



FCC RF Test Report

APPLICANT : Gosuncn Technology Group Co., Ltd.
EQUIPMENT : Automatic Database Diagnostic Monitor (LTE OBD II Dongle)
BRAND NAME : GOSUNCN
MODEL NAME : GD201
FCC ID : 2APNR-GD201
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(H), 27(F),
CLASSIFICATION : PCS Licensed Transmitter (PCB)
TEST DATE(S) : Aug. 01, 2021 ~ Aug. 03, 2021

We, Sporton International (ShenZhen) Inc., 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 (Model Name: L710HG, FCC ID: 2AK9D-L710HG) during the test, only Power/ERP/EIRP and RSE test items are tested in this report, all the other test results are referenced from the module RF report.

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

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



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People's Republic of China



TABLE OF CONTENTS

REVISION HISTORY... 3
SUMMARY OF TEST RESULT ... 4
1 GENERAL DESCRIPTION ... 5
1.1 Applicant ... 5
1.2 Manufacturer ... 5
1.3 Product Feature of Equipment Under Test ... 5
1.4 Product Specification of Equipment Under Test ... 5
1.5 Modification of EUT ... 6
1.6 Maximum ERP/EIRP Power ... 6
1.7 Testing Location ... 7
1.8 Test Software ... 8
1.9 Applicable Standards ... 8
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST ... 9
2.1 Test Mode ... 9
2.2 Connection Diagram of Test System ... 10
2.3 Support Unit used in test configuration and system ... 10
2.4 Frequency List of Low/Middle/High Channels ... 11
3 CONDUCTED TEST ITEMS ... 14
3.1 Measuring Instruments ... 14
3.2 Test Setup ... 14
3.3 Test Result of Conducted Test ... 14
3.4 Conducted Output Power and ERP/EIRP ... 15
4 RADIATED TEST ITEMS ... 16
4.1 Measuring Instruments ... 16
4.2 Test Setup ... 16
4.3 Test Result of Radiated Test ... 17
4.4 Radiated Spurious Emission ... 18
5 LIST OF MEASURING EQUIPMENT ... 19
6 UNCERTAINTY OF EVALUATION ... 20
APPENDIX A. TEST RESULTS OF CONDUCTED TEST
APPENDIX B. TEST RESULTS OF RADIATED TEST
APPENDIX C. TEST SETUP PHOTOGRAPHS



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG171528B	Rev. 01	Initial issue of report	Aug. 23, 2021



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§22.913(a)(5)	Effective Radiated Power (Band 5) (Band 26)	ERP < 7 Watt	PASS	-
	§27.50(b)(10) §27.50(c)(10)	Effective Radiated Power (Band 12) (Band 13)	ERP < 3 Watt		-
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt		-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		-
-	§24.232(d)	Peak-to-Average Ratio	<13 dB		PASS
-	§2.1049	Occupied Bandwidth	-	-	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2)(4) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 26)	< 43+10log10(P[Watts])	PASS	1
-	§2.1051 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 26)	< 43+10log10(P[Watts])	PASS	1
-	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	1
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 12) (Band 13) (Band 26)	< 43+10log10(P[Watts])	PASS	Under limit 13.65 dB at 1559.500 MHz

Remark 1:

All test results were leveraged from module RF report which can refer to Report No. I20W00023-WWAN-Rev1

Declaration of Conformity:

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

Comments and Explanations:

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



1 General Description

1.1 Applicant

Gosuncn Technology Group Co., Ltd.

6F, 2819 KaiChuang Blvd., Science Town, Huangpu District, Guangzhou City, Guangdong, China.

1.2 Manufacturer

Gosuncn Technology Group Co., Ltd.

6F, 2819 KaiChuang Blvd., Science Town, Huangpu District, Guangzhou City, Guangdong, China.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Automatic Database Diagnostic Monitor (LTE OBD II Dongle)
Brand Name	GOSUNCN
Model Name	GD201
FCC ID	2APNR-GD201
IMEI Code	Radiation: 864341050000077
HW Version	GD201_MB_A
SW Version	MCU_EN_GD201V1.1.1B02
EUT Stage	Identical Prototype

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850 MHz ~ 1910 MHz LTE Band 4 : 1710 MHz ~ 1755 MHz LTE Band 5 : 824 MHz ~ 849 MHz LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 13 : 777 MHz ~ 787 MHz LTE Band 26 : 824 MHz ~ 849 MHz
Rx Frequency	LTE Band 2 : 1930 MHz ~ 1990 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz LTE Band 5 : 869 MHz ~ 894 MHz LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 13 : 746 MHz ~ 756 MHz LTE Band 26 : 869 MHz ~ 894 MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 26 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz
Maximum Output Power to Antenna	LTE Band 2 : 22.73 dBm LTE Band 4 : 23.69 dBm



	LTE Band 12 : 23.55 dBm LTE Band 13 : 23.42 dBm LTE Band 26 : 23.51 dBm
Antenna Gain	LTE Band 2 : 1.5 dBi LTE Band 4 : 2.2 dBi LTE Band 5 : -1.0 dBi LTE Band 12 : -2.1 dBi LTE Band 13 : -2.0 dBi LTE Band 26 : -1.0 dBi
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP Power

LTE Band 2		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	0.2280	0.2421
3	1851.5 ~ 1908.5	0.2291	0.2455
5	1852.5 ~ 1907.5	0.2382	0.2460
10	1855.0 ~ 1905.0	0.2483	0.2466
15	1857.5 ~ 1902.5	0.2523	0.2312
20	1860.0 ~ 1900.0	0.2649	0.2529
LTE Band 4		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	0.3243	0.3767
3	1711.5 ~ 1753.5	0.3258	0.3776
5	1712.5 ~ 1752.5	0.3350	0.3864
10	1715.0 ~ 1750.0	0.3281	0.3873
15	1717.5 ~ 1747.5	0.3334	0.3873
20	1720.0 ~ 1745.0	0.3882	0.3420
LTE Band 5		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	824.7 ~ 848.3	0.1028	0.1014
3	825.5 ~ 847.5	0.1038	0.1007
5	826.5 ~ 846.5	0.1069	0.1028



10	829.0 ~ 844.0	0.1057	0.1054
LTE Band 12		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	699.7 ~ 715.3	0.0843	0.0805
3	700.5 ~ 714.5	0.0836	0.0822
5	701.5 ~ 713.5	0.0845	0.0843
10	704.0 ~ 711.0	0.0851	0.0847
LTE Band 13		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
5	779.5 ~ 784.5	0.0828	0.0793
10	782.0	0.0845	0.0805
LTE Band 26		QPSK	16QAM
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Maximum ERP(W)
1.4	824.7 ~ 848.3	0.1028	0.1014
3	825.5 ~ 847.5	0.1038	0.1007
5	826.5 ~ 846.5	0.1069	0.1028
10	829.0 ~ 844.0	0.1057	0.1054
15	831.5 ~ 841.5	0.1086	0.1057
CH26765	821.5	0.1069	0.1028

Note:LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22.

1.7 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH03-SZ	CN1256	421272



1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH03-SZ	AUDIX	E3	6.2009-8-24

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, 22(H), 24(E), 27(L), 27(H), 27(F)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ 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

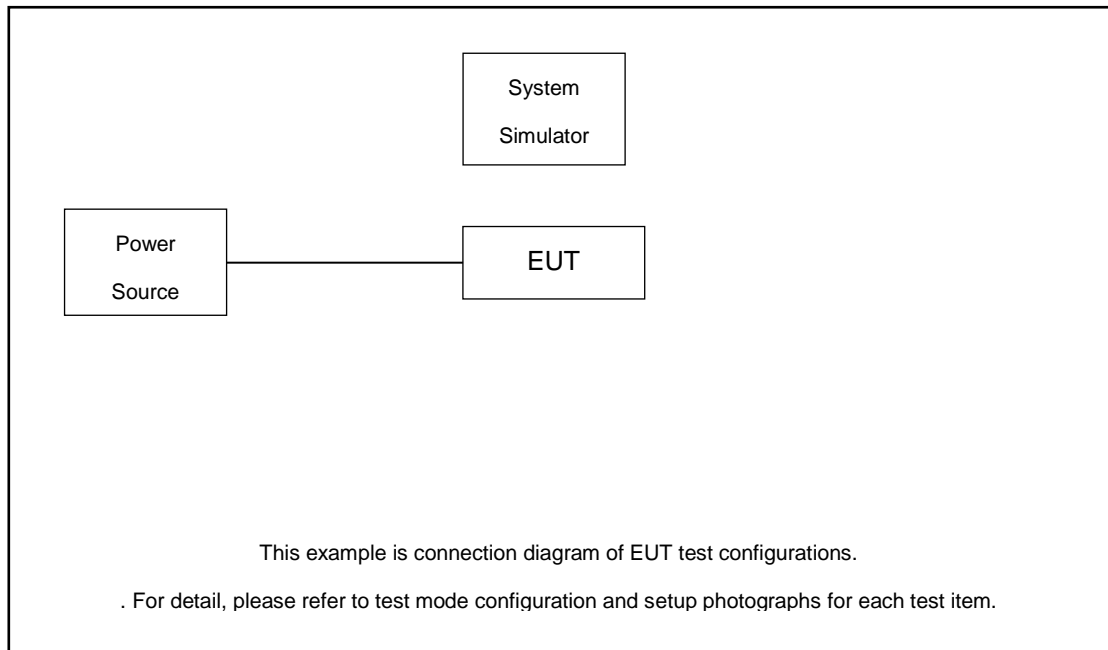
2.1 Test Mode

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.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation			RB #			Test Channel			
		1.4	3	5	10	15	20	QPSK	16QAM	64QAM	1	Half	Full	L	M	H	
Max. Output Power	2	v	v	v	v	v	v	v	v	-	v	v	v	v	v	v	
	4	v	v	v	v	v	v	v	v	-	v	v	v	v	v	v	
	5	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v	
	12	v	v	v	v	-	-	v	v	-	v	v	v	v	v	v	
	13	-	-	v	v	-	-	v	v	-	v	v	v	v	v	v	
	26	v	v	v	v	v	-	v	v	-	v	v	v	v	v	v	
E.R.P / E.I.R.P	2	v	v	v	v	v	v	v	v	-	v			v	v	v	
	4	v	v	v	v	v	v	v	v	-	v			v	v	v	
	12	v	v	v	v	-	-	v	v	-	v			v	v	v	
	13	-	-	v	v	-	-	v	v	-	v			v	v	v	
	26	v	v	v	v	v	-	v	v	-	v			v	v	v	
Radiated Spurious Emission	2	Worst Case														v	
	4	Worst Case														v	
	12	Worst Case														v	
	13	Worst Case														v	
	26	Worst Case														v	
Note	<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. LTE Band 26 overlaps the entire frequency range of LTE Band 5. Therefore, the test results provided in this report covers Band 5 and the portion of Band 26 subject to Part 22. 																

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GWINSTEK	PSS-2002	N/A	N/A	Unshielded, 1.8 m
2.	Adapter	Mentech	MAC-120100X-D-16	N/A	N/A	N/A
3.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m



2.4 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 12 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23060	23095	23130
	Frequency	704	707.5	711
5	Channel	23035	23095	23155
	Frequency	701.5	707.5	713.5
3	Channel	23025	23095	23165
	Frequency	700.5	707.5	714.5
1.4	Channel	23017	23095	23173
	Frequency	699.7	707.5	715.3

LTE Band 13 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	-	23230	-
	Frequency	-	782	-
5	Channel	23205	23230	23255
	Frequency	779.5	782	784.5



LTE Band 26 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
15	Channel	26865	26915	26965
	Frequency	831.5	836.5	841.5
10	Channel	26840	26915	26990
	Frequency	829	836.5	844
5	Channel	26815	26915	27015
	Frequency	826.5	836.5	846.5
3	Channel	26805	26915	27025
	Frequency	825.5	836.5	847.5
1.4	Channel	26797	26915	27033
	Frequency	824.7	836.5	848.3

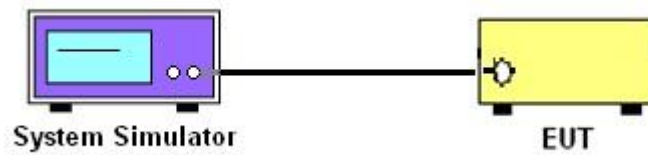
3 Conducted Test Items

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 ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5 and Band 26.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12, Band 13

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4.

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.

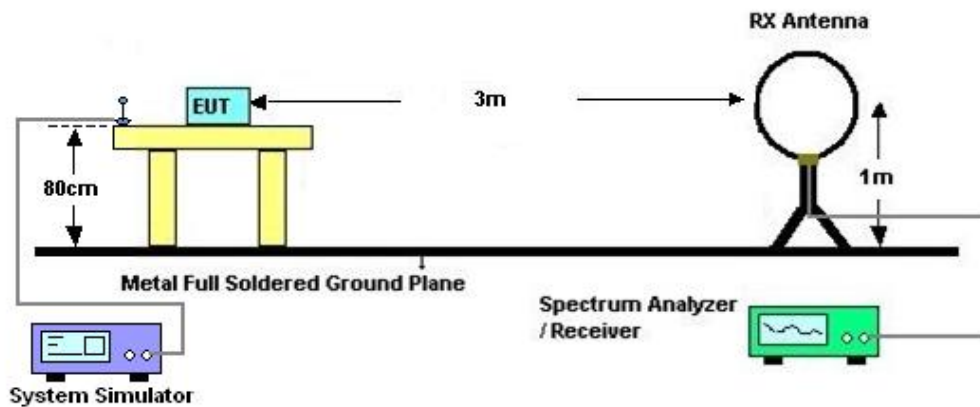
4 Radiated Test Items

4.1 Measuring Instruments

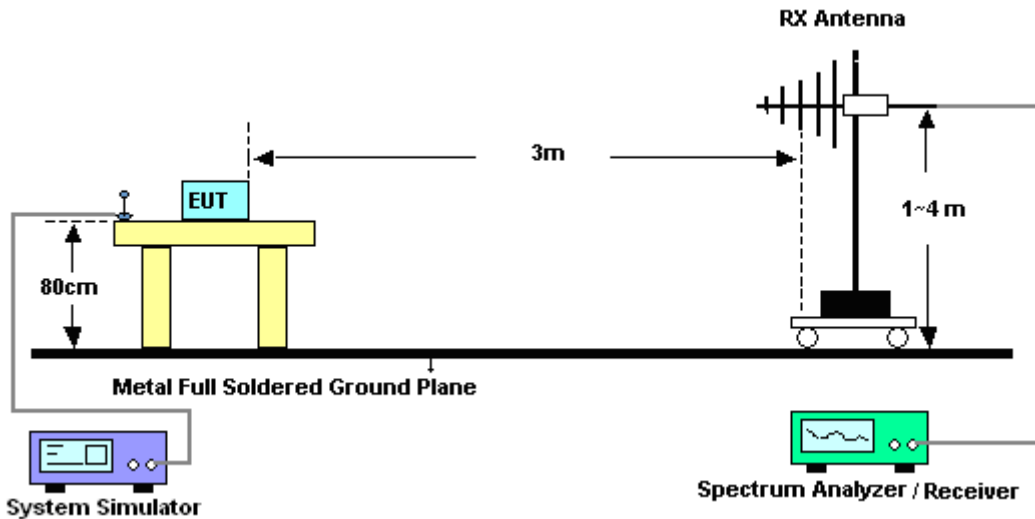
See list of measuring instruments of this test report.

4.2 Test Setup

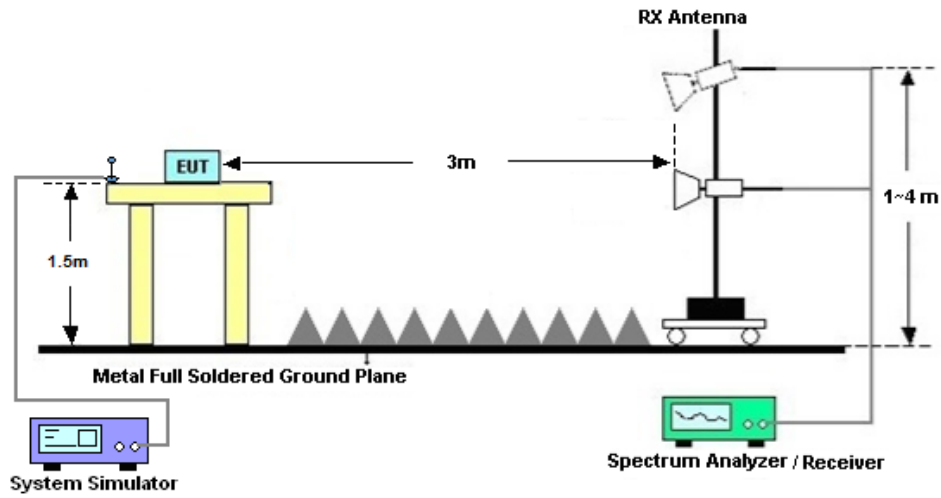
4.2.1 For radiated test below 30MHz



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. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
= $P(W) - [43 + 10\log(P)] (dB)$
= $[30 + 10\log(P)] (dBm) - [43 + 10\log(P)] (dB)$
= $-13dBm$.



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	Apr. 17, 2021	Aug. 01, 2021~ Aug. 03, 2021	Apr. 16, 2022	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	Aug. 01, 2021~ Aug. 03, 2021	Jun. 21, 2022	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz;	Apr. 17, 2021	Aug. 01, 2021~ Aug. 03, 2021	Apr. 16, 2022	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz-2GHz	Jun. 22, 2020	Aug. 01, 2021~ Aug. 03, 2021	Jun. 21, 2022	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1355	1GHz~18GHz	Apr. 25 2021	Aug. 01, 2021~ Aug. 03, 2021	Apr. 24 2022	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 17,2020	Aug. 01, 2021~ Aug. 03, 2021	Oct. 16,2021	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jun. 20, 2020	Aug. 01, 2021~ Aug. 03, 2021	Jun. 19, 2022	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 23, 2021	Aug. 01, 2021~ Aug. 03, 2021	Apr. 22, 2022	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Dec. 25,2020	Aug. 01, 2021~ Aug. 03, 2021	Dec. 24,2021	Radiation (03CH03-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	Aug. 01, 2021~ Aug. 03, 2021	NCR	Radiation (03CH03-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Aug. 01, 2021~ Aug. 03, 2021	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Aug. 01, 2021~ Aug. 03, 2021	NCR	Radiation (03CH03-SZ)

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 Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.0dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.6dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.8dB
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				18700	18900	19100
Frequency (MHz)				1860	1880	1900
20	QPSK	1	0	22.71	22.73	22.53
20	QPSK	1	5	22.64	22.62	22.70
20	QPSK	3	0	22.58	22.62	22.61
20	QPSK	3	3	22.56	22.57	22.53
20	QPSK	6	0	22.54	22.61	22.60
20	16QAM	1	0	22.38	22.50	22.53
20	16QAM	1	5	22.34	22.50	22.32
20	16QAM	3	0	22.44	22.34	22.43
20	16QAM	3	3	22.28	22.45	22.42
20	16QAM	6	0	22.44	22.32	22.41
Channel				18675	18900	19125
Frequency (MHz)				1857.5	1880	1902.5
15	QPSK	1	0	22.52	22.30	22.45
15	QPSK	1	5	21.96	22.36	22.29
15	QPSK	3	0	21.85	22.34	22.18
15	QPSK	3	3	21.91	22.32	22.26
15	QPSK	6	0	21.82	22.28	22.27
15	16QAM	1	0	21.92	22.14	21.98
15	16QAM	1	5	22.01	22.12	21.93
15	16QAM	3	0	22.03	22.09	22.02
15	16QAM	3	3	21.96	22.08	21.94
15	16QAM	6	0	21.91	22.06	21.91
Channel				18650	18900	19150
Frequency (MHz)				1855	1880	1905
10	QPSK	1	0	22.45	22.27	22.32



10	QPSK	1	5	22.25	22.35	22.29
10	QPSK	3	0	22.15	22.24	22.09
10	QPSK	3	3	22.25	22.12	22.25
10	QPSK	6	0	22.11	22.04	22.06
10	16QAM	1	0	22.23	22.12	22.21
10	16QAM	1	5	22.24	22.27	22.36
10	16QAM	3	0	22.31	22.42	22.32
10	16QAM	3	3	22.20	22.17	22.33
10	16QAM	6	0	22.27	22.19	22.18
Channel				18625	18900	19175
Frequency (MHz)				1852.5	1880	1907.5
5	QPSK	1	0	22.07	22.23	22.22
5	QPSK	1	5	22.16	22.27	22.25
5	QPSK	3	0	22.05	22.10	22.14
5	QPSK	3	3	22.05	22.05	22.06
5	QPSK	6	0	21.87	21.93	21.94
5	16QAM	1	0	22.05	22.08	22.09
5	16QAM	1	5	22.10	22.21	22.26
5	16QAM	3	0	22.41	22.40	22.31
5	16QAM	3	3	22.11	22.09	22.13
5	16QAM	6	0	22.06	22.05	22.01
Channel				18615	18900	19185
Frequency (MHz)				1851.5	1880	1908.5
3	QPSK	1	0	21.97	21.89	21.98
3	QPSK	1	5	21.96	22.10	22.10
3	QPSK	3	0	21.89	21.94	21.91
3	QPSK	3	3	21.85	21.85	21.86
3	QPSK	6	0	21.68	21.79	21.71
3	16QAM	1	0	22.02	22.00	22.01
3	16QAM	1	5	22.02	22.03	22.00
3	16QAM	3	0	22.40	22.30	22.36
3	16QAM	3	3	22.01	22.01	22.05
3	16QAM	6	0	21.93	21.88	21.90
Channel				18607	18900	19193
Frequency (MHz)				1850.7	1880	1909.3
1.4	QPSK	1	0	22.05	22.03	21.95



1.4	QPSK	1	5	22.00	21.97	22.08
1.4	QPSK	3	0	21.88	21.96	22.03
1.4	QPSK	3	3	21.94	21.85	21.91
1.4	QPSK	6	0	21.80	21.73	21.83
1.4	16QAM	1	0	21.93	21.89	22.02
1.4	16QAM	1	5	21.95	22.02	21.90
1.4	16QAM	3	0	22.31	22.32	22.34
1.4	16QAM	3	3	21.91	22.06	22.09
1.4	16QAM	6	0	21.92	21.86	21.90



LTE Band 4						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20050	20175	20300
Frequency (MHz)				1720	1732.5	1745
20	QPSK	1	0	23.60	23.69	23.68
20	QPSK	1	5	22.86	22.91	22.87
20	QPSK	3	0	23.00	23.01	22.92
20	QPSK	3	3	22.78	22.98	22.86
20	QPSK	6	0	22.82	22.99	22.87
20	16QAM	1	0	22.93	22.97	22.91
20	16QAM	1	5	23.13	23.14	23.13
20	16QAM	3	0	23.07	23.11	22.99
20	16QAM	3	3	22.89	23.01	22.96
20	16QAM	6	0	22.91	23.09	23.01
Channel				20025	20175	20325
Frequency (MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	23.03	22.99	22.99
15	QPSK	1	5	22.80	22.85	22.70
15	QPSK	3	0	22.66	22.66	22.81
15	QPSK	3	3	22.70	22.72	22.76
15	QPSK	6	0	22.95	22.98	22.98
15	16QAM	1	0	22.91	22.90	22.76
15	16QAM	1	5	23.61	23.55	23.68
15	16QAM	3	0	23.05	22.95	23.01
15	16QAM	3	3	22.79	22.83	22.74
15	16QAM	6	0	22.71	22.84	22.86
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	22.93	22.96	22.96
10	QPSK	1	5	22.75	22.69	22.79
10	QPSK	3	0	22.73	22.63	22.78
10	QPSK	3	3	22.74	22.60	22.73
10	QPSK	6	0	22.83	22.90	22.95
10	16QAM	1	0	22.81	22.74	22.81



10	16QAM	1	5	23.58	23.51	23.68
10	16QAM	3	0	22.94	23.02	22.92
10	16QAM	3	3	22.86	22.84	22.75
10	16QAM	6	0	22.75	22.84	22.83
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	22.94	23.05	23.03
5	QPSK	1	5	22.84	22.83	22.85
5	QPSK	3	0	22.66	22.66	22.69
5	QPSK	3	3	22.68	22.70	22.65
5	QPSK	6	0	22.94	22.87	22.94
5	16QAM	1	0	22.86	22.75	22.75
5	16QAM	1	5	23.61	23.56	23.67
5	16QAM	3	0	22.96	22.94	22.88
5	16QAM	3	3	22.83	22.73	22.88
5	16QAM	6	0	22.85	22.73	22.75
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	22.93	22.80	22.82
3	QPSK	1	5	22.77	22.76	22.66
3	QPSK	3	0	22.64	22.55	22.65
3	QPSK	3	3	22.59	22.63	22.51
3	QPSK	6	0	22.88	22.84	22.90
3	16QAM	1	0	22.73	22.85	22.75
3	16QAM	1	5	23.53	23.57	23.56
3	16QAM	3	0	22.89	22.91	22.87
3	16QAM	3	3	22.75	22.63	22.65
3	16QAM	6	0	22.77	22.76	22.71
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	22.91	22.88	22.88
1.4	QPSK	1	5	22.68	22.75	22.74
1.4	QPSK	3	0	22.65	22.51	22.59
1.4	QPSK	3	3	22.49	22.56	22.61
1.4	QPSK	6	0	22.91	22.87	22.84
1.4	16QAM	1	0	22.84	22.67	22.74



1.4	16QAM	1	5	23.56	23.51	23.45
1.4	16QAM	3	0	22.81	22.92	22.88
1.4	16QAM	3	3	22.72	22.73	22.63
1.4	16QAM	6	0	22.77	22.77	22.82



LTE Band 5						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	23.48	23.49	23.46
10	QPSK	1	5	23.46	23.40	23.45
10	QPSK	3	0	23.38	23.44	23.38
10	QPSK	3	3	23.45	23.45	23.43
10	QPSK	6	0	23.03	23.05	22.92
10	16QAM	1	0	23.41	23.47	23.47
10	16QAM	1	5	23.41	23.38	23.41
10	16QAM	3	0	23.46	23.45	23.45
10	16QAM	3	3	23.38	23.42	23.44
10	16QAM	6	0	23.47	23.40	23.41
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	23.40	23.40	23.44
5	QPSK	1	5	23.43	23.46	23.34
5	QPSK	3	0	23.46	23.47	23.45
5	QPSK	3	3	23.35	23.38	23.47
5	QPSK	6	0	22.97	22.86	22.96
5	16QAM	1	0	23.47	23.43	23.44
5	16QAM	1	5	23.38	23.47	23.40
5	16QAM	3	0	23.41	23.44	23.44
5	16QAM	3	3	23.47	23.34	23.41
5	16QAM	6	0	23.42	23.42	23.47
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.40	23.38	23.41
3	QPSK	1	5	23.34	23.43	23.42
3	QPSK	3	0	23.45	23.46	23.35
3	QPSK	3	3	23.34	23.23	23.30
3	QPSK	6	0	22.79	22.76	22.76
3	16QAM	1	0	23.34	23.43	23.46



3	16QAM	1	5	23.44	23.41	23.44
3	16QAM	3	0	23.46	23.34	23.46
3	16QAM	3	3	23.41	23.42	23.45
3	16QAM	6	0	23.46	23.47	23.42
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.47	23.46	23.42
1.4	QPSK	1	5	23.38	23.44	23.41
1.4	QPSK	3	0	23.27	23.45	23.43
1.4	QPSK	3	3	23.23	23.26	23.36
1.4	QPSK	6	0	22.67	22.78	22.82
1.4	16QAM	1	0	23.40	23.47	23.41
1.4	16QAM	1	5	23.40	23.34	23.40
1.4	16QAM	3	0	23.42	23.47	23.42
1.4	16QAM	3	3	23.43	23.40	23.41
1.4	16QAM	6	0	23.40	23.46	23.38



LTE Band 12						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				23060	23095	23130
Frequency (MHz)				704	707.5	711
10	QPSK	1	0	23.22	23.55	23.37
10	QPSK	1	5	23.05	23.24	23.09
10	QPSK	3	0	23.38	23.39	23.20
10	QPSK	3	3	23.14	23.27	23.24
10	QPSK	6	0	22.81	22.98	22.80
10	16QAM	1	0	23.33	23.52	23.35
10	16QAM	1	5	23.52	23.53	23.41
10	16QAM	3	0	23.19	23.30	23.19
10	16QAM	3	3	23.39	23.41	23.21
10	16QAM	6	0	23.32	23.37	23.26
Channel				23035	23095	23155
Frequency (MHz)				701.5	707.5	713.5
5	QPSK	1	0	23.52	23.50	23.49
5	QPSK	1	5	23.12	23.05	23.09
5	QPSK	3	0	23.21	23.20	23.29
5	QPSK	3	3	23.23	23.17	23.17
5	QPSK	6	0	22.92	22.82	22.88
5	16QAM	1	0	23.34	23.51	23.43
5	16QAM	1	5	23.41	23.39	23.43
5	16QAM	3	0	23.14	23.24	23.20
5	16QAM	3	3	23.31	23.38	23.23
5	16QAM	6	0	23.34	23.24	23.33
Channel				23025	23095	23165
Frequency (MHz)				700.5	707.5	714.5
3	QPSK	1	0	23.47	23.44	23.33
3	QPSK	1	5	23.00	23.09	23.04
3	QPSK	3	0	23.13	23.11	23.20
3	QPSK	3	3	23.14	23.20	23.18
3	QPSK	6	0	22.83	22.90	22.76
3	16QAM	1	0	23.25	23.25	23.20



3	16QAM	1	5	23.39	23.22	23.40
3	16QAM	3	0	22.97	23.08	23.10
3	16QAM	3	3	23.19	23.11	23.17
3	16QAM	6	0	23.17	23.24	23.21
Channel				23017	23095	23173
Frequency (MHz)				699.7	707.5	715.3
1.4	QPSK	1	0	23.36	23.51	23.33
1.4	QPSK	1	5	23.08	22.92	22.99
1.4	QPSK	3	0	23.06	23.17	23.18
1.4	QPSK	3	3	23.22	23.15	23.09
1.4	QPSK	6	0	22.78	22.80	22.72
1.4	16QAM	1	0	23.30	23.26	23.19
1.4	16QAM	1	5	23.25	23.23	23.24
1.4	16QAM	3	0	23.08	22.95	23.09
1.4	16QAM	3	3	23.29	23.18	23.14
1.4	16QAM	6	0	23.24	23.29	23.31



LTE Band 13						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel					23230	
Frequency (MHz)					782	
10	QPSK	1	0		23.42	
10	QPSK	1	5		23.34	
10	QPSK	3	0		23.31	
10	QPSK	3	3		23.34	
10	QPSK	6	0		23.12	
10	16QAM	1	0		23.17	
10	16QAM	1	5		23.02	
10	16QAM	3	0		23.21	
10	16QAM	3	3		23.18	
10	16QAM	6	0		22.85	
Channel				23205	23230	23255
Frequency (MHz)				779.5	782	784.5
5	QPSK	1	0	23.32	23.29	23.33
5	QPSK	1	5	23.33	23.26	23.30
5	QPSK	3	0	23.29	23.20	23.28
5	QPSK	3	3	23.14	23.16	23.26
5	QPSK	6	0	22.98	23.05	23.00
5	16QAM	1	0	22.98	23.04	23.14
5	16QAM	1	5	22.82	22.82	22.85
5	16QAM	3	0	23.10	23.07	23.12
5	16QAM	3	3	23.10	23.06	23.13
5	16QAM	6	0	22.84	22.72	22.74



LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.
Channel				26865	26915	26965
Frequency (MHz)				831.5	836.5	841.5
15	QPSK	1	0	23.44	23.51	23.37
15	QPSK	1	5	23.30	23.31	23.14
15	QPSK	3	0	23.25	23.27	23.24
15	QPSK	3	3	23.39	23.41	23.31
15	QPSK	6	0	22.73	22.83	22.70
15	16QAM	1	0	23.27	23.39	23.35
15	16QAM	1	5	22.86	22.95	22.79
15	16QAM	3	0	22.74	22.86	22.73
15	16QAM	3	3	22.79	22.87	22.74
15	16QAM	6	0	22.83	22.89	22.70
Channel				26840	26915	26990
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	23.31	23.36	23.39
10	QPSK	1	5	23.14	23.30	23.15
10	QPSK	3	0	23.24	23.14	23.09
10	QPSK	3	3	23.36	23.23	23.30
10	QPSK	6	0	22.78	22.65	22.68
10	16QAM	1	0	23.24	23.38	23.25
10	16QAM	1	5	22.94	22.87	22.80
10	16QAM	3	0	22.82	22.72	22.82
10	16QAM	3	3	22.71	22.69	22.78
10	16QAM	6	0	22.88	22.79	22.73
Channel				26815	26915	27015
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	23.44	23.28	23.28
5	QPSK	1	5	23.21	23.19	23.23
5	QPSK	3	0	23.15	23.13	23.16
5	QPSK	3	3	23.40	23.32	23.34
5	QPSK	6	0	22.64	22.68	22.80
5	16QAM	1	0	23.27	23.26	23.25



5	16QAM	1	5	22.75	22.79	22.87
5	16QAM	3	0	22.79	22.71	22.84
5	16QAM	3	3	22.72	22.74	22.73
5	16QAM	6	0	22.83	22.88	22.72
Channel				26805	26915	27025
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	23.23	23.14	23.24
3	QPSK	1	5	23.07	23.15	23.02
3	QPSK	3	0	22.94	23.11	23.02
3	QPSK	3	3	23.31	23.12	23.12
3	QPSK	6	0	22.64	22.62	22.56
3	16QAM	1	0	23.18	23.10	23.14
3	16QAM	1	5	22.72	22.60	22.74
3	16QAM	3	0	22.53	22.65	22.67
3	16QAM	3	3	22.58	22.60	22.70
3	16QAM	6	0	22.80	22.68	22.77
Channel				26797	26915	27033
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	23.17	23.13	23.27
1.4	QPSK	1	5	23.17	23.12	23.09
1.4	QPSK	3	0	23.10	23.03	23.02
1.4	QPSK	3	3	23.19	23.22	23.13
1.4	QPSK	6	0	22.64	22.49	22.51
1.4	16QAM	1	0	23.13	23.18	23.21
1.4	16QAM	1	5	22.67	22.63	22.60
1.4	16QAM	3	0	22.70	22.58	22.56
1.4	16QAM	3	3	22.56	22.56	22.67
1.4	16QAM	6	0	22.74	22.76	22.80



ERP/EIRP

LTE Band 2 (GT - LC = 1.5 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	22.00	21.97	22.08	21.96	22.10	22.10	22.16	22.27	22.25
Conducted Power (Watts)	0.1585	0.1574	0.1614	0.1570	0.1622	0.1622	0.1644	0.1687	0.1679
EIRP(dBm)	23.50	23.47	23.58	23.46	23.60	23.60	23.66	23.77	23.75
EIRP(Watts)	0.2239	0.2223	0.2280	0.2218	0.2291	0.2291	0.2323	0.2382	0.2371

LTE Band 2 (GT - LC = 1.5 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	22.45	22.27	22.32	22.52	22.30	22.45	22.71	22.73	22.53
Conducted Power (Watts)	0.1758	0.1687	0.1706	0.1786	0.1698	0.1758	0.1866	0.1875	0.1791
EIRP(dBm)	23.95	23.77	23.82	24.02	23.80	23.95	24.21	24.23	24.03
EIRP(Watts)	0.2483	0.2382	0.2410	0.2523	0.2399	0.2483	0.2636	0.2649	0.2529



LTE Band 2 (GT - LC = 1.5 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
Conducted Power (dBm)	22.31	22.32	22.34	22.40	22.30	22.36	22.41	22.40	22.31
Conducted Power (Watts)	0.1702	0.1706	0.1714	0.1738	0.1698	0.1722	0.1742	0.1738	0.1702
EIRP(dBm)	23.81	23.82	23.84	23.90	23.80	23.86	23.91	23.90	23.81
EIRP(Watts)	0.2404	0.2410	0.2421	0.2455	0.2399	0.2432	0.2460	0.2455	0.2404

LTE Band 2 (GT - LC = 1.5 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
Conducted Power (dBm)	22.31	22.42	22.32	21.92	22.14	21.98	22.38	22.50	22.53
Conducted Power (Watts)	0.1702	0.1746	0.1706	0.1556	0.1637	0.1578	0.1730	0.1778	0.1791
EIRP(dBm)	23.81	23.92	23.82	23.42	23.64	23.48	23.88	24.00	24.03
EIRP(Watts)	0.2404	0.2466	0.2410	0.2198	0.2312	0.2228	0.2443	0.2512	0.2529



LTE Band 4 (GT - LC = 2.2 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
Conducted Power (dBm)	22.91	22.88	22.88	22.93	22.80	22.82	22.94	23.05	23.03
Conducted Power (Watts)	0.1954	0.1941	0.1941	0.1963	0.1905	0.1914	0.1968	0.2018	0.2009
EIRP(dBm)	25.11	25.08	25.08	25.13	25.00	25.02	25.14	25.25	25.23
EIRP(Watts)	0.3243	0.3221	0.3221	0.3258	0.3162	0.3177	0.3266	0.3350	0.3334

LTE Band 4 (GT - LC = 2.2 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
Conducted Power (dBm)	22.93	22.96	22.96	23.03	22.99	22.99	23.60	23.69	23.68
Conducted Power (Watts)	0.1963	0.1977	0.1977	0.2009	0.1991	0.1991	0.2291	0.2339	0.2333
EIRP(dBm)	25.13	25.16	25.16	25.23	25.19	25.19	25.80	25.89	25.88
EIRP(Watts)	0.3258	0.3281	0.3281	0.3334	0.3304	0.3304	0.3802	0.3882	0.3873



LTE Band 4 (GT - LC = 2.2 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
Conducted Power (dBm)	23.56	23.51	23.45	23.53	23.57	23.56	23.61	23.56	23.67
Conducted Power (Watts)	0.2270	0.2244	0.2213	0.2254	0.2275	0.2270	0.2296	0.2270	0.2328
EIRP(dBm)	25.76	25.71	25.65	25.73	25.77	25.76	25.81	25.76	25.87
EIRP(Watts)	0.3767	0.3724	0.3673	0.3741	0.3776	0.3767	0.3811	0.3767	0.3864

LTE Band 4 (GT - LC = 2.2 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
Conducted Power (dBm)	23.58	23.51	23.68	23.61	23.55	23.68	23.13	23.14	23.13
Conducted Power (Watts)	0.2280	0.2244	0.2333	0.2296	0.2265	0.2333	0.2056	0.2061	0.2056
EIRP(dBm)	25.78	25.71	25.88	25.81	25.75	25.88	25.33	25.34	25.33
EIRP(Watts)	0.3784	0.3724	0.3873	0.3811	0.3758	0.3873	0.3412	0.3420	0.3412



LTE Band 12 (GT - LC = -2.1 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	23.36	23.51	23.33	23.47	23.44	23.33	23.52	23.50	23.49
Conducted Power (Watts)	0.2168	0.2244	0.2153	0.2223	0.2208	0.2153	0.2249	0.2239	0.2234
ERP(dBm)	19.11	19.26	19.08	19.22	19.19	19.08	19.27	19.25	19.24
ERP(Watts)	0.0815	0.0843	0.0809	0.0836	0.0830	0.0809	0.0845	0.0841	0.0839

LTE Band 12 (GT - LC = -2.1 dB) QPSK			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	23.22	23.55	23.37
Conducted Power (Watts)	0.2099	0.2265	0.2173
ERP(dBm)	18.97	19.30	19.12
ERP(Watts)	0.0789	0.0851	0.0817



LTE Band 12 (GT - LC = -2.1 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	23017	23095	23173	23025	23095	23165	23035	23095	23155
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	699.7	707.5	715.3	700.5	707.5	714.5	701.5	707.5	713.5
Conducted Power (dBm)	23.24	23.29	23.31	23.39	23.22	23.40	23.34	23.51	23.43
Conducted Power (Watts)	0.2109	0.2133	0.2143	0.2183	0.2099	0.2188	0.2158	0.2244	0.2203
ERP(dBm)	18.99	19.04	19.06	19.14	18.97	19.15	19.09	19.26	19.18
ERP(Watts)	0.0793	0.0802	0.0805	0.0820	0.0789	0.0822	0.0811	0.0843	0.0828

LTE Band 12 (GT - LC = -2.1 dB) 16QAM			
Bandwidth	10M		
Channel	23060	23095	23130
	(Low)	(Mid)	(High)
Frequency (MHz)	704	707.5	711
Conducted Power (dBm)	23.52	23.53	23.41
Conducted Power (Watts)	0.2249	0.2254	0.2193
ERP(dBm)	19.27	19.28	19.16
ERP(Watts)	0.0845	0.0847	0.0824



LTE Band 13 (GT - LC = -2.0 dB) QPSK						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	23.33	23.26	23.30		23.42	-
Conducted Power (Watts)	0.2153	0.2118	0.2138		0.2198	-
ERP(dBm)	19.18	19.11	19.15		19.27	-
ERP(Watts)	0.0828	0.0815	0.0822		0.0845	-

LTE Band 13 (GT - LC = -2.0 dB) 16QAM						
Bandwidth	5M			10M		
Channel	23205	23230	23255	23230		
	(Low)	(Mid)	(High)	-	(Mid)	-
Frequency (MHz)	779.5	782	784.5	-	782	-
Conducted Power (dBm)	22.98	23.04	23.14		23.21	-
Conducted Power (Watts)	0.1986	0.2014	0.2061		0.2094	-
ERP(dBm)	18.83	18.89	18.99		19.06	-
ERP(Watts)	0.0764	0.0774	0.0793		0.0805	-



LTE Band 26 (GT - LC = -1.0 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	23.17	23.13	23.27	23.31	23.12	23.12	23.44	23.28	23.28
Conducted Power (Watts)	0.2075	0.2056	0.2123	0.2143	0.2051	0.2051	0.2208	0.2128	0.2128
ERP(dBm)	20.02	19.98	20.12	20.16	19.97	19.97	20.29	20.13	20.13
ERP(Watts)	0.1005	0.0995	0.1028	0.1038	0.0993	0.0993	0.1069	0.1030	0.1030

LTE Band 26 (GT - LC = -1.0 dB) QPSK							
Bandwidth	10M			15M			15M
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)
Frequency (MHz)	829	836.5	844	831.5	836.5	841.5	821.5
Conducted Power (dBm)	23.31	23.36	23.39	23.44	23.51	23.37	23.44
Conducted Power (Watts)	0.2143	0.2168	0.2183	0.2208	0.2244	0.2173	0.2208
ERP(dBm)	20.16	20.21	20.24	20.29	20.36	20.22	20.29
ERP(Watts)	0.1038	0.1050	0.1057	0.1069	0.1086	0.1052	0.1069



LTE Band 26 (GT - LC = -1.0 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	26797	26915	27033	26805	26915	27025	26815	26915	27015
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency (MHz)	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
Conducted Power (dBm)	23.13	23.18	23.21	23.18	23.10	23.14	23.27	23.26	23.25
Conducted Power (Watts)	0.2056	0.2080	0.2094	0.2080	0.2042	0.2061	0.2123	0.2118	0.2113
ERP(dBm)	19.98	20.03	20.06	20.03	19.95	19.99	20.12	20.11	20.10
ERP(Watts)	0.0995	0.1007	0.1014	0.1007	0.0989	0.0998	0.1028	0.1026	0.1023

LTE Band 26 (GT - LC = -1.0 dB) 16QAM							
Bandwidth	10M			15M			15M
Channel	26840	26915	26990	26865	26915	26965	26765
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)
Frequency (MHz)	829	836.5	844	831.5	836.5	841.5	821.5
Conducted Power (dBm)	23.24	23.38	23.25	23.27	23.39	23.35	23.27
Conducted Power (Watts)	0.2109	0.2178	0.2113	0.2123	0.2183	0.2163	0.2123
ERP(dBm)	20.09	20.23	20.10	20.12	20.24	20.20	20.12
ERP(Watts)	0.1021	0.1054	0.1023	0.1028	0.1057	0.1047	0.1028



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 2 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3751.18	-36.61	-13	-23.61	-51.05	-43.36	5.85	12.60	H
	5626.77	-60.49	-13	-47.49	-77.34	-66.29	7.30	13.10	H
	7502	-56.82	-13	-43.82	-79.15	-59.97	8.35	11.50	H
	3751.18	-35.82	-13	-22.82	-50.46	-42.57	5.85	12.60	V
	5626.77	-58.45	-13	-45.45	-75.21	-64.25	7.30	13.10	V
	7502	-56.95	-13	-43.95	-79.19	-60.10	8.35	11.50	V

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

LTE Band 4 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3456.18	-33.52	-13	-20.52	-45.96	-40.37	5.65	12.50	H
	5184.27	-56.15	-13	-43.15	-73.43	-61.82	7.13	12.80	H
	6912.36	-59.35	-13	-46.35	-79.80	-62.75	8.40	11.80	H
	8640	-55.49	-13	-42.49	-79.41	-58.34	8.75	11.60	H
	3456.18	-36.45	-13	-23.45	-49.44	-43.30	5.65	12.50	V
	5184.27	-56.58	-13	-43.58	-73.81	-62.25	7.13	12.80	V
	6912.36	-59.45	-13	-46.45	-79.85	-62.85	8.40	11.80	V
	8640	-55.82	-13	-42.82	-79.6	-58.67	8.75	11.60	V

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

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1406	-59.18	-13	-46.18	-67.14	-62.43	4.00	9.40	H
	2109	-56.89	-13	-43.89	-66.55	-60.46	4.88	10.60	H
	2812	-62.99	-13	-49.99	-74.85	-67.92	5.52	12.60	H
	1406	-58.71	-13	-45.71	-66.75	-61.96	4.00	9.40	V
	2109	-56.17	-13	-43.17	-66.20	-59.74	4.88	10.60	V
	2812	-62.99	-13	-49.99	-75.09	-67.92	5.52	12.60	V

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



LTE Band 13 / 5MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1559.5	-60.57	-42.15	-18.42	-67.20	-63.82	4.00	9.40	H
	2339.25	-64.00	-13	-51.00	-74.69	-67.57	4.88	10.60	H
	3119	-63.18	-13	-50.18	-75.87	-68.11	5.52	12.60	H
	1559.5	-55.80	-42.15	-13.65	-62.64	-59.05	4.00	9.40	V
	2339.25	-60.88	-13	-47.88	-71.96	-64.45	4.88	10.60	V
	3119	-62.75	-13	-49.75	-75.95	-67.68	5.52	12.60	V

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

LTE Band 13 / 10MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1555	-60.30	-13	-47.30	-66.98	-63.55	4.00	9.40	H
	2332.5	-63.79	-13	-50.79	-74.49	-67.36	4.88	10.60	H
	3110	-63.39	-13	-50.39	-76.03	-68.32	5.52	12.60	H
	1555	-55.49	-13	-42.49	-62.38	-58.74	4.00	9.40	V
	2332.5	-60.10	-13	-47.10	-71.19	-63.67	4.88	10.60	V
	3110	-62.85	-13	-49.85	-76.00	-67.78	5.52	12.60	V

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

LTE Band 26 / 15MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1659.5	-67.27	-13	-54.27	-73.39	-70.52	4.00	9.40	H
	2489.25	-64.60	-13	-51.60	-74.81	-68.17	4.88	10.60	H
	3319	-64.19	-13	-51.19	-76.23	-69.12	5.52	12.60	H
	1659.5	-67.42	-13	-54.42	-73.35	-70.67	4.00	9.40	V
	2489.25	-64.26	-13	-51.26	-74.82	-67.83	4.88	10.60	V
	3319	-64.30	-13	-51.30	-76.76	-69.23	5.52	12.60	V

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