



FCC RF Test Report

APPLICANT : Greater Goods, LLC
EQUIPMENT : LTE-M Scale W
BRAND NAME : Greater Goods
MODEL NAME : 0028
FCC ID : 2ADUL0028
STANDARD : 47 CFR Part 2, 24(E), 27(L), 27(H)
CLASSIFICATION : PCS Licensed Transmitter (PCB)
TEST DATE(S) : Aug. 30, 2023 ~ Sep. 05, 2023

The product was installed a module during the test: LTE Module (Brand Name : Quectel, Model Name: BG950A-GL, FCC ID: XMR2021BG950AGL) during test.

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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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	-	Report Only	-
	§27.50(c)(10)	Effective Radiated Power (Band 12)	ERP < 3 Watt	PASS	-
	§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	1
-	§2.1049	Occupied Bandwidth	-	Report Only	1
-	§2.1051 §24.238(a) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 12)	< 43+10log10(P[Watts])	PASS	1
-	§2.1051 §24.238(a) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 12)	< 43+10log10(P[Watts])	PASS	1
-	§2.1055 §24.235 §27.54	Frequency Stability Temperature & Voltage	Within Authorized Band	PASS	1
4.4	§2.1053 §24.238(a) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 12)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 23.02 dB at 6900.000 MHz

Remark 1:

All test results were leveraged from module RF report which can refer to Report No. R2301A0022-R5V1 and R2301A0022-R6V1.

Conformity Assessment Condition:

- 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.
- 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

Greater Goods, LLC
4427 Chouteau Ave., St. Louis MO 63110, United States

1.2 Manufacturer

Greater Goods, LLC
4427 Chouteau Ave., St. Louis MO 63110, United States

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	LTE-M Scale W
Brand Name	Greater Goods
Model Name	0028
FCC ID	2ADUL0028
SN / IMEI Code	Conducted: 016487000000076 Radiation: 016487000000043
HW Version	V02
SW Version	A01
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 12 : 699 MHz ~ 716 MHz
Rx Frequency	LTE Band 2 : 1930 MHz ~ 1990 MHz LTE Band 4 : 2110 MHz ~ 2155 MHz LTE Band 12 : 729 MHz ~ 746 MHz
LTE Category	M1
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz
Maximum Output Power to Antenna	LTE Band 2 : 23.93 dBm LTE Band 4 : 23.99 dBm LTE Band 12 : 23.97 dBm
Antenna Gain	LTE Band 2 : 3.36 dBi LTE Band 4 : 3.74 dBi LTE Band 12 : 0.94 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)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1850.7 ~ 1909.3	0.5297	-	0.3972	-
3	1851.5 ~ 1908.5	0.5333	-	0.4102	-
5	1852.5 ~ 1907.5	0.5272	-	0.5358	-
10	1855.0 ~ 1905.0	0.5333	-	0.5309	-
15	1857.5 ~ 1902.5	0.5358	-	0.5236	-
20	1860.0 ~ 1900.0	0.5309	-	0.5260	-
LTE Band 4		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
1.4	1710.7 ~ 1754.3	0.5623	-	0.4406	-
3	1711.5 ~ 1753.5	0.5702	-	0.4742	-
5	1712.5 ~ 1752.5	0.5754	-	0.5861	-
10	1715.0 ~ 1750.0	0.5888	-	0.5861	-
15	1717.5 ~ 1747.5	0.5689	-	0.5929	-
20	1720.0 ~ 1745.0	0.5636	-	0.5875	-
LTE Band 12		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)
1.4	699.7 ~ 715.3	0.1807	-	0.1432	-
3	700.5 ~ 714.5	0.1871	-	0.1552	-
5	701.5 ~ 713.5	0.1803	-	0.1832	-
10	704.0 ~ 711.0	0.1888	-	0.1824	-

Verify the conducted power is less than the module report, so all conducted power is referenced to the module report.



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.
	03CH03-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	SPORTON	FCC LTE_Ver2.0 Auto_china_210503	2.0
2.	03CH03-KS	AUDIX	E3	210616

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, 24(E), 27(L), 27(H)
- 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

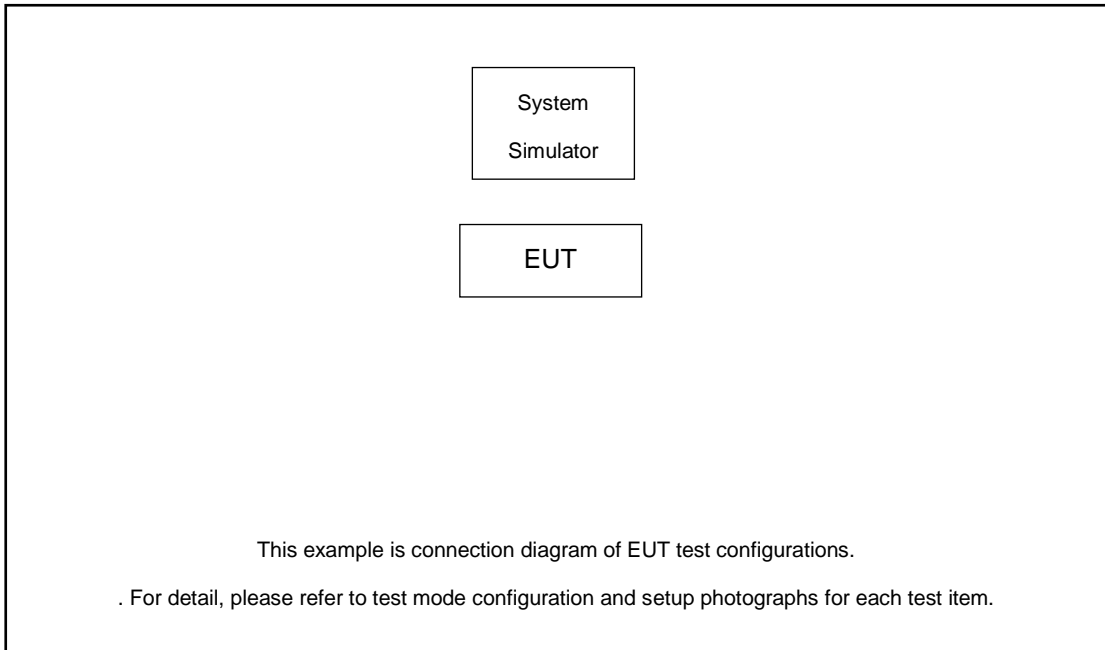
2.1 Test Mode

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
	12	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	v	v
	4	v	v	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
Radiated Spurious Emission	2	Worst Case													v	
	4	Worst Case													v	
	12	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



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	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 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

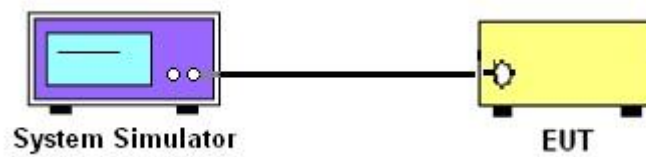
3 Conducted Test Items

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 3 Watts for LTE Band 12.

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.

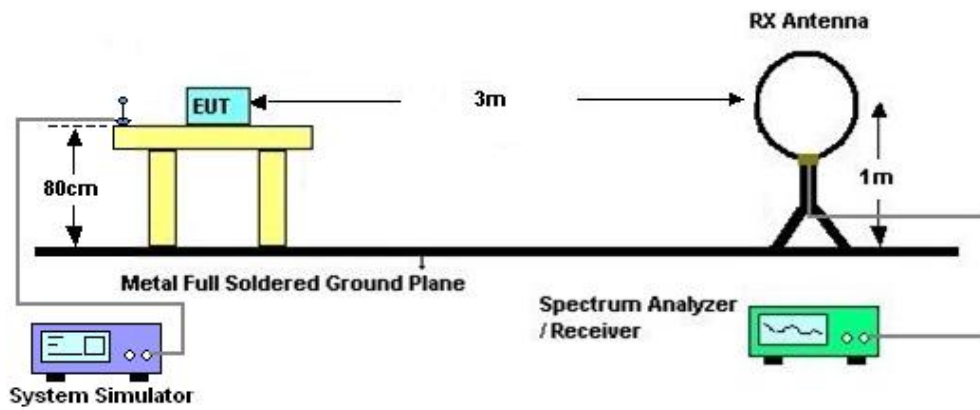
4 Radiated Test Items

4.1 Measuring Instruments

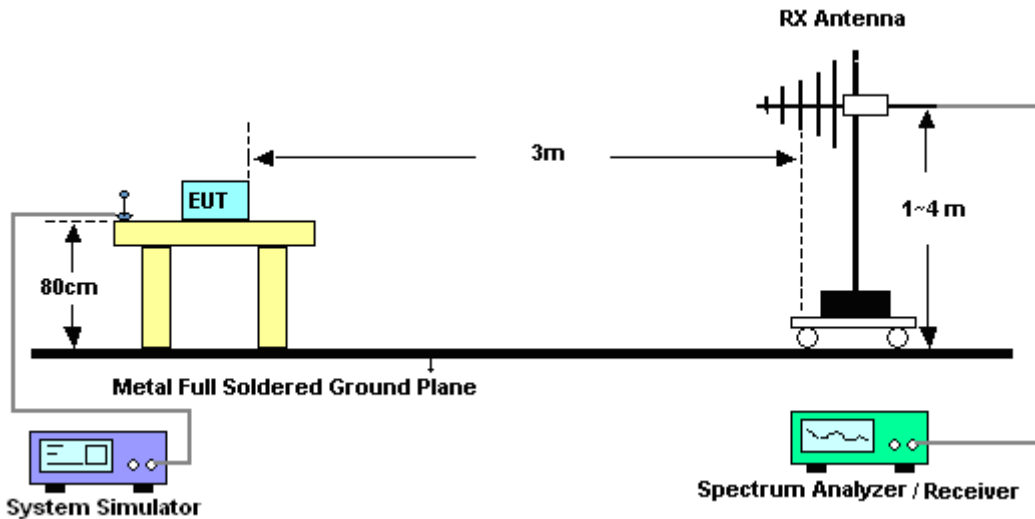
See list of measuring instruments of this test report.

4.2 Test Setup

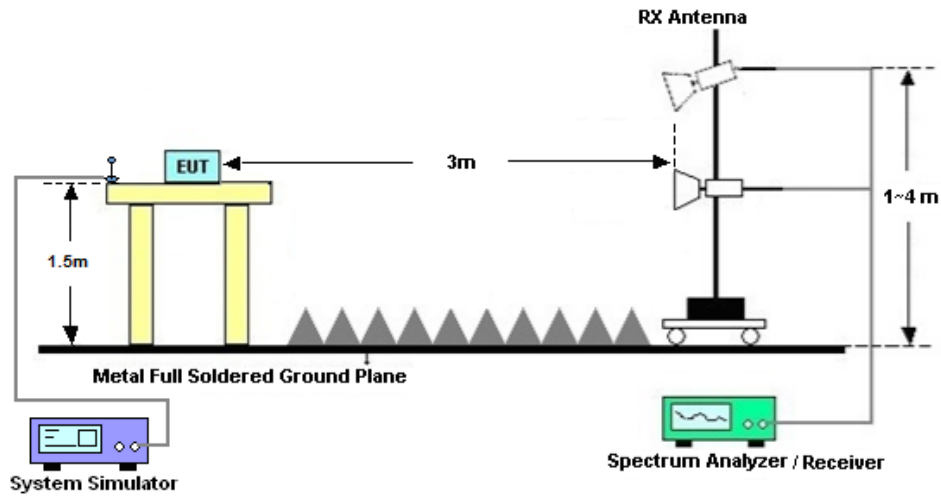
4.2.1 For radiated test below 30MHz



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.

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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
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)
= $P(W) - [43 + 10\log(P)] \text{ (dB)}$
= $[30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
= -13dBm.



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	Sep. 05, 2023	Oct. 11, 2023	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44GHz	May 15, 2023	Aug. 30, 2023	May 14, 2024	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	30MHz~1GHz	Dec. 23, 2022	Aug. 30, 2023	Dec. 22, 2023	Radiation (03CH03-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 15, 2022	Aug. 30, 2023	Nov. 14, 2023	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101116	18GHz~40GHz	Oct. 17, 2022	Aug. 30, 2023	Oct. 16, 2023	Radiation (03CH03-KS)
Amplifier	SONOMA	310N	413740	30MHz ~1000MHz	Jan. 05, 2023	Aug. 30, 2023	Jan. 04, 2024	Radiation (03CH03-KS)
Amplifier	Keysight	83017A	MY53270319	1GHz~26.5GHz	Oct. 12, 2022	Aug. 30, 2023	Oct. 11, 2023	Radiation (03CH03-KS)
Amplifier	EM	EM18G40G A	060851	18~40GHz	Jan. 05, 2023	Aug. 30, 2023	Jan. 04, 2024	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Aug. 30, 2023	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Aug. 30, 2023	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Aug. 30, 2023	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required



6 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.56 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.54 dB
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Appendix A. Test Results of Conducted Test

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

Conducted Output Power(Average power) and ERP/EIRP

LTE eMTC Band 2	Channel/ Frequency(MHz)	index	RB# RBstart		Conducted Power (dBm)		EIRP (dBm)		EIRP (W)	
			QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
1.4M	18067/1850.7	0	1#0	1#0	23.5	22.63	26.86	25.99	0.4853	0.3972
		0	6#0	5#0	22.57	22.18	25.93	25.54	0.3917	0.3581
	18900/1880	0	1#0	1#0	23.88	22.35	27.24	25.71	0.5297	0.3724
		0	6#0	5#0	23.39	21.91	26.75	25.27	0.4732	0.3365
	19193/1909.3	0	1#5	1#5	23.78	22.46	27.14	25.82	0.5176	0.3819
0		6#0	5#0	22.16	21.88	25.52	25.24	0.3565	0.3342	
3M	18615/1851.5	0	1#0	1#0	23.4	22.77	26.76	26.13	0.4742	0.4102
		0	6#0	5#0	22.34	22.15	25.7	25.51	0.3715	0.3556
	18900/1880	0	1#0	1#0	23.34	22.74	26.7	26.1	0.4677	0.4074
		0	6#0	5#0	22.11	21.94	25.47	25.3	0.3524	0.3388
	19185/1908.5	1	1#5	1#5	23.91	22.57	27.27	25.93	0.5333	0.3917
0		6#0	5#0	21.9	22.06	25.26	25.42	0.3357	0.3483	
5M	18625/1852.5	3	1#0	1#0	23.86	23.8	27.22	27.16	0.5272	0.5200
		0	6#0	5#0	23.24	21.88	26.6	25.24	0.4571	0.3342
	18900/1880	0	1#0	1#0	23.31	23.93	26.67	27.29	0.4645	0.5358
		0	6#0	5#0	23.15	21.91	26.51	25.27	0.4477	0.3365
	19175/1907.5	0	1#5	1#5	23.68	23.56	27.04	26.92	0.5058	0.4920
0		6#0	5#0	22.93	21.54	26.29	24.9	0.4256	0.3090	
10M	18650/1855	3	1#0	1#0	23.83	23.86	27.19	27.22	0.5236	0.5272
		0	4#0	4#0	23.81	23.89	27.17	27.25	0.5212	0.5309
	18900/1880	0	1#0	1#0	23.91	23.6	27.27	26.96	0.5333	0.4966
		0	4#0	4#0	23.02	22.95	26.38	26.31	0.4345	0.4276
	19150/1905	4	1#5	1#5	23.69	23.6	27.05	26.96	0.5070	0.4966
7		4#2	4#2	23.44	21.64	26.8	25	0.4786	0.3162	
15M	18675/1857.5	3	1#0	1#0	23.81	23.82	27.17	27.18	0.5212	0.5224
		0	6#0	5#0	23.65	23.83	27.01	27.19	0.5023	0.5236
	18900/1880	0	1#0	1#0	23.88	23.65	27.24	27.01	0.5297	0.5023
		0	6#0	5#0	23.54	23.77	26.9	27.13	0.4898	0.5164
	19125/1902.5	8	1#5	1#5	23.69	23.6	27.05	26.96	0.5070	0.4966
11		6#0	5#0	23.93	23.55	27.29	26.91	0.5358	0.4909	
20M	18700/1860	3	1#0	1#0	23.85	23.82	27.21	27.18	0.5260	0.5224
		0	6#0	5#0	23.58	23.81	26.94	27.17	0.4943	0.5212
	18900/1880	0	1#0	1#0	23.89	23.71	27.25	27.07	0.5309	0.5093
		0	6#0	5#0	23.58	23.85	26.94	27.21	0.4943	0.5260
	19100/1900	12	1#5	1#5	23.68	23.59	27.04	26.95	0.5058	0.4955
15		6#0	5#0	23.65	23.56	27.01	26.92	0.5023	0.4920	



LTE eMTC Band 4	Channel/ Frequency(MHz)	index	RB# RBstart		Conducted Power (dBm)		EIRP (dBm)		EIRP (W)	
			QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
1.4M	19957/1710.7	0	1#0	1#0	23.7	22.58	27.44	26.32	0.5546	0.4285
		0	6#0	5#0	22.31	21.8	26.05	25.54	0.4027	0.3581
	20175/1732.5	0	1#0	1#0	23.67	22.47	27.41	26.21	0.5508	0.4178
		0	6#0	5#0	23.31	21.81	27.05	25.55	0.5070	0.3589
	20393/1754.3	0	1#5	1#5	23.76	22.7	27.5	26.44	0.5623	0.4406
		0	6#0	5#0	23.5	21.97	27.24	25.71	0.5297	0.3724
3M	19965/1711.5	0	1#0	1#0	23.82	22.85	27.56	26.59	0.5702	0.4560
		0	6#0	5#0	21.84	21.51	25.58	25.25	0.3614	0.3350
	20175/1732.5	0	1#0	1#0	23.82	22.78	27.56	26.52	0.5702	0.4487
		0	6#0	5#0	22.14	21.81	25.88	25.55	0.3873	0.3589
	20385/1753.5	1	1#5	1#5	23.68	23.02	27.42	26.76	0.5521	0.4742
		0	6#0	5#0	22.22	21.96	25.96	25.7	0.3945	0.3715
5M	19975/1712.5	3	1#0	1#0	23.8	23.81	27.54	27.55	0.5675	0.5689
		0	6#0	5#0	23.22	21.71	26.96	25.45	0.4966	0.3508
	20175/1732.5	0	1#0	1#0	23.86	23.85	27.6	27.59	0.5754	0.5741
		0	6#0	5#0	23.23	21.79	26.97	25.53	0.4977	0.3573
	20375/1752.5	0	1#5	1#5	23.52	23.94	27.26	27.68	0.5321	0.5861
		0	6#0	5#0	23.36	21.85	27.1	25.59	0.5129	0.3622
10M	20000/1715	3	1#0	1#0	23.78	23.8	27.52	27.54	0.5649	0.5675
		0	4#0	4#0	23.96	22.78	27.7	26.52	0.5888	0.4487
	20175/1732.5	0	1#0	1#0	23.83	23.85	27.57	27.59	0.5715	0.5741
		0	4#0	4#0	22.95	22.89	26.69	26.63	0.4667	0.4603
	20350/1750	4	1#5	1#5	23.59	23.94	27.33	27.68	0.5408	0.5861
		7	4#2	4#2	23.81	22.06	27.55	25.8	0.5689	0.3802
15M	20025/1717.5	3	1#0	1#0	23.78	23.84	27.52	27.58	0.5649	0.5728
		0	6#0	5#0	23.61	23.74	27.35	27.48	0.5433	0.5598
	20175/1732.5	0	1#0	1#0	23.78	23.75	27.52	27.49	0.5649	0.5610
		0	6#0	5#0	23.69	23.7	27.43	27.44	0.5534	0.5546
	20325/1747.5	8	1#5	1#5	23.52	23.99	27.26	27.73	0.5321	0.5929
		11	6#0	5#0	23.81	23.89	27.55	27.63	0.5689	0.5794
20M	20050/1720	3	1#0	1#0	23.76	23.78	27.5	27.52	0.5623	0.5649
		0	6#0	5#0	23.62	23.64	27.36	27.38	0.5445	0.5470
	20175/1732.5	0	1#0	1#0	23.77	23.82	27.51	27.56	0.5636	0.5702
		0	6#0	5#0	23.65	23.72	27.39	27.46	0.5483	0.5572
	20300/1745	12	1#5	1#5	23.58	23.95	27.32	27.69	0.5395	0.5875
		15	6#0	5#0	23.75	23.9	27.49	27.64	0.5610	0.5808



LTE eMTC Band 12	Channel/Frequency(MHz)	index	RB# RBstart		Conducted Power (dBm)		ERP (dBm)		ERP (W)	
			QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
1.4M	23017/699.7	0	1#0	1#0	23.78	22.77	22.57	21.56	0.1807	0.1432
		0	6#0	5#0	22.43	22.02	21.22	20.81	0.1324	0.1205
	23095/707.5	0	1#0	1#0	23.43	22.4	22.22	21.19	0.1667	0.1315
		0	6#0	5#0	22.02	21.57	20.81	20.36	0.1205	0.1086
	23173/715.3	0	1#5	1#5	23.19	22	21.98	20.79	0.1578	0.1199
		0	6#0	5#0	21.64	21.16	20.43	19.95	0.1104	0.0989
3M	23025/700.5	0	1#0	1#0	23.93	23.12	22.72	21.91	0.1871	0.1552
		0	6#0	5#0	22.28	22.01	21.07	20.8	0.1279	0.1202
	23095/707.5	0	1#0	1#0	23.57	22.72	22.36	21.51	0.1722	0.1416
		0	6#0	5#0	21.86	21.58	20.65	20.37	0.1161	0.1089
	23165/714.5	1	1#5	1#5	22.35	22.36	21.14	21.15	0.1300	0.1303
		0	6#0	5#0	21.56	21.29	20.35	20.08	0.1084	0.1019
5M	23035/701.5	3	1#0	1#0	23.77	23.84	22.56	22.63	0.1803	0.1832
		0	6#0	5#0	23.25	22.03	22.04	20.82	0.1600	0.1208
	23095/707.5	0	1#0	1#0	23.62	23.68	22.41	22.47	0.1742	0.1766
		0	6#0	5#0	22.93	21.74	21.72	20.53	0.1486	0.1130
	23155/713.5	0	1#5	1#5	23.44	23.4	22.23	22.19	0.1671	0.1656
		0	6#0	5#0	22.65	21.44	21.44	20.23	0.1393	0.1054
10M	23060/704	3	1#0	1#0	23.76	23.82	22.55	22.61	0.1799	0.1824
		0	4#0	4#0	23.04	23.05	21.83	21.84	0.1524	0.1528
	23095/707.5	0	1#0	1#0	23.67	23.8	22.46	22.59	0.1762	0.1816
		0	4#0	4#0	23.97	22.89	22.76	21.68	0.1888	0.1472
	23130/711	4	1#5	1#5	23.44	23.42	22.23	22.21	0.1671	0.1663
		7	4#2	4#2	22.99	21.36	21.78	20.15	0.1507	0.1035



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

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

LTE Band 2 / 20MHz / QPSK								
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	3735	-53.72	-13	-40.72	-65.98	2.64	14.90	H
	5610	-41.71	-13	-28.71	-53.57	2.94	14.80	H
	7485	-47.34	-13	-34.34	-57.11	3.39	13.16	H
	3735	-47.48	-13	-34.48	-59.74	2.64	14.90	V
	5610	-36.05	-13	-23.05	-47.91	2.94	14.80	V
	7485	-44.46	-13	-31.46	-54.23	3.39	13.16	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)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3450	-49.79	-13	-36.79	-60.53	2.60	13.34	H
	5175	-46.76	-13	-33.76	-57.27	3.01	13.52	H
	6900	-43.08	-13	-30.08	-53.28	3.27	13.47	H
	8625	-44.91	-13	-31.91	-51.88	5.52	12.5	H
	3450	-56.16	-13	-43.16	-66.90	2.60	13.34	V
	5175	-47.04	-13	-34.04	-57.55	3.01	13.52	V
	6900	-36.02	-13	-23.02	-46.22	3.27	13.47	V
	8625	-45.25	-13	-32.25	-52.22	5.52	12.50	V

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



LTE Band 12 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1406	-42.86	-13	-29.86	-49.83	1.58	10.70	H
	2110	-45.29	-13	-32.29	-53.54	2.10	12.50	H
	2814	-60.06	-13	-47.06	-68.95	2.85	13.90	H
	3516	-67.53	-13	-54.53	-75.99	2.68	13.30	H
	4218	-61.82	-13	-48.82	-69.58	3.09	13.00	H
	4926	-58.61	-13	-45.61	-67.38	3.18	14.10	H
	5628	-55.62	-13	-42.62	-62.86	3.31	12.70	H
	6330	-59.42	-13	-46.42	-67.01	3.41	13.15	H
	1406	-62.56	-13	-49.56	-69.53	1.58	10.70	V
	2110	-59.04	-13	-46.04	-67.29	2.10	12.50	V
	2814	-65.79	-13	-52.79	-74.68	2.86	13.90	V
	3516	-68.01	-13	-55.01	-76.47	2.69	13.30	V
	4218	-52.30	-13	-39.30	-60.06	3.09	13.00	V
	4926	-49.90	-13	-36.90	-58.67	3.18	14.10	V
	5628	-51.62	-13	-38.62	-58.86	3.31	12.70	V
	6330	-52.10	-13	-39.10	-59.69	3.41	13.15	V

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