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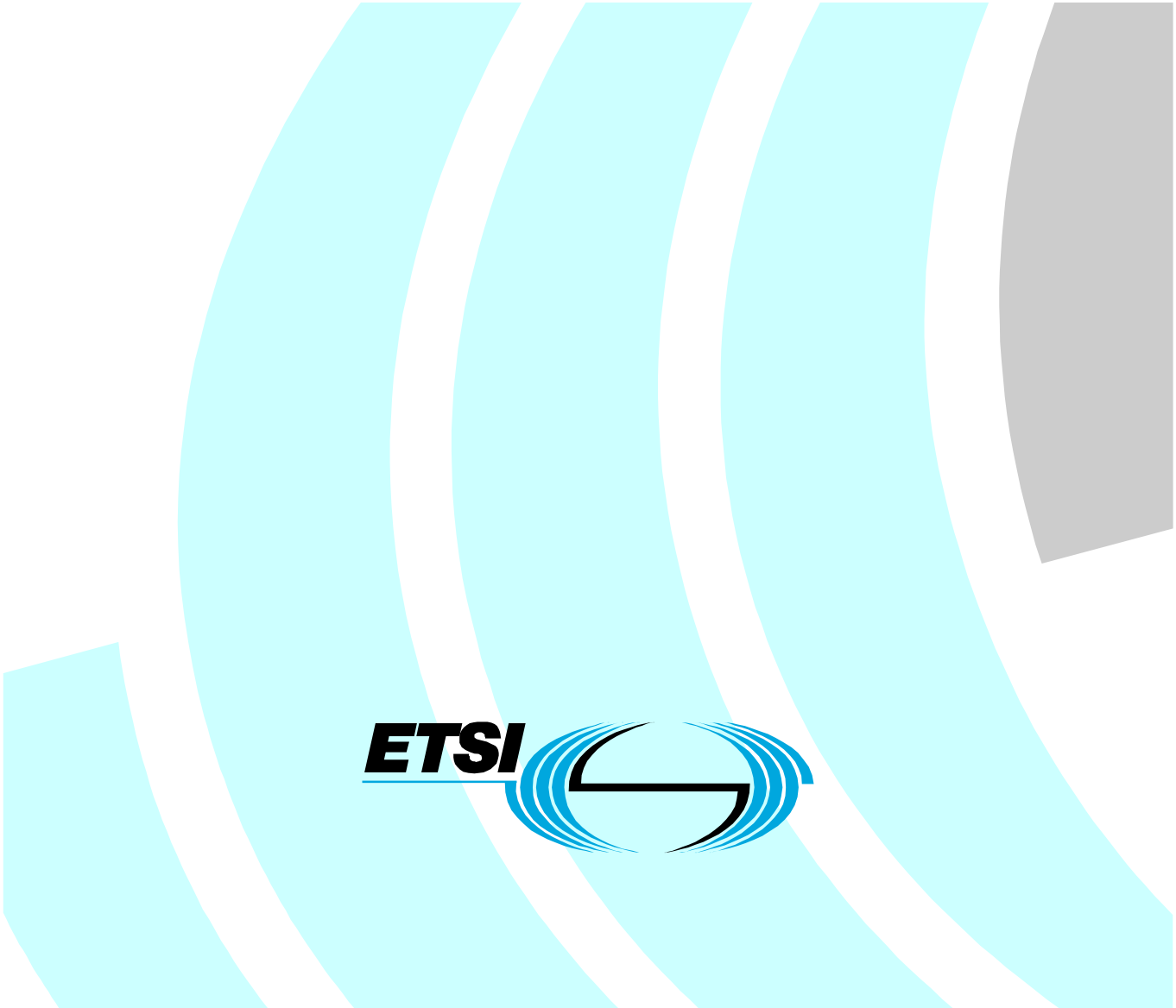
Harmonized European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 6: Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive



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Contents

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Foreword

This Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM), and is now submitted for the Vote phase of the ETSI standards Two-step Approval Procedure.

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 1999/5/EC [1] of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive").

The present document is part 6 of a multi-part deliverable covering the Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks, as identified below:

Part 1: "Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE Directive";

Part 2: "Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 3: "Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 4: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 5: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 6: "Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 7: "Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 8: "Harmonized EN for IMT-2000, TDMA Single-Carrier (UWC 136) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 9: "Harmonized EN for IMT-2000, TDMA Single-Carrier (UWC 136) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 10: "Harmonized EN for IMT-2000 FDMA/TDMA (DECT) covering essential requirements of article 3.2 of the R&TTE Directive";

Part 11: "Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (Repeaters) covering essential requirements of article 3.2 of the R&TTE Directive".

Part 12: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (Repeaters) covering essential requirements of article 3.2 of the R&TTE Directive".

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	18 months after doa

Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the R&TTE Directive. The modular structure is shown in EG 201 399.

1 Scope

The present document applies to the following radio equipment type:

- User equipment for IMT-2000 CDMA TDD (UTRA TDD).

This radio equipment type is capable of operating in all or any part of the frequency bands given in table 1.

Table 1: IMT-2000 CDMA TDD service frequency bands

Operating band	Direction of transmission	IMT-2000 CDMA TDD service frequency bands
a	Transmit and Receive	1 900 MHz to 1 920 MHz
	Transmit and Receive	2 010 MHz to 2 025 MHz
d	Transmit and Receive	2 570 MHz to 2 620 MHz

IMT-2000 CDMA TDD (UTRA TDD) supports two options of the TDD mode with the chip rates of 3,84 Mcps and 1,28 Mcps. These two options are called the 3,84 Mcps TDD option and the 1,28 Mcps TDD option respectively. The requirements are listed in different subsections only if the parameters deviate. The present document covers requirements for 3,84 Mcps TDD option user equipment for Release 99, 4, 5, 6 and 7 and for 1,28 Mcps TDD option user equipment for Release 4, 5, 6 and 7.

The present document covers the provisions of Directive 1999/5/EC [1] (R&TTE Directive) article 3.2, which states that "… radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive [1] may apply to equipment within the scope of the present document.

NOTE: A list of such ENs is included on the web site: http://www.newapproach.org/.

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

[1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).

[2] Void.

[3] Void.

[4] ETSI TR 100 028 (V1.4.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

[5] ETSI TS 125 102 (V7.3.0): "Universal Mobile Telecommunications System (UMTS); User Equipment (UE) radio transmission and reception (TDD) (3GPP TS 25.102 version 7.3.0 Release 7)".

[6] ETSI TS 134 108 (V4.7.0): "Universal Mobile Telecommunications System (UMTS); Common test environments for User Equipment (UE) conformance testing (3GPP TS 34.108 version 4.7.0 Release 4)".

[7] ETSI TS 134 109 (V4.5.0): "Universal Mobile Telecommunications System (UMTS); Terminal logical test interface; Special conformance testing functions (3GPP TS 34.109 version 4.5.0 Release 4)".

[8] ETSI TS 134 122 (V5.3.0): "Universal Mobile Telecommunications System (UMTS); Terminal conformance specification, Radio transmission and reception (TDD) (3GPP TS 34.122 version 5.3.0 Release 5)".

[9] Void.

[10] Void.

[11] ETSI TS 125 102 (V5.5.0) (2003): "Universal Mobile Telecommunications System (UMTS); UTRA (UE) TDD; Radio transmission and reception (3GPP TS 25.102 version 5.5.0 Release 5)".

[12] IEC 60068-2-1: "Environmental testing - Part 2: Tests. Tests A: Cold".

[13] IEC 60068-2-2: "Environmental testing - Part 2: Tests. Tests B: Dry heat".

[14] ETSI EN 301 908-1(V3.2.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 1: Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE Directive".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [1] and the following apply:

chip rate: rate of "chips" (modulated symbols after spreading) per second

data rate: rate of the user information, which must be transmitted over the Air Interface

EXAMPLE: Output rate of the voice codec.

environmental profile: range of environmental conditions under which the equipment within the scope of the present document is required to comply with the provisions of the present document

maximum output power: measure of the maximum power supported by the UE (i.e. the actual power as would be measured assuming no measurement error) in a bandwidth of at least $(1 + \alpha)$ times the chip rate of the radio access mode. The period of measurement shall be a transmit timeslot excluding the guard period unless otherwise stated

mean power: when applied to a CDMA modulated signal this is the power (transmitted or received) in a bandwidth of at least $(1 + \alpha)$ times the chip rate of the radio access mode. The period of measurement shall be a transmit timeslot excluding the guard period unless otherwise stated

node B: logical node responsible for radio transmission/reception in one or more cells to/from the User Equipment

nominal maximum output power: nominal power defined by the UE power class

RRC filtered mean power: mean power as measured through a root raised cosine filter with roll-off factor α and a bandwidth equal to the chip rate of the radio access mode

3.2 Symbols

For the purposes of the present document, the following symbols apply:

α	roll-off factor of the root-raised cosine filter, $\alpha = 0,22$
DPCH_Ec	average energy per PN chip for DPCH
$\frac{DPCH\_Ec}{I_{or}}$	ratio of the average energy per PN chip of the DPCH to the total transmit power spectral density of the downlink at the BS antenna connector
$\frac{\Sigma\ DPCH\_Ec}{I_{or}}$	ratio of the sum of DPCH_Ec for one service in case of multicode to the total transmit power spectral density of the downlink at the BS antenna connector
F_{uw}	Frequency of unwanted signal

NOTE: This is specified in bracket in terms of an absolute frequency(s) or frequency offset from the assigned channel frequency.

I_{oac}	the power spectral density (integrated in a noise bandwidth equal to the chip rate and normalized to the chip rate) of the adjacent frequency channel as measured at the UE antenna connector
I_{or}	the total transmit power spectral density (integrated in a bandwidth of $(1+\alpha)$ times the chip rate and normalized to the chip rate) of the downlink signal at the BS antenna connector
$\hat{I}_{or}$	the received power spectral density of the downlink signal as measured at the UE antenna connector

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACLR	Adjacent Channel Leakage power Ratio
ACS	Adjacent Channel Selectivity
BER	Bit Error Ratio
BS	Base Station
CDMA	Code Division Multiple Access
CRC	Cyclic Redundancy Check
CW	Continuous Wave (unmodulated signal)
DCH	Dedicated CHannel
DL	Down Link (forward link)
DPCH	Dedicated Physical CHannel
EMC	Electro-Magnetic Compatibility
EUT	Equipment Under Test
FDD	Frequency Division Duplexing
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
RRC	Root-Raised Cosine
SS	System Simulator
TH	Temperature High
TDD	Time Division Duplexing
TS	Time Slot
TL	Temperature Low
TTE	Telecommunications Terminal Equipment
TX	Transmitter
UARFCN	UTRA Absolute Radio Frequency Channel Number
UE	User Equipment
UL	Uplink (reverse link)
UTRA	Universal Terrestrial Radio Access
VH	Voltage High
VL	Voltage Low

4 Technical requirements specifications

4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the user equipment, which shall be declared by the supplier. The equipment shall comply with all the technical requirements of the present document at all times when operating within the boundary limits of the declared operational environmental profile.

For guidance on how a supplier can declare the environmental profile see annex B.

4.2 Conformance requirements

The requirements in the present document are based on the assumption that the operating band, band (a) and (d), are shared between systems of the IMT-2000 family or systems having compatible characteristics.

4.2.1 Introduction

To meet the essential requirement under article 3.2 of the R&TTE Directive [1] for IMT-2000 User Equipment eight essential parameters in addition to those in EN 301 908-1 [14] have been identified. Table 2 provides a cross reference between these eight essential parameters and the corresponding eleven technical requirements within the scope of the present document.

To fulfil an essential parameter the compliance with all the corresponding technical requirements in table 2 must be verified.

Table 2: Cross reference

Essential parameter	Corresponding technical requirement	
Spectrum emissions mask	4.2.2	Spectrum emissions mask
	4.2.12	Transmitter adjacent channel leakage power ratio
Conducted spurious emissions in active mode	4.2.3	Transmitter spurious emissions
Accuracy of maximum output power	4.2.4	Maximum output power
Prevention of harmful interference through control of power	4.2.5	Minimum transmit output power
Conducted spurious emissions in idle mode	4.2.6	Receiver spurious emissions
Impact of interference on receiver performance	4.2.7	Receiver blocking characteristics
	4.2.8	Receiver intermodulation characteristics
	4.2.9	Receiver spurious response
Receiver adjacent channel selectivity	4.2.10	Receiver adjacent channel selectivity
Control and Monitoring functions	4.2.11	Out-of-synchronization handling of output power

The technical requirements apply for declared operating bands.

4.2.2 Spectrum emission mask

4.2.2.1 Definition

The spectrum emission mask establishes out-of-band emission power limits of the user equipment transmitter. Out-of-band emissions are defined as unwanted emissions outside the channel bandwidth resulting from the modulation process and non-linearity in the transmitter but excluding spurious emissions.

4.2.2.1.1 3,84 Mcps TDD option

The spectrum emission mask of the UE applies to frequency offsets between 2,5 MHz and 12,5 MHz on both sides of the UE centre carrier frequency. The out-of-channel emission is specified as a power level relative to the RRC-filtered mean power of the UE carrier.

4.2.2.1.2 1,28 Mcps TDD option

The spectrum emission mask of the UE applies to frequency offsets between 0,8 MHz and 4 MHz on both sides of the UE centre carrier frequency. The out-of-channel emission is specified as a power level relative to the RRC-filtered mean power of the UE carrier.

4.2.2.2 Limits

4.2.2.2.1 3,84 Mcps TDD option

The power of any UE emission shall not exceed the levels specified in table 3.

Table 3: Spectrum emission mask requirement (3,84 Mcps TDD option)

Frequency offset Δf	Minimum requirement	Measurement bandwidth
2,5 MHz to 3,5 MHz	$\left\{-33,5-15\times\left(\frac{\Delta f}{MHz}-2,5\right)\right\}$dBc	30 kHz
3,5 MHz to 7,5 MHz	$\left\{-33,5-1\times\left(\frac{\Delta f}{MHz}-3,5\right)\right\}$dBc	1 MHz
7,5 MHz to 8,5 MHz	$\left\{-37,5-10\times\left(\frac{\Delta f}{MHz}-7,5\right)\right\}$dBc	1 MHz
8,5 MHz to 12,5 MHz	-47,5 dBc	1 MHz

NOTE 1: Δf is the separation between the carrier frequency and the centre of the measuring filter.
NOTE 2: The first measurement position with a 30 kHz filter is at Δf equals to 2,515 MHz; the last is at Δf equals to 3,485 MHz.
NOTE 3: The first measurement position with a 1 MHz filter is at Δf equals to 4 MHz; the last is at Δf equals to 12 MHz. As a general rule, the resolution bandwidth of the measuring equipment should be equal to the measurement bandwidth. To improve measurement accuracy, sensitivity and efficiency, the resolution bandwidth can be different from the measurement bandwidth. When the resolution bandwidth is smaller than the measurement bandwidth, the result should be integrated over the measurement bandwidth in order to obtain the equivalent noise bandwidth of the measurement bandwidth.
NOTE 4: The lower limit shall be -48,5 dBm/3,84 MHz or the minimum requirement presented in this table whichever is the higher.

4.2.2.2.2 1,28 Mcps TDD option

The power of any UE emission shall not exceed the levels specified in table 3a.

Table 3a: Spectrum emission mask requirement (1,28 Mcps TDD option)

Frequency offset Δf	Minimum requirement	Measurement bandwidth
0,8 MHz	-33,5 dBc	30 kHz
0,8 MHz to 1,8 MHz	$\left\{-33,5-14\times\left(\frac{\Delta f}{MHz}-0,8\right)\right\}$dBc	30 kHz
1,8 MHz to 2,4 MHz	$\left\{-47,5-25\times\left(\frac{\Delta f}{MHz}-1,8\right)\right\}$dBc	30 kHz
2,4 MHz to 4,0 MHz	-47,5 dBc	1 MHz
NOTE 1: Δf is the separation between the carrier frequency and the centre of the measuring filter. NOTE 2: The first measurement position with a 30 kHz filter is at Δf equals to 0,815 MHz; the last is at Δf equals to 2,385 MHz. NOTE 3: The first measurement position with a 1 MHz filter is at Δf equals to 2,9 MHz; the last is at Δf equals to 3,5 MHz. As a general rule, the resolution bandwidth of the measuring equipment should be equal to the measurement bandwidth. To improve measurement accuracy, sensitivity and efficiency, the resolution bandwidth can be different from the measurement bandwidth. When the resolution bandwidth is smaller than the measurement bandwidth, the result should be integrated over the measurement bandwidth in order to obtain the equivalent noise bandwidth of the measurement bandwidth. NOTE 4: The lower limit shall be -53,5 dBm/1,28 MHz or the minimum requirement presented in this table whichever is the higher.		

4.2.2.3 Conformance

Conformance tests described in clause 5.3.1 shall be carried out.

4.2.3 Transmitter spurious emissions

4.2.3.1 Definition

Transmitter spurious emissions are emissions which are caused by unwanted transmitter effects such as harmonics emission, parasitic emission, intermodulation products and frequency conversion products, but exclude Out-of-band emissions.

4.2.3.2 Limits

4.2.3.2.1 3,84 Mcps TDD option

The following requirements are only applicable for frequencies, which are greater than 12,5 MHz away from the UE centre carrier frequency.

Table 4: General spurious emissions requirements (3,84 Mcps TDD option)

Frequency band	Measurement bandwidth	Minimum requirement
9 kHz ≤ f < 150 kHz	1 kHz	-36 dBm
150 kHz ≤ f < 30 MHz	10 kHz	-36 dBm
30 MHz ≤ f < 1 000 MHz	100 kHz	-36 dBm
1 GHz ≤ f < 12,75 GHz	1 MHz	-30 dBm

Table 5: Additional spurious emissions requirements (3,84 Mcps TDD option)

Frequency band	Measurement bandwidth	Minimum requirement
925 MHz ≤ f ≤ 935 MHz	100 kHz	-67 dBm
935 MHz < f ≤ 960 MHz	100 kHz	-79 dBm
1 805 MHz ≤ f ≤ 1 880 MHz	100 kHz	-71 dBm
2 620 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-37 dBm
NOTE: The measurements shall be made on frequencies which are integer multiples of 200 kHz. As exceptions, up to five measurements with a level up to the applicable requirements defined in table 4 are permitted for each UARFCN used in the measurement.		

4.2.3.2.2 1,28 Mcps TDD option

The following requirements are only applicable for frequencies, which are greater than 4 MHz away from the UE centre carrier frequency.

Table 5a: General spurious emissions requirements (1,28 Mcps TDD option)

Frequency band	Measurement bandwidth	Minimum requirement
9 kHz ≤ f < 150 kHz	1 kHz	-36 dBm
150 kHz ≤ f < 30 MHz	10 kHz	-36 dBm
30 MHz ≤ f < 1 000 MHz	100 kHz	-36 dBm
1 GHz ≤ f < 12,75 GHz	1 MHz	-30 dBm

Table 5b: Additional spurious emissions requirements (1,28 Mcps TDD option)

Frequency band	Measurement bandwidth	Minimum requirement
925 MHz ≤ f ≤ 935 MHz	100 kHz	-67 dBm
935 MHz < f ≤ 960 MHz	100 kHz	-79 dBm
1 805 MHz ≤ f ≤ 1 880 MHz	100 kHz	-71 dBm
2 620 MHz ≤ f ≤ 2 690 MHz	3,84 MHz	-37 dBm
NOTE: The measurements shall be made on frequencies which are integer multiples of 200 kHz. As exceptions, up to five measurements with a level up to the applicable requirements defined in table 5a are permitted for each UARFCN used in the measurement.		

4.2.3.3 Conformance

Conformance tests described in clause 5.3.2. shall be carried out.

4.2.4 Maximum output power

4.2.4.1 Definition

The following power classes define the nominal maximum output power. Maximum output power and nominal maximum output power are defined in clause 3.1.

4.2.4.2 Limits

The error of the UE maximum output power shall not exceed the tolerance shown in table 6 for single code.

Table 6: Power classes

Power Class	Nominal maximum output power	Tolerance
2	+24 dBm	+1,7 dB to -3,7 dB
3	+21 dBm	+2,7 dB to -2,7 dB

4.2.4.3 Conformance

Conformance tests described in clause 5.3.3 shall be carried out.

4.2.5 Minimum transmit output power

4.2.5.1 Definition

The minimum controlled output power of the UE is when the power is set to a minimum value. The minimum transmit output power is defined as the mean power in one time slot excluding the guard period.

4.2.5.2 Limits

4.2.5.2.1 3,84 Mcps TDD option

The minimum transmit output power shall be lower or equal to -43 dBm.

4.2.5.2.2 1,28 Mcps TDD option

The minimum transmit output power shall be lower or equal to -48 dBm.

4.2.5.3 Conformance

Conformance tests described in clause 5.3.4 shall be carried out.

4.2.6 Receiver spurious emissions

4.2.6.1 Definition

The spurious emissions power is the power of emissions generated or amplified in a receiver that appears at the UE antenna connector.

4.2.6.2 Limits

4.2.6.2.1 3,84 Mcps TDD option

The power of any spurious emissions shall not exceed the limits given in table 7.

Table 7: Receiver spurious emission requirements (3,84 Mcps TDD option)

Band	Maximum level	Measurement bandwidth	Note
30 MHz to 1 GHz	-57 dBm	100 kHz	
1 GHz to 1,9 GHz and 1,92 GHz to 2,01 GHz and 2,025 GHz to 2,11 GHz and 2,17 GHz to 2,57 GHz	-47 dBm	1 MHz	With the exception of frequencies between 12,5 MHz below the first carrier frequency and 12,5 MHz above the last carrier frequency used by the UE
1,9 GHz to 1,92 GHz and 2,01 GHz to 2,025 GHz and 2,11 GHz to 2,170 GHz and 2,57 GHz to 2,69 GHz	-60 dBm	3,84 MHz	With the exception of frequencies between 12,5 MHz below the first carrier frequency and 12,5 MHz above the last carrier frequency used by the UE
2,69 GHz to 12,75 GHz	-47 dBm	1 MHz	

4.2.6.2.2 1,28 Mcps TDD option

The power of any spurious emissions shall not exceed the limits given in table 7a.

Table 7a: Receiver spurious emission requirements (1,28 Mcps TDD option)

Band	Maximum level	Measurement Bandwidth	Note
30 MHz to 1 GHz	-57 dBm	100 kHz	
1 GHz to 1,9 GHz and 1,92 GHz to 2,01 GHz and 2,025 GHz to 2,11 GHz and 2,17 GHz to 2,57 GHz	-47 dBm	1 MHz	With the exception of frequencies between 4 MHz below the first carrier frequency and 4 MHz above the last carrier frequency used by the UE
1,9 GHz to 1,92 GHz and 2,01 GHz to 2,025 GHz and 2,11 GHz to 2,170 GHz and 2,57 GHz to 2,69 GHz	-64 dBm	1,28 MHz	With the exception of frequencies between 4 MHz below the first carrier frequency and 4 MHz above the last carrier frequency used by the UE
2,69 GHz to 12,75 GHz	-47 dBm	1 MHz	

4.2.6.3 Conformance

Conformance tests described in clause 5.3.5 shall be carried out.

4.2.7 Receiver blocking characteristics

4.2.7.1 Definition

The blocking characteristic is a measure of the receiver ability to receive a wanted signal at its assigned channel frequency in the presence of an unwanted interferer on frequencies other than those of the spurious response or the adjacent channels without this unwanted input signal causing a degradation of the performance of the receiver beyond a specified limit. The blocking performance shall apply at all frequencies except those at which a spurious response occurs.

4.2.7.2 Limits

4.2.7.2.1 3,84 Mcps TDD option

The BER shall not exceed 0,001 for the parameters specified in tables 8 and 9.

For table 9, up to 24 exceptions are allowed for spurious response frequencies in each assigned frequency channel when measured using a 1 MHz step size for the interference signal.

Table 8: In-band blocking (3,84 Mcps TDD option)

Parameter	Level		Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0		dB
$\hat{I}_{or}$	-102		dBm/3,84 MHz
I_{ouw} mean power (modulated)	-56 (for $F_{uwoffset}$ ±10 MHz)	-44 (for $F_{uwoffset}$ ±15 MHz)	dBm

Table 9: Out-of-band blocking (3,84 Mcps TDD option)

Parameter	Band 1	Band 2	Band 3	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	0	0	dB
$\hat{I}_{or}$	-102	-102	-102	dBm/3,84 MHz
I_{ouw} (CW)	-44	-30	-15	dBm
F_{uw} (absolute frequency) for operation in band (a)	1 840 < f < 1 885 1 935 < f < 1 995 2 040 < f < 2 085	1 815 < f < 1 840 2 085 < f < 2 110	1 < f < 1 815 2 110 < f < 12 750	MHz
F_{uw} (absolute frequency) for operationg in band (d)	2 510 <f< 2 555 2 635 <f< 2 680	2 485 <f< 2 510 2 680 <f< 2 705	1 <f< 2 485 2 705 <f< 12 750	MHz
NOTE 1: For operation in band (a), F_{uw} (absolute frequency) in bands, from 1 885 MHz < f< 1 900 MHz, 1 920 MHz <f< 1 935 MHz, 1 995 MHz < f < 2 010 MHz and 2 025 MHz < f < 2 040 MHz, the appropriate in-band blocking in table 8 or adjacent channel selectivity in table 12 shall be applied. NOTE 2: For operation in band (d), F_{uw} (absolute frequency) in bands, from 2 555 MHz < f< 2 570 MHz and 2 620 MHz <f< 2 635 MHz, the appropriate in-band blocking in table 8 or adjacent channel selectivity in table 12 shall be applied.				

4.2.7.2.2 1,28 Mcps TDD option

The BER shall not exceed 0,001 for the parameters specified in tables 9a and 9b.

For table 9b up to 24 exceptions are allowed for spurious response frequencies in each assigned frequency channel when measured using a 1 MHz step size for the interference signal.

Table 9a: In-band blocking (1,28 Mcps TDD option)

Parameter	Level		Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	**0**		dB
$\hat{I}_{or}$	-105		dBm/1,28 MHz
I_{ouw} mean power (modulated)	-61 (for $F_{uwoffset}$ ±3,2 MHz)	-49 (for $F_{uwoffset}$ ±4,8 MHz)	dBm

Table 9b: Out-of-band blocking (1,28 Mcps TDD option)

Parameter	Band 1	Band 2	Band 3	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	0	0	dB
$\hat{I}_{or}$	-105	-105	-105	dBm/1,28 MHz
I_{ouw} (CW)	-44	-30	-15	dBm

Parameter	Band 1	Band 2	Band 3	Unit
F_{uw} (absolute frequency) for operation in band (a)	1 840 < f < 1 895,2 1 924,8 < f < 2 005,2 2 029,8 < f < 2 085	1 815 < f < 1 840 2 085 < f < 2 110	1 < f < 1 815 2 110 < f < 12 750	MHz
F_{uw} (absolute frequency) for operation in band (d)	2 510 < f < 2 565,2 2 624,8 < f < 2 680	2 485 < f < 2 510 2 680 < f < 2 705	1< f < 2 485 2 705 < f < 12 750	MHz
NOTE 1: For operation in band (a), F_{uw} (absolute frequency) in bands, from 1 895,2 MHz < f< 1 900 MHz, 1 920 MHz < f < 1 924,8 MHz, 2 005,2 MHz < f < 2 010 MHz and 2 025 MHz < f < 2 029,8 MHz, the appropriate in-band blocking in table 9a or adjacent channel selectivity in table 12a shall be applied. NOTE 2: For operation in band (d), F_{uw} (absolute frequency) in bands, from 2 565,2 MHz < f< 2 570 MHz and 2 620 MHz <f< 2 624,8 MHz, the appropriate in-band blocking in table 9a or adjacent channel selectivity in table 12a shall be applied.				

4.2.7.3 Conformance

Conformance tests described in clause 5.3.6. shall be carried out.

4.2.8 Receiver intermodulation characteristics

4.2.8.1 Definition and applicability

Third and higher order mixing of two interfering RF signals can produce an interfering signal in the band of the desired channel. Intermodulation response rejection is a measure of the capability of the receiver to receive a wanted signal on its assigned channel frequency in the presence of two or more interfering signals which have a specific frequency relationship to the wanted signal.

4.2.8.2 Limits

4.2.8.2.1 3,84 Mcps TDD option

The BER shall not exceed 0,001 for the parameters specified in table 10.

Table 10: Receiver intermodulation characteristics (3,84 Mcps TDD option)

Parameter	Value	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	dB
$\hat{I}_{or}$	-102	dBm/3,84 MHz
I_{ouw1}(CW)	-46	dBm
I_{ouw2}(modulated)	-46	dBm/3,84 MHz
F_{uw1}(CW)	±10	MHz
F_{uw2}(modulated)	±20	MHz

4.2.8.2.2 1,28 Mcps TDD option

The BER shall not exceed 0,001 for the parameters specified in table 10a.

Table10a: Receiver intermodulation characteristics (1,28 Mcps TDD option)

Parameter	Value	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	dB
$\hat{I}_{or}$	-105	dBm/1,28 MHz
I_{ouw1}(CW)	-46	dBm
I_{ouw2} mean power (modulated)	-46	dBm
F_{uw1}(CW)	±3,2	MHz
F_{uw2}(modulated)	±6,4	MHz

4.2.8.3 Conformance

Conformance tests described in clause 5.3.7 shall be carried out.

4.2.9 Receiver spurious response

4.2.9.1 Definition

Spurious response is a measure of the receiver's ability to receive a wanted signal on its assigned channel frequency without exceeding a given degradation due to the presence of an unwanted CW interfering signal at any other frequency at which a response is obtained, i.e. for which the blocking limit is not met.

4.2.9.2 Limits

4.2.9.2.1 3,84 Mcps TDD option

The BER shall not exceed 0,001 for the parameters specified in table 11.

Table 11: Spurious response (3,84 Mcps TDD option)

Parameter	Value	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	dB
$\hat{I}_{or}$	-102	dBm/3,84 MHz
I_{ouw} (CW)	-44	dBm

4.2.9.2.2 1,28 Mcps TDD option

The BER shall not exceed 0,001 for the parameters specified in table 11a.

Table 11a: Spurious response (1,28 Mcps TDD option)

Parameter	Value	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	dB
$\hat{I}_{or}$	-105	dBm/1,28 MHz
I_{ouw} (CW)	-44	dBm

4.2.9.3 Conformance

Conformance tests described in clause 5.3.8 shall be carried out.

4.2.10 Receiver adjacent channel selectivity

4.2.10.1 Definition

Adjacent Channel Selectivity (ACS) is a measure of the receiver ability to receive a wanted signal at its assigned channel frequency in the presence of an adjacent channel signal at a given frequency offset from the centre frequency of the assigned channel. ACS is the ratio of the receive filter attenuation on the assigned channel frequency to the receiver filter attenuation on the adjacent channel(s).

4.2.10.2 Limits

4.2.10.2.1 3,84 Mcps TDD option

For UE of power classes 2 and 3 and parameters specified in table 12 the BER shall not exceed 0,001. This test condition is equivalent to the ACS value 33 dB.

Table 12: Test parameters for Adjacent Channel Selectivity (3,84 Mcps TDD option)

Parameter	Level	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	dB
$\hat{I}_{or}$	-91	dBm/3,84 MHz
I_{oac} mean power (modulated)	-52	dBm
F_{uw} offset	+5 or -5	MHz

4.2.10.2.2 1,28 Mcps TDD option

For UE of power classes 2 and 3 and parameters specified in table 12a the BER shall not exceed 0,001. This test condition is equivalent to the ACS value 33 dB.

Table 12a: Test parameters for Adjacent Channel Selectivity (1,28 Mcps TDD option)

Parameter	Level	Unit
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	0	dB
$\hat{I}_{or}$	-91	dBm/1,28 MHz
I_{oac} mean power (modulated)	-52	dBm
F_{uw} offset	+1,6 or -1,6	MHz

4.2.10.3 Conformance

Conformance tests described in clause 5.3.9 shall be carried out.

4.2.11 Out-of-synchronization handling of output power

4.2.11.1 Definition

The UE shall monitor the DPCH quality in order to detect a loss of the signal on layer 1. The threshold Q_{out} specifies at what DPCH quality levels the UE shall shut its power off. The threshold is defined by the condition under which the UE shall shut its transmitter off as stated in this clause.

The OFF power is defined as the RRC filtered mean power measured over one chip when the transmitter is off.

4.2.11.2 Limit

4.2.11.2.1 3,84 Mcps TDD option

The handover triggering level shall be set very high to ensure that the beacon channel power never exceeds the value of 10 dB above it. Therefore the averaging time for signal quality will always be 160 ms.

When the UE estimates the DPCH quality over the last 160 ms period to be worse than a threshold Q_{out}, the UE shall shut its transmitter off within 40 ms.

The quality level at the thresholds Q_{out} correspond signal level depending on the downlink conditions DCH parameters. For the conditions in table 13 a signal with the quality at the level Q_{out} can be generated by a ΣDPCH_Ec/ I_{or} ratio of -13 dB. In this test, the DL reference measurement channel 12,2 kbit/s specified in TS 125 102 [5], where the CRC bits are replaced by data bits, and with static propagation conditions is used. For the parameters in table 13, figure 2 shows a scenario where the $\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$ ratio varies from a level where the DPCH is demodulated under normal conditions, down to a level where the UE shall shut its power off.

Table 13: DCH parameters for test of Out-of-synch handling (3,84 Mcps TDD option)

Parameter	Unit	Value
$\hat{I}_{or}/I_{oc}$	dB	1.1
I_{oc}	dBm/3,84 MHz	-60
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	dB	See figure 2
Information Data Rate	kbit/s	13
TFCI	-	On

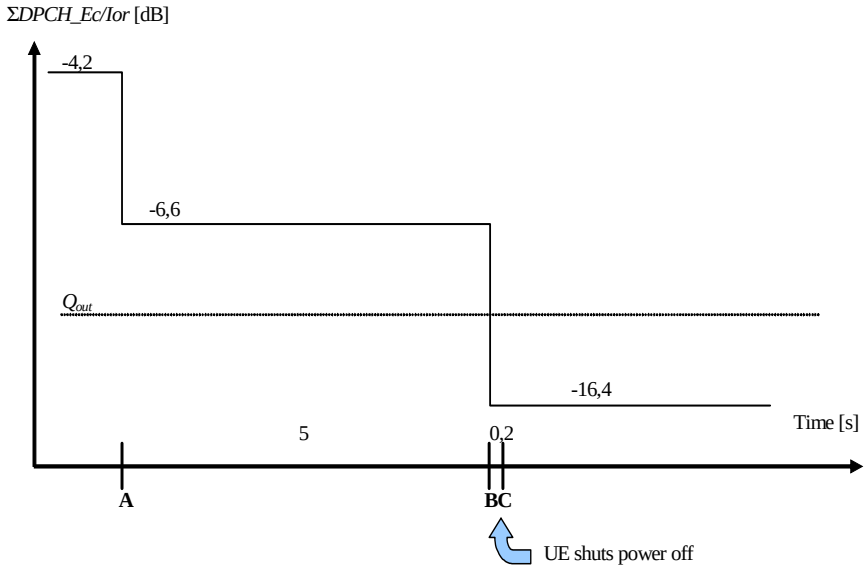

Figure 2: Test case for out-of-synch handling in the UE (3,84 Mcps TDD option)

The UE transmitter is considered to be off if the transmitter power is less than -63,5 dBm.

4.2.11.2.2 1,28 Mcps TDD option

The handover triggering level shall be set very high to ensure that the beacon channel power never exceeds the value of 10 dB above it. Therefore the averaging time for signal quality will always be 160 ms.

When the UE estimates the DPCH quality over the last 160 ms period to be worse than a threshold Q_{out}, the UE shall shut its transmitter off within 40 ms.

The quality level at the thresholds Q_{out} correspond signal level depending on the downlink conditions DCH parameters. For the conditions in table 13a a signal with the quality at the level Q_{out} can be generated by a ΣDPCH_Ec/ I_{or} ratio of -15 dB. In this test, the DL reference measurement channel 12,2 kbit/s specified in TS 125 102 [5], where the CRC bits are replaced by data bits, and with static propagation conditions is used. For the parameters in table 13a, figure 2a shows a scenario where the $\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$ ratio varies from a level where the DPCH is demodulated under normal conditions, down to a level where the UE shall shut its power off.

Table 13a: DCH parameters for test of Out-of-synch handling (1,28 Mcps TDD option)

Parameter	Unit	Value
$\hat{I}_{or}/I_{oc}$	dB	-1
I_{oc}	dBm/1,28 MHz	-60
$\frac{\Sigma \text{ DPCH\_Ec}}{I_{or}}$	dB	See figure 2a
Information Data Rate	kbit/s	12,2
TFCI	-	On

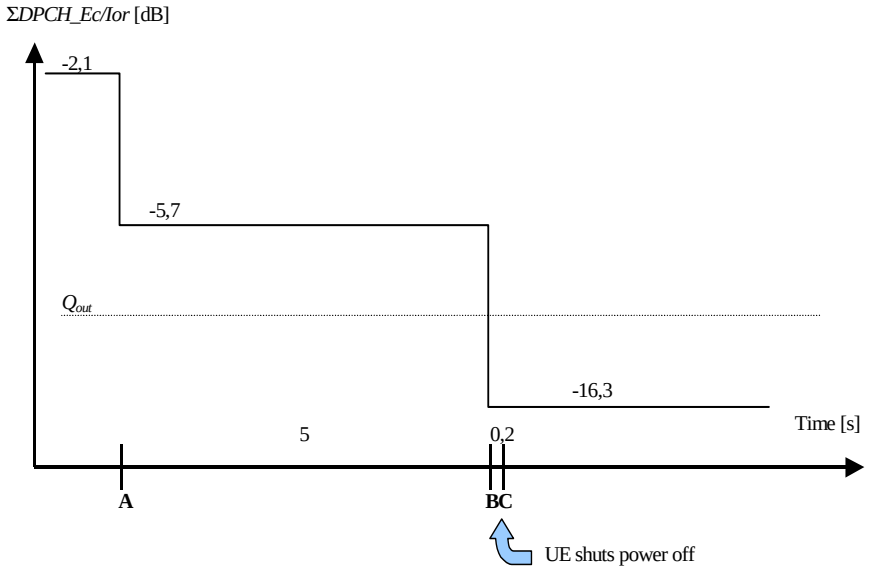

Figure 2a: Test case for out-of-synch handling in the UE (1,28 Mcps TDD option)

The UE transmitter is considered to be off if the transmitter power is less than -63,5 dBm.

4.2.11.3 Conformance

Conformance tests described in clause 5.3.10 shall be carried out.

4.2.12 Transmitter adjacent channel leakage power ratio

4.2.12.1 Definition

Adjacent Channel Leakage power Ratio (ACLR) is the ratio of the RRC filtered mean power centred on the assigned channel frequency to the RRC filtered mean power centred on an adjacent channel frequency.

4.2.12.2 Limits

4.2.12.2.1 3,84 Mcps TDD option

If the adjacent channel RRC filtered mean power is greater than -50 dBm then the ACLR shall be equal to or greater than the limits specified in table 13b.

Table 13b: UE ACLR limits (3,84 Mcps TDD option)

adjacent channel	ACLR limit
UE channel ±5 MHz	32,2 dB
UE channel ±10 MHz	42,2 dB

4.2.12.2.2 1,28 Mcps TDD option

If the adjacent channel RRC filtered mean power is greater than -55 dBm then the ACLR shall be equal to or greater than the limits specified in table 13c.

Table 13c: UE ACLR limits (1,28 Mcps TDD option)

adjacent channel	ACLR limit
UE channel ±1,6 MHz	32,2 dB
UE channel ±3,2 MHz	42,2 dB

4.2.12.3 Conformance

Conformance tests described in clause 5.3.11 shall be carried out.

5 Testing for compliance with technical requirements

5.1 Environmental conditions for testing

Tests defined in the present document shall be carried out at representative points within the boundary limits of the required operational environmental profile.

Where technical performance varies subject to environmental conditions, tests shall be carried out under a sufficient variety of environmental conditions (within the boundary limits of the required operational environmental profile) to give confidence of compliance for the affected technical requirements.

Normally it should be sufficient for all tests to be conducted using normal test condition except where otherwise stated. For guidance on the use of other test conditions to be used in order to show compliance reference can be made to TS 134 122 [8].

5.2 Interpretation of the measurement results

The interpretation of the results recorded in a test report for the measurements described in the present document shall be as follows:

- the measured value related to the corresponding limit shall be used to decide whether the user equipment meets the requirements of the present document;
- the value of the measurement uncertainty for the measurement of each parameter shall be included in the test report;
- the recorded value of the measurement uncertainty shall be, for each measurement, equal to or lower than the figures in table 14.

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028 [4] and shall correspond to an expansion factor (coverage factor) k = 1,96 (which provides a confidence level of 95 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)). For guidance on other measurement conditions reference can be made to the annexes of TS 134 122 [8].

Table 14 is based on this expansion factor.

Table 14: Maximum measurement uncertainty of the test system

Parameter	Conditions	Uncertainty
5.3.1 Spectrum emission mask		±1,5 dB
5.3.2 Transmitter spurious emissions	For UE and coexistence bands: for results < -60 dBm for results > -60 dBm	 ±3,0 dB ±2,0 dB
	Outside above: f ≤ 2,2 GHz 2,2 GHz < f ≤ 4 GHz 4 GHz < f	 ±1,5 dB ±2,0 dB ±4,0 dB
5.3.3 Maximum output power	–	±0,7 dB
5.3.4 Minimum transmit output power	–	±1,0 dB
5.3.5 Receiver spurious emissions	UE receive band	±3,0 dB
	Outside UE receive band f ≤ 2,2 GHz 2,2 GHz <f ≤ 4 GHz 4 GHz <f	 ±2,0 dB ±2,0 dB ±4,0 dB
5.3.6 Receiver blocking characteristics (3,84 Mcps TDD option)	Foffset < 15 MHz	±1,4 dB
	Foffset ≥ 15 MHz and f ≤ 2,2 GHz 2,2 GHz < f ≤ 4 GHz 4 GHz <f	±1,0 dB ±1,7 dB ±3,1 dB
5.3.6 Receiver blocking characteristics (1,28 Mpcs TDD option)	Foffset < 4,8 MHz	±1,4 dB
	Foffset ≥ 4,8 MHz and f ≤ 2,2 GHz 2,2 GHz < f ≤4 GHz 4 GHz < f	±1,0 dB ±1,7 dB ±3,1 dB
5.3.7 Receiver intermodulation characteristics	-	±1,3 dB with Formula = $\sqrt{(2\cdot CW\_level\_error)^2+(\mathrm{mod}\_level\_error)^2+(wanted\_signal\_level\_error)^2}$ (Using CW interferer ±0,5 dB, modulated interferer ±0,5 dB, wanted signal ±0,7 dB)
5.3.8 Receiver spurious response	f ≤ 2,2 GHz	±1,0 dB
	2,2 GHz < f ≤ 4 GHz	±1,7 dB
	4 GHz < f:	±3,1 dB
5.3.9 Receiver Adjacent Channel Selectivity (ACS)	-	±1,1 dB
5.3.10 Out-of-synchronization handling of output power	$\frac{\Sigma DPCH\_E_c}{I_{or}}$	±0,4 dB
	Measurement of transmit OFF power	±1,5 dB
5.3.11 Transmitter adjacent channel leakage power ratio	-	±0,8 dB

NOTE 1: For RF tests it should be noted that the uncertainties in table 14 apply to the test system operating into a nominal 50 Ω load and do not include system effects due to mismatch between the EUT and the test system.

NOTE 2: Annex G of TR 100 028 [4] provides guidance for the calculation of the uncertainty components related to mismatch.

NOTE 3: If the test system for a test is known to have a measurement uncertainty greater than that specified in table 14, this equipment can still be used provided that an adjustment is made follows:

- any additional uncertainty in the test system over and above that specified in table 14 is used to tighten the test requirements thus making the test harder to pass (for some tests, e.g. receiver tests, this may require modification of stimulus signals). This procedure will ensure that a test system not compliant with table 14 does not increase the probability of passing an EUT that would otherwise have failed a test if a test system compliant with table 14 had been used.

5.3 Essential radio test suites

5.3.1 Spectrum emission mask

5.3.1.1 Method of test

5.3.1.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequencies to be tested are low range and high range as defined in TS 134 108 [6].

1) Connect the System Simulator (SS) to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the generic call setup procedure using parameters as specified in table 15.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

Table 15: Common transmitter test parameters

Parameter	Value/description
UL Reference measurement channel	12,2 kbit/s (see TS 125 102 [5])
Uplink power control	Set the SS level and signalling parameter values such that MS under test will transmit maximum power
Data content	real life (sufficiently irregular pattern)

5.3.1.1.2 Procedure

1) Measure the power of the transmitted signal using a measurement filter bandwidth according to table 3 for the 3,84 Mcps TDD option and table 3a for the 1,28 Mcps TDD option respectively. The characteristics of the filter shall be approximately Gaussian (typical spectrum analyser filter). The centre frequency of the filter shall be stepped in contiguous steps according to table 3 for the 3,84 Mcps TDD option and table 3a for the 1,28 Mcps TDD option respectively. The step duration shall be sufficient slow to capture the active TS. The measured power shall be recorded for each step.

2) Measure the RRC filtered mean power centred on the assigned channel frequency according to annex B in TS 134 122 [8].

3) Display the results of step 1 in dBc with respect to 2).

5.3.1.2 Test requirements

The result of the measurement according to clause 5.3.1.1.2 step 3) shall fulfil the test requirements of table 3 for the 3,84 Mcps TDD option and table 3a for the 1,28 Mcps TDD option respectively.

5.3.2 Transmitter spurious emissions

5.3.2.1 Method of test

5.3.2.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequencies to be tested are low range, mid range and high range as defined in TS 134 108 [8].

1) Connect the SS to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the generic call setup procedure using parameters as specified in table 15.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.2.1.2 Procedure

Measure the power of the spurious emissions applying measurement filters bandwidths as specified in the relevant tables 4 and 5 for the 3,84 Mcps TDD option and tables 5a and 5b for the 1,28 Mcps TDD option respectively. The characteristics of the filters shall be approximately Gaussian (typical spectrum analyser filters). The centre frequency of the filter shall be swept over the frequency bands as given in the tables. The sweep time shall be sufficiently low to capture the active time slots.

5.3.2.2 Test requirements

The spurious emissions measured according to clause 5.3.2.1.2 shall not exceed the limits specified in the relevant tables 4 and 5 for the 3,84 Mcps TDD option and tables 5a and 5b for the 1,28 Mcps TDD option respectively.

5.3.3 Maximum output power

5.3.3.1 Method of test

5.3.3.1.1 Initial conditions

Test environment: normal and extreme (for guidance see annex B).

The frequencies to be tested are low range, mid range and high range as defined in TS 134 108 [6].

1) Connect the System Simulator (SS) to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the Generic call setup procedure using parameters as specified in table 16.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

Table 16: Test parameters for maximum output power single code

Parameter	Value/description
UL Reference measurement channel	Single code 12,2 kbit/s (see TS 125 102 [5])
Uplink Power Control	SS level and signalling values such that UE will transmit maximum power
Data content	real life (sufficiently irregular)

5.3.3.1.2 Procedure

1) Measure the mean power of the UE output signal.

2) Run step 1 for RF channels Low/Mid/High.

5.3.3.2 Test requirements

The output power error, measured in step 1) of clause 5.3.3.1.2, shall not exceed the prescribed tolerance in table 6.

5.3.4 Minimum transmit output power

5.3.4.1 Method of test

5.3.4.1.1 Initial conditions

Test environment: normal and extreme (for guidance see annex B).

The frequency to be tested is mid range as defined in TS 134 108 [6].

1) Connect the System Simulator (SS) to the UE antenna connector (see TS 134 122 [8]).

2) A call is set up according to the Generic call setup procedure using parameters as specified in table 17.

Table 17: Common TX test parameters

Parameter	Value/description
UL Reference measurement channel	12,2 kbit/s (see TS 125 102 [5])
Uplink Power Control	SS level and signalling values such that UE transmits maximum power
Data content	Real life (sufficiently irregular)

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.4.1.2 Procedure

1) Configure the UE transmitter to enable power control steps of size 1 dB.

2) Set and send Down power control commands to the UE. The sequence shall be sufficiently long so that the UE output signal reached its minimum power.

3) Measure the mean power of the UE output signal according to annex B of TS 134 122 [8].

4) Configure the UE transmitter to enable power control steps of 2 dB and of 3 dB, respectively, and repeat steps 2 and 3.

5) Run step 2) to 4) for RF channels Low, Mid and High.

5.3.4.2 Test requirements

For all measurements, the minimum transmit power derived in steps 3), and 4) 5) of 5.3.4.1.2 shall be below the limit in clause 4.2.5.2.1 for the 3,84 Mcps TDD option and 4.2.5.2.2 for the 1,28 Mcps TDD option respectively.

5.3.5 Receiver spurious emissions

5.3.5.1 Method of test

5.3.5.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequency to be tested is mid range as defined in TS 134 108 [6].

1) Connect the measurement equipment to the UE antenna connector (see TS 134 122 [8]).

2) Set up RF parameters according to table 18 for the 3,84 Mcps TDD option and table 19 for the 1,28 Mcps TDD option respectively.

Table 18: RF parameters for receiver spurious emissions test (3,84 Mcps TDD Option)

Parameter	Unit	Level
PCCPCH_Ec/I_{or}	dB	-3
SCH_Ec/I_{or}	dB	-9
$\hat{I}_{or}/I_{oc}$	dB	9
PCCPCH RSCP	dBm	-64

Table 19: RF parameters for receiver spurious emissions test (1,28 Mcps TDD Option)

Parameter	Unit	Level
PCCPCH_Ec/I_{or}	dB	-3
DwPCH_Ec/I_{or}	dB	0
$\hat{I}_{or}/I_{oc}$	dB	9
PCCPCH RSCP	dBm	-64

3) A call is set up according to the setup procedure specified in TS 134 108 [6] with the following exceptions for information elements in System Information Block type3.

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	TDD
- Sintrasearch	0 dB
- Sintersearch	0 dB
- RAT List	This parameter is configurable
- Ssearch,RAT	0 dB
- Maximum allowed UL TX power	Power level where Pcompensation=0

NOTE 1: The setup procedure (3) sets the UE into CELL_FACH state. With this state and the SS level (2) it is ensured that UE continuously monitors the S-CCPCH and no cell reselections are performed. No transmission of the UE will interfere with the measurement.

NOTE 2: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.5.1.2 Procedure

Measure the power of spurious emissions by covering the frequency ranges of table 7 for the 3,84 Mcps TDD option and table 7a for the 1,28 Mcps TDD option respectively. Cover the UTRA/TDD and UTRA/FDD UE receive band in contiguous steps of 200 kHz. Cover the other frequency ranges in contiguous steps of 100 kHz. Apply the corresponding filters of table 7 for the 3,84 Mcps TDD option and table 7a for the 1,28 Mcps TDD option respectively. The step duration shall be sufficiently long to capture intermittent spurious emissions.

5.3.5.2 Test requirements

The power level of any spurious emissions shall not exceed the values of table 7 for the 3,84 Mcps TDD option and table 7a for the 1,28 Mcps TDD option respectively.

5.3.6 Receiver blocking characteristics

5.3.6.1 Method of test

5.3.6.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequency to be tested is mid range as defined in TS 134 108 [6].

1) Connect the System Simulator (SS) and the interfering signal generator to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the Generic call setup procedure.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.6.1.2 Procedure

1) Set the wanted signal frequency channel to mid range frequency using the parameters in table 8 for the 3,84 Mcps TDD option and table 9a for the 1,28 Mcps TDD option respectively.

2) Step the interfering signal generator frequency through the frequency range indicated in table 8 for the 3,84 Mcps TDD option and table 9a for the 1,28 Mcps TDD option respectively with a step size of 1 MHz. The interfering signal level shall be set according to table 8 for the 3,84 Mcps TDD option and table 9a for the 1,28 Mcps TDD option respectively.

3) The interference signal modulation shall be equivalent to a continuously running wideband CDMA signal with one code and a chip frequency of 3,84 Mcps for the 3,84 Mcps TDD option and 1,28 Mcps for the 1,28 Mcps TDD option respectively and a roll off factor of 0,22.

4) Measure the BER of the wanted signal received from the UE at the SS for each step of the interfering frequency.

5) Set the wanted signal frequency channel to an arbitrary frequency chosen from the low, mid or high range using the parameters in table 9 for the 3,84 Mcps TDD option and table 9b for the 1,28 Mcps TDD option respectively.

6) Step the interfering signal generator through the frequency range indicated in table 9 for the 3,84 Mcps TDD option and table 9b for the 1,28 Mcps TDD option respectively with a step size of 1 MHz. The interfering signal level shall be set according to table 9 for the 3,84 Mcps TDD option and table 9b for the 1,28 Mcps TDD option respectively.

7) Apply an interfering CW signal.

8) Measure the BER of the wanted signal received from the UE at the SS for each interfering frequency.

9) Record the frequencies for which BER exceed the test requirements in clause 4.2.7.2.1 for the 3,84 Mcps TDD option and clause 4.2.7.2.2 for the 1,28 Mcps TDD option. These frequencies are further processed in clause 5.3.8 "Receiver spurious response".

5.3.6.2 Test requirements

The measured BER from step 4) shall not exceed the limit stated in clause 4.2.7.2.1 for the 3,84 Mcps TDD option and clause 4.2.7.2.2 for the 1,28 Mcps TDD option respectively.

The measured BER from step 8) shall not exceed the limit stated in clause 4.2.7.2.1 for the 3,84 Mcps TDD option and clause 4.2.7.2.2 for the 1,28 Mcps TDD option respectively except for up to 24 different interfering frequencies. These frequencies are further processed in clause 5.3.8 "Receiver spurious response".

5.3.7 Receiver intermodulation characteristics

5.3.7.1 Method of test

5.3.7.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequency to be tested is mid range as defined in TS 134 108 [6].

1) Connect the System Simulator (SS) and the generators of unwanted signals to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the Generic call setup procedure.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.7.1.2 Procedure

1) Set the wanted and interfering signals as indicated in table 10 for the 3,84 Mcps TDD option and table 10a for the 1,28 Mcps TDD option respectively with positive offset with respect to the wanted signal.

2) Measure the BER of DCH that the UE at the System Simulator (SS) receives.

3) Set the interfering signals according to table 10 for the 3,84 Mcps TDD option and table 10a for the 1,28 Mcps TDD option respectively with negative offsets with respect to the wanted signal and repeat step 2).

5.3.7.2 Test requirements

The measured BER, derived in step 2) and 3) shall not exceed the limit in clause 4.2.8.2.1 for the 3,84 Mcps TDD option and clause 4.2.8.2.2 for the 1,28 Mcps TDD option respectively.

5.3.8 Receiver spurious response

5.3.8.1 Method of test

5.3.8.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequency to be tested is mid range as defined in TS 134 108 [6].

1) Connect the SS and the unwanted signal to the UE antenna connector (see TS 134 122 [8]).

2) A call is set up according to the Generic call setup procedure.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.8.1.2 Procedure

1) Set the wanted signal frequency to the frequency used for the out-of-band blocking test. Set the power level of the wanted signal according to table 11 for the 3,84 Mcps TDD option and table 11a for the 1,28 Mcps TDD option respectively.

2) Set the frequency of the interferer signal according the recorded spurious response frequency values obtained from the out-of-band blocking test as described in clause 5.3.6.1.2, at which the blocking test failed. Set the power level of the interferer according to table 11 for the 3,84 Mcps TDD option and table 11a for the 1,28 Mcps TDD option respectively.

3) Measure the BER of DCH received from the UE at the SS.

5.3.8.2 Test requirements

The measured BER, derived in step 3), shall not exceed the limit in clause 4.2.9.2.1 for the 3,84 Mcps TDD option and clause 4.2.9.2.2 for the 1,28 Mcps TDD option respectively.

5.3.9 Receiver adjacent channel selectivity

5.3.9.1 Method of test

5.3.9.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequency to be tested is mid range as defined in TS 134 108 [6].

1) Connect the system simulator (SS) and the interferer to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the Generic call setup procedure.

3) Enter the UE into loopback test mode and start the loopback test.

4) Set the signal generators to produce wanted and interference signals according to table 12 for the 3,84 Mcps TDD option and table 12a for the 1,28 Mcps TDD option respectively. The interference signal shall be equivalent to a continuously running wideband CDMA signal with one code and chip frequency 3,84 Mcps for the 3,84 Mcps TDD option and 1,28 Mcps for the 1,28 Mcps TDD option respectively and roll off factor of 0,22.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.9.1.2 Procedure

1) Set the interference signal 5 MHz for the 3,84 Mcps TDD option and 1,6 MHz for the 1,28 Mcps TDD option respectively above the assigned channel frequency of the wanted signal.

2) Measure the BER of the wanted signal received from the UE at the SS.

3) Set the interference signal 5 MHz for the 3,84 Mcps TDD option and 1,6 MHz for the 1,28 Mcps TDD option respectively below the assigned channel frequency of the wanted signal and repeat 2).

5.3.9.2 Test requirements

The measured BER, derived in step 2), shall not exceed the limit in clause 4.2.9.2.1 for the 3,84 Mcps TDD option and clause 4.2.9.2.2 for the 1,28 Mcps TDD option respectively.

5.3.10 Out-of-synchronization handling of output power

5.3.10.1 Method of test

5.3.10.1.1 Initial conditions

Test environment: normal (for guidance see annex B).

The frequencies to be tested is mid range as defined in TS 134 108 [6].

1) Connect the SS to the UE antenna connector (see TS 134 122 [8]).

2) Calls are set up according to the Generic call setup procedure using parameters as specified in table 13 for the 3,84 Mcps TDD option and table 13a for the 1,28 Mcps TDD option respectively.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.10.1.2 Procedure

5.3.10.1.2.1 3,84 Mcps TDD option

1) SS level and signalling values are set such that the UE transmits maximum power (see TS 134 122 [8], clause E.3.1).

2) Set the SS TX signal quality to $\frac{\Sigma DPCH\_E_c}{I_{or}}$ = -4,2 dB.

3) Set the SS TX signal quality to $\frac{\Sigma DPCH\_E_c}{I_{or}}$ = -6,6 dB.

4) Set the SS TX signal quality to $\frac{\Sigma DPCH\_E_c}{I_{or}}$ = -16,4 dB and verify that the UE TX signal turns off 200 ms or earlier with respect to that instant.

5) The SS monitors the UE transmitted power for 5 s and verifies that the UE transmitter is not switched on during this time.

5.3.10.1.2.2 1,28 Mcps TDD option

1) SS level and signalling values are set such that the UE transmits maximum power (see TS 134 122, clause E.3.1 [8]).

2) Set the SS TX signal quality to $\frac{\Sigma DPCH\_E_c}{I_{or}}$ = -2,1 dB.

3) Set the SS TX signal quality to $\frac{\Sigma DPCH\_E_c}{I_{or}}$ = -5,7 dB.

4) Set the SS TX signal quality to $\frac{\Sigma DPCH\_E_c}{I_{or}}$ = -16,3 dB and verify that the UE TX signal turns off 200 ms or earlier with respect to that instant.

5) The SS monitors the UE transmitted power for 5 s and verifies that the UE transmitter is not switched on during this time.

5.3.10.2 Test requirements

The results obtained shall be compared to the limits in clause 4.2.11.2.1 for the 3,84 Mcps TDD option and clause 4.2.11.2.2 for the 1,28 Mcps TDD option respectively in order to prove compliance.

5.3.11 Transmitter adjacent channel leakage power ratio

5.3.11.1 Method of test

5.3.11.1.1 Initial conditions

Test environment: normal and extreme (for guidance see annex B).

The frequencies to be tested are low range, mid range and high range as defined in TS 134 108 [6].

1) Connect the system simulator (SS) to the UE antenna connector (see TS 134 122 [8]).

2) Set up a call according to the generic call setup procedure using parameters as specified in table 15.

3) Enter the UE into loopback test mode and start the loopback test.

NOTE: When reference is made to test setup, call-setup and loopback test mode, guidance on the applicability of these can be found in TS 134 122 [8], annexes A to E, TS 134 108 [6] and TS 134 109 [7], respectively.

5.3.11.1.2 Procedure

1) Measure the RRC filtered mean power centred on the assigned channel frequency.

2) Average over the number of time slots defined in TS 134 122 [8].

3) Measure the RRC filtered mean power centred on the first lower adjacent channel frequency.

4) Average over the number of time slots defined in TS 134 122 [8].

5) Calculate the ACLR by: Power acc. to 2) / Power acc. to 4).

6) Repeat steps 3) 4) and 5) for the second lower adjacent RF channel (centre frequency 10 MHz for the 3,84 Mcps TDD Option and 3,2 MHz for the 1,28 Mcps TDD Option, respectively, below the assigned channel frequency of the transmitted signal) and also for the first and second upper adjacent RF channel (centre frequency 5 MHz for the 3,84 Mcps TDD Option and 1,6 MHz for the 1,28 Mcps TDD Option, respectively, above the assigned channel frequency of the transmitted signal, and 10 MHz, for the 3,84 Mcps TDD Option and 3,2 MHz for the 1,28 Mcps TDD Option, respectively above the assigned channel frequency of the transmitted signal).

7) Run step 1) to 6) for RF channels Low/Mid/High.

5.3.11.2 Test requirements

The ACLR calculated in steps 3) to 5) of clause 5.3.11.1.2 shall be equal or greater than the limits given in table 13b for the 3,84 Mcps TDD option and table 13c for the 1,28 Mcps TDD option respectively.

Annex A (normative): HS Requirements and conformance Test specifications Table (HS-RTT)

The HS Requirements and conformance Test specifications Table (HS-RTT) in table A.1 serves a number of purposes, as follows:

- it provides a statement of all the essential requirements in words and by cross reference to a specific clause in the present document or to a specific clause in a specific referenced document;
- it provides a statement of all the test procedures corresponding to those essential requirements by cross reference to (a) specific clause(s) in the present document or to (a) specific clause(s) in (a) specific referenced document(s);
- it qualifies each requirement to be either:
  - Unconditional: meaning that the requirement applies in all circumstances; or
  - Conditional: meaning that the requirement is dependent on the manufacturer having chosen to support optional functionality defined within the schedule.
- in the case of Conditional requirements, it associates the requirement with the particular optional service or functionality;
- it qualifies each test procedure to be either:
  - Essential: meaning that it is included with the Essential Radio Test Suite and therefore the requirement shall be demonstrated to be met in accordance with the referenced procedures;
  - Other: meaning that the test procedure is illustrative but other means of demonstrating compliance with the requirement are permitted.

Table A.1: HS Requirements and conformance Test specifications Table (HS-RTT)

Harmonized Standard EN 301 908-6 The following essential requirements and test specifications are relevant to the presumption of conformity under Article 3.2 of the R&TTE Directive						
Essential Requirement			**Requirement Conditionality**		**Test Specification**	
No	**Description**	**Reference: Clause No**	**U/C**	**Condition**	**E/O**	**Reference: Clause No**
1	Spectrum emission mask	4.2.2	U		E	5.3.1
2	Transmitter spurious emissions	4.2.3	U		E	5.3.2
3	Maximum output power	4.2.4	U		E	5.3.3
4	Minimum transmit output power	4.2.5	U		E	5.3.4
5	Receiver spurious emissions	4.2.6	U		E	5.3.5
6	Receiver blocking characteristics	4.2.7	U		E	5.3.6
7	Receiver intermodulation characteristics	4.2.8	U		E	5.3.7
8	Receiver spurious response	4.2.9	U		E	5.3.8
9	Receiver adjacent channel selectivity	4.2.10	U		E	5.3.9
10	Out-of-synchronization handling of output power	4.2.11	U		E	5.3.10
11	Transmitter adjacent channel leakage power ratio	4.2.12	U		E	5.3.11

Key to columns:

Essential Requirement:

No A unique identifier for one row of the table which may be used to identify a requirement or its test specification.

Description A textual reference to the requirement.

Clause Number Identification of clause(s) defining the requirement in the present document unless another document is referenced explicitly.

Requirement Conditionality:

U/C Indicates whether the requirement is to be *unconditionally* applicable (U) or is *conditional* upon the manufacturers claimed functionality of the equipment (C).

Condition Explains the conditions when the requirement shall or shall not be applicable for a technical requirement which is classified "conditional".

Test Specification:

E/O Indicates whether the test specification forms part of the Essential Radio Test Suite (E) or whether it is one of the Other Test Suite (O).

NOTE: All tests whether "E" or "O" are relevant to the requirements. Rows designated "E" collectively make up the Essential Radio Test Suite. The completion of all tests classified "E" as specified with satisfactory outcomes is a necessary condition for a presumption of conformity.

Clause Number Identification of clause(s) defining the test specification in the present document unless another document is referenced explicitly.

Annex B (informative): Environmental profile

B.1 General

B.1.1 Introduction

This informative annex defines the environmental profile of the UE.

B.1.2 Temperature

The UE should fulfil all the test requirements in the full temperature range as given in table B.1.

Table B.1: Temperatures

Range	Conditions
+15°C to +35°C	For normal conditions (with relative humidity of 25 % to 75 %)
-10°C to +55°C	For extreme conditions (see IEC 60068-2-1 [12] and IEC 60068-2-2 [13])

The low and high extreme temperature conditions are denoted as TL (temperature low, -10°C) and TH (temperature high, +55°C).

B.1.3 Voltage

The UE should fulfil all test requirements stated in the present document in the full voltage range between the extreme supply voltages.

The manufacturer should declare a lower and a higher extreme supply voltage and an approximate shutdown voltage. For equipment that can be operated from one or more of the power sources listed below, the lower extreme voltage should not be higher, and the higher extreme voltage should not be lower than that specified in table B.2.

Table B.2: Supply voltages

Power source	Lower extreme voltage	Higher extreme voltage	Normal conditions voltage
AC mains	0,9 × nominal	1,1 × nominal	nominal
Regulated lead acid battery	0,9 × nominal	1,3 × nominal	1,1 × nominal
Non regulated batteries:			
Leclanché/lithium	0,85 × nominal	Nominal	Nominal
Mercury/nickel cadmium	0,90 × nominal	Nominal	Nominal

B.1.4 Test environment

Where a normal environment is required then the normal conditions shown in clauses B.1.2 and B.1.3 should be applied.

Where an extreme environment is required then the various combinations of extreme temperatures together with the extreme voltages shown in clauses B.1.2 and B.1.3 should be applied. The combinations are:

- low extreme temperature/low extreme voltage (TL/VL);
- low extreme temperature/high extreme voltage (TL/VH);
- high extreme temperature/low extreme voltage (TH/VL);
- high extreme temperature/high extreme voltage (TH/VH).

Annex C (informative): Bibliography

- IEC 60068-3-1 (1974-01): "Environmental testing - Part 3: Background information - Section One: Cold and dry heat tests".
- CEPT/ERC/REC 74-01E (Siófok 1998, Nice 1999, Sesimbra 2002): "Unwanted Emissions in the Spurious Domain".
- Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.
- ETSI EG 201 399 (V2.1.1): "A guide to the production of Harmonized Standards for application under the R&TTE Directive".

Annex D (informative): The EN title in the official languages

Language	EN title
Bulgarian	
Czech	Elektromagnetická kompatibilita a rádiové spektrum (ERM) – Základnové stanice (BS), opakovače a uživatelská zařízení (UE) buňkových sítí IMT-2000 třetí generace – Část 6: Harmonizovaná EN pokrývající základní požadavky článku 3.2 Směrnice R&TTE na IMT-2000, CDMA TDD (UTRA TDD) (UE)
Danish	Elektromagnetisk kompatibilitet og radiospektrumanliggender (ERM); Basisstationer (BS), Repeaters og brugerudstyr (UE) for IMT-2000 CDMA tredje generations cellulær radionet; Part 6: Harmoniseret EN for IMT-2000, CDMA TDD (UTRA TDD) (UE), der dækker de væsentlige krav i R&TTE Direktivets artikel 3.2
Dutch	Elektromagnetische compatibiliteit en radiospectrum-zaken (ERM); Basisstations (BS), Repeaters en gebruikersapparatuur (UE) voor IMT-2000 derde generatie mobiele netwerken; Deel 6: Geharmoniseerde EN voor IMT-2000, CDMA TDD (UTRA TDD) (UE), welke invulling geeft aan de wezenlijke vereisten, neergelegd in artikel 3.2 van de R&TTE-richtlijn
English	Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 6: Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive
Estonian	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS), repiiterid ja kasutajaseadmed (UE); Osa 6: IMT-2000, CDMA TDD (UTRA TDD) (UE) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
Finnish	Sähkömagneettinen yhteensopivuus ja radiospektriasiat (ERM); IMT-2000 kolmannen sukupolven solukkoverkkojen tukiasemat (BS), toistimet ja matkaviestinlaitteet (UE); Osa 6: R&TTE direktiivin artiklan 3.2 olennaiset vaatimukset toteuttava yhdenmukaistettu EN IMT-2000 CDMA aikajakotekniikkaa (UTRA TDD) käyttäville matkaviestinlaitteille (UE)
French	Compatibilité électromagnétique et Radioélectrique (ERM); Stations de Base (BS) , Répéteurs et Equipement Utilisateur (UE) pour les réseaux cellulaires de troisième génération IMT-2000; Partie 6: Norme harmonisée pour l'IMT-2000, CDMA TDD (UTRA TDD) (UE) couvrant les exigences essentielles de l'article 3.2 de la Directive R&TTE
German	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM); Basis- (BS), Repeater und Mobilstationen (UE) für zellulare Mobilfunknetze der dritten Generation IMT-2000; Teil 6: CDMA TDD (UTRA TDD) (UE), Harmonisierte Europäische Norm (EN) für IMT-2000 mit wesentlichen Anforderungen nach R&TTE Richtlinie Artikel 3.2
Greek	Ηλεκτρομαγνητική συμβατότητα και Θέματα Ηλεκτρομαγνητικού Φάσματος (ERM); Σταθμοί Βάσης (BS), αναμεταδότες και Μηχανήματα Χρηστών (UE) για κυψελωτά δικτυα Τρίτης Γεννιάς IMT-2000; Μερος 6; Εξαρμονισμένη τυποποίηση για IMT-2000, CDMA TDD (UTRA TDD) (UE) Που καλυπτει τα αναγκαία προαπαιτούμενα του Αρθρου 3.2 της Ντιρεκτιβας R&TTE
Hungarian	Elektromágneses összeférhetőségi és rádióspektrumügyek (ERM). Az IMT-2000 harmadik generációs cellás hálózatainak bázisállomásai (BS), átjátszói és felhasználói berendezései (UE). 6. rész: Az IMT-2000 CDMA TDD (UTRA TDD) (UE) berendezéseire vonatkozó, az R&TTE
Icelandic	
Italian	Compatibilità elettromagnetica e problematiche di Spettro Radio (ERM); Stazioni Base (BS), Ripetitori e Terminali Mobili (UE) per le reti cellulari di terza generazione IMT-2000; Parte 6: Norma armonizzata per IMT-2000, CDMA TDD (UTRA TDD) (UE) relativa ai requisiti essenziali dell'articolo 3.2 della Direttiva R&TTE
Latvian	Elektromagnētiskā saderība un radiofrekvenču spektra jautājumi (ERM); IMT-2000 trešās paaudzes šūnu tīklu bāzes stacijas (BS), retranslatori un lietotāja iekārtas (UE); 6.daļa: Harmonizēts IMT–2000 un CDMA TDD (ULTRA TDD) (UE) Eiropas standarts (EN), kas atbilst R&TTE
Lithuanian	Elektromagnetinio suderinamumo ir radijo dažnių spektro dalykai. Trečiosios kartos korinių tinklų IMT-2000 bazinės stotys (BS), kartotuvai ir vartotojo įranga (VĮ). 6 dalis. Darnusis IMT-2000, CDMA TDD (ULTRA TDD) būdo (VĮ) Europos standartas, apimantis esminius 1999/5/EC direktyvos 3.2 straipsnio reikalavimus
Maltese	
Norwegian	Elektromagnetisk kompatibilitet og radiospektrumspørsmål (ERM); Basestasjoner (BS), repeatere og brukerutstyr (UE) for IMT-2000 tredjegenerasjons celledelte nett;Del 6: Harmonisert EN for IMT-2000, CDMA TDD (UTRA TDD) (UE) som dekker de vesentligste krav i R&TTE

Language	EN title
Polish	Kompatybilność elektromagnetyczna i zagadnienia widma radiowego (ERM); Stacje bazowe (BS), stacje przekaźnikowe i urządzenia użytkownika (UE) dla sieci komórkowych trzeciej generacji IMT-2000; Część 6: Zharmonizowana EN dla IMT-2000 CDMA TDD (UTRA TDD) (UE) zapewniająca spełnianie zasadniczych wymagań zgodnie z artykułem 3.2 dyrektywy R&TTE
Portuguese	Assuntos de Espectro Radioeléctrico e Compatibilidade Electromagnética (ERM); Estações de Base (BS) , Repetidores e equipamento de utilizador (UE) para a terceira geração de redes celulares IMT-2000; Parte 6: EN Harmonizada para o IMT-2000, CDMA TDD (UTRA-TDD) (UE), cobrindo os requisitos essenciais no âmbito do artigo 3.º, n.º 2 da Directiva R&TTE
Romanian	
Spanish	Compatibilidad electromagnética y espectro radio (ERM); estaciones base (BS), Repetidores y equipos de usuario (UE) de redes móviles de tercera generación IMT-2000; EN armonizada que cubre los requisitos mínimos del artículo 3.2 de la directiva de R&TTE (1999/5/EC); Parte 6: CDMA TDD (UTRA TDD) (UE)
Slovak	Elektromagnetická kompatibilita a záležitosti rádiového spektra (ERM). Základňové stanice (BS), opakovače a používateľské zariadenia (UE) bunkových sietí tretej generácie IMT-2000. Časť 6: Harmonizovaná EN na IMT-2000 - CDMA TDD (UTRA TDD) (UE), vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice R&TTE
Slovenian	Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) – Bazne postaje (BS), ponavljalniki (repetitorji) in uporabniška oprema (UE) za celična omrežja tretje generacije IMT-2000 – 6. del: Harmonizirani EN za IMT-2000, CDMA TDD (UTRA TDD) (UE), ki zajema bistvene zahteve člena 3.2 direktive R&TTE
Spanish	Cuestiones de Compatibilidad Electromagnética y Espectro de Radiofrecuencia (ERM); Estaciones de Base (BS), Repetidores y Equipos de usuario (UE) de redes celulares de Tercera Generación IMT-2000; Parte 6: Norma Europea (EN) armonizada para IMT-2000, CDMA TDD (UTRA TDD) (UE), cubriendo los requisitos esenciales según el artículo 3,2 de la Directiva R&TTE
Swedish	Elektromagnetisk kompatibilitet och radiospektrumfrågor (ERM); Basstationer (BS), Repeatrar och Mobilstationer (UE) för tredje generationens mobilnät IMT-2000; Del 6: Harmoniserad EN för IMT-2000, CDMA TDD (UTRA TDD) (UE) omfattande väsentliga krav enligt artikel 3.2 i R&TTE-direktivet

History

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