FCC RADIO TEST REPORT

FCC ID	:	**UZ7-RTL10C1**
Equipment	:	**Tablet PC with Windows OS**
Brand Name	:	**Zebra**
Model Name	:	**RTL10C1**
Applicant	:	**Zebra Technologies Corporation 1 Zebra Plaza, Holtsville, NY 11742**
Manufacturer	:	**Zebra Technologies Corporation 1 Zebra Plaza, Holtsville, NY 11742**
Standard	:	**FCC 47 CFR Part 2, 22(H), 24(E), 27**

The product was received on Dec. 15, 2021 and testing was performed from Dec. 21, 2021 to Jan. 29, 2022. 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 partial report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

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Table of Contents

History of this test report **3**
Summary of Test Result **4**
1 General Description **6**
1.1 Product Feature of Equipment Under Test 6
1.2 Product Specification of Equipment Under Test 7
1.3 Modification of EUT 8
1.4 Maximum ERP/EIRP Power 9
1.5 Testing Location 12
1.6 Applicable Standards 12
2 Test Configuration of Equipment Under Test **13**
2.1 Test Mode 13
2.2 Connection Diagram of Test System 15
2.3 Support Unit used in test configuration and system 15
2.4 Frequency List of Low/Middle/High Channels 16
3 Conducted Test Items **20**
3.1 Measuring Instruments 20
3.2 Conducted Output Power and ERP/EIRP 21
4 Radiated Test Items **23**
4.1 Measuring Instruments 23
4.2 Radiated Spurious Emission Measurement 25
5 List of Measuring Equipment **26**
6 Uncertainty of Evaluation **27**
Appendix A. Test Results of Conducted Test
Appendix B. Test Results of Radiated Test
Appendix C. Test Setup Photographs

History of this test report

Report No.	Version	Description	Issued Date
FG181117C	01	Initial issue of report	Feb. 21, 2022

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)(2)	Effective Radiated Power (n5)	Pass	
	§27.50 (c)(10)	Effective Radiated Power (n12) (n71)		
	§24.232 (c) §27.50 (h)(2)	Equivalent Isotropic Radiated Power (n2) (n25) (n7) (n38) (n41)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (n66)		
-	§24.232 (d) §27.50 (d)(5)	Peak-to-Average Ratio	-	See Note
-	§2.1049	Occupied Bandwidth	-	See Note
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Band Edge Measurement (n2) (n5) (n12) (n25) (n66) (n71)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Band Edge Measurement (n7) (n38) (n41)		
-	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g) §27.53 (h)	Conducted Spurious Emission (n2) (n5) (n12) (n25) (n66) (n71)	-	See Note
	§2.1051 §27.53 (m)(4)	Conducted Spurious Emission (n7) (n38) (n41)		
-	§2.1055 §22.355 §24.235 §27.54	Frequency Stability Temperature & Voltage	-	See Note

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) (n12) (n25) (n66) (n71)	Pass	Under limit 15.42 dB at 10405.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (n7) (n38) (n41)		
Note: The module (Model: RM505Q-AE) makes no difference after verifying output power, this report reuses test data from the module report.				

Declaration of Conformity:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results. 2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".
Comments and Explanations:
The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Wei Chen

Report Producer: Amy Chen

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC with Windows OS
Brand Name	Zebra
Model Name	RTL10C1
FCC ID	UZ7-RTL10C1
Sample 1	XPAD
Sample 2	XSLATE
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/NFC/GNSS WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
HW Version	EV
SW Version	Windows 10 Pro
MFD	18OCT21
EUT Stage	Identical Prototype

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

Specification of Accessories				
Adaptor with CLA cable	**Brand Name**	Zebra	**Model Number**	ADP-65JH HB
Battery	**Brand Name**	ZEBRA	**Model Number**	XLBM1
Power cord	**Brand Name**	Zebra	**Model Number**	450040

Supported Unit Used in Test Configuration and System				
Keyboard	**Brand Name**	Zebra	**Model Number**	L10-KB
98 Whr Extended Battery (Certified)	**Brand Name**	Zebra	**Model Number**	XLBE1
AEI LONG RANGE RFID MODULE	**Brand Name**	Zebra	**Model Number**	M6E-MICRO
PASSIVE SHORT STYLUS	**Brand Name**	Zebra	**Model Number**	440007
ET8X MPP 2.0 ACTIVE STYLUS WITH 5 REPLACEMENT TIPS. AAAA BATTERY INCLUDED	**Brand Name**	Zebra	**Model Number**	SG-ET8X-STYLUS1-01

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 n7: 2502.5 MHz ~ 2567.5 MHz 5G NR n12: 701.5 MHz ~ 713.5 MHz 5G NR n25: 1852.5 MHz ~ 1912.5 MHz 5G NR n38: 2575 MHz ~ 2615 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 n7: 2622.5 MHz ~ 2687.5 MHz 5G NR n12: 731.5 MHz ~ 743.5 MHz 5G NR n25: 1932.5 MHz ~ 1992.5 MHz 5G NR n38: 2575 MHz ~ 2615 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
Bandwidth	5G NR n2: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n5: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n7: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n12: 5MHz / 10MHz / 15MHz 5G NR n25: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n38: 10MHz / 15MHz / 20MHz 5G NR n41: 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 80MHz / 100MHz 5G NR n66: 5MHz / 10MHz / 15MHz / 20MHz / 30MHz / 40MHz 5G NR n71: 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	**<SISO Mode>** 5G NR n2: 24.39 dBm 5G NR n5: 24.17 dBm 5G NR n7: 24.49 dBm 5G NR n12: 24.07 dBm 5G NR n25: 24.53 dBm 5G NR n41: 26.44 dBm 5G NR n41: 23.49 dBm for HPUE 5G NR n66: 24.43 dBm 5G NR n71: 24.27 dBm **<MIMO Mode>** 5G NR n41: 25.30 dBm
Antenna Type	Fixed Internal Antenna

Product Specification is subject to this standard	
Antenna Gain	**<Main>:** 5G NR n5: 1.65 dBi 5G NR n12: 2.13 dBi 5G NR n71: 1.91 dBi **<Aux.>:** 5G NR n41: 0.83 dBi **<MIMO1>** 5G NR n2: 2.04 dBi 5G NR n7: 2.58 dBi 5G NR n25: 2.04 dBi 5G NR n38: 3.58 dBi 5G NR n41: 3.58 dBi 5G NR n66: 2.86 dBi
Type of Modulation	PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.3 Modification of EUT

No modifications are made to the EUT during all test items.

1.4 Maximum ERP/EIRP Power

5G NR n2		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
5	1852.5 ~ 1907.5	0.4325	0.3499
10	1855.0 ~ 1905.0	0.4345	0.3428
15	1857.5 ~ 1902.5	0.4385	0.3540
20	1860.0 ~ 1900.0	0.4395	0.3664
5G NR n5		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
5	826.5 ~ 846.5	0.2323	0.1972
10	829.0 ~ 844.0	0.2286	0.1824
15	831.5 ~ 841.5	0.2328	0.1968
20	834.0~839.0	0.2275	0.1968
5G NR n7		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
5	2502.5 ~ 2567.5	0.4920	0.3981
10	2505.0 ~ 2565.0	0.4842	0.4150
15	2507.5 ~ 2562.5	0.5047	0.4188
20	2510.0 ~ 2560.0	0.5093	0.4256
5G NR n12		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz	Maximum ERP(W)	Maximum ERP(W)
5	701.5 ~ 713.5	0.2506	0.2109
10	704.0 ~ 711.0	0.2432	0.1871
15	706.5 ~ 708.5	0.2541	0.2153
5G NR n25		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
5	1852.5 ~ 1912.5	0.4457	0.3243
10	1855.0 ~ 1910.0	0.4416	0.3733
15	1857.5 ~ 1907.5	0.4539	0.3614
20	1860.0 ~ 1905.0	0.4508	0.3724

5G NR n41		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
20	2506.02 ~ 2679.99	0.9333	0.6745
30	2511.00 ~ 2674.98	1.0046	0.7362
40	2516.01 ~ 2670.00	1.0046	0.7499
50	2521.02 ~ 2664.99	0.9311	0.6776
60	2526.00 ~ 2659.98	0.9311	0.7015
80	2536.02 ~ 2649.99	0.8551	0.6546
100	2546.01 ~ 2640.00	0.8453	0.6281

5G NR n41_HPUE		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
20	2506.02 ~ 2679.99	0.4519	0.4436
30	2511.00 ~ 2674.98	0.4932	0.5093
40	2516.01 ~ 2670.00	0.5035	0.4875
50	2521.02 ~ 2664.99	0.4721	0.4498
60	2526.00 ~ 2659.98	0.4710	0.4457
80	2536.02 ~ 2649.99	0.4335	0.4335
100	2546.01 ~ 2640.00	0.4256	0.3926

5G NR n41_MIMO		PI/2 BPSK	QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)		Maximum EIRP(W)
20	2506.02 ~ 2679.99	-	1.0520	0.9727
30	2511.00 ~ 2674.98	-	1.1350	1.0399
40	2516.01 ~ 2670.00	-	1.1535	1.0351
50	2521.02 ~ 2664.99	-	1.0864	0.9705
60	2526.00 ~ 2659.98	-	1.0990	0.9795
80	2536.02 ~ 2649.99	-	1.0280	0.9204
100	2546.01 ~ 2640.00	-	1.0423	0.9120

5G NR n66		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	**Frequency Range (MHz)**	**Maximum EIRP(W)**	**Maximum EIRP(W)**
5	1712.5 ~ 1777.5	0.5358	0.4178
10	1715.0 ~ 1775.0	0.5188	0.4217
15	1717.5 ~ 1772.5	0.5284	0.4198
20	1720.0 ~ 1770.0	0.5093	0.4150
5G NR n71		**PI/2 BPSK / QPSK**	**16QAM / 64QAM / 256QAM**
BW (MHz)	**Frequency Range (MHz)**	**Maximum ERP(W)**	**Maximum ERP(W)**
5	665.5 ~ 695.5	0.2529	0.2128
10	668.0 ~ 693.0	0.2438	0.2014
15	670.5 ~ 690.5	0.2500	0.2037
20	673.0 ~ 688.0	0.2455	0.2138

1.5 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	Sherry Wu
Temperature	22.3~22.7℃
Relative Humidity	48.7~53.3%

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	Jack Cheng, Lance Chiang, and Chuan Chu
Temperature	22.3~26.4℃
Relative Humidity	58~66%
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

1.6 Applicable Standards

According to the specifications of 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.

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
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.

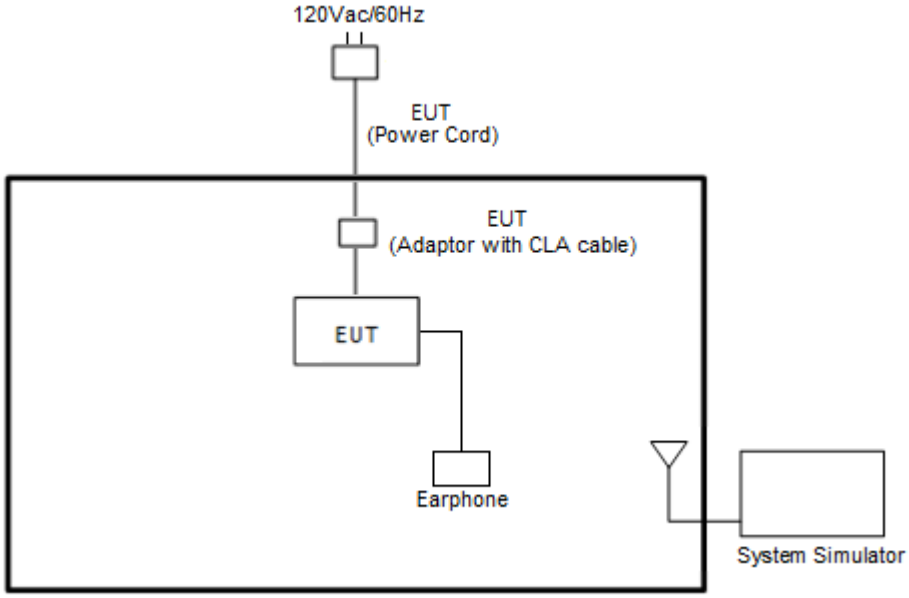
For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and find X Plane with Adapter for 5G NR n25, n66, and n41; X Plane without Adapter for 5G NR n5, and n38; Y Plane with Adapter for 5G NR n2, n7, and n71; Z Plane with Adapter for 5G NR n12 as worst plane.

Test Items	NR Band	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		5	10	15	20	30	40	50	60	80	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
	n7	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n12	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
	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						
	n7	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v						
	n12	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						
	n66	v	v	v	v	v	v	-	-	-	-	v	v	v	v	v						
	n71	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v						

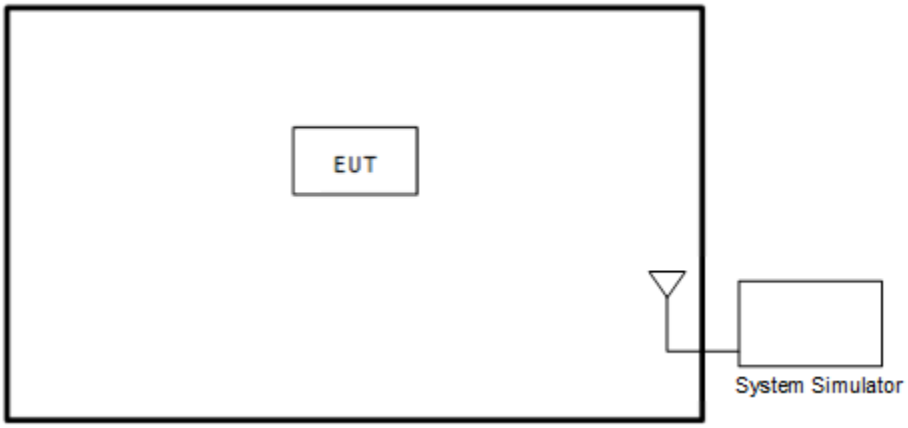
Test Items	NR Band	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		5	10	15	20	30	40	50	60	80	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H
Radiated Spurious Emission	n2				v	-	-	-	-	-	-	v					v			v	v	v
	n5				v	-	-	-	-	-	-	v					v			v	v	v
	n7				v	-	-	-	-	-	-	v					v			v	v	v
	n12			v	-	-	-	-	-	-	-	v					v			v	v	v
	n25				v	-	-	-	-	-	-	v					v			v	v	v
	n38	-			v	-	-	-	-	-	-	v					v			v	v	v
	n41	-	-	-							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. All the radiated test cases were performed with Sample 1. 5. 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.																					

2.2 Connection Diagram of Test System

<EUT with accessory >



<EUT without accessory >



2.3 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
2.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	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 Band n7 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	502000	507000	512000
	Frequency	2510	2535	2560
15	Channel	501500	507000	512500
	Frequency	2507.5	2535	2562.5
10	Channel	501000	507000	513000
	Frequency	2505	2535	2565
5	Channel	500500	507000	513500
	Frequency	2502.5	2535	2567.5

5G NR Band n12 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
15	Channel	141300	141500	141700
	Frequency	706.5	707.5	708.5
10	Channel	140800	141500	142200
	Frequency	704	707.5	711
5	Channel	140300	141500	142700
	Frequency	701.5	707.5	713.5

5G NR Band 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 Band n38 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
20	Channel	516000	519000	522000
	Frequency	2580	2595	2610
15	Channel	515500	519000	522500
	Frequency	2577.5	2595	2612.5
10	Channel	515000	519000	523000
	Frequency	2575	2595	2615

5G NR Band n41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
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
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

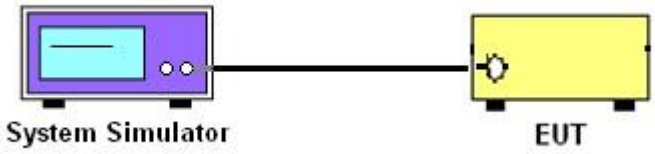
3 Conducted Test Items

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 n12 and n71

The EIRP of mobile transmitters must not exceed 2 Watts for 5G NR n2 and n25 and n7 and n38 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

Note: For MIMO mode, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

The directional gain "DG" is calculated as following table.

5G NR n41	MIMO 1 (dBi)	Aux. (dBi)	Directional gain (dBi)
	3.58	0.83	5.32

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.

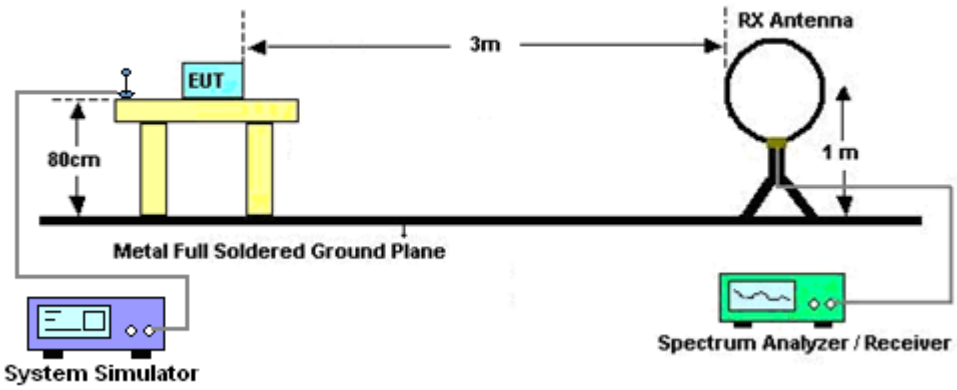
4 Radiated Test Items

4.1 Measuring Instruments

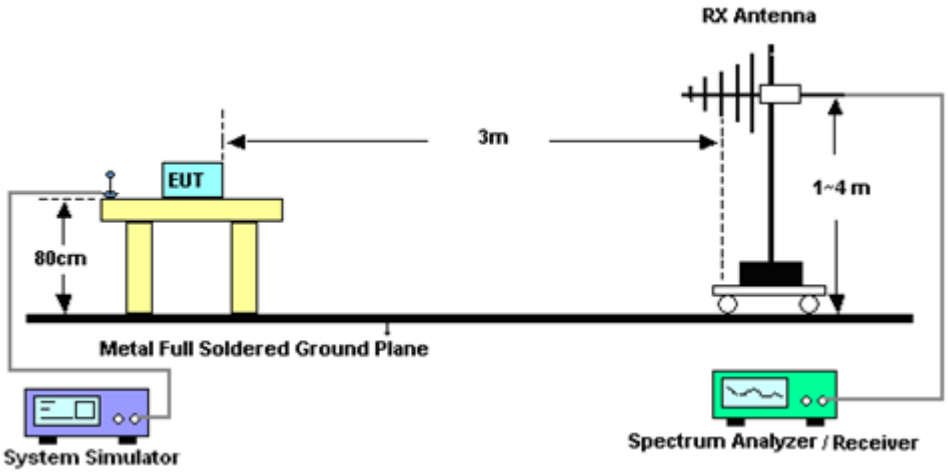
See list of measuring instruments of this test report.

4.1.1 Test Setup

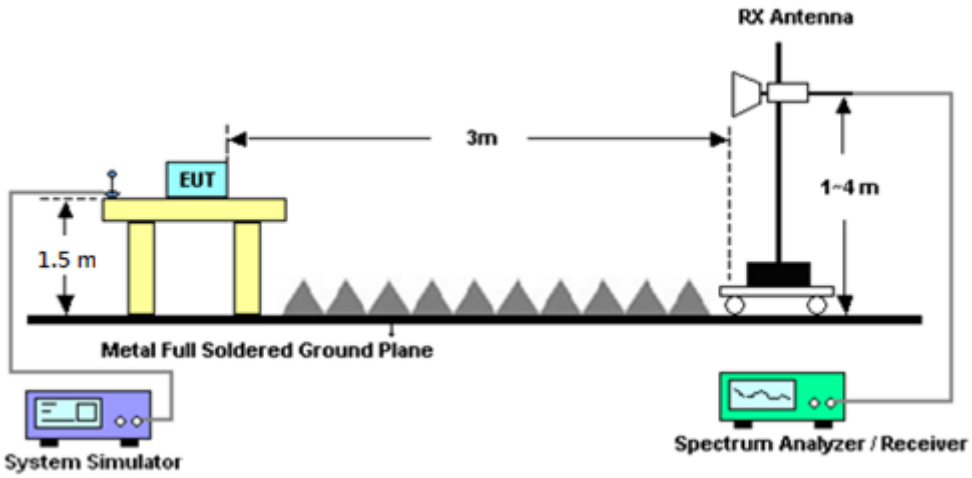
For radiated test below 30MHz



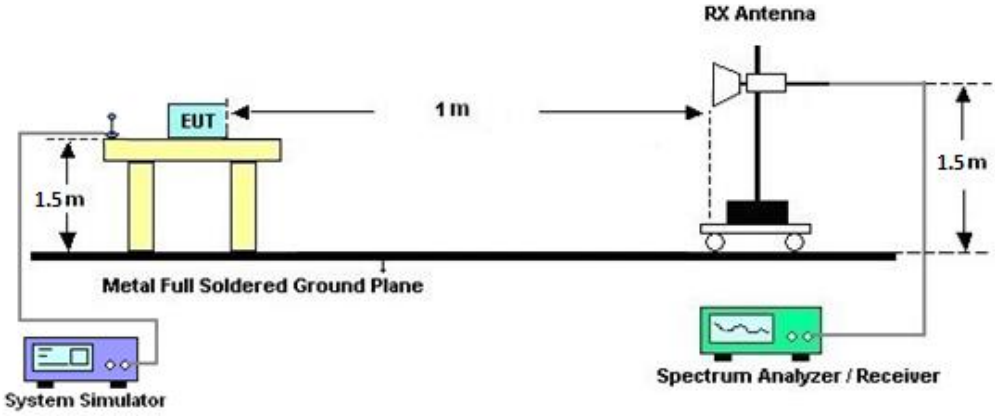
For radiated test from 30MHz to 1GHz



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 n7, 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 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 n7, 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	100315	9 kHz~30 MHz	Jan. 07, 2022	Jan. 13, 2022~ Jan. 29, 2022	Jan. 06, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	37059 & 01	30MHz~1GHz	Oct. 09, 2021	Jan. 13, 2022~ Jan. 29, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 09, 2021	Jan. 13, 2022~ Jan. 29, 2022	Oct. 08, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz~18GHz	Oct. 25, 2021	Jan. 13, 2022~ Jan. 29, 2022	Oct. 24, 2022	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	May 18, 2021	Jan. 13, 2022~ Jan. 29, 2022	May 17, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 30, 2021	Jan. 13, 2022~ Jan. 29, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 21, 2021	Jan. 13, 2022~ Jan. 29, 2022	May 20, 2022	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 24, 2021	Jan. 13, 2022~ Jan. 29, 2022	Mar. 23, 2022	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 25, 2021	Jan. 13, 2022~ Jan. 29, 2022	May 24, 2022	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900249	1GHz~18GHz	Dec. 22, 2021	Jan. 13, 2022~ Jan. 29, 2022	Dec. 21, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Jan. 13, 2022~ Jan. 29, 2022	Jun. 21, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010B	MY60240520	10Hz~44GHz	Dec. 23, 2021	Jan. 13, 2022~ Jan. 29, 2022	Dec. 22, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Jan. 13, 2022~ Jan. 29, 2022	Mar. 10, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 22, 2021	Jan. 13, 2022~ Jan. 29, 2022	Feb. 21, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 22, 2021	Jan. 13, 2022~ Jan. 29, 2022	Feb. 21, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12 SS	SN2	1.2GHz Low Pass Filter	Mar. 17, 2021	Jan. 13, 2022~ Jan. 29, 2022	Mar. 16, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-1080 -1200-15000-6 0SS	SN1	1.2GHz High Pass Filter	Mar. 17, 2021	Jan. 13, 2022~ Jan. 29, 2022	Mar. 16, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN2	3GHz High Pass Filter	Jul. 12, 2021	Jan. 13, 2022~ Jan. 29, 2022	Jul. 11, 2022	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN2	6.75GHz High Pass Filter	Mar. 17, 2021	Jan. 13, 2022~ Jan. 29, 2022	Mar. 16, 2022	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Sep. 30, 2021	Jan. 13, 2022~ Jan. 29, 2022	Sep. 29, 2022	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jan. 13, 2022~ Jan. 29, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jan. 13, 2022~ Jan. 29, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jan. 13, 2022~ Jan. 29, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Jan. 13, 2022~ Jan. 29, 2022	N/A	Radiation (03CH12-HY)
Hygrometer	Testo	608-H11	3489324	NA	Jan. 18, 2021	Dec. 21, 2021~ Dec. 23, 2021	Jan. 17, 2022	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8821C	6262044657	LTE	Jan. 07, 2021	Dec. 21, 2021~ Dec. 23, 2021	Jan. 06, 2022	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262012917	FR1	Jan. 07, 2021	Dec. 21, 2021~ Dec. 23, 2021	Jan. 06, 2022	Conducted (TH03-HY)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.10 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.39 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.34 dB

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and ERP/EIRP

<SISO Mode>

NR n2 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	24.24	24.19	24.09	26.36	0.4325
5	1	23		24.30	24.22	24.13		
5	12	6		24.24	24.22	24.09		
5	1	0		23.69	23.71	23.58		
5	1	24		23.77	23.68	23.56		
5	25	0		23.74	23.73	23.57		
5	1	1	QPSK	24.21	24.24	24.08		
5	1	23		24.32	24.29	24.16		
5	12	6		24.24	24.19	24.07		
5	1	0		23.25	23.24	23.05		
5	1	24		23.31	23.26	23.10		
5	25	0		23.26	23.19	23.11		
5	1	1	16-QAM	23.12	23.18	23.40	25.44	0.3499
5	1	1	64-QAM	21.90	21.94	21.20		
5	1	1	256-QAM	19.14	19.15	18.97		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.34	24.20	24.04	26.38	0.4345
10	1	50		24.29	24.32	24.00		
10	25	12		24.34	24.22	24.13		
10	1	0		23.80	23.71	23.55		
10	1	51		23.77	23.76	23.51		
10	50	0		23.87	23.84	23.60		
10	1	1	QPSK	24.30	24.20	24.14		
10	1	50		24.27	24.21	24.12		
10	25	12		24.30	24.21	24.31		
10	1	0		23.33	23.27	23.13		
10	1	51		23.28	23.17	23.09		
10	50	0		23.00	23.22	23.13		
10	1	1	16-QAM	23.31	23.21	23.16	25.35	0.3428
10	1	1	64-QAM	21.94	21.89	21.84		
10	1	1	256-QAM	19.18	19.11	19.04		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.35	24.29	24.17	26.42	0.4385
15	1	77		24.30	24.36	24.12		
15	36	18		24.32	24.32	24.10		
15	1	0		23.82	23.87	23.62		
15	1	78		23.80	23.84	23.62		
15	75	0		23.91	23.84	23.60		
15	1	1	QPSK	24.38	24.36	24.06		
15	1	77		24.34	24.30	24.04		
15	36	18		24.34	24.32	24.14		
15	1	0		23.31	23.35	23.10		
15	1	78		23.37	23.29	23.07		
15	75	0		23.31	23.35	23.15		
15	1	1	16-QAM	23.45	23.20	23.42	25.49	0.3540
15	1	1	64-QAM	21.66	21.48	21.20		
15	1	1	256-QAM	19.25	19.23	19.00		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.27	24.24	24.21	26.43	0.4395
20	1	104		24.37	24.23	24.11		
20	50	25		24.35	24.39	24.22		
20	1	0		23.85	23.73	23.71		
20	1	105		23.86	23.75	23.63		
20	100	0		23.80	23.79	23.72		
20	1	1	QPSK	24.32	24.34	24.18		
20	1	104		24.39	24.34	24.01		
20	50	25		24.34	24.38	24.23		
20	1	0		23.36	23.32	23.30		
20	1	105		23.40	23.32	23.18		
20	100	0		23.30	23.34	23.24		
20	1	1	16-QAM	23.60	23.33	23.16	25.64	0.3664
20	1	1	64-QAM	21.42	22.03	21.83		
20	1	1	256-QAM	19.14	19.17	19.20		
Limit	EIRP < 2W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.65 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.16	24.01	23.90	23.66	0.2323
5	1	23		23.97	23.89	23.66		
5	12	6		24.07	23.96	23.76		
5	1	0		23.61	23.48	23.35		
5	1	24		23.44	23.37	23.09		
5	25	0		23.54	23.43	23.29		
5	1	1	QPSK	24.14	23.95	23.82		
5	1	23		23.97	23.92	23.67		
5	12	6		24.05	23.90	23.74		
5	1	0		23.15	23.00	22.95		
5	1	24		22.98	22.91	22.68		
5	25	0		23.09	22.99	22.80		
5	1	1	16-QAM	23.45	22.85	23.29	22.95	0.1972
5	1	1	64-QAM	21.42	21.60	21.14		
5	1	1	256-QAM	19.20	19.09	18.94		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.65 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.09	23.91	23.82	23.59	0.2286
10	1	50		23.98	23.67	22.80		
10	25	12		24.04	24.01	23.81		
10	1	0		23.56	23.43	23.29		
10	1	51		23.36	23.09	22.17		
10	50	0		23.53	23.51	23.31		
10	1	1	QPSK	24.05	23.93	23.77		
10	1	50		23.90	23.90	23.68		
10	25	12		24.00	23.96	23.79		
10	1	0		23.03	22.90	22.82		
10	1	51		22.94	22.88	22.73		
10	50	0		23.02	22.97	22.77		
10	1	1	16-QAM	22.96	22.82	23.11	22.61	0.1824
10	1	1	64-QAM	21.38	21.53	20.92		
10	1	1	256-QAM	19.00	18.88	18.86		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.65 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.14	24.10	23.93	23.67	0.2328
15	1	77		23.91	23.85	23.73		
15	36	18		24.06	24.02	23.92		
15	1	0		23.61	23.58	23.45		
15	1	78		23.42	23.40	23.20		
15	75	0		23.53	23.53	23.40		
15	1	1	QPSK	24.17	24.14	23.95		
15	1	77		23.97	23.78	23.80		
15	36	18		24.05	24.04	23.94		
15	1	0		23.19	23.06	22.93		
15	1	78		22.98	22.90	22.72		
15	75	0		23.09	23.04	22.86		
15	1	1	16-QAM	23.12	23.44	23.26	22.94	0.1968
15	1	1	64-QAM	21.78	21.28	21.07		
15	1	1	256-QAM	19.11	19.03	18.96		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 1.65 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.04	24.05	24.03	23.57	0.2275
20	1	104		23.85	23.79	23.75		
20	50	25		23.97	24.02	23.95		
20	1	0		23.53	23.61	23.52		
20	1	105		23.30	23.34	23.22		
20	100	0		23.47	23.51	23.43		
20	1	1	QPSK	24.07	24.06	24.06		
20	1	104		23.80	23.82	23.74		
20	50	25		24.00	23.97	23.97		
20	1	0		23.03	23.06	23.08		
20	1	105		22.81	22.85	22.78		
20	100	0		22.99	23.02	22.99		
20	1	1	16-QAM	23.44	23.05	22.91	22.94	0.1968
20	1	1	64-QAM	21.27	21.80	21.71		
20	1	1	256-QAM	19.02	19.04	19.02		
Limit	ERP < 7W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 2.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	24.33	24.14	24.05	26.92	0.4920
5	1	23		24.34	24.20	23.94		
5	12	6		24.30	24.19	24.10		
5	1	0		23.88	23.62	23.58		
5	1	24		23.85	22.72	23.46		
5	25	0		23.92	23.66	23.62		
5	1	1	QPSK	24.26	24.17	24.13		
5	1	23		24.28	24.20	24.00		
5	12	6		24.22	24.17	24.03		
5	1	0		23.26	23.22	23.17		
5	1	24		23.27	23.17	23.02		
5	25	0		23.30	23.24	23.10		
5	1	1	16-QAM	23.20	23.11	23.42	26.00	0.3981
5	1	1	64-QAM	21.95	21.83	21.28		
5	1	1	256-QAM	19.40	19.24	19.11		
Limit	EIRP < 2W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 2.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.16	24.15	24.13	26.85	0.4842
10	1	50		24.10	24.19	23.96		
10	25	12		24.25	24.20	24.11		
10	1	0		23.67	23.65	23.56		
10	1	51		23.67	23.59	23.37		
10	50	0		23.74	23.77	23.61		
10	1	1	QPSK	24.27	24.17	24.07		
10	1	50		24.21	24.19	24.03		
10	25	12		24.20	24.17	24.14		
10	1	0		23.33	23.22	23.12		
10	1	51		23.22	23.24	23.06		
10	50	0		23.20	23.16	23.08		
10	1	1	16-QAM	23.60	23.13	23.01	26.18	0.4150
10	1	1	64-QAM	21.59	21.56	21.47		
10	1	1	256-QAM	19.24	19.15	19.18		
Limit	EIRP < 2W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 2.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.37	24.39	24.22	27.03	0.5047
15	1	77		24.40	24.19	23.97		
15	36	18		24.35	24.28	24.21		
15	1	0		23.88	23.82	23.76		
15	1	78		23.86	23.71	23.58		
15	75	0		23.85	23.81	23.77		
15	1	1	QPSK	24.45	24.31	24.20		
15	1	77		24.35	24.28	24.18		
15	36	18		24.39	24.31	24.22		
15	1	0		23.39	23.38	23.23		
15	1	78		23.29	23.24	23.20		
15	75	0		23.40	23.30	23.23		
15	1	1	16-QAM	23.41	23.64	23.13	26.22	0.4188
15	1	1	64-QAM	22.15	21.48	21.86		
15	1	1	256-QAM	19.33	19.22	19.13		
Limit	EIRP < 2W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 2.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.49	24.25	24.25	27.07	0.5093
20	1	104		24.41	24.24	24.10		
20	50	25		24.47	24.35	24.23		
20	1	0		24.01	23.79	23.70		
20	1	105		23.91	23.77	23.55		
20	100	0		23.93	23.84	23.69		
20	1	1	QPSK	24.42	24.32	23.96		
20	1	104		24.44	24.29	24.04		
20	50	25		24.40	24.33	24.22		
20	1	0		23.48	23.39	23.27		
20	1	105		23.38	23.27	23.20		
20	100	0		23.39	23.36	23.27		
20	1	1	16-QAM	23.71	23.29	22.97	26.29	0.4256
20	1	1	64-QAM	21.54	21.76	21.95		
20	1	1	256-QAM	19.28	19.24	19.12		
Limit	EIRP < 2W			Result			Pass	

NR n12 Maximum Average Power [dBm] (GT - LC = 2.13 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	23.86	23.80	23.66	23.99	0.2506
5	1	23		23.63	23.69	23.46		
5	12	6		23.88	23.69	23.56		
5	1	0		23.32	23.34	23.09		
5	1	24		23.12	23.17	22.93		
5	25	0		23.31	23.21	23.07		
5	1	1	QPSK	24.01	23.88	23.65		
5	1	23		23.80	23.84	23.45		
5	12	6		23.74	23.70	23.52		
5	1	0		22.97	22.87	22.65		
5	1	24		22.81	22.76	22.45		
5	25	0		22.89	22.78	22.54		
5	1	1	16-QAM	23.26	22.58	22.56	23.24	0.2109
5	1	1	64-QAM	21.14	21.08	21.33		
5	1	1	256-QAM	18.92	18.86	18.61		
Limit	ERP < 3W			Result			Pass	

NR n12 Maximum Average Power [dBm] (GT - LC = 2.13 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	23.88	23.81	23.75	23.86	0.2432
10	1	50		23.61	23.62	23.48		
10	25	12		23.76	23.80	23.70		
10	1	0		23.37	23.31	23.24		
10	1	51		23.10	23.16	22.95		
10	50	0		23.31	23.29	23.16		
10	1	1	QPSK	23.80	23.76	23.82		
10	1	50		23.67	23.60	23.57		
10	25	12		23.68	23.74	23.68		
10	1	0		22.81	22.71	22.87		
10	1	51		22.65	22.59	22.58		
10	50	0		22.76	22.76	22.64		
10	1	1	16-QAM	22.66	22.57	22.74	22.72	0.1871
10	1	1	64-QAM	21.47	21.37	20.99		
10	1	1	256-QAM	18.82	18.81	18.72		
Limit	ERP < 3W			Result			Pass	

NR n12 Maximum Average Power [dBm] (GT - LC = 2.13 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.03	23.98	23.91	24.05	0.2541
15	1	77		23.64	23.61	23.57		
15	36	18		23.81	23.78	23.77		
15	1	0		23.47	23.43	23.42		
15	1	78		23.11	23.12	23.04		
15	75	0		23.36	23.31	23.25		
15	1	1	QPSK	24.07	24.06	23.91		
15	1	77		23.71	23.71	23.61		
15	36	18		23.89	23.84	23.76		
15	1	0		22.99	23.02	22.93		
15	1	78		22.68	22.62	22.60		
15	75	0		22.87	22.81	22.80		
15	1	1	16-QAM	23.35	23.25	22.85	23.33	0.2153
15	1	1	64-QAM	21.15	21.16	21.59		
15	1	1	256-QAM	18.95	18.94	18.88		
Limit	ERP < 3W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	24.28	24.16	24.13	26.49	0.4457
5	1	23		24.27	24.36	24.15		
5	12	6		24.26	24.24	24.16		
5	1	0		23.73	23.72	23.61		
5	1	24		23.75	23.83	23.59		
5	25	0		23.76	23.70	23.65		
5	1	1	QPSK	24.38	24.22	24.17		
5	1	23		24.45	24.32	24.19		
5	12	6		24.25	24.17	24.11		
5	1	0		23.39	23.21	23.15		
5	1	24		23.43	23.35	23.20		
5	25	0		23.29	23.22	23.14		
5	1	1	16-QAM	23.07	23.06	22.94	25.11	0.3243
5	1	1	64-QAM	21.63	21.84	21.86		
5	1	1	256-QAM	19.27	19.18	21.41		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.38	24.21	23.51	26.45	0.4416
10	1	50		24.35	24.29	23.57		
10	25	12		24.39	24.32	24.24		
10	1	0		23.82	23.67	22.63		
10	1	51		23.78	23.78	22.79		
10	50	0		23.89	23.85	23.70		
10	1	1	QPSK	24.34	24.30	24.18		
10	1	50		24.41	24.30	24.17		
10	25	12		24.37	24.32	24.21		
10	1	0		23.42	23.24	23.18		
10	1	51		23.32	23.30	23.23		
10	50	0		23.36	23.35	23.16		
10	1	1	16-QAM	23.68	23.59	23.11	25.72	0.3733
10	1	1	64-QAM	21.51	21.43	21.63		
10	1	1	256-QAM	19.24	19.20	19.13		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.42	24.38	24.26	26.57	0.4539
15	1	77		24.47	24.30	24.14		
15	36	18		24.45	24.33	24.21		
15	1	0		23.93	23.85	23.74		
15	1	78		24.02	23.78	23.69		
15	75	0		23.94	23.77	23.71		
15	1	1	QPSK	24.53	24.40	24.24		
15	1	77		24.45	24.33	24.21		
15	36	18		24.49	24.34	24.23		
15	1	0		23.47	23.42	23.17		
15	1	78		23.44	23.32	23.07		
15	75	0		23.45	23.39	23.23		
15	1	1	16-QAM	23.47	23.45	23.54	25.58	0.3614
15	1	1	64-QAM	22.27	22.15	21.34		
15	1	1	256-QAM	19.37	19.28	19.10		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 2.04 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.50	24.45	24.11	26.54	0.4508
20	1	104		24.42	24.25	23.98		
20	50	25		24.50	24.31	24.28		
20	1	0		24.02	23.94	23.61		
20	1	105		23.95	23.75	23.47		
20	100	0		23.92	23.80	23.75		
20	1	1	QPSK	24.43	24.44	24.25		
20	1	104		24.45	24.30	24.18		
20	50	25		24.40	24.35	24.23		
20	1	0		23.50	23.55	23.29		
20	1	105		23.43	23.41	23.08		
20	100	0		23.44	23.32	23.23		
20	1	1	16-QAM	23.37	23.11	23.67	25.71	0.3724
20	1	1	64-QAM	22.11	21.74	21.42		
20	1	1	256-QAM	19.55	19.32	19.14		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	25.57	25.91	25.60	29.70	0.9333
20	1	49		25.52	26.10	24.69		
20	25	12		25.52	26.05	25.34		
20	1	0		22.15	22.44	22.34		
20	1	50		22.07	22.62	22.11		
20	50	0		25.14	25.58	24.94		
20	1	1	QPSK	25.57	25.91	25.63		
20	1	49		25.51	26.12	24.71		
20	25	12		25.50	26.01	25.16		
20	1	0		22.14	22.48	22.35		
20	1	50		21.98	22.64	22.17		
20	50	0		24.61	25.04	24.38		
20	1	1	16-QAM	24.53	24.71	24.42	28.29	0.6745
20	1	1	64-QAM	23.19	23.48	23.45		
20	1	1	256-QAM	21.12	21.36	21.35		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	26.01	26.24	26.28	30.02	1.0046
30	1	76		25.90	26.44	24.91		
30	36	18		25.87	26.34	25.74		
30	1	0		22.55	22.80	21.93		
30	1	77		22.43	23.04	22.64		
30	75	0		25.47	25.85	25.39		
30	1	1	QPSK	26.01	26.25	26.11		
30	1	76		25.80	26.17	24.79		
30	36	18		25.84	26.32	25.52		
30	1	0		22.51	22.82	22.90		
30	1	77		22.40	22.95	22.66		
30	75	0		25.02	25.37	24.73		
30	1	1	16-QAM	24.75	25.09	24.98	28.67	0.7362
30	1	1	64-QAM	23.67	23.85	23.63		
30	1	1	256-QAM	21.51	21.77	21.86		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	25.90	26.24	26.31	30.02	1.0046
40	1	104		25.96	26.44	24.89		
40	50	25		25.87	26.37	25.79		
40	1	0		22.52	22.77	22.84		
40	1	105		22.56	23.01	22.56		
40	100	0		25.38	25.87	25.58		
40	1	1	QPSK	25.70	26.24	26.23		
40	1	104		25.97	26.24	24.72		
40	50	25		25.71	26.32	25.87		
40	1	0		22.51	22.78	22.80		
40	1	105		22.54	26.28	22.50		
40	100	0		24.89	25.40	25.10		
40	1	1	16-QAM	24.52	25.10	25.17	28.75	0.7499
40	1	1	64-QAM	23.60	23.71	23.95		
40	1	1	256-QAM	21.50	21.80	21.89		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	25.61	25.90	25.84	29.69	0.9311
50	1	131		25.89	26.09	24.71		
50	64	32		25.54	26.01	25.97		
50	1	0		22.13	22.36	22.37		
50	1	132		22.40	22.69	22.12		
50	128	0		25.20	25.51	25.31		
50	1	1	QPSK	25.44	25.87	25.90		
50	1	131		25.84	26.11	24.66		
50	64	32		25.28	25.98	25.88		
50	1	0		22.15	22.41	22.45		
50	1	132		22.39	22.73	22.19		
50	128	0		24.68	25.00	24.89		
50	1	1	16-QAM	24.30	24.73	24.61	28.31	0.6776
50	1	1	64-QAM	23.11	23.36	23.51		
50	1	1	256-QAM	21.10	21.31	21.34		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	25.46	25.80	25.83	29.69	0.9311
60	1	160		25.73	26.05	24.34		
60	81	40		25.51	25.93	25.80		
60	1	0		22.00	22.35	22.34		
60	1	161		22.34	22.64	22.05		
60	162	0		25.19	25.44	25.19		
60	1	1	QPSK	25.42	25.81	25.67		
60	1	160		25.73	26.11	24.67		
60	81	40		25.47	25.99	25.88		
60	1	0		21.91	22.33	22.31		
60	1	161		22.23	22.59	22.03		
60	162	0		24.67	25.00	24.84		
60	1	1	16-QAM	24.18	24.69	24.88	28.46	0.7015
60	1	1	64-QAM	23.08	23.37	23.41		
60	1	1	256-QAM	20.97	21.31	21.29		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	25.14	25.62	25.69	29.32	0.8551
80	1	215		25.26	25.55	21.50		
80	108	54		25.30	25.67	25.63		
80	1	0		21.81	22.10	22.26		
80	1	216		21.87	22.07	21.83		
80	216	0		24.78	25.11	25.13		
80	1	1	QPSK	25.28	25.53	25.74		
80	1	215		25.32	25.52	24.53		
80	108	54		25.31	25.68	25.67		
80	1	0		21.85	22.12	22.31		
80	1	216		21.90	21.97	21.85		
80	216	0		24.27	24.65	24.66		
80	1	1	16-QAM	24.16	24.33	24.58	28.16	0.6546
80	1	1	64-QAM	22.71	23.20	23.18		
80	1	1	256-QAM	20.69	21.02	20.70		
Limit	EIRP < 2W			Result			Pass	

NR n41 Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	25.30	25.60	25.44	29.27	0.8453
100	1	271		25.30	25.62	24.37		
100	135	67		25.38	25.65	25.64		
100	1	0		21.87	22.14	22.08		
100	1	272		21.84	22.14	21.82		
100	270	0		24.82	25.13	25.08		
100	1	1	QPSK	25.28	25.57	25.56		
100	1	271		25.27	25.61	24.45		
100	135	67		25.40	25.69	25.61		
100	1	0		21.81	22.12	22.07		
100	1	272		21.77	22.07	21.79		
100	270	0		24.34	24.65	24.59		
100	1	1	16-QAM	24.21	24.34	24.40	27.98	0.6281
100	1	1	64-QAM	22.92	23.27	22.98		
100	1	1	256-QAM	20.67	21.08	20.88		
Limit	EIRP < 2W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 2.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	23.63	23.86	23.89	27.29	0.5358
5	1	23		24.10	23.85	23.90		
5	12	6		24.16	23.91	24.04		
5	1	0		23.01	23.39	23.39		
5	1	24		23.58	23.33	24.43		
5	25	0		23.67	23.38	23.45		
5	1	1	QPSK	24.13	23.94	24.06		
5	1	23		24.16	23.88	24.08		
5	12	6		24.10	23.84	23.96		
5	1	0		23.21	22.92	23.04		
5	1	24		23.17	22.92	22.92		
5	25	0		23.14	22.93	22.94		
5	1	1	16-QAM	23.18	23.20	23.35	26.21	0.4178
5	1	1	64-QAM	21.85	21.05	21.13		
5	1	1	256-QAM	18.94	18.88	18.93		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 2.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.24	23.91	22.99	27.15	0.5188
10	1	50		24.16	23.96	23.82		
10	25	12		24.29	23.94	24.04		
10	1	0		23.62	23.39	22.43		
10	1	51		23.65	23.44	23.30		
10	50	0		23.73	23.43	23.53		
10	1	1	QPSK	24.24	23.85	23.94		
10	1	50		24.18	23.80	23.98		
10	25	12		24.26	23.77	24.04		
10	1	0		23.29	22.90	23.02		
10	1	51		23.16	22.78	23.00		
10	50	0		23.25	22.89	23.03		
10	1	1	16-QAM	23.23	22.87	23.39	26.25	0.4217
10	1	1	64-QAM	21.94	21.57	21.22		
10	1	1	256-QAM	19.23	18.88	19.00		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 2.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.21	23.99	23.75	27.23	0.5284
15	1	77		24.17	23.88	23.88		
15	36	18		24.20	23.88	23.89		
15	1	0		23.70	23.51	23.21		
15	1	78		23.62	23.38	23.44		
15	75	0		23.70	23.38	23.41		
15	1	1	QPSK	24.37	24.01	23.68		
15	1	77		24.26	24.01	23.86		
15	36	18		24.18	23.93	23.87		
15	1	0		23.36	23.01	22.94		
15	1	78		23.27	22.84	22.87		
15	75	0		23.22	23.00	22.88		
15	1	1	16-QAM	23.15	23.37	22.62	26.23	0.4198
15	1	1	64-QAM	21.48	21.10	21.62		
15	1	1	256-QAM	19.32	18.86	19.00		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 2.86 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	23.77	23.91	23.91	27.07	0.5093
20	1	104		24.04	23.93	23.93		
20	50	25		24.21	23.96	23.95		
20	1	0		23.25	23.10	23.45		
20	1	105		23.59	23.40	23.42		
20	100	0		23.63	23.46	23.47		
20	1	1	QPSK	24.14	23.90	23.54		
20	1	104		24.14	23.90	24.00		
20	50	25		24.16	23.84	23.86		
20	1	0		23.39	23.14	22.91		
20	1	105		23.18	22.93	22.98		
20	100	0		23.13	23.01	22.95		
20	1	1	16-QAM	22.91	22.86	23.32	26.18	0.4150
20	1	1	64-QAM	21.63	21.80	21.12		
20	1	1	256-QAM	19.34	18.95	18.93		
Limit	EIRP < 1W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 1.91 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	23.55	23.90	23.84	24.03	0.2529
5	1	23		23.80	23.80	23.66		
5	12	6		24.12	23.93	23.75		
5	1	0		22.99	23.49	23.33		
5	1	24		23.25	23.35	23.13		
5	25	0		23.55	23.39	23.25		
5	1	1	QPSK	24.27	23.88	23.77		
5	1	23		24.06	23.81	23.59		
5	12	6		24.07	23.83	23.71		
5	1	0		23.24	22.90	22.91		
5	1	24		23.07	22.85	22.69		
5	25	0		23.15	22.88	22.73		
5	1	1	16-QAM	23.52	22.79	22.59	23.28	0.2128
5	1	1	64-QAM	21.33	21.59	21.47		
5	1	1	256-QAM	19.41	19.18	18.98		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 1.91 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.10	23.79	23.76	23.87	0.2438
10	1	50		23.90	23.03	23.47		
10	25	12		23.76	23.94	23.72		
10	1	0		23.63	23.33	23.25		
10	1	51		23.43	22.55	22.99		
10	50	0		23.36	23.42	23.17		
10	1	1	QPSK	24.11	23.90	23.90		
10	1	50		23.83	23.86	23.64		
10	25	12		23.83	23.94	23.73		
10	1	0		23.17	22.97	22.98		
10	1	51		22.89	22.87	22.59		
10	50	0		23.03	22.96	22.68		
10	1	1	16-QAM	23.00	23.28	23.19	23.04	0.2014
10	1	1	64-QAM	21.49	21.06	21.02		
10	1	1	256-QAM	19.50	18.97	18.98		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 1.91 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.18	24.02	23.90	23.98	0.2500
15	1	77		23.88	23.93	23.61		
15	36	18		23.20	23.95	23.79		
15	1	0		23.67	23.47	23.37		
15	1	78		23.45	23.41	23.07		
15	75	0		23.55	23.48	23.27		
15	1	1	QPSK	24.22	24.00	24.02		
15	1	77		24.01	23.89	23.60		
15	36	18		23.22	23.93	23.88		
15	1	0		23.22	23.05	22.91		
15	1	78		22.97	22.84	22.61		
15	75	0		23.07	22.95	22.82		
15	1	1	16-QAM	23.17	22.84	23.33	23.09	0.2037
15	1	1	64-QAM	22.00	21.70	21.09		
15	1	1	256-QAM	19.42	19.17	19.08		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = 1.91 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.12	24.07	24.00	23.90	0.2455
20	1	104		23.81	23.77	23.58		
20	50	25		24.00	23.91	23.84		
20	1	0		23.68	23.61	23.53		
20	1	105		23.35	23.22	23.10		
20	100	0		23.45	23.50	23.35		
20	1	1	QPSK	24.14	23.97	24.03		
20	1	104		23.80	23.81	23.65		
20	50	25		24.04	23.97	23.92		
20	1	0		22.18	23.04	23.07		
20	1	105		22.90	22.78	22.64		
20	100	0		23.04	22.97	22.91		
20	1	1	16-QAM	23.54	22.79	23.00	23.30	0.2138
20	1	1	64-QAM	21.44	21.65	21.71		
20	1	1	256-QAM	19.22	19.05	19.15		
Limit	ERP < 3W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.45	22.75	22.70	26.55	0.4519
20	1	49		22.37	22.97	22.45		
20	25	12		22.47	22.87	22.61		
20	1	0		21.93	22.24	22.24		
20	1	50		21.88	22.47	21.91		
20	50	0		22.44	22.89	22.61		
20	1	1	QPSK	22.37	22.80	22.63		
20	1	49		22.33	22.97	22.35		
20	25	12		22.50	22.88	22.61		
20	1	0		21.95	22.25	22.18		
20	1	50		21.79	22.47	21.91		
20	50	0		22.48	22.90	22.66		
20	1	1	16-QAM	22.29	22.63	22.43	26.47	0.4436
20	1	1	64-QAM	22.55	22.89	22.73		
20	1	1	256-QAM	20.93	21.22	21.20		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	22.85	23.15	23.24	26.93	0.4932
30	1	76		22.80	23.35	23.03		
30	36	18		22.87	23.18	23.14		
30	1	0		22.38	22.64	22.84		
30	1	77		22.31	22.82	22.52		
30	75	0		22.85	23.16	23.13		
30	1	1	QPSK	22.88	23.11	23.28		
30	1	76		22.81	23.34	22.96		
30	36	18		22.85	23.15	23.10		
30	1	0		22.36	22.64	22.73		
30	1	77		22.32	22.84	22.48		
30	75	0		22.87	23.24	23.14		
30	1	1	16-QAM	22.89	23.05	23.17	27.07	0.5093
30	1	1	64-QAM	22.89	23.16	23.49		
30	1	1	256-QAM	21.34	21.66	21.79		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	22.83	23.13	23.20	27.02	0.5035
40	1	104		22.88	23.44	22.92		
40	50	25		22.77	23.23	23.19		
40	1	0		22.31	22.61	22.75		
40	1	105		22.40	22.94	22.46		
40	100	0		22.78	23.28	23.15		
40	1	1	QPSK	22.83	23.15	23.27		
40	1	104		22.91	23.40	23.00		
40	50	25		22.73	23.21	23.14		
40	1	0		22.37	22.72	22.75		
40	1	105		22.40	22.94	22.45		
40	100	0		22.80	23.26	23.19		
40	1	1	16-QAM	22.71	23.05	23.27	26.88	0.4875
40	1	1	64-QAM	22.84	23.30	23.28		
40	1	1	256-QAM	21.32	21.76	21.68		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	22.61	22.85	22.92	26.74	0.4721
50	1	131		22.80	23.13	22.67		
50	64	32		22.64	22.95	23.02		
50	1	0		22.12	22.42	22.42		
50	1	132		22.40	22.61	22.17		
50	128	0		22.67	23.01	22.93		
50	1	1	QPSK	22.63	22.97	22.81		
50	1	131		22.72	23.16	22.55		
50	64	32		22.56	23.00	23.01		
50	1	0		22.07	22.41	22.39		
50	1	132		22.31	22.63	22.18		
50	128	0		22.70	23.03	22.90		
50	1	1	16-QAM	22.46	22.70	22.58	26.53	0.4498
50	1	1	64-QAM	22.72	22.95	22.92		
50	1	1	256-QAM	21.08	21.34	21.37		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	22.56	22.88	22.83	26.73	0.4710
60	1	160		22.85	23.12	22.62		
60	81	40		22.61	23.03	22.95		
60	1	0		22.03	22.37	22.33		
60	1	161		22.33	22.61	22.10		
60	162	0		22.72	23.01	22.90		
60	1	1	QPSK	22.54	22.84	22.80		
60	1	160		22.89	23.15	22.52		
60	81	40		22.59	22.99	22.90		
60	1	0		22.09	22.39	22.27		
60	1	161		22.34	22.61	22.02		
60	162	0		22.70	23.01	22.88		
60	1	1	16-QAM	22.41	22.72	2.62	26.49	0.4457
60	1	1	64-QAM	22.63	22.80	22.91		
60	1	1	256-QAM	21.03	21.33	21.29		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	22.34	22.58	22.68	26.37	0.4335
80	1	215		22.39	22.54	22.21		
80	108	54		22.32	22.68	22.68		
80	1	0		21.80	22.11	22.27		
80	1	216		21.86	22.08	21.79		
80	216	0		22.31	22.65	22.63		
80	1	1	QPSK	22.34	22.56	22.79		
80	1	215		22.38	22.53	22.34		
80	108	54		22.33	22.69	22.68		
80	1	0		21.83	22.06	22.28		
80	1	216		21.85	22.03	21.79		
80	216	0		22.30	22.67	22.61		
80	1	1	16-QAM	22.17	22.44	22.76	26.37	0.4335
80	1	1	64-QAM	22.41	22.73	22.79		
80	1	1	256-QAM	20.73	21.11	20.70		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 3.58 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	22.15	22.63	22.54	26.29	0.4256
100	1	271		22.20	22.61	22.25		
100	135	67		22.33	22.68	22.70		
100	1	0		21.66	22.14	22.02		
100	1	272		21.75	22.15	21.72		
100	270	0		22.34	22.66	22.57		
100	1	1	QPSK	22.17	22.62	22.50		
100	1	271		22.26	22.55	22.21		
100	135	67		22.35	22.65	22.71		
100	1	0		21.70	22.07	21.93		
100	1	272		21.75	22.10	21.67		
100	270	0		22.27	22.61	22.56		
100	1	1	16-QAM	22.07	22.36	22.30	25.94	0.3926
100	1	1	64-QAM	22.20	22.27	22.16		
100	1	1	256-QAM	20.63	21.12	21.01		
Limit	EIRP < 2W			Result			Pass	

<MIMO Mode>

NR n41 Maximum Average Power [dBm], DG = 5.32 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	21.46	21.67	21.47	22.03	22.03	21.76	24.76	24.86	24.63	30.22	1.0520
20	1	49		21.42	21.82	21.49	21.78	21.87	21.66	24.61	24.86	24.59		
20	25	12		21.36	21.77	21.40	21.92	22.00	21.76	24.66	24.90	24.59		
20	1	0		19.56	19.73	19.60	19.95	20.07	19.77	22.77	22.91	22.70		
20	1	50		19.42	19.77	19.50	19.83	19.95	19.71	22.64	22.87	22.62		
20	51	0		19.90	20.23	19.92	20.41	20.40	20.21	23.17	23.33	23.08		
20	1	1	16-QAM	21.01	21.30	21.12	21.69	21.79	21.38	24.37	24.56	24.26	29.88	0.9727
20	1	1	64-QAM	19.26	19.10	19.38	1.59	19.68	19.44	19.33	22.41	22.42		
20	1	1	256-QAM	16.44	16.72	16.52	16.94	17.07	16.63	19.71	19.91	19.59		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 5.32 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	21.98	22.22	21.99	22.45	22.22	22.34	25.23	25.23	25.18	30.55	1.1350
30	1	76		21.76	22.05	21.89	22.33	22.24	22.21	25.06	25.16	25.06		
30	39	19		21.96	22.08	22.02	22.22	22.26	22.20	25.10	25.18	25.12		
30	1	0		20.01	20.20	20.05	20.45	20.27	20.35	23.25	23.25	23.21		
30	1	77		19.86	20.21	19.99	20.41	20.32	20.31	23.15	23.28	23.16		
30	78	0		20.43	20.61	20.56	20.73	20.72	20.73	23.59	23.68	23.66		
30	1	1	16-QAM	21.49	21.61	21.45	22.16	21.86	21.95	24.85	24.75	24.72	30.17	1.0399
30	1	1	64-QAM	19.74	19.94	19.97	20.08	20.08	19.99	22.92	23.02	22.99		
30	1	1	256-QAM	16.95	17.00	17.10	17.44	17.42	17.40	20.21	20.23	20.26		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 5.32 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	22.14	22.28	22.25	22.24	22.28	22.12	25.20	25.29	25.20	30.62	1.1535
40	1	104		21.90	22.23	22.00	22.32	22.34	22.21	25.13	25.30	25.12		
40	53	26		20.29	22.18	22.02	20.69	22.24	22.15	23.50	25.22	25.10		
40	1	0		19.96	20.15	20.21	20.39	20.45	20.21	23.19	23.31	23.22		
40	1	105		19.79	20.15	19.87	20.29	20.29	20.12	23.06	23.23	23.01		
40	106	0		20.32	20.71	20.55	20.72	20.82	20.71	23.53	23.78	23.64		
40	1	1	16-QAM	21.48	21.59	21.69	21.89	22.04	21.84	24.70	24.83	24.78	30.15	1.0351
40	1	1	64-QAM	19.76	19.84	19.93	20.02	20.13	19.88	22.90	23.00	22.92		
40	1	1	256-QAM	16.99	16.94	17.00	17.39	17.35	17.17	20.20	20.16	20.10		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 5.32 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	21.76	21.91	21.94	21.95	21.95	21.92	24.87	24.94	24.94	30.36	1.0864
50	1	131		21.80	22.01	21.73	22.10	22.04	21.97	24.96	25.04	24.86		
50	67	33		21.62	21.80	21.68	22.04	21.94	21.85	24.85	24.88	24.78		
50	1	0		19.64	19.80	19.74	20.03	20.02	19.92	22.85	22.92	22.84		
50	1	132		19.70	19.93	19.59	20.11	20.08	19.87	22.92	23.02	22.74		
50	133	0		20.27	20.32	20.20	20.56	20.46	20.39	23.43	23.40	23.31		
50	1	1	16-QAM	21.27	21.49	12.55	21.66	21.58	21.71	24.48	24.55	22.21	29.87	0.9705
50	1	1	64-QAM	19.43	19.56	19.72	19.78	19.72	19.82	22.62	22.65	22.78		
50	1	1	256-QAM	16.50	16.52	16.76	17.20	16.99	17.07	19.87	19.77	19.93		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 5.32 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	21.70	21.92	21.81	22.07	22.07	21.92	24.90	25.01	24.88	30.41	1.0990
60	1	160		21.71	22.02	21.55	22.01	22.13	21.69	24.87	25.09	24.63		
60	81	40		21.77	21.92	21.71	22.09	22.12	21.82	24.94	25.03	24.78		
60	1	0		19.76	19.87	19.90	20.09	20.16	19.97	22.94	23.03	22.95		
60	1	161		19.81	20.07	19.64	20.16	20.11	19.76	23.00	23.10	22.71		
60	162	0		20.21	20.44	20.22	20.61	20.60	20.40	23.42	23.53	23.32		
60	1	1	16-QAM	21.22	21.42	21.46	21.75	21.74	21.63	24.50	24.59	24.56	29.91	0.9795
60	1	1	64-QAM	19.36	19.57	19.69	19.50	19.74	19.66	22.44	22.67	22.69		
60	1	1	256-QAM	16.52	17.04	16.91	17.00	16.67	16.98	19.78	19.87	19.96		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 5.32 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	21.71	21.80	21.66	21.82	21.77	21.57	24.78	24.80	24.63	30.12	1.0280
80	1	215		21.50	21.68	21.31	21.68	21.74	21.57	24.60	24.72	24.45		
80	109	54		21.56	21.73	21.66	21.78	21.71	21.67	24.68	24.73	24.68		
80	1	0		19.57	19.75	19.51	19.79	19.80	19.68	22.69	22.79	22.61		
80	1	216		19.50	19.71	19.43	19.73	19.71	19.59	22.63	22.72	22.52		
80	217	0		20.03	20.20	20.05	20.18	20.25	20.10	23.12	23.24	23.09		
80	1	1	16-QAM	21.19	20.94	21.21	21.43	21.47	21.41	24.32	24.22	24.32	29.64	0.9204
80	1	1	64-QAM	19.30	19.39	19.49	19.50	19.52	19.22	22.41	22.47	22.37		
80	1	1	256-QAM	16.44	16.62	16.58	16.84	16.92	16.68	19.65	19.78	19.64		
Limit	EIRP < 2W			Result									Pass	

NR n41 Maximum Average Power [dBm], DG = 5.32 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	21.40	21.84	21.56	21.73	21.85	21.61	24.58	24.86	24.60	30.18	1.0423
100	1	271		21.50	21.90	21.38	21.58	21.75	21.55	24.55	24.84	24.48		
100	137	68		21.59	21.62	21.65	21.72	21.70	21.64	24.67	24.67	24.66		
100	1	0		19.53	19.71	19.58	19.65	19.83	19.58	22.60	22.78	22.59		
100	1	272		19.32	19.73	19.44	19.68	19.78	19.59	22.51	22.77	22.53		
100	273	0		19.99	20.22	20.17	20.24	20.25	20.10	23.13	23.25	23.15		
100	1	1	16-QAM	21.14	21.21	20.84	21.39	21.23	21.23	24.28	24.23	24.05	29.6	0.9120
100	1	1	64-QAM	19.30	19.73	19.40	19.33	19.76	19.37	22.33	22.76	22.40		
100	1	1	256-QAM	16.37	16.67	16.59	16.74	16.76	16.70	19.57	19.73	19.66		
Limit	EIRP < 2W			Result									Pass	

Appendix B. Test Results of Radiated Test

5G NR n5A

5G NR n5A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-53.08	-13	-40.08	-62.73	-58.67	0.92	8.66	H
	2472	-52.59	-13	-39.59	-66.54	-59.96	1.14	10.66	H
	3304	-55.24	-13	-42.24	-71.29	-63.79	1.32	12.03	H
									H
									H
									H
	1648	-56.76	-13	-43.76	-65.88	-62.35	0.92	8.66	V
	2472	-49.38	-13	-36.38	-63.48	-56.75	1.14	10.66	V
	3304	-55.08	-13	-42.08	-71.6	-63.63	1.32	12.03	V
									V
									V
									V
Middle	1656	-52.78	-13	-39.78	-62.45	-58.40	0.92	8.69	H
	2480	-52.07	-13	-39.07	-66.01	-59.45	1.15	10.67	H
	3312	-55.50	-13	-42.50	-71.54	-64.07	1.33	12.05	H
									H
									H
									H
	1656	-54.79	-13	-41.79	-63.89	-60.41	0.92	8.69	V
	2480	-49.18	-13	-36.18	-63.29	-56.56	1.15	10.67	V
	3312	-54.77	-13	-41.77	-71.27	-63.34	1.33	12.05	V
									V
									V
									V

Highest	1664	-55.35	-13	-42.35	-65.04	-61.00	0.93	8.72	H
	2488	-53.58	-13	-40.58	-67.54	-60.97	1.15	10.68	H
	3320	-54.71	-13	-41.71	-70.73	-63.30	1.33	12.07	H
									H
									H
									H
	1664	-58.84	-13	-45.84	-67.94	-64.49	0.93	8.72	V
	2488	-50.99	-13	-37.99	-65.14	-58.38	1.15	10.68	V
	3320	-54.29	-13	-41.29	-70.77	-62.88	1.33	12.07	V
									V
									V
									V

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

5G NR n2A

5G NR n2A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-49.37	-13	-36.37	-67.93	-60.58	1.41	12.62	H
	5553	-43.86	-13	-30.86	-66.76	-55.42	1.74	13.30	H
	7405	-44.83	-13	-31.83	-71.81	-54.14	1.94	11.25	H
									H
									H
									H
	3702	-50.45	-13	-37.45	-69.16	-61.66	1.41	12.62	V
	5553	-45.78	-13	-32.78	-68.21	-57.34	1.74	13.30	V
	7405	-45.01	-13	-32.01	-71.84	-54.32	1.94	11.25	V
									V
									V
									V
Middle	3742	-47.38	-13	-34.38	-66.03	-58.60	1.42	12.65	H
	5610	-45.50	-13	-32.50	-68.31	-57.06	1.74	13.30	H
	7485	-45.19	-13	-32.19	-71.82	-54.33	1.98	11.12	H
									H
									H
									H
	3742	-50.27	-13	-37.27	-69.12	-61.49	1.42	12.65	V
	5610	-45.44	-13	-32.44	-67.93	-57.00	1.74	13.30	V
	7485	-45.35	-13	-32.35	-71.93	-54.49	1.98	11.12	V
									V
									V
									V

Highest	3782	-45.48	-13	-32.48	-64.23	-55.69	2.02	12.23	H
	5670	-44.20	-13	-31.20	-67.32	-54.52	2.12	12.44	H
	7565	-44.82	-13	-31.82	-71.06	-52.94	2.11	10.23	H
									H
									H
									H
	3782	-47.96	-13	-34.96	-66.96	-58.17	2.02	12.23	V
	5670	-43.65	-13	-30.65	-66.27	-53.97	2.12	12.44	V
	7565	-44.81	-13	-31.81	-71.01	-52.93	2.11	10.23	V
									V
									V
									V

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

5G NR n25A

5G NR n25A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-50.38	-13	-37.38	-68.94	-61.59	1.41	12.62	H
	5553	-47.73	-13	-34.73	-70.64	-59.29	1.74	13.30	H
	7405	-44.12	-13	-31.12	-71.1	-53.43	1.94	11.25	H
									H
									H
									H
	3702	-49.23	-13	-36.23	-67.94	-60.44	1.41	12.62	V
	5553	-43.47	-13	-30.47	-65.9	-55.03	1.74	13.30	V
	7405	-44.61	-13	-31.61	-71.44	-53.92	1.94	11.25	V
									V
									V
									V
Middle	3747	-51.57	-13	-38.57	-70.24	-62.79	1.42	12.65	H
	5621	-48.78	-13	-35.78	-71.64	-60.34	1.74	13.30	H
	7495	-44.93	-13	-31.93	-71.52	-54.05	1.99	11.11	H
									H
									H
									H
	3747	-49.19	-13	-36.19	-68.05	-60.41	1.42	12.65	V
	5621	-48.11	-13	-35.11	-68.61	-59.67	1.74	13.30	V
	7495	-45.18	-13	-32.18	-71.74	-54.30	1.99	11.11	V
									V
									V
									V

Highest	3792	-49.80	-13	-36.80	-68.57	-60.00	2.02	12.22	H
	5688	-48.30	-13	-35.30	-71.48	-58.65	2.11	12.46	H
	7585	-45.51	-13	-32.51	-71.65	-53.70	2.11	10.31	H
									H
									H
									H
	3792	-48.29	-13	-35.29	-67.32	-58.49	2.02	12.22	V
	5688	-46.50	-13	-33.50	-69.15	-56.85	2.11	12.46	V
	7585	-46.04	-13	-33.04	-72.13	-54.23	2.11	10.31	V
									V
									V
									V

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

5G NR n66A

5G NR n66A / 40MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3425	-54.16	-13	-41.16	-71.04	-65.13	1.35	12.32	H
	5137	-46.03	-13	-33.03	-67.6	-57.18	1.65	12.79	H
	6849	-46.60	-13	-33.60	-72.05	-56.97	1.74	12.11	H
									H
									H
									H
	3425	-53.64	-13	-40.64	-70.92	-64.61	1.35	12.32	V
	5137	-44.37	-13	-31.37	-65.69	-55.52	1.65	12.79	V
	6849	-46.86	-13	-33.86	-71.91	-57.23	1.74	12.11	V
									V
									V
									V
Middle	3455	-54.15	-13	-41.15	-71.32	-65.19	1.35	12.39	H
	5182	-50.07	-13	-37.07	-71.66	-61.27	1.66	12.85	H
	6909	-46.13	-13	-33.13	-71.88	-56.42	1.73	12.03	H
									H
									H
									H
	3455	-53.76	-13	-40.76	-71.32	-64.80	1.35	12.39	V
	5182	-45.22	-13	-32.22	-66.63	-56.42	1.66	12.85	V
	6909	-46.86	-13	-33.86	-72.17	-57.15	1.73	12.03	V
									V
									V
									V

Highest	3485	-53.70	-13	-40.70	-71.18	-64.81	1.36	12.46	H
	5227	-46.01	-13	-33.01	-67.72	-57.26	1.67	12.92	H
	6969	-45.73	-13	-32.73	-71.8	-55.95	1.72	11.94	H
									H
									H
									H
	3485	-53.40	-13	-40.40	-71.26	-64.51	1.36	12.46	V
	5227	-44.52	-13	-31.52	-66.04	-55.77	1.67	12.92	V
	6969	-45.98	-13	-32.98	-71.57	-56.20	1.72	11.94	V
									V
									V
									V

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

5G NR n12A

5G NR n12A / 15MHz / PI/2 BPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1400	-56.63	-13.00	-43.63	-67.56	-61.28	0.84	7.64	H
	2096	-52.68	-13.00	-39.68	-66.16	-59.60	1.06	10.13	H
	2800	-56.09	-13.00	-43.09	-70.91	-63.78	1.22	11.06	H
									H
									H
									H
	1400	-59.10	-13.00	-46.10	-68.80	-63.75	0.84	7.64	V
	2096	-56.98	-13.00	-43.98	-69.36	-63.90	1.06	10.13	V
	2800	-56.26	-13.00	-43.26	-71.02	-63.95	1.22	11.06	V
									V
									V
									V
Middle	1402	-51.04	-13.00	-38.04	-61.97	-55.69	0.84	7.65	H
	2104	-53.13	-13.00	-40.13	-66.74	-60.06	1.06	10.15	H
	2808	-55.37	-13.00	-42.37	-70.23	-63.07	1.22	11.07	H
									H
									H
									H
	1400	-49.67	-13.00	-36.67	-59.37	-54.32	0.84	7.64	V
	2104	-46.45	-13.00	-33.45	-58.95	-53.38	1.06	10.15	V
	2808	-55.07	-13.00	-42.07	-69.88	-62.77	1.22	11.07	V
									V
									V
									V

Highest	1404	-55.48	-13.00	-42.48	-66.41	-60.14	0.85	7.66	H
	2106	-52.61	-13.00	-39.61	-66.25	-59.55	1.06	10.15	H
	2808	-55.67	-13.00	-42.67	-70.53	-63.37	1.22	11.07	H
									H
									H
									H
	1404	-58.91	-13.00	-45.91	-68.61	-63.57	0.85	7.66	V
	2106	-56.85	-13.00	-43.85	-69.35	-63.79	1.06	10.15	V
	2808	-55.72	-13.00	-42.72	-70.53	-63.42	1.22	11.07	V
									V
									V
									V

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

5G NR n7A

5G NR n7A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5002	-49.22	-25	-24.22	-70.73	-60.21	1.61	12.60	H
	7503	-44.79	-25	-19.79	-71.35	-53.90	1.99	11.10	H
	10005	-41.99	-25	-16.99	-70.94	-50.89	2.40	11.30	H
									H
									H
									H
	5002	-49.75	-25	-24.75	-70.81	-60.74	1.61	12.60	V
	7503	-45.10	-25	-20.10	-71.63	-54.21	1.99	11.10	V
	10005	-41.18	-25	-16.18	-70.92	-50.08	2.40	11.30	V
									V
									V
									V
Middle	5052	-49.53	-25	-24.53	-71.06	-60.58	1.62	12.67	H
	7578	-45.71	-25	-20.71	-71.88	-54.82	2.00	11.12	H
	10105	-41.81	-25	-16.81	-71.08	-50.63	2.40	11.22	H
									H
									H
									H
	5052	-50.05	-25	-25.05	-71.21	-61.10	1.62	12.67	V
	7578	-45.89	-25	-20.89	-72.02	-55.00	2.00	11.12	V
	10105	-41.30	-25	-16.30	-71.14	-50.12	2.40	11.22	V
									V
									V
									V

Highest	5102	-49.65	-25	-24.65	-71.21	-60.76	1.64	12.74	H
	7653	-45.45	-25	-20.45	-71.53	-54.57	2.01	11.13	H
	10205	-41.52	-25	-16.52	-71.1	-50.26	2.40	11.14	H
									H
									H
									H
	5102	-50.03	-25	-25.03	-71.29	-61.14	1.64	12.74	V
	7653	-45.89	-25	-20.89	-71.85	-55.01	2.01	11.13	V
	10205	-41.44	-25	-16.44	-71.37	-50.18	2.40	11.14	V
									V
									V
									V

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

5G NR n38A

5G NR n38A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5142	-50.00	-25	-25.00	-71.59	-61.15	1.65	12.80	H
	7713	-45.30	-25	-20.30	-71.38	-54.42	2.02	11.14	H
	10285	-41.66	-25	-16.66	-71.49	-50.34	2.39	11.07	H
									H
									H
									H
	5142	-50.20	-25	-25.20	-71.54	-61.35	1.65	12.80	V
	7713	-45.69	-25	-20.69	-71.58	-54.81	2.02	11.14	V
	10285	-41.77	-25	-16.77	-71.78	-50.45	2.39	11.07	V
									V
									V
									V
Middle	5172	-49.35	-25	-24.35	-70.94	-60.54	1.65	12.84	H
	7758	-41.23	-25	-16.23	-67.33	-50.36	2.03	11.15	H
	10345	-41.52	-25	-16.52	-71.54	-50.15	2.39	11.02	H
									H
									H
									H
	5172	-50.42	-25	-25.42	-71.81	-61.61	1.65	12.84	V
	7758	-45.65	-25	-20.65	-71.5	-54.78	2.03	11.15	V
	10345	-41.43	-25	-16.43	-71.49	-50.06	2.39	11.02	V
									V
									V
									V

Highest	5202	-50.28	-25	-25.28	-71.9	-61.50	1.66	12.88	H
	7803	-45.83	-25	-20.83	-71.96	-54.96	2.03	11.16	H
	10405	-40.42	-25	-15.42	-70.62	-49.00	2.39	10.98	H
									H
									H
									H
	5202	-50.30	-25	-25.30	-71.75	-61.52	1.66	12.88	V
	7803	-45.96	-25	-20.96	-71.79	-55.09	2.03	11.16	V
	10405	-40.94	-25	-15.94	-71.06	-49.52	2.39	10.98	V
									V
									V
									V

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

5G NR n41A

5G NR n41A / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	4992	-49.77	-25	-24.77	-71.26	-60.76	1.61	12.60	H
	7488	-45.26	-25	-20.26	-71.88	-54.40	1.98	11.12	H
	9990	-42.11	-25	-17.11	-71.09	-51.02	2.40	11.30	H
									H
									H
									H
	4992	-50.09	-25	-25.09	-71.12	-61.08	1.61	12.60	V
	7491	-45.51	-25	-20.51	-72.09	-54.64	1.99	11.11	V
	9990	-41.26	-25	-16.26	-71.01	-50.17	2.40	11.30	V
									V
									V
									V
Middle	5088	-51.95	-25	-26.95	-73.94	-63.04	1.63	12.72	H
	7632	-47.85	-25	-22.85	-73.7	-56.97	2.01	11.13	H
	10179	-43.90	-25	-18.90	-73.9	-52.66	2.40	11.16	H
									H
									H
									H
	5088	-52.52	-25	-27.52	-74.18	-63.61	1.63	12.72	V
	7631	-48.44	-25	-23.44	-74.2	-57.56	2.01	11.13	V
	10179	-43.47	-25	-18.47	-73.88	-52.23	2.40	11.16	V
									V
									V
									V

Highest	5184	-52.60	-25	-27.60	-74.54	-63.80	1.66	12.86	H
	7776	-47.55	-25	-22.55	-73.47	-56.68	2.03	11.16	H
	10368	-42.72	-25	-17.72	-43.72	-51.33	2.39	11.01	H
									H
									H
									H
	5184	-52.99	-25	-27.99	-74.75	-64.19	1.66	12.86	V
	7776	-47.67	-25	-22.67	-73.32	-56.80	2.03	11.16	V
	10368	-43.25	-25	-18.25	-73.74	-51.86	2.39	11.01	V
									V
									V
									V

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

5G NR n71A

5G NR n71A / 20MHz / PI/2 BPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1328	-54.11	-13	-41.11	-64.74	-60.59	0.83	7.31	H
	1992	-49.61	-13	-36.61	-61.43	-58.54	1.04	9.97	H
	2656	-56.18	-13	-43.18	-70.4	-65.88	1.19	10.89	H
									H
									H
									H
	1328	-55.13	-13	-42.13	-64.92	-61.61	0.83	7.31	V
	1992	-53.36	-13	-40.36	-64.21	-62.29	1.04	9.97	V
	2656	-56.65	-13	-43.65	-70.84	-66.35	1.19	10.89	V
									V
									V
									V
Middle	1344	-54.80	-13	-41.80	-65.5	-61.35	0.83	7.38	H
	2016	-53.44	-13	-40.44	-65.61	-62.42	1.04	10.02	H
	2688	-56.50	-13	-43.50	-70.85	-66.23	1.20	10.93	H
									H
									H
									H
	1344	-54.57	-13	-41.57	-64.34	-61.12	0.83	7.38	V
	2016	-53.30	-13	-40.30	-64.47	-62.28	1.04	10.02	V
	2688	-56.64	-13	-43.64	-70.95	-66.37	1.20	10.93	V
									V
									V
									V

Highest	1360	-56.73	-13	-43.73	-67.49	-63.35	0.83	7.46	H
	2040	-49.43	-13	-36.43	-61.99	-58.44	1.05	10.06	H
	2720	-56.44	-13	-43.44	-70.92	-66.20	1.20	10.96	H
									H
									H
									H
	1360	-53.56	-13	-40.56	-63.31	-60.18	0.83	7.46	V
	2040	-52.49	-13	-39.49	-64.02	-61.50	1.05	10.06	V
	2720	-56.25	-13	-43.25	-70.68	-66.01	1.20	10.96	V
									V
									V
									V

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