FCC RADIO TEST REPORT

FCC ID	:	**LHJ-FE5NA0010**
Equipment	:	**FE5NA0010, FE5NA0011**
Brand Name	:	**Continental**
Model Name	:	**FE5NA0010, FE5NA0011**
Applicant	:	**Continental Automotive Systems, Inc. 21440 W Lake Cook Rd., Deer Park, IL 60010, USA**
Manufacturer	:	**Continental Automotive Systems, Inc. 21440 W Lake Cook Rd., Deer Park, IL 60010, USA**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E), 27**

The product was received on Nov. 22, 2022 and testing was performed from Mar. 18, 2023 to Mar. 23, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

Table of Contents

History of this test report

Report No.	Version	Description	Issue Date
FG2N2201-01C	01	Initial issue of report	Apr. 25, 2023
FG2N2201-01C	02	Revise Summary note and Product Specification of Equipment Under Test This report is an updated version, replacing the report issued on Apr. 25, 2023.	Apr. 27, 2023
FG2N2201-01C	03	Revise Product Specification of Equipment Under Test This report is an updated version, replacing the report issued on Apr. 27, 2023.	Apr. 27, 2023

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§22.913 (a)(5)	Effective Radiated Power (n5)	Pass	
	§27.50 (c)(10)	Effective Radiated Power (n71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (n2) (n25) (n41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (n66)		
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	Not Required	-
-	§2.1049	Occupied Bandwidth	Not Required	-
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (n2) (n5) (n25) (n66) (n71)	Not Required	-
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (n41)		
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (n2) (n5) (n25) (n66) (n71)	Not Required	-
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (n41)		
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	Not Required	-

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
4.2	§2.1053 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Radiated Spurious Emission (n2) (n5) (n25) (n66) (n71)	Pass	12.18 dB under the limit at 9995.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (n41)		

Remark:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report by adding external antenna (Model: 42862899). All the test cases were performed on original report which can be referred to Sporton Report Number FG2N2201C. Based on the original report, only worst case was verified.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Clio Lo

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	FE5NA0010, FE5NA0011
Brand Name	Continental
Model Name	FE5NA0010, FE5NA0011
FCC ID	LHJ-FE5NA0010
Installed into the Host	Equipment name: G12N510G1, G12N500G1 Brand name: Continental Model name: G12N510G1, G12N500G1
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/GNSS
EUT Stage	Identical Prototype

Sample Information			
Sample	**TA-code**	**L2/L5 GNSS**	**Band Difference**
1	FE5NA0010	Support	/
2	FE5NA0011	Not Support	BOM change: depopulated passive components from the GNSS RF front-end

Remark: The above EUT's information was declared by manufacturer.

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Tx Frequency	5G NR n2: 1852.5 MHz ~ 1907.5 MHz 5G NR n5: 826.5 MHz ~ 846.5 MHz 5G NR n25: 1852.5 MHz ~ 1912.5 MHz 5G NR n41: 2506.02 MHz ~ 2679.99 MHz 5G NR n66: 1712.5 MHz ~ 1777.5 MHz 5G NR n71: 665.5 MHz ~ 695.5 MHz
Rx Frequency	5G NR n2: 1932.5 MHz ~ 1987.5 MHz 5G NR n5: 871.5 MHz ~ 891.5 MHz 5G NR n25: 1932.5 MHz ~ 1992.5 MHz 5G NR n41: 2506.02 MHz ~ 2679.99 MHz 5G NR n66: 2112.5 MHz ~ 2197.5 MHz 5G NR n71: 619.5 MHz ~ 649.5 MHz

Product Specification is subject to this standard	
Bandwidth	5G NR n2: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n5: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n25: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz 5G NR n41: 10MHz / 15MHz / 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 80MHz / 90MHz / 100MHz 5G NR n66: 5MHz / 10MHz / 15MHz / 20MHz / 25MHz / 30MHz / 40MHz 5G NR n71: 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	5G NR n2: 23.01 dBm 5G NR n5: 23.25 dBm 5G NR n25: 23.24 dBm 5G NR n41: 25.41 dBm 5G NR n41: 21.52 dBm for MIMO 5G NR n66: 22.76 dBm 5G NR n71: 23.13 dBm
Antenna Type	**<External (Model: 86783279) >:** External Sharkfin Antenna + XM + Dual GNSS +5G **<External (Model: 42862899) >:** external sharkfin antenna, sharkfin NA 5G+Dual GNSS+XM
Antenna Gain	**<External (Model: 86783279) >:** **Primary cell antenna:** 5G NR n2: 3.5 dBi 5G NR n5: 4.0 dBi 5G NR n25: 3.5 dBi 5G NR n41: 6.1 dBi 5G NR n66: 2.6 dBi 5G NR n71: 1.7 dBi **Secondary cell antenna:** 5G NR n41: 4.9 dBi **<External (Model: 42862899) >:** **Primary cell antenna:** 5G NR n2: 3.4 dBi 5G NR n5: 1.2 dBi 5G NR n25: 3.4 dBi 5G NR n41: 3.8 dBi 5G NR n66: -0.4 dBi 5G NR n71: 2.0 dBi **Secondary cell antenna:** 5G NR n41: 3.0 dBi
Type of Modulation	PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.
2. For 5G NR n41, Primary cell antenna is only available in MIMO mode.

1.3 Modification of EUT

No modifications made to the EUT during the testing.

1.4 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	**Sporton Site No.**
	TH03-HY
Test Engineer	Cotty Hsu and Luffy Lin
Temperature (℃)	22.1~22.8
Relative Humidity (%)	53~55

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH12-HY (TAF Code: 3786)
Test Engineer	Jesse Fan, Tim Lee and Wilson Wu
Temperature (℃)	20~25
Relative Humidity (%)	50~60
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786

1.5 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- ANSI / TIA-603-E
- FCC 47 CFR Part 2, 22(H), 24(E), 27
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

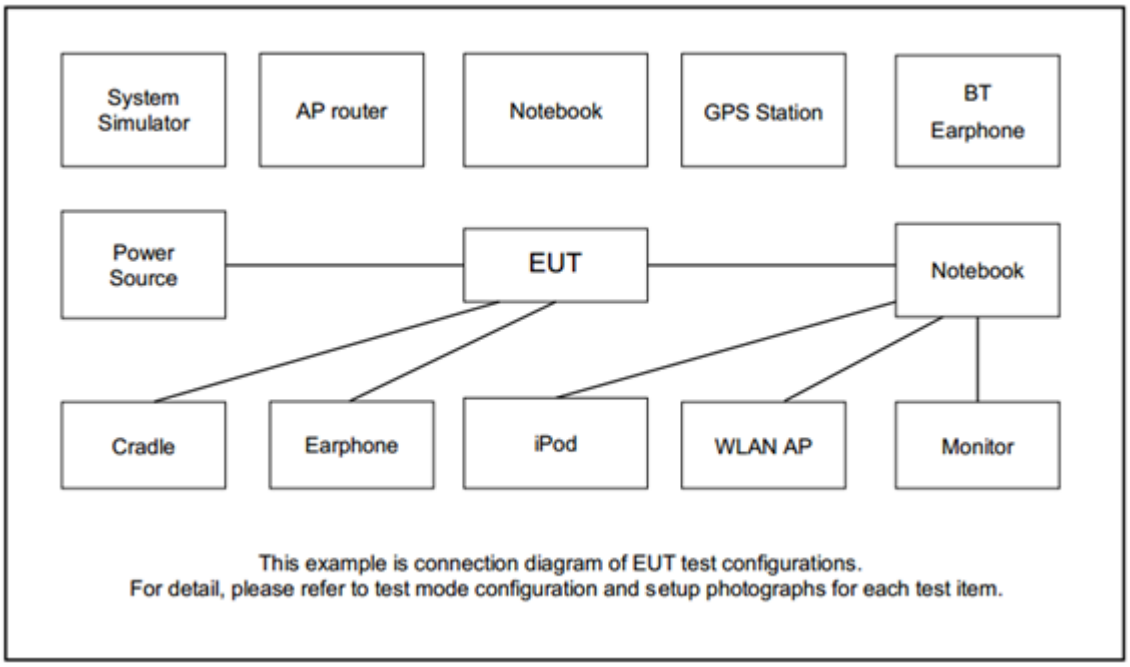
2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

Test Items	NR Band	Bandwidth (MHz)											Modulation					RB #			Test Channel		
		5	10	15	20	30	40	50	60	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Max. Output Power	n2	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n5	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n25	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n41	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n66	v	v	v	v	v	v	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n71	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
E.R.P / E.I.R.P	n2	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v	Max Power					
	n5	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v						
	n25	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v						
	n41	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v						
	n66	v	v	v	v	v	v	-	-	-	-	-	v	v	v	v	v						
	n71	v	v	v	v	-	-	-	-	-	-	-	v	v	v	v	v						
Radiated Spurious Emission	n2				v	-	-	-	-	-	-	-	v					v			v	v	v
	n5				v	-	-	-	-	-	-	-	v					v			v	v	v
	n25		v			-	-	-	-	-	-	-	v					v			v	v	v
	n41	-	-	-				v					v	v				v			v	v	v
	n66				v			-	-	-	-	-	v					v			v	v	v
	n71		v			-	-	-	-	-	-	-	v					v			v	v	v
Remark	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. For radiated measurement, pre-scanned in two modes, DFT-s OFDM and CP OFDM. The worst cases (DFT-s OFDM) were recorded in this report, and the worst modes of FR1 and LTE for simultaneous transmission were verified and compliant. 5. Test combination are EN-DC 2A_n5A, EN-DC 14A_n2A, EN-DC 5A_n66A. 6. All the radiated test cases were performed with Sample 1.																						

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Sharkfin Antenna	Amphenol	42862899	N/A	N/A	Unshielded, 1.8 m
2.	Metal Plate	N/A	N/A	N/A	N/A	Unshielded, 1.8 m
3.	Adapter	TePoo	PT-WC-03	N/A	N/A	N/A
4.	Teddy Jr Load Box	Continental	N/A	N/A	N/A	N/A
5.	DC Power Supply	GW Instek	SP-606	N/A	N/A	N/A
6.	System Simulator	Anritsu	MT8821C	N/A	N/A	N/A
7.	System Simulator	Anritsu	MT8000A	N/A	N/A	N/A

2.4 Frequency List of Low/Middle/High Channels

5G NR n2 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	372000	376000	380000
	Frequency	1860	1880	1900
15	Channel	371500	376000	380500
	Frequency	1857.5	1880	1902.5
10	Channel	371000	376000	381000
	Frequency	1855	1880	1905
5	Channel	370500	376000	381500
	Frequency	1852.5	1880	1907.5

5G NR n5 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

5G NR n25 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	372000	376500	381000
	Frequency	1860	1882.5	1905
15	Channel	371500	376500	381500
	Frequency	1857.5	1882.5	1907.5
10	Channel	371000	376500	382000
	Frequency	1855	1882.5	1910
5	Channel	370500	376500	382500
	Frequency	1852.5	1882.5	1912.5

5G NR n41 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99

5G NR n66 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
40	Channel	346000	349000	352000
	Frequency	1730	1745	1760
30	Channel	345000	349000	353000
	Frequency	1725	1745	1765
20	Channel	344000	349000	354000
	Frequency	1720	1745	1770
15	Channel	343500	349000	354500
	Frequency	1717.5	1745	1772.5
10	Channel	343000	349000	355000
	Frequency	1715	1745	1775
5	Channel	342500	349000	355500
	Frequency	1712.5	1745	1777.5

5G NR n71 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	134600	136100	137600
	Frequency	673	680.5	688
15	Channel	134100	136100	138100
	Frequency	670.5	680.5	690.5
10	Channel	133600	136100	138600
	Frequency	668	680.5	693
5	Channel	133100	136100	139100
	Frequency	665.5	680.5	695.5

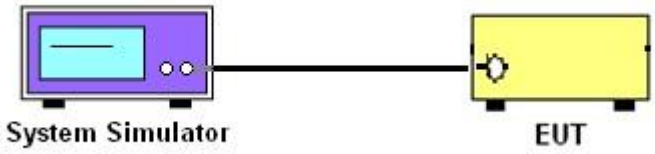
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for 5G NR n5

The ERP of mobile transmitters must not exceed 3 Watts for 5G NR n71

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n2 and n25 and n41

The EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n66

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T – L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

The MIMO mode is completely uncorrelated, so the directional gain is selected the maximum gain among all antennas.

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

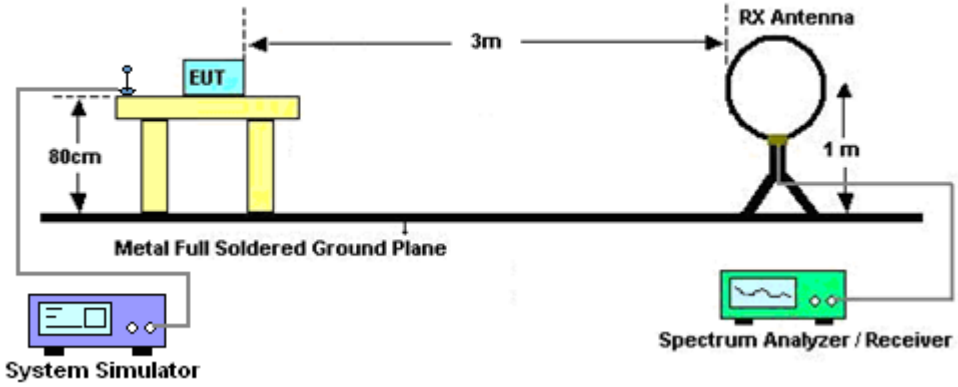
4 Radiated Test Items

4.1 Measuring Instruments

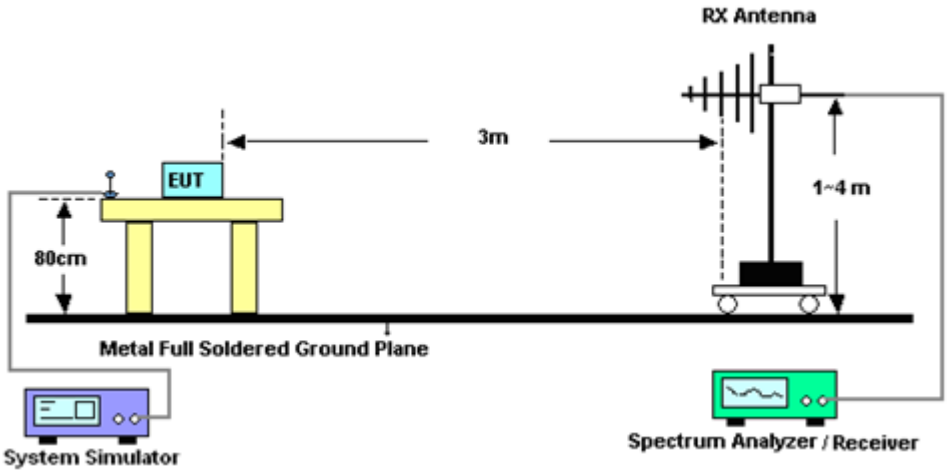
See list of measuring instruments of this test report.

4.1.1 Test Setup

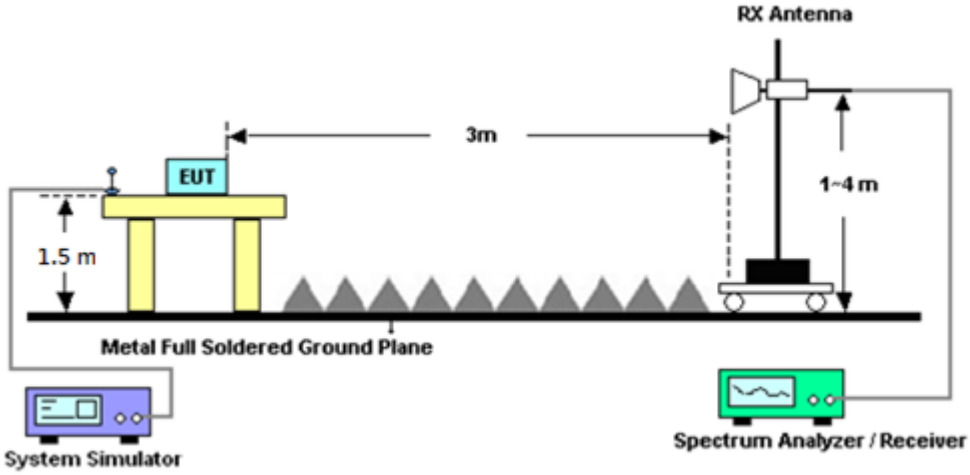
For radiated test below 30MHz



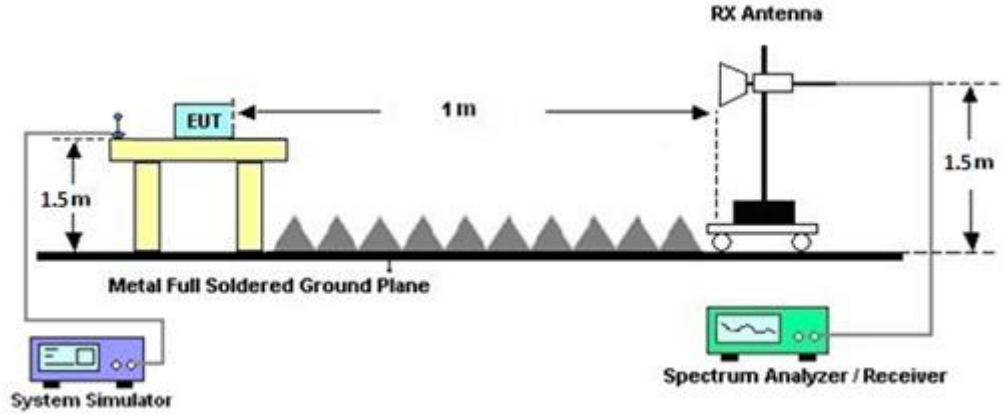
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

4.2 Radiated Spurious Emission Measurement

4.2.1 Description of Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For 5G NR n41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

    For 5G NR n41

    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

    EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

    ERP (dBm) = EIRP - 2.15

5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Mar. 18, 2023~ Apr. 07, 2023	Sep. 19, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Nov. 10, 2022	Mar. 18, 2023~ Apr. 07, 2023	Nov. 09, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz~18GHz	Aug. 09, 2022	Mar. 18, 2023~ Apr. 07, 2023	Aug. 08, 2023	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz-40GHz	Nov. 24, 2022	Mar. 18, 2023~ Apr. 07, 2023	Nov. 23, 2023	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	Oct. 03, 2022	Mar. 18, 2023~ Apr. 07, 2023	Oct. 02, 2023	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Mar. 18, 2023~ Apr. 07, 2023	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900249	1GHz-18GHz	Dec. 21, 2022	Mar. 18, 2023~ Apr. 07, 2023	Dec. 20, 2023	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 07, 2022	Mar. 18, 2023~ Apr. 07, 2023	Dec. 06, 2023	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 10, 2023	Mar. 18, 2023~ Apr. 07, 2023	Jan. 09, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60SS	SN1	1.2GHz High Pass Filter	Mar. 14, 2023	Mar. 18, 2023~ Apr. 07, 2023	Mar. 13, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Mar. 14, 2023	Mar. 18, 2023~ Apr. 07, 2023	Mar. 13, 2024	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 14, 2023	Mar. 18, 2023~ Apr. 07, 2023	Mar. 13, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Mar. 18, 2023~ Apr. 07, 2023	Mar. 06, 2024	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 20, 2022	Mar. 18, 2023~ Apr. 07, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Dec. 20, 2022	Mar. 18, 2023~ Apr. 07, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Dec. 20, 2022	Mar. 18, 2023~ Apr. 07, 2023	Dec. 19, 2023	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP210090	N/A	Oct. 03, 2022	Mar. 18, 2023~ Apr. 07, 2023	Oct. 02, 2023	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 18, 2023~ Apr. 07, 2023	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Mar. 18, 2023~ Apr. 07, 2023	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Mar. 18, 2023~ Apr. 07, 2023	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Mar. 18, 2023~ Apr. 07, 2023	N/A	Radiation (03CH12-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio Communication Analyzer	Anritsu	MT8821C	6262025353	LTE FDD/TDD LTE-2CC DLCA/ULCA	Oct. 13, 2022	Jan. 17, 2023~ Mar. 23, 2023	Oct. 12, 2023	Conducted (TH03-HY)
Thermal Chamber	ESPEC	SH-641	92013720	-40℃ ~90℃	Sep. 07, 2022	Jan. 17, 2023~ Mar. 23, 2023	Sep. 06, 2023	Conducted (TH03-HY)
DC Power Supply	GW Instek	GPP-2323	GES906037	0V~64V ; 0A~6A	Dec. 29, 2022	Jan. 17, 2023~ Mar. 23, 2023	Dec. 28, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA DirectionalCoupler	#B	1-18GHz	Jan. 06, 2023	Jan. 17, 2023~ Mar. 23, 2023	Jan. 05, 2024	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262134933	FR1	Jun. 13, 2022	Jan. 17, 2023~ Mar. 23, 2023	Jun. 12, 2023	Conducted (TH03-HY)

6 Measurement Uncertainty

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.31 dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.25 dB**

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.81 dB**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP/EIRP

NR n2 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.76	22.76	22.75	26.26	0.4227
5	1	23		22.75	22.65	22.72		
5	12	6		22.86	22.80	22.75		
5	1	0		22.18	22.18	22.23		
5	1	24		22.21	22.13	22.21		
5	25	0		22.24	22.18	22.28		
5	1	1	QPSK	22.57	22.65	22.61		
5	1	23		22.68	22.59	22.69		
5	12	6		22.67	22.71	22.49		
5	1	0		22.61	22.62	22.65		
5	1	24		22.61	22.56	22.69		
5	25	0		21.76	21.68	21.73		
5	1	1	16-QAM	21.66	21.72	21.73	25.13	0.3258
5	1	1	64-QAM	20.08	20.06	20.06		
5	1	1	256-QAM	17.79	17.72	17.68		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	21.95	22.87	22.65	26.35	0.4315
10	1	50		22.34	22.73	22.77		
10	25	12		22.83	22.84	22.95		
10	1	0		21.33	22.26	22.27		
10	1	51		21.76	22.13	22.32		
10	50	0		22.26	22.18	22.32		
10	1	1	QPSK	22.82	22.75	22.61		
10	1	50		22.93	22.61	22.72		
10	25	12		22.83	22.72	22.85		
10	1	0		22.79	22.78	22.65		
10	1	51		22.95	22.62	22.69		
10	50	0		21.83	21.68	21.75		
10	1	1	16-QAM	20.84	21.79	21.56	25.19	0.3304
10	1	1	64-QAM	20.54	20.27	20.01		
10	1	1	256-QAM	17.88	17.75	17.73		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.95	22.69	22.75	26.41	0.4375
15	1	77		23.01	22.68	22.68		
15	36	18		22.90	22.75	22.72		
15	1	0		22.32	22.23	22.15		
15	1	78		22.45	22.12	22.24		
15	75	0		22.38	22.17	22.15		
15	1	1	QPSK	22.79	22.65	22.68		
15	1	77		22.98	22.49	22.78		
15	36	18		22.89	22.67	22.68		
15	1	0		22.68	22.65	22.54		
15	1	78		22.84	22.52	22.72		
15	75	0		21.95	21.76	21.68		
15	1	1	16-QAM	21.92	21.83	21.65	25.32	0.3404
15	1	1	64-QAM	20.23	20.21	20.34		
15	1	1	256-QAM	17.94	17.75	17.73		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.96	22.83	22.78	26.41	0.4375
20	1	104		22.99	22.73	22.82		
20	50	25		23.01	22.76	22.74		
20	1	0		22.32	22.51	22.12		
20	1	105		22.52	22.30	22.34		
20	100	0		22.43	22.32	22.24		
20	1	1	QPSK	22.76	22.79	22.67		
20	1	104		22.83	22.58	22.68		
20	50	25		22.95	22.76	22.77		
20	1	0		22.75	22.76	22.49		
20	1	105		22.80	22.52	22.75		
20	100	0		21.93	21.77	21.75		
20	1	1	16-QAM	21.73	22.02	21.75	25.42	0.3483
20	1	1	64-QAM	20.32	20.19	20.19		
20	1	1	256-QAM	18.05	17.92	17.78		
Limit	EIRP < 2W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	23.10	23.02	23.02	22.20	0.1660
5	1	23		22.93	22.92	22.92		
5	12	6		23.15	23.04	22.92		
5	1	0		22.47	22.44	22.45		
5	1	24		22.47	22.36	22.28		
5	25	0		22.55	22.48	22.45		
5	1	1	QPSK	22.92	22.87	22.98		
5	1	23		22.89	22.75	22.82		
5	12	6		23.06	22.99	22.93		
5	1	0		22.92	22.89	22.80		
5	1	24		22.88	22.75	22.41		
5	25	0		22.01	22.06	21.98		
5	1	1	16-QAM	22.05	22.01	21.89	21.10	0.1288
5	1	1	64-QAM	20.48	20.54	20.69		
5	1	1	256-QAM	18.12	18.46	18.06		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	22.88	23.05	22.78	22.26	0.1683
10	1	50		23.02	22.92	22.77		
10	25	12		23.21	23.01	22.76		
10	1	0		22.42	22.48	22.42		
10	1	51		22.57	22.54	22.25		
10	50	0		22.52	22.56	22.44		
10	1	1	QPSK	22.80	22.97	22.83		
10	1	50		22.93	22.86	22.76		
10	25	12		23.01	23.04	22.92		
10	1	0		22.87	22.98	22.80		
10	1	51		22.90	22.85	22.83		
10	50	0		21.98	22.05	21.85		
10	1	1	16-QAM	21.86	21.98	21.80	21.03	0.1268
10	1	1	64-QAM	20.32	20.47	20.34		
10	1	1	256-QAM	18.06	18.03	18.01		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	23.05	23.07	23.11	22.16	0.1644
15	1	77		22.97	22.98	22.87		
15	36	18		23.09	23.06	22.98		
15	1	0		22.52	22.45	22.54		
15	1	78		22.54	22.35	22.32		
15	75	0		22.53	22.47	22.46		
15	1	1	QPSK	23.07	22.98	23.01		
15	1	77		23.03	22.95	22.85		
15	36	18		23.01	23.05	22.96		
15	1	0		23.04	22.94	22.89		
15	1	78		22.91	22.86	22.76		
15	75	0		22.06	22.02	21.87		
15	1	1	16-QAM	21.89	22.16	22.07	21.21	0.1321
15	1	1	64-QAM	20.67	20.51	20.44		
15	1	1	256-QAM	18.08	18.19	18.21		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	22.99	23.09	22.95	22.30	0.1698
20	1	104		22.81	22.85	22.76		
20	50	25		23.25	23.20	23.12		
20	1	0		22.57	22.49	22.54		
20	1	105		22.43	22.48	22.14		
20	100	0		22.56	22.51	22.47		
20	1	1	QPSK	22.98	23.02	22.98		
20	1	104		22.84	22.75	22.75		
20	50	25		23.11	23.05	23.04		
20	1	0		22.86	22.99	22.97		
20	1	105		22.85	22.73	22.64		
20	100	0		22.03	22.01	21.98		
20	1	1	16-QAM	21.98	22.09	22.03	21.14	0.1300
20	1	1	64-QAM	20.37	20.57	20.42		
20	1	1	256-QAM	18.12	18.15	18.16		
Limit	ERP < 7W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	23.03	22.60	22.81	26.47	0.4436
5	1	23		22.93	22.72	22.11		
5	12	6		23.07	22.75	22.27		
5	1	0		22.46	22.08	22.26		
5	1	24		22.44	22.21	21.58		
5	25	0		22.55	22.15	22.01		
5	1	1	QPSK	23.02	22.65	22.55		
5	1	23		23.04	22.73	22.06		
5	12	6		22.95	22.65	22.59		
5	1	0		22.03	21.58	21.63		
5	1	24		22.02	21.75	21.01		
5	25	0		22.03	21.59	21.72		
5	1	1	16-QAM	21.93	21.62	21.54	25.33	0.3412
5	1	1	64-QAM	20.58	20.35	20.21		
5	1	1	256-QAM	17.98	17.54	17.58		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	23.18	22.72	22.85	26.58	0.4550
10	1	50		23.03	22.73	21.94		
10	25	12		23.12	22.65	22.93		
10	1	0		22.63	22.26	22.35		
10	1	51		22.46	22.21	21.39		
10	50	0		22.52	22.24	22.01		
10	1	1	QPSK	23.05	22.68	22.89		
10	1	50		23.01	22.69	21.86		
10	25	12		23.15	22.66	22.89		
10	1	0		22.07	21.65	21.85		
10	1	51		21.98	21.75	21.72		
10	50	0		22.13	21.65	22.88		
10	1	1	16-QAM	22.12	21.74	21.86	25.52	0.3565
10	1	1	64-QAM	20.85	20.35	20.51		
10	1	1	256-QAM	18.09	17.58	17.84		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	23.24	22.93	22.85	26.64	0.4613
15	1	77		23.02	22.73	22.35		
15	36	18		23.18	22.81	22.89		
15	1	0		22.75	22.35	22.26		
15	1	78		22.52	22.16	21.86		
15	75	0		22.63	22.23	21.54		
15	1	1	QPSK	23.15	22.91	22.65		
15	1	77		23.06	22.69	22.24		
15	36	18		23.18	22.79	22.81		
15	1	0		22.19	21.85	21.85		
15	1	78		22.05	21.82	21.80		
15	75	0		22.35	21.77	21.69		
15	1	1	16-QAM	22.24	21.98	21.64	25.64	0.3664
15	1	1	64-QAM	20.86	20.59	20.45		
15	1	1	256-QAM	18.18	17.85	17.68		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 3.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.94	22.57	22.86	26.64	0.4613
20	1	104		22.60	22.32	22.08		
20	50	25		22.86	22.83	22.76		
20	1	0		22.78	22.76	22.29		
20	1	105		22.54	22.28	21.56		
20	100	0		22.49	22.54	22.10		
20	1	1	QPSK	23.24	22.98	22.84		
20	1	104		22.81	22.51	22.12		
20	50	25		22.12	22.68	22.82		
20	1	0		22.27	22.01	21.84		
20	1	105		21.93	21.47	21.59		
20	100	0		22.15	21.75	21.68		
20	1	1	16-QAM	21.96	21.95	21.77	25.36	0.3436
20	1	1	64-QAM	21.01	20.45	20.48		
20	1	1	256-QAM	18.12	17.87	17.43		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.98	25.06	24.72	28.09	0.6442
20	1	49		24.97	24.92	24.75		
20	25	12		25.05	24.97	24.78		
20	1	0		21.53	21.54	21.23		
20	1	50		21.54	21.44	21.14		
20	50	0		24.56	24.47	24.28		
20	1	1	QPSK	25.09	25.07	24.71		
20	1	49		25.03	24.97	24.68		
20	25	12		25.01	24.96	24.76		
20	1	0		21.47	21.52	21.19		
20	1	50		21.49	21.43	21.15		
20	50	0		24.12	23.96	23.77		
20	1	1	16-QAM	23.95	23.87	23.91	26.95	0.4955
20	1	1	64-QAM	22.63	22.67	22.57		
20	1	1	256-QAM	20.45	20.47	20.25		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	25.15	25.08	25.11	28.32	0.6792
30	1	76		25.27	25.12	24.94		
30	36	18		25.24	25.03	24.84		
30	1	0		21.64	21.65	21.62		
30	1	77		21.79	21.62	21.54		
30	75	0		24.76	24.62	24.53		
30	1	1	QPSK	25.21	25.10	25.14		
30	1	76		25.32	25.13	24.95		
30	36	18		25.21	25.04	24.88		
30	1	0		21.69	21.62	21.62		
30	1	77		21.84	21.63	21.47		
30	75	0		24.29	24.13	23.92		
30	1	1	16-QAM	24.01	23.96	24.05	27.05	0.5070
30	1	1	64-QAM	22.81	22.67	22.75		
30	1	1	256-QAM	20.68	20.57	20.52		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	25.14	25.16	25.08	28.27	0.6714
40	1	104		25.27	25.17	24.83		
40	50	25		25.19	24.97	24.88		
40	1	0		21.68	21.75	21.63		
40	1	105		21.73	21.62	21.36		
40	100	0		24.71	24.58	24.44		
40	1	1	QPSK	25.08	25.18	25.13		
40	1	104		25.21	25.13	24.81		
40	50	25		25.16	24.95	24.86		
40	1	0		21.58	21.66	21.67		
40	1	105		21.75	21.65	21.46		
40	100	0		24.22	24.07	23.92		
40	1	1	16-QAM	24.01	24.09	24.02	27.09	0.5117
40	1	1	64-QAM	22.74	22.87	22.74		
40	1	1	256-QAM	20.61	20.62	20.42		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	25.13	25.07	25.02	28.24	0.6668
50	1	131		25.21	25.16	24.70		
50	64	32		25.12	24.97	24.81		
50	1	0		21.61	21.59	21.60		
50	1	132		21.73	21.60	21.25		
50	128	0		24.58	24.49	24.39		
50	1	1	QPSK	25.11	25.08	25.04		
50	1	131		25.24	25.11	24.72		
50	64	32		25.09	24.96	24.82		
50	1	0		21.61	21.59	21.54		
50	1	132		21.75	21.59	21.23		
50	128	0		24.12	23.96	23.87		
50	1	1	16-QAM	23.91	23.94	23.93	26.94	0.4943
50	1	1	64-QAM	22.67	22.65	22.64		
50	1	1	256-QAM	20.49	20.64	20.49		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	24.95	25.20	25.03	28.21	0.6622
60	1	160		25.03	25.07	24.61		
60	81	40		25.11	24.92	24.73		
60	1	0		21.49	21.65	21.53		
60	1	161		21.56	21.55	21.15		
60	162	0		24.61	24.48	24.38		
60	1	1	QPSK	24.98	25.21	25.02		
60	1	160		25.02	25.09	24.62		
60	81	40		24.97	24.91	24.71		
60	1	0		21.45	21.55	21.53		
60	1	161		21.53	21.57	21.07		
60	162	0		24.12	23.96	23.80		
60	1	1	16-QAM	23.82	24.06	23.83	27.06	0.5082
60	1	1	64-QAM	22.65	22.77	22.58		
60	1	1	256-QAM	20.48	20.59	20.45		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	25.13	25.24	25.03	28.26	0.6699
80	1	215		24.75	25.12	24.67		
80	108	54		25.15	25.03	25.01		
80	1	0		21.58	21.75	21.53		
80	1	216		21.21	21.69	21.18		
80	216	0		24.59	24.62	24.51		
80	1	1	QPSK	25.11	25.26	25.06		
80	1	215		24.72	25.15	24.68		
80	108	54		25.08	25.02	24.93		
80	1	0		21.58	21.80	21.52		
80	1	216		21.18	21.66	21.19		
80	216	0		24.09	24.08	24.02		
80	1	1	16-QAM	23.91	24.26	23.86	27.26	0.5321
80	1	1	64-QAM	22.65	22.87	22.62		
80	1	1	256-QAM	20.54	20.72	20.48		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
90	1	1	PI/2 BPSK	25.06	25.34	24.96	28.34	0.6823
90	1	243		24.67	25.10	24.79		
90	120	60		25.24	24.99	25.06		
90	1	0		21.61	21.83	21.46		
90	1	244		21.19	21.68	21.28		
90	240	0		24.65	24.62	24.59		
90	1	1	QPSK	25.18	25.29	25.05		
90	1	243		24.72	25.18	24.81		
90	120	60		25.11	25.04	25.01		
90	1	0		21.65	21.84	21.51		
90	1	244		21.24	21.68	21.27		
90	240	0		24.09	24.21	24.06		
90	1	1	16-QAM	23.96	24.24	23.94	27.24	0.5297
90	1	1	64-QAM	22.76	22.92	22.68		
90	1	1	256-QAM	20.59	20.85	20.49		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	25.05	25.25	25.02	28.41	0.6934
100	1	271		24.54	25.12	24.83		
100	135	67		25.05	24.99	25.01		
100	1	0		21.59	21.98	21.52		
100	1	272		21.12	21.65	21.25		
100	270	0		24.41	24.63	24.56		
100	1	1	QPSK	25.12	25.41	24.97		
100	1	271		24.61	25.13	24.79		
100	135	67		25.01	24.99	25.06		
100	1	0		21.63	21.85	21.46		
100	1	272		21.06	21.54	21.28		
100	270	0		24.01	24.12	24.02		
100	1	1	16-QAM	23.95	24.17	23.85	27.17	0.5212
100	1	1	64-QAM	22.67	22.92	22.52		
100	1	1	256-QAM	20.56	20.82	20.38		
Limit	EIRP < 2W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -0.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.53	22.54	22.26	22.20	0.1660
5	1	23		22.35	22.55	22.19		
5	12	6		22.49	22.60	22.38		
5	1	0		21.88	21.95	21.72		
5	1	24		21.87	21.88	21.70		
5	25	0		21.98	21.94	21.72		
5	1	1	QPSK	22.42	22.32	22.19		
5	1	23		22.37	22.36	22.17		
5	12	6		22.51	22.50	22.32		
5	1	0		22.34	22.33	22.19		
5	1	24		22.35	22.36	22.21		
5	25	0		21.46	21.46	21.27		
5	1	1	16-QAM	21.43	21.34	21.32	21.03	0.1268
5	1	1	64-QAM	19.95	19.87	19.75		
5	1	1	256-QAM	17.64	17.53	17.47		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -0.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.63	22.52	22.37	22.31	0.1702
10	1	50		22.54	22.48	22.29		
10	25	12		22.71	22.49	22.36		
10	1	0		22.14	21.90	21.94		
10	1	51		21.91	21.97	21.75		
10	50	0		22.03	22.01	21.91		
10	1	1	QPSK	22.54	22.38	22.30		
10	1	50		22.47	22.39	22.25		
10	25	12		22.52	22.59	22.36		
10	1	0		22.49	22.35	22.35		
10	1	51		22.44	22.37	22.24		
10	50	0		21.53	21.53	21.38		
10	1	1	16-QAM	21.54	21.47	21.48	21.14	0.1300
10	1	1	64-QAM	20.09	19.94	19.92		
10	1	1	256-QAM	17.76	17.65	17.56		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -0.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.61	22.64	22.45	22.24	0.1675
15	1	77		22.53	22.49	22.18		
15	36	18		22.50	22.55	22.29		
15	1	0		21.95	22.02	21.87		
15	1	78		22.03	21.94	21.66		
15	75	0		22.12	21.99	21.86		
15	1	1	QPSK	22.45	22.49	22.44		
15	1	77		22.55	22.56	22.16		
15	36	18		22.52	22.47	22.31		
15	1	0		22.16	22.53	22.35		
15	1	78		22.50	22.41	22.12		
15	75	0		21.54	21.55	21.37		
15	1	1	16-QAM	21.46	21.63	21.42	21.23	0.1327
15	1	1	64-QAM	20.06	20.14	19.95		
15	1	1	256-QAM	17.74	17.79	17.63		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -0.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.48	22.51	22.47	22.24	0.1675
20	1	104		22.54	22.36	22.19		
20	50	25		22.64	22.52	22.54		
20	1	0		22.15	22.01	21.88		
20	1	105		22.06	21.97	21.83		
20	100	0		22.08	22.04	21.87		
20	1	1	QPSK	22.56	22.58	22.35		
20	1	104		22.41	22.41	22.25		
20	50	25		22.59	22.53	22.38		
20	1	0		22.54	22.46	22.34		
20	1	105		22.49	22.36	22.14		
20	100	0		21.56	21.51	21.43		
20	1	1	16-QAM	21.56	21.53	21.35	21.16	0.1306
20	1	1	64-QAM	20.06	20.02	19.96		
20	1	1	256-QAM	17.75	17.76	17.61		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -0.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	22.76	22.66	22.52	22.36	0.1722
30	1	158		22.71	22.63	22.36		
30	80	40		22.65	22.63	22.73		
30	1	0		22.14	22.24	22.18		
30	1	159		22.17	22.22	21.93		
30	160	0		22.14	22.18	22.05		
30	1	1	QPSK	22.75	22.65	22.63		
30	1	158		22.62	22.68	22.28		
30	80	40		22.56	22.59	22.55		
30	1	0		22.74	22.56	22.66		
30	1	159		22.62	22.68	22.45		
30	160	0		21.71	21.64	21.64		
30	1	1	16-QAM	21.74	21.73	21.49	21.34	0.1361
30	1	1	64-QAM	20.18	20.13	20.05		
30	1	1	256-QAM	17.95	17.84	17.84		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = -0.4 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	22.56	22.44	22.75	22.35	0.1718
40	1	214		22.42	22.53	22.32		
40	108	54		22.51	22.75	22.57		
40	1	0		21.90	22.02	22.20		
40	1	215		21.93	22.02	21.93		
40	216	0		22.02	22.21	21.98		
40	1	1	QPSK	22.51	22.48	22.48		
40	1	214		22.32	22.38	22.43		
40	108	54		22.63	22.67	22.69		
40	1	0		22.49	22.48	22.45		
40	1	215		22.35	22.48	22.34		
40	216	0		21.61	21.63	21.59		
40	1	1	16-QAM	21.56	21.48	21.66	21.26	0.1337
40	1	1	64-QAM	19.93	19.94	20.23		
40	1	1	256-QAM	17.83	17.78	17.76		
Limit	EIRP < 1W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	22.90	22.95	22.75	22.92	0.1959
5	1	23		22.91	22.71	22.69		
5	12	6		22.92	22.77	22.78		
5	1	0		22.54	22.31	22.38		
5	1	24		22.49	22.13	22.19		
5	25	0		22.47	22.29	22.21		
5	1	1	QPSK	23.07	22.96	22.94		
5	1	23		22.98	22.66	22.85		
5	12	6		22.95	22.82	21.07		
5	1	0		21.96	21.84	21.88		
5	1	24		22.02	21.66	21.74		
5	25	0		21.94	21.78	21.02		
5	1	1	16-QAM	22.01	21.79	21.87	21.86	0.1535
5	1	1	64-QAM	20.64	20.47	20.53		
5	1	1	256-QAM	18.13	17.92	17.97		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	22.97	22.82	22.68	22.83	0.1919
10	1	50		22.89	22.73	22.59		
10	25	12		22.98	22.85	22.75		
10	1	0		22.48	22.34	22.24		
10	1	51		22.31	22.28	22.18		
10	50	0		22.52	22.31	22.24		
10	1	1	QPSK	22.95	22.85	22.67		
10	1	50		22.93	22.77	22.56		
10	25	12		22.94	22.88	22.67		
10	1	0		21.95	21.89	21.74		
10	1	51		21.84	21.76	21.71		
10	50	0		22.01	21.85	21.65		
10	1	1	16-QAM	21.99	21.74	21.72	21.84	0.1528
10	1	1	64-QAM	20.57	20.52	20.34		
10	1	1	256-QAM	18.05	17.88	17.77		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	23.06	22.90	22.84	22.98	0.1986
15	1	77		22.89	22.68	22.61		
15	36	18		23.00	22.86	22.69		
15	1	0		22.65	22.41	22.20		
15	1	78		22.38	22.25	22.19		
15	75	0		22.51	22.38	22.31		
15	1	1	QPSK	23.13	22.95	22.86		
15	1	77		22.95	22.75	22.62		
15	36	18		23.01	22.88	22.70		
15	1	0		22.07	21.92	21.75		
15	1	78		21.85	21.74	21.67		
15	75	0		22.02	21.90	21.73		
15	1	1	16-QAM	22.13	21.84	21.76	21.98	0.1578
15	1	1	64-QAM	20.83	20.59	20.46		
15	1	1	256-QAM	18.19	18.04	17.80		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	23.05	23.02	22.90	22.90	0.1950
20	1	104		22.59	22.65	22.64		
20	50	25		22.98	22.95	22.83		
20	1	0		22.52	22.47	22.46		
20	1	105		22.15	22.32	22.21		
20	100	0		22.39	22.28	22.25		
20	1	1	QPSK	23.03	22.95	22.92		
20	1	104		22.48	22.64	22.65		
20	50	25		22.92	22.79	22.77		
20	1	0		22.06	22.03	21.87		
20	1	105		21.75	21.79	21.78		
20	100	0		21.98	21.86	21.79		
20	1	1	16-QAM	21.98	21.97	21.85	21.83	0.1524
20	1	1	64-QAM	20.65	20.56	20.45		
20	1	1	256-QAM	18.13	18.01	17.91		
Limit	ERP < 3W			Result			Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
20	1	1	QPSK	17.83	17.95	16.42	18.37	18.05	16.14	21.12	21.01	19.29	25.04	0.3192
20	1	49		18.10	17.89	17.56	18.35	17.85	17.32	21.24	20.88	20.45		
20	25	12		18.21	18.16	17.68	18.16	17.93	17.45	21.20	21.06	20.58		
20	1	0		16.94	16.62	16.43	16.74	16.62	16.15	19.85	19.63	19.30		
20	1	50		16.79	16.52	16.27	16.74	16.44	16.01	19.78	19.49	19.15		
20	51	0		16.83	16.68	16.35	16.65	16.51	16.06	19.75	19.61	19.22		
20	1	1	16-QAM	18.01	17.62	16.53	17.72	17.53	16.18	20.88	20.59	19.37	24.68	0.2938
20	1	1	64-QAM	16.12	15.96	15.73	15.85	15.81	15.32	19.00	18.90	18.54		
20	1	1	256-QAM	13.45	13.30	12.91	13.04	13.03	12.45	16.26	16.18	15.70		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
30	1	1	QPSK	18.21	18.10	17.95	18.51	18.09	17.94	21.37	21.11	20.96	25.17	0.3289
30	1	76		18.25	18.17	17.85	18.46	17.98	17.68	21.37	21.09	20.78		
30	39	19		18.35	18.10	17.90	18.35	17.91	17.72	21.36	21.02	20.82		
30	1	0		17.15	16.81	16.81	16.90	16.77	16.57	20.04	19.80	19.70		
30	1	77		17.12	16.73	16.65	17.08	16.70	16.42	20.11	19.73	19.55		
30	78	0		17.15	16.79	16.57	16.95	16.65	13.36	20.06	19.73	18.27		
30	1	1	16-QAM	18.22	17.97	17.72	17.98	17.56	17.38	21.11	20.78	20.56	24.91	0.3097
30	1	1	64-QAM	16.35	16.11	16.01	16.05	15.91	15.68	19.21	19.02	18.86		
30	1	1	256-QAM	13.65	13.39	13.33	13.27	13.12	12.90	16.47	16.27	16.13		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
40	1	1	QPSK	18.15	18.39	18.09	18.45	18.13	18.21	21.31	21.27	21.16	25.12	0.3251
40	1	104		18.27	18.25	17.89	18.35	18.08	17.68	21.32	21.18	20.80		
40	53	26		18.23	18.10	17.92	18.29	17.94	17.68	21.27	21.03	20.81		
40	1	0		17.06	17.01	16.82	16.94	16.78	16.74	20.01	19.91	19.79		
40	1	105		16.99	16.79	16.44	16.85	16.62	16.32	19.93	19.72	19.39		
40	106	0		17.05	16.87	16.57	16.84	16.63	16.41	19.96	19.76	19.50		
40	1	1	16-QAM	18.08	18.05	17.76	17.76	17.64	17.72	20.93	20.86	20.75	24.73	0.2972
40	1	1	64-QAM	16.49	16.15	16.01	16.21	16.05	15.94	19.36	19.11	18.99		
40	1	1	256-QAM	13.52	13.51	13.40	13.24	13.28	13.07	16.39	16.41	16.25		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
50	1	1	QPSK	18.24	18.06	17.97	18.35	18.21	18.23	21.31	21.15	21.11	25.13	0.3258
50	1	131		18.36	18.12	17.71	18.27	18.03	17.62	21.33	21.09	20.68		
50	67	33		18.15	17.93	17.77	18.23	17.81	17.66	21.20	20.88	20.73		
50	1	0		16.98	16.77	16.69	16.79	16.74	16.76	19.90	19.77	19.74		
50	1	132		16.88	16.62	16.34	16.94	16.63	16.31	19.92	19.64	19.34		
50	133	0		16.91	16.54	16.45	16.86	16.55	16.34	19.90	19.56	19.41		
50	1	1	16-QAM	18.19	17.91	17.83	17.93	17.75	17.71	21.07	20.84	20.78	24.87	0.3069
50	1	1	64-QAM	16.33	16.01	15.92	15.96	15.98	15.95	19.16	19.01	18.95		
50	1	1	256-QAM	13.50	13.42	13.33	13.15	13.14	13.14	16.34	16.29	16.25		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
60	1	1	QPSK	18.14	18.11	17.92	18.17	18.24	18.05	21.17	21.19	21.00	25.04	0.3192
60	1	160		18.08	18.12	17.68	18.12	18.05	17.45	21.11	21.10	20.58		
60	81	40		18.21	18.01	17.65	18.24	17.88	17.68	21.24	20.96	20.68		
60	1	0		16.84	16.80	16.64	16.60	16.77	16.53	19.73	19.80	19.60		
60	1	161		16.62	16.66	16.29	16.61	16.59	16.06	19.63	19.64	19.19		
60	162	0		16.75	16.72	16.45	16.73	16.58	16.36	19.75	19.66	19.42		
60	1	1	16-QAM	17.96	16.05	17.74	17.76	16.05	17.63	20.87	19.06	20.70	24.67	0.2931
60	1	1	64-QAM	16.02	16.04	15.98	15.98	16.05	15.84	19.01	19.06	18.92		
60	1	1	256-QAM	13.33	13.48	13.31	13.09	13.28	13.02	16.22	16.39	16.18		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
80	1	1	QPSK	18.15	18.43	18.17	18.27	18.24	17.99	21.22	21.35	21.09	25.18	0.3296
80	1	215		17.75	18.23	17.85	17.80	18.04	17.53	20.79	21.15	20.70		
80	109	54		18.55	18.13	17.97	18.18	17.96	17.86	21.38	21.06	20.93		
80	1	0		17.03	17.01	16.86	16.71	16.92	16.57	19.88	19.98	19.73		
80	1	216		16.46	16.83	16.42	16.19	16.57	16.10	19.34	19.71	19.27		
80	217	0		16.90	16.80	16.82	16.65	16.62	16.47	19.79	19.72	19.66		
80	1	1	16-QAM	18.27	18.08	17.86	17.78	17.76	17.46	21.04	20.93	20.67	24.84	0.3048
80	1	1	64-QAM	16.24	16.27	16.05	16.13	16.19	15.88	19.20	19.24	18.98		
80	1	1	256-QAM	13.55	13.62	13.42	13.24	13.44	13.15	16.41	16.54	16.30		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
90	1	1	QPSK	18.41	18.53	18.10	18.45	18.48	18.04	21.44	21.52	21.08	25.32	0.3404
90	1	243		18.25	18.19	17.91	18.18	18.18	17.57	21.23	21.20	20.75		
90	123	61		18.01	18.14	18.20	17.87	17.92	17.97	20.95	21.04	21.10		
90	1	0		17.09	17.08	16.74	16.96	16.98	16.61	20.04	20.04	19.69		
90	1	244		16.84	16.83	16.39	16.73	16.75	16.24	19.80	19.80	19.33		
90	245	0		16.78	16.81	16.82	16.65	16.65	16.64	19.73	19.74	19.74		
90	1	1	16-QAM	18.23	18.25	17.73	17.92	17.93	17.54	21.09	21.10	20.65	24.90	0.3090
90	1	1	64-QAM	16.32	16.35	16.13	16.34	16.35	15.84	19.34	19.36	19.00		
90	1	1	256-QAM	13.72	13.72	13.32	13.55	13.25	13.14	16.65	16.50	16.24		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 3.8 dBi														
BW	RB	RB	Mod	Antenna 1			Antenna 2			Combine			EIRP	EIRP
(MHz)	Size	Offset		Lowest	Middle	Highest	Lowest	Middle	Highest	Lowest	Middle	Highest	(dBm)	(W)
100	1	1	QPSK	18.21	18.46	17.93	18.32	18.39	17.94	21.28	21.44	20.95	25.24	0.3342
100	1	271		17.64	18.28	17.87	17.55	18.14	17.62	20.61	21.22	20.76		
100	137	68		18.06	18.01	18.09	18.13	17.97	17.98	21.11	21.00	21.05		
100	1	0		17.04	17.05	16.69	16.69	16.85	16.51	19.88	19.96	19.61		
100	1	272		16.25	16.68	16.31	15.95	16.65	16.12	19.11	19.68	19.23		
100	273	0		16.76	16.72	16.70	16.55	16.67	16.55	19.67	19.71	19.64		
100	1	1	16-QAM	18.15	18.14	17.65	17.78	17.80	17.42	20.98	20.98	20.55	24.78	0.3006
100	1	1	64-QAM	16.30	16.32	15.95	16.02	16.16	15.82	19.17	19.25	18.90		
100	1	1	256-QAM	13.66	13.72	16.13	13.24	13.43	12.99	16.47	16.59	17.85		
Limit	EIRP < 2W			Result									Pass	

Appendix B. Test Results of Radiated Test

<External Antenna>

EN-DC 2A-n5A

EN-DC 2A-n5A / 10+20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1650	-60.52	-13	-47.52	-71.03	-66.94	0.81	9.38	H
	2475	-57.09	-13	-44.09	-70.82	-64.23	1.08	10.38	H
	3301	-54.65	-13	-41.65	-71.46	-63.45	1.10	12.06	H
									H
									H
									H
	1650	-60.21	-13	-47.21	-70.64	-66.63	0.81	9.38	V
	2475	-56.97	-13	-43.97	-70.74	-64.11	1.08	10.38	V
	3301	-54.33	-13	-41.33	-71.43	-63.13	1.10	12.06	V
									V
									V
									V
Middle	1656	-60.10	-13	-47.10	-70.61	-66.54	0.81	9.40	H
	2483	-56.71	-13	-43.71	-70.44	-63.88	1.09	10.42	H
	3312	-54.29	-13	-41.29	-71.1	-63.15	1.10	12.12	H
									H
									H
									H
	1656	-60.19	-13	-47.19	-70.64	-66.63	0.81	9.40	V
	2483	-56.62	-13	-43.62	-70.4	-63.79	1.09	10.42	V
	3312	-54.10	-13	-41.10	-71.21	-62.96	1.10	12.12	V
									V
									V
									V

Highest	1660	-60.42	-13	-47.42	-70.95	-66.87	0.81	9.41	H
	2490	-57.01	-13	-44.01	-70.75	-64.21	1.10	10.45	H
	3321	-54.13	-13	-41.13	-70.95	-63.04	1.10	12.17	H
									H
									H
									H
	1660	-60.48	-13	-47.48	-70.93	-66.93	0.81	9.41	V
	2490	-56.98	-13	-43.98	-70.77	-64.18	1.10	10.45	V
	3321	-53.79	-13	-40.79	-70.91	-62.70	1.10	12.17	V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

5G NR n25

5G NR n25/ 10MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3701	-52.05	-13	-39.05	-70.94	-62.92	1.23	12.10	H
	5552	-48.57	-13	-35.57	-71.9	-60.14	1.58	13.15	H
	7403	-42.12	-13	-29.12	-71.6	-51.57	1.94	11.39	H
									H
									H
									H
									H
	3701	-52.09	-13	-39.09	-71.24	-62.96	1.23	12.10	V
	5552	-45.64	-13	-32.64	-71.67	-57.21	1.58	13.15	V
	7403	-42.78	-13	-29.78	-72.36	-52.23	1.94	11.39	V
									V
									V
									V
									V
Middle	3756	-51.75	-13	-38.75	-70.6	-62.74	1.17	12.16	H
	5634	-47.46	-13	-34.46	-70.75	-59.21	1.48	13.23	H
	7513	-41.84	-13	-28.84	-71.08	-51.18	1.92	11.25	H
									H
									H
									H
									H
	3756	-51.41	-13	-38.41	-70.55	-62.40	1.17	12.16	V
	5634	-45.09	-13	-32.09	-71.14	-56.84	1.48	13.23	V
	7513	-41.67	-13	-28.67	-71.04	-51.01	1.92	11.25	V
									V
									V
									V
									V

Highest	3811	-51.93	-13	-38.93	-70.81	-63.01	1.14	12.22	H
	5717	-48.76	-13	-35.76	-72.15	-60.68	1.40	13.32	H
	7623	-42.70	-13	-29.70	-71.97	-52.42	1.89	11.61	H
									H
									H
									H
									H
	3811	-51.98	-13	-38.98	-71.17	-63.06	1.14	12.22	V
	5717	-46.28	-13	-33.28	-72.14	-58.20	1.40	13.32	V
	7623	-42.66	-13	-29.66	-72.12	-52.38	1.89	11.61	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 14A-n2A

EN-DC 14A-n2A / 10+20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-51.71	-13	-38.71	-70.6	-62.58	1.23	12.10	H
	5553	-48.86	-13	-35.86	-72.19	-60.44	1.58	13.15	H
	7405	-42.39	-13	-29.39	-71.87	-51.84	1.94	11.39	H
									H
									H
									H
									H
	3702	-51.76	-13	-38.76	-70.91	-62.63	1.23	12.10	V
	5553	-45.98	-13	-32.98	-72.01	-57.56	1.58	13.15	V
	7405	-42.43	-13	-29.43	-72	-51.88	1.94	11.39	V
									V
									V
									V
									V
Middle	3744	-52.30	-13	-39.30	-71.17	-63.26	1.18	12.14	H
	5610	-48.25	-13	-35.25	-71.52	-59.95	1.51	13.21	H
	7485	-42.69	-13	-29.69	-71.97	-52.00	1.92	11.23	H
									H
									H
									H
									H
	3744	-51.82	-13	-38.82	-70.97	-62.78	1.18	12.14	V
	5610	-45.31	-13	-32.31	-71.41	-57.01	1.51	13.21	V
	7485	-42.27	-13	-29.27	-71.68	-51.58	1.92	11.23	V
									V
									V
									V
									V

Highest	3782	-52.50	-13	-39.50	-71.34	-63.54	1.14	12.18	H
	5673	-48.44	-13	-35.44	-71.77	-60.27	1.44	13.27	H
	7565	-42.63	-13	-29.63	-71.87	-52.19	1.90	11.46	H
									H
									H
									H
									H
	3782	-52.50	-13	-39.50	-71.34	-63.54	1.14	12.18	V
	5673	-48.44	-13	-35.44	-71.77	-60.27	1.44	13.27	V
	7565	-42.63	-13	-29.63	-71.87	-52.19	1.90	11.46	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

5G NR n66

5G NR n66/ 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3422	-52.78	-13	-39.78	-70.93	-64.20	1.14	12.56	H
	5133	-49.95	-13	-36.95	-72.01	-61.31	1.30	12.67	H
	6845	-44.74	-13	-31.74	-72.32	-55.31	1.85	12.42	H
									H
									H
									H
									H
	3422	-53.02	-13	-40.02	-71.32	-64.44	1.14	12.56	V
	5133	-48.96	-13	-35.96	-71.84	-60.32	1.30	12.67	V
	6845	-43.90	-13	-30.90	-72.22	-54.47	1.85	12.42	V
									V
									V
									V
									V
Middle	3472	-52.54	-13	-39.54	-71.46	-63.77	1.22	12.46	H
	5208	-49.52	-13	-36.52	-71.81	-60.95	1.30	12.72	H
	6944	-44.11	-13	-31.11	-71.86	-54.29	1.84	12.02	H
									H
									H
									H
									H
	3472	-52.24	-13	-39.24	-70.9	-63.47	1.22	12.46	V
	5208	-48.63	-13	-35.63	-71.94	-60.06	1.30	12.72	V
	6944	-44.10	-13	-31.10	-72.17	-54.28	1.84	12.02	V
									V
									V
									V
									V

Highest	3522	-51.96	-13	-38.96	-71.23	-62.99	1.29	12.31	H
	5283	-49.17	-13	-36.17	-72.05	-60.67	1.45	12.95	H
	7045	-43.83	-13	-30.83	-71.86	-53.68	1.84	11.69	H
									H
									H
									H
									H
	3522	-52.15	-13	-39.15	-71.07	-63.18	1.29	12.31	V
	5283	-49.91	-13	-36.91	-72.07	-61.41	1.45	12.95	V
	7045	-43.89	-13	-30.89	-72.08	-53.74	1.84	11.69	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EN-DC 5A-n66A

EN-DC 5A-n66A / 10+40MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3425	-53.67	-13	-40.67	-71.85	-65.08	1.14	12.55	H
	5137	-49.98	-13	-36.98	-72.04	-61.35	1.30	12.67	H
	6849	-45.15	-13	-32.15	-72.74	-55.71	1.85	12.40	H
									H
									H
									H
									H
	3425	-53.32	-13	-40.32	-71.63	-64.73	1.14	12.55	V
	5137	-49.04	-13	-36.04	-71.93	-60.41	1.30	12.67	V
	6849	-44.12	-13	-31.12	-72.44	-54.68	1.85	12.40	V
									V
									V
									V
									V
Middle	3455	-52.94	-13	-39.94	-71.58	-64.24	1.19	12.49	H
	5182	-50.10	-13	-37.10	-72.28	-61.50	1.29	12.69	H
	6909	-44.66	-13	-31.66	-72.35	-54.98	1.84	12.16	H
									H
									H
									H
									H
	3455	-52.93	-13	-39.93	-71.45	-64.23	1.19	12.49	V
	5182	-49.21	-13	-36.21	-72.34	-60.61	1.29	12.69	V
	6909	-44.45	-13	-31.45	-72.61	-54.77	1.84	12.16	V
									V
									V
									V
									V

Highest	3484	-52.15	-13	-39.15	-71.26	-63.34	1.24	12.43	H
	5226	-50.05	-13	-37.05	-72.49	-61.49	1.33	12.78	H
	6969	-44.07	-13	-31.07	-71.86	-54.15	1.84	11.92	H
									H
									H
									H
									H
	3484	-53.23	-13	-40.23	-71.98	-64.42	1.24	12.43	V
	5226	-48.64	-13	-35.64	-72.17	-60.08	1.33	12.78	V
	6969	-44.28	-13	-31.28	-72.29	-54.36	1.84	11.92	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

5G NR n41

5G NR n41/ 50MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4997	-49.66	-25	-24.66	-71.38	-60.91	1.35	12.60	H
	7496	-42.88	-25	-17.88	-72.13	-52.17	1.92	11.21	H
	9995	-37.18	-25	-12.18	-71.57	-45.99	2.29	11.10	H
									H
									H
									H
									H
	4997	-49.27	-25	-24.27	-71.46	-60.52	1.35	12.60	V
	7496	-42.98	-25	-17.98	-72.36	-52.27	1.92	11.21	V
	9995	-38.52	-25	-13.52	-71.55	-47.33	2.29	11.10	V
									V
									V
									V
									V
Middle	5141	-49.73	-25	-24.73	-71.82	-61.10	1.30	12.67	H
	7712	-42.31	-25	-17.31	-71.72	-52.08	1.88	11.66	H
	10283	-37.28	-25	-12.28	-72.02	-45.94	2.27	10.93	H
									H
									H
									H
									H
	5141	-48.83	-25	-23.83	-71.76	-60.20	1.30	12.67	V
	7712	-42.27	-25	-17.27	-71.92	-52.04	1.88	11.66	V
	10283	-38.44	-25	-13.44	-72.27	-47.10	2.27	10.93	V
									V
									V
									V
									V

Highest	5285	-49.59	-25	-24.59	-72.5	-61.09	1.45	12.96	H
	7928	-41.80	-25	-16.80	-71.99	-51.23	1.95	11.38	H
	10571	-37.34	-25	-12.34	-72.48	-45.85	2.24	10.76	H
									H
									H
									H
									H
	5285	-48.10	-25	-23.10	-72.3	-59.60	1.45	12.96	V
	7928	-41.65	-25	-16.65	-72.2	-51.08	1.95	11.38	V
	10571	-37.25	-25	-12.25	-71.9	-45.76	2.24	10.76	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

5G NR n41 MIMO

5G NR n41/ 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4995	-50.05	-25	-25.05	-71.78	-61.30	1.35	12.60	H
	7492	-43.39	-25	-18.39	-72.66	-52.68	1.92	11.22	H
	9989	-37.45	-25	-12.45	-71.82	-46.25	2.29	11.09	H
									H
									H
									H
									H
	4995	-48.39	-25	-23.39	-71.07	-59.64	1.35	12.60	V
	7492	-42.93	-25	-17.93	-72.34	-52.22	1.92	11.22	V
	9989	-39.06	-25	-14.06	-72.09	-47.86	2.29	11.09	V
									V
									V
									V
									V
Middle	5169	-50.01	-25	-25.01	-72.15	-61.40	1.29	12.68	H
	7753	-42.25	-25	-17.25	-71.74	-52.04	1.88	11.68	H
	10337	-37.68	-25	-12.68	-72.49	-46.31	2.26	10.90	H
									H
									H
									H
									H
	5169	-49.35	-25	-24.35	-72.41	-60.74	1.29	12.68	V
	7753	-42.56	-25	-17.56	-72.31	-52.35	1.88	11.68	V
	10337	-38.21	-25	-13.21	-72.2	-46.84	2.26	10.90	V
									V
									V
									V
									V

Highest	5342	-49.52	-25	-24.52	-72.85	-61.07	1.57	13.13	H
	8013	-41.99	-25	-16.99	-72.55	-51.24	2.00	11.25	H
	10685	-37.35	-25	-12.35	-72.71	-45.81	2.23	10.69	H
									H
									H
									H
									H
	5342	-48.19	-25	-23.19	-73.01	-59.74	1.57	13.13	V
	8013	-41.32	-25	-16.32	-72.25	-50.57	2.00	11.25	V
	10685	-37.94	-25	-12.94	-72.92	-46.40	2.23	10.69	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

5G NR n71

5G NR n71/ 10MHz / PI/2 BPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1328	-58.00	-13	-45.00	-68.63	-64.19	0.76	6.95	H
	1991	-57.55	-13	-44.55	-69.52	-66.66	0.89	10.00	H
	2655	-55.40	-13	-42.40	-70.09	-65.30	1.08	10.97	H
									H
									H
									H
									H
	1328	-56.87	-13	-43.87	-67.31	-63.06	0.76	6.95	V
	1991	-58.63	-13	-45.63	-70.61	-67.74	0.89	10.00	V
	2655	-54.84	-13	-41.84	-69.76	-64.74	1.08	10.97	V
									V
									V
									V
									V
Middle	1353	-57.89	-13	-44.89	-68.48	-64.16	0.77	7.04	H
	2029	-55.69	-13	-42.69	-68.03	-64.64	0.90	9.86	H
	2705	-55.43	-13	-42.43	-70.27	-65.29	1.09	10.95	H
									H
									H
									H
									H
	1353	-53.85	-13	-40.85	-64.34	-60.12	0.77	7.04	V
	2029	-50.82	-13	-37.82	-63.3	-59.77	0.90	9.86	V
	2705	-54.86	-13	-41.86	-70.02	-64.72	1.09	10.95	V
									V
									V
									V
									V

Highest	1378	-58.60	-13	-45.60	-69.15	-64.95	0.77	7.12	H
	2066	-55.98	-13	-42.98	-68.67	-64.74	0.91	9.67	H
	2755	-52.78	-13	-39.78	-67.78	-62.60	1.11	10.92	H
									H
									H
									H
									H
	1378	-55.87	-13	-42.87	-66.41	-62.22	0.77	7.12	V
	2066	-51.90	-13	-38.90	-64.86	-60.66	0.91	9.67	V
	2755	-54.53	-13	-41.53	-69.92	-64.35	1.11	10.92	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.