



# FCC RADIO TEST REPORT

**FCC ID** : 2AJN7-TP00129B  
**Equipment** : Notebook Computer  
**Brand Name** : Lenovo  
**Model Name** : TP00129B  
**Applicant** : LC Future Center Limited Taiwan Branch  
7F., No.780, Beian Rd., Zhongshan Dist., Taipei 104, Taiwan  
**Manufacturer** : LCFC (HeFei) Electronics Technology Co., Ltd.  
No. 3188-1, Yungu Road (Hefei Export Processing Zone), Hefei  
Economics & Technology Development Area, Anhui, CHINA  
**Standard** : FCC 47 CFR Part 2, 22(H), 24(E), 27

Equipment: Fibocom FM350-GL tested inside of Lenovo Notebook Computer.

The product was received on Sep. 07, 2021 and testing was performed from Sep. 15, 2021 and completed on Jan. 05, 2022. We, Sporton International Inc. Wensan 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. Wensan Laboratory, the test report shall not be reproduced except in full.

*Louis Wu*

Approved by: Louis Wu

*Sporton International Inc. Wensan Laboratory*



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### History of this test report

Report No.	Version	Description	Issued Date
FG190606C	01	Initial issue of report	Jan. 25, 2022
FG190606C	02	Add test data	Mar. 15, 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 (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) (n66) (n71)(n25)	-	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) (n66) (n71)(n25)	-	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) (n25)	Pass	Under limit 2.94 dB at 5114.000 MHz
	§2.1051 §27.53 (m)(4)	Radiated Spurious Emission (n7) (n38) (n41) (n66) (n71)		

**Note:**

1. The certified module (model: FM350-GL) which supports normal mode and TX switching mode being integrated into a notebook computer. Spot check on both modes were performed and no degradation occur. Thus the module test results were leveraged in this report and additionally reporting the spot check results in this report.
2. In normal mode, Conducted power was verified to be consistent with the original modular approval, so the output power level in the original modular grant is referenced in this report for determining ERP/EIRP of this host product, and verified the TX switching mode of Radiated Spurious Emission and Conducted power.

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**Reviewed by: Sheng Kuo****Report Producer: Ruby Zou**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Notebook Computer
Brand Name	Lenovo
Model Name	TP00129B
FCC ID	2AJN7-TP00129B
Sample 1	EUT with Amphenol Antenna
Sample 2	EUT with Novocomms/JYT Antenna
EUT supports Radios application	WCDMA/HSPA/LTE/5G NR/GNSS
EUT Stage	Production Unit

**Remark:**

1. The above EUT's information was declared by manufacturer.
2. Equipment: Fibocom FM350-GL tested inside of Lenovo Notebook Computer.

	Normal mode	TX switching mode
	TX/RX	TX/RX
Ant_0 (Main)	WCDMA : 2/4/5 LTE : 2/4/5/7/12/13/14/17/25/26/30/38/66/71 NR : 2/5/7/25/30/38/66/71	WCDMA : 5 LTE : 5/12/13/14/17/26/41/48/71 NR : 5/41/71/77/78
Ant_2 (MIMO2)	LTE : 41/48 NR : 41/77/78	WCDMA : 2/4 LTE : 2/4/7/25/30/38/66 NR : 2/7/25/30/38/66



WWAN Antenna Information				
Main Antenna	Manufacturer	Amphenol	Peak gain (dBi)	5G NR n2: -0.22 5G NR n5: -0.65 5G NR n7: 1.45 5G NR n25: -0.06 5G NR n38: 1.80 5G NR n41: 1.87 5G NR n66: 1.55 5G NR n71: -1.86
	Part number	TKC116-16-000-C	Type	PIFA
	Manufacturer	JYT/NVC	Peak gain (dBi)	5G NR n2: -1.42 5G NR n5: 0.37 5G NR n7: 1.88 5G NR n25: -1.42 5G NR n38: 1.84 5G NR n41: 1.83 5G NR n66: 0.05 5G NR n71: -0.39
	Part number	JYAAE0150HR	Type	PIFA
MIMO 2 Antenna	Manufacturer	Amphenol	Peak gain (dBi)	5G NR n2: 0.2 5G NR n7: 1.94 5G NR n25: 0.39 5G NR n38: 1.79 5G NR n41: 1.93 5G NR n66: 1.13
	Part number	TKC115-16-000-C	Type	PIFA
	Manufacturer	JYT/NVC	Peak gain (dBi)	5G NR n2: -0.5 5G NR n7: 2.28 5G NR n25: -0.5 5G NR n38: 1.65 5G NR n41: 2.28 5G NR n66: -0.74
	Part number	JYAAE0151HR	Type	PIFA

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

## 1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
<b>Tx Frequency</b>	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 n25: 1852.5 MHz ~ 1912.5 MHz 5G NR n38: 2575 MHz ~ 2615 MHz 5G NR n41: 2501.01 MHz ~ 2685 MHz 5G NR n66: 1712.5 MHz ~ 1777.5 MHz 5G NR n71: 665.5 MHz ~ 695.5 MHz
<b>Rx Frequency</b>	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 n25: 1932.5 MHz ~ 1992.5 MHz 5G NR n38: 2575 MHz ~ 2615 MHz 5G NR n41: 2501.01 MHz ~ 2685 MHz 5G NR n66: 2112.5 MHz ~ 2197.5 MHz 5G NR n71: 619.5 MHz ~ 649.5 MHz
<b>Bandwidth</b>	5G NR n2: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n5: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n7: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n25: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n38: 5MHz / 10MHz / 15MHz / 20MHz 5G NR n41: 10MHz / 15MHz / 30MHz / 40MHz / 50MHz / 80MHz / 100MHz 5G NR n66: 5MHz / 10MHz / 15MHz / 20MHz / 40MHz 5G NR n71: 5MHz / 10MHz / 15MHz / 20MHz
<b>Maximum Output Power to Antenna</b>	<b>&lt;Main Antenna&gt;</b> 5G NR n2: 23.27 dBm 5G NR n5: 24.59 dBm 5G NR n7: 23.38 dBm 5G NR n25: 22.78 dBm 5G NR n38: 23.27 dBm 5G NR n41: 26.35 dBm for HPUE 5G NR n66: 23.20 dBm 5G NR n71: 24.32 dBm <b>&lt;MIMO 2 Antenna&gt;</b> 5G NR n2: 23.26 dBm 5G NR n7: 23.31 dBm 5G NR n25: 23.74 dBm 5G NR n38: 23.26 dBm 5G NR n41: 26.61 dBm for HPUE 5G NR n66: 23.19 dBm
<b>Type of Modulation</b>	PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

## 1.3 Modification of EUT

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





### 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
Test Site No.	<b>Sporton Site No.</b>
	TH03-HY (TAF Code: 1190)
Test Engineer	Sherry Wu
Temperature	23.5~26.4°C
Relative Humidity	49.8~55.5%
Remark	The Conducted test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010
Test Site No.	<b>Sporton Site No.</b>
	03CH13-HY
Test Engineer	Yuan Lee, Jacky Hong, Wilson Wu and Peter Liao
Temperature	20~25°C
Relative Humidity	50~60%

**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 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. The TAF code is not including all the FCC KDB listed without accreditation.



## 2 Test Configuration of Equipment Under Test

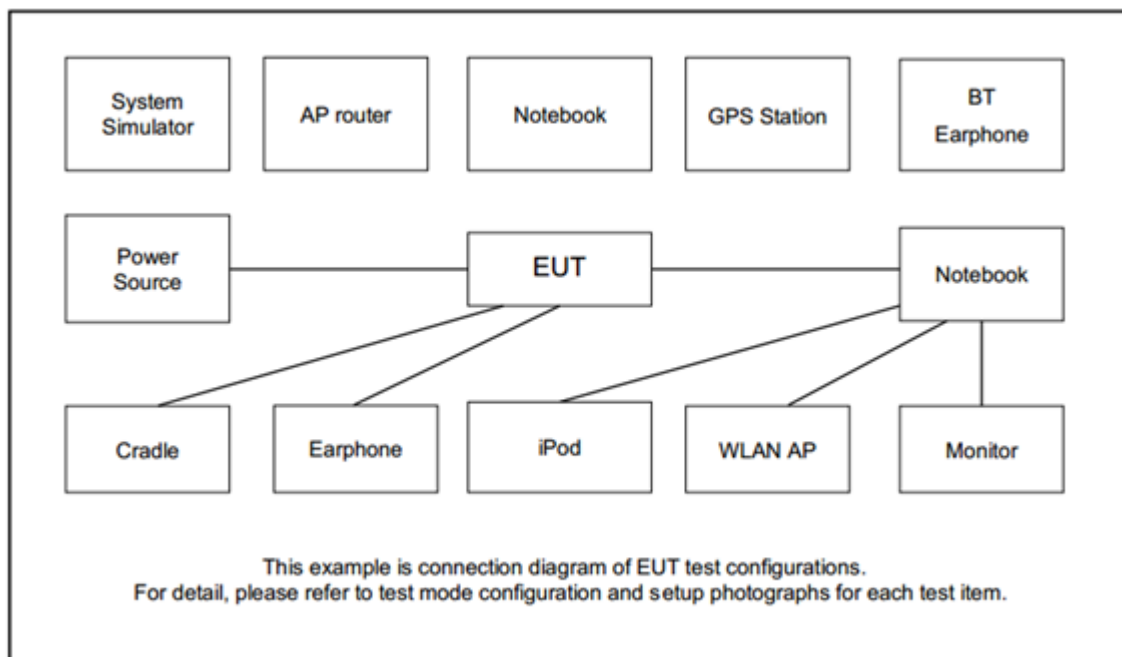
### 2.1 Test Mode

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	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
	n25	v	v	v	v	-	-	-	v	v	v	v	v	v	v	v	v	v	v
	n38	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
	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						
	n25	v	v	v	v	-	-	-	v	v	v	v	v						
	n38	v	v	v	v	-	-	-	v	v	v	v	v						
	n66	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
	n7				v	-	-	-		v				v			v	v	v
	n25				v	-	-	-		v				v			v	v	v
	n38				v	-	-	-		v				v			v	v	v
	n66					-	v	-		v				v			v	v	v
	n71				v	-	-	-		v				v			v	v	v
Remark	<ol style="list-style-type: none"> <li>The mark "v" means that this configuration is chosen for testing</li> <li>The mark "-" means that this bandwidth is not supported.</li> <li>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.</li> <li>Test combination is EN-DC 5A-n2A, EN-DC 2A-n5A, EN-DC 48A-n66A, EN-DC 2A-n71A.</li> </ol>																		

Test Items	NR Band	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		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	n41_HPUE	v	v	-	v	v	v	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v
E.R.P / E.I.R.P	n41_HPUE	v	v	-	v	v	v	-	v	-	v	v	v	v	v	v	Max. Power					
Radiated Spurious Emission	n41_HPUE			-				-	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. Test combination is EN-DC 66A-n41A_HPUE																					

## 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.	Earphone	SONY	MH750	N/A	Unshielded, 1.0m	N/A
2.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

## 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 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
5	Channel	514500	519000	523500
	Frequency	2572.5	2595	2617.5



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
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
15	Channel	500700	518598	536496
	Frequency	2503.5	2592.99	2682.48
10	Channel	500202	518598	537000
	Frequency	2501.01	2592.99	2685

5G NR n66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
40	Channel	346000	349000	352000
	Frequency	1730	1745	1760
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



<b>5G NR n71 Channel and Frequency List</b>				
<b>BW [MHz]</b>	<b>Channel/Frequency(MHz)</b>	<b>Lowest</b>	<b>Middle</b>	<b>Highest</b>
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

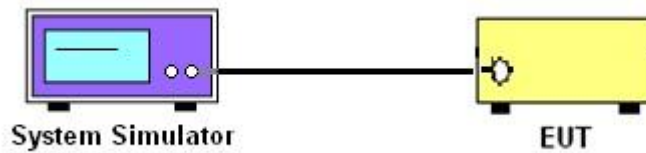
### 3 Conducted Test Items

#### 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 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

### 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.

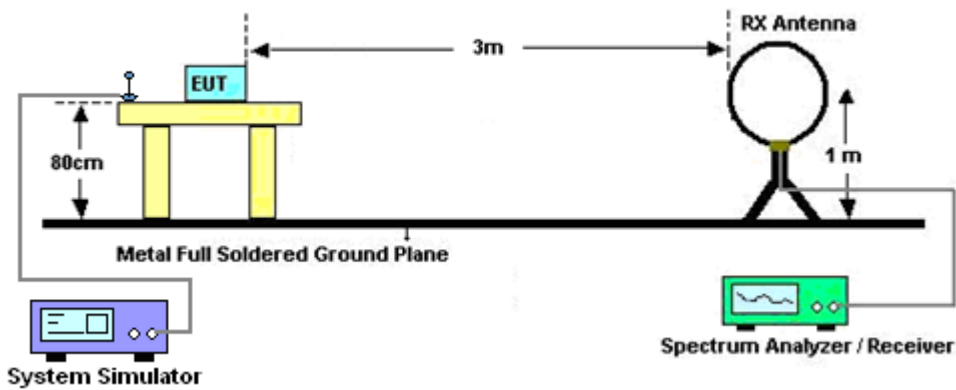
## 4 Radiated Test Items

### 4.1 Measuring Instruments

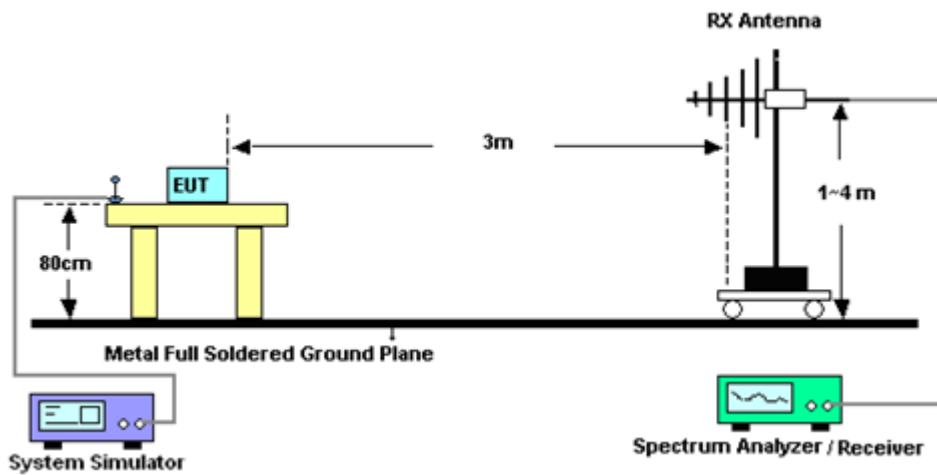
See list of measuring instruments of this test report.

#### 4.1.1 Test Setup

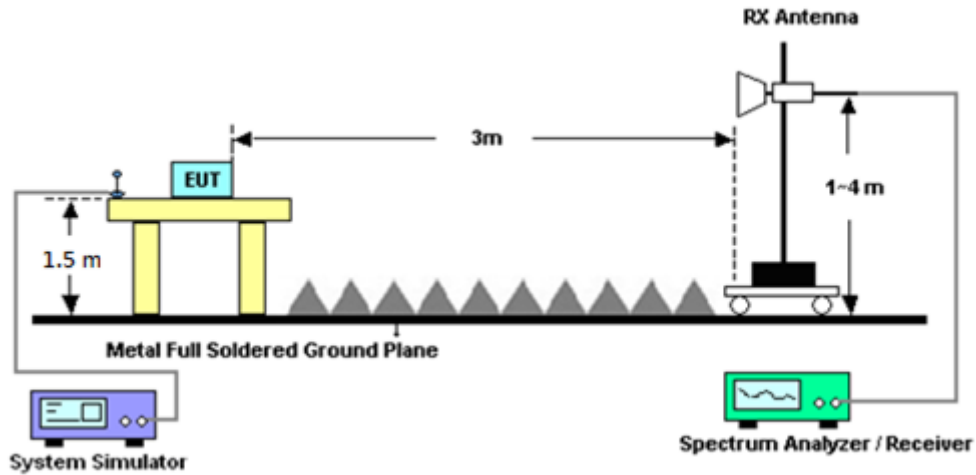
For radiated test below 30MHz



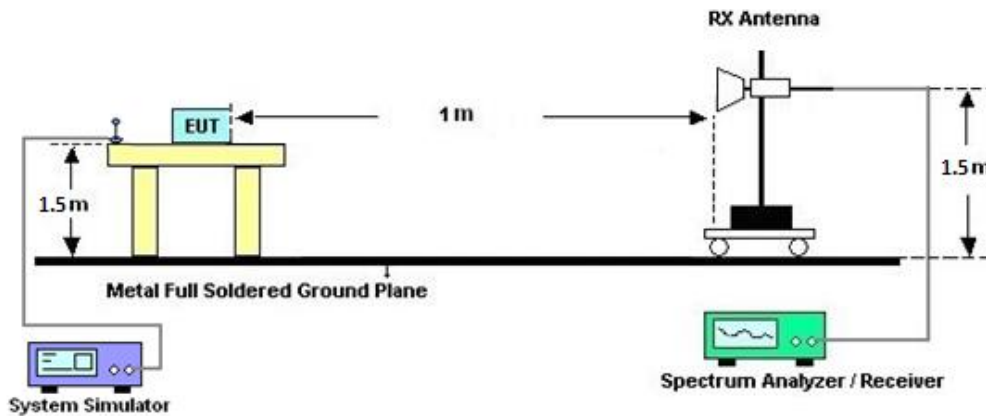
For radiated test from 30MHz to 1GHz



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, n38, 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  $43 + 10\log(P)$ dB below the transmitter power P(Watts)

For 5G NR n7, n38, n41

The limit line is derived from  $55 + 10\log(P)$ 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
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 16, 2020	Sep. 15, 2021~ Dec. 14, 2021	Dec. 15, 2021	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 15, 2021	Dec. 15, 2021~ Jan. 05, 2022	Dec. 14, 2022	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	40103 & 07	30MHz to 1GHz	Apr. 28, 2021	Sep. 15, 2021~ Jan. 05, 2022	Apr. 27, 2022	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	41912 & 05	30MHz to 1GHz	Feb. 08, 2021	Sep. 15, 2021~ Jan. 05, 2022	Feb. 07, 2022	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz ~ 18GHz	May 18, 2021	Sep. 15, 2021~ Jan. 05, 2022	May 17, 2022	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz ~ 18GHz	Jul. 13, 2021	Sep. 15, 2021~ Jan. 05, 2022	Jul. 12, 2022	Radiation (03CH13-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 07, 2021	Sep. 15, 2021~ Jan. 05, 2022	Sep. 06, 2022	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590074	1GHz~18GHz	May 18, 2021	Sep. 15, 2021~ Jan. 05, 2022	May 17, 2022	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 27, 2020	Sep. 15, 2021~ Oct. 25, 2021	Oct. 26, 2021	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Oct. 26, 2021	Oct. 26, 2021~ Jan. 05, 2022	Oct. 25, 2022	Radiation (03CH13-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 31, 2021	Sep. 15, 2021~ Jan. 05, 2022	Jan. 30, 2022	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 18, 2021	Sep. 15, 2021~ Jan. 05, 2022	Mar. 17, 2022	Radiation (03CH13-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Sep. 15, 2021~ Jan. 05, 2022	N/A	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Sep. 15, 2021~ Jan. 05, 2022	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Sep. 15, 2021~ Jan. 05, 2022	N/A	Radiation (03CH13-HY)
Software	Audix	E3 6.2009-8-24	RK-000992	N/A	N/A	Sep. 15, 2021~ Jan. 05, 2022	N/A	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 11, 2020	Sep. 15, 2021~ Nov. 12, 2021	Dec. 10, 2021	Radiation (03CH13-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz ~ 40GHz	Jun. 22, 2021	Nov. 12, 2021~ Jan. 05, 2022	Jun. 21, 2022	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30M-18G	Feb. 10, 2021	Sep. 15, 2021~ Jan. 05, 2022	Feb. 09, 2022	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30M-18G	Feb. 10, 2021	Sep. 15, 2021~ Jan. 05, 2022	Feb. 09, 2022	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30M~40GHz	Feb. 22, 2021	Sep. 15, 2021~ Jan. 05, 2022	Feb. 21, 2022	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz~40GHz	Mar. 11, 2021	Sep. 15, 2021~ Jan. 05, 2022	Mar. 10, 2022	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30M-18G	Feb. 10, 2021	Sep. 15, 2021~ Jan. 05, 2022	Feb. 09, 2022	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 11, 2021	Sep. 15, 2021~ Jan. 05, 2022	Mar. 10, 2022	Radiation (03CH13-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz~40GHz	Dec. 11, 2020	Sep. 15, 2021~Nov. 12, 2021	Dec. 10, 2021	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 21, 2021	Nov. 12, 2021~Jan. 03, 2022	May 20, 2022	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170980	18GHz~40GHz	Jan. 11, 2021	Sep. 15, 2021~Jan. 05, 2022	Jan. 10, 2022	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN2	3GHz High Pass Filter	Jul. 12, 2021	Sep. 15, 2021~Jan. 05, 2022	Jul. 11, 2022	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60SS	SN3	1.2GHz High Pass Filter	Jul. 01, 2021	Sep. 15, 2021~Jan. 05, 2022	Jun. 30, 2022	Radiation (03CH13-HY)
Hygrometer	TECEPEL	DTM-303B	TP161243	N/A	Sep. 02, 2021	Sep. 15, 2021~Jan. 05, 2022	Sep. 01, 2022	Radiation (03CH13-HY)
Base Station (Measure)	Anritsu	MT8821C	6261849015	LTE	Oct. 06, 2021	Oct. 07, 2021~Oct. 12, 2021	Oct. 05, 2022	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262012917	FR1	Jan. 07, 2021	Oct. 07, 2021~Oct. 12, 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% ( $U = 2Uc(y)$ )	3.45 dB
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.73 dB
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.00 dB
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## Appendix A. Test Results of Conducted Test

### Conducted Output Power(Average power) and ERP/EIRP

<Main Antenna>

NR n2 Maximum Average Power [dBm] (GT - LC = -0.22 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.41	22.21	22.40	22.37	0.1726
5	1	23		22.35	22.29	22.41		
5	12	6		22.53	22.27	22.54		
5	1	1	QPSK	22.48	22.18	22.43		
5	1	23		22.29	22.22	22.45		
5	12	6		22.51	22.24	22.59		
5	1	1	16-QAM	21.85	21.87	21.94	21.72	0.1486
5	1	1	64-QAM	20.22	20.31	20.31		
5	1	1	256-QAM	18.32	18.33	18.65		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = -0.22 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.29	22.03	22.15	22.16	0.1644
10	1	50		22.27	22.23	22.37		
10	25	12		22.34	22.08	22.37		
10	1	1	QPSK	22.27	22.02	22.33		
10	1	50		22.25	22.23	22.37		
10	25	12		22.32	22.07	22.38		
10	1	1	16-QAM	21.63	21.58	21.89	21.67	0.1469
10	1	1	64-QAM	20.12	20.10	20.21		
10	1	1	256-QAM	18.14	18.10	18.51		
Limit	EIRP < 2W			Result			Pass	





NR n2 Maximum Average Power [dBm] (GT - LC = -0.22 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.45	22.14	22.22	22.25	0.1679
15	1	77		22.27	22.19	22.32		
15	36	18		22.42	22.22	22.38		
15	1	1	QPSK	22.47	22.04	22.27		
15	1	77		22.28	22.15	22.35		
15	36	18		22.46	22.17	22.41		
15	1	1	16-QAM	21.75	21.64	21.86	21.64	0.1459
15	1	1	64-QAM	20.11	20.18	20.24		
15	1	1	256-QAM	18.23	18.17	18.31		
Limit	EIRP < 2W			Result			Pass	

NR n2 Maximum Average Power [dBm] (GT - LC = -0.22 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.83	23.19	23.02	23.05	0.2018
20	1	104		23.08	23.25	22.81		
20	50	25		23.12	23.27	22.96		
20	1	1	QPSK	22.98	23.09	23.03		
20	1	104		23.06	23.11	22.76		
20	50	25		23.25	23.27	23.01		
20	1	1	16-QAM	21.75	21.51	21.82	21.6	0.1445
20	1	1	64-QAM	19.98	20.09	20.29		
20	1	1	256-QAM	18.25	18.06	18.29		
Limit	EIRP < 2W			Result			Pass	



NR n5 Maximum Average Power [dBm] (GT - LC = 0.37 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.34	24.59	24.28	22.81	0.1910
5	1	23		24.41	24.53	24.32		
5	12	6		24.42	24.46	24.41		
5	1	1	QPSK	24.31	24.34	24.31		
5	1	23		24.32	24.31	24.21		
5	12	6		24.43	24.47	24.43		
5	1	1	16-QAM	23.01	23.21	23.23	21.45	0.1396
5	1	1	64-QAM	21.52	21.94	21.78		
5	1	1	256-QAM	19.46	19.61	19.75		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 0.37 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.18	24.46	24.17	22.71	0.1866
10	1	50		24.38	24.49	24.28		
10	25	12		24.21	24.45	24.35		
10	1	1	QPSK	24.11	24.26	24.05		
10	1	50		24.28	24.42	24.00		
10	25	12		24.23	24.34	24.32		
10	1	1	16-QAM	23.02	23.11	23.01	21.33	0.1358
10	1	1	64-QAM	21.28	21.35	21.62		
10	1	1	256-QAM	19.48	19.59	19.62		
Limit	ERP < 7W			Result			Pass	



NR n5 Maximum Average Power [dBm] (GT - LC = 0.37 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.56	24.55	24.46	22.78	0.1897
15	1	77		24.49	24.51	24.52		
15	36	18		24.38	24.46	24.39		
15	1	1	QPSK	24.37	24.29	24.28		
15	1	77		24.39	24.39	24.42		
15	36	18		24.43	24.49	24.41		
15	1	1	16-QAM	23.20	23.23	23.35	21.57	0.1435
15	1	1	64-QAM	21.41	21.47	21.42		
15	1	1	256-QAM	19.63	19.58	19.56		
Limit	ERP < 7W			Result			Pass	

NR n5 Maximum Average Power [dBm] (GT - LC = 0.37 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.46	24.47	24.44	22.73	0.1875
20	1	104		24.51	24.50	24.47		
20	50	25		24.36	24.42	24.39		
20	1	1	QPSK	24.40	24.33	24.26		
20	1	104		24.30	24.38	24.35		
20	50	25		24.43	24.42	24.49		
20	1	1	16-QAM	22.58	23.12	22.63	21.34	0.1361
20	1	1	64-QAM	21.25	21.55	21.04		
20	1	1	256-QAM	18.93	19.54	19.17		
Limit	ERP < 7W			Result			Pass	



NR n7 Maximum Average Power [dBm] (GT - LC = 1.88 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.78	23.09	22.76	25.12	0.3251
5	1	23		23.01	23.18	22.46		
5	12	6		23.11	23.13	23.09		
5	1	1	QPSK	22.88	23.24	22.91		
5	1	23		22.91	23.09	22.44		
5	12	6		23.16	22.93	23.09		
5	1	1	16-QAM	21.55	21.92	21.67	23.8	0.2399
5	1	1	64-QAM	20.16	20.17	20.15		
5	1	1	256-QAM	18.36	21.48	18.34		
Limit	EIRP < 2W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 1.88 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.77	23.17	22.71	25.1	0.3236
10	1	50		23.17	23.06	22.46		
10	25	12		22.97	23.01	22.94		
10	1	1	QPSK	22.91	23.21	22.81		
10	1	50		23.22	23.05	22.51		
10	25	12		22.99	23.03	22.91		
10	1	1	16-QAM	21.59	21.93	21.47	23.81	0.2404
10	1	1	64-QAM	20.15	20.03	20.14		
10	1	1	256-QAM	18.35	18.43	18.39		
Limit	EIRP < 2W			Result			Pass	



NR n7 Maximum Average Power [dBm] (GT - LC = 1.88 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.86	23.19	23.13	25.26	0.3357
15	1	77		23.38	23.16	22.66		
15	36	18		23.19	23.12	23.06		
15	1	1	QPSK	23.06	23.08	22.93		
15	1	77		23.15	23.18	22.53		
15	36	18		23.21	23.14	23.11		
15	1	1	16-QAM	21.47	21.81	21.68	23.69	0.2339
15	1	1	64-QAM	20.32	20.13	20.31		
15	1	1	256-QAM	18.46	18.72	18.12		
Limit	EIRP < 2W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 1.88 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.86	22.98	23.12	25.19	0.3304
20	1	104		23.31	23.17	22.42		
20	50	25		23.17	23.18	23.11		
20	1	1	QPSK	22.94	23.01	23.04		
20	1	104		23.26	23.07	22.49		
20	50	25		23.17	23.21	23.10		
20	1	1	16-QAM	21.62	21.48	21.71	23.59	0.2286
20	1	1	64-QAM	20.18	19.97	20.23		
20	1	1	256-QAM	18.36	18.63	18.09		
Limit	EIRP < 2W			Result			Pass	



NR n25 Maximum Average Power [dBm] (GT - LC = -0.06 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.48	22.41	22.72	22.72	0.1871
5	1	23		22.41	22.52	22.71		
5	12	6		22.51	22.57	22.78		
5	1	1	QPSK	22.36	22.29	22.59		
5	1	23		22.32	22.34	22.57		
5	12	6		22.49	22.51	22.77		
5	1	1	16-QAM	21.73	21.75	21.65	21.69	0.1476
5	1	1	64-QAM	20.58	20.79	20.84		
5	1	1	256-QAM	18.39	18.41	18.27		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.06 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.48	22.25	22.61	22.57	0.1807
10	1	50		22.47	22.54	22.63		
10	25	12		22.49	22.29	22.54		
10	1	1	QPSK	22.37	22.17	22.48		
10	1	50		22.36	22.39	22.56		
10	25	12		22.51	22.32	22.57		
10	1	1	16-QAM	21.71	21.86	21.69	21.8	0.1514
10	1	1	64-QAM	20.67	20.73	20.56		
10	1	1	256-QAM	18.35	18.21	18.44		
Limit	EIRP < 2W			Result			Pass	



NR n25 Maximum Average Power [dBm] (GT - LC = -0.06 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.57	22.28	22.70	22.72	0.1871
15	1	77		22.46	22.10	22.71		
15	36	18		22.54	22.41	22.74		
15	1	1	QPSK	22.41	22.21	22.53		
15	1	77		22.31	22.42	22.66		
15	36	18		22.16	22.36	22.78		
15	1	1	16-QAM	21.79	21.87	21.73	21.81	0.1517
15	1	1	64-QAM	20.76	20.44	20.42		
15	1	1	256-QAM	18.25	18.24	18.36		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = -0.06 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.37	22.21	22.62	22.71	0.1866
20	1	104		22.31	22.48	22.74		
20	50	25		22.52	22.49	22.76		
20	1	1	QPSK	22.43	22.13	22.44		
20	1	104		22.18	22.51	22.66		
20	50	25		22.54	22.52	22.77		
20	1	1	16-QAM	21.76	21.82	21.66	21.76	0.1500
20	1	1	64-QAM	20.41	20.43	20.46		
20	1	1	256-QAM	18.28	18.51	18.28		
Limit	EIRP < 2W			Result			Pass	



NR n66 Maximum Average Power [dBm] (GT - LC = 1.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.96	23.11	22.67	24.71	0.2958
5	1	23		23.07	23.13	22.56		
5	12	6		23.01	23.16	22.66		
5	1	1	QPSK	22.89	23.12	22.57		
5	1	23		22.99	23.08	22.52		
5	12	6		23.03	23.16	22.71		
5	1	1	16-QAM	21.81	21.98	21.93	23.53	0.2254
5	1	1	64-QAM	20.09	20.43	20.37		
5	1	1	256-QAM	17.91	18.11	18.12		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 1.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.91	22.95	22.68	24.59	0.2877
10	1	50		23.04	22.99	22.55		
10	25	12		22.94	22.96	22.57		
10	1	1	QPSK	22.81	22.98	22.58		
10	1	50		23.01	22.84	22.63		
10	25	12		22.98	23.02	22.64		
10	1	1	16-QAM	21.81	21.88	21.88	23.43	0.2203
10	1	1	64-QAM	20.10	20.16	20.27		
10	1	1	256-QAM	17.92	18.01	18.05		
Limit	EIRP < 1W			Result			Pass	





NR n66 Maximum Average Power [dBm] (GT - LC = 1.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.94	23.17	22.73	24.74	0.2979
15	1	77		23.08	23.09	22.64		
15	36	18		23.03	23.19	22.72		
15	1	1	QPSK	22.89	23.10	22.67		
15	1	77		23.04	22.95	22.55		
15	36	18		23.11	23.12	22.73		
15	1	1	16-QAM	21.87	21.98	21.84	23.53	0.2254
15	1	1	64-QAM	20.13	20.28	20.13		
15	1	1	256-QAM	17.92	18.16	18.04		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 1.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.92	23.02	22.70	24.73	0.2972
20	1	104		23.12	23.06	22.56		
20	50	25		23.03	23.15	22.81		
20	1	1	QPSK	22.79	23.05	22.65		
20	1	104		23.01	22.97	22.53		
20	50	25		23.04	23.18	22.81		
20	1	1	16-QAM	21.72	21.91	21.79	23.46	0.2218
20	1	1	64-QAM	20.03	20.21	20.33		
20	1	1	256-QAM	17.93	18.04	17.98		
Limit	EIRP < 1W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 1.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	22.50	22.63	22.53	24.75	0.2985
40	1	214		22.67	22.53	22.16		
40	108	54		23.08	23.09	22.92		
40	1	1	QPSK	22.43	22.54	22.58		
40	1	214		22.55	22.44	22.16		
40	108	54		23.02	23.20	22.94		
40	1	1	16-QAM	21.48	21.13	21.49	23.04	0.2014
40	1	1	64-QAM	19.63	19.71	19.87		
40	1	1	256-QAM	17.59	17.63	17.66		
Limit	EIRP < 1W			Result			Pass	



NR n71 Maximum Average Power [dBm] (GT - LC = -0.39 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
5	1	1	PI/2 BPSK	24.23	24.09	24.22	21.74	0.1493
5	1	23		24.23	24.20	24.18		
5	12	6		24.21	24.15	24.26		
5	1	1	QPSK	24.18	24.10	24.19		
5	1	23		24.16	24.18	23.25		
5	12	6		24.18	24.21	24.28		
5	1	1	16-QAM	23.51	23.39	23.34	20.97	0.1250
5	1	1	64-QAM	21.89	21.82	21.62		
5	1	1	256-QAM	19.71	19.47	19.49		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = -0.39 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
10	1	1	PI/2 BPSK	24.10	23.99	23.99	21.62	0.1452
10	1	50		24.16	24.13	24.11		
10	25	12		23.99	24.04	24.06		
10	1	1	QPSK	24.07	23.92	23.98		
10	1	50		24.05	24.12	24.08		
10	25	12		24.06	24.04	24.12		
10	1	1	16-QAM	23.43	23.29	23.24	20.89	0.1227
10	1	1	64-QAM	21.82	21.63	21.48		
10	1	1	256-QAM	19.56	19.45	19.37		
Limit	ERP < 3W			Result			Pass	



NR n71 Maximum Average Power [dBm] (GT - LC = -0.39 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
15	1	1	PI/2 BPSK	24.20	24.28	24.18	21.75	0.1496
15	1	77		24.24	24.21	24.29		
15	36	18		24.17	24.23	24.21		
15	1	1	QPSK	24.16	23.43	24.21		
15	1	77		24.21	23.28	24.28		
15	36	18		24.14	23.32	24.27		
15	1	1	16-QAM	23.54	23.43	23.46	21	0.1259
15	1	1	64-QAM	21.82	21.74	21.76		
15	1	1	256-QAM	19.62	19.64	19.66		
Limit	ERP < 3W			Result			Pass	

NR n71 Maximum Average Power [dBm] (GT - LC = -0.39 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	ERP (dBm)	ERP(W)
20	1	1	PI/2 BPSK	24.09	24.10	24.12	21.78	0.1507
20	1	104		24.32	24.20	24.26		
20	50	25		24.15	24.28	24.23		
20	1	1	QPSK	24.02	24.06	24.16		
20	1	104		24.15	24.24	24.24		
20	50	25		24.18	24.27	24.28		
20	1	1	16-QAM	23.41	23.45	23.42	20.91	0.1233
20	1	1	64-QAM	21.71	21.71	21.84		
20	1	1	256-QAM	19.59	19.59	19.69		
Limit	ERP < 3W			Result			Pass	



NR n38 Maximum Average Power [dBm] (GT - LC = 1.84 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.82	23.04	23.02	25.1	0.3236
5	1	23		22.89	22.96	23.06		
5	12	6		23.22	23.19	23.26		
5	1	1	QPSK	23.10	23.03	23.03		
5	1	23		23.18	22.94	23.08		
5	12	6		23.07	22.23	23.21		
5	1	1	16-QAM	21.98	22.13	23.01	24.85	0.3055
5	1	1	64-QAM	20.46	20.52	20.88		
5	1	1	256-QAM	18.30	18.32	18.55		
Limit	EIRP < 2W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 1.84 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	22.84	22.91	22.82	25.07	0.3214
10	1	50		22.99	22.96	22.99		
10	25	12		23.23	23.05	23.10		
10	1	1	QPSK	23.05	22.95	22.89		
10	1	50		23.14	22.90	23.05		
10	25	12		23.12	23.01	23.14		
10	1	1	16-QAM	21.93	22.26	22.18	24.1	0.2570
10	1	1	64-QAM	20.53	20.51	20.91		
10	1	1	256-QAM	18.21	18.33	18.33		
Limit	EIRP < 2W			Result			Pass	



NR n38 Maximum Average Power [dBm] (GT - LC = 1.84 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	23.02	23.06	22.92	25.1	0.3236
15	1	77		23.04	23.07	23.12		
15	36	18		23.16	23.15	23.26		
15	1	1	QPSK	23.14	23.14	23.01	23.99	0.2506
15	1	77		23.11	23.12	23.14		
15	36	18		23.25	23.11	23.21		
15	1	1	16-QAM	21.98	22.15	22.07	24	0.2512
15	1	1	64-QAM	20.42	20.65	20.79		
15	1	1	256-QAM	18.29	18.32	18.42		
Limit	EIRP < 2W			Result			Pass	
NR n38 Maximum Average Power [dBm] (GT - LC = 1.84 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.99	22.98	22.86	25.11	0.3243
20	1	104		23.04	23.02	23.02		
20	50	25		23.19	23.17	23.24		
20	1	1	QPSK	23.00	23.06	22.97	24	0.2512
20	1	104		23.03	23.01	23.10		
20	50	25		23.27	23.25	23.22		
20	1	1	16-QAM	21.91	22.16	22.12	24	0.2512
20	1	1	64-QAM	20.59	20.59	20.92		
20	1	1	256-QAM	18.46	18.26	18.51		
Limit	EIRP < 2W			Result			Pass	



NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.87 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	26.32	26.29	26.13	28.22	0.6637
20	1	1	QPSK	26.26	26.35	26.05		
Limit	EIRP < 2W			Result			Pass	



NR n2 Maximum Average Power [dBm] (GT - LC = 0.2 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	23.25	23.26	23.24	23.46	0.2218
20	1	1	QPSK	23.24	23.23	23.22		
Limit	EIRP < 2W			Result			Pass	

NR n7 Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	23.15	23.02	23.14	25.59	0.3622
20	1	1	QPSK	23.31	22.91	22.98		
Limit	EIRP < 2W			Result			Pass	

NR n25 Maximum Average Power [dBm] (GT - LC = 0.39 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	23.74	23.34	23.73	24.13	0.2588
20	1	1	QPSK	23.62	23.52	23.61		
Limit	EIRP < 2W			Result			Pass	

NR n66 Maximum Average Power [dBm] (GT - LC = 1.13 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	23.03	23.16	23.19	24.32	0.2704
20	1	1	QPSK	23.06	23.17	23.18		
Limit	EIRP < 1W			Result			Pass	



NR n38 Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
5	1	1	PI/2 BPSK	22.89	23.11	22.98	24.9	0.309
Limit	EIRP < 2W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	23.00	23.12	23.04	24.91	0.3097
Limit	EIRP < 2W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	22.93	23.14	23.05	24.93	0.3112
Limit	EIRP < 2W			Result			Pass	

NR n38 Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	22.97	23.24	23.01	25.05	0.3199
20	1	1	QPSK	22.98	23.26	23.05		
20	1	1	16-QAM	21.99	22.34	21.81	24.13	0.2588
20	1	1	64-QAM	19.98	20.38	19.86		
20	1	1	256-QAM	18.48	18.77	18.33		
Limit	EIRP < 2W			Result			Pass	





<MIMO 2 Antenna>

<SCS 15K>

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	26.23	26.29	26.24	28.69	0.7396
10	1	50		26.28	26.30	26.31		
10	25	12		26.31	26.35	26.39		
10	1	1	QPSK	26.24	26.30	26.26		
10	1	50		26.29	26.32	26.32		
10	25	12		26.33	26.36	26.41		
10	1	1	16-QAM	24.91	24.52	25.45	27.73	0.5929
10	1	1	64-QAM	23.79	23.79	24.21		
10	1	1	256-QAM	21.85	21.62	21.40		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	26.28	26.26	26.32	28.72	0.7447
15	1	77		26.36	26.29	26.36		
15	36	18		26.42	26.44	26.41		
15	1	1	QPSK	26.25	26.24	26.33		
15	1	77		26.36	26.31	26.35		
15	36	18		26.41	26.42	26.42		
15	1	1	16-QAM	25.09	25.55	25.03	27.83	0.6067
15	1	1	64-QAM	23.88	24.99	24.27		
15	1	1	256-QAM	21.62	21.71	21.82		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	26.11	26.17	26.32	28.73	0.7464
30	1	158		26.24	26.18	26.27		
30	80	40		26.45	26.39	26.41		
30	1	1	QPSK	26.18	26.19	26.31		
30	1	158		26.27	26.15	26.29		
30	80	40		26.45	26.34	26.39		
30	1	1	16-QAM	24.95	24.72	25.01	27.29	0.5358
30	1	1	64-QAM	23.71	23.72	23.61		
30	1	1	256-QAM	21.64	21.54	21.72		
Limit	EIRP < 2W			Result			Pass	



NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	26.09	26.16	26.16	28.76	0.7516
40	1	214		26.17	26.01	26.11		
40	108	54		26.41	26.32	26.48		
40	1	1	QPSK	25.97	26.08	26.13		
40	1	214		26.06	25.97	26.03		
40	108	54		26.46	26.34	26.44		
40	1	1	16-QAM	24.66	24.85	25.26	27.54	0.5675
40	1	1	64-QAM	23.44	23.93	23.41		
40	1	1	256-QAM	20.76	21.11	21.56		
Limit	EIRP < 2W			Result			Pass	



<SCS 30K>

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	26.17	26.24	26.57	28.89	0.7745
10	1	22		26.36	26.16	26.48		
10	12	6		26.14	26.33	26.61		
10	1	1	QPSK	26.15	26.20	26.56		
10	1	22		26.33	26.14	26.46		
10	12	6		26.09	26.27	26.53		
10	1	1	16-QAM	25.17	25.37	25.66	27.94	0.6223
10	1	1	64-QAM	23.63	23.73	24.11		
10	1	1	256-QAM	21.55	21.71	21.54		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	26.03	26.34	26.41	28.85	0.7674
15	1	36		26.22	26.25	26.44		
15	18	9		26.13	26.23	26.57		
15	1	1	QPSK	25.92	26.24	26.37		
15	1	36		26.18	26.22	26.35		
15	18	9		26.08	26.25	26.52		
15	1	1	16-QAM	25.16	25.25	25.51	27.79	0.6012
15	1	1	64-QAM	23.47	23.72	23.88		
15	1	1	256-QAM	21.56	22.97	21.55		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
30	1	1	PI/2 BPSK	25.93	26.15	26.26	28.78	0.7551
30	1	76		26.18	26.10	26.36		
30	36	18		26.19	26.28	26.50		
30	1	1	QPSK	25.88	26.11	26.22		
30	1	76		26.17	25.99	26.29		
30	36	18		26.21	26.22	26.41		
30	1	1	16-QAM	24.93	25.23	25.11	27.51	0.5636
30	1	1	64-QAM	23.37	23.38	23.53		
30	1	1	256-QAM	21.63	21.56	21.58		
Limit	EIRP < 2W			Result			Pass	



NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	25.63	25.86	26.16	28.76	0.7516
40	1	104		26.05	25.80	26.11		
40	50	25		26.31	26.21	26.48		
40	1	1	QPSK	25.57	25.84	26.13		
40	1	104		25.99	25.73	26.03		
40	50	25		26.26	26.23	26.44		
40	1	1	16-QAM	24.87	25.05	25.26	27.54	0.5675
40	1	1	64-QAM	23.10	23.52	23.41		
40	1	1	256-QAM	21.44	21.69	21.56		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	25.96	26.11	26.12	28.74	0.7482
50	1	131		26.41	26.13	26.33		
50	64	32		26.43	26.31	26.38		
50	1	1	QPSK	25.85	26.07	26.05		
50	1	131		26.39	26.11	26.29		
50	64	32		26.43	26.27	26.46		
50	1	1	16-QAM	25.16	25.25	25.37	27.65	0.5821
50	1	1	64-QAM	23.33	23.76	23.74		
50	1	1	256-QAM	21.61	21.61	21.57		
Limit	EIRP < 2W			Result			Pass	



NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	25.31	25.76	26.17	28.85	0.7674
80	1	215		25.83	25.71	25.84		
80	108	54		26.31	26.14	26.30		
80	1	1	QPSK	26.01	25.71	26.34		
80	1	215		26.12	25.69	26.57		
80	108	54		26.33	26.13	26.33		
80	1	1	16-QAM	24.77	24.88	25.03	27.31	0.5383
80	1	1	64-QAM	23.75	23.54	23.27		
80	1	1	256-QAM	22.24	21.48	21.41		
Limit	EIRP < 2W			Result			Pass	

NR n41 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.28 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	25.23	25.06	24.84	28.52	0.7112
100	1	271		25.09	25.91	25.74		
100	135	67		26.11	26.14	26.21		
100	1	1	QPSK	26.19	25.72	25.83		
100	1	271		25.40	26.24	25.97		
100	135	67		26.11	26.08	26.21		
100	1	1	16-QAM	24.45	24.27	24.27	26.73	0.4710
100	1	1	64-QAM	22.94	22.55	22.48		
100	1	1	256-QAM	20.73	20.54	20.30		
Limit	EIRP < 2W			Result			Pass	



# Appendix B. Test Results of Radiated Test

<Sample 1>

## 5G NR n2 (Ant. Main)

5G NR n2 / 20MHz / QPSK									
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	3703	-55.04	-13	-42.04	-75.77	-65.34	1.98	12.28	H
	5554	-53.16	-13	-40.16	-76.89	-63.29	2.14	12.28	H
	7405	-47.89	-13	-34.89	-76.28	-55.89	2.17	10.17	H
									H
									H
	3703	-54.83	-13	-41.83	-76.09	-65.13	1.98	12.28	V
	5554	-52.51	-13	-39.51	-76.86	-62.64	2.14	12.28	V
	7405	-48.06	-13	-35.06	-76.42	-56.06	2.17	10.17	V
									V
									V
Middle	3743	-54.90	-13	-41.90	-75.75	-65.16	2.00	12.25	H
	5614	-52.82	-13	-39.82	-76.54	-63.05	2.13	12.36	H
	7485	-47.96	-13	-34.96	-76.12	-55.86	2.12	10.03	H
									H
									H
	3743	-53.80	-13	-40.80	-75.16	-64.06	2.00	12.25	V
	5614	-51.62	-13	-38.62	-75.99	-61.85	2.13	12.36	V
	7485	-48.19	-13	-35.19	-76.22	-56.09	2.12	10.03	V
									V
									V



Highest	3783	-54.57	-13	-41.57	-75.54	-64.78	2.02	12.23	H
	5674	-52.21	-13	-39.21	-76.26	-62.54	2.11	12.44	H
	7565	-47.78	-13	-34.78	-75.4	-55.90	2.11	10.23	H
									H
									H
	3783	-54.15	-13	-41.15	-75.61	-64.36	2.02	12.23	V
	5674	-51.62	-13	-38.62	-76.26	-61.95	2.11	12.44	V
	7565	-48.36	-13	-35.36	-75.95	-56.48	2.11	10.23	V
									V
									V

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



5G NR n25 (Ant. Main)

5G NR n25 / 20MHz / QPSK									
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	3703	-55.24	-13	-42.24	-75.97	-65.54	1.98	12.28	H
	5554	-53.31	-13	-40.31	-77.04	-63.44	2.14	12.28	H
	7405	-48.03	-13	-35.03	-76.42	-56.03	2.17	10.17	H
									H
									H
	3703	-54.71	-13	-41.71	-75.97	-65.01	1.98	12.28	V
	5554	-52.30	-13	-39.30	-76.65	-62.43	2.14	12.28	V
	7405	-47.94	-13	-34.94	-76.3	-55.94	2.17	10.17	V
									V
									V
Middle	3748	-54.68	-13	-41.68	-75.54	-64.93	2.00	12.25	H
	5621	-52.27	-13	-39.27	-76.04	-62.51	2.13	12.37	H
	7495	-48.00	-13	-35.00	-76.13	-55.89	2.12	10.01	H
									H
									H
	3748	-53.83	-13	-40.83	-75.2	-64.08	2.00	12.25	V
	5621	-51.88	-13	-38.88	-76.29	-62.12	2.13	12.37	V
	7495	-48.08	-13	-35.08	-76.07	-55.97	2.12	10.01	V
									V
									V





Highest	3793	-54.10	-13	-41.10	-75.1	-64.30	2.02	12.22	H
	5689	-52.06	-13	-39.06	-76.18	-62.41	2.11	12.46	H
	7585	-48.39	-13	-35.39	-75.86	-56.58	2.11	10.31	H
									H
									H
	3793	-54.00	-13	-41.00	-75.48	-64.20	2.02	12.22	V
	5689	-51.01	-13	-38.01	-75.71	-61.36	2.11	12.46	V
	7585	-48.68	-13	-35.68	-76.16	-56.87	2.11	10.31	V
									V
									V
									V
									V

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



**EN-DC 5A + n2A (Ant. Main + Ant. MIMO 2)**

EN-DC 5A+n2A / 10M+20MHz / QPSK									
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	-55.10	-13	-42.10	-75.85	-65.40	1.98	12.28	H
	5553	-52.72	-13	-39.72	-76.4	-62.85	2.14	12.27	H
	7405	-47.78	-13	-34.78	-76.21	-55.78	2.17	10.17	H
									H
									H
	3702	-54.74	-13	-41.74	-75.99	-65.04	1.98	12.28	V
	5553	-51.86	-13	-38.86	-76.21	-61.99	2.14	12.27	V
	7405	-48.32	-13	-35.32	-76.68	-56.32	2.17	10.17	V
									V
									V
Middle	3743	-54.76	-13	-41.76	-75.61	-65.02	2.00	12.25	H
	5614	-49.94	-13	-36.94	-73.66	-60.17	2.13	12.36	H
	7485	-48.11	-13	-35.11	-76.27	-56.01	2.12	10.03	H
									H
									H
	3743	-54.06	-13	-41.06	-75.42	-64.32	2.00	12.25	V
	5614	-49.77	-13	-36.77	-74.14	-60.00	2.13	12.36	V
	7485	-48.33	-13	-35.33	-76.36	-56.23	2.12	10.03	V
									V
									V



Highest	3782	-54.61	-13	-41.61	-75.58	-64.82	2.02	12.23	H
	5674	-46.02	-13	-33.02	-70.07	-56.35	2.11	12.44	H
	7565	-48.49	-13	-35.49	-76.11	-56.61	2.11	10.23	H
									H
									H
	3782	-53.96	-13	-40.96	-75.42	-64.17	2.02	12.23	V
	5674	-45.73	-13	-32.73	-70.37	-56.06	2.11	12.44	V
	7565	-48.35	-13	-35.35	-75.94	-56.47	2.11	10.23	V
									V
									V
									V
									V

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



**5G NR n66 (Ant. Main)**

5G NR n66 / 40MHz / QPSK									
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	-57.32	-13	-44.32	-76.41	-67.69	1.81	12.18	H
	5137	-52.85	-13	-39.85	-76.41	-62.67	2.30	12.13	H
	6849	-50.33	-13	-37.33	-76.78	-59.01	2.37	11.05	H
									H
									H
	3425	-56.50	-13	-43.50	-76.22	-66.87	1.81	12.18	V
	5137	-51.36	-13	-38.36	-75.49	-61.18	2.30	12.13	V
	6849	-49.46	-13	-36.46	-76.47	-58.14	2.37	11.05	V
									V
									V
Middle	3455	-56.82	-13	-43.82	-76.2	-67.25	1.83	12.27	H
	5182	-52.94	-13	-39.94	-76.51	-62.79	2.29	12.14	H
	6909	-49.49	-13	-36.49	-76.1	-58.09	2.39	10.99	H
									H
									H
	3455	-56.19	-13	-43.19	-76.12	-66.62	1.83	12.27	V
	5182	-49.77	-13	-36.77	-73.89	-59.62	2.29	12.14	V
	6909	-49.14	-13	-36.14	-76.35	-57.74	2.39	10.99	V
									V
									V



Highest	3485	-56.62	-13	-43.62	-76.3	-67.12	1.86	12.36	H
	5227	-53.34	-13	-40.34	-76.94	-63.22	2.27	12.15	H
	6969	-49.38	-13	-36.38	-76.14	-57.90	2.41	10.93	H
									H
									H
	3425	-55.99	-13	-42.99	-76.15	-66.36	1.81	12.18	V
	5137	-53.30	-13	-40.30	-77.44	-63.12	2.30	12.13	V
	6849	-48.78	-13	-35.78	-76.19	-57.46	2.37	11.05	V
									V
									V
									V
									V

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



**EN-DC 48A+n66A (Ant. MIMO 2 + Ant. Main)**

EN-DC 48A+n66A / 20M+40MHz / QPSK									
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	3424	-46.96	-13	-33.96	-75.95	-57.32	1.81	12.17	H
	5136	-42.80	-13	-29.80	-76.3	-52.62	2.30	12.13	H
	6849	-40.22	-13	-27.22	-76.68	-48.90	2.37	11.05	H
									H
									H
	3424	-46.62	-13	-33.62	-76.24	-56.98	1.81	12.17	V
	5136	-42.18	-13	-29.18	-76.25	-52.00	2.30	12.13	V
	6849	-39.30	-13	-26.30	-76.32	-47.98	2.37	11.05	V
									V
									V
Middle	3454	-46.58	-13	-33.58	-75.87	-57.01	1.83	12.26	H
	5181	-43.08	-13	-30.08	-76.59	-52.93	2.29	12.14	H
	6909	-39.85	-13	-26.85	-76.46	-48.45	2.39	10.99	H
									H
									H
	3454	-45.93	-13	-32.93	-75.77	-56.36	1.83	12.26	V
	5181	-42.47	-13	-29.47	-76.54	-52.32	2.29	12.14	V
	6909	-39.32	-13	-26.32	-76.53	-47.92	2.39	10.99	V
									V
									V



Highest	3484	-46.19	-13	-33.19	-75.77	-56.69	1.86	12.35	H
	5226	-43.57	-13	-30.57	-77.12	-53.45	2.27	12.15	H
	6969	-39.20	-13	-26.20	-75.96	-47.72	2.41	10.93	H
									H
									H
	3484	-45.65	-13	-32.65	-75.71	-56.15	1.86	12.35	V
	5226	-42.85	-13	-29.85	-76.94	-52.73	2.27	12.15	V
	6969	-38.25	-13	-25.25	-75.66	-46.77	2.41	10.93	V
									V
									V
									V
									V

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



5G NR n38 (Ant. Main)

5G NR n38 / 20MHz / QPSK									
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	-44.96	-25	-19.96	-38.59	-54.79	2.30	12.13	H
	7711	-60.46	-25	-35.46	-58.53	-69.11	2.11	10.76	H
	10280.5	-58.60	-25	-33.60	-61.43	-68.27	2.24	11.91	H
									H
									H
	5142	-45.09	-25	-20.09	-39.29	-54.92	2.30	12.13	V
	7711	-58.59	-25	-33.59	-56.71	-67.24	2.11	10.76	V
	10280.5	-59.26	-25	-34.26	-61.7	-68.93	2.24	11.91	V
									V
									V
Middle	5170	-46.26	-25	-21.26	-39.95	-56.10	2.29	12.13	H
	7760	-61.13	-25	-36.13	-59.32	-69.95	2.11	10.94	H
	10346.5	-59.51	-25	-34.51	-62.41	-69.10	2.35	11.94	H
									H
									H
	5170	-44.82	-25	-19.82	-39.07	-54.66	2.29	12.13	V
	7760	-57.48	-25	-32.48	-55.74	-66.30	2.11	10.94	V
	10346.5	-59.67	-25	-34.67	-62.31	-69.26	2.35	11.94	V
									V
									V





Highest	5205	-65.79	-25	-40.79	-59.58	-75.66	2.28	12.14	H
	7803	-60.92	-25	-35.92	-59.23	-69.90	2.11	11.09	H
	10396	-58.77	-25	-33.77	-61.73	-68.30	2.43	11.96	H
									H
									H
	5205	-63.11	-25	-38.11	-57.44	-72.98	2.28	12.14	V
	7803	-56.51	-25	-31.51	-54.88	-65.49	2.11	11.09	V
	10396	-59.46	-25	-34.46	-62.25	-68.99	2.43	11.96	V
									V
									V

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



5G NR n41(HPUE) (Ant. MIMO 1 SRS)

5G NR n41(HPUE) / 80MHz / QPSK									
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	4995	-52.44	-25	-27.44	-75.96	-62.18	2.36	12.10	H
	7492	-46.93	-25	-21.93	-75.07	-54.82	2.12	10.01	H
	9989	-43.99	-25	-18.99	-76.03	-53.98	1.81	11.80	H
									H
									H
	4995	-51.89	-25	-26.89	-76.03	-61.63	2.36	12.10	V
	7492	-45.90	-25	-20.90	-73.9	-53.79	2.12	10.01	V
	9989	-45.40	-25	-20.40	-76.56	-55.39	1.81	11.80	V
									V
									V
Middle	5109	-52.41	-25	-27.41	-75.96	-62.22	2.32	12.12	H
	7663	-47.31	-25	-22.31	-74.76	-55.78	2.11	10.59	H
	10217	-42.54	-25	-17.54	-74.68	-52.28	2.14	11.89	H
									H
									H
	5109	-51.92	-25	-26.92	-76.05	-61.73	2.32	12.12	V
	7663	-44.71	-25	-19.71	-72.21	-53.18	2.11	10.59	V
	10217	-43.66	-25	-18.66	-75.29	-53.40	2.14	11.89	V
									V
									V



Highest	5223	-53.30	-25	-28.30	-76.89	-63.18	2.27	12.14	H
	7834	-47.16	-25	-22.16	-74.98	-56.25	2.11	11.20	H
	10445	-43.15	-25	-18.15	-75.42	-52.62	2.50	11.98	H
									H
									H
	5223	-52.61	-25	-27.61	-76.75	-62.49	2.27	12.14	V
	7834	-45.36	-25	-20.36	-73.19	-54.45	2.11	11.20	V
	10445	-43.23	-25	-18.23	-75.42	-52.70	2.50	11.98	V
									V
									V
									V
									V

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



**5G NR n2 (Ant. MIMO 2)**

5G NR n2 / 20MHz / QPSK									
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	3703	-54.78	-13	-41.78	-75.51	-65.08	1.98	12.28	H
	5554	-52.52	-13	-39.52	-76.25	-62.65	2.14	12.28	H
	7405	-47.55	-13	-34.55	-75.94	-55.55	2.17	10.17	H
									H
									H
	3703	-54.53	-13	-41.53	-75.79	-64.83	1.98	12.28	V
	5554	-46.11	-13	-33.11	-70.46	-56.24	2.14	12.28	V
	7405	-47.61	-13	-34.61	-75.97	-55.61	2.17	10.17	V
									V
									V
Middle	3743	-54.39	-13	-41.39	-75.24	-64.65	2.00	12.25	H
	5614	-52.60	-13	-39.60	-76.32	-62.83	2.13	12.36	H
	7485	-47.80	-13	-34.80	-75.96	-55.70	2.12	10.03	H
									H
									H
	3743	-53.97	-13	-40.97	-75.33	-64.23	2.00	12.25	V
	5614	-52.12	-13	-39.12	-76.49	-62.35	2.13	12.36	V
	7485	-47.68	-13	-34.68	-75.71	-55.58	2.12	10.03	V
									V
									V



Highest	3783	-54.54	-13	-41.54	-75.51	-64.75	2.02	12.23	H
	5674	-49.37	-13	-36.37	-73.42	-59.70	2.11	12.44	H
	7565	-48.19	-13	-35.19	-75.81	-56.31	2.11	10.23	H
									H
									H
	3783	-53.61	-13	-40.61	-75.07	-63.82	2.02	12.23	V
	5674	-47.81	-13	-34.81	-72.45	-58.14	2.11	12.44	V
	7565	-47.98	-13	-34.98	-75.59	-56.10	2.11	10.23	V
									V
									V

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



5G NR n25 (Ant. MIMO 2)

5G NR n25 / 20MHz / QPSK									
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	3703	-55.07	-13	-42.07	-75.8	-65.37	1.98	12.28	H
	5554	-52.67	-13	-39.67	-76.4	-62.80	2.14	12.28	H
	7405	-47.57	-13	-34.57	-75.96	-55.57	2.17	10.17	H
									H
									H
	3703	-54.55	-13	-41.55	-75.81	-64.85	1.98	12.28	V
	5554	-49.80	-13	-36.80	-74.15	-59.93	2.14	12.28	V
	7405	-47.55	-13	-34.55	-75.91	-55.55	2.17	10.17	V
									V
									V
Middle	3748	-54.61	-13	-41.61	-75.47	-64.86	2.00	12.25	H
	5621	-52.05	-13	-39.05	-75.82	-62.29	2.13	12.37	H
	7495	-47.52	-13	-34.52	-75.65	-55.41	2.12	10.01	H
									H
									H
	3748	-54.09	-13	-41.09	-75.46	-64.34	2.00	12.25	V
	5621	-52.04	-13	-39.04	-76.45	-62.28	2.13	12.37	V
	7495	-47.91	-13	-34.91	-75.9	-55.80	2.12	10.01	V
									V
									V



Highest	3793	-54.07	-13	-41.07	-75.06	-64.27	2.02	12.22	H
	5689	-51.71	-13	-38.71	-75.83	-62.06	2.11	12.46	H
	7585	-48.40	-13	-35.40	-75.87	-56.59	2.11	10.31	H
									H
									H
	3793	-53.93	-13	-40.93	-75.41	-64.13	2.02	12.22	V
	5689	-50.00	-13	-37.00	-74.7	-60.35	2.11	12.46	V
	7585	-48.38	-13	-35.38	-75.86	-56.57	2.11	10.31	V
									V
									V

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



**5G NR n66 (Ant. MIMO 2)**

5G NR n66 / 40MHz / QPSK									
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)
Middle	3455	-56.50	-13	-43.50	-75.88	-66.93	1.83	12.27	H
	5182	-53.07	-13	-40.07	-76.64	-62.92	2.29	12.14	H
	6909	-49.70	-13	-36.70	-76.31	-58.30	2.39	10.99	H
									H
									H
	3455	-55.54	-13	-42.54	-75.47	-65.97	1.83	12.27	V
	5182	-52.50	-13	-39.50	-76.62	-62.35	2.29	12.14	V
	6909	-49.15	-13	-36.15	-76.36	-57.75	2.39	10.99	V
									V
									V

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





**5G NR n38 (Ant. MIMO 2)**

5G NR n38 / 20MHz / QPSK									
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)
Middle	5170	-64.76	-25	-39.76	-58.45	-74.60	2.29	12.13	H
	7760	-62.02	-25	-37.02	-60.21	-70.84	2.11	10.94	H
	10346	-59.13	-25	-34.13	-62.03	-68.72	2.35	11.94	H
									H
									H
	5170	-64.50	-25	-39.50	-58.75	-74.34	2.29	12.13	V
	7760	-61.87	-25	-36.87	-60.13	-70.69	2.11	10.94	V
	10346	-60.00	-25	-35.00	-62.63	-69.59	2.35	11.94	V
									V
									V

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



**5G NR n41(HPUE) (Ant. Aux SRS)**

5G NR n41(HPUE) / 80MHz / QPSK									
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	4995	-52.78	-25	-27.78	-76.3	-62.52	2.36	12.10	H
	7492	-47.44	-25	-22.44	-75.58	-55.33	2.12	10.01	H
	9989	-44.47	-25	-19.47	-76.51	-54.46	1.81	11.80	H
									H
									H
	4995	-52.17	-25	-27.17	-76.31	-61.91	2.36	12.10	V
	7492	-44.44	-25	-19.44	-72.44	-52.33	2.12	10.01	V
	9989	-45.66	-25	-20.66	-76.82	-55.65	1.81	11.80	V
									V
									V
Middle	5109	-52.79	-25	-27.79	-76.34	-62.60	2.32	12.12	H
	7663	-48.10	-25	-23.10	-75.55	-56.57	2.11	10.59	H
	10217	-43.30	-25	-18.30	-75.44	-53.04	2.14	11.89	H
									H
									H
	5109	-52.01	-25	-27.01	-76.14	-61.82	2.32	12.12	V
	7663	-45.15	-25	-20.15	-72.65	-53.62	2.11	10.59	V
	10217	-44.17	-25	-19.17	-75.8	-53.91	2.14	11.89	V
									V
									V



Highest	5223	-53.58	-25	-28.58	-77.17	-63.46	2.27	12.14	H
	7834	-47.56	-25	-22.56	-75.38	-56.65	2.11	11.20	H
	10445	-43.20	-25	-18.20	-75.47	-52.67	2.50	11.98	H
									H
									H
	5223	-52.73	-25	-27.73	-76.87	-62.61	2.27	12.14	V
	7834	-47.50	-25	-22.50	-75.33	-56.59	2.11	11.20	V
	10445	-43.39	-25	-18.39	-75.58	-52.86	2.50	11.98	V
									V
									V
									V
									V

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



<Sample 2>

**5G NR n5 (Ant. Main)**

5G NR n5 / 20MHz / QPSK									
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	1650	-58.47	-13	-45.47	-71.5	-63.86	1.23	8.77	H
	2476	-38.16	-13	-25.16	-55.08	-45.05	1.44	10.48	H
	3301	-57.48	-13	-44.48	-76.19	-65.43	1.71	11.80	H
									H
									H
	1650	-60.42	-13	-47.42	-73.33	-65.81	1.23	8.77	V
	2476	-38.18	-13	-25.18	-55.36	-45.07	1.44	10.48	V
	3301	-57.02	-13	-44.02	-76.16	-64.97	1.71	11.80	V
									V
									V
Middle	1656	-56.81	-13	-43.81	-69.87	-62.22	1.23	8.79	H
	2483	-39.84	-13	-26.84	-56.76	-46.74	1.44	10.49	H
	3311	-57.56	-13	-44.56	-76.21	-65.53	1.72	11.83	H
									H
									H
	1656	-59.61	-13	-46.61	-72.54	-65.02	1.23	8.79	V
	2483	-42.33	-13	-29.33	-59.51	-49.23	1.44	10.49	V
	3311	-56.90	-13	-43.90	-75.99	-64.87	1.72	11.83	V
									V
									V



Highest	1661	-62.12	-13	-49.12	-75.2	-67.55	1.23	8.81	H
	2491	-42.33	-13	-29.33	-59.23	-49.23	1.44	10.49	H
	3320	-57.33	-13	-44.33	-75.94	-65.32	1.72	11.86	H
									H
									H
	1661	-61.11	-13	-48.11	-74.08	-66.54	1.23	8.81	V
	2491	-48.39	-13	-35.39	-65.53	-55.29	1.44	10.49	V
	3320	-56.95	-13	-43.95	-76.02	-64.94	1.72	11.86	V
									V
									V

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



**EN-DC 2A + n5 (Ant. MIMO 2 + Ant. Main)**

EN-DC 2A+n5 / 20M+20MHz / QPSK									
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	1635	-52.46	-13	-39.46	-75.35	-57.80	1.22	8.71	H
	2448	-39.15	-13	-26.15	-66.1	-46.03	1.43	10.46	H
	3271	-47.23	-13	-34.23	-76.04	-55.11	1.68	11.71	H
									H
									H
	1635	-52.88	-13	-39.88	-75.63	-58.22	1.22	8.71	V
	2448	-44.29	-13	-31.29	-71.62	-51.17	1.43	10.46	V
	3271	-46.98	-13	-33.98	-76.11	-54.86	1.68	11.71	V
									V
									V
Middle	1656	-52.33	-13	-39.33	-75.29	-57.74	1.23	8.79	H
	2480	-35.37	-13	-22.37	-62.22	-42.27	1.44	10.48	H
	3312	-47.86	-13	-34.86	-76.42	-55.83	1.72	11.84	H
									H
									H
	1656	-52.60	-13	-39.60	-75.43	-58.01	1.23	8.79	V
	2480	-38.81	-13	-25.81	-65.92	-45.71	1.44	10.48	V
	3312	-47.28	-13	-34.28	-76.28	-55.25	1.72	11.84	V
									V
									V



Highest	1675	-51.94	-13	-38.94	-74.95	-57.42	1.24	8.87	H
	2512	-40.10	-13	-27.10	-66.91	-47.02	1.44	10.51	H
	3351	-47.56	-13	-34.56	-75.88	-55.62	1.75	11.95	H
									H
									H
	1675	-52.43	-13	-39.43	-75.34	-57.91	1.24	8.87	V
	2512	-42.05	-13	-29.05	-69.05	-48.97	1.44	10.51	V
	3351	-47.44	-13	-34.44	-76.31	-55.50	1.75	11.95	V
									V
									V

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



5G NR n7 (Ant. Main)

5G NR n7 / 20MHz / QPSK									
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	5003	-58.20	-25	-33.20	-51.48	-67.94	2.36	12.10	H
	7504	-51.11	-25	-26.11	-49.57	-59.01	2.11	10.01	H
	10005	-59.88	-25	-34.88	-62.42	-69.87	1.81	11.80	H
									H
									H
	5003	-56.28	-25	-31.28	-50.18	-66.02	2.36	12.10	V
	7504	-46.23	-25	-21.23	-44.55	-54.13	2.11	10.01	V
	10005	-60.77	-25	-35.77	-62.39	-70.76	1.81	11.80	V
									V
									V
Middle	5053	-55.43	-25	-30.43	-48.84	-65.20	2.34	12.11	H
	7579	-53.02	-25	-28.02	-50.97	-61.19	2.11	10.28	H
	10105	-59.33	-25	-34.33	-61.97	-69.21	1.97	11.84	H
									H
									H
	5053	-54.58	-25	-29.58	-48.59	-64.35	2.34	12.11	V
	7579	-50.13	-25	-25.13	-48.07	-58.30	2.11	10.28	V
	10105	-60.12	-25	-35.12	-62.02	-70.00	1.97	11.84	V
									V
									V





Highest	5103	-56.49	-25	-31.49	-50.02	-66.29	2.32	12.12	H
	7654	-49.57	-25	-24.57	-47.5	-58.01	2.11	10.55	H
	10205	-59.75	-25	-34.75	-62.5	-69.51	2.12	11.88	H
									H
									H
	5103	-55.54	-25	-30.54	-49.66	-65.34	2.32	12.12	V
	7654	-44.58	-25	-19.58	-42.56	-53.02	2.11	10.55	V
	10205	-60.36	-25	-35.36	-62.57	-70.12	2.12	11.88	V
									V
									V

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



5G NR n41(HPUE) (Ant. Main)

5G NR n41(HPUE) / 80MHz / QPSK									
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	4995	-49.08	-25	-24.08	-42.34	-58.82	2.36	12.10	H
	7492	-48.74	-25	-23.74	-47.23	-56.63	2.12	10.01	H
	9989	-59.38	-25	-34.38	-61.91	-69.37	1.81	11.80	H
									H
									H
	4995	-48.16	-25	-23.16	-42.04	-57.90	2.36	12.10	V
	7492	-44.35	-25	-19.35	-42.7	-52.24	2.12	10.01	V
	9989	-60.24	-25	-35.24	-61.9	-70.23	1.81	11.80	V
									V
									V
Middle	5109	-54.02	-25	-29.02	-47.56	-63.83	2.32	12.12	H
	7663	-47.85	-25	-22.85	-45.8	-56.32	2.11	10.59	H
	10217	-59.36	-25	-34.36	-62.12	-69.10	2.14	11.89	H
									H
									H
	5109	-50.08	-25	-25.08	-44.2	-59.89	2.32	12.12	V
	7663	-39.79	-25	-14.79	-37.79	-48.26	2.11	10.59	V
	10217	-59.95	-25	-34.95	-62.19	-69.69	2.14	11.89	V
									V
									V



Highest	5223	-52.40	-25	-27.40	-46.25	-62.28	2.27	12.14	H
	7834	-47.22	-25	-22.22	-45.72	-56.31	2.11	11.20	H
	10445	-58.73	-25	-33.73	-61.74	-68.20	2.50	11.98	H
									H
									H
	5223	-49.81	-25	-24.81	-44.2	-59.69	2.27	12.14	V
	7834	-39.52	-25	-14.52	-38.03	-48.61	2.11	11.20	V
	10445	-58.44	-25	-33.44	-61.38	-67.91	2.50	11.98	V
									V
									V

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



**5G NR n71(Ant. Main)**

5G NR n71 / 20MHz / QPSK									
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	1329	-56.60	-13	-43.60	-70.82	-60.73	1.14	7.41	H
	1993	-39.66	-13	-26.66	-54.75	-46.23	1.36	10.07	H
	2657	-58.90	-13	-45.90	-76.01	-65.93	1.45	10.63	H
									H
									H
	1329	-60.42	-13	-47.42	-74.29	-64.55	1.14	7.41	V
	1993	-42.46	-13	-29.46	-57.56	-49.03	1.36	10.07	V
	2657	-58.31	-13	-45.31	-75.72	-65.34	1.45	10.63	V
									V
									V
Middle	1344	-59.32	-13	-46.32	-73.62	-63.51	1.14	7.48	H
	2015	-42.90	-13	-29.90	-58.34	-49.50	1.36	10.11	H
	2687	-58.41	-13	-45.41	-75.64	-65.46	1.45	10.65	H
									H
									H
	1344	-60.04	-13	-47.04	-73.93	-64.23	1.14	7.48	V
	2015	-47.08	-13	-34.08	-62.57	-53.68	1.36	10.11	V
	2687	-58.10	-13	-45.10	-75.66	-65.15	1.45	10.65	V
									V
									V



Highest	1359	-59.89	-13	-46.89	-74.25	-64.15	1.14	7.55	H
	2038	-39.32	-13	-26.32	-55.17	-45.93	1.37	10.13	H
	2717	-58.26	-13	-45.26	-75.63	-65.33	1.45	10.67	H
									H
									H
	1359	-60.28	-13	-47.28	-74.2	-64.54	1.14	7.55	V
	2038	-48.39	-13	-35.39	-64.35	-55.00	1.37	10.13	V
	2717	-58.22	-13	-45.22	-75.92	-65.29	1.45	10.67	V
									V
									V

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



**EN-DC 2A+n71A (Ant. MIMO 2 + Ant. Main)**

EN-DC 2A+n71A / 20M+20MHz / QPSK									
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	-50.62	-13	-37.62	-74.73	-57.10	0.83	7.31	H
	1992	-40.45	-13	-27.45	-65.46	-49.38	1.04	9.97	H
	2657	-48.73	-13	-35.73	-75.78	-58.43	1.19	10.89	H
									H
									H
	1328	-51.05	-13	-38.05	-74.81	-57.53	0.83	7.31	V
	1992	-44.05	-13	-31.05	-69.07	-52.98	1.04	9.97	V
	2657	-48.43	-13	-35.43	-75.77	-58.13	1.19	10.89	V
									V
									V
Middle	1344	-50.49	-13	-37.49	-74.68	-57.04	0.83	7.38	H
	2016	-38.68	-13	-25.68	-64.04	-47.66	1.04	10.02	H
	2688	-48.60	-13	-35.60	-75.77	-58.33	1.20	10.93	H
									H
									H
	1344	-50.59	-13	-37.59	-74.38	-57.14	0.83	7.38	V
	2016	-50.00	-13	-37.00	-75.41	-58.98	1.04	10.02	V
	2688	-48.28	-13	-35.28	-75.77	-58.01	1.20	10.93	V
									V
									V



Highest	1360	-50.20	-13	-37.20	-74.45	-56.82	0.83	7.46	H
	2040	-42.07	-13	-29.07	-67.84	-51.08	1.05	10.06	H
	2720	-48.59	-13	-35.59	-75.89	-58.35	1.20	10.96	H
									H
									H
	1360	-50.80	-13	-37.80	-74.6	-57.42	0.83	7.46	V
	2040	-44.26	-13	-31.26	-70.14	-53.27	1.05	10.06	V
	2720	-48.14	-13	-35.14	-75.78	-57.90	1.20	10.96	V
									V
									V

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



**5G NR n7 (Ant. MIMO 2)**

5G NR n7 / 20MHz / QPSK									
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	-62.43	-25	-37.43	-55.71	-72.17	2.36	12.10	H
	7503	-47.38	-25	-22.38	-45.83	-55.28	2.11	10.01	H
	10005	-58.97	-25	-33.97	-61.51	-68.96	1.81	11.80	H
									H
									H
	5002	-59.33	-25	-34.33	-53.23	-69.07	2.36	12.10	V
	7503	-43.64	-25	-18.64	-41.95	-51.54	2.11	10.01	V
	10005	-59.63	-25	-34.63	-61.25	-69.62	1.81	11.80	V
									V
									V
Middle	5055	-61.92	-25	-36.92	-55.33	-71.69	2.34	12.11	H
	7580	-48.86	-25	-23.86	-46.78	-57.03	2.11	10.29	H
	10105	-58.33	-25	-33.33	-60.98	-68.21	1.97	11.84	H
									H
									H
	5055	-59.39	-25	-34.39	-53.4	-69.16	2.34	12.11	V
	7580	-43.91	-25	-18.91	-41.83	-52.08	2.11	10.29	V
	10105	-59.27	-25	-34.27	-61.19	-69.15	1.97	11.84	V
									V
									V





Highest	5102	-60.98	-25	-35.98	-54.5	-70.78	2.32	12.12	H
	7654	-44.92	-25	-19.92	-42.85	-53.36	2.11	10.55	H
	10205	-58.90	-25	-33.90	-61.65	-68.66	2.12	11.88	H
									H
									H
	5102	-60.19	-25	-35.19	-54.3	-69.99	2.32	12.12	V
	7654	-40.52	-25	-15.52	-38.5	-48.96	2.11	10.55	V
	10205	-59.62	-25	-34.62	-61.83	-69.38	2.12	11.88	V
									V
									V

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



5G NR n41(HPUE) (Ant. MIMO 2)

5G NR n41(HPUE) / 80MHz / QPSK									
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	4995	-55.10	-25	-30.10	-48.36	-64.84	2.36	12.10	H
	7492	-43.96	-25	-18.96	-42.45	-51.85	2.12	10.01	H
	9989	-59.56	-25	-34.56	-62.09	-69.55	1.81	11.80	H
									H
									H
	4995	-52.17	-25	-27.17	-46.05	-61.91	2.36	12.10	V
	7492	-38.78	-25	-13.78	-37.13	-46.67	2.12	10.01	V
	9989	-60.36	-25	-35.36	-62.01	-70.35	1.81	11.80	V
									V
									V
Middle	5109	-55.91	-25	-30.91	-49.45	-65.72	2.32	12.12	H
	7663	-49.23	-25	-24.23	-47.18	-57.70	2.11	10.59	H
	10217	-59.90	-25	-34.90	-62.66	-69.64	2.14	11.89	H
									H
									H
	5109	-51.07	-25	-26.07	-45.19	-60.88	2.32	12.12	V
	7663	-43.44	-25	-18.44	-41.44	-51.91	2.11	10.59	V
	10217	-60.57	-25	-35.57	-62.82	-70.31	2.14	11.89	V
									V
									V



Highest	5223	-53.60	-25	-28.60	-47.43	-63.48	2.27	12.14	H
	7834	-43.73	-25	-18.73	-42.21	-52.82	2.11	11.20	H
	10445	-59.01	-25	-34.01	-62.02	-68.48	2.50	11.98	H
									H
									H
	5223	-51.22	-25	-26.22	-45.6	-61.10	2.27	12.14	V
	7834	-39.05	-25	-14.05	-37.54	-48.14	2.11	11.20	V
	10445	-58.87	-25	-33.87	-61.81	-68.34	2.50	11.98	V
									V
									V

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



**5G NR n41 (HPUE) MIMO (Ant. Main + Ant. MIMO 2)**

5G NR n41 MIMO (HPUE) / 80MHz / QPSK									
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)
Middle	5114	-30.63	-25	-5.63	-54.18	-40.44	2.31	12.12	H
	7671	-41.71	-25	-16.71	-69.18	-50.21	2.11	10.62	H
	10229	-43.70	-25	-18.70	-75.85	-53.43	2.16	11.89	H
									H
									H
	5114	-27.94	-25	-2.94	-52.07	-37.75	2.31	12.12	V
	7671	-38.12	-25	-13.12	-65.64	-46.62	2.11	10.62	V
	10229	-44.19	-25	-19.19	-75.85	-53.92	2.16	11.89	V
									V
									V

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



**EN-DC 66A + n41A (HPUE) (Ant. Main + Ant. MIMO 2)**

EN-DC 66A+n41A(HPUE) / 20M+80MHz / QPSK									
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	5000	-52.75	-25	-27.75	-76.28	-62.49	2.36	12.10	H
	7501	-48.33	-25	-23.33	-76.44	-56.22	2.11	10.00	H
	10000	-45.77	-25	-20.77	-77.8	-55.77	1.80	11.80	H
									H
									H
	5000	-52.36	-25	-27.36	-76.51	-62.10	2.36	12.10	V
	7501	-45.03	-25	-20.03	-73	-52.92	2.11	10.00	V
	10000	-46.61	-25	-21.61	-77.71	-56.61	1.80	11.80	V
									V
									V
Middle	5114	-52.99	-25	-27.99	-76.54	-62.80	2.31	12.12	H
	7671	-48.20	-25	-23.20	-75.67	-56.70	2.11	10.62	H
	10231	-43.51	-25	-18.51	-75.66	-53.24	2.16	11.89	H
									H
									H
	5114	-52.43	-25	-27.43	-76.56	-62.24	2.31	12.12	V
	7671	-44.87	-25	-19.87	-72.39	-53.37	2.11	10.62	V
	10231	-44.35	-25	-19.35	-76.02	-54.08	2.16	11.89	V
									V
									V



Highest	5228	-53.88	-25	-28.88	-77.48	-63.76	2.27	12.15	H
	7837	-46.74	-25	-21.74	-74.58	-55.84	2.11	11.21	H
	10462	-43.60	-25	-18.60	-75.88	-53.05	2.53	11.98	H
									H
									H
	5228	-52.43	-25	-27.43	-76.57	-62.31	2.27	12.15	V
	7837	-42.35	-25	-17.35	-70.2	-51.45	2.11	11.21	V
	10462	-43.69	-25	-18.69	-75.93	-53.14	2.53	11.98	V
									V
									V

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