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Technical Specification

**Universal Mobile Telecommunications System (UMTS);
Common Test Environments for User Equipment (UE)
conformance testing
(3GPP TS 34.108 version 4.2.0 Release 1999)**



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Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The definition of the Conformance Tests for UE in 3G will be a complex task as the complete test suite covers RF, EMC and Protocol aspects of the UE.

Each test requires a Test Environment to be defined in which the UE has to operate to defined standards, constraints and performance. The overall task can be simplified if there are a number of well defined and agreed Common Test Environments where every one can be used for a number of tests. Hence the present documents defines testing conditions that are common to several tests avoiding the need to duplicate the same information for every single test.

The present document defines default values for a variety of common areas. Where values are not specified in test cases, the defaults in the present document will apply. If specified, the test case values will take precedence.

The present document addresses the FDD mode as well as the TDD mode.

1 Scope

The present document contains definitions of reference conditions and test signals, default parameters, reference radio bearer configurations used in radio bearer interoperability testing, common radio bearer configurations for other test purposes, common requirements for test equipment and generic set-up procedures for use in UE conformance tests.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 34.123-1: "User Equipment (UE) conformance specification; Part 1: Protocol conformance specification".
- [2] 3GPP TS 34.121: "Terminal Conformance Specification; Radio transmission and reception (FDD)".
- [3] 3GPP TS 34.123-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".
- [4] 3GPP TS 34.124: "ElectroMagnetic compatibility (EMC) requirements for Mobile terminals and ancillary equipment".
- [5] 3GPP TS 34.122: "Terminal Conformance Specification; Radio transmission and reception (TDD)".
- [6] 3GPP TS 34.109: "Terminal Logical Test Interface; Special conformance testing functions".
- [8] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [7] 3GPP TS 25.301 "Radio Interface Protocol Architecture".
- [9] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [10] 3GPP TR 25.990: "Vocabulary".
- [11] 3GPP TS 25.101: "UE Radio transmission and reception (FDD)".
- [12] 3GPP TS 25.102: "UTRA (UE) TDD; Radio transmission and reception".
- [13] 3GPP TS 25.211: "Physical Channels and mapping of Transport Channels onto Physical channels (FDD)".
- [14] 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)".
- [15] 3GPP TS 23.107: "Quality of Service (QoS) concept and architecture".
- [16] 3GPP TS 26.110: "Codec for Circuit Switched Multimedia Telephony Service; General Description".
- [17] 3GPP TS 29.007: "General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".

- [18] 3GPP TR 23.910: "Circuit Switched Data Bearer Service".
- [19] Void.
- [20] 3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- [21] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [22] 3GPP TS 31.101: "UICC-Terminal Interface; Physical and Logical Characteristics".
- [23] 3GPP TS 31.102: "Characteristics of the USIM Application".
- [24] 3GPP TS 33.102: "3G Security; Security Architecture".
- [25] 3GPP TS 33.103: "3G Security; Integration Guidelines".
- [26] 3GPP TS 33.105: "3G Security; Cryptographic Algorithm Requirements".
- [27] 3GPP TS 25.224: "Physical layer procedures (TDD)".
- [28] 3GPP TS 25.221: "Physical Channels and mapping of Transport Channels onto Physical channels (TDD)".
- [29] 3GPP TS 25.222: "Multiplexing and Channel Coding (TDD)".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in [9], [10] and the following apply:

Maximum average power: average transmitter output power obtained over any specified time interval, including periods with no transmission, when the transmit time slots are at the maximum power setting

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in [9], [10] and the following apply:

| | |
|----------|---|
| I_{oc} | The power spectral density of a band limited white noise source (simulating interference from other cells) as measured at the UE antenna connector. |
| AFC | Automatic Frequency Control |
| AM | Acknowledgement mode |
| ATT | Attenuator |
| BCCH | Broadcast Control Channel |
| CBS | Cell Broadcast Service |
| CC | Convolutional coding |
| CCCH | Common Control Channel |
| CCTrCH | Coded Composite Transport Channel |
| CS | Circuit switching |
| DCCH | Dedicated Control Channel |
| DL | Downlink |
| DPCH | Dedicated Physical Channel |
| DT | Direct transfer |
| DTCH | Dedicated Traffic Channel |
| FTM | File tunnelling mode |
| HYB | Hybrid |
| NAS | Non-access stratum |
| OBW | Occupied Bandwidth |
| OCNS | Orthogonal Channel Noise Simulator, a mechanism used to simulate the users or control signals on the other orthogonal channels of a downlink. |

| | |
|--------|--|
| PRACH | Physical Random Access Channel |
| PS | Packet switching |
| RAB | Radio Access Bearer |
| RB | Radio Bearer |
| RRC | Radio Resource Control (for sub-Layer of layer 3) but also Root-Raised Cosine (for Filter shape) |
| SCCPCH | Secondary Common Control Physical Channel |
| SMS | Short Message Service |
| SRB | Signalling RB |
| SS | System Simulator |
| SSD | Source statistics descriptor |
| TC | Turbo coding |
| TM | Transparent mode |
| UL | Uplink |
| UM | Unacknowledgement mode |

4 Common requirements of test equipment

Mobile conformance testing can be categorised into 3 distinct areas:

- RF Conformance Testing.
- EMC Conformance Testing.
- Signalling Conformance Testing.

The test equipment required for each category of testing may or not be different, depending on the supplier of the test equipment. However, there will be some generic requirements of the test equipment that are essential for all three categories of test, and these are specified in this clause.

In addition, there will be requirements to test operation in multi-system configurations (eg UTRA plus GSM/DCS1800). However, these would not form a common test equipment requirement for the three test areas and are not considered in the present document.

4.1 General Functional Requirements

NOTE: This clause has been written such that it does not constrain the implementation of different architectures and designs of test equipment.

All test equipment used to perform conformance testing on a UE shall provide a platform suitable for testing UE's that are either:

- a) FDD Mode; or
- b) TDD Mode; or
- c) both FDD/TDD Modes.

All test equipment shall provide (for the mode(s) supported) the following minimum functionality.

- The capability of emulating a single UTRA cell with the appropriate channels to allow the UE to register on the cell.
- The capability to allow the UE to set up an RRC connection with the System Simulator, and to maintain the connection for the duration of the test.
- The capability (for the specific test):
 - to select and support an appropriate Radio Bearer for the downlink;
 - to set the appropriate downlink power levels;
 - to set up and support the appropriate Radio Bearer for the uplink;

- to set and control the uplink power levels.

4.2 Minimum performance levels

4.2.1 Supported Cell Configuration

The System Simulator shall provide the capability to simulate a minimum number of cells (of the appropriate UTRA Mode) whose number and capabilities are governed by the test cases that need to be performed (test cases are defined in [1] (Signalling), [2] (RF-FDD) and [5] (RF-TDD)). For this purpose test cases can be split into two different categories: Tests that require only one cell and Tests that require several cells.

To perform test cases requiring one cell, the system simulator must provide a Cell offering the capabilities to perform all the test cases in this category.

To perform test cases requiring several cells, additional cells must be provided by the system simulator. The additional cells, however, need only provide a minimum set of capabilities so as to support the first cell in carrying out the multi-cell test cases.

The type and number of channels (especially physical channels) constitute an important set of capabilities for a cell. The following clauses list possible channels that may be supported by the SS. Each channel type, however, and the minimum number of channels needed are only mandatory if specific test cases require them.

The mapping between Logical and Transport channels is as described in [7]. Similarly the mapping between Transport channels and Physical channels is as described in 3GPP TS 25.211 for the FDD mode, and 3GPP TS 25.221 for the TDD mode. The reference measurement channels (mapping between Transport channels and Physical channels for DTCH/DCCH to be tested) are defined in [2] annex C for FDD and [5] annex C for TDD.

4.2.1.1 Supported Channels for FDD Mode

4.2.1.1.1 Logical Channels

| Logical Channel | Minimum Number | Comments |
|-----------------|----------------|---|
| BCCH | 1 | |
| CCCH | 1 | |
| DCCH | 4 | 2 for RRC testing, 2 for NAS testing |
| PCCH | 1 | |
| DTCH | n <FFS> | Depending on SS's support for RB service testing (See clause 14 of TS 34.123-1) |

4.2.1.1.2 Transport Channels

| Transport Channel | Minimum Number | Comments |
|-------------------|----------------|---------------------|
| BCH | 1 | |
| FACH | 1 | |
| PCH | 1 | |
| DCH | n <FFS> | |
| DSCH | 1 | |
| RACH | 2 | |
| CPCH | 1 | |
| FAUSCH | N/A | Not in Release 1999 |

4.2.1.1.3 Physical Channels

| Physical Channel | Minimum Number | Comments |
|------------------|------------------|---|
| P-CCPCH | 1 | Primary Common Control Physical Channel. This is used by the Cell to Broadcast System Information messages, it is transmitted using the Primary Scrambling Code for the Cell. |
| P-CPICH | 1 | Primary Common Pilot Channel using the Primary Scrambling Code for the Cell. |
| S-CPICH | 1 (For RF Tests) | Secondary Common Pilot Channel. This signal is used as the phase reference for some RF tests. |
| SCH | 1 | Synchronisation Channel (includes P-SCH and S-SCH) |
| S-CCPCH | 2 | Secondary Common Control Physical Channel. |
| PICH | 1 | To identify when the UE should access the PCCH for Paging Messages. |
| AICH | 1 | General Acquisition Indicator Channel that can be used for: - Acquisition Indicator Channel, for PRACH - Access Preamble Acquisition Indicator Channel (AP-ICH), for PCPCH - Collision-Detection/Channel-Assignment Indicator Channel (CD/CA-ICH), for PCPCH |
| DPDCH | 3 | Downlink Physical Data Channel. There will be a single DPCH associated with all the DPDCHs used for Layer 1 signalling. This number is for the First Cell. Additional Cells may define a lower number which should be at least 1. |
| PDSCH | 1 | Physical Downlink Shared Channel. |
| DPCH | 1 | Uplink Dedicated Physical Channel |
| PRACH | 2 | Physical Random Access Channel. |
| PCPCH | 1 | Physical Common Packet Channel. |
| CSICH | 1 | CPCH Status Indicator Channel |

4.2.1.2 Supported Channels for TDD Mode

4.2.1.2.1 Logical Channels

| Logical Channel | Minimum Number | Comments |
|-----------------|----------------|----------|
| BCCH | 1 | |
| CCCH | 1 | |
| DCCH | 1 | |
| PCCH | 1 | |
| DTCH | 1 | |
| SHCH | 1 | |

4.2.1.2.2 Transport Channels

| Transport Channel | Minimum Number | Comments |
|-------------------|----------------|----------|
| BCH | 1 | |
| FACH | 1 | |
| PCH | 1 | |
| DCH | n <FFS> | |
| DSCH | 1 | |
| USCH | 1 | |
| RACH | 1 | |

4.2.1.2.3 Physical Channels (3.84 Mcps)

| Physical Channel | Minimum Number | Comments |
|------------------|----------------|--|
| P-CCPCH | 1 | Primary Common Control Physical Channel. This is the Cell Broadcast Channel, transmitted using the Primary Scrambling Code for the Cell. |
| SCH | 1 | Synchronisation Channel |
| S-CCPCH | 2 | Secondary Common Control Physical Channel. |
| PICH | | To identify when the UE should access the PCCH for Paging Messages. |
| DPCH (DL) | 3 | Downlink Dedicated Physical Channel |
| PDSCH | 1 | Physical Downlink Shared Channel. |
| DPCH (UL) | 1 | Uplink Dedicated Physical Channel |
| PUSCH | 1 | Physical Uplink Shared Channel. |
| PRACH | 2 | Physical Random Access Channel. |

4.2.1.2.4 Physical Channels (1.28 Mcps)

| Physical Channel | Minimum Number | Comments |
|------------------|----------------|--|
| P-CCPCH | 1 | Primary Common Control Physical Channel. This is the Cell Broadcast Channel, transmitted using the Primary Scrambling Code for the Cell. |
| DwPCH | 1 | Synchronisation Channel |
| UpPCH | 1 | Synchronisation Channel |
| S-CCPCH | 2 | Secondary Common Control Physical Channel. |
| PICH | | To identify when the UE should access the PCCH for Paging Messages. |
| DPCH (DL) | 3 | Downlink Dedicated Physical Channel |
| PDSCH | 1 | Physical Downlink Shared Channel. |
| DPCH (UL) | 1 | Uplink Dedicated Physical Channel |
| PUSCH | 1 | Physical Uplink Shared Channel. |
| FPACH | 1 | Fast Physical Access Channel |
| PRACH | 2 | Physical Random Access Channel. |

4.2.1.3 Support of T_{cell} timing offset

In test case parameter declarations, the parameter T_{cell} may be specified between 0 to 38399, to allow for extensibility. However, the system simulator is required only to support a maximum T_{cell} value of 2304, with a step resolution of 256. The SS may limit a T_{cell} value of greater than 2304, and may round T_{cell} to the nearest multiple of 256.

4.2.2 RF Performance

4.2.2.1 Frequency of Operation

The System Simulator shall be capable of adjusting the Carrier Frequency of the DL channels to any frequency allowed in the DL frequency band. The DL frequency shall be accurate to the level of accuracy set by the core specifications [20] for FDD and [21] for TDD.

For RF tests, the requirement of Test Equipment is described in [2] annex F for FDD and [5] annex F for TDD respectively.

4.2.2.2 Power Level Setting Accuracy

The system simulator shall be able to adjust the average power output of the DL Channels to meet the absolute accuracy of the system simulator DL power levels covered in clause 5.4.1 Downlink Signal Levels.

For RF tests, the requirement of Test Equipment is described in [2] annex F for FDD and [5] annex F for TDD respectively.

The system simulator shall be capable of altering the power of the DL Dedicated channels under control of the UE Layer 1 Signalling information.

4.2.2.3 Uplink Power Control

The system simulator shall be able to command the UE to transmit at the maximum level for its power class or a lower level required for specific tests. The system simulator shall also provide the capability of generating the Layer 1 Signalling information to set the power levels of the Uplink Dedicated Channels from the UE to lower levels if required.

4.2.2.4 Uplink Signal Handling

For FDD mode, the System Simulator shall not be damaged by a Power Class 1 UE transmitting at the maximum power level permitted in [11] and for TDD mode by a Power Class 2 UE transmitting at the maximum power level permitted in [12].

4.2.2.5 Uplink Sensitivity

The simulator shall be able to receive uplink transmissions from the UE when it is transmitting at the minimum power level defined in [11] for FDD mode, and [12] for TDD mode.

Editor's note: this is obviously a useful feature for the system simulator; however it is <ffs> if it should be an essential common requirement for a protocol test system.

4.2.3 Timers Tolerances

All the timers used during testing are within a tolerance margin given by the equation below. If for a specific test a different tolerance value is required then this should be specified in the relevant test document (i.e. the document where the test is described).

Timer tolerance = 10%, or $2 * TTI + t_{\text{delta}}$, whichever value is the greater.

Where t_{delta} is 55 ms.

5 Reference Test Conditions

5.1 Test frequencies

The test frequencies are based the UMTS frequency bands defined in the core specifications.

To avoid interference with adjacent frequency bands the lowest test frequency (downlink and uplink) needs to be offset upwardly by at least 2,6 MHz since the channel's width is 5 MHz for FDD and 3.84 Mcps TDD option, and 0.8 MHz for 1.28 Mcps TDD option since the channel's width is 1.6 MHz. The raster spacing is 200KHz. Similarly the highest test frequency (downlink and uplink) needs to be offset downwardly by at least 2.6 MHz for FDD and 3.84 Mcps TDD option, and 0.8 MHz for 1.28 Mcps TDD option.

NOTE: Additional regulations concerning interferences to frequency bands used by different systems may also exist. Those regulations are specific to the country where the test equipment is used and need to be taken into account if they require a higher offset than 2,6 MHz from the edge frequencies for FDD and 3.84 Mcps TDD option, and 0.8 MHz for 1.28 Mcps TDD option.

5.1.1 FDD Mode Test frequencies

UTRA/FDD is designed to operate in either of two paired bands [11]. The second band is used in ITU Region 2. The reference test frequencies for the common test environment for each of the 2 regions are defined in the following tables:

5.1.1.1 Standard FDD reference test frequencies

| Test Frequency ID | UARFCN | Frequency of Uplink | UARFCN | Frequency of Downlink |
|-------------------|--------|---------------------|--------|-----------------------|
| Low Range | 9 613 | 1 922.6 MHz | 10 563 | 2 112.6 MHz |
| Mid Range | 9 750 | 1 950.0 MHz | 10 700 | 2 140.0 MHz |
| High Range | 9 887 | 1 977.4 MHz | 10 837 | 2 167.4 MHz |

5.1.1.2 FDD reference test frequencies for ITU region 2

| Test Frequency ID | UARFCN | Frequency of Uplink | UARFCN | Frequency of Downlink |
|-------------------|--------|---------------------|--------|-----------------------|
| Low Range | 9 263 | 1 852.6 MHz | 9 663 | 1 932.6 MHz |
| Mid Range | 9 400 | 1 880 MHz | 9 800 | 1 960 MHz |
| High Range | 9 537 | 1 907.4 MHz | 9 937 | 1 987.4 MHz |

5.1.2 TDD Mode Test frequencies

The reference test frequencies for the common test environment in the TDD [12] Bands are defined in the following tables.

5.1.2.1 Standard TDD reference test frequencies (3.84 Mcps option)

| Test Frequency ID | Band 1 | | Band 2 | |
|-------------------|--------|-----------------------|--------|-----------------------|
| | UARFCN | Frequency (UL and DL) | UARFCN | Frequency (UL and DL) |
| Low Range | 9 513 | 1 902.6 MHz | 10 063 | 2 012.6 MHz |
| Mid Range | 9 550 | 1 910 MHz | 10 087 | 2 017.4 MHz |
| High Range | 9 587 | 1 917.4 MHz | 10 112 | 2 022.4 MHz |

5.1.2.1A Standard TDD reference test frequencies (1.28 Mcps option)

| Test Frequency ID | Band 1 | | Band 2 | |
|-------------------|--------|-----------------------|--------|-----------------------|
| | UARFCN | Frequency (UL and DL) | UARFCN | Frequency (UL and DL) |
| Low Range | 9504 | 1 900.8 MHz | 10 054 | 2 010.8 MHz |
| Mid Range | 9550 | 1 910 MHz | 10 087 | 2 017.4 MHz |
| High Range | 9596 | 1 919.2 MHz | 10 121 | 2 024.2 MHz |

5.1.2.2 TDD reference test frequencies for ITU Region 2 (3.84 Mcps option)

a)

| Test Frequency ID | Band 1 | | Band 2 | |
|-------------------|--------|-----------------------|--------|-----------------------|
| | UARFCN | Frequency (UL and DL) | UARFCN | Frequency (UL and DL) |
| Low Range | 9 263 | 1 852.6 MHz | 9 663 | 1 932.6 MHz |
| Mid Range | 9 400 | 1 880 MHz | 9 800 | 1 960 MHz |
| High Range | 9 537 | 1 907.4 MHz | 9 937 | 1 987.4 MHz |

b)

| Test Frequency ID | UARFCN | Frequency (UL and DL) |
|-------------------|--------|-----------------------|
| Low Range | 9 563 | 1 912.6 MHz |
| Mid Range | 9 600 | 1 920 MHz |
| High Range | 9 637 | 1 927.4 MHz |

5.1.2.2A TDD reference test frequencies for ITU Region 2 (1.28 Mcps option)

a)

| Test Frequency ID | Band 1 | | Band 2 | |
|-------------------|--------|-----------------------|--------|-----------------------|
| | UARFCN | Frequency (UL and DL) | UARFCN | Frequency (UL and DL) |
| Low Range | 9 254 | 1 850.8 MHz | 9 654 | 1 930.8 MHz |
| Mid Range | 9 400 | 1 880 MHz | 9 800 | 1 960 MHz |
| High Range | 9 546 | 1 909.2 MHz | 9 946 | 1 989,2 MHz |

b)

| Test Frequency ID | UARFCN | Frequency (UL and DL) |
|-------------------|--------|-----------------------|
| Low Range | 9554 | 1910.8 MHz |
| Mid Range | 9600 | 1920 MHz |
| High Range | 9646 | 1929,2 MHz |

5.2 Radio conditions

There are a number of radio propagation conditions defined in [2] for FDD mode and [5] for TDD mode, which may be required for a number of tests and hence can be considered as Common Conditions for FDD mode and TDD mode respectively.

NOTE: The System Simulator is required to support at least the normal Propagation Condition; support of the other propagation conditions is optional, depending on the specific test supported by the simulator.

5.2.1 Normal Propagation Condition

This condition provides a connection between the System Simulator that is effectively free from Additive White Gaussian Noise, and where there are no fading or multipath effects. This condition will be used for Signalling tests.

5.2.2 Static Propagation Condition

See [2] annex D for FDD.

For TDD mode, the propagation for the static performance measurement is an Additive White Gaussian Noise (AWGN) environment. No fading and multi-paths exist for this propagation model..

5.2.3 Multi-Path Fading Propagation Conditions

See [2] annex D for FDD and [5] annex D for TDD.

5.2.4 Moving Propagation Conditions

See [2] annex D for FDD. There are no currently defined Moving propagation conditions for TDD.

5.2.5 Birth-Death propagation conditions

See [2] annex D for FDD. There are no currently defined Birth-Death propagation conditions for TDD.

5.3 Standard test signals

Reference [11] and [12] for definitions of standard test signals.

5.4 Signal levels

The power levels given in the following clauses (5.4.1 and 5.4.2) apply for Signalling tests only. For RF tests power levels are given in [2] annex E for FDD and [5] annex E for TDD.

5.4.1 Downlink Signal Levels

<FFS>

5.4.2 Uplink Signal Levels

<FFS>

6 Reference System Configurations

This clause defines a number of Reference System Configurations which can be used for different tests.

6.1 Simulated network environments

The UE will eventually have to operate in either single mode networks (FDD or TDD) and dual mode networks (FDD+TDD).

It is <ffs> whether a reference environment needs to be defined for multi-mode networks (eg: the environment could be created by combining two appropriate reference environments from the single mode cases).

The following tables list the default parameters for 1 to 8 cell environments for testing.

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Contents of Master Information Block PLMN type is the case of GSM-MAP

| | |
|---|---|
| - MIB value tag | 1 |
| - Supported PLMN types | GSM-MAP |
| - PLMN type | |
| - PLMN identity | Set to the same Mobile Country Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)). |
| - MCC digit | Set to the same Mobile Network Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)). |
| - MNC digit | Not Present |
| - ANSI-41 Core Network information | |
| - References to other system information blocks and scheduling blocks | |
| - References to other system information blocks | |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value Tag |
| - Cell Value tag | 1 |
| - Scheduling | |
| - SEG_COUNT | 1 |
| - SIB_REP | 16 |
| - SIB_POS | 1 |
| - SIB_POS offset info | Not Present – use default |
| - SIB type | Scheduling Block 1 |
| - Scheduling information | |
| - CHOICE Value tag | PLMN Value tag |
| - PLMN Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 64 |
| - SIB_POS | 11 |
| - SIB_POS offset info | Not Present – use default |
| - SIB type | System Information Type 1 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 64 |
| - SIB_POS | 11 |
| - SIB_POS offset info | Not Present – use default |
| - SIB type | System Information Type 2 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 64 |
| - SIB_POS | 10 |
| - SIB_POS offset info | Not Present – use default |
| - SIB type | System Information Type 3 |
| - Scheduling information | |

| | |
|--------------------------|---------------------------|
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 64 |
| - SIB_POS | 26 |
| - SIB_POS offset info | Not Present – use default |
| - SIB type | System Information Type 4 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 4 |
| - SIB_REP | 64 |
| - SIB_POS | 19 |
| - SIB_POS offset info | |
| - SIB_OFF | 4 |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type | System Information Type 5 |

Contents of Scheduling Block 1 (FDD and 1.28 Mcps TDD)

| | |
|---|----------------------------|
| - References to other system information blocks | |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 4 |
| - SIB_REP | 64 |
| - SIB_POS | 3 |
| - SIB_POS offset info | |
| - SIB_OFF | 4 |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 6 |
| - Scheduling information | |
| - CHOICE Value tag | Not Present |
| - SEG_COUNT | 1 |
| - SIB_REP | 16 |
| - SIB_POS | 2 |
| - SIB_POS offset info | Not Present |
| - SIB type SIBs only | System Information Type 7 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 3 |
| - SIB_REP | 64 |
| - SIB_POS | 29 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 11 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 3 |
| - SIB_REP | 64 |
| - SIB_POS | 13 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 12 |
| - Scheduling information | |
| - CHOICE Value tag | PLMN Value tag |
| - PLMN Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 64 |
| - SIB_POS | 18 |
| - SIB_POS offset info | Not Present |

| | |
|----------------------|----------------------------|
| - SIB type SIBs only | System Information Type 18 |
|----------------------|----------------------------|

Contents of Scheduling Block 1 (3.84 Mcps TDD)

| | |
|---|----------------------------|
| - References to other system information blocks | |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 4 |
| - SIB_REP | 128 |
| - SIB_POS | 19 |
| - SIB_POS offset info | |
| - SIB_OFF | 4 |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 5 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 4 |
| - SIB_REP | 128 |
| - SIB_POS | 35 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 6 |
| - Scheduling information | |
| - CHOICE Value tag | Not Present |
| - SEG_COUNT | 1 |
| - SIB_REP | 32 |
| - SIB_POS | 11 |
| - SIB_POS offset info | Not Present |
| - SIB type SIBs only | System Information Type 7 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 2 |
| - SIB_REP | 128 |
| - SIB_POS | 29 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 11 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 2 |
| - SIB_REP | 128 |
| - SIB_POS | 61 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 12 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 64 |
| - SIB_POS | 54 |
| - SIB_POS offset info | Not Present - use default |
| - SIB type SIBs only | System Information Type 14 |
| - Scheduling information | |
| - CHOICE Value tag | PLMN Value tag |
| - PLMN Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 128 |
| - SIB_POS | 6 |
| - SIB_POS offset info | Not Present |

| | |
|----------------------|----------------------------|
| - SIB type SIBs only | System Information Type 18 |
|----------------------|----------------------------|

Contents of System Information Block type 1 (supported PLMN type is GSM-MAP)

| | |
|---|-------------------|
| - CN common GSM-MAP NAS system information | |
| - GSM-MAP NAS system information | 00 80H |
| - CN domain system information | |
| - CN domain identity | PS |
| - CHOICE CN Type | GSM-MAP |
| - CN domain specific NAS system information | |
| - GSM-MAP NAS system information | 00 00H |
| - CN domain specific DRX cycle length coefficient | 7 |
| - CN domain identity | CS |
| - CHOICE CN Type | GSM-MAP |
| - CN domain specific NAS system information | |
| - GSM-MAP NAS system information | 1E 01H |
| - CN domain specific DRX cycle length coefficient | 7 |
| - UE Timers and constants in idle mode | |
| - T300 | 4000 milliseconds |
| - N300 | 7 |
| - T312 | 10 seconds |
| - N312 | 200 |
| - UE Timers and constants in connected mode | |
| - T301 | 2000 milliseconds |
| - N301 | 2 |
| - T302 | 4000 milliseconds |
| - N302 | 3 |
| - T304 | 1000 milliseconds |
| - N304 | 3 |
| - T305 | 60 minutes |
| - T307 | 50 seconds |
| - T308 | 320 milliseconds |
| - T309 | 8 seconds |
| - T310 | 320 milliseconds |
| - N310 | 5 |
| - T311 | 500 milliseconds |
| - T312 | 5 seconds |
| - N312 | 200 |
| - T313 | 10 seconds |
| - N313 | 20 |
| - T314 | 20 seconds |
| - T315 | 30 seconds |
| - N315 | 200 |
| - T316 | 50 seconds |
| - T317 | 1800 seconds |

Contents of System Information Block type 2

| | |
|---------------------|--|
| - URA identity list | <i>Only 1 URA identity broadcasted</i> |
| - URA identity | 0000 0000 0000 0001B |

Contents of System Information Block type 3 (FDD)

| | |
|--|-------------------------------------|
| - SIB4 indicator | TRUE |
| - Cell identity | 0000 0000 0000 0000 0000 0000 0001B |
| - Cell selection and re-selection info | |
| - Mapping info | Not Present |
| - Cell selection_and_reselection_quality_measure | CPICH RSCP |
| - CHOICE mode | FDD |
| - Sintrasearch | 16 dB |
| - Sintersearch | 16 dB |
| - SsearchHCS | Not Present |
| - RAT List | This parameter is configurable |
| - RAT identifier | GSM |
| - Ssearch,RAT | -32 dB |
| - SHCS,RAT | Not Present |
| - Slimit,SearchRAT | Not Present |
| - Qqualmin | -20 dB |
| - Qrxlevmin | -115 dBm |
| - Qhyst1s | 0 dB |
| - Qhyst2s | Not Present |
| - Treselections | 0 seconds |
| - HCS Serving cell information | Not Present |
| - Maximum allowed UL TX power | 33dBm |
| - Cell Access Restriction | |
| - Cell barred | Not barred |
| - Intra-frequency cell re-selection indicator | Not present |
| - T _{barred} | Not present |
| - Cell Reserved for operator use | Not reserved |
| - Cell Reservation Extension | Not reserved |
| - Access Class Barred List | |
| - Access Class Barred0 | Not barred |
| - Access Class Barred1 | Not barred |
| - Access Class Barred2 | Not barred |
| - Access Class Barred3 | Not barred |
| - Access Class Barred4 | Not barred |
| - Access Class Barred5 | Not barred |
| - Access Class Barred6 | Not barred |
| - Access Class Barred7 | Not barred |
| - Access Class Barred8 | Not barred |
| - Access Class Barred9 | Not barred |
| - Access Class Barred10 | Not barred |
| - Access Class Barred11 | Not barred |
| - Access Class Barred12 | Not barred |
| - Access Class Barred13 | Not barred |
| - Access Class Barred14 | Not barred |
| - Access Class Barred15 | Not barred |

Contents of System Information Block type 3 (3.84 Mcps TDD and 1.28 Mcps TDD)

| | |
|--|-------------------------------------|
| - SIB4 Indicator | TRUE |
| - Cell identity | 0000 0000 0000 0000 0000 0000 0001B |
| - Cell selection and re-selection info | |
| - Mapping info | Not present |
| - Cell selection_and_reselection_quality_measure | CPICH RSCP |
| - CHOICE mode | TDD |
| - Sintrasearch | 10 dB |
| - Sintersearch | 10 dB |
| - SsearchHCS | Not present |
| - RAT List | This parameter is configurable |
| - RAT identifier | GSM |
| - Ssearch,RAT | -32 dB |
| - SHCS,RAT | Not present |
| - Slimit,SsearchRAT | Not Present |
| - Qrxlevmin | -115 dBm |
| - Qhyst1s | 0 dB |
| - Treselections | 0 seconds |
| - HCS Serving cell information | Not present |
| - Maximum allowed UL TX power | 30dBm |
| - Cell Access Restriction | |
| - Cell barred | Not barred |
| - Intra-frequency cell re-selection indicator | Not present |
| - T _{barred} | Not present |
| - Cell Reserved for operator use | Not reserved |
| - Cell Reservation Extension | Not reserved |
| - Access Class Barred List | |
| - Access Class Barred0 | Not barred |
| - Access Class Barred1 | Not barred |
| - Access Class Barred2 | Not barred |
| - Access Class Barred3 | Not barred |
| - Access Class Barred4 | Not barred |
| - Access Class Barred5 | Not barred |
| - Access Class Barred6 | Not barred |
| - Access Class Barred7 | Not barred |
| - Access Class Barred8 | Not barred |
| - Access Class Barred9 | Not barred |
| - Access Class Barred10 | Not barred |
| - Access Class Barred11 | Not barred |
| - Access Class Barred12 | Not barred |
| - Access Class Barred13 | Not barred |
| - Access Class Barred14 | Not barred |
| - Access Class Barred15 | Not barred |

Contents of System Information Block type 4 in connected mode (FDD)

| | |
|--|-------------------------------------|
| - Cell identity | 0000 0000 0000 0000 0000 0000 0001B |
| - Cell selection and re-selection info | Not present |
| - Mapping Info | CPICH RSCP |
| - Cell_selection_and_reselection_quality_measure | |
| - CHOICE mode | FDD |
| - S _{intrasearch} | 16 dB |
| - S _{intersearch} | 16 dB |
| - S _{searchHCS} | Not present |
| - RAT List | This parameter is configurable |
| - RAT identifier | GSM |
| - S _{search,RAT} | -32 dB |
| - S _{HCS,RAT} | Not Present |
| - S _{limit,SearchRAT} | Not Present |
| - Q _{qualmin} | -20 dB |
| - Q _{rxlevmin} | -115 dBm |
| - Q _{hyst1s} | 0 dB |
| - Q _{hyst2s} | Not Present |
| - T _{reselections} | 0 seconds |
| - HCS Serving cell information | Not Present |
| - Maximum allowed UL TX power | 33dBm |
| - Cell Access Restriction | |
| - Cell barred | Not barred |
| - Intra-frequency cell re-selection indicator | Not present |
| - T _{barred} | Not present |
| - Access Class Barred | Not barred |
| - Cell Reserved for operator use | Not reserved |
| - Cell Reservation Extension | Not reserved |
| - Access Class Barred List | |
| - Access Class Barred0 | Not barred |
| - Access Class Barred1 | Not barred |
| - Access Class Barred2 | Not barred |
| - Access Class Barred3 | Not barred |
| - Access Class Barred4 | Not barred |
| - Access Class Barred5 | Not barred |
| - Access Class Barred6 | Not barred |
| - Access Class Barred7 | Not barred |
| - Access Class Barred8 | Not barred |
| - Access Class Barred9 | Not barred |
| - Access Class Barred10 | Not barred |
| - Access Class Barred11 | Not barred |
| - Access Class Barred12 | Not barred |
| - Access Class Barred13 | Not barred |
| - Access Class Barred14 | Not barred |
| - Access Class Barred15 | Not barred |

Contents of System Information Block type 4 in connected mode (similar to SIB type3)
(3.84 Mcps TDD and 1.28 Mcps TDD)

| | |
|--|-------------------------------------|
| - Cell identity | 0000 0000 0000 0000 0000 0000 0001B |
| - Cell selection and re-selection info | |
| - Mapping info | Not Present |
| - Cell_selection_and_reselection_quality_measure | CPICH RSCP |
| - CHOICE mode | TDD |
| - S _{intrasearch} | 10 dB |
| - S _{intersearch} | 10 dB |
| - S _{searchHCS} | Not present |
| - RAT List | This parameter is configurable |
| - RAT identifier | GSM |
| - S _{search,RAT} | -32 dB |
| - S _{HCS,RAT} | Not present |
| - S _{limit,SsearchRAT} | Not Present |
| - Q _{rxlevmin} | -115 dBm |
| - Q _{hyst1s} | 0 dB |
| - T _{reselctions} | 0 seconds |
| - HCS Serving cell information | Not present |
| - Maximum allowed UL TX power | 30dBm |
| - Cell Access Restriction | |
| - Cell barred | Not barred |
| - Intra-frequency cell re-selection indicator | Not present |
| - T _{barred} | Not present |
| - Cell Reserved for operator use | Not reserved |
| - Cell Reservation Extension | Not reserved |
| - Access Class Barred List | |
| - Access Class Barred0 | Not barred |
| - Access Class Barred1 | Not barred |
| - Access Class Barred2 | Not barred |
| - Access Class Barred3 | Not barred |
| - Access Class Barred4 | Not barred |
| - Access Class Barred5 | Not barred |
| - Access Class Barred6 | Not barred |
| - Access Class Barred7 | Not barred |
| - Access Class Barred8 | Not barred |
| - Access Class Barred9 | Not barred |
| - Access Class Barred10 | Not barred |
| - Access Class Barred11 | Not barred |
| - Access Class Barred12 | Not barred |
| - Access Class Barred13 | Not barred |
| - Access Class Barred14 | Not barred |
| - Access Class Barred15 | Not barred |

Contents of System Information Block type 5 (FDD)

| | |
|--|---------------------------|
| - SIB6 indicator | TRUE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH Power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.00 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | Configured |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | Configured |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS complete information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor |
| - Reference TFC ID | 0 |
| - CHOICE Mode | FDD |
| - Power offset Pp-m | 0 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor β_c | 11 |
| - Gain factor β_d | 15 |
| - Reference TFC ID | 0 |
| - CHOICE Mode | FDD |
| - Power offset Pp-m | 0 dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |

| | |
|--|---------------------------|
| - ASC Setting | FDD |
| - CHOICE mode | 0 (ASC#2) |
| - Available signature Start Index | 7 (ASC#2) |
| - Available signature End Index | '1111'B |
| - Assigned Sub-channel Number | |
| - ASC Setting | FDD |
| - CHOICE mode | 0 (ASC#3) |
| - Available signature Start Index | 7 (ASC#3) |
| - Available signature End Index | '1111'B |
| - Assigned Sub-channel Number | |
| - ASC Setting | FDD |
| - CHOICE mode | 0 (ASC#4) |
| - Available signature Start Index | 7 (ASC#4) |
| - Available signature End Index | '1111'B |
| - Assigned Sub-channel Number | |
| - ASC Setting | FDD |
| - CHOICE mode | 0 (ASC#5) |
| - Available signature Start Index | 7 (ASC#5) |
| - Available signature End Index | '1111'B |
| - Assigned Sub-channel Number | |
| - ASC Setting | FDD |
| - CHOICE mode | 0 (ASC#6) |
| - Available signature Start Index | 7 (ASC#6) |
| - Available signature End Index | '1111'B |
| - Assigned Sub-channel Number | |
| - ASC Setting | FDD |
| - CHOICE mode | 0 (ASC#7) |
| - Available signature Start Index | 7 (ASC#7) |
| - Available signature End Index | '1111'B |
| - Assigned Sub-channel Number | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system information | |
| - Secondary CCPCH info | |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 1 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |

| | |
|--|--|
| - Timing offset | 0 |
| - TFCS | (This IE is repeated for TFC number for PCH and FACH.) |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS complete information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - CTFC information | 6 |
| - Power offset information | Not Present |
| - CTFC information | 8 |
| - Power offset information | Not Present |
| - CTFC information | 10 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 240 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 220 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |

| | |
|--|---------------|
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - Channelisation code | 2 |
| - Number of PI per frame | 18 |
| - STTD indicator | FALSE |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type 5 (3.84 Mcps TDD)

| | |
|--|-------------------------------------|
| - SIB6 indicator | TRUE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | TDD |
| - PUSCH system information | Not Present |
| - PDSCH system information | Not Present |
| - TDD open loop power control | |
| - Primary CCPCH Tx Power | 30 dbm |
| - CHOICE TDD option | 3.84 Mcps TDD /REL-4/ |
| - Alpha | (1/8) |
| - PRACH Constant Value | -10 |
| - DPCH Constant Value | -10 |
| - PUSCH Constant Value | -10 |
| - UE positioning related parameters | Not Present /REL-4/ |
| - Primary CCPCH info | |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD /REL-4/ |
| - CHOICE SyncCase | Sync Case 2 |
| - Timeslot | 0 |
| - Cell parameters ID | Not Present |
| - SCTD indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD /REL-4/ |
| - Timeslot number | 14 |
| - PRACH Channelisation Code List | |
| - CHOICE SF | SF8 |
| - Channelisation Code List | |
| - Channelisation Code | 8/1 |
| - Channelisation Code | 8/2 |
| - Channelisation Code | 8/3 |
| - Channelisation Code | 8/4 |
| - PRACH Midamble | Direct |
| - PNBSCH allocation | Not Present /REL-4/ |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |

| | |
|--|---------------------------|
| - RACH TFCS | Not present |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Settings | (ASC#0) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#1) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#2) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#3) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#4) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#5) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#6) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - Persistence scaling factors | |
| - Access Service Class | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - AC-to-ASC mapping | |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - CHOICE <i>mode</i> | TDD (no data) |
| - Secondary CCPCH system information | |
| - Secondary CCPCH system information | |
| - Secondary CCPCH info | |
| - CHOICE <i>mode</i> | TDD |
| - Offset | 0 |
| - Common timeslot info | |
| - 2 nd interleaving mode | Frame |

| | |
|---|--|
| - TFCI coding | Reference clause 6.10 Parameter Set |
| - Puncturing limit | Reference clause 6.10 Parameter Set |
| - Repetition period | Not Present (MD "1") |
| - Repetition length | Not present (empty) |
| - Individual timeslot info | |
| - CHOICE TDD option | 3.84 Mcps TDD |
| - Timeslot number | 1 |
| - TFCI existence | Reference clause 6.10 Parameter Set |
| - Midamble Shift and burst type | |
| - CHOICE <i>TDD option</i> | 3.84 Mcps TDD |
| - CHOICE Burst Type | Type 1 |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration burst type 1 and 3 | 4 |
| - Midamble Shift | Not Present |
| - CHOICE <i>TDD option</i> | 3.84 Mcps TDD |
| - no data | |
| - Code List | |
| - Channelisation Code | (This IE is repeated for Code number for PCH and FACH) |
| - TFCS | (This IE is repeated for TFC number for PCH and FACH.) |
| - Normal | |
| - TFCI Field 1 information | Addition |
| - CHOICE TFCS representation | |
| - TFCS addition information | |
| - CHOICE CTFC Size | Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. |
| - CTFC information | Reference clause 6.10 Parameter Set |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Reference clause 6.10 Parameter Set |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Reference clause 6.10 Parameter Set |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |

| | |
|--|-------------------------------------|
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - CHOICE <i>mode</i> | TDD |
| - Channelisation code | 16/16 |
| - Timeslot number | 0 |
| - CHOICE <i>TDD option</i> | 3.84 Mcps TDD |
| - CHOICE Burst Type | Type 1 |
| - Midamble Shift | 0 |
| - Repetition period/length | 64/2 |
| - Offset | 0 |
| - Paging indicator length | 4 |
| - N_{GAP} | 4 |
| - N_{PCH} | 2 |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type 5 (1.28 Mcps TDD)

| | |
|--|-------------------------------------|
| - SIB6 indicator | TRUE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | TDD |
| - PUSCH system information | Not Present |
| - PDSCH system information | Not Present |
| - TDD open loop power control | |
| - Primary CCPCH Tx Power | 30 dbm |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - no data | |
| - Primary CCPCH info | |
| - CHOICE <i>mode</i> | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - TSTD indicator | FALSE |
| - Cell parameters ID | Not Present |
| - Block STTD indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - SYNC_UL info | |
| - SYNC_UL codes bitmap | "11111111" |
| - UL Target SIR | 10 dB |
| - Power Ramping Step | 3 dB |
| - Max SYNC_UL Transmissions | 8 |
| - Mmax | 32 |
| - PRACH definition | |
| - Timeslot number | |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - Timeslot number | 1 |
| - PRACH Channelisation Code List | |
| - Channelisation Code List | |
| - Channelisation Code | (8/1) |
| - Midamble Shift and burst type | |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration | 8 |
| - Midamble Shift | Not present |
| - FPACH info | |
| - Timeslot number | 6 |
| - Channelisation code | (16/16) |
| - Midamble Shift and burst type | |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - Midamble Allocation Mode | Common Midamble |
| - Midamble configuration | 8 |
| - Midamble Shift | Not present |
| - WT | 4 |
| - PNBSCH allocation | Not Present /REL-4/ |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - RACH TFCS | Not present |
| - PRACH partitioning | |
| - Access Service Class | |

| | |
|--------------------------------------|-------------------------------------|
| - ASC Settings | (ASC#0) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#1) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#2) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#3) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#4) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#5) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#6) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - Access Service Class | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - AC-to-ASC mapping | |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - CHOICE mode | TDD (no data) |
| - Secondary CCPCH system information | |
| - Secondary CCPCH system information | |
| - Secondary CCPCH info | |
| - CHOICE mode | TDD |
| - Offset | 0 |
| - Common timeslot info | |
| - 2 nd interleaving mode | Frame |
| - TFCI coding | Reference clause 6.10 Parameter Set |
| - Puncturing limit | Reference clause 6.10 Parameter Set |
| - Repetition period | 1 |
| - Repetition length | 0 |

| | |
|--|--|
| - Individual timeslot info | |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Timeslot number | 0 |
| - TFCI existence | Reference clause 6.10 Parameter Set |
| - Midamble Shift and burst type | |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration | 4 |
| - Midamble Shift | Not Present |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Modulation | Reference clause 6.10 Parameter Set |
| - SS-TPC Symbols | Reference clause 6.10 Parameter Set |
| - Code List | |
| - Channelisation Code | Reference clause 6.10 Parameter Set |
| - TFCS | Reference clause 6.10 Parameter Set |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Addition |
| - TFCS addition information | |
| - CHOICE CTFC Size | Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. |
| - CTFC information | Reference clause 6.10 Parameter Set |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - Transport Channel Identity | 12 (for PCH) |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | (This IE is repeated for TFI number.) |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 13 (for FACH) |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | (This IE is repeated for TFI number.) |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - CTCH indicator | FALSE |
| - PICH info | |
| - CHOICE <i>mode</i> | TDD |
| - Channelisation code list | |
| - Channelisation code | (16/1) |
| - Channelisation code | (16/2) |
| - Timeslot number | 0 |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Midamble shift and burst type | 0 |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration | 8 |
| - Midamble Shift | Not Present |

| | |
|-------------------------------|-------------|
| - Repetition period/length | 64/2 |
| - Offset | 0 |
| - Paging indicator length | 4 |
| - N _{GAP} | 4 |
| - N _{PCH} | 2 |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type 6 in connected mode (FDD)

| | |
|--|---------------------------|
| - PICH power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.00 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | Configured |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | Configured |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor |
| - Reference TFC ID | 0 |
| - CHOICE Mode | FDD |
| - Power offset Pp-m | 0 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor β _c | 11 |
| - Gain factor β _d | 15 |
| - Reference TFC ID | 0 |
| - CHOICE Mode | FDD |
| - Power offset Pp-m | 0 dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |

| | |
|--|---------------------------|
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#2) |
| - Available signature End Index | 7 (ASC#2) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#3) |
| - Available signature End Index | 7 (ASC#3) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#4) |
| - Available signature End Index | 7 (ASC#4) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#5) |
| - Available signature End Index | 7 (ASC#5) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#6) |
| - Available signature End Index | 7 (ASC#6) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#7) |
| - Available signature End Index | 7 (ASC#7) |
| - Assigned Sub-channel Number | '1111'B |
| - Persistence scaling factor | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping | Not Present |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system info | |
| - Secondary CCPCH info | |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 1 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |

| | |
|--|--|
| - Fixed or Flexible position | Flexible |
| - Timing offset | 0 |
| - TFCS | (This IE is repeated for TFC number for PCH and FACH.) |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS addition information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - CTFC information | 6 |
| - Power offset information | Not Present |
| - CTFC information | 8 |
| - Power offset information | Not Present |
| - CTFC information | 10 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 240 (PCCH) |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |
| - Number of Transport blocks | 3 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |

| | |
|--|---------------|
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - Channelisation code | 2 |
| - Number of PI per frame | 18 |
| - STTD indicator | FALSE |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type 6 in connected mode (similar to SIB type 5) (3.84 Mcps TDD)

| | |
|--|-------------------------------------|
| - PICH Power offset | -5 dB |
| - CHOICE Mode | TDD |
| - PUSCH system information | Not Present |
| - PDSCH system information | Not Present |
| - TDD open loop power control | |
| - Primary CCPCH Tx Power | 30 dbm |
| - Alpha | (1/8) |
| - PRACH Constant Value | -10 |
| - DPCH Constant Value | -10 |
| - PUSCH Constant Value | -10 |
| - Primary CCPCH info | |
| - CHOICE <i>mode</i> | TDD |
| - CHOICE SyncCase | Sync Case 2 |
| - Timeslot | 0 |
| - Cell parameters ID | Not Present |
| - SCTD indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE <i>mode</i> | TDD |
| - Timeslot number | 14 |
| - PRACH Channelisation Code List | |
| - CHOICE SF | SF8 |
| - Channelisation Code List | |
| - Channelisation Code | 8/1 |
| - Channelisation Code | 8/2 |
| - Channelisation Code | 8/3 |
| - Channelisation Code | 8/4 |
| - PRACH Midamble | Direct |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - RACH TFCS | Not present |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Settings | (ASC#0) |

| | |
|---|-------------------------------------|
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#1) |
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#2) |
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#3) |
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#4) |
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#5) |
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - ASC Settings | (ASC#6) |
| - CHOICE mode | TDD |
| - Available Channelisation codes indices | Not Present (Default all) |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | null |
| - Persistence scaling factors | |
| - Access Service Class | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - AC-to-ASC mapping | |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - CHOICE mode | TDD (no data) |
| - Secondary CCPCH system information | |
| - Secondary CCPCH system information | |
| - Secondary CCPCH info | |
| - CHOICE mode | TDD |
| - Offset | 0 |
| - Common timeslot info | |
| - 2 nd interleaving mode | Not Present (MD "Frame") |
| - TFCI coding | Reference clause 6.10 Parameter Set |
| - Puncturing limit | Reference clause 6.10 Parameter Set |
| - Repetition period | Not Present (MD "1") |
| - Repetition length | Not present |
| - Individual timeslot info | |
| - Timeslot number | 1 |
| - TFCI existence | Reference clause 6.10 Parameter Set |
| - Midamble Shift and burst type | |
| - CHOICE Burst Type | Type 1 |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration burst type 1 and 3 | 4 |

| | |
|--|--|
| - Midamble Shift | Not Present |
| - Code List | Reference clause 6.10 Parameter Set |
| - Channelisation Code | (This IE is repeated for TFC number for PCH and FACH.) |
| - TFCS | |
| - Normal | Addition |
| - TFCI Field 1 information | Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. |
| - CHOICE TFCS representation | Reference clause 6.10 Parameter Set |
| - TFCS addition information | Not Present |
| - CHOICE CTFC Size | |
| - CTFC information | |
| - Power offset information | |
| - FACH/PCH information | (PCH) |
| - TFS | Common transport channels |
| - CHOICE Transport channel type | |
| - Dynamic Transport format information | Reference clause 6.10 Parameter Set |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | TDD |
| - CHOICE Mode | Reference clause 6.10 Parameter Set |
| - Transmission Time Interval | ALL |
| - CHOICE Logical Channel List | |
| - Semi-static Transport Format information | Reference clause 6.10 Parameter Set |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Reference clause 6.10 Parameter Set |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 13 (for FACH) |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | (This IE is repeated for TFI number.) |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - CTCH indicator | FALSE |
| - PICH info | |
| - CHOICE <i>mode</i> | TDD |
| - Channelisation code | 16/16 |
| - Timeslot number | 0 |
| - CHOICE Burst Type | Type 1 |
| - Midamble Shift | 0 |

| | |
|-------------------------------|-------------|
| - Repetition period/length | 64/2 |
| - Offset | 0 |
| - Paging indicator length | 4 |
| - N_{GAP} | 4 |
| - N_{PCH} | 2 |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type6 In connected mode (similar to SIB type5) (1.28 Mcps TDD)

| | |
|--|-------------------------------------|
| - SIB6 indicator | TRUE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | TDD |
| - PUSCH system information | Not Present |
| - PDSCH system information | Not Present |
| - TDD open loop power control | |
| - Primary CCPCH Tx Power | 30 dbm |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - no data | |
| - Primary CCPCH info | |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - TSTD indicator | FALSE |
| - Cell parameters ID | Not Present |
| - Block STTD indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - SYNC_UL info | |
| - SYNC_UL codes bitmap | "11111111" |
| - UL Target SIR | 10 dB |
| - Power Ramping Step | 3 dB |
| - Max SYNC_UL Transmissions | 8 |
| - Mmax | 32 |
| - PRACH definition | |
| - Timeslot number | |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - Timeslot number | 1 |
| - PRACH Channelisation Code List | |
| - Channelisation Code List | |
| - Channelisation Code | (8/1) |
| - Midamble Shift and burst type | |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration | 8 |
| - Midamble Shift | Not present |
| - FPACH info | |
| - Timeslot number | 6 |
| - Channelisation code | (16/16) |
| - Midamble Shift and burst type | |
| - CHOICE TDD option | 1.28 Mcps TDD /REL-4/ |
| - Midamble Allocation Mode | Common Midamble |
| - Midamble configuration | 8 |
| - Midamble Shift | Not present |
| - WT | 4 |
| - PNBSCH allocation | Not Present /REL-4/ |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - RACH TFCS | Not present |
| - PRACH partitioning | |
| - Access Service Class | |

| | |
|--------------------------------------|-------------------------------------|
| - ASC Settings | (ASC#0) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#1) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#2) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#3) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#4) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#5) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - ASC Settings | (ASC#6) |
| - CHOICE mode | TDD |
| - CHOICE TDD option | 1.28 Mcps TDD |
| - Available SYNC_UL codes indices | "111111111" |
| - CHOICE subchannel size | Size1 |
| - Available Subchannels | Null |
| - Access Service Class | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - AC-to-ASC mapping | |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - CHOICE mode | TDD (no data) |
| - Secondary CCPCH system information | |
| - Secondary CCPCH system information | |
| - Secondary CCPCH info | |
| - CHOICE mode | TDD |
| - Offset | 0 |
| - Common timeslot info | |
| - 2 nd interleaving mode | Frame |
| - TFCI coding | Reference clause 6.10 Parameter Set |
| - Puncturing limit | Reference clause 6.10 Parameter Set |
| - Repetition period | 1 |
| - Repetition length | 0 |

| | |
|--|--|
| - Individual timeslot info | 1.28 Mcps TDD |
| - CHOICE <i>TDD option</i> | 0 |
| - Timeslot number | Reference clause 6.10 Parameter Set |
| - TFCI existence | |
| - Midamble Shift and burst type | 1.28 Mcps TDD |
| - CHOICE <i>TDD option</i> | Default midamble |
| - Midamble Allocation Mode | 4 |
| - Midamble configuration | Not Present |
| - Midamble Shift | 1.28 Mcps TDD |
| - CHOICE <i>TDD option</i> | Reference clause 6.10 Parameter Set |
| - Modulation | Reference clause 6.10 Parameter Set |
| - SS-TPC Symbols | Reference clause 6.10 Parameter Set |
| - Code List | |
| - Channelisation Code | Reference clause 6.10 Parameter Set |
| - TFCS | Reference clause 6.10 Parameter Set |
| - Normal | |
| - TFCI Field 1 information | Addition |
| - CHOICE TFCS representation | |
| - TFCS addition information | |
| - CHOICE CTFC Size | Number of bits used must be enough to cover all combinations of CTFC from clause 6.10. |
| - CTFC information | Reference clause 6.10 Parameter Set |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - Transport Channel Identity | 12 (for PCH) |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - Transport Channel Identity | 13 (for FACH) |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference clause 6.10 Parameter Set |
| - Number of TB and TTI List | Reference clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference clause 6.10 Parameter Set |
| - CHOICE Mode | TDD |
| - Transmission Time Interval | Not Present |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference clause 6.10 Parameter Set |
| - Type of channel coding | Reference clause 6.10 Parameter Set |
| - Coding Rate | Reference clause 6.10 Parameter Set |
| - Rate matching attribute | Reference clause 6.10 Parameter Set |
| - CRC size | Reference clause 6.10 Parameter Set |
| - CTCH indicator | FALSE |
| - PICH info | |
| - CHOICE <i>mode</i> | TDD |
| - Channelisation code list | |
| - Channelisation code | (16/1) |
| - Channelisation code | (16/2) |
| - Timeslot number | 0 |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Midamble shift and burst type | 0 |
| - CHOICE <i>TDD option</i> | 1.28 Mcps TDD |
| - Midamble Allocation Mode | Default midamble |
| - Midamble configuration | 8 |
| - Midamble Shift | Not Present |

| | |
|-------------------------------|-------------|
| - Repetition period/length | 64/2 |
| - Offset | 0 |
| - Paging indicator length | 4 |
| - N _{GAP} | 4 |
| - N _{PCH} | 2 |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type 7 (FDD)

| | |
|---|--------------------------------------|
| CHOICE Mode | FDD |
| - UL interference | -100dBm |
| - PRACHs listed in system information block type5 | |
| - Dynamic persistence level | 2 |
| - PRACHs listed in system information block type6 | |
| - Dynamic persistence level | 2 |
| - Expiration Time Factor | Not Present – use default value of 1 |

Contents of System Information Block type 7 (TDD)

| | |
|---|--------------------------------------|
| - PRACHs listed in system information block type5 | |
| - Dynamic persistence level | 2 |
| - PRACHs listed in system information block type6 | |
| - Dynamic persistence level | 2 |
| -Expiration Time Factor | Not Present – use default value of 1 |

Contents of System Information Block type 8, 9 (only for FDD)

This information is used for static CPCH in the cell, so this is not present.

Contents of System Information Block type 10 (only for FDD)

This information is used for DRAC, so this is not present.

Contents of System Information Block type 11 (FDD)

| | |
|---|---|
| - SIB12 indicator | TRUE |
| - FACH measurement occasion info | Not Present |
| - Measurement control system information | |
| - Use of HCS | Not used |
| - Cell_selection_and_reselection_quality_measure | CPICH RSCP |
| - Intra-frequency measurement system information | |
| - Intra-frequency measurement identity | 1 |
| - Intra-frequency cell info list | |
| - CHOICE intra-frequency cell removal | Remove no intra-frequency cells |
| - New intra-frequency cells | |
| - Intra-frequency cell id | 1 |
| - Cell info | |
| - Cell individual offset | 0dB |
| - Reference time difference to cell | Not Present |
| - Read SFN indicator | TRUE |
| - CHOICE mode | FDD |
| - Primary CPICH info | |
| - Primary scrambling code | Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1 |
| - Primary CPICH TX power | Not Present |
| - TX Diversity indicator | FALSE |
| - Cell Selection and Re-selection info | |
| - Qoffset1 _{s,n} | 0 dB |
| - Qoffset2 _{s,n} | Not Present |
| - Maximum allowed UL TX power | 33 dBm |
| - HCS neighbouring cell information | Not Present |
| - CHOICE mode | FDD |
| - Qqualmin | -20 dB |
| - Qrxlevmin | -115 dBm |
| - Cell for measurement | Not Present |
| - Intra-frequency measurement quantity | |
| - Filter coefficient | 0 |
| - Measurement quantity | CPICH RSCP |
| - Intra-frequency reporting quantity for RACH Reporting | Not Present |
| - Maximum number of reported cells on RACH | Not Present |
| - Reporting information for state CELL_DCH | |
| - Intra-frequency reporting quantity | |
| - Reporting quantities for active set cells | |
| - SFN-SFN observed time difference type | No report |
| - Cell identity reporting indicator | TRUE |
| - Cell synchronisation information reporting indicator | TRUE |
| - CHOICE mode | FDD |
| - CPICH Ec/N0 reporting indicator | FALSE |
| - CPICH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for monitored set cells | |
| - SFN-SFN observed time difference type | No report |
| - Cell identity reporting indicator | TRUE |
| - Cell synchronisation information reporting indicator | FALSE |
| - CHOICE mode | FDD |
| - CPICH Ec/N0 reporting indicator | FALSE |
| - CPICH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for detected set cells | Not Present |
| - Measurement reporting mode | |
| - Measurement Report Transfer Mode | Acknowledged mode RLC |
| - Periodic Reporting/Event Trigger Reporting Mode | Event trigger |
| - CHOICE report criteria | Intra-frequency measurement reporting criteria |
| - Intra-frequency measurement reporting criteria | |
| - Parameters required for each event | 2 kinds |
| - Intra-frequency event identity | 1a |

| | |
|--|--|
| - Triggering condition 1 | Not Present |
| - Triggering condition 2 | Active set cells and monitored set cells |
| - Reporting Range | 5dB |
| - Cells forbidden to affect Reporting range | Not Present |
| - W | 1.0 |
| - Hysteresis | 0.0 |
| - Threshold Used Frequency | Not Present |
| - Reporting deactivation threshold | 3 |
| - Replacement activation threshold | Not Present |
| - Time to trigger | 640 |
| - Amount of reporting | 4 |
| - Reporting interval | 4000 |
| - Reporting cell status | |
| - CHOICE reported cell | Report cell within active set and/or monitored set cells on used frequency |
| - Maximum number of reported cells | 3 |
| - Intra-frequency event identity | 1b |
| - Triggering condition 1 | Active set cells and monitored set cells |
| - Triggering condition 2 | Not Present |
| - Reporting Range | 5dB |
| - Cells forbidden to affect Reporting range | Not Present |
| - W | 1.0 |
| - Hysteresis | 0.0 |
| - Threshold Used Frequency | Not Present |
| - Reporting deactivation threshold | 3 |
| - Replacement activation threshold | Not Present |
| - Time to trigger | 640 |
| - Amount of reporting | 4 |
| - Reporting interval | 4000 |
| - Reporting cell status | |
| - CHOICE reported cell | Report cell within active set and/or monitored set cells on used frequency |
| - Maximum number of reported cells | 3 |
| - Inter-frequency measurement system information | Not Present |
| - Inter-RAT measurement system information | Not Present |
| - Traffic volume measurement system information | Not Present |
| - UE internal measurement system information | Not Present |

Contents of System Information Block type 11 (3.84 Mcps and 1.28 Mcps TDD)

| | |
|--|--|
| - SIB 12 Indicator | TRUE |
| - FACH measurement occasion info | Not Present |
| - Measurement control system information | |
| - Use of HCS | Not used |
| - Cell_selection_and_reselection_quality_measure | CPICH-RSCP |
| - Intra-frequency measurement system information | |
| - Intra-frequency measurement identity | 1 |
| - Intra-frequency cell info list | |
| - CHOICE intra-frequency cell removal | Remove no intra-frequency cells |
| - New intra-frequency cells | |
| - Intra-frequency cell id | 1 |
| - Cell info | |
| - Cell individual offset | 0dB |
| - Reference time difference to cell | Not Present |
| - Read SFN Indicator | TRUE |
| - CHOICE mode | TDD |
| - Primary CCPCH info | |
| - Cell parameters ID | Reference clause 6.1 Default settings for cell |
| - Primary CCPCH TX power | Not Present |
| - Timeslot list | Not Present |
| - Burst type | Not Present |
| - Cell Selection and Re-selection info | Not Present |
| - Cell for measurement | Not Present |

| | |
|---|--|
| - Intra-frequency measurement quantity | 0 |
| - Filter coefficient | TDD |
| - CHOICE mode | TDD |
| - Measurement quantity list | P-CCPCH RSCP |
| - Measurement quantity | Not Present |
| - Intra-frequency reporting quantity for RACH Reporting | Not Present |
| - Maximum number of reported cells on RACH | Not Present |
| - Reporting information for state CELL_DCH | |
| - Intra-frequency reporting quantity | |
| - Reporting quantities for active set cells | |
| - SFN-SFN observed time difference reporting indicator | No report |
| - Cell synchronisation information reporting indicator | TRUE |
| - Cell identity reporting indicator | TRUE |
| - CHOICE mode | TDD |
| - Timeslot ISCP reporting indicator | FALSE |
| - Proposal TSGN reporting required | FALSE |
| - P-CCPCH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for monitored set cells | |
| - SFN-SFN observed time difference reporting indicator | No report |
| - Cell synchronisation information reporting indicator | FALSE |
| - Cell identity reporting indicator | TRUE |
| - CHOICE mode | TDD |
| - Timeslot ISCP reporting indicator | FALSE |
| - Proposal TSGN reporting required | FALSE |
| - P-CCPCH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for detected set cells | Not Present |
| - Measurement reporting mode | |
| - Measurement Report Transfer Mode | Acknowledged mode RLC |
| - Periodical Reporting / Event Trigger | Event trigger |
| - Intra-frequency measurement reporting criteria | |
| - Parameters required for each event | |
| - Intra-frequency event identity | 1g |
| - Triggering condition1 | Not Present |
| - Triggering condition2 | Not Present |
| - Reporting Range | Not Present |
| - cells forbidden to affect reporting range | Not Present |
| - W(optional in case of 1a,1b) | Not Present |
| - Hysteresis | 0.0 |
| - Threshold used frequency | Not Present |
| - Reporting deactivation threshold | Not Present |
| - Replacement activation threshold | Not Present |
| - Time to trigger | 640 |
| - Amount of reporting | 4 |
| - Reporting interval | 4000 |
| - Reporting cell status | |
| - CHOICE reported cells | Report cell within active set and/or monitored cells on used frequency |
| - Maximum number of reported cells | 2 |
| - Inter-frequency measurement system information | Not Present |
| - Inter-RAT measurement system information | Not Present |
| - Traffic volume measurement system information | Not Present |
| - UE internal measurement system information | Not Present |

Contents of System Information Block type 12 in connected mode (FDD)

| | |
|--|-------------|
| - FACH measurement occasion info | Not Present |
| - Measurement control system information | |

| | |
|---|--|
| - Use of HCS | Not used |
| - Cell_selection_and_reselection_quality_measure | CPICH RSCP |
| - Intra-frequency measurement system information | |
| - Intra-frequency measurement identity | 1 |
| - Intra-frequency cell info list | |
| - CHOICE intra-frequency cell removal | Remove no intra-frequency cells |
| - New intra-frequency cells | |
| - Intra-frequency cell id | 1 |
| - Cell info | |
| - Cell individual offset | 0dB |
| - Reference time difference to cell | Not Present |
| - Read SFN indicator | TRUE |
| - CHOICE mode | FDD |
| - Primary CPICH info | |
| - Primary scrambling code | Refer to clause "Default settings for cell No.1 (FDD)" in clause 6.1 |
| - Primary CPICH TX power | Not Present |
| - TX Diversity indicator | FALSE |
| - Cell Selection and Re-selection info | |
| - Qoffset _{s,n} | 0 dB |
| - Qoffset _{2s,n} | Not Present |
| - Maximum allowed UL TX power | 33dBm |
| - HCS neighbouring cell information | Not Present |
| - CHOICE mode | FDD |
| - Qqualmin | -20 dB |
| - Qrxlevmin | -115 dBm |
| - Cell for measurement | Not Present |
| - Intra-frequency measurement quantity | |
| - Filter coefficient | 0 |
| - Measurement quantity | CPICH RSCP |
| - Intra-frequency reporting quantity for RACH Reporting | Not Present |
| - Maximum number of reported cells on RACH | Not Present |
| - Reporting information for state CELL_DCH | |
| - Intra-frequency reporting quantity | |
| - Reporting quantities for active set cells | |
| - SFN-SFN observed time difference type | No report |
| - Cell synchronisation information reporting indicator | TRUE |
| - Cell identity reporting indicator | TRUE |
| - CHOICE mode | FDD |
| - CPICH Ec/N0 reporting indicator | FALSE |
| - CPICH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for monitored set cells | |
| - SFN-SFN observed time difference type | No report |
| - Cell synchronisation information reporting indicator | FALSE |
| - Cell identity reporting indicator | TRUE |
| - CHOICE mode | FDD |
| - CPICH Ec/N0 reporting indicator | FALSE |
| - CPICH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for detected set cells | Not Present |
| - Measurement reporting mode | |
| - Measurement Report Transfer Mode | Acknowledged mode RLC |
| - Periodic Reporting/Event Trigger Reporting Mode | Event trigger |
| - CHOICE report criteria | Intra-frequency measurement reporting criteria |
| - Intra-frequency measurement reporting criteria | |
| - Parameters required for each event | |
| - Intra-frequency event identity | 1a |
| - Triggering condition 1 | Not Present |
| - Triggering condition 2 | Active set cells and monitored set cells |
| - Reporting Range | 5dB |
| - Cells forbidden to affect reporting range | Not Present |

| | |
|--|--|
| - W | 1.0 |
| - Hysteresis | 0.0 |
| - Threshold Used Frequency | Not Present |
| - Reporting deactivation threshold | 3 |
| - Replacement activation threshold | Not Present |
| - Time to trigger | 640 |
| - Amount of reporting | 4 |
| - Reporting interval | 0 |
| - Reporting cell status | |
| - CHOICE reported cell | Report cell Within active set and/or monitored set cells on used frequency |
| - Maximum number of reported cells | 3 |
| - Intra-frequency event identity | 1b |
| - Triggering condition 1 | Active set cells and monitored set cells |
| - Triggering condition 2 | Not Present |
| - Reporting Range | 5dB |
| - Cells forbidden to affect Reporting range | Not Present |
| - W | 1.0 |
| - Hysteresis | 0.0 |
| - Threshold Used Frequency | Not Present |
| - Reporting deactivation threshold | 3 |
| - Replacement activation threshold | Not Present |
| - Time to trigger | 640 |
| - Amount of reporting | 4 |
| - Reporting interval | 4000 |
| - Reporting cell status | |
| - CHOICE reported cell | Report cell within active set and/or monitored set cells on used frequency |
| - Maximum number of reported cells | 3 |
| - Inter-frequency measurement system information | Not Present |
| - Inter-RAT measurement system information | Not Present |
| - Traffic volume measurement system information | Not Present |
| - UE internal measurement system information | Not Present |

Contents of System Information Block type 12 in connected mode (similar to SIB type11) (3.84 Mcps and 1.28 Mcps TDD)

| | |
|--|--|
| - FACH measurement occasion info | Not Present |
| - Measurement control system information | |
| - Use of HCS | Not used |
| - Cell_selection_and_reselection_quality_measure | CPICH-RSCP |
| - Intra-frequency measurement system information | |
| - Intra-frequency measurement identity | 1 |
| - Intra-frequency cell info list | |
| - CHOICE intra-frequency cell removal | Remove no intra-frequency cells |
| - New intra-frequency cells | |
| - Intra-frequency cell id | 1 |
| - Cell info | |
| - Cell individual offset | 0dB |
| - Reference time difference to cell | Not Present |
| - Read SFN Indicator | TRUE |
| - CHOICE mode | TDD |
| - Primary CCPCH info | |
| - Cell parameters ID | Reference clause 6.1 Default settings for cell |
| - Primary CCPCH TX power | Not Present |
| - Timeslot list | Not Present |
| - Burst type | |
| - Cell Selection and Re-selection info | Not Present |
| - Cell for measurement | Not present |
| - Intra-frequency measurement quantity | |
| - Filter coefficient | 0 |
| - CHOICE mode | TDD |
| - Measurement list | |

| | |
|---|--|
| - Measurement quantity | P-CCPCH RSCP |
| - Intra-frequency reporting quantity for RACH Reporting | Not Present |
| - Maximum number of reported cells on RACH | No report |
| - Reporting information for state CELL_DCH | |
| - Intra-frequency reporting quantity | |
| - Reporting quantities for active set cells | |
| - SFN-SFN observed time difference reporting indicator | No report |
| - Cell synchronisation information reporting indicator | TRUE |
| - Cell identity reporting indicator | TRUE |
| - CHOICE mode | TDD |
| - Timeslot ISCP reporting indicator | FALSE |
| - Proposal TSGN reporting required | FALSE |
| - P-CCPCH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for monitored set cells | |
| - SFN-SFN observed time difference reporting indicator | No report |
| - Cell synchronisation information reporting indicator | FALSE |
| - Cell identity reporting indicator | TRUE |
| - CHOICE mode | TDD |
| - Timeslot ISCP reporting indicator | FALSE |
| - Proposal TSGN reporting required | FALSE |
| - P-CCPCH RSCP reporting indicator | TRUE |
| - Pathloss reporting indicator | FALSE |
| - Reporting quantities for detected set cells | Not Present |
| - Measurement reporting mode | |
| - Measurement Report Transfer Mode | Acknowledged mode RLC |
| - Periodical Reporting / Event Trigger Reporting Mode | Event trigger |
| - Intra-frequency measurement reporting criteria | |
| - Parameters required for each event | |
| - Intra-frequency event identity | 1g |
| - Triggering condition1 | Not Present |
| - Triggering condition2 | Not Present |
| - Reporting Range | Not Present |
| - cells forbidden to affect reporting range | Not Present |
| - W(optional in case of 1a,1b) | Not Present |
| - Hysteresis | 0.0 |
| - Threshold used frequency | Not Present |
| - Reporting deactivation threshold | Not Present |
| - Replacement activation threshold | Not Present |
| - Time to trigger | 640 |
| - Amount of reporting | 4 |
| - Reporting interval | 4000 |
| - Reporting cell status | |
| - CHOICE reported cells | Report cell within active set and/or monitored cells on used frequency |
| - Maximum number of reported cells | 2 |
| - Inter-frequency measurement system information | Not Present |
| - Inter-RAT measurement system information | Not Present |
| - Traffic volume measurement system information | Not Present |
| - UE internal measurement system information | Not Present |

Contents of System Information Block type 13 (used when supported PLMN type is ANSI-41)

| | |
|---|-----------------------------------|
| - CN Domain system information list | |
| - CN Domain system information | <i>For Packet-Switched domain</i> |
| - CN domain identity | PS |
| - CHOICE CN Type | ANSI-41 |
| - CN domain specific NAS system information | |
| - NAS (ANSI-41) system information | T.B.D |

| | |
|--|------------------------------------|
| - CN domain specific DRX cycle length coefficient | 7 |
| - CN Domain system information | <i>For Circuit-Switched domain</i> |
| - CN domain identity | CS |
| - CHOICE CN Type | ANSI-41 |
| - CN domain specific NAS system information | |
| - NAS (ANSI-41) system information | T.B.D |
| - CN domain specific DRX cycle length coefficient | 7 |
| - UE timers and constants in idle mode | |
| - T300 | 400 milliseconds |
| - N300 | 7 |
| - T312 | 10 seconds |
| - N312 | 200 |
| - Capability update requirement | |
| - UE radio access FDD capability update requirement | TRUE |
| - UE radio access TDD capability update requirement | FALSE |
| - System specific capability update requirement list | Not Present |

Contents of System Information Block type 14 (3.84 Mcps TDD)

| | |
|---|----------------------|
| - Individual Timeslot interference list | |
| - Individual Timeslot interference | |
| - Timeslot number | 2 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 3 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 4 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 5 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 6 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 7 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 9 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 10 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 11 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 12 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 13 |
| - UL Timeslot Interference | -90 dbm |
| - Individual Timeslot interference | |
| - Timeslot number | 14 |
| - UL Timeslot Interference | -90 dbm |
| - Expiration Time Factor | Not Present (MD "1") |

Contents of System Information Block type 16

| | |
|---------------------------------|-------|
| - Predefined RB configuration | [FFS] |
| - Predefined TrCh configuration | [FFS] |
| - Predefined Phy configuration | [FFS] |

Contents of System Information Block type 17 (3.84 Mcps TDD and 1.28 Mcps TDD)

This system information block contains fast changing parameters for the configuration of the shared physical channels to be used in connected mode, so this is not present.

Contents of System Information Block type 18

| | |
|---------------------------------------|---|
| - Idle mode PLMN identities | Set to the same value as indicated in MIB |
| - PLMNs of intra-frequency cells list | |
| - PLMN identity | |
| - PLMNs of inter-frequency cells list | |
| - PLMNs of inter-RAT cells list | |
| - Connected mode PLMN identities | Not present |

Default settings for cell No.1 (FDD):

| | |
|------------------------------|--|
| Downlink input level | Reference clause 6.10 Parameter Set |
| Uplink output power | Minimum supported by the UE's power class. |
| PCCPCH/PCPICH carrier number | Reference clause 6.10 Parameter Set |
| Cell Channel Description | |
| - Primary CPICH info | |
| - Primary scrambling code | 100 |

Default settings for cell No.1 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|------------------------------|--|
| Downlink input level | Reference clause 6.10 Parameter Set |
| Uplink output power | Minimum supported by the UE's power class. |
| PCCPCH/PCPICH carrier number | Reference clause 6.10 Parameter Set |
| Cell Channel Description | |
| - Primary CCPCH info | |
| - Cell parameters ID | 0 |

Cell No.2

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.2 are identical to those of cell No.1 with the following exceptions:

| | |
|---------------|-------------------------------------|
| Cell identity | 0000 0000 0000 0000 0000 0000 0010B |
| URA identity | 0000 0000 0000 0001B |

Default settings for cell No.2 (FDD):

| | |
|------------------------------|--|
| Downlink input level | Reference clause 6.10 Parameter Set |
| Uplink output power | Minimum supported by the UE's power class. |
| PCCPCH/PCPICH carrier number | Reference clause 6.10 Parameter Set |
| Cell Channel Description | |
| - Primary CPICH info | |
| - Primary scrambling code | 150 |

Default settings for cell No.2 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 4 |
|---|---|

Cell No.3

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.3 are identical to those of cell No.1 with the following exceptions:

| | |
|-------------------------------|---|
| Cell identity URA identity | 0000 0000 0000 0000 0000 0000 0011B 0000 0000 0000 0010B |
|-------------------------------|---|

Default settings for cell No.3 (FDD):

| | |
|--|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 200 |
|--|---|

Default settings for cell No.3 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 8 |
|---|---|

Cell No.4

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.4 are identical to those of cell No.1 with the following exceptions:

| | |
|-------------------------------|---|
| Cell identity URA identity | 0000 0000 0000 0000 0000 0000 0100B 0000 0000 0000 0010B |
|-------------------------------|---|

Default settings for cell No.4 (FDD):

| | |
|--|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 250 |
|--|---|

Default settings for cell No.4 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|--|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 12 |
|---|--|

Cell No.5

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.5 are identical to those of cell No.1 with the following exceptions:

| | |
|-------------------------------|---|
| Cell identity URA identity | 0000 0000 0000 0000 0000 0000 0101B 0000 0000 0000 0011B |
|-------------------------------|---|

Default settings for cell No.5 (FDD):

| | |
|--|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 300 |
|--|---|

Default settings for cell No.5 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 114 |
|---|---|

Cell No.6

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.6 are identical to those of cell No.1 with the following exceptions:

| | |
|-------------------------------|---|
| Cell identity URA identity | 0000 0000 0000 0000 0000 0000 0110B 0000 0000 0000 0011B |
|-------------------------------|---|

Default settings for cell No.6 (FDD):

| | |
|--|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 350 |
|--|---|

Default settings for cell No.6 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 119 |
|---|---|

Cell No.7

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.7 are identical to those of cell No.1 with the following exceptions:

| | |
|-------------------------------|---|
| Cell identity URA identity | 0000 0000 0000 0000 0000 0000 0111B 0000 0000 0000 0100B |
|-------------------------------|---|

Default settings for cell No.7 (FDD):

| | |
|--|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 400 |
|--|---|

Default settings for cell No.7 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 123 |
|---|---|

Cell No.8

The contents of SYSTEM INFORMATION BLOCK TYPE 1 to 16 messages for cell No.8 are identical to those of cell No.1 with the following exceptions:

| | |
|-------------------------------|---|
| Cell identity URA identity | 0000 0000 0000 0000 0000 0000 1000B 0000 0000 0000 0100B |
|-------------------------------|---|

Default settings for cell No.8 (FDD):

| | |
|--|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CPICH info - Primary scrambling code | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 450 |
|--|---|

Default settings for cell No.8 (3.84 Mcps TDD and 1.28 Mcps TDD):

| | |
|---|---|
| Downlink input level Uplink output power PCCPCH/PCPICH carrier number Cell Channel Description - Primary CCPCH info - Cell parameters ID | Reference clause 6.10 Parameter Set Minimum supported by the UE's power class. Reference clause 6.10 Parameter Set 127 |
|---|---|

Reference Radio Conditions for signalling test cases only (FDD)

The following transmission parameters shall be used for signalling test cases only unless otherwise stated in the description of the individual test case.

Table 6.1.3 are the default settings for a non-suitable cell which is configured and always present whereas Table 6.1.4 is for a cell that is switched off. Cells configured according to Table 6.1.3 are for test cases in which it is necessary to make a cell unsuitable, and then subsequently make it suitable. This could be achieved by switching the cell off and then reconfiguration as in Table 6.1.4, but this takes a lot of time to do.

Table 6.1.1: Default settings for a serving cell in a single cell environment

| Parameter | Unit | Cell 1 |
|---|--------------|--------------|
| Cell type | | Serving cell |
| UTRA RF Channel Number | | Channel 1 |
| Qqualmin | dB | -24 |
| Qrxlevmin | dBm | -80 |
| UE_TXPWR_MAX_RACH | dBm | 21 |
| CPICH Ec (see notes 1 and 2) | dBm/3.84 MHz | -60 |
| NOTE 1: The power level is specified in terms of CPICH_Ec instead of CPICH_RSCP as RSCP is a receiver measurement and only CPICH_Ec can be directly controlled by the SS. | | |
| NOTE 2: The cell fulfils TS 25.304, 5.2.3.1.2 and TS 25.133, 8.1.2.2.1. | | |

Table 6.1.2: Default settings for a serving cell and a suitable neighbour cell in a multi-cell environment

| Parameter | Unit | Cell 1 | Cell 2 |
|---|--------------|--------------|-------------------------|
| Cell type | | Serving cell | Suitable neighbour cell |
| UTRA RF Channel Number | | Channel 1 | Channel 1 |
| Qqualmin | dB | -24 | -24 |
| Qrxlevmin | dBm | -80 | -80 |
| UE_TXPWR_MAX_RACH | dBm | 21 | 21 |
| CPICH Ec (see notes 1 and 2) | dBm/3.84 MHz | -60 | -70 |
| NOTE 1: The power level is specified in terms of CPICH_Ec instead of CPICH_RSCP as RSCP is a receiver measurement and only CPICH_Ec can be directly controlled by the SS. | | | |
| NOTE 2: Both cells fulfil TS 25.304, 5.2.3.1.2 and TS 25.133, 8.1.2.2.1. | | | |

Table 6.1.3: Default settings for a non-suitable cell

| Parameter | Unit | Level |
|---|--------------|-------|
| Qqualmin | dB | -24 |
| Qrxlevmin | dBm | -80 |
| UE_TXPWR_MAX_RACH | dBm | 21 |
| CPICH_Ec (see notes 1 and 2) | dBm/3.84 MHz | -90 |
| NOTE 1: The power level is specified in terms of CPICH_Ec instead of CPICH_RSCP as RSCP is a receiver measurement and only CPICH_Ec can be directly controlled by the SS. | | |
| NOTE 2: The cell is not suitable according to TS 25.304, 5.2.3.1.2. | | |

Table 6.1.4: Default settings for a non-suitable "Off" cell

| Parameter | Unit | Level |
|---|--------------|--------|
| Qqualmin | dB | -24 |
| Qrxlevmin | dBm | -80 |
| UE_TXPWR_MAX_RACH | dBm | 21 |
| CPICH_Ec (see notes 1 and 2) | dBm/3.84 MHz | ≤ -122 |
| NOTE 1: The power level is specified in terms of CPICH_Ec instead of CPICH_RSCP as RSCP is a receiver measurement and only CPICH_Ec can be directly controlled by the SS. | | |
| NOTE 2: The cell is not suitable according to TS 25.304, 5.2.3.1.2. | | |

Table 6.1.5: Default power levels of physical channels relative to CPICH_Ec

| Parameter | Unit | Level Idle mode | Level Connected mode |
|-----------|--|--------------------|-------------------------|
| DPCH_Ec | dB | (NOTE) | -5 |
| PCCPCH_Ec | dB | | -2 |
| SCCPCH_Ec | dB | | -2 |
| AICH_Ec | dB | | -5 |
| SCH_Ec | dB | | -2 |
| PICH_Ec | dB | | -5 |
| NOTE: | This shall be less than -122 dBm to ensure the channel is considered as "off". | | |

Reference Radio Conditions for signalling test cases only (TDD)

<FFS>

6.1.1 SCCPCH configuration with Stand-alone SRB for PCCH in the first SCCPCH and Interactive/Background 32 kbps PS RAB + SRBs for CCCH/DCCH/BCCH in the second SCCPCH

Two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/DCCH/BCCH.

This Reference System Configuration is the same as defined in chapter 6.1, except for the following SIBs.

Contents of System Information Block type 5 (FDD)

| | |
|--|--|
| - SIB6 indicator | TRUE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH Power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.0 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor, reference TFC id = 0 |
| - Power offset Pp-m | -5 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor β_c | 10 |
| - Gain factor β_d | 15 |
| - Reference TFC ID | 0 |
| - Power offset Pp-m | -5dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |

| | |
|--|-----------------------------|
| - Available signature Start Index | 0 (ASC#2) |
| - Available signature End Index | 7 (ASC#2) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#3) |
| - Available signature End Index | 7 (ASC#3) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#4) |
| - Available signature End Index | 7 (ASC#4) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#5) |
| - Available signature End Index | 7 (ASC#5) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#6) |
| - Available signature End Index | 7 (ASC#6) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#7) |
| - Available signature End Index | 7 (ASC#7) |
| - Assigned Sub-channel Number | '1111'B |
| - Persistence scaling factor | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system information | (For 2 SCCPCHs) |
| - Secondary CCPCH info | (SCCPCH for standalone PCH) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 128 |
| - Code number | 4 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | FALSE |
| - Fixed or Flexible position | Fixed |
| - Timing offset | 30 |
| - TFCS | |

| | |
|--|------------------------------|
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 240 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - Channelisation code | 2 |
| - Number of PI per frame | 18 |
| - STTD indicator | FALSE |
| - Secondary CCPCH info | (SCCPCH including two FACHs) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 1 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |
| - Timing offset | 0 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |

| | |
|--|---------------------------|
| - Number of Transport blocks | 3 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 220 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - CBS DRX Level 1 information | Not Present |

Contents of System Information Block type 6 in connected mode (FDD)

| | |
|--|--|
| - PICH Power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH Power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.0 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor, reference TFC id=0 |
| - Power offset Pp-m | -5 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor β_c | 10 |
| - Gain factor β_d | 15 |
| - Reference TFC ID | 0 |
| - Power offset Pp-m | -5dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#2) |

| | |
|--|-----------------------------|
| - Available signature End Index | 7 (ASC#2) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#3) |
| - Available signature End Index | 7 (ASC#3) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#4) |
| - Available signature End Index | 7 (ASC#4) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#5) |
| - Available signature End Index | 7 (ASC#5) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#6) |
| - Available signature End Index | 7 (ASC#6) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#7) |
| - Available signature End Index | 7 (ASC#7) |
| - Assigned Sub-channel Number | '1111'B |
| - Persistence scaling factor | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping table | Not present |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system information | (For 2 SCCPCHs) |
| - Secondary CCPCH info | (SCCPCH for standalone PCH) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 128 |
| - Code number | 4 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | FALSE |
| - Fixed or Flexible position | Fixed |
| - Timing offset | 30 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |

| | |
|--|------------------------------|
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 240 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - Channelisation code | 2 |
| - Number of PI per frame | 18 |
| - STTD indicator | FALSE |
| - Secondary CCPCH info | (SCCPCH including two FACHs) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 1 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |
| - Timing offset | 0 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |
| - Number of Transport blocks | 3 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 220 |

| | |
|--|---------------------------|
| - CRC size | 16 bit |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - CBS DRX Level 1 information | Not Present |

6.1.2 SCCPCH configuration with Stand-alone SRB for PCCH in the first SCCPCH, RB for CTCH + SRBs for CCCH/BCCH in the second SCCPCH and Interactive/Background 32 kbps PS RAB + SRBs for CCCH/DCCH/BCCH in the third SCCPCH

Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

This Reference System Configuration is the same as defined in chapter 6.1, except for the following SIBs.

Contents of System Information Block type 5 (FDD)

| | |
|--|--|
| - SIB6 indicator | TRUE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH Power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.0 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor, reference TFC id=0 |
| - Power offset Pp-m | -5 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor β_c | 10 |
| - Gain factor β_d | 15 |
| - Reference TFC ID | 0 |
| - Power offset Pp-m | -5dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |

| | |
|--|-----------------------------|
| - Available signature Start Index | 0 (ASC#2) |
| - Available signature End Index | 7 (ASC#2) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#3) |
| - Available signature End Index | 7 (ASC#3) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#4) |
| - Available signature End Index | 7 (ASC#4) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#5) |
| - Available signature End Index | 7 (ASC#5) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#6) |
| - Available signature End Index | 7 (ASC#6) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#7) |
| - Available signature End Index | 7 (ASC#7) |
| - Assigned Sub-channel Number | '1111'B |
| - Persistence scaling factor | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system information | (For 2 SCCPCHs) |
| - Secondary CCPCH info | (SCCPCH for standalone PCH) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 128 |
| - Code number | 4 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | FALSE |
| - Fixed or Flexible position | Fixed |
| - Timing offset | 30 |
| - TFCS | |

| | |
|--|------------------------------|
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 240 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - Channelisation code | 2 |
| - Number of PI per frame | 18 |
| - STTD indicator | FALSE |
| - Secondary CCPCH info | (SCCPCH including two FACHs) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 128 |
| - Code number | 5 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |
| - Timing offset | 0 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |

| | |
|--|---------------------------|
| - FACH/PCH information | |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/3 |
| - Rate matching attribute | 220 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/3 |
| - Rate matching attribute | 220 |
| - CRC size | 16bit |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | TRUE |
| - CBS DRX Level 1 information | |
| - Period of CTCH allocation (N) | 2 |
| - CBS frame offset (K) | 0 |

Contents of System Information Block type 6 in connected mode (FDD)

| | |
|--|---|
| - PICH Power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH Power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.0 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor reference TFC id=0 |
| - Power offset Pp-m | -5 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor β_c | 10 |
| - Gain factor β_d | 15 |
| - Reference TFC ID | 0 |
| - Power offset Pp-m | -5dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#2) |

| | |
|--|------------------------------|
| - Available signature End Index | 7 (ASC#2) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#3) |
| - Available signature End Index | 7 (ASC#3) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#4) |
| - Available signature End Index | 7 (ASC#4) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#5) |
| - Available signature End Index | 7 (ASC#5) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#6) |
| - Available signature End Index | 7 (ASC#6) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#7) |
| - Available signature End Index | 7 (ASC#7) |
| - Assigned Sub-channel Number | '1111'B |
| - Persistence scaling factor | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping table | Not present |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system information | |
| - Secondary CCPCH info | (SCCPCH including two FACHs) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 1 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |
| - Timing offset | 90 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |

| | |
|--|---------------------------|
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |
| - Number of Transport blocks | 3 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 220 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 16 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 17 (for FACH) |
| - CTCH indicator | FALSE |
| - CBS DRX Level 1 information | Not Present |

6.1.3 SCCPCH configuration with Stand-alone SRB for PCCH in the first SCCPCH and Interactive/Background 32 kbps PS RAB + SRBs for CCCH/DCCH/BCCH in the second and third SCCPCHs

Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

This Reference System Configuration is the same as defined in chapter 6.1, except for the following SIBs. (SIB6 is not used in this configuration.)

Contents of Scheduling Block 1 (FDD)

| | |
|---|----------------|
| - References to other system information blocks | |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |

| | |
|--------------------------|----------------------------|
| - SEG_COUNT | 3 |
| - SIB_REP | 128 |
| - SIB_POS | 26 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 5 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 1 |
| - SIB_REP | 128 |
| - SIB_POS | 22 |
| - SIB_POS offset info | Not Present – use default |
| - SIB type SIBs only | System Information Type 7 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 2 |
| - SIB_REP | 128 |
| - SIB_POS | 58 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 11 |
| - Scheduling information | |
| - CHOICE Value tag | Cell Value tag |
| - Cell Value tag | 1 |
| - SEG_COUNT | 2 |
| - SIB_REP | 128 |
| - SIB_POS | 106 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 12 |
| - Scheduling information | |
| - CHOICE Value tag | PLMN Value tag |
| - PLMN Value tag | 1 |
| - SEG_COUNT | 6 |
| - SIB_REP | 128 |
| - SIB_POS | 74 |
| - SIB_POS offset info | |
| - SIB_OFF | 2 |
| - SIB_OFF | 2 |
| - SIB_OFF | 8 |
| - SIB_OFF | 4 |
| - SIB_OFF | 2 |
| - SIB type SIBs only | System Information Type 16 |

Contents of System Information Block type 5 (FDD)

| | |
|--|---|
| - SIB6 indicator | FALSE |
| - PICH Power offset | -5 dB |
| - CHOICE Mode | FDD |
| - AICH Power offset | 5 dB |
| - Primary CCPCH info | |
| - TX Diversity indicator | FALSE |
| - PRACH system information list | |
| - PRACH system information | |
| - PRACH info | |
| - CHOICE mode | FDD |
| - Available Signature | '0000 0000 1111 1111'B |
| - Available SF | 64 |
| - Preamble scrambling code number | 0 |
| - Puncturing Limit | 1.0 |
| - Available Sub Channel number | '1111 1111 1111'B |
| - Transport Channel Identity | 15 |
| - RACH TFS | |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - RLC size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 20 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 150 |
| - CRC size | 16 |
| - RACH TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factor reference TFC id=0 |
| - Power offset Pp-m | -5 dB |
| - CTFC information | 1 |
| - Power offset information | |
| - CHOICE Gain Factors | Signalled Gain Factor |
| - Gain factor βc | 10 |
| - Gain factor βd | 15 |
| - Reference TFC ID | 0 |
| - Power offset Pp-m | -5dB |
| - PRACH partitioning | |
| - Access Service Class | |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#0) |
| - Available signature End Index | 7 (ASC#0) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#1) |
| - Available signature End Index | 7 (ASC#1) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |

| | |
|--|-----------------------------|
| - Available signature Start Index | 0 (ASC#2) |
| - Available signature End Index | 7 (ASC#2) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#3) |
| - Available signature End Index | 7 (ASC#3) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#4) |
| - Available signature End Index | 7 (ASC#4) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#5) |
| - Available signature End Index | 7 (ASC#5) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#6) |
| - Available signature End Index | 7 (ASC#6) |
| - Assigned Sub-channel Number | '1111'B |
| - ASC Setting | |
| - CHOICE mode | FDD |
| - Available signature Start Index | 0 (ASC#7) |
| - Available signature End Index | 7 (ASC#7) |
| - Assigned Sub-channel Number | '1111'B |
| - Persistence scaling factor | |
| - Persistence scaling factor | 0.9 (for ASC#2) |
| - Persistence scaling factor | 0.9 (for ASC#3) |
| - Persistence scaling factor | 0.9 (for ASC#4) |
| - Persistence scaling factor | 0.9 (for ASC#5) |
| - Persistence scaling factor | 0.9 (for ASC#6) |
| - Persistence scaling factor | 0.9 (for ASC#7) |
| - AC-to-ASC mapping table | |
| - AC-to-ASC mapping | 6 (AC0-9) |
| - AC-to-ASC mapping | 5 (AC10) |
| - AC-to-ASC mapping | 4 (AC11) |
| - AC-to-ASC mapping | 3 (AC12) |
| - AC-to-ASC mapping | 2 (AC13) |
| - AC-to-ASC mapping | 1 (AC14) |
| - AC-to-ASC mapping | 0 (AC15) |
| - Primary CPICH DL TX power | 31 |
| - Constant value | -10 |
| - PRACH power offset | |
| - Power Ramp Step | 3dB |
| - Preamble Retrans Max | 2 |
| - RACH transmission parameters | |
| - Mmax | 2 |
| - NB01min | 3 slot |
| - NB01max | 10 slot |
| - AICH info | |
| - Channelisation code | 3 |
| - STTD indicator | FALSE |
| - AICH transmission timing | 0 |
| - Secondary CCPCH system information | (For 3 SCCPCHs) |
| - Secondary CCPCH info | (SCCPCH for standalone PCH) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 128 |
| - Code number | 6 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | FALSE |
| - Fixed or Flexible position | Fixed |
| - Timing offset | 30 |
| - TFCS | |

| | |
|--|------------------------------|
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 2 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (PCH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 240 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | $\frac{1}{2}$ |
| - Rate matching attribute | 230 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 12 (for PCH) |
| - CTCH indicator | FALSE |
| - PICH info | |
| - Channelisation code | 2 |
| - Number of PI per frame | 18 |
| - STTD indicator | FALSE |
| - Secondary CCPCH info | (SCCPCH including two FACHs) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 1 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |
| - Timing offset | 0 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |

| | |
|--|------------------------------|
| - Number of Transport blocks | 3 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 220 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 13 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 14 (for FACH) |
| - CTCH indicator | FALSE |
| - Secondary CCPCH info | (SCCPCH including two FACHs) |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - Secondary CPICH info | Not Present |
| - Secondary scrambling code | Not Present |
| - STTD indicator | FALSE |
| - Spreading factor | 64 |
| - Code number | 2 |
| - Pilot symbol existence | FALSE |
| - TFCI existence | TRUE |
| - Fixed or Flexible position | Flexible |
| - Timing offset | 90 |
| - TFCS | |
| - Normal | |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete |
| - TFCS addition information | |
| - CHOICE CTFC Size | 4 bit |
| - CTFC information | 0 |
| - Power offset information | Not Present |
| - CTFC information | 1 |
| - Power offset information | Not Present |
| - CTFC information | 2 |
| - Power offset information | Not Present |
| - CTFC information | 3 |
| - Power offset information | Not Present |
| - CTFC information | 4 |
| - Power offset information | Not Present |
| - CTFC information | 5 |
| - Power offset information | Not Present |
| - FACH/PCH information | |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 168 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - Number of Transport blocks | 2 |
| - Number of Transport blocks | 3 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |

| | |
|--|---------------------------|
| - Transmission time interval | 10 ms |
| - Type of channel coding | Convolutional |
| - Coding Rate | 1/2 |
| - Rate matching attribute | 220 |
| - CRC size | 16 bit |
| - Transport Channel Identity | 16 (for FACH) |
| - CTCH indicator | FALSE |
| - TFS | (FACH) |
| - CHOICE Transport channel type | Common transport channels |
| - Dynamic Transport format information | |
| - RLC Size | 360 |
| - Number of TB and TTI List | |
| - Number of Transport blocks | 0 |
| - Number of Transport blocks | 1 |
| - CHOICE Mode | FDD |
| - CHOICE Logical Channel List | ALL |
| - Semi-static Transport Format information | |
| - Transmission time interval | 10 ms |
| - Type of channel coding | Turbo |
| - Rate matching attribute | 130 |
| - CRC size | 16bit |
| - Transport Channel Identity | 17 (for FACH) |
| - CTCH indicator | FALSE |
| - CBS DRX Level 1 information | Not Present |

6.2 Number of neighbour cells

The options for the number of neighbour cells (ie the total number of active cells in the simulated network) are given below. See clause 6.1 for cell configurations.

6.2.1 Basic Network

| Number of Cells | Use of Network Configuration |
|-----------------|--|
| 1 | Basic UE registration; RRC Connection Establishment and Release; operation of dedicated channels in non-handover modes; general RF and EMC testing |

6.2.2 Soft Handover Network (FDD)

| Number of Cells | Use of Network Configuration/Constraints |
|-----------------|---|
| 2 | Can be used in place of basic network, plus offering operation of dedicated channels in 2 way soft handover or in 2 way SSDT handover for RF or signalling tests; simple cell reselection tests |

6.2.3 Hard Handover Network

| Number of Cells | Use of Network Configuration |
|-----------------|--|
| 2 | Can be used in place of basic network, plus offering operation in 2 cell hard handover (inter-frequency) |

6.2.4 'Roaming' Network

| Number of Cells | Use of Network Configuration |
|-----------------|---|
| 7 | This configuration is intended to provide the capability for extensive cell selection and reselection testing, as defined under Idle Mode Testing. It is <ffs> if 7 is the correct number of cells and also <ffs> is the number of separate RF channels to be supported by the 'Roaming Network' |

6.3 Cell/BS codes etc

See clause 6.1.

6.4 Routing/location area

See clause 6.1.

6.5 Network options settings

See clause 6.1.

6.6 Power control mode

6.6.1 Downlink Power Control

6.6.1.1 Outer Loop Power Control

This is used to set the SIR requirements from the given BER/BLER requirements for the dedicated channel – the reference configuration is for the BER/BLER and SIR requirements to be fixed, ie Outer Loop Power Control is disabled.

6.6.1.2 Inner Loop Power Control

The inner loop power control adjusts the power of the dedicated channel to meet the SIR requirements. The reference condition is for the Inner Loop Power Control to be disabled.

6.6.2 Uplink Power Control

6.6.2.1 Outer Loop Power Control

This is used to set the SIR requirements from the given BER/BLER requirements for the dedicated channel – the reference configuration is for the BER/BLER and SIR requirements to be fixed, ie Outer Loop Power Control is disabled.

6.6.2.2 Inner Loop Power Control (FDD)

The inner loop power control adjusts the power of the dedicated channel to meet the SIR requirements.

6.7 Tx Diversity modes

The reference settings for Tx Diversity Mode shall be

6.7.1 Non-Diverse Operation

DL Transmit Diversity shall be disabled on all cells in the simulated network

6.7.2 Diverse Operation

6.7.2.1 Diverse Operation (FDD mode)

The diversity options applied to the DL channels shall be as below for all cells in the simulated network.

| Channel | Open loop mode | | Closed loop Mode |
|---------|----------------|------|------------------|
| | TSTD | STTD | |
| P-CCPCH | – | X | – |
| SCH | X | – | – |
| S-CCPCH | – | X | – |
| DPCH | – | X | – |
| PICH | – | X | – |
| AICH | – | X | – |

6.7.2.2 Diverse Operation (TDD mode)

The diversity options applied to the DL channels shall be as below for all cells in the simulated network

6.7.2.2.1 3.84.Mcps option

| Physical channel type | Open loop TxDiversity | | Closed loop TxDiversity |
|-----------------------|-----------------------|------|-------------------------|
| | TSTD | SCTD | |
| P-CCPCH | – | X | – |
| SCH | X | – | – |
| DPCH | – | – | X |

6.7.2.2.2 1.28 Mcps option

| Physical channel type | Open loop TxDiversity | | Closed loop TxDiversity |
|-----------------------|-----------------------|------------|-------------------------|
| | TSTD | Block STTD | |
| P-CCPCH | X | X | – |
| DwPCH | X | – | – |
| DPCH | X | – | X |

6.8 Compressed Mode Parameters (FDD)

The reference configuration is that Compressed Mode is disabled, except when the Hard Handover (inter-frequency network configuration is being used). It is necessary to define a set of compressed mode parameters to be used for inter-frequency hard handover.

6.8.1 Normal Operation

Downlink Compressed Mode – disabled.

Uplink Compressed Mode – disabled.

6.8.2 Inter-Frequency Hard Handover

Downlink compressed Mode – enabled

Parameters

Downlink Compression Method

SF Reduction

Left/Right Alternative DL Scrambling Codes

No

Compressed Mode Sequence and Parameters

Frame Structure Type A

SFN for first transmission gap

Fixed Gap Position

TGL = 7

Double Slot Gap

TGP

TGD

PD

Uplink Compressed Mode - disabled

6.9 BCCH parameters

See clause 6.1.

6.10 Reference Radio Bearer configurations used in Radio Bearer interoperability testing

The reference radio bearer configurations are typical configurations of the radio interface. This sub-set of the mandatory set of radio bearer configurations supported by the UE is intended to be used as test configurations for testing of the UE. The purpose of the reference radio bearer configurations is to ensure interoperability of UE's in different regions and networks.

The reference radio bearer configurations are used in the radio bearer interoperability test cases, clause 14 of TS 34.123-1 [1]. The reference radio bearer configurations are also intended to be the first choice for other test cases where a radio bearer configuration is needed. For test cases requiring alternative configurations not provided by the reference radio bearer configurations then these specific radio bearer configurations are either specified in the actual test case itself; or in case the configurations are used by more than one test case then these common radio bearer configurations are specified in clause 6.11 of the present document.

NOTE If not specifically specified then the mid-value of the RM attribute value range as specified by the actual reference radio bearer configuration shall be applied for testing.

6.10.1 QoS Architecture and RAB attributes

From a user point-of-view services are considered end-to-end, this means from a Terminal Equipment (TE) to another TE. An End-to-End Service may have a certain Quality of Service (QoS) which is provided for the user through the different networks. In UMTS, it is the UMTS Bearer Service that provides the requested QoS through the use of different QoS classes as defined in TS 23.107.

The UMTS Bearer Service consists of two parts, the Radio Access Bearer Service, RAB, and the Core Network Bearer Service. The Radio Access Bearer Service is realised by a Radio Bearer Service and an Iu-Bearer Service. The relationship between the services is illustrated in figure 6.10.1.1.

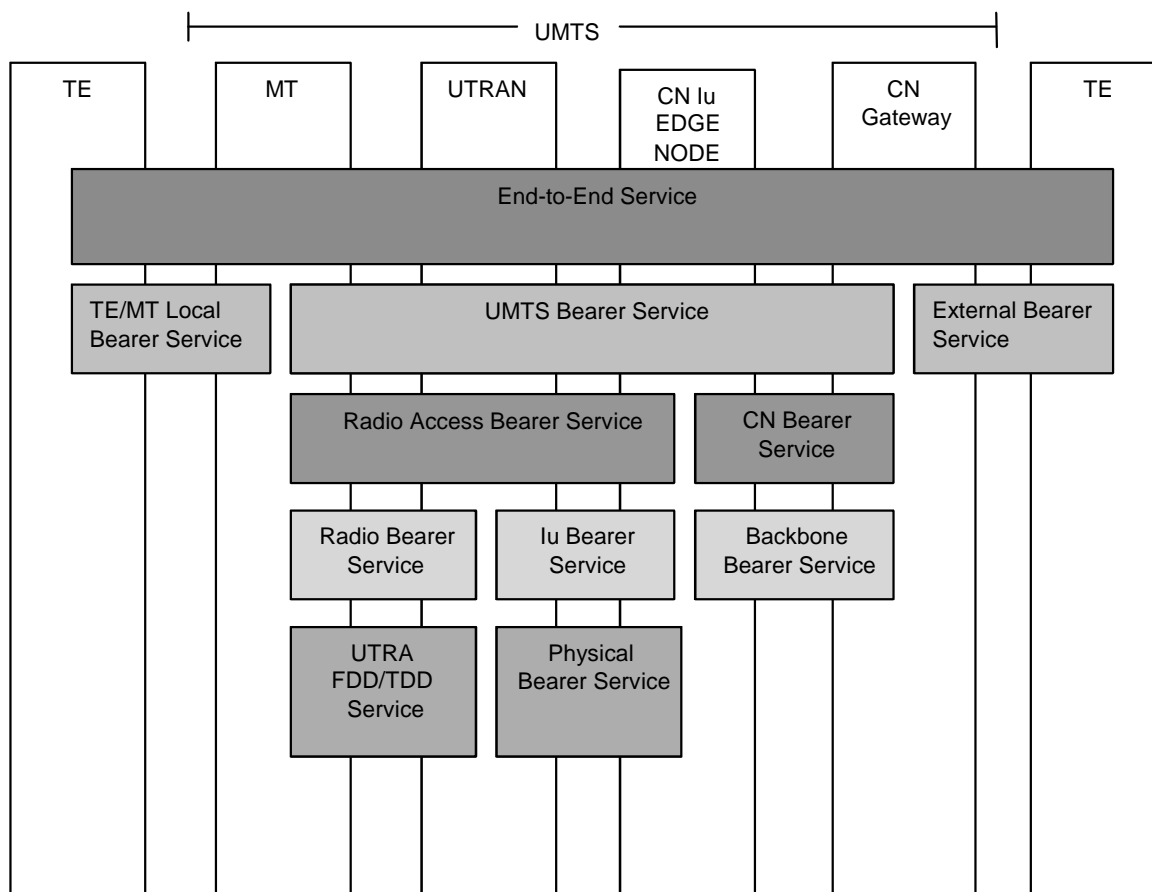


Figure 6.10.1.1: UMTS QoS Architecture

The Radio Access Bearer Service is characterised by a number of attributes such as Traffic class, Maximum bit rate, Guaranteed bit rate, SDU error ratio, Residual BER, Transfer Delay etc. As a first approach the four following attributes have been considered to come up with the parameter settings in clause 6.10.2.4 for FDD mode and 6.10.3.4 for TDD mode:

- Traffic class;
- SSD;
- Maximum bit rate;
- Residual BER.

The Traffic classes are explained in table 6.10.1.1. The Maximum bit rate has been considered at RLC layer and Physical Layer for the acknowledged and unacknowledged modes respectively. The Residual BER is understood as BER at RLC layer and Transport BLER for the acknowledged and unacknowledged modes respectively.

NOTE: The maximum bit rate in 6.10.2.4 is one of the RAB attribute as described above. For Interactive/Background PS RABs, however, the maximum bit rate of Radio Bearer can be lower than the maximum bit rate of RAB attributes due to radio resource management. Bit rates of Interactive/Background PS RABs described in 6.10.2.4 may represent the maximum bit rate of Radio Bearer taking account into this management.

Table 6.10.1.1: Traffic classes

| Traffic class | Conversational class conversational RT | Streaming class streaming RT | Interactive class Interactive best effort | Background Background best effort |
|------------------------------------|---|--|--|---|
| Fundamental characteristics | - Preserve time relation (variation) between information entities of the stream Conversational pattern (stringent and low delay) | - Preserve time relation (variation) between information entities of the stream (i.e. some but constant delay) | Request response pattern Preserve payload content | Destination is not expecting the data within a certain time Preserve payload content |
| Example of the application | - speech, video, ... | - facsimile (NT) - streaming audio and video | - Web browsing | - background download of emails |

6.10.2 RAB and signalling RB for FDD

6.10.2.1 RABs and signalling RBs

In the following clauses, the typical parameter sets are presented for reference RABs, signalling RBs and important combinations of them. The data rate given for each RAB is the maximum data rate that can be supported by that RAB.

NOTE: The granularity for each RAB needs to be clarified.

Table 6.10.2.1.1: Prioritised RABs.

| # | Traffic class [15] | SSD [15] | Max. rate, kbps | CS/PS |
|-----|---------------------------|----------|---|-------|
| 1 | Conversational | Speech | UL:12.2 DL:12.2 | CS |
| 1a | Conversational | Speech | UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) | CS |
| 2 | Conversational | Speech | UL:10.2 DL:10.2 | CS |
| 2a | Conversational | Speech | UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) | CS |
| 3 | Conversational | Speech | UL:7.95 DL:7.95 | CS |
| 4 | Conversational | Speech | UL:7.4 DL:7.4 | CS |
| 4a | Conversational | Speech | UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) | CS |
| 5 | Conversational | Speech | UL:6.7 DL:6.7 | CS |
| 6 | Conversational | Speech | UL:5.9 DL:5.9 | CS |
| 7 | Conversational | Speech | UL:5.15 DL:5.15 | CS |
| 8 | Conversational | Speech | UL:4.75 DL:4.75 | CS |
| 9 | Conversational | Unknown | UL:28.8 DL:28.8 | CS |
| 10 | Conversational | Unknown | UL:64 DL:64 | CS |
| 11 | Conversational | Unknown | UL:32 DL:32 | CS |
| 12 | Streaming | Unknown | UL:14.4 DL:14.4 | CS |
| 13 | Streaming | Unknown | UL:28.8 DL:28.8 | CS |
| 14 | Streaming | Unknown | UL:57.6 DL:57.6 | CS |
| 15 | Streaming | Unknown | UL:0 DL:64 | CS |
| 15a | Streaming | Unknown | UL:16 DL:64 | PS |
| 16 | Streaming | Unknown | UL:64 DL:0 | CS |
| 17 | Streaming | Unknown | UL:0 DL:128 | CS |
| 18 | Streaming | Unknown | UL:128 DL:0 | CS |
| 19 | Streaming | Unknown | UL:0 DL:384 | CS |
| 20 | Interactive or Background | N/A | UL:32 DL:8 | PS |
| 20a | Interactive or Background | N/A | UL:8 DL:8 | PS |
| 20b | Interactive or Background | N/A | UL:16 DL:16 | PS |
| 20c | Interactive or Background | N/A | UL:32 DL:32 | PS |
| 21 | Interactive or Background | N/A | UL:64 DL:8 | PS |
| 22 | Interactive or Background | N/A | UL:32 DL:64 | PS |
| 23 | Interactive or Background | N/A | UL:64 DL:64 | PS |
| 24 | Interactive or Background | N/A | UL:64 DL:128 | PS |
| 25 | Interactive or Background | N/A | UL:128 DL:128 | PS |
| 26 | Interactive or Background | N/A | UL:64 DL:384 | PS |
| 27 | Interactive or Background | N/A | UL:128 DL:384 | PS |
| 28 | Interactive or Background | N/A | UL:384 DL:384 | PS |
| 29 | Interactive or Background | N/A | UL:64 DL:2048 | PS |
| 30 | Interactive or Background | N/A | UL:128 DL:2048 | PS |
| 31 | Interactive or Background | N/A | UL:384 DL:2048 | PS |
| 32 | Interactive or Background | N/A | UL:64 DL:256 | PS |
| 33 | Interactive or Background | N/A | UL:0 DL:32 | PS |
| 34 | Interactive or Background | N/A | UL:32 DL: 0 | PS |
| 35 | Interactive or Background | N/A | UL:64 DL:144 | PS |
| 36 | Interactive or Background | N/A | UL:144 DL:144 | PS |

Table 6.10.2.1.2: Signalling RBs

| # | Maximum rate, kbps | Logical channel | PhyCh onto which SRBs are mapped |
|---|---------------------|-----------------|----------------------------------|
| 1 | UL:1.7 DL:1.7 | DCCH | DPCH |
| 2 | UL:3.4 DL:3.4 | DCCH | DPCH |
| 3 | UL:13.6 DL:13.6 | DCCH | DPCH |
| 4 | DL:27.2 (alt. 40.8) | DCCH | SCCPCH |
| 5 | UL:16.6 | CCCH | PRACH |
| 6 | DL:30.4 (alt. 45.6) | CCCH | SCCPCH |
| 7 | DL:33.2 (alt. 49.8) | BCCH: | SCCPCH |
| 8 | DL:24 (alt. 6.4) | PCCH | SCCPCH |

6.10.2.2 Combinations of RABs and Signalling RBs

In the present document, physical channel parameters for following combinations of RABs and signalling RBs on a CCTrCH are described.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 4a) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5a) Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 6) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 7) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 7a) Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 8) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 9) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 10) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 11) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.

- 12) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 13) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 14) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 15) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 16) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 17) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 18) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 19) Streaming / unknown / UL:64 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 20) Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 21) Streaming / unknown / UL:128 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 22) Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23a) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23b) Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23c) Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23d) Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 24) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 25) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 26) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 27) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 28) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 29) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 30) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 31) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 32) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 33) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 34) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 35) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 36) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 37) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38a) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38b) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38c) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:1632 DL:1632 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38d) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38e) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:0 DL:0 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38f) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38g) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:16 DL:16 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38h) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:32 DL:32 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38i) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 38j) Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 39) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 40) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 41) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 42) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 43) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 44) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 45) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 46) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 47) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 48) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 49) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 50) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 51) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 51a) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 51b) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or Background / UL:16 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 52) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 53) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 54) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 55) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 56) Interactive or background / UL:8 DL:8 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 57) Interactive or background / UL:64 DL:64 kbps / PS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 58) Streaming / unknown / UL:16 DL:64 kbps / PS RAB
+ Interactive or background / UL:8 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

Combinations on DSCH and DPCH

- 1) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 2) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 3) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 6) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

Combinations on SCCPCH

- 1) Stand-alone 24 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
+ SRB for CCCH
+ SRBs for DCCH
+ SRB for BCCH.
- 3) Interactive or background / DL:32 kbps / PS RAB
+ SRB for PCCH

- + SRB for CCCH
- + SRBs for DCCH
- + SRB for BCCH.

- 4) RB for CTCH
 + SRB for CCCH
 +SRB for BCCH

Combinations on PRACH

- 1) Interactive or background / UL:32 kbps / PS RAB
 + SRB for CCCH
 + SRBs for DCCH.

6.10.2.3 Example of linkage between RABs and services

RABs, which are included in the present document, can provide the services as shown in table 6.10.1.1. Furthermore, the required BER for each RAB, which is assumed in the present document, is shown in table 6.10.2.3.1.

Table 6.10.2.3.1: Example of linkage between RABs and services

| Traffic class [15] | RAB | | | Residual BER [15] | Services |
|---------------------------|----------|------------------------------|-------|--|---------------------------------------|
| | SSD [15] | Max. rate, kbps | CS/PS | | |
| Conversational | Speech | UL:4.75-12.2 DL:4.75-12.2 | CS | 5×10^{-4} , 1×10^{-3} , 5×10^{-3} | AMR speech |
| Conversational | Unknown | UL:64 DL:64 | CS | 1×10^{-4} or 1×10^{-6} | UDI 1B, 64k 3G-324M [15] |
| Conversational | Unknown | UL:32 DL:32 | CS | 1×10^{-4} or 1×10^{-6} | 32k 3G-324M [15] |
| Conversational | Unknown | UL:28.8 DL:28.8 | CS | 1×10^{-3} | Transparent modem |
| Streaming | Unknown | UL:14.4 DL:14.4 | CS | 1×10^{-3} | FAX ^[6] |
| Streaming | Unknown | UL:28.8 DL:28.8 | CS | 1×10^{-3} | FAX [18] PIAFS 32 kbps |
| Streaming | Unknown | UL:57.6 DL:57.6 | CS | 1×10^{-3} | Modem [18], FTM [17] PIAFS 64 kbps |
| Streaming | Unknown | UL:64-128 or DL:64-384 | CS | 1×10^{-3} or 1×10^{-4} | Streaming video, uni-directional |
| Interactive or Background | N/A | UL:32-384 DL:8-2048 | PS | 1×10^{-3} or 1×10^{-4} | Packet |

NOTE 1: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.

NOTE 2: CBS can be provided via the signalling RB (CTCH) on SCCPCH.

NOTE 3: UDI *n*B can be provided via *n* RABs of conversational 64 kbps.

6.10.2.4 Typical radio parameter sets

6.10.2.4.1 Combinations on DPCH

6.10.2.4.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

6.10.2.4.1.1.1 Uplink

6.10.2.4.1.1.1.1 Transport channel parameters

6.10.2.4.1.1.1.1.1 Transport channel parameters for UL:1.7 kbps SRBs for DCCH

| | | | | | |
|--------------|---|--------------------------------|-----------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 1700 | 1600 | 1600 | 1600 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 (alt 0, 148) | | | |
| | TFS | TF0, bits | 0x148 (alt 1x0) | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 80 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Uplink: Max number of bits/radio frame before rate matching | 65 | | | |
| | RM attribute | 155-185 | | | |

6.10.2.4.1.1.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.1.1.1.2 Physical channel parameters

| | | |
|-------------|---|-----|
| DPCH Uplink | | |
| | | |
| | Min spreading factor | 256 |
| | Max number of DPDCH data bits/radio frame | 150 |
| | Puncturing Limit | 1 |

6.10.2.4.1.1.2 Downlink

6.10.2.4.1.1.2.1 Transport channel parameters

6.10.2.4.1.1.2.1.1 Transport channel parameters for DL:1.7 kbps SRBs for DCCH

| | | | | | |
|---|---|--------------------------------|-------------------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 1700 | 1600 | 1600 | 1600 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 (alt 0, 148) (note) | | | |
| | TFS | TF0, bits | 0 x148 (alt 1x0) (note) | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 80 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | RM attribute | 155-185 | | | |
| NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE. | | | | | |

6.10.2.4.1.1.2.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.1.1.2.2 Physical channel parameters

| | | | |
|---------------|--------------------------|---------------------------|------------------|
| DPCH Downlink | DTX position | | N/A (SingleTrCH) |
| | Minimum spreading factor | | 512 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 4 |
| | | Number of data bits/frame | 60 |

6.10.2.4.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.2.1 Uplink

6.10.2.4.1.2.1.1 Transport channel parameters

6.10.2.4.1.2.1.1.1 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

| | | | | | |
|--------------|---|--------------------------------|-----------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 3400 | 3200 | 3200 | 3200 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 (alt 0, 148) | | | |
| | TFS | TF0, bits | 0x148 (alt 1x0) | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 40 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Uplink; Max number of bits/radio frame before rate matching | 129 | | | |
| | RM attribute | 155-185 | | | |

6.10.2.4.1.2.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.1.2.1.2 Physical channel parameters

| | | |
|-------------|---|-----|
| DPCH Uplink | Min spreading factor | 256 |
| | Max number of DPDCH data bits/radio frame | 150 |
| | Puncturing Limit | 1 |

6.10.2.4.1.2.2 Downlink

6.10.2.4.1.2.2.1 Transport channel parameters

6.10.2.4.1.2.2.1.1 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

| | | | | | |
|---|---|--------------------------------|------------------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 3400 | 3200 | 3200 | 3200 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 (alt 0, 148) (note) | | | |
| | TFS | TF0, bits | 0x148 (alt 1x0) (note) | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 40 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | RM attribute | 155-185 | | | |
| NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE. | | | | | |

6.10.2.4.1.2.2.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.1.2.2.2 Physical channel parameters

| | | | | |
|---------------------------|--------------------------|---------------------------|------------------|----|
| DPCH Downlink | DTX position | | N/A (SingleTrCH) | |
| | Minimum spreading factor | | 256 | |
| | DPCCH | Number of TFCl bits/slot | | 0 |
| | | Number of TPC bits/slot | | 2 |
| | | Number of Pilot bits/slot | | 4 |
| | DPDCH | Number of data bits/slot | | 14 |
| Number of data bits/frame | | 210 | | |

6.10.2.4.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

6.10.2.4.1.3.1 Uplink

6.10.2.4.1.3.1.1 Transport channel parameters

6.10.2.4.1.3.1.1.1 Transport channel parameters for UL:13.6 kbps SRBs for DCCH

| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
|--------------|---|--------------------------------|-----------------|---------------------|--------------------|
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 13600 | 12800 | 12800 | 12800 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 (alt 0, 148) | | | |
| | TFS | TF0, bits | 0x148 (alt 1x0) | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 10 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Uplink; Max number of bits/radio frame before rate matching | 516 | | | |

6.10.2.4.1.3.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.1.3.1.2 Physical channel parameters

| | | |
|-------------|---|-----|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 1 |

6.10.2.4.1.3.2 Downlink

6.10.2.4.1.3.2.1 Transport channel parameters

6.10.2.4.1.3.2.1.1 Transport channel parameters for DL:13.6 kbps SRBs for DCCH

| | | | | | |
|---|---|--------------------------------|------------------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 13600 | 12800 | 12800 | 12800 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 (alt 0, 148) (note) | | | |
| | TFS | TF0, bits | 0x148 (alt 1x0) (note) | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 10 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| NOTE: alternative parameters enable the measurement "transport channel BLER" in the UE. | | | | | |

6.10.2.4.1.3.2.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.1.3.2.2 Physical channel parameters

| | | | |
|---------------|--------------------------|---------------------------|------------------|
| DPCH Downlink | DTX position | | N/A (SingleTrCH) |
| | Minimum spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| | | Number of data bits/frame | 510 |

6.10.2.4.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.4.1 Uplink

6.10.2.4.1.4.1.1 Transport channel parameters

6.10.2.4.1.4.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--------------|---|----------------------------|-----------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 39, 81 (alt. 0, 39, 81) | 103 | 60 | |
| | Max data rate, bps | 12200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 39, 81 (alt. 0, 39, 81) | 103 | 60 | |
| | TFS | TF0, bits | 0x81(alt. 1x0) (note) | 0x103 | 0x60 |
| | | TF1, bits | 1x39 | 1x103 | 1x60 |
| | | TF2, bits | 1x81 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 303 | 333 | 136 | |
| | Uplink: Max number of bits/radio frame before rate matching | 152 | 167 | 68 | |
| | RM attribute | 180-220 | 170-210 | 215-256 | |
| NOTE: | In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.4.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.

6.10.2.4.1.4.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.1.4.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.84 |

6.10.2.4.1.4.2 Downlink

6.10.2.4.1.4.2.1 Transport channel parameters

6.10.2.4.1.4.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--|----------------------|----------------|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 0 | 103 | 60 | |
| | | 39 | | | |
| | | 81 | | | |
| Max data rate, bps | 12 200 | | | | |
| TrD PDU header, bit | 0 | | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 0 | 103 | 60 | |
| | | 39 | | | |
| | | 81 | | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x103 | 0x60 |
| | | TF1, bits | 1x39 | 1x103 | 1x60 |
| | | TF2, bits | 1x81 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| Max number of bits/TTI after channel coding | 303 | 333 | 136 | | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.2.4.1.4.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.4.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.1.4.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Fixed |
|---------------|---------------------------|-------|
| | Spreading factor | 128 |
| DPCCH | Number of TFCI bits/slot | 0 |
| | Number of TPC bits/slot | 2 |
| | Number of Pilot bits/slot | 4 |
| | Number of data bits/slot | 34 |
| DPDCH | Number of data bits/slot | 34 |
| | Number of data bits/frame | 510 |

6.10.2.4.1.4a Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.4a.1.1 Transport channel parameters

6.10.2.4.1.4a.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|---|---|--|--------------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 39, 42, 55, 75, 81 (alt. 0, 39, 81) | 53, 63, 84, 103 | 60 | |
| | Max data rate, bps | 12200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 39, 42, 55, 75, 81 (alt. 0, 39, 42, 55, 75, 81) | 53, 63, 84, 103 | 60 | |
| | TFS | TF0, bits | 0x81(alt. 1x0) (note) | 0x103 | 0x60 |
| | | TF1, bits | 1x39 | 1x53 | 1x60 |
| | | TF2 bits | 1x42 | 1x63 | N/A |
| | | TF3, bits | 1x55 | 1x84 | N/A |
| | | TF4, bits | 1x75 | 1x103 | N/A |
| | | TF5, bits | 1x81 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 303 | 333 | 136 | |
| | Uplink: Max number of bits/radio frame before rate matching | 152 | 167 | 68 | |
| | RM attribute | 180-220 | 170-210 | 215-256 | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.2.4.1.4a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.4a.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1) |

6.10.2.4.1.4a.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.84 |

6.10.2.4.1.4a.2 Downlink

6.10.2.4.1.4a.2.1 Transport channel parameters

6.10.2.4.1.4a.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|---|---|-----------------------|-----------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 0, 39, 42, 55, 75, 81 | 53, 63, 84, 103 | 60 | |
| | Max data rate, bps | 12 200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 0, 39, 42, 55, 75, 81 | 53, 63, 84, 103 | 60 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x103 | 0x60 |
| | | TF1, bits | 1x39 | 1x53 | 1x60 |
| | | TF2, bits | 1x42 | 1x63 | N/A |
| | | TF3, bits | 1x55 | 1x84 | N/A |
| | | TF4, bits | 1x75 | 1x103 | N/A |
| | TF5, bits | 1x81 | N/A | N/A | |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 303 | 333 | 136 | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212.). | | | | | |

6.10.2.4.1.4a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.4a.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1) |

6.10.2.4.1.4a.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCl bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| | | Number of data bits/frame | 510 |

6.10.2.4.1.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.5.1 Uplink

6.10.2.4.1.5.1.1 Transport channel parameters

6.10.2.4.1.5.1.1.1 Transport channel parameters for Conversational / speech / UL:10.2 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|---|---|----------------------------|---------------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 39, 65 (alt. 0, 39, 65) | 99 | 40 | |
| | Max data rate, bps | 10200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 39, 65 (alt. 0, 39, 65) | 99 | 40 | |
| | TFS | TF0, bits | 0x65 (alt. 1x0) (note) | 0x99 | 0x40 |
| | | TF1, bits | 1x39 | 1x99 | 1x40 |
| | | TF2, bits | 1x65 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 255 | 321 | 96 | |
| | Uplink: Max number of bits/radio frame before rate matching | 128 | 161 | 48 | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.2.4.1.5.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.5.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.1.5.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.5.2 Downlink

6.10.2.4.1.5.2.1 Transport channel parameters

6.10.2.4.1.5.2.1.1 Transport channel parameters for Conversational / speech / DL:10.2 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--|----------------------|----------------|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 0 | 99 | 40 | |
| | | 39 | | | |
| | | 65 | | | |
| Max data rate, bps | 10 200 | | | | |
| TrD PDU header, bit | 0 | | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 0 | 99 | 40 | |
| | | 39 | | | |
| | | 65 | | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x99 | 0x40 |
| | | TF1, bits | 1x39 | 1x99 | 1x40 |
| | | TF2, bits | 1x65 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| Max number of bits/TTI after channel coding | 255 | 321 | 96 | | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.2.4.1.5.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.5.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.1.5.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Fixed |
|---------------|---------------------------|-------|
| | Spreading factor | 128 |
| DPCCH | Number of TFCI bits/slot | 0 |
| | Number of TPC bits/slot | 2 |
| | Number of Pilot bits/slot | 4 |
| DPDCH | Number of data bits/slot | 34 |
| | Number of data bits/frame | 510 |

- 6.10.2.4.1.5a Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 6.10.2.4.1.5a.1 Uplink
- 6.10.2.4.1.5a.1.1 Transport channel parameters
- 6.10.2.4.1.5a.1.1.1 Transport channel parameters for Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|---|---|--|---------------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 39, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65) | 53, 63, 76, 99 | 40 | |
| | Max data rate, bps | 10200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 39, 42, 55, 58, 65 (alt. 0, 39, 42, 55, 58, 65) | 53, 63, 76, 99 | 40 | |
| | TFS | TF0, bits | 0x65 (alt. 1x0) (note) | 0x99 | 0x40 |
| | | TF1, bits | 1x39 | 1x53 | 1x40 |
| | | TF2, bits | 1x42 | 1x63 | N/A |
| | | TF3, bits | 1x55 | 1x76 | N/A |
| | | TF4, bits | 1x58 | 1x99 | N/A |
| | TF5, bits | 1x65 | N/A | N/A | |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 255 | 321 | 96 | |
| | Uplink: Max number of bits/radio frame before rate matching | 128 | 161 | 48 | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

- 6.10.2.4.1.5a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

- 6.10.2.4.1.5a.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1) |

6.10.2.4.1.5a.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.5a.2 Downlink

6.10.2.4.1.5a.2.1 Transport channel parameters

6.10.2.4.1.5a.2.1.1 Transport channel parameters for Conversational / speech / DL: DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--|---|-----------------------|-------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 0, 39, 42, 55, 58, 65 | 0, 53, 63, 76, 99 | 40 | |
| | Max data rate, bps | 10 200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 0, 39, 42, 55, 58, 65 | 0, 53, 63, 76, 99 | 40 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x99 | 0x40 |
| | | TF1, bits | 1x39 | 1x53 | 1x40 |
| | | TF2, bits | 1x42 | 1x63 | N/A |
| | | TF3, bits | 1x55 | 1x76 | N/A |
| | | TF4, bits | 1x58 | 1x99 | N/A |
| | TF5, bits | 1x65 | N/A | N/A | |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 255 | 321 | 96 | |
| | RM attribute | 180-220 | 170-210 | 215-256 | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.2.4.1.5a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.5a.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF0), (TF3,TF2,TF0,TF0), (TF4,TF3,TF0,TF0), (TF5,TF4,TF1,TF0), (TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1), (TF3,TF2,TF0,TF1), (TF4,TF3,TF0,TF1), (TF5,TF4,TF1,TF1) |

6.10.2.4.1.5a.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| Number of data bits/frame | | 510 | |

6.10.2.4.1.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.6.1 Uplink

6.10.2.4.1.6.1.1 Transport channel parameters

6.10.2.4.1.6.1.1.1 Transport channel parameters for Conversational / speech / UL:7.95 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--------------|--|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 75 (alt. 0, 39, 75) | 84 | |
| | Max data rate, bps | 7950 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 75 (alt. 0, 39, 75) | 84 | |
| | TFS | TF0, bits | 0x75 (alt. 1x0) (note) | 0x84 |
| | | TF1, bits | 1x39 | 1x84 |
| | | TF2, bits | 1x75 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 285 | 276 | |
| | Uplink: Max number of bits/radio frame before rate matching | 143 | 138 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE: | In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clauses 4.2.1.1 in TS 25.212). | | | |

6.10.2.4.1.6.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.6.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.6.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.6.2 Downlink

6.10.2.4.1.6.2.1 Transport channel parameters

6.10.2.4.1.6.2.1.1 Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0 | 84 | |
| | | 39 | | |
| | | 75 | | |
| Max data rate, bps | 7950 | | | |
| TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 84 | |
| | | 39 | | |
| | | 75 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x84 |
| | | TF1, bits | 1x39 | 1x84 |
| | | TF2, bits | 1x75 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 285 | 276 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.6.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.6.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.6.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| Number of data bits/frame | | 510 | |

6.10.2.4.1.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.7.1 Uplink

6.10.2.4.1.7.1.1 Transport channel parameters

6.10.2.4.1.7.1.1.1 Transport channel parameters for Conversational / speech / UL:7.4 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--------------|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 61 (alt. 0, 39, 61) | 87 | |
| | Max data rate, bps | 7400 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 61 (alt. 0, 39, 61) | 87 | |
| | TFS | TF0, bits | 0x61 (alt. 1x0) (note) | 0x87 |
| | | TF1, bits | 1x39 | 1x87 |
| | | TF2, bits | 1x61 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 243 | 285 | |
| | Uplink: Max number of bits/radio frame before rate matching | 122 | 143 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE: | In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | |

6.10.2.4.1.7.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.7.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.7.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.7.2 Downlink

6.10.2.4.1.7.2.1 Transport channel parameters

6.10.2.4.1.7.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0 | 87 | |
| | | 39 | | |
| | | 61 | | |
| Max data rate, bps | 7400 | | | |
| TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 87 | |
| | | 39 | | |
| | | 61 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x87 |
| | | TF1, bits | 1x39 | 1x87 |
| | | TF2, bits | 1x61 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 243 | 285 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB #1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.7.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.7.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.7.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| Number of data bits/frame | | 510 | |

6.10.2.4.1.7a Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.7a.1 Uplink

6.10.2.4.1.7a.1.1 Transport channel parameters

6.10.2.4.1.7a.1.1.1 Transport channel parameters for Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--------------|---|---|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 42, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61) | 53, 63, 76, 87 | |
| | Max data rate, bps | 7400 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 42, 55, 58, 61 (alt. 0, 39, 42, 55, 58, 61) | 53, 63, 76, 87 | |
| | TFS | TF0, bits | 0x61 (alt. 1x0) (note) | 0x87 |
| | | TF1, bits | 1x39 | 1x53 |
| | | TF2, bits | 1x42 | 1x63 |
| | | TF3, bits | 1x55 | 1x76 |
| | | TF4, bits | 1x58 | 1x87 |
| | | TF5, bits | 1x61 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 243 | 285 | |
| | Uplink: Max number of bits/radio frame before rate matching | 122 | 143 | |
| RM attribute | 180-220 | 170-210 | | |

NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBIs are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212).

6.10.2.4.1.7a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.7a.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF3, TF2, TF0), (TF4, TF3, TF0), (TF5, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1), (TF3, TF2, TF1), (TF4, TF3, TF1), (TF5, TF4, TF1) |

6.10.2.4.1.7a.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.7a.2 Downlink

6.10.2.4.1.7a.2.1 Transport channel parameters

6.10.2.4.1.7a.2.1.1 Transport channel parameters for Conversational / speech / DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|----------------------|-----------------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 42, 55, 58, 61 | 53, 63, 76, 87 | |
| | Max data rate, bps | 7400 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0, 39, 42, 55, 58, 61 | 53, 63, 76, 87 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x87 |
| | | TF1, bits | 1x39 | 1x53 |
| | | TF2, bits | 1x42 | 1x63 |
| | | TF3, bits | 1x55 | 1x76 |
| | | TF4, bits | 1x58 | 1x87 |
| | TF5, bits | 1x61 | N/A | |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| Max number of bits/TTI after channel coding | 243 | 285 | | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB #1 (see clause 4.2.1.1 in TS 25.212.). | | | | |

6.10.2.4.1.7a.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.7a.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF3, TF2, TF0), (TF4, TF3, TF0), (TF5, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1), (TF3, TF2, TF1), (TF4, TF3, TF1), (TF5, TF4, TF1) |

6.10.2.4.1.7a.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCl bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| | | Number of data bits/frame | 510 |

6.10.2.4.1.8 Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.8.1 Uplink

6.10.2.4.1.8.1.1 Transport channel parameters

6.10.2.4.1.8.1.1.1 Transport channel parameters for Conversational / speech / UL:6.7 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--------------|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 58 (alt. 0, 39, 58) | 76 | |
| | Max data rate, bps | 6700 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 58 (alt. 0, 39, 58) | 76 | |
| | TFS | TF0, bits | 0x58 (alt. 1x0) (note) | 0x76 |
| | | TF1, bits | 1x39 | 1x76 |
| | | TF2, bits | 1x58 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 234 | 252 | |
| | Uplink: Max number of bits/radio frame before rate matching | 117 | 126 | |
| RM attribute | 180-220 | 170-210 | | |

NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212).

6.10.2.4.1.8.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.8.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.8.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.8.2 Downlink

6.10.2.4.1.8.2.1 Transport channel parameters

6.10.2.4.1.8.2.1.1 Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0 | 76 | |
| | | 39 | | |
| | | 58 | | |
| Max data rate, bps | 6700 | | | |
| TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 76 | |
| | | 39 | | |
| | | 58 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x76 |
| | | TF1, bits | 1x39 | 1x76 |
| | | TF2, bits | 1x58 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 234 | 252 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.8.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.8.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.8.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| Number of data bits/frame | | 510 | |

6.10.2.4.1.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.9.1 Uplink

6.10.2.4.1.9.1.1 Transport channel parameters

6.10.2.4.1.9.1.1.1 Transport channel parameters for Conversational / speech / UL:5.9 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 55 (alt. 0, 39, 55) | 63 | |
| | Max data rate, bps | 5900 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 55 (alt. 0, 39, 55) | 63 | |
| | TFS | TF0, bits | 0x55 (alt. 1x0) (note) | 0x63 |
| | | TF1, bits | 1x39 | 1x63 |
| | | TF2, bits | 1x55 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 225 | 213 | |
| | Uplink: Max number of bits/radio frame before rate matching | 113 | 107 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.9.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.9.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.9.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.9.2 Downlink

6.10.2.4.1.9.2.1 Transport channel parameters

6.10.2.4.1.9.2.1.1 Transport channel parameters for Conversational / speech / DL:5.9 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0 | 63 | |
| | | 39 | | |
| | | 55 | | |
| Max data rate, bps | 5900 | | | |
| TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 63 | |
| | | 39 | | |
| | | 55 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x63 |
| | | TF1, bits | 1x39 | 1x63 |
| | | TF2, bits | 1x55 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 225 | 213 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.9.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.9.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.9.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| Number of data bits/frame | | 510 | |

6.10.2.4.1.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

6.10.2.4.1.10.1 Uplink

6.10.2.4.1.10.1.1 Transport channel parameters

6.10.2.4.1.10.1.1 Transport channel parameters for Conversational / speech / UL:5.15 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 49 (alt. 0, 39, 49) | 54 | |
| | Max data rate, bps | 5150 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 49 (alt. 0, 39, 49) | 54 | |
| | TFS | TF0, bits | 0x49 (alt. 1x0) (note) | 0x54 |
| | | TF1, bits | 1x39 | 1x54 |
| | | TF2, bits | 1x49 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 207 | 186 | |
| | Uplink: Max number of bits/radio frame before rate matching | 104 | 93 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.10.1.1.2 Transport channel parameters for UL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.1.1.1.1

6.10.2.4.1.10.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.10.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 128 |
| | Max number of DPDCH data bits/radio frame | 300 |
| | Puncturing Limit | 0.84 |

6.10.2.4.1.10.2 Downlink

6.10.2.4.1.10.2.1 Transport channel parameters

6.10.2.4.1.10.2.1.1 Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0 | 54 | |
| | | 39 | | |
| | | 49 | | |
| | Max data rate, bps | 5150 | | |
| TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 54 | |
| | | 39 | | |
| | | 49 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x54 |
| | | TF1, bits | 1x39 | 1x54 |
| | | TF2, bits | 1x49 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 207 | 186 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.10.2.1.2 Transport channel parameters for DL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.1.2.1.1

6.10.2.4.1.10.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.10.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 256 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 14 |
| Number of data bits/frame | | 210 | |

6.10.2.4.1.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

6.10.2.4.1.11.1 Uplink

6.10.2.4.1.11.1.1 Transport channel parameters

6.10.2.4.1.11.1.1.1 Transport channel parameters for Conversational / speech / UL:4.75 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 42 (alt. 0, 39, 42) | 53 | |
| | Max data rate, bps | 4750 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 42 (alt. 0, 39, 42) | 53 | |
| | TFS | TF0, bits | 0x42 (alt. 1x0) (note) | 0x53 |
| | | TF1, bits | 1x39 | 1x53 |
| | | TF2, bits | 1x42 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 186 | 183 | |
| | Uplink: Max number of bits/radio frame before rate matching | 93 | 92 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE: In case of usign this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.11.1.1.2 Transport channel parameters for UL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.1.1.1.1

6.10.2.4.1.11.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.11.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 128 |
| | Max number of DPDCH data bits/radio frame | 300 |
| | Puncturing Limit | 0.92 |

6.10.2.4.1.11.2 Downlink

6.10.2.4.1.11.2.1 Transport channel parameters

6.10.2.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0 | 53 | |
| | | 39 | | |
| | | 42 | | |
| Max data rate, bps | 4750 | | | |
| TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 53 | |
| | | 39 | | |
| | | 42 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x53 |
| | | TF1, bits | 1x39 | 1x53 |
| | | TF2, bits | 1x42 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 186 | 183 | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.2.4.1.11.2.1.2 Transport channel parameters for DL:1.7 kbps SRBs for DCCH

See clause 6.10.2.4.1.1.2.1.1

6.10.2.4.1.11.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.2.4.1.11.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 256 |
| | DPCCH | Number of TFCI bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 14 |
| Number of data bits/frame | | 210 | |

6.10.2.4.1.12 Conversational / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.12.1 Uplink

6.10.2.4.1.12.1.1 Transport channel parameters

6.10.2.4.1.12.1.1.1 Transport channel parameters for conversational / unknown / UL:28.8 kbps / CS RAB

| | | | |
|--------------|---|-----------|-------|
| Higher layer | RAB/Signalling RB | RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | Uplink: Max number of bits/radio frame before rate matching | 891 | |
| RM attribute | 160-200 | | |

6.10.2.4.1.12.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.12.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.2.4.1.12.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 0.92 |

6.10.2.4.1.12.2 Downlink

6.10.2.4.1.12.2.1 Transport channel parameters

6.10.2.4.1.12.2.1.1 Transport channel parameters for conversational / unknown / DL:28.8 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| RM attribute | 160-200 | | |

6.10.2.4.1.12.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.12.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.2.4.1.12.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|----|
| Downlink | Spreading factor | 64 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 60 |
| Number of data bits/frame | | 900 | |

6.10.2.4.1.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.13.1 Uplink

6.10.2.4.1.13.1.1 Transport channel parameters

6.10.2.4.1.13.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | | |
|--------------|---|-----------------|-------------------|--|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | | |
| | Payload sizes, bit | 640 | | |
| | Max data rate, bps | 64000 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 640 | | |
| | TFS | TF0, bits | 0x640 | |
| | | TF1, bits | 2x640(alt. 4x640) | |
| | TTI, ms | 20(alt. 40) | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 3948(alt. 7884) | | |
| | Uplink: Max number of bits/radio frame before rate matching | 1974(alt. 1971) | | |
| | RM attribute | 150-195 | | |

6.10.2.4.1.13.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.13.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.13.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.13.2 Downlink

6.10.2.4.1.13.2.1 Transport channel parameters

6.10.2.4.1.13.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 64000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 640 | |
| | TFS | TF0, bits | 0x640 |
| | | TF1, bits | 2x640(alt. 4x640) |
| | TTI, ms | 20(alt. 40) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3948(alt. 7884) | |
| | RM attribute | 150-195 | |

6.10.2.4.1.13.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.13.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.13.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Flexible |
|---------------|---------------------------|----------|
| | Spreading factor | 32 |
| DPCCH | Number of TFCI bits/slot | 8 |
| | Number of TPC bits/slot | 4 |
| | Number of Pilot bits/slot | 8 |
| DPDCH | Number of data bits/slot | 140 |
| | Number of data bits/frame | 2100 |

6.10.2.4.1.14 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.14.1 Uplink

6.10.2.4.1.14.1.1 Transport channel parameters

6.10.2.4.1.14.1.1.1 Transport channel parameters for Conversational / unknown / UL:32 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 32000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 640 | |
| | TFS | TF0, bits | 0x640 |
| | | TF1, bits | 1x640(alt. 2x640) |
| | TTI, ms | 20(alt. 40) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1980(alt. 3948) | |
| | Uplink: Max number of bits/radio frame before rate matching | 990(alt. 987) | |
| | RM attribute | 165-210 | |

6.10.2.4.1.14.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1

6.10.2.4.1.13.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.14.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 0.80 |

6.10.2.4.1.14.2 Downlink

6.10.2.4.1.14.2.1 Transport channel parameters

6.10.2.4.1.14.2.1.1 Transport channel parameters for Conversational / unknown / DL:32 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 32000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 640 | |
| | TFS | TF0, bits | 0x640 |
| | | TF1, bits | 1x640(alt. 2x640) |
| | TTI, ms | 20(alt. 40) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1980(alt. 3948) | |
| | RM attribute | 165-210 | |

6.10.2.4.1.14.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.14.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.14.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|----|
| Downlink | Spreading factor | 64 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 60 |
| Number of data bits/frame | | 900 | |

6.10.2.4.1.15 Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.15.1 Uplink

6.10.2.4.1.15.1.1 Transport channel parameters

6.10.2.4.1.15.1.1.1 Transport channel parameters for Streaming / unknown / UL: 14.4 kbps / CS RAB

| | | | |
|--------------|---|-----------|-------|
| Higher layer | RAB/Signalling RB | RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 14400 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1788 | |
| | Uplink: Max number of bits/radio frame before rate matching | 447 | |
| | RM attribute | 145-185 | |

6.10.2.4.1.15.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.15.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.15.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.15.2 Downlink

6.10.2.4.1.15.2.1 Transport channel parameters

6.10.2.4.1.15.2.1.1 Transport channel parameters for Streaming / unknown / DL:14.4 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 14400 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1788 | |
| | RM attribute | 145-185 | |

6.10.2.4.1.15.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.15.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.15.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|----|
| Downlink | Spreading factor | 128 | |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 28 |
| Number of data bits/frame | | 420 | |

6.10.2.4.1.16 Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.16.1 Uplink

6.10.2.4.1.16.1.1 Transport channel parameters

6.10.2.4.1.16.1.1.1 Transport channel parameters for Streaming / unknown / UL:28.8 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | Uplink: Max number of bits/radio frame before rate matching | 891 | |
| RM attribute | 135-175 | | |

6.10.2.4.1.16.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.16.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.2.4.1.16.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.16.2 Downlink

6.10.2.4.1.16.2.1 Transport channel parameters

6.10.2.4.1.16.2.1.1 Transport channel parameters for Streaming / unknown / DL:28.8 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.16.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.16.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.2.4.1.16.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|----|
| Downlink | Spreading factor | 64 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 60 |
| Number of data bits/frame | | 900 | |

6.10.2.4.1.17 Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.17.1 Uplink

6.10.2.4.1.17.1.1 Transport channel parameters

6.10.2.4.1.17.1.1.1 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 57600 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | | TF3, bits | 3x576 |
| | | TF4, bits | 4x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| Max number of bits/TTI after channel coding | 7116 | | |
| Uplink: Max number of bits/radio frame before rate matching | 1779 | | |

6.10.2.4.1.17.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.17.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (57.6 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.17.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.17.2 Downlink

6.10.2.4.1.17.2.1 Transport channel parameters

6.10.2.4.1.17.2.1.1 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 57600 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | | TF3, bits | 3x576 |
| | | TF4, bits | 4x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 7116 | |
| RM attribute | 125-165 | | |

6.10.2.4.1.17.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.17.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (57.6 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.17.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|-----|
| Downlink | Spreading factor | 32 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| Number of data bits/frame | | 2100 | |

6.10.2.4.1.18 Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.18.1 Uplink

6.10.2.4.1.18.1.1 Transport channel parameters

6.10.2.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS RAB

N/A

6.10.2.4.1.18.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.18.1.1.3 TFCS

See clause 6.10.2.4.1.2.1.1.2.

6.10.2.4.1.18.1.2 Physical channel parameters

See clause 6.10.2.4.1.2.1.2.

6.10.2.4.1.18.2 Downlink

6.10.2.4.1.18.2.1 Transport channel parameters

6.10.2.4.1.18.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8076 | |
| RM attribute | 125-165 | | |

6.10.2.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.18.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.18.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.19 Streaming / unknown / UL:64 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.19.1 Uplink

6.10.2.4.1.19.1.1 Transport channel parameters

6.10.2.4.1.19.1.1.1 Transport channel parameters for Streaming / unknown / UL:64 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8076 | |
| Uplink: Max number of bits/radio frame before rate matching | 2019 | | |
| RM attribute | 125-165 | | |

6.10.2.4.1.19.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.19.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.19.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 1 |

6.10.2.4.1.19.2 Downlink

6.10.2.4.1.19.2.1 Transport channel parameters

6.10.2.4.1.19.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS RAB

N/A

6.10.2.4.1.19.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.19.2.1.3 TFCS

See clause 6.10.2.4.1.2.2.1.2.

6.10.2.4.1.19.2.2 Physical channel parameters

See clause 6.10.2.4.1.2.2.2.

6.10.2.4.1.20 Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.20.1 Uplink

6.10.2.4.1.20.1.1 Transport channel parameters

6.10.2.4.1.20.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS RAB

N/A

6.10.2.4.1.20.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.20.1.1.3 TFCS

See clause 6.10.2.4.1.2.1.1.2.

6.10.2.4.1.20.1.2 Physical channel parameters

See clause 6.10.2.4.1.2.1.2.

6.10.2.4.1.20.2 Downlink

6.10.2.4.1.20.2.1 Transport channel parameters

6.10.2.4.1.20.2.1.1 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TF5, bits | 16x320 | |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| Max number of bits/TTI after channel coding | 16152 | | |
| RM attribute | 125-165 | | |

6.10.2.4.1.20.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.20.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.2.4.1.20.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|-----|
| Downlink | Spreading factor | 16 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| Number of data bits/frame | | 4320 | |

6.10.2.4.1.21 Streaming / unknown / UL:128 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.21.1 Uplink

6.10.2.4.1.21.1.1 Transport channel parameters

6.10.2.4.1.21.1.1.1 Transport channel parameters for Streaming / unknown / UL:128 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TF5, bits | 16x320 | |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 16152 | |
| Uplink: Max number of bits/radio frame before rate matching | 4038 | | |
| RM attribute | 125-165 | | |

6.10.2.4.1.21.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.21.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.2.4.1.21.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 8 |
| | Max number of DPDCH data bits/radio frame | 4800 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.21.2 Downlink

6.10.2.4.1.21.2.1 Transport channel parameters

6.10.2.4.1.21.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS RAB
N/A

6.10.2.4.1.21.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.21.2.1.3 TFCS

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.21.2.2 Physical channel parameters

See clause 6.10.2.4.1.2.2.2.

6.10.2.4.1.22 Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.22.1 Uplink

6.10.2.4.1.22.1.1 Transport channel parameters

6.10.2.4.1.22.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS RAB
N/A

6.10.2.4.1.22.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.22.1.1.3 TFCS

See clause 6.10.2.4.1.2.1.1.2.

6.10.2.4.1.22.1.2 Physical channel parameters

See clause 6.10.2.4.1.2.1.2.

6.10.2.4.1.22.2 Downlink

6.10.2.4.1.22.2.1 Transport channel parameters

6.10.2.4.1.22.2.1.1 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | | TF5, bits | 16x320 |
| | | TF6, bits | 32x320 |
| | | TF7, bits | 48x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 48432 | |
| RM attribute | 110-150 | | |

6.10.2.4.1.22.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.22.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 16 |
| TFCS | (384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1) |

6.10.2.4.1.22.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|----------|------------------|---------------------------|------|
| Downlink | Spreading factor | 8 | |
| | Number of DPDCH | 1 | |
| | DPCCH | Number of TFCl bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| | | Number of data bits/frame | 9120 |

6.10.2.4.1.23 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.23.1 Uplink

6.10.2.4.1.23.1.1 Transport channel parameters

6.10.2.4.1.23.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|------------------|------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 (alt. N/A) |
| | TTI, ms | 20 (alt. 10) | |
| | Coding type | TC (alt. CC 1/3) | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 (alt. 1080) | |
| | Uplink: Max number of bits/radio frame before rate matching | 1062 (alt. 1080) | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.23.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 (alt. 4) |
| TFCS | (32 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)) |

6.10.2.4.1.23.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.23.2 Downlink

6.10.2.4.1.23.2.1 Transport channel parameters

6.10.2.4.1.23.2.1.1 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|------------------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 8000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 40 | |
| | Coding type | TC (alt. CC 1/3) | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1068 (alt. 1080) | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.23.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 4 |
| TFCS | (8 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.23.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 32 |
| | | Number of data bits/frame | 480 |

6.10.2.4.1.23a Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.23a.1 Uplink

6.10.2.4.1.23a.1.1 Transport channel parameters

6.10.2.4.1.23a.1.1.1 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 8000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 40 | |
| | Coding type | CC 1/3 | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1080 | |
| | Uplink: Max number of bits/radio frame before rate matching | 270 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23a.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.23a.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 4 |
| TFCS | (8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.23a.1.2 Physical channel parameters

| | | |
|-------------|---|-----|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.23a.2 Downlink

6.10.2.4.1.23a.2.1 Transport channel parameters

6.10.2.4.1.23a.2.1.1 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 8000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 40 | |
| | Coding type | CC 1/3 | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1080 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23a.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.23a.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 4 |
| TFCS | (8 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.2.4.1.23a.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 32 |
| | | Number of data bits/frame | 480 |

6.10.2.4.1.23b Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.23b.1 Uplink

6.10.2.4.1.23b.1.1 Transport channel parameters

6.10.2.4.1.23b.1.1.1 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 16000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 | |
| | Uplink: Max number of bits/radio frame before rate matching | 531 | |
| RM attribute | 135-175 | | |

6.10.2.4.1.23b.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.23b.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.2.4.1.23b.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.23b.2 Downlink

6.10.2.4.1.23b.2.1 Transport channel parameters

6.10.2.4.1.23b.2.1.1 Transport channel parameters for Interactive or background / DL:16 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 16000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23b.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.23b.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (16 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.2.4.1.23b.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 32 |
| | | Number of data bits/frame | 480 |

6.10.2.4.1.23c Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.23c.1 Uplink

6.10.2.4.1.23c.1.1 Transport channel parameters

6.10.2.4.1.23c.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 3x336 |
| | | TF4, bits | 4x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | Uplink: Max number of bits/radio frame before rate matching | 1059 | |
| RM attribute | 135-175 | | |

6.10.2.4.1.23c.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.23c.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1) |

6.10.2.4.1.23c.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.23c.2 Downlink

6.10.2.4.1.23c.2.1 Transport channel parameters

6.10.2.4.1.23c.2.1.1 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 3x336 |
| | | TF4, bits | 4x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| RM attribute | 135-175 | | |

6.10.2.4.1.23c.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.23c.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1) |

6.10.2.4.1.23c.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Flexible |
|---------------|---------------------------|----------|
| | Spreading factor | 64 |
| DPCCH | Number of TFCI bits/slot | 8 |
| | Number of TPC bits/slot | 4 |
| | Number of Pilot bits/slot | 8 |
| DPDCH | Number of data bits/slot | 60 |
| | Number of data bits/frame | 900 |

6.10.2.4.1.23d Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI)+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.23d.1 Uplink

6.10.2.4.1.23d.1.1 Transport channel parameters

6.10.2.4.1.23d.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 | |
| | Uplink: Max number of bits/radio frame before rate matching | 1062 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23d.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.23d.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1) |

6.10.2.4.1.23d.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.23d.2 Downlink

6.10.2.4.1.23d.2.1 Transport channel parameters

6.10.2.4.1.23d.2.1.1 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.23d.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.23d.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (32 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1) |

6.10.2.4.1.23d.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Flexible |
|---------------|---------------------------|----------|
| | Spreading factor | 64 |
| DPCCH | Number of TFCI bits/slot | 8 |
| | Number of TPC bits/slot | 4 |
| | Number of Pilot bits/slot | 8 |
| DPDCH | Number of data bits/slot | 60 |
| | Number of data bits/frame | 900 |

6.10.2.4.1.24 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.24.1 Uplink

6.10.2.4.1.24.1.1 Transport channel parameters

6.10.2.4.1.24.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 3x336 |
| | | TF4, bits | 4x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | Uplink: Max number of bits/radio frame before rate matching | 2118 | |
| RM attribute | 130-170 | | |

6.10.2.4.1.24.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.24.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.24.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.24.2 Downlink

See clause 6.10.2.4.1.23.2.

6.10.2.4.1.25 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.25.1 Uplink

See clause 6.10.2.4.1.23.1.

6.10.2.4.1.25.2 Downlink

6.10.2.4.1.25.2.1 Transport channel parameters

6.10.2.4.1.25.2.1.1 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 3x336 |
| | | TF4, bits | 4x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| Max number of bits/TTI after channel coding | 4236 | | |
| RM attribute | 130-170 | | |

6.10.2.4.1.25.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.25.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.25.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Flexible |
|---------------|---------------------------|----------|
| | Spreading factor | 32 |
| DPCCH | Number of TFCI bits/slot | 8 |
| | Number of TPC bits/slot | 4 |
| | Number of Pilot bits/slot | 8 |
| DPDCH | Number of data bits/slot | 140 |
| | Number of data bits/frame | 2100 |

6.10.2.4.1.26 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.26.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.26.2 Downlink

See clause 6.10.2.4.1.25.2.

6.10.2.4.1.27 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.27.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.27.2 Downlink

6.10.2.4.1.27.2.1 Transport channel parameters

6.10.2.4.1.27.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | | |
|---|----------------------|-----------|--------|--|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | AM | | |
| | Payload sizes, bit | 320 | | |
| | Max data rate, bps | 128000 | | |
| | AMD PDU header, bit | 16 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 336 | | |
| | TFS | TF0, bits | 0x336 | |
| | | TF1, bits | 1x336 | |
| | | TF2, bits | 2x336 | |
| | | TF3, bits | 4 x336 | |
| | | TF4, bits | 8 x336 | |
| | TTI, ms | 20 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| Max number of bits/TTI after channel coding | 8460 | | | |
| RM attribute | 120-160 | | | |

6.10.2.4.1.27.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.27.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 10 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.27.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 16 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| Number of data bits/frame | | 4320 | |

6.10.2.4.1.28 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.28.1 Uplink

6.10.2.4.1.28.1.1 Transport channel parameters

6.10.2.4.1.28.1.1.1 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8460 | |
| Uplink: Max number of bits/radio frame before rate matching | 4230 | | |
| RM attribute | 120-160 | | |

6.10.2.4.1.28.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.28.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 10 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.2.4.1.28.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 8 |
| | Max number of DPDCH data bits/radio frame | 4800 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.28.2 Downlink

See clause 6.10.2.4.1.27.2.

6.10.2.4.1.29 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.29.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.29.2 Downlink

6.10.2.4.1.29.2.1 Transport channel parameters

6.10.2.4.1.29.2.1.1 Transport channel parameters for Interactive or background / DL:144 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 144000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 9x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| Max number of bits/TTI after channel coding | 9516 | | |
| RM attribute | 140-180 | | |

6.10.2.4.1.29.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.29.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (144 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.2.4.1.29.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 16 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| Number of data bits/frame | | 4320 | |

6.10.2.4.1.30 Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.30.1 Uplink

6.10.2.4.1.30.1.1 Transport channel parameters

6.10.2.4.1.30.1.1.1 Transport channel parameters for Interactive or background / UL:144 kbps / PS RAB

| | | | |
|---|---|------------|--------|
| Higher layer | RAB/Signalling RB | RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 144000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 9 x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 9516 | |
| Uplink: Max number of bits/radio frame before rate matching | 4758 | | |
| RM attribute | 140-180 | | |

6.10.2.4.1.30.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.30.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (144 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.2.4.1.30.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 8 |
| | Max number of DPDCH data bits/radio frame | 4800 |
| | Puncturing Limit | 0.84 |

6.10.2.4.1.30.2 Downlink

See clause 6.10.2.4.1.29.2.

6.10.2.4.1.31 Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.31.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.31.2 Downlink

6.10.2.4.1.31.2.1 Transport channel parameters

6.10.2.4.1.31.2.1.1 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|-------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | N/A (alt. 12x336) |
| | | TF6, bits | N/A (alt. 16x336) |
| | TTI, ms | 10(alt. 20) | |
| | Coding type | TC | |
| CRC, bit | 16 | | |
| Max number of bits/TTI after channel coding | 8460(alt. 16920) | | |
| RM attribute | 135-175 | | |

6.10.2.4.1.31.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.31.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 (alt.14) |
| TFCS | (256 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1)) |

6.10.2.4.1.31.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Flexible |
|---------------|---------------------------|----------|
| | Spreading factor | 8 |
| | Number of DPDCH | 1 |
| DPCCH | Number of TFCI bits/slot | 8 |
| | Number of TPC bits/slot | 8 |
| | Number of Pilot bits/slot | 16 |
| DPDCH | Number of data bits/slot | 608 |
| | Number of data bits/frame | 9120 |

6.10.2.4.1.32 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.32.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.32.2 Downlink

6.10.2.4.1.32.2.1 Transport channel parameters

6.10.2.4.1.32.2.1.1 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|--------------------|--------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 12x336 |
| | | TF6, bits | N/A (alt. 16 x336) |
| | | TF7, bits | N/A (alt. 20 x336) |
| | TF8, bits | N/A (alt. 24 x336) | |
| | TTI, ms | 10(alt. 20) | |
| | Coding type | TC | |
| CRC, bit | 16 | | |
| Max number of bits/TTI after channel coding | 12684(alt. 25368) | | |
| RM attribute | 110-150 | | |

6.10.2.4.1.32.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.32.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 12 (alt.18) |
| TFCS | (384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1)) |

6.10.2.4.1.32.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|-----|
| Downlink | Spreading factor | 8 | |
| | Number of DPDCH | 1 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| Number of data bits/frame | | 9120 | |

6.10.2.4.1.33 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.33.1 Uplink

See clause 6.10.2.4.1.28.1.

6.10.2.4.1.33.2 Downlink

See clause 6.10.2.4.1.32.2.

6.10.2.4.1.34 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.34.1 Uplink

6.10.2.4.1.34.1.1 Transport channel parameters

6.10.2.4.1.34.1.1.1 Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|---|--------------------|------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 12x336 |
| | | TF6, bits | 16x336(alt. N/A) |
| | | TF7, bits | 20x336(alt. N/A) |
| | TF8, bits | 24 x336 (alt. N/A) | |
| | TTI, ms | 20 (alt. 10) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 25368 | |
| Uplink: Max number of bits/radio frame before rate matching | 12684 | | |
| RM attribute | 110-150 | | |

6.10.2.4.1.34.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.34.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 18 (alt.12) |
| TFCS | (384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)) |

6.10.2.4.1.34.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 4 |
| | Max number of DPDCH data bits/radio frame | 9600 |
| | Number of DPDCH | 1 |
| | Puncturing Limit | 0.72 |

6.10.2.4.1.34.2 Downlink

See clause 6.10.2.4.1.32.2.

6.10.2.4.1.35 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.35.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.35.2 Downlink

6.10.2.4.1.35.2.1 Transport channel parameters

6.10.2.4.1.35.2.1.1 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 2048000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 656 | |
| | TFS | TF0, bits | 0x656 |
| | | TF1, bits | 1x656 |
| | | TF2, bits | 2x656 |
| | | TF3, bits | 4 x656 |
| | | TF4, bits | 8 x656 |
| | | TF5, bits | 12x656 |
| | | TF6, bits | 16x656 |
| | | TF7, bits | 20x656 |
| | | TF8, bits | 24x656 |
| | | TF9, bits | 28x656 |
| | | TF10, bits | 32x656 |
| | | TF11, bits | N/A (alt. 36x656) |
| | | TF12, bits | N/A (alt. 40x656) |
| | | TF13, bits | N/A (alt. 44x656) |
| | | TF14, bits | N/A (alt. 48x656) |
| | | TF15, bits | N/A (alt. 52x656) |
| | | TF16, bits | N/A (alt. 56x656) |
| | | TF17, bits | N/A (alt. 60x656) |
| TF18, bits | N/A (alt. 64x656) | | |
| TTI, ms | 10(alt. 20) | | |
| Coding type | TC | | |
| CRC, bit | 16 | | |
| Max number of bits/TTI after channel coding | 64575 (alt. 129141) | | |
| RM attribute | 130-170 | | |

6.10.2.4.1.35.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.35.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 22 (alt.38) |
| TFCS | (2048 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1) (alt. TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0),(TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1),(TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0)) |

6.10.2.4.1.35.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|---------------------------|------------------|---------------------------|------|
| Downlink | Spreading factor | 4 | |
| | Number of DPCH | 3 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 1248 |
| Number of data bits/frame | | 18720 | |

6.10.2.4.1.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.36.1 Uplink

See clause 6.10.2.4.1.28.1.

6.10.2.4.1.36.2 Downlink

See clause 6.10.2.4.1.35.2.

6.10.2.4.1.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.37.1 Uplink

See clause 6.10.2.4.1.34.1.

6.10.2.4.1.37.2 Downlink

See clause 6.10.2.4.1.35.2.

6.10.2.4.1.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38.1 Uplink

6.10.2.4.1.38.1.1 Transport channel parameters

6.10.2.4.1.38.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.38.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.2.4.1.23.1.1.1.

6.10.2.4.1.38.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 18 (alt. 12) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 32kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1)) |

6.10.2.4.1.38.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.38.2 Downlink

6.10.2.4.1.38.2.1 Transport channel parameters

6.10.2.4.1.38.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.38.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1.23.2.1.1.

6.10.2.4.1.38.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.

6.10.2.4.1.38.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 8kbps RAB, DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1) |

6.10.2.4.1.38.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 64 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 60 |
| Number of data bits/frame | | 900 | |

6.10.2.4.1.38a Conversational / speech / 12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38a.1 Uplink

6.10.2.4.1.38a.1.1 Transport channel parameters

6.10.2.4.1.38a.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.38a.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|---------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 0 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | TTI, ms | | 20 |
| | Coding type | | CC |
| | CRC, bit | | 16 |
| | Max number of bits/TTI after channel coding | | 0 |
| | Uplink: Max number of bits/radio frame before rate matching | | 0 |
| | RM attribute | | 130-170 |

6.10.2.4.1.38a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38a.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1) |

6.10.2.4.1.38a.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.84 |

6.10.2.4.1.38a.2 Downlink

6.10.2.4.1.38a.2.1 Transport channel parameters

6.10.2.4.1.38a.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.38a.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|---------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 0 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | TTI, ms | | 20 |
| | Coding type | | CC |
| | CRC, bit | | 16 |
| | Max number of bits/TTI after channel coding | | 0 |
| | RM attribute | | 130-170 |

6.10.2.4.1.38a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38a.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 0kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1) |

6.10.2.4.1.38a.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCl bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| | | Number of data bits/frame | 510 |

6.10.2.4.1.38b Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38b.1 Uplink

6.10.2.4.1.38b.1.1 Transport channel parameters

6.10.2.4.1.38b.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.38b.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 8000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1068 | |
| | Uplink: Max number of bits/radio frame before rate matching | 267 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.38b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38b.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF1,TF1) |

6.10.2.4.1.38b.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.38b.2 Downlink

6.10.2.4.1.38b.2.1 Transport channel parameters

6.10.2.4.1.38b.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.38b.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 8000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1068 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.38b.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.38b.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF1,TF1) |

6.10.2.4.1.38b.2.2 Physical channel parameters

| DPCH Downlink | DTX position | Flexible |
|---------------|---------------------------|----------|
| | Spreading factor | 64 |
| DPCCH | Number of TFCl bits/slot | 8 |
| | Number of TPC bits/slot | 4 |
| | Number of Pilot bits/slot | 8 |
| DPDCH | Number of data bits/slot | 60 |
| | Number of data bits/frame | 900 |

6.10.2.4.1.38c Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38c.1 Uplink

6.10.2.4.1.38c.1.1 Transport channel parameters

6.10.2.4.1.38c.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.38c.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.2.4.1.23c.1.1.1.

6.10.2.4.1.38c.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38c.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF1,TF4,TF1) |

6.10.2.4.1.38c.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.38c.2 Downlink

6.10.2.4.1.38c.2.1 Transport channel parameters

6.10.2.4.1.38c.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.38c.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.2.4.1.23c.2.1.1.

6.10.2.4.1.38c.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.38c.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF1,TF4,TF1) |

6.10.2.4.1.38c.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCl bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.38d Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38d.1 Uplink

6.10.2.4.1.38d.1.1 Transport channel parameters

6.10.2.4.1.38d.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.38d.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | RAB | |
|---|---|--------------------------------|-------|--|
| RLC | Logical channel type | DTCH | DTCH | |
| | RLC mode | AM | AM | |
| | Payload sizes, bit | 320 | 320 | |
| | Max data rate, bps | 64000 | 64000 | |
| | AMD PDU header, bit | 16 | 16 | |
| MAC | MAC header, bit | 4 | 4 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 340 | | |
| | TFS | TF0, bits | 0x340 | |
| | | TF1, bits | 1x340 | |
| | | TF2, bits | 2x340 | |
| | | TF3, bits | 3x340 | |
| | | TF4, bits | 4x340 | |
| | TTI, ms | 20 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 4284 | | |
| Uplink: Max number of bits/radio frame before rate matching | 2142 | | | |
| RM attribute | 130-170 | | | |

6.10.2.4.1.38d.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38d.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0),(TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0),(TF2,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0),(TF2,TF1,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0),(TF2,TF1,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0),(TF2,TF1,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1),(TF2,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1),(TF2,TF1,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1),(TF2,TF1,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1),(TF2,TF1,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1),(TF2,TF1,TF1,TF4,TF1) |

6.10.2.4.1.38d.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.38d.2 Downlink

6.10.2.4.1.38d.2.1 Transport channel parameters

6.10.2.4.1.38d.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.38d.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB + DL:64 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | | RAB | |
|--------------|---|--------------------------------|-------|--|
| RLC | Logical channel type | DTCH | DTCH | |
| | RLC mode | AM | AM | |
| | Payload sizes, bit | 320 | 320 | |
| | Max data rate, bps | 64000 | 64000 | |
| | AMD PDU header, bit | 16 | 16 | |
| MAC | MAC header, bit | 4 | 4 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 340 | | |
| | TFS | 0x340 | 0x340 | |
| | | 1x340 | 1x340 | |
| | | 2x340 | 2x340 | |
| | | 3x340 | 3x340 | |
| | | 4x340 | 4x340 | |
| | TTI, ms | 20 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 4284 | | |
| RM attribute | 130-170 | | | |

6.10.2.4.1.38d.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.38d.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0),(TF2,TF1,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0),(TF2,TF1,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0),(TF2,TF1,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0),(TF2,TF1,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0),(TF2,TF1,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1),(TF2,TF1,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1),(TF2,TF1,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1),(TF2,TF1,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1),(TF2,TF1,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1),(TF2,TF1,TF1,TF4,TF1) |

6.10.2.4.1.38d.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| Number of data bits/frame | | 2100 | |

6.10.2.4.1.38e Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38e.1 Uplink

6.10.2.4.1.38e.1.1 Transport channel parameters

6.10.2.4.1.38e.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.1.1.1.

6.10.2.4.1.38e.1.1.2 Transport channel parameters for Interactive or background / UL:0 kbps / PS RAB

See clause 6.10.2.4.1.38a.1.1.2.

6.10.2.4.1.38e.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38e.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1) |

6.10.2.4.1.38e.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 0.84 |

6.10.2.4.1.38e.2 Downlink

6.10.2.4.1.38e.2.1 Transport channel parameters

6.10.2.4.1.38e.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.2.1.1.

6.10.2.4.1.38e.2.1.2 Transport channel parameters for Interactive or background / DL:0 kbps / PS RAB

See clause 6.10.2.4.1.38a.2.1.2

6.10.2.4.1.38e.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38e.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 0 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), |

6.10.2.4.1.38e.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|-------|
| DPCH Downlink | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCl bits/slot | 0 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 34 |
| | | Number of data bits/frame | 510 |

6.10.2.4.1.38f Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38f.1 Uplink

6.10.2.4.1.38f.1.1 Transport channel parameters

6.10.2.4.1.38f.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.1.1.1.

6.10.2.4.1.38f.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.1.

6.10.2.4.1.38f.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38f.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 24 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1) |

6.10.2.4.1.38f.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.38f.2 Downlink

6.10.2.4.1.38f.2.1 Transport channel parameters

6.10.2.4.1.38f.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.2.1.1.

6.10.2.4.1.38f.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.2.1.1

6.10.2.4.1.38f.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38f.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 24 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 8 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1) |

6.10.2.4.1.38f.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 64 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 60 |
| Number of data bits/frame | | 900 | |

6.10.2.4.1.38g Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38g.1 Uplink

6.10.2.4.1.38g.1.1 Transport channel parameters

6.10.2.4.1.38g.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1. 4a.1.1.1.

6.10.2.4.1.38g.1.1.2 Transport channel parameters for Interactive or background / UL:16 kbps / PS RAB

See clause 6.10.2.4.1. 23b.1.1.1.

6.10.2.4.1.38g.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38g.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 32 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1) |

6.10.2.4.1.38g.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 1200 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.38g.2 Downlink

6.10.2.4.1.38g.2.1 Transport channel parameters

6.10.2.4.1.38g.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.2.1.1.

6.10.2.4.1.38g.2.1.2 Transport channel parameters for Interactive or background / DL:16 kbps / PS RAB

See clause 6.10.2.4.1.23b.2.1.1.

6.10.2.4.1.38g.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38g.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 36 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 16 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1) |

6.10.2.4.1.38g.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 64 |
| | DPCCH | Number of TFCl bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 60 |
| | | Number of data bits/frame | 900 |

6.10.2.4.1.38h Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38h.1 Uplink

6.10.2.4.1.38h.1.1 Transport channel parameters

6.10.2.4.1.38h.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.1.1.1.

6.10.2.4.1.38h.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.2.4.1.23c.1.1.1.

6.10.2.4.1.38h.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38h.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 32 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF0,TF0,TF0,TF4,TF0), (TF5,TF4,TF1,TF0,TF0), (TF5,TF4,TF1,TF1,TF0), (TF5,TF4,TF1,TF2,TF0), (TF5,TF4,TF1,TF4,TF0), (TF4,TF3,TF0,TF0,TF0), (TF4,TF3,TF0,TF1,TF0), (TF3,TF2,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF0,TF0,TF0,TF4,TF1), (TF5,TF4,TF1,TF0,TF1), (TF5,TF4,TF1,TF1,TF1), (TF5,TF4,TF1,TF2,TF1), (TF5,TF4,TF1,TF4,TF1), (TF4,TF3,TF0,TF0,TF1), (TF4,TF3,TF0,TF1,TF1), (TF3,TF2,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF4,TF1) |

6.10.2.4.1.38h.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.38h.2 Downlink

6.10.2.4.1.38h.2.1 Transport channel parameters

6.10.2.4.1.38h.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.2.1.1.

6.10.2.4.1.38h.2.1.2 Transport channel parameters for Interactive or background / DL:32 kbps / PS RAB

See clause 6.10.2.4.1.23c.2.1.1.

6.10.2.4.1.38h.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38h.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 48 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 32 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF0,TF0,TF0,TF4,TF0), (TF5,TF4,TF1,TF0,TF0), (TF5,TF4,TF1,TF1,TF0), (TF5,TF4,TF1,TF2,TF0), (TF5,TF4,TF1,TF4,TF0), (TF4,TF3,TF0,TF0,TF0), (TF4,TF3,TF0,TF1,TF0), (TF4,TF3,TF0,TF2,TF0), (TF4,TF3,TF0,TF4,TF0), (TF3,TF2,TF0,TF0,TF0), (TF3,TF2,TF0,TF1,TF0), (TF3,TF2,TF0,TF2,TF0), (TF3,TF2,TF0,TF4,TF0), (TF2,TF1,TF0,TF0,TF0), (TF2,TF1,TF0,TF1,TF0), (TF2,TF1,TF0,TF2,TF0), (TF2,TF1,TF0,TF4,TF0), (TF1,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF0,TF0,TF0,TF4,TF1), (TF5,TF4,TF1,TF0,TF1), (TF5,TF4,TF1,TF1,TF1), (TF5,TF4,TF1,TF2,TF1), (TF5,TF4,TF1,TF4,TF1), (TF4,TF3,TF0,TF0,TF1), (TF4,TF3,TF0,TF1,TF1), (TF4,TF3,TF0,TF2,TF1), (TF4,TF3,TF0,TF4,TF1), (TF3,TF2,TF0,TF0,TF1), (TF3,TF2,TF0,TF1,TF1), (TF3,TF2,TF0,TF2,TF1), (TF3,TF2,TF0,TF4,TF1), (TF2,TF1,TF0,TF0,TF1), (TF2,TF1,TF0,TF1,TF1), (TF2,TF1,TF0,TF2,TF1), (TF2,TF1,TF0,TF4,TF1), (TF1,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF4,TF1) |

6.10.2.4.1.38h.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCl bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.38i Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38i.1 Uplink

6.10.2.4.1.38i.1.1 Transport channel parameters

6.10.2.4.1.38i.1.1.1 Transport channel parameters for Conversational / speech / UL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.1.1.1.

6.10.2.4.1.38i.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.2.4.1.24.1.1.1.

6.10.2.4.1.38i.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.38i.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 48 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1) |

6.10.2.4.1.38i.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.76 |

6.10.2.4.1.38i.2 Downlink

6.10.2.4.1.38i.2.1 Transport channel parameters

6.10.2.4.1.38i.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.2.1.1.

6.10.2.4.1.38i.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.2.4.1.25.2.1.1.

6.10.2.4.1.38i.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38i.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 60 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF0,TF3,TF0), (TF3,TF2,TF0,TF3,TF0), (TF4,TF3,TF0,TF3,TF0), (TF5,TF4,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF0,TF3,TF1), (TF3,TF2,TF0,TF3,TF1), (TF4,TF3,TF0,TF3,TF1), (TF5,TF4,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1) |

6.10.2.4.1.38i.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.38j Conversational / speech / (12.2 7.95 5.9 4.75) kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.38j.1 Uplink

6.10.2.4.1.38j.1.1 Transport channel parameters

See clause 6.10.2.4.1.38i.1.1

6.10.2.4.1.38j.2 Downlink

6.10.2.4.1.38j.2.1 Transport channel parameters

6.10.2.4.1.38j.2.1.1 Transport channel parameters for Conversational / speech / DL: (12.2 7.95 5.9 4.75) kbps / CS RAB

See clause 6.10.2.4.1.4a.2.1.1.

6.10.2.4.1.38j.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.2.4.1.27.2.1.1.

6.10.2.4.1.38j.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.1.38j.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 60 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB, DCCH)= (TF0,TF0,TF0,TF0,TF0), (TF1,TF0,TF0,TF0,TF0), (TF2,TF1,TF0,TF0,TF0), (TF3,TF2,TF0,TF0,TF0), (TF4,TF3,TF0,TF0,TF0), (TF5,TF4,TF1,TF0,TF0), (TF0,TF0,TF0,TF1,TF0), (TF1,TF0,TF0,TF1,TF0), (TF2,TF1,TF0,TF1,TF0), (TF3,TF2,TF0,TF1,TF0), (TF4,TF3,TF0,TF1,TF0), (TF5,TF4,TF1,TF1,TF0), (TF0,TF0,TF0,TF2,TF0), (TF1,TF0,TF0,TF2,TF0), (TF2,TF1,TF0,TF2,TF0), (TF3,TF2,TF0,TF2,TF0), (TF4,TF3,TF0,TF2,TF0), (TF5,TF4,TF1,TF2,TF0), (TF0,TF0,TF0,TF3,TF0), (TF1,TF0,TF0,TF3,TF0), (TF2,TF1,TF0,TF3,TF0), (TF3,TF2,TF0,TF3,TF0), (TF4,TF3,TF0,TF3,TF0), (TF5,TF4,TF1,TF3,TF0), (TF0,TF0,TF0,TF4,TF0), (TF1,TF0,TF0,TF4,TF0), (TF2,TF1,TF0,TF4,TF0), (TF3,TF2,TF0,TF4,TF0), (TF4,TF3,TF0,TF4,TF0), (TF5,TF4,TF1,TF4,TF0), (TF0,TF0,TF0,TF0,TF1), (TF1,TF0,TF0,TF0,TF1), (TF2,TF1,TF0,TF0,TF1), (TF3,TF2,TF0,TF0,TF1), (TF4,TF3,TF0,TF0,TF1), (TF5,TF4,TF1,TF0,TF1), (TF0,TF0,TF0,TF1,TF1), (TF1,TF0,TF0,TF1,TF1), (TF2,TF1,TF0,TF1,TF1), (TF3,TF2,TF0,TF1,TF1), (TF4,TF3,TF0,TF1,TF1), (TF5,TF4,TF1,TF1,TF1), (TF0,TF0,TF0,TF2,TF1), (TF1,TF0,TF0,TF2,TF1), (TF2,TF1,TF0,TF2,TF1), (TF3,TF2,TF0,TF2,TF1), (TF4,TF3,TF0,TF2,TF1), (TF5,TF4,TF1,TF2,TF1), (TF0,TF0,TF0,TF3,TF1), (TF1,TF0,TF0,TF3,TF1), (TF2,TF1,TF0,TF3,TF1), (TF3,TF2,TF0,TF3,TF1), (TF4,TF3,TF0,TF3,TF1), (TF5,TF4,TF1,TF3,TF1), (TF0,TF0,TF0,TF4,TF1), (TF1,TF0,TF0,TF4,TF1), (TF2,TF1,TF0,TF4,TF1), (TF3,TF2,TF0,TF4,TF1), (TF4,TF3,TF0,TF4,TF1), (TF5,TF4,TF1,TF4,TF1) |

6.10.2.4.1.38j.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 16 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| | | Number of data bits/frame | 4320 |

6.10.2.4.1.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.39.1 Uplink

See clause 6.10.2.4.1.38.1.

6.10.2.4.1.39.2 Downlink

6.10.2.4.1.39.2.1 Transport channel parameters

6.10.2.4.1.39.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.39.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.2.4.1.25.2.1.1.

6.10.2.4.1.39.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.39.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.39.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.1.40.1 Uplink

6.10.2.4.1.40.1.1 Transport channel parameters

6.10.2.4.1.40.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.40.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.2.4.1.24.1.1.1.

6.10.2.4.1.40.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.40.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.40.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.76 |

6.10.2.4.1.40.2 Downlink

See clause 6.10.2.4.1.39.2.

6.10.2.4.1.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.41.1 Uplink

See clause 6.10.2.4.1.40.1.

6.10.2.4.1.41.2 Downlink

6.10.2.4.1.41.2.1 Transport channel parameters

6.10.2.4.1.41.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.41.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.2.4.1.27.2.1.1.

6.10.2.4.1.41.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.41.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.41.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|------|
| DPCH Downlink | DTX position | Flexible | |
| | Spreading factor | 16 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| | | Number of data bits/frame | 4320 |

6.10.2.4.1.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.42.1 Uplink

See clause 6.10.2.4.1.40.1.

6.10.2.4.1.42.2 Downlink

6.10.2.4.1.42.2.1 Transport channel parameters

6.10.2.4.1.42.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.42.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.2.4.1.31.2.1.1.

6.10.2.4.1.42.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.42.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 (alt. 42) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 256 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1)) |

6.10.2.4.1.42.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 8 |
| | Number of DPDCH | | 1 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| Number of data bits/frame | | 9120 | |

6.10.2.4.1.43 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.43.1 Uplink

See clause 6.10.2.4.1.40.1.

6.10.2.4.1.43.2 Downlink

6.10.2.4.1.43.2.1 Transport channel parameters

6.10.2.4.1.43.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.43.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.2.4.1.32.2.1.1.

6.10.2.4.1.43.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.43.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 36 (alt. 54) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF2, TF1, TF1, TF8, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1), (TF0, TF0, TF0, TF8, TF1), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1)) |

6.10.2.4.1.43.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|----------|------------------|---------------------------|------|
| Downlink | Spreading factor | 8 | |
| | Number of DPDCH | 1 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| | | Number of data bits/frame | 9120 |

6.10.2.4.1.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.44.1 Uplink

6.10.2.4.1.44.1.1 Transport channel parameters

6.10.2.4.1.44.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.44.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.2.4.1.28.1.1.1.

6.10.2.4.1.44.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.44.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.44.1.2 Physical channel parameters

| | | |
|----------------|--|------|
| DPCH Uplink | Min spreading factor | 8 |
| | Max number of DPDCH data bits/radio frame | 4800 |
| | Puncturing Limit | 0.92 |
| | | |

6.10.2.4.1.44.2 Downlink

6.10.2.4.1.44.2.1 Transport channel parameters

6.10.2.4.1.44.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.44.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

See clause 6.10.2.4.1.35.2.1.1.

6.10.2.4.1.44.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.44.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 4 |
| | Number of DPDCH | | 3 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 1248 |
| Number of data bits/frame | | 18720 | |

6.10.2.4.1.45 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.45.1 Uplink

6.10.2.4.1.45.1.1 Transport channel parameters

6.10.2.4.1.45.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.45.1.1.2 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.2.4.1.17.1.1.1.

6.10.2.4.1.45.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.45.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 57.6 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.45.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.45.2 Downlink

6.10.2.4.1.45.2.1 Transport channel parameters

6.10.2.4.1.45.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.45.2.1.2 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.2.4.1.17.2.1.1.

6.10.2.4.1.45.2.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.11.

6.10.2.4.1.45.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 57.6 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.45.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.46 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.46.1 Uplink

See clause 6.10.2.4.1.4.1.

6.10.2.4.1.46.2 Downlink

6.10.2.4.1.46.2.1 Transport channel parameters

6.10.2.4.1.46.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.46.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS RAB

See clause 6.10.2.4.1.18.2.1.1.

6.10.2.4.1.46.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.46.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.2.4.1.46.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.47 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.47.1 Uplink

See clause 6.10.2.4.1.4.1.

6.10.2.4.1.47.2 Downlink

6.10.2.4.1.47.2.1 Transport channel parameters

6.10.2.4.1.47.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.47.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS RAB

See clause 6.10.2.4.1.20.2.1.1.

6.10.2.4.1.47.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.47.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 36 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1) |

6.10.2.4.1.47.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|----------|------------------|---------------------------|------|
| Downlink | Spreading factor | 16 | |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| | | Number of data bits/frame | 4320 |

6.10.2.4.1.48 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:384 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.48.1 Uplink

See clause 6.10.2.4.1.4.1.

6.10.2.4.1.48.2 Downlink

6.10.2.4.1.48.2.1 Transport channel parameters

6.10.2.4.1.48.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.48.2.1.2 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS RAB

See clause 6.10.2.4.1.22.2.1.1.

6.10.2.4.1.48.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.48.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 48 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1) |

6.10.2.4.1.48.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 8 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| | | Number of data bits/frame | 9120 |

6.10.2.4.1.49 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.49.1 Uplink

6.10.2.4.1.49.1.1 Transport channel parameters

6.10.2.4.1.49.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.1.1.1.

6.10.2.4.1.49.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.1.1.1.

6.10.2.4.1.49.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.49.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1) |

6.10.2.4.1.49.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.72 |

6.10.2.4.1.49.2 Downlink

6.10.2.4.1.49.2.1 Transport channel parameters

6.10.2.4.1.49.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.1.49.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.2.1.1.

6.10.2.4.1.49.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.11.

6.10.2.4.1.49.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1) |

6.10.2.4.1.49.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCl bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.50 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.50.1 Uplink

6.10.2.4.1.50.1.1 Transport channel parameters

6.10.2.4.1.50.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.1.1.1.

6.10.2.4.1.50.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.50.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 8 |
| TFCS | (64 kbps RAB, 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0) (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1) |

6.10.2.4.1.50.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 8 |
| | Max number of DPDCH data bits/radio frame | 4800 |
| | Puncturing Limit | 0.92 |

6.10.2.4.1.50.2 Downlink

6.10.2.4.1.50.2.1 Transport channel parameters

6.10.2.4.1.50.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.2.1.1.

6.10.2.4.1.50.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.50.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 8 |
| TFCS | (64 kbps RAB, 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0) (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1) |

6.10.2.4.1.50.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 16 |
| | DPCCH | Number of TF0 bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| | | Number of data bits/frame | 4320 |

6.10.2.4.1.51 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.51.1 Uplink

6.10.2.4.1.51.1.1 Transport channel parameters

6.10.2.4.1.51.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.1.1.1.

6.10.2.4.1.51.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.2.4.1.24.1.1.1.

6.10.2.4.1.51.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.51.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.2.4.1.51.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 8 |
| | Max number of DPDCH data bits/radio frame | 4800 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.51.2 Downlink

6.10.2.4.1.51.2.1 Transport channel parameters

6.10.2.4.1.51.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.2.1.1.

6.10.2.4.1.51.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.2.4.1.25.2.1.1.

6.10.2.4.1.51.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.51.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.2.4.1.51.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 16 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 288 |
| Number of data bits/frame | | 4320 | |

6.10.2.4.1.51a Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.51a.1 Uplink

6.10.2.4.1.51a.1.1 Transport channel parameters

6.10.2.4.1.51a.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.2.1.1.

6.10.2.4.1.51a.1.1.2 Transport channel parameters for Interactive or Background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.37.1.1.1.

6.10.2.4.1.51a.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.51a.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 8 |
| TFCS | (64 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1) |

6.10.2.4.1.51a.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.88 |

6.10.2.4.1.51a.2 Downlink

6.10.2.4.1.51a.2.1 Transport channel parameters

6.10.2.4.1.51a.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / PS RAB

See clause 6.10.2.4.1.13.2.1.1.

6.10.2.4.1.51a.2.1.2 Transport channel parameters for Interactive or Background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.2.1.1.

6.10.2.4.1.51a.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.51a.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 8 |
| TFCS | (64 kbps Conversational RAB, 8 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1) |

6.10.2.4.1.51a.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.1.51b Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or Background / UL:16 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.51b.1 Uplink

6.10.2.4.1.51b.1.1 Transport channel parameters

6.10.2.4.1.51b.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.1.1.1.

6.10.2.4.1.51b.1.1.2 Transport channel parameters for Interactive or Background / UL:16 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 16000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 | |
| Uplink: Max number of bits/radio frame before rate matching | 531 | | |
| RM attribute | 135-175 | | |

6.10.2.4.1.51b.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.51b.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (64 kbps Conversational RAB, 16 kbps I/B RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1) |

6.10.2.4.1.51b.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.80 |

6.10.2.4.1.51b.2 Downlink

See clause 6.10.2.4.1.51.2.

6.10.2.4.1.52 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.52.1 Uplink

See clause 6.10.2.4.1.51.1.

6.10.2.4.1.52.2 Downlink

6.10.2.4.1.52.2.1 Transport channel parameters

6.10.2.4.1.52.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.2.1.1.

6.10.2.4.1.52.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.2.4.1.27.2.1.1.

6.10.2.4.1.52.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.52.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 128 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.2.4.1.52.2.2 Physical channel parameters

| | | | |
|---------------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 8 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| Number of data bits/frame | | 9120 | |

6.10.2.4.1.53 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.53.1 Uplink

6.10.2.4.1.53.1.1 Transport channel parameters

6.10.2.4.1.53.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.2.4.1.13.1.1.1.

6.10.2.4.1.53.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.2.4.1.28.1.1.1.

6.10.2.4.1.53.1.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.53.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 128kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.2.4.1.53.1.2 Physical channel parameters

| | | |
|----------------|---|------|
| DPCH Uplink | Min spreading factor | 4 |
| | Max number of DPDCH data bits/radio frame | 9600 |
| | Puncturing Limit | 0.96 |

6.10.2.4.1.53.2 Downlink

See clause 6.10.2.4.1.52.2.

6.10.2.4.1.54 Interactive or background / UL:64 DL:128 kbps / PS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.54.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.54.2 Downlink

6.10.2.4.1.54.2.1 Transport channel parameters

6.10.2.4.1.54.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.2.4.1.27.2.1.1.

6.10.2.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS RAB

See clause 6.10.2.4.1.18.2.1.1.

6.10.2.4.1.54.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.54.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 50 |
| TFCS | (I/B 128 kbps RAB, Str. 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF0, TF2, TF0), (TF1, TF2, TF0), (TF2, TF2, TF0), (TF3, TF2, TF0), (TF4, TF2, TF0), (TF0, TF3, TF0), (TF1, TF3, TF0), (TF2, TF3, TF0), (TF3, TF3, TF0), (TF4, TF3, TF0), (TF0, TF4, TF0), (TF1, TF4, TF0), (TF2, TF4, TF0), (TF3, TF4, TF0), (TF4, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF0, TF2, TF1), (TF1, TF2, TF1), (TF2, TF2, TF1), (TF3, TF2, TF1), (TF4, TF2, TF1), (TF0, TF3, TF1), (TF1, TF3, TF1), (TF2, TF3, TF1), (TF3, TF3, TF1), (TF4, TF3, TF1), (TF0, TF4, TF1), (TF1, TF4, TF1), (TF2, TF4, TF1), (TF3, TF4, TF1), (TF4, TF4, TF1) |

6.10.2.4.1.54.2.4 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 8 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| | | Number of data bits/frame | 9120 |

6.10.2.4.1.55 Interactive or background / UL:64 DL:128 kbps / PS RAB + Streaming / unknown / UL:0 DL:128 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.55.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.1.55.2 Downlink

6.10.2.4.1.55.2.1 Transport channel parameters

6.10.2.4.1.55.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.2.4.1.27.2.1.1.

6.10.2.4.1.55.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS RAB

See clause 6.10.2.4.1.20.2.1.1.

6.10.2.4.1.55.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.55.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 60 |
| TFCS | (I/B 128 kbps RAB, Str. 128 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF0, TF2, TF0), (TF1, TF2, TF0), (TF2, TF2, TF0), (TF3, TF2, TF0), (TF4, TF2, TF0), (TF0, TF3, TF0), (TF1, TF3, TF0), (TF2, TF3, TF0), (TF3, TF3, TF0), (TF4, TF3, TF0), (TF0, TF4, TF0), (TF1, TF4, TF0), (TF2, TF4, TF0), (TF3, TF4, TF0), (TF4, TF4, TF0), (TF0, TF5, TF0), (TF1, TF5, TF0), (TF2, TF5, TF0), (TF3, TF5, TF0), (TF4, TF5, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF0, TF2, TF1), (TF1, TF2, TF1), (TF2, TF2, TF1), (TF3, TF2, TF1), (TF4, TF2, TF1), (TF0, TF3, TF1), (TF1, TF3, TF1), (TF2, TF3, TF1), (TF3, TF3, TF1), (TF4, TF3, TF1), (TF0, TF4, TF1), (TF1, TF4, TF1), (TF2, TF4, TF1), (TF3, TF4, TF1), (TF4, TF4, TF1), (TF0, TF5, TF1), (TF1, TF5, TF1), (TF2, TF5, TF1), (TF3, TF5, TF1), (TF4, TF5, TF1) |

6.10.2.4.1.55.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 8 |
| | DPCCH | Number of TFCI bits/slot | 8 |
| | | Number of TPC bits/slot | 8 |
| | | Number of Pilot bits/slot | 16 |
| | DPDCH | Number of data bits/slot | 608 |
| | | Number of data bits/frame | 9120 |

- 6.10.2.4.1.56 Interactive or background / UL:8 DL:8 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 6.10.2.4.1.56.1 Uplink
- 6.10.2.4.1.56.1.1 Transport channel parameters
- 6.10.2.4.1.56.1.1.1 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB + UL:8 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | RAB | |
|--------------|---|--------------------------------|-------|--|
| RLC | Logical channel type | DTCH | DTCH | |
| | RLC mode | AM | AM | |
| | Payload sizes, bit | 320 | 320 | |
| | Max data rate, bps | 8000 | 8000 | |
| | AMD PDU header, bit | 16 | 16 | |
| MAC | MAC header, bit | 4 | 4 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 340 | | |
| | TFS | TF0, bits | 0x340 | |
| | | TF1, bits | 1x340 | |
| | TTI, ms | 40 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 1080 | | |
| | Uplink: Max number of bits/radio frame before rate matching | 270 | | |
| | RM attribute | 135-175 | | |

6.10.2.4.1.56.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.56.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (8 kbps RAB + 8 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF0,TF1), (TF1,TF1) |

6.10.2.4.1.56.1.2 Physical channel parameters

| | | |
|-------------|---|-----|
| DPCH Uplink | Min spreading factor | 64 |
| | Max number of DPDCH data bits/radio frame | 600 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.56.2 Downlink

6.10.2.4.1.56.2.1 Transport channel parameters

6.10.2.4.1.56.2.1.1 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB + DL:8 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | RAB | |
|--------------|---|--------------------------------|-------|--|
| RLC | Logical channel type | DTCH | DTCH | |
| | RLC mode | AM | AM | |
| | Payload sizes, bit | 320 | 320 | |
| | Max data rate, bps | 8000 | 8000 | |
| | AMD PDU header, bit | 16 | 16 | |
| MAC | MAC header, bit | 4 | 4 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 340 | | |
| | TFS | TF0, bits | 0x340 | |
| | | TF1, bits | 1x340 | |
| | TTI, ms | 40 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 1080 | | |
| RM attribute | 135-175 | | | |

6.10.2.4.1.56.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.56.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (8 kbps RAB + 8 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF0,TF1), (TF1,TF1) |

6.10.2.4.1.56.2.2 Physical channel parameters

| DPCH | DTX position | Flexible | |
|----------|------------------|---------------------------|-----|
| Downlink | Spreading factor | 128 | |
| | DPCCH | Number of TFCl bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 32 |
| | | Number of data bits/frame | 480 |

- 6.10.2.4.1.57 Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 6.10.2.4.1.57.1 Uplink
- 6.10.2.4.1.57.1.1 Transport channel parameters
- 6.10.2.4.1.57.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB + UL:64 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | RAB | |
|---|---|--------------------------------|-------|--|
| RLC | Logical channel type | DTCH | DTCH | |
| | RLC mode | AM | AM | |
| | Payload sizes, bit | 320 | 320 | |
| | Max data rate, bps | 64000 | 64000 | |
| | AMD PDU header, bit | 16 | 16 | |
| MAC | MAC header, bit | 4 | 4 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 340 | | |
| | TFS | TF0, bits | 0x340 | |
| | | TF1, bits | 1x340 | |
| | | TF2, bits | 2x340 | |
| | | TF3, bits | 3x340 | |
| | | TF4, bits | 4x340 | |
| | TTI, ms | 20 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 4284 | | |
| Uplink: Max number of bits/radio frame before rate matching | 2142 | | | |
| RM attribute | 130-170 | | | |

6.10.2.4.1.57.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.57.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1) |

6.10.2.4.1.57.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 16 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 0.92 |

6.10.2.4.1.57.2 Downlink

6.10.2.4.1.57.2.1 Transport channel parameters

6.10.2.4.1.57.2.1.1 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB + DL:64 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | RAB | |
|--------------|---|--------------------------------|-------|--|
| RLC | Logical channel type | DTCH | DTCH | |
| | RLC mode | AM | AM | |
| | Payload sizes, bit | 320 | 320 | |
| | Max data rate, bps | 64000 | 64000 | |
| | AMD PDU header, bit | 16 | 16 | |
| MAC | MAC header, bit | 4 | 4 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 340 | | |
| | TFS | 0x340 | 0x340 | |
| | | 1x340 | 1x340 | |
| | | 2x340 | 2x340 | |
| | | 3x340 | 3x340 | |
| | | 4x340 | 4x340 | |
| | TTI, ms | 20 | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 4284 | | |
| RM attribute | 130-170 | | | |

6.10.2.4.1.57.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.57.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB + 64 kbps RAB, DCCH)= (TF0,TF0), (TF1,TF0), (TF2,TF0), (TF3,TF0), (TF4,TF0), (TF0,TF1), (TF1,TF1), (TF2,TF1), (TF3,TF1), (TF4,TF1) |

6.10.2.4.1.57.2.2 Physical channel parameters

| DPCH Downlink | DTX position | | Flexible |
|------------------|---------------------------|--|----------|
| | Spreading factor | | 32 |
| DPCCH | Number of TFCl bits/slot | | 8 |
| | Number of TPC bits/slot | | 4 |
| | Number of Pilot bits/slot | | 8 |
| DPDCH | Number of data bits/slot | | 140 |
| | Number of data bits/frame | | 2100 |

6.10.2.4.1.58 Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.1.58.1 Uplink

6.10.2.4.1.58.1.1 Transport channel parameters

6.10.2.4.1.58.1.1.1 Transport channel parameters for Streaming / unknown / UL:16 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 16000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1068 | |
| | Uplink: Max number of bits/radio frame before rate matching | 534 | |
| | RM attribute | 135-175 | |

6.10.2.4.1.58.1.1.2 Transport channel parameters for Interactive or background / UL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.1.1.1.

6.10.2.4.1.58.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.1.1.1.

6.10.2.4.1.58.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 8 |
| TFCS | (16 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0), (TF1,TF0,TF0), (TF0,TF1,TF0), (TF1,TF1,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF0,TF1,TF1), (TF1,TF1,TF1) |

6.10.2.4.1.58.1.2 Physical channel parameters

| | | |
|-------------|---|------|
| DPCH Uplink | Min spreading factor | 32 |
| | Max number of DPDCH data bits/radio frame | 2400 |
| | Puncturing Limit | 1.0 |

6.10.2.4.1.58.2 Downlink

6.10.2.4.1.58.2.1 Transport channel parameters

6.10.2.4.1.58.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 64000 | |
| | AM PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 656 | |
| | TFS | TF0, bits | 0x656 |
| | | TF1, bits | 12x656 |
| | | TF2, bits | 24x656 |
| | | TF3, bits | 48x656 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8076 | |
| RM attribute | 125-165 | | |

6.10.2.4.1.58.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.2.4.1.38b.2.1.1.

6.10.2.4.1.58.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.1.58.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 16 |
| TFCS | (64 kbps RAB, 8 kbps RAB, DCCH)= (TF0,TF0,TF0), (TF1,TF0,TF0), (TF2,TF0,TF0), (TF3,TF0,TF0), (TF0,TF1,TF0), (TF1,TF1,TF0), (TF2,TF1,TF0), (TF3,TF1,TF0), (TF0,TF0,TF1), (TF1,TF0,TF1), (TF2,TF0,TF1), (TF3,TF0,TF1), (TF0,TF1,TF1), (TF1,TF1,TF1), (TF2,TF1,TF1), (TF3,TF1,TF1) |

6.10.2.4.1.58.2.2 Physical channel parameters

| | | | |
|------------------|------------------|---------------------------|----------|
| DPCH Downlink | DTX position | | Flexible |
| | Spreading factor | | 32 |
| | DPCCH | Number of TFCl bits/slot | 8 |
| | | Number of TPC bits/slot | 4 |
| | | Number of Pilot bits/slot | 8 |
| | DPDCH | Number of data bits/slot | 140 |
| | | Number of data bits/frame | 2100 |

6.10.2.4.2 Combinations on PDSCH and DPCH

6.10.2.4.2.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.2.1.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.2.1.2 Downlink

6.10.2.4.2.1.2.1 Transport channel parameters

6.10.2.4.2.1.2.1.1 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

| Higher layer | RAB/Signalling RB | RAB | |
|---|----------------------|--|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 18 | |
| | MAC multiplexing | Logical channel multiplexing on a frame by frame basis | |
| Layer 1 | TrCH type | DSCH | |
| | TB sizes, bit | 354 | |
| | TFS | TF0, bits | 0x354 |
| | | TF1, bits | 1x354 |
| | | TF2, bits | 2x354 |
| | | TF3, bits | 4 x354 |
| | | TF4, bits | 8 x354 |
| | | TF5, bits | N/A (alt. 12x354) |
| | TF6, bits | N/A (alt. 16x354) | |
| | TTI, ms | 10(alt. 20) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| Max number of bits/TTI after channel coding | 8892(alt. 17784) | | |
| RM attribute | 135-175 | | |

6.10.2.4.2.1.2.1.2 Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.2.1.2.1.3 TFCS

| | | |
|-------------------------------------|-----------|--|
| PDSCH | TFCS size | 5 (alt.7) |
| | TFCS | 256 kbps RAB =TF0, TF1, TF2, TF3, TF4 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6) |
| DPCH Downlink associated with PDSCH | TFCS size | 2 |
| | TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.2.1.2.2 Physical channel parameters

| | | | |
|---|--------------------------|---------------------------|---|
| PDSCH | RAB or SRB, TrCh | | Interactive or background / 256 kbps / PS RAB, DSCH |
| | DTX position | | N/A (SingleTrCH) |
| | Minimum spreading factor | | 8 |
| DPCH Downlink associated with PDSCH | RAB or SRB, TrCh | | 3.4 kbps SRB for DCCH, DCH |
| | DTX position | | N/A (SingleTrCH) |
| | Spreading factor | | 256 |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 12 |
| Number of data bits/frame | | 180 | |

6.10.2.4.2.2 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.2.2.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.2.2.2 Downlink

6.10.2.4.2.2.2.1 Transport channel parameters

6.10.2.4.2.2.2.1.1 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

| | | | |
|---|----------------------|-------------------|--|
| Higher layer | RAB/Signalling RB | | RAB |
| RLC | Logical channel type | | DTCH |
| | RLC mode | | AM |
| | Payload sizes, bit | | 320 |
| | Max data rate, bps | | 384000 |
| | AMD PDU header, bit | | 16 |
| MAC | MAC header, bit | | 18 |
| | MAC multiplexing | | Logical channel multiplexing on a frame by frame basis |
| Layer 1 | TrCH type | | DSCH |
| | TB sizes, bit | | 354 |
| | TFS | TF0, bits | 0x354 |
| | | TF1, bits | 1x354 |
| | | TF2, bits | 2x354 |
| | | TF3, bits | 4 x354 |
| | | TF4, bits | 8 x354 |
| | | TF5, bits | 12 x354 |
| | | TF6, bits | N/A (alt. 16x354) |
| | | TF7, bits | N/A (alt. 20x354) |
| | TF8, bits | N/A (alt. 24x354) | |
| | TTI, ms | | 10(alt. 20) |
| | Coding type | | TC |
| | CRC, bit | | 16 |
| Max number of bits/TTI after channel coding | | 13332(alt. 26664) | |
| RM attribute | | 110-150 | |

6.10.2.4.2.2.2.1.2 Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.2.2.1.3 TFCS

| | | |
|-------------------------------------|-----------|--|
| PDSCH | TFCS size | 6 (alt.9) |
| | TFCS | 384 kbps RAB = TF0, TF1, TF2, TF3, TF4, TF5 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8) |
| DPCH Downlink associated with PDSCH | TFCS size | 2 |
| | TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.2.2.2 Physical channel parameters

| | | | |
|-------------------------------------|--------------------------|---------------------------|--|
| PDSCH | RAB or SRB, TrCh | | Interactive or background / 384 kbps / PS RAB, DSCH |
| | DTX position | | N/A (SingleTrCH) |
| | Minimum spreading factor | | 8 |
| DPCH Downlink associated with PDSCH | RAB or SRB, TrCh | | 3.4 kbps SRB for DCCH, DCH |
| | DTX position | | N/A (SingleTrCH) |
| | Spreading factor | | 256 |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 12 |
| Number of data bits/frame | | 180 | |

6.10.2.4.2.3 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.2.4.2.3.1 Uplink

See clause 6.10.2.4.1.24.1.

6.10.2.4.2.3.2 Downlink

6.10.2.4.2.3.2.1 Transport channel parameters

6.10.2.4.2.3.2.1.1 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

| | | | |
|--------------|----------------------|-----------|--|
| Higher layer | RAB/Signalling RB | | RAB |
| RLC | Logical channel type | | DTCH |
| | RLC mode | | AM |
| | Payload sizes, bit | | 640 |
| | Max data rate, bps | | 2048000 |
| | AMD PDU header, bit | | 16 |
| MAC | MAC header, bit | | 18 |
| | MAC multiplexing | | Logical channel multiplexing on a frame by frame basis |
| Layer 1 | TrCH type | | DSCH |
| | TB sizes, bit | | 674 |
| | TFS | TF0, bits | 0x674 |
| | | TF1, bits | 1x674 |
| | | TF2, bits | 2x674 |
| | | TF3, bits | 4 x674 |
| | | TF4, bits | 8 x674 |
| | | TF5, bits | 12x674 |
| | | TF6, bits | 16x674 |
| | | TF7, bits | 20x674 |
| TF8, bits | 24x674 | | |

| Higher layer | RAB/Signalling RB | RAB |
|--------------|---|---------------------|
| | TF9, bits | 28x674 |
| | TF10, bits | 32x674 |
| | TF11, bits | N/A (alt. 36x674) |
| | TF12, bits | N/A (alt. 40x674) |
| | TF13, bits | N/A (alt. 44x674) |
| | TF14, bits | N/A (alt. 48x674) |
| | TF15, bits | N/A (alt. 52x674) |
| | TF16, bits | N/A (alt. 56x674) |
| | TF17, bits | N/A (alt. 60x674) |
| | TF18, bits | N/A (alt. 64x674) |
| | TTI, ms | 10(alt. 20) |
| | Coding type | TC |
| | CRC, bit | 16 |
| | Max number of bits/TTI after channel coding | 66300 (alt. 132588) |
| | RM attribute | 130-170 |

6.10.2.4.2.3.2.1.2 Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1

6.10.2.4.2.3.2.1.3 TFCS

| | | |
|---|-----------|--|
| PDSCH | TFCS size | 11 (alt.19) |
| | TFCS | 2048 kbps RAB = TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10, TF11, TF12, TF13, TF14, TF15, TF16, TF17, TF18) |
| DPCH Downlink associated with PDSCH | TFCS size | 2 |
| | TFCS | SRBs for DCCH = TF0, TF1 |

6.10.2.4.2.3.2.2 Physical channel parameters

| | | | | |
|---|--------------------------|---------------------------|---|----|
| PDSCH | RAB or SRB, TrCh | | Interactive or background / 2048 kbps / PS RAB, DSCH | |
| | DTX position | | N/A (SingleTrCH) | |
| | Minimum spreading factor | | 4 | |
| DPCH Downlink associated with PDSCH | RAB or SRB, TrCh | | 3.4 kbps SRB for DCCH, DCH | |
| | DTX position | | N/A (SingleTrCH) | |
| | Spreading factor | | 256 | |
| | DPCCH | Number of TFCI bits/slot | | 2 |
| | | Number of TPC bits/slot | | 2 |
| | | Number of Pilot bits/slot | | 4 |
| | DPDCH | Number of data bits/slot | | 12 |
| Number of data bits/frame | | 180 | | |

6.10.2.4.2.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.2.4.1 Uplink

See clause 6.10.2.4.1.40.1.

6.10.2.4.2.4.2 Downlink

6.10.2.4.2.4.2.1 Transport channel parameters

6.10.2.4.2.4.2.1.1 Transport channel parameters for Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1

6.10.2.4.2.4.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.2.4.2.1.2.1.1

6.10.2.4.2.4.2.1.3 Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.2.4.2.1.4 TFCS

| | | |
|-------------------------------------|-----------|--|
| PDSCH | TFCS size | 5 (alt.7) |
| | TFCS | 256 kbps RAB = TF0, TF1, TF2, TF3, TF4 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6) |
| DPCH Downlink associated with PDSCH | TFCS size | 6 |
| | TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.2.4.2.4 Physical channel parameters

| | | | |
|-------------------------------------|--------------------------|---------------------------|--|
| PDSCH | RAB or SRB, TrCh | | Interactive or background / 256 kbps / PS RAB, DSCH |
| | DTX position | | N/A (SingleTrCH) |
| | Minimum spreading factor | | 4 |
| DPCH Downlink associated with PDSCH | RAB or SRB, TrCh | | Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH |
| | DTX position | | Fixed |
| | Spreading factor | | 128 |
| | DPCCH | Number of TFCI bits/slot | 2 |
| | | Number of TPC bits/slot | 2 |
| | | Number of Pilot bits/slot | 4 |
| | DPDCH | Number of data bits/slot | 32 |
| Number of data bits/frame | | 480 | |

6.10.2.4.2.5 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.2.5.1 Uplink

See clause 6.10.2.4.1.40.1.

6.10.2.4.2.5.2 Downlink

6.10.2.4.2.5.2.1 Transport channel parameters

6.10.2.4.2.5.2.1.1 Transport channel parameters for Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.2.5.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.2.4.2.2.2.1.1.

6.10.2.4.2.5.2.1.3 Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.2.5.2.1.4 TFCS

| | | |
|-------------------------------------|-----------|--|
| PDSCH | TFCS size | 6 (alt.9) |
| | TFCS | 384 kbps RAB = TF0, TF1, TF2, TF3, TF4, TF5 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8) |
| DPCH Downlink associated with PDSCH | TFCS size | 6 |
| | TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.2.5.2.2 Physical channel parameters

| | | | | | |
|-------------------------------------|--------------------------|---------------------------|---|----|--|
| PDSCH | RAB or SRB, TrCh | | Interactive or background / 384 kbps / PS RAB, DSCH | | |
| | DTX position | | N/A (SingleTrCH) | | |
| | Minimum spreading factor | | 8 | | |
| DPCH Downlink associated with PDSCH | RAB or SRB, TrCh | | Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH | | |
| | DTX position | | Fixed | | |
| | Spreading factor | | 128 | | |
| | DPCCH | Number of TFCI bits/slot | | 2 | |
| | | Number of TPC bits/slot | | 2 | |
| | | Number of Pilot bits/slot | | 4 | |
| | DPDCH | Number of data bits/slot | | 32 | |
| Number of data bits/frame | | 480 | | | |

6.10.2.4.2.6 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.2.4.2.6.1 Uplink

See clause 6.10.2.4.1.40.1.

6.10.2.4.2.6.2 Downlink

6.10.2.4.2.6.2.1 Transport channel parameters

6.10.2.4.2.6.2.1.1 Transport channel parameters for Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB

See clause 6.10.2.4.1.4.2.1.1.

6.10.2.4.2.6.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

See clause 6.10.2.4.2.3.2.1.1.

6.10.2.4.2.6.2.1.3 Transport channel parameters for DL:3.4 DL: 3.4 kbps SRBs for DCCH

See clause 6.10.2.4.1.2.2.1.1.

6.10.2.4.2.6.2.1.4 TFCS

| | | |
|-------------------------------------|-----------|--|
| PDSCH | TFCS size | 11 (alt.19) |
| | TFCS | 2048 kbps RAB =TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10 (alt. TF0, TF1, TF2, TF3, TF4, TF5, TF6, TF7, TF8, TF9, TF10, TF11, TF12, TF13, TF14, TF15, TF16, TF17, TF18) |
| DPCH Downlink associated with PDSCH | TFCS size | 6 |
| | TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH) = (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.2.4.2.6.2.2 Physical channel parameters

| | | | | | |
|-------------------------------------|--------------------------|---------------------------|--|----|--|
| PDSCH | RAB or SRB, TrCh | | Interactive or background / 2048 kbps / PS RAB, DSCH | | |
| | DTX position | | N/A (SingleTrCH) | | |
| | Minimum spreading factor | | 4 | | |
| DPCH Downlink associated with PDSCH | RAB or SRB, TrCh | | Conversational / speech / 12.2 kbps / CS RAB, DCH + 3.4 kbps SRBs for DCCH. DCH | | |
| | DTX position | | Fixed | | |
| | Spreading factor | | 128 | | |
| | DPCCH | Number of TFCI bits/slot | | 2 | |
| | | Number of TPC bits/slot | | 2 | |
| | | Number of Pilot bits/slot | | 4 | |
| | DPDCH | Number of data bits/slot | | 32 | |
| Number of data bits/frame | | 480 | | | |

6.10.2.4.3 Combinations on SCCPCH

6.10.2.4.3.1 Stand-alone signalling RB for PCCH

6.10.2.4.3.1.1 Transport channel parameters

6.10.2.4.3.1.1.1 Transport channel parameter of SRB for PCCH

| | | | |
|--------------|---|-----------|-------------------|
| Higher layer | RAB/signalling RB | | SRB |
| | User of Radio Bearer | | RRC |
| RLC | Logical channel type | | PCCH |
| | RLC mode | | TM |
| | Payload sizes, bit | | 240 (alt. 80) |
| | Max data rate, bps | | 24000 (alt. 8000) |
| | TrD PDU header, bit | | 0 |
| MAC | MAC header, bit | | 0 |
| | MAC multiplexing | | N/A |
| Layer 1 | TrCH type | | PCH |
| | TB sizes, bit | | 240 (alt. 80) |
| | TFS | TF0, bts | 0x240 (alt. 0x80) |
| | | TF1, bits | 1x240 (alt. 1x80) |
| | TTI, ms | | 10 |
| | Coding type | | CC 1/2 |
| | CRC, bit | | 16 |
| | Max number of bits/TTI before rate matching | | 528 (alt. 208) |
| | RM attribute | | 210-250 |

6.10.2.4.3.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for PCCH = TF0, TF1 |

6.10.2.4.3.1.2 Physical channel parameters

| | | |
|--------|---------------------------|------------------|
| SCCPCH | TFCS size | 2 |
| | DTX position | N/A (SingleTrCH) |
| | Spreading factor | 128(alt. 256) |
| | Number of TFCl bits/slot | 0 |
| | Number of Pilot bits/slot | 0 |
| | Number of data bits/slot | 40(alt. 20) |
| | Number of data bits/frame | 600(alt. 300) |

6.10.2.4.3.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.10.2.4.3.2.1 Transport channel parameters

6.10.2.4.3.2.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB

| Higher layer | RAB/signalling RB User of Radio Bearer | RAB Interactive/ Background RAB | |
|--------------|---|------------------------------------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 24 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | FACH | |
| | TB sizes, bit | 360 | |
| | TFS | TF0, bits | 0x360 |
| | | TF1, bits | 1x360 |
| | TTI, ms | 10 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI before rate matching | 1140 | |
| | RM attribute | 110-150 | |

6.10.2.4.3.2.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#0 RRC | SRB#1 RRC | SRB#2 RRC | SRB#3 NAS_DT High prio | SRB#4 NAS_DT Low prio | SRB#5 RRC | |
|---|---|--------------------------------|--|-----------------------|------------------------------|-----------------------------|-----------------------|--|
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH | BCCH | |
| | RLC mode | UM | UM | AM | AM | AM | TM | |
| | Payload sizes, bit | 152 | 136 or 120 (note) | 128 | 128 | 128 | 166 | |
| | Max data rate, bps | 30400 (alt. 45600) | 27200 or 2400 (alt. 40800 or 36000) | 25600 (alt. 38400) | 25600 (alt. 38400) | 25600 (alt. 38400) | 33200 (alt. 49800) | |
| | AMD/UMD/TrD PDU header, bit | 8 | 8 | 16 | 16 | 16 | 0 | |
| MAC | MAC header, bit | 8 | 24 or 40 | 24 | 24 | 24 | 2 | |
| | MAC multiplexing | 6 logical channel multiplexing | | | | | | |
| Layer 1 | TrCH type | FACH | | | | | | |
| | TB sizes, bit | 168 | | | | | | |
| | TFS | TF0, bits | 0x168 | | | | | |
| | | TF1, bits | 1x168 | | | | | |
| | | TF2, bits | 2x168 | | | | | |
| | | TF3, bits | N/A (alt. 3x168) | | | | | |
| | TTI, ms | 10 | | | | | | |
| | Coding type | CC 1/2 | | | | | | |
| | CRC, bit | 16 | | | | | | |
| Max number of bits/TTI before rate matching | 752 (alt. 1136) | | | | | | | |
| RM attribute | 200-240 | | | | | | | |

NOTE: MAC header size and PLC payload size depend on use of U-RNTI or C-RNTI.

6.10.2.4.3.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4, 5, or 6 |
| TFCS | (32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), [TF0, TF3] (note), (TF1, TF0), [TF1, TF1] (note) |
| NOTE: | These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of (TF0, TF2). |

6.10.2.4.3.2.2 Physical channel parameters

| | | |
|--------|---------------------------|----------|
| SCCPCH | DTX position | Flexible |
| | Spreading factor | 64 |
| | Number of TFCI bits/slot | 8 |
| | Number of Pilot bits/slot | 0 |
| | Number of data bits/slot | 72 |
| | Number of data bits/frame | 1080 |

6.10.2.4.3.3 Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

6.10.2.4.3.3.1 Transport channel parameters

6.10.2.4.3.3.1.1 Transport channel parameters of SRB for Interactive/Background 32 kbps RAB

See clause 6.10.2.4.3.2.1

6.10.2.4.3.3.1.2 Transport channel parameters of SRB for PCCH

See clause 6.10.2.4.3.1.1

6.10.2.4.3.3.1.3 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.2.4.3.2.1.2

6.10.2.4.3.3.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 6, 7, 8 or 9 for 240 bits PCH TrBlk size (alt. 6, 7, 8, 9, 10, or 11 for 80 bits PCH TrBlk size) |
| TFCS | (32 kbps RAB, SRB for PCCH, SRBs for CCCH/ DCCH/ BCCH) = (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), [TF0, TF0, TF3] (see note), (TF0, TF1, TF0), (TF0, TF1, TF1), [TF0, TF1, TF2] (see note), (TF1, TF0, TF0), [TF1, TF0, TF1] (see note) (alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), [TF0,TF0, TF3] (see note), (TF0, TF1, TF0), (TF0, TF1, TF1), [TF0, TF1, TF2] (see note), [TF0, TF1, TF3] (see note), (TF1, TF0, TF0), [TF1, TF0, TF1] (see note), [TF1, TF1, TF0] (see note)) |
| NOTE: | These TFCs are available only if SCCPCH can be allocated bigger Tx power than required Tx power for TFC of (TF0, TF0, TF2). |

6.10.2.4.3.3.2 Physical channel parameters

| | | |
|--------|---------------------------|----------|
| SCCPCH | DTX position | Flexible |
| | Spreading factor | 64 |
| | Number of TFCI bits/slot | 8 |
| | Number of Pilot bits/slot | 0 |
| | Number of data bits/slot | 72 |
| | Number of data bits/frame | 1080 |

6.10.2.4.3.4 RB for CTCH + SRB for CCCH + SRB for BCCH

6.10.2.4.3.4.1 Transport channel parameters

6.10.2.4.3.4.1.1 Transport channel parameters of RB for CTCH

| | | | |
|--------------|---|-----------|---------|
| Higher layer | RAB/signalling RB | | N/A |
| | User of Radio Bearer | | BMC |
| RLC | Logical channel type | | CTCH |
| | RLC mode | | UM |
| | Payload sizes, bit | | 152 |
| | Max data rate, bps | | 15200 |
| | UMD PDU header, bit | | 8 |
| MAC | MAC header, bit | | 8 |
| | MAC multiplexing | | N/A |
| Layer 1 | TrCH type | | FACH |
| | TB sizes, bit | | 168 |
| | TFS | TF0, bits | 0x168 |
| | | TF1, bits | 1x168 |
| | TTI, ms | | 10 |
| | Coding type | | CC 1/3 |
| | CRC, bit | | 16 |
| | Max number of bits/TTI before rate matching | | 576 |
| | RM attribute | | 200-240 |

6.10.2.4.3.4.1.2 Transport channel parameters of SRB for CCCH and SRB for BCCH

| | | | | |
|--------------|---|-----------|--------------------------------|-------|
| Higher layer | RAB/signalling RB | | SRB#0 | SRB#5 |
| | User of Radio Bearer | | RRC | RRC |
| RLC | Logical channel type | | CCCH | BCCH |
| | RLC mode | | UM | TM |
| | Payload sizes, bit | | 152 | 166 |
| | Max data rate, bps | | 15200 | 16600 |
| | AMD/UMD/TrD PDU header, bit | | 8 | 0 |
| MAC | MAC header, bit | | 8 | 2 |
| | MAC multiplexing | | 2 logical channel multiplexing | |
| Layer 1 | TrCH type | | FACH | |
| | TB sizes, bit | | 168 | |
| | TFS | TF0, bits | 0x168 | |
| | | TF1, bits | 1x168 | |
| | TTI, ms | | 10 | |
| | Coding type | | CC 1/3 | |
| | CRC, bit | | 16 | |
| | Max number of bits/TTI before rate matching | | 576 | |
| | RM attribute | | 200-240 | |

6.10.2.4.3.4.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 3 |
| TFCS | (RB for CTCH, SRBs for CCCH/ BCCH) = (TF0, TF0), (TF1, TF0), (TF0, TF1) |

6.10.2.4.3.4.2 Physical channel parameters

| | | |
|--------|---------------------------|----------|
| SCCPCH | DTX position | Flexible |
| | Spreading factor | 128 |
| | Number of TFCI bits/slot | 2 |
| | Number of Pilot bits/slot | 0 |
| | Number of data bits/slot | 38 |
| | Number of data bits/frame | 570 |

6.10.2.4.4 Combinations on PRACH

6.10.2.4.4.1 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH

6.10.2.4.4.1.1 Transport channel parameters

6.10.2.4.4.1.1.1 Transport channel parameter for Interactive/Background 32 kbps PS RAB, SRB for CCCH, SRB for DCCH

| Higher layer | RAB/signalling RB | RAB | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 | |
|--------------|---|-----------------------------------|----------------|----------------|----------------|---------------------|--------------------|--|
| | User of Radio Bearer | Interactive/ Background RAB | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | |
| RLC | Logical channel type | DTCH | CCCH | DCCH | DCCH | DCCH | DCCH | |
| | RLC mode | AM | TM | UM | AM | AM | AM | |
| | Payload sizes, bit | 320 | 166 | 136 | 128 | 128 | 128 | |
| | Max data rate, bps | 32000 | 16600 | 13600 | 12800 | 12800 | 12800 | |
| | AMD/UMD/TrD PDU header, bit | 16 | 0 | 8 | 16 | 16 | 16 | |
| MAC | MAC header, bit | 24 | 2 | 24 | 24 | 24 | 24 | |
| | MAC multiplexing | 6 logical channel multiplexing | | | | | | |
| Layer 1 | TrCH type | RACH | | | | | | |
| | TB sizes, bit | 360 | 168 | 168 | 168 | 168 | 168 | |
| | TFS | TF0, bits | 1x168 | | | | | |
| | | TF1, bits | 1x360 | | | | | |
| | TTI, ms | 20 (alt. 10) | | | | | | |
| | Coding type | CC 1/2 | | | | | | |
| | CRC, bit | 16 | | | | | | |
| | Max number of bits/TTI after channel coding | 768 | 384 | 384 | 384 | 384 | 384 | |
| | Max number of bits/Radio frame before rate matching | 384 (alt. 768) | 192 (alt. 384) | 192 (alt. 384) | 192 (alt. 384) | 192 (alt. 384) | 192 (alt. 384) | |

6.10.2.4.4.1.1.2 TFCS

| | |
|-----------|--|
| TFCS size | 2 |
| TFCS | 32 kbps + SRBs for CCCH/ DCCH = TF0, TF1 |

6.10.2.4.4.1.2 Physical channel parameters

| | | |
|-------|-------------------------------------|-----------------|
| PRACH | Minimum Spreading factor | 64 (alt. 32) |
| | Max number of data bits/radio frame | 600 (alt. 1200) |
| | Puncturing Limit | 1 |

6.10.3 RAB and signalling RB for TDD

6.10.3.1 RABs and signalling RBs

In the following clauses, the typical parameter sets are presented for reference RABs, signalling RBs and important combinations of them. The data rate given for each RAB is the maximum data rate that can be supported by that RAB.

NOTE: The granularity for each RAB needs to be clarified.

Table 6.10.3.1.1: Prioritised RABs.

| # | Traffic class ^[3] | SSD ^[3] | Max. rate, kbps | CS/PS |
|----|------------------------------|--------------------|-----------------|-------|
| 1 | Conversational | Speech | UL:12.2 DL:12.2 | CS |
| 2 | Conversational | Speech | UL:10.2 DL:10.2 | CS |
| 3 | Conversational | Speech | UL:7.95 DL:7.95 | CS |
| 4 | Conversational | Speech | UL:7.4 DL:7.4 | CS |
| 5 | Conversational | Speech | UL:6.7 DL:6.7 | CS |
| 6 | Conversational | Speech | UL:5.9 DL:5.9 | CS |
| 7 | Conversational | Speech | UL:5.15 DL:5.15 | CS |
| 8 | Conversational | Speech | UL:4.75 DL:4.75 | CS |
| 9 | Conversational | Unknown | UL:28.8 DL:28.8 | CS |
| 10 | Conversational | Unknown | UL:64 DL:64 | CS |
| 11 | Conversational | Unknown | UL:32 DL:32 | CS |
| 12 | Streaming | Unknown | UL:14.4 DL:14.4 | CS |
| 13 | Streaming | Unknown | UL:28.8 DL:28.8 | CS |
| 14 | Streaming | Unknown | UL:57.6 DL:57.6 | CS |
| 15 | Streaming | Unknown | UL:0 DL:64 | CS |
| 16 | Streaming | Unknown | UL:64 DL:0 | CS |
| 17 | Streaming | Unknown | UL:0 DL:128 | CS |
| 18 | Streaming | Unknown | UL:128 DL:0 | CS |
| 19 | Streaming | Unknown | UL:0 DL:384 | CS |
| 20 | Interactive or Background | N/A | UL:32 DL:8 | PS |
| 21 | Interactive or Background | N/A | UL:64 DL:8 | PS |
| 22 | Interactive or Background | N/A | UL:32 DL:64 | PS |
| 23 | Interactive or Background | N/A | UL:64 DL:64 | PS |
| 24 | Interactive or Background | N/A | UL:64 DL:128 | PS |
| 25 | Interactive or Background | N/A | UL:128 DL:128 | PS |
| 26 | Interactive or Background | N/A | UL:64 DL:384 | PS |
| 27 | Interactive or Background | N/A | UL:128 DL:384 | PS |
| 28 | Interactive or Background | N/A | UL:384 DL:384 | PS |
| 29 | Interactive or Background | N/A | UL:64 DL:2048 | PS |
| 30 | Interactive or Background | N/A | UL:128 DL:2048 | PS |
| 31 | Interactive or Background | N/A | UL:384 DL:2048 | PS |
| 32 | Interactive or Background | N/A | UL:64 DL:256 | PS |
| 33 | Interactive or Background | N/A | UL:0 DL:32 | PS |
| 34 | Interactive or Background | N/A | UL:32 DL:0 | PS |
| 35 | Interactive or Background | N/A | UL:64 DL:144 | PS |
| 36 | Interactive or Background | N/A | UL:144 DL:144 | PS |

Table 6.10.3.1.2: Signalling RBs

| # | Maximum rate, kbps | Logical channel | PhyCh onto which SRBs are mapped |
|----|---------------------|-----------------|----------------------------------|
| 1 | UL:1.7 DL:1.7 | DCCH | DPCH |
| 2 | UL:3.4 DL:3.4 | DCCH | DPCH |
| 3 | UL:13.6 DL:13.6 | DCCH | DPCH |
| 4 | DL:27.2 (alt. 40.8) | DCCH | SCCPCH |
| 5 | UL:16.6 | CCCH | PRACH |
| 6 | DL:30.4 (alt. 45.6) | CCCH | SCCPCH |
| 7 | DL:33.2 (alt. 49.8) | BCCH: | SCCPCH |
| 8 | DL:24 (alt. 6.4) | PCCH | SCCPCH |
| 9 | UL:16.8 | SHCCH | PRACH |
| 10 | UL:16.8 | SHCCH | PRACH or PUSCH |
| 11 | DL:16 | SHCCH | SCCPCH |
| 12 | DL:16 | SHCCH | SCCPCH or PDSCH |

6.10.3.2 Combinations of RABs and Signalling RBs

In the present document, physical channel parameters for following combinations of RABs and signalling RBs on a CCTrCH are described.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 6) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 7) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 8) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 9) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 10) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 11) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 12) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 13) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 14) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 15) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 16) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 17) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 18) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 19) Streaming / unknown / UL:64 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 20) Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 21) Streaming / unknown / UL:128 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 22) Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 24) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 25) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 26) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 27) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 28) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 29) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 30) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 31) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 32) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 33) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 34) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 35) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 36) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 37) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 39) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 40) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 41) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 42) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 43) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 44) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 45) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 46) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 47) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 48) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 49) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 50) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 51) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 52) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 53) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 - + Interactive or background / UL:128 DL:128 kbps / PS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 54) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
 - + Streaming / unknown / UL:0 DL:64 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 55) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
 - + Streaming / unknown / UL:0 DL:128 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH.

Combinations on PDSCH, SCCPCH, PUSCH and PRACH

- 1) Interactive or background / UL:64 DL:256 kbps / PS RAB
 - + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 - + UL:16.8 DL: 16 kbps SRBs for SHCCH.
- 2) Interactive or background / UL:64 DL:384 kbps / PS RAB
 - + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 - + UL: 16.8 DL: 16 kbps SRBs for SHCCH.
- 3) Interactive or background / UL:64 DL:2048 kbps / PS RAB
 - + UL:3.4 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 - + UL: 16.8 DL: 16 kbps SRBs for SHCCH.

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

- 1) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH
 - + Interactive or background / UL:64 DL:256 kbps / PS RAB
 - + UL:16.8 kbps SRBs for CCCH and SHCCH
 - + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.
- 2) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH
 - + Interactive or background / UL:64 DL:384 kbps / PS RAB
 - + UL:16.8 kbps SRBs for CCCH and SHCCH
 - + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.
- 3) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 - + UL:3.4 DL:3.4 kbps SRBs for DCCH
 - + Interactive or background / UL:64 DL:2048 kbps / PS RAB
 - + UL:16.8 kbps SRBs for CCCH and SHCCH
 - + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.

Combinations on SCCPCH

- 1) Stand-alone 24 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
 - + SRB for CCCH
 - + SRBs for DCCH
 - + SRB for BCCH.
- 3) Interactive or background / DL:32 kbps / PS RAB
 - + SRB for PCCH
 - + SRB for CCCH
 - + SRBs for DCCH
 - + SRB for BCCH.

Combinations on PRACH

- 1) Interactive or background / UL:32 kbps / PS RAB
 + SRB for CCCH
 + SRBs for DCCH.

6.10.3.3 Example of linkage between RABs and services

RABs, which are included in the present document, can provide the services as shown in table 6.10.1.1: Traffic classes. Furthermore, the required BER for each RAB, which is assumed in the present document, is shown in table 6.10.3.3.1.

Table 6.10.3.3.1: Example of linkage between RABs and services

| Traffic class ^[3] | RAB | | | Residual BER ^[3] | Services |
|------------------------------|--------------------|------------------------------|-------|--|--|
| | SSD ^[3] | Max. rate, kbps | CS/PS | | |
| Conversational | Speech | UL:4.75-12.2 DL:4.75-12.2 | CS | 5×10^{-4} , 1×10^{-3} , 5×10^{-3} | AMR speech |
| Conversational | Unknown | UL:64 DL:64 | CS | 1×10^{-4} or 1×10^{-6} | UDI 1B, 64k 3G-324M ^[4] |
| Conversational | Unknown | UL:32 DL:32 | CS | 1×10^{-4} or 1×10^{-6} | 32k 3G-324M ^[4] |
| Conversational | Unknown | UL:28.8 DL:28.8 | CS | 1×10^{-3} | Transparent modem |
| Streaming | Unknown | UL:14.4 DL:14.4 | CS | 1×10^{-3} | FAX ^[6] |
| Streaming | Unknown | UL:28.8 DL:28.8 | CS | 1×10^{-3} | FAX ^[6] PIAFS 32 kbps |
| Streaming | Unknown | UL:57.6 DL:57.6 | CS | 1×10^{-3} | Modem ^[6] , FTM ^[6] , PIAFS 64 kbps |
| Streaming | Unknown | UL:64-128 or DL:64-384 | CS | 1×10^{-3} or 1×10^{-4} | Streaming video, uni-directional |
| Interactive or Background | N/A | UL:32-384 DL:8-2048 | PS | 1×10^{-3} or 1×10^{-4} | Packet |

NOTE 1: SMS can be provided via the signalling RB (DCCH) on DPCH or SCCPCH.

NOTE 2: CBS can be provided via the signalling RB (CTCH) on SCCPCH

NOTE 3: UDI *n*B can be provided via *n* RABs of conversational 64 kbps.

6.10.3.4 Typical radio parameter sets

6.10.3.4.1 Combinations on DPCH

6.10.3.4.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

6.10.3.4.1.1.1 Uplink

6.10.3.4.1.1.1.1 Transport channel parameters

6.10.3.4.1.1.1.1.1 Transport channel parameters for UL:1.7 kbps SRBs for DCCH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
|--------------|---|--------------------------------|-------|---------------------|--------------------|
| | | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 1700 | 1600 | 1600 | 1600 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 | | | |
| | TFS | TF0, bits | 0x148 | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 80 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Max number of bits/radio frame before rate matching | 65 | | | |

6.10.3.4.1.1.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.3.4.1.1.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 238 |
| | TFCI code word | 4 bit |
| | TPC | 2 bit |
| | Puncturing Limit | 1 |

6.10.3.4.1.1.2 Downlink

6.10.3.4.1.1.2.1 Transport channel parameters

6.10.3.4.1.1.2.1.1 Transport channel parameters for DL:1.7 kbps SRBs for DCCH

| | | | | | |
|--------------|---|--------------------------------|--------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 1700 | 1600 | 1600 | 1600 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 | | | |
| | TFS | TF0, bits | 0 x148 | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 80 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Max number of bits/radio frame before rate matching | 65 | | | |

6.10.3.4.1.1.2.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.3.4.1.1.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 240 bits |
| | TFCI code word | 4 bits |
| | Puncturing limit | 1 |

6.10.3.4.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.2.1 Uplink

6.10.3.4.1.2.1.1 Transport channel parameters

6.10.3.4.1.2.1.1.1 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

| | | | | | |
|--------------|---|--------------------------------|--------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 3400 | 3200 | 3200 | 3200 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 | | | |
| | TFS | TF0, bits | 0x148 | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 40 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Max number of bits/radio frame before rate matching | 129 | | | |
| | RM attribute | 155-165 | | | |

6.10.3.4.1.2.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.3.4.1.2.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 238 bits |
| | TFCI code word | 4 bits |
| | TPC | 2 bit |
| | Puncturing Limit | 1 |

6.10.3.4.1.2.2 Downlink

6.10.3.4.1.2.2.1 Transport channel parameters

6.10.3.4.1.2.2.1.1 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

| | | | | | |
|--------------|---|--------------------------------|--------------|---------------------|--------------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 3400 | 3200 | 3200 | 3200 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 | | | |
| | TFS | TF0, bits | 0x148 | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 40 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Max number of bits/radio frame before rate matching | 129 | | | |
| | RM attribute | 155-165 | | | |

6.10.3.4.1.2.2.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.3.4.1.2.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 240 |
| | TFCI code word | 4 bits |
| | Puncturing limit | 1 |

6.10.3.4.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

6.10.3.4.1.3.1 Uplink

6.10.3.4.1.3.1.1 Transport channel parameters

6.10.3.4.1.3.1.1.1 Transport channel parameters for UL:13.6 kbps SRBs for DCCH

| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
|--------------|---|--------------------------------|-------|---------------------|--------------------|
| | User of Radio Bearer | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 13600 | 12800 | 12800 | 12800 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 | | | |
| | TFS | TF0, bits | 0x148 | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 10 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Max number of bits/radio frame before rate matching | 516 | | | |

6.10.3.4.1.3.1.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.3.4.1.3.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF8 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 476 bits |
| | TFCI code word | 4 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.92 |

6.10.3.4.1.3.2 Downlink

6.10.3.4.1.3.2.1 Transport channel parameters

6.10.3.4.1.3.2.1.1 Transport channel parameters for DL:13.6 kbps SRBs for DCCH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
|--------------|---|--------------------------------|-------|---------------------|--------------------|
| | | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | UM | AM | AM | AM |
| | Payload sizes, bit | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 13600 | 12800 | 12800 | 12800 |
| | AMD/UMD PDU header, bit | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 4 | 4 | 4 | 4 |
| | MAC multiplexing | 4 logical channel multiplexing | | | |
| Layer 1 | TrCH type | DCH | | | |
| | TB sizes, bit | 148 | | | |
| | TFS | TF0, bits | 0x148 | | |
| | | TF1, bits | 1x148 | | |
| | TTI, ms | 10 | | | |
| | Coding type | CC 1/3 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI before rate matching | 516 | | | |
| | Max number of bits/radio frame before rate matching | 516 | | | |

6.10.3.4.1.3.2.1.2 TFCS

| | |
|-----------|--------------------------|
| TFCS size | 2 |
| TFCS | SRBs for DCCH = TF0, TF1 |

6.10.3.4.1.3.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 484 bits |
| | TFCI code word | 4 bits |
| | Puncturing limit | 0.92 |

6.10.3.4.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.4.1 Uplink

6.10.3.4.1.4.1.1 Transport channel parameters

6.10.3.4.1.4.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--------------|---|----------------------------|-----------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 39, 81 (alt. 0, 39, 81) | 103 | 60 | |
| | Max data rate, bps | 12200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 39, 81 (alt. 0, 39, 81) | 103 | 60 | |
| | TFS | TF0, bits | 0x81(alt. 1x0) (note) | 0x103 | 0x60 |
| | | TF1, bits | 1x39 | 1x103 | 1x60 |
| | | TF2, bits | 1x81 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 303 | 333 | 136 | |
| | Max number of bits/radio frame before rate matching | 152 | 167 | 68 | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE: | In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.4.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.

6.10.3.4.1.4.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.3.4.1.4.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF8 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 452 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bit |
| | Puncturing Limit | 0.84 |

6.10.3.4.1.4.2 Downlink

6.10.3.4.1.4.2.1 Transport channel parameters

6.10.3.4.1.4.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--|---|----------------|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 0, 39, 81 | 103 | 60 | |
| | Max data rate, bps | 12200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 0 39 81 | 103 | 60 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x103 | 0x60 |
| | | TF1, bits | 1x39 | 1x103 | 1x60 |
| | | TF2, bits | 1x81 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 303 | 333 | 136 | |
| | Max number of bits/radio frame before rate matching | 152 | 167 | 68 | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.3.4.1.4.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.4.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.3.4.1.4.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 472 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0.88 |

6.10.3.4.1.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.5.1 Uplink

6.10.3.4.1.5.1.1 Transport channel parameters

6.10.3.4.1.5.1.1.1 Transport channel parameters for Conversational / speech / UL:10.2 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|---|---|----------------------------|---------------------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 39, 65 (alt. 0, 39, 65) | 99 | 40 | |
| | Max data rate, bps | 10200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 39, 65 (alt. 0, 39, 65) | 99 | 40 | |
| | TFS | TF0, bits | 0x65 (alt. 1x0) (note) | 0x99 | 0x40 |
| | | TF1, bits | 1x39 | 1x99 | 1x40 |
| | | TF2, bits | 1x65 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 255 | 321 | 96 | |
| | Max number of bits/radio frame before rate matching | 128 | 161 | 48 | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.3.4.1.5.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.5.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.3.4.1.5.1.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bit |
| Puncturing Limit | 0.48 | |

6.10.3.4.1.5.2 Downlink

6.10.3.4.1.5.2.1 Transport channel parameters

6.10.3.4.1.5.2.1.1 Transport channel parameters for Conversational / speech / DL:10.2 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | RAB subflow #3 | |
|--|---|----------------|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | | |
| | RLC mode | TM | TM | TM | |
| | Payload sizes, bit | 0, 39, 65 | 99 | 40 | |
| | Max data rate, bps | 10200 | | | |
| | TrD PDU header, bit | 0 | | | |
| MAC | MAC header, bit | 0 | | | |
| | MAC multiplexing | N/A | | | |
| Layer 1 | TrCH type | DCH | DCH | DCH | |
| | TB sizes, bit | 0 | 99 | 40 | |
| | | 39 | | | |
| | | 65 | | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x99 | 0x40 |
| | | TF1, bits | 1x39 | 1x99 | 1x40 |
| | | TF2, bits | 1x65 | N/A | N/A |
| | TTI, ms | 20 | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | CC 1/2 | |
| | CRC, bit | 12 | N/A | N/A | |
| | Max number of bits/TTI after channel coding | 255 | 321 | 96 | |
| Max number of bits/radio frame before rate matching | 128 | 161 | 48 | | |
| RM attribute | 180-220 | 170-210 | 215-256 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | | |

6.10.3.4.1.5.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.5.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3,DCCH)= (TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0), (TF2, TF1, TF1, TF0), (TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF1), (TF2, TF1, TF1, TF1) |

6.10.3.4.1.5.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.1.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.6.1 Uplink

6.10.3.4.1.6.1.1 Transport channel parameters

6.10.3.4.1.6.1.1.1 Transport channel parameters for Conversational / speech / UL:7.95 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 75 (alt. 0, 39, 75) | 84 | |
| | Max data rate, bps | 7950 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 75 (alt. 0, 39, 75) | 84 | |
| | TFS | TF0, bits | 0x75 (alt. 1x0) (note) | |
| | | TF1, bits | 1x39 | 1x84 |
| | | TF2, bits | 1x75 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 285 | 276 | |
| | Max number of bits/radio frame before rate matching | 143 | 138 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clauses 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.6.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.6.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.6.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.52 |

6.10.3.4.1.6.2 Downlink

6.10.3.4.1.6.2.1 Transport channel parameters

6.10.3.4.1.6.2.1.1 Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 75 | 84 | |
| | Max data rate, bps | 7950 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0, 39, 75 | 84 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x84 |
| | | TF1, bits | 1x39 | 1x84 |
| | | TF2, bits | 1x75 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 285 | 276 | |
| | Max number of bits/radio frame before rate matching | 143 | 138 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.6.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.6.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.6.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,52 |

6.10.3.4.1.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.7.1 Uplink

6.10.3.4.1.7.1.1 Transport channel parameters

6.10.3.4.1.7.1.1.1 Transport channel parameters for Conversational / speech / UL:7.4 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 61 (alt. 0, 39, 61) | 87 | |
| | Max data rate, bps | 7400 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 61 (alt. 0, 39, 61) | 87 | |
| | TFS | TF0, bits | 0x61 (alt. 1x0) (note) | 0x87 |
| | | TF1, bits | 1x39 | 1x87 |
| | | TF2, bits | 1x61 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 243 | 285 | |
| | Max number of bits/radio frame before rate matching | 122 | 143 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBIs are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.7.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.7.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.7.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.56 |

6.10.3.4.1.7.2 Downlink

6.10.3.4.1.7.2.1 Transport channel parameters

6.10.3.4.1.7.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 61 | 87 | |
| | Max data rate, bps | 7400 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0, 39, 61 | 87 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x87 |
| | | TF1, bits | 1x39 | 1x87 |
| | | TF2, bits | 1x61 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 243 | 285 | |
| | Max number of bits/radio frame before rate matching | 122 | 143 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB #1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.7.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.7.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.7.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,56 |

6.10.3.4.1.8 Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.8.1 Uplink

6.10.3.4.1.8.1.1 Transport channel parameters

6.10.3.4.1.8.1.1.1 Transport channel parameters for Conversational / speech / UL:6.7 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 58 (alt. 0, 39, 58) | 76 | |
| | Max data rate, bps | 6700 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 58 (alt. 0, 39, 58) | 76 | |
| | TFS | TF0, bits | 0x58 (alt. 1x0) (note) | 0x76 |
| | | TF1, bits | 1x39 | 1x76 |
| | | TF2, bits | 1x58 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 234 | 252 | |
| | Max number of bits/radio frame before rate matching | 117 | 126 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.8.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.8.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.8.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.60 |

6.10.3.4.1.8.2 Downlink

6.10.3.4.1.8.2.1 Transport channel parameters

6.10.3.4.1.8.2.1.1 Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 58 | 76 | |
| | Max data rate, bps | 6700 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0 | 76 | |
| | | 39 | | |
| | | 58 | | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x76 |
| | | TF1, bits | 1x39 | 1x76 |
| | | TF2, bits | 1x58 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 234 | 252 | |
| Max number of bits/radio frame before rate matching | 117 | 126 | | |
| RM attribute | 180-220 | 170-210 | | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.8.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.8.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.8.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,6 |

6.10.3.4.1.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.9.1 Uplink

6.10.3.4.1.9.1.1 Transport channel parameters

6.10.3.4.1.9.1.1.1 Transport channel parameters for Conversational / speech / UL:5.9 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 55 (alt. 0, 39, 55) | 63 | |
| | Max data rate, bps | 5900 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 55 (alt. 0, 39, 55) | 63 | |
| | TFS | TF0, bits | 0x55 (alt. 1x0) (note) | 0x63 |
| | | TF1, bits | 1x39 | 1x63 |
| | | TF2, bits | 1x55 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 225 | 213 | |
| | Max number of bits/radio frame before rate matching | 113 | 107 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.9.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.9.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.9.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCl code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.64 |

6.10.3.4.1.9.2 Downlink

6.10.3.4.1.9.2.1 Transport channel parameters

6.10.3.4.1.9.2.1.1 Transport channel parameters for Conversational / speech / DL:5.9 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 55 | 63 | |
| | Max data rate, bps | 5900 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0, 39, 55 | 63 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x63 |
| | | TF1, bits | 1x39 | 1x63 |
| | | TF2, bits | 1x55 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 225 | 213 | |
| | Max number of bits/radio frame before rate matching | 113 | 107 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.9.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.9.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.9.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,64 |

6.10.3.4.1.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

6.10.3.4.1.10.1 Uplink

6.10.3.4.1.10.1.1 Transport channel parameters

6.10.3.4.1.10.1.1 Transport channel parameters for Conversational / speech / UL:5.15 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|---|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 49 (alt. 0, 39, 49) | 54 | |
| | Max data rate, bps | 5150 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 49 (alt. 0, 39, 49) | 54 | |
| | TFS | TF0, bits | 0x49 (alt. 1x0) (note) | |
| | | TF1, bits | 1x39 | 1x54 |
| | | TF2, bits | 1x49 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 207 | 186 | |
| | Max number of bits/radio frame before rate matching | 104 | 93 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.10.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.10.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.10.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.68 |

6.10.3.4.1.10.2 Downlink

6.10.3.4.1.10.2.1 Transport channel parameters

6.10.3.4.1.10.2.1.1 Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 49 | 54 | |
| | Max data rate, bps | 5150 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0, 39, 49 | 54 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x54 |
| | | TF1, bits | 1x39 | 1x54 |
| | | TF2, bits | 1x49 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 207 | 186 | |
| | Max number of bits/radio frame before rate matching | 104 | 93 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.10.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.10.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.10.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0.68 |

6.10.3.4.1.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

6.10.3.4.1.11.1 Uplink

6.10.3.4.1.11.1.1 Transport channel parameters

6.10.3.4.1.11.1.1.1 Transport channel parameters for Conversational / speech / UL:4.75 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--------------|---|-------------------------|------------------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 39, 42 (alt. 0, 39, 42) | 53 | |
| | Max data rate, bps | 4750 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 39, 42 (alt. 0, 39, 42) | 53 | |
| | TFS | TF0, bits | 0x42 (alt. 1x0) (note) | |
| | | TF1, bits | 1x39 | 1x53 |
| | | TF2, bits | 1x42 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 186 | 183 | |
| | Max number of bits/radio frame before rate matching | 93 | 92 | |
| | RM attribute | 180-220 | 170-210 | |

NOTE: In case of using this alternative, CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212).

6.10.3.4.1.11.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.11.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.11.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 226 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.68 |

6.10.3.4.1.11.2 Downlink

6.10.3.4.1.11.2.1 Transport channel parameters

6.10.3.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB subflow #1 | RAB subflow #2 | |
|--|---|----------------|----------------|------|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 0, 39, 42 | 53 | |
| | Max data rate, bps | 4750 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | DCH | |
| | TB sizes, bit | 0, 39, 42 | 53 | |
| | TFS (note 1) | TF0, bits | 1x0 (note 2) | 0x53 |
| | | TF1, bits | 1x39 | 1x53 |
| | | TF2, bits | 1x42 | N/A |
| | TTI, ms | 20 | 20 | |
| | Coding type | CC 1/3 | CC 1/3 | |
| | CRC, bit | 12 | N/A | |
| | Max number of bits/TTI after channel coding | 186 | 183 | |
| | Max number of bits/radio frame before rate matching | 93 | 92 | |
| | RM attribute | 180-220 | 170-210 | |
| NOTE 1: The TrCH corresponding to RAB subflow #1 should be used as the guiding TrCH, (see clause 4.3 in TS 25.212). | | | | |
| NOTE 2: CRC parity bits are to be attached to RAB subflow#1 any time since number of TrBlks are 1 even if there is no data on RAB subflow#1 (see clause 4.2.1.1 in TS 25.212). | | | | |

6.10.3.4.1.11.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.11.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (RAB subflow#1, RAB subflow#2, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF1, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF1, TF1) |

6.10.3.4.1.11.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 228 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,72 |

6.10.3.4.1.12 Conversational / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.12.1 Uplink

6.10.3.4.1.12.1.1 Transport channel parameters

6.10.3.4.1.12.1.1.1 Transport channel parameters for conversational / unknown / UL:28.8 kbps / CS RAB

| | | | |
|--------------|---|-----------|-------|
| Higher Layer | RAB/Signalling RB | RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | Max number of bits/radio frame before rate matching | 891 | |
| | RM attribute | 160-200 | |

6.10.3.4.1.12.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.12.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.3.4.1.12.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF8 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 452 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.44 |

6.10.3.4.1.12.2 Downlink

6.10.3.4.1.12.2.1 Transport channel parameters

6.10.3.4.1.12.2.1.1 Transport channel parameters for conversational / unknown / DL:28.8 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | Max number of bits/radio frame before rate matching | 891 | |
| | RM attribute | 160-200 | |

6.10.3.4.1.12.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.12.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 6 |
| TFCS | (28.8 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.3.4.1.12.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 472 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,44 |

6.10.3.4.1.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.13.1 Uplink

6.10.3.4.1.13.1.1 Transport channel parameters

6.10.3.4.1.13.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | | |
|--------------|---|-----------------|-------------------|--|
| RLC | Logical channel type | DTCH | | |
| | RLC mode | TM | | |
| | Payload sizes, bit | 640 | | |
| | Max data rate, bps | 64000 | | |
| | TrD PDU header, bit | 0 | | |
| MAC | MAC header, bit | 0 | | |
| | MAC multiplexing | N/A | | |
| Layer 1 | TrCH type | DCH | | |
| | TB sizes, bit | 640 | | |
| | TFS | TF0, bits | 0x640 | |
| | | TF1, bits | 2x640(alt. 4x640) | |
| | TTI, ms | 20(alt. 40) | | |
| | Coding type | TC | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 3948(alt. 7884) | | |
| | Max number of bits/radio frame before rate matching | 1974(alt. 1971) | | |
| | RM attribute | 150-195 | | |

6.10.3.4.1.13.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.13.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.13.1.2 Physical channel parameters

| | | |
|-------------|----------------------|--|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | {SF16 x 1 code + SF4 x 1 code} x 1 time slot |
| | Max. Number of data | 1210 bits |
| | TFCI code word | 8 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.56 |

6.10.3.4.1.13.2 Downlink

6.10.3.4.1.13.2.1 Transport channel parameters

6.10.3.4.1.13.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 64000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 640 | |
| | TFS | TF0, bits | 0x640 |
| | | TF1, bits | 2x640(alt. 4x640) |
| | TTI, ms | 20(alt. 40) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3948(alt. 7884) | |
| | Max number of bits/radio frame before rate matching | 1974(alt. 1971) | |
| | RM attribute | 150-195 | |

6.10.3.4.1.13.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.13.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (64 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.13.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1212 bits |
| | TFCI code word | 8 bits |
| | Puncturing limit | 0,56 |

6.10.3.4.1.14 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.14.1 Uplink

6.10.3.4.1.14.1.1 Transport channel parameters

6.10.3.4.1.14.1.1.1 Transport channel parameters for Conversational / unknown / UL:32 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 32000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 640 | |
| | TFS | TF0, bits | 0x640 |
| | | TF1, bits | 1x640(alt. 2x640) |
| | TTI, ms | 20(alt. 40) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1980(alt. 3948) | |
| | Max number of bits/radio frame before rate matching | 990(alt. 987) | |
| | RM attribute | 165-210 | |

6.10.3.4.1.14.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.13.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.14.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF4 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 936 bits |
| | TFCI code word | 8 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.80 |

6.10.3.4.1.14.2 Downlink

6.10.3.4.1.14.2.1 Transport channel parameters

6.10.3.4.1.14.2.1.1 Transport channel parameters for Conversational / unknown / DL:32 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 32000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 640 | |
| | TFS | TF0, bits | 0x640 |
| | | TF1, bits | 1x640(alt. 2x640) |
| | TTI, ms | 20(alt. 40) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1980(alt. 3948) | |
| | Max number of bits/radio frame before rate matching | 990(alt. 987) | |
| | RM attribute | 165-210 | |

6.10.3.4.1.14.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.14.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (32 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.14.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 3 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 724 bits |
| | TFCI code word | 8 bits |
| | Puncturing limit | 0,64 |

6.10.3.4.1.15 Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.15.1 Uplink

6.10.3.4.1.15.1.1 Transport channel parameters

6.10.3.4.1.15.1.1.1 Transport channel parameters for Streaming / unknown / UL: 14.4 kbps / CS RAB

| | | | |
|--------------|---|-----------|-------|
| Higher Layer | RAB/Signalling RB | RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 14400 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1788 | |
| | Max number of bits/radio frame before rate matching | 447 | |
| | RM attribute | 145-185 | |

6.10.3.4.1.15.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.15.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.15.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF8 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 468 bits |
| | TFCI code word | 8 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.80 |

6.10.3.4.1.15.2 Downlink

6.10.3.4.1.15.2.1 Transport channel parameters

6.10.3.4.1.15.2.1.1 Transport channel parameters for Streaming / unknown / DL:14.4 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 14400 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1788 | |
| | Max number of bits/radio frame before rate matching | 447 | |
| | RM attribute | 145-185 | |

6.10.3.4.1.15.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.15.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 4 |
| TFCS | (14.4 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.15.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 480 bits |
| | TFCI code word | 8 bits |
| | Puncturing limit | 0,8 |

6.10.3.4.1.16 Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.16.1 Uplink

6.10.3.4.1.16.1.1 Transport channel parameters

6.10.3.4.1.16.1.1.1 Transport channel parameters for Streaming / unknown / UL:28.8 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | Max number of bits/radio frame before rate matching | 891 | |
| RM attribute | 135-175 | | |

6.10.3.4.1.16.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.16.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.3.4.1.16.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF8 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 452 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.44 |

6.10.3.4.1.16.2 Downlink

6.10.3.4.1.16.2.1 Transport channel parameters

6.10.3.4.1.16.2.1.1 Transport channel parameters for Streaming / unknown / DL:28.8 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 28800 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 3564 | |
| | Max number of bits/radio frame before rate matching | 891 | |
| | RM attribute | 135-175 | |

6.10.3.4.1.16.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.16.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 |
| TFCS | (28.8kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) |

6.10.3.4.1.16.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 472 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,44 |

6.10.3.4.1.17 Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.17.1 Uplink

6.10.3.4.1.17.1.1 Transport channel parameters

6.10.3.4.1.17.1.1.1 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 57600 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | | TF3, bits | 3x576 |
| | | TF4, bits | 4x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 7116 | |
| | Max number of bits/radio frame before rate matching | 1779 | |
| RM attribute | 125-165 | | |

6.10.3.4.1.17.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.17.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (57.6 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.17.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF4 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 904 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.44 |

6.10.3.4.1.17.2 Downlink

6.10.3.4.1.17.2.1 Transport channel parameters

6.10.3.4.1.17.2.1.1 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 576 | |
| | Max data rate, bps | 57600 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 576 | |
| | TFS | TF0, bits | 0x576 |
| | | TF1, bits | 1x576 |
| | | TF2, bits | 2x576 |
| | | TF3, bits | 3x576 |
| | | TF4, bits | 4x576 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 7116 | |
| | Max number of bits/radio frame before rate matching | 1779 | |
| RM attribute | 125-165 | | |

6.10.3.4.1.17.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.17.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (57.6 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.17.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 4 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 960 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,48 |

- 6.10.3.4.1.18 Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 6.10.3.4.1.18.1 Uplink
- 6.10.3.4.1.18.1.1 Transport channel parameters
- 6.10.3.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB
N/A
- 6.10.3.4.1.18.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.1.1.1.
- 6.10.3.4.1.18.1.1.3 TFCS
See clause 6.10.3.4.1.2.1.1.2.
- 6.10.3.4.1.18.1.2 Physical channel parameters
See clause 6.10.3.4.1.2.1.2.
- 6.10.3.4.1.18.2 Downlink
- 6.10.3.4.1.18.2.1 Transport channel parameters
- 6.10.3.4.1.18.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8076 | |
| | Max number of bits/radio frame before rate matching | 2019 | |
| RM attribute | 125-165 | | |

- 6.10.3.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.18.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.18.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1204 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,56 |

6.10.3.4.1.19 Streaming / unknown / UL:64 DL:0 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.19.1 Uplink

6.10.3.4.1.19.1.1 Transport channel parameters

6.10.3.4.1.19.1.1.1 Transport channel parameters for Streaming / unknown / UL:64 kbps / CS or PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8076 | |
| | Max number of bits/radio frame before rate matching | 2019 | |
| | RM attribute | 125-165 | |

6.10.3.4.1.19.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.19.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.19.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|---|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | {SF16 x 1 code + SF4 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 1202 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.52 |

6.10.3.4.1.19.2 Downlink

6.10.3.4.1.19.2.1 Transport channel parameters

6.10.3.4.1.19.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB

N/A

6.10.3.4.1.19.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.19.2.1.3 TFCS

See clause 6.10.3.4.1.2.2.1.2.

6.10.3.4.1.19.2.2 Physical channel parameters

See clause 6.10.3.4.1.2.2.2.

6.10.3.4.1.20 Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.20.1 Uplink

6.10.3.4.1.20.1.1 Transport channel parameters

6.10.3.4.1.20.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB

N/A

6.10.3.4.1.20.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.20.1.1.3 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.10.3.4.1.20.1.2 Physical channel parameters

See clause 6.10.3.4.1.2.1.2.

6.10.3.4.1.20.2 Downlink

6.10.3.4.1.20.2.1 Transport channel parameters

6.10.3.4.1.20.2.1.1 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | | TF5, bits | 16x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 16152 | |
| | Max number of bits/radio frame before rate matching | 4038 | |
| RM attribute | 125-165 | | |

6.10.3.4.1.20.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.20.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.3.4.1.20.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2192 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,52 |

6.10.3.4.1.21 Streaming / unknown / UL:128 DL:0 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.21.1 Uplink

6.10.3.4.1.21.1.1 Transport channel parameters

6.10.3.4.1.21.1.1.1 Transport channel parameters for Streaming / unknown / UL:128 kbps / CS or PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | TF5, bits | 16x320 | |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 16152 | |
| | Uplink: Max number of bits/radio frame before rate matching | 4038 | |
| RM attribute | 125-165 | | |

6.10.3.4.1.21.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.21.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.3.4.1.21.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | SF2 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 2064 bits |
| | TFCI code word | 16 bit |
| | TPC | 2 bits |
| | Puncturing Limit | 0.48 |

6.10.3.4.1.21.2 Downlink

6.10.3.4.1.21.2.1 Transport channel parameters

6.10.3.4.1.21.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB
N/A

6.10.3.4.1.21.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.21.2.1.3 TFCS

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.21.2.2 Physical channel parameters

See clause 6.10.3.4.1.2.2.2.

6.10.3.4.1.22 Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs
for DCCH

6.10.3.4.1.22.1 Uplink

6.10.3.4.1.22.1.1 Transport channel parameters

6.10.3.4.1.22.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB
N/A

6.10.3.4.1.22.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.22.1.1.3 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.10.3.4.1.22.1.2 Physical channel parameters

See clause 6.10.3.4.1.2.1.2.

6.10.3.4.1.22.2 Downlink

6.10.3.4.1.22.2.1 Transport channel parameters

6.10.3.4.1.22.2.1.1 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | TM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | TrD PDU header, bit | 0 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 320 | |
| | TFS | TF0, bits | 0x320 |
| | | TF1, bits | 1x320 |
| | | TF2, bits | 2x320 |
| | | TF3, bits | 4x320 |
| | | TF4, bits | 8x320 |
| | | TF5, bits | 16x320 |
| | | TF6, bits | 32x320 |
| | | TF7, bits | 48x320 |
| | TTI, ms | 40 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 48432 | |
| | Max number of bits/radio frame before rate matching | 12108 | |
| RM attribute | 110-150 | | |

6.10.3.4.1.22.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.22.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 16 |
| TFCS | (384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1) |

6.10.3.4.1.22.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 3 time slots |
| | Max. Number of data bits/radio frame | 6608 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,52 |

6.10.3.4.1.23 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.23.1 Uplink

6.10.3.4.1.23.1.1 Transport channel parameters

6.10.3.4.1.23.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|------------------|------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 (alt. N/A) |
| | TTI, ms | 20 (alt. 10) | |
| | Coding type | TC (alt. CC 1/3) | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 2124 (alt. 1080) | |
| | Max number of bits/radio frame before rate matching | 1062 (alt. 1080) | |
| RM attribute | 135-175 | | |

6.10.3.4.1.23.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.23.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 6 (alt. 4) |
| TFCS | (32 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1)) |

6.10.3.4.1.23.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF4 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 904 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.76 |

6.10.3.4.1.23.2 Downlink

6.10.3.4.1.23.2.1 Transport channel parameters

6.10.3.4.1.23.2.1.1 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|------------------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 8000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | TTI, ms | 40 | |
| | Coding type | TC (alt. CC 1/3) | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 1068 (alt. 1080) | |
| | Max number of bits/radio frame before rate matching | 267 (alt. 270) | |
| | RM attribute | 135-175 | |

6.10.3.4.1.23.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.23.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 4 |
| TFCS | (8 kbps RAB, DCCH)=(TF0, TF0), (TF1, TF0), (TF0, TF1), (TF1, TF1) |

6.10.3.4.1.23.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 236 bits |
| | TFCI code word | 8 bits |
| | Puncturing limit | 0,56 |

6.10.3.4.1.24 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.24.1 Uplink

6.10.3.4.1.24.1.1 Transport channel parameters

6.10.3.4.1.24.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 3x336 |
| | | TF4, bits | 4x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | Max number of bits/radio frame before rate matching | 2118 | |
| RM attribute | 130-170 | | |

6.10.3.4.1.24.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.24.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.24.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|---|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | {SF16 x 1 code + SF4 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 1202 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.52 |

6.10.3.4.1.24.2 Downlink

See clause 6.10.3.4.1.23.2.

6.10.3.4.1.25 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.25.1 Uplink

See clause 6.10.3.4.1.23.1.

6.10.3.4.1.25.2 Downlink

6.10.3.4.1.25.2.1 Transport channel parameters

6.10.3.4.1.25.2.1.1 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|---|-----------|-------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 64000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 3x336 |
| | | TF4, bits | 4x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| Max number of bits/radio frame before rate matching | 2118 | | |
| RM attribute | 130-170 | | |

6.10.3.4.1.25.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.25.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.25.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1204 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,52 |

6.10.3.4.1.26 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.26.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.26.2 Downlink

See clause 6.10.3.4.1.25.2.

6.10.3.4.1.27 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.27.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.27.2 Downlink

6.10.3.4.1.27.2.1 Transport channel parameters

6.10.3.4.1.27.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8460 | |
| Max number of bits/radio frame before rate matching | 4230 | | |
| RM attribute | 120-160 | | |

6.10.3.4.1.27.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.27.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 10 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.27.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2192 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.1.28 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.28.1 Uplink

6.10.3.4.1.28.1.1 Transport channel parameters

6.10.3.4.1.28.1.1.1 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 128000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8460 | |
| | Max number of bits/radio frame before rate matching | 4230 | |
| | RM attribute | 120-160 | |

6.10.3.4.1.28.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.28.1.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 10 |
| TFCS | (128 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.1.28.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | SF2 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 2064 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.48 |

6.10.3.4.1.28.2 Downlink

See clause 6.10.3.4.1.27.2.

6.10.3.4.1.29 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.3.4.1.29.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.29.2 Downlink

6.10.3.4.1.29.2.1 Transport channel parameters

6.10.3.4.1.29.2.1.1 Transport channel parameters for Interactive or background / DL:144 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 144000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 9x336 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 9516 | |
| | Max number of bits/radio frame before rate matching | 4758 | |
| RM attribute | 140-180 | | |

6.10.3.4.1.29.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.29.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (144 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.3.4.1.29.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 9 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2468 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.1.30 Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.3.4.1.30.1 Uplink

6.10.3.4.1.30.1.1 Transport channel parameters

6.10.3.4.1.30.1.1.1 Transport channel parameters for Interactive or background / UL:144 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 144000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | TF5, bits | 9 x336 | |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 9516 | |
| Max number of bits/radio frame before rate matching | 4758 | | |
| RM attribute | 140-180 | | |

6.10.3.4.1.30.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.30.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (144 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) |

6.10.3.4.1.30.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|---|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | {SF16 x 1 code + SF2 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 2466 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.52 |

6.10.3.4.1.30.2 Downlink

See clause 6.10.3.4.1.29.2.

6.10.3.4.1.31 Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.3.4.1.31.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.31.2 Downlink

6.10.3.4.1.31.2.1 Transport channel parameters

6.10.3.4.1.31.2.1.1 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|---|------------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | N/A (alt. 12x336) |
| | | TF6, bits | N/A (alt. 16x336) |
| | TTI, ms | 10(alt. 20) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 8460(alt. 16920) | |
| Max number of bits/radio frame before rate matching | 8460 (alt. 8460) | | |
| RM attribute | 135-175 | | |

6.10.3.4.1.31.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.31.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 10 (alt.14) |
| TFCS | (256 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1)) |

6.10.3.4.1.31.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 4400 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.1.32 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.3.4.1.32.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.32.2 Downlink

6.10.3.4.1.32.2.1 Transport channel parameters

6.10.3.4.1.32.2.1.1 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB |
|--------------|----------------------|--------|
| RLC | Logical channel type | DTCH |
| | RLC mode | AM |
| | Payload sizes, bit | 320 |
| | Max data rate, bps | 384000 |
| | AMD PDU header, bit | 16 |
| MAC | MAC header, bit | 0 |
| | MAC multiplexing | N/A |

| Higher Layer | RAB/Signalling RB | RAB | |
|---|--------------------|--------------------|--------------------|
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 12x336 |
| | | TF6, bits | N/A (alt. 16 x336) |
| | | TF7, bits | N/A (alt. 20 x336) |
| | TF8, bits | N/A (alt. 24 x336) | |
| | TTI, ms | 10(alt. 20) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| Max number of bits/TTI after channel coding | 12684(alt. 25368) | | |
| Max number of bits/radio frame before rate matching | 12684 (alt. 12684) | | |
| RM attribute | 110-150 | | |

6.10.3.4.1.32.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.32.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 12 (alt.18) |
| TFCS | (384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1)) |

6.10.3.4.1.32.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 3 time slots |
| | Max. Number of data bits/radio frame | 6608 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,52 |

6.10.3.4.1.33 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.33.1 Uplink

See clause 6.10.3.4.1.28.1.

6.10.3.4.1.33.2 Downlink

See clause 6.10.3.4.1.32.2.

6.10.3.4.1.34 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.34.1 Uplink

6.10.3.4.1.34.1.1 Transport channel parameters

6.10.3.4.1.34.1.1.1 Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|---|--------------------|------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 384000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 |
| | | TF3, bits | 4 x336 |
| | | TF4, bits | 8 x336 |
| | | TF5, bits | 12x336 |
| | | TF6, bits | 16x336(alt. N/A) |
| | | TF7, bits | 20x336(alt. N/A) |
| | TF8, bits | 24 x336 (alt. N/A) | |
| | TTI, ms | 20 (alt. 10) | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 25368 | |
| Max number of bits/radio frame before rate matching | 12684 | | |
| RM attribute | 110-150 | | |

6.10.3.4.1.34.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.34.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 18 (alt.12) |
| TFCS | (384 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0) (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1)) |

6.10.3.4.1.34.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | SF2 x 1 code x 3 time slots |
| | Max. Number of data bits/radio frame | 6480 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.48 |

6.10.3.4.1.34.2 Downlink

See clause 6.10.3.4.1.32.2.

6.10.3.4.1.35 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.35.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.35.2 Downlink

6.10.3.4.1.35.2.1 Transport channel parameters

6.10.3.4.1.35.2.1.1 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|----------------------|-------------------|-------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 640 | |
| | Max data rate, bps | 2048000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 656 | |
| | TFS | TF0, bits | 0x656 |
| | | TF1, bits | 1x656 |
| | | TF2, bits | 2x656 |
| | | TF3, bits | 4 x656 |
| | | TF4, bits | 8 x656 |
| | | TF5, bits | 12x656 |
| | | TF6, bits | 16x656 |
| | | TF7, bits | 20x656 |
| | | TF8, bits | 24x656 |
| | | TF9, bits | 28x656 |
| | | TF10, bits | 32x656 |
| | | TF11, bits | N/A (alt. 36x656) |
| | | TF12, bits | N/A (alt. 40x656) |
| | | TF13, bits | N/A (alt. 44x656) |
| | | TF14, bits | N/A (alt. 48x656) |
| | | TF15, bits | N/A (alt. 52x656) |
| | | TF16, bits | N/A (alt. 56x656) |
| | | TF17, bits | N/A (alt. 60x656) |
| | TF18, bits | N/A (alt. 64x656) | |
| | TTI, ms | 10(alt. 20) | |
| Coding type | TC | | |
| CRC, bit | 16 | | |
| Max number of bits/TTI after channel coding | 64575 (alt. 129141) | | |

| | | |
|--------------|---|--------------------|
| Higher Layer | RAB/Signalling RB | RAB |
| | Max number of bits/radio frame before rate matching | 64575 (alt. 64571) |
| | RM attribute | 130-170 |

6.10.3.4.1.35.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.35.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 22 (alt.38) |
| TFCS | (2048 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1) (alt. TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0)) |

6.10.3.4.1.35.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF1 x 1 code x 12 time slot |
| | Max. Number of data bits/radio frame | 52976 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,80 |

6.10.3.4.1.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.36.1 Uplink

See clause 6.10.3.4.1.28.1.

6.10.3.4.1.36.2 Downlink

See clause 6.10.3.4.1.35.2.

6.10.3.4.1.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.37.1 Uplink

See clause 6.10.3.4.1.34.1.

6.10.3.4.1.37.2 Downlink

See clause 6.10.3.4.1.35.2.

6.10.2.4.1.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:32 DL:8 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.38.1 Uplink

6.10.3.4.1.38.1.1 Transport channel parameters

6.10.3.4.1.38.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1

6.10.3.4.1.38.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23.1.1.1.

6.10.3.4.1.38.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.38.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 18 (alt. 12) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 32kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1)) |

6.10.3.4.1.38.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF4 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 904 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.56 |

6.10.3.4.1.38.2 Downlink

6.10.3.4.1.38.2.1 Transport channel parameters

6.10.3.4.1.38.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.38.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1.

6.10.3.4.1.38.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.

6.10.3.4.1.38.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 8kbps RAB, DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1) |

6.10.3.4.1.38.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 472 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,60 |

6.10.3.4.1.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.3.4.1.39.1 Uplink

See clause 6.10.3.4.1.38.1.

6.10.3.4.1.39.2 Downlink

6.10.3.4.1.39.2.1 Transport channel parameters

6.10.3.4.1.39.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.39.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.10.3.4.1.39.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.39.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.39.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1936 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,68 |

6.10.3.4.1.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:64 kbps / PS RAB
 + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.10.3.4.1.40.1 Uplink

6.10.3.4.1.40.1.1 Transport channel parameters

6.10.3.4.1.40.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.40.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.24.1.1.1.

6.10.3.4.1.40.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.40.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.40.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF2 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 1808 bits |
| | TFCI code word | 16 bit |
| | TPC | 2 bits |
| | Puncturing Limit | 0.68 |

6.10.3.4.1.40.2 Downlink

See clause 6.10.3.4.1.39.2.

6.10.3.4.1.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:128 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.41.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.41.2 Downlink

6.10.3.4.1.41.2.1 Transport channel parameters

6.10.3.4.1.41.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.41.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.41.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.41.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.41.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 10 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2744 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,56 |

6.10.3.4.1.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:256 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.42.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.42.2 Downlink

6.10.3.4.1.42.2.1 Transport channel parameters

6.10.3.4.1.42.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1

6.10.3.4.1.42.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.3.4.1.31.2.1.1.

6.10.3.4.1.42.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.42.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 (alt. 42) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 256 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1)) |

6.10.3.4.1.42.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 10 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 5504 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,60 |

6.10.3.4.1.43 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:64 DL:384 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.43.1 Uplink

See clause 6.10.3.4.1.40.1.

6.10.3.4.1.43.2 Downlink

6.10.3.4.1.43.2.1 Transport channel parameters

6.10.3.4.1.43.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.43.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

6.10.3.4.1.43.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.43.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 36 (alt. 54) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF2, TF1, TF1, TF8, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1), (TF0, TF0, TF0, TF8, TF1), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1)) |

6.10.3.4.1.43.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 3 time slots |
| | Max. Number of data bits/radio frame | 6592 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.1.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:128 DL:2048 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.44.1 Uplink

6.10.3.4.1.44.1.1 Transport channel parameters

6.10.3.4.1.44.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB
 See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.44.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB
 See clause 6.10.3.4.1.28.1.1.1.

6.10.3.4.1.44.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH
 See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.44.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.44.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|--|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | {SF8 x 1 code + SF2 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 2724 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.56 |

6.10.3.4.1.44.2 Downlink

6.10.3.4.1.44.2.1 Transport channel parameters

6.10.3.4.1.44.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
 See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.44.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB
 See clause 6.10.3.4.1.35.2.1.1.

6.10.3.4.1.44.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.44.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF1 x 1 code x 12 time slots |
| | Max. Number of data bits/radio frame | 36400 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,52 |

6.10.3.4.1.45 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.45.1 Uplink

6.10.3.4.1.45.1.1 Transport channel parameters

6.10.3.4.1.45.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.45.1.1.2 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

6.10.3.4.1.45.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.45.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 57.6 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.45.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|--|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | {SF8 x 1 code + SF4 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 1428 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.60 |

6.10.3.4.1.45.2 Downlink

6.10.3.4.1.45.2.1 Transport channel parameters

6.10.3.4.1.45.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.45.2.1.2 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

6.10.3.4.1.45.2.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.11.

6.10.3.4.1.45.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 57.6 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.45.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 6 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1448 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,6 |

6.10.3.4.1.46 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.46.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.46.2 Downlink

6.10.3.4.1.46.2.1 Transport channel parameters

6.10.3.4.1.46.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.46.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB

See clause 6.10.3.4.1.18.2.1.1.

6.10.3.4.1.46.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.46.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 30 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1) |

6.10.3.4.1.46.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2192 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,8 |

6.10.3.4.1.47 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.47.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.47.2 Downlink

6.10.3.4.1.47.2.1 Transport channel parameters

6.10.3.4.1.47.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.47.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

6.10.3.4.1.47.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.47.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 36 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 128 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1) |

6.10.3.4.1.47.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 10 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2728 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,56 |

6.10.3.4.1.48 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Streaming / unknown / UL:0 DL:384 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.48.1 Uplink

See clause 6.10.3.4.1.4.1.

6.10.3.4.1.48.2 Downlink

6.10.3.4.1.48.2.1 Transport channel parameters

6.10.3.4.1.48.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.48.2.1.2 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB

See clause 6.10.3.4.1.22.2.1.1.

6.10.3.4.1.48.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.48.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 48 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 384 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1) |

6.10.3.4.1.48.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 10 codes x 3 time slots |
| | Max. Number of data bits/radio frame | 8248 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,64 |

6.10.3.4.1.49 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.49.1 Uplink

6.10.3.4.1.49.1.1 Transport channel parameters

6.10.3.4.1.49.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.1.49.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.49.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.49.1.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1) |

6.10.3.4.1.49.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | SF2 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 2064 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.72 |

6.10.3.4.1.49.2 Downlink

6.10.3.4.1.49.2.1 Transport channel parameters

6.10.3.4.1.49.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.1.49.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.49.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.11.

6.10.3.4.1.49.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 12 |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 64 kbps RAB , DCCH)= (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1) |

6.10.3.4.1.49.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2192 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,88 |

6.10.3.4.1.50 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.50.1 Uplink

6.10.3.4.1.50.1.1 Transport channel parameters

6.10.3.4.1.50.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.5.4.1.13.1.1.1.

6.10.3.4.1.50.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.50.1.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 8 |
| TFCS | (64 kbps RAB, 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0) (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1) |

6.10.3.4.1.50.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | SF1 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 3616 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.88 |

6.10.3.4.1.50.2 Downlink

6.10.3.4.1.50.2.1 Transport channel parameters

6.10.3.4.1.50.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.50.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.50.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 8 |
| TFCS | (64 kbps RAB, 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0) (TF0, TF0, TF1), (TF1, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1) |

6.10.3.4.1.50.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | SF16 x 11 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2668 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,64 |

6.10.3.4.1.51 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.51.1 Uplink

6.10.3.4.1.51.1.1 Transport channel parameters

6.10.3.4.1.51.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.51.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.24.1.1.1.

6.10.3.4.1.51.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.51.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.3.4.1.51.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Midamble | 256 chips |
| | Codes and time slots | SF2 x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 2064 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.44 |

6.10.3.4.1.51.2 Downlink

6.10.3.4.1.51.2.1 Transport channel parameters

6.10.3.4.1.51.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.51.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.10.3.4.1.51.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.51.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.3.4.1.51.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2192 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.1.52 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.52.1 Uplink

See clause 6.10.3.4.1.51.1.

6.10.3.4.1.52.2 Downlink

6.10.3.4.1.52.2.1 Transport channel parameters

6.10.3.4.1.52.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.10.3.4.1.52.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.52.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.52.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 128 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.3.4.1.52.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|--|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | {SF16 x 8 codes x 1 time slot} + {SF16 x 5 codes x 1 time slot} |
| | Max. Number of data bits/radio frame | 3156 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,44 |

6.10.3.4.1.53 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.53.1 Uplink

6.10.3.4.1.53.1.1 Transport channel parameters

6.10.3.4.1.53.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.10.3.4.1.53.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

6.10.3.4.1.53.1.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.1.53.1.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 20 |
| TFCS | (Conv. 64 kbps RAB, I/B 128kbps RAB, DCCH)= (TF0, TF0, TF0), (TF0, TF1, TF0), (TF0, TF2, TF0), (TF0, TF3, TF0), (TF0, TF4, TF0), (TF1, TF0, TF0), (TF1, TF1, TF0), (TF1, TF2, TF0), (TF1, TF3, TF0), (TF1, TF4, TF0), (TF0, TF0, TF1), (TF0, TF1, TF1), (TF0, TF2, TF1), (TF0, TF3, TF1), (TF0, TF4, TF1), (TF1, TF0, TF1), (TF1, TF1, TF1), (TF1, TF2, TF1), (TF1, TF3, TF1), (TF1, TF4, TF1) |

6.10.3.4.1.53.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|--|
| DPCH Uplink | Midamble | 512 chips |
| | Codes and time slots | {SF2 x 1 code x 1 time slot} + {SF16 x 1 code + SF4 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 3154 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.48 |

6.10.3.4.1.53.2 Downlink

See clause 6.10.3.4.1.52.2.

6.10.3.4.1.54 Interactive or background / UL:64 DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.54.1 Uplink

See clause 6.10.3.4.1.24.1.

6.10.3.4.1.54.2 Downlink

6.10.3.4.1.54.2.1 Transport channel parameters

6.10.3.4.1.54.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB
See clause 6.10.3.4.1.18.2.1.1.

6.10.3.4.1.54.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.54.2.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 50 |
| TFCS | (I/B 128 kbps RAB, Str. 64 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF0, TF2, TF0), (TF1, TF2, TF0), (TF2, TF2, TF0), (TF3, TF2, TF0), (TF4, TF2, TF0), (TF0, TF3, TF0), (TF1, TF3, TF0), (TF2, TF3, TF0), (TF3, TF3, TF0), (TF4, TF3, TF0), (TF0, TF4, TF0), (TF1, TF4, TF0), (TF2, TF4, TF0), (TF3, TF4, TF0), (TF4, TF4, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF0, TF2, TF1), (TF1, TF2, TF1), (TF2, TF2, TF1), (TF3, TF2, TF1), (TF4, TF2, TF1), (TF0, TF3, TF1), (TF1, TF3, TF1), (TF2, TF3, TF1), (TF3, TF3, TF1), (TF4, TF3, TF1), (TF0, TF4, TF1), (TF1, TF4, TF1), (TF2, TF4, TF1), (TF3, TF4, TF1), (TF4, TF4, TF1) |

6.10.3.4.1.54.2.4 Physical channel parameters

| | | |
|---------------|--------------------------------------|--|
| DPCH Downlink | Midamble | 512 chips |
| | Codes and time slots | {SF16 x 8 codes x 1 time slot} + {SF16 x 5 codes x 1 time slot} |
| | Max. Number of data bits/radio frame | 3140 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,68 |

6.10.3.4.1.55 Interactive or background / UL:64 DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.10.3.4.1.55.1 Uplink
See clause 6.10.3.4.1.24.1.

6.10.3.4.1.55.2 Downlink

6.10.3.4.1.55.2.1 Transport channel parameters

6.10.3.4.1.55.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB
See clause 6.10.3.4.1.27.2.1.1.

6.10.3.4.1.55.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB
See clause 6.10.3.4.1.20.2.1.1.

6.10.3.4.1.55.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.1.55.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 60 |
| TFCS | (I/B 128 kbps RAB, Str. 128 kbps RAB, DCCH)= (TF0, TF0, TF0), (TF1, TF0, TF0), (TF2, TF0, TF0), (TF3, TF0, TF0), (TF4, TF0, TF0), (TF0, TF1, TF0), (TF1, TF1, TF0), (TF2, TF1, TF0), (TF3, TF1, TF0), (TF4, TF1, TF0), (TF0, TF2, TF0), (TF1, TF2, TF0), (TF2, TF2, TF0), (TF3, TF2, TF0), (TF4, TF2, TF0), (TF0, TF3, TF0), (TF1, TF3, TF0), (TF2, TF3, TF0), (TF3, TF3, TF0), (TF4, TF3, TF0), (TF0, TF4, TF0), (TF1, TF4, TF0), (TF2, TF4, TF0), (TF3, TF4, TF0), (TF4, TF4, TF0), (TF0, TF5, TF0), (TF1, TF5, TF0), (TF2, TF5, TF0), (TF3, TF5, TF0), (TF4, TF5, TF0), (TF0, TF0, TF1), (TF1, TF0, TF1), (TF2, TF0, TF1), (TF3, TF0, TF1), (TF4, TF0, TF1), (TF0, TF1, TF1), (TF1, TF1, TF1), (TF2, TF1, TF1), (TF3, TF1, TF1), (TF4, TF1, TF1), (TF0, TF2, TF1), (TF1, TF2, TF1), (TF2, TF2, TF1), (TF3, TF2, TF1), (TF4, TF2, TF1), (TF0, TF3, TF1), (TF1, TF3, TF1), (TF2, TF3, TF1), (TF3, TF3, TF1), (TF4, TF3, TF1), (TF0, TF4, TF1), (TF1, TF4, TF1), (TF2, TF4, TF1), (TF3, TF4, TF1), (TF4, TF4, TF1), (TF0, TF5, TF1), (TF1, TF5, TF1), (TF2, TF5, TF1), (TF3, TF5, TF1), (TF4, TF5, TF1) |

6.10.3.4.1.55.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|------------------------------|
| DPCH Downlink | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 2176 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,48 |

6.10.3.4.2 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

6.10.3.4.2.1 Interactive or background / UL: 64 DL: 256 kbps / PS RAB
 + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 + UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.1.1 Uplink

6.10.3.4.2.1.1.1 Transport channel parameters

6.10.3.4.2.1.1.1.1 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

| Higher Layer | RAB/Signalling RB | RAB | SRB#5 | |
|--------------|---|-----------|---------|-------|
| RLC | Logical channel type | DTCH | SHCCH | |
| | RLC mode | AM | TM | |
| | Payload sizes, bit | 320 | 168 | |
| | Max data rate, bps | 64000 | 16800 | |
| | AMD/TrD PDU header, bit | 16 | 0 | |
| MAC | MAC header, bit | 0 | 0 | |
| | MAC multiplexing | N/A | N/A | |
| Layer 1 | TrCH type | USCH | USCH | |
| | TB sizes, bit | 336 | 168 | |
| | TFS | TF0, bits | 0x336 | 0x168 |
| | | TF1, bits | 1x336 | 1x168 |
| | | TF2, bits | 2x336 | N/A |
| | | TF3, bits | 3x336 | N/A |
| | | TF4, bits | 4x336 | N/A |
| | TTI, ms | 20 | 10 | |
| | Coding type | TC | CC 1/2 | |
| | CRC, bit | 16 | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | 384 | |
| | Max number of bits/radio frame before rate matching | 2118 | 384 | |
| | RM attribute | 135-175 | 180-220 | |

6.10.3.4.2.1.1.1.2 TFCS for USCH

| | |
|-----------|--|
| TFCS size | 10 |
| TFCS | (64 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) |

6.10.3.4.2.1.1.1.3 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL SRB for SHCCH mapped on RACH

| Higher layer | RAB/signalling RB | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 |
|--------------|-----------------------------|-------|-------|-------|------------------|-----------------|-------|
| | User of Radio Bearer | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | RRC |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH | SHCCH |
| | RLC mode | TM | UM | AM | AM | AM | TM |
| | Payload sizes, bit | 168 | 136 | 128 | 128 | 128 | 168 |
| | Max data rate, bps | 16800 | 13600 | 12800 | 12800 | 12800 | 16800 |
| | AMD/UMD/TrD PDU header, bit | 0 | 8 | 16 | 16 | 16 | 0 |

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 |
|--------------|---|--------------------------------|-------|-------|---------------------|--------------------|-------|
| | | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | RRC |
| MAC | MAC header, bit | 2 | 26 | 26 | 26 | 26 | 2 |
| | MAC multiplexing | 6 logical channel multiplexing | | | | | |
| Layer 1 | TrCH type | RACH | | | | | |
| | TB sizes, bit | 170 | 170 | 170 | 170 | 170 | 170 |
| | TFS | TF0, bits | | | | | |
| | TTI, ms | 10 | | | | | |
| | Coding type | CC ½ | | | | | |
| | CRC, bit | 16 | | | | | |
| | Max number of bits/TTI after channel coding | 388 | 388 | 388 | 388 | 388 | 388 |

6.10.3.4.2.1.1.2 Physical channel parameters

| | | |
|-------|--------------------------------------|--|
| PUSCH | Midamble | 512 chips |
| | Codes and time slots | {SF16 x 1 code + SF4 x 1 code} x 1 time slot |
| | Max. Number of data bits/radio frame | 1202 bits |
| | TFCI code word | 16 bits |
| | TPC | 2 bits |
| | Puncturing Limit | 0.48 |

| | | |
|-------|--------------------------------------|--|
| PRACH | Midamble | 512 chips |
| | Codes and time slots | SF8 (alt. SF16) x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 464 (alt. 232) |
| | Puncturing Limit | 1.0 (alt. 0.56) |

6.10.3.4.2.1.2 Downlink

6.10.3.4.2.1.2.1 Transport channel parameters

6.10.3.4.2.1.2.1.1 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

| Higher Layer | RAB/Signalling RB | RAB | SRB#5 | |
|--------------|---|-------------------|-------------------|-------|
| RLC | Logical channel type | DTCH | SHCCH | |
| | RLC mode | AM | UM | |
| | Payload sizes, bit | 320 | 160 | |
| | Max data rate, bps | 256000 | 16000 | |
| | AMD/UMD PDU header, bit | 16 | 8 | |
| MAC | MAC header, bit | 0 | 0 | |
| | MAC multiplexing | N/A | N/A | |
| Layer 1 | TrCH type | DSCH | DSCH | |
| | TB sizes, bit | 336 | 168 | |
| | TFS | TF0, bits | 0x336 | 0x168 |
| | | TF1, bits | 1x336 | 1x168 |
| | | TF2, bits | 2x336 | N/A |
| | | TF3, bits | 4x336 | N/A |
| | | TF4, bits | 8x336 | N/A |
| | | TF5, bits | N/A (alt. 12x336) | N/A |
| | | TF6, bits | N/A (alt. 16x336) | N/A |
| | TTI, ms | 10 (alt. 20) | 10 | |
| | Coding type | TC | CC 1/2 | |
| | CRC, bit | 16 | 16 | |
| | Max number of bits/TTI after channel coding | 8460 (alt. 16908) | 384 | |
| | Downlink: Max number of bits/radio frame before rate matching | 8460 (alt. 8454) | 384 | |
| RM attribute | 135-175 | 180-220 | | |

6.10.3.4.2.1.2.1.2 TFCS for DSCH

| | |
|-----------|---|
| TFCS size | 10 (alt. 14) |
| TFCS | (256 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1)) |

6.10.3.4.2.1.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 | SRB#6 | |
|--------------|---|--------------------------------|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| | | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | RRC | RRC | |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH | SHCCH | BCCH | |
| | RLC mode | UM | UM | AM | AM | AM | UM | TM | |
| | Payload sizes, bit | 160 | 136 or 120 (note) | 128 | 128 | 128 | 160 | 168 | |
| | Max data rate, bps | 32000 (alt. 48000) | 27200 or 24000 (alt. 40800 or 36000) | 25600 (alt. 38400) | 25600 (alt. 38400) | 25600 (alt. 38400) | 32000 (alt. 48000) | 33600 (alt. 50400) | |
| | AMD/UMD/TrD PDU header, bit | 8 | 8 | 16 | 16 | 16 | 8 | 0 | |
| MAC | MAC header, bit | 3 | 27 or 43 | 27 | 27 | 27 | 3 | 3 | |
| | MAC multiplexing | 7 logical channel multiplexing | | | | | | | |
| Layer 1 | TrCH type | FACH | | | | | | | |
| | TB sizes, bit | 171 | 171 | 171 | 171 | 171 | 171 | 171 | |
| | TFS | TF0, bits | 0x171 | | | | | | |
| | | TF1, bits | 1x171 | | | | | | |
| | | TF2, bits | 2x171 | | | | | | |
| | | TF3, bits | 3x171 | | | | | | |
| | | TF4, bits | 4x171 | | | | | | |
| | | TF5, bits | N/A (alt. 5x171) | | | | | | |
| | | TF6, bits | N/A (alt. 6x171) | | | | | | |
| | TTI, ms | 20 | | | | | | | |
| | Coding type | CC 1/2 | | | | | | | |
| | CRC, bit | 16 | | | | | | | |
| | Max number of bits/TTI after channel coding | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) |
| | Max number of bits/radio frame before rate matching | 764 (alt. 1146) | 764 (alt. 1146) | 764 (alt. 1146) | 764 (alt. 1146) | 764 (alt. 1146) | 764 (alt. 1146) | 764 (alt. 1146) | 764 (alt. 1146) |
| | NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI. | | | | | | | | |

6.10.3.4.2.1.2.1.4 TFCS for FACH

| | |
|-----------|---|
| TFCS size | 5 (alt. 7) |
| TFCS | FACH = TF0, TF1, TF2, TF3, TF4 (alt. FACH = TF0, TF1, TF2, TF3, TF4, TF5, T F6) |

6.10.3.4.2.1.2.2 Physical channel parameters

| | | |
|-------|--------------------------------------|-------------------------------|
| PDSCH | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 4400 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 0.48 |

| | | |
|-----------------------|--------------------------------------|------------------------------|
| SCCPCH (burst type 1) | Midamble | 512 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1204 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 1 |

| | | |
|-----------------------|--------------------------------------|------------------------------|
| SCCPCH (burst type 2) | Midamble | 256 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1364 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 1 |

6.10.3.4.2.2 Interactive or background / UL: 64 DL: 384 kbps / PS RAB
+ UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.2.1 Uplink

See clause 6.10.3.4.2.1.1.

6.10.3.4.2.2.2 Downlink

6.10.3.4.2.2.2.1 Transport channel parameters

6.10.3.4.2.2.2.1.1 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

| Higher Layer | RAB/Signalling RB | RAB | SRB#5 | |
|---|---|--------------------|-------------------|-------|
| RLC | Logical channel type | DTCH | SHCCH | |
| | RLC mode | AM | UM | |
| | Payload sizes, bit | 320 | 160 | |
| | Max data rate, bps | 384000 | 16000 | |
| | AMD/UMD PDU header, bit | 16 | 8 | |
| MAC | MAC header, bit | 0 | 0 | |
| | MAC multiplexing | N/A | N/A | |
| Layer 1 | TrCH type | DSCH | DSCH | |
| | TB sizes, bit | 336 | 168 | |
| | TFS | TF0, bits | 0x336 | 0x168 |
| | | TF1, bits | 1x336 | 1x168 |
| | | TF2, bits | 2x336 | N/A |
| | | TF3, bits | 4x336 | N/A |
| | | TF4, bits | 8x336 | N/A |
| | | TF5, bits | 12x336 | N/A |
| | | TF6, bits | N/A (alt. 16x336) | N/A |
| | | TF7, bits | N/A (alt. 20x336) | N/A |
| | TF8, bits | N/A (alt. 24x336) | N/A | |
| | TTI, ms | 10 (alt. 20) | 10 | |
| | Coding type | TC | CC 1/2 | |
| | CRC, bit | 16 | 16 | |
| | Max number of bits/TTI after channel coding | 12684 (alt. 25356) | 384 | |
| Downlink: Max number of bits/radio frame before rate matching | 12684 (alt. 12678) | 384 | | |
| RM attribute | 135-175 | 180-220 | | |

6.10.3.4.2.2.2.1.2 TFCS for DSCH

| | |
|-----------|---|
| TFCS size | 12 (alt. 18) |
| TFCS | (384 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF0), (TF8, TF0)) |

6.10.3.4.2.2.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.2.1.2.1.3.

6.10.3.4.2.2.2.1.4 TFCS for FACH

See clause 6.10.3.4.2.1.2.1.4.

6.10.3.4.2.2.2 Physical channel parameters

| | | |
|-------|--------------------------------------|-------------------------------|
| PDSCH | Midamble | 256 chips |
| | Codes and time slots | SF16 x 8 codes x 3 time slots |
| | Max. Number of data bits/radio frame | 6608 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 0.48 |

| | | |
|-----------------------|--------------------------------------|------------------------------|
| SCCPCH (burst type 1) | Midamble | 512 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1204 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 1 |

| | | |
|-----------------------|--------------------------------------|------------------------------|
| SCCPCH (burst type 2) | Midamble | 256 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1364 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 1 |

6.10.3.4.2.3 Interactive or background / UL: 64 DL: 2048 kbps / PS RAB
+ UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.10.3.4.2.3.1 Uplink

See clause 6.10.3.4.2.1.1.

6.10.3.4.2.3.2 Downlink

6.10.3.4.2.3.2.1 Transport channel parameters

6.10.3.4.2.3.2.1.1 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

| Higher Layer | RAB/Signalling RB | RAB | SRB#5 | |
|---|-------------------------|-------------------|-------------------|-------|
| RLC | Logical channel type | DTCH | SHCCH | |
| | RLC mode | AM | UM | |
| | Payload sizes, bit | 640 | 160 | |
| | Max data rate, bps | 2048000 | 16000 | |
| | AMD/UMD PDU header, bit | 16 | 8 | |
| MAC | MAC header, bit | 0 | 0 | |
| | MAC multiplexing | N/A | N/A | |
| Layer 1 | TrCH type | DSCH | DSCH | |
| | TB sizes, bit | 656 | 168 | |
| | TFS | TF0, bits | 0x656 | 0x168 |
| | | TF1, bits | 1x656 | 1x168 |
| | | TF2, bits | 2x656 | N/A |
| | | TF3, bits | 4x656 | N/A |
| | | TF4, bits | 8x656 | N/A |
| | | TF5, bits | 12x656 | N/A |
| | | TF6, bits | 16x656 | N/A |
| | | TF7, bits | 20x656 | N/A |
| | | TF8, bits | 24x656 | N/A |
| | | TF9, bits | 28x656 | N/A |
| | | TF10, bits | 32x656 | N/A |
| | | TF11, bits | N/A (alt. 36x656) | N/A |
| | | TF12, bits | N/A (alt. 40x656) | N/A |
| | | TF13, bits | N/A (alt. 44x656) | N/A |
| | | TF14, bits | N/A (alt. 48x656) | N/A |
| | | TF15, bits | N/A (alt. 52x656) | N/A |
| | | TF16, bits | N/A (alt. 56x656) | N/A |
| | TF17, bits | N/A (alt. 60x656) | N/A | |
| | TF18, bits | N/A (alt. 64x656) | N/A | |
| | TTI, ms | 10 (alt. 20) | 10 | |
| | Coding type | TC | CC ½ | |
| CRC, bit | 16 | 16 | | |
| Max number of bits/TTI after channel coding | 64524 (alt. 129036) | 384 | | |
| Downlink: Max number of bits/radio frame before rate matching | 64524 (alt. 64518) | 384 | | |
| RM attribute | 135-175 | 180-220 | | |

6.10.3.4.2.3.2.1.2 TFCS for DSCH

| | |
|-----------|--|
| TFCS size | 22 (alt. 38) |
| TFCS | (2048 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1) (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF9, TF0), (TF10, TF0), (TF11, TF0), (TF12, TF0), (TF13, TF0), (TF14, TF0), (TF15, TF0), (TF16, TF0), (TF17, TF0), (TF18, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1), (TF9, TF1), (TF10, TF1), (TF11, TF1), (TF12, TF1), (TF13, TF1), (TF14, TF1), (TF15, TF1), (TF16, TF1), (TF17, TF1), (TF18, TF1)) |

6.10.3.4.2.3.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.2.1.2.1.3.

6.10.3.4.2.3.2.1.4 TFCS for FACH

See clause 6.10.3.4.2.1.2.1.4.

6.10.3.4.2.3.2.2 Physical channel parameters

| | | |
|-------|--------------------------------------|---------------------------------|
| PDSCH | Midamble | 256 chips |
| | Codes and time slots | SF16 x 12 codes x 11 time slots |
| | Max. Number of data bits/radio frame | 36416 bits (alt. 36400 bits) |
| | TFCI code word | 16 bits (alt. 32 bits) |
| | Puncturing Limit | 0.56 |

| | | |
|-----------------------|--------------------------------------|------------------------------|
| SCCPCH (burst type 1) | Midamble | 512 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1204 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 1 |

| | | |
|-----------------------|--------------------------------------|------------------------------|
| SCCPCH (burst type 2) | Midamble | 256 chips |
| | Codes and time slots | SF16 x 5 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1364 bits |
| | TFCI code word | 16 bits |
| | Puncturing Limit | 1 |

6.10.3.4.3 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

6.10.3.4.3.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL: 64 DL: 256 kbps / PS RAB
 + UL: 16.8 kbps SRBs for CCCH and SHCCH
 + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

6.10.3.4.3.1.1 Uplink

6.10.3.4.3.1.1.1 Transport channel parameters

6.10.3.4.3.1.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.10.3.4.3.1.1.1.2 Transport channel parameters for UL SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.10.3.4.3.1.1.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.1.1.3.

6.10.3.4.3.1.1.1.4 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.10.3.4.3.1.1.1.5 TFCS for USCH

See clause 6.10.3.4.2.1.1.1.2.

6.10.3.4.3.1.1.1.6 Transport channel parameters for SRB for CCCH and UL SRB for SHCCH mapped on RACH

| Higher layer | RAB/signalling RB | SRB#0 | SRB#5 | |
|--------------|---|--------------------------------|-------|--|
| | User of Radio Bearer | RRC | RRC | |
| RLC | Logical channel type | CCCH | SHCCH | |
| | RLC mode | TM | TM | |
| | Payload sizes, bit | 168 | 168 | |
| | Max data rate, bps | 16800 | 16800 | |
| | TrD PDU header, bit | 0 | 0 | |
| MAC | MAC header, bit | 2 | 2 | |
| | MAC multiplexing | 2 logical channel multiplexing | | |
| Layer 1 | TrCH type | RACH | | |
| | TB sizes, bit | 170 | | |
| | TFS | TF0, bits | 1x170 | |
| | TTI, ms | 10 | | |
| | Coding type | CC 1/2 | | |
| | CRC, bit | 16 | | |
| | Max number of bits/TTI after channel coding | 388 | | |

6.10.3.4.3.1.1.2 Physical channel parameters

Physical channel parameters for uplink DPCH see clause 6.10.3.4.1.4.1.2.

Physical channel parameters for PUSCH see clause 6.10.3.4.2.1.1.2.

Physical channel parameters for PRACH see clause 6.10.3.4.2.1.1.2.

6.10.3.4.3.1.2 Downlink

6.10.3.4.3.1.2.1 Transport channel parameters

6.10.3.4.3.1.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.1.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.1.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.1.2.1.4 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.10.3.4.3.1.2.1.5 TFCS for DSCH

See clause 6.10.3.4.2.1.2.1.2.

6.10.3.4.3.1.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

| | | | | | |
|---|---|--------------------------------|-------|-------|--|
| Higher layer | RAB/Signalling RB | SRB#0 | SRB#5 | SRB#6 | |
| | User of Radio Bearer | RRC | RRC | RRC | |
| RLC | Logical channel type | CCCH | SHCCH | BCCH | |
| | RLC mode | UM | UM | TM | |
| | Payload sizes, bit | 160 | 160 | 168 | |
| | Max data rate, bps | 32000 | 32000 | 33600 | |
| | UMD/TrD PDU header, bit | 8 | 8 | 0 | |
| MAC | MAC header, bit | 3 | | | |
| | MAC multiplexing | 3 logical channel multiplexing | | | |
| Layer 1 | TrCH type | FACH | | | |
| | TB sizes, bit | 171 | | | |
| | TFS | TF0, bits | 0x171 | | |
| | | TF1, bits | 1x171 | | |
| | | TF2, bits | 2x171 | | |
| | | TF3, bits | 3x171 | | |
| | | TF4, bits | 4x171 | | |
| | TTI, ms | 10 | | | |
| | Coding type | CC 1/2 | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI after channel coding | 1528 | | | |
| Max number of bits/radio frame before rate matching | 764 | | | | |

6.10.3.4.3.1.2.1.7 TFCS for FACH

| | |
|-----------|--------------------------------|
| TFCS size | 5 |
| TFCS | FACH = TF0, TF1, TF2, TF3, TF4 |

6.10.3.4.3.1.2.2 Physical channel parameters

Physical channel parameters for downlink DPCH see clause 6.10.3.4.1.4.2.2.

Physical channel parameters for downlink PDSCH see clause 6.10.3.4.2.1.2.2.

Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.

- 6.10.3.4.3.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL: 64 DL: 384 kbps / PS RAB
 + UL: 16.8 kbps SRBs for CCCH and SHCCH
 + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH

6.10.3.4.3.2.1 Uplink

See clause 6.10.3.4.3.1.1.

6.10.3.4.3.2.2 Downlink

6.10.3.4.3.2.2.1 Transport channel parameters

6.10.3.4.3.2.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.2.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.2.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.2.2.1.4 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.10.3.4.3.2.2.1.5 TFCS for DSCH

See clause 6.10.3.4.2.2.2.1.2.

6.10.3.4.3.2.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.3.1.2.1.6.

6.10.3.4.3.2.2.1.7 TFCS for FACH

See clause 6.10.3.4.3.1.2.1.7.

6.10.3.4.3.2.2.2 Physical channel parameters

Physical channel parameters for downlink DPCH see clause 6.10.3.4.1.4.2.2.

Physical channel parameters for PDSCH see clause 6.10.3.4.2.2.2.2.

Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.

6.10.3.4.3.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
+ Interactive or background / UL: 64 DL: 2048 kbps / PS RAB
+ UL: 16.8 kbps SRBs for CCCH and SHCCH
+ DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH

6.10.3.4.3.3.1 Uplink

See clause 6.10.3.4.3.1.1.

6.10.3.4.3.3.2 Downlink

6.10.3.4.3.3.2.1 Transport channel parameters

6.10.3.4.3.3.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.10.3.4.3.3.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.10.3.4.3.3.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.10.3.4.3.3.2.1.4 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.3.2.1.1.

6.10.3.4.3.3.2.1.5 TFCS for DSCH

See clause 6.10.3.4.2.3.2.1.2.

6.10.3.4.3.3.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.10.3.4.3.1.2.1.6.

6.10.3.4.3.3.2.1.7 TFCS for FACH

See clause 6.10.3.4.3.1.2.1.7.

6.10.3.4.3.3.2.2 Physical channel parameters

Physical channel parameters for downlink DPCH see clause 6.10.3.4.1.4.2.2.

Physical channel parameters for PDSCH see clause 6.10.3.4.2.3.2.2.

Physical channel parameters for SCCPCH see clause 6.10.3.4.2.1.2.2.

6.10.3.4.4 Combinations on SCCPCH

6.10.3.4.4.1 Stand-alone signalling RB for PCCH

6.10.3.4.4.1.1 Transport channel parameters

6.10.3.4.4.1.1.1 Transport channel parameter of SRB for PCCH

| | | | |
|--------------|---|-----------|-------------------|
| Higher layer | RAB/signalling RB | | SRB |
| | User of Radio Bearer | | RRC |
| RLC | Logical channel type | | PCCH |
| | RLC mode | | TM |
| | Payload sizes, bit | | 240 (alt. 80) |
| | Max data rate, bps | | 24000 (alt. 8000) |
| | TrD PDU header, bit | | 0 |
| MAC | MAC header, bit | | 0 |
| | MAC multiplexing | | N/A |
| Layer 1 | TrCH type | | PCH |
| | TB sizes, bit | | 240 (alt. 80) |
| | TFS | TF0, bts | 0x240 (alt. 0x80) |
| | | TF1, bits | 1x240 (alt. 1x80) |
| | | TF2, bits | 2x240 (alt. 2x80) |
| | TTI, ms | | 20 |
| | Coding type | | CC 1/2 |
| | CRC, bit | | 16 |
| | Max number of bits/TTI before rate matching | | 1056 (alt. 400) |
| | Max number of bits/radio frame before rate matching | | 528 (alt. 200) |
| RM attribute | | 210-250 | |

6.10.3.4.4.1.1.2 TFCS

| | |
|-----------|-------------------------------|
| TFCS size | 3 |
| TFCS | SRBs for PCCH = TF0, TF1, TF2 |

6.10.3.4.2.1.2 Physical channel parameters

| | | |
|---------|--------------------------------------|------------------------------|
| S-CCPCH | Midamble | 512 chips |
| | Codes and time slots | SF16 x 2 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 472 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,88 |

6.10.3.4.4.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.2.1 Transport channel parameters

6.10.3.4.4.2.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB

| | | | |
|--------------|---|-----------------------------|--------|
| Higher layer | RAB/signalling RB | RAB | |
| | User of Radio Bearer | Interactive/ Background RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 27 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | FACH | |
| | TB sizes, bit | 363 | |
| | TFS | TF0, bits | 0 x363 |
| | | TF1, bits | 1x363 |
| | | TF2, bits | 2x 363 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI before rate matching | 2286 | |
| | Max number of bits/radio frame before rate matching | 1143 | |
| RM attribute | 110-150 | | |

6.10.3.4.4.2.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

| | | | | | | | | |
|---|---|--------------------------------|-------------------------------------|--------------------|--------------------|--------------------|--------------------|--|
| Higher layer | RAB/signalling RB | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 | |
| | User of Radio Bearer | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | RRC | |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH | BCCH | |
| | RLC mode | UM | UM | AM | AM | AM | TM | |
| | Payload sizes, bit | 160 | 136 or 120 (note) | 128 | 128 | 128 | 168 | |
| | Max data rate, bps | 32000 (alt. 48000) | 27200 or 2400 (alt. 40800 or 36000) | 25600 (alt. 38400) | 25600 (alt. 38400) | 25600 (alt. 38400) | 33600 (alt. 50400) | |
| | AMD/UMD/TrD PDU header, bit | 8 | 8 | 16 | 16 | 16 | 0 | |
| MAC | MAC header, bit | 3 | 27 or 43 | 27 | 27 | 27 | 3 | |
| | MAC multiplexing | 6 logical channel multiplexing | | | | | | |
| Layer 1 | TrCH type | FACH | | | | | | |
| | TB sizes, bit | 171 | | | | | | |
| | TFS | TF0, bits | 0x171 | | | | | |
| | | TF1, bits | 1x171 | | | | | |
| | | TF2, bits | 2x171 | | | | | |
| | | TF3, bits | 3x171 | | | | | |
| | | TF4, bits | 4x171 | | | | | |
| | | TF5, bits | N/A (alt. 5x171) | | | | | |
| | | TF6, bits | N/A (alt. 6x171) | | | | | |
| | TTI, ms | 20 | | | | | | |
| | Coding type | CC 1/2 | | | | | | |
| | CRC, bit | 16 | | | | | | |
| | Max number of bits/TTI before rate matching | 1528 (alt. 2292) | | | | | | |
| | Max number of bits/radio frame before rate matching | 764 (alt.1146) | | | | | | |
| RM attribute | 200-240 | | | | | | | |
| NOTE: MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI. | | | | | | | | |

6.10.3.4.4.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 15 (alt. 21) |
| TFCS | (32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4),(TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4),(TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4) (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF0, TF5), (TF0, TF6), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF1, TF5), (TF1, TF6), (TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (TF2, TF5), (TF2, TF6)) |

6.10.3.4.4.2.2 Physical channel parameters

(burst type 1):

| | | |
|---------|--------------------------------------|------------------------------|
| S-CCPCH | Midamble | 512 chips |
| | Codes and time slots | SF16 x 6 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1448 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,6 |

(burst type 2):

| | | |
|---------|--------------------------------------|------------------------------|
| S-CCPCH | Midamble | 256 chips |
| | Codes and time slots | SF16 x 6 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1640 bits |
| | TFCI code word | 16 bits |
| | Puncturing limit | 0,68 |

6.10.3.4.4.3 Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

6.10.3.4.4.3.1 Transport channel parameters

6.10.3.4.4.3.1.1 Transport channel parameters of SRB for Interactive/Background 32 kbps RAB

See clause 6.10.3.4.4.2.1.

6.10.3.4.4.3.1.2 Transport channel parameters of SRB for PCCH

See clause 6.10.3.4.4.1.1.

6.10.3.4.4.3.1.3 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.10.3.4.4.2.1.2.

6.10.3.4.4.3.1.4 TFCS

| | |
|-----------|--|
| TFCS size | 45 (alt.63) |
| TFCS | <p>(32 kbps RAB, SRB for PCCH, SRBs for CCCH/ DCCH/ BCCH) =</p> <p>(TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4), (TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4), (TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4), (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4), (TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4), (TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4), (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4), (TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4), (TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4)</p> <p>(alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4), (TF0, TF0, TF5), (TF0, TF0, TF6), (TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4), (TF0, TF1, TF5), (TF0, TF1, TF6), (TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4), (TF0, TF2, TF5), (TF0, TF2, TF6), (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4), (TF1, TF0, TF5), (TF1, TF0, TF6), (TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4), (TF1, TF1, TF5), (TF1, TF1, TF6), (TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4), (TF1, TF2, TF5), (TF1, TF2, TF6), (TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4), (TF2, TF0, TF5), (TF2, TF0, TF6), (TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4), (TF2, TF1, TF5), (TF2, TF1, TF6), (TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4), (TF2, TF2, TF5), (TF2, TF2, TF6))</p> |

6.10.3.4.4.3.2 Physical channel parameters

(burst type 1):

| | | |
|---------|--------------------------------------|------------------------------|
| S-CCPCH | Midamble | 512 chips |
| | Codes and time slots | SF16 x 8 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1920 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,68 |

(burst type 2):

| | | |
|---------|--------------------------------------|------------------------------|
| S-CCPCH | Midamble | 256 chips |
| | Codes and time slots | SF16 x 7 codes x 1 time slot |
| | Max. Number of data bits/radio frame | 1900 bits |
| | TFCI code word | 32 bits |
| | Puncturing limit | 0,64 |

6.10.3.4.5 Combinations on PRACH

6.10.3.4.5.1 SRB for CCCH + SRB for DCCH

6.10.3.4.5.1.1 Transport channel parameters

6.10.3.4.5.1.1.1 Transport channel parameter for SRB for CCCH, SRB for DCCH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 |
|--------------|---|--------------------------------|-------|-------|---------------------|--------------------|
| | | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | TM | UM | AM | AM | AM |
| | Payload sizes, bit | 168 | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 16800 | 13600 | 12800 | 12800 | 12800 |
| | AMD/UMD/TrD PDU header, bit | 0 | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 2 | 26 | 26 | 26 | 26 |
| | MAC multiplexing | 5 logical channel multiplexing | | | | |
| Layer 1 | TrCH type | RACH | | | | |
| | TB sizes, bit | 170 | 170 | 170 | 170 | 170 |
| | TFS TF0, bits | 1x170 | | | | |
| | TTI, ms | 10 | | | | |
| | Coding type | CC ½ | | | | |
| | CRC, bit | 16 | | | | |
| | Max number of bits/TTI after channel coding | 388 | 388 | 388 | 388 | 388 |
| | Max number of bits/Radio frame before rate matching | 388 | 388 | 388 | 388 | 388 |

6.10.3.4.5.1.1.2 TFCS

| | |
|-----------|---------------------------|
| TFCS size | 1 |
| TFCS | SRBs for CCCH/ DCCH = TF0 |

6.10.3.4.5.1.2 Physical channel parameters

| | | |
|-------|--------------------------------------|--|
| PRACH | Midamble | 512 chips |
| | Codes and time slots | SF8 (alt. SF16) x 1 code x 1 time slot |
| | Max. Number of data bits/radio frame | 488 bits (alt. 244 bits) |
| | Puncturing Limit | 1.0 (alt. 0.75) |

6.11 Common Radio Bearer configurations for other test purposes

The common radio bearer configurations are used for functional testing of various UE functions. Only common configurations that are used by multiple test cases and are not covered by the reference radio bearer configurations in clause 6.10 are specified in the present clause. Radio bearer configurations only used by a single test case are specified in the actual test case itself.

NOTE If not specifically specified then the mid-value of the RM attribute value range as specified by the actual reference radio bearer configuration shall be applied for testing.

6.11.1 Unacknowledged Mode Radio Bearer configuration (7 bit Length Indicator)

This configuration is based on the Interactive or background / UL:64 DL 64 kbps / PS RAB + UL:3.4 DL 3.4 kbps SRBs for DCCH (see TS 34.108 clause 6.10.2.4.1.26) with the transport channels parameters of the RAB defined as followed:

Transport channel parameters for the Uplink RAB

| Higher layer | RAB/Signalling RB | | RAB | |
|---|---|-----------|-------|--------------|
| RLC | Logical channel type | | DTCH | |
| | RLC mode | | UM | |
| | Payload sizes, bit | | 328 | |
| | Max data rate, bps | | 65600 | |
| | UMD PDU header, bit | | 8 | |
| MAC | MAC header, bit | | 0 | |
| | MAC multiplexing | | N/A | |
| Layer 1 | TrCH type | | DCH | |
| | TB sizes, bit | | 336 | |
| | TFS | TF0, bits | | 0x336 |
| | | TF1, bits | | 1x336 |
| | | TF2, bits | | 2x336(Note1) |
| | | TF3, bits | | 3x336(Note1) |
| | | TF4, bits | | 4x336(Note1) |
| | TTI, ms | | 20 | |
| | Coding type | | TC | |
| | CRC, bit | | 16 | |
| | Max number of bits/TTI after channel coding | | 4236 | |
| Uplink: Max number of bits/radio frame before rate matching | | 2118 | | |
| RM attribute | | 130-170 | | |

Transport channel parameters for the Downlink RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | UM | |
| | Payload sizes, bit | 328 | |
| | Max data rate, bps | 65600 | |
| | UMD PDU header, bit | 8 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 336 | |
| | TFS | TF0, bits | 0x336 |
| | | TF1, bits | 1x336 |
| | | TF2, bits | 2x336 (note) |
| | | TF3, bits | 3x336 (note) |
| | | TF4, bits | 4x336 (note) |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| RM attribute | 130-170 | | |

NOTE: This TFI is not applied to TFS for RLC test cases.

6.11.2 Unacknowledged Mode Radio Bearer configuration (15 bit Length Indicator)

This configuration is based on the Interactive or background / UL:64 DL 64 kbps / PS RAB + UL:3.4 DL 3.4 kbps SRBs for DCCCH (see TS 34.108 clause 6.10.2.4.1.26) with the transport channels parameters of the RAB defined as followed:

Transport channel parameters for the Uplink RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | UM | |
| | Payload sizes, bit | 1336 | |
| | Max data rate, bps | 66800 | |
| | UMD PDU header, bit | 8 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 1344 | |
| | TFS | TF0, bits | 0x1344 |
| | | TF1, bits | 1x1344 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | Uplink: Max number of bits/radio frame before rate matching | 2118 | |
| | RM attribute | 130-170 | |

Transport channel parameters for the Downlink RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | UM | |
| | Payload sizes, bit | 1336 | |
| | Max data rate, bps | 66800 | |
| | UMD PDU header, bit | 8 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 1344 | |
| | TFS | TF0, bits | 0x1344 |
| | | TF1, bits | 1x1344 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | RM attribute | 130-170 | |

6.11.3 Acknowledged Mode Radio Bearer configuration (7 bit Length Indicator)

Transport channel parameters for the Uplink RAB

See clause 6.10.2.4.1.24.1.

Transport channel parameters for the Downlink RAB

See clause 6.10.2.4.1.25.2.

6.11.4 Acknowledged Mode Radio Bearer configuration (15 bit Length Indicator)

This configuration is based on the Interactive or background / UL:64 DL 64 kbps / PS RAB + UL:3.4 DL 3.4 kbps SRBs for DCCH (see TS 34.108 clause 6.10.2.4.1.26) with the transport channels parameters of the RAB defined as followed.

Transport channel parameters for the Uplink RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 1328 | |
| | Max data rate, bps | 66400 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 1344 | |
| | TFS | TF0, bits | 0x1344 |
| | | TF1, bits | 1x1344 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | Uplink: Max number of bits/radio frame before rate matching | 2118 | |
| | RM attribute | 130-170 | |

Transport channel parameters for the Downlink RAB

| Higher layer | RAB/Signalling RB | RAB | |
|--------------|---|-----------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 1328 | |
| | Max data rate, bps | 66400 | |
| | AMD PDU header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 1344 | |
| | TFS | TF0, bits | 0x1344 |
| | | TF1, bits | 1x1344 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI after channel coding | 4236 | |
| | RM attribute | 130-170 | |

6.11.5 Reference Radio Bearer configurations used in Radio Bearer testing for 1.28 Mcps TDD

6.11.5.1 RABs and signalling RBs

See clause 6.10.3.1.

6.11.5.2 Combinations of RABs and Signalling RBs

In this document, physical channel parameters for following combinations of RABs and signalling RBs on a CCTrCH are described.

NOTE: It is understood that for speech service the AMR mode may be operated asymmetrically for the uplink and downlink.

Combinations on DPCH

- 1) Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 2) Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 3) Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.
- 4) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 5) Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 6) Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 7) Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 8) Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 9) Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 10) Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 11) Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB
+ UL:1.7 DL:1.7 kbps SRBs for DCCH.
- 12) Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 13) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 14) Conversational / unknown / UL:32 DL:32 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 15) Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 16) Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 17) Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 18) Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 19) Streaming / unknown / UL:64 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 20) Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 21) Streaming / unknown / UL:128 DL:0 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 22) Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 23) Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 24) Interactive or background / UL:64 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 25) Interactive or background / UL:32 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 26) Interactive or background / UL:64 DL: 64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 27) Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 28) Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 29) Interactive or background / UL:64 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 30) Interactive or background / UL:144 DL:144 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 31) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 32) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 33) Interactive or background / UL:128 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 34) Interactive or background / UL:384 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 35) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 36) Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 37) Interactive or background / UL:384 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 38) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 39) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 40) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH.
- 41) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 42) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 43) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

- 44) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:128 DL:2048 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 45) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 46) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 47) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 48) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 49) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 50) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 51) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 52) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 53) Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 54) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.
- 55) Interactive or /background / UL:64 kbps DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH.

Combinations on PDSCH, SCCPCH, PUSCH and PRACH

- 1) Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL:16.8 DL: 16 kbps SRBs for SHCCH.
- 2) Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH.
- 3) Interactive or background / UL:64 DL:2048 kbps / PS RAB
+ UL:3.4 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
+ UL: 16.8 DL: 16 kbps SRBs for SHCCH.

Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

- 1) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL:64 DL:256 kbps / PS RAB
 + UL:16.8 kbps SRBs for CCCH and SHCCH
 + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.
- 2) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL:64 DL:384 kbps / PS RAB
 + UL:16.8 kbps SRBs for CCCH and SHCCH
 + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.
- 3) Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL:64 DL:2048 kbps / PS RAB
 + UL:16.8 kbps SRBs for CCCH and SHCCH
 + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH.

Combinations on SCCPCH

- 1) Stand-alone 32 kbps SRB for PCCH.
- 2) Interactive or background / DL:32 kbps / PS RAB
 + SRB for CCCH
 + SRBs for DCCH
 + SRB for BCCH.
- 3) Interactive or background / DL:32 kbps / PS RAB
 + SRB for PCCH
 + SRB for CCCH
 + SRBs for DCCH
 + SRB for BCCH.

Combinations on PRACH

- 1) Interactive or background / UL:32 kbps / PS RAB
 + SRB for CCCH
 + SRBs for DCCH.

6.11.5.3 Example of linkage between RABs and services

See clause 6.10.3.3.

6.11.5.4 Typical radio parameter sets

6.11.5.4.1 Combinations on DPCH

6.11.5.4.1.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

6.11.5.4.1.1.1 Uplink

6.11.5.4.1.1.1.1 Transport channel parameters

6.11.5.4.1.1.1.1.1 Transport channel parameters for UL:1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.1.1.1.1.

6.11.5.4.1.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF16 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 164 bits |
| | TFCI code word / radio frame | 4 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.1.2 Downlink

6.11.5.4.1.1.2.1 Transport channel parameters

6.11.5.4.1.1.2.1.1 Transport channel parameters for DL:1.7 kbps SRBs for DCCH

See clause 6.10.3.4.1.1.2.1.1.

6.11.5.4.1.1.2.1.2 TFCS

See clause 6.10.3.4.1.1.2.1.2.

6.11.5.4.1.1.2.2 Physical channel parameters

| | | |
|---------------|--|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF16 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 164 bits |
| | TFCI code word / radio frame | 4 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.2.1 Uplink

6.11.5.4.1.2.1.1 Transport channel parameters

6.11.5.4.1.2.1.1.1 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.2.1.1.2 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.11.5.4.1.2.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF16 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 164 bits |
| | TFCI code word / radio frame | 4 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.2.2 Downlink

6.11.5.4.1.2.2.1 Transport channel parameters

6.11.5.4.1.2.2.1.1 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.2.2.1.2 TFCS

See clause 6.10.3.4.1.2.2.1.2.

6.11.5.4.1.2.2.2 Physical channel parameters

| | | |
|------------------|--|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF16 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 164 bits |
| | TFCI code word / radio frame | 4 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

6.11.5.4.1.3.1 Uplink

6.11.5.4.1.3.1.1 Transport channel parameters

6.11.5.4.1.3.1.1.1 Transport channel parameters for UL:13.6 kbps SRBs for DCCH

See clause 6.10.3.4.1.3.1.1.1.

6.11.5.4.1.3.1.1.2 TFCS

See clause 6.10.3.4.1.3.1.1.2.

6.11.5.4.1.3.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 340 bits |
| | TFCI code word / radio frame | 4 bits |
| | TPC / radio frame | 2x 2 bit |
| | SS / radio frame | 2x 2 bit |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.3.2 Downlink

6.11.5.4.1.3.2.1 Transport channel parameters

6.11.5.4.1.3.2.1.1 Transport channel parameters for DL:13.6 kbps SRBs for DCCH

See clause 6.10.3.4.1.3.2.1.1.

6.11.5.4.1.3.2.1.2 TFCS

See clause 6.10.3.4.1.3.2.1.2.

6.11.5.4.1.3.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 340 bits |
| | TFCI code word / radio frame | 4 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.4.1 Uplink

6.11.5.4.1.4.1.1 Transport channel parameters

6.11.5.4.1.4.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.4.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause clause 6.10.3.4.1.2.1.1.

6.11.5.4.1.4.1.1.3 TFCS

See clause 6.10.3.4.1.4.1.1.3.

6.11.5.4.1.4.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.60 |

6.11.5.4.1.4.2 Downlink

6.11.5.4.1.4.2.1 Transport channel parameters

6.11.5.4.1.4.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.4.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.4.2.1.3 TFCS

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.1.4.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.60 |

6.11.5.4.1.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.5.1 Uplink

6.11.5.4.1.5.1.1 Transport channel parameters

6.11.5.4.1.5.1.1.1 Transport channel parameters for Conversational / speech / UL:10.2 kbps / CS RAB

See clause 6.10.3.4.1.5.1.1.1.

6.11.5.4.1.5.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.5.1.1.3 TFCS

See clause 6.10.3.4.1.5.1.1.3.

6.11.5.4.1.5.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.68 |

6.11.5.4.1.5.2 Downlink

6.11.5.4.1.5.2.1 Transport channel parameters

6.11.5.4.1.5.2.1.1 Transport channel parameters for Conversational / speech / DL:10.2 kbps / CS RAB

See clause 6.10.3.4.1.5.2.1.1.

6.11.5.4.1.5.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.5.2.1.3 TFCS

See clause 6.10.3.4.1.5.2.1.3.

6.11.5.4.1.5.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.68 |

6.11.5.4.1.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.6.1 Uplink

6.11.5.4.1.6.1.1 Transport channel parameters

6.11.5.4.1.6.1.1.1 Transport channel parameters for Conversational / speech / UL:7.95 kbps / CS RAB

See clause 6.10.3.4.1.6.1.1.1.

6.11.5.4.1.6.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.6.1.1.3 TFCS

See clause 6.10.3.4.1.6.1.1.3.

6.11.5.4.1.6.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.80 |

6.11.5.4.1.6.2 Downlink

6.11.5.4.1.6.2.1 Transport channel parameters

6.11.5.4.1.6.2.1.1 Transport channel parameters for Conversational / speech / DL:7.95 kbps / CS RAB

See clause 6.10.3.4.1.6.2.1.1.

6.11.5.4.1.6.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.6.2.1.3 TFCS

See clause 6.10.3.4.1.6.2.1.3.

6.11.5.4.1.6.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.80 |

6.11.5.4.1.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.7.1 Uplink

6.11.5.4.1.7.1.1 Transport channel parameters

6.11.5.4.1.7.1.1.1 Transport channel parameters for Conversational / speech / UL:7.4 kbps / CS RAB

See clause 6.10.3.4.1.7.1.1.1

6.11.5.4.1.7.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.7.1.1.3 TFCS

See clause 6.10.3.4.1.7.1.1.3.

6.11.5.4.1.7.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.80 |

6.11.5.4.1.7.2 Downlink

6.11.5.4.1.7.2.1 Transport channel parameters

6.11.5.4.1.7.2.1.1 Transport channel parameters for Conversational / speech / DL:7.4 kbps / CS RAB

See clause 6.10.3.4.1.7.2.1.1

6.11.5.4.1.7.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.7.2.1.3 TFCS

See clause 6.10.3.4.1.7.2.1.3

6.11.5.4.1.7.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.80 |

6.11.5.4.1.8 Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.8.1 Uplink

6.11.5.4.1.8.1.1 Transport channel parameters

6.11.5.4.1.8.1.1.1 Transport channel parameters for Conversational / speech / UL:6.7 kbps / CS RAB

See clause 6.10.3.4.1.8.1.1.1.

6.11.5.4.1.8.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.8.1.1.3 TFCS

See clause 6.10.3.4.1.8.1.1.3.

6.11.5.4.1.8.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.88 |

6.11.5.4.1.8.2 Downlink

6.11.5.4.1.8.2.1 Transport channel parameters

6.11.5.4.1.8.2.1.1 Transport channel parameters for Conversational / speech / DL:6.7 kbps / CS RAB

See clause 6.10.3.4.1.8.2.1.1

6.11.5.4.1.8.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.8.2.1.3 TFCS

See clause 6.10.3.4.1.8.2.1.3

6.11.5.4.1.8.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.88 |

6.11.5.4.1.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.9.1 Uplink

6.11.5.4.1.9.1.1 Transport channel parameters

6.11.5.4.1.9.1.1.1 Transport channel parameters for Conversational / speech / UL:5.9 kbps / CS RAB

See clause 6.10.3.4.1.9.1.1.1.

6.11.5.4.1.9.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.9.1.1.3 TFCS

See clause 6.10.3.4.1.9.1.1.3.

6.11.5.4.1.9.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.92 |

6.11.5.4.1.9.2 Downlink

6.11.5.4.1.9.2.1 Transport channel parameters

6.11.5.4.1.9.2.1.1 Transport channel parameters for Conversational / speech / DL:5.9 kbps / CS RAB

See clause 6.10.3.4.1.9.2.1.1.

6.11.5.4.1.9.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.9.2.1.3 TFCS

See clause 6.10.3.4.1.9.2.1.3

6.11.5.4.1.9.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.92 |

6.11.5.4.1.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

6.11.5.4.1.10.1 Uplink

6.11.5.4.1.10.1.1 Transport channel parameters

6.11.5.4.1.10.1.1.1 Transport channel parameters for Conversational / speech / UL:5.15 kbps / CS RAB

See clause 6.10.3.4.1.10.1.1.1.

6.11.5.4.1.10.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.10.1.1.3 TFCS

See clause 6.10.3.4.1.10.1.1.3.

6.11.5.4.1.10.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.96 |

6.11.5.4.1.10.2 Downlink

6.11.5.4.1.10.2.1 Transport channel parameters

6.11.5.4.1.10.2.1.1 Transport channel parameters for Conversational / speech / DL:5.15 kbps / CS RAB

See clause 6.10.3.4.1.10.2.1.1.

6.11.5.4.1.10.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.10.2.1.3 TFCS

See clause 6.10.3.4.1.10.2.1.3.

6.11.5.4.1.10.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.96 |

6.11.5.4.1.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

6.11.5.4.1.11.1 Uplink

6.11.5.4.1.11.1.1 Transport channel parameters

6.11.5.4.1.11.1.1.1 Transport channel parameters for Conversational / speech / UL:4.75 kbps / CS RAB

See clause 6.10.3.4.1.11.1.1.1.

6.11.5.4.1.11.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.11.1.1.3 TFCS

See clause 6.10.3.4.1.11.1.1.3.

6.11.5.4.1.11.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.11.2 Downlink

6.11.5.4.1.11.2.1 Transport channel parameters

6.11.5.4.1.11.2.1.1 Transport channel parameters for Conversational / speech / DL:4.75 kbps / CS RAB

See clause 6.10.3.4.1.11.2.1.1.

6.11.5.4.1.11.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.11.2.1.3 TFCS

See clause 6.10.3.4.1.11.2.1.3.

6.11.5.4.1.11.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 2 code x 2 time slots |
| | Max. Number of data bits / radio frame | 328 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.12 Conversational / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.12.1 Uplink

6.11.5.4.1.12.1.1 Transport channel parameters

6.11.5.4.1.12.1.1.1 Transport channel parameters for conversational / unknown / UL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.12.1.1.1.

6.11.5.4.1.12.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.12.1.1.3 TFCS

See clause 6.10.3.4.1.12.1.1.3.

6.11.5.4.1.12.1.2 Physical channel parameters

| | | |
|-------------|--|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 4 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 680 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.12.2 Downlink

6.11.5.4.1.12.2.1 Transport channel parameters

6.11.5.4.1.12.2.1.1 Transport channel parameters for conversational / unknown / DL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.12.2.1.1.

6.11.5.4.1.12.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.12.2.1.3 TFCS

See clause 6.10.3.4.1.12.2.1.3.

6.11.5.4.1.12.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 4 code x 2 time slots |
| | Max. Number of data bits / radio frame | 680 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.13.1 Uplink

6.11.5.4.1.13.1.1 Transport channel parameters

6.11.5.4.1.13.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.13.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.13.1.1.3 TFCS

See clause 6.10.3.4.1.13.1.1.3.

6.11.5.4.1.13.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF2 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 1392 bits |
| | TFCI code word / radio frame | 8 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.13.2 Downlink

6.11.5.4.1.13.2.1 Transport channel parameters

6.11.5.4.1.13.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.13.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.13.2.1.3 TFCS

See clause 6.10.3.4.1.13.2.1.3.

6.11.5.4.1.13.2.2 Physical channel parameters

| | | |
|------------------|--|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF 16 x 8 code x 2 time slots |
| | Max. Number of data bits / radio frame | 1392 bits |
| | TFCI code word / radio frame | 8 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.14 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.14.1 Uplink

6.11.5.4.1.14.1.1 Transport channel parameters

6.11.5.4.1.14.1.1.1 Transport channel parameters for Conversational / unknown / UL:32 kbps / CS RAB

See clause 6.10.3.4.1.14.1.1.1.

6.11.5.4.1.14.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.14.1.1.3 TFCS

See clause 6.10.3.4.1.14.1.1.3.

6.11.5.4.1.14.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF4 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 688 bits |
| | TFCI code word / radio frame | 8 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS/ radio frame | 2x 2 bits |
| | Puncturing Limit | 0.60 |

6.11.5.4.1.14.2 Downlink

6.11.5.4.1.14.2.1 Transport channel parameters

6.11.5.4.1.14.2.1.1 Transport channel parameters for Conversational / unknown / DL:32 kbps / CS RAB

See clause 6.10.3.4.1.14.2.1.1.

6.11.5.4.1.14.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.14.2.1.3 TFCS

See clause 6.10.3.4.1.14.2.1.3.

6.11.5.4.1.14.2.2 Physical channel parameters

| | | |
|------------------|--|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 4 code x 2 time slots |
| | Max. Number of data bits / radio frame | 699 bits |
| | TFCI code word / radio frame | 8 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.60 |

6.11.5.4.1.15 Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.15.1 Uplink

6.11.5.4.1.15.1.1 Transport channel parameters

6.11.5.4.1.15.1.1.1 Transport channel parameters for Streaming / unknown / UL: 14.4 kbps / CS RAB

See clause 6.10.3.4.1.15.1.1.1.

6.11.5.4.1.15.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.15.1.1.3 TFCS

See clause 6.10.3.4.1.15.1.1.3.

6.11.5.4.1.15.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF4 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 688 bits |
| | TFCI code word / radio frame | 8 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.15.2 Downlink

6.11.5.4.1.15.2.1 Transport channel parameters

6.11.5.4.1.15.2.1.1 Transport channel parameters for Streaming / unknown / DL:14.4 kbps / CS RAB

See clause 6.10.3.4.1.15.2.1.1.

6.11.5.4.1.15.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.15.2.1.3 TFCS

See clause 6.10.3.4.1.15.2.1.3.

6.11.5.4.1.15.2.2 Physical channel parameters

| | | |
|------------------|-----------------------------------|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 3 code x 2 time slots |
| | Max. Number of data bits / radio | 512 bits |
| | TFCI code word / radio frame | 8 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.88 |

6.11.5.4.1.16 Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.16.1 Uplink

6.11.5.4.1.16.1.1 Transport channel parameters

6.11.5.4.1.16.1.1.1 Transport channel parameters for Streaming / unknown / UL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.16.1.1.1.

6.11.5.4.1.16.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.16.1.1.3 TFCS

See clause 6.10.3.4.1.16.1.1.3.

6.11.5.4.1.16.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ frame | SF4 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 680 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.16.2 Downlink

6.11.5.4.1.16.2.1 Transport channel parameters

6.11.5.4.1.16.2.1.1 Transport channel parameters for Streaming / unknown / DL:28.8 kbps / CS RAB

See clause 6.10.3.4.1.16.2.1.1.

6.11.5.4.1.16.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.16.2.1.3 TFCS

See clause 6.10.3.4.1.16.2.1.3.

6.11.5.4.1.16.2.2 Physical channel parameters

| | | |
|------------------|--|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 4 code x 2 time slots |
| | Max. Number of data bits / radio frame | 680 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.17 Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.17.1 Uplink

6.11.5.4.1.17.1.1 Transport channel parameters

6.11.5.4.1.17.1.1.1 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

6.11.5.4.1.17.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.17.1.1.3 TFCS

See clause 6.10.3.4.1.17.1.1.3.

6.11.5.4.1.17.1.2 Physical channel parameters

| | | |
|-------------|--|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF2 x 1 code x 2 time slots |
| | Max. Number of data bits / radio frame | 1384 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.72 |

6.11.5.4.1.17.2 Downlink

6.11.5.4.1.17.2.1 Transport channel parameters

6.11.5.4.1.17.2.1.1 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

6.11.5.4.1.17.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.17.2.1.3 TFCS

See clause 6.10.3.4.1.17.2.1.3.

6.11.5.4.1.17.2.2 Physical channel parameters

| | | |
|------------------|--|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF16 x 8 code x 2 time slots |
| | Max. Number of data bits / radio frame | 1384 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.72 |

6.11.5.4.1.18 Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.18.1 Uplink

6.11.5.4.1.18.1.1 Transport channel parameters

6.11.5.4.1.18.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB
N/A.

6.11.5.4.1.18.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.18.1.1.3 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.11.5.4.1.18.1.2 Physical channel parameters

See clause 6.11.5.4.1.2.1.2.

6.11.5.4.1.18.2 Downlink

6.11.5.4.1.18.2.1 Transport channel parameters

6.11.5.4.1.18.2.1.1 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB

See clause 6.10.3.4.1.18.2.1.1.

6.11.5.4.1.18.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.18.2.1.3 TFCS

See clause 6.10.3.4.1.18.2.1.3.

6.11.5.4.1.18.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF16 x 8 code x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS / radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.19 Streaming / unknown / UL:64 DL:0 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.19.1 Uplink

6.11.5.4.1.19.1.1 Transport channel parameters

6.11.5.4.1.19.1.1.1 Transport channel parameters for Streaming / unknown / UL:64 kbps / CS or PS RAB

See clause 6.10.3.4.1.19.1.1.1.

6.11.5.4.1.19.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.19.1.1.3 TFCS

See clause 6.10.3.4.1.19.1.1.3.

6.11.5.4.1.19.1.2 Physical channel parameters

| | | |
|----------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF2 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS/ radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.19.2 Downlink

6.11.5.4.1.19.2.1 Transport channel parameters

6.11.5.4.1.19.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB

N/A.

6.11.5.4.1.19.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.19.2.1.3 TFCS

See clause 6.10.3.4.1.2.2.1.2.

6.11.5.4.1.19.2.2 Physical channel parameters

See clause 6.11.5.4.1.2.1.2.

6.11.5.4.1.20 Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.20.1 Uplink

6.11.5.4.1.20.1.1 Transport channel parameters

6.11.5.4.1.20.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB
N/A

6.11.5.4.1.20.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.20.1.1.3 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.11.5.4.1.20.1.2 Physical channel parameters

See clause 6.11.5.4.1.2.1.2.

6.11.5.4.1.20.2 Downlink

6.11.5.4.1.20.2.1 Transport channel parameters

6.11.5.4.1.20.2.1.1 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

6.11.5.4.1.20.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.20.2.1.3 TFCS

See clause 6.10.3.4.1.20.2.1.3.

6.11.5.4.1.20.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS/ radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.21 Streaming / unknown / UL:128 DL:0 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.21.1 Uplink

6.11.5.4.1.21.1.1 Transport channel parameters

6.11.5.4.1.21.1.1.1 Transport channel parameters for Streaming / unknown / UL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.21.1.1.1.

6.11.5.4.1.21.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.21.1.1.3 TFCS

See clause 6.10.3.4.1.21.1.1.3.

6.11.5.4.1.21.1.2 Physical channel parameters

| | | |
|----------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots / radio frame | SF1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC / radio frame | 2x 2 bits |
| | SS/ radio frame | 2x 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.21.2 Downlink

6.11.5.4.1.21.2.1 Transport channel parameters

6.11.5.4.1.21.2.1.1 Transport channel parameters for Streaming / unknown / DL:0 kbps / CS or PS RAB
N/A.

6.11.5.4.1.21.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.21.2.1.3 TFCS

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.21.2.2 Physical channel parameters

See clause 6.11.5.4.1.2.2.2.

6.11.5.4.1.22 Streaming / unknown / UL:0 DL:384 kbps / CS or PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.22.1 Uplink

6.11.5.4.1.22.1.1 Transport channel parameters

6.11.5.4.1.22.1.1.1 Transport channel parameters for Streaming / unknown / UL:0 kbps / CS or PS RAB
N/A.

6.11.5.4.1.22.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.22.1.1.3 TFCS

See clause 6.10.3.4.1.2.1.1.2.

6.11.5.4.1.22.1.2 Physical channel parameters

See clause 6.11.5.4.1.2.1.2.

6.11.5.4.1.22.2 Downlink

6.11.5.4.1.22.2.1 Transport channel parameters

6.11.5.4.1.22.2.1.1 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB

See clause 6.10.3.4.1.22.2.1.1.

6.11.5.4.1.22.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.22.2.1.3 TFCS

See clause 6.10.3.4.1.22.2.1.3.

6.11.5.4.1.22.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|---------------|--|-----------------------------|-----------------------------|
| | Codes and time slots/ radio frame | SF 1 x 1code x 6 time slots | SF1 x 1 code x 4 time slots |
| | Max. Number of data bits / radio frame | 8424 bits | 8212 bits |
| | TFCI code word / radio frame | 16 bits | 16 bits |
| | TPC / radio frame | 2x 2 bits | 2x 3 bits |
| | SS/ radio frame | 2x 2 bits | 2x 3 bits |
| | Puncturing Limit | 0.68 | 0.68 |

6.11.5.4.1.23 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.23.1 Uplink

6.11.5.4.1.23.1.1 Transport channel parameters

6.11.5.4.1.23.1.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23.1.1.1

6.11.5.4.1.23.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1

6.11.5.4.1.23.1.1.3 TFCS

See clause 6.10.3.4.1.23.1.1.3

6.11.5.4.1.23.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 2 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.23.2 Downlink

6.11.5.4.1.23.2.1 Transport channel parameters

6.11.5.4.1.23.2.1.1 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB

See clause 6.10.3.4.1.23.2.1.1.

6.11.5.4.1.23.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.23.2.1.3 TFCS

See clause 6.10.3.4.1.23.2.1.3.

6.11.5.4.1.23.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 2 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 336 bits |
| | TFCI code word/ radio frame | 8 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.84 |

6.11.5.4.1.24 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.24.1 Uplink

6.11.5.4.1.24.1.1 Transport channel parameters

6.11.5.4.1.24.1.1.1 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.24.1.1.1.

6.11.5.4.1.24.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.24.1.1.3 TFCS

See clause 6.10.3.4.1.24.1.1.3.

6.11.5.4.1.24.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF2 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.6 |

6.11.5.4.1.24.2 Downlink

See clause 6.11.5.4.1.23.2

6.11.5.4.1.25 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.25.1 Uplink

See clause 6.11.5.4.1.23.1.

6.11.5.4.1.25.2 Downlink

6.11.5.4.1.25.2.1 Transport channel parameters

6.11.5.4.1.25.2.1.1 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.11.5.4.1.25.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.25.2.1.3 TFCS

See clause 6.10.3.4.1.25.2.1.3.

6.11.5.4.1.25.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 8 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit/ radio frame | 0.6 |

6.11.5.4.1.26 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.26.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.26.2 Downlink

See clause 6.11.5.4.1.25.2.

6.11.5.4.1.27 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.27.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.27.2 Downlink

6.11.5.4.1.27.2.1 Transport channel parameters

6.11.5.4.1.27.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.11.5.4.1.27.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.27.2.1.3 TFCS

See clause 6.10.3.4.1.27.2.1.3.

6.11.5.4.1.27.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 9 codes x 4 time slots |
| | Max. Number of data bits/radio frame | 3144 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.72 |

6.11.5.4.1.28 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.28.1 Uplink

6.11.5.4.1.28.1.1 Transport channel parameters

6.11.5.4.1.28.1.1.1 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

6.11.5.4.1.28.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.28.1.1.3 TFCS

See clause 6.10.3.4.1.28.1.1.3.

6.11.5.4.1.28.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF1 x 1 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.28.2 Downlink

See clause 6.11.5.4.1.27.2.

6.11.5.4.1.29 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.11.5.4.1.29.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.29.2 Downlink

6.11.5.4.1.29.2.1 Transport channel parameters

6.11.5.4.1.29.2.1.1 Transport channel parameters for Interactive or background / DL:144 kbps / PS RAB

See clause 6.10.3.4.1.29.2.1.1.

6.11.5.4.1.29.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.29.2.1.3 TFCS

See clause 6.10.3.4.1.29.2.1.3.

6.11.5.4.1.29.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 9 codes x 4 time slots |
| | Max. Number of data bits/radio frame | 3144 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.30 Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.11.5.4.1.30.1 Uplink

6.11.5.4.1.30.1.1 Transport channel parameters

6.11.5.4.1.30.1.1.1 Transport channel parameters for Interactive or background / UL:144 kbps / PS RAB

See clause 6.10.3.4.1.30.1.1.1.

6.11.5.4.1.30.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.30.1.1.3 TFCS

See clause 6.10.3.4.1.30.1.1.3.

6.11.5.4.1.30.1.2 Physical channel parameters

| | | | |
|-------------|--------------------------------------|--|----------------------------|
| DPCH Uplink | Modulation | QPSK | 8PSK |
| | Codes and time slots/ radio frame | (SF1 x 1 code x 2 time slots) + (SF2 x 1 code x 2 time slots) | SF1 x 1code x 2 time slots |
| | Max. Number of data bits/radio frame | 4200 bits | 4188 bits |
| | TFCI code word/ radio frame | 16 bits | 24 bits |
| | TPC/ radio frame | 2*2 bits | 2* 3bits |
| | SS/ radio frame | 2*2 bits | 2* 3bits |
| | Puncturing Limit | 0.88 | 0.84 |

6.11.5.4.1.30.2 Downlink

See clause 6.11.5.4.1.29.2.

6.11.5.4.1.31 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.11.5.4.1.31.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.31.2 Downlink

6.11.5.4.1.31.2.1 Transport channel parameters

6.11.5.4.1.31.2.1.1 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB

See clause 6.10.3.4.1.31.2.1.1.

6.11.5.4.1.31.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.31.2.1.3 TFCS

See clause 6.10.3.4.1.31.2.1.3.

6.11.5.4.1.31.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK |
|------------------|--------------------------------------|------------------------------|
| | Codes and time slots/ radio frame | SF 1 x 1 code x 4 time slots |
| | Max. Number of data bits/radio frame | 5608 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.32 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.11.5.4.1.32.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.32.2 Downlink

6.11.5.4.1.32.2.1 Transport channel parameters

6.11.5.4.1.32.2.1.1 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

6.11.5.4.1.32.2.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.32.2.1.3 TFCS

See clause 6.10.3.4.1.32.2.1.3.

6.11.5.4.1.32.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|------------------|--------------------------------------|-----------------------------|-----------------------------|
| | Codes and time slots/ radio frame | SF1 x 1 code x 6 time slots | SF1 x 1 code x 4 time slots |
| | Max. Number of data bits/radio frame | 8424 bits | 8412 bits |
| | TFCI code word/ radio frame | 16 bits | 24 bits |
| | TPC/ radio frame | 2*2 bits | 2*3 bits |
| | SS/ radio frame | 2*2 bits | 2*3 bits |
| | Puncturing Limit | 0.64 | 0.64 |

6.11.5.4.1.33 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.33.1 Uplink

See clause 6.11.5.4.1.28.1

6.11.5.4.1.33.2 Downlink

See clause 6.11.5.4.1.32.2.

6.11.5.4.1.34 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.34.1 Uplink

6.11.5.4.1.34.1.1 Transport channel parameters

6.11.5.4.1.34.1.1.1 Transport channel parameters for Interactive or background / UL:384 kbps / PS RAB

See clause 6.10.3.4.1.34.1.1.1.

6.11.5.4.1.34.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.34.1.1.3 TFCS

See clause 6.10.3.4.1.34.1.1.3.

6.11.5.4.1.34.1.2 Physical channel parameters

| DPCH Uplink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|------------------------------|------------------------------|
| | Codes and time slots/ radio frame | SF 1 x 1 code x 6 time slots | SF 1 x 1 code x 4 time slots |
| Max. Number of data bits/radio frame | 8424 bits | 8412 bits | |
| TFCI code word / radio frame | 16 bits | 24 bits | |
| TPC / radio frame | 2 * 2 bits | 3 * 3 bits | |
| SS / radio frame | 2 * 2 bits | 3 * 3 bits | |
| Puncturing Limit | 0.64 | 0.64 | |

6.11.5.4.1.34.2 Downlink

See clause 6.11.5.4.1.32.2.

6.11.5.4.1.35 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.35.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.35.2 Downlink

6.11.5.4.1.35.2.1 Transport channel parameters

6.11.5.4.1.35.2.1.1 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB

| Higher Layer | RAB/Signalling RB | RAB | |
|---|---|--------------------|--------------------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 1704 | |
| | Max data rate, bps | 2048000 | |
| | RLC header, bit | 16 | |
| MAC | MAC header, bit | 0 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | DCH | |
| | TB sizes, bit | 1720 | |
| | TFS | TF0, bits | 0x1720 |
| | | TF1, bits | 1x1720 |
| | | TF2, bits | 2x1720 |
| | | TF3, bits | 4x1720 |
| | | TF4, bits | 8 x1720 |
| | | TF5, bits | 12x1720 |
| | | TF6, bits | N/A (alt. 16x1720) |
| | | TF7, bits | N/A (alt. 20x1720) |
| | TF8, bits | N/A (alt. 24x1720) | |
| | TTI, ms | 10(alt. 20) | |
| | Coding type | No coding | |
| | CRC, bit | 24 | |
| | Max number of bits/TTI after channel coding | 20928 (alt. 41856) | |
| Max number of bits/radio frame before rate matching | 20928 (alt. 20928) | | |
| RM attribute | 130-170 | | |

6.11.5.4.1.35.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1

6.11.5.4.1.35.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 12 (alt.18) |
| TFCS | (2048 kbps RAB, DCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1), (TF8, TF1)) |

6.11.5.4.1.35.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|------------------------------|
| DPCH Downlink | Modulation | 8PSK |
| | Codes and time slots/ radio frame | SF1 x 1 code x 10 time slots |
| | Max. Number of data bits/radio frame | 21084 bits |
| | TFCl code word/ radio frame | 24 bits |
| | TPC/ radio frame | 2*3 bits |
| | SS/ radio frame | 2*3 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.36.1 Uplink

See clause 6.11.5.4.1.28.1.

6.11.5.4.1.36.2 Downlink

See clause 6.11.5.4.1.35.2.

6.11.5.4.1.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.37.1 Uplink

See clause 6.11.5.4.1.34.1.

6.11.5.4.1.37.2 Downlink

See clause 6.11.5.4.1.35.2.

6.10.2.4.1.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:32 DL:8 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.38.1 Uplink

6.11.5.4.1.38.1.1 Transport channel parameters

6.11.5.4.1.38.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.38.1.1.2 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

See clause 6.10.3.4.1.23.1.1.1.

6.11.5.4.1.38.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.38.1.1.4 TFCS

See clause 6.10.3.4.1.38.1.1.4.

6.11.5.4.1.38.1.2 Physical channel parameters

| | | |
|----------------|--------------------------------------|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 2 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.84 |

6.11.5.4.1.38.2 Downlink

6.11.5.4.1.38.2.1 Transport channel parameters

6.11.5.4.1.38.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.38.2.1.2 Transport channel parameters for Interactive or background / DL:8 kbps / PS RAB
See clause 6.10.3.4.1.23.2.1.1.

6.11.5.4.1.38.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.

6.11.5.4.1.38.2.1.4 TFCS
See clause 6.10.3.4.1.38.2.1.4.

6.11.5.4.1.38.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 3 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 504 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.11.5.4.1.39.1 Uplink
See clause 6.11.5.4.1.38.1.

6.11.5.4.1.39.2 Downlink

6.11.5.4.1.39.2.1 Transport channel parameters

6.11.5.4.1.39.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.39.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB
See clause 6.10.3.4.1.25.2.1.1.

6.11.5.4.1.39.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.39.2.1.4 TFCS
See clause 6.10.3.4.1.39.2.1.4.

6.11.5.4.1.39.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|---------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 10 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1736 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

6.11.5.4.1.40.1 Uplink

6.11.5.4.1.40.1.1 Transport channel parameters

6.11.5.4.1.40.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.40.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.24.1.1.1.

6.11.5.4.1.40.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.40.1.1.4 TFCS

See clause 6.10.3.4.1.40.1.1.4.

6.11.5.4.1.40.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2784 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.40.2 Downlink

See clause 6.11.5.4.1.39.2.

6.11.5.4.1.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.41.1 Uplink

See clause 6.11.5.4.1.40.1.

6.11.5.4.1.41.2 Downlink

6.11.5.4.1.41.2.1 Transport channel parameters

6.11.5.4.1.41.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.41.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB
See clause 6.10.3.4.1.27.2.1.1.

6.11.5.4.1.41.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.41.2.1.4 TFCS
See clause 6.10.3.4.1.41.2.1.4.

6.11.5.4.1.41.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|--------------------------------|---------------------------------|
| | Codes and time slots/ radio frame | SF 16 x 9 codes x 4 time slots | SF 16 x 12 codes x 2 time slots |
| Max. Number of data bits/radio frame | 3144 bits | 3132 bits | |
| TFCI code word / radio frame | 16 bits | 24 bits | |
| TPC / radio frame | 2 * 2 bits | 3 x 3 bits | |
| SS / radio frame | 2 * 2 bits | 3 x 3 bits | |
| Puncturing Limit | 0.64 | 0.64 | |

6.11.5.4.1.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:256 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.42.1 Uplink
See clause 6.11.5.4.1.40.1.

6.11.5.4.1.42.2 Downlink

6.11.5.4.1.42.2.1 Transport channel parameters

6.11.5.4.1.42.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.42.2.1.2 Transport channel parameters for Interactive or background / DL:256 kbps / PS RAB
See clause 6.10.3.4.1.31.2.1.1.

6.11.5.4.1.42.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.42.2.1.4 TFCS
See clause 6.10.3.4.1.42.2.1.4.

6.11.5.4.1.42.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|-----------------------------|-----------------------------|
| | Codes and time slots/ radio frame | SF1 x 1 code x 6 time slots | SF1 x 1 code x 4 time slots |
| Max. Number of data bits/radio frame | 8400 bits | 8376 bits | |
| TFCI code word/ radio frame | 16 bits | 24 bits | |
| TPC/ radio frame | 2*2 bits | 2*3 bits | |
| SS/ radio frame | 2*2 bits | 2*3 bits | |
| Puncturing Limit | 0.88 | 0.88 | |

6.11.5.4.1.43 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Interactive or background / UL:64 DL:384 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.43.1 Uplink

See clause 6.11.5.4.1.40.1.

6.11.5.4.1.43.2 Downlink

6.11.5.4.1.43.2.1 Transport channel parameters

6.11.5.4.1.43.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.43.2.1.2 Transport channel parameters for Interactive or background / DL:384 kbps / PS RAB

See clause 6.10.3.4.1.32.2.1.1.

6.11.5.4.1.43.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.43.2.1.4 TFCS

See clause 6.10.3.4.1.43.2.1.4.

6.11.5.4.1.43.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|------------------------------|------------------------------|
| | Codes and time slots/ radio frame | SF 1 x 1 code x 6 time slots | SF 1 x 1 code x 4 time slots |
| Max. Number of data bits/radio frame | 8408 bits | 8388 bits | |
| TFCI code word / radio frame | 32 bits | 48 bits | |
| TPC / radio frame | 2 * 2 bits | 3 x 3 bits | |
| SS / radio frame | 2 * 2 bits | 3 x 3 bits | |
| Puncturing Limit | 0.60 | 0.60 | |

6.11.5.4.1.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Interactive or background / UL:128 DL:2048 kbps / PS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.44.1 Uplink

6.11.5.4.1.44.1.1 Transport channel parameters

6.11.5.4.1.44.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB
 See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.44.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB
 See clause 6.10.3.4.1.28.1.1.1.

6.11.5.4.1.44.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH
 See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.44.1.1.4 TFCS
 See clause 6.10.3.4.1.44.1.1.4.

6.11.5.4.1.44.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|-----------------------------|
| DPCH Uplink | Modulation | 8PSK |
| | Codes and time slots/ radio frame | SF1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 4188 bits |
| | TFCI code word/ radio frame | 24 bits |
| | TPC/ radio frame | 2*3 bits |
| | SS/ radio frame | 2*3 bits |
| | Puncturing Limit | 0.88 |

6.11.5.4.1.44.2 Downlink

6.11.5.4.1.44.2.1 Transport channel parameters

6.11.5.4.1.44.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
 See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.44.2.1.2 Transport channel parameters for Interactive or background / DL:2048 kbps / PS RAB
 See clause 6.11.5.4.1.35.2.1.1.

6.11.5.4.1.44.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
 See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.44.2.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 33 (alt. 51) |
| TFCS | (RAB subflow#1, RAB subflow#2, RAB subflow#3, 2048 kbps RAB , DCCH)= ((TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1)) (alt. (TF0, TF0, TF0, TF0, TF0), (TF1, TF0, TF0, TF0, TF0), (TF2, TF1, TF1, TF0, TF0), (TF0, TF0, TF0, TF1, TF0), (TF1, TF0, TF0, TF1, TF0), (TF2, TF1, TF1, TF1, TF0), (TF0, TF0, TF0, TF2, TF0), (TF1, TF0, TF0, TF2, TF0), (TF2, TF1, TF1, TF2, TF0), (TF0, TF0, TF0, TF3, TF0), (TF1, TF0, TF0, TF3, TF0), (TF2, TF1, TF1, TF3, TF0), (TF0, TF0, TF0, TF4, TF0), (TF1, TF0, TF0, TF4, TF0), (TF2, TF1, TF1, TF4, TF0), (TF0, TF0, TF0, TF5, TF0), (TF1, TF0, TF0, TF5, TF0), (TF2, TF1, TF1, TF5, TF0), (TF0, TF0, TF0, TF6, TF0), (TF1, TF0, TF0, TF6, TF0), (TF2, TF1, TF1, TF6, TF0), (TF0, TF0, TF0, TF7, TF0), (TF1, TF0, TF0, TF7, TF0), (TF2, TF1, TF1, TF7, TF0), (TF0, TF0, TF0, TF8, TF0), (TF1, TF0, TF0, TF8, TF0), (TF0, TF0, TF0, TF0, TF1), (TF1, TF0, TF0, TF0, TF1), (TF2, TF1, TF1, TF0, TF1), (TF0, TF0, TF0, TF1, TF1), (TF1, TF0, TF0, TF1, TF1), (TF2, TF1, TF1, TF1, TF1), (TF0, TF0, TF0, TF2, TF1), (TF1, TF0, TF0, TF2, TF1), (TF2, TF1, TF1, TF2, TF1), (TF0, TF0, TF0, TF3, TF1), (TF1, TF0, TF0, TF3, TF1), (TF2, TF1, TF1, TF3, TF1), (TF0, TF0, TF0, TF4, TF1), (TF1, TF0, TF0, TF4, TF1), (TF2, TF1, TF1, TF4, TF1), (TF0, TF0, TF0, TF5, TF1), (TF1, TF0, TF0, TF5, TF1), (TF2, TF1, TF1, TF5, TF1), (TF0, TF0, TF0, TF6, TF1), (TF1, TF0, TF0, TF6, TF1), (TF2, TF1, TF1, TF6, TF1), (TF0, TF0, TF0, TF7, TF1), (TF1, TF0, TF0, TF7, TF1), (TF2, TF1, TF1, TF7, TF1), (TF0, TF0, TF0, TF8, TF1)) |

For better understanding of the TFCS please note that the following combinations are not included in the table above: (TF2, TF1, TF1, TF5, TF0) , (TF1, TF0, TF0, TF5, TF1) , (TF2, TF1, TF1, TF5, TF1) , (TF2, TF1, TF1, TF8, TF0), (TF1, TF0, TF0, TF8, TF1), (TF2, TF1, TF1, TF8, TF1)

6.11.5.4.1.44.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|-------------------------------|
| DPCH Downlink | Modulation | 8PSK |
| | Codes and time slots/ radio frame | SF 1 x 1 code x 10 time slots |
| | Max. Number of data bits/radio frame | 21060 bits |
| | TFCI code word / radio frame | 48 bits |
| | TPC / radio frame | 3 * 3 bits |
| | SS / radio frame | 3 * 3 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.45 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.45.1 Uplink

6.11.5.4.1.45.1.1 Transport channel parameters

6.11.5.4.1.45.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.45.1.1.2 Transport channel parameters for Streaming / unknown / UL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.1.1.1.

6.11.5.4.1.45.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.45.1.1.4 TFCS

See clause 6.10.3.4.1.45.1.1.4.

6.11.5.4.1.45.1.2 Physical channel parameters

| | | |
|-------------|--------------------------------------|----------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF2 x 1code x 2 time slots |
| | Max. Number of data bits/radio frame | 1384 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.45.2 Downlink

6.11.5.4.1.45.2.1 Transport channel parameters

6.11.5.4.1.45.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.45.2.1.2 Transport channel parameters for Streaming / unknown / DL:57.6 kbps / CS RAB

See clause 6.10.3.4.1.17.2.1.1.

6.11.5.4.1.45.2.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.11.

6.11.5.4.1.45.2.1.4 TFCS

See clause 6.10.3.4.1.45.2.1.4.

6.11.5.4.1.45.2.2 Physical channel parameters

| | | |
|---------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 9 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1560 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.46 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.46.1 Uplink

See clause 6.11.5.4.1.4.1.

6.11.5.4.1.46.2 Downlink

6.11.5.4.1.46.2.1 Transport channel parameters

6.11.5.4.1.46.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.46.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB
See clause 6.10.3.4.1.18.2.1.1.

6.11.5.4.1.46.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.46.2.1.4 TFCS
See clause 6.10.3.4.1.46.2.1.4.

6.11.5.4.1.46.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 11 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1912 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.47 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.47.1 Uplink
See clause 6.11.5.4.1.4.1.

6.11.5.4.1.47.2 Downlink

6.11.5.4.1.47.2.1 Transport channel parameters

6.11.5.4.1.47.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.47.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB
See clause 6.10.3.4.1.20.2.1.1.

6.11.5.4.1.47.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.47.2.1.4 TFCS
See clause 6.10.3.4.1.47.2.1.4.

6.11.5.4.1.47.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|--------------------------------|---------------------------------|
| | Codes and time slots/ radio frame | SF 16 x 9 codes x 4 time slots | SF 16 x 12 codes x 2 time slots |
| Max. Number of data bits/radio frame | 3128 bits | 3108 bits | |
| TFCI code word / radio frame | 32 bits | 48 bits | |
| TPC / radio frame | 2 * 2 bits | 3 x 3 bits | |
| SS / radio frame | 2 * 2 bits | 3 x 3 bits | |
| Puncturing Limit | 0.68 | 0.68 | |

6.11.5.4.1.48 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ Streaming / unknown / UL:0 DL:384 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.48.1 Uplink

See clause 6.11.5.4.1.4.1.

6.11.5.4.1.48.2 Downlink

6.11.5.4.1.48.2.1 Transport channel parameters

6.11.5.4.1.48.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.48.2.1.2 Transport channel parameters for Streaming / unknown / DL:384 kbps / CS or PS RAB

See clause 6.10.3.4.1.22.2.1.1.

6.11.5.4.1.48.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.48.2.1.4 TFCS

See clause 6.10.3.4.1.48.2.1.4.

6.11.5.4.1.48.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|----------------------------|-----------------------------|
| | Codes and time slots/ radio frame | SF1 x 1code x 6 time slots | SF1 x 1 code x 4 time slots |
| Max. Number of data bits/radio frame | 8408 bits | 8388 bits | |
| TFCI code word/ radio frame | 32 bits | 48 bits | |
| TPC/ radio frame | 2*2 bits | 2*3 bits | |
| SS/ radio frame | 2*2 bits | 2*3 bits | |
| Puncturing Limit | 0.64 | 0.64 | |

6.11.5.4.1.49 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + Conversational / unknown / UL:64 DL:64 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.49.1 Uplink

6.11.5.4.1.49.1.1 Transport channel parameters

6.11.5.4.1.49.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 kbps / CS RAB
 See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.1.49.1.1.2 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB
 See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.49.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH
 See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.49.1.1.4 TFCS

See clause 6.10.3.4.1.49.1.1.4.

6.11.5.4.1.49.1.2 Physical channel parameters

| | | |
|----------------|--------------------------------------|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 1 |

6.11.5.4.1.49.2 Downlink

6.11.5.4.1.49.2.1 Transport channel parameters

6.11.5.4.1.49.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB
 See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.1.49.2.1.2 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB
 See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.49.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH
 See clause 6.10.3.4.1.2.2.11.

6.11.5.4.1.49.2.1.4 TFCS

See clause 6.10.3.4.1.49.2.1.4.

6.11.5.4.1.49.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|--------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 11 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1912 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.50 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.50.1 Uplink

6.11.5.4.1.50.1.1 Transport channel parameters

6.11.5.4.1.50.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.5.4.1.13.1.1.1.

6.11.5.4.1.50.1.1.2 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.50.1.1.3 TFCS

See clause 6.10.3.4.1.50.1.1.3.

6.11.5.4.1.50.1.2 Physical channel parameters

| | | |
|----------------|--------------------------------------|------------------------------|
| DPCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.68 |

6.11.5.4.1.50.2 Downlink

6.11.5.4.1.50.2.1 Transport channel parameters

6.11.5.4.1.50.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.50.2.1.2 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.50.2.1.3 TFCS

See clause 6.10.3.4.1.50.2.1.3.

6.11.5.4.1.50.2.2 Physical channel parameters

| | | |
|-------------------|--------------------------------------|---------------------------------|
| DPCCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 15 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 2616 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.51 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:64 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.51.1 Uplink

6.11.5.4.1.51.1.1 Transport channel parameters

6.11.5.4.1.51.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.51.1.1.2 Transport channel parameters for Interactive or background / UL:64 kbps / PS RAB

See clause 6.10.3.4.1.24.1.1.1.

6.11.5.4.1.51.1.1.3 Transport channel parameters for UL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.51.1.1.4 TFCS

See clause 6.10.3.4.1.51.1.1.4.

6.11.5.4.1.51.1.2 Physical channel parameters

| | | |
|-----------------|--------------------------------------|------------------------------|
| DPCCH Uplink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.51.2 Downlink

6.11.5.4.1.51.2.1 Transport channel parameters

6.11.5.4.1.51.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.51.2.1.2 Transport channel parameters for Interactive or background / DL:64 kbps / PS RAB

See clause 6.10.3.4.1.25.2.1.1.

6.11.5.4.1.51.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.51.2.1.4 TFCS

See clause 6.10.3.4.1.51.2.1.4.

6.11.5.4.1.51.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK |
|------------------|--------------------------------------|-----------------------------|
| | Codes and time slots/ radio frame | SF1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.52 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:64 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.52.1 Uplink

See clause 6.11.5.4.1.51.1

6.11.5.4.1.52.2 Downlink

6.11.5.4.1.52.2.1 Transport channel parameters

6.11.5.4.1.52.2.1.1 Transport channel parameters for Conversational / unknown / DL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.2.1.1.

6.11.5.4.1.52.2.1.2 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.11.5.4.1.52.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.52.2.1.4 TFCS

See clause 6.10.3.4.1.52.2.1.4.

6.11.5.4.1.52.2.2 Physical channel parameters

| DPCH Downlink | Modulation | QPSK |
|------------------|--------------------------------------|---------------------------------|
| | Codes and time slots/ radio frame | SF 16 x 12 codes x 4 time slots |
| | Max. Number of data bits/radio frame | 4200 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.53 Conversational / unknown / UL:64 DL:64 kbps / CS RAB
+ Interactive or background / UL:128 DL:128 kbps / PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.53.1 Uplink

6.11.5.4.1.53.1.1 Transport channel parameters

6.11.5.4.1.53.1.1.1 Transport channel parameters for Conversational / unknown / UL:64 kbps / CS RAB

See clause 6.10.3.4.1.13.1.1.1.

6.11.5.4.1.53.1.1.2 Transport channel parameters for Interactive or background / UL:128 kbps / PS RAB

See clause 6.10.3.4.1.28.1.1.1.

6.11.5.4.1.53.1.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.1.53.1.1.4 TFCS

See clause 6.10.3.4.1.53.1.1.4.

6.11.5.4.1.53.1.2 Physical channel parameters

| DPCH Uplink | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|-----------------------------|----------------------------|
| | Codes and time slots/ radio frame | SF1 x 1 code x 4 time slots | SF1 x 1code x 2 time slots |
| Max. Number of data bits/radio frame | 5608 bits | 4188 bits | |
| TFCl code word/ radio frame | 16 bits | 24 bits | |
| TPC/ radio frame | 2*2 bits | 2*3 bits | |
| SS/ radio frame | 2*2 bits | 2*3 bits | |
| Puncturing Limit | 0.88 | 0.68 | |

6.11.5.4.1.53.2 Downlink

See clause 6.11.5.4.1.52.2.

6.11.5.4.1.54 Interactive or background / UL:64 DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:64 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.54.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.54.2 Downlink

6.11.5.4.1.54.2.1 Transport channel parameters

6.11.5.4.1.54.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.11.5.4.1.54.2.1.2 Transport channel parameters for Streaming / unknown / DL:64 kbps / CS or PS RAB

See clause 6.10.3.4.1.18.2.1.1.

6.11.5.4.1.54.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.54.2.1.4 TFCS

See clause 6.10.3.4.1.54.2.1.4.

6.11.5.4.1.54.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|---------------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 12 codes x 4 time slots |
| | Max. Number of data bits/radio frame | 4184 bits |
| | TFCI code word / radio frame | 32 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.1.55 Interactive or background / UL:64 DL:128 kbps / PS RAB
+ Streaming / unknown / UL:0 DL:128 kbps / CS or PS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH

6.11.5.4.1.55.1 Uplink

See clause 6.11.5.4.1.24.1.

6.11.5.4.1.55.2 Downlink

6.11.5.4.1.55.2.1 Transport channel parameters

6.11.5.4.1.55.2.1.1 Transport channel parameters for Interactive or background / DL:128 kbps / PS RAB

See clause 6.10.3.4.1.27.2.1.1.

6.11.5.4.1.55.2.1.2 Transport channel parameters for Streaming / unknown / DL:128 kbps / CS or PS RAB

See clause 6.10.3.4.1.20.2.1.1.

6.11.5.4.1.55.2.1.3 Transport channel parameters for DL:3.4 kbps SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.1.55.2.1.4 TFCS

See clause 6.10.3.4.1.55.2.1.4.

6.11.5.4.1.55.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|-----------------------------|
| DPCH Downlink | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF1 x 1 code x 4 time slots |
| | Max. Number of data bits/radio frame | 5592 bits |
| | TFCI code word/ radio frame | 24 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| Puncturing Limit | 0.64 | |

6.11.5.4.2 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

6.11.5.4.2.1 Interactive or background / UL: 64 DL: 256 kbps / PS RAB
 + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 + UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.11.5.4.2.1.1 Uplink

6.11.5.4.2.1.1.1 Transport channel parameters

6.11.5.4.2.1.1.1.1 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB
 and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.11.5.4.2.1.1.1.2 TFCS for USCH

See clause 6.10.3.4.2.1.1.1.2.

6.11.5.4.2.1.1.1.3 Transport channel parameters for SRB for CCCH and UL SRBs for DCCH and UL
 SRB for SHCCH mapped on RACH

See clause 6.10.3.4.2.1.1.1.3.

6.11.5.4.2.1.1.2 Physical channel parameters

| | | |
|-------|--------------------------------------|------------------------------|
| PUSCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 1 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 2792 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 1 |

Physical channel parameter for PRACH.

See clause 6.11.5.4.5.1.2.

6.11.5.4.2.1.2 Downlink

6.11.5.4.2.1.2.1 Transport channel parameters

6.11.5.4.2.1.2.1.1 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB
 and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.11.5.4.2.1.2.1.2 TFCS for DSCH

See clause 6.10.3.4.2.1.2.1.2.

6.11.5.4.2.1.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#0 | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 | SRB#6 | |
|---|---|--------------------------------|--------------------------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--|
| | | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | RRC | RRC | |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH | SHCCH | BCCH | |
| | RLC mode | UM | UM | AM | AM | AM | UM | TM | |
| | Payload sizes, bit | 160 | 136 or 120* | 128 | 128 | 128 | 160 | 168 | |
| | Max data rate, bps | 32000 (alt. 48000) | 27200 or 24000 (alt. 40800 or 36000) | 25600 (alt. 38400) | 25600 (alt. 38400) | 25600 (alt. 38400) | 32000 (alt. 48000) | 33600 (alt. 50400) | |
| | RLC header, bit | 8 | 8 | 16 | 16 | 16 | 8 | 0 | |
| MAC | MAC header, bit | 3 | 27 or 43 | 27 | 27 | 27 | 3 | 3 | |
| | MAC multiplexing | 7 logical channel multiplexing | | | | | | | |
| Layer 1 | TrCH type | FACH | | | | | | | |
| | TB sizes, bit | 171 | 171 | 171 | 171 | 171 | 171 | 171 | |
| | TFS | TF0, bits | 0x171 | | | | | | |
| | | TF1, bits | 1x171 | | | | | | |
| | | TF2, bits | 2x171 | | | | | | |
| | | TF3, bits | 3x171 | | | | | | |
| | | TF4, bits | 4x171 | | | | | | |
| | | TF5, bits | N/A (alt. 5x171) | | | | | | |
| | | TF6, bits | N/A (alt. 6x171) | | | | | | |
| | TTI, ms | 20 | | | | | | | |
| | Coding type | CC ½ | | | | | | | |
| CRC, bit | 16 | | | | | | | | |
| Max number of bits/TTI after channel coding | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | 1528 (alt. 2292) | |

* MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.

6.11.5.4.2.1.2.1.4 TFCS for FACH

| | |
|-----------|--|
| TFCS size | 5 (alt. 7) |
| TFCS | FACH = TF0, TF1, TF2, TF3, TF4 (alt. FACH = TF0, TF1, TF2, TF3, TF4, TF5, TF6) |

6.11.5.4.2.1.2.2 Physical channel parameters

| PDSCH | Modulation | QPSK | 8PSK |
|--------------------------------------|-----------------------------------|--------------------------------|-----------------------------|
| | Codes and time slots/ radio frame | SF16 x 11 codes x 6 time slots | SF1 x 1 code x 4 time slots |
| Max. Number of data bits/radio frame | 5784 bits | 6511 bits | |
| TFCI code word/ radio frame | 16 bits | 24 bits | |
| TPC/ radio frame | 2*2 bits | 2*3 bits | |
| SS/ radio frame | 2*2 bits | 2*3 bits | |
| Puncturing Limit | 0.64 | 0.72 | |

| S-CCPCH | Modulation | QPSK |
|--------------------------------------|-----------------------------------|-------------------------------|
| | Codes and time slots/ radio frame | SF16 x 5 codes x 2 time slots |
| Max. Number of data bits/radio frame | 856 bits | |
| TFCI code word/ radio frame | 16 bits | |
| TPC/ radio frame | 2*2 bits | |
| SS/ radio frame | 2*2 bits | |
| Puncturing Limit | 0.72 | |

6.11.5.4.2.2 Interactive or background / UL: 64 DL: 384 kbps / PS RAB
 + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 + UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.11.5.4.2.2.1 Uplink

See clause 6.11.5.4.2.1.1.

6.11.5.4.2.2.2 Downlink

6.11.5.4.2.2.2.1 Transport channel parameters

6.11.5.4.2.2.2.1.1 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB
 and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.11.5.4.2.2.2.1.2 TFCS for DSCH

See clause 6.10.3.4.2.2.2.1.2.

6.11.5.4.2.2.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB
 for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.2.1.2.1.3.

6.11.5.4.2.2.2.1.4 TFCS for FACH

See clause 6.11.5.4.2.1.2.1.4.

6.11.5.4.2.2.2.2 Physical channel parameters

| | | |
|------------------|--------------------------------------|------------------------------|
| PDSCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 1 x 1 code x 6 time slots |
| | Max. Number of data bits/radio frame | 8424 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| Puncturing Limit | | 0.64 |

| | | |
|------------------|--------------------------------------|--------------------------------|
| SCCPCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 5 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 856 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| Puncturing Limit | | 0.72 |

6.11.5.4.2.3 Interactive or background / UL: 64 DL: 2048 kbps / PS RAB
 + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH
 + UL: 16.8 DL: 16 kbps SRBs for SHCCH

6.11.5.4.2.3.1 Uplink

See clause 6.11.5.4.2.1.1.

6.11.5.4.2.3.2 Downlink

6.11.5.4.2.3.2.1 Transport channel parameters

6.11.5.4.2.3.2.1.1 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

| Higher Layer | RAB/Signalling RB | RAB | SRB#5 | |
|---|---|--------------------|--------------------|-------|
| RLC | Logical channel type | DTCH | SHCCH | |
| | RLC mode | AM | UM | |
| | Payload sizes, bit | 1704 | 160 | |
| | Max data rate, bps | 2048000 | 16000 | |
| | RLC header, bit | 16 | 8 | |
| MAC | MAC header, bit | 0 | 0 | |
| | MAC multiplexing | N/A | N/A | |
| Layer 1 | TrCH type | DSCH | DSCH | |
| | TB sizes, bit | 1720 | 168 | |
| | TFS | TF0, bits | 0x1720 | 0x168 |
| | | TF1, bits | 1x1720 | 1x168 |
| | | TF2, bits | 2x1720 | N/A |
| | | TF3, bits | 4x1720 | N/A |
| | | TF4, bits | 8x1720 | N/A |
| | | TF5, bits | 12x1720 | N/A |
| | | TF6, bits | N/A (alt. 16x1720) | N/A |
| | | TF7, bits | N/A (alt. 20x1720) | N/A |
| | TF8, bits | N/A (alt. 24x1720) | N/A | |
| | TTI, ms | 10 (alt. 20) | 10 | |
| | Coding type | No Coding | CC ½ | |
| | CRC, bit | 24 | 16 | |
| | Max number of bits/TTI after channel coding | 20928 (alt. 41856) | 384 | |
| Downlink: Max number of bits/radio frame before rate matching | 20928 (alt. 20928) | 384 | | |
| RM attribute | 135-175 | 180-220 | | |

6.11.5.4.2.3.2.1.2 TFCS for DSCH

| | |
|-----------|---|
| TFCS size | 11 (alt.17) |
| TFCS | (2048 kbps RAB, SHCCH)= (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (alt. (TF0, TF0), (TF1, TF0), (TF2, TF0), (TF3, TF0), (TF4, TF0), (TF5, TF0), (TF6, TF0), (TF7, TF0), (TF8, TF0), (TF0, TF1), (TF1, TF1), (TF2, TF1), (TF3, TF1), (TF4, TF1), (TF5, TF1), (TF6, TF1), (TF7, TF1)) |

For better understanding of the TFCS please note that the following combinations are not included in the table above: (TF5, TF1), (TF8, TF1)

6.11.5.4.2.3.2.1.3 Transport channel parameters for DL SRBs for DCCH and SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.2.1.2.1.3.

6.11.5.4.2.3.2.1.4 TFCS for FACH

See clause 6.11.5.4.2.1.2.1.4.

6.11.5.4.2.3.2.2 Physical channel parameters

| | | |
|-------|--------------------------------------|------------------------------|
| PDSCH | Modulation | 8PSK |
| | Codes and time slots/ radio frame | SF1 x 1 code x 10 time slots |
| | Max. Number of data bits/radio frame | 21084 bits |
| | TFCI code word/ radio frame | 24 bits |
| | TPC/ radio frame | 2*3 bits |
| | SS/ radio frame | 2*3 bits |
| | Puncturing Limit | 1 |

| | | |
|---------|--------------------------------------|-------------------------------|
| S-CCPCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 5 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 856 bits |
| | TFCI code word/ radio frame | 16 bits |
| | TPC/ radio frame | 2*2 bits |
| | SS/ radio frame | 2*2 bits |
| | Puncturing Limit | 0.72 |

6.11.5.4.3 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

- 6.11.5.4.3.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
+ Interactive or background / UL: 64 DL: 256 kbps / PS RAB
+ UL: 16.8 kbps SRBs for CCCH and SHCCH
+ DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH

6.11.5.4.3.1.1 Uplink

6.11.5.4.3.1.1.1 Transport channel parameters

6.11.5.4.3.1.1.1.1 Transport channel parameters for Conversational / speech / UL:12.2 / CS RAB

See clause 6.10.3.4.1.4.1.1.1.

6.11.5.4.3.1.1.1.2 Transport channel parameters for UL SRBs for DCCH

See clause 6.10.3.4.1.2.1.1.1.

6.11.5.4.3.1.1.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.1.1.3.

6.11.5.4.3.1.1.1.4 Transport channel parameters for Interactive or background / UL: 64 kbps / PS RAB and UL SRB for SHCCH mapped on USCH

See clause 6.10.3.4.2.1.1.1.1.

6.11.5.4.3.1.1.1.5 TFCS for USCH

See clause 6.10.3.4.2.1.1.1.2.

6.11.5.4.3.1.1.1.6 Transport channel parameters for SRB for CCCH and UL SRB for SHCCH mapped on RACH

See clause 6.10.3.4.3.1.1.1.6.

6.11.5.4.3.1.1.2 Physical channel parameters

Physical channel parameters for uplink DPCH see clause 6.11.5.4.1.4.1.2.

Physical channel parameters for PUSCH see clause 6.11.5.4.2.1.1.2.

Physical channel parameters for PRACH see clause 6.11.5.4.2.1.1.2.

6.11.5.4.3.1.2 Downlink

6.11.5.4.3.1.2.1 Transport channel parameters

6.11.5.4.3.1.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.3.1.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.3.1.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.3.1.2.1.4 Transport channel parameters for Interactive or background / DL: 256 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.1.2.1.1.

6.11.5.4.3.1.2.1.5 TFCS for DSCH

See clause 6.10.3.4.2.1.2.1.2.

6.11.5.4.3.1.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

| Higher layer | RAB/Signalling RB User of Radio Bearer | SRB#0 | SRB#5 | SRB#6 | |
|---|---|--------------------------------|-------|-------|--|
| RLC | Logical channel type | CCCH | SHCCH | BCCH | |
| | RLC mode | UM | UM | TM | |
| | Payload sizes, bit | 160 | 160 | 168 | |
| | Max data rate, bps | 32000 | 32000 | 33600 | |
| | RLC header, bit | 8 | 8 | 0 | |
| MAC | MAC header, bit | 3 | | | |
| | MAC multiplexing | 3 logical channel multiplexing | | | |
| Layer 1 | TrCH type | FACH | | | |
| | TB sizes, bit | 171 | | | |
| | TFS | TF0, bits | 0x171 | | |
| | | TF1, bits | 1x171 | | |
| | | TF2, bits | 2x171 | | |
| | | TF3, bits | 3x171 | | |
| | | TF4, bits | 4x171 | | |
| | TTI, ms | 20 | | | |
| | Coding type | CC ½ | | | |
| | CRC, bit | 16 | | | |
| | Max number of bits/TTI after channel coding | 1528 | | | |
| Max number of bits/radio frame before rate matching | 764 | | | | |

6.11.5.4.3.1.2.1.7 TFCS for FACH

| | |
|-----------|-----------------------------|
| TFCS size | 5 |
| TFCS | FACH = TF0, TF1,TF2,TF3,TF4 |

6.11.5.4.3.1.2.2 Physical channel parameters

Physical channel parameters for downlink for DPCH see clause 6.11.5.4.1.4.2.2.

Physical channel parameters for downlink for PDSCH see clause 6.11.5.4.2.1.2.2.

Physical channel parameters for SCCPCH see clause 6.11.5.4.2.1.2.2.

- 6.11.5.4.3.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
 + UL:3.4 DL:3.4 kbps SRBs for DCCH
 + Interactive or background / UL: 64 DL: 384 kbps / PS RAB
 + UL: 16.8 kbps SRBs for CCCH and SHCCH
 + DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH

6.11.5.4.3.2.1 Uplink

See clause 6.11.5.4.3.1.1.

6.11.5.4.3.2.2 Downlink

6.11.5.4.3.2.2.1 Transport channel parameters

6.11.5.4.3.2.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.1.4.1.4.2.1.1.

6.11.5.4.3.2.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.3.2.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.3.2.2.1.4 Transport channel parameters for Interactive or background / DL: 384 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.10.3.4.2.2.2.1.1.

6.11.5.4.3.2.2.1.5 TFCS for DSCH

See clause 6.10.3.4.2.2.2.1.2.

6.11.5.4.3.2.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.3.1.2.1.6.

6.11.5.4.3.2.2.1.7 TFCS for FACH

See clause 6.11.5.4.3.1.2.1.7.

6.11.5.4.3.2.2.2 Physical channel parameters

Physical channel parameters for downlink for DPCH see clause 6.11.5.4.1.4.2.2.

Physical channel parameters for downlink for PDSCH see clause 6.11.5.4.2.2.2.2.

Physical channel parameters for downlink for SCCPCH see clause 6.11.5.4.2.1.2.2.

6.11.5.4.3.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB
+ UL:3.4 DL:3.4 kbps SRBs for DCCH
+ Interactive or background / UL: 64 DL: 2048 kbps / PS RAB
+ UL: 16.8 kbps SRBs for CCCH and SHCCH
+ DL: 33.6 kbps SRBs for CCCH, SHCCH and BCCH

6.11.5.4.3.3.1 Uplink

See clause 6.11.5.4.3.1.1.

6.11.5.4.3.3.2 Downlink

6.11.5.4.3.3.2.1 Transport channel parameters

6.11.5.4.3.3.2.1.1 Transport channel parameters for Conversational / speech / DL:12.2 kbps / CS RAB

See clause 6.10.3.4.1.4.2.1.1.

6.11.5.4.3.3.2.1.2 Transport channel parameters for DL SRBs for DCCH

See clause 6.10.3.4.1.2.2.1.1.

6.11.5.4.3.3.2.1.3 TFCS for DCH

See clause 6.10.3.4.1.4.2.1.3.

6.11.5.4.3.3.2.1.4 Transport channel parameters for Interactive or background / DL: 2048 kbps / PS RAB and DL SRB for SHCCH mapped on DSCH

See clause 6.11.5.4.2.3.2.1.2.

6.11.5.4.3.3.2.1.5 TFCS for DSCH

See clause 6.11.5.4.2.3.2.1.4.

6.11.5.4.3.3.2.1.6 Transport channel parameters for SRB for CCCH and SRB for BCCH and DL SRB for SHCCH mapped on FACH

See clause 6.11.5.4.3.1.2.1.6.

6.11.5.4.3.3.2.1.7 TFCS for FACH

See clause 6.11.5.4.3.1.2.1.7.

6.11.5.4.3.3.2.2 Physical channel parameters

Physical channel parameters for downlink DPCH see clause 6.11.5.4.1.4.2.2.

Physical channel parameters for PDSCH see clause 6.11.5.4.2.3.2.2.

Physical channel parameters for SCCPCH see clause 6.11.5.4.2.1.2.2.

6.11.5.4.4 Combinations on SCCPCH

6.11.5.4.4.1 Stand-alone signalling RB for PCCH

6.11.5.4.4.1.1 Transport channel parameters

6.11.5.4.4.1.1.1 Transport channel parameter of SRB for PCCH

| | | | |
|--------------|---|-----------|-------------------|
| Higher layer | RAB/signalling RB | | SRB |
| | User of Radio Bearer | | RRC |
| RLC | Logical channel type | | PCCH |
| | RLC mode | | TM |
| | Payload sizes, bit | | 240 (alt. 80) |
| | Max data rate, bps | | 24000 (alt. 8000) |
| | RLC header, bit | | 0 |
| MAC | MAC header, bit | | 0 |
| | MAC multiplexing | | N/A |
| Layer 1 | TrCH type | | PCH |
| | TB sizes, bit | | 240 (alt. 80) |
| | TFS | TF0, bits | 0x240 (alt. 0x80) |
| | | TF1, bits | 1x240 (alt. 1x80) |
| | | TF2, bits | 2x240 (alt. 2x80) |
| | TTI, ms | | 20 |
| | Coding type | | CC 1/2 |
| | CRC, bit | | 16 |
| | Max number of bits/TTI before rate matching | | 1056 (alt. 400) |
| RM attribute | | 210-250 | |

6.11.5.4.4.1.1.2 TFCS

| | |
|-----------|-------------------------------|
| TFCS size | 3 |
| TFCS | SRBs for PCCH = TF0, TF1, TF2 |

6.11.5.4.4.1.2 Physical channel parameters

| | | |
|---------|--------------------------------------|-------------------------------|
| S-CCPCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 2 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 344 bits |
| | TFCI code word/ radio frame | 8 bits |
| | TPC/ radio frame | 0 bits |
| | SS/ radio frame | 0 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.4.2 Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

6.11.5.4.4.2.1 Transport channel parameters

6.11.5.4.4.2.1.1 Transport channel parameters for Interactive/Background 32 kbps PS RAB

| Higher layer | RAB/signalling RB User of Radio Bearer | RAB Interactive/ Background RAB | |
|--------------|---|------------------------------------|--------|
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | RLC header, bit | 16 | |
| MAC | MAC header, bit | 27 | |
| | MAC multiplexing | N/A | |
| Layer 1 | TrCH type | FACH | |
| | TB sizes, bit | 363 | |
| | TFS | TF0, bits | 0 x363 |
| | | TF1, bits | 1x363 |
| | | TF2, bits | 2x363 |
| | TTI, ms | 20 | |
| | Coding type | TC | |
| | CRC, bit | 16 | |
| | Max number of bits/TTI before rate matching | 2286 | |
| | RM attribute | 110-150 | |

6.11.5.4.4.2.1.2 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

| Higher layer | RAB/signalling RB User of Radio Bearer | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 | SRB#6 | |
|---|---|--------------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--|
| | | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio | RRC | |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH | BCCH | |
| | RLC mode | UM | UM | AM | AM | AM | TM | |
| | Payload sizes, bit | 160 | 136 or 120 | 128 | 128 | 128 | 168 | |
| | Max data rate, bps | 32000 (alt. 48000) | 27200 or 2400 (alt. 40800 or 36000) | 25600 (alt. 38400) | 25600 (alt. 38400) | 25600 (alt. 38400) | 33600 (alt. 50400) | |
| | RLC header, bit | 8 | 8 | 16 | 16 | 16 | 0 | |
| MAC | MAC header, bit | 3 | 27 or 43 | 27 | 27 | 27 | 3 | |
| | MAC multiplexing | 6 logical channel multiplexing | | | | | | |
| Layer 1 | TrCH type | FACH | | | | | | |
| | TB sizes, bit | 171 | | | | | | |
| | TFS | TF0, bits | 0x171 | | | | | |
| | | TF1, bits | 1x171 | | | | | |
| | | TF2, bits | 2x171 | | | | | |
| | | TF3, bits | 3x171 | | | | | |
| | | TF4, bits | 4x171 | | | | | |
| | | TF5, bits | N/A (alt. 5x171) | | | | | |
| | TF6, bits | N/A (alt. 6x171) | | | | | | |
| | TTI, ms | 20 | | | | | | |
| Coding type | CC ½ | | | | | | | |
| CRC, bit | 16 | | | | | | | |
| Max number of bits/TTI before rate matching | 1528 (alt. 2292) | | | | | | | |
| RM attribute | 200-240 | | | | | | | |

* MAC header size and RLC payload size depend on use of U-RNTI or C-RNTI.

6.11.5.4.4.2.1.3 TFCS

| | |
|-----------|---|
| TFCS size | 15 (alt. 21) |
| TFCS | (32kbps RAB, SRBs for CCCH/DCCH/BCCH) = (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3),), (TF0, TF4), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (alt. (TF0, TF0), (TF0, TF1), (TF0, TF2), (TF0, TF3), (TF0, TF4), (TF0, TF5), (TF0, TF6), (TF1, TF0), (TF1, TF1), (TF1, TF2), (TF1, TF3), (TF1, TF4), (TF1, TF5), (TF1, TF6), (TF2, TF0), (TF2, TF1), (TF2, TF2), (TF2, TF3), (TF2, TF4), (TF2, TF5), (TF2, TF6)) |

6.11.5.4.4.2.2 Physical channel parameters

| | | |
|--------|--------------------------------------|--------------------------------|
| SCCPCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 16 x 9 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1560 bits |
| | TFCI code word / radio frame | 16 bits |
| | TPC / radio frame | 2 * 2 bits |
| | SS / radio frame | 2 * 2 bits |
| | Puncturing Limit | 0.68 |

6.11.5.4.4.3 Interactive/Background 32 kbps RAB + SRB for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

6.11.5.4.4.3.1 Transport channel parameters

6.11.5.4.4.3.1.1 Transport channel parameters of SRB for Interactive/Background 32 kbps RAB

See clause 6.11.5.4.4.2.1.

6.11.5.4.4.3.1.2 Transport channel parameters of SRB for PCCH

See clause 6.11.5.4.4.1.1.

6.11.5.4.4.3.1.3 Transport channel parameters of SRBs for CCCH, SRB for DCCH, and SRB for BCCH

See clause 6.11.5.4.4.2.1.2.

6.11.5.4.4.3.1.4 TFCS

| | |
|-----------|---|
| TFCS size | 45 (alt. 63) |
| TFCS | <p>(32 kbps RAB, SRB for PCCH, SRBs for CCCH/ DCCH/ BCCH) =</p> <p>(TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4),(TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4),(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4),(TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4),(TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4),(TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4),(TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4),(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4)</p> <p>(alt. (TF0, TF0, TF0), (TF0, TF0, TF1), (TF0, TF0, TF2), (TF0, TF0, TF3), (TF0, TF0, TF4), (TF0, TF0, TF5), (TF0, TF0, TF6),(TF0, TF1, TF0), (TF0, TF1, TF1), (TF0, TF1, TF2), (TF0, TF1, TF3), (TF0, TF1, TF4), (TF0, TF1, TF5), (TF0, TF1, TF6),(TF0, TF2, TF0), (TF0, TF2, TF1), (TF0, TF2, TF2), (TF0, TF2, TF3), (TF0, TF2, TF4), (TF0, TF2, TF5), (TF0, TF2, TF6), (TF1, TF0, TF0), (TF1, TF0, TF1), (TF1, TF0, TF2), (TF1, TF0, TF3), (TF1, TF0, TF4), (TF1, TF0, TF5), (TF1, TF0, TF6), (TF1, TF1, TF0), (TF1, TF1, TF1), (TF1, TF1, TF2), (TF1, TF1, TF3), (TF1, TF1, TF4), (TF1, TF1, TF5), (TF1, TF1, TF6),(TF1, TF2, TF0), (TF1, TF2, TF1), (TF1, TF2, TF2), (TF1, TF2, TF3), (TF1, TF2, TF4), (TF1, TF2, TF5), (TF1, TF2, TF6),(TF2, TF0, TF0), (TF2, TF0, TF1), (TF2, TF0, TF2), (TF2, TF0, TF3), (TF2, TF0, TF4), (TF2, TF0, TF5), (TF2, TF0, TF6),(TF2, TF1, TF0), (TF2, TF1, TF1), (TF2, TF1, TF2), (TF2, TF1, TF3), (TF2, TF1, TF4), (TF2, TF1, TF5), (TF2, TF1, TF6),(TF2, TF2, TF0), (TF2, TF2, TF1), (TF2, TF2, TF2), (TF2, TF2, TF3), (TF2, TF2, TF4), (TF2, TF2, TF5) (TF2, TF2, TF6))</p> |

6.11.5.4.4.3.2 Physical channel parameters

| | | |
|---------|--------------------------------------|--------------------------------|
| S-CCPCH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF16 x 10 codes x 2 time slots |
| | Max. Number of data bits/radio frame | 1728 bits |
| | TFCI code word/ radio frame | 32 bits |
| | TPC/ radio frame | 0 bits |
| | SS/ radio frame | 0 bits |
| | Puncturing Limit | 0.64 |

6.11.5.4.5 Combinations on PRACH

6.11.5.4.5.1 SRB for CCCH + SRBs for DCCH

6.11.5.4.5.1.1 Transport channel parameters

6.11.5.4.5.1.1.1 Transport channel parameter for SRB for CCCH, SRBs for DCCH

| | | | | | | |
|--------------|----------------------|--------------------------------|--------------|--------------|------------------|-----------------|
| Higher layer | RAB/signalling RB | SRB#1 | SRB#2 | SRB#3 | SRB#4 | SRB#5 |
| | User of Radio Bearer | RRC | RRC | RRC | NAS_DT High prio | NAS_DT Low prio |
| RLC | Logical channel type | CCCH | DCCH | DCCH | DCCH | DCCH |
| | RLC mode | TM | UM | AM | AM | AM |
| | Payload sizes, bit | 168 | 136 | 128 | 128 | 128 |
| | Max data rate, bps | 16800 | 13600 | 12800 | 12800 | 12800 |
| | RLC header, bit | 0 | 8 | 16 | 16 | 16 |
| MAC | MAC header, bit | 2 | 26 | 26 | 26 | 26 |
| | MAC multiplexing | 5 logical channel multiplexing | | | | |
| Layer 1 | TrCH type | RACH | | | | |
| | TB sizes, bit | 170 | 170 | 170 | 170 | 170 |
| | TFS TF0, bits | 1x170 | | | | |

| | | | | | |
|---|------|-----|-----|-----|-----|
| TTI, ms | 10 | | | | |
| Coding type | CC ½ | | | | |
| CRC, bit | 16 | | | | |
| Max number of bits/TTI after channel coding | 388 | 388 | 388 | 388 | 388 |
| Max number of bits/Radio frame before rate matching | 388 | 388 | 388 | 388 | 388 |

6.11.5.4.5.1.1.2 TFCS

See clause 6.10.3.4.5.1.1.2

6.11.5.4.5.1.2 Physical channel parameters

| | | |
|-------|--------------------------------------|------------------------------|
| PRACH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 8 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 352 bits |
| | TPC / radio frame | 0 bits |
| | SS / radio frame | 0 bits |
| | Puncturing Limit | 0.88 |

6.11.5.4.5.2 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRBs for DCCH

6.11.5.4.5.2.1 Transport channel parameters

6.11.5.4.5.2.1.1 Transport channel parameters for Interactive or background / UL:32 kbps / PS RAB

| Higher layer | RAB/signalling RB | RAB | |
|--------------|---|----------------------------|-------|
| | User of Radio Bearer | Interactive/Background RAB | |
| RLC | Logical channel type | DTCH | |
| | RLC mode | AM | |
| | Payload sizes, bit | 320 | |
| | Max data rate, bps | 32000 | |
| | AMD/UMD/TrD PDU header, bit | 16 | |
| MAC | MAC header, bit | 24 | |
| | MAC multiplexing | | |
| Layer 1 | TrCH type | RACH | |
| | TB sizes, bit | 360 | |
| | TFS | TF0, bits | 1x360 |
| | TTI, ms | | 10 |
| | Coding type | | CC ½ |
| | CRC, bit | | 16 |
| | Max number of bits/TTI after channel coding | | 768 |
| | Max number of bits/Radio frame before rate matching | | 768 |

6.11.5.4.5.2.1.2 Transport channel parameters for SRB for CCCH + SRBs for DCCH

See the Chapter 6.11.5.4.5.1.1.1.

6.11.5.4.5.2.1.3 TFCS

| | |
|-----------|--|
| TFCS size | 2 |
| TFCS | 32 kbps + SRBs for CCCH/ DCCH = TF0, TF1 |

6.11.5.4.5.2.2 Physical channel parameters

| | | |
|-------|--------------------------------------|------------------------------|
| PRACH | Modulation | QPSK |
| | Codes and time slots/ radio frame | SF 4 x 1 code x 2 time slots |
| | Max. Number of data bits/radio frame | 704 bits |
| | TPC / radio frame | 0 bits |
| | SS / radio frame | 0 bits |
| | Puncturing Limit | 0.88 |

For physical channel parameters for SRB for CCCH + SRBs for DCCH see clause 6.11.5.4.5.1.2.

7 Generic setup procedures

7.1 Basic Generic Procedures

7.1.1 UE Test States for Basic Generic Procedures

This clause describes a set of procedures for use by test cases in TS 34.123-1. Describing these procedures in a generic manner allows their use in many test cases. By using these procedures, test case descriptions need not detail signalling that is not relevant to its purpose or understanding.

The procedures are based upon default values that are adapted to the most common usage. Test cases that require values different from the default will, when specifying the Basic Generic Procedure, also specify those parameters that are modified.

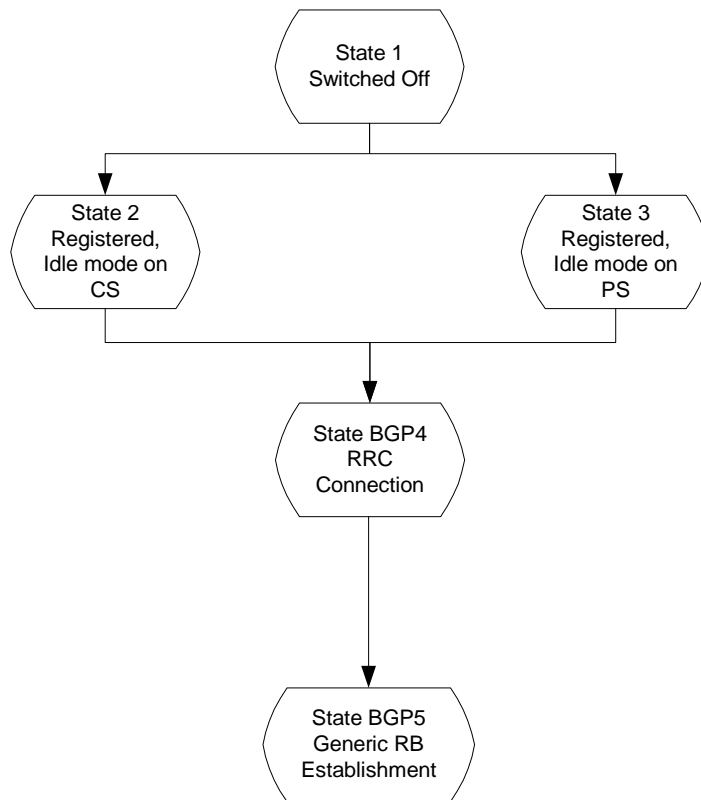


Figure 7.1.1: UE Test States for Basic Generic Procedures

In order that the UE can set up a call in UTRAN, there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.1.1 and the status of the relevant protocols in the UE in the different states are given in table 7.1.1.

Table 7.1.1: The UE states

| | | RRC | CC | MM | SM | GMM |
|-------------------|---------------------------------|------------|-----------|-------------|-----------|-------------|
| State 1 | Power OFF | ---- | null | detached | inactive | detached |
| State 2 | CS Registered Idle Mode | idle | null | idle | inactive | detached |
| State 3 | PS Registered Idle Mode | idle | null | detached | inactive | idle |
| State BGP4 | RRC Connection | connected | null | as previous | inactive | as previous |
| State BGP5 | Generic RB Establishment | connected | null | as previous | inactive | as previous |

7.1.2 Mobile terminated establishment of Radio Resource Connection

7.1.2.1 Initial conditions

System Simulator:

The system simulator will start from the default idle state. Parameters will be the default parameters for a single cell, unless otherwise specified in the test case.

User Equipment:

Unless otherwise specified in the test case, the UE will be in the following state:

- Default test operating conditions.

- The UE shall have followed the generic registration procedure for CS or PS operations, and will be in Idle Mode, Camped-on (State 2 or State 3).

7.1.2.2 Definition of system information messages

The default system information messages are used.

7.1.2.3 Procedure

- The SS sends a PAGING TYPE 1 message to the UE on the appropriate paging block, and with the IE "Paging record" containing the TMSI or P-TMSI of the UUT.
- The SS receives an RRC CONNECTION REQUEST message from the UE.
- On receipt of the RRC CONNECTION REQUEST the SS shall transmit a RRC CONNECTION SETUP message to the UE. The SS shall wait for the receipt of an RRC CONNECTION COMPLETE message from the UE.
- On receipt of an RRC CONNECTION COMPLETE message, the procedure is complete.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|---------------------------|
| | UE | SS | | |
| 1 | | ← | SYSTEM INFORMATION (BCCH) | Default SI messages |
| 2 | | ← | PAGING TYPE 1 (PCCH) | Sent on appropriate cycle |
| 3 | | → | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | | ← | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | | → | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |

7.1.2.4 Specific message contents

7.1.2.4.1 PAGING TYPE 1

This message is sent from the SS to the UE, using the TM RLC SAP, on the PCCH logical channel:

| Information Element | | | | Value/Remark |
|---|---------------|---------------|--------------------|--|
| Message Type | | | | PAGING TYPE 1 |
| UE Information elements | | | | |
| Paging record list | Paging record | CN originator | Paging cause | Terminating Speech Call (note) |
| | | | CN domain identity | CS domain (note) |
| | | | TMSI (GSM-MAP) | As specified during Registration procedure |
| Other information elements | | | | |
| BCCH modification info | | | | omit |
| NOTE: These defaults are applied if no subsequent procedure is to be run. Otherwise, the Paging cause and CN domain identity are selected in accordance with the requirements of the following procedure. | | | | |

7.1.2.4.2 RRC CONNECTION REQUEST

This message is sent by the UE to the SS using the TM-RLC SAP. It is sent on the CCCH Logical channel.

| Information Element | | | Value/Remark |
|---|-------------------------------|----------------|--|
| Message Type | | | RRC CONNECTION REQUEST |
| UE information elements | | | |
| Initial UE identity | TMSI and LAI | TMSI (GSM-MAP) | As specified during Registration procedure |
| | | LAI (GSM-MAP) | As specified by default 1 cell environment |
| Initial UE capability | Maximum number of AM entities | | As declared in UE ICS |
| Establishment cause | | | As appropriate |
| Protocol error indicator | | | FALSE |
| Measurement information elements | | | |
| Measured results on RACH | | | Not checked |

7.1.2.4.3 RRC CONNECTION SETUP

This message is sent from the SS to the UE using the UM-RLC SAP. The message is sent on the CCCH Logical channel.

The default RRC CONNECTION SETUP message for the transition to connected mode CELL_DCH is used except for the IE fields specified below.

| Information Element | | | Value/Remark |
|--|--------------|----------------|--|
| Message Type | | | RRC CONNECTION SETUP |
| UE Information Elements | | | |
| Initial UE identity | TMSI and LAI | TMSI (GSM-MAP) | As specified during Registration procedure |
| | | LAI (GSM-MAP) | As specified by default 1 cell environment |
| RB Information Elements | | | |
| Use default for 3.4k bit/s signalling radio bearer | | | |
| TrCH Information Elements | | | |
| Use default for 3.4k bit/s signalling radio bearer | | | |
| Frequency info | | | As specified by default 1 cell environment |
| Uplink radio resources | | | |
| Use default | | | |
| Downlink radio resources | | | |
| Use default | | | |

7.1.2.4.4 RRC CONNECTION SETUP COMPLETE

This message is sent by the UE to the SS using AM-RLC SAP. The message is sent on the DCCH Logical channel.

| Information Element | | Value/Remark | |
|--------------------------------|------------------------------|--|--------------------|
| Message Type | | RRC CONNECTION SETUP COMPLETE | |
| UE Information Elements | | | |
| Hyper frame number | | Not checked | |
| UE radio access capability | Conformance test compliance | | R99 |
| | PDCP capability | Support for lossless SRNS relocation | Not checked |
| | | Supported algorithm types | Not checked |
| | RLC capability | Total RLC AM buffer size | Not checked |
| | | Maximum number of AM entities | Not checked |
| | Transport channel capability | Downlink | |
| | | Max no of bits received | Not checked |
| | | Max convolutionally coded bits received | Not checked |
| | | Max turbo coded bits received | Not checked |
| | | Maximum number of simultaneous transport channels | Not checked |
| | | Max no of received transport blocks | Not checked |
| | | Maximum number of TFC in the TFCS | Not checked |
| | | Maximum number of TF | Not checked |
| | | Support for turbo decoding | Not checked |
| | | Uplink | |
| | | Max no of bits transmitted | Not checked |
| | | Max convolutionally coded bits received | Not checked |
| | | Max turbo coded bits received | Not checked |
| | | Maximum number of simultaneous transport channels | Not checked |
| | | Max no of transmitted transport blocks | Not checked |
| | | Maximum number of TFC in the TFCS | Not checked |
| | | Maximum number of TF | Not checked |
| | | Support for turbo encoding | Not checked |
| | RF capability | UE power class | As declared for UE |
| | | Tx/Rx frequency separation | Not checked |
| | Physical channel capability | Downlink | |
| | | Maximum number of simultaneous CTrCH | Not checked |
| | | Max no DPCH/PDSCH codes | Not checked |
| | | Max no physical channel bits received | Not checked |
| | | Support for SF 512 | Not checked |
| | | Support of PDSCH | Not checked |
| | | Simultaneous reception of SCCPCH and DPCH | Not checked |
| | | Max no of S-CCPCH RL | Not checked |
| | | Uplink | |
| | | Maximum number of DPDCH bits transmitted per 10 ms | Not checked |
| | | Support of PCPCH | Not checked |

| Information Element | | | Value/Remark |
|-------------------------------|------------------------------------|---|----------------|
| | UE multi-mode/multi-RAT capability | Multi-RAT capability | |
| | | Multi-mode capability | FDD or FDD/TDD |
| | Security capability | Ciphering algorithm capability | Not checked |
| | | Integrity protection algorithm capability | Not checked |
| | LCS capability | Standalone location method(s) supported | Not checked |
| | | UE based OTDOA supported | Not checked |
| | | Network Assisted GPS support | Not checked |
| | | GPS reference time capable | Not checked |
| | | Support for IPDL | Not checked |
| | Measurement capability | Need for downlink compressed mode | Not checked |
| | | FDD measurements DL | Not checked |
| | | TDD measurements DL | Not checked |
| | | GSM 900 DL | Not checked |
| | | DCS 1800 DL | Not checked |
| | | GSM 1900 DL | Not checked |
| | | Multi-carrier measurement DL | Not checked |
| | | Need for uplink compressed mode | Not checked |
| | | FDD measurements UL | Not checked |
| | | TDD measurements UL | Not checked |
| | | GSM 900 UL | Not checked |
| | | DCS 1800 UL | Not checked |
| | | GSM 1900 UL | Not checked |
| | | Multi-carrier measurement UL | Not checked |
| UE system specific capability | | | Not checked |

7.1.3 Radio Bearer Setup Procedure

7.1.3.1 Initial conditions

The procedure specified in clause 7.1.2 will be run. This procedure starts from the successful completion of clause 7.1.2.

7.1.3.2 Definition of system information messages

The default system information messages are used.

7.1.3.3 Procedure

- The SS sends a RADIO BEARER SETUP message to the UE on the DCCH established by the RRC Connection Establishment procedure.
- The SS receives a RADIO BEARER SETUP COMPLETE message from the UE in RLC Acknowledged mode on the DCCH.

On reception of the RADIO BEARER SETUP COMPLETE the procedure is complete.

| Step | Direction | | Message | Comments |
|------|-----------|----|------------------------------------|----------|
| | UE | SS | | |
| 1 | ← | | RADIO BEARER SETUP (DCCH) | RRC |
| 2 | → | | RADIO BEARER SETUP COMPLETE (DCCH) | RRC |

7.1.3.4 Specific message contents

7.1.3.4.1 RADIO BEARER SETUP

The RADIO BEARER SETUP message is sent from the System Simulator to the UE, using AM-RLC on the DCCH logical channel.

The default RRC CONNECTION SETUP message for the setup of a speech radio access bearer is used except for the IE fields specified below.

| Information Element | Value/Remark |
|--------------------------------|---|
| Message Type | RADIO BEARER SETUP |
| UE Information Elements | |
| CN Information Elements | |
| RB Information Elements | |
| RAB information for setup | Default parameters for 12.2 kbps speech RAB |

7.1.3.4.2 RADIO BEARER SETUP COMPLETE

The RADIO BEARER SETUP COMPLETE message is sent from the UE to the System Simulator, using AM-RLC on the DCCH logical channel.

The default RADIO BEARER SETUP COMPLETE message is used .

| Information Element | Value/Remark |
|---------------------|-----------------------------|
| Message Type | RADIO BEARER SETUP COMPLETE |
| Use default | |

7.2 Generic setup procedures

7.2.1 UE Test States for Generic setup procedures

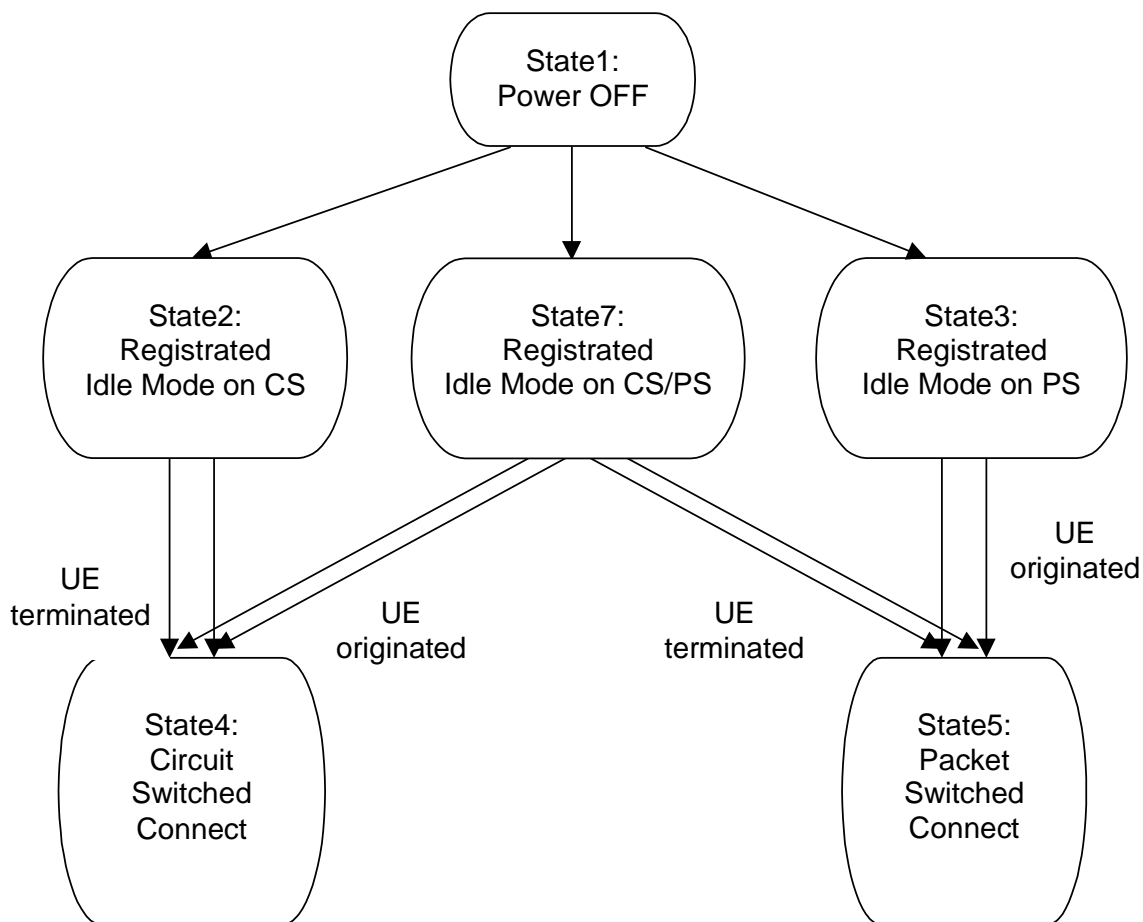


Figure 7.2.1.1: UE Test States for Generic setup procedures

In order that the UE can set up a call in UTRAN, there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.2.1.1 and the status of the relevant protocols in the UE in the different states are given in table 7.2.1.1.

Table 7.2.1.1: The UE states

| | | RRC | CC | MM | SM | GMM |
|--------|--------------------------------|-----------|--------|------------------------|----------|------------------------|
| State1 | Power OFF | ----- | null | detached | inactive | detached |
| State2 | Registrated Idle Mode on CS | idle | null | idle | inactive | detached |
| State3 | Registrated Idle Mode on PS | idle | null | detached | inactive | idle |
| State4 | Circuit Switched Connect | connected | active | connected | inactive | same as previous state |
| State5 | Packet Switched Connect | connected | null | same as previous state | active | connected |
| State7 | Registrated Idle Mode on CS/PS | idle | null | idle | inactive | idle |

7.2.2 Registration of UE

7.2.2.1 Registration on CS

7.2.2.1.1 Initial condition

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.1.2 Definition of system information messages

The default system information messages are used.

7.2.2.1.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|--------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | NW Broadcast |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | LOCATION UPDATING REQUEST | MM |
| 6 | <-- | | AUTHENTICATION REQUEST | MM |
| 7 | --> | | AUTHENTICATION RESPONSE | MM |
| 8 | <-- | | SECURITY MODE COMMAND | RRC |
| 9 | --> | | SECURITY MODE COMPLETE | RRC |
| 10 | <-- | | LOCATION UPDATING ACCEPT | MM |
| 11 | --> | | TMSI REALLOCATION COMPLETE | MM |
| 12 | <-- | | RRC CONNECTION RELEASE | RRC |
| 13 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |

7.2.2.1.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.2.2.2 Registration on PS

7.2.2.2.1 Initial condition

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.2.2 Definition of system information messages

The default system information messages are used.

7.2.2.2.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---------------------------------------|--------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | NW Broadcast |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | ATTACH REQUEST | GMM |
| 6 | <-- | | AUTHENTICATION AND CIPHERING REQUEST | GMM |
| 7 | --> | | AUTHENTICATION AND CIPHERING RESPONSE | GMM |
| 8 | <-- | | SECURITY MODE COMMAND | RRC |
| 9 | --> | | SECURITY MODE COMPLETE | RRC |
| 10 | <-- | | ATTACH ACCEPT | GMM |
| 11 | --> | | ATTACH COMPLETE | GMM |
| 12 | <-- | | RRC CONNECTION RELEASE | RRC |
| 13 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |

7.2.2.2.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.2.2.3 Registration on CS / PS combined environment

7.2.2.3.1 Initial condition

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.2.3.2 Definition of system information messages

The default system information messages are used.

7.2.2.3.3 Procedure

Registration of UE for SS shall be established under ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---------------------------------------|--------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | NW Broadcast |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | ATTACH REQUEST | GMM |
| 6 | <-- | | AUTHENTICATION AND CIPHERING REQUEST | GMM |
| 7 | --> | | AUTHENTICATION AND CIPHERING RESPONSE | GMM |
| 8 | <-- | | SECURITY MODE COMMAND | RRC |
| 9 | --> | | SECURITY MODE COMPLETE | RRC |
| 10 | <-- | | ATTACH ACCEPT | GMM |
| 11 | --> | | ATTACH COMPLETE | GMM |
| 12 | <-- | | RRC CONNECTION RELEASE | RRC |
| 13 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |

7.2.2.3.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.2.3 Call setup

7.2.3.1 Generic call set up procedure for mobile terminating circuit switched calls

7.2.3.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.3.1.2 Definition of system information messages

The default system information messages are used.

7.2.3.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|-------------------------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | <-- | | PAGING (PCCH) | Paging |
| 3 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 6 | --> | | PAGING RESPONSE | RR |
| 7 | <-- | | AUTHENTICATION REQUEST | MM |
| 8 | --> | | AUTHENTICATION RESPONSE | MM |
| 9 | <-- | | SECURITY MODE COMMAND | RRC |
| 10 | --> | | SECURITY MODE COMPLETE | RRC |
| 11 | <-- | | SET UP | CC |
| 12 | --> | | CALL CONFIRMED | CC |
| 13 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 14 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 15 | --> | | ALERTING | CC (this message is optional) |
| 16 | --> | | CONNECT | CC |
| 17 | <-- | | CONNECT ACKNOWLEDGE | CC |

7.2.3.1.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.2.3.2 Generic call set-up procedure for mobile originating circuit switched calls

7.2.3.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.3.2.2 Definition of system information messages

The default system information messages are used.

7.2.3.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|---------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | CM SERVICE REQUEST | MM |
| 6 | <-- | | AUTHENTICATION REQUEST | MM |
| 7 | --> | | AUTHENTICATION RESPONSE | MM |
| 8 | <-- | | SECURITY MODE COMMAND | RRC |
| 9 | --> | | SECURITY MODE COMPLETE | RRC |
| 10 | --> | | SET UP | CC |
| 11 | <-- | | CALL PROCEEDING | CC |
| 12 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 13 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 14 | <-- | | ALERTING | CC |
| 15 | <-- | | CONNECT | CC |
| 16 | --> | | CONNECT ACKNOWLEDGE | CC |

7.2.3.2.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.2.4 Session setup

7.2.4.1 Generic session set up procedure for mobile terminating packet switched sessions

7.2.4.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.4.1.2 Definition of system information messages

The default system information messages are used.

7.2.4.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---------------------------------------|---------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | <-- | | PAGING TYPE1 (PCCH) | Paging |
| 3 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 6 | --> | | SERVICE REQUEST | GMM |
| 7 | <-- | | AUTHENTICATION AND CIPHERING REQUEST | GMM |
| 8 | --> | | AUTHENTICATION AND CIPHERING RESPONSE | GMM |
| 9 | <-- | | SECURITY MODE COMMAND | RRC |
| 10 | --> | | SECURITY MODE COMPLETE | RRC |
| 11 | <-- | | REQUEST PDP CONTEXT ACTIVATION | SM |
| 12 | --> | | ACTIVATE PDP CONTEXT REQUEST | SM |
| 13 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 14 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 15 | <-- | | ACTIVATE PDP CONTEXT ACCEPT | SM |

7.2.4.1.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.2.4.2 Generic session set up procedure for mobile originating packet switched sessions

7.2.4.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions.
- The Test-USIM shall be inserted.

7.2.4.2.2 Definition of system information messages

The default system information messages are used.

7.2.4.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in 5. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---------------------------------------|---------------|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | SERVICE REQUEST | GMM |
| 6 | <-- | | AUTHENTICATION AND CIPHERING REQUEST | GMM |
| 7 | --> | | AUTHENTICATION AND CIPHERING RESPONSE | GMM |
| 8 | <-- | | SECURITY MODE COMMAND | RRC |
| 9 | --> | | SECURITY MODE COMPLETE | RRC |
| 10 | --> | | ACTIVATE PDP CONTEXT REQUEST | SM |
| 11 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 12 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 13 | <-- | | ACTIVATE PDP CONTEXT ACCEPT | SM |

7.2.4.2.4 Specific message contents

All Specific message contents shall be referred to clause 9 "Default Message Contents of Layer3 Messages for Layer 3 Testing".

7.3 Test procedures for RF test

7.3.1 UE Test States for RF testing

In this clause, the states of the UE for the test are defined.

| | | RRC | CC | MM | SM | GMM |
|--------|-------------------------|-----------|------|----------|----------|----------|
| State1 | Power OFF | ----- | null | detached | inactive | detached |
| State2 | CS Registered Idle Mode | idle | null | idle | inactive | detached |
| State3 | PS Registered Idle Mode | idle | null | detached | inactive | idle |
| State4 | Test Mode | connected | null | detached | inactive | detached |

7.3.2 Test procedure for TX, RX and Performance Requirement (without handover)

7.3.2.1 Initial conditions

System Simulator

- 1cell, default parameters.

User Equipment

The UE shall be operated under RF test conditions.

The Test-USIM shall be inserted.

The UE has a valid TMSI (CS)

The UE has a valid P-TMSI (PS)

7.3.2.2 Definition of system information messages

The default system information messages specified in clause 6.1 are used with the following exceptions.

Contents of System information block type 1: RRC

| Information Element | Value/remark |
|---|---------------------------------|
| - CN domain system information | |
| - CN domain identity | PS |
| - CHOICE CN Type | GSM-MAP |
| - CN domain specific NAS system information | |
| - GSM-MAP NAS system information | 00 00 |
| - CN domain specific DRX cycle length coefficient | 7 |
| - CN domain identity | CS |
| - CHOICE CN Type | GSM-MAP |
| - CN domain specific NAS system information | |
| - GSM-MAP NAS system information | 00(T3212 is set to infinity) 01 |
| - CN domain specific DRX cycle length coefficient | 7 |
| - UE Timers and constants in connected mode | |
| - T305 | Infinity |

7.3.2.3 Procedure

For UE supporting CS

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|---|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | <-- | | PAGING TYPE1 (PCCH) | Paging (CS domain, TMSI) |
| 3 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 6 | --> | | PAGING RESPONSE | RR |
| 7 | <-- | | ACTIVATE RB TEST MODE | TC |
| 8 | --> | | ACTIVATE RB TEST MODE COMPLETE | TC |
| 9 | <-- | | RADIO BEARER SETUP | RRC (RAB SETUP) |
| 10 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 11 | <-- | | CLOSE UE TEST LOOP (DCCH) | TC (UE test loop mode set up) |
| 12 | --> | | CLOSE UE TEST LOOP COMPLETE | TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated) |
| 13 | <-- | | OPEN UE TEST LOOP | TC |
| 14 | --> | | OPEN UE TEST LOOP COMPLETE | TC |
| 15 | <-- | | RRC CONNECTION RELEASE | RRC |
| 16 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |

For UE supporting PS only

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|---|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | <-- | | PAGING TYPE1 (PCCH) | Paging (PS domain, P-TMSI) |
| 3 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 6 | --> | | SERVICE REQUEST | GMM |
| 7 | <-- | | SECURITY MODE COMMAND | RRC (note) |
| 8 | --> | | SECURITY MODE COMPLETE | RRC (note) |
| 9 | <-- | | ACTIVATE RB TEST MODE | TC |
| 10 | --> | | ACTIVATE RB TEST MODE COMPLETE | TC |
| 11 | <-- | | RADIO BEARER SETUP | RRC (RAB SETUP) |
| 12 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 13 | <-- | | CLOSE UE TEST LOOP (DCCH) | TC (UE test loop mode set up) |
| 14 | --> | | CLOSE UE TEST LOOP COMPLETE | TC (confirms that loopback entities for the radio bearer(s) have been created and loop back is activated) |
| 15 | <-- | | OPEN UE TEST LOOP | TC |
| 16 | --> | | OPEN UE TEST LOOP COMPLETE | TC |
| 17 | <-- | | RRC CONNECTION RELEASE | RRC |
| 18 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |

NOTE: Step7 and Step8 are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.

7.3.2.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

7.3.2.4.1 ATTCH ACCEPT

This message is sent from the SS to the UE, used for the UE supporting PS only.

Contents of Attach Accept message: GMM

| Information Element | Value/remark |
|--------------------------|---------------------------|
| Periodic RA update timer | E0 (timer is deactivated) |

7.3.2.4.2 Reference measurement channels

The messages in this sub-clause are sent from the SS to the UE, determining the configurations of reference measurement channel for the RF tests.

UL reference measurement channel (12.2kbps)

[T.B.D.]

UL reference measurement channel (786kbps)

[T.B.D.]

DL reference measurement channel (12.2kbps)

[T.B.D.]

DL reference measurement channel (64kbps)

[T.B.D.]

DL reference measurement channel (144kbps)

[T.B.D.]

DL reference measurement channel (384kbps)

[T.B.D.]

Reference measurement channel for BTFD

[T.B.D.]

7.3.2.4.3 UE test loop mode

The messages in this sub-clause are sent from the SS to the UE, determining the UE test loop mode for the RF tests.

UE test loop mode 1 without DCCH dummy transmission

Default. See clause 9.2.

UE test loop mode 1 with DCCH dummy transmission

Contents of CLOSE UE TEST LOOP: TC

| Information Element | Value/remark |
|---------------------|---|
| UE test loop mode | UE test loop mode 1 DCCH dummy transmission set to "enabled". 00000100B |

UE test loop mode 2 without DCCH dummy transmission

Contents of CLOSE UE TEST LOOP: TC

| Information Element | Value/remark |
|---------------------|--|
| UE test loop mode | UE test loop mode 2 DCCH dummy transmission set to "disabled". 00000001B |

7.3.2.4.4 Compressed mode

[T.B.D.]

7.3.2.4.5 Transmit diversity mode

[T.B.D.]

7.3.3 Test procedure for Rx Spurious Emission

7.3.3.1 Initial conditions

System Simulator

- 1cell, default parameters.

User Equipment

The UE shall be operated under RF test conditions.

The Test-USIM shall be inserted.

The UE has a valid TMSI (CS)

The UE has a valid P-TMSI (PS)

7.3.3.2 Definition of system information messages

The default system information messages specified in clause 6.1 are used with the following exceptions.

Contents of System information block type 1: RRC

| Information Element | Value/remark |
|---|---------------------------------|
| - CN domain system information | |
| - CN domain identity | PS |
| - CHOICE CN Type | GSM-MAP |
| - CN domain specific NAS system information | |
| - GSM-MAP NAS system information | 00 00 |
| - CN domain specific DRX cycle length coefficient | 7 |
| - CN domain identity | CS |
| - CHOICE CN Type | GSM-MAP |
| - CN domain specific NAS system information | |
| - GSM-MAP NAS system information | 00(T3212 is set to infinity) 01 |
| - CN domain specific DRX cycle length coefficient | 7 |
| - UE Timers and constants in connected mode | |
| - T305 | Infinity |

7.3.3.2 Procedure

For UE supporting CS

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|--|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | <-- | | PAGING TYPE1 (PCCH) | Paging (CS domain, TMSI) |
| 3 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 6 | --> | | PAGING RESPONSE | RR |
| 7 | <-- | | ACTIVATE RB TEST MODE | TC |
| 8 | --> | | ACTIVATE RB TEST MODE COMPLETE | TC |
| 9 | <-- | | RADIO BEARER SETUP | RRC - RAB SETUP using Reference Radio Bearer Configuration - RRC state indicator is set to "CELL_FACH" |
| 10 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 11 | <-- | | RRC CONNECTION RELEASE | RRC |
| 12 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |

For UE supporting PS only

| Step | Direction | | Message | Comments |
|---|-----------|----|--------------------------------------|--|
| | UE | SS | | |
| 1 | <-- | | SYSTEM INFORMATION (BCCH) | Broadcast |
| 2 | <-- | | PAGING TYPE1 (PCCH) | Paging (PS domain, P-TMSI) |
| 3 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 4 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 5 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 6 | --> | | SERVICE REQUEST | GMM |
| 7 | <-- | | SECURITY MODE COMMAND | RRC (note) |
| 8 | --> | | SECURITY MODE COMPLETE | RRC (note) |
| 9 | <-- | | ACTIVATE RB TEST MODE | TC |
| 10 | --> | | ACTIVATE RB TEST MODE COMPLETE | TC |
| 11 | <-- | | RADIO BEARER SETUP | RRC - RAB SETUP using Reference Radio Bearer Configuration - RRC state indicator is set to "CELL_FACH" |
| 12 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 13 | <-- | | RRC CONNECTION RELEASE | RRC |
| 14 | --> | | RRC CONNECTION RELEASE COMPLETE | RRC |
| NOTE: Step7 and Step8 are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message. | | | | |

7.3.3.4 Specific message contents

The default message contents specified in clause 9.2 are used with the following exceptions.

Contents of RADIO BEARER SETUP message: RRC

| Information Element | Value/remark |
|---------------------|--------------|
| RRC State indicator | CELL_FACH |

Contents of Attach Accept message: GMM

| Information Element | Value/remark |
|--------------------------|---------------------------|
| Periodic RA update timer | E0 (timer is deactivated) |

7.3.4 Test procedure for Handover

FFS

7.3.5 Test procedure for Measurement Performance Requirement

FFS

7.4 Common generic procedures for AS testing

7.4.1 UE RRC Test States for common procedures

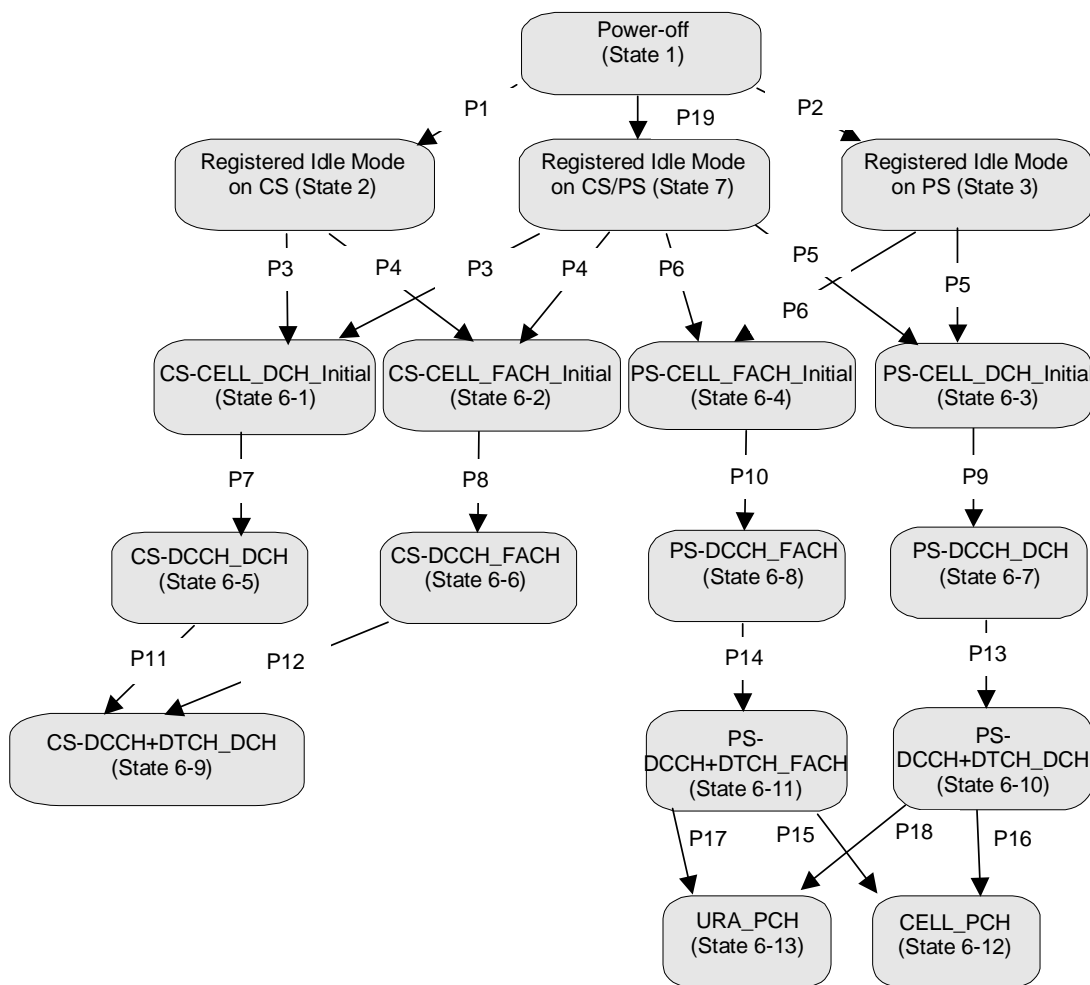


Figure 7.4.1.1: UE RRC test initial states and common procedures

For UE to set up a call in UTRAN, there are a number of procedures to be undertaken in a hierarchical sequence to move between known states. The sequences are shown in figure 7.4.1.1, the operating states for various protocols in the UE are given in table 7.4.1.1.

It is noted that figure 7.4.1.1 should not be construed as a formal state transition diagram, in any manner. The intention here is to define the starting state of UE following the execution of the procedures indicated above.

Table 7.4.1.1: The UE states

| | | RRC | CC | MM | SM | GMM |
|---------------|-------------------------------|-----------------------|-----------|-------------|----------------|-------------|
| State 1 | Power OFF | ----- | Null | Detached | Inactive | Detached |
| State 2 | Registered Idle Mode on CS | Idle | Null | Idle | Inactive | Detached |
| State 3 | Registered Idle Mode on PS | Idle | Null | Detached | Inactive | Idle |
| State 7 | Registered Idle Mode on CS/PS | Idle | Null | Idle | Inactive | Idle |
| State BGP6-1 | CS-CELL_DCH_Initial | Connected | Null | As previous | Inactive | As previous |
| State BGP6-2 | CS-CELL_FACH_Initial | Connected | Null | As previous | Inactive | As previous |
| State BGP6-3 | PS-CELL_DCH_Initial | Connected | Null | As previous | Inactive | As previous |
| State BGP6-4 | PS-CELL_FACH_Initial | Connected | Null | As previous | Inactive | As previous |
| State BGP6-5 | CS-DCCH_DCH | Connected (CELL_DCH) | Null | As previous | Inactive | As previous |
| State BGP6-6 | CS-DCCH_FACH | Connected (CELL_FACH) | Null | As previous | Inactive | As previous |
| State BGP6-7 | PS-DCCH_DCH | Connected (CELL_DCH) | Null | As previous | Active pending | As previous |
| State BGP6-8 | PS-DCCH_FACH | Connected (CELL_FACH) | Null | As previous | Active pending | As previous |
| State BGP6-9 | CS-DCCH+DTCH_DCH | Connected (CELL_DCH) | Connected | As previous | Inactive | As previous |
| State BGP6-10 | PS-DCCH+DTCH_DCH | Connected (CELL_DCH) | Null | As previous | Active | As previous |
| State BGP6-11 | PS-DCCH+DTCH_FACH | Connected (CELL_FACH) | Null | As previous | Active | As previous |
| State BGP6-12 | CELL_PCH | Connected (CELL_PCH) | Null | As previous | Inactive | As previous |
| State BGP6-13 | URA_PCH | Connected (URA_PCH) | Null | As previous | Inactive | As previous |

State 1, state 2, state 3, P1, P2 and P19 are described in TS34.108 clause 7.2. States 6-X (for X=1 to 16) are described below.

7.4.2 Generic Setup Procedure for RRC test cases

7.4.2.1 RRC connection establishment procedure for circuit-switched calls (procedure P3 and P4)

7.4.2.1.1 Mobile terminating call

7.4.2.1.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.1.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.1.1.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|----------|
| | UE | SS | | |
| 1 | <-- | | PAGING TYPE 1 (PCCH) | RRC |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | PAGING RESPONSE | RR |

7.4.2.1.1.4 Specific message contents

To execute procedure P3, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P4, all specific message contents with the exception of step 3 shall be referred to clause 9 of TS 34.108. For step 3, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex A is used.

7.4.2.1.2 Mobile originating calls

7.4.2.1.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.1.2.2 Definition of system information messages

The default system information messages specified in clause 6.1 of TS 34.108 are used.

7.4.2.1.2.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|----------|
| | UE | SS | | |
| 1 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 2 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 3 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 4 | --> | | CM SERVICE REQUEST | MM |

7.4.2.1.2.4 Specific message contents

To execute procedure P3, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P4, all specific message contents with the exception of step 2 shall be referred to clause 9 of TS 34.108. For step 2, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex A is used.

7.4.2.2 RRC connection establishment procedure for packet switched sessions (procedure P5 and P6)

7.4.2.2.1 Mobile terminating session

7.4.2.2.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.2.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.2.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|----------|
| | UE | SS | | |
| 1 | <-- | | PAGING TYPE1 (PCCH) | Paging |
| 2 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 3 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 4 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 5 | --> | | SERVICE REQUEST | GMM |

7.4.2.2.1.4 Specific message contents

To execute procedure P5, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P6, all specific message contents with the exception of step 3 shall be referred to clause 9 of TS 34.108. For step 3, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 Annex A is used.

7.4.2.2.2 Mobile originating sessions

7.4.2.2.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be operated under normal test conditions as specified in TS 34.108.
- The Test USIM shall be inserted.

7.4.2.2.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.2.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|--------------------------------------|----------|
| | UE | SS | | |
| 1 | --> | | RRC CONNECTION REQUEST (CCCH) | RRC |
| 2 | <-- | | RRC CONNECTION SETUP (CCCH) | RRC |
| 3 | --> | | RRC CONNECTION SETUP COMPLETE (DCCH) | RRC |
| 4 | --> | | SERVICE REQUEST | GMM |

7.4.2.2.2.4 Specific message contents

To execute procedure P5, all specific message contents shall be referred to clause 9 of TS 34.108.

To execute procedure P6, all specific message contents with the exception of step 2 shall be referred to clause 9 of TS 34.108. For step 2, the message of the same type titled "Transition to CELL_FACH" in TS 34.123-1 annex. A is used.

7.4.2.3 NAS call set up procedure for circuit switched calls (procedure P7 and P8)

7.4.2.3.1 Mobile terminating call

7.4.2.3.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1 or state 6-2.
- The Test USIM shall be inserted.

7.4.2.3.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.3.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|-------------------------|----------|
| | UE | SS | | |
| 1 | <-- | | AUTHENTICATION REQUEST | MM |
| 2 | --> | | AUTHENTICATION RESPONSE | MM |
| 3 | <-- | | SECURITY MODE COMMAND | RRC |
| 4 | --> | | SECURITY MODE COMPLETE | RRC |
| 5 | <-- | | SET UP | CC |
| 6 | --> | | CALL CONFIRMED | CC |

7.4.2.3.1.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS 34.108.

7.4.2.3.2 Mobile originating calls

7.4.2.3.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-1 or state 6-2.
- The Test USIM shall be inserted.

7.4.2.3.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.3.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|-------------------------|----------|
| | UE | SS | | |
| 1 | <-- | | AUTHENTICATION REQUEST | MM |
| 2 | --> | | AUTHENTICATION RESPONSE | MM |
| 3 | <-- | | SECURITY MODE COMMAND | RRC |
| 4 | --> | | SECURITY MODE COMPLETE | RRC |
| 5 | --> | | SET UP | CC |
| 6 | <-- | | CALL PROCEEDING | CC |

7.4.2.3.2.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS 34.108.

7.4.2.4 NAS session activation procedure for packet switched sessions (procedure P9 and P10)

7.4.2.4.1 Mobile terminating session

7.4.2.4.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.4.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.4.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---------------------------------------|----------|
| | UE | SS | | |
| 1 | <-- | | AUTHENTICATION AND CIPHERING REQUEST | GMM |
| 2 | --> | | AUTHENTICATION AND CIPHERING RESPONSE | GMM |
| 3 | <-- | | SECURITY MODE COMMAND | RRC |
| 4 | --> | | SECURITY MODE COMPLETE | RRC |
| 5 | <-- | | REQUEST PDP CONTEXT ACTIVATION | SM |
| 6 | --> | | ACTIVATE PDP CONTEXT REQUEST | SM |

7.4.2.4.1.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS 34.108.

7.4.2.4.2 Mobile originating sessions

7.4.2.4.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-3 or state 6-4.
- The Test USIM shall be inserted.

7.4.2.4.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.4.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---------------------------------------|----------|
| | UE | SS | | |
| 1 | <-- | | AUTHENTICATION AND CIPHERING REQUEST | GMM |
| 2 | --> | | AUTHENTICATION AND CIPHERING RESPONSE | GMM |
| 3 | <-- | | SECURITY MODE COMMAND | RRC |
| 4 | --> | | SECURITY MODE COMPLETE | RRC |
| 5 | --> | | ACTIVATE PDP CONTEXT REQUEST | SM |

7.4.2.4.2.4 Specific message contents

All RRC specific message contents shall be referred to clause 9 of TS34.108.

7.4.2.5 Radio access bearer establishment procedure for circuit switched calls (procedure P11 and P12)

7.4.2.5.1 Mobile terminating call

7.4.2.5.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-5 or state 6-6.
- The Test USIM shall be inserted.

7.4.2.5.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.5.1.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|-----------------------------|-------------------------------|
| | UE | SS | | |
| 1 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 2 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 3 | --> | | ALERTING | CC (This message is optional) |
| 4 | --> | | CONNECT | CC |
| 5 | <-- | | CONNECT ACKNOWLEDGE | CC |

7.4.2.5.1.4 Specific message contents

To execute procedure P11, use the message titled "CS speech" (defined in clause 9 of TS 34.108) for the message in step 1. To execute procedure 12, use the message "The others of speech in CS" (defined in annex A of TS 34.123-1) for the message in step 1.

7.4.2.5.2 Mobile originating calls

7.4.2.5.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-5 or state 6-6.
- The Test USIM shall be inserted.

7.4.2.5.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.5.2.3 Procedure

The Call Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|-----------------------------|---------------|
| | UE | SS | | |
| 1 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 2 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 3 | <-- | | ALERTING | CC |
| 4 | <-- | | CONNECT | CC |
| 5 | --> | | CONNECT ACKNOWLEDGE | CC |

7.4.2.5.2.4 Specific message contents

To execute procedure P11, use the message titled "CS speech" (defined in Annex A of TS 34.123-1) for the message in step 1. To execute procedure 12, use the message "The others of speech in CS" (defined in annex A of TS 34.123-1) for the message in step 1.

7.4.2.6 Radio access bearer establishment procedure for packet switched sessions (procedure P13 and P14)

7.4.2.6.1 Mobile terminating session

7.4.2.6.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-7 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.6.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.6.1.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|-----------------------------|---------------|
| | UE | SS | | |
| 1 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 2 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 3 | <-- | | ACTIVATE PDP CONTEXT ACCEPT | SM |

7.4.2.6.1.4 Specific message contents

For step 1, the messages in annex A of TS 34.123-1 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure 14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS".

7.4.2.6.2 Mobile originating sessions

7.4.2.6.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-7 or state 6-8.
- The Test USIM shall be inserted.

7.4.2.6.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.6.2.3 Procedure

The Session Set-up procedure shall be performed under Ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|-----------------------------|---------------|
| | UE | SS | | |
| 1 | <-- | | RADIO BEARER SETUP | RRC RAB SETUP |
| 2 | --> | | RADIO BEARER SETUP COMPLETE | RRC |
| 3 | <-- | | ACTIVATE PDP CONTEXT ACCEPT | SM |

7.4.2.6.2.4 Specific message contents

For step 1, the messages in Annex A of TS 34.123-1 are used. To execute procedure P13, use the message titled "Packet to CELL_DCH from CELL_DCH in PS". To execute procedure 14, use the message titled "Packet to CELL_FACH from CELL_FACH in PS".

7.4.2.7 Procedure for transitions to CELL_PCH or URA_PCH state (procedure P15, P16, P17 and P18)

7.4.2.7.1 Transition to CELL_PCH (procedure P15 and P16)

7.4.2.7.1.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.7.1.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.7.1.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---|----------|
| | UE | SS | | |
| 1 | <-- | | PHYSICAL CHANNEL RECONFIGURATION | RRC |
| 2 | --> | | PHYSICAL CHANNEL RECONFIGURATION COMPLETE | RRC |

7.4.2.7.1.4 Specific message contents

Contents of PHYSICAL CHANNEL RECONFIGURATION message: DCCH-AM (Step 1)

| Information Element | Value/remark |
|-------------------------------------|--------------|
| Message Type RRC State Indicator | CELL_PCH |

7.4.2.7.2 Transition to URA_PCH (procedure P17 and P18)

7.4.2.7.2.1 Initial conditions

System Simulator:

- 1 cell, default parameters.

User Equipment:

- The UE shall be in state 6-10 or state 6-11.
- The Test USIM shall be inserted.

7.4.2.7.2.2 Definition of system information messages

The default system information messages are used as specified in clause 6.1 of TS 34.108.

7.4.2.7.2.3 Procedure

The Call Set-up procedure shall be performed under ideal radio conditions as defined in clause 5 of TS 34.108. Reference Test Conditions.

| Step | Direction | | Message | Comments |
|------|-----------|----|---|----------|
| | UE | SS | | |
| 1 | <-- | | PHYSICAL CHANNEL RECONFIGURATION | RRC |
| 2 | --> | | PHYSICAL CHANNEL RECONFIGURATION COMPLETE | RRC |

7.4.2.7.2.4 Specific message contents

Contents of PHYSICAL CHANNEL RECONFIGURATION message: DCCH-AM (Step 1)

| Information Element | Value/remark |
|---------------------|--------------|
| Message Type | |
| RRC State Indicator | URA_PCH |

8 Test USIM Parameters

8.1 Introduction

This clause defines default parameters for programming the elementary files of the test USIM. The requirements of this clause do not apply to the USIM/ME tests of TS34.123-1.

8.1.1 Definitions

"Test USIM card":

A USIM card supporting the test algorithm for authentication, programmed with the parameters defined in this clause. The electrical, mechanical and environmental requirements of the test USIM card are specified in TS 31.101 and TS 31.102.

"Test USIM":

Either a test USIM card or the USIM simulator programmed with the parameters defined in this clause.

8.1.2 Definition of the test algorithm for authentication

In order to be able to easily test the UMTS authentication and key agreement procedure as specified in TS 33.102 [24] and TS 33.105 [26] along the whole system, the availability of a test algorithm for generation of authentication vector based on quintets is needed (in GSM triplets was used). Additionally, calculation of the parameters for re-synchronisation requests is needed. The definition of the test algorithm are the functions f_1 , f_2 , f_3 , f_4 , f_5 and the corresponding functions for re-synchronization are f_1^* and f_5^* .

The test algorithm defined in the present clause shall be implemented in test USIM cards as well in test USIM simulators and SS. The test algorithm may also, for test purposes, be implemented in AUC.

The following procedure employs bit wise modulo 2 addition ("XOR").

The following convention applies:

All data variables in the specification of this test algorithm are presented with the most significant substring on the left hand side and the least significant substring on the right hand side. A substring may be a bit, byte or other arbitrary length bitstring. Where a variable is broken down into a number of substrings, the leftmost (most significant) substring is numbered 0, the next most significant is numbered 1, and so on through to the least significant.

8.1.2.1 Authentication and key derivation in the test USIM and SS

The following steps describe sequence of operations for the functions f_1 , f_2 , f_3 , f_4 and f_5 to perform in the test USIM and SS, in order to obtain the XMAC/MAC, RES/XRES, CK, IK and AK respectively, to be used in the authentication and key agreement procedure.

Step 1:

XOR to the challenge **RAND**, a predefined number **K** (in which at least one bit is not zero, see 8.2), having the same bit length (128 bits) as **RAND**.

The result **XDOUT** of this is:

$$\mathbf{XDOUT}[\text{bits } 0,1, \dots, 126,127] = \mathbf{K} [\text{bits } 0,1, \dots, 126,127] \text{ XOR } \mathbf{RAND}[\text{bits } 0,1, \dots, 126,127]$$

Step 2:

RES (test USIM), **XRES** (SS), **CK**, **IK** and **AK** are extracted from **XDOUT** this way:

$$\mathbf{RES}[\text{bits } 0,1, \dots, n-1,n] = \mathbf{f}_2(\mathbf{XDOUT},n) = \mathbf{XDOUT}[\text{bits } 0,1, \dots, n-1,n] \quad (\text{with } 30 < n < 128)$$

NOTE: Suggested length for RES is 128 bits (i.e. $n = 127$).
In SS and AUC, the XRES calculation is identical to RES.

$$\mathbf{CK}[\text{bits } 0,1, \dots, 126,127] = \mathbf{f}_3(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 8,9, \dots, 126,127, 0,1, \dots, 6,7]$$

$$\mathbf{IK}[\text{bits } 0,1, \dots, 126,127] = \mathbf{f}_4(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 16,17, \dots, 126,127, 0,1, \dots, 14,15]$$

$$\mathbf{AK}[\text{bits } 0,1, \dots, 46,47] = \mathbf{f}_4(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 24,25, \dots, 70,71]$$

Step 3:

Concatenate **SQN** with **AMF** to obtain **CDOUT** like this:

$$\mathbf{CDOUT}[\text{bits } 0,1, \dots, 62,63] = \mathbf{SQN}[\text{bits } 0,1, \dots, 46,47] \parallel \mathbf{AMF}[\text{bits } 0,1, \dots, 14,15]$$

NOTE: For test USIM the $\mathbf{SQN} = \mathbf{SQN}_{\text{MS}} = \mathbf{SQN}_{\text{SS}}[\text{bits } 0,1, \dots, 46,47] = \mathbf{AUTN}[\text{bits } 0,1, \dots, 46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots, 46,47]$ where AUTN is the received authentication token.

Step 4:

XMAC (test USIM) and **MAC** (SS) are calculated from **XDOUT** and **CDOUT** this way:

$$\mathbf{XMAC}[\text{bits } 0,1, \dots 62, 63] = \mathbf{f1}(\mathbf{XDOUT}, \mathbf{CDOUT}) = \mathbf{XDOUT}[\text{bits } 0,1, \dots 62,63] \text{ XOR } \mathbf{CDOUT}[\text{bits } 0,1, \dots 62,63]$$

NOTE: In SS and AUC, the MAC calculation is identical to XMAC

Step 5:

The SS calculates the authentication token **AUTN**:

$$\mathbf{AUTN}[\text{bits } 0,1, \dots 126,127] = \mathbf{SQN} \oplus \mathbf{AK}[\text{bits } 0,1, \dots 46,47] \parallel \mathbf{AMF}[\text{bits } 0,1, \dots 14,15] \parallel \mathbf{MAC}[\text{bits } 0,1, \dots 62, 63]$$

$$\text{Where } \mathbf{SQN} \oplus \mathbf{AK}[\text{bits } 0,1, \dots 46,47] = \mathbf{SQN}[\text{bits } 0,1, \dots 46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots 46,47]$$

8.1.2.2 Generation of re-synchronisation parameters in the USIM

For SS to be able to initiate an authentication re-synchronisation procedure a specific AMF value has been defined.

$$\mathbf{AMF}_{\text{RESYNCH}} = \mathbf{AMF}[\text{bits } 0,1, \dots 14,15] = "1111 1111 1111 1111"$$

When the test USIM receives an authentication token (AUTN) having the value of AMF field equal to the $\mathbf{AMF}_{\text{RESYNCH}}$ value then the test USIM shall initiate the re-synchronisation procedure.

When the test USIM starts the re-synchronisation procedure, the MAC-S and AK have to be calculated using the functions $\mathbf{f1}^*$ and $\mathbf{f5}^*$, which in the test algorithm are identical to $\mathbf{f1}$ and $\mathbf{f5}$, respectively.

Step 1:

XOR to the challenge **RAND**, a predefined number **K** (in which at least one bit is not zero, see 8.2), having the same bit length (128 bits) as **RAND**.

The result **XDOUT** of this is:

$$\mathbf{XDOUT}[\text{bits } 0,1, \dots 126,127] = \mathbf{K}[\text{bits } 0,1, \dots 126,127] \text{ XOR } \mathbf{RAND}[\text{bits } 0,1, \dots 126,127]$$

Step 2:

AK is extracted from **XDOUT** this way:

$$\mathbf{AK}[\text{bits } 0,1, \dots 46,47] = \mathbf{f5}^*(\mathbf{XDOUT}) = \mathbf{XDOUT}[\text{bits } 24,25, \dots 70,71]$$

Step 3:

Concatenate \mathbf{SQN}_{MS} with \mathbf{AMF}^* to obtain **CDOUT** like this:

$$\mathbf{CDOUT}[\text{bits } 0,1, \dots 62,63] = \mathbf{SQN}_{\text{MS}}[\text{bits } 0,1, \dots 46,47] \parallel \mathbf{AMF}^*[\text{bits } 0,1, \dots 14,15]$$

Where \mathbf{AMF}^* assumes a dummy value of all zeros

NOTE: For test USIM the $\mathbf{SQN}_{\text{MS}} = \mathbf{SQN}_{\text{SS}}[\text{bits } 0,1, \dots 46,47] = \mathbf{AUTN}[\text{bits } 0,1, \dots 46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots 46,47]$ where AUTN is the received authentication token.

For SS and AUC the $\mathbf{SQN}_{\text{MS}} = \mathbf{AUTS}[\text{bits } 0,1, \dots 46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1, \dots 46,47]$ where AUTS is the received re-synchronisation parameter.

Step 4:

MAC-S is calculated from **XDOUT** and **CDOUT** this way:

$$\mathbf{MAC-S}[\text{bits } 0,1, \dots 62, 63] = \mathbf{f1}^*(\mathbf{XDOUT}, \mathbf{CDOUT}) = \mathbf{XDOUT}[\text{bits } 0,1, \dots 62,63] \text{ XOR } \mathbf{CDOUT}[\text{bits } 0,1, \dots 62,63]$$

NOTE: In SS and AUC, the XMAC-S calculation is identical to MAC-S.

Step 5:

The test USIM calculates the re-synchronisation parameter **AUTS**:

$$\mathbf{AUTS}[\text{bits } 0,1,\dots,110,111] = \mathbf{SQN}_{\text{MS}} \oplus \mathbf{AK}[\text{bits } 0,1,\dots,46,47] \parallel \mathbf{MAC-S}[\text{bits } 0,1,\dots,62,63]$$

$$\text{Where } \mathbf{SQN}_{\text{MS}} \oplus \mathbf{AK}[\text{bits } 0,1,\dots,46,47] = \mathbf{SQN}_{\text{MS}}[\text{bits } 0,1,\dots,46,47] \text{ XOR } \mathbf{AK}[\text{bits } 0,1,\dots,46,47]$$

8.1.2.3 Using the authentication test algorithm for UE conformance testing

8.1.2.3.1 Authentication accept case

The authentication accept case is illustrated in figure 8.1.2.3.1.

The SS calculates the authentication token AUTN according to the test algorithm as specified in clause 8.1.2.1 (step 1 to 5) using an AMF value different from the $\text{AMF}_{\text{RESYNCH}}$ value.

The SS sends an authentication request, including RAND and AUTN parameters, to the ME/USIM.

Based on the received RAND parameter the test USIM calculates the RES, CK IK and XMAC parameters according to clause 8.1.2.1 (step 1 to 4). The test USIM extracts the $\text{SQN}_{\text{MS}} = \text{SQN}_{\text{SS}}$, AMF and MAC parameters from the received authentication token AUTN.

The test USIM checks that $\text{XMAC} = \text{MAC}$ and then return the RES, CK and IK parameters to the ME.

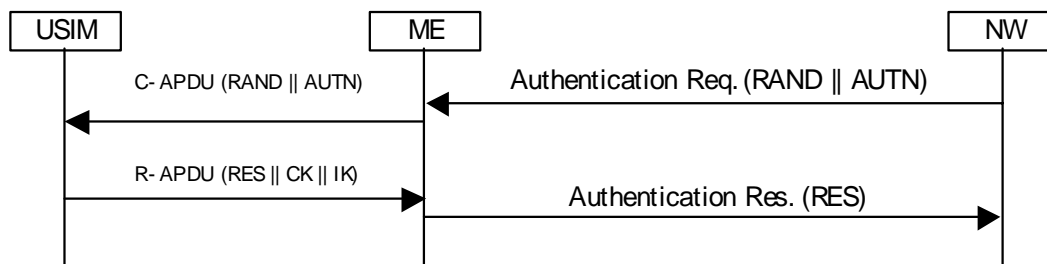


Figure 8.1.2.3.1: Network accepted by UE

8.1.2.3.2 MAC failure case

The MAC failure case is illustrated in figure 8.1.2.3.2.

The SS calculates the authentication token AUTN according to the test algorithm as specified in clause 8.1.2.1 (step 1 to 5) using an AMF value different from the $\text{AMF}_{\text{RESYNCH}}$ value and a MAC value different from what is calculated in clause 8.1.2.1 step 4.

The SS sends an authentication request, including RAND and AUTN parameters, to the ME/USIM.

Based on the received RAND parameter The test USIM calculates the RES, CK, IK and XMAC parameters according to clause 8.1.2.1 (step 1 to 4).

The test USIM extracts the $\text{SQN}_{\text{MS}} = \text{SQN}_{\text{SS}}$, AMF and MAC parameters from the received authentication token AUTN.

When the test USIM identifies that the calculated XMAC value is different from the MAC value received in AUTN then the USIM notifies the ME of the MAC failure and the ME sends an AUTHENTICATION FAILURE message to the SS (cause "MAC failure").

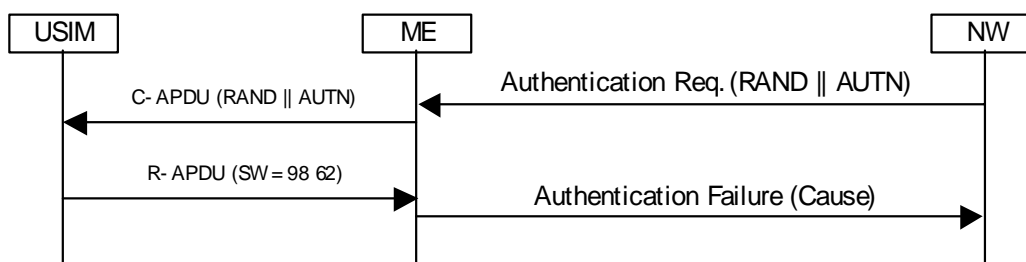


Figure 8.1.2.3.2: MAC failure cases

8.1.2.3.3 SQN failure case

The SQN failure case is illustrated in figure 8.1.2.3.3.

The SS calculates the authentication token AUTN according to the test algorithm as specified in clause 8.1.2.1 (step 1 to 5) using an AMF value equal to $AMF_{RESYNCH}$.

The SS sends an authentication request, including RAND and AUTN parameters, to the UE/USIM.

The test USIM extracts the $SQN_{MS} = SQN_{SS}$, AMF and MAC parameters from the received authentication token AUTN.

When the test USIM identifies that the AMF field is equal to the $AMF_{RESYNCH}$ value it calculates the re-synchronisation parameter AUTS as specified in clause 8.1.2.2 (step 1 to 5) and forward it to the ME.

The ME sends an AUTHENTICATION FAILURE message to the SS including the AUTS parameter.

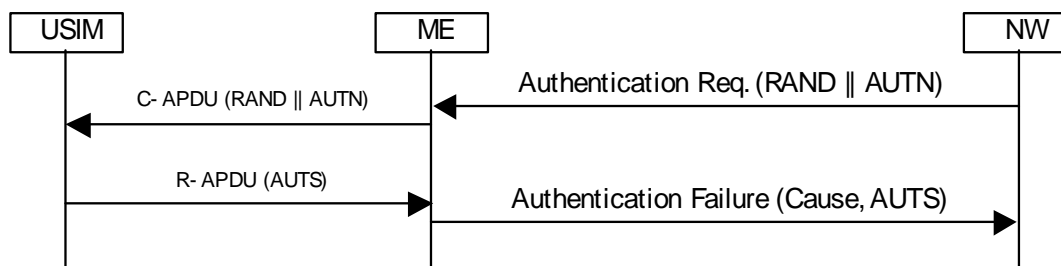


Figure 8.1.2.3.3: SQN failure case

8.2 Default Parameters for the test USIM

K:

The authentication key "K" will be chosen by the test house and will be non zero. The "K" value used by the SS will align with this value.

PIN Disabling:

The PIN enabled / disabled flag will be set to "PIN Disabled". This ensures that when the Test USIM is inserted into a UE the user will not be prompted for PIN entry.

8.3 Default settings for the Elementary Files (EFs)

The format and coding of elementary files of the USIM are defined in TS31.101 and TS31.102. The following clauses define the default parameters to be programmed into each elementary file. Some files may be updated by the UE based on information received from the SS. These are identified in the following clauses.

If EFs have an unassigned value, it may not be clear from the main text what this value should be. This clause suggests values in these cases.

8.3.1 Contents of the EFs at the MF level

8.3.1.1 EF_{DIR}

8.3.1.2 EF_{ICCID} (ICC Identity)

The programming of this EF is a test house option.

8.3.1.3 EF_{PL} (Preferred Languages)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.1.4 EF_{ARR} (Access rule reference)

The programming of this EF is a test house option.

8.3.2 Contents of files at the USIM ADF (Application DF) level

8.3.2.1 EF_{LI} (Language Indication)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.2 EF_{IMSI} (IMSI)

The IMSI value will be chosen by the test house. The IMSI used by the SS will align this value.

File size: 9 bytes

Default values: Byte 1 (DEC): 8

Bytes 2-9 (HEX): 09 10 10 ** ** ** **

"*" indicates any number between 0 and 9 subject to the restriction that IMSI mod 1000 (i.e. bytes 7, 8 and 9) lies in one of the following ranges:

063-125, 189-251, 315-377, 441-503, 567-629, 693-755, 819-881 or 945-999

NOTE: This ensures that the UE can listen to the second CCCH when more than one basic physical channel is configured for the CCCH. This is necessary for the test of "paging re-organization".

8.3.2.3 EF_{Keys} (Cipherring and Integrity Keys)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.4 EF_{KeysPS} (Cipherring and Integrity Keys for Packet Switched domain)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.5 EF_{PLMNwACT} (User controlled PLMN selector with Access Technology)

File size: 5n bytes

Default values (HEX): Bytes 1-3: 32 F4 10 (MCC, MNC) - Translates to 234, 01

Bytes 4-5: 80 00 (Access Technology) – Translates to UTRAN

Bytes 6-8: 32 F4 20 (MCC, MNC)

Bytes 9-10: 80 00 (Access Technology)

Bytes 11-13: 32 F4 30 (MCC, MNC)

....

....

....

Bytes(5n-4) - (5n-2): 32 F4 43 (MCC, MNC)

Bytes (5n-1) - 5n: 80 00 (Access Technology)

PLMNs are shown coded above since this is the largest number required for a test. It is necessary to take this into account since the USIM cards must be dimensioned to cope with this number of records.

8.3.2.6 EF_{HPLMN} (HPLMN search period)

File size: 1 byte

Default value (HEX): 00 (no HPLMN search attempts)

8.3.2.7 EF_{ACMmax} (ACM maximum value)

File size: 3 bytes

Default: Byte 1: 00

Byte 2: 00

Byte 3: 00

The above translates to: "Not valid".

8.3.2.8 EF_{UST} (USIM Service Table)

Services will be allocated and activated as follows:

| Services | | Activated |
|---------------|--|-----------|
| Service n°1 : | Local Phone Book | Option |
| Service n°2 : | Fixed Dialling Numbers (FDN) | Option |
| Service n°3 : | Extension 2 | Option |
| Service n°4 : | Service Dialling Numbers (SDN) | Option |
| Service n°5 : | Extension3 | Option |
| Service n°6 : | Barred Dialling Numbers (BDN) | Option |
| Service n°7 : | Extension4 | Option |
| Service n°8 : | Outgoing Call Information (OCI and OCT) | Option |
| Service n°9 : | Incoming Call Information (ICI and ICT) | Option |
| Service n°10: | Short Message Storage (SMS) | Yes |
| Service n°11: | Short Message Status Reports (SMSR) | Option |
| Service n°12: | Short Message Service Parameters (SMSP) | Yes |
| Service n°13: | Advice of Charge (AoC) | Yes |
| Service n°14: | Capability Configuration Parameters (CCP) | Yes |
| Service n°15: | Cell Broadcast Message Identifier | Yes |
| Service n°16: | Cell Broadcast Message Identifier Ranges | Yes |
| Service n°17: | Group Identifier Level 1 | Option |
| Service n°18: | Group Identifier Level 2 | Option |
| Service n°19: | Service Provider Name | Option |
| Service n°20: | User controlled PLMN selector with Access Technology | Yes |
| Service n°21: | MSISDN | Option |
| Service n°22: | Image (IMG) | Option |
| Service n°23: | Not used (reserved for SoLSA) | No |
| Service n°24: | Enhanced Multi-Level Precedence and Pre-emption Service | Option |
| Service n°25: | Automatic Answer for Empp | Option |
| Service n°26: | RFU | No |
| Service n°27: | GSM Access | Yes |
| Service n°28: | Data download via SMS-PP | Option |
| Service n°29: | Data download via SMS-CB | Option |
| Service n°30: | Call Control by USIM | Option |
| Service n°31: | MO-SMS Control by USIM | Option |
| Service n°32: | RUN AT COMMAND command | Option |
| Service n°33: | Packet Switched Domain | Yes |
| Service n°34: | Enabled Services Table | Yes |
| Service n°35: | APN Control List (ACL) | Option |
| Service n°36: | Depersonalisation Control Keys | Option |
| Service n°37: | Co-operative Network List | Option |
| Service n°38: | GSM security context | Yes |
| Service n°39: | CPBCCCH Information | Yes |
| Service n°40: | Investigation Scan | Yes |
| Service n°41: | MExE | Option |
| Service n°42: | Operator controlled PLMN selector with Access Technology | Yes |
| Service n°43: | HPLMN selector with Access Technology | Yes |

8.3.2.9 EF_{ACM} (Accumulated Call Meter)

File size: 3 bytes

Default: Byte 1: 00

Byte 2: 00

Byte 3: 00

The above translates to: "Not yet implemented".

8.3.2.10 EF_{GID1} (Group Identifier Level 1)

The programming of this EF is a test house option.

8.3.2.11 EF_{GID2} (Group Identifier Level 2)

The programming of this EF is a test house option.

8.3.2.12 EF_{SPN} (Service Provider Name)

The programming of this EF is a test house option.

8.3.2.13 EF_{PUCT} (Price per Unit and Currency Table)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.14 EF_{CBMI} (Cell Broadcast Message identifier selection)

The programming of this EF is a test house option.

The file size is 2n bytes, where n is the number of Cell broadcast message identifier records - each record defining a type of Cell Broadcast message which may be accessed by the UE. Care should be taken when dimensioning the USIM to take into account the number of Cell Broadcast message identifier records required.

8.3.2.15 EF_{ACC} (Access Control Class)

The EFACC can be selected by a test house in two types.

Type A;

File size: 2 Bytes
 Default values (BIN): Byte 1: 000000**
 Byte 2: *****

The test house may set any single bit shown by "*" to "1". All remaining bits of byte 2 will be set to "0". This determines the access control class of the USIM.

Type B;

Default values (BIN): Byte 1: 111110**
 Byte 2: *****

The test house may set any single bit shown by "*" to "1". All remaining bits of byte 2 will be set to "0". This determines the access control class of the USIM.

8.3.2.16 EF_{FPLMN} (Forbidden PLMNs)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.17 EF_{LOCI} (Location Information)

File size: 11 Bytes
 Default values: Bytes 1-4 (HEX): FF FF FF FF (TMSI)
 Bytes 5-9 (HEX): 42 F6 18 FF FE (LAI)
 Byte 10 (HEX): FF (RFU)

Byte 11 (BIN): 00000001 (Location Update Status = "not updated")

Bytes 5-9: LAI-MCC = 246 (bytes 5-6) and LAI-MNC = 81 (byte 7) are frequently used. The LAC (bytes 8-9) is set to "FF FE" since this, in conjunction with byte 11 setting of "01", is used to ensure that the UE performs a location update at the beginning of a test.

Bytes in this file (e.g. TMSI in bytes 1-4) may be updated as a result of a location update attempt by the UE.

8.3.2.18 EF_{AD} (Administrative Data)

File size: 4 bytes

Default values Byte 1: 10000000 - (type approval operations)

Byte 2: 00000000

Byte 3: 00000000

Byte 4: 00000010

8.3.2.19 Void

8.3.2.20 EF_{CBMID} (Cell Broadcast Message Identifier for Data Download)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.21 EF_{ECC} (Emergency Call Codes)

The programming of this EF is a test house option.

8.3.2.22 EF_{CBMIR} (Cell Broadcast Message Identifier Range selection)

The programming of this EF follows default parameter written in TS31.102 Annex E.

8.3.2.23 EF_{PSLOCI} (Packet Switched location information)

File size: 14 Bytes

Default values: Bytes 1-4 (HEX): FF FF FF FF (P-TMSI)

Bytes 5-7 (HEX): FF FF FF (P-TMSI signature value)

Bytes 8-13 (HEX): 42 F6 18 FF FE FF (RAI)

Byte 14 (BIN): 00000001 (Routing Area update status = "not updated")

Bytes 8-13: RAI-MCC = 246 (bytes 8-9) and RAI-MNC = 81 (byte 10) are frequently used. The LAC (bytes 11-12) is set to "FF FE" since this, in conjunction with byte 14 setting of "01", is used to ensure that the UE performs a location update at the beginning of a test.

Bytes in this file (e.g. P-TMSI in bytes 1-4) may be updated as a result of a location update attempt by the UE.

8.3.2.24 EF_{FDN} (Fixed Dialling Numbers)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.25 EF_{SMS} (Short messages)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.26 EF_{MSISDN} (MSISDN)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.27 EF_{SMSP} (Short message service parameters)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.28 EF_{SMSS} (SMS status)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.29 EF_{SDN} (Service Dialling Numbers)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.30 EF_{EXT2} (Extension2)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.31 EF_{EXT3} (Extension3)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.32 EF_{SMSR} (Short message status reports)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.33 EF_{ICI} (Incoming Call Information)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.34 EF_{OCl} (Outgoing Call Information)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.35 EF_{ICT} (Incoming Call Timer)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.36 EF_{OCT} (Outgoing Call Timer)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.37 EF_{EXT5} (Extension5)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.38 EF_{CCP2} (Capability Configuration Parameters 2)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.39 EF_{eMLPP} (enhanced Multi Level Precedence and Pre-emption)

The programming of this EF is a test house option.

8.3.2.40 EF_{AAeM} (Automatic Answer for eMLPP Service)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.41 EF_{GMSI} (Group Identity)

This clause is expected to be defined in the release 2000 version of the present document.

8.3.2.42 EF_{Hiddenkey} (Key for hidden phone book entries)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.43 Void**8.3.2.44 EF_{BDN} (Barred dialling numbers)**

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.45 EF_{EXT4} (Extension 4)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.46 EF_{CMI} (Comparison method information)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.47 EF_{EST} (Enabled service table)

The programming of this EF is a test house option.

8.3.2.48 EF_{ACL} (Access point name control list)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.49 EF_{DCK} (Depersonalisation control keys)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.50 EF_{CNL} (Co-operative network list)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.51 EF_{START-HFN} (Initialisation values for Hyperframe number)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.52 EF_{THRESHOLD} (Maximum value of START)

The programming of this EF is a test house option.

8.3.2.53 EF_{OPLMNsel} (OPLMN selector)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.54 EF_{PHPLMNAT} (Preferred HPLMN Access Technology)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.55 EF_{ARR} (Access rule reference)

The programming of this EF is a test house option.

8.3.2.56 EF_{RPLMNACT} (RPLMN Last used Access Technology)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.2.57 EF_{NETPAR} (Network Parameters)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3 Contents of DFs at the USIM ADF (Application DF) level

8.3.3.1 Contents of files at the USIM SoLSA level

8.3.3.1.1 EF_{SAI} (SoLSA Access Indicator)

This clause is expected to be defined in the release 2000 version of the present document.

8.3.3.1.2 EF_{SLL} (SoLSA LSA List)

This clause is expected to be defined in the release 2000 version of the present document.

8.3.3.1.3 LSA Descriptor files

This clause is expected to be defined in the release 2000 version of the present document.

8.3.3.1.4 Contents of files at the MExE level

8.3.3.1.4.1 EF_{MExE-ST} (MExE Service table)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.1.4.2 EF_{ORPK} (Operator Root Public Key)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.1.4.3 EF_{ARPK} (Administrator Root Public Key)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.1.4.4 EF_{TPRPK} (Third Party Root Public Key)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.1.4.5 EF_{TKCDF} (Trusted Key/Certificates Data Files)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2 Contents of files at the DF PHONEBOOK level

8.3.3.2.1 EF_{PBR} (Phone Book Reference file)

The programming of this EF is a test house option.

8.3.3.2.2 EF_{IAP} (Index Administration Phone book)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.3 EF_{ADN} (Abbreviated dialling numbers)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.4 EF_{EXT1} (Extension1)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.5 EF_{PBC} (Phone Book Control)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.6 EF_{GRP} (Grouping file)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.7 EF_{AAS} (Additional number Alpha String)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.8 EF_{GAS} (Grouping information Alpha String)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.9 EF_{ANR} (Additional Number)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.10 EF_{SNE} (Second Name Entry)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.11 EF_{CCP1} (Capability Configuration Parameters 1)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.12 Phone Book Synchronisation

8.3.3.2.12.1 EF_{UID} (Unique Identifier)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.12.2 EF_{PSC} (Phone book Synchronisation Counter)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.12.3 EF_{CC} (Change Counter)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.12.4 EF_{PUIID} (Previous Unique Identifier)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.2.13 EF_{EMAIL} (e-mail address)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.3 Contents of files at the DF GSM level (Files required for GSM Access)

8.3.3.3.1 EF_{Kc} (GSM Cipherring key Kc)

File size: 9 Bytes

Default values (HEX): Bytes 1-8: Align with Kc used by SS

Byte 9: 07

Byte 9 is set to 07 to indicate that there is no key available at the start of a test.

The bytes within this elementary file may be updated by the UE as a result of a successful authentication attempt.

8.3.3.3.2 EF_{KcGPRS} (GPRS Cipherring key KcGPRS)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.3.3 Void

8.3.3.3.4 EF_{CPBCCCH} (CPBCCCH Information)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.3.3.5 EF_{InvScan} (Investigation Scan)

The programming of this EF follows default parameter.

8.3.4 Contents of EFs at the TELECOM level

8.3.4.1 EF_{ADN} (Abbreviated dialling numbers)

The programming of this EF is a test house option. It should be noted that sufficient space should be provided on the USIM card for 101 records.

8.3.4.2 EF_{EXT1} (Extension1)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.4.3 EF_{ECCP} (Extended Capability Configuration Parameter)

The programming of this EF is a test house option.

8.3.4.4 EF_{SUME} (SetUpMenu Elements)

The programming of this EF is a test house option.

8.3.4.5 EF_{ARR} (Access rule reference)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.5 Contents of DFs at the TELECOM level

8.3.5.1 Contents of files at the DF_{GRAPHICS} level

8.3.5.1.1 EF_{IMG} (Image)

The programming of this EF follows default parameter written in TS 31.102 annex E.

8.3.5.1.2 Image Instance Data Files

8.3.5.2 Contents of files at the DF_{PHONEBOOK} under the DF_{TELECOM}

The programming of this EF is a test house option.

9 Default Message Contents

9.1 Default Message Contents for Signalling

This clause contains the default values of common messages, which unless indicated otherwise in specific clauses of TS 34.123-1, shall be transmitted and checked by the system simulator.

In this clause, decimal values are normally used. However, sometimes a hexadecimal value, indicated by an "H", or a binary value, indicated by a "B" is used.

Contents of DOWNLINK DIRECT TRANSFER message: AM

| Information Element | Value/remark |
|-------------------------------|--|
| Message Type | 0 |
| RRC transaction identifier | |
| Integrity check info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. |
| - Message authentication code | SS calculates the value of MAC-I for this message and writes to this IE. |
| - RRC Message sequence number | SS provides the value of this IE, from its internal counter. |
| CN domain identity | CS domain or PS domain |
| NAS message | See Specific Message Content for each test case |

Contents of INITIAL DIRECT TRANSFER message: AM

| Information Element | Value/remark |
|--------------------------------|---|
| Message Type | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. |
| Integrity check info | |
| - Message authentication code | This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. |
| - RRC Message sequence number | |
| CN domain identity | CS domain or PS domain |
| Intra Domain NAS Node Selector | Set to the same octet string as in the IMSI stored in the USIM card |
| NAS message | Set according to that indicated in specific message content for each test case |
| Measured results on RACH | Not checked |

Contents of PAGING TYPE 1 message: TM (Speech in CS)

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| Paging record list | |
| - Paging record | CN identity Terminating Conversational Call CS domain |
| - CHOICE Used paging identity | |
| - Paging cause | |
| - CN domain identity | |
| - CHOICE UE identity | |
| - IMSI (GSM-MAP) | Set to the same octet string as in the IMSI stored in the USIM card |
| BCCH modification info | Not Present |

Contents of PAGING TYPE 1 message: TM (The others of speech in CS)

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| Paging record list | |
| - Paging record | CN identity Terminating Streaming Call CS domain |
| - CHOICE Used paging identity | |
| - Paging cause | |
| - CN domain identity | |
| - CHOICE UE identity | |
| - IMSI (GSM-MAP) | Set to the same octet string as in the IMSI stored in the USIM card |
| BCCH modification info | Not Present |

Contents of PAGING TYPE 1 message: TM (Packet in PS)

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| Paging record list | |
| - Paging record | CN identity Terminating Interactive Call PS domain |
| - CHOICE Used paging identity | |
| - Paging cause | |
| - CN domain identity | |
| - CHOICE UE identity | |
| - IMSI (GSM-MAP) | Set to the same octet string as in the IMSI stored in the USIM card |
| BCCH modification info | Not Present |

Contents of RADIO BEARER SETUP message: AM or UM (Speech in CS)

| Information Element | Value/remark |
|--|---|
| Message Type | 0 |
| RRC transaction identifier | |
| Integrity check info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. |
| - message authentication code | |
| - RRC message sequence number | SS provides the value of this IE, from its internal counter. |
| Integrity protection mode info | Not Present |
| Ciphering mode info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. |
| - Ciphering mode command | Start/restart |
| - Ciphering algorithm | Use one of the supported ciphering algorithms |
| - Ciphering activation time for DPCH | $(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$ |
| - Radio bearer downlink ciphering activation time info | Not Present |
| Activation time | $(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$ |
| New U-RNTI | Not Present |
| New C-RNTI | Not Present |
| RRC State indicator | CELL_DCH |
| UTRAN DRX cycle length coefficient | Not Present |
| CN information info | Not Present |
| URA identity | Not Present |
| Signalling RB information to setup list | Not Present |
| RAB information for setup list | |
| - RAB information for setup | |
| - RAB info | |
| - RAB identity | 0000 0001B |
| - CN domain identity | CS domain |
| - NAS Synchronization Indicator | Not Present |
| - Re-establishment timer | UseT314 |
| - RB information to setup | |
| - RB identity | 10 |
| - PDCP info | Not Present |
| - CHOICE RLC info type | RLC info |
| - CHOICE Uplink RLC mode | TM RLC |
| - Transmission RLC discard | Not Present |
| - Segmentation indication | FALSE |
| - CHOICE Downlink RLC mode | TM RLC |
| - Segmentation indication | FALSE |
| - RB mapping info | |
| - Information for each multiplexing option | |
| - RLC logical channel mapping indicator | Not Present |
| - Number of uplink RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 1 |
| - Logical channel identity | Not Present |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 1 |
| - Downlink RLC logical channel info | |
| - Number of downlink RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 6 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | Not Present |
| - RB identity | 11 |
| - PDCP info | Not Present |
| - CHOICE RLC info type | RLC info |
| - CHOICE Uplink RLC mode | TM RLC |
| - Transmission RLC discard | Not Present |
| - Segmentation indication | FALSE |
| - CHOICE Downlink RLC mode | TM RLC |

| Information Element | Value/remark |
|---|---|
| - Segmentation indication | FALSE |
| - RB mapping info | |
| - Information for each multiplexing option | Not Present |
| - RLC logical channel mapping indicator | 1 |
| - Number of uplink RLC logical channels | DCH |
| - Uplink transport channel type | 2 |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | Configured |
| - CHOICE RLC size list | 1 |
| - MAC logical channel priority | |
| - Downlink RLC logical channel info | |
| - Number of downlink RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 7 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | Not Present |
| - RB identity | 12 |
| - PDCP info | Not Present |
| - CHOICE RLC info type | RLC info |
| - CHOICE Uplink RLC mode | TM RLC |
| - Transmission RLC discard | Not Present |
| - Segmentation indication | FALSE |
| - CHOICE Downlink RLC mode | TM RLC |
| - Segmentation indication | FALSE |
| - RB mapping info | |
| - Information for each multiplexing option | Not Present |
| - RLC logical channel mapping indicator | Not Present |
| - Number of uplink RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 3 |
| - Logical channel identity | Not Present |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 1 |
| - Downlink RLC logical channel info | |
| - Number of downlink RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 8 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | Not Present |
| RB information to be affected list | Not Present |
| Downlink counter synchronisation info | Not Present |
| UL Transport channel information for all transport channels | |
| - PRACH TFCS | Not Present |
| - CHOICE mode | FDD |
| - TFC subset | Not Present |
| - UL DCH TFCS | |
| - CHOICE TFCI signalling | Normal |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS complete reconfigure information | |
| - CHOICE CTFC Size | |
| - CTFC information | This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10 |
| - CTFC | Reference to TS34.108 clause 6.10 Parameter Set |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factors(The last TFC is set to Signalled Gain Factors) |
| - Gain factor β_c | 11 (below 64 kbps) |
| - Gain factor β_d | 9 (higher than 64 kbps) |
| - Reference TFC ID | (Not Present if the above is set to Computed Gain Factors) |
| - CHOICE mode | 15 |
| | (Not Present if the above is set to Computed Gain Factors) |
| | 0 |
| | FDD |

| Information Element | Value/remark |
|---|--|
| - Power offset P _{p-m} | Not Present |
| Deleted TrCH information list | Not Present |
| Added or Reconfigured TrCH information list | 3 DCHs |
| - Added or Reconfigured UL TrCH information | |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 1 |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) |
| - Number of TBs and TTI List | Not Present |
| - Transmission Time Interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference to TS34.108 clause 6.10 Parameter Set |
| - CHOICE Logical Channel list | All |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Type of channel coding | Reference to TS34.108 clause 6.10 Parameter Set |
| - Coding Rate | Reference to TS34.108 clause 6.10 Parameter Set |
| - Rate matching attribute | Reference to TS34.108 clause 6.10 Parameter Set |
| - CRC size | Reference to TS34.108 clause 6.10 Parameter Set |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 2 |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) |
| - Number of TBs and TTI List | Not Present |
| - Transmission Time Interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) |
| - CHOICE Logical Channel list | All |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Type of channel coding | Reference to TS34.108 clause 6.10 Parameter Set |
| - Coding Rate | Reference to TS34.108 clause 6.10 Parameter Set |
| - Rate matching attribute | Reference to TS34.108 clause 6.10 Parameter Set |
| - CRC size | Reference to TS34.108 clause 6.10 Parameter Set |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 3 |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) |
| - Number of TBs and TTI List | Not Present |
| - Transmission Time Interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.) |
| - CHOICE Logical Channel list | All |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Type of channel coding | Reference to TS34.108 clause 6.10 Parameter Set |
| - Coding Rate | Reference to TS34.108 clause 6.10 Parameter Set |
| - Rate matching attribute | Reference to TS34.108 clause 6.10 Parameter Set |
| - CRC size | Reference to TS34.108 clause 6.10 Parameter Set |
| CHOICE mode | FDD |
| - CPCH set ID | Not Present |
| - Added or Reconfigured TrCH information for DRAC list | Not Present |
| DL Transport channel information common for all transport channel | |
| - SCCPCH TFCS | Not Present |
| - CHOICE mode | FDD |
| - CHOICE DL parameters | Same as UL |
| Deleted TrCH information list | Not Present |
| Added or Reconfigured TrCH information list | 3 DCHs |

| Information Element | Value/remark |
|---|--|
| Added or Reconfigured DL TrCH information | |
| - Downlink transport channel type | DCH |
| - DL Transport channel identity | 6 |
| - CHOICE DL parameters | Same as UL |
| - Uplink transport channel type | DCH |
| - UL TrCH identity | 1 |
| - DCH quality target | |
| - BLER Quality value | -6.3 |
| - Transparent mode signalling info | Not Present |
| - Downlink transport channel type | DCH |
| - DL Transport channel identity | 7 |
| - CHOICE DL parameters | Same as UL |
| - Uplink transport channel type | DCH |
| - UL TrCH identity | 2 |
| - DCH quality target | |
| - BLER Quality value | Not Present |
| - Transparent mode signalling info | Not Present |
| - Downlink transport channel type | DCH |
| - DL Transport channel identity | 8 |
| - CHOICE DL parameters | Same as UL |
| - Uplink transport channel type | DCH |
| - UL TrCH identity | 3 |
| - DCH quality target | |
| - BLER Quality value | Not Present |
| - Transparent mode signalling info | Not Present |
| Frequency info | |
| - UARFCN uplink(Nu) | Reference to clause 5.1 Test frequencies |
| - UARFCN downlink(Nd) | Reference to clause 5.1 Test frequencies |
| Maximum allowed UL TX power | 33dBm |
| CHOICE channel requirement | Uplink DPCH info |
| - Uplink DPCH power control info | |
| - DPCCH power offset | -6dB |
| - PC Preamble | 1 frame |
| - SRB delay | 7 frames |
| - Power Control Algorithm | Algorithm1 |
| - TPC step size | 1dB |
| - Scrambling code type | Long |
| - Scrambling code number | 0 (0 to 16777215) |
| - Number of DPDCH | Not Present(1) |
| - spreading factor | Reference to TS34.108 clause 6.10 Parameter Set |
| - TFCI existence | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of FBI bit | Reference to TS34.108 clause 6.10 Parameter Set |
| - Puncturing Limit | Reference to TS34.108 clause 6.10 Parameter Set |
| CHOICE Mode | FDD |
| - Downlink PDSCH information | Not Present |
| Downlink information common for all radio links | |
| - Downlink DPCH info common for all RL | |
| - Timing indicator | Maintain |
| - CFN-targetSFN frame offset | Not Present |
| - Downlink DPCH power control information | |
| - DPC mode | 0 (single) |
| - CHOICE mode | FDD |
| - Power offset $P_{Pilot-DPCH}$ | 0 |
| - DL rate matching restriction information | Not Present |
| - Spreading factor | Reference to TS34.108 clause 6.10 Parameter Set |
| - Fixed or Flexible Position | Reference to TS34.108 clause 6.10 Parameter Set |
| - TFCI existence | Reference to TS34.108 clause 6.10 Parameter Set |
| - CHOICE SF | Reference to TS34.108 clause 6.10 Parameter Set |
| - DPCH compressed mode info | Not Present |
| - TX Diversity mode | None |
| - SSDT information | Not Present |
| - Default DPCH Offset Value | Not Present |
| Downlink information for each radio link list | |
| - Downlink information for each radio link | |
| - Choice mode | FDD |
| - Primary CPICH info | |
| - Primary scrambling code | Reference to clause 6.1 "Default settings (FDD)" |

| Information Element | Value/remark |
|--|---|
| - PDSCH with SHO DCH info | Not Present |
| - PDSCH code mapping | Not Present |
| - Downlink DPCH info for each RL | |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - DPCH frame offset | 0 chips |
| - Secondary CPICH info | Not Present |
| - DL channelisation code | |
| - Secondary scrambling code | 1 |
| - Spreading factor | Reference to TS34.108 clause 6.10 Parameter Set |
| - Code number | 0 |
| - Scrambling code change | No change |
| - TPC combination index | 0 |
| - SSST Cell Identity | Not Present |
| - Closed loop timing adjustment mode | Not Present |
| - SCCPCH information for FACH | Not Present |

Contents of RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS)

| Information Element | Value/remark |
|--|---|
| Message Type | |
| RRC transaction identifier | |
| Integrity check info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. |
| - message authentication code | |
| - RRC message sequence number | SS provides the value of this IE, from its internal counter. |
| Integrity protection mode info | Not Present |
| Ciphering mode info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. |
| - Ciphering mode command | Start/restart |
| - Ciphering algorithm | Use one of the supported ciphering algorithms |
| - Ciphering activation time for DPCH | $(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$ |
| - Radio bearer downlink ciphering activation time info | Not Present |
| Activation time | $(256+CFN-(CFN \text{ MOD } 8 + 8))\text{MOD } 256$ |
| New U-RNTI | Not Present |
| New C-RNTI | Not Present |
| RRC State indicator | CELL_DCH |
| UTRAN DRX cycle length coefficient | Not Present |
| CN information info | Not Present |
| URA identity | Not Present |
| Signalling RB information to setup | Not Present |
| RAB information for setup | |
| - RAB info | |
| - RAB identity | 0000 0101B |
| - CN domain identity | PS domain |
| - NAS Synchronization Indicator | Not Present |
| - Re-establishment timer | UseT314 |
| - RB information to setup | |
| - RB identity | 20 |
| - PDCP info | Not Present |
| - CHOICE RLC info type | RLC info |
| - CHOICE Uplink RLC mode | AM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of uplink RLC logical channels | 1 |
| - Uplink transport channel type | DCH |

| Information Element | Value/remark |
|---|---|
| - UL Transport channel identity | 1 |
| - Logical channel identity | Not Present |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 1 |
| - Downlink RLC logical channel info | |
| - Number of downlink RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 6 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | Not Present |
| - RLC logical channel mapping indicator | Not Present |
| - Number of uplink RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 7 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 6 |
| - Downlink RLC logical channel info | |
| - Number of downlink RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 7 |
| RB information to be affected list | Not Present |
| Downlink counter synchronisation info | Not Present |
| UL Transport channel information for all transport channels | |
| - PRACH TFCS | Not Present |
| - CHOICE mode | FDD |
| - TFC subset | Not Present |
| - UL DCH TFCS | |
| - CHOICE TFCI signalling | Normal |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS complete reconfigure information | |
| - CHOICE CTFC Size | |
| - CTFC information | This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10 |
| - CTFC | Reference to TS34.108 clause 6.10 Parameter Set |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factors(The last TFC is set to Signalled Gain Factors) |
| - Gain factor β_c | 11 (below 64 kbps) |
| | 9 (higher than 64 kbps) |
| | (Not Present if the above is set to Computed Gain Factors) |
| - Gain factor β_d | 15 |
| | (Not Present if the above is set to Computed Gain Factors) |
| - Reference TFC ID | 0 |
| - CHOICE mode | FDD |
| - Power offset P _{p-m} | Not Present |
| Deleted TrCH information list | Not Present |
| Added or Reconfigured TrCH information list | |
| - Added or Reconfigured UL TrCH information | |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 1 |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of TBs and TTI List | (This IE is repeated for TFI number.) |
| - Transmission Time Interval | Not Present |
| - Number of Transport blocks | Reference to TS34.108 clause 6.10 Parameter Set |
| - CHOICE Logical Channel list | All |
| - Semi-static Transport Format information | |

| Information Element | Value/remark |
|---|---|
| - Transmission time interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Type of channel coding | Reference to TS34.108 clause 6.10 Parameter Set |
| - Coding Rate | Reference to TS34.108 clause 6.10 Parameter Set |
| - Rate matching attribute | Reference to TS34.108 clause 6.10 Parameter Set |
| - CRC size | Reference to TS34.108 clause 6.10 Parameter Set |
| CHOICE mode | FDD |
| - CPCH set ID | Not Present |
| - Added or Reconfigured TrCH information for | Not Present |
| DRAC list | |
| DL Transport channel information common for all transport channel | |
| - SCCPCH TFCS | Not Present |
| - CHOICE mode | FDD |
| - CHOICE DL parameters | Explicit |
| - DL DCH TFCS | |
| - CHOICE TFCI signalling | Normal |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Complete reconfiguration |
| - TFCS complete reconfigure | |
| - CHOICE CTFC Size | |
| - CTFC information | |
| - CTFC | This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10 |
| - Power offset information | Reference to TS34.108 clause 6.10 Parameter Set |
| - CHOICE Gain Factors | Computed Gain Factors(The last TFC is set to Signalled Gain Factors) |
| - Gain factor β_c | 11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the above is set to Computed Gain Factors) |
| - Gain factor β_d | 15 (Not Present if the above is set to Computed Gain Factors) |
| - Reference TFC ID | 0 |
| - CHOICE mode | FDD |
| - Power offset P _{p-m} | Not Present |
| Deleted TrCH information list | Not Present |
| Added or Reconfigured TrCH information list | |
| - Added or Reconfigured DL TrCH information | |
| - Downlink transport channel type | DCH |
| - DL Transport channel identity | 6 |
| - CHOICE DL parameters | Explicit |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| - Dynamic Transport format information | |
| - RLC Size | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of TBs and TTI List | (This IE is repeated for TFI number.) |
| - Transmission Time Interval | Not Present |
| - Number of Transport blocks | Reference to TS34.108 clause 6.10 Parameter Set |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Type of channel coding | Reference to TS34.108 clause 6.10 Parameter Set |
| - Coding Rate | Reference to TS34.108 clause 6.10 Parameter Set |
| - Rate matching attribute | Reference to TS34.108 clause 6.10 Parameter Set |
| - CRC size | Reference to TS34.108 clause 6.10 Parameter Set |
| - DCH quality target | |
| - BLER Quality value | -6.3 |
| - Transparent mode signalling info | Not Present |
| Frequency info | |
| - UARFCN uplink(Nu) | Reference to clause 5.1 Test frequencies |
| - UARFCN downlink(Nd) | Reference to clause 5.1 Test frequencies |
| Maximum allowed UL TX power | 33dBm |
| CHOICE channel requirement | Uplink DPCH info |
| - Uplink DPCH power control info | |
| - DPCCH power offset | -6dB |
| - PC Preamble | 1 frame |
| - SRB delay | 7 frames |

| Information Element | Value/remark |
|--|--|
| <ul style="list-style-type: none"> - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit | Algorithm1 1dB Long 0 (0 to 16777215) Not Present(1) Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set Reference to TS34.108 clause 6.10 Parameter Set |
| CHOICE Mode | FDD |
| <ul style="list-style-type: none"> - Downlink PDSCH information | Not Present |
| Downlink information common for all radio links | |
| <ul style="list-style-type: none"> - Downlink DPCH info common for all RL | |
| <ul style="list-style-type: none"> - Timing indicator | Maintain |
| <ul style="list-style-type: none"> - CFN-targetSFN frame offset | Not Present |
| <ul style="list-style-type: none"> - Downlink DPCH power control information | |
| <ul style="list-style-type: none"> - DPC mode | 0 (single) |
| <ul style="list-style-type: none"> - CHOICE mode | FDD |
| <ul style="list-style-type: none"> - Power offset $P_{\text{Pilot-DPDCH}}$ | 0 |
| <ul style="list-style-type: none"> - DL rate matching restriction information | Not Present |
| <ul style="list-style-type: none"> - Spreading factor | Reference to TS34.108 clause 6.10 Parameter Set |
| <ul style="list-style-type: none"> - Fixed or Flexible Position | Reference to TS34.108 clause 6.10 Parameter Set |
| <ul style="list-style-type: none"> - TFCI existence | Reference to TS34.108 clause 6.10 Parameter Set |
| <ul style="list-style-type: none"> - CHOICE SF | Reference to TS34.108 clause 6.10 Parameter Set |
| <ul style="list-style-type: none"> - DPCH compressed mode info | Not Present |
| <ul style="list-style-type: none"> - TX Diversity mode | None |
| <ul style="list-style-type: none"> - SSdT information | Not Present |
| <ul style="list-style-type: none"> - Default DPCH Offset Value | Not Present |
| Downlink information for each radio link list | |
| <ul style="list-style-type: none"> - Downlink information for each radio link | |
| <ul style="list-style-type: none"> - Choice mode | FDD |
| <ul style="list-style-type: none"> - Primary CPICH info | Reference to clause 6.1 "Default settings (FDD)" |
| <ul style="list-style-type: none"> - Primary scrambling code | Not Present |
| <ul style="list-style-type: none"> - PDSCH with SHO DCH info | Not Present |
| <ul style="list-style-type: none"> - PDSCH code mapping | Not Present |
| <ul style="list-style-type: none"> - Downlink DPCH info for each RL | |
| <ul style="list-style-type: none"> - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| <ul style="list-style-type: none"> - DPCH frame offset | 0 chips |
| <ul style="list-style-type: none"> - Secondary CPICH info | Not Present |
| <ul style="list-style-type: none"> - DL channelisation code | 1 |
| <ul style="list-style-type: none"> - Secondary scrambling code | Reference to TS34.108 clause 6.10 Parameter Set |
| <ul style="list-style-type: none"> - Spreading factor | 0 |
| <ul style="list-style-type: none"> - Code number | No change |
| <ul style="list-style-type: none"> - Scrambling code change | 0 |
| <ul style="list-style-type: none"> - TPC combination index | Not Present |
| <ul style="list-style-type: none"> - SSdT Cell Identity | Not Present |
| <ul style="list-style-type: none"> - Closed loop timing adjustment mode | Not Present |
| <ul style="list-style-type: none"> - SCCPCH information for FACH | Not Present |

Contents of RADIO BEARER SETUP COMPLETE message: AM

| | |
|--|--|
| Message Type | |
| RRC transaction identifier | Checked to see if the value is identical to the same IE in the downlink RADIO BEARER SETUP message. |
| Integrity check info | The presence of this IE is dependent on Ixit statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs shall be absent. |
| - Message authentication code | This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. |
| - RRC Message sequence number | This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. |
| Uplink integrity protection activation info | Not checked. |
| CHOICE mode | FDD |
| START | Not checked |
| COUNT-C activation time | The presence of this IE depends on the following 2 factors: (a) There exists RB(s) mapped to RLC-TM and (b) UE is transiting to CELL_DCH state after the RB establishment procedure. Else, this IE is absent. |
| Radio bearer uplink ciphering activation time info | If ciphering is not activated in RADIO BEARER SETUP message, this IE must be absent. Else, SS checks this IE for the presence of activation times of all ciphered uplink RLC-UM and RLC-AM RBs. |
| Uplink counter synchronisation info | Not checked |

Contents of RADIO BEARER RELEASE COMPLETE message: AM

| | |
|--|--|
| Message Type | |
| RRC transaction identifier | Checked to see the value is identical to the same IE in the downlink RADIO BEARER RELEASE message. |
| Integrity check info | The presence of this IE is dependent on Ixit statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs shall be absent. |
| - Message authentication code | This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. |
| - RRC Message sequence number | This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. |
| Uplink integrity protection activation info | Not checked. |
| CHOICE mode | FDD |
| COUNT-C activation time | The presence of this IE depends on the following 2 factors: (a) There exists RB(s) mapped to RLC-TM and (b) UE is transiting to CELL_DCH state after the RB release procedure. Else, this IE is absent. |
| Radio bearer uplink ciphering activation time info | If ciphering is not activated in RADIO BEARER RELEASE message, this IE must be absent. Else, SS checks this IE for the presence of activation times of all ciphered uplink RLC-UM and RLC-AM RBs. |
| Uplink counter synchronisation info | Not checked |

Contents of RRC CONNECTION REQUEST message: TM

| Information Element | Value/remark |
|--------------------------|--|
| Message Type | |
| Initial UE identity | |
| - CHOICE UE id type | |
| - IMSI (GSM-MAP) | Set to the UE's IMSI (GSM-MAP) or TMSI. |
| Establishment cause | To be checked against requirement if specified |
| Protocol error indicator | FALSE |
| Measured results on RACH | Not checked |

Contents of RRC CONNECTION RELEASE message: UM

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| U-RNTI | This IE is set to the following value when the message is transmitted on the CCCH. When transmitted on DCCH, this is absent. |
| - SRNC identity | 0000 0000 0001B |
| - S-RNTI | 0000 0000 0000 0000 0001B |
| RRC transaction identifier | 0 |
| Integrity check info | The presence of this IE depends on 2 factors: (a) IXIT statements in TS 34.123-2: If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. (b) This IE is present when this message is transmitted on downlink DCCH. Else, this IE and the sub-IEs are omitted. |
| - Message authentication code | SS calculates the value of MAC-I for this message and writes to this IE. |
| - RRC Message sequence number | SS provides the value of this IE, from its internal counter. |
| N308 | 2 (for CELL_DCH state). Not Present (for UE in other connected mode states). |
| Release cause | Normal event |
| Rplmn information | Not Present |

Contents of RRC CONNECTION RELEASE COMPLETE message: AM or UM

| Information Element | Semantics description |
|-------------------------------|--|
| Message Type | |
| RRC transaction identifier | The value of this IE is checked to see that it matches the value of the same IE transmitted in the downlink RRC CONNECTION RELEASE message. |
| Integrity check info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. |
| - Message authentication code | Checked to see if it's identical to the value of XMAC-I calculated by the SS |
| - RRC Message sequence number | Checked to see if it is present. This number is used by the SS to compute the XMAC-I |
| Error indication | Not checked |

Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH)

| Information Element | Value/remark |
|--|---|
| Message Type | |
| Initial UE identity | Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST" message |
| RRC transaction identifier | 0 |
| Activation time | Not Present(Now) |
| New U-RNTI | |
| - SRNC identity | 0000 0000 0001B |
| - S-RNTI | 0000 0000 0000 0000 0001B |
| New C-RNTI | 0000 0000 0000 0001B |
| RRC State Indicator | CELL_DCH |
| UTRAN DRX cycle length coefficient | 9 |
| Capability update requirement | Not Present |
| Signalling RB information to setup | (UM DCCH for RRC) |
| - RB identity | 1 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | UM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Timer based no explicit |
| - Timer discard | 50 |
| - CHOICE Downlink RLC mode | UM RLC |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 1 |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 1 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 1 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 1 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 2 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 1 |
| Signalling RB information to setup | (AM DCCH for RRC) |
| - RB identity | 2 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | AM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |

| Information Element | Value/remark |
|--|--|
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 2 |
| - CHOICE RLC size list | Configure |
| - MAC logical channel priority | 2 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 2 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 2 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 3 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 2 |
| Signalling RB information to setup | (AM DCCH for NAS_DT High priority) |
| - RB identity | 3 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | AM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |

| Information Element | Value/remark |
|--|--|
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 3 |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 3 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 3 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 3 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 4 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 3 |
| Signalling RB information to setup | (AM DCCH for NAS_DT Low priority) |
| - RB identity | 4 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | AM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 4 |
| - CHOICE RLC size list | Configured |

| Information Element | Value/remark |
|---|---|
| - MAC logical channel priority | 4 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 4 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 4 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 5 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 4 |
| UL Transport channel information for all transport channels | |
| - PRACH TFCS | Not Present |
| - CHOICE Mode | FDD |
| - TFC subset | Nor Present |
| - UL DCH TFCS | |
| - CHOICE TFCI signalling | Normal |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Addition |
| - TFCS complete reconfigure | |
| - CHOICE CTFC Size | 2bit CTFC |
| - CTFC information | This IE is repeated for TFC numbers and reference to TS34.108 clause 6.10 |
| - CTFC | Reference to TS34.108 clause 6.10 Parameter Set |
| - Power offset information | |
| - CHOICE Gain Factors | Computed Gain Factors(The last TFC is set to Signalled Gain Factors) |
| - Gain factor β_c | 11 (below 64 kbps) 9 (higher than 64 kbps) (Not Present if the above is set to Computed Gain Factors) |
| - Gain factor β_d | 15 (Not Present if the above is set to Computed Gain Factors) |
| - Reference TFC ID | 0 |
| - CHOICE mode | FDD |
| - Power offset Pp-m | Not Present |
| Added or Reconfigured UL TrCH information | |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| - Dynamic Transport format information | |
| - RLC size | Reference to clause 6.10 Parameter Set |
| - Number of TBs and TTI lists | (This IE is repeated for TFI number) |
| - Transmission Time Interval | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of Transport blocks | Reference to TS34.108 clause 6.10 Parameter Set |
| - CHOICE Logical channel list | All |
| - Semi-static Transport Format information | |
| - Transmission time interval | Reference to clause 6.10 Parameter Set |
| - Type of channel coding | Reference to clause 6.10 Parameter Set |
| - Coding Rate | Reference to clause 6.10 Parameter Set |
| - Rate matching attribute | Reference to clause 6.10 Parameter Set |
| - CRC size | Reference to clause 6.10 Parameter Set |
| DL Transport channel information common for all transport channel | |
| - SCCPCH TFCS | Not Present |
| - CHOICE mode | FDD |

| Information Element | Value/remark |
|---|--|
| - CHOICE DL parameters | Same as UL |
| Added or Reconfigured DL TrCH information | |
| - Downlink transport channel type | DCH |
| - DL Transport channel identity | 10 |
| - CHOICE DL parameters | Same as UL |
| - Uplink transport channel type | DCH |
| - UL TrCH Identity | 5 |
| - DCH quality target | |
| - BLER Quality value | -6.3 |
| - Transparent mode signalling info | Not Present |
| Frequency info | |
| - UARFCN uplink(Nu) | Reference to clause 5.1 Test frequencies |
| - UARFCN downlink(Nd) | Reference to clause 5.1 Test frequencies |
| Maximum allowed UL TX power | 33dBm |
| Uplink DPCH info | |
| - Uplink DPCH power control info | |
| - DPCCH power offset | -6dB |
| - PC Preamble | 1 frame |
| - SRB delay | 7 frames |
| - Power Control Algorithm | Algorithm1 |
| - TPC step size | 1dB |
| - Scrambling code type | Long |
| - Scrambling code number | 0 (0 to 16777215) |
| - Number of DPDCH | Not Present(1) |
| - Spreading factor | Reference to TS34.108 clause 6.10 Parameter Set |
| - TFCI existence | Reference to TS34.108 clause 6.10 Parameter Set |
| - Number of FBI bit | Reference to TS34.108 clause 6.10 Parameter Set |
| - Puncturing Limit | Reference to TS34.108 clause 6.10 Parameter Set |
| Downlink information common for all radio links | |
| - Downlink DPCH info common for all RL | |
| - Timing Indication | Initialise |
| - CFN-targetSFN frame offset | 0 |
| - CHOICE mode | FDD |
| - Downlink DPCH power control information | |
| - DPC mode | 0 (single) |
| - Power offset $P_{Pilot-DPCH}$ | 0 |
| - DL rate matching restriction information | Not Present |
| - Spreading factor | Reference to TS34.108 clause 6.10 Parameter Set |
| - Fixed or Flexible Position | Reference to TS34.108 clause 6.10 Parameter Set |
| - TFCI existence | Reference to TS34.108 clause 6.10 Parameter Set |
| - CHOICE SF | Reference to TS34.108 clause 6.10 Parameter Set |
| - DPCH compressed mode info | Not Present |
| - TX Diversity mode | None |
| - SSDT information | Not Present |
| - Default DPCH Offset Value | 0 |
| Downlink information for each radio links list | |
| - Downlink information for each radio links | |
| - CHOICE mode | FDD |
| - Primary CPICH info | |
| - Primary scrambling code | Reference to clause 6.1 "Default settings (FDD)" |
| - PDSCH with SHO DCH info | Not Present |
| - PDSCH code mapping | Not Present |
| - Downlink DPCH info for each RL | |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - DPCH frame offset | 0 chips |
| - Secondary CPICH info | Not Present |
| - DL channelisation code | |
| - Secondary scrambling code | 1 |
| - Spreading factor | Reference to clause 6.10 Parameter Set |
| - Code number | 0 |
| - Scrambling code change | No change |
| - TPC combination index | 0 |
| - SSDT Cell Identity | Not Present |
| - Closed loop timing adjustment mode | Not Present |
| - SCCPCH information for FACH | Not Present |

Contents of RRC CONNECTION SETUP COMPLETE message: AM

| Information Element | Value/remark |
|--------------------------------------|---|
| Message Type | |
| RRC transaction identifier | The value of this IE is checked to see that it matches the value of the same IE transmitted in the downlink RRC CONNECTION SETUP message. |
| START list | Not checked |
| UE radio access capability | Not checked |
| UE radio access capability extension | Not checked |
| UE system specific capability | Not checked |

Contents of SECURITY MODE COMMAND message: AM

| Information Element | Value/remark |
|--|---|
| Message Type | |
| RRC transaction identifier | Arbitrarily selects an integer between 0 and 3 |
| Integrity check info | |
| - Message authentication code | Set to an arbitrarily selected 32-bits integer |
| - RRC Message Sequence Number | Set to an arbitrarily selected integer between 0 and 15 |
| Security capability | |
| - Ciphering algorithm capability | |
| - UEA0 | If ciphering is not indicated to be active on IXIT statements in TS 34.123-2, set this IE to TRUE. |
| - UEA1 | If ciphering is indicated to be active on IXIT statements in TS 34.123-2, set this IE to TRUE. |
| - Spare | FALSE |
| - Integrity protection algorithm capability | 0000000000000010B (UIA1) |
| - UIA1 | TRUE |
| - Spare | FALSE |
| Ciphering mode info | This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. |
| - Ciphering mode command | Start/restart |
| - Ciphering algorithm | Use the same ciphering algorithm specified in "ciphering algorithm capability" IE in this message. |
| - Ciphering activation time for DPCH | Not Present |
| - Radio bearer downlink ciphering activation time info | |
| - Radio bearer activation time | |
| - RB identity | 1 |
| - RLC sequence number | Current RLC SN+2 |
| - RB identity | 2 |
| - RLC sequence number | Current RLC SN+2 |
| - RB identity | 3 |
| - RLC sequence number | Current RLC SN + 2 |
| - RB identity | 4 |
| - RLC sequence number | Current RLC SN + 2 |
| Integrity protection mode info | The presence of this IE is dependent on IXIT statements in TS 34.123-32. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. |
| - Integrity protection mode command | Start |
| - Downlink integrity protection activation info | Not Present |
| - Integrity protection algorithm | UIA1 |
| - Integrity protection initialisation number | SS selects an arbitrary 32 bits number for FRESH |
| CN domain identity | Supported domain |
| UE system specific security capability | Not Checked |

Contents of SECURITY MODE COMPLETE message: AM

| Information Element | Value/remark |
|--|--|
| Message Type | |
| RRC transaction identifier | The value of this IE is checked to see that it matches the value of the same IE transmitted in the downlink SECURITY MODE COMMAND message. |
| Integrity check info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. |
| - Message authentication code | This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. |
| - RRC Message sequence number | This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. |
| Uplink integrity protection activation info | Not checked. |
| Radio bearer uplink ciphering activation time info | If ciphering is not activated in SECURITY MODE COMMAND message, this IE must be absent. Else, SS checks this IE for the presence of activation times for all ciphered uplink RLC-UM and RLC-AM RBs. |

Contents of UPLINK DIRECT TRANSFER message: AM

| Information Element | Value/remark |
|-------------------------------|--|
| Message Type | |
| Integrity check info | The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. |
| - Message authentication code | This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. |
| - RRC Message sequence number | This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. |
| CN domain identity | Checked to see if set to supported CN domain as specified in the IXIT statements |
| NAS message | Set according to that indicated in specific message content clause |
| Measured results on RACH | Not checked |

9.2 Default Message Contents for RF

This clause contains the default values of common messages for RF test. The parameters of the UL/DL reference measurement channel 12.2kbps and UE test loop mode 1 without Dummy DCCH transmission are set to default message contents.

Contents of Activate RB Test Mode message

| Information Element | Value/remark |
|------------------------|----------------|
| Protocol discriminator | F (Length 1/2) |
| Skip indicator | 0 (Length 1/2) |
| Message Type | 44h |

Contents of Close UE Test Loop message

| Information Element | Value/remark |
|------------------------------|-----------------|
| Protocol discriminator | F (Length 1/2) |
| Skip indicator | 0 (Length 1/2) |
| Message Type | 40h |
| UE test loop mode | 00h |
| UE test loop mode 1 LB setup | 03h 00h F4h 0Ah |

Contents of Open UE Test Loop message

| Information Element | Value/remark |
|------------------------|----------------|
| Protocol discriminator | F (Length 1/2) |
| Skip indicator | 0 (Length 1/2) |
| Message Type | 42h |

Contents of PAGING TYPE 1 message: TM (CS)

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| Paging record list | |
| -Paging record | |
| - CHOICE Used paging identity | CN identity |
| - Paging cause | Terminating Streaming Call |
| - CN domain identity | CS domain |
| - CHOICE UE identity | |
| - IMSI (GSM-MAP) | Set to the same octet string as in the IMSI stored in the USIM card |
| BCCH modification info | Not Present |

Contents of PAGING TYPE 1 message: TM (PS)

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| Paging record list | |
| -Paging record | |
| - CHOICE Used paging identity | CN identity |
| - Paging cause | Terminating Interactive Call |
| - CN domain identity | PS domain |
| - CHOICE UE identity | |
| - IMSI (GSM-MAP) | Set to the same octet string as in the IMSI stored in the USIM card |
| BCCH modification info | Not Present |

Contents of RADIO BEARER SETUP message: AM or UM

| Information Element | Condition | Value/remark |
|--|-----------|---|
| Message Type RRC transaction identifier Integrity check info - message authentication code - RRC message sequence number Integrity protection mode info Ciphering mode info - Ciphering mode command - Ciphering algorithm - Ciphering activation time for DPCH - Radio bearer downlink ciphering activation time info Activation time New U-RNTI New C-RNTI RRC State indicator UTRAN DRX cycle length coefficient CN information info URA identity Signalling RB information to setup | A1,A3 | Arbitrarily selects an integer between 0 and 3 The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. SS calculates the value of MAC-I for this message and writes to this IE. SS provides the value of this IE, from its internal counter. Not Present The presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. Start/restart Use one of the supported ciphering algorithms $(256+CFN-(CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$ Not Present $(256+CFN-(CFN \text{ MOD } 8 + 8)) \text{ MOD } 256$ Not Present Not Present CELL_DCH Not Present Not Present Not Present Not Present |
| RAB information for setup - RAB info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer - RB information to setup - RB identity - PDCP info - CHOICE RLC info type - CHOICE Uplink RLC mode - Transmission RLC discard - Segmentation indication - CHOICE Downlink RLC mode - Segmentation indication - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity | A1 | 0000 0001B CS domain Not Present UseT314 10 Not Present RLC info TM RLC Not Present FALSE TM RLC FALSE Not Present 1 DCH 1 Not Present Configured 1 1 DCH 6 Not Present Not Present |
| RAB information for setup - RAB info - RAB identity | A3 | 0000 0101B |

| Information Element | Condition | Value/remark |
|---|-----------|--|
| <ul style="list-style-type: none"> - CN domain identity - NAS Synchronization Indicator - Re-establishment timer - RB information to setup - RB identity - PDCP info - CHOICE RLC info type - CHOICE Uplink RLC mode - Transmission RLC discard - SDU discard mode - MAX_DAT - Timer_MRW - MaxMRW - Transmission window size - Timer_RST - Max_RST - Polling info - Timer_poll_prohibit - Timer_poll - Poll_SDU - Last transmission PDU poll - Last retransmission PDU poll - Poll_Windows - CHOICE Downlink RLC mode - In-sequence delivery - Receiving window size - Downlink RLC status info - Timer_status_prohibit - Timer_EPC - Missing PDU indicator - RB mapping info - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list - RLC size index - MAC logical channel priority - Downlink RLC logical channel info - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity | | PS domain Not Present UseT314 20 Not Present RLC info AM RLC Max DAT retransmissions 4 100 4 8 500 4 200 200 1 TRUE TRUE 99 AM RLC TRUE 8 200 200 TRUE 2RBMuxOptions Not Present 1 DCH 1 Not Present Configured 1 1 DCH 6 Not Present Not Present 1 RACH Not Present 7 Explicit List Reference to TS34.108 clause 6 Parameter Set 6 1 FACH Not Present Not Present Not Present |
| RB information to be affected Downlink counter synchronisation info | A1,A3 | Not Present Not Present |
| UL Transport channel information for all transport channels <ul style="list-style-type: none"> - PRACH TFCS - CHOICE mode - TFC subset - UL DCH TFCS | A1,A3 | Not Present FDD Not Present |

| Information Element | Condition | Value/remark |
|---|-----------|--|
| <ul style="list-style-type: none"> - CHOICE TFCI signalling - TFCI Field 1 information - CHOICE TFCS representation - TFCS complete reconfigure information - CHOICE CTFC Size <ul style="list-style-type: none"> - ctfc2Bit - ctfc2 <ul style="list-style-type: none"> -powerOffsetInformation(OP) -gainFactorInformation <ul style="list-style-type: none"> -computedGainFactors - Reference TFC ID - ctfc2 <ul style="list-style-type: none"> -powerOffsetInformation(OP) -gainFactorInformation <ul style="list-style-type: none"> -computedGainFactors - Reference TFC ID - ctfc2 <ul style="list-style-type: none"> -powerOffsetInformation(OP) -gainFactorInformation <ul style="list-style-type: none"> -computedGainFactors - Reference TFC ID - ctfc2 <ul style="list-style-type: none"> -powerOffsetInformation(OP) -gainFactorInformation <ul style="list-style-type: none"> -computedGainFactors - Reference TFC ID - ctfc2 <ul style="list-style-type: none"> -powerOffsetInformation(OP) -gainFactorInformation <ul style="list-style-type: none"> -signalledGainFactors -modeSpecificInfo <ul style="list-style-type: none"> -fdd <ul style="list-style-type: none"> - Gain factor βc - Gain factor βd - Reference TFC ID | | Normal Complete reconfiguration ctfc2Bit 4 0 ComputedGainFactors 0 0 2 computedGainFactors 0 0 1 computedGainFactors 0 0 3 signalledGainFactors fdd 8 15 0 Not Present |
| Deleted UL TrCH information | | |
| Added or Reconfigured UL TrCH information <ul style="list-style-type: none"> -ul-AddReconfTransChInfoList - Uplink transport channel type - UL Transport channel identity - TFS - CHOICE Transport channel type <ul style="list-style-type: none"> TTI <ul style="list-style-type: none"> -tti20 <ul style="list-style-type: none"> -DedicatedDynamicTF-Info <ul style="list-style-type: none"> - RLC size <ul style="list-style-type: none"> - BitMode <ul style="list-style-type: none"> -sizeType2 <ul style="list-style-type: none"> -Part1 -Part2 -numberOfTbSizeList <ul style="list-style-type: none"> -NumberOfTransportBlocks <ul style="list-style-type: none"> -zero -NumberOfTransportBlocks <ul style="list-style-type: none"> -one -logicalChannelList <ul style="list-style-type: none"> -allSizes -semistaticTF-Information <ul style="list-style-type: none"> -channelCodingType <ul style="list-style-type: none"> -convolutional - Rate matching attribute - CRC size | A1 | 1 DCH 1 Dedicated transport channels tti20 1 BitMode sizeType2 ((Part1*8)+128+Part2=244bit) 14 4 2 zero one allSizes convolutional third 256 16 |
| DL Transport channel information common for all transport channel | A1,A3 | Not Present FDD Same as UL |
| Deleted DL TrCH information | A1,A3 | Not Present |

| Information Element | Condition | Value/remark |
|--|-----------|--|
| Added or Reconfigured DL TrCH information -dl-AddReconfTransChInfoList(OP) - Downlink transport channel type - DL Transport channel identity - CHOICE DL parameters - Uplink transport channel type - UL TrCH identity - DCH quality target - BLER Quality value - Transparent mode signalling info | | 1 DCH 6 Same as UL DCH 1 -6.3 Not Present |
| Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Maximum allowed UL TX power CHOICE channel requirement - Uplink DPCH power control info - DPCCH power offset - PC Preamble - SRB delay - Power Control Algorithm - TPC step size - Scrambling code type - Scrambling code number - Number of DPDCH - spreading factor - TFCI existence - Number of FBI bit - Puncturing Limit CHOICE Mode - Downlink PDSCH information | A1,A3 | Reference to clause 5.1 Test frequencies Reference to clause 5.1 Test frequencies 33dBm Uplink DPCH info -6dB 1 frame 7 frames Algorithm1 1dB Long 0 (0 to 16777215) 1 64 TRUE Not Present(0) 1 FDD Not Present |
| Downlink information common for all radio links - Downlink DPCH info common for all RL - Timing indicator - CFN-targetSFN frame offset - Downlink DPCH power control information - DPC mode - CHOICE mode - Power offset $P_{Pilot-DPCH}$ - DL rate matching restriction information - Spreading factor - Number of bits for Pilot bits(SF=128,256) - Fixed or Flexible Position - TFCI existence - DPCH compressed mode info - TX Diversity mode - SSdT information - Default DPCH Offset Value | A1,A3 | Maintain Not Present 0 (single) FDD 0 Not Present 128 8 Fixed TRUE Not Present None Not Present Not Present |
| Downlink information for each radio link list - Primary CPICH info - Primary scrambling code - PDSCH with SHO DCH info - PDSCH code mapping - Downlink DPCH info for each RL - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSdT Cell Identity - Closed loop timing adjustment mode - SCCPCH information for FACH | A1,A3 | 100 Not Present Not Present Primary CPICH may be used 0 chips Not Present 1 128 0 No change 0 Not Present Not Present Not Present |

| Condition | Explanation |
|-----------|--|
| A1 | This IE is needed for transparent mode. In the case of TX and RX test cases, this IE is selected. |
| A3 | This IE is needed for acknowledged mode. |
| NOTE: | In the case of Performance Requirement and RRM test cases, A1 or A3 is selected according to the combination of UL and DL channels or test requirements. |

Contents of RRC CONNECTION RELEASE message: UM

| Information Element | Value/remark |
|-------------------------------|---|
| Message Type | |
| U-RNTI | This IE is set to the following value when the message is transmitted on the DCCCH. When transmitted on CDCCH, this is absent. 0000 0000 0001B 0000 0000 0000 0000 0001B |
| - SRNC identity | |
| - S-RNTI | |
| RRC transaction identifier | 0 |
| Integrity check info | The presence of this IE depends on 2 factors: (a) IXIT statements in TS 34.123-2: If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. (b) This IE is present when this message is transmitted on downlink DCCH. Else, this IE and the sub-IEs are omitted. |
| - Message authentication code | SS calculates the value of MAC-I for this message and writes to this IE. |
| - RRC Message sequence number | SS provides the value of this IE, from its internal counter. |
| N308 | 2 (for CELL_DCH state). Not Present (for UE in other connected mode states). |
| Release cause | Normal event |
| Rplmn information | Not Present |

Contents of RRC CONNECTION SETUP message: UM

| Information Element | Value/remark |
|--|--|
| Message Type | |
| Initial UE identity | Select the same identity as in the IE "Initial UE Identity" in received RRC CONNECTION REQUEST message |
| RRC transaction identifier | 0 |
| Activation time | Not Present(Now) |
| New U-RNTI | |
| - SRNC identity | 0000 0000 0001B |
| - S-RNTI | 0000 0000 0000 0000 0001B |
| New C-RNTI | 0000 0000 0000 0001B |
| RRC State Indicator | CELL_DCH |
| UTRAN DRX cycle length coefficient | 9 |
| Capability update requirement | Not Present |
| Signalling RB information to setup | (UM DCCH for RRC) |
| - RB identity | 1 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | UM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Timer based no explicit |
| Timer discard | 450 |
| - CHOICE Downlink RLC mode | UM RLC |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 1 |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 1 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 1 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 1 |
| - CHOICE RLC size list | Configured |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 2 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 1 |
| - RLC logical channel mapping indicator | Not Present |
| Signalling RB information to setup | (AM DCCH for RRC) |
| - RB identity | 2 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | AM RLC |

| Information Element | Value/remark |
|--|--|
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 2 |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 2 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 2 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 2 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 3 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 2 |
| Signalling RB information to setup | (AM DCCH for NAS_DT High priority) |
| - RB identity | 3 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | AM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |

| Information Element | Value/remark |
|--|--|
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| -UL Transport channel identity | 5 |
| - Logical channel identity | 3 |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 3 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 3 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 3 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 4 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 3 |
| Signalling RB information to setup | (AM DCCH for NAS_DT Low priority) |
| - RB identity | 4 |
| - CHOICE RLC info type | |
| - RLC info | |
| - CHOICE Uplink RLC mode | AM RLC |
| - Transmission RLC discard | |
| - SDU discard mode | Max DAT retransmissions |
| - MAX_DAT | 4 |
| - Timer_MRW | 100 |

| Information Element | Value/remark |
|---|--|
| - MaxMRW | 4 |
| - Transmission window size | 8 |
| - Timer_RST | 500 |
| - Max_RST | 4 |
| - Polling info | |
| - Timer_poll_prohibit | 200 |
| - Timer_poll | 200 |
| - Poll_SDU | 1 |
| - Last transmission PDU poll | TRUE |
| - Last retransmission PDU poll | TRUE |
| - Poll_Windows | 99 |
| - CHOICE Downlink RLC mode | AM RLC |
| - In-sequence delivery | TRUE |
| - Receiving window size | 8 |
| - Downlink RLC status info | |
| - Timer_status_prohibit | 200 |
| - Timer_EPC | 200 |
| - Missing PDU indicator | TRUE |
| - RB mapping info | |
| - Information for each multiplexing option | 2 RBMuxOptions |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - Logical channel identity | 4 |
| - CHOICE RLC size list | Configured |
| - MAC logical channel priority | 4 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | DCH |
| - DL DCH Transport channel identity | 10 |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 4 |
| - RLC logical channel mapping indicator | Not Present |
| - Number of RLC logical channels | 1 |
| - Uplink transport channel type | RACH |
| - UL Transport channel identity | Not Present |
| - Logical channel identity | 4 |
| - CHOICE RLC size list | Explicit List |
| - RLC size index | Reference to TS34.108 clause 6 Parameter Set |
| - MAC logical channel priority | 5 |
| - Downlink RLC logical channel info | |
| - Number of RLC logical channels | 1 |
| - Downlink transport channel type | FACH |
| - DL DCH Transport channel identity | Not Present |
| - DL DSCH Transport channel identity | Not Present |
| - Logical channel identity | 4 |
| UL Transport channel information for all transport channels | |
| - PRACH TFCS | Not Present |
| - CHOICE Mode | FDD |
| - TFC subset | Not Present |
| - UL DCH TFCS | |
| - CHOICE TFCI signalling | Normal |
| - TFCI Field 1 information | |
| - CHOICE TFCS representation | Addition |
| - TFCS complete reconfigure | |
| - CHOICE CTFC Size | ctfc2Bit |

| Information Element | Value/remark |
|---|--|
| - ctfc2Bit | 2 |
| - ctfc2 | 0 |
| -powerOffsetInformation(OP) | |
| -gainFactorInformation | computedGainFactors |
| -computedGainFactors | 0 |
| -powerOffsetPp-m(OP) | |
| - ctfc2 | 1 |
| -powerOffsetInformation(OP) | |
| -gainFactorInformation | signalledGainFactors |
| -signalledGainFactors | |
| -modeSpecificInfo | fdd |
| -fdd | |
| - Gain factor β_c | 15 |
| - Gain factor β_d | 15 |
| - Reference TFC ID | 0 |
| - Power offset Pp-m | Not Present |
| Added or Reconfigured UL TrCH information | |
| -ul-AddReconfTransChInfoList | 1 |
| - Uplink transport channel type | DCH |
| - UL Transport channel identity | 5 |
| - TFS | |
| - CHOICE Transport channel type | Dedicated transport channels |
| TTI | tti40 |
| -tti40 | 1 |
| -DedicatedDynamicTF-Info | |
| - RLC size | octetModeType1 ((8*sizeType1)+16=96bit) |
| -octetModeType1 | sizeType1 |
| -sizeType1 | 10 |
| -numberOfTbSizeList | 2 |
| -NumberOfTransportBlocks | zero |
| -zero | |
| -NumberOfTransportBlocks | one |
| -one | |
| -logicalChannelList | allSizes |
| -allSizes | |
| -semistaticTF-Information | |
| -channelCodingType | convolucional |
| -convolucional | third |
| - Rate matching attribute | 256 |
| - CRC size | crc12 |
| DL Transport channel information common for all transport channel | |
| - SCCPCH TFCS | Not Present |
| - CHOICE mode | FDD |
| - CHOICE DL parameters | Same as UL |
| Added or Reconfigured DL TrCH information | |
| -dl-AddReconfTransChInfoList | 1 |
| - Downlink transport channel type | DCH |
| - DL Transport channel identity | 10 |
| - CHOICE DL parameters | SameAasUL |
| - Uplink transport channel type | DCH |
| - UL TrCH Identity | 5 |
| - DCH quality target | |
| - BLER Quality value | -6.3 |
| - Transparent mode signalling info | Not Present |
| Frequency info | |
| - UARFCN uplink(Nu) | Reference to clause 5.1 Test frequencies |
| - UARFCN downlink(Nd) | Reference to clause 5.1 Test frequencies |

| Information Element | Value/remark |
|---|---------------------------|
| Maximum allowed UL TX power | 33dBm |
| Uplink DPCH info | |
| - Uplink DPCH power control info | |
| - DPCCH power offset | -6dB |
| - PC Preamble | 1 frame |
| - SRB delay | 7 frames |
| - Power Control Algorithm | Algorithm1 |
| - TPC step size | 1dB |
| - Scrambling code type | Long |
| - Scrambling code number | 0 (0 to 16777215) |
| - Number of DPDCH | 1 |
| spreading factor | 256 |
| - TFCI existence | TRUE |
| - Number of FBI bit | Not Present(0) |
| - Puncturing Limit | 1 |
| Downlink information common for all radio links | |
| - Downlink DPCH info common for all RL | |
| - Timing Indication | Initialise |
| - CFN-targetSFN frame offset | 0 |
| - CHOICE mode | FDD |
| - Downlink DPCH power control information | |
| - DPC mode | 0 (single) |
| - Power offset $P_{\text{Pilot-DPDCH}}$ | 0 |
| - DL rate matching restriction information | Not Present |
| - Spreading factor | 256 |
| - Number of bits for Pilot bits(SF=128,256) | 8 |
| - Fixed or Flexible Position | Fixed |
| - TFCI existence | FALSE |
| - DPCH compressed mode info | Not Present |
| - TX Diversity mode | None |
| - SSDT information | Not Present |
| - Default DPCH Offset Value | 0 |
| Downlink information for each radio links list | |
| -Downlink information for each radio links | |
| - CHOICE mode | FDD |
| - Primary CPICH info | |
| - Primary scrambling code | 100 |
| - PDSCH with SHO DCH info | Not Present |
| - PDSCH code mapping | Not Present |
| - Downlink DPCH info for each RL | |
| - Primary CPICH usage for channel estimation | Primary CPICH may be used |
| - DPCH frame offset | 0 chips |
| - Secondary CPICH info | Not Present |
| - DL channelisation code | |
| - Secondary scrambling code | 1 |
| - Spreading factor | 256 |
| - Code number | 0 |
| - Scrambling code change | No change |
| - TPC combination index | 0 |
| - SSDT Cell Identity | Not Present |
| - Closed loop timing adjustment mode | Not Present |
| - SCCPCH information for FACH | Not Present |

Contents of SECURITY MODE COMMAND message: AM

| Information Element | Value/remark |
|--|---|
| Message Type | |
| RRC transaction identifier | Arbitrarily selects an integer between 0 and 3 |
| Integrity check info | |
| - Message authentication code | Set to an arbitrarily selected 32-bits integer |
| - RRC Message Sequence Number | Set to an arbitrarily selected integer between 0 and 15 |
| Security capability | |
| - Ciphering algorithm capability | If ciphering is not indicated to be active on Ixit statements in TS 34.123-2, set this IE to TRUE. |
| - UEA0 | If ciphering is indicated to be active on Ixit statements in TS 34.123-2, set this IE to TRUE. |
| - UEA1 | FALSE |
| - Spare | FALSE |
| - Integrity protection algorithm capability | 0000000000000010B (UIA1) |
| - UIA1 | TRUE |
| - Spare | FALSE |
| Ciphering mode info | This presence of this IE is dependent on Ixit statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. |
| - Ciphering mode command | Start/restart |
| - Ciphering algorithm | Use the same ciphering algorithm specified in "ciphering algorithm capability" IE in this message. |
| - Ciphering activation time for DPCH | Not Present |
| - Radio bearer downlink ciphering activation time info | |
| - Radio bearer activation time | |
| - RB identity | 1 |
| - RLC sequence number | Current RLC SN+2 |
| - RB identity | 2 |
| - RLC sequence number | Current RLC SN+2 |
| - RB identity | 3 |
| - RLC sequence number | Current RLC SN + 2 |
| - RB identity | 4 |
| - RLC sequence number | Current RLC SN + 2 |
| Integrity protection mode info | The presence of this IE is dependent on Ixit statements in TS 34.123-32. If integrity protection is indicated to be active, this IE is present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs are omitted. |
| - Integrity protection mode command | Start |
| - Downlink integrity protection activation info | Not Present |
| - Integrity protection algorithm | UIA1 |
| - Integrity protection initialisation number | SS selects an arbitrary 32 bits number for FRESH |
| CN domain identity | Supported domain |
| UE system specific security capability | Not Checked |

Annex A (informative): System information definition using ASN.1 description

Reference: clause 6.1.

```

MasterInformationBlock
mib-ValueTag 1,
plmn-Type {
  gsm-MAP {
    plmn-Identity {
      mcc {
        MCC 0,
        MCC 0,
        MCC 1
      },
      mnc {
        MNC 1
      }
    }
  }
},
sibSb-ReferenceList {
  SIBSb-ReferenceList {
    sibSb-Type sysInfoTypeSB1 1,
    scheduling {
      scheduling {
        segCount 1,
        sib-Pos {
          rep16 1
        }
      }
    }
  },
  SIBSb-ReferenceList {
    sibSb-Type sysInfoType1 2,
    scheduling {
      scheduling {
        segCount 1,
        sib-Pos {
          rep128 5
        }
      }
    }
  },
  SIBSb-ReferenceList {
    sibSb-Type sysInfoType2 2,
    scheduling {
      scheduling {
        segCount 1,
        sib-Pos {
          rep128 7
        }
      }
    }
  },
  SIBSb-ReferenceList {
    sibSb-Type sysInfoType3 1,
    scheduling {
      scheduling {
        segCount 1,
        sib-Pos {
          rep64 3
        }
      }
    }
  },
  SIBSb-ReferenceList {
    sibSb-Type sysInfoType4 1,
    scheduling {
      scheduling {
        segCount 1,
        sib-Pos {
          rep64 19
        }
      }
    }
  }
}

```

```

    }
  }
}

SysInfoTypeSB1
{
  sib-ReferenceList {
    {
      sib-Type sysInfoType5 : 1,
      scheduling {
        scheduling {
          segCount 3,
          sib-Pos repl28 : 13,
          sib-PosOffsetInfo {
            so2,
            so2
          }
        }
      }
    },
    {
      sib-Type sysInfoType6 : 1,
      scheduling {
        scheduling {
          segCount 3,
          sib-Pos repl28 : 21,
          sib-PosOffsetInfo {
            so2,
            so2
          }
        }
      }
    },
    {
      sib-Type sysInfoType7 : NULL,
      scheduling {
        scheduling {
          segCount 1,
          sib-Pos repl28 : 11
        }
      }
    },
    {
      sib-Type sysInfoType11 : 1,
      scheduling {
        scheduling {
          segCount 2,
          sib-Pos repl28 : 29,
          sib-PosOffsetInfo {
            so2
          }
        }
      }
    },
    {
      sib-Type sysInfoType12 : 1,
      scheduling {
        scheduling {
          segCount 2,
          sib-Pos repl28 : 53,
          sib-PosOffsetInfo {
            so2
          }
        }
      }
    }
  }
}

SysInfoType1
{
  cn-CommonGSM-MAP-NAS-SysInfo '00 80'H,
  cn-DomainSysInfoList {
    {
      cn-DomainIdentity ps-domain,
      cn-Type gsm-MAP : '00 00'H,

```

```

        cn-DRX-CycleLengthCoeff 7
    },
    {
        cn-DomainIdentity cs-domain,
        cn-Type gsm-MAP : '1E 01'H,
        cn-DRX-CycleLengthCoeff 7
    }
},
ue-ConnTimersAndConstants {
    t-301 ms2000,
    n-301 2,
    t-302 ms4000,
    n-302 3,
    t-304 ms1000,
    n-304 3,
    t-305 m60,
    t-307 s50,
    t-308 ms320,
    t-309 8,
    t-310 ms320,
    n-310 5,
    t-311 ms500,
    t-312 5,
    n-312 s200,
    t-313 10,
    n-313 s20,
    t-314 s20,
    t-315 s30,
    n-315 s200,
    t-316 s50,
    t-317 s1800
},
ue-IdleTimersAndConstants {
    t-300 ms400,
    n-300 7,
    t-312 10,
    n-312 s200
}
}

SysInfoType2
{
    ura-IdentityList {
        '00000000 00000001'B
    }
}

SysInfoType3
{
    sib4indicator TRUE,
    cellIdentity '00000000 00000000 00000000 0001'B,
    cellSelectReselectInfo {
        mappingInfo {
            {
                rat ultra-FDD,
                mappingFunctionParameterList {
                    {
                        functionType linear,
                        mapParameter1 1,
                        mapParameter2 1,
                        upperLimit 1
                    }
                }
            }
        }
    },
    cellSelectQualityMeasure cpich-Ec-N0 : {
        q-HYST-2-S 0
    },
    modeSpecificInfo fdd : {
        s-Intrasearch 8,
        s-Intersearch 8,
        s-SearchHCS 5,
        q-QualMin -20,
        q-RxlevMin -58
    },
    q-Hyst-1-S 0,
    t-Reselection-S 0,
    hcs-ServingCellInformation {

```



```

        },
        gainFactorBetaD 15,
        referenceTFC-ID 0
    },
    powerOffsetPp-m -5
}
}
},
prach-Partitioning fdd : {
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
},
persistenceScalingFactorList {
    psf0-9,
    psf0-9,
    psf0-9,
    psf0-9,
    psf0-9,
    psf0-9
},
ac-To-ASC-MappingTable {
    6,
    4,

```

```

    3,
    2,
    1,
    0
  },
  modeSpecificInfo fdd : {
    primaryCPICH-TX-Power 31,
    constantValue -10,
    prach-PowerOffset {
      powerRampStep 3,
      preambleRetransMax 2
    },
    rach-TransmissionParameters {
      mmax 2,
      nb01Min 3,
      nb01Max 10
    },
    aich-Info {
      channelisationCode256 3,
      sttd-Indicator FALSE,
      aich-TransmissionTiming e0
    }
  }
},
sCCPCH-SystemInformationList {
  {
    secondaryCCPCH-Info {
      modeSpecificInfo fdd : {
        pCPICH-UsageForChannelEst maybeUsed,
        sttd-Indicator FALSE,
        sf-AndCodeNumber sf64 : 1,
        pilotSymbolExistence FALSE,
        tfci-Existence TRUE,
        positionFixedOrFlexible flexible,
        timingOffset 0
      }
    },
    tfcs normalTFCI-Signalling : complete : {
      ctfcSize ctfc4Bit : {
        {
          ctfc4 0
        },
        {
          ctfc4 1
        },
        {
          ctfc4 2
        },
        {
          ctfc4 3
        },
        {
          ctfc4 4
        },
        {
          ctfc4 5
        },
        {
          ctfc4 6
        },
        {
          ctfc4 8
        },
        {
          ctfc4 10
        }
      }
    }
  },
  fach-PCH-InformationList {
    {
      transportFormatSet commonTransChTFS : {
        tti tt10 : {
          {
            rlc-Size fdd : {
              octetModeRLC-SizeInfoType2 sizeType1 : 24
            },
            numberOfTbSizeList {

```



```

},
primaryCCPCH-Info fdd : {
  tx-DiversityIndicator FALSE
},
prach-SystemInformationList {
  {
    prach-RACH-Info {
      modeSpecificInfo fdd : {
        availableSignatures '00000000 11111111'B,
        availableSF sfpr64,
        preambleScramblingCodeWordNumber 0,
        puncturingLimit p11,
        availableSubChannelNumbers '11111111 1111'B
      }
    },
    transportChannelIdentity 15,
    rach-TransportFormatSet commonTransChTFS : {
      tti tti20 : {
        {
          rlc-Size fdd : {
            octetModeRLC-SizeInfoType2 sizeType1 : 15
          },
          numberOfTbSizeList {
            one : NULL
          },
          logicalChannelList configured : NULL
        },
        {
          rlc-Size fdd : {
            octetModeRLC-SizeInfoType2 sizeType2 : 3
          },
          numberOfTbSizeList {
            one : NULL
          },
          logicalChannelList configured : NULL
        }
      },
      semistaticTF-Information {
        channelCodingType convolutional : half,
        rateMatchingAttribute 150,
        crc-Size crc16
      }
    },
    rach-TFCS normalTFCI-Signalling : complete : {
      ctfcSize ctfc2Bit : {
        {
          ctfc2 0,
          powerOffsetInformation {
            gainFactorInformation computedGainFactors : 0,
            powerOffsetPp-m -5
          }
        },
        {
          ctfc2 1,
          powerOffsetInformation {
            gainFactorInformation signalledGainFactors : {
              modeSpecificInfo fdd : {
                gainFactorBetaC 10
              },
              gainFactorBetaD 15,
              referenceTFC-ID 0
            },
            powerOffsetPp-m -5
          }
        }
      }
    },
    prach-Partitioning fdd : {
      {
        accessServiceClass-FDD {
          availableSignatureStartIndex 0,
          availableSignatureEndIndex 7,
          assignedSubChannelNumber '1111'B
        }
      },
      {
        accessServiceClass-FDD {
          availableSignatureStartIndex 0,

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        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
{
    accessServiceClass-FDD {
        availableSignatureStartIndex 0,
        availableSignatureEndIndex 7,
        assignedSubChannelNumber '1111'B
    }
},
},
persistenceScalingFactorList {
    psf0-9,
    psf0-9,
    psf0-9,
    psf0-9,
    psf0-9,
    psf0-9
},
modeSpecificInfo fdd : {
    primaryCPICH-TX-Power 31,
    constantValue -10,
    prach-PowerOffset {
        powerRampStep 3,
        preambleRetransMax 2
    },
    rach-TransmissionParameters {
        mmax 2,
        nb01Min 3,
        nb01Max 10
    },
    aich-Info {
        channelisationCode256 3,
        sttd-Indicator FALSE,
        aich-TransmissionTiming e0
    }
}
},
},
sCCPCH-SystemInformationList {
    {
        secondaryCCPCH-Info {

```

```

modeSpecificInfo fdd : {
  pCPICH-UsageForChannelEst maybeUsed,
  sttd-Indicator FALSE,
  sf-AndCodeNumber sf64 : 1,
  pilotSymbolExistence FALSE,
  tfci-Existence TRUE,
  positionFixedOrFlexible flexible,
  timingOffset 0
}
},
tfcs normalTFCI-Signalling : complete : {
  ctfcSize ctfc4Bit : {
    {
      ctfc4 0
    },
    {
      ctfc4 1
    },
    {
      ctfc4 2
    },
    {
      ctfc4 3
    },
    {
      ctfc4 4
    },
    {
      ctfc4 5
    },
    {
      ctfc4 6
    },
    {
      ctfc4 8
    },
    {
      ctfc4 10
    }
  }
},
fach-PCH-InformationList {
  {
    transportFormatSet commonTransChTFS : {
      tti tti10 : {
        {
          rlc-Size fdd : {
            octetModeRLC-SizeInfoType2 sizeType1 : 24
          },
          numberOfTbSizeList {
            zero : NULL,
            one : NULL
          },
          logicalChannelList allSizes : NULL
        }
      },
      semistaticTF-Information {
        channelCodingType convolutional : half,
        rateMatchingAttribute 230,
        crc-Size crcl6
      }
    },
    transportChannelIdentity 12,
    ctch-Indicator FALSE
  },
  {
    transportFormatSet commonTransChTFS : {
      tti tti10 : {
        {
          rlc-Size fdd : {
            octetModeRLC-SizeInfoType2 sizeType1 : 15
          },
          numberOfTbSizeList {
            zero : NULL,
            one : NULL,
            small : 2,
            small : 3
          }
        },

```



```

    },
    cellSelectionReselectionInfo {
        q-OffsetS-N 0,
        maxAllowedUL-TX-Power 33,
        modeSpecificInfo fdd : {
            q-QualMin -20,
            q-RxlevMin -58
        }
    }
}
},
{
    intraFreqCellID 1,
    cellInfo {
        cellIndividualOffset 0,
        modeSpecificInfo fdd : {
            primaryCPICH-Info {
                primaryScramblingCode 150
            },
            readSFN-Indicator TRUE,
            tx-DiversityIndicator FALSE
        },
        cellSelectionReselectionInfo {
            q-OffsetS-N 0,
            maxAllowedUL-TX-Power 33,
            modeSpecificInfo fdd : {
                q-QualMin -20,
                q-RxlevMin -58
            }
        }
    }
},
{
    intraFreqCellID 2,
    cellInfo {
        cellIndividualOffset 0,
        modeSpecificInfo fdd : {
            primaryCPICH-Info {
                primaryScramblingCode 200
            },
            readSFN-Indicator TRUE,
            tx-DiversityIndicator FALSE
        },
        cellSelectionReselectionInfo {
            q-OffsetS-N 0,
            maxAllowedUL-TX-Power 33,
            modeSpecificInfo fdd : {
                q-QualMin -20,
                q-RxlevMin -58
            }
        }
    }
},
{
    intraFreqCellID 3,
    cellInfo {
        cellIndividualOffset 0,
        modeSpecificInfo fdd : {
            primaryCPICH-Info {
                primaryScramblingCode 250
            },
            readSFN-Indicator TRUE,
            tx-DiversityIndicator FALSE
        },
        cellSelectionReselectionInfo {
            q-OffsetS-N 0,
            maxAllowedUL-TX-Power 33,
            modeSpecificInfo fdd : {
                q-QualMin -20,
                q-RxlevMin -58
            }
        }
    }
}
},
intraFreqMeasQuantity {
    filterCoefficient fc0,

```

```

        modeSpecificInfo fdd : {
            intraFreqMeasQuantity-FDD cpich-RSCP
        }
    },
    intraFreqReportingQuantityForRACH {
        sfn-SFN-OTD-Type noReport,
        modeSpecificInfo fdd : {
            intraFreqRepQuantityRACH-FDD noReport
        }
    },
    maxReportedCellsOnRACH noReport,
    reportingInfoForCellDCH {
        intraFreqReportingQuantity {
            activeSetReportingQuantities {
                sfn-SFN-OTD-Type noReport,
                cellIdentity-reportingIndicator TRUE,
                cellSynchronisationInfoReportingIndicator FALSE,
                modeSpecificInfo fdd : {
                    cpich-Ec-NO-reportingIndicator FALSE,
                    cpich-RSCP-reportingIndicator TRUE,
                    pathloss-reportingIndicator FALSE
                }
            },
            monitoredSetReportingQuantities {
                sfn-SFN-OTD-Type noReport,
                cellIdentity-reportingIndicator TRUE,
                cellSynchronisationInfoReportingIndicator FALSE,
                modeSpecificInfo fdd : {
                    cpich-Ec-NO-reportingIndicator FALSE,
                    cpich-RSCP-reportingIndicator TRUE,
                    pathloss-reportingIndicator FALSE
                }
            }
        },
        measurementReportingMode {
            measurementReportTransferMode acknowledgedModeRLC,
            periodicalOrEventTrigger eventTrigger
        },
        reportCriteria intraFreqReportingCriteria : {
            eventCriteriaList {
                {
                    event ela : {
                        triggeringCondition activeSetAndMonitoredSetCells,
                        reportingRange 5,
                        w 1,
                        reportDeactivationThreshold t3,
                        reportingAmount ra-Infinity,
                        reportingInterval ri4
                    },
                    hysteresis 0,
                    timeToTrigger ttt640,
                    reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
                }
            }
        }
    }
}
SysInfoType12
{
    measurementControlSysInfo {
        use-of-HCS hcs-not-used : {
            cellSelectQualityMeasure cpich-RSCP : {
                intraFreqMeasurementSysInfo {
                    intraFreqMeasurementID 1,
                    intraFreqCellInfoSI-List {
                        removedIntraFreqCellList removeNoIntraFreqCells : NULL,
                        newIntraFreqCellList {
                            {
                                intraFreqCellID 0,
                                cellInfo {
                                    cellIndividualOffset 0,
                                    modeSpecificInfo fdd : {
                                        primaryCPICH-Info {
                                            primaryScramblingCode 100
                                        }
                                    }
                                }
                            }
                        }
                    }
                }
            }
        }
    }
}

```

```

    },
    readSFN-Indicator TRUE,
    tx-DiversityIndicator FALSE
  },
  cellSelectionReselectionInfo {
    q-OffsetS-N 0,
    maxAllowedUL-TX-Power 33,
    modeSpecificInfo fdd : {
      q-QualMin -20,
      q-RxlevMin -58
    }
  }
},
{
  intraFreqCellID 1,
  cellInfo {
    cellIndividualOffset 0,
    modeSpecificInfo fdd : {
      primaryCPICH-Info {
        primaryScramblingCode 150
      },
      readSFN-Indicator TRUE,
      tx-DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q-OffsetS-N 0,
      maxAllowedUL-TX-Power 33,
      modeSpecificInfo fdd : {
        q-QualMin -20,
        q-RxlevMin -58
      }
    }
  }
},
{
  intraFreqCellID 2,
  cellInfo {
    cellIndividualOffset 0,
    modeSpecificInfo fdd : {
      primaryCPICH-Info {
        primaryScramblingCode 200
      },
      readSFN-Indicator TRUE,
      tx-DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q-OffsetS-N 0,
      maxAllowedUL-TX-Power 33,
      modeSpecificInfo fdd : {
        q-QualMin -20,
        q-RxlevMin -58
      }
    }
  }
},
{
  intraFreqCellID 3,
  cellInfo {
    cellIndividualOffset 0,
    modeSpecificInfo fdd : {
      primaryCPICH-Info {
        primaryScramblingCode 250
      },
      readSFN-Indicator TRUE,
      tx-DiversityIndicator FALSE
    },
    cellSelectionReselectionInfo {
      q-OffsetS-N 0,
      maxAllowedUL-TX-Power 33,
      modeSpecificInfo fdd : {
        q-QualMin -20,
        q-RxlevMin -58
      }
    }
  }
}
}

```

```

    },
    intraFreqMeasQuantity {
        filterCoefficient fc0,
        modeSpecificInfo fdd : {
            intraFreqMeasQuantity-FDD cpich-RSCP
        }
    },
    intraFreqReportingQuantityForRACH {
        sfn-SFN-OTD-Type noReport,
        modeSpecificInfo fdd : {
            intraFreqRepQuantityRACH-FDD noReport
        }
    },
    maxReportedCellsOnRACH noReport,
    reportingInfoForCellDCH {
        intraFreqReportingQuantity {
            activeSetReportingQuantities {
                sfn-SFN-OTD-Type noReport,
                cellIdentity-reportingIndicator TRUE,
                cellSynchronisationInfoReportingIndicator FALSE,
                modeSpecificInfo fdd : {
                    cpich-Ec-NO-reportingIndicator FALSE,
                    cpich-RSCP-reportingIndicator TRUE,
                    pathloss-reportingIndicator FALSE
                }
            },
            monitoredSetReportingQuantities {
                sfn-SFN-OTD-Type noReport,
                cellIdentity-reportingIndicator TRUE,
                cellSynchronisationInfoReportingIndicator FALSE,
                modeSpecificInfo fdd : {
                    cpich-Ec-NO-reportingIndicator FALSE,
                    cpich-RSCP-reportingIndicator TRUE,
                    pathloss-reportingIndicator FALSE
                }
            }
        },
        measurementReportingMode {
            measurementReportTransferMode acknowledgedModeRLC,
            periodicalOrEventTrigger eventTrigger
        },
        reportCriteria intraFreqReportingCriteria : {
            eventCriteriaList {
                {
                    event ela : {
                        triggeringCondition activeSetAndMonitoredSetCells,
                        reportingRange 5,
                        w 1,
                        reportDeactivationThreshold t3,
                        reportingAmount ra-Infinity,
                        reportingInterval ri4
                    },
                    hysteresis 0,
                    timeToTrigger ttt0,
                    reportingCellStatus withinActiveAndOrMonitoredUsedFreq : e3
                }
            }
        }
    }
}

```

Annex B (informative): Change history

| Meeting-1st-Level | Doc-1st-Level | CR | Rev | Subject | Cat | Version-Current | Version-New | Doc-2nd-Level |
|-------------------|---------------|-----|-----|---|-----|-----------------|-------------|---------------|
| TP-08 | | | | Approval of the specification | | 2.0.0 | 3.0.0 | |
| TP-09 | TP-000131 | 001 | | RRC Message Contents: RLCSize | C | 3.0.1 | 3.1.0 | T1-000190 |
| TP-09 | TP-000131 | 002 | | RRC Message Contents: RLCParam | C | 3.0.1 | 3.1.0 | T1-000191 |
| TP-09 | TP-000131 | 003 | | RRC Message Contents: PCPreamble | C | 3.0.1 | 3.1.0 | T1-000192 |
| TP-09 | TP-000131 | 004 | | RRC Message Contents: RBIdentity | C | 3.0.1 | 3.1.0 | T1-000193 |
| TP-09 | TP-000131 | 005 | | RRC Message Contents: TrCHParam | C | 3.0.1 | 3.1.0 | T1-000194 |
| TP-09 | TP-000131 | 006 | | RRC Message Contents: UECapability | C | 3.0.1 | 3.1.0 | T1-000195 |
| TP-09 | TP-000131 | 007 | | RRC Message Contents: RBMapping | C | 3.0.1 | 3.1.0 | T1-000196 |
| TP-09 | TP-000131 | 008 | | RRC Message Contents: PagingCause | C | 3.0.1 | 3.1.0 | T1-000197 |
| TP-09 | TP-000131 | 009 | | RRC Message Contents: CipherringAndIntegrity | C | 3.0.1 | 3.1.0 | T1-000198 |
| TP-09 | TP-000131 | 010 | | RRC Message Contents: RLCInfo | C | 3.0.1 | 3.1.0 | T1-000199 |
| TP-09 | TP-000131 | 011 | | RRC Message Contents: CompressedMode | C | 3.0.1 | 3.1.0 | T1-000200 |
| TP-09 | TP-000131 | 012 | | RRC Message Contents: SIB | C | 3.0.1 | 3.1.0 | T1-000201 |
| TP-09 | TP-000131 | 013 | | RRC Message Contents: PhyCH | D | 3.0.1 | 3.1.0 | T1-000202 |
| TP-09 | TP-000131 | 014 | | RRC Message Contents: Measurement | C | 3.0.1 | 3.1.0 | T1-000203 |
| TP-09 | TP-000131 | 015 | | RRC Message Contents: TFCS | C | 3.0.1 | 3.1.0 | T1-000204 |
| TP-09 | TP-000131 | 016 | | RRC Message Contents: DPCHFrameOffset | C | 3.0.1 | 3.1.0 | T1-000205 |
| TP-09 | TP-000131 | 017 | | Test USIM Parameters | F | 3.0.1 | 3.1.0 | T1-000215 |
| TP-09 | TP-000131 | 018 | | Correction to definition of the test algorithm for authentication (clause 8.1.2) | F | 3.0.1 | 3.1.0 | T1-000164 |
| TP-09 | TP-000131 | 019 | | Reference Radio Bearer Configurations | F | 3.0.1 | 3.1.0 | T1-000212 |
| TP-09 | TP-000131 | 020 | | TDD Single mode | F | 3.0.1 | 3.1.0 | T1-000220 |
| TP-10 | TP-000215 | 021 | | Common generic procedure for AS testing | B | 3.1.0 | 3.2.0 | T1-000294 |
| TP-10 | TP-000215 | 022 | | Requirements for the system simulator for support of Tcell parameter | F | 3.1.0 | 3.2.0 | T1-000303 |
| TP-10 | TP-000215 | 023 | | Minimum Performance Levels | F | 3.1.0 | 3.2.0 | T1-000306 |
| TP-10 | TP-000215 | 024 | | Downlink signal conditions and propagation conditions | D | 3.1.0 | 3.2.0 | T1-000307 |
| TP-10 | TP-000215 | 025 | | Updating 34.108 v3.1.0 to TDD single mode | F | 3.1.0 | 3.2.0 | T1-000281 |
| TP-10 | TP-000215 | 026 | | Application of integrity mode protection to signalling message by default | F | 3.1.0 | 3.2.0 | T1-000296 |
| TP-10 | TP-000215 | 027 | | Updates to the default message contents in clause 9 | C | 3.1.0 | 3.2.0 | T1-000282 |
| TP-10 | TP-000215 | 028 | | Updates to System Information Block (SIB) and Master Information Block (MIB) messages | C | 3.1.0 | 3.2.0 | T1-000283 |
| TP-10 | TP-000215 | 029 | | Application of ciphering during conformance testing | C | 3.1.0 | 3.2.0 | T1-000285 |
| TP-10 | TP-000215 | 030 | | Addition for System Information parameters (34.108 clause 6.1) | F | 3.1.0 | 3.2.0 | T1-000304 |
| TP-10 | TP-000215 | 031 | | Correction for Generic Setup Procedures (34.108 clause 7.2) | F | 3.1.0 | 3.2.0 | T1-000305 |
| TP-11 | TP-010018 | 032 | | Default radio conditions for multi-cell environment | F | 3.2.0 | 3.3.0 | T1-010078 |
| TP-11 | TP-010018 | 033 | | Correction for Generic Setup Procedures (34.108 clause 7.2) | F | 3.2.0 | 3.3.0 | T1-010079 |
| TP-11 | TP-010018 | 034 | | Corrections for Test USIM Parameters(34.108 clause 8) | F | 3.2.0 | 3.3.0 | T1-010080 |
| TP-11 | TP-010018 | 035 | | Correction of clause number in TS 34.108. | D | 3.2.0 | 3.3.0 | T1-010081 |
| TP-11 | TP-010018 | 036 | | Update of authentication test algorithm | C | 3.2.0 | 3.3.0 | T1-010082 |
| TP-11 | TP-010018 | 037 | | Updates to clause 9 of TS 34.108 v3.2.0 | F | 3.2.0 | 3.3.0 | T1-010084 |
| TP-11 | TP-010018 | 038 | | Updating to TDD single mode | F | 3.2.0 | 3.3.0 | T1-010088 |
| TP-11 | TP-010018 | 039 | | Simulated network environments for TDD mode (SIB) | F | 3.2.0 | 3.3.0 | T1-010089 |
| TP-12 | TP-010118 | 040 | | Corrections to clause 6.10 FDD parameters | F | 3.3.0 | 3.4.0 | T1-010205 |
| TP-12 | TP-010118 | 041 | | Corrections to clause 6.10 TDD parameters | F | 3.3.0 | 3.4.0 | T1-010206 |
| TP-12 | TP-010118 | 042 | | Adding section for radio bearer configurations intended for functional testing | D | 3.3.0 | 3.4.0 | T1-010210 |
| TP-12 | TP-010118 | 043 | | Update of list of abbreviations | D | 3.3.0 | 3.4.0 | T1-010211 |
| TP-12 | TP-010118 | 044 | | Updates to clause 6.1 and 9 | F | 3.3.0 | 3.4.0 | T1-010212 |
| TP-12 | TP-010118 | 045 | | Updates to clause 7.4 | F | 3.3.0 | 3.4.0 | T1-010213 |
| TP-12 | TP-010118 | 046 | | clause 6.1: System Information Blocks for TDD Mode | F | 3.3.0 | 3.4.0 | T1-010214 |
| TP-12 | TP-010118 | 047 | | Editorial corrections and removal of a reference document | F | 3.3.0 | 3.4.0 | T1-010215 |
| TP-13 | TP-010215 | 048 | | Correction to reference | F | 3.4.0 | 3.5.0 | T1-010275 |
| TP-13 | TP-010215 | 049 | | Editorial modification for References | F | 3.4.0 | 3.5.0 | T1-010276 |
| TP-13 | TP-010215 | 050 | | Some corrections in clause 5 | F | 3.4.0 | 3.5.0 | T1-010277 |
| TP-13 | TP-010215 | 051 | | Update to Scope Statement | F | 3.4.0 | 3.5.0 | T1-010278 |
| TP-13 | TP-010215 | 052 | | Clause 6.10 Definition of RB configurations, TDD parameters | F | 3.4.0 | 3.5.0 | T1-010279 |
| TP-13 | TP-010215 | 053 | | Updates to clause 6.1, clause 7.4 and clause 9 | F | 3.4.0 | 3.5.0 | T1-010280 |
| TP-13 | TP-010215 | 054 | | Clause 6.1: Default radio conditions for Signalling tests | F | 3.4.0 | 3.5.0 | T1-010281 |

| Meeting-1st-Level | Doc-1st-Level | CR | Rev | Subject | Cat | Version-Current | Version-New | Doc-2nd-Level |
|-------------------|---------------|-----|-----|---|-----|-----------------|-------------|---------------|
| TP-13 | TP-010215 | 055 | | Correction of Radio Bearer Configurations for FDD Mode | F | 3.4.0 | 3.5.0 | T1-010282 |
| TP-13 | TP-010215 | 056 | | Correction of Radio Bearer Configurations for TDD Mode | F | 3.4.0 | 3.5.0 | T1-010283 |
| TP-13 | TP-010215 | 057 | | Changes to Signalling Radio Bearer (SRB) numbering | F | 3.4.0 | 3.5.0 | T1-010284 |
| TP-13 | TP-010215 | 058 | | Missing bearers in tables 6.10.2.1.1 and 6.10.3.1.1 | F | 3.4.0 | 3.5.0 | T1-010285 |
| TP-13 | TP-010215 | 059 | | Correction of system information block 5 | F | 3.4.0 | 3.5.0 | T1-010286 |
| TP-13 | TP-010215 | 060 | | Introducing of 1.28 Mcps TDD Mode in clauses 4, 5 and 6 | F | 3.4.0 | 4.0.0 | T1-010287 |
| TP-13 | TP-010215 | 061 | | Introduction of System Information Blocks for 1.28 Mcps TDD Mode | F | 3.4.0 | 4.0.0 | T1-010288 |
| TP-13 | TP-010215 | 062 | | Introduction of typical radio parameters for 1.28 McpsTDD | F | 3.4.0 | 4.0.0 | T1-010289 |
| TP-13 | TP-010215 | 063 | | Clause 6.11 RBs for RLC and PDCP testing | F | 3.4.0 | 3.5.0 | T1-010290 |
| TP-14 | TP-010285 | 065 | 1 | Correction to 6.1 Contents of System Information Blocks | A | 4.0.0 | 4.1.0 | T1-010475 |
| TP-14 | TP-010285 | 067 | 1 | Corrections to clause 6.1, 7.4 and 9 | A | 4.0.0 | 4.1.0 | T1-010473 |
| TP-14 | TP-010258 | 069 | | Reference Radio Conditions | A | 4.0.0 | 4.1.0 | T1-010461 |
| TP-14 | TP-010258 | 071 | | Modification of Test procedures for RF tests | A | 4.0.0 | 4.1.0 | T1-010463 |
| TP-14 | TP-010258 | 073 | | Default message contents for RF tests | A | 4.0.0 | 4.1.0 | T1-010465 |
| TP-14 | TP-010258 | 075 | | Correction to 6.10 Reference Radio Bearer configurations | A | 4.0.0 | 4.1.0 | T1-010467 |
| TP-14 | TP-010258 | 077 | | Definition of default value of rate matching attribute | A | 4.0.0 | 4.1.0 | T1-010469 |
| TP-14 | TP-010258 | 079 | | Update of clause 7.4 and 6.10 | A | 4.0.0 | 4.1.0 | T1-010471 |
| TP-14 | TP-010292 | 081 | | Correction on introduction of section 6.10 | A | 4.0.0 | 4.1.0 | -- |
| TP-15 | TP-020038 | 083 | | Replacement of Block STTD by Space Code Transmit Diversity (SCTD) (Rel-4) | A | 4.1.0 | 4.2.0 | T1-020092 |
| TP-15 | TP-020038 | 085 | | Update of reference radio conditions (Rel-4) | A | 4.1.0 | 4.2.0 | T1-020098 |
| TP-15 | TP-020038 | 087 | | Update of system reference configurations and default messages (Rel-4) | A | 4.1.0 | 4.2.0 | T1-020100 |
| TP-15 | TP-020038 | 089 | | Corrections to 34108-410 | A | 4.1.0 | 4.2.0 | T1-020102 |
| TP-15 | TP-020038 | 091 | | Introduction of new Reference RABs (Rel-4) | A | 4.1.0 | 4.2.0 | T1-020195 |
| TP-15 | TP-020038 | 094 | | Update of SIBs for TDD (both modes) in TS34.108 (Rel4) | F | 4.1.0 | 4.2.0 | T1-020107 |
| TP-15 | TP-020038 | 095 | | Clarification of bit rate of Interactive/Background PS RAB function (Rel-4) | A | 4.1.0 | 4.2.0 | T1-020184 |

History

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