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TECHNICAL SPECIFICATION

**5G;
5GS;
UE conformance specification;
Part 2: Applicability of protocol test cases
(3GPP TS 38.523-2 version 15.0.0 Release 15)**

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Contents

Foreword

This Technical Specification 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.

The present document is part 2 of a multi-part deliverable covering the 5G System (5GS) User Equipment (UE) protocol conformance specification, as identified below:

- 3GPP TS 38.523-1 [2]: "5GS; User Equipment (UE) conformance specification; Part 1: Protocol".

- **3GPP TS 38.523-2: "5GS; User Equipment (UE) conformance specification; Part 2: Applicability of protocol test cases" (the present document).**

- 3GPP TS 38.523-3 [3]: "5GS; User Equipment (UE) conformance specification; Part 3: Protocol Test Suites".

1 Scope

The present document provides the applicability of protocol test cases proforma for 5G New Radio (NR) User Equipment (UE), in compliance with the relevant requirements.

The present document specifies the recommended applicability statement for the test cases included in 3GPP TS 38.523-1 [2] and 3GPP TS 38.523-3 [3]. These applicability statements are based on the features implemented in the UE.

Special conformance testing functions can be found in 3GPP TS 38.509 [5] and 3GPP TS 36.509 [7] and the common test environments are included in 3GPP TS 38.508-1 [4] and 3GPP TS 36.508 [6].

The present document is valid for UE implemented according to 3GPP Releases starting from Release 15 up to the Release indicated on the cover page of the present document.

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 TR 21.905: "Vocabulary for 3GPP Specifications".

[2]   3GPP TS 38.523-1: "5GS; User Equipment (UE) conformance specification; Part 1: Protocol".

[3]   3GPP TS 38.523-3: "5GS; User Equipment (UE) conformance specification; Part 3: Protocol Test Suites".

[4]   3GPP TS 38.508-1: "5GS; User Equipment (UE) conformance specification; Part 1: Common test environment".

[5]   3GPP TS 38.508-2: "5GS; User Equipment (UE) conformance specification; Part 2: Common Implementation Conformance Statement (ICS) proforma".

[6]   3GPP TS 38.509: "5GS; Special conformance testing functions for User Equipment (UE)".

[7]   3GPP TS 36.508: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRAN); Common Test Environments for User Equipment (UE) Conformance Testing".

[8]   3GPP TS 36.509: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Special conformance testing functions for User Equipment (UE)".

[9]   3GPP TS 34.229-2: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP);User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) specification".

[10]   3GPP TS 36.523-2: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRAN); User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [5] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [5].

Implementation Conformance Statement (ICS): statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented

ICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS

Implementation extra Information for Testing (IXIT): A statement made by a supplier or implementer of an UEUT which contains or references all of the information (in addition to that given in the ICS) related to the UEUT and its testing environment, which will enable the test laboratory to run an appropriate test suite against the UEUT

IXIT proforma: A document, in the form of a questionnaire, which when completed for an UEUT becomes an IXIT

Protocol Implementation Conformance Statement (PICS): An ICS for an implementation or system claimed to conform to a given protocol specification

Protocol Implementation extra Information for Testing (PIXIT): An IXIT related to testing for conformance to a given protocol specification

Static conformance review: A review of the extent to which the static conformance requirements are claimed to be supported by the UEUT, by comparing the answers in the ICS(s) with the static conformance requirements expressed in the relevant specification(s)

3.2 Symbols

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

<symbol> <Explanation>

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

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

FFS	For Further Study
ICS	Implementation Conformance Statement
IXIT	Implementation extra Information for Testing
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation extra Information for Testing
SCS	System Conformance Statement
TC	Test Case
UEUT	User Equipment Under Test

4 Recommended Test Case Applicability

4.0 Introduction

The applicability of each individual test is identified in subclause 4.1. This is just a recommendation based on the purpose for which the test case was written.

The applicability of every test is formally expressed by the use of Boolean expression that are based on parameters (ICS). The parameters (ICS) included in TS 38.508-2 [5] are used in the test case applicability condition without

reference. Parameters (ICS) specified in 3GPP TS 36.523-2 [10] and 3GPP TS 34.229-2 [9] shall be referred with proper reference.

Additional information related to the Test Case (TC), e.g. affecting its dynamic behaviour or its execution may be provided as well

The columns in subclause 4.1 have the following meaning:

Clause

The clause column indicates the clause number in TS 38.523-1 [2] that contains the test body.

Title

The title column describes the name of the test and contains the clause title of the clause in TS 38.523-1 [2] that contains the test body.

Release

The release column indicates the earliest release from which the test case is applicable. In some specific cases it may indicate the release(s) for which the TC is **only** applicable.

Note: Some exceptions to this interpretation may be indicated in Notes in column 'Number of TC Executions'.

Applicability - Condition

The following notations are used for the applicability column:

R   recommended - the test case is recommended

O   optional – the test case is optional

N/A   not applicable - in the given context, the test case is not recommended.

Ci   conditional - the test is recommended ("R") or not ("N/A") depending on the support of other items. "i" is an integer identifying a unique conditional status expression which is defined immediately following the table. For nested conditional expressions, the syntax "IF ... THEN (IF ... THEN ... ELSE...) ELSE ..." is used to avoid ambiguities.

NOTE: The conditions are defined in subclause 4.2.

Applicability - Comments

This column contains a verbal description of the condition.

Additional Information - Specific ICS

This column contains the mnemonics of ICS(s) affecting the dynamic behaviour of the TC.

Additional Information - Specific IXIT

This column contains the mnemonics of IXIT(s) affecting the dynamic behaviour of the TC.

Additional Information - Number of TC Executions

This column contains, wherever applicable, the recommended for certification purposes number of TC executions. It may contain also other information e.g. exceptions to the release applicable to the test. Clarifying notes are listed at the end of the same Table.

Additional Information - Release other RAT

In regard to a particular test case, this column provides information on the release which is used by the simulated network in the other (i.e. non 5GS) RAT(s) where applicable. For each applicable RAT the release shall be indicated in the format 'Rel-X RAT'. When multiple RATs are applicable the entries per RAT shall be separated by a comma. When a value for a 3GPP RAT is not provided but the RAT is in the scope of the test case then for this RAT the release indicated in the Release column applies (per default).

4.1 Protocol conformance test cases applicability

Table 4.1-1a: Applicability of Protocol conformance Idle mode test cases, ref. TS 38.523-1 [2]

Clause	TC Title	Release	Applicability	
			Condition	Comment
X	Section title			
x.y.z		Rel-n	Cxy	

Table 4.1-1b: Additional Information of Applicability of Protocol conformance Idle mode test cases, ref. TS 38.523-1 [2]

Clause	Specific ICS	Specific IXIT	Number of TC Executions	Release other RAT
X				
x.y.z				

Table 4.1-2a: Applicability of Protocol conformance Layer 2 test cases, ref. TS 38.523-1 [2]

Clause	TC Title	Release	Applicability	
			Condition	Comment
7.1.1	**MAC**			
7.1.1.1	**Random Access Procedures**			
7.1.1.1.1	Correct selection of RACH parameters / Random access preamble and PRACH resource explicitly signalled to the UE by RRC / contention free random access procedure	Rel-15	R	UEs supporting 5GS
7.1.1.1.2	Random access procedure / Successful/ C-RNTI Based/Preamble selected by MAC itself	Rel-15	R	UEs supporting 5GS
7.1.1.2	**Downlink Data Transfer**			
7.1.1.2.1	Correct Handling of DL MAC PDU / Assignment / HARQ process	Rel-15	R	UEs supporting 5GS
7.1.1.3	**Uplink Data Transfer**			
7.1.1.3.1	Correct Handling of UL MAC PDU / Assignment / HARQ process	Rel-15	R	UEs supporting 5GS
7.1.1.3.2	Logical channel prioritization handling	Rel-15	C02	UEs supporting 5GS and RLC UM Mode
7.1.1.3.3	Correct handling of MAC control information / Scheduling requests	Rel-15	R	UEs supporting 5GS
7.1.1.3.4	Correct handling of MAC control information / Buffer status / UL data arrive in the UE Tx buffer / Regular BSR	Rel-15	R	UEs supporting 5GS
7.1.1.3.5	Correct handling of MAC control information / Buffer Status / UL resources are allocated / Padding BSR	Rel-15	R	UEs supporting 5GS
7.1.1.3.6	Correct handling of MAC control information / Buffer status / Periodic BSR timer expires	Rel-15	R	UEs supporting 5GS
7.1.1.4	**Transport Size Selection**			
7.1.1.4.1	**DL-SCH Transport Size Selection**			
7.1.1.4.1.1	DL-SCH Transport Block Size selection / DCI format 1_0	Rel-15	R	UEs supporting 5GS
7.1.1.4.1.2	DL-SCH Transport Block Size selection / DCI format 1_0 / 256QAM	Rel-15	C12	UEs supporting 5GS and 256QAM for PUSCH
7.1.1.4.1.3	DL-SCH transport block size selection / DCI format 1_1 / RA type 0/RA Type / 2 Codewords enabled	Rel-15	R	UEs supporting 5GS
7.1.1.4.1.4	DL-SCH transport block size selection / DCI format 1_1 / RA type 0/RA Type / 2 Codewords enabled / 256QAM	Rel-15	C12	UEs supporting 5GS and 256QAM for PUSCH
7.1.1.4.2	**UL-SCH Transport Size Selection**			
7.1.1.4.2.1	UL-SCH Transport Block Size selection / DCI format 1_0	Rel-15	R	UEs supporting 5GS
7.1.1.4.2.2	UL-SCH Transport Block Size selection / DCI format 1_0 / 256QAM	Rel-15	C11	UEs supporting 5GS and 256QAM for PDSCH for FR1/FR2
7.1.1.4.2.3	UL-SCH transport block size selection / DCI format 1_1 / RA type 0/RA Type / 2 Codewords enabled	Rel-15	R	UEs supporting 5GS
7.1.1.4.2.4	UL-SCH transport block size selection / DCI format 1_1 / RA type 0/RA Type / 2 Codewords enabled / 256QAM	Rel-15	C11	UEs supporting 5GS and 256QAM for PDSCH for FR1/FR2

Clause	TC Title	Release	Applicability	
			Condition	Comment
7.1.1.5	**Discontinuous reception**			
7.1.1.5.1	DRX operation / Short cycle not configured / Parameters configured by RRC	Rel-15	C03	UEs supporting 5GS and long DRX cycle
7.1.1.5.2	DRX operation / Short cycle not configured /Long DRX command MAC control element reception	Rel-15	C03	UEs supporting 5GS and long DRX cycle
7.1.1.5.3	DRX operation / Short cycle configured / Parameters configured by RRC	Rel-15	C04	UEs supporting 5GS and short DRX cycle
7.1.1.6	**Semi-Persistent Scheduling**			
7.1.1.6.1	Correct handling of DL assignment / Semi-persistent case	Rel-15	R	UEs supporting 5GS
7.1.2	**RLC**			
7.1.2.2	**RLC Unacknowledged Mode**			
7.1.2.2.1	UM RLC / Segmentation and reassembly / 6-bit SN / Segmentation Info (SI) field	Rel-15	C05	UEs supporting 5GS and RLC UM with 6-bit length of RLC sequence number
7.1.2.2.2	UM RLC / Segmentation and reassembly / 12-bit SN / Segmentation Info (SI) field	Rel-15	C06	UEs supporting 5GS and RLC UM with 12-bit length of RLC sequence number
7.1.2.2.3	UM RLC / 6-bit SN / Correct use of sequence numbering	Rel-15	C05	UEs supporting 5GS and RLC UM with 6-bit length of RLC sequence number
7.1.2.2.4	UM RLC / 12-bit SN / Correct use of sequence numbering	Rel-15	C06	UEs supporting 5GS and RLC UM with 12-bit length of RLC sequence number
7.1.2.2.5	UM RLC / Receive Window operation and t-Reassembly expiry	Rel-15	C02	UEs supporting 5GS and RLC UM Mode
7.1.2.2.6	UM RLC / RLC re-establishment procedure	Rel-15	C02	UEs supporting 5GS and RLC UM Mode
7.1.2.3	**RLC Acknowledged Mode**			
7.1.2.3.1	AM RLC / 12-bit SN/Segmentation and reassembly / Segmentation Info (SI) field	Rel-15	C07	UEs supporting 5GS and RLC AM with 12-bit length of RLC sequence number
7.1.2.3.2	AM RLC / 18-bit SN/Segmentation and reassembly / Segmentation Info (SI) field	Rel-15	R	UEs supporting 5GS
7.1.2.3.3	AM RLC / 12-bit SN / Correct use of sequence numbering	Rel-15	C07	UEs supporting 5GS and RLC AM with 12-bit length of RLC sequence number
7.1.2.3.4	AM RLC / 18-bit SN / Correct use of sequence numbering	Rel-15	R	UEs supporting 5GS and RLC
7.1.2.3.5	AM RLC / Control of transmit window / Control of receive window	Rel-15	R	UEs supporting 5GS
7.1.2.3.6	AM RLC / Polling for status	Rel-15	R	UEs supporting 5GS
7.1.2.3.7	AM RLC / Receiver status triggers	Rel-15	R	UEs supporting 5GS
7.1.2.3.8	AM RLC / Reconfiguration of RLC parameters by upper layers	Rel-15	R	UEs supporting 5GS
7.1.2.3.9	AM RLC / Reassembling of AMD PDUs	Rel-15	R	UEs supporting 5GS
7.1.2.3.10	AM RLC / Re-transmission of RLC PDU with and without re-segmentation	Rel-15	R	UEs supporting 5GS
7.1.2.3.11	AM RLC / RLC re-establishment procedure	Rel-15	R	UEs supporting 5GS
7.1.3	**PDCP**			
7.1.3.1	**Maintenance of PDCP sequence numbers for radio bearers**			
7.1.3.1.1	Maintenance of PDCP sequence numbers / User plane / 12-bit SN	Rel-15	C08	UEs supporting 5GS and 12-bit length of PDCP sequence number
7.1.3.1.2	Maintenance of PDCP sequence numbers / User plane / 18-bit SN	Rel-15	R	UEs supporting 5GS
7.1.3.2	**PDCP Integrity Protection**			
7.1.3.2.1	Integrity protection / Correct functionality of encryption algorithm SNOW3G / SRB / DRB	Rel-15	R	UEs supporting 5GS
7.1.3.2.2	Integrity protection / Correct functionality of encryption algorithm AES / SRB / DRB	Rel-15	R	UEs supporting 5GS
7.1.3.2.3	Integrity protection / Correct functionality of encryption algorithm ZUC / SRB / DRB	Rel-15	C09	UEs supporting 5GS and ZUC algorithm
7.1.3.3	**PDCP Ciphering and deciphering**			
7.1.3.3.1	Ciphering and deciphering / Correct functionality of encryption algorithm SNOW3G / SRB / DRB	Rel-15	R	UEs supporting 5GS
7.1.3.3.2	Ciphering and deciphering / Correct functionality of encryption algorithm AES / SRB / DRB	Rel-15	R	UEs supporting 5GS
7.1.3.3.3	Ciphering and deciphering / Correct functionality of encryption algorithm ZUC / SRB / DRB	Rel-15	C09	UEs supporting 5GS and ZUC algorithm
7.1.3.4	**PDCP Handover**			
7.1.3.4.1	PDCP handover / Lossless handover / PDCP sequence number maintenance/PDCP status report to convey the information on missing or acknowledged PDCP SDUs at handover/ In-	Rel-15	R	UEs supporting 5GS

Clause	TC Title	Release	Applicability	
			Condition	**Comment**
	order delivery and duplicate elimination in the downlink			
7.1.3.4.2	PDCP handover / Non-lossless handover / PDCP sequence number maintenance	Rel-15	R	UEs supporting 5GS
7.1.3.5	**PDCP Other**			
7.1.3.5.1	PDCP Discard	Rel-15	C02	UEs supporting 5GS and RLC UM Mode
7.1.3.5.2	PDCP Uplink Routing / Split DRB	Rel-15	C10	UEs supporting 5GS and UL transmission via both MCG path and SCG path for the split DRB
7.1.3.5.4	PDCP reordering / Maximum re-ordering delay below t-Reordering / t-Reordering timer operations	Rel-15	R	UEs supporting 5GS

Table 4.1-2b: Additional Information of Applicability of Protocol conformance Layer 2 test cases, ref. TS 38.523-1 [2]

Clause	Specific ICS	Specific IXIT	Number of TC Executions	Release other RAT
7.1.1				
7.x.y.z				

Table 4.1-3a: Applicability of Protocol conformance RRC test cases, ref. TS 38.523-1 [2]

Clause	TC Title	Release	Applicability	
			Condition	**Comment**
8.2.1	**UE Capability / RRC Others**			
8.2.1.1	**UE capability transfer / Success**			
8.2.1.1.1	UE capability transfer / Success / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.1.2	**BandwidthPart Configuration / SCG**			
8.2.1.2.1	BandwidthPart Configuration / SCG / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.2	**Radio Bearer Addition, Modification and Release**			
8.2.2.1	**SRB3 Establishment, Reconfiguration and Release / NR addition, modification and release**			
8.2.2.1.1	SRB3 Establishment, Reconfiguration and Release / NR addition, modification and release / EN-DC	Rel-15	FFS	UEs supporting EN-DC
8.2.2.2	**Split SRB Establishment and Release**			
8.2.2.2.1	Split SRB Establishment and Release / EN-DC	Rel-15	FFS	UEs supporting EN-DC
8.2.2.3	**Simultaneous SRB3 and Split SRB / Sequential message flow on SRB3 and Split SRB**			
8.2.2.3.1	Simultaneous SRB3 and Split SRB / Sequential message flow on SRB3 and Split SRB / EN-DC	Rel-15	FFS	UEs supporting EN-DC and simultaneous Split SRB and SRB3
8.2.2.4	**PSCell Addition, Modification and Release / SCG DRB**			
8.2.2.4.1	PSCell addition, modification and release / SCG DRB / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.2.5	**PSCell Addition, Modification and Release / Split DRB**			
8.2.2.5.1	PSCell addition, modification and release / Split DRB / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.2.6	**Bearer Modification / MCG DRB / SRB / PDCP version change**			
8.2.2.6.1	Bearer Modification / MCG DRB / SRB / PDCP version change / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.2.7	**Bearer Modification / Handling for bearer type change without security key change**			
8.2.2.7.1	Bearer Modification / Handling for bearer type change without security key change / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.2.8	**Bearer Modification / Handling for bearer type change with security key change**			
8.2.2.8.1	Bearer Modification / Handling for bearer type change with security key change / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.2.9	**Bearer Modification / Uplink data path / Split DRB Reconfiguration**			
8.2.2.9.1	Bearer Modification / Uplink data path / Split DRB Reconfiguration / EN-DC	Rel-15	C01	UEs supporting EN-DC

Clause	TC Title	Release	Applicability	
			Condition	Comment
8.2.3	**Measurement Configuration Control and Reporting / Handovers**			
8.2.3.1	**Measurement configuration control and reporting / Inter-RAT measurements / Event B1 / Measurement of NR cells**			
8.2.3.1.1	Measurement configuration control and reporting / Inter-RAT measurements / Event B1 / Measurement of NR cells / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.3.2	**Measurement configuration control and reporting / Inter-RAT measurements / Event B1 / Measurement of NR cells / RSRQ based measurements**			
8.2.3.2.1	Measurement configuration control and reporting / Inter-RAT measurements / Event B1 / Measurement of NR cells / RSRQ based measurements / EN-DC	Rel-15	FFS	UEs supporting EN-DC and Inter-RAT measurement and NR measurements and Event B triggered reporting
8.2.3.3	**Measurement configuration control and reporting / Inter-RAT measurements / Periodic reporting / Measurement of NR cells**			
8.2.3.3.1	Measurement configuration control and reporting / Inter-RAT measurements / Periodic reporting / Measurement of NR cells / EN-DC	Rel-15	FFS	UEs supporting EN-DC and Inter-RAT measurement and NR measurements and Periodic measurement reporting
8.2.3.4	**Measurement configuration control and reporting / Event A1 / Measurement of NR PSCell**			
8.2.3.4.1	Measurement configuration control and reporting / Event A1 / Measurement of NR PSCell / EN-DC	Rel-15	C13	UEs supporting EN-DC and NR measurements and Event A triggered reporting
8.2.3.5	**Measurement configuration control and reporting / Event A2 / Measurement of NR PSCell**			
8.2.3.5.1	Measurement configuration control and reporting / Event A2 / Measurement of NR PSCell / EN-DC	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR Intra-frequency and NR-Inter frequency measurements)
8.2.3.6	**Measurement configuration control and reporting / Event A3 (intra-frequency, inter-frequency and inter-band measurements) / Measurement of Neighbour NR cells**			
8.2.3.6.1	Measurement configuration control and reporting / Event A3 (intra-frequency, inter-frequency and inter-band measurements) / Measurement of Neighbour NR cells / EN-DC	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR intra-frequency and inter-frequency measurements)
8.2.3.7	**Measurement configuration control and reporting / Event A4 (intra-frequency, inter-frequency and inter-band measurements) / Measurement of Neighbour NR cell**			
8.2.3.7.1	Measurement configuration control and reporting / Event A4 (intra-frequency, inter-frequency and inter-band measurements) / Measurement of Neighbour NR cell / EN-DC	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR intra-frequency and inter-frequency measurements)
8.2.3.8	**Measurement configuration control and reporting / Event A5 (intra-frequency, inter-frequency and inter-band measurements) / Measurement of Neighbour NR cell**			
8.2.3.8.1	Measurement configuration control and reporting / Event A5 (intra-frequency, inter-frequency and inter-band measurements) / Measurement of Neighbour NR cell / EN-DC	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR intra-frequency and inter-frequency measurements)
8.2.3.9	**Measurement configuration control and reporting / SS/PBCH block based / CSI-RS based intra-frequency measurements / Measurement of Neighbour NR cell**			
8.2.3.9.1	Measurement configuration control and reporting / SS/PBCH block based / CSI-RS based intra-frequency measurements / Measurement of Neighbour NR Cell / EN-DC	Rel-15	C15	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR Intra-frequency and Inter frequency measurements) and CSI-RSRP measurement
8.2.3.10	**Measurement configuration control and reporting / SS/PBCH block based / CSI-RS based inter-frequency measurements / Measurement of Neighbour NR cell**			
8.2.3.10.1	Measurement configuration control and reporting / SS/PBCH block based / CSI-RS	Rel-15	C15	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR Intra-

Clause	TC Title	Release	Applicability	
			Condition	**Comment**
	based inter-frequency measurements / Measurement of Neighbour NR Cell			frequency and Inter frequency measurements) and CSI-RSRP measurement
8.2.3.11	**Measurement Gaps patterns Related**			
8.2.3.11.1	Measurement Gaps patterns Related / LTE / NR FR1 / EN-DC	Rel-15	FFS	FFS
8.2.3.11.2	Measurement Gaps patterns Related / LTE / NR FR2 / EN-DC	Rel-15	FFS	FFS
8.2.3.12	**Measurement configuration control and reporting / Inter-RAT measurements / Event B2 / Measurement of NR cells**			
8.2.3.12.1	Measurement configuration control and reporting / Inter-RAT measurements / Event B2 / Measurement of NR cells / EN-DC	Rel-15	FFS	UEs supporting EN-DC
8.2.3.13	**PCell Handover with SCG change / Reconfiguration with sync / SCG DRB**			
8.2.3.13.1	PSCell Handover with SCG change / Reconfiguration with sync / SCG DRB / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.3.14	**SCG change / Reconfiguration with sync / Split DRB**			
8.2.3.14.1	PSCell Handover with SCG change / Reconfiguration with sync / Split DRB / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.4	**Measurement Configuration Control and Reporting / Handovers**			
8.2.4.3	**NR CA / RRC connection reconfiguration / LTE Handover / Success / PCell change and SCell addition / Two simultaneous events A3 and B1**			
8.2.4.3.1	NR CA / RRC connection reconfiguration / LTE Handover / Success / PCell change and SCell addition / Two simultaneous events A3 and B1 / Intra-band Contiguous CA	Rel-15	FFS	UEs supporting EN-DC and NR Intra-band contiguous CA and Inter-RAT measurement and NR measurements and Event A triggered reporting and Event B triggered reporting
8.2.5	**Reconfiguration Failure / Radio link failure**			
8.2.5.1	**Radio link failure / PSCell addition failure**			
8.2.5.1.1	Radio link failure / PSCell addition failure / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.5.2	**Radio link failure / PSCell out of sync indication**			
8.2.5.2.1	Radio link failure / PSCell out of sync indication / Radio link failure / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.5.3	**Radio link failure / RLC-MaxNumRetx failure**			
8.2.5.3.1	Radio link failure / RLC-MaxNumRetx failure / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.5.4	**Reconfiguration failure / SCG change failure**			
8.2.5.4.1	Reconfiguration failure / SCG change failure / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.5.5	**Reconfiguration failure / SCG Reconfiguration failure / SRB3**			
8.2.5.5.1	Reconfiguration failure / SCG Reconfiguration failure / SRB3 / EN-DC	Rel-15	FFS	UEs supporting EN-DC and srb3
8.2.5.6	**Reconfiguration failure / SCG Reconfiguration failure / SRB1**			
8.2.5.6.1	Reconfiguration failure / SCG Reconfiguration failure / SRB1 / EN-DC	Rel-15	C01	UEs supporting EN-DC

Table 4.1-3b: Additional Information of Applicability of Protocol conformance RRC test cases, ref. TS 38.523-1 [2]

Clause	Specific ICS	Specific IXIT	Number of TC Executions	Release other RAT
8.2.1				
8.x.y.z				
8.2.2				
8.2.2.1				
8.2.2.1.1			Either test cases 8.2.2.1.1 & 8.2.2.1.2 OR test case 8.2.2.3.1 is executed. (Note 1)	
8.2.2.1.2			Either test cases 8.2.2.1.1 & 8.2.2.1.2 OR test case 8.2.2.1.3 is executed. (Note 1)	
8.2.2.3				
8.2.2.3.1			Either test cases 8.2.2.1.1 & 8.2.2.1.2 OR test case 8.2.2.3.1 is executed. (Note 1)	
Note 1: The 2 set of test case(s) (8.2.2.1.1 & 8.2.2.1.2/8.2.2.3.1) verify the same core requirements. It is recommended that test case 8.2.2.3.1 is executed if supported.				

Table 4.1-4a: Applicability of Protocol conformance Session management test cases, ref. TS 38.523-1 [2]

Clause	TC Title	Release	Applicability	
			Condition	Comment
10.1	**5GS session management**			
x.y.z		Rel-n	Cxy	
10.2	**EN-DC session management**			
10.2.1	**Network initiated procedures**			
10.2.1.1	Default EPS bearer context activation	Rel-15	C01	UEs supporting EN-DC
10.2.1.2	Dedicated EPS bearer context activation	Rel-15	C01	UEs supporting EN-DC
10.2.2	**UE initiated procedures**			
10.2.2.1	EPS bearer resource allocation / modification	Rel-15	C16	UEs supporting EN-DC and UE requested bearer resource allocation and modification procedures

Table 4.1-4b: Additional Information of Applicability of Protocol conformance Session Management test cases, ref. TS 38.523-1 [2]

Clause	Specific ICS	Specific IXIT	Number of TC Executions	Release other RAT
10.1				
10.x.y.z				

4.2 Protocol conformance test cases Applicability Condition

Table 4.2-1: Applicability of Protocol conformance test cases Conditions

Condition	Test case Selection Expression	Comment
C01	IF A.4.1-1/5 THEN R ELSE N/A	UEs supporting EN-DC
C02	IF (A.4.3.4-1/2 OR A.4.3.4-1/3) THEN R ELSE N/A	UEs supporting 5GS and RLC UM Mode
C03	IF A.4.3.5-1/1 THEN R ELSE N/A	UEs supporting 5GS and Long DRX Cycle
C04	IF A.4.3.5-1/2 THEN R ELSE N/A	UEs supporting 5GS and short DRX cycle
C05	IF A.4.3.4-1/3 THEN R ELSE N/A	UEs supporting 5GS and RLC UM with 6-bit length of RLC sequence number
C06	IF A.4.3.4-1/2 THEN R ELSE N/A	UEs supporting 5GS and RLC UM with 12-bit length of RLC sequence number

Condition	Test case Selection Expression	Comment
C01	IF A.4.1-1/5 THEN R ELSE N/A	UEs supporting EN-DC
C07	IF A.4.3.4-1/1 THEN R ELSE N/A	UEs supporting 5GS and RLC AM with 12-bit length of RLC sequence number
C08	IF A.4.3.3-1/1 THEN R ELSE N/A	UEs supporting 5GS and 12-bit length of PDCP sequence number
C09	IF A.4.1-2/3 THEN R ELSE N/A	UEs supporting 5GS and ZUC Algorithm
C10	IF A.4.3.7/2 THEN R ELSE N/A	UEs supporting 5GS and UL transmission via both MCG path and SCG path for the split DRB
C11	IF (A.4.3.2-1/2 OR A.4.3.2-1/3) THEN R ELSE N/A	UEs supporting 5GS and 256QAM for PDSCH for FR1/FR2
C12	IF (A.4.3.2-1/4) THEN R ELSE N/A	UEs supporting 5GS and 256QAM for PUSCH
C13	IF A.4.1-1/5 AND A.4.3.6-1/1 THEN R ELSE N/A	UEs supporting EN-DC and NR measurements and Event A triggered reporting
C14	IF A.4.1-1/5 AND A.4.3.6-1/1 AND A.4.3.6-1/3 THEN R ELSE N/A	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR Intra-frequency and NR-Inter frequency measurements)
C15	IF A.4.1-1/5 AND A.4.3.6-1/1 AND A.4.3.6-1/3 AND A.4.3.6-1/4 THEN R ELSE N/A	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR Intra-frequency and Inter frequency measurements) and CSI-RSRP measurement
C16	IF A.4.1-1/5 AND [10] A.4.4-1/18 AND [10] A.4.4-1/19 THEN R ELSE N/A	UEs supporting EN-DC and UE requested bearer resource allocation and modification procedures

Annex A (informative): Change history

						Change history	
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2017-08	RAN5#76	R5-174402	-	-	-	Introduction of TS 38.523-2.	0.0.1
2018-03	RAN5##2 -5G-NR Adhoc	R5-181762	-	-	-	Draft TS 38.523-2 v0.1.0	0.1.0
2018-04	RAN5##2 -5G-NR Adhoc	R5-181837	-	-	-	Draft TS 38.523-2 v0.2.0	0.2.0
2018-04	RAN5##2 -5G-NR Adhoc	R5-181838	-	-	-	Addition of applicability for new 5GS test cases	0.2.0
2018-04	RAN5##2 -5G-NR Adhoc	R5-181210	-	-	-	Add applicability for new NR testcases	0.2.0
2018-04	RAN5##2 -5G-NR Adhoc	R5-180922	-	-	-	Addition of applicability of new NR test cases 7.1.3.2 and 7.3.4.2	0.2.0
2018-04	RAN5##2 -5G-NR Adhoc	R5-180974	-	-	-	Addition of New Layer 2 NR Test Case Applicability	0.2.0
2018-05	RAN5#79	R5-182897	-	-	-	Update to NR test cases applicability	1.0.0
2018-05	RAN5#79	R5-183158	-	-	-	Update to NR Test case applicability	1.0.0
2018-05	RAN5#79	R5-183159	-	-	-	Addition of Layer 2 test case applicabilities and selection expressions	1.0.0
2018-05	RAN5#79	R5-183235	-	-	-	Correction to applicability of NR testcases	1.0.0
2018-05	RAN5#79	R5-183236	-	-	-	Updates to applicability for session management TCs	1.0.0
2018-06	RAN#80	RP-181211	-	-	-	put under revision control as v15.0.0 with small editorial changes	15.0.0

History

Document history		
V15.0.0	July 2018	Publication