



FCC RADIO TEST REPORT

FCC ID : ZMOFM350GLG
Equipment : 5G Module
Brand Name : Fibocom Wireless Inc.
Model Name : FM350-GL
Applicant : Fibocom Wireless Inc.
1101, Tower A, Building 6, Shenzhen
International, Innovation Valley, Dashi 1st Rd,
Nanshan, ShenZhen, China
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, 27

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

The product was received on Oct. 20, 2022 and testing was performed from Nov. 05, 2022 to Nov. 17, 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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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Reporting only	-
	§27.50 (k)(3)	Equivalent Isotropic Radiated Power (n77) (n78)	Pass	
-	§27.50 (k)(4)	Peak-to-Average Ratio	-	See Note
-	§2.1049	Occupied Bandwidth	-	See Note
-	§2.1051 §27.53 (n)(2)	Conducted Band Edge Measurement (n77) (n78)	-	See Note
-	§2.1051 §27.53 (n)(2)	Conducted Spurious Emission (n77) (n78)	-	See Note
-	§2.1055 §27.54	Frequency Stability Temperature & Voltage	-	See Note
4.2	§2.1053 §27.53 (n)(2)	Radiated Spurious Emission (n77) (n78)	Pass	15.92 dB under limit at 13805.000 MHz

Note: 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.

Declaration of Conformity:

- 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.
- The measurement uncertainty please refer to 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: Sheng Kuo

Report Producer: Cindy Liu



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G Module
Brand Name	Fibocom Wireless Inc.
Model Name	FM350-GL
FCC ID	ZMOFM350GLG
Sample 1	EUT with Host 1
Sample 2	EUT with Host 2
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

The product was installed into Notebook Computer (Brand Name: Lenovo, Model Name: TP00129C) during test, and the host information was recorded in the following table.

Host Information	
Host 1	Host with Amphenol Antenna
Host 2	Host with Novocomms/JYT Antenna

WWAN Antenna Information				
Main Antenna	Manufacturer	Amphenol	Peak gain (dBi)	5G NR n77 : 1.79 5G NR n78 : 2.57
	Part number	TKC116-16-000-C	Type	PIFA
	Manufacturer	Novocomms/JYT	Peak gain (dBi)	5G NR n77 : 0.12 5G NR n78 : 0.66
	Part number	JYAAE0150HR	Type	PIFA
MIMO 2 Antenna	Manufacturer	Amphenol	Peak gain (dBi)	5G NR n77 : 0.54 5G NR n78 : 0.54
	Part number	TKC115-16-000-C	Type	PIFA
	Manufacturer	Novocomms/JYT	Peak gain (dBi)	5G NR n77 : 0.55 5G NR n78 : 0.78
	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 is subject to this standard	
Tx/Rx Frequency	3455.01 MHz ~ 3544.98 MHz
Bandwidth	SCS 15kHz: 10MHz/15MHz/20MHz SCS 30kHz: 10MHz/15MHz/20MHz/40MHz/50MHz/60MHz/80MHz/100MHz
Maximum Output Power to Antenna	Main Antenna: 5G NR n77: 25.50 dBm for HPUE 5G NR n78: 25.68 dBm for HPUE MIMO 2 Antenna: 5G NR n77: 24.35 dBm for HPUE 5G NR n78: 25.48 dBm for HPUE
Type of Modulation	CP-OFDM: QPSK/16QAM/64QAM/256QAM DFT-s-OFDM: 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.	Sporton Site No.
	TH03-HY (TAF Code: 1190)
Test Engineer	Ivy Yeh
Temperature (°C)	20~24
Relative Humidity (%)	50~52
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.	Sporton Site No.
	03CH12-HY
Test Engineer	Jack Cheng, Tim Lee, Wilson Wu and Jesse Fan
Temperature (°C)	20~25
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, 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.

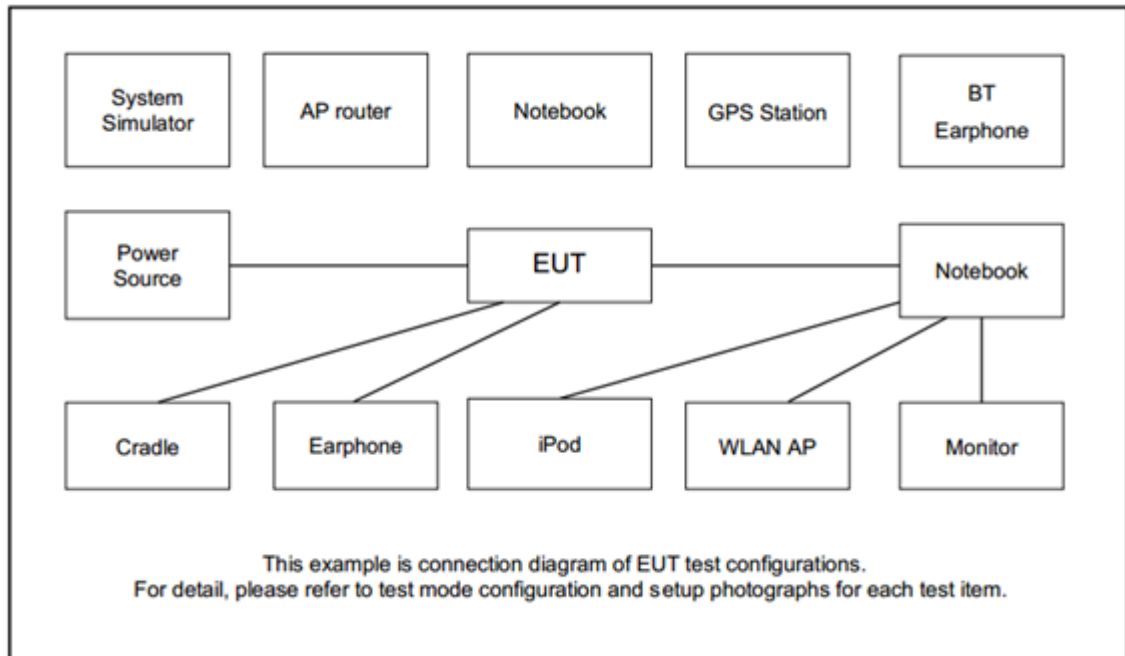
2 Test Configuration of Equipment Under Test

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	25	30	40	50	60	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Half	Full	L	M	H			
Max. Output Power	n77	-	v	v	v	-	-	v	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	n78	-	v	v	v	-	-	v	v	v	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
E.I.R.P	n77	-	v	v	v	-	-	v	v	v	v	-	v	v	v	v	v	v	Max. Power								
	n78	-	v	v	v	-	-	v	v	v	v	-	v	v	v	v	v	v									
Radiated Spurious Emission	n77	-				-	-					-	v	v						v						v	
	n78	-				-	-					-	v	v						v						v	
Remark	<ol style="list-style-type: none"> The mark "v " means that this configuration is chosen for testing The mark "- " means that this bandwidth is not supported. 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. 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





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	MT8821C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.4 Frequency List of Low/Middle/High Channels

5G NR n77/n78 Channel and Frequency List for SCS 15kHz				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	630667	633334	636000
	Frequency	3460.005	3500.01	3540
15	Channel	630500	633334	636166
	Frequency	3457.5	3500.01	3542.49
10	Channel	630334	633334	636332
	Frequency	3455.01	3500.01	3544.98

5G NR n77/n78 Channel and Frequency List for SCS 30kHz				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	-	633334	-
	Frequency	-	3500.01	-
80	Channel	632668	633334	634000
	Frequency	3490.02	3500.01	3510
60	Channel	632000	633334	634666
	Frequency	3480	3500.01	3519.99
50	Channel	631668	633334	635000
	Frequency	3475.02	3500.01	3525
40	Channel	631334	633334	635332
	Frequency	3470.01	3500.01	3529.98
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540
15	Channel	630500	633334	636166
	Frequency	3457.5	3500.01	3542.49
10	Channel	630334	633334	636332
	Frequency	3455.01	3500.01	3544.98

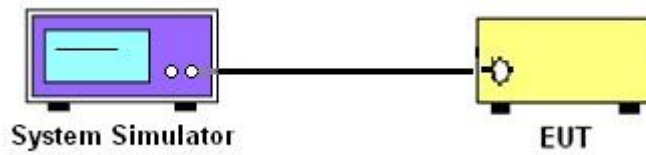
3 Conducted Test Items

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 EIRP

3.2.1 Description of the Conducted Output Power Measurement and 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 EIRP of mobile transmitters must not exceed 1 Watts for 5G NR n77 and n78

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

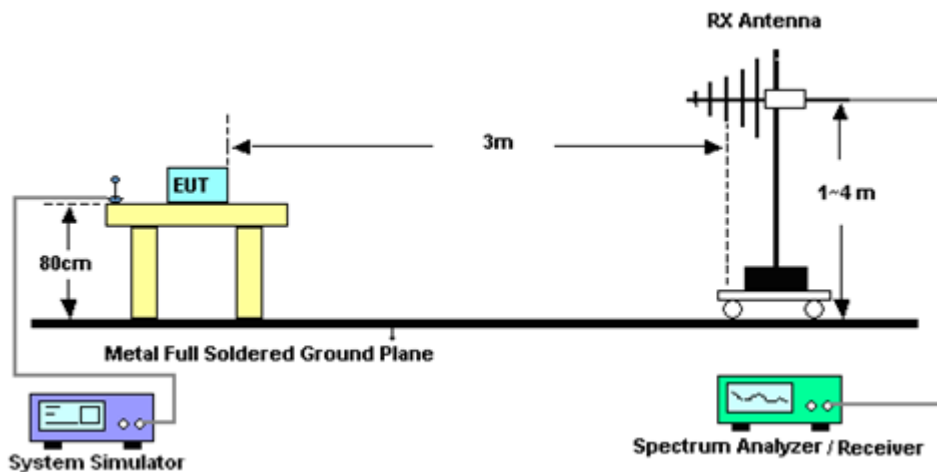
See list of measuring instruments of this test report.

4.1.1 Test Setup

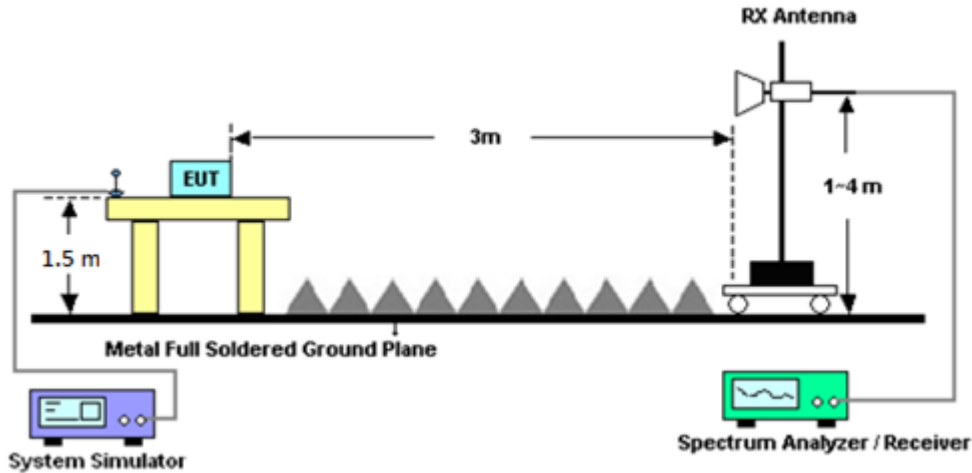
For radiated test below 30MHz



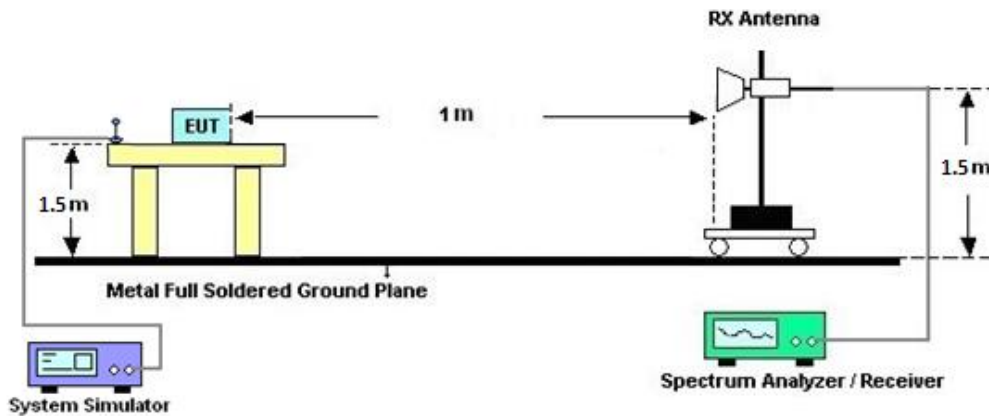
For radiated test from 30MHz to 1GHz



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

4.2.2 Test Procedures

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

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



5 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	May 13, 2022	Nov. 12, 2022~ Nov. 14, 2022	May 12, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 03, 2021	Nov. 12, 2022~ Nov. 14, 2022	Dec. 02, 2022	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	40103 & 07	30MHz~1GHz	Apr. 24, 2022	Nov. 12, 2022~ Nov. 14, 2022	Apr. 23, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 08, 2022	Nov. 12, 2022~ Nov. 14, 2022	Oct. 07, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1212	1GHz~18GHz	Mar. 10, 2022	Nov. 12, 2022~ Nov. 14, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 30, 2021	Nov. 12, 2022~ Nov. 14, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 14, 2022	Nov. 12, 2022~ Nov. 14, 2022	May 13, 2023	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2022	Nov. 12, 2022~ Nov. 14, 2022	Mar. 22, 2023	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Nov. 12, 2022~ Nov. 14, 2022	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-1 8G-56-01-A7 0	EC1900249	1GHz-18GHz	Dec. 22, 2021	Nov. 12, 2022~ Nov. 14, 2022	Dec. 21, 2022	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-1 8G-56-01-A7 0	EC1900269	1GHz-18GHz	Dec. 27, 2021	Nov. 12, 2022~ Nov. 14, 2022	Dec. 26, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Nov. 12, 2022~ Nov. 14, 2022	Dec. 23, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Keysight	N9010A	MY53470118	10Hz~44GHz	Jan. 12, 2022	Nov. 12, 2022~ Nov. 14, 2022	Jan. 11, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Nov. 12, 2022~ Nov. 14, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 10, 2021	Nov. 12, 2022~ Nov. 14, 2022	Dec. 09, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Nov. 12, 2022~ Nov. 14, 2022	Feb. 20, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803953/2	30MHz~40GHz	Mar. 08, 2022	Nov. 12, 2022~ Nov. 14, 2022	Mar. 07, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872 .5-6750-1800 0-40ST	SN2	6.75GHz High Pass Filter	Mar. 15, 2022	Nov. 12, 2022~ Nov. 14, 2022	Mar. 14, 2023	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Nov. 26, 2021	Nov. 12, 2022~ Nov. 14, 2022	Nov. 25, 2022	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 12, 2022~ Nov. 14, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1m~4m	N/A	Nov. 12, 2022~ Nov. 14, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 12, 2022~ Nov. 14, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Nov. 12, 2022~ Nov. 14, 2022	N/A	Radiation (03CH12-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303B	TP200886	NA	Mar. 21, 2022	Nov. 05, 2022 ~ Nov. 17, 2022	Mar. 20, 2023	Conducted (TH03-HY)
Base Station (Measure)	Anritsu	MT8000A	6262012917	FR1	Feb. 11, 2022	Nov. 05, 2022 ~ Nov. 17, 2022	Feb. 10, 2023	Conducted (TH03-HY)
Radio Communication Analyzer	Anritsu	MT8821C	6201664755	LTE FDD/TDD LTE-2CC DLCA/ULCA	Aug. 01, 2022	Nov. 05, 2022 ~ Nov. 17, 2022	Jul. 31, 2023	Conducted (TH03-HY)
Coupler	Warison	20dB 25W SMA Directional Coupler	#B	1-18GHz	Jan. 07, 2022	Nov. 05, 2022 ~ Nov. 17, 2022	Jan. 06, 2023	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% ($U = 2Uc(y)$)	3.31 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.25 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.81 dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power) and EIRP

<Main Antenna>

<SCS 15kHz>

NR n77 (HPUE) 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	24.35	24.51	24.72	26.71	0.4688
10	1	50		24.49	24.61	24.92		
10	25	12		24.34	24.49	24.77		
10	1	1	QPSK	24.36	24.46	24.71		
10	1	50		24.45	24.63	24.91		
10	25	12		24.39	24.55	24.85		
10	1	1	16-QAM	23.65	23.63	23.99	25.78	0.3784
10	1	1	64-QAM	21.77	21.97	22.22		
10	1	1	256-QAM	19.87	20.00	20.23		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) 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	24.51	24.55	24.72	27.29	0.5358
15	1	77		24.51	24.71	25.50		
15	36	18		24.55	24.65	24.85		
15	1	1	QPSK	24.50	24.60	24.76		
15	1	77		24.51	24.79	25.00		
15	36	18		24.65	24.71	24.94		
15	1	1	16-QAM	23.71	24.02	24.02	25.81	0.3811
15	1	1	64-QAM	21.96	22.16	22.27		
15	1	1	256-QAM	19.97	20.24	20.33		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) 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	24.54	24.57	24.67	26.86	0.4853
20	1	104		24.50	24.73	25.07		
20	50	25		24.56	24.72	24.84		
20	1	1	QPSK	24.50	24.57	24.68		
20	1	104		24.53	24.72	24.86		
20	50	25		24.61	24.80	24.89		
20	1	1	16-QAM	23.73	23.74	23.91	25.70	0.3715
20	1	1	64-QAM	22.06	21.97	22.19		
20	1	1	256-QAM	20.03	20.02	20.19		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	25.08	25.29	25.37	28.13	0.6501
10	1	50		25.13	25.28	25.49		
10	25	12		25.32	25.39	25.45		
10	1	1	QPSK	25.21	25.41	25.51		
10	1	50		25.24	25.36	25.56		
10	25	12		25.15	25.39	25.44		
10	1	1	16-QAM	24.11	23.36	24.64	27.21	0.5260
10	1	1	64-QAM	22.66	22.83	22.86		
10	1	1	256-QAM	20.56	21.01	21.06		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	25.23	25.41	25.44	28.25	0.6683
15	1	77		25.30	25.43	25.58		
15	36	18		25.46	25.64	25.56		
15	1	1	QPSK	25.44	25.56	25.54		
15	1	77		25.46	25.68	25.65		
15	36	18		25.36	25.62	25.53		
15	1	1	16-QAM	24.21	24.42	24.52	27.09	0.5117
15	1	1	64-QAM	22.83	22.92	22.84		
15	1	1	256-QAM	20.75	21.05	20.98		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	25.23	25.32	25.33	28.20	0.6607
20	1	104		25.31	25.33	25.49		
20	50	25		25.55	25.62	25.57		
20	1	1	QPSK	25.38	25.48	25.43		
20	1	104		25.39	25.57	25.56		
20	50	25		25.45	25.63	25.56		
20	1	1	16-QAM	24.23	24.54	24.45	27.11	0.5140
20	1	1	64-QAM	22.89	22.87	22.68		
20	1	1	256-QAM	20.72	21.00	20.91		
Limit	EIRP < 1W			Result			Pass	



<SCS 30kHz>

NR n77 (HPUE) 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	24.22	24.39	24.63	26.58	0.4550
10	1	22		24.19	24.43	24.66		
10	12	6		24.35	24.55	24.78		
10	1	1	QPSK	24.31	24.37	24.61		
10	1	22		24.26	24.45	24.66		
10	12	6		24.33	24.55	24.79		
10	1	1	16-QAM	23.31	23.43	23.46	25.25	0.3350
10	1	1	64-QAM	21.74	21.87	22.10		
10	1	1	256-QAM	19.93	20.07	20.35		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) 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	24.30	24.39	24.51	26.55	0.4519
15	1	36		24.22	24.41	24.66		
15	18	9		24.38	24.54	24.73		
15	1	1	QPSK	24.30	24.37	24.60		
15	1	36		24.22	24.39	24.65		
15	18	9		24.42	24.57	24.76		
15	1	1	16-QAM	23.31	23.33	23.58	25.37	0.3443
15	1	1	64-QAM	21.76	21.91	22.04		
15	1	1	256-QAM	19.99	20.07	20.25		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) 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	24.30	24.27	24.41	27.19	0.5236
20	1	49		24.16	24.34	24.52		
20	25	12		24.37	24.15	24.10		
20	1	1	QPSK	24.24	24.28	24.42		
20	1	49		24.21	24.36	24.54		
20	25	12		25.40	24.53	24.70		
20	1	1	16-QAM	23.31	23.35	23.45	25.24	0.3342
20	1	1	64-QAM	21.78	21.75	21.97		
20	1	1	256-QAM	19.97	20.02	20.13		
Limit	EIRP < 1W			Result			Pass	



NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	23.71	23.67	23.77	26.07	0.4046
40	1	104		23.81	23.76	24.04		
40	50	25		24.05	24.22	24.25		
40	1	1	QPSK	23.72	23.68	23.72		
40	1	104		23.78	23.78	23.99		
40	50	25		24.12	24.18	24.28		
40	1	1	16-QAM	22.76	22.72	22.78	24.57	0.2864
40	1	1	64-QAM	21.18	21.13	21.21		
40	1	1	256-QAM	19.42	19.34	19.45		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	23.94	23.89	24.02	26.04	0.4018
50	1	131		24.05	24.10	24.22		
50	64	32		24.06	24.25	24.22		
50	1	1	QPSK	23.95	23.85	24.02		
50	1	131		24.06	24.12	24.18		
50	64	32		24.09	24.23	24.21		
50	1	1	16-QAM	22.94	22.92	22.91	24.73	0.2972
50	1	1	64-QAM	21.42	21.38	21.45		
50	1	1	256-QAM	19.64	19.62	19.65		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	23.96	23.93	23.97	26.15	0.4121
60	1	160		24.17	24.24	24.34		
60	81	40		24.16	24.23	24.24		
60	1	1	QPSK	23.93	23.85	23.96		
60	1	160		24.16	24.22	24.36		
60	81	40		24.15	24.23	24.25		
60	1	1	16-QAM	23.02	22.94	23.04	24.83	0.3041
60	1	1	64-QAM	21.44	21.36	21.49		
60	1	1	256-QAM	19.68	19.58	19.64		
Limit	EIRP < 1W			Result			Pass	



NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	23.52	23.46	23.45	26.02	0.3999
80	1	215		23.79	23.88	23.92		
80	108	54		24.17	24.18	24.22		
80	1	1	QPSK	23.52	23.49	23.51		
80	1	215		23.83	23.90	23.96		
80	108	54		24.17	24.21	24.23		
80	1	1	16-QAM	22.65	22.63	22.52	24.44	0.2780
80	1	1	64-QAM	21.25	21.21	21.24		
80	1	1	256-QAM	19.41	19.42	19.37		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 1.79 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	-	23.14	-	25.97	0.3954
100	1	271		-	23.66	-		
100	135	67		-	24.12	-		
100	1	1	QPSK	-	23.22	-		
100	1	271		-	23.74	-		
100	135	67		-	24.18	-		
100	1	1	16-QAM	-	22.65	-	24.44	0.2780
100	1	1	64-QAM	-	21.02	-		
100	1	1	256-QAM	-	19.21	-		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	25.11	25.30	25.32	28.06	0.6397
10	1	22		25.06	25.24	25.36		
10	12	6		25.18	25.37	25.49		
10	1	1	QPSK	25.11	25.31	25.36		
10	1	22		25.01	25.25	25.41		
10	12	6		25.23	25.40	25.47		
10	1	1	16-QAM	24.21	24.35	24.38	26.95	0.4955
10	1	1	64-QAM	22.60	22.71	22.84		
10	1	1	256-QAM	20.81	20.97	21.04		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	25.06	25.27	25.25	27.98	0.6281
15	1	36		25.05	25.25	25.35		
15	18	9		25.21	25.39	25.40		
15	1	1	QPSK	25.11	25.30	25.27		
15	1	36		25.07	25.25	25.35		
15	18	9		25.21	25.37	25.41		
15	1	1	16-QAM	23.91	24.27	24.38	26.95	0.4955
15	1	1	64-QAM	22.54	22.74	22.87		
15	1	1	256-QAM	20.78	20.94	21.05		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	25.08	25.18	25.11	28.02	0.6339
20	1	49		25.00	25.18	25.22		
20	25	12		25.27	25.45	25.33		
20	1	1	QPSK	25.09	25.17	25.16		
20	1	49		25.08	25.12	25.27		
20	25	12		25.29	25.45	25.42		
20	1	1	16-QAM	24.12	24.25	24.27	26.84	0.4831
20	1	1	64-QAM	22.48	22.56	22.63		
20	1	1	256-QAM	20.78	20.89	20.85		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	24.57	24.55	24.59	27.79	0.6012
40	1	104		24.68	24.71	24.98		
40	50	25		25.01	25.12	25.18		
40	1	1	QPSK	24.59	24.55	24.64		
40	1	104		24.71	24.70	24.99		
40	50	25		24.99	25.16	25.22		
40	1	1	16-QAM	23.55	23.56	23.41	26.13	0.4102
40	1	1	64-QAM	22.01	22.03	22.13		
40	1	1	256-QAM	20.19	20.23	20.31		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	24.72	24.80	24.87	27.74	0.5943
50	1	131		24.90	24.95	25.17		
50	64	32		24.95	25.14	25.08		
50	1	1	QPSK	24.79	24.80	24.93		
50	1	131		24.96	24.97	25.13		
50	64	32		24.99	25.16	25.15		
50	1	1	16-QAM	23.79	23.82	23.90	26.47	0.4436
50	1	1	64-QAM	22.31	22.27	22.32		
50	1	1	256-QAM	20.50	20.50	20.61		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	24.75	24.75	24.87	27.81	0.6039
60	1	160		24.97	25.04	25.23		
60	81	40		25.03	25.17	25.15		
60	1	1	QPSK	24.72	24.77	24.81		
60	1	160		25.02	25.10	25.24		
60	81	40		25.04	25.13	25.14		
60	1	1	16-QAM	23.56	23.77	24.11	26.68	0.4656
60	1	1	64-QAM	22.26	22.25	22.85		
60	1	1	256-QAM	20.51	20.45	20.96		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	24.19	24.17	24.17	27.49	0.5610
80	1	215		24.44	24.56	24.71		
80	108	54		24.85	24.90	24.85		
80	1	1	QPSK	24.25	24.24	24.24		
80	1	215		24.54	24.63	24.79		
80	108	54		24.90	24.92	24.91		
80	1	1	16-QAM	23.33	22.89	23.07	25.90	0.3890
80	1	1	64-QAM	21.67	21.57	21.52		
80	1	1	256-QAM	20.13	20.11	20.09		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 2.57 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	-	23.91	-	27.38	0.5470
100	1	271		-	24.45	-		
100	135	67		-	24.79	-		
100	1	1	QPSK	-	23.91	-		
100	1	271		-	24.47	-		
100	135	67		-	24.81	-		
100	1	1	16-QAM	-	22.72	-	25.29	0.3381
100	1	1	64-QAM	-	21.38	-		
100	1	1	256-QAM	-	19.92	-		
Limit	EIRP < 1W			Result			Pass	



<MIMO2 Antenna>

<SCS 15kHz>

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	23.77	23.88	24.02	24.68	0.2938
10	1	50		23.84	23.97	24.12		
10	25	12		23.83	23.92	24.05		
10	1	1	QPSK	23.76	23.83	24.01		
10	1	50		23.84	23.96	24.13		
10	25	12		23.84	23.94	24.09		
10	1	1	16-QAM	22.84	22.93	23.05	23.60	0.2291
10	1	1	64-QAM	21.15	21.26	21.35		
10	1	1	256-QAM	18.92	18.94	19.15		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	23.96	23.96	24.07	24.78	0.3006
15	1	77		23.97	24.09	24.23		
15	36	18		24.01	24.05	24.17		
15	1	1	QPSK	23.92	23.94	24.04		
15	1	77		23.94	24.06	24.21		
15	36	18		24.04	24.08	24.18		
15	1	1	16-QAM	23.03	23.04	23.13	23.68	0.2333
15	1	1	64-QAM	21.32	21.35	21.43		
15	1	1	256-QAM	19.08	19.14	19.24		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	23.96	23.89	23.97	24.70	0.2951
20	1	104		23.95	24.02	24.15		
20	50	25		24.08	24.13	24.13		
20	1	1	QPSK	23.93	23.92	23.95		
20	1	104		23.93	24.06	24.13		
20	50	25		24.06	24.12	24.12		
20	1	1	16-QAM	23.05	23.02	23.06	23.61	0.2296
20	1	1	64-QAM	21.23	21.29	21.35		
20	1	1	256-QAM	19.07	19.06	19.15		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	25.07	25.23	25.21	26.12	0.4093
10	1	50		25.15	25.28	25.28		
10	25	12		25.12	25.26	25.24		
10	1	1	QPSK	25.09	25.22	25.22		
10	1	50		25.15	25.31	25.34		
10	25	12		25.14	25.28	25.25		
10	1	1	16-QAM	24.12	24.25	24.21	25.03	0.3184
10	1	1	64-QAM	22.58	22.73	22.75		
10	1	1	256-QAM	20.64	20.85	20.89		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	25.21	25.34	25.24	26.23	0.4198
15	1	77		25.36	25.45	25.36		
15	36	18		25.31	25.42	25.32		
15	1	1	QPSK	25.25	25.32	25.28		
15	1	77		25.34	25.43	25.45		
15	36	18		25.34	25.44	25.35		
15	1	1	16-QAM	24.13	24.26	24.23	25.04	0.3192
15	1	1	64-QAM	22.62	22.63	22.79		
15	1	1	256-QAM	20.86	20.92	20.86		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	25.23	25.30	25.11	26.26	0.4227
20	1	104		25.32	25.36	25.32		
20	50	25		25.39	25.43	25.27		
20	1	1	QPSK	25.22	25.23	25.08		
20	1	104		25.27	25.31	25.23		
20	50	25		25.43	25.48	25.26		
20	1	1	16-QAM	24.53	24.56	24.38	25.34	0.3420
20	1	1	64-QAM	23.16	23.19	23.05		
20	1	1	256-QAM	20.57	20.61	20.42		
Limit	EIRP < 1W			Result			Pass	



<SCS 30kHz>

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	24.01	24.12	24.25	24.90	0.3090
10	1	22		24.03	24.14	24.30		
10	12	6		24.05	24.23	24.31		
10	1	1	QPSK	24.02	24.08	24.25		
10	1	22		23.97	24.15	24.28		
10	12	6		24.09	24.21	24.35		
10	1	1	16-QAM	23.02	23.12	23.27	23.82	0.2410
10	1	1	64-QAM	21.55	21.62	21.78		
10	1	1	256-QAM	19.46	19.55	19.75		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	24.06	24.04	24.14	24.86	0.3062
15	1	36		24.00	24.09	24.27		
15	18	9		24.15	24.21	24.25		
15	1	1	QPSK	24.04	24.04	24.12		
15	1	36		24.01	24.12	24.23		
15	18	9		24.15	24.17	24.31		
15	1	1	16-QAM	23.03	23.07	23.18	23.73	0.2360
15	1	1	64-QAM	21.54	21.59	21.65		
15	1	1	256-QAM	19.48	19.52	19.65		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	24.02	23.98	23.99	24.77	0.2999
20	1	49		23.98	24.05	24.12		
20	25	12		24.11	24.22	24.19		
20	1	1	QPSK	23.99	23.98	23.98		
20	1	49		23.97	24.05	24.11		
20	25	12		24.13	24.21	24.21		
20	1	1	16-QAM	22.97	22.98	23.01	23.56	0.2270
20	1	1	64-QAM	21.53	21.52	21.53		
20	1	1	256-QAM	19.49	19.46	19.49		
Limit	EIRP < 1W			Result			Pass	



NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	23.49	23.42	23.42	24.47	0.2799
40	1	104		23.54	23.54	23.61		
40	50	25		23.86	23.88	23.91		
40	1	1	QPSK	23.48	23.41	23.49		
40	1	104		23.58	23.56	23.68		
40	50	25		23.84	23.87	23.92		
40	1	1	16-QAM	22.46	22.35	22.54	23.09	0.2037
40	1	1	64-QAM	20.98	20.87	21.04		
40	1	1	256-QAM	18.92	18.85	18.90		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	23.66	23.65	23.69	24.50	0.2818
50	1	131		23.87	23.84	23.88		
50	64	32		23.82	23.95	23.85		
50	1	1	QPSK	23.63	23.68	23.67		
50	1	131		23.82	23.86	23.94		
50	64	32		23.79	23.93	23.85		
50	1	1	16-QAM	22.59	22.51	22.62	23.17	0.2075
50	1	1	64-QAM	21.26	21.09	21.18		
50	1	1	256-QAM	19.17	19.14	19.13		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	23.80	23.71	23.70	24.64	0.2911
60	1	160		23.96	23.98	23.98		
60	81	40		23.93	23.95	23.93		
60	1	1	QPSK	23.82	23.68	23.72		
60	1	160		24.01	23.94	24.09		
60	81	40		23.94	23.91	23.91		
60	1	1	16-QAM	22.65	22.54	22.56	23.20	0.2089
60	1	1	64-QAM	21.21	21.12	21.16		
60	1	1	256-QAM	19.22	19.13	19.16		
Limit	EIRP < 1W			Result			Pass	



NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	23.27	23.26	23.23	24.41	0.2761
80	1	215		23.42	23.46	23.51		
80	108	54		23.81	23.84	23.82		
80	1	1	QPSK	23.21	23.28	23.22		
80	1	215		23.45	23.47	23.53		
80	108	54		23.83	23.86	23.83		
80	1	1	16-QAM	22.03	22.15	22.02	22.70	0.1862
80	1	1	64-QAM	20.94	21.02	20.95		
80	1	1	256-QAM	18.94	18.92	18.89		
Limit	EIRP < 1W			Result			Pass	

NR n77 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.55 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	-	23.01	-	24.36	0.2729
100	1	271		-	23.26	-		
100	135	67		-	23.79	-		
100	1	1	QPSK	-	22.98	-		
100	1	271		-	23.28	-		
100	135	67		-	23.81	-		
100	1	1	16-QAM	-	21.86	-	22.41	0.1742
100	1	1	64-QAM	-	20.79	-		
100	1	1	256-QAM	-	18.75	-		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
10	1	1	PI/2 BPSK	25.19	25.32	25.29	26.21	0.4178
10	1	22		25.19	25.27	25.32		
10	12	6		25.29	25.43	25.37		
10	1	1	QPSK	25.22	25.32	25.34		
10	1	22		25.25	25.34	23.36		
10	12	6		25.36	25.38	25.37		
10	1	1	16-QAM	24.17	24.32	24.29	25.10	0.3236
10	1	1	64-QAM	22.75	22.93	22.88		
10	1	1	256-QAM	20.62	20.76	20.74		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
15	1	1	PI/2 BPSK	25.15	25.23	25.21	26.17	0.414
15	1	36		25.24	25.27	25.26		
15	18	9		25.28	25.38	25.27		
15	1	1	QPSK	25.21	25.26	25.18		
15	1	36		25.22	25.35	25.28		
15	18	9		25.33	25.39	25.34		
15	1	1	16-QAM	24.16	24.25	24.11	25.03	0.3184
15	1	1	64-QAM	22.85	22.79	22.67		
15	1	1	256-QAM	20.64	20.73	20.64		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
20	1	1	PI/2 BPSK	25.13	25.14	25.14	26.23	0.4198
20	1	49		25.21	25.19	25.23		
20	25	12		25.42	25.44	25.31		
20	1	1	QPSK	25.19	25.23	25.07		
20	1	49		25.22	25.23	25.18		
20	25	12		25.43	25.45	25.31		
20	1	1	16-QAM	24.14	24.21	24.08	24.99	0.3155
20	1	1	64-QAM	22.72	22.78	22.52		
20	1	1	256-QAM	20.57	20.64	20.56		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
40	1	1	PI/2 BPSK	24.68	24.67	24.77	25.95	0.3936
40	1	104		24.78	24.76	24.95		
40	50	25		25.16	25.17	25.14		
40	1	1	QPSK	24.73	24.62	24.72		
40	1	104		24.79	24.76	24.97		
40	50	25		25.13	25.15	25.11		
40	1	1	16-QAM	23.67	23.64	23.65	24.45	0.2786
40	1	1	64-QAM	22.24	22.07	22.01		
40	1	1	256-QAM	20.12	20.05	20.14		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
50	1	1	PI/2 BPSK	24.86	24.89	24.92	25.99	0.3972
50	1	131		25.02	25.07	25.15		
50	64	32		25.02	25.19	25.01		
50	1	1	QPSK	24.88	24.93	24.89		
50	1	131		25.04	25.06	25.19		
50	64	32		25.09	25.21	25.08		
50	1	1	16-QAM	23.85	23.80	23.86	24.64	0.2911
50	1	1	64-QAM	22.35	22.43	22.45		
50	1	1	256-QAM	20.32	20.36	20.32		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
60	1	1	PI/2 BPSK	24.93	24.98	24.96	26.12	0.4093
60	1	160		25.18	25.12	25.34		
60	81	40		25.12	25.18	25.21		
60	1	1	QPSK	25.03	24.85	24.95		
60	1	160		25.21	25.03	25.32		
60	81	40		25.15	25.14	25.19		
60	1	1	16-QAM	23.92	23.83	23.95	24.73	0.2972
60	1	1	64-QAM	22.53	22.42	22.45		
60	1	1	256-QAM	20.45	20.36	20.54		
Limit	EIRP < 1W			Result			Pass	



NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
80	1	1	PI/2 BPSK	24.36	24.36	24.32	25.69	0.3707
80	1	215		24.48	24.56	24.72		
80	108	54		24.89	24.91	24.89		
80	1	1	QPSK	24.43	24.42	24.42		
80	1	215		24.53	24.62	24.82		
80	108	54		24.85	24.91	24.90		
80	1	1	16-QAM	23.33	23.36	23.31	24.14	0.2594
80	1	1	64-QAM	21.85	21.89	21.84		
80	1	1	256-QAM	20.17	20.15	20.05		
Limit	EIRP < 1W			Result			Pass	

NR n78 (HPUE) Maximum Average Power [dBm] (GT - LC = 0.78 dB)								
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest	EIRP (dBm)	EIRP(W)
100	1	1	PI/2 BPSK	-	24.09	-	25.66	0.3681
100	1	271		-	24.46	-		
100	135	67		-	24.75	-		
100	1	1	QPSK	-	24.17	-		
100	1	271		-	24.52	-		
100	135	67		-	24.88	-		
100	1	1	16-QAM	-	23.06	-	23.84	0.2421
100	1	1	64-QAM	-	21.62	-		
100	1	1	256-QAM	-	19.92	-		
Limit	EIRP < 1W			Result			Pass	



Appendix B. Test Results of Radiated Test

5G NR n77 (HPUE) (Ant. Main)

5G NR n77(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-42.54	-13	-29.54	-71.95	-50.73	1.84	12.19	H
	10354	-36.04	-13	-23.04	-71.84	-42.52	2.26	10.89	H
	13805	-29.31	-13	-16.31	-73.21	-37.08	2.63	12.56	H
	20708	-62.46	-13	-49.46	-75.86	-75.00	3.22	17.92	H
	24159	-58.95	-13	-45.95	-76.61	-71.51	3.78	18.50	H
	27610	-56.75	-13	-43.75	-77.28	-70.20	3.95	19.54	H
									H
	6903	-42.51	-13	-29.51	-72.42	-50.70	1.84	12.19	V
	10354	-36.93	-13	-23.93	-71.94	-43.41	2.26	10.89	V
	13805	-30.56	-13	-17.56	-73.43	-38.33	2.63	12.56	V
	20708	-63.17	-13	-50.17	-76.33	-75.71	3.22	17.92	V
	24159	-59.86	-13	-46.86	-77.16	-72.42	3.78	18.50	V
	27610	-57.62	-13	-44.62	-77.83	-71.07	3.95	19.54	V
									V

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



5G NR n78 (HPUE) (Ant. Main)

5G NR n78(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-42.57	-13	-29.57	-71.98	-50.76	1.84	12.19	H
	10354	-36.39	-13	-23.39	-72.19	-42.87	2.26	10.89	H
	13805	-29.16	-13	-16.16	-73.06	-36.93	2.63	12.56	H
	20708	-62.70	-13	-49.70	-76.1	-75.24	3.22	17.92	H
	24159	-58.92	-13	-45.92	-76.58	-71.48	3.78	18.50	H
	27610	-56.98	-13	-43.98	-77.51	-70.43	3.95	19.54	H
									H
	6903	-41.93	-13	-28.93	-71.84	-50.12	1.84	12.19	V
	10354	-37.23	-13	-24.23	-72.24	-43.71	2.26	10.89	V
	13805	-30.00	-13	-17.00	-72.87	-37.77	2.63	12.56	V
	20708	-63.50	-13	-50.50	-76.66	-76.04	3.22	17.92	V
	24159	-59.67	-13	-46.67	-76.97	-72.23	3.78	18.50	V
	27610	-57.65	-13	-44.65	-77.86	-71.10	3.95	19.54	V
									V

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



5G NR n77 (HPUE) (Ant. MIMO 1 SRS)

5G NR n77(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-42.95	-13	-29.95	-72.36	-51.14	1.84	12.19	H
	10354	-36.18	-13	-23.18	-71.95	-42.66	2.26	10.89	H
	13805	-28.94	-13	-15.94	-72.84	-36.71	2.63	12.56	H
	20708	-63.23	-13	-50.23	-76.63	-75.77	3.22	17.92	H
	24159	-59.66	-13	-46.66	-77.32	-72.22	3.78	18.50	H
	27610	-56.94	-13	-43.94	-77.47	-70.39	3.95	19.54	H
									H
	6903	-42.29	-13	-29.29	-72.2	-50.48	1.84	12.19	V
	10354	-36.68	-13	-23.68	-71.69	-43.16	2.26	10.89	V
	13805	-30.12	-13	-17.12	-72.99	-37.89	2.63	12.56	V
	20708	-63.37	-13	-50.37	-76.53	-75.91	3.22	17.92	V
	24159	-59.68	-13	-46.68	-76.97	-72.24	3.78	18.50	V
	27610	-57.06	-13	-44.06	-77.27	-70.51	3.95	19.54	V
									V

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



5G NR n78 (HPUE) (Ant. MIMO 1 SRS)

5G NR n78(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-42.77	-13	-29.77	-72.18	-50.96	1.84	12.19	H
	10354	-35.96	-13	-22.96	-71.76	-42.44	2.26	10.89	H
	13805	-29.27	-13	-16.27	-73.17	-37.04	2.63	12.56	H
	20707	-63.56	-13	-50.56	-76.96	-76.10	3.22	17.92	H
	24158	-60.19	-13	-47.19	-77.85	-72.75	3.78	18.49	H
	27610	-57.04	-13	-44.04	-77.57	-70.49	3.95	19.54	H
									H
	6903	-42.25	-13	-29.25	-72.16	-50.44	1.84	12.19	V
	10354	-37.03	-13	-24.03	-72.04	-43.51	2.26	10.89	V
	13805	-29.98	-13	-16.98	-72.85	-37.75	2.63	12.56	V
	20707	-63.48	-13	-50.48	-76.64	-76.02	3.22	17.92	V
	24158	-59.70	-13	-46.70	-76.99	-72.26	3.78	18.49	V
	27610	-56.92	-13	-43.92	-77.13	-70.37	3.95	19.54	V
									V

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



5G NR n77 (HPUE) (Ant. MIMO 2)

5G NR n77(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-41.84	-13	-28.84	-71.25	-50.03	1.84	12.19	H
	10354	-35.81	-13	-22.81	-71.61	-42.29	2.26	10.89	H
	13805	-28.92	-13	-15.92	-72.82	-36.69	2.63	12.56	H
	20708	-62.93	-13	-49.93	-76.33	-75.47	3.22	17.92	H
	24159	-59.03	-13	-46.03	-76.69	-71.59	3.78	18.50	H
	27610	-56.66	-13	-43.66	-77.19	-70.11	3.95	19.54	H
									H
	6903	-41.18	-13	-28.18	-71.09	-49.37	1.84	12.19	V
	10354	-36.89	-13	-23.89	-71.9	-43.37	2.26	10.89	V
	13805	-30.23	-13	-17.23	-73.1	-38.00	2.63	12.56	V
	20708	-63.20	-13	-50.20	-76.36	-75.74	3.22	17.92	V
	24159	-59.84	-13	-46.84	-77.14	-72.40	3.78	18.50	V
	27610	-57.14	-13	-44.14	-77.35	-70.59	3.95	19.54	V
									V

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



5G NR n78 (HPUE) (Ant. MIMO 2)

5G NR n78(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-41.58	-13	-28.58	-70.99	-49.77	1.84	12.19	H
	10354	-35.94	-13	-22.94	-71.74	-42.42	2.26	10.89	H
	13805	-29.47	-13	-16.47	-73.37	-37.24	2.63	12.56	H
	20708	-62.93	-13	-49.93	-76.33	-75.47	3.22	17.92	H
	24159	-59.39	-13	-46.39	-77.05	-71.95	3.78	18.50	H
	27610	-56.88	-13	-43.88	-77.41	-70.33	3.95	19.54	H
									H
	6903	-40.00	-13	-27.00	-69.91	-48.19	1.84	12.19	V
	10354	-36.72	-13	-23.72	-71.73	-43.20	2.26	10.89	V
	13805	-30.27	-13	-17.27	-73.14	-38.04	2.63	12.56	V
	20708	-63.30	-13	-50.30	-76.46	-75.84	3.22	17.92	V
	24159	-59.49	-13	-46.49	-76.79	-72.05	3.78	18.50	V
	27610	-56.85	-13	-43.85	-77.06	-70.30	3.95	19.54	V
									V

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



5G NR n77 MIMO(HPUE) (Ant. MIMO 2 + Ant. Main)

5G NR n77MIMO(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-39.03	-13	-26.03	-68.44	-47.22	1.84	12.19	H
	10354	-35.89	-13	-22.89	-71.69	-42.37	2.26	10.89	H
	13805	-29.38	-13	-16.38	-73.28	-37.15	2.63	12.56	H
	20708	-63.18	-13	-50.18	-76.58	-75.72	3.22	17.92	H
	24159	-59.35	-13	-46.35	-77.01	-71.91	3.78	18.50	H
	27610	-57.11	-13	-44.11	-77.64	-70.56	3.95	19.54	H
									H
	6903	-34.61	-13	-21.61	-64.52	-42.80	1.84	12.19	V
	10354	-31.78	-13	-18.78	-66.79	-38.26	2.26	10.89	V
	13805	-29.87	-13	-16.87	-72.74	-37.64	2.63	12.56	V
	20708	-63.21	-13	-50.21	-76.37	-75.75	3.22	17.92	V
	24159	-59.93	-13	-46.93	-77.23	-72.49	3.78	18.50	V
	27610	-57.32	-13	-44.32	-77.53	-70.77	3.95	19.54	V
									V

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



5G NR n78 MIMO(HPUE) (Ant. MIMO 2 + Ant. Main)

5G NR n78 MIMO(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-40.32	-13	-27.32	-69.73	-48.51	1.84	12.19	H
	10354	-35.31	-13	-22.31	-71.11	-41.79	2.26	10.89	H
	13805	-29.02	-13	-16.02	-72.92	-36.79	2.63	12.56	H
	20708	-62.89	-13	-49.89	-76.29	-75.43	3.22	17.92	H
	24159	-58.83	-13	-45.83	-76.49	-71.39	3.78	18.50	H
	27610	-57.03	-13	-44.03	-77.56	-70.48	3.95	19.54	H
									H
	6903	-31.90	-13	-18.90	-61.81	-40.09	1.84	12.19	V
	10354	-31.02	-13	-18.02	-66.03	-37.50	2.26	10.89	V
	13805	-30.40	-13	-17.40	-73.27	-38.17	2.63	12.56	V
	20708	-61.28	-13	-48.28	-74.44	-73.82	3.22	17.92	V
	24159	-60.02	-13	-47.02	-77.32	-72.58	3.78	18.50	V
	27610	-57.45	-13	-44.45	-77.66	-70.90	3.95	19.54	V
									V

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



5G NR n77(HPUE) (Ant. Aux. SRS)

5G NR n77(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-41.64	-13	-28.64	-71.05	-49.83	1.84	12.19	H
	10354	-35.95	-13	-22.95	-71.75	-42.43	2.26	10.89	H
	13805	-28.92	-13	-15.92	-72.82	-36.69	2.63	12.56	H
	20708	-63.65	-13	-50.65	-77.05	-76.19	3.22	17.92	H
	24159	-59.56	-13	-46.56	-77.22	-72.12	3.78	18.50	H
	27610	-56.86	-13	-43.86	-77.39	-70.31	3.95	19.54	H
									H
	6903	-41.25	-13	-28.25	-71.16	-49.44	1.84	12.19	V
	10354	-36.89	-13	-23.89	-71.9	-43.37	2.26	10.89	V
	13805	-30.19	-13	-17.19	-73.06	-37.96	2.63	12.56	V
	20708	-63.88	-13	-50.88	-77.04	-76.42	3.22	17.92	V
	24159	-60.24	-13	-47.24	-77.54	-72.80	3.78	18.50	V
	27610	-56.69	-13	-43.69	-76.9	-70.14	3.95	19.54	V
									V

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



5G NR n78(HPUE) (Ant. Aux. SRS)

5G NR n78(HPUE) / 100MHz / PI/2 BPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	6903	-42.09	-13	-29.09	-71.5	-50.28	1.84	12.19	H
	10354	-35.94	-13	-22.94	-71.74	-42.42	2.26	10.89	H
	13805	-29.47	-13	-16.47	-73.37	-37.24	2.63	12.56	H
	20708	-63.52	-13	-50.52	-76.92	-76.06	3.22	17.92	H
	24159	-59.92	-13	-46.92	-77.58	-72.48	3.78	18.50	H
	27610	-56.72	-13	-43.72	-77.25	-70.17	3.95	19.54	H
									H
	6903	-40.40	-13	-27.40	-70.31	-48.59	1.84	12.19	V
	10354	-36.72	-13	-23.72	-71.73	-43.20	2.26	10.89	V
	13805	-30.27	-13	-17.27	-73.14	-38.04	2.63	12.56	V
	20708	-63.68	-13	-50.68	-76.84	-76.22	3.22	17.92	V
	24159	-60.04	-13	-47.04	-77.34	-72.60	3.78	18.50	V
	27610	-57.36	-13	-44.36	-77.57	-70.81	3.95	19.54	V
									V

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