

PARTIAL Test Report

23-1-0014801T034_TR1-R02

Number of pages: 41 Date of Report: 2024-Oct-25

Testing company: cetecom advanced GmbH
Untertuerkheimer Str. 6-10
66117 Saarbruecken
GERMANY

Applicant: VALEO Telematik und Akustik GmbH

Product: Antenna and Remote Telematics Integrated System
Model: ARTEMIS-NAR-01

FCC ID: QWY-ARTEMIS-NAR01

IC: 6588A-ARTEMISNAR1
PMN: ARTEMIS-NAR-01
HVIN: ARTEMIS-NAR-01
FVIN: E20 R550

Testing has been carried out in accordance with:

FCC Regulations
Title 47 CFR, Chapter I, Subchapter A
Part 15, Subpart C Intentional Radiators; § 15.209 Radiated emission limits; general requirements
Title 47 CFR, Chapter I, Subchapter B
Part 22, Subpart H Cellular Radiotelephone Service
Part 24, Subpart E Paging and Radiotelephone Service
Part 27, Subpart C Miscellaneous Wireless Communications Services

ISED-Regulations, Radio Standards Specification
RSS-Gen, Issue 5 General Requirements for Compliance of Radio Apparatus
RSS-130, Issue 2 Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
RSS-132, Issue 4 Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
RSS-133, Issue 7 2 GHz Personal Communications Services
RSS-139, Issue 4 Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz
RSS-192, Issue 5 Flexible Use Broadband Equipment Operating in the Band 3450-3900 MHz
RSS-198, Issue 1 Flexible Use Broadband Equipment Operating in the Band 3900-3980 MHz
RSS-199, Issue 4 Broadband Radio Service (BRS) Equipment Operating in the Band 2500-2690 MHz

Tested Technology: 5G NR

Test Results: ☒ The EUT complies with the requirements in respect of selected parameters subject to the test.

The test results relate only to devices specified in this document

The current version of Test Report 23-1-0014801T034_TR1-R02 replaces the test report 23-1-0014801T034_TR1-R01 dated 2024-Jul-15. The replaced test report is herewith invalid.

Signatures:

B.Eng. Martin Nunier
Supervisor Radio Services
Authorization of test report

Timo Franke
Testing Manager
Responsible of test report

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1 General information

1.1 Disclaimer and Notes

The test results of this test report relate exclusively to the test item specified in this test report as specified in chapter 2.7. cetecom advanced does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of cetecom advanced.

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Also we refer on special conditions which the applicant should fulfill according §2.927 to §2.948, special focus regarding modification of the equipment and availability of sample equipment for market surveillance tests.

1.2 Attestation

I declare that all measurements were performed by me or under my supervision and that all measurements have been performed and are correct to my best knowledge and belief to Industry Canada standards. All of the above requirements are met in accordance with enumerated standards.

1.3 Summary of Test Results

Test case in 5G NR 2 band	Reference Clause FCC ☒	Reference Clause ISSED ☒	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5: §8.8	-	-	N/A
Conducted RF output power	§2.1046	RSS-133, Issue 7: §5.5 + SRSP-510, Issue 6: §6.3	18	-	PASSED
Radiated RF output power	§24.232(c), §2.1046	RSS-133, Issue 7: §5.5 + SRSP-510, Issue 6: §6.3	-	-	NP
26dB Emission bandwidth	§24.238(b), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Occupied Channel Bandwidth 99%	§24.238(b), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Radiated Band Edge	§24.238(a)(b), §2.1053(a), §2.1057(a)	RSS-133, Issue 7: §5.6	-	-	NP
Conducted RF Band Edge	§24.238(a)(b), §2.1051	RSS-133, Issue 7: §5.6	-	-	NP
Peak to Average ratio (PAPR)	§24.232(d), §2.1046	RSS-133, Issue 7: §5.5	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9	30	-	PASSED
Spurious emissions at antenna terminals	§24.238(a)(b), §2.1051, §2.1057(a)	RSS-133, Issue 7: §5.6	-	-	NP
Radiated spurious emissions	§24.238(a)(b), §2.1053, §2.1057(a)	RSS-133, Issue 7: §5.6	34	-	PASSED
Frequency stability, temperature variation	§24.235, §2.1055(a)(1)	RSS-Gen, Issue 5: §6.11 RSS-133, Issue 7: §5.4	-	-	NP
Frequency stability, voltage variation	§24.235, §2.1055(d)(1)	RSS-Gen, Issue 5: §6.11 RSS-133, Issue 7: §5.4	-	-	NP

Test case in 5G NR 5 band	Reference Clause FCC	Reference Clause ISED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5: §8.8	-	-	N/A
Conducted RF output power	§22.913(a)(5), §2.1046	RSS-132, Issue 4: §5.4	18	-	PASSED
Radiated RF output power	§22.913, §2.1046	RSS-132, Issue 4: §5.4	-	-	NP
26dB Emission bandwidth	§22.917(b), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Occupied Channel Bandwidth 99%	§22.917(b), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Radiated Band Edge	§22.917(a)(b), §2.1053(a), §2.1057(a)	RSS-132, Issue 4: §5.5(i)(ii)	-	-	NP
Conducted RF Band Edge	§22.917(a)(b), §2.1051, §2.1057(a)	RSS-132, Issue 4: §5.5(i)(ii)	-	-	NP
Peak to Average ratio (PAPR)	§22.913(d), §2.1046	RSS-132, Issue 4: §5.4	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen, Issue 5: §8.9	30	-	PASSED
Spurious emissions at antenna terminals	§22.917(a)(b), §2.1051, §2.1057(a)	RSS-132, Issue 4: §5.5(i)(ii)	-	-	NP
Radiated spurious emissions	§22.917(a)(b), §2.1051, §2.1057(a)	RSS-132, Issue 4: §5.5(i)(ii)	34	-	PASSED
Frequency stability, temperature variation	§22.355, §2.1055(a)(1)	RSS-Gen, Issue 5: §6.11 RSS-132, Issue 4: §5.3	-	-	NP
Frequency stability, voltage variation	§22.355, §2.1055(d)(1)	RSS-Gen, Issue 5: §6.11 RSS-132, Issue 4: §5.3	-	-	NP

Test case in 5G NR 41 band	Reference Clause FCC	Reference Clause ISSED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen Issue 5: §8.8	-	-	N/A
Conducted RF output power	§27.50(h)(2), §2.1046	RSS-199, Issue 4: §5.5	18	-	PASSED
Radiated RF output power	§27.50(h)(2), §2.1046	RSS-199, Issue 4: §5.5	-	-	NP
26dB Emission bandwidth	§27.53(h)(3), §2.202(a), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Occupied Channel Bandwidth 99%	§27.53(h)(3), §2.202(a), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Radiated Band Edge	§27.53(m)(4), §2.1053, §2.1057(a)	RSS-199, Issue 4: §5.6	-	-	NP
Conducted RF Band Edge	§27.53(m)(4), §2.1051, §2.1057(a)	RSS-199, Issue 4: §5.6	-	-	NP
Peak to Average ratio (PAPR)	§27.50(h)(2), §2.1046	RSS-199, Issue 4: §5.5	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9	30	-	PASSED
Spurious emissions at antenna terminals	§27.53(m)(4), §2.1051, §2.1057(a)	RSS-199, Issue 4: §5.6	-	-	NP
Radiated spurious emissions	§27.53(m)(4), §2.1053, §2.1057(a)	RSS-199, Issue 4: §5.6	34	-	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-Gen, Issue 5: §6.11 RSS-199, Issue 4: §5.4	-	-	NP
Frequency stability, voltage variation	§27.54, §2.1055(d)(1)	RSS-Gen, Issue 5: §6.11 RSS-199, Issue 4: §5.4	-	-	NP

Test case in 5G NR 66 band	Reference Clause FCC	Reference Clause ISSED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen Issue 5: §8.8	-	-	N/A
Conducted RF output power	§27.50(d)(4), §2.1046	RSS-139, Issue 4: §5.5	18	-	PASSED
Radiated RF output power	§27.50(d)(4), §2.1046	RSS-139, Issue 4: §5.5	-	-	NP
26dB Emission bandwidth	§27.53(h)(3), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Occupied Channel Bandwidth 99%	§27.53(h)(3), §2.1049	RSS-Gen, Issue 5: §6.7	-	-	NP
Radiated Band Edge	§27.53(h), §2.1053, §2.1057(a)	RSS-139, Issue 4: 5.6	-	-	NP
Conducted RF Band Edge	§27.53(h), §2.1051, §2.1057(a)	RSS-139, Issue 4: 5.6	-	-	NP
Peak to Average ratio (PAPR)	§27.50(d)(4)(5), §2.1046	RSS-139, Issue 4: 5.5	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9	30	-	PASSED
Spurious emissions at antenna terminals	§27.53(h), §2.1051, §2.1057(a)	RSS-139, Issue 4: 5.6	-	-	NP
Radiated spurious emissions	§27.53(h), §2.1053, §2.1057(a)	RSS-139, Issue 4: 5.6	34	-	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-Gen, Issue 5: §6.11 RSS-139, Issue 4: 5.4	-	-	NP
Frequency stability, voltage variation	§27.54, §2.1055(d)(1)	RSS-Gen, Issue 5: §6.11 RSS-139, Issue 4: 5.4	-	-	NP

Test case in 5G NR 71 band	Reference Clause FCC	Reference Clause ISSED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	-	-	N/A
Conducted RF output power	§27.50(c)(10), §2.1046	RSS-130, Issue 2: §4.6.1/ §4.6.3, RSS-Gen, Issue 5:§6.12	18	-	PASSED
Radiated RF output power	§27.50(c)(10), §2.1046	RSS-130, Issue 2: §4.6.1/ §4.6.3, RSS-Gen, Issue 5:§6.12	-	-	NP
26dB Emission bandwidth	§2.1049	RSS-Gen, Issue 5:§6.7	-	-	NP
Occupied Channel Bandwidth 99%	§2.1049	RSS-130, Issue 2:§4.5, RSS-Gen, Issue 5:§6.7	-	-	NP
Radiated Band Edge	§27.53(g), §2.1053, §2.1057(a)	RSS-130, Issue 2:§4.7.1, RSS-Gen, Issue 5:§6.13	-	-	NP
Conducted RF Band Edge	§27.53(g), §2.1053(a), §2.1057(a)	RSS-130, Issue 2:§4.7.1, RSS-Gen, Issue 5:§6.13	-	-	NP
Peak to Average ratio (PAPR)	§27.50(c)(10), §2.1046	RSS-130, Issue 2: §4.6.1	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	30	-	PASSED
Spurious emissions at antenna terminals	§27.53(g), §2.1051, §2.1057(a)	RSS-130, Issue 2:§4.7.1, RSS-Gen, Issue 5:§6.13	-	-	NP
Radiated spurious emissions	§27.53(g), §2.1053(a) §2.1057(1)	RSS-130, Issue 2:§4.7.1, RSS-Gen, Issue 5:§6.13	34	-	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-130, Issue 2:§4.5, RSS-Gen, Issue 5:§6.11	-	-	NP
Frequency stability, voltage variation	§27.54, §2.1055(d)(1)	RSS-130, Issue 2:§4.5, RSS-Gen, Issue 5:§6.11	-	-	NP

Test case in 5G NR 77 band	Reference Clause FCC	Reference Clause ISSED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	-	-	N/A
Conducted RF output power	§27.50(j)(3), §2.1046	RSS-192, Issue 5: §5.5, RSS-198, Issue 1: §5.5, RSS-Gen, Issue 5:§6.12	18	-	PASSED
Radiated RF output power	§27.50(j)(3), §2.1046	RSS-192, Issue 5: §5.5, RSS-198, Issue 1: §5.5, RSS-Gen, Issue 5:§6.12	-	-	NP
26dB Emission bandwidth	§2.1049	RSS-Gen, Issue 5:§6.7	-	-	NP
Occupied Channel Bandwidth 99%	§2.1049	RSS-Gen, Issue 5:§6.7	-	-	NP
Radiated Band Edge	§27.53(l)(2), §2.1053(a), §2.1057(a)	RSS-192, Issue 5:§5.6, RSS-198, Issue 1: §5.6, RSS-Gen, Issue 5:§6.13	-	-	NP
Conducted RF Band Edge	§27.53(l)(2), §2.1053(a), §2.1057(a)	RSS-192, Issue 5:§5.6, RSS-198, Issue 1: §5.6, RSS-Gen, Issue 5:§6.13	-	-	NP
Peak to Average ratio (PAPR)	§27.50(c)(10), §2.1046	RSS-192, Issue 5: §5.5 RSS-198, Issue 1: §5.5,	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	30	-	PASSED
Spurious emissions at antenna terminals	§27.53(l)(2), §2.1053(a) §2.1057(1)	RSS-192, Issue 5:§5.6, RSS-198, Issue 1: §5.6, RSS-Gen, Issue 5: §6.13	-	-	NP
Radiated spurious emissions	§27.53(l)(2), §2.1053(a) §2.1057(1)	RSS-192, Issue 5:§5.6, RSS-198, Issue 1: §5.6, RSS-Gen, Issue 5:§6.13	34	-	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-192, Issue 5:§5.4, RSS-198, Issue 1: §5.4, RSS-Gen, Issue 5:§6.11	-	-	NP
Frequency stability, voltage variation	§27.54, §2.1055(d)(1)	RSS-192, Issue 5:§5.4, RSS-198, Issue 1: §5.4, RSS-Gen, Issue 5:§6.11	-	-	NP

Test case in 5G NR 78 band	Reference Clause FCC	Reference Clause ISCED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	-	-	N/A
Conducted RF output power	§27.50(k)(3), §2.1046	RSS-192, Issue 5: §5.5, RSS-Gen, Issue 5:§6.12	18	-	PASSED
Radiated RF output power	§27.50(k)(3), §2.1046	RSS-192, Issue 5: §5.5, RSS-Gen, Issue 5:§6.12	-	-	NP
26dB Emission bandwidth	§2.1049	RSS-Gen, Issue 5:§6.7	-	-	NP
Occupied Channel Bandwidth 99%	§2.1049	RSS-Gen, Issue 5:§6.7	-	-	NP
Radiated Band Edge	§27.53(n), §2.1053(a), §2.1057(a)	RSS-192, Issue 5:§5.6, RSS-Gen, Issue 5:§6.13	-	-	NP
Conducted RF Band Edge	§27.53(n), §2.1053(a), §2.1057(a)	RSS-192, Issue 5:§5.6, RSS-Gen, Issue 5:§6.13	-	-	NP
Peak to Average ratio (PAPR)	§27.50(c)(10), §2.1046	RSS-192, Issue 5: §5.5	-	-	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	30	-	PASSED
Spurious emissions at antenna terminals	§27.53(n)(2), §2.1053(a), §2.1057(1)	RSS-192, Issue 5:§5.6, RSS-Gen, Issue 5: §6.13	-	-	NP
Radiated spurious emissions	§27.53(n)(2), §2.1053(a) §2.1057(1)	RSS-192, Issue 5:§5.6, RSS-Gen, Issue 5:§6.13	34	-	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-192, Issue 5:§5.4, RSS-Gen, Issue 5:§6.11	-	-	NP
Frequency stability, voltage variation	§27.54, §2.1055(d)(1)	RSS-192, Issue 5:§5.4, RSS-Gen, Issue 5:§6.11	-	-	NP

PASSED	The EUT complies with the essential requirements in the standard.
FAILED	The EUT does not comply with the essential requirements in the standard.
N/A	Test case does not apply to the test object.
NP	The test was not performed by the cetecom advanced Laboratory.

Decision Rule: cetecom advanced GmbH follows [ILAC G8:2019 chapter 4.2.1 \(Simple Acceptance Rule\)](#).

Remarks:

- Please check the module report “FG370621-01C issued on 2023-Nov-30 and CG370621-01C issued on 2023-Dec-25 by Sporton International Inc. EMC & Wireless Communications Laboratory” for not performed Measurements by the cetecom advanced laboratory.

1.4 Summary of Test Methods

Test case	Test method
AC-Power Lines Conducted Emissions	ANSI C63.4-2014, §7, ANSI C63.10-2013 §6.2
Conducted RF output power	ANSI C63.26:2015, §5.2, KDB 971168 D01 v03r01
Radiated RF output power	ANSI C63.26:2015, §5.2.7, KDB 971168 D01 v03r01
Occupied Channel Bandwidth 99%	ANSI C63.26:2015, §5.4.4, KDB 971168 D01 v03r01
26dB Emission bandwidth	ANSI C63.26:2015, §5.4.3, KDB 971168 D01 v03r01
Modulation characteristics	ANSI C63.26:2015, §5.3
Radiated Band Edge	ANSI C63.26:2015, §5.5, KDB 971168 D01 v03r01
Conducted RF Band Edge	ANSI C63.26:2015, §5.7, KDB 971168 D01 v03r01
Peak to Average ratio (PAPR)	ANSI C63.26:2015, §5.2.6
Result calculated with measured conducted RF-power value and stated/measured antenna gain for band of interest	
Radiated field strength emissions below 30 MHz	ANSI C63.4-2014 §5.3, §8.2.1, §8.3.1.1+§8.3.2.1
Spurious emissions at antenna terminals	ANSI C63.26:2015, §5.7, KDB 971168 D01 v03r01
Radiated spurious emissions	ANSI C63.26:2015, §5.5, KDB 971168 D01 v03r01, ANSI C63.26.1:2018

2 Administrative Data

2.1 Identification of the Testing Laboratory

Company name:	cetecom advanced GmbH
Address:	Untertuerkheimer Str. 6-10 66117 Saarbruecken Germany
Responsible for testing laboratory:	Dipl.-Ing. (FH) Andreas Luckenbill M.Sc.
Accreditation scope:	DAkkS Webpage: FCC ISED
IC Lab company No. / CAB ID:	3462D / DE0001
Test location 1:	Im Teelbruch 116; 45219 Essen
Test location 2:	--

2.2 General limits for environmental conditions

Temperature:	22±2 °C
Relative. humidity:	45±15% rH

2.3 Test Laboratories sub-contracted

Company name:	--
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2.4 Organizational Items

Responsible testing manager:	Timo Franke
Receipt of EUT:	2023-Oct-31
Date(s) of test:	2023-Nov-21 to 2024-Feb-27
Version of template:	24.0301

2.5 Applicant's details

Applicant's name:	VALEO Telematik und Akustik GmbH
Address:	Max-Planck-Str. 28-32 61381 Friedrichsdorf Hesse Germany
Contact Person:	Martin Fleckenstein
Contact Person's Email:	martin.fleckenstein@valeo.com

2.6 Manufacturer's details

Manufacturer's name:	VALEO Telematik und Akustik GmbH
Address:	Max-Planck-Str. 28-32 61381 Friedrichsdorf Germany

2.7 Equipment under Test (EUT)

EUT No. *)	Sample No.	Product	Model	Type	SN	HW	SW
EUT 1	23-1-00148S177_C01	Antenna and Remote Telematics Integrated System	ARTEMIS-NAR-01	-	AT10NAFH24000000052	D4	E20 R550
EUT 2	23-1-00148S178_C01	Antenna and Remote Telematics Integrated System	ARTEMIS-NAR-01	-	AT10NAFH24000000051	D4	E20 R550

*) EUT short description is used to simplify the identification of the EUT in this test report.

2.8 Untested Variant (VAR)

VAR No. *)	Sample No.	Product	Model	Type	SN	HW	SW
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*) The listed additional untested model variant(s) (VAR) is/are not object of evaluation of compliance. For further information please see Annex 5: Declaration of applicant of model differences.

2.9 Auxiliary Equipment (AE)

AE No. *)	Sample No.	Auxiliary Equipment	Model	SN	HW	SW
AE 1	23-1-00148S22_C01	Ethernet/USB Adapter	N/A	N/A	N/A	N/A
AE 2	23-1-00148S24_C01	Media Converter BCM	100Base-T1 Media Converter BCM	230230153	N/A	N/A
AE 3	23-1-00148S55_C01	Car roof	N/A	N/A	N/A	N/A
AE 4	23-1-00148S59_C01	EMC Load Box	N/A	N/A	N/A	N/A
AE 5	23-1-00148S63_C01	Evaluation KIT	VA6003	71012229012	N/A	N/A

*) AE short description is used to simplify the identification of the auxiliary equipment in this test report.

2.10 Connected cables (CAB)

CAB No. *)	Sample No.	Cable Type	Connectors / Details	Length
CAB 1	23-1-00148S28_C01	Power cable	-	150 cm
CAB 2	23-1-00148S60_C01	EMC cable harness	-	150 cm
CAB 3	23-1-00148S70_C01	Cable	SMA / UFL	15 cm
CAB 4	23-1-00148S27_C01	LAN cable	-	100 cm

*) CAB short description is used to simplify the identification of the connected cables in this test report.

2.11 Software (SW)

SW No. *)	Sample No.	SW Name	Description	SW Status
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*) SW short description is used to simplify the identification of the used software in this test report. If the table above does not show any other line than the headline, no SW was used during testing nor was taken into account for evaluation.

2.12 EUT set-ups

set-up no. *)	Combination of EUT and AE	Description
1	EUT 1 + AE 1 + AE 2 + AE 3 + AE 4 + AE 5 + CAB 2 + CAB 4	Used for radiated measurements
2	EUT 2 + CAB 1 + CAB 3	Used for conducted measurements

*) EUT set-up no. is used to simplify the identification of the EUT set-up in this test report.

2.13 EUT operation modes

EUT operating mode no. *)	Operating modes	Additional information
Operating mode 1	NR FDD Band 2 Traffic	Frequency / channel range: UL: 1850.0 to 1910 MHz, DL: 1930.0 to 1990 MHz / Channel: UL: 370000 to 382000, DL: 386000 to 398000. A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT
Operating mode 2	NR FDD Band 5 Traffic	Frequency / channel range: UL: 824 to 849 MHz, DL: 869 to 894 MHz / Channel: UL: 164800 to 169800, DL: 173800 to 178800. A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT
Operating mode 3	NR TDD Band 41 Traffic	Frequency / channel range: 2496 to 2690 MHz Channel: 499200 to 537999 A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT
Operating mode 4	NR FDD Band 66 Traffic	Frequency / channel range: UL: 1710 to 1780 MHz, DL: 2110 to 2200 MHz / Channel: UL: 342000 to 356000, DL: 422000 to 436000. A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT
Operating mode 5	NR FDD Band 71 Traffic	Frequency / channel range: UL: 663 to 698 MHz, DL: 617 to 652 MHz / Channel: UL: 132600 to 139600, DL: 123400 to 130400. A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT
Operating mode 6	NR TDD Band 77 Traffic	Frequency / channel range: 3300 to 4200 MHz Channel: 620000 to 680000 A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT
Operating mode 6	NR TDD Band 78 Traffic	Frequency / channel range: 3300 MHz to 3800 MHz Channel: 620000 to 653333 A Communication link has been established between Wideband Radio Communication Tester CMW500 and EUT

*) EUT operating mode no. is used to simplify the test report.

3 Equipment under test (EUT)

3.1 General Data of Main EUT as Declared by Applicant

Firmware	☐ for normal use	☒ Special version for test execution	
Power supply	☐ AC Mains	-	
	☒ DC Mains	12 V DC	
	☐ Battery	-	
Operational conditions	T _{nom} = 21 °C	T _{min} = -35 °C	T _{max} = +75 °C
EUT sample type	Engineering Samples		
Weight	0.860 kg		
Size [LxWxH]	61.0 cm x 11.0 cm x 4.5 cm		
Interfaces/Ports	2x Fakra, 2x MQS, 1x MateNet		
For further details refer Applicants Declaration & following technical documents			

3.2 Detailed Technical data of Main EUT as Declared by Applicant

TX Frequency range [MHz] and Number of channels	☒ LTE 2	1850 - 1910 (UL), 1930 - 1990 (DL)	UARFCN range 370000 - 382000
	☒ LTE 5	824 - 849 (UL), 869 -894 (DL)	UARFCN range 164800 - 169800
	☒ LTE 41	2496 - 2690 (UL)	UARFCN range 499200 - 537999
	☒ LTE 66	1710 - 1780 (UL), 2110 - 2200 (DL)	UARFCN range 342000 - 356000
	☒ LTE 71	663 - 698 (UL), 617 - 652 (DL)	UARFCN range 132600 - 139600
	☒ LTE 77	3300 MHz - 4200 MHz	UARFCN range 620000 - 680000
	☒ LTE 78	3300 MHz - 3800 MHz	UARFCN range 620000 - 653333
Antenna Type	☒ Integrated ☐ External, no RF- connector ☐ External, separate RF-connector		
Antenna gain	LTE band 2: 9.5 dBi		LTE band 5: 5 dBi
	LTE band 41: 9.5 dBi		LTE band 66: 5 dBi
	LTE band 71: 5 dBi		LTE band 77: 10 dBi
	LTE band 78: 10 dBi		
FCC label attached	No		
Test firmware / software and storage location	EUT		
For further details refer Applicants Declaration & following technical documents			
Description of Reference Document (supplied by applicant)		Version	Total Pages
ARTEMIS_Tune-up-information_Rev_1.2		1.2	23

3.3 Worst case identification

LTE mode	Data rate
5G NR FDD 2	BW 5 MHz; ch Low 1852.5 MHz; RB50%mid; BPSK
5G NR FDD 5	BW 5 MHz; ch Low 826.5 MHz; RB50%mid; BPSK
5G NR TDD 41	BW 90 MHz; ch High 2644.98 MHz; 1RBhigh-1; BPSK
5G NR FDD 66	BW 5 MHz; ch High 1777.5 MHz; 1RBhigh-1; BPSK
5G NR FDD 71	BW 10 MHz; ch Mid 680.5 MHz; RB50%mid; BPSK
5G NR FDD 77	BW 90 MHz; ch Mid 3624.99 MHz; 1RBlow+1; BPSK
5G NR TDD 78	BW 100 MHz; ch Mid 3550.5 MHz; 1RBlow+1; BPSK

3.4 Modifications on Test sample

Additions/deviations or exclusions	--
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4 Measurements

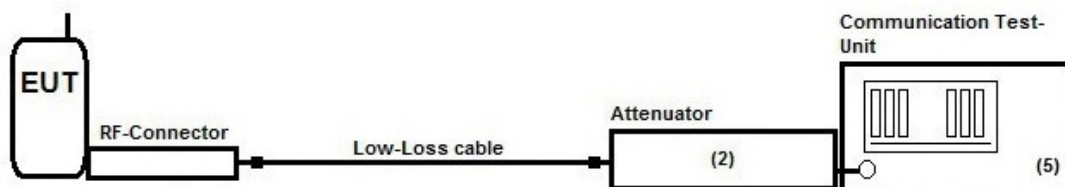
4.1 Conducted RF output power

4.1.1 Description of the general test setup and methodology, see below example:

Following modified test set-up apply for tests performed inside the climatic chamber (frequency stability) or conducted RF-carrier power-measurement. The EUT RF-Signal is directly connected over suitable RF-connector over low-loss cable and an attenuator (2) to the cellular radio communication test-unit. (5).

The measurements were performed with the integrated power measurement function of the communication test-unit. (5).

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:

(See Tables *Summary of Test Results* and *Summary of Test Methods* on page 12)

EUT settings

The EUT was instructed to send with maximum power (if adjustable) according applicants instructions.

The measurements were made at the low, middle and high carrier frequencies of each of the supported operating band within the designated range within the allowed channel bandwidths. Choosing three TX-carrier frequencies of the mobile phone, should be sufficient to demonstrate compliance

4.1.2 Measurement Location

Test site	120910 - Radio Laboratory 1 (TS 8997)
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4.1.3 Limit

Operation band	FCC Limit [W] ☒	ISED Limit [W] ☒
5G NR 2	2 EIRP (33 dBm)	2 EIRP (33 dBm)
5G NR 5	7 ERP (38.5 dBm)	7 ERP (38.5 dBm)
5G NR 41	2 EIRP (33 dBm)	2 EIRP (33 dBm)
5G NR 66	1 EIRP (30dBm)	1 EIRP (30dBm)
5G NR 71	3 ERP (33 dBm)	3 ERP (33 dBm)
5G NR 77	1 EIRP (30 dBm)	1 EIRP (30 dBm)
5G NR 78	1 EIRP (30 dBm)	1 EIRP (30 dBm)

4.1.4 Result

5G NR FDD Band 2																	
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict
BW 5 MHz	370500	1852.5	BPSK	1	low	21.79	9.50	3.20	28.09	0.64417	25.94	0.39264	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.21	9.50	3.20	28.51	0.70958	26.36	0.43251	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.08	9.50	3.20	28.38	0.68865	26.23	0.41976	2.00	33.01	2.00	33.01	Passed
				1	high	21.81	9.50	3.20	28.11	0.64714	25.96	0.39446	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.59	9.50	3.20	28.89	0.77446	26.74	0.47206	2.00	33.01	2.00	33.01	Passed
				100%		21.82	9.50	3.20	28.12	0.64863	25.97	0.39537	2.00	33.01	2.00	33.01	Passed
	376000	1880.00	BPSK	1	low	21.73	9.50	3.20	28.03	0.63533	25.88	0.38726	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.36	9.50	3.20	28.66	0.73451	26.51	0.44771	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.12	9.50	3.20	28.42	0.69502	26.27	0.42364	2.00	33.01	2.00	33.01	Passed
				1	high	21.62	9.50	3.20	27.92	0.61944	25.77	0.37757	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.22	9.50	3.20	28.52	0.71121	26.37	0.43351	2.00	33.01	2.00	33.01	Passed
				100%		21.74	9.50	3.20	28.04	0.63680	25.89	0.38815	2.00	33.01	2.00	33.01	Passed
	381500	1907.50	BPSK	1	low	21.55	9.50	3.20	27.85	0.60954	25.70	0.37154	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.11	9.50	3.20	28.41	0.69343	26.26	0.42267	2.00	33.01	2.00	33.01	Passed
				1	high-1	21.97	9.50	3.20	28.27	0.67143	26.12	0.40926	2.00	33.01	2.00	33.01	Passed
				1	high	21.30	9.50	3.20	27.60	0.57544	25.45	0.35075	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.13	9.50	3.20	28.43	0.69663	26.28	0.42462	2.00	33.01	2.00	33.01	Passed
				100%		21.55	9.50	3.20	27.85	0.60954	25.70	0.37154	2.00	33.01	2.00	33.01	Passed
	371000	1855.00	BPSK	1	low	21.86	9.50	3.20	28.16	0.65464	26.01	0.39902	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.19	9.50	3.20	28.49	0.70632	26.34	0.43053	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.16	9.50	3.20	28.46	0.70146	26.31	0.42756	2.00	33.01	2.00	33.01	Passed
				1	high	22.15	9.50	3.20	28.45	0.69984	26.30	0.42658	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.41	9.50	3.20	28.71	0.74302	26.56	0.45290	2.00	33.01	2.00	33.01	Passed
				100%		21.86	9.50	3.20	28.16	0.65464	26.01	0.39902	2.00	33.01	2.00	33.01	Passed
20525		1880.00	BPSK	1	low	21.63	9.50	3.20	27.93	0.62087	25.78	0.37844	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.08	9.50	3.20	28.38	0.68865	26.23	0.41976	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.16	9.50	3.20	28.46	0.70146	26.31	0.42756	2.00	33.01	2.00	33.01	Passed
				1	high	22.14	9.50	3.20	28.44	0.69823	26.29	0.42560	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.26	9.50	3.20	28.56	0.71779	26.41	0.43752	2.00	33.01	2.00	33.01	Passed
				100%		21.90	9.50	3.20	28.20	0.66069	26.05	0.40272	2.00	33.01	2.00	33.01	Passed
381000	1905.00	BPSK	1	low	21.73	9.50	3.20	28.03	0.63533	25.88	0.38726	2.00	33.01	2.00	33.01	Passed	
			1	low+1	22.06	9.50	3.20	28.36	0.68549	26.21	0.41783	2.00	33.01	2.00	33.01	Passed	
			1	high-1	21.88	9.50	3.20	28.18	0.65766	26.03	0.40087	2.00	33.01	2.00	33.01	Passed	
			1	high	21.94	9.50	3.20	28.24	0.66681	26.09	0.40644	2.00	33.01	2.00	33.01	Passed	
			50%	mid	22.30	9.50	3.20	28.60	0.72444	26.45	0.44157	2.00	33.01	2.00	33.01	Passed	
			100%		21.67	9.50	3.20	27.97	0.62661	25.82	0.38194	2.00	33.01	2.00	33.01	Passed	
371500	829.00	BPSK	1	low	21.96	9.50	3.20	28.26	0.66988	26.11	0.40832	2.00	33.01	2.00	33.01	Passed	
			1	low+1	22.13	9.50	3.20	28.43	0.69663	26.28	0.42462	2.00	33.01	2.00	33.01	Passed	
			1	high-1	22.26	9.50	3.20	28.56	0.71779	26.41	0.43752	2.00	33.01	2.00	33.01	Passed	
			1	high	22.13	9.50	3.20	28.43	0.69663	26.28	0.42462	2.00	33.01	2.00	33.01	Passed	
			50%	mid	22.42	9.50	3.20	28.72	0.74473	26.57	0.45394	2.00	33.01	2.00	33.01	Passed	
			100%		21.95	9.50	3.20	28.25	0.66834	26.10	0.40738	2.00	33.01	2.00	33.01	Passed	
	376000	1880.00	BPSK	1	low	21.71	9.50	3.20	28.01	0.63241	25.86	0.38548	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.21	9.50	3.20	28.51	0.70958	26.36	0.43251	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.13	9.50	3.20	28.43	0.69663	26.28	0.42462	2.00	33.01	2.00	33.01	Passed
				1	high	22.16	9.50	3.20	28.46	0.70146	26.31	0.42756	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.21	9.50	3.20	28.51	0.70958	26.36	0.43251	2.00	33.01	2.00	33.01	Passed
				100%		21.87	9.50	3.20	28.17	0.65615	26.02	0.39994	2.00	33.01	2.00	33.01	Passed
380500	1902.50	BPSK	1	low	21.78	9.50	3.20	28.08	0.64269	25.93	0.39174	2.00	33.01	2.00	33.01	Passed	
			1	low+1	22.23	9.50	3.20	28.53	0.71285	26.38	0.43451	2.00	33.01	2.00	33.01	Passed	
			1	high-1	21.99	9.50	3.20	28.29	0.67453	26.14	0.41115	2.00	33.01	2.00	33.01	Passed	
			1	high	22.00	9.50	3.20	28.30	0.67608	26.15	0.41210	2.00	33.01	2.00	33.01	Passed	
			50%	mid	22.15	9.50	3.20	28.45	0.69984	26.30	0.42658	2.00	33.01	2.00	33.01	Passed	
			100%		21.74	9.50	3.20	28.04	0.63680	25.89	0.38815	2.00	33.01	2.00	33.01	Passed	
372000	1860.00	BPSK	1	low	21.87	9.50	3.20	28.17	0.65615	26.02	0.39994	2.00	33.01	2.00	33.01	Passed	
			1	low+1	22.22	9.50	3.20	28.52	0.71121	26.37	0.43351	2.00	33.01	2.00	33.01	Passed	
			1	high-1	22.15	9.50	3.20	28.45	0.69984	26.30	0.42658	2.00	33.01	2.00	33.01	Passed	
			1	high	22.21	9.50	3.20	28.51	0.70958	26.36	0.43251	2.00	33.01	2.00	33.01	Passed	
			50%	mid	22.34	9.50	3.20	28.64	0.73114	26.49	0.44566	2.00	33.01	2.00	33.01	Passed	
			100%		21.84	9.50	3.20	28.14	0.65163	25.99	0.39719	2.00	33.01	2.00	33.01	Passed	
	376000	1800.00	BPSK	1	low	21.73	9.50	3.20	28.03	0.63533	25.88	0.38726	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.15	9.50	3.20	28.45	0.69984	26.30	0.42658	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.06	9.50	3.20	28.36	0.68549	26.21	0.41783	2.00	33.01	2.00	33.01	Passed
				1	high	22.00	9.50	3.20	28.30	0.67608	26.15	0.41210	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.33	9.50	3.20	28.63	0.72946	26.48	0.44463	2.00	33.01	2.00	33.01	Passed
				100%		21.83	9.50	3.20	28.13	0.65013	25.98	0.39628	2.00	33.01	2.00	33.01	Passed
	380000	1900.00	BPSK	1	low	21.69	9.50	3.20	27.99	0.62951	25.84	0.38371	2.00	33.01	2.00	33.01	Passed
				1	low+1	22.25	9.50	3.20	28.55	0.71614	26.40	0.43652	2.00	33.01	2.00	33.01	Passed
				1	high-1	22.02	9.50	3.20	28.32	0.67920	26.17	0.41400	2.00	33.01	2.00	33.01	Passed
				1	high	21.97	9.50	3.20	28.27	0.67143	26.12	0.40926	2.00	33.01	2.00	33.01	Passed
				50%	mid	22.26	9.50	3.20	28.56	0.71779	26.41	0.43752	2.00	33.01	2.00	33.01	Passed
				100%		21.74	9.50	3.20	28.04	0.63680	25.89	0.38815	2.00	33.01	2.00	33.01	Passed
EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																	
ERP = EIRP - 2.15																	

5G NR FDD Band 5																	
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), ERP	FCC Limit (dBm); ERP	ISED Limit(W), ERP	ISED Limit (dBm), ERP	Verdict
BW 5 MHz	165300	826.50	QPSK	1	low	22.19	5.00	3.50	23.69	0.23388	21.54	0.14256	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.61	5.00	3.50	24.11	0.25763	21.96	0.15704	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.48	5.00	3.50	23.98	0.25003	21.83	0.15241	7.00	38.45	7.00	38.45	Passed
				1	high	22.21	5.00	3.50	23.71	0.23496	21.56	0.14322	7.00	38.45	7.00	38.45	Passed
				50%	mid	22.99	5.00	3.50	24.49	0.28119	22.34	0.17140	7.00	38.45	7.00	38.45	Passed
				100%		22.22	5.00	3.50	23.72	0.23550	21.57	0.14355	7.00	38.45	7.00	38.45	Passed
				1	low	22.13	5.00	3.50	23.63	0.23067	21.48	0.14060	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.76	5.00	3.50	24.26	0.26669	22.11	0.16255	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.52	5.00	3.50	24.02	0.25235	21.87	0.15382	7.00	38.45	7.00	38.45	Passed
				1	high	22.02	5.00	3.50	23.52	0.22491	21.37	0.13709	7.00	38.45	7.00	38.45	Passed
	167300	836.50	QPSK	50%	mid	22.62	5.00	3.50	24.12	0.25823	21.97	0.15740	7.00	38.45	7.00	38.45	Passed
				100%		22.14	5.00	3.50	23.64	0.23121	21.49	0.14093	7.00	38.45	7.00	38.45	Passed
				1	low	21.95	5.00	3.50	23.45	0.22131	21.30	0.13490	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.51	5.00	3.50	24.01	0.25177	21.86	0.15346	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.37	5.00	3.50	23.87	0.24378	21.72	0.14859	7.00	38.45	7.00	38.45	Passed
				1	high	21.7	5.00	3.50	23.20	0.20893	21.05	0.12735	7.00	38.45	7.00	38.45	Passed
				50%	mid	22.53	5.00	3.50	24.03	0.25293	21.88	0.15417	7.00	38.45	7.00	38.45	Passed
				100%		21.95	5.00	3.50	23.45	0.22131	21.30	0.13490	7.00	38.45	7.00	38.45	Passed
				1	low	22.26	5.00	3.50	23.76	0.23768	21.61	0.14488	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.59	5.00	3.50	24.09	0.25645	21.94	0.15631	7.00	38.45	7.00	38.45	Passed
	165800	829.00	QPSK	1	high-1	22.56	5.00	3.50	24.06	0.25468	21.91	0.15524	7.00	38.45	7.00	38.45	Passed
				1	high	22.55	5.00	3.50	24.05	0.25410	21.90	0.15488	7.00	38.45	7.00	38.45	Passed
				50%	mid	22.81	5.00	3.50	24.31	0.26977	22.16	0.16444	7.00	38.45	7.00	38.45	Passed
				100%		22.26	5.00	3.50	23.76	0.23768	21.61	0.14488	7.00	38.45	7.00	38.45	Passed
				1	low	22.03	5.00	3.50	23.53	0.22542	21.38	0.13740	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.48	5.00	3.50	23.98	0.25003	21.83	0.15241	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.56	5.00	3.50	24.06	0.25468	21.91	0.15524	7.00	38.45	7.00	38.45	Passed
				1	high	22.54	5.00	3.50	24.04	0.25351	21.89	0.15453	7.00	38.45	7.00	38.45	Passed
				50%	mid	22.66	5.00	3.50	24.16	0.26062	22.01	0.15885	7.00	38.45	7.00	38.45	Passed
				100%		22.3	5.00	3.50	23.80	0.23988	21.65	0.14622	7.00	38.45	7.00	38.45	Passed
168800	844.00	QPSK	1	low	22.13	5.00	3.50	23.63	0.23067	21.48	0.14060	7.00	38.45	7.00	38.45	Passed	
			1	low+1	22.46	5.00	3.50	23.96	0.24889	21.81	0.15171	7.00	38.45	7.00	38.45	Passed	
			1	high-1	22.28	5.00	3.50	23.78	0.23878	21.63	0.14555	7.00	38.45	7.00	38.45	Passed	
			1	high	22.34	5.00	3.50	23.84	0.24210	21.69	0.14757	7.00	38.45	7.00	38.45	Passed	
			50%	mid	22.7	5.00	3.50	24.20	0.26303	22.05	0.16032	7.00	38.45	7.00	38.45	Passed	
			100%		22.07	5.00	3.50	23.57	0.22751	21.42	0.13868	7.00	38.45	7.00	38.45	Passed	
			1	low	22.36	5.00	3.50	23.86	0.24322	21.71	0.14825	7.00	38.45	7.00	38.45	Passed	
			1	low+1	22.53	5.00	3.50	24.03	0.25293	21.88	0.15417	7.00	38.45	7.00	38.45	Passed	
			1	high-1	22.66	5.00	3.50	24.16	0.26062	22.01	0.15885	7.00	38.45	7.00	38.45	Passed	
			1	high	22.53	5.00	3.50	24.03	0.25293	21.88	0.15417	7.00	38.45	7.00	38.45	Passed	
BW 15 MHz	166300	831.50	QPSK	50%	mid	22.82	5.00	3.50	24.32	0.27040	22.17	0.16482	7.00	38.45	7.00	38.45	Passed
				100%		22.35	5.00	3.50	23.85	0.24266	21.70	0.14791	7.00	38.45	7.00	38.45	Passed
				1	low	22.11	5.00	3.50	23.61	0.22961	21.46	0.13996	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.61	5.00	3.50	24.11	0.25763	21.96	0.15704	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.53	5.00	3.50	24.03	0.25293	21.88	0.15417	7.00	38.45	7.00	38.45	Passed
				1	high	22.56	5.00	3.50	24.06	0.25468	21.91	0.15524	7.00	38.45	7.00	38.45	Passed
	167300	836.50	QPSK	50%	mid	22.61	5.00	3.50	24.11	0.25763	21.96	0.15704	7.00	38.45	7.00	38.45	Passed
				100%		22.27	5.00	3.50	23.77	0.23823	21.62	0.14521	7.00	38.45	7.00	38.45	Passed
				1	low	22.18	5.00	3.50	23.68	0.23335	21.53	0.14223	7.00	38.45	7.00	38.45	Passed
				1	low+1	22.63	5.00	3.50	24.13	0.25882	21.98	0.15776	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.39	5.00	3.50	23.89	0.24491	21.74	0.14928	7.00	38.45	7.00	38.45	Passed
				1	high	22.4	5.00	3.50	23.90	0.24547	21.75	0.14962	7.00	38.45	7.00	38.45	Passed
	168300	841.50	QPSK	50%	mid	22.55	5.00	3.50	24.05	0.25410	21.90	0.15488	7.00	38.45	7.00	38.45	Passed
				100%		22.14	5.00	3.50	23.64	0.23121	21.49	0.14093	7.00	38.45	7.00	38.45	Passed
				1	low	22.27	5.00	3.50	23.77	0.23823	21.62	0.14521	7.00	38.45	7.00	38.45	Passed
BW 20 MHz	20450	834.00	QPSK	1	low+1	22.62	5.00	3.50	24.12	0.25823	21.97	0.15740	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.55	5.00	3.50	24.05	0.25410	21.90	0.15488	7.00	38.45	7.00	38.45	Passed
				1	high	22.61	5.00	3.50	24.11	0.25763	21.96	0.15704	7.00	38.45	7.00	38.45	Passed
				50%	mid	22.74	5.00	3.50	24.24	0.26546	22.09	0.16181	7.00	38.45	7.00	38.45	Passed
				100%		22.24	5.00	3.50	23.74	0.23659	21.59	0.14421	7.00	38.45	7.00	38.45	Passed
				1	low	22.13	5.00	3.50	23.63	0.23067	21.48	0.14060	7.00	38.45	7.00	38.45	Passed
	167300	836.50	QPSK	1	low+1	22.55	5.00	3.50	24.05	0.25410	21.90	0.15488	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.46	5.00	3.50	23.96	0.24889	21.81	0.15171	7.00	38.45	7.00	38.45	Passed
				1	high	22.4	5.00	3.50	23.90	0.24547	21.75	0.14962	7.00	38.45	7.00	38.45	Passed
				50%	mid	22.73	5.00	3.50	24.23	0.26485	22.08	0.16144	7.00	38.45	7.00	38.45	Passed
				100%		22.23	5.00	3.50	23.73	0.23605	21.58	0.14388	7.00	38.45	7.00	38.45	Passed
				1	low	22.09	5.00	3.50	23.59	0.22856	21.44	0.13932	7.00	38.45	7.00	38.45	Passed
	167800	839.00	QPSK	1	low+1	22.65	5.00	3.50	24.15	0.26002	22.00	0.15849	7.00	38.45	7.00	38.45	Passed
				1	high-1	22.42	5.00	3.50	23.92	0.24660	21.77	0.15031	7.00	38.45	7.00	38.45	Passed
				1	high	22.37	5.00	3.50	23.87	0.24378	21.72	0.14859	7.00	38.45	7.00	38.45	Passed
50%	mid	22.66	5.00	3.50	24.16	0.26062	22.01	0.15885	7.00	38.45	7.00	38.45	Passed				
100%		22.14	5.00	3.50	23.64	0.23121	21.49	0.14093	7.00	38.45	7.00	38.45	Passed				
EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																	
FRP = EIRP - 2.15																	

5G NR TDD Band 41																			
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict		
BW 20 MHz	501204	2506.02	BPSK	1	low	19.8	9.50	3.50	25.80	0.38019	23.65	0.23174	2.00	33.01	2.00	33.01	Passed		
				1	low+1	20.56	9.50	3.50	26.56	0.45290	24.41	0.27606	2.00	33.01	2.00	33.01	Passed		
				1	high-1	20.77	9.50	3.50	26.77	0.47534	24.62	0.28973	2.00	33.01	2.00	33.01	Passed		
				1	high	20.75	9.50	3.50	26.75	0.47315	24.60	0.28840	2.00	33.01	2.00	33.01	Passed		
				50%	mid	20.66	9.50	3.50	26.66	0.46345	24.51	0.28249	2.00	33.01	2.00	33.01	Passed		
				100%		20.16	9.50	3.50	26.16	0.41305	24.01	0.25177	2.00	33.01	2.00	33.01	Passed		
				1	low	21.58	9.50	3.50	27.58	0.57280	25.43	0.34914	2.00	33.01	2.00	33.01	Passed		
				1	low+1	22.02	9.50	3.50	28.02	0.63387	25.87	0.38637	2.00	33.01	2.00	33.01	Passed		
				1	high-1	22.23	9.50	3.50	28.23	0.66527	26.08	0.40551	2.00	33.01	2.00	33.01	Passed		
				1	high	22.27	9.50	3.50	28.27	0.67143	26.12	0.40926	2.00	33.01	2.00	33.01	Passed		
				50%	mid	22.05	9.50	3.50	28.05	0.63826	25.90	0.38905	2.00	33.01	2.00	33.01	Passed		
				100%		21.59	9.50	3.50	27.59	0.57412	25.44	0.34995	2.00	33.01	2.00	33.01	Passed		
	518598	2592.99	BPSK	1	low	23.08	9.50	3.50	29.08	0.80910	26.93	0.49317	2.00	33.01	2.00	33.01	Passed		
	1			low+1	22.94	9.50	3.50	28.94	0.78343	26.79	0.47753	2.00	33.01	2.00	33.01	Passed			
	1			high-1	22.3	9.50	3.50	28.30	0.67608	26.15	0.41210	2.00	33.01	2.00	33.01	Passed			
	1			high	22.29	9.50	3.50	28.29	0.67453	26.14	0.41115	2.00	33.01	2.00	33.01	Passed			
	50%			mid	22.78	9.50	3.50	28.78	0.75509	26.63	0.46026	2.00	33.01	2.00	33.01	Passed			
	100%				23.05	9.50	3.50	29.05	0.80353	26.90	0.48978	2.00	33.01	2.00	33.01	Passed			
	503202			2516.01	BPSK	1	low	20.29	9.50	3.50	26.29	0.42560	24.14	0.25942	2.00	33.01	2.00	33.01	Passed
						1	low+1	20.5	9.50	3.50	26.50	0.44668	24.35	0.27227	2.00	33.01	2.00	33.01	Passed
						1	high-1	21.25	9.50	3.50	27.25	0.53088	25.10	0.32359	2.00	33.01	2.00	33.01	Passed
						1	high	21.3	9.50	3.50	27.30	0.53703	25.15	0.32734	2.00	33.01	2.00	33.01	Passed
						50%	mid	20.94	9.50	3.50	26.94	0.49431	24.79	0.30130	2.00	33.01	2.00	33.01	Passed
						100%		20.36	9.50	3.50	26.36	0.43251	24.21	0.26363	2.00	33.01	2.00	33.01	Passed
518598		2592.99	BPSK			1	low	21.64	9.50	3.50	27.64	0.58076	25.49	0.35400	2.00	33.01	2.00	33.01	Passed
						1	low+1	22.06	9.50	3.50	28.06	0.63973	25.91	0.38994	2.00	33.01	2.00	33.01	Passed
						1	high-1	22.57	9.50	3.50	28.57	0.71945	26.42	0.43853	2.00	33.01	2.00	33.01	Passed
						1	high	22.52	9.50	3.50	28.52	0.71121	26.37	0.43351	2.00	33.01	2.00	33.01	Passed
						50%	mid	22.05	9.50	3.50	28.05	0.63826	25.90	0.38905	2.00	33.01	2.00	33.01	Passed
						100%		21.69	9.50	3.50	27.69	0.58749	25.54	0.35810	2.00	33.01	2.00	33.01	Passed
	534000			2670.00	BPSK	1	low	21.46	9.50	3.50	27.46	0.55719	25.31	0.33963	2.00	33.01	2.00	33.01	Passed
						1	low+1	23.44	9.50	3.50	29.44	0.87902	27.29	0.53580	2.00	33.01	2.00	33.01	Passed
						1	high-1	22.7	9.50	3.50	28.70	0.74131	26.55	0.45186	2.00	33.01	2.00	33.01	Passed
						1	high	22.66	9.50	3.50	28.66	0.73451	26.51	0.44771	2.00	33.01	2.00	33.01	Passed
						50%	mid	23.47	9.50	3.50	29.47	0.88512	27.32	0.53951	2.00	33.01	2.00	33.01	Passed
						100%		23.18	9.50	3.50	29.18	0.82794	27.03	0.50466	2.00	33.01	2.00	33.01	Passed
504204		2521.02	BPSK			1	low	20.4	9.50	3.50	26.40	0.43652	24.25	0.26607	2.00	33.01	2.00	33.01	Passed
						1	low+1	20.48	9.50	3.50	26.48	0.44463	24.33	0.27102	2.00	33.01	2.00	33.01	Passed
						1	high-1	20.93	9.50	3.50	26.93	0.49317	24.78	0.30061	2.00	33.01	2.00	33.01	Passed
						1	high	20.91	9.50	3.50	26.91	0.49091	24.76	0.29923	2.00	33.01	2.00	33.01	Passed
						50%	mid	20.81	9.50	3.50	26.81	0.47973	24.66	0.29242	2.00	33.01	2.00	33.01	Passed
						100%		20.39	9.50	3.50	26.39	0.43551	24.24	0.26546	2.00	33.01	2.00	33.01	Passed
	518598			2592.99	BPSK	1	low	21.68	9.50	3.50	27.68	0.58614	25.53	0.35727	2.00	33.01	2.00	33.01	Passed
						1	low+1	21.95	9.50	3.50	27.95	0.62373	25.80	0.38019	2.00	33.01	2.00	33.01	Passed
						1	high-1	22.31	9.50	3.50	28.31	0.67764	26.16	0.41305	2.00	33.01	2.00	33.01	Passed
						1	high	22.42	9.50	3.50	28.42	0.69502	26.27	0.42364	2.00	33.01	2.00	33.01	Passed
						50%	mid	22.16	9.50	3.50	28.16	0.65464	26.01	0.39902	2.00	33.01	2.00	33.01	Passed
						100%		21.73	9.50	3.50	27.73	0.59293	25.58	0.36141	2.00	33.01	2.00	33.01	Passed
532998		2664.99	BPSK			1	low	23.1	9.50	3.50	29.10	0.81283	26.95	0.49545	2.00	33.01	2.00	33.01	Passed
						1	low+1	23.01	9.50	3.50	29.01	0.79616	26.86	0.48529	2.00	33.01	2.00	33.01	Passed
						1	high-1	22.24	9.50	3.50	28.24	0.66681	26.09	0.40644	2.00	33.01	2.00	33.01	Passed
						1	high	22.32	9.50	3.50	28.32	0.67920	26.17	0.41400	2.00	33.01	2.00	33.01	Passed
						50%	mid	23.5	9.50	3.50	29.50	0.89125	27.35	0.54325	2.00	33.01	2.00	33.01	Passed
						100%		23.05	9.50	3.50	29.05	0.80353	26.90	0.48978	2.00	33.01	2.00	33.01	Passed
	505200			2526.00	BPSK	1	low	21.04	9.50	3.50	27.04	0.50582	24.89	0.30832	2.00	33.01	2.00	33.01	Passed
						1	low+1	20.39	9.50	3.50	26.39	0.43551	24.24	0.26546	2.00	33.01	2.00	33.01	Passed
						1	high-1	21	9.50	3.50	27.00	0.50119	24.85	0.30549	2.00	33.01	2.00	33.01	Passed
						1	high	20.61	9.50	3.50	26.61	0.45814	24.46	0.27925	2.00	33.01	2.00	33.01	Passed
						50%	mid	20.96	9.50	3.50	26.96	0.49659	24.81	0.30269	2.00	33.01	2.00	33.01	Passed
						100%		20.27	9.50	3.50	26.27	0.42364	24.12	0.25823	2.00	33.01	2.00	33.01	Passed
518598		2592.99	BPSK			1	low	21.67	9.50	3.50	27.67	0.58479	25.52	0.35645	2.00	33.01	2.00	33.01	Passed
						1	low+1	21.78	9.50	3.50	27.78	0.59979	25.63	0.36559	2.00	33.01	2.00	33.01	Passed
						1	high-1	22.76	9.50	3.50	28.76	0.75162	26.61	0.45814	2.00	33.01	2.00	33.01	Passed
						1	high	22.16	9.50	3.50	28.16	0.65464	26.01	0.39902	2.00	33.01	2.00	33.01	Passed
						50%	mid	22.11	9.50	3.50	28.11	0.64714	25.96	0.39446	2.00	33.01	2.00	33.01	Passed
						100%		21.69	9.50	3.50	27.69	0.58749	25.54	0.35810	2.00	33.01	2.00	33.01	Passed
	531996			2659.98	BPSK	1	low	22.99	9.50	3.50	28.99	0.79250	26.84	0.48306	2.00	33.01	2.00	33.01	Passed
						1	low+1	22.94	9.50	3.50	28.94	0.78343	26.79	0.47753	2.00	33.01	2.00	33.01	Passed
						1	high-1	22.1	9.50	3.50	28.10	0.64565	25.95	0.39355	2.00	33.01	2.00	33.01	Passed
						1	high	21.67	9.50	3.50	27.67	0.58479	25.52	0.35645	2.00	33.01	2.00	33.01	Passed
						50%	mid	23.35	9.50	3.50	29.35	0.86099	27.20	0.52481	2.00	33.01	2.00	33.01	Passed
						100%		22.92	9.50	3.50	28.92	0.77983	26.77	0.47534	2.00	33.01	2.00	33.01	Passed

BW 80 MHz	507204	2536.02	BPSK	1	low	20.63	9.50	3.50	26.63	0.46026	24.48	0.28054	2.00	33.01	2.00	33.01	Passed	
				1	low+1	20.75	9.50	3.50	26.75	0.47315	24.60	0.28840	2.00	33.01	2.00	33.01	Passed	
				1	high-1	21.65	9.50	3.50	27.65	0.58210	25.50	0.35481	2.00	33.01	2.00	33.01	Passed	
				1	high	21.69	9.50	3.50	27.69	0.58749	25.54	0.35810	2.00	33.01	2.00	33.01	Passed	
				50%	mid	21.26	9.50	3.50	27.26	0.53211	25.11	0.32434	2.00	33.01	2.00	33.01	Passed	
				100%		20.75	9.50	3.50	26.75	0.47315	24.60	0.28840	2.00	33.01	2.00	33.01	Passed	
	1	low	21.88	9.50	3.50	27.88	0.61376	25.73	0.37411	2.00	33.01	2.00	33.01	Passed				
	1	low+1	21.88	9.50	3.50	27.88	0.61376	25.73	0.37411	2.00	33.01	2.00	33.01	Passed				
	1	high-1	23.2	9.50	3.50	29.20	0.83176	27.05	0.50699	2.00	33.01	2.00	33.01	Passed				
	1	high	23.22	9.50	3.50	29.22	0.83560	27.07	0.50933	2.00	33.01	2.00	33.01	Passed				
	50%	mid	22.46	9.50	3.50	28.46	0.70146	26.31	0.42756	2.00	33.01	2.00	33.01	Passed				
	100%		22.06	9.50	3.50	28.06	0.63973	25.91	0.38994	2.00	33.01	2.00	33.01	Passed				
	1	low	23.12	9.50	3.50	29.12	0.81658	26.97	0.49774	2.00	33.01	2.00	33.01	Passed				
	1	low+1	22.64	9.50	3.50	28.64	0.73114	26.49	0.44566	2.00	33.01	2.00	33.01	Passed				
	1	high-1	24.35	9.50	3.50	30.35	1.08393	28.20	0.66069	2.00	33.01	2.00	33.01	Passed				
	1	high	24.43	9.50	3.50	30.43	1.10408	28.28	0.67298	2.00	33.01	2.00	33.01	Passed				
	50%	mid	23.52	9.50	3.50	29.52	0.89536	27.37	0.54576	2.00	33.01	2.00	33.01	Passed				
	100%		23.02	9.50	3.50	29.02	0.79799	26.87	0.48641	2.00	33.01	2.00	33.01	Passed				
	BW 90 MHz	508200	2541.00	BPSK	1	low	20.08	9.50	3.50	26.08	0.40551	23.93	0.24717	2.00	33.01	2.00	33.01	Passed
					1	low+1	20.64	9.50	3.50	26.64	0.46132	24.49	0.28119	2.00	33.01	2.00	33.01	Passed
					1	high-1	21.36	9.50	3.50	27.36	0.54450	25.21	0.33189	2.00	33.01	2.00	33.01	Passed
					1	high	21.51	9.50	3.50	27.51	0.56364	25.36	0.34356	2.00	33.01	2.00	33.01	Passed
					50%	mid	20.86	9.50	3.50	26.86	0.48529	24.71	0.29580	2.00	33.01	2.00	33.01	Passed
					100%		20.57	9.50	3.50	26.57	0.45394	24.42	0.27669	2.00	33.01	2.00	33.01	Passed
1		low	21.82	9.50	3.50	27.82	0.60534	25.67	0.36898	2.00	33.01	2.00	33.01	Passed				
1		low+1	21.36	9.50	3.50	27.36	0.54450	25.21	0.33189	2.00	33.01	2.00	33.01	Passed				
1		high-1	22.89	9.50	3.50	28.89	0.77446	26.74	0.47206	2.00	33.01	2.00	33.01	Passed				
1		high	22.98	9.50	3.50	28.98	0.79068	26.83	0.48195	2.00	33.01	2.00	33.01	Passed				
50%		mid	22.29	9.50	3.50	28.29	0.67453	26.14	0.41115	2.00	33.01	2.00	33.01	Passed				
100%			21.86	9.50	3.50	27.86	0.61094	25.71	0.37239	2.00	33.01	2.00	33.01	Passed				
518598		2592.99	BPSK	1	low	22.97	9.50	3.50	28.97	0.78886	26.82	0.48084	2.00	33.01	2.00	33.01	Passed	
				1	low+1	22.74	9.50	3.50	28.74	0.74817	26.59	0.45604	2.00	33.01	2.00	33.01	Passed	
				1	high-1	24.49	9.50	3.50	30.49	1.11944	28.34	0.68234	2.00	33.01	2.00	33.01	Passed	
				1	high	24.46	9.50	3.50	30.46	1.11173	28.31	0.67764	2.00	33.01	2.00	33.01	Passed	
				50%	mid	22.95	9.50	3.50	28.95	0.78524	26.80	0.47863	2.00	33.01	2.00	33.01	Passed	
				100%		22.78	9.50	3.50	28.78	0.75509	26.63	0.46026	2.00	33.01	2.00	33.01	Passed	
528996		2644.98	BPSK	1	low	22.97	9.50	3.50	28.97	0.78886	26.82	0.48084	2.00	33.01	2.00	33.01	Passed	
				1	low+1	22.74	9.50	3.50	28.74	0.74817	26.59	0.45604	2.00	33.01	2.00	33.01	Passed	
				1	high-1	24.49	9.50	3.50	30.49	1.11944	28.34	0.68234	2.00	33.01	2.00	33.01	Passed	
				1	high	24.46	9.50	3.50	30.46	1.11173	28.31	0.67764	2.00	33.01	2.00	33.01	Passed	
				50%	mid	22.95	9.50	3.50	28.95	0.78524	26.80	0.47863	2.00	33.01	2.00	33.01	Passed	
				100%		22.78	9.50	3.50	28.78	0.75509	26.63	0.46026	2.00	33.01	2.00	33.01	Passed	
	509202	2546.01	BPSK	1	low	20.03	9.50	3.50	26.03	0.40087	23.88	0.24434	2.00	33.01	2.00	33.01	Passed	
				1	low+1	20.69	9.50	3.50	26.69	0.46666	24.54	0.28445	2.00	33.01	2.00	33.01	Passed	
				1	high-1	21.42	9.50	3.50	27.42	0.55208	25.27	0.33651	2.00	33.01	2.00	33.01	Passed	
				1	high	21.4	9.50	3.50	27.40	0.54954	25.25	0.33497	2.00	33.01	2.00	33.01	Passed	
				50%	mid	21.29	9.50	3.50	27.29	0.53580	25.14	0.32659	2.00	33.01	2.00	33.01	Passed	
				100%		20.64	9.50	3.50	26.64	0.46132	24.49	0.28119	2.00	33.01	2.00	33.01	Passed	
518598	2592.99	BPSK	1	low	21.88	9.50	3.50	27.88	0.61376	25.73	0.37411	2.00	33.01	2.00	33.01	Passed		
			1	low+1	21.43	9.50	3.50	27.43	0.55335	25.28	0.33729	2.00	33.01	2.00	33.01	Passed		
			1	high-1	23.1	9.50	3.50	29.10	0.81283	26.95	0.49545	2.00	33.01	2.00	33.01	Passed		
			1	high	23.04	9.50	3.50	29.04	0.80168	26.89	0.48865	2.00	33.01	2.00	33.01	Passed		
			50%	mid	22.36	9.50	3.50	28.36	0.68549	26.21	0.41783	2.00	33.01	2.00	33.01	Passed		
			100%		22.05	9.50	3.50	28.05	0.63826	25.90	0.38905	2.00	33.01	2.00	33.01	Passed		
	528000	2640.00	BPSK	1	low	22.85	9.50	3.50	28.85	0.76736	26.70	0.46774	2.00	33.01	2.00	33.01	Passed	
				1	low+1	22.22	9.50	3.50	28.22	0.66374	26.07	0.40458	2.00	33.01	2.00	33.01	Passed	
				1	high-1	24.45	9.50	3.50	30.45	1.10917	28.30	0.67608	2.00	33.01	2.00	33.01	Passed	
				1	high	24.46	9.50	3.50	30.46	1.11173	28.31	0.67764	2.00	33.01	2.00	33.01	Passed	
				50%	mid	23.19	9.50	3.50	29.19	0.82985	27.04	0.50582	2.00	33.01	2.00	33.01	Passed	
				100%		22.81	9.50	3.50	28.81	0.76033	26.66	0.46345	2.00	33.01	2.00	33.01	Passed	
EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																		
ERP = EIRP - 2.15																		

5G NR FDD Band 66																		
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict	
BW 5 MHz	342500	1712.50	BPSK	1	low	21.89	9.50	3.70	27.69	0.58749	25.54	0.35810	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.46	9.50	3.70	28.26	0.66988	26.11	0.40832	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.37	9.50	3.70	28.17	0.65615	26.02	0.39994	1.00	30.00	1.00	30.00	Passed	
				1	high	22.13	9.50	3.70	27.93	0.62087	25.78	0.37844	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.48	9.50	3.70	28.28	0.67298	26.13	0.41020	1.00	30.00	1.00	30.00	Passed	
				100%		22.07	9.50	3.70	27.87	0.61235	25.72	0.37325	1.00	30.00	1.00	30.00	Passed	
	349000	1745.00	BPSK	1	low	21.90	9.50	3.70	27.70	0.58884	25.55	0.35892	1.00	30.00	1.00	30.00	Passed	
				1	low+1	18.71	9.50	3.70	24.51	0.28249	22.36	0.17219	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.28	9.50	3.70	28.08	0.64269	25.93	0.39174	1.00	30.00	1.00	30.00	Passed	
				1	high	21.79	9.50	3.70	27.59	0.57412	25.44	0.34995	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.24	9.50	3.70	28.04	0.63680	25.89	0.38815	1.00	30.00	1.00	30.00	Passed	
				100%		21.89	9.50	3.70	27.69	0.58749	25.54	0.35810	1.00	30.00	1.00	30.00	Passed	
	355500	1777.50	BPSK	1	low	21.99	9.50	3.70	27.79	0.60117	25.64	0.36644	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.35	9.50	3.70	28.15	0.65313	26.00	0.39811	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.66	9.50	3.70	28.46	0.70146	26.31	0.42756	1.00	30.00	1.00	30.00	Passed	
				1	high	21.99	9.50	3.70	27.79	0.60117	25.64	0.36644	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.59	9.50	3.70	28.39	0.69024	26.24	0.42073	1.00	30.00	1.00	30.00	Passed	
				100%		22.05	9.50	3.70	27.85	0.60954	25.70	0.37154	1.00	30.00	1.00	30.00	Passed	
	BW 10 MHz	343000	1715.00	BPSK	1	low	21.82	9.50	3.70	27.62	0.57810	25.47	0.35237	1.00	30.00	1.00	30.00	Passed
					1	low+1	22.18	9.50	3.70	27.98	0.62806	25.83	0.38282	1.00	30.00	1.00	30.00	Passed
					1	high-1	22.10	9.50	3.70	27.90	0.61660	25.75	0.37584	1.00	30.00	1.00	30.00	Passed
					1	high	22.09	9.50	3.70	27.89	0.61518	25.74	0.37497	1.00	30.00	1.00	30.00	Passed
					50%	mid	22.26	9.50	3.70	28.06	0.63973	25.91	0.38994	1.00	30.00	1.00	30.00	Passed
					100%		21.84	9.50	3.70	27.64	0.58076	25.49	0.35400	1.00	30.00	1.00	30.00	Passed
349000		1745.00	BPSK	1	low	21.78	9.50	3.70	27.58	0.57280	25.43	0.34914	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.33	9.50	3.70	28.13	0.65013	25.98	0.39628	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.24	9.50	3.70	28.04	0.63680	25.89	0.38815	1.00	30.00	1.00	30.00	Passed	
				1	high	22.34	9.50	3.70	28.14	0.65163	25.99	0.39719	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.46	9.50	3.70	28.26	0.66988	26.11	0.40832	1.00	30.00	1.00	30.00	Passed	
				100%		21.97	9.50	3.70	27.77	0.59841	25.62	0.36475	1.00	30.00	1.00	30.00	Passed	
355000		1775.00	BPSK	1	low	22.00	9.50	3.70	27.80	0.60256	25.65	0.36728	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.36	9.50	3.70	28.16	0.65464	26.01	0.39902	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.55	9.50	3.70	28.35	0.68391	26.20	0.41687	1.00	30.00	1.00	30.00	Passed	
				1	high	22.38	9.50	3.70	28.18	0.65766	26.03	0.40087	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.47	9.50	3.70	28.27	0.67143	26.12	0.40926	1.00	30.00	1.00	30.00	Passed	
				100%		22.01	9.50	3.70	27.81	0.60395	25.66	0.36813	1.00	30.00	1.00	30.00	Passed	
BW 15 MHz	343500	1717.50	BPSK	1	low	21.72	9.50	3.70	27.52	0.56494	25.37	0.34435	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.59	9.50	3.70	28.39	0.69024	26.24	0.42073	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.05	9.50	3.70	27.85	0.60954	25.70	0.37154	1.00	30.00	1.00	30.00	Passed	
				1	high	22.08	9.50	3.70	27.88	0.61376	25.73	0.37411	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.42	9.50	3.70	28.22	0.66374	26.07	0.40458	1.00	30.00	1.00	30.00	Passed	
				100%		21.84	9.50	3.70	27.64	0.58076	25.49	0.35400	1.00	30.00	1.00	30.00	Passed	
	349000	1745.00	BPSK	1	low	21.88	9.50	3.70	27.68	0.58614	25.53	0.35727	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.53	9.50	3.70	28.33	0.68077	26.18	0.41495	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.27	9.50	3.70	28.07	0.64121	25.92	0.39084	1.00	30.00	1.00	30.00	Passed	
				1	high	22.17	9.50	3.70	27.97	0.62661	25.82	0.38194	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.41	9.50	3.70	28.21	0.66222	26.06	0.40365	1.00	30.00	1.00	30.00	Passed	
				100%		21.93	9.50	3.70	27.73	0.59293	25.58	0.36141	1.00	30.00	1.00	30.00	Passed	
	354500	1772.50	BPSK	1	low	21.83	9.50	3.70	27.63	0.57943	25.48	0.35318	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.39	9.50	3.70	28.19	0.65917	26.04	0.40179	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.28	9.50	3.70	28.08	0.64269	25.93	0.39174	1.00	30.00	1.00	30.00	Passed	
				1	high	22.25	9.50	3.70	28.05	0.63826	25.90	0.38905	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.38	9.50	3.70	28.18	0.65766	26.03	0.40087	1.00	30.00	1.00	30.00	Passed	
				100%		21.89	9.50	3.70	27.69	0.58749	25.54	0.35810	1.00	30.00	1.00	30.00	Passed	
BW 20 MHz	344000	1720.00	BPSK	1	low	21.86	9.50	3.70	27.66	0.58345	25.51	0.35563	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.47	9.50	3.70	28.27	0.67143	26.12	0.40926	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.15	9.50	3.70	27.95	0.62373	25.80	0.38019	1.00	30.00	1.00	30.00	Passed	
				1	high	22.18	9.50	3.70	27.98	0.62806	25.83	0.38282	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.40	9.50	3.70	28.20	0.66069	26.05	0.40272	1.00	30.00	1.00	30.00	Passed	
				100%		21.98	9.50	3.70	27.78	0.59979	25.63	0.36559	1.00	30.00	1.00	30.00	Passed	
	349000	1745.00	BPSK	1	low	21.94	9.50	3.70	27.74	0.59429	25.59	0.36224	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.39	9.50	3.70	28.19	0.65917	26.04	0.40179	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.32	9.50	3.70	28.12	0.64863	25.97	0.39537	1.00	30.00	1.00	30.00	Passed	
				1	high	22.28	9.50	3.70	28.08	0.64269	25.93	0.39174	1.00	30.00	1.00	30.00	Passed	
				50%	mid	22.45	9.50	3.70	28.25	0.66834	26.10	0.40738	1.00	30.00	1.00	30.00	Passed	
				100%		21.99	9.50	3.70	27.79	0.60117	25.64	0.36644	1.00	30.00	1.00	30.00	Passed	
	354000	1770.00	BPSK	1	low	22.02	9.50	3.70	27.82	0.60534	25.67	0.36898	1.00	30.00	1.00	30.00	Passed	
				1	low+1	22.35	9.50	3.70	28.15	0.65313	26.00	0.39811	1.00	30.00	1.00	30.00	Passed	
				1	high-1	22.35	9.50	3.70	28.15	0.65313	26.00	0.39811	1.00	30.00	1.00	30.00	Passed	

BW 40 MHz	346000	1730.00	BPSK	1	low	19.14	9.50	3.70	24.94	0.31189	22.79	0.19011	1.00	30.00	1.00	30.00	Passed
				1	low+1	19.64	9.50	3.70	25.44	0.34995	23.29	0.21330	1.00	30.00	1.00	30.00	Passed
				1	high-1	19.60	9.50	3.70	25.40	0.34674	23.25	0.21135	1.00	30.00	1.00	30.00	Passed
				1	high	19.11	9.50	3.70	24.91	0.30974	22.76	0.18880	1.00	30.00	1.00	30.00	Passed
				50%	mid	19.61	9.50	3.70	25.41	0.34754	23.26	0.21184	1.00	30.00	1.00	30.00	Passed
				100%		19.09	9.50	3.70	24.89	0.30832	22.74	0.18793	1.00	30.00	1.00	30.00	Passed
	349000	1745.00	BPSK	1	low	19.04	9.50	3.70	24.84	0.30479	22.69	0.18578	1.00	30.00	1.00	30.00	Passed
				1	low+1	19.52	9.50	3.70	25.32	0.34041	23.17	0.20749	1.00	30.00	1.00	30.00	Passed
				1	high-1	19.49	9.50	3.70	25.29	0.33806	23.14	0.20606	1.00	30.00	1.00	30.00	Passed
				1	high	18.97	9.50	3.70	24.77	0.29992	22.62	0.18281	1.00	30.00	1.00	30.00	Passed
				50%	mid	19.58	9.50	3.70	25.38	0.34514	23.23	0.21038	1.00	30.00	1.00	30.00	Passed
				100%		19.18	9.50	3.70	24.98	0.31477	22.83	0.19187	1.00	30.00	1.00	30.00	Passed
	352000	1760.00	BPSK	1	low	19.22	9.50	3.70	25.02	0.31769	22.87	0.19364	1.00	30.00	1.00	30.00	Passed
				1	low+1	19.66	9.50	3.70	25.46	0.35156	23.31	0.21429	1.00	30.00	1.00	30.00	Passed
				1	high-1	19.93	9.50	3.70	25.73	0.37411	23.58	0.22803	1.00	30.00	1.00	30.00	Passed
				1	high	19.32	9.50	3.70	25.12	0.32509	22.97	0.19815	1.00	30.00	1.00	30.00	Passed
				50%	mid	19.48	9.50	3.70	25.28	0.33729	23.13	0.20559	1.00	30.00	1.00	30.00	Passed
				100%		19.07	9.50	3.70	24.87	0.30690	22.72	0.18707	1.00	30.00	1.00	30.00	Passed
EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																	
ERP = EIRP - 2.15																	

5G NR FDD Band 71																	
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), ERP	FCC Limit (dBm); ERP	ISED Limit(W), ERP	ISED Limit (dBm), ERP	Verdict
BW 5 MHz	133100	665.50	BPSK	1	low	21.77	5.00	4.80	21.97	0.15740	19.82	0.09594	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.18	5.00	4.80	22.38	0.17298	20.23	0.10544	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.12	5.00	4.80	22.32	0.17061	20.17	0.10399	3.00	34.77	3.00	34.77	Passed
				1	high	21.64	5.00	4.80	21.84	0.15276	19.69	0.09311	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.39	5.00	4.80	22.59	0.18155	20.44	0.11066	3.00	34.77	3.00	34.77	Passed
				100%		21.81	5.00	4.80	22.01	0.15885	19.86	0.09683	3.00	34.77	3.00	34.77	Passed
	136100	680.50	BPSK	1	low	21.60	5.00	4.80	21.80	0.15136	19.65	0.09226	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.09	5.00	4.80	22.29	0.16943	20.14	0.10328	3.00	34.77	3.00	34.77	Passed
				1	high-1	21.94	5.00	4.80	22.14	0.16368	19.99	0.09977	3.00	34.77	3.00	34.77	Passed
				1	high	21.60	5.00	4.80	21.80	0.15136	19.65	0.09226	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.06	5.00	4.80	22.26	0.16827	20.11	0.10257	3.00	34.77	3.00	34.77	Passed
				100%		21.60	5.00	4.80	21.80	0.15136	19.65	0.09226	3.00	34.77	3.00	34.77	Passed
	139100	695.50	BPSK	1	low	21.79	5.00	4.80	21.99	0.15812	19.84	0.09638	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.28	5.00	4.80	22.48	0.17701	20.33	0.10789	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.09	5.00	4.80	22.29	0.16943	20.14	0.10328	3.00	34.77	3.00	34.77	Passed
				1	high	21.64	5.00	4.80	21.84	0.15276	19.69	0.09311	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.30	5.00	4.80	22.50	0.17783	20.35	0.10839	3.00	34.77	3.00	34.77	Passed
				100%		21.67	5.00	4.80	21.87	0.15382	19.72	0.09376	3.00	34.77	3.00	34.77	Passed
	133600	668.00	BPSK	1	low	21.67	5.00	4.80	21.87	0.15382	19.72	0.09376	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.08	5.00	4.80	22.28	0.16904	20.13	0.10304	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.06	5.00	4.80	22.26	0.16827	20.11	0.10257	3.00	34.77	3.00	34.77	Passed
				1	high	22.10	5.00	4.80	22.30	0.16982	20.15	0.10351	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.23	5.00	4.80	22.43	0.17498	20.28	0.10666	3.00	34.77	3.00	34.77	Passed
				100%		21.73	5.00	4.80	21.93	0.15596	19.78	0.09506	3.00	34.77	3.00	34.77	Passed
136100		680.50	BPSK	1	low	21.58	5.00	4.80	21.78	0.15066	19.63	0.09183	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.04	5.00	4.80	22.24	0.16749	20.09	0.10209	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.06	5.00	4.80	22.26	0.16827	20.11	0.10257	3.00	34.77	3.00	34.77	Passed
				1	high	21.99	5.00	4.80	22.19	0.16558	20.04	0.10093	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.19	5.00	4.80	22.39	0.17498	20.28	0.10666	3.00	34.77	3.00	34.77	Passed
				100%		21.62	5.00	4.80	21.82	0.15205	19.67	0.09268	3.00	34.77	3.00	34.77	Passed
138600	693.00	BPSK	1	low	21.68	5.00	4.80	21.88	0.15417	19.73	0.09397	3.00	34.77	3.00	34.77	Passed	
			1	low+1	22.23	5.00	4.80	22.43	0.17498	20.28	0.10666	3.00	34.77	3.00	34.77	Passed	
			1	high-1	22.13	5.00	4.80	22.33	0.17100	20.18	0.10423	3.00	34.77	3.00	34.77	Passed	
			1	high	22.12	5.00	4.80	22.32	0.17061	20.17	0.10399	3.00	34.77	3.00	34.77	Passed	
			50%	mid	22.28	5.00	4.80	22.48	0.17701	20.33	0.10789	3.00	34.77	3.00	34.77	Passed	
			100%		21.73	5.00	4.80	21.93	0.15596	19.78	0.09506	3.00	34.77	3.00	34.77	Passed	
BW 15 MHz	134100	670.50	BPSK	1	low	21.88	5.00	4.80	22.08	0.16144	19.93	0.09840	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.24	5.00	4.80	22.44	0.17539	20.29	0.10691	3.00	34.77	3.00	34.77	Passed
				1	high-1	21.99	5.00	4.80	22.19	0.16558	20.04	0.10093	3.00	34.77	3.00	34.77	Passed
				1	high	22.05	5.00	4.80	22.25	0.16788	20.10	0.10233	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.33	5.00	4.80	22.53	0.17906	20.38	0.10914	3.00	34.77	3.00	34.77	Passed
				100%		21.77	5.00	4.80	21.97	0.15740	19.82	0.09594	3.00	34.77	3.00	34.77	Passed
	136100	680.50	BPSK	1	low	21.67	5.00	4.80	21.87	0.15382	19.72	0.09376	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.11	5.00	4.80	22.31	0.17022	20.16	0.10375	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.00	5.00	4.80	22.20	0.16596	20.05	0.10116	3.00	34.77	3.00	34.77	Passed
				1	high	22.03	5.00	4.80	22.23	0.16711	20.08	0.10186	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.13	5.00	4.80	22.33	0.17100	20.18	0.10423	3.00	34.77	3.00	34.77	Passed
				100%		21.62	5.00	4.80	21.82	0.15205	19.67	0.09268	3.00	34.77	3.00	34.77	Passed
	138100	690.50	BPSK	1	low	21.61	5.00	4.80	21.81	0.15171	19.66	0.09247	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.10	5.00	4.80	22.30	0.16982	20.15	0.10351	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.15	5.00	4.80	22.35	0.17179	20.20	0.10471	3.00	34.77	3.00	34.77	Passed
				1	high	22.11	5.00	4.80	22.31	0.17022	20.16	0.10375	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.29	5.00	4.80	22.49	0.17742	20.34	0.10814	3.00	34.77	3.00	34.77	Passed
				100%		21.76	5.00	4.80	21.96	0.15704	19.81	0.09572	3.00	34.77	3.00	34.77	Passed
BW 20 MHz	134600	673.00	BPSK	1	low	21.60	5.00	4.80	21.80	0.15136	19.65	0.09226	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.32	5.00	4.80	22.52	0.17865	20.37	0.10889	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.01	5.00	4.80	22.21	0.16634	20.06	0.10139	3.00	34.77	3.00	34.77	Passed
				1	high	22.03	5.00	4.80	22.23	0.16711	20.08	0.10186	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.23	5.00	4.80	22.43	0.17498	20.28	0.10666	3.00	34.77	3.00	34.77	Passed
				100%		21.68	5.00	4.80	21.88	0.15417	19.73	0.09397	3.00	34.77	3.00	34.77	Passed
	136100	680.50	BPSK	1	low	21.66	5.00	4.80	21.86	0.15346	19.71	0.09354	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.16	5.00	4.80	22.36	0.17219	20.21	0.10495	3.00	34.77	3.00	34.77	Passed
				1	high-1	21.99	5.00	4.80	22.19	0.16558	20.04	0.10093	3.00	34.77	3.00	34.77	Passed
				1	high	22.17	5.00	4.80	22.37	0.17258	20.22	0.10520	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.12	5.00	4.80	22.32	0.17061	20.17	0.10399	3.00	34.77	3.00	34.77	Passed
				100%		21.60	5.00	4.80	21.80	0.15136	19.65	0.09226	3.00	34.77	3.00	34.77	Passed
	137600	688.00	BPSK	1	low	21.55	5.00	4.80	21.75	0.14962	19.60	0.09120	3.00	34.77	3.00	34.77	Passed
				1	low+1	22.13	5.00	4.80	22.33	0.17100	20.18	0.10423	3.00	34.77	3.00	34.77	Passed
				1	high-1	22.00	5.00	4.80	22.20	0.16596	20.05	0.10116	3.00	34.77	3.00	34.77	Passed
				1	high	22.04	5.00	4.80	22.24	0.16749	20.09	0.10209	3.00	34.77	3.00	34.77	Passed
				50%	mid	22.16	5.00	4.80	22.36	0.17219	20.21	0.10495	3.00	34.77	3.00	34.77	Passed
				100%		21.54	5.00	4.80	21.74	0.14928	19.59	0.09099	3.00	34.77	3.00	34.77	Passed
EIRP = RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																	
ERP = EIRP - 2.15																	

5G NR TDD Band 77																				
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict			
BW 20 MHz	630668	3460.02	BPSK	1	low	21.87	10.00	8.50	23.37	0.21727	21.22	0.13243	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.50	10.00	8.50	27.00	0.50119	24.85	0.30549	1.00	30.00	1.00	30.00	Passed			
				1	high-1	25.44	10.00	8.50	26.94	0.49431	24.79	0.30130	1.00	30.00	1.00	30.00	Passed			
				1	high	25.48	10.00	8.50	26.98	0.49888	24.83	0.30409	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.36	10.00	8.50	26.86	0.48529	24.71	0.29580	1.00	30.00	1.00	30.00	Passed			
				100%		24.83	10.00	8.50	26.33	0.42954	24.18	0.26182	1.00	30.00	1.00	30.00	Passed			
				1	low	25.45	10.00	8.50	26.95	0.49545	24.80	0.30200	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.97	10.00	8.50	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed			
				1	high-1	26.01	10.00	8.50	27.51	0.56364	25.36	0.34356	1.00	30.00	1.00	30.00	Passed			
				1	high	26.08	10.00	8.50	27.58	0.57280	25.43	0.34914	1.00	30.00	1.00	30.00	Passed			
	641666	3624.99	BPSK	50%	mid	25.93	10.00	8.50	27.43	0.55335	25.28	0.33729	1.00	30.00	1.00	30.00	Passed			
				100%		25.55	10.00	8.50	27.05	0.50699	24.90	0.30903	1.00	30.00	1.00	30.00	Passed			
				1	low	24.72	10.00	8.50	26.22	0.41879	24.07	0.25527	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.36	10.00	8.50	26.86	0.48529	24.71	0.29580	1.00	30.00	1.00	30.00	Passed			
				1	high-1	25.09	10.00	8.50	26.59	0.45604	24.44	0.27797	1.00	30.00	1.00	30.00	Passed			
				1	high	25.03	10.00	8.50	26.53	0.44978	24.38	0.27416	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.22	10.00	8.50	26.72	0.46989	24.57	0.28642	1.00	30.00	1.00	30.00	Passed			
				100%		24.72	10.00	8.50	26.22	0.41879	24.07	0.25527	1.00	30.00	1.00	30.00	Passed			
				1	low	24.96	10.00	8.50	26.46	0.44259	24.31	0.26977	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.36	10.00	8.50	26.86	0.48529	24.71	0.29580	1.00	30.00	1.00	30.00	Passed			
	631334	3470.01	BPSK	1	high-1	25.70	10.00	8.50	27.20	0.52481	25.05	0.31989	1.00	30.00	1.00	30.00	Passed			
				1	high	25.71	10.00	8.50	27.21	0.52602	25.06	0.32063	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.50	10.00	8.50	27.00	0.50119	24.85	0.30549	1.00	30.00	1.00	30.00	Passed			
				100%		24.90	10.00	8.50	26.40	0.43652	24.25	0.26607	1.00	30.00	1.00	30.00	Passed			
				1	low	25.44	10.00	8.50	26.94	0.49431	24.79	0.30130	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.76	10.00	8.50	27.26	0.53211	25.11	0.32434	1.00	30.00	1.00	30.00	Passed			
				1	high-1	26.02	10.00	8.50	27.52	0.56494	25.37	0.34435	1.00	30.00	1.00	30.00	Passed			
				1	high	26.04	10.00	8.50	27.54	0.56754	25.39	0.34594	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.97	10.00	8.50	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed			
				100%		25.43	10.00	8.50	26.93	0.49317	24.78	0.30061	1.00	30.00	1.00	30.00	Passed			
664000	3960.00	BPSK	1	low	24.76	10.00	8.50	26.26	0.42267	24.11	0.25763	1.00	30.00	1.00	30.00	Passed				
			1	low+1	25.35	10.00	8.50	26.85	0.48417	24.70	0.29512	1.00	30.00	1.00	30.00	Passed				
			1	high-1	25.06	10.00	8.50	26.56	0.45290	24.41	0.27606	1.00	30.00	1.00	30.00	Passed				
			1	high	24.96	10.00	8.50	26.46	0.44259	24.31	0.26977	1.00	30.00	1.00	30.00	Passed				
			50%	mid	25.26	10.00	8.50	26.76	0.47424	24.61	0.28907	1.00	30.00	1.00	30.00	Passed				
			100%		24.77	10.00	8.50	26.27	0.42364	24.12	0.25823	1.00	30.00	1.00	30.00	Passed				
			BW 50 MHz	631668	3475.02	BPSK	1	low	24.95	10.00	8.50	26.45	0.44157	24.30	0.26915	1.00	30.00	1.00	30.00	Passed
							1	low+1	25.29	10.00	8.50	26.79	0.47753	24.64	0.29107	1.00	30.00	1.00	30.00	Passed
							1	high-1	25.57	10.00	8.50	27.07	0.50933	24.92	0.31046	1.00	30.00	1.00	30.00	Passed
							1	high	25.57	10.00	8.50	27.07	0.50933	24.92	0.31046	1.00	30.00	1.00	30.00	Passed
50%	mid	25.45					10.00	8.50	26.95	0.49545	24.80	0.30200	1.00	30.00	1.00	30.00	Passed			
100%		25.02					10.00	8.50	26.52	0.44875	24.37	0.27353	1.00	30.00	1.00	30.00	Passed			
641666	3624.99	BPSK		1	low	22.36	10.00	8.50	23.86	0.24322	21.71	0.14825	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.78	10.00	8.50	27.28	0.53456	25.13	0.32584	1.00	30.00	1.00	30.00	Passed			
				1	high-1	25.97	10.00	8.50	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed			
				1	high	25.93	10.00	8.50	27.43	0.55335	25.28	0.33729	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.99	10.00	8.50	27.49	0.56105	25.34	0.34198	1.00	30.00	1.00	30.00	Passed			
				100%		25.37	10.00	8.50	26.87	0.48641	24.72	0.29648	1.00	30.00	1.00	30.00	Passed			
663666	3954.99	BPSK		1	low	24.70	10.00	8.50	26.20	0.41687	24.05	0.25410	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.30	10.00	8.50	26.80	0.47863	24.65	0.29174	1.00	30.00	1.00	30.00	Passed			
				1	high-1	24.96	10.00	8.50	26.46	0.44259	24.31	0.26977	1.00	30.00	1.00	30.00	Passed			
				1	high	25.00	10.00	8.50	26.50	0.44668	24.35	0.27227	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.29	10.00	8.50	26.79	0.47753	24.64	0.29107	1.00	30.00	1.00	30.00	Passed			
				100%		24.77	10.00	8.50	26.27	0.42364	24.12	0.25823	1.00	30.00	1.00	30.00	Passed			
BW 60 MHz	632000	3480.00	BPSK	1	low	22.07	10.00	8.50	23.57	0.22751	21.42	0.13868	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.43	10.00	8.50	26.93	0.49317	24.78	0.30061	1.00	30.00	1.00	30.00	Passed			
				1	high-1	25.59	10.00	8.50	27.09	0.51168	24.94	0.31189	1.00	30.00	1.00	30.00	Passed			
				1	high	22.26	10.00	8.50	23.76	0.23768	21.61	0.14488	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.66	10.00	8.50	27.16	0.52000	25.01	0.31696	1.00	30.00	1.00	30.00	Passed			
				100%		25.15	10.00	8.50	26.65	0.46238	24.50	0.28184	1.00	30.00	1.00	30.00	Passed			
	641666	3624.99	BPSK	1	low	25.38	10.00	8.50	26.88	0.48753	24.73	0.29717	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.82	10.00	8.50	27.32	0.53951	25.17	0.32885	1.00	30.00	1.00	30.00	Passed			
				1	high-1	25.67	10.00	8.50	27.17	0.52119	25.02	0.31769	1.00	30.00	1.00	30.00	Passed			
				1	high	22.23	10.00	8.50	23.73	0.23605	21.58	0.14388	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.96	10.00	8.50	27.46	0.55719	25.31	0.33963	1.00	30.00	1.00	30.00	Passed			
				100%		25.43	10.00	8.50	26.93	0.49317	24.78	0.30061	1.00	30.00	1.00	30.00	Passed			
	663332	3949.98	BPSK	1	low	24.61	10.00	8.50	26.11	0.40832	23.96	0.24889	1.00	30.00	1.00	30.00	Passed			
				1	low+1	25.21	10.00	8.50	26.71	0.46881	24.56	0.28576	1.00	30.00	1.00	30.00	Passed			
				1	high-1	24.60	10.00	8.50	26.10	0.40738	23.95	0.24831	1.00	30.00	1.00	30.00	Passed			
				1	high	21.19	10.00	8.50	22.69	0.18578	20.54	0.11324	1.00	30.00	1.00	30.00	Passed			
				50%	mid	25.11	10.00	8.50	26.61	0.45814	24.46	0.27925	1.00	30.00	1.00	30.00	Passed			
				100%		24.60	10.00	8.50	26.10	0.40738	23.95	0.24831	1.00	30.00	1.00	30.00	Passed			

BW 80 MHz	632668	3490.02	BPSK	1	low	21.99	10.00	8.50	23.49	0.22336	21.34	0.13614	1.00	30.00	1.00	30.00	Passed
				1	low+1	25.53	10.00	8.50	27.03	0.50466	24.88	0.30761	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.70	10.00	8.50	27.20	0.52481	25.05	0.31989	1.00	30.00	1.00	30.00	Passed
				1	high	25.69	10.00	8.50	27.19	0.52360	25.04	0.31915	1.00	30.00	1.00	30.00	Passed
	50%	mid	25.78	10.00	8.50	27.28	0.53456	25.13	0.32584	1.00	30.00	1.00	30.00	Passed			
	100%		25.15	10.00	8.50	26.65	0.46238	24.50	0.28184	1.00	30.00	1.00	30.00	Passed			
	1	low	25.36	10.00	8.50	26.86	0.48529	24.71	0.29580	1.00	30.00	1.00	30.00	Passed			
	1	low+1	26.07	10.00	8.50	27.57	0.57148	25.42	0.34834	1.00	30.00	1.00	30.00	Passed			
	1	high-1	25.66	10.00	8.50	27.16	0.52000	25.01	0.31696	1.00	30.00	1.00	30.00	Passed			
	1	high	25.64	10.00	8.50	27.14	0.51761	24.99	0.31550	1.00	30.00	1.00	30.00	Passed			
	50%	mid	25.96	10.00	8.50	27.46	0.55719	25.31	0.33963	1.00	30.00	1.00	30.00	Passed			
	100%		25.39	10.00	8.50	26.89	0.48865	24.74	0.29785	1.00	30.00	1.00	30.00	Passed			
641666	3624.99	BPSK	1	low	24.70	10.00	8.50	26.20	0.41687	24.05	0.25410	1.00	30.00	1.00	30.00	Passed	
			1	low+1	25.39	10.00	8.50	26.89	0.48865	24.74	0.29785	1.00	30.00	1.00	30.00	Passed	
			1	high-1	24.64	10.00	8.50	26.14	0.41115	23.99	0.25061	1.00	30.00	1.00	30.00	Passed	
			1	high	24.57	10.00	8.50	26.07	0.40458	23.92	0.24660	1.00	30.00	1.00	30.00	Passed	
50%	mid	25.23	10.00	8.50	26.73	0.47098	24.58	0.28708	1.00	30.00	1.00	30.00	Passed				
100%		24.68	10.00	8.50	26.18	0.41495	24.03	0.25293	1.00	30.00	1.00	30.00	Passed				
662666	3939.99	BPSK	1	low	24.70	10.00	8.50	26.20	0.41687	24.05	0.25410	1.00	30.00	1.00	30.00	Passed	
			1	low+1	25.39	10.00	8.50	26.89	0.48865	24.74	0.29785	1.00	30.00	1.00	30.00	Passed	
			1	high-1	24.64	10.00	8.50	26.14	0.41115	23.99	0.25061	1.00	30.00	1.00	30.00	Passed	
			1	high	24.57	10.00	8.50	26.07	0.40458	23.92	0.24660	1.00	30.00	1.00	30.00	Passed	
	50%	mid	25.23	10.00	8.50	26.73	0.47098	24.58	0.28708	1.00	30.00	1.00	30.00	Passed			
	100%		24.68	10.00	8.50	26.18	0.41495	24.03	0.25293	1.00	30.00	1.00	30.00	Passed			
	633000	3495.00	BPSK	1	low	22.04	10.00	8.50	23.54	0.22594	21.39	0.13772	1.00	30.00	1.00	30.00	Passed
				1	low+1	25.47	10.00	8.50	26.97	0.49774	24.82	0.30339	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.79	10.00	8.50	27.29	0.53580	25.14	0.32659	1.00	30.00	1.00	30.00	Passed
				1	high	25.86	10.00	8.50	27.36	0.54450	25.21	0.33189	1.00	30.00	1.00	30.00	Passed
		50%	mid	25.64	10.00	8.50	27.14	0.51761	24.99	0.31550	1.00	30.00	1.00	30.00	Passed		
		100%		25.17	10.00	8.50	26.67	0.46452	24.52	0.28314	1.00	30.00	1.00	30.00	Passed		
641666		3624.99	BPSK	1	low	25.42	10.00	8.50	26.92	0.49204	24.77	0.29992	1.00	30.00	1.00	30.00	Passed
				1	low+1	26.14	10.00	8.50	27.64	0.58076	25.49	0.35400	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.85	10.00	8.50	27.35	0.54325	25.20	0.33113	1.00	30.00	1.00	30.00	Passed
				1	high	25.85	10.00	8.50	27.35	0.54325	25.20	0.33113	1.00	30.00	1.00	30.00	Passed
50%		mid	25.77	10.00	8.50	27.27	0.53333	25.12	0.32509	1.00	30.00	1.00	30.00	Passed			
100%			25.43	10.00	8.50	26.93	0.49317	24.78	0.30061	1.00	30.00	1.00	30.00	Passed			
662332	3934.98	BPSK	1	low	24.65	10.00	8.50	26.15	0.41210	24.00	0.25119	1.00	30.00	1.00	30.00	Passed	
			1	low+1	25.31	10.00	8.50	26.81	0.47973	24.66	0.29242	1.00	30.00	1.00	30.00	Passed	
			1	high-1	24.59	10.00	8.50	26.09	0.40644	23.94	0.24774	1.00	30.00	1.00	30.00	Passed	
			1	high	24.55	10.00	8.50	26.05	0.40272	23.90	0.24547	1.00	30.00	1.00	30.00	Passed	
50%	mid	25.16	10.00	8.50	26.66	0.46345	24.51	0.28249	1.00	30.00	1.00	30.00	Passed				
100%		24.65	10.00	8.50	26.15	0.41210	24.00	0.25119	1.00	30.00	1.00	30.00	Passed				
640000	3600.00	BPSK	1	low	22.48	10.00	8.50	23.98	0.25003	21.83	0.15241	1.00	30.00	1.00	30.00	Passed	
			1	low+1	25.94	10.00	8.50	27.44	0.55463	25.29	0.33806	1.00	30.00	1.00	30.00	Passed	
			1	high-1	25.84	10.00	8.50	27.34	0.54200	25.19	0.33037	1.00	30.00	1.00	30.00	Passed	
			1	high	25.88	10.00	8.50	27.38	0.54702	25.23	0.33343	1.00	30.00	1.00	30.00	Passed	
	50%	mid	25.81	10.00	8.50	27.31	0.53827	25.16	0.32810	1.00	30.00	1.00	30.00	Passed			
	100%		25.36	10.00	8.50	26.86	0.48529	24.71	0.29580	1.00	30.00	1.00	30.00	Passed			
	641666	3624.99	BPSK	1	low	25.44	10.00	8.50	26.94	0.49431	24.79	0.30130	1.00	30.00	1.00	30.00	Passed
				1	low+1	25.98	10.00	8.50	27.48	0.55976	25.33	0.34119	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.88	10.00	8.50	27.38	0.54702	25.23	0.33343	1.00	30.00	1.00	30.00	Passed
				1	high	25.91	10.00	8.50	27.41	0.55081	25.26	0.33574	1.00	30.00	1.00	30.00	Passed
	50%	mid	25.97	10.00	8.50	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed			
	100%		25.45	10.00	8.50	26.95	0.49545	24.80	0.30200	1.00	30.00	1.00	30.00	Passed			
662000	3930.00	BPSK	1	low	24.65	10.00	8.50	26.15	0.41210	24.00	0.25119	1.00	30.00	1.00	30.00	Passed	
			1	low+1	25.43	10.00	8.50	26.93	0.49317	24.78	0.30061	1.00	30.00	1.00	30.00	Passed	
			1	high-1	24.63	10.00	8.50	26.13	0.41020	23.98	0.25003	1.00	30.00	1.00	30.00	Passed	
			1	high	24.63	10.00	8.50	26.13	0.41020	23.98	0.25003	1.00	30.00	1.00	30.00	Passed	
50%	mid	25.21	10.00	8.50	26.71	0.46881	24.56	0.28576	1.00	30.00	1.00	30.00	Passed				
100%		24.72	10.00	8.50	26.22	0.41879	24.07	0.25527	1.00	30.00	1.00	30.00	Passed				
EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																	
ERP = EIRP - 2.15																	

5G NR TDD Band 78																		
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	Path loss to Antenna Connector	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict	
BW 20 MHz	620668	3310.02	BPSK	1	low	24.35	10.00	8.00	26.35	0.43152	24.20	0.26303	1.00	30.00	1.00	30.00	Passed	
				1	low+1	24.70	10.00	8.00	26.70	0.46774	24.55	0.28510	1.00	30.00	1.00	30.00	Passed	
				1	high-1	24.83	10.00	8.00	26.83	0.48195	24.68	0.29376	1.00	30.00	1.00	30.00	Passed	
				1	high	24.82	10.00	8.00	26.82	0.48084	24.67	0.29309	1.00	30.00	1.00	30.00	Passed	
				50%	mid	24.83	10.00	8.00	26.83	0.48195	24.68	0.29376	1.00	30.00	1.00	30.00	Passed	
				100%		24.37	10.00	8.00	26.37	0.43351	24.22	0.26424	1.00	30.00	1.00	30.00	Passed	
	636700	3550.50	BPSK	1	low	25.49	10.00	8.00	27.49	0.56105	25.34	0.34198	1.00	30.00	1.00	30.00	Passed	
				1	low+1	26.01	10.00	8.00	28.01	0.63241	25.86	0.38548	1.00	30.00	1.00	30.00	Passed	
				1	high-1	26.03	10.00	8.00	28.03	0.63533	25.88	0.38726	1.00	30.00	1.00	30.00	Passed	
				1	high	26.02	10.00	8.00	28.02	0.63387	25.87	0.38637	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.93	10.00	8.00	27.93	0.62087	25.78	0.37844	1.00	30.00	1.00	30.00	Passed	
				100%		25.56	10.00	8.00	27.56	0.57016	25.41	0.34754	1.00	30.00	1.00	30.00	Passed	
	652666	3789.99	BPSK	1	low	24.75	10.00	8.00	26.75	0.47315	24.60	0.28840	1.00	30.00	1.00	30.00	Passed	
				1	low+1	25.04	10.00	8.00	27.04	0.50582	24.89	0.30832	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.11	10.00	8.00	27.11	0.51404	24.96	0.31333	1.00	30.00	1.00	30.00	Passed	
				1	high	25.14	10.00	8.00	27.14	0.51761	24.99	0.31550	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.23	10.00	8.00	27.23	0.52845	25.08	0.32211	1.00	30.00	1.00	30.00	Passed	
				100%		24.73	10.00	8.00	26.73	0.47098	24.58	0.28708	1.00	30.00	1.00	30.00	Passed	
	BW 40 MHz	621334	3320.01	BPSK	1	low	24.26	10.00	8.00	26.26	0.42267	24.11	0.25763	1.00	30.00	1.00	30.00	Passed
					1	low+1	24.91	10.00	8.00	26.91	0.49091	24.76	0.29923	1.00	30.00	1.00	30.00	Passed
					1	high-1	24.68	10.00	8.00	26.68	0.46559	24.53	0.28379	1.00	30.00	1.00	30.00	Passed
					1	high	24.70	10.00	8.00	26.70	0.46774	24.55	0.28510	1.00	30.00	1.00	30.00	Passed
					50%	mid	24.75	10.00	8.00	26.75	0.47315	24.60	0.28840	1.00	30.00	1.00	30.00	Passed
					100%		24.29	10.00	8.00	26.29	0.42560	24.14	0.25942	1.00	30.00	1.00	30.00	Passed
636700		3550.50	BPSK	1	low	25.48	10.00	8.00	27.48	0.55976	25.33	0.34119	1.00	30.00	1.00	30.00	Passed	
				1	low+1	26.13	10.00	8.00	28.13	0.65013	25.98	0.39628	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.91	10.00	8.00	27.91	0.61802	25.76	0.37670	1.00	30.00	1.00	30.00	Passed	
				1	high	25.92	10.00	8.00	27.92	0.61944	25.77	0.37757	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.97	10.00	8.00	27.97	0.62661	25.82	0.38194	1.00	30.00	1.00	30.00	Passed	
				100%		25.47	10.00	8.00	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed	
652000		3780.00	BPSK	1	low	25.16	10.00	8.00	27.16	0.52000	25.01	0.31696	1.00	30.00	1.00	30.00	Passed	
				1	low+1	25.80	10.00	8.00	27.80	0.60256	25.65	0.36728	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.81	10.00	8.00	27.81	0.60395	25.66	0.36813	1.00	30.00	1.00	30.00	Passed	
				1	high	25.70	10.00	8.00	27.70	0.58884	25.55	0.35892	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.49	10.00	8.00	27.49	0.56105	25.34	0.34198	1.00	30.00	1.00	30.00	Passed	
				100%		25.17	10.00	8.00	27.17	0.52119	25.02	0.31769	1.00	30.00	1.00	30.00	Passed	
BW 50 MHz	621668	3325.02	BPSK	1	low	24.29	10.00	8.00	26.29	0.42560	24.14	0.25942	1.00	30.00	1.00	30.00	Passed	
				1	low+1	24.82	10.00	8.00	26.82	0.48084	24.67	0.29309	1.00	30.00	1.00	30.00	Passed	
				1	high-1	24.81	10.00	8.00	26.81	0.47973	24.66	0.29242	1.00	30.00	1.00	30.00	Passed	
				1	high	24.73	10.00	8.00	26.73	0.47098	24.58	0.28708	1.00	30.00	1.00	30.00	Passed	
				50%	mid	24.74	10.00	8.00	26.74	0.47206	24.59	0.28774	1.00	30.00	1.00	30.00	Passed	
				100%		24.26	10.00	8.00	26.26	0.42267	24.11	0.25763	1.00	30.00	1.00	30.00	Passed	
	636700	3550.50	BPSK	1	low	25.51	10.00	8.00	27.51	0.56364	25.36	0.34356	1.00	30.00	1.00	30.00	Passed	
				1	low+1	26.29	10.00	8.00	28.29	0.67453	26.14	0.41115	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.91	10.00	8.00	27.91	0.61802	25.76	0.37670	1.00	30.00	1.00	30.00	Passed	
				1	high	26.05	10.00	8.00	28.05	0.63826	25.90	0.38905	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.99	10.00	8.00	27.99	0.62951	25.84	0.38371	1.00	30.00	1.00	30.00	Passed	
				100%		25.56	10.00	8.00	27.56	0.57016	25.41	0.34754	1.00	30.00	1.00	30.00	Passed	
	651666	3774.99	BPSK	1	low	25.13	10.00	8.00	27.13	0.51642	24.98	0.31477	1.00	30.00	1.00	30.00	Passed	
				1	low+1	26.01	10.00	8.00	28.01	0.63241	25.86	0.38548	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.69	10.00	8.00	27.69	0.58749	25.54	0.35810	1.00	30.00	1.00	30.00	Passed	
				1	high	25.63	10.00	8.00	27.63	0.57943	25.48	0.35318	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.49	10.00	8.00	27.49	0.56105	25.34	0.34198	1.00	30.00	1.00	30.00	Passed	
				100%		25.14	10.00	8.00	27.14	0.51761	24.99	0.31550	1.00	30.00	1.00	30.00	Passed	
BW 60 MHz	622000	3330.00	BPSK	1	low	21.37	10.00	8.00	23.37	0.21727	21.22	0.13243	1.00	30.00	1.00	30.00	Passed	
				1	low+1	24.84	10.00	8.00	26.84	0.48306	24.69	0.29444	1.00	30.00	1.00	30.00	Passed	
				1	high-1	24.71	10.00	8.00	26.71	0.46881	24.56	0.28576	1.00	30.00	1.00	30.00	Passed	
				1	high	21.10	10.00	8.00	23.10	0.20417	20.95	0.12445	1.00	30.00	1.00	30.00	Passed	
				50%	mid	24.67	10.00	8.00	26.67	0.46452	24.52	0.28314	1.00	30.00	1.00	30.00	Passed	
				100%		24.31	10.00	8.00	26.31	0.42756	24.16	0.26062	1.00	30.00	1.00	30.00	Passed	
	636700	3550.50	BPSK	1	low	25.47	10.00	8.00	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed	
				1	low+1	26.09	10.00	8.00	28.09	0.64417	25.94	0.39264	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.94	10.00	8.00	27.94	0.62230	25.79	0.37931	1.00	30.00	1.00	30.00	Passed	
				1	high	22.43	10.00	8.00	24.43	0.27733	22.28	0.16904	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.99	10.00	8.00	27.99	0.62951	25.84	0.38371	1.00	30.00	1.00	30.00	Passed	
				100%		25.44	10.00	8.00	27.44	0.55463	25.29	0.33806	1.00	30.00	1.00	30.00	Passed	
	651332	3769.98	BPSK	1	low	25.13	10.00	8.00	27.13	0.51642	24.98	0.31477	1.00	30.00	1.00	30.00	Passed	
				1	low+1	25.90	10.00	8.00	27.90	0.61660	25.75	0.37584	1.00	30.00	1.00	30.00	Passed	
				1	high-1	25.61	10.00	8.00	27.61	0.57677	25.46	0.35156	1.00	30.00	1.00	30.00	Passed	
				1	high	22.10	10.00	8.00	24.10	0.25704	21.95	0.15668	1.00	30.00	1.00	30.00	Passed	
				50%	mid	25.52	10.00	8.00	27.52	0.56494	25.37	0.34435	1.00	30.00	1.00	30.00	Passed	
				100%		25.19	10.00	8.00	27.19	0.52360	25.04	0.31915	1.00	30.00	1.00	30.00	Passed	

BW 80 MHz	622668	3340.02	BPSK	1	low	24.40	10.00	8.00	26.40	0.43652	24.25	0.26607	1.00	30.00	1.00	30.00	Passed
				1	low+1	24.81	10.00	8.00	26.81	0.47973	24.66	0.29242	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.02	10.00	8.00	27.02	0.50350	24.87	0.30690	1.00	30.00	1.00	30.00	Passed
				1	high	25.05	10.00	8.00	27.05	0.50699	24.90	0.30903	1.00	30.00	1.00	30.00	Passed
				50%	mid	24.67	10.00	8.00	26.67	0.46452	24.52	0.28314	1.00	30.00	1.00	30.00	Passed
	636700	3550.50	BPSK	100%		24.39	10.00	8.00	26.39	0.43551	24.24	0.26546	1.00	30.00	1.00	30.00	Passed
				1	low	25.51	10.00	8.00	27.51	0.56364	25.36	0.34356	1.00	30.00	1.00	30.00	Passed
				1	low+1	26.13	10.00	8.00	28.13	0.65013	25.98	0.39628	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.90	10.00	8.00	27.90	0.61660	25.75	0.37584	1.00	30.00	1.00	30.00	Passed
				1	high	25.86	10.00	8.00	27.86	0.61094	25.71	0.37239	1.00	30.00	1.00	30.00	Passed
	650666	3759.99	BPSK	50%	mid	26.05	10.00	8.00	28.05	0.63826	25.90	0.38905	1.00	30.00	1.00	30.00	Passed
				100%		25.59	10.00	8.00	27.59	0.57412	25.44	0.34995	1.00	30.00	1.00	30.00	Passed
				1	low	22.31	10.00	8.00	24.31	0.26977	22.16	0.16444	1.00	30.00	1.00	30.00	Passed
				1	low+1	25.75	10.00	8.00	27.75	0.59566	25.60	0.36308	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.44	10.00	8.00	27.44	0.55463	25.29	0.33806	1.00	30.00	1.00	30.00	Passed
BW 90 MHz	623000	3345.00	BPSK	1	high	25.47	10.00	8.00	27.47	0.55847	25.32	0.34041	1.00	30.00	1.00	30.00	Passed
				50%	mid	25.65	10.00	8.00	27.65	0.58210	25.50	0.35481	1.00	30.00	1.00	30.00	Passed
				100%		25.18	10.00	8.00	27.18	0.52240	25.03	0.31842	1.00	30.00	1.00	30.00	Passed
	636700	3550.50	BPSK	1	low	21.45	10.00	8.00	23.45	0.22131	21.30	0.13490	1.00	30.00	1.00	30.00	Passed
				1	low+1	24.82	10.00	8.00	26.82	0.48084	24.67	0.29309	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.12	10.00	8.00	27.12	0.51523	24.97	0.31405	1.00	30.00	1.00	30.00	Passed
				1	high	25.08	10.00	8.00	27.08	0.51050	24.93	0.31117	1.00	30.00	1.00	30.00	Passed
				50%	mid	24.88	10.00	8.00	26.88	0.48753	24.73	0.29717	1.00	30.00	1.00	30.00	Passed
	650332	3754.98	BPSK	100%		24.36	10.00	8.00	26.36	0.43251	24.21	0.26363	1.00	30.00	1.00	30.00	Passed
				1	low	25.56	10.00	8.00	27.56	0.57016	25.41	0.34754	1.00	30.00	1.00	30.00	Passed
				1	low+1	26.19	10.00	8.00	28.19	0.65917	26.04	0.40179	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.85	10.00	8.00	27.85	0.60954	25.70	0.37154	1.00	30.00	1.00	30.00	Passed
				1	high	25.89	10.00	8.00	27.89	0.61518	25.74	0.37497	1.00	30.00	1.00	30.00	Passed
BW 100 MHz	623334	3350.01	BPSK	50%	mid	26.17	10.00	8.00	28.17	0.65615	26.02	0.39994	1.00	30.00	1.00	30.00	Passed
				100%		25.55	10.00	8.00	27.55	0.56885	25.40	0.34674	1.00	30.00	1.00	30.00	Passed
				1	low	25.25	10.00	8.00	27.25	0.53088	25.10	0.32359	1.00	30.00	1.00	30.00	Passed
				1	low+1	25.83	10.00	8.00	27.83	0.60674	25.68	0.36983	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.52	10.00	8.00	27.52	0.56494	25.37	0.34435	1.00	30.00	1.00	30.00	Passed
	636700	3550.50	BPSK	1	high	25.60	10.00	8.00	27.60	0.57544	25.45	0.35075	1.00	30.00	1.00	30.00	Passed
				50%	mid	25.78	10.00	8.00	27.78	0.59979	25.63	0.36559	1.00	30.00	1.00	30.00	Passed
				100%		25.27	10.00	8.00	27.27	0.53333	25.12	0.32509	1.00	30.00	1.00	30.00	Passed
				1	low	21.56	10.00	8.00	23.56	0.22699	21.41	0.13836	1.00	30.00	1.00	30.00	Passed
				1	low+1	24.87	10.00	8.00	26.87	0.48641	24.72	0.29648	1.00	30.00	1.00	30.00	Passed
	650000	3750.00	BPSK	1	high-1	25.06	10.00	8.00	27.06	0.50816	24.91	0.30974	1.00	30.00	1.00	30.00	Passed
				1	high	25.11	10.00	8.00	27.11	0.51404	24.96	0.31333	1.00	30.00	1.00	30.00	Passed
				50%	mid	24.68	10.00	8.00	26.68	0.46559	24.53	0.28379	1.00	30.00	1.00	30.00	Passed
				100%		24.27	10.00	8.00	26.27	0.42364	24.12	0.25823	1.00	30.00	1.00	30.00	Passed
				1	low	25.52	10.00	8.00	27.52	0.56494	25.37	0.34435	1.00	30.00	1.00	30.00	Passed
BW 100 MHz	636700	3550.50	BPSK	1	low+1	26.30	10.00	8.00	28.30	0.67608	26.15	0.41210	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.81	10.00	8.00	27.81	0.60395	25.66	0.36813	1.00	30.00	1.00	30.00	Passed
				1	high	25.79	10.00	8.00	27.79	0.60117	25.64	0.36644	1.00	30.00	1.00	30.00	Passed
				50%	mid	26.11	10.00	8.00	28.11	0.64714	25.96	0.39446	1.00	30.00	1.00	30.00	Passed
				100%		25.58	10.00	8.00	27.58	0.57280	25.43	0.34914	1.00	30.00	1.00	30.00	Passed
	650000	3750.00	BPSK	1	low	25.25	10.00	8.00	27.25	0.53088	25.10	0.32359	1.00	30.00	1.00	30.00	Passed
				1	low+1	25.98	10.00	8.00	27.98	0.62806	25.83	0.38282	1.00	30.00	1.00	30.00	Passed
				1	high-1	25.57	10.00	8.00	27.57	0.57148	25.42	0.34834	1.00	30.00	1.00	30.00	Passed
				1	high	25.57	10.00	8.00	27.57	0.57148	25.42	0.34834	1.00	30.00	1.00	30.00	Passed
				50%	mid	25.74	10.00	8.00	27.74	0.59429	25.59	0.36224	1.00	30.00	1.00	30.00	Passed
	650000	3750.00	BPSK	100%		25.21	10.00	8.00	27.21	0.52602	25.06	0.32063	1.00	30.00	1.00	30.00	Passed
				EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable													
				ERP = EIRP - 2.15													

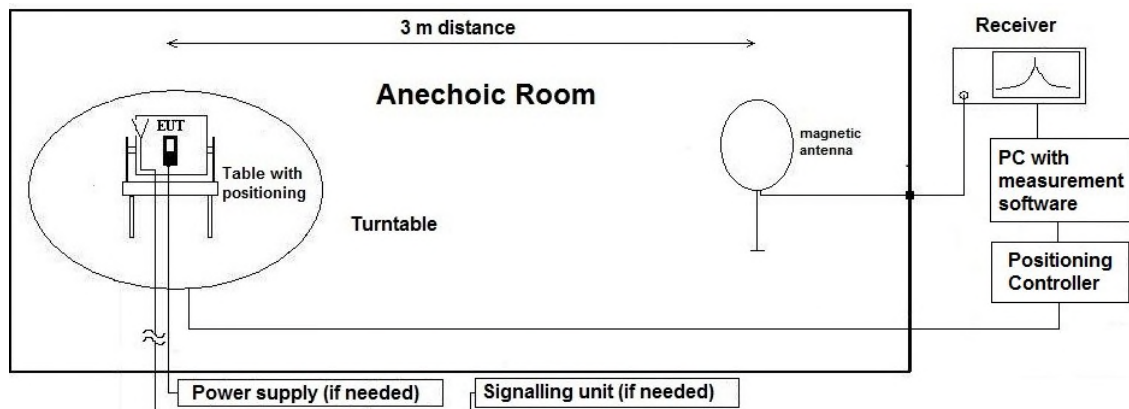
4.2 Radiated field strength emissions below 30 MHz

4.2.1 Description of the general test setup and methodology, see below example:

Evaluating the radiated field emissions are done first by an exploratory emission measurement and a final measurement for most critical frequencies determined.

The loop antenna was placed at 1 m height above ground plane and 3 m measurement distance from set-up for investigations. Because of reduced measurement distance, correction data were applied, as stated in chapter "General Limit - Radiated field strength emissions below 30 MHz". The tests are performed in the semi anechoic room recognized by the regulatory commission.

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:

(See Tables *Summary of Test Results* and *Summary of Test Methods* on page 12)

Exploratory, preliminary measurements

The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 0.8 m height which is placed on the turntable. By rotating the turntable (step 90°, range 0° to 360°) and the EUT itself either on 3-orthogonal axis (portable equipment) or 2-orthogonal axis (defined operational position of EUT), the emission spectrum was recorded.

The loop antenna was moved at least to 2-perpendicular axes (antenna vector in direction of EUT and parallel to EUT) in order to maximize the emissions. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a data reduction table for further investigations. If various operating modes are supported, further investigations are made to find the worst-case. Also the interconnection cables and equipment position were varied in order to maximize the emissions.

Final measurement on critical frequencies

Based on the exploratory measurements, the most critical frequencies are re-measured by maintaining the EUT's worst-case operation mode, cable position, etc.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself either over 3-orthogonal axis (not defined usage position) or 2-orthogonal axis (defined usage position).

On the determined worst-case position, a final measurement with necessary bandwidth and detector according standard has been carried out.

Formula:

$$E_C = E_R + AF + C_L + D_F - G_A$$

$$M = L_T - E_C$$

AF = Antenna factor

C_L = Cable loss

D_F = Distance correction factor (if used)

E_C = Electrical field – corrected value

E_R = Receiver reading

G_A = Gain of pre-amplifier (if used)

L_T = Limit

M = Margin

All units are dB-units, positive margin means value is below limit.

4.2.2 Sample calculation

Raw-Value [dBuV/m]	Antenna factor	Distance Correction [dB]	Cable Loss	Preamplifier	Resulting correction value [dB]	Final result [dBuV/m]	Remarks
19.83	18.9	-70.75	0.18	--	-51.67	-31.83	30 to 3 m correction used according ANSI C63.10-2013

Remark: This calculation is based on an example value at 458 kHz

4.2.3 Correction factors due to reduced meas. distance ($f < 30$ MHz):

The used correction factors when the measurement distance is reduced compared to regulatory measurement distance, are calculated according to Extrapolation formulas valid for EUT's with maximum dimension of $0.625 \times \lambda$. Formula 2+3+4 as presented in ANSI C63.10, Chapter 6.4.4 are used for the calculations of proper extrapolation factors

Frequency Range	f [kHz/MHz]	Lambda [m]	Far-Field Point [m]	Distance Limit accord. 15.209 [m]	1st Condition (dmeas < Dnear-field)	2nd Condition (Limit distance bigger dnear-field)	Distance Correction accord. Formula
kHz	9	33333.33	5305.17	300	fulfilled	not fulfilled	-80.00
	10	30000.00	4774.65		fulfilled	not fulfilled	-80.00
	20	15000.00	2387.33		fulfilled	not fulfilled	-80.00
	30	10000.00	1591.55		fulfilled	not fulfilled	-80.00
	40	7500.00	1193.66		fulfilled	not fulfilled	-80.00
	50	6000.00	954.93		fulfilled	not fulfilled	-80.00
	60	5000.00	795.78		fulfilled	not fulfilled	-80.00
	70	4285.71	682.09		fulfilled	not fulfilled	-80.00
	80	3750.00	596.83		fulfilled	not fulfilled	-80.00
	90	3333.33	530.52		fulfilled	not fulfilled	-80.00
	100	3000.00	477.47		fulfilled	not fulfilled	-80.00
	125	2400.00	381.97		fulfilled	not fulfilled	-80.00
	200	1500.00	238.73		fulfilled	fulfilled	-78.02
	300	1000.00	159.16		fulfilled	fulfilled	-74.49
	400	750.00	119.37		fulfilled	fulfilled	-72.00
	490	612.24	97.44		fulfilled	fulfilled	-70.23
	500	600.00	95.49	30	fulfilled	not fulfilled	-40.00
	600	500.00	79.58		fulfilled	not fulfilled	-40.00
	700	428.57	68.21		fulfilled	not fulfilled	-40.00
	800	375.00	59.68		fulfilled	not fulfilled	-40.00
	900	333.33	53.05		fulfilled	not fulfilled	-40.00
MHz	1.00	300.00	47.75		fulfilled	not fulfilled	-40.00
	1.59	188.50	30.00		fulfilled	not fulfilled	-40.00
	2.00	150.00	23.87		fulfilled	fulfilled	-38.02
	3.00	100.00	15.92		fulfilled	fulfilled	-34.49
	4.00	75.00	11.94		fulfilled	fulfilled	-32.00
	5.00	60.00	9.55		fulfilled	fulfilled	-30.06
	6.00	50.00	7.96		fulfilled	fulfilled	-28.47
	7.00	42.86	6.82		fulfilled	fulfilled	-27.13
	8.00	37.50	5.97		fulfilled	fulfilled	-25.97
	9.00	33.33	5.31		fulfilled	fulfilled	-24.95
	10.00	30.00	4.77		fulfilled	fulfilled	-24.04
	10.60	28.30	4.50		fulfilled	fulfilled	-23.53
	11.00	27.27	4.34		fulfilled	fulfilled	-23.21
	12.00	25.00	3.98		fulfilled	fulfilled	-22.45
	13.56	22.12	3.52		fulfilled	fulfilled	-21.39
	15.00	20.00	3.18		fulfilled	fulfilled	-20.51
	15.92	18.85	3.00		fulfilled	fulfilled	-20.00
	17.00	17.65	2.81		not fulfilled	fulfilled	-20.00
	18.00	16.67	2.65		not fulfilled	fulfilled	-20.00
	20.00	15.00	2.39		not fulfilled	fulfilled	-20.00
	21.00	14.29	2.27		not fulfilled	fulfilled	-20.00
	23.00	13.04	2.08		not fulfilled	fulfilled	-20.00
	25.00	12.00	1.91		not fulfilled	fulfilled	-20.00
	27.00	11.11	1.77		not fulfilled	fulfilled	-20.00
	29.00	10.34	1.65		not fulfilled	fulfilled	-20.00
	30.00	10.00	1.59		not fulfilled	fulfilled	-20.00

4.2.4 Measurement Location

Test site	120901 - SAC3 - Radiated Emission <1GHz
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4.2.5 Limit

Radiated emissions limits (3 meters)					
Frequency Range [MHz]	Limit [$\mu\text{V/m}$]	Limit [dB $\mu\text{V/m}$]	Distance [m]	Detector	RBW [kHz]
0.009 – 0.09	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	0.2
0.09 – 0.11	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Quasi peak	0.2
0.11 – 0.15	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	0.2
0.15 – 0.49	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	9
0.49 – 1.705	24000 / f [kHz]	87.6 – 20Log(f) (kHz)	30	Quasi peak	9
1.705 - 30	30	29.5	30	Quasi peak	9

*Remark: In Canada same limits apply, just unit reference is different

4.2.6 Result

Diagram	Band	Mode	Maximum Level [dB $\mu\text{V/m}$] Frequency Range 0.009 – 30 MHz	Result
2.201a	2	5G_NR_FDD_n2_CH_381500	No peaks < 6 dB margin	Passed
2.201b	2	5G_NR_FDD_n2_CH_381500	No peaks < 6 dB margin	Passed
2.501a	5	5G_NR_FDD_n5_CH_167800	No peaks < 6 dB margin	Passed
2.501b	5	5G_NR_FDD_n5_CH_167800	No peaks < 6 dB margin	Passed
2.4101a	41	5G_NR_TDD_n41_CH_528000	No peaks < 6 dB margin	Passed
2.4101b	41	5G_NR_TDD_n41_CH_528000	No peaks < 6 dB margin	Passed
2.6601a	66	5G_NR_FDD_n66_CH_352000	No peaks < 6 dB margin	Passed
2.6601b	66	5G_NR_FDD_n66_CH_352000	No peaks < 6 dB margin	Passed
2.7101a	71	5G_NR_FDD_n71_CH_134100	No peaks < 6 dB margin	Passed
2.7101b	71	5G_NR_FDD_n71_CH_134100	No peaks < 6 dB margin	Passed
2.7701a	77	5G_NR_TDD_n41_CH_52800	No peaks < 6 dB margin	Passed
2.7701b	77	5G_NR_TDD_n77_CH_662000	No peaks < 6 dB margin	Passed
2.7701c	77	5G_NR_TDD_n77_CH_633666	No peaks < 6 dB margin	Passed
2.7701d	77	5G_NR_TDD_n77_CH_633666	No peaks < 6 dB margin	Passed
2.7801a	78	5G_NR_TDD_n78_CH_650332	No peaks < 6 dB margin	Passed
2.7801b	78	5G_NR_TDD_n78_CH_650332	No peaks < 6 dB margin	Passed
2.7801c	78	5G_NR_TDD_n78_CH_633666	No peaks < 6 dB margin	Passed
2.7801d	78	5G_NR_TDD_n78_CH_633666	No peaks < 6 dB margin	Passed

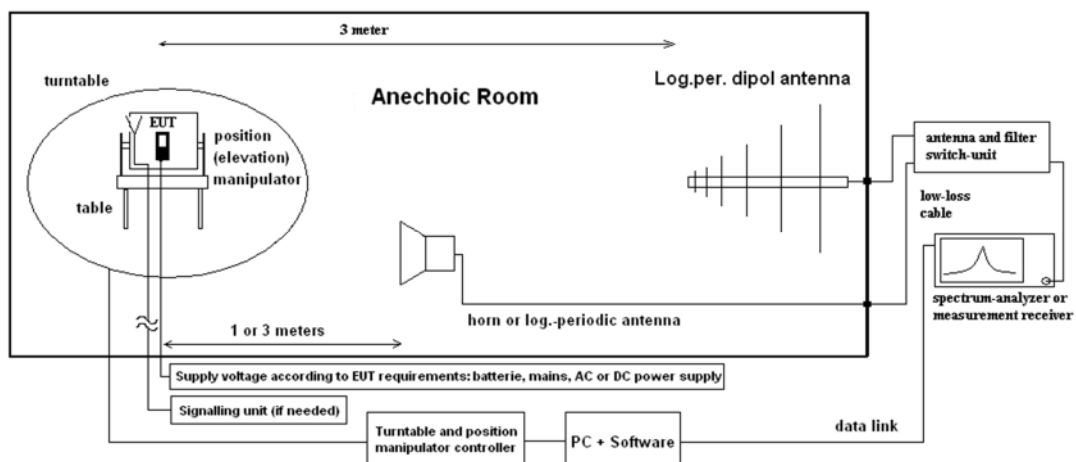
Remark: for more information and graphical plot see annex 201 23-1-0014801T034_TR1-A201-R02

4.3 Radiated spurious emissions

4.3.1 Description of the general test setup and methodology, see below example:

Evaluating the emissions have to be done first by an exploratory emissions measurement and a final measurement for most critical frequencies. The tests are performed in a CISPR 16-1-4:2010 compliant fully anechoic room (FAR) recognized by the regulatory commission. The measurement distance was set to 3 meter for frequencies up to 18 GHz and 2 meter above 18 GHz. A logarithmic periodic antenna is used for the frequency range 30 MHz to 1 GHz. Horn antennas are used for frequency range 1 GHz to 40 GHz. The EUT is aligned within 3 dB beam width of the measurement antenna with three orthogonal axis measurements on the EUT.

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:

(See Tables *Summary of Test Results* and *Summary of Test Methods* on page 12)

Exploratory, preliminary measurements

The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 1.50 m height which is placed on the turntable. By rotating the turntable (range 0° to 360°, step 45°) and the EUT itself on 3-orthogonal axis (the emission spectrum and it's characteristics was recorded with an EMI-receiver, broadband antenna and software.

The measurements are performed in horizontal and vertical polarization of the measurement antennas. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a table for further investigations. If various operating modes are supported, further investigations are made to find the worst-case of them. Also the interconnection cables and equipment position were varied in order to maximize the emissions.

Final measurement on critical frequencies

Based on the exploratory measurements, the most critical frequencies are re-measured by main-taining the EUT's worst-case operation mode, cable position, etc.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself over 3-orthogonal axis and the height for EUT with large dimensions.

On the determined worst-case position, a final measurement with necessary bandwidth and detector according standard has been carried out.

The readings on the spectrum analyzer are corrected with conversion value between field strength and E(I)RP, so the readings shown are equivalent to ERP/EIRP values. Critical measurements near the limit are re-measured with a substitution method accord. ANSI/TIA/EIA 603 C/D

Formula:

$$P_{EIRP} = P_{MEAS} + C_L + FSL - G_{PreA} - G_{ANT} \quad (1)$$

P_{MEAS} = measured power at instrument

M = Margin

L_T = Limit

FSL = Free Space loss = Function(frequency, measurement distance)

$$M = L_T - P_{EIRP}$$

C_L = cable loss

G_{PreA} = Gain of pre-amplifier (if used)

G_{ANT} = Gain of antenna in [dBi]

All units are dB-units, positive margin means value is below limit.

4.3.2 Measurement Location

Test site	120904 - FAC1 - Radiated Emissions
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4.3.3 Limit

Operation band	Frequency Range [MHz]	Limit [dBm]	Detector [MaxHold]	RBW / VBW [MHz]
5G NR 2	30 - 19500	-13	Peak	1 / 3
5G NR 5	30 - 9000	-13	Peak	1 / 3
5G NR 41	30 - 27000	-25	Peak	1 / 3
5G NR 66	30 - 18000	- 13	Peak	1 / 3
5G NR 71	30 - 7000	- 13	Peak	1 / 3
5G NR 77	30 - 40000	- 13	Peak	1 / 3
5G NR 78	30 - 40000	- 13	Peak	1 / 3

4.3.4 Result

Diagram	Band	Mode	30 MHz to 10 th Harmonics	Result
8.02a	2	5G_NR_FDD_n2_CH_381500_lying	No peaks found	Passed
8.02b	2	5G_NR_FDD_n2_CH_381500_standing	No peaks found	Passed
8.02c	2	5G_NR_FDD_n2_CH_381500	No peaks found	Passed
8.02d	2	5G_NR_FDD_n2_CH_381500	No peaks found	Passed
8.05a	5	5G_NR_FDD_n5_CH_167800_lying	No peaks found	Passed
8.05b	5	5G_NR_FDD_n5_CH_167800_standing	No peaks found	Passed
8.41a	41	5G_NR_TDD_n41_CH_528000_lying	No peaks found	Passed
8.41b	41	5G_NR_TDD_n41_CH_528000_standing	No peaks found	Passed
8.41c	41	5G_NR_TDD_n41_CH_528000_AntH	No peaks found	Passed
8.41d	41	5G_NR_TDD_n41_CH_528000_AntV	No peaks found	Passed
8.66a	66	5G_NR_FDD_n66_CH_352000_lying	No peaks found	Passed
8.66b	66	5G_NR_FDD_n66_CH_352000_standing	No peaks found	Passed
8.71a	71	5G_NR_FDD_n71_CH_134100_lying	No peaks found	Passed
8.71b	71	5G_NR_FDD_n71_CH_134100_standing	No peaks found	Passed
8.77a	77	5G_NR_TDD_n77_CH_662000_lying	No peaks found	Passed
8.77b	77	5G_NR_TDD_n77_CH_662000_standing	-39,72	Passed
8.77c	77	5G_NR_TDD_n77_CH_662000_AntH	No peaks found	Passed
8.77d	77	5G_NR_TDD_n77_CH_662000_AntV	No peaks found	Passed
8.77e	77	5G_NR_TDD_n77_CH_633666_lying	No peaks found	Passed
8.77f	77	5G_NR_TDD_n77_CH_633666_standing	No peaks found	Passed
8.77g	77	5G_NR_TDD_n77_CH_633666_AntH	No peaks found	Passed
8.77h	77	5G_NR_TDD_n77_CH_633666_AntV	No peaks found	Passed
8.78a	78	5G_NR_TDD_n78_CH_650332_lying	No peaks found	Passed
8.78b	78	5G_NR_TDD_n78_CH_650332_standing	No peaks found	Passed
8.78c	78	5G_NR_TDD_n78_CH_650332_AntH	No peaks found	Passed
8.78d	78	5G_NR_TDD_n78_CH_650332_AntV	No peaks found	Passed
8.78e	78	5G_NR_TDD_n78_CH_633666_lying	No peaks found	Passed
8.78f	78	5G_NR_TDD_n78_CH_633666_standing	No peaks found	Passed
8.78g	78	5G_NR_TDD_n78_CH_633666_AntH	No peaks found	Passed
8.78h	78	5G_NR_TDD_n78_CH_633666_AntV	No peaks found	Passed

Remark: for more information and graphical plot see annex 201 **23-1-0014801T034_TR1-A201-R02**

4.4 Equipment lists

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
	120901 - SAC3 - Radiated Emission <1GHz			calchk	cal: 2015-Jul-21 chk: 2021-Jul-27	cal: 10Y chk: 12M	cal: 2025-Jul-21 chk: 2022-Jul-27
20341	Digital Multimeter Fluke 112	Fluke Deutschland GmbH / Glottertal	81650455	cal	cal: 2024-May-13	cal: 24M	cal: 2026-May-13
20442	Semi Anechoic Chamber SAC3	ETS-Lindgren GmbH / Taufkirchen	without	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20482	filter matrix Filter matrix SAR 1	cetecom advanced GmbH / Essen	without	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20574	Biconilog Hybrid Antenna BTA-L	Frankonia GmbH / Heideck	980026L	cal	cal: 2022-Jun-15	cal: 36M	cal: 2025-Jun-15
20620	EMI Test Receiver ESU26	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100362	cal	cal: 2024-May-15	cal: 12M	cal: 2025-May-15
20885	Power Supply EA3632A	Agilent Technologies Deutschland GmbH	75305850	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
25038	Loop Antenna HFH2-Z2	Rohde & Schwarz Messgerätebau GmbH / Memmingen	879824/13	cal	cal: 2022-Jul-04	cal: 24M	cal: 2024-Jul-04
	120904 - FAC1 - Radiated Emissions			chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20020	Horn Antenna 3115 (Subst 1)	EMCO Elektronik GmbH	9107-3699	calchk	cal: 2021-Aug-17 chk: 2013-Apr-20	cal: 36M chk: 12M	cal: 2024-Aug-17
20066	Notch Filter WRCT 1900/2200-5/40-10EEK	Wainwright Instruments GmbH	5	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20121	Notch Filter WRCB 1879,5/1880,5EE	Wainwright Instruments GmbH	15	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20122	Notch Filter WRCB 1747/1748	Wainwright Instruments GmbH / Andechs	12	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20254	High Pass Filter SHC 2600/12750-1.5KK	Trilithic	23042	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20287	Pre-Amplifier 25MHz - 4GHz AMF-2D-100M4G-35-10P	Miteq Inc.	379418	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20290	Notch Filter WRCA 901,9/903,1SS	Wainwright Instruments GmbH	3RR	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20291	High Pass Filter WHJ 2200-4EE	Wainwright Instruments GmbH	14	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20338	Pre-Amplifier 100MHz - 26GHz J54-00102600-38-5P	Miteq Inc.	838697	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20448	Notch Filter WRCT 1850.0/2170.0-5/40-10ESK	Wainwright Instruments GmbH	5	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20449	Notch Filter WRCT 824.0/894.0-5/40-8SSK	Wainwright Instruments GmbH	1	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20484	Pre-Amplifier 2,5GHz - 18GHz AMF-5D-02501800-25-10P	Miteq Inc.	1244554	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20489	Test Receiver ESU40	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100030	cal	cal: 2024-May-15	cal: 12M	cal: 2025-May-15
20512	Notch Filter WRCA 800/960-02/40-6EEK (GSM 850)	Wainwright Instruments GmbH	24	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20549	Log. Per. Antenna HL025	Rohde & Schwarz Messgerätebau GmbH	1000060	calchk	cal: 2021-Aug-18	cal: 36M chk: 12M	cal: 2024-Aug-18
20558	Fully Anechoic Chamber 1	ETS-Lindgren GmbH / Taufkirchen	-	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20608	Ultrabroadband-Antenna HL562	Rohde & Schwarz Messgerätebau GmbH / Memmingen	830547/009	cal	cal: 2023-Jul-04	cal: 36M	cal: 2026-Jul-04
20611	Power Supply E3632A	Agilent Technologies Deutschland GmbH	KR 75305854	cpu			
20690	Spectrum Analyzer FSU	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100302/026	cal	cal: 2023-May-25	cal: 24M	cal: 2025-May-25
20720	Measurement Software EMC32 [FAC]	Rohde & Schwarz Messgerätebau GmbH	V10.xx	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20868	High Pass Filter AFH-07000	AtlanTecRF	16071300004	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20883	Open Switch and control Platform OSP-B200S2 Satellite	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101432	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22
20884	Open Switch and control Platform OSP320	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101391	chk	chk: 2023-Aug-22	chk: 12M	chk: 2024-Aug-22

Tools used in 'P1M1'

4.4.1 Legend

Note / remarks	Interval of calibration & Verification
12M	12 months
24M	24 months
36M	36 months
10Y	10 Years

Abbreviation Check Type	Description
cnn	Calibration and verification not necessary
cal	Calibration
calchk	Calibration plus intermediate Verification
chk	Verification
cpu	Verification before usage

5 Results from external laboratory

None

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6 Opinions and interpretations

None

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7 List of abbreviations

None

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8 Measurement Uncertainty valid for conducted/radiated measurements

The reported uncertainties are calculated based on the standard uncertainty multiplied with the appropriate coverage factor **k**, such that a confidence level of approximately 95% is achieved. For uncertainty determination, each component used in the concrete measurement set-up was taken in account and its contribution to the overall uncertainty according its statistical distribution calculated.

Issue No.	Measurement type	Reference	Frequency range of measurement		Calculated Uncertainty based on confidence level of 95.54%	Remarks
			Start [MHz]	Stop [MHz]		
1	Magnetic Field Strength	EN ,FCC, JP, IC	0.009	30	4.86	Magnetic loop antenna, Pre-Amp on
2	RF-Output Power (EIRP) Unwanted emissions (EIRP) [dB]	EN, FCC, JP, IC	30	100	4.57	without Pre-Amp
			30	100	4.91	with Pre-Amp
			100	1000	4.02	without Pre-Amp
			100	1000	4.26	with Pre-Amp
			1000	18000	4.36	without Pre-Amp
			1000	18000	5.23	with Pre-Amp
			18000	33000	4.92	Schwarzbeck BBHA9170 (#20302) Antenna set-up non-waveguide antenna)
			33000	50000	4.17	Set-up for Q-Band (WR-22), non-wave guide antenna
			40000	60000	4.69	Set-up U-Band (WR-19), non-waveguide antenna
			50000	75000	4.06	External Mixer set-up V-Band (WR-15)
			75000	110000	4.17	External Mixer set-up W-Band (WR-6)
			90000	140000	5.49	External Mixer set-up F-Band (WR-8)
			140000	225000	6.22	External Mixer set-up G-Band (WR-5)
			225000	325000	7.04	External Mixer set-up (WR-3)
			325000	500000	8.84	External Mixer set-up (WR-2.2)
3	Radiated Blocking [dB]	EN	1000	18000	2.85	Typical set-up with microwave generator and antenna, value for 7 GHz calculated
			18000	33000	4.66	Typical set-up with microwave generator and antenna
			33000	50000	3.48	WR-22 set-up
			50000	75000	3.73	WR-15 set-up
			75000	110000	4.26	WR-6 set-up
4	Frequency Error / UWB+FMCW [kHz]	EN, FCC, JP, ISCED	40000	77000	276.19	calculated for 77 GHz (FMCW) carrier
	Frequency Error / NFC [Hz]	EN, FCC, JP, ISCED	6000	7000	33.92	calculated for 6.5 GHz UWB Ch.5
			11.00	14.00	20.76	calculated for 13.56 MHz NFC carrier
5	TS 8997 Conducted Parameters	FCC15/18 / ISCED	30	6000	1.11	1. Power measurement with Fast-sampling-detector
			30	6000	1.20	2. Power measurement with Spectrum-Analyzer
			30	6000	1.20	3. Power Spectrum-Density measurement
			30	7500	1.20	4. Conducted Spurious emissions
			0.009	30	2.56	5. Conducted Spurious emissions
			2.4	2.48	1.95 ppm	6a. Bandwidth / 2-Marker Method for 2.4 GHz ISM
			5.18	5.825	7.180 ppm	6b. Bandwidth / 2-Marker Method for 5 GHz WLAN
			5.18	5.825	1.099 ppm	7. Frequency (Marker method) for 5 GHz WLAN
			30	6000	0.11561 µs	8. Medium-Utilization factor / Timing
			30	6000	1.85	9a. Blocking-Level of companion device
			30	6000	1.62	9b. Blocking Generator level
6	Conducted Emissions	EN, FCC	0.009	30	3.57	general EMI-measurements on AC/DC ports

9 Versions of test reports (change history)

Version	Applied changes	Date of release
R01	Initial release	2024-Jul-15
R02	PMN, HVIN and FVIN for ISED corrected ISED references corrected	2024-Oct-25
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End Of Test Report