

FCC RF Test Report

APPLICANT : Viavi Solutions Inc.
EQUIPMENT : 5G Sub-6 GHz M.2 Module with WCDMA and LTE
BRAND NAME : VIAVI
MODEL NAME : RM520N-GL
FCC ID : WUW-RM520NGL
STANDARD : 47 CFR Part 96
CLASSIFICATION : Citizens Band End User Devices (CBE)
EQUIPMENT TYPE : End User Equipment
TEST DATE(S) : Jul. 30, 2024

The product was installed into a host (Brand Name: VIAVI, Model Name: NXE-DEVICE-4M) during the test, only Conducted Power, EIRP and RSE test items are tested in this report.

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.

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



Sporton International Inc. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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History of this test report

Report No.	Version	Description	Issued Date
FG452001G	01	Initial issue of report	Dec. 18, 2024

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	§2.1046	Conducted Output Power	Reporting only	-
-	§96.41	Peak-to-Average Ratio	Not Applicable	Not applicable for End User Devices
3.4	§96.41	Maximum E.I.R.P	Pass	-
		Maximum Power Spectral Density	Not Applicable	Not applicable for End User Devices
-	§2.1049 §96.41	Occupied Bandwidth	Reporting only	1
-	§2.1051 §96.41	Conducted Band Edge Measurement	Pass	1
-	§2.1051 §96.41	Conducted Spurious Emission	Pass	1
-	§2.1055	Frequency Stability for Temperature & Voltage	Pass	1
4.4	§2.1051 §96.41	Radiated Spurious Emission	Pass	Under limit 19.30 dB at 14544.00 MHz

Remark 1: Test results are leveraged from module RF report No “FYCR220600021101”

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/manufacture 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

Viavi Solutions Inc.

1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

1.2 Manufacturer

Viavi Solutions Inc.

1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	5G Sub-6 GHz M.2 Module with WCDMA and LTE
Brand Name	VIAVI
Model Name	RM520N-GL
FCC ID	WUW-RM520NGL
Tx Frequency	LTE Band 48: 3550 MHz ~ 3700 MHz
Rx Frequency	LTE Band 48: 3550 MHz ~ 3700 MHz
Bandwidth	5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	< Module A> <Ant.2> LTE Band 48: 14.92 dBm LTE Band 48C: 14.85 dBm < Module B> <Ant.2> LTE Band 48: 14.93 dBm LTE Band 48C: 14.81 dBm < Module C> <Ant.2> LTE Band 48: 14.99 dBm LTE Band 48C: 14.91 dBm < Module D> <Ant.2> LTE Band 48: 14.92 dBm LTE Band 48C: 14.81 dBm
Antenna Gain	< Module A/B/C/D> <Ant.2> LTE Band 48: 5.5 dBi
Type of Modulation	QPSK / 16QAM / 64QAM / 256QAM
EUT Stage	Identical Prototype

Host Product Feature	
Equipment	XEDGE 2.0
Brand Name	VIAVI
Model Name	NXE-DEVICE-4M
IMEI Code	Conducted : IMEI A: 868371051639645 IMEI B: 868371051635213 IMEI C: 868371051635338 IMEI D: 868371051639819 Radiation : IMEI A: 868371051120539 IMEI B: 868371051121032 IMEI C: 868371051143184 IMEI D: 868371051635312
Applicant	Viavi Solutions Inc. 1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286
Manufacturer	Viavi Solutions Inc. 1445 South Spectrum Boulevard, Suite 102, Chandler, Arizona 85286

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The maximum EIRP is calculated from max output power and antenna gain, only the maximum EIRP of Ant. 2 (Modem C) are shown in the report.
3. The four Modules are the same include Power setting, but we still verified the real power, which is within the uncertainty range, so we chose the module of the higher power for testing, each Module has four antennas, for LTE band 48, only Ant.2 supports TX/RX function, the others are RX only.
4. For RSE testing, we choice the module of the higher conducted Power to test, because between four modules do not support MIMO mode.

1.4 Maximum EIRP Power

LTE Band 48		QPSK		16QAM/64QAM/256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5	3552.5~3697.5	0.1104	-	0.1062	-
10	3555~3695	0.1104	-	0.1057	-
15	3557.5~3692.5	0.1099	-	0.1062	-
20	3560~3690	0.1119	-	0.1102	-

LTE Band 48 CA	QPSK		16QAM/64QAM/256QAM	
BW (MHz) Frequency (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
5MHz+20MHz (3553.5 ~ 3690 MHz)	0.1074	-	0.1038	-
10MHz+20MHz (3555.5 ~ 3690 MHz)	0.1081	-	0.1038	-
15MHz+20MHz (3557.8 ~ 3690 MHz)	0.1067	-	0.1069	-
20MHz+5MHz (3560 ~ 3696.7 MHz)	0.1067	-	0.1045	-
20MHz+10MHz (3560 ~ 3694.5 MHz)	0.1050	-	0.1064	-
20MHz+15MHz (3560 ~ 3692.2 MHz)	0.1062	-	0.1050	-
20MHz+20MHz (3560 ~ 3690 MHz)	0.1099	-	0.1091	-

Note: All modulations have been tested, only the worst test results of PSK & QAM are shown in the report.

1.5 Testing Site

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

1.6 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH04-KS	AUDIX	E3	210616

1.7 Applied Standards

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

- ♦ ANSI C63.26-2015
- ♦ 47 CFR Part 96
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 940660 D01 Part 96 CBRS v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

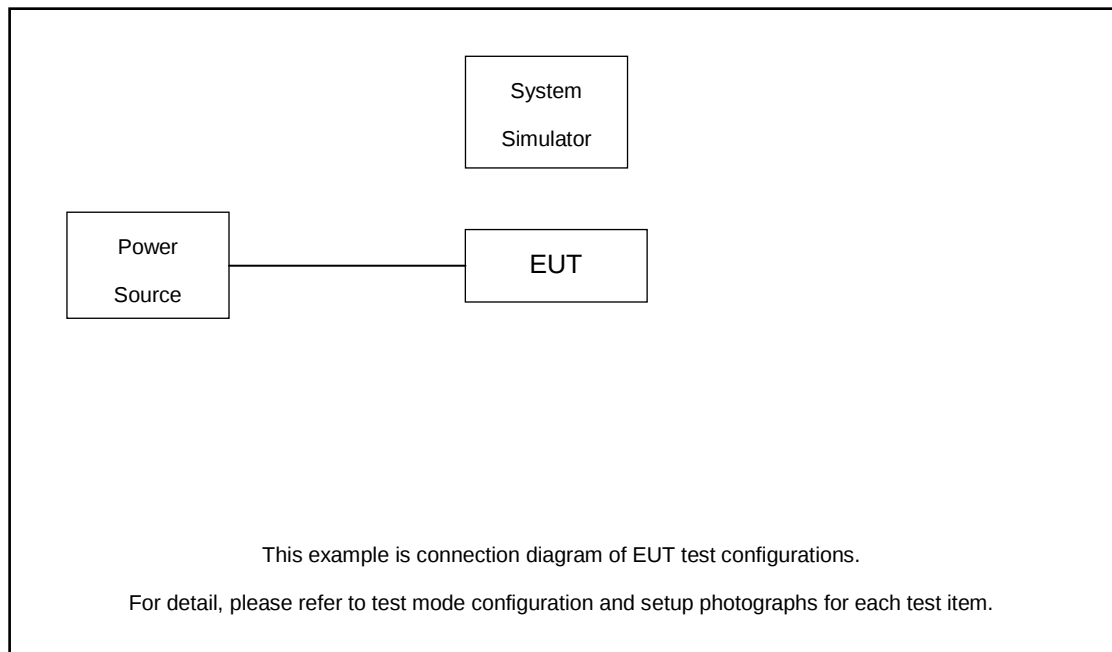
2.1 Test Mode

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

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

Test Items	Band	Bandwidth (MHz)						Modulation				RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256 QAM	1	Half	Full	L	M	H
Max. Output Power	48	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
E.I.R.P	48	-	-	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Radiated Spurious Emission	48	Worst Case													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.																

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m

2.4 Frequency List of Low/Middle/High Channels

LTE Band 48 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	55340	55990	56640
	Frequency	3560.0	3625.0	3690.0
15	Channel	55315	55990	56665
	Frequency	3557.5	3625.0	3692.5
10	Channel	55290	55990	56690
	Frequency	3555.0	3625.0	3695.0
5	Channel	55265	55990	56715
	Frequency	3552.5	3625.0	3697.5

LTE Band 48C_CA Channel and Frequency List					
BW [MHz]	Channel/Frequency(MHz)		Lowest	Middle	Highest
5 + 20	PCC	Channel	55273	55898	56523
		Frequency	3553.3	3615.8	3678.3
	SCC	Channel	55390	56015	56640
		Frequency	3565	3627.5	3690
20 + 5	PCC	Channel	55340	55965	56590
		Frequency	3560	3622.5	3685
	SCC	Channel	55457	56082	56707
		Frequency	3571.7	3634.2	3696.7
10 + 20	PCC	Channel	55295	55896	56496
		Frequency	3555.5	3615.6	3675.6
	SCC	Channel	55439	56040	56640
		Frequency	3569.9	3630	3690
20 + 10	PCC	Channel	55340	55941	56541
		Frequency	3560	3620.1	3680.1
	SCC	Channel	55484	56085	56685
		Frequency	3574.4	3634.5	3694.5
15 + 20	PCC	Channel	55318	55893	56469
		Frequency	3557.8	3615.3	3672.9
	SCC	Channel	55489	56064	56640
		Frequency	3574.9	3632.4	3690
20 + 15	PCC	Channel	55340	55916	56491
		Frequency	3560	3617.6	3675.1
	SCC	Channel	55511	56087	56662
		Frequency	3577.1	3634.7	3692.2
20 + 20	PCC	Channel	55340	55891	56442
		Frequency	3560	3615.1	3670.2
	SCC	Channel	55538	56089	56640
		Frequency	3579.8	3634.9	3690

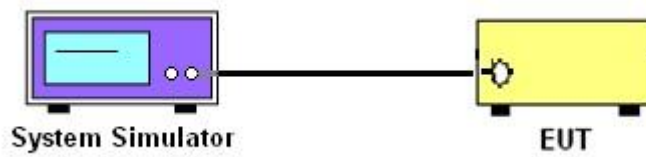
3 Conducted Test Items

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 Conducted Output Power

3.3.1 Description of the Conducted Output Power 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.

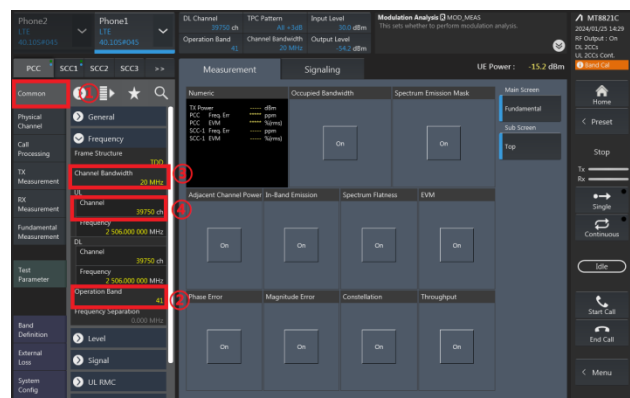
3.3.2 Test Procedures

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.

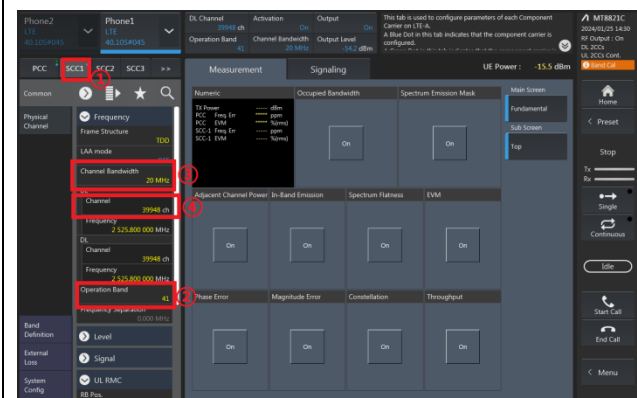
3.3.3 Test Procedures for LTE ULCA

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter PCC & SCC output ports were connected to the system simulator.
3. Set EUT at maximum power, set the PCC/SCC CA band, channel, bandwidth and RB config.

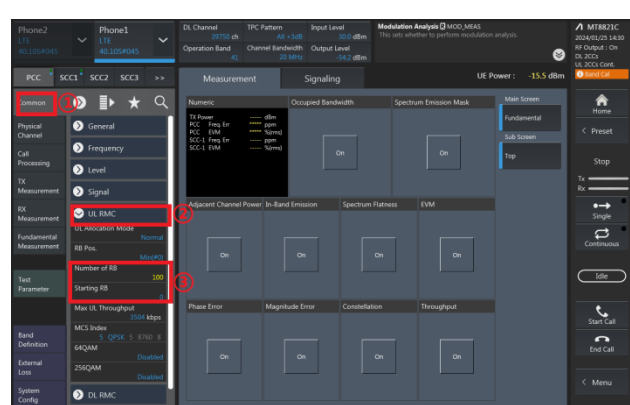
PCC config_(Channel Bandwidth / Channel / Band)



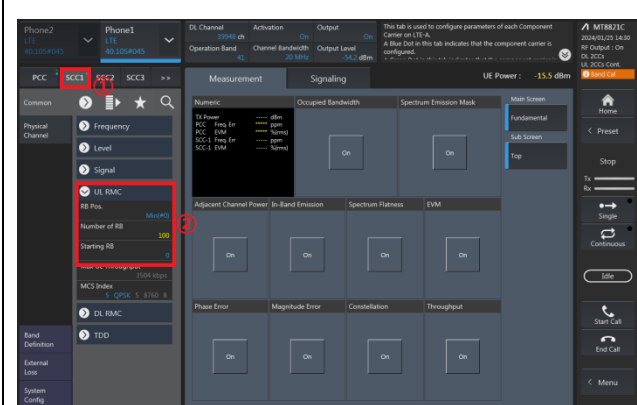
SCC config_(Channel Bandwidth / Channel / Band)



PCC config_(Number of RB / Starting RB)

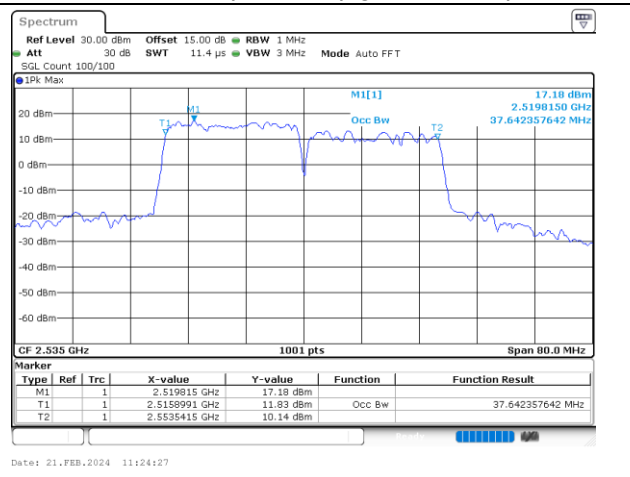


SCC config_(Number of RB / Starting RB)

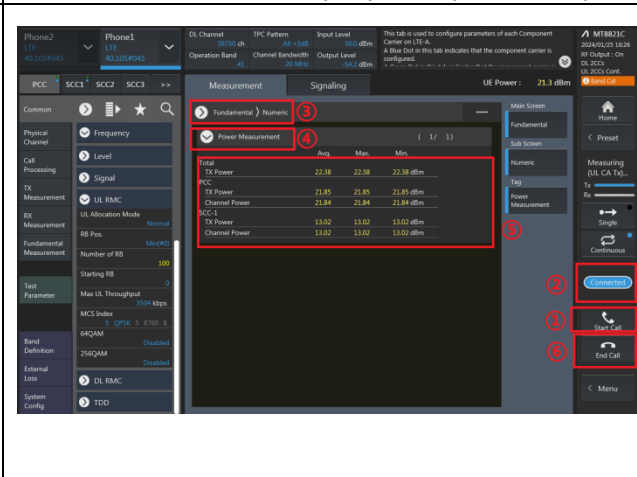


4. Select lowest, middle, and highest channels for each ULCA band and different modulation.
5. Check the ULCA spectrum and record the total power from the system simulator.

Check the ULCA spectrum (eg. 20M+20M)



Read the Total UL CA output power (PCC+SCC)



3.4 EIRP

3.4.1 Description of the EIRP Measurement

EIRP limits for CBRS equipment as below table:

Device		Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
Applied	End User Device	23	n/a
☐	Category A CBSD	30	20
☐	Category B CBSD	47	37

Remark:

1. The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths for LTE Band 48 (i.e. 5, 10, 15, 20MHz)

3.4.2 Test Procedures for EIRP

1. Establishing a communications link with the call box (Base station) to measure the Maximum conducted power, the parameters were set to force the EUT transmitting at maximum output power level. Use the average power measurement function to measure total channel power of each channel bandwidth (per ANSI C63.26-2015 Section 5.2.1)
2. Determining ERP and/or EIRP from conducted RF output power measurements (Per ANSI C63.26-2015 Section 5.2.5.5)

$$\text{EIRP} = P_T + G_T - L_C, \text{ ERP} = \text{EIRP} - 2.15, \text{ where}$$

$$P_T = \text{transmitter output power in dBm}$$

$$G_T = \text{gain of the transmitting antenna in dBi}$$

$$L_C = \text{signal attenuation in the connecting cable between the transmitter and antenna in dB}$$

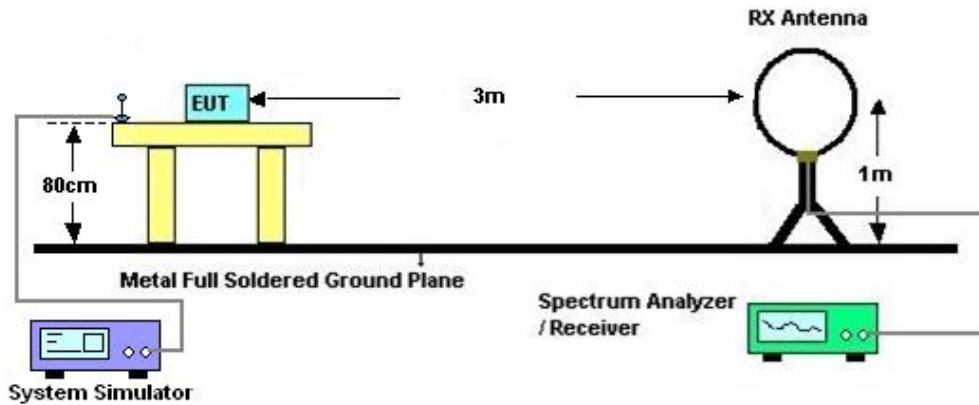
4 Radiated Test Items

4.1 Measuring Instruments

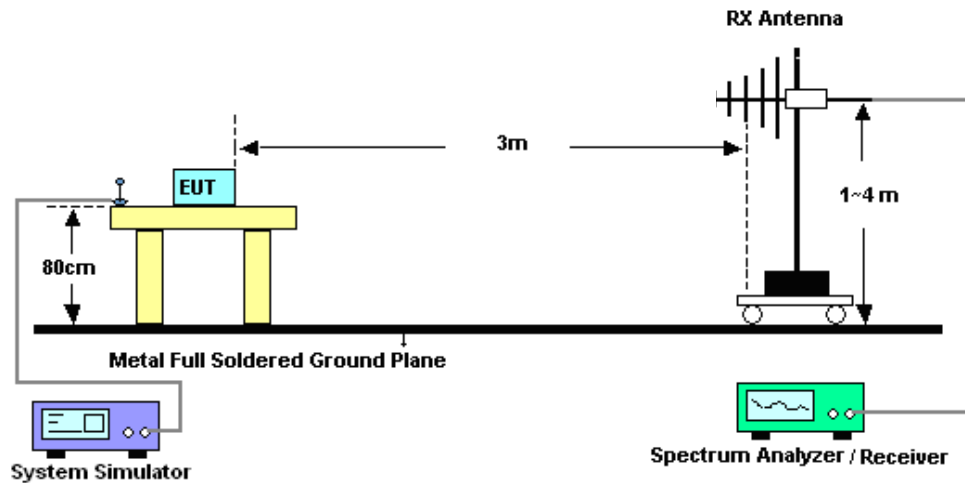
See list of measuring instruments of this test report.

4.2 Test Setup

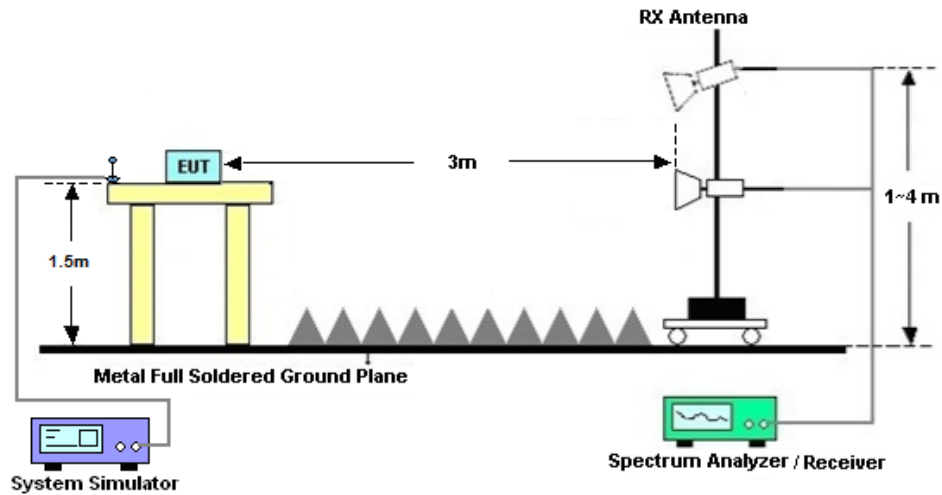
4.2.1 For radiated test below 30MHz



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 Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26-2015.

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 -40dBm / MHz.

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

4.4.2 Test Procedures

1. 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.
2. The EUT was set 3 meters from the receiving antenna 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 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
5. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
$$\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$$
$$\text{ERP (dBm)} = \text{EIRP} - 2.15$$
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is -40dBm/MHz



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. 11, 2023	Jul. 30, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Jul. 30, 2024	NCR	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz~44G,MAX 30dB	Oct. 11, 2023	Jul. 30, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 09, 2023	Jul. 30, 2024	Sep. 08, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Dec. 06, 2023	Jul. 30, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 23, 2023	Jul. 30, 2024	Oct. 22, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Jul. 30, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz~1GHz	Jan. 03, 2024	Jul. 30, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40G A	060728	18~40GHz	Jan. 02, 2024	Jul. 30, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz~18Ghz	Oct. 11, 2023	Jul. 30, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz~18Ghz	Oct. 11, 2023	Jul. 30, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 30, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 30, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 30, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

Uncertainty of Conducted Measurement

Conducted Power	±0.50 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.82 dB
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----- THE END -----

Appendix A. Test Results of Conducted Test

Test Engineer :	Smile	Temperature :	24~26°C
		Relative Humidity :	50~53%

Conducted Output Power(Average power) and EIRP

LTE Band 48_Ant.2 (Modem C):

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	EIRP(W)		
Channel				55340	55990	56640			
Frequency (MHz)				3560	3625	3690	L	M	H
20	QPSK	1	0	14.98	14.99	14.54	0.1117	0.1119	0.1009
20	QPSK	1	99	14.89	14.87	14.57	0.1094	0.1089	0.1016
20	QPSK	100	0	14.87	14.93	14.63	0.1089	0.1104	0.1030
20	16QAM	1	0	14.85	14.81	14.56	0.1084	0.1074	0.1014
20	64QAM	1	0	14.80	14.76	14.51	0.1072	0.1062	0.1002
20	256QAM	1	0	14.88	14.92	14.63	0.1091	0.1102	0.1030
Channel				55315	55990	56665	EIRP(W)		
Frequency (MHz)				3557.5	3625	3692.5	L	M	H
15	QPSK	1	0	14.87	14.91	14.65	0.1089	0.1099	0.1035
15	16QAM	1	0	14.76	14.76	14.65	0.1062	0.1062	0.1035
Channel				55290	55990	56690	EIRP(W)		
Frequency (MHz)				3555	3625	3695	L	M	H
10	QPSK	1	0	14.90	14.93	14.64	0.1096	0.1104	0.1033
10	16QAM	1	0	14.74	14.71	14.51	0.1057	0.1050	0.1002
Channel				55265	55990	56715	EIRP(W)		
Frequency (MHz)				3552.5	3625	3697.5	L	M	H
5	QPSK	1	0	14.93	14.92	14.57	0.1104	0.1102	0.1016
5	16QAM	1	0	14.76	14.74	14.56	0.1062	0.1057	0.1014



LTE Band 48C_Ant.2 (Modem C):

Combination 20MHz+20MHz (100RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
L	QPSK	1	Max	1	0	14.89	0.1094
M	QPSK	1	Max	1	0	14.91	0.1099
H	QPSK	1	Max	1	0	14.38	0.0973
L	16QAM	1	Max	1	0	14.80	0.1072
M	16QAM	1	Max	1	0	14.76	0.1062
H	16QAM	1	Max	1	0	14.34	0.0964
L	64QAM	1	Max	1	0	14.70	0.1047
M	64QAM	1	Max	1	0	14.78	0.1067
H	64QAM	1	Max	1	0	14.24	0.0942
L	256QAM	1	Max	1	0	14.71	0.1050
M	256QAM	1	Max	1	0	14.88	0.1091
H	256QAM	1	Max	1	0	14.23	0.0940
Combination 20MHz+15MHz (100RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	14.76	0.1062
L	16QAM	1	Max	1	0	14.71	0.1050
Combination 15MHz+20MHz (100RB+75RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	14.78	0.1067
L	16QAM	1	Max	1	0	14.79	0.1069
Combination 20MHz+10MHz (100RB+50RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	14.71	0.1050
L	16QAM	1	Max	1	0	14.77	0.1064
Combination 10MHz+20MHz (50RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	14.84	0.1081
L	16QAM	1	Max	1	0	14.66	0.1038



Combination 20MHz+5MHz (100RB+25RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	14.78	0.1067
L	16QAM	1	Max	1	0	14.69	0.1045
Combination 5MHz+20MHz (25RB+100RB)							
Channel	Modulation	PCC		SCC		Measured Power	EIRP(W)
		RB Size	RB offset	RB Size	RB offset		
M	QPSK	1	Max	1	0	14.81	0.1074
L	16QAM	1	Max	1	0	14.66	0.1038



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Bruce	Temperature :	23~25°C
		Relative Humidity :	41~42%

Note: Pre-scanned harmonic for the different antennas, we choose the worst antenna mode to perform final test and record in the report.

LTE Band 48 / 20MHz / QPSK / Ant.2								
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)
Lowest	7104	-63.18	-40	-23.18	-74.64	2.84	14.30	H
	10656	-62.13	-40	-22.13	-72.07	3.49	13.43	H
	14208	-61.98	-40	-21.98	-72.22	3.85	14.09	H
	7104	-62.46	-40	-22.46	-73.92	2.84	14.30	V
	10656	-62.33	-40	-22.33	-72.27	3.49	13.43	V
	14208	-61.88	-40	-21.88	-72.12	3.85	14.09	V
Middle	7236	-63.99	-40	-23.99	-75.45	2.84	14.30	H
	10848	-62.27	-40	-22.27	-72.21	3.49	13.43	H
	14460	-62.60	-40	-22.60	-72.84	3.85	14.09	H
	7236	-63.79	-40	-23.79	-75.25	2.84	14.30	V
	10848	-62.01	-40	-22.01	-71.95	3.49	13.43	V
	14460	-62.48	-40	-22.48	-72.72	3.85	14.09	V
Highest	7368	-62.43	-40	-22.43	-73.89	2.84	14.30	H
	11040	-60.89	-40	-20.89	-70.83	3.49	13.43	H
	14724	-61.96	-40	-21.96	-72.20	3.85	14.09	H
	7368	-62.40	-40	-22.40	-73.86	2.84	14.30	V
	11040	-61.20	-40	-21.20	-71.14	3.49	13.43	V
	14724	-61.82	-40	-21.82	-72.06	3.85	14.09	V

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



LTE Band 48C / 20MHz+ 20MHz / QPSK / Ant.2								
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)
Lowest	7104	-62.37	-40	-22.37	-73.83	2.84	14.30	H
	10656	-60.66	-40	-20.66	-70.60	3.49	13.43	H
	14208	-59.73	-40	-19.73	-69.97	3.85	14.09	H
	7104	-62.77	-40	-22.77	-74.23	2.84	14.30	V
	10656	-60.95	-40	-20.95	-70.89	3.49	13.43	V
	14208	-59.85	-40	-19.85	-70.09	3.85	14.09	V
	7140	-63.20	-40	-23.20	-74.66	2.84	14.30	H
	10716	-60.11	-40	-20.11	-70.05	3.49	13.43	H
	14280	-60.19	-40	-20.19	-70.43	3.85	14.09	H
	7140	-63.24	-40	-23.24	-74.70	2.84	14.30	V
	10716	-60.41	-40	-20.41	-70.35	3.49	13.43	V
	14280	-59.99	-40	-19.99	-70.23	3.85	14.09	V
Middle	7236	-62.77	-40	-22.77	-74.23	2.84	14.30	H
	10848	-59.47	-40	-19.47	-69.41	3.49	13.43	H
	14460	-59.41	-40	-19.41	-69.65	3.85	14.09	H
	7236	-62.48	-40	-22.48	-73.94	2.84	14.30	V
	10848	-59.83	-40	-19.83	-69.77	3.49	13.43	V
	14460	-59.48	-40	-19.48	-69.72	3.85	14.09	V
	7272	-62.39	-40	-22.39	-73.85	2.84	14.30	H
	10908	-59.68	-40	-19.68	-69.62	3.49	13.43	H
	14544	-59.30	-40	-19.30	-69.54	3.85	14.09	H
	7272	-62.36	-40	-22.36	-73.82	2.84	14.30	V
	10908	-59.88	-40	-19.88	-69.82	3.49	13.43	V
	14544	-59.33	-40	-19.33	-69.57	3.85	14.09	V
Highest	7320	-62.41	-40	-22.41	-73.87	2.84	14.30	H
	10980	-59.51	-40	-19.51	-69.45	3.49	13.43	H
	14640	-59.84	-40	-19.84	-70.08	3.85	14.09	H
	7320	-62.27	-40	-22.27	-73.73	2.84	14.30	V
	10980	-59.60	-40	-19.60	-69.54	3.49	13.43	V
	14640	-59.82	-40	-19.82	-70.06	3.85	14.09	V
	7368	-62.35	-40	-22.35	-73.81	2.84	14.30	H
	11040	-59.50	-40	-19.50	-69.44	3.49	13.43	H
	14724	-59.90	-40	-19.90	-70.14	3.85	14.09	H
	7368	-62.61	-40	-22.61	-74.07	2.84	14.30	V
	11040	-59.47	-40	-19.47	-69.41	3.49	13.43	V
	14724	-59.92	-40	-19.92	-70.16	3.85	14.09	V

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