FCC RF Test Report

APPLICANT	:	Smawave Technology Co. ,Ltd
EQUIPMENT	:	5G ODU_NA
BRAND NAME	:	smawave
MODEL NAME	:	SRE620-b
FCC ID	:	2AU8HSRE620-B
STANDARD	:	47 CFR Part 2, 27
CLASSIFICATION	:	Licensed Non-Broadcast Station Transmitter (TNB)
TEST DATE(S)	:	May 13, 2023 ~ May 23, 2023

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

This product installed a RF module (Brand Name: Quectel, Model Name: RG520N-NA, FCC ID: XMR2022RG520NNA) during the test, only Conducted Power, EIRP and RSE test items are tested in this report, all the other test results are leveraged from module RF report.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FW342001B	Rev. 01	Initial issue of report	May 31, 2023

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (5G NR n41)	EIRP < 2Watt		
-	§27.50(j)(4)	Peak-to-Average Ratio	<13 dB	PASS	1
-	§2.1049	Occupied Bandwidth	Reporting Only	PASS	1
-	§27.53(m)(4)	Conducted Band Edge Measurement (5G NR n41)	§27.53(m)(4)	PASS	1
-	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (5G NR n41)	< $55+10\log_{10}$(P[Watts])	PASS	1
-	§2.1055 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	1
4.4	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n41)	< $55+10\log_{10}$(P[Watts])	PASS	Under limit 37.56 dB at 5096.00 MHz

Remark 1: All test results were leveraged from module RF report which can refer to Report No. 2204RSU037-U6.

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Smawave Technology Co. ,Ltd
3/F, Building 8, 1001 North Qinzhou Road，Xuhui District, Shanghai, China

1.2 Manufacturer

Smawave Technology Co. ,Ltd
3/F, Building 8, 1001 North Qinzhou Road，Xuhui District, Shanghai, China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	5G ODU_NA
Brand Name	smawave
Model Name	SRE620-b
FCC ID	2AU8HSRE620-B
IMEI Code	Conducted: 863109050027817 Radiation: 863109050027833
HW Version	V1.0
SW Version	Codium_FW_5G_1.0.8

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n41 : 2496 MHz ~ 2690 MHz
Rx Frequency	5G NR n41 : 2496 MHz ~ 2690 MHz
Bandwidth	n41 : 20MHz / 30MHz / 40MHz / 50MHz / 60MHz / 70MHz / 80MHz / 90MHz / 100MHz
SCS	30kHz
Maximum Output Power to Antenna	<Ant.3>: n41 : 27.03 dBm <Ant.0+3>: n41 UL MIMO : 25.32 dBm
Antenna Gain	<Ant.0>: 6.29 dBi <Ant.3>: 5.85 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. The device supports HPUE mode for 5G NR n41 SA mode only.
2. 5G NR n41 supports UL MIMO mode, and only supports CP-OFDM modulation in UL MIMO mode. The MIMO mode is completely uncorrelated, the directional gain is selected the maximum gain among Ant.0 & Ant.3.
3. 5G NR does not support NSA mode for LTE B41/B48 and 5G NR n41/48.

1.5 Modification of EUT

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

1.6 Maximum EIRP

5G NR n41		PI/2 BPSK / QPSK	16QAM / 64QAM / 256QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP (W)	Maximum EIRP (W)
20	2506.02 ~ 2679.99	1.9275	1.5031
30	2511.00 ~ 2674.98	1.9143	1.5740
40	2516.01 ~ 2670.00	1.9320	1.6032
50	2521.02 ~ 2664.99	1.9143	1.5066
60	2526.00 ~ 2659.98	1.9011	1.5276
70	2531.01 ~ 2565.00	1.8793	1.4894
80	2536.02 ~ 2649.99	1.8664	1.4757
90	2541.00 ~ 2644.98	1.8750	1.4894
100	2546.01 ~ 2640.00	1.9409	1.6069

Note:

1. All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.
2. 5G NR n41 UL MIMO power/EIRP is lower than SISO mode, thus not show MIMO power&EIRP here.

1.7 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24al

1.9 Applicable Standards

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

- 47 CFR Part 2, 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

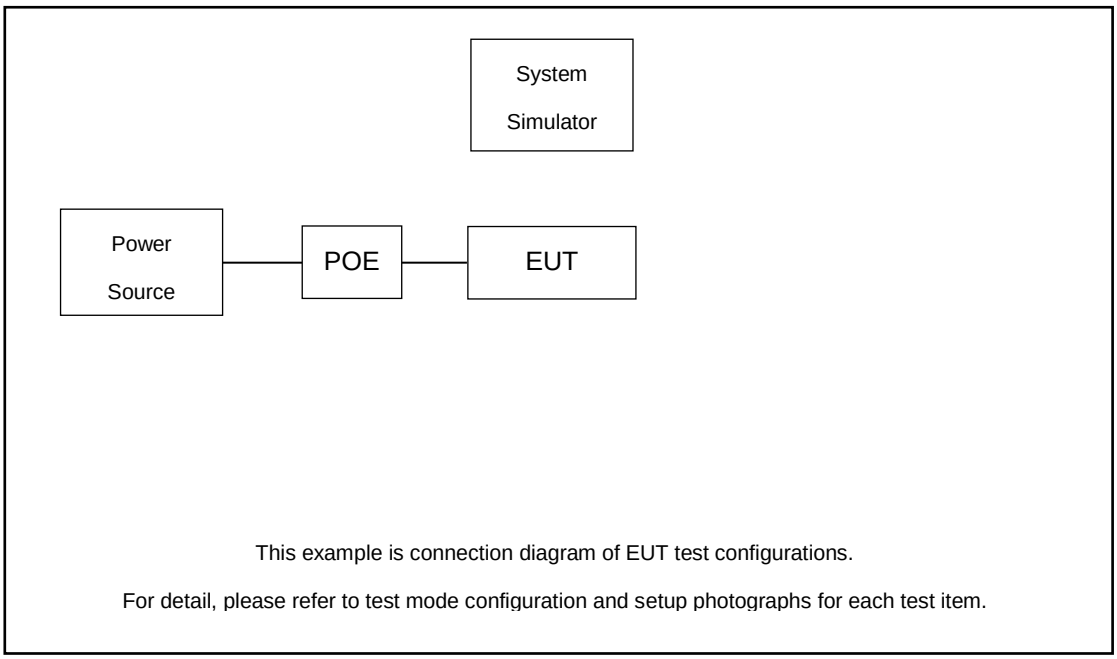
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

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.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

Test Items	5G NR	Bandwidth (MHz)													Modulation					RB #			Test Channel		
		5	10	15	20	25	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Partial	Full	L	M	H
Max. Output Power	n41	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
E.I.R.P	n41	-	-	-	v	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	n41	Worst Case																						v	
Note	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.																								

2.2 Connection Diagram of Test System



The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

5G NR n41 Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2565
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99

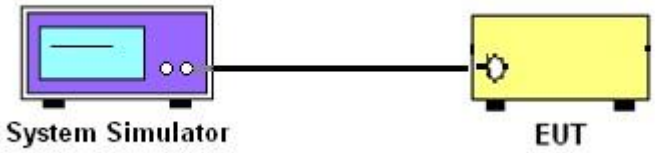
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and EIRP

3.4.1 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 2 Watts for 5G NR n41.

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

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

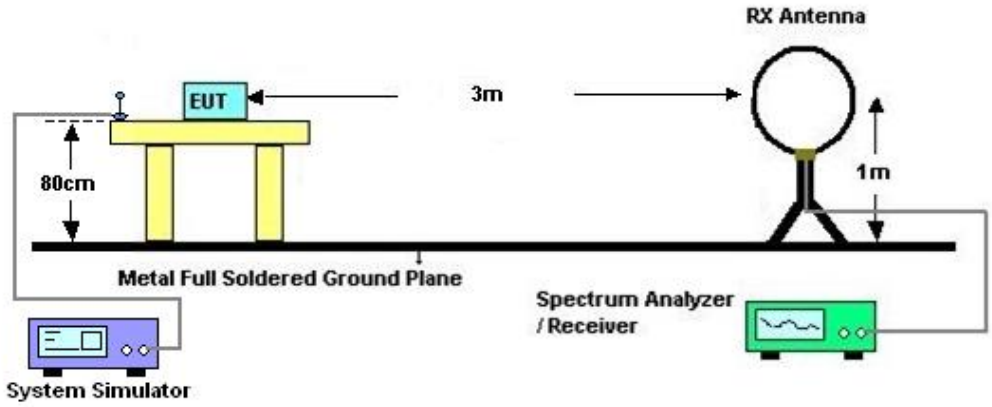
4 Radiated Test Items

4.1 Measuring Instruments

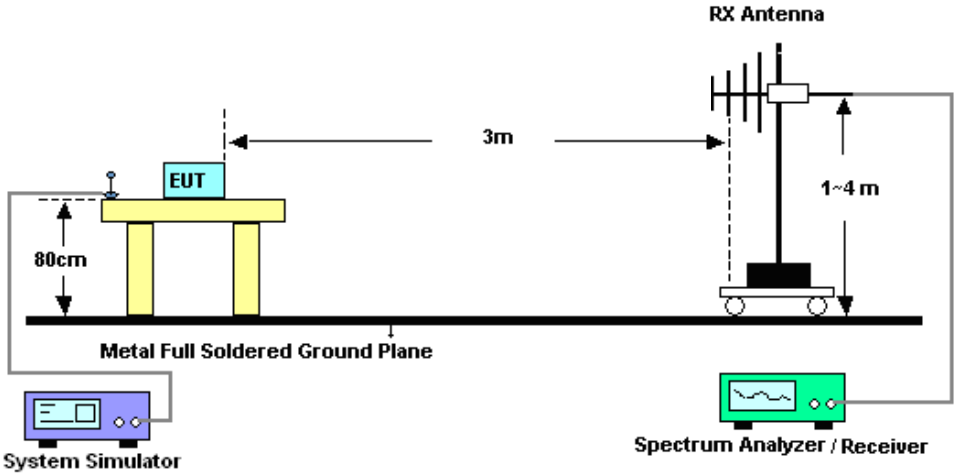
See list of measuring instruments of this test report.

4.2 Test Setup

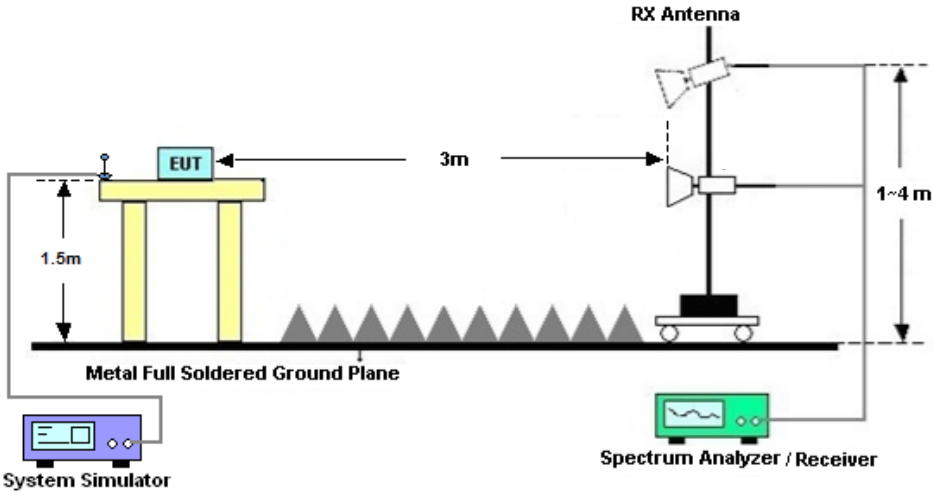
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

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.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26.

For 5G NR n41

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

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

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. For 5G NR n41:
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 12, 2022	May 23, 2023	Oct. 11, 2023	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	May 23, 2023	NCR	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 12, 2022	May 13, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 16, 2022	May 13, 2023	Oct. 15, 2023	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 24, 2022	May 13, 2023	May 23, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Oct. 16, 2022	May 13, 2023	Oct. 15, 2023	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 08, 2023	May 13, 2023	Jan. 07, 2024	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	May 24, 2022	May 13, 2023	May 23, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2023	May 13, 2023	Jan. 04, 2024	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz-18Ghz	Oct. 12, 2022	May 13, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 12, 2022	May 13, 2023	Oct. 11, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 13, 2023	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 13, 2023	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 13, 2023	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±0.46 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.82 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.56 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.54 dB

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Simle Wang	Temperature :	22~23℃
		Relative Humidity :	40~42%

Conducted Output Power(Average power) and EIRP

5G NR n41 (Ant. 3):

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP （W）		
Channel				509202	518598	528000		L	M	H
Frequency (MHz)				2546.01	2592.99	2640				
100	PI/2 BPSK	1	1	27.02	27.03	26.93	5.85	1.9364	1.9409	1.8967
100	QPSK	1	1	26.99	26.93	26.82	5.85	1.9231	1.8967	1.8493
100	QPSK	1	137	26.48	26.54	26.34	5.85	1.7100	1.7338	1.6558
100	QPSK	1	271	26.37	26.56	26.85	5.85	1.6672	1.7418	1.8621
100	QPSK	135	0	25.77	25.63	25.62	5.85	1.4521	1.4060	1.4028
100	QPSK	135	69	26.53	26.60	26.63	5.85	1.7298	1.7579	1.7701
100	QPSK	135	138	25.43	25.72	25.68	5.85	1.3428	1.4355	1.4223
100	QPSK	270	0	25.60	25.68	25.62	5.85	1.3964	1.4223	1.4028
100	16QAM	1	1	26.21	26.11	25.96	5.85	1.6069	1.5704	1.5171
100	64QAM	1	1	24.14	23.82	23.77	5.85	0.9977	0.9268	0.9162
100	256QAM	1	1	22.27	22.05	21.89	5.85	0.6486	0.6166	0.5943
Channel				508200	518598	528996	Gain	EIRP （W）		
Frequency (MHz)				2541	2592.99	2644.98				
90	PI/2 BPSK	1	1	26.88	26.65	26.57	5.85	1.8750	1.7783	1.7458
90	QPSK	1	1	26.86	26.63	26.55	5.85	1.8664	1.7701	1.7378
90	16QAM	1	1	25.88	25.67	25.59	5.85	1.4894	1.4191	1.3932
Channel				507204	518598	529998	Gain	EIRP （W）		
Frequency (MHz)				2536.02	2592.99	2649.99				
80	PI/2 BPSK	1	1	26.86	26.50	26.49	5.85	1.8664	1.7179	1.7140
80	QPSK	1	1	26.84	26.48	26.47	5.85	1.8578	1.7100	1.7061
80	16QAM	1	1	25.84	25.60	25.50	5.85	1.4757	1.3964	1.3646
Channel				506202	518598	531000	Gain	EIRP （W）		
Frequency (MHz)				2531.01	2592.99	2565				
70	PI/2 BPSK	1	1	26.89	26.52	26.58	5.85	1.8793	1.7258	1.7498
70	QPSK	1	1	26.87	26.50	26.56	5.85	1.8707	1.7179	1.7418
70	16QAM	1	1	25.88	25.53	25.54	5.85	1.4894	1.3740	1.3772
Channel				505200	518598	531996	Gain	EIRP （W）		
Frequency (MHz)				2526	2592.99	2659.98				
60	PI/2 BPSK	1	1	26.94	26.62	26.49	5.85	1.9011	1.7660	1.7140
60	QPSK	1	1	26.92	26.60	26.47	5.85	1.8923	1.7579	1.7061
60	16QAM	1	1	25.99	25.64	25.53	5.85	1.5276	1.4093	1.3740

Channel				504204	518598	532998	Gain	EIRP （W）		
Frequency (MHz)				2521.02	2592.99	2664.99				
50	PI/2 BPSK	1	1	26.97	26.78	26.36	5.85	1.9143	1.8323	1.6634
50	QPSK	1	1	26.95	26.76	26.34	5.85	1.9055	1.8239	1.6558
50	16QAM	1	1	25.93	25.65	25.31	5.85	1.5066	1.4125	1.3062
Channel				503202	518598	534000	Gain	EIRP （W）		
Frequency (MHz)				2516.01	2592.99	2670				
40	PI/2 BPSK	1	1	27.01	26.96	26.66	5.85	1.9320	1.9099	1.7824
40	QPSK	1	1	26.98	26.94	26.64	5.85	1.9187	1.9011	1.7742
40	16QAM	1	1	26.20	25.95	25.66	5.85	1.6032	1.5136	1.4158
Channel				502200	518598	534996	Gain	EIRP （W）		
Frequency (MHz)				2511	2592.99	2674.98				
30	PI/2 BPSK	1	1	26.97	26.94	26.74	5.85	1.9143	1.9011	1.8155
30	QPSK	1	1	26.92	26.92	26.72	5.85	1.8923	1.8923	1.8072
30	16QAM	1	1	26.12	25.90	25.63	5.85	1.5740	1.4962	1.4060
Channel				501204	518598	535998	Gain	EIRP （W）		
Frequency (MHz)				2506.02	2592.99	2679.99				
20	PI/2 BPSK	1	1	27.00	26.96	26.65	5.85	1.9275	1.9099	1.7783
20	QPSK	1	1	26.93	26.94	26.63	5.85	1.8967	1.9011	1.7701
20	16QAM	1	1	25.92	25.81	25.54	5.85	1.5031	1.4655	1.3772

5G NR n41 MIMO (Ant. 0+3):

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Gain	EIRP (W)		
Channel				509202	518598	528000		L	M	H
Frequency (MHz)				2546.01	2592.99	2640				
100	QPSK	1	1	25.11	24.83	24.92	6.29	1.3804	1.2942	1.3213
100	QPSK	1	137	24.96	24.97	24.96	6.29	1.3335	1.3366	1.3335
100	QPSK	1	271	25.04	25.01	25.07	6.29	1.3583	1.3490	1.3677
100	QPSK	135	0	23.56	23.42	23.41	6.29	0.9661	0.9354	0.9333
100	QPSK	135	69	24.92	24.96	24.97	6.29	1.3213	1.3335	1.3366
100	QPSK	135	138	23.49	23.50	23.56	6.29	0.9506	0.9528	0.9661
100	QPSK	270	0	23.59	23.48	23.49	6.29	0.9727	0.9484	0.9506
100	16QAM	1	1	24.92	24.60	24.96	6.29	1.3213	1.2274	1.3335
100	64QAM	1	1	22.88	22.69	22.76	6.29	0.8260	0.7907	0.8035
100	256QAM	1	1	20.05	19.86	19.84	6.29	0.4305	0.4121	0.4102
Channel				508200	518598	528996	Gain	EIRP (W)		
Frequency (MHz)				2541	2592.99	2644.98				
90	QPSK	1	1	25.11	24.82	24.71	6.29	1.3804	1.2912	1.2589
90	16QAM	1	1	24.68	24.47	24.47	6.29	1.2503	1.1912	1.1912
Channel				507204	518598	529998	Gain	EIRP (W)		
Frequency (MHz)				2536.02	2592.99	2649.99				
80	QPSK	1	1	24.99	24.79	24.74	6.29	1.3428	1.2823	1.2677
80	16QAM	1	1	24.65	24.51	24.43	6.29	1.2417	1.2023	1.1803
Channel				506202	518598	531000	Gain	EIRP (W)		
Frequency (MHz)				2531.01	2592.99	2565				
70	QPSK	1	1	25.07	24.70	24.71	6.29	1.3677	1.2560	1.2589
70	16QAM	1	1	24.83	24.47	24.43	6.29	1.2942	1.1912	1.1803
Channel				505200	518598	531996	Gain	EIRP (W)		
Frequency (MHz)				2526	2592.99	2659.98				
60	QPSK	1	1	25.15	24.98	24.85	6.29	1.3932	1.3397	1.3002
60	16QAM	1	1	24.78	24.64	24.55	6.29	1.2794	1.2388	1.2134
Channel				504204	518598	532998	Gain	EIRP (W)		
Frequency (MHz)				2521.02	2592.99	2664.99				
50	QPSK	1	1	25.22	25.03	24.78	6.29	1.4158	1.3552	1.2794
50	16QAM	1	1	24.88	24.64	24.48	6.29	1.3092	1.2388	1.1940
Channel				503202	518598	534000	Gain	EIRP (W)		
Frequency (MHz)				2516.01	2592.99	2670				
40	QPSK	1	1	25.22	25.32	25.05	6.29	1.4158	1.4488	1.3614
40	16QAM	1	1	24.82	24.97	24.82	6.29	1.2912	1.3366	1.2912
Channel				502200	518598	534996	Gain	EIRP (W)		
Frequency (MHz)				2511	2592.99	2674.98				
30	QPSK	1	1	25.26	25.21	25.02	6.29	1.4289	1.4125	1.3521
30	16QAM	1	1	24.94	24.91	24.68	6.29	1.3274	1.3183	1.2503
Channel				501204	518598	535998	Gain	EIRP (W)		
Frequency (MHz)				2506.02	2592.99	2679.99				
20	QPSK	1	1	25.23	25.26	25.05	6.29	1.4191	1.4289	1.3614
20	16QAM	1	1	24.86	24.82	24.74	6.29	1.3032	1.2912	1.2677

Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Herry Li	Temperature :	23~25℃
		Relative Humidity :	41~42%

SA n41 / NR 100MHz / QPSK / ANT3(NR)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5096	-63.00	-25	-38.00	-73.21	3.03	13.24	H
	7644	-63.18	-25	-38.18	-72.63	3.56	13.01	H
	10190	-62.90	-25	-37.90	-72.42	3.92	13.44	H
	5096	-63.05	-25	-38.05	-73.26	3.03	13.24	V
	7644	-63.30	-25	-38.30	-72.75	3.56	13.01	V
	10190	-62.85	-25	-37.85	-72.37	3.92	13.44	V

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

n41 UL MIMO / NR 100MHz+100MHz / QPSK / ANT0+3(NR)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5096	-62.56	-25	-37.56	-72.77	3.03	13.24	H
	7644	-63.00	-25	-38.00	-72.45	3.56	13.01	H
	10190	-62.77	-25	-37.77	-72.29	3.92	13.44	H
	5096	-62.97	-25	-37.97	-73.18	3.03	13.24	V
	7644	-62.90	-25	-37.90	-72.35	3.56	13.01	V
	10190	-62.59	-25	-37.59	-72.11	3.92	13.44	V

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