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Technical Specification

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Part 2: Applicability of protocol test cases
(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 expressions 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
6.1	**In a pure NG-RAN environment**			
6.1.1	**NG-RAN Only PLMN Selection**			
6.1.1.1	PLMN selection of RPLMN, HPLMN/EHPLMN, UPLMN and OPLMN / Automatic mode	Rel-15	C21	UEs supporting 5G Core
6.1.1.2	PLMN selection of "Other PLMN/access technology combinations" / Automatic mode	Rel-15	C21	UEs supporting 5G Core
6.1.1.3	Cell reselection of ePLMN in manual mode	Rel-15	C21	UEs supporting 5G Core
6.1.1.4	PLMN selection in shared network environment / Automatic mode	Rel-15	C21	UEs supporting 5G Core
6.1.1.5	PLMN selection of RPLMN, HPLMN/EHPLMN, UPLMN and OPLMN / Automatic mode / User reselection.	Rel-15	C36	UEs supporting 5G Core and user initiated PLMN reselection in automatic mode on NR
6.1.1.6	PLMN selection / Periodic reselection / MinimumPeriodicSearchTimer	Rel-15	C34	UEs supporting 5G Core and MinimumPeriodicSearchTimer
6.1.1.7	PLMN selection of RPLMN or (E)HPLMN; Automatic mode	Rel-15	C21	UEs supporting 5G Core.
6.1.1.8	PLMN selection of RPLMN or (E)HPLMN; Manual mode	Rel-15	C21	UEs supporting 5G Core.
6.1.2	**NG-RAN Only Cell Selection**			
6.1.2.1	Cell Selection/Qrxlevmin & Cell Reselection (Intra NR)	Rel-15	C21	UEs supporting 5G Core
6.1.2.2	QqualminCell Selection/Qqualmin/Intra NR / Serving cell becomes non-suitable (Srxlev > 0, Squal < 0)	Rel-15	C21	UEs supporting 5G Core
6.1.2.3	Cell selection / Intra NR/ Serving cell becomes non-suitable (S<0 , MIB Indicated barred)	Rel-15	C21	UEs supporting 5G Core
6.1.2.4	Cell reselection for interband operation	Rel-15	C37	UEs supporting 5G Core and more than 1 FDD or TDD NR band
6.1.2.5	Cell reselection for interband operation using Pcompensation / Between FDD and TDD	Rel-15	C38	UEs supporting 5G Core and NR FDD and NR TDD
6.1.2.8	Cell reselection / Equivalent PLMN / Single Frequency operation	Rel-15	C21	UEs supporting 5G Core
6.1.2.9	Cell reselection using Qhyst, Qoffset and Treselection	Rel-15	C21	UEs supporting 5G Core
6.1.2.12	Cell reselection using cell status and cell reservations / cellReservedForOtherUse	Rel-15	C21	UEs supporting 5G Core.
6.1.2.13	Cell reselection using cell status and cell reservations / Access Identity 1, 2 or 12 to 14 - cellReservedForOperatorUse	Rel-15	C21	UEs supporting 5G Core.
6.1.2.14	Cell reselection using cell status and cell reservations / Access Identity 11 or 15 - cellReservedForOperatorUse	Rel-15	C21	UEs supporting 5G Core.
6.1.2.15	Cell reselection in shared network environment	Rel-15	C21	UEs supporting 5G Core.
6.1.2.17	Cell reselection / Cell-specific reselection parameters provided by the network in a neighbouring cell list	Rel-15	C21	UEs supporting 5G Core.
6.1.2.19	Speed Dependent Cell Reselection	Rel-15	C21	UEs supporting 5G Core
6.1.2.20	Inter-frequency cell reselection according to cell reselection priority provided by SIBs	Rel-15	C21	UEs supporting 5G Core
6.1.2.21	Cell reselection, SIntraSearchQ and SnonIntraSearchQ	Rel-15	C21	UEs supporting 5G Core
6.1.2.22	Inter-frequency cell reselection based on common priority information with parameters ThreshX, HighQ, ThreshX, LowQ and ThreshServing, LowQ	Rel-15	C21	UEs supporting 5G Core
6.2	**Multi-mode environment (NG-RAN, E-UTRAN)**			

Clause	TC Title	Release	Applicability	
			Condition	Comment
6.2.1	**Inter-RAT PLMN Selection**			
6.2.1.1	Inter-RAT PLMN Selection / Selection of correct RAT for OPLMN / Automatic mode	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.1.2	Inter-RAT PLMN Selection / Selection of correct RAT for UPLMN / Automatic mode	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.1.3	Inter-RAT PLMN Selection / Selection of correct PLMN and RAT in shared network environment / Automatic mode	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.1.4	Inter-RAT PLMN Selection / Selection of correct RAT from the OPLMN list / Manual mode	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.1.5	Inter-RAT Background HPLMN Search / Search for correct RAT for HPLMN / Automatic Mode	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.3	**Inter-RAT Cell Reselection**			
6.2.3.3	Inter-RAT cell reselection / From NR RRC_Idle to E-UTRA_IDLE (lower priority & higher priority , Srxlev based)	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.3.5	Inter-RAT cell reselection/From NR RRC_IDLE to E-UTRA_Idle according to RAT priority provided by dedicated signalling (RRCRelease)	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.2.3.7	Inter-RAT cell reselection/From NR RRC_IDLE to E-UTRA RRC_IDLE, Snonintrasearch	Rel-15	C32	UEs supporting 5G Core and E-UTRA
6.3	**5GS Steering of Roaming**			
6.3.1	**Steering of Roaming**			
6.3.1.1	Steering of UE in roaming during registration/security check successful using List Type 1	Rel-15	C21	UEs supporting 5G Core
6.3.1.2	Steering of UE in roaming during registration/security check successful but SOR Transparent container indicates ACK has been NOT been requested	Rel-15	C21	UEs supporting 5G Core
6.4	**UE Procedures in RRC_INACTIVE state**			
6.4.1	**NG-RAN Only PLMN Selection in RRC_INACTIVE state**			
6.4.2	**NG-RAN Only Cell Selection in RRC_INACTIVE State**			
6.4.2.1	Cell Selection/Qrxlevmin & Cell Reselection (Intra NR in RRC_INACTIVE state)	Rel-15	C21	UEs supporting 5G Core

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
6				
6.1				
6.2				
6.2.1				
6.2.1.1				Rel-15 E-UTRA
6.2.1.2				Rel-15 E-UTRA
6.2.1.3				Rel-15 E-UTRA
6.2.1.4				Rel-15 E-UTRA
6.2.1.5				Rel-15 E-UTRA

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
7.1.1.1.1a	Correct selection of RACH parameters / Random access preamble and PRACH resource explicitly signalled to the UE by PDCCH Order / contention free random access	Rel-15	R	UEs supporting 5GS

Clause	TC Title	Release	Applicability	
			Condition	Comment
	procedure			
7.1.1.1.2	Random access procedure / Successful/ C-RNTI Based / Preamble selected by MAC itself	Rel-15	R	UEs supporting 5GS
7.1.1.1.3	Random access procedure / Successful / SI request	Rel-15	R	UEs supporting 5GS
7.1.1.1.4	Random access procedure / Successful / Beam Failure / Preamble selected by MAC itself / Non-Contention Free RACH procedure	Rel-15	R	UEs supporting 5GS
7.1.1.1.5	Random access procedure / Successful / Supplementary Uplink	Rel-15	C28	UEs supporting 5GS and supplemental uplink with dynamic switch
7.1.1.1.6	Random access procedure / Successful/ Temporary 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
7.1.1.2.2	Correct Handling of DL HARQ process PDSCH Aggregation	Rel-15	C20	UEs supporting 5GS and PDSCH aggregation
7.1.1.2.3	Correct HARQ process handling / CCCH	Rel-15	R	UEs supporting 5GS
7.1.1.2.4	Correct HARQ process handling / BCCH	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
7.1.1.3.7	UE power headroom reporting / Periodic reporting / DL pathloss change reporting	Rel-15	R	UEs supporting 5GS
7.1.1.3.8	UE power headroom reporting / SCell activation / DL pathloss change reporting	Rel-15	R	UEs supporting 5GS
7.1.1.3.9	Correct Handling of UL HARQ process / PUSCH Aggregation	Rel-15	R	UEs supporting 5GS
7.1.1.4	**Transport Size Selection**			
7.1.1.4.1	**DL-SCH Transport Block Size Selection**			
7.1.1.4.1.1	DL-SCH Transport Block Size selection / DCI format 1_0	Rel-15	R	UEs supporting 5GS
7.1.1.4.1.3	DL-SCH transport block size selection / DCI format 1_1 / RA type 0/RA Type 1 / 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 1 / 2 Codewords enabled / 256QAM	Rel-15	C12	UEs supporting 5GS and 256QAM for PUSCH
7.1.1.4.2	**UL-SCH Transport Block Size Selection**			
7.1.1.4.2.1	UL-SCH Transport Block Size selection / DCI format 0_0 / Transform precoding disabled	Rel-15	R	UEs supporting 5GS
7.1.1.4.2.3	UL-SCH transport block size selection / DCI format 0_1 / RA type 0/RA Type 1 / Transform precoding disabled	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 / 256QAM / Transform precoding disabled	Rel-15	C11	UEs supporting 5GS and 256QAM for PDSCH for FR1/FR2
7.1.1.4.2.5	UL-SCH Transport Block Size selection / DCI format 0_0 / Transform precoding and 64QAM	Rel-15	R	UEs supporting 5GS
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
7.1.1.5.4	DRX Operation / Short cycle configured / DRX command MAC control element reception	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-	Rel-15	C17	UEs supporting 5GS and PDSCH reception

Clause	TC Title	Release	Applicability	
			Condition	Comment
	persistent case			based on semi-persistent scheduling
7.1.1.6.2	Correct handling of UL grant / configured grant Type 1	Rel-15	C18	UEs supporting 5GS and Type 1 PUSCH transmissions with configured grant
7.1.1.6.3	Correct handling of UL grant / configured grant Type 2	Rel-15	C19	UEs supporting 5GS and Type 2 PUSCH transmissions with configured grant
7.1.1.7	**Activation/Deactivation of Scells**			
7.1.1.7.1.1	Activation/Deactivation of SCells / Activation/Deactivation MAC control element reception / sCellDeactivationTimer / Intra-band Contiguous CA	Rel-15	R	UEs supporting 5GS
7.1.1.7.1.2	Activation/Deactivation of SCells / Activation/Deactivation MAC control element reception / sCellDeactivationTimer / Inter-band CA	Rel-15	R	UEs supporting 5GS
7.1.1.7.1.3	Activation/Deactivation of SCells / Activation/Deactivation MAC control element reception / sCellDeactivationTimer / Intra-band non-Contiguous CA	Rel-15	R	UEs supporting 5GS
7.1.1.8	**Bandwidth Part (BWP) operation**			
7.1.1.8.1	Bandwidth Part (BWP) operation UL/DL	Rel-15	R	UEs supporting 5GS
7.1.1.9	**MAC Reconfiguration and Reset**			
7.1.1.9.1	MAC Reset	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	Rel-15	R	UEs supporting 5GS

Clause	TC Title	Release	Applicability	
			Condition	Comment
	functionality of encryption algorithm AES / SRB / DRB			
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-order delivery and duplicate elimination in the downlink	Rel-15	R	UEs supporting 5GS
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
7.1.3.5.3	PDCP Data Recovery	Rel-15	R	UEs supporting 5GS
7.1.3.5.4	PDCP reordering / Maximum re-ordering delay below t-Reordering / t-Reordering timer operations	Rel-15	R	UEs supporting 5GS
7.1.4	**SDAP**			
7.1.4.1	SDAP Data Transfer and PDU Header Handling UL/DL	Rel-15	C21A	UEs supporting 5G Core and reflective QoS
7.1.4.2	SDAP Data Transfer handling without Header UL/DL	Rel-15	C21	UEs supporting 5G Core

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				
FFS				

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

Clause	TC Title	Release	Applicability	
			Condition	Comment
8.1.1	**RRC connection management procedures**			
8.1.1.1	**Paging**			
8.1.1.1.1	RRC / Paging for connection / Multiple paging records	Rel-15	C21	UEs supporting 5G Core
8.1.1.1.2	RRC / Paging for connection / Shared network environment	Rel-15	C21	UEs supporting 5G Core
8.1.1.2	**RRC connection establishment**			
8.1.1.2.1	RRC connection establishment / Return to idle state after T300 expiry	Rel-15	C21	UEs supporting 5G Core
8.1.1.2.3	RRC connection establishment / RRC Reject with wait time	Rel-15	C21	UEs supporting 5G Core
8.1.1.3	**RRC Release**			
8.1.1.3.1	RRC connection release / Redirection to another NR frequency	Rel-15	C21	UEs supporting 5G Core
8.1.1.3.2	RRC connection release / Redirection from NR to E-UTRAN	Rel-15	C32	UEs supporting 5G Core and E-UTRA
8.1.1.3.3	RRC connection release / Success / With priority information	Rel-15	C21	UEs supporting 5G Core
8.1.1.3.4	RRC connection release / Success / With priority information / E-UTRA	Rel-15	C26	UEs supporting 5GS and E-UTRA
8.1.1.3.5	RRC connection release / With priority information / T320 expiry	Rel-15	C21	UEs supporting 5G Core
8.1.1.3.6	RRC connection release / With priority information / T320 expiry / E-UTRA	Rel-15	C32	UEs supporting 5G Core and E-UTRA
8.1.1.4	**RRC Resume**			
8.1.1.4.1	RRC resume / Suspend-Resume / Success	Rel-15	C21	UEs supporting 5G Core
8.1.1.4.2	RRC resume / Suspend-Resume / RRC setup / T319 expiry	Rel-15	C21	UEs supporting 5G Core

Clause	TC Title	Release	Applicability	
			Condition	Comment
8.1.1.4.3	RRC resume / Suspend-Resume / RNA update / Success	Rel-15	C21	UEs supporting 5G Core
8.1.2	**RRC reconfiguration**			
8.1.2.1	**Radio bearer establishment / reconfiguration / release**			
8.1.2.1.1	RRC reconfiguration / DRB / SRB / Establishment / Modification / Release / Success	Rel-15	C21	UEs supporting 5G Core
8.1.2.1.3	RRC reconfiguration / Radio resource reconfiguration / dedicatedSIB1-Delivery	Rel-15	C21	UEs supporting 5G Core
8.1.3	**Measurement configuration control and reporting**			
8.1.3.1	**Intra NR measurements**			
8.1.3.1.1	Measurement configuration control and reporting / Intra NR measurements / Event A1 / Event A2	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.2	Measurement configuration control and reporting / Event A3 / Measurement of Neighbor NR cell / Intra-frequency measurements	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.3	Measurement configuration control and reporting / Event A3 / Measurement of Neighbor NR cell / Inter-frequency measurements	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.4	Measurement configuration control and reporting / Event A3 / Measurement of Neighbor NR cell / Inter-band measurements	Rel-15	C21	UEs supporting 5G
8.1.3.1.5	Measurement configuration control and reporting / Event A4 / Measurement of Neighbor NR cell / Intra-frequency measurements	Rel-15	C21	UEs supporting 5G
8.1.3.1.6	Measurement configuration control and reporting / Event A4 / Measurement of Neighbor NR cell / Inter-frequency measurements	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.7	Measurement configuration control and reporting / Event A4 / Measurement of Neighbor NR cell / Inter-band measurements	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.8	Measurement configuration control and reporting / Event A5 / Measurement of Neighbor NR cell / Intra-frequency measurements	Rel-15	C21	UEs supporting 5G
8.1.3.1.9	Measurement configuration control and reporting / Event A5 / Measurement of Neighbor NR cell / Inter-frequency measurements	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.10	Measurement configuration control and reporting / Event A5 / Measurement of Neighbor NR cell / Inter-band measurements	Rel-15	C21	UEs supporting 5G Core
8.1.3.1.11	Measurement configuration control and reporting / Intra NR measurements / Two simultaneous events A3 (intra and inter-frequency measurements) / RSRQ based measurements	Rel-15	C21	UEs supporting 5G
8.1.3.1.12	Measurement configuration control and reporting / Intra NR measurements / Two simultaneous events A5 (intra and inter-frequency measurements) / SINR based measurements	Rel-15	C40	UEs supporting 5G and SS-SINR measurements
8.1.3.1.13	Measurement configuration control and reporting / SS/PBCH block based / CSI-RS based intra-frequency measurements / Measurement of Neighbor NR cell	Rel-15	FFS	UEs supporting 5G Core and FFS
8.1.3.1.14	Measurement configuration control and reporting / SS/PBCH block based / CSI-RS based inter-frequency measurements / Measurement of Neighbor NR cell	Rel-15	FFS	UEs supporting 5G Core and FFS
8.1.3.1.17	**NR CA / Measurement configuration control and reporting / Intra NR measurements / Event A6**			
8.1.3.1.17.1	NR CA / Measurement configuration control and reporting / Intra NR measurements / Event A6 / Intra-band Contiguous CA	Rel-15	C41	UEs supporting 5G Core and intra-band contiguous CA
8.1.3.1.17.2	NR CA / Measurement configuration control	Rel-15	C42	UEs supporting 5G Core and inter-band CA

Clause	TC Title	Release	Applicability	
			Condition	Comment
	and reporting / Intra NR measurements / Event A6 / Inter-band CA			
8.1.3.1.17.3	NR CA / Measurement configuration control and reporting / Intra NR measurements / Event A6 / Intra-band non-Contiguous CA	Rel-15	C43	UEs supporting 5G Core and intra-band non-contiguous CA
8.1.3.1.18	**NR CA / Measurement configuration control and reporting / Intra NR measurements / Additional measurement reporting**			
8.1.3.1.18.1	NR CA / Measurement configuration control and reporting / Intra NR measurements / Additional measurement reporting / Intra-band Contiguous CA	Rel-15	C41	UEs supporting 5G Core and intra-band contiguous CA
8.1.3.1.18.2	NR CA / Measurement configuration control and reporting / Intra NR measurements / Additional measurement reporting / Inter-band CA	Rel-15	C42	UEs supporting 5G Core and inter-band CA
8.1.3.1.18.3	NR CA / Measurement configuration control and reporting / Intra NR measurements / Additional measurement reporting / Intra-band non-Contiguous CA	Rel-15	C43	UEs supporting 5G Core and intra-band non-contiguous CA
8.1.3.2	**Inter-RAT measurements**			
8.1.3.2.1	Measurement configuration control and reporting / Inter-RAT measurements / Event B1 / Measurement of E-UTRA cells	Rel-15	C31	UEs supporting 5G Core and Inter-RAT E-UTRA measurements and Event B triggered reporting
8.1.3.2.2	Measurement configuration control and reporting / Inter-RAT measurements / Event B2 / Measurement of E-UTRA cells	Rel-15	C31	UEs supporting 5G Core and Inter-RAT E-UTRA measurements and Event B triggered reporting
8.1.3.2.3	Measurement configuration control and reporting / Inter-RAT measurements / Event B2 / Measurement of E-UTRA cells / RSRQ based measurements	Rel-15	C31	UEs supporting 5G Core and Inter-RAT E-UTRA measurements and Event B triggered reporting
8.1.3.2.5	Measurement configuration control and reporting / Inter-RAT measurements / Simultaneous A2 and B2 / Measurements of NR and E-UTRA cells	Rel-15	C31	UEs supporting 5G Core and Inter-RAT E-UTRA measurements and Event B triggered reporting
8.1.4	**Handover**			
8.1.4.1	**Intra NR handover**			
8.1.4.1.1	Intra NR handover / Success / Dedicated preamble / Common preamble / Intra-frequency	Rel-15	C21	UEs supporting 5G Core
8.1.4.1.2	Intra NR handover / Success / Dedicated preamble / Common preamble / Inter-frequency	Rel-15	C21	UEs supporting 5G Core
8.1.4.1.3	Intra NR handover / Success / Security key reconfiguration	Rel-15	C21	UEs supporting 5G Core
8.1.4.1.4	Intra NR handover / Failure / Security key reconfiguration	Rel-15	C21	UEs supporting 5G Core
8.1.4.1.5	Intra NR handover / Failure / Re-establishment successful	Rel-15	C21	UEs supporting 5G Core
8.1.4.1.6	Intra NR handover / Failure / Re-establishment failure	Rel-15	C21	UEs supporting 5G Core
8.1.4.1.9	**NR CA / Intra NR handover / Failure / Re-establishment successful**			
8.1.4.1.9.1	NR CA / Intra NR handover / Failure / Re-establishment successful / Intra-band Contiguous CA	Rel-15	C44	UEs supporting 5G Core and intra-band contiguous CA
8.1.4.1.9.2	NR CA / Intra NR handover / Failure / Re-establishment successful / Inter-band CA	Rel-15	C45	UEs supporting 5G Core and inter-band CA
8.1.4.1.9.3	NR CA / Intra NR handover / Failure / Re-establishment successful / Intra-band non-contiguous CA	Rel-15	C46	UEs supporting 5G Core and intra-band non-contiguous CA
8.1.4.2	**Inter-RAT handover**			
8.1.4.2.1	**Inter-RAT handover NR to E-UTRA**			
8.1.4.2.1.1	Inter-RAT handover / From NR to E-UTRA / Success	Rel-15	C32	UEs supporting 5G Core and E-UTRA
8.1.4.2.1.2	Inter-RAT handover / From NR to E-UTRA / Failure	Rel-15	C26	UEs supporting 5GS and E-UTRA
8.1.4.2.2	**Inter-RAT handover to NR**			
8.1.4.2.2.1	Inter-RAT handover / From E-UTRA to NR / Success	Rel-15	C26	UEs supporting 5GS and E-UTRA
8.1.4.2.2.2	Inter-RAT handover / From E-UTRA to NR / Failure	Rel-15	C26	UEs supporting 5GS and E-UTRA
8.1.5	**RRC others**			
8.1.5.1	**UE capability transfer**			
8.1.5.1.1	UE Capability transfer / Success	Rel-15	C21	UEs supporting 5G Core

Clause	TC Title	Release	Applicability	
			Condition	Comment
8.1.5.2	**SI change / On-demand SIB**			
8.1.5.2.1	SI change / Notification of BCCH modification / Short message for SI update	Rel-15	R	UEs supporting 5GS
8.1.5.3	**PWS notification**			
8.1.5.3.1	PWS notification / PWS reception in NR RRC_IDLE state	Rel-15	C35	UEs supporting 5G Core and (ETWS reception or CMAS reception)
8.1.5.3.2	PWS notification / PWS reception in NR RRC_INACTIVE state	Rel-15	C35	UEs supporting 5G Core and (ETWS reception or CMAS reception)
8.1.5.3.3	PWS notification / PWS reception in NR RRC_CONNECTED state	Rel-15	C35	UEs supporting 5G Core and (ETWS reception or CMAS reception)
8.1.5.3.4	PWS notification / PWS reception using dedicatedSystemInformationDelivery	Rel-15	C35	UEs supporting 5G Core and (ETWS reception or CMAS reception)
8.1.5.5	**Redirection to NR**			
8.1.5.5.1	Redirection to NR / From E-UTRA / Success	Rel-15	C21	UEs supporting 5G Core
8.1.5.6	**Radio link failure**			
8.1.5.6.1	Radio link failure / RRC connection re-establishment success	Rel-15	C21	UEs supporting 5G Core
8.1.5.6.2	Radio link failure / T301 expiry	Rel-15	C21	UEs supporting 5G Core
8.1.5.6.3	Radio link failure / T311 expiry	Rel-15	C21	UEs supporting 5G Core
8.1.5.6.4	Radio link failure / Radio link recovery while T310 is running	Rel-15	C21	UEs supporting 5G Core
8.1.5.6.5	**NR CA / No Radio Link Failure on SCell / RRC Connection Continues on Pcell**			
8.1.5.6.5.1	NR CA / No Radio Link Failure on SCell / RRC Connection Continues on PCell / Intra-band Contiguous CA	Rel-15	C44	UEs supporting 5G Core and intra-band contiguous CA
8.1.5.6.5.2	NR CA / No Radio Link Failure on SCell / RRC Connection Continues on PCell / Inter-band CA	Rel-15	C45	UEs supporting 5G Core and inter-band CA
8.1.5.6.5.3	NR CA / No Radio Link Failure on SCell / RRC Connection Continues on PCell / Intra-band non-Contiguous CA	Rel-15	C46	UEs supporting 5G Core and intra-band non-contiguous CA
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	C22	UEs supporting EN-DC and SRB3
8.2.2.2	**Split SRB Establishment and Release**			
8.2.2.2.1	Split SRB Establishment and Release / EN-DC	Rel-15	C01	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	C23	UEs supporting EN-DC, UL transmission via either MCG path or SCG path for the 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**			

Clause	TC Title	Release	Applicability	
			Condition	Comment
	DRB Reconfiguration			
8.2.2.9.1	Bearer Modification / Uplink data path / Split DRB Reconfiguration / EN-DC	Rel-15	C01	UEs supporting EN-DC
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**			

Clause	TC Title	Release	Applicability	
			Condition	Comment
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	C01	UEs supporting EN-DC
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	C01	UEs supporting EN-DC
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 and at least periodical reporting)
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 and at least periodical reporting)
8.2.3.6.1a	Measurement configuration control and reporting / Event A3 / Measurement of Neighbor NR cell / Inter-frequency measurements / 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 and at least periodical reporting)
8.2.3.6.1b	Measurement configuration control and reporting / Event A3 / Measurement of Neighbor NR cell / Inter-band measurements / 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 and at least periodical reporting)
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 and at least periodical reporting)
8.2.3.7.1a	Measurement configuration control and reporting / Event A4 / Measurement of Neighbor NR cell / Inter-frequency measurements / 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 and at least periodical reporting)
8.2.3.7.1b	Measurement configuration control and reporting / Event A4 / Measurement of Neighbor NR cell / Inter-band measurements / 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 and at least periodical reporting)
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 and at least periodical reporting)
8.2.3.8.1a	Measurement configuration control and reporting / Event A5 / Measurement of Neighbor NR cell / Inter-frequency measurements / 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 and at least periodical reporting)
8.2.3.8.1b	Measurement configuration control and reporting / Event A5 / Measurement of Neighbor NR cell / Inter-band measurements / 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 and at least periodical reporting)
8.2.3.9	**Measurement configuration control and reporting / SS/PBCH block based / CSI-RS**			

Clause	TC Title	Release	Applicability	
			Condition	Comment
	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 at least periodical reporting) 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 based inter-frequency measurements / Measurement of Neighbour NR Cell	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
8.2.3.11	**Measurement Gaps patterns Related**			
8.2.3.11.1	Measurement configuration control and reporting / Measurement Gaps / NR FR1 / EN-DC	Rel-15	C24	UEs supporting EN-DC and (NR intra-frequency and inter-frequency measurements and at least periodical reporting) and (two independent measurement gap configurations for FR1 and FR2) and Inter-Band EN-DC within FR1
8.2.3.11.2	Measurement Gaps patterns Related / LTE / NR FR2 / EN-DC	Rel-15	C25	UEs supporting EN-DC and (NR intra-frequency and inter-frequency measurements and at least periodical reporting) and (two independent measurement gap configurations for FR1 and FR2) and Inter-Band EN-DC including FR2
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	C01	UEs supporting EN-DC
8.2.3.13	**PSCell 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	SCG change / Reconfiguration with sync / Split DRB / EN-DC	Rel-15	C01	UEs supporting EN-DC
8.2.3.15	**Measurement configuration control and reporting / Two simultaneous events A2 and A3 (intra-frequency measurements) / Measurement of Neighbour NR cells**			
8.2.3.15.1	Measurement configuration control and reporting / Two simultaneous events A2 and A3 (intra-frequency 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 NR-Inter frequency measurements and at least periodical reporting)
8.2.4	**Carrier Aggregation**			
8.2.4.1	**NR CA / NR SCell addition / modification / release / Success**			
8.2.4.1.1	**NR CA / NR SCell addition / modification / release / Success / EN-DC**			
8.2.4.1.1.1	NR CA / NR SCell addition / modification / release / Success / EN-DC / Intra-band Contiguous CA	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR intra-frequency and inter-frequency measurements and at least periodical reporting)
8.2.4.1.1.2	NR CA / NR SCell addition / modification / release / Success / EN-DC / Intra-band non-Contiguous CA	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR intra-frequency and inter-frequency measurements and at least periodical reporting)
8.2.4.1.1.3	NR CA / NR SCell addition / modification / release / Success / EN-DC / Inter-band CA	Rel-15	C14	UEs supporting EN-DC and NR measurements and Event A triggered reporting and (NR intra-frequency and inter-frequency measurements and at least periodical reporting)
8.2.4.2	**NR CA / Simultaneous PSCell and SCell addition / PSCell and SCell change / CA Release**			
8.2.4.2.1	**NR CA / Simultaneous PSCell and SCell addition / PSCell and SCell change / CA Release / EN-DC**			
8.2.4.2.1.1	NR CA / Simultaneous PSCell and SCell addition / PSCell and SCell change / CA Release / EN-DC / Intra-band Contiguous CA	Rel-15	C01	UEs supporting EN-DC

Clause	TC Title	Release	Applicability	
			Condition	Comment
8.2.4.2.1.2	NR CA / Simultaneous PSCell and SCell addition / PSCell and SCell change / CA Release / EN-DC / Intra-band non-Contiguous CA	Rel-15	C01	UEs supporting EN-DC
8.2.4.2.1.3	NR CA / Simultaneous PSCell and SCell addition / PSCell and SCell change / CA Release / EN-DC / Inter-band CA	Rel-15	C01	UEs supporting EN-DC
8.2.4.3	**NR CA / SCell change / Intra-NR measurement event A6 / SRB3**			
8.2.4.3.1	**NR CA / SCell change / Intra-NR measurement event A6 / SRB3 / EN-DC**			
8.2.4.3.1.1	NR CA / SCell change / Intra-NR measurement event A6 / SRB3 / EN-DC / Intra-band Contiguous CA	Rel-15	FFS	UEs supporting EN-DC and NR Intra-band contiguous CA and Inter-RAT measurement and NR measurements
8.2.4.3.1.2	NR CA / SCell change / Intra-NR measurement event A6 / SRB3 / EN-DC / Intra-band non-Contiguous CA	Rel-15	FFS	UEs supporting EN-DC and NR Intra-band non-contiguous CA and Inter-RAT measurement and NR measurements
8.2.4.3.1.3	NR CA / SCell change / Intra-NR measurement event A6 / SRB3 / EN-DC / Inter-band CA	Rel-15	FFS	UEs supporting EN-DC and NR Inter-band CA and Inter-RAT measurement and NR measurements
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 - random access problem / 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	Void			
8.2.5.6	**Reconfiguration failure / SCG Reconfiguration failure / SRB1**			
8.2.5.6.1	Void			

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
8.1.1				
8.1.1.3				
8.1.1.3.2				Rel-15 E-UTRA
8.1.1.3.4				Rel-15 E-UTRA
8.1.1.3.6				Rel-15 E-UTRA
8.1.4				
8.1.4.2				
8.1.4.2.1				
8.1.4.2.1.1				Rel-15 E-UTRA
8.1.4.2.1.2				Rel-15 E-UTRA
8.1.4.2.2				
8.1.4.2.2.1				Rel-15 E-UTRA
8.1.4.2.2.2				Rel-15 E-UTRA
8.2.1				
8.2.2				
8.2.2.1				
8.2.2.1.1			Only executed if test case 8.2.2.3.1 is not applicable (Note 1)	
Note 1: Test cases8.2.2.3.1 also verifies the core requirements covered by test case 8.2.2.1.1 but it is not applicable to all UE.				

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

Clause	TC Title	Release	Applicability	
			Condition	Comment
9	**Mobility management**			
9.1	**5GS mobility management**			
9.1.1	**Primary authentication and key agreement**			
9.1.1.1	EAP based primary authentication and key agreement / EAP-AKA' related procedures	Rel-15	C21	UEs supporting 5G Core
9.1.1.2	EAP based primary authentication and key agreement / Reject	Rel-15	C21	UEs supporting 5G Core
9.1.1.3	EAP based primary authentication and key agreement / EAP message transport / Abnormal	Rel-15	C21	UEs supporting 5G Core
9.1.1.6	5G AKA based primary authentication and key agreement / Abnormal	Rel-15	C21	UEs supporting 5G Core
9.1.2	**Security mode control**			
9.1.2.1	NAS security mode command	Rel-15	C21	UEs supporting 5G Core
9.1.2.2	Protection of initial NAS signalling messages	Rel-15	C21	UEs supporting 5G Core
9.1.3	**Identification**			
9.1.3.1	Identification procedure	Rel-15	C21	UEs supporting 5G Core
9.1.4	**Generic UE configuration update**			
9.1.4.1	Generic UE configuration update / New 5G-GUTI, NITZ, registration requested, Network slicing indication, New Allowed NSSAI / acknowledgement from the UE	Rel-15	C21	UEs supporting 5G Core
9.1.5	**Registration**			
9.1.5.1	**Initial registration**			
9.1.5.1.1	Initial registration / Success / 5G-GUTI reallocation, Last visited TAI	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.2	Initial registration / 5GS services / Equivalent PLMN list handling	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.3	Initial registration / 5GS services / NSSAI handling	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.4	Initial registration / MICO mode	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.5	Initial registration / Abnormal / Failure after 5 attempts	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.6	Initial registration / Rejected / Illegal UE	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.7	Void	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.8	Initial registration / Rejected / Serving network not authorized	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.9	Initial registration / Abnormal / Change of cell into a new tracking area	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.10	Initial registration / Rejected / PLMN not allowed	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.11	Initial registration / Rejected / Tracking area not allowed	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.12	Initial registration / Rejected / Roaming not allowed in this tracking area	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.13	Initial registration / Rejected / No suitable cells in tracking area	Rel-15	C21	UEs supporting 5G Core
9.1.5.1.14	Initial registration / Rejected / Congestions / Abnormal Cases / T3346	Rel-15	C21	UEs supporting 5G Core
9.1.5.2	**Mobility and periodic registration update**			
9.1.5.2.1	Mobility registration update / TAI list handling	Rel-15	C21	UEs supporting 5G Core
9.1.5.2.2	Periodic registration update	Rel-15	C21	UEs supporting 5G Core
9.1.5.2.4	Mobility registration update / The lower layer requests NAS signalling connection recovery	Rel-15	C21	UEs supporting 5G Core
9.1.5.2.7	Mobility and periodic registration update / Rejected / UE identity cannot be derived by the network	Rel-15	C21	UEs supporting 5G Core
9.1.5.2.8	Mobility and periodic registration update / Rejected / Implicitly de-registered	Rel-15	C21	UEs supporting 5G Core
9.1.5.2.9	Mobility and periodic registration update / Abnormal / Change of cell into a new tracking area, collision with generic UE configuration update procedure	Rel-15	C21	UEs supporting 5G Core
9.1.6	**De-registration**			
9.1.6.1	**UE-initiated de-registration**			
9.1.6.1.1	UE-initiated de-registration / Switch off / Abnormal / De-registration and 5GMM common procedure collision	Rel-15	C21	UEs supporting 5G Core

9.1.6.1.2	UE-initiated de-registration / Normal de-registration / Abnormal / Transmission failure without TAI change from lower layers, De-registration and 5GMM common procedure collision, T3521 timeout	Rel-15	C21	UEs supporting 5G Core
9.1.6.1.3	UE-initiated de-registration / Abnormal / Change of cell into a new tracking area	Rel-15	C21	UEs supporting 5G Core
9.1.6.1.4	UE-initiated de-registration / Abnormal / Transmission failure with TAI change from lower layers	Rel-15	C21	UEs supporting 5G Core
9.1.6.2	**Network-initiated de-registration**			
9.1.6.2.1	Network-initiated de-registration / De-registration for 3GPP access / Re-registration required	Rel-15	C21	UEs supporting 5G Core
9.1.6.2.2	Network-initiated de-registration / De-registration for 3GPP access / Re-registration not required	Rel-15	C21	UEs supporting 5G Core
9.1.7	**Service request**			
9.1.7.1	Service request / IDLE mode uplink user data transport / Rejected / Restricted service area, Abnormal / T3517, T3525	Rel-15	C21	UEs supporting 5G Core
9.1.7.2	Service request / CONNECTED mode user data transport / Abnormal / T3517	Rel-15	C21	UEs supporting 5G Core
9.1.8	**SMS over NAS**			
9.1.8.1	SMS over NAS services / MO SMS over NAS - Idle mode	Rel-15	C33	UEs supporting 5G Core and SMS over NAS and UE configured to not use SMSoIP
9.2	**5GS Non-3GPP Access Mobility Management**			
9.2.2	**Security Mode Control**			
9.2.2.1	NAS security mode command	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.2.2	Protection of initial NAS signalling messages	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.5	**Registration**			
9.2.5.1	**Initial Registration**			
9.2.5.1.1	Initial registration / Success / 5G-GUTI reallocation, Last visited TAI	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.5.1.4	Initial registration / Rejected / Congestion / Abnormal cases / T3346	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.6	**De-registration**			
9.2.6.1	**UE-initiated de-registration**			
9.2.6.1.1	UE-initiated de-registration / switch off	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.6.2	**Network-initiated de-registration**			
9.2.6.2.1	Network-initiated de-registration / De-registration for Non-3GPP access / Re-registration required	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.6.2.2	Network-initiated de-registration / De-registration for Non 3GPP access / Re-registration not required	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
9.2.8	**SMS over NAS**			
9.2.8.1	SMS over NAS / MO SMS over NAS - 5GMM-Idle mode	Rel-15	C30	UEs supporting 5GS core over non-3GPP Access Network SMS over NAS and WLAN
9.3	**Inter-system mobility**			
9.3.1	**5GS-EPC Inter-system mobility**			
9.3.1.1	Mobility registration update / Single-registration mode with N26 / 5GMM-IDLE / 5GC to EPC	Rel-15	C26	UEs supporting 5GS and E-UTRA
9.3.1.2	Mobility registration update / Single-registration mode with N26 / 5GMM-IDLE / EPC to 5GC	Rel-15	C26	UEs supporting 5GS and E-UTRA
9.3.1.3	Mobility and periodic registration update / Rejected / Single-registration mode with N26 / Handling of EPC relevant parameters	Rel-15	C26	UEs supporting 5GS and E-UTRA
10	**Session management**			
10.1	**5GS session management**			
10.1.1	**PDU session authentication and authorization**			
10.1.1.1	PDU session authentication and authorization / During the UE-requested PDU session procedure	Rel-15	C39	UEs supporting 5G Core and additional UE-requested PDU establishment
10.1.1.2	PDU session authentication and authorization / After the UE-requested PDU session procedure	Rel-15	C48	UEs supporting 5G Core and Number of UE-requested PDU session establishments after REGISTRATION
10.1.2	**Network-requested PDU session modification**			
10.1.2.2	Network-requested PDU session modification /	Rel-15	C21	UEs supporting 5G Core

	Abnormal / Invalid PDU session identity			
10.1.3	**Network-requested PDU session release**			
10.1.3.1	Network-requested PDU session release / accepted / reactivation / for the same [S-NSSAI, DNN] combination	Rel-15	C21	UEs supporting 5G Core
10.1.3.2	Network-requested PDU session release / Accepted / Insufficient resources / T3396, Accepted / Insufficient resources for specific slice and DNN / T3584, Abnormal / No PDU session context active for the received PDU session ID	Rel-15	C21	UEs supporting 5G Core
10.1.4	**UE-requested PDU session establishment**			
10.1.4.2	UE-requested PDU session establishment / Initial emergency request, existing emergency PDU session	Rel-15	C21	UEs supporting 5G Core
10.1.5	**UE-requested PDU session modification**			
10.1.5.1	UE-requested PDU session modification	Rel-15	C21	UEs supporting 5G Core
10.1.6	**UE-requested PDU session release**			
10.1.6.1	UE-requested PDU session release / Abnormal / Collision with network-requested PDU session modification procedure	Rel-15	C21	UEs supporting 5G Core
10.1.6.2	UE-requested PDU session release / Abnormal / Collision with network-requested PDU session release procedure	Rel-15	C21	UEs supporting 5G Core
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
10.3	5GS Non-3GPP Access Session Management			
10.3.1	PDU session authentication and authorization			
10.3.1.1	PDU session authentication and authorization / during the UE-requested PDU session procedure	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
10.3.2	Network-requested PDU session modification			
10.3.2.1	Network-requested PDU session modification /Accepted/Rejected	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
10.3.5	UE-requested PDU session modification			
10.3.5.1	UE-requested PDU session modification/Success	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN
10.3.6	UE-requested PDU session release			
10.3.6.1	UE-requested PDU session release / Abnormal / Collision with network-requested PDU session modification procedure	Rel-15	C29	UEs supporting 5GS core over non-3GPP Access Network and WLAN

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

Clause	Specific ICS and IXIT	Comment	Number of TC Executions	Release other RAT
9				
9.1				
9.1.6				
9.1.6.1				
9.1.6.1.1	[10] pc_USIM_Removal	Support of USIM removal without power down		
9.3				
9.3.1				
9.3.1.1				Rel-15 E-UTRA
9.3.1.2				Rel-15 E-UTRA
9.3.1.3				Rel-15 E-UTRA
10				
10.1				

Table 4.1-5a: Applicability of Protocol conformance Multi-layer test cases, ref. TS 38.523-1 [2]

Clause	TC Title	Release	Applicability	
			Condition	Comment

11	**Multi-layer and Services**			
11.1	**5GS / EPS fallback**			
11.1.1	MMTEL voice call setup from NR RRC_IDLE / EPS Fallback with redirection / Single registration mode with N26 interface / Success	Rel-15	FFS	UEs supporting 5G Core and E-UTRA
11.1.2	MO MMTEL voice call setup from NR RRC_IDLE / EPS Fallback with redirection / Single registration mode without N26 interface / Success	Rel-15	FFS	UEs supporting 5G Core and E-UTRA
11.1.3	MO MMTEL voice call setup from NR RRC_CONNECTED / EPS Fallback with handover / Single registration mode with N26 interface / Success	Rel-15	FFS	UEs supporting 5G Core and E-UTRA
11.1.4	MO MMTEL voice call setup from NR RRC_CONNECTED / EPS Fallback with redirection / Single registration mode with N26 interface / E-UTRAN cell reselection using cell status barred / Success	Rel-15	FFS	UEs supporting 5G Core and E-UTRA
11.1.5	MO MMTEL voice call setup from NR RRC_CONNECTED / EPS Fallback with redirection / Single registration mode without N26 interface / E-UTRAN cell reselection using cell status reservation / Success	Rel-15	FFS	UEs supporting 5G Core and E-UTRA
11.1.6	MT MMTEL voice call setup from NR RRC_IDLE / EPS Fallback with redirection / Single registration mode without N26 interface / Success	Rel-15	FFS	UEs supporting 5G Core and E-UTRA
11.1.7	Emergency call setup from NR RRC_IDLE / Emergency Services Fallback to EPS with redirection / Single registration mode with N26 interface / Success	Rel-15	C47	UEs supporting 5GS and E-UTRA and IMS emergency call and Emergency Services Fallback to EPS

Table 4.1-5b: Additional Information of Applicability of Protocol conformance Multi-layer test cases, ref. TS 38.523-1 [2]

Clause	Specific ICS and IXIT	Comment	Number of TC Executions	Release other RAT
11				
11.1				
11.1.1				Rel-15 E-UTRA
11.1.2				Rel-15 E-UTRA
11.1.3				Rel-15 E-UTRA
11.1.4				Rel-15 E-UTRA
11.1.5				Rel-15 E-UTRA
11.1.6				Rel-15 E-UTRA
11.1.7				Rel-15 E-UTRA

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.4.1-3/2 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
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 [10] A.4.4-1/99 THEN R ELSE N/A	UEs supporting 5GS and ZUC Algorithm
C10	IF A.4.3.7-1/2 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.4.1-3/2 AND A.4.3.6-1/1 THEN R ELSE N/A	UEs supporting EN-DC and NR measurements and Event A

Condition	Test case Selection Expression	Comment
C01	IF A.4.1-3/2 THEN R ELSE N/A	UEs supporting EN-DC
		triggered reporting
C14	IF A.4.1-3/2 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 and at least periodical reporting)
C15	IF A.4.1-3/2 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 at least periodical reporting) and CSI-RSRP measurement
C16	IF A.4.1-3/2 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
C17	IF A.4.3.1-1/1 THEN R ELSE N/A	UEs supporting 5GS and PDSCH reception based on semi-persistent scheduling
C18	IF A.4.3.1-1/10 THEN R ELSE N/A	UEs supporting 5GS and Type 1 PUSCH transmissions with configured grant
C19	IF A.4.3.1-1/11 THEN R ELSE N/A	UEs supporting 5GS and Type 2 PUSCH transmissions with configured grant
C20	IF A.4.3.2-1/12 THEN R ELSE N/A	UEs supporting 5GS and PDSCH aggregation
C21	IF A.4.1-5/1 THEN R ELSE N/A	UEs supporting 5G Core
C21A	IF A.4.1-5/1 AND A.4.3.7-1/4 THEN R ELSE N/A	UEs supporting 5G Core and reflective QoS
C22	IF A.4.1-3/2 AND A.4.3.7-1/3 THEN R ELSE N/A	UEs supporting EN-DC and SRB3
C23	IF A.4.1-3/2 AND A.4.3.7-1/1 AND A.4.3.7-1/3 THEN R ELSE N/A	UEs supporting EN-DC, UL transmission via either MCG path or SCG path for the split SRB and SRB3
C24	IF A.4.1-3/2 AND A.4.3.6-1/3 AND A.4.3.6-1/2 AND A.4.1-4/3 THEN R ELSE N/A	UEs supporting EN-DC and (NR intra-frequency and inter-frequency measurements and at least periodical reporting) and (two independent measurement gap configurations for FR1 and FR2) and Inter-Band EN-DC within FR1
C25	IF A.4.1-3/2 AND A.4.3.6-1/3 AND A.4.3.6-1/2 AND A.4.1-4/4 THEN R ELSE N/A	UEs supporting EN-DC and (NR intra-frequency and inter-frequency measurements and at least periodical reporting) and (two independent measurement gap configurations for FR1 and FR2) and Inter-Band EN-DC including FR2
C26	IF ([10] A.4.1-1/1 OR [10] A.4.1-1/2) THEN R ELSE N/A	UEs supporting 5GS and E-UTRA
C27	IF A.4.1-5/1 AND A.4.3.6-1/1 THEN R ELSE N/A	UEs supporting 5G Core and NR measurements and Event A triggered reporting
C28	IF A.4.3.2-1/13 THEN R ELSE N/A	UEs supporting 5GS and supplemental uplink with dynamic switch
C29	IF A.4.1-5/2 AND [10] A.4.1-1/5.	UEs supporting 5GS core over non-3GPP Access Network and WLAN
C30	IF A.4.1-5/2 AND A.4.3.7-1/1 AND [10] A.4.1-1/5.	UEs supporting 5GS core over non-3GPP Access Network, SMS over NAS and WLAN
C31	IF A.4.1-5/1 AND A.4.3.6-1/5 THEN R ELSE N/A	UEs supporting 5G Core and Inter-RAT E-UTRA measurements and Event B triggered reporting
C32	IF A.4.1-5/1 AND ([10] A.4.1-1/1 OR [10] A.4.1-1/2) THEN R ELSE N/A	UEs supporting 5G Core and E-UTRA
C33	IF A.4.1-5/1 AND A.4.3.7-1/6 AND NOT [10] A.4.4-2/32 THEN R ELSE N/A	UEs supporting 5G Core and SMS over NAS and UE configured to not use SMSoIP
C34	IF A.4.1-5/1 AND [10] A.4.4-1/84 THEN R ELSE N/A	UEs supporting 5G Core and MinimumPeriodicSearchTimer
C35	IF A.4.1-5/1 AND (A.4.3.7-1/8 OR A.4.3.7-1/7) THEN R ELSE N/A	UEs supporting 5G Core and (ETWS reception or CMAS reception)
C36	IF A.4.1-5/1 AND A.4.3.7-1/7 THEN R ELSE N/A	UEs supporting 5G Core and user initiated PLMN reselection in automatic mode on NR
C37	IF A.4.1-5/1 AND A.4.1-2/1 OR A.4.1-2/2 THEN R ELSE N/A	UEs supporting 5G Core and more than 1 FDD or TDD NR band
C38	IF A.4.1-5/1 AND A.4.1-1/1 AND A.4.1-1/2 THEN R ELSE N/A	UEs supporting 5G Core and NR FDD and NR TDD
C39	IF A.4.1-5/1 AND A.4.3.7-1/1 AND A.4.3.7-1/10 THEN R ELSE N/A	UEs supporting 5G Core additional UE-requested PDU establishment and the UE includes the SM PDU DN request container IE in the PDU SESSION ESTABLISHMENT REQUEST message.
C40	IF A.4.1-5/1 AND A.4.3.6-1/6 THEN R ELSE N/A	UEs supporting 5G Core and SS-SINR measurements
C41	IF A.4.1-5/1 AND (A.4.1-4A/1 OR A.4.1.4A/3) THEN R ELSE N/A	UEs supporting 5G Core and intra-band contiguous CA
C42	IF A.4.1-5/1 AND (A.4.1-4A/5 OR A.4.1-4A/6 OR A.4.1-4A/7) THEN R ELSE N/A	UEs supporting 5G Core and inter-band CA
C43	IF A.4.1-5/1 AND (A.4.1-4A/2 OR A.4.1.4A/4) THEN R ELSE N/A	UEs supporting 5G Core and intra-band non-contiguous CA
C44	IF A.4.1-5/1 AND (A.4.1-4A/1 OR A.4.1.4A/3) THEN R ELSE N/A	UEs supporting 5G Core and intra-band contiguous CA
C45	IF A.4.1-5/1 AND (A.4.1-4A/5 OR A.4.1-4A/6 OR A.4.1-4A/7) THEN R ELSE N/A	UEs supporting 5G Core and inter-band CA
C46	IF A.4.1-5/1 AND (A.4.1-4A/2 OR A.4.1.4A/4) THEN R ELSE N/A	UEs supporting 5G Core and intra-band non-contiguous CA
C47	IF ([10] A.4.1-1/1 OR [10] A.4.1-1/2) AND [10] A.4.2.1.1-1/4 AND A.4.3.7-1/11 THEN R ELSE N/A	UEs supporting 5GS and E-UTRA and IMS emergency call and Emergency Services Fallback to EPS
C48	IF A.4.1-5/1 AND A.4.4.2-1/3 THEN R ELSE N/A	UEs supporting 5G Core and Number of UE-requested PDU

Condition	Test case Selection Expression	Comment
C01	IF A.4.1-3/2 THEN R ELSE N/A	UEs supporting EN-DC
		session establishments after REGISTRATION

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
2018-09	RAN#81	R5-184682	0004	-	F	Update of test case title for TC 8.2.5.1.1	15.1.0
2018-09	RAN#81	R5-185157	0005	1	F	Update of NR test cases title and applicability	15.1.0
2018-09	RAN#81	R5-185162	0003	1	F	Addition of missing and new test cases applicabilities	15.1.0
2018-12	RAN#82	R5-186875	0021	-	F	Removal of applicability for RRC SCG failure tests	15.2.0
2018-12	RAN#82	R5-188196	0027	1	F	Addition of test applicabilities for 5GC testcases	15.2.0
2018-12	RAN#82	R5-187499	0029	-	F	Adding applicability of test cases 8.2.2.1.1 and 8.2.2.3.1	15.2.0
2018-12	RAN#82	R5-187799	0022	1	F	Adding applicability for 5G TC TA registration update	15.2.0
2018-12	RAN#82	R5-188103	0033	-	F	Update of applicability and selection expressions	15.2.0
2018-12	RAN#82	R5-188104	0030	1	F	Adding new test case applicability	15.2.0
2018-12	RAN#82	R5-188197	0031	3	F	Update of 5G-NR test cases applicability	15.2.0
2019-03	RAN#83	R5-192033	0043	-	F	Addition of applicability of new 5GC test case 9.1.2.2	15.3.0
2019-03	RAN#83	R5-192707	0044	1	F	Introduction of Non 3GPP Access over WLAN test case applicabilities	15.3.0
2019-03	RAN#83	R5-192809	0040	1	F	Addition of applicability for Inter-RAT measurement and handover	15.3.0
2019-03	RAN#83	R5-192856	0039	2	F	Addition of applicability for NR test case	15.3.0
2019-03	RAN#83	R5-192857	0042	3	F	Update of 5G-NR test cases applicability	15.3.0
2019-06	RAN#84	R5-194891	0054	1	F	Introduction of Non 3GPP Access over WLAN test case applicabilities	15.4.0
2019-06	RAN#84	R5-195371	0046	2	F	Addition of Applicability for test cases	15.4.0
2019-06	RAN#84	R5-195372	0051	2	F	Update of 5G-NR test cases applicability	15.4.0