

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 27
47 CFR FCC Part 90
47 CFR FCC Part 2

Report No.: RFBEDV-WTW-P23030565A-1

FCC ID: G95RG525FNA

Product: Module

Brand: Vantiva

Model No.: RG525FNA

Received Date: 2023/3/16

Test Date: 2024/10/25 ~ 2025/1/21

Issued Date: 2025/2/3

Applicant: Vantiva USA LLC

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: Jeremy Lin, **Date:** 2025/2/3
Jeremy Lin / Project Engineer

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Prepared by : Polly Chien / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P23030565A-1	Original release.	2025/2/3

1 Certificate

Product: Module

Brand: Vantiva

Test Model: RG525FNA

Sample Status: Engineering sample

Applicant: Vantiva USA LLC

Test Date: 2024/10/25 ~ 2025/1/21

Standard: 47 CFR FCC Part 27
47 CFR FCC Part 90
47 CFR FCC Part 2

Measurement procedure: ANSI/TIA/EIA-603-E 2016
ANSI C63.26-2015
KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 971168 D02 Misc Rev Approv License Devices v02r02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

Standard / Clause	Test Item	Result	Remark
Part 2.1046 Part 27.50(c) Part 27.50(a) Part 27.50(k) Part 27.50(j) Part 90.542(a)(7)	Effective Radiated Power and Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
Part 2.1047	Modulation Characteristics	NA	Refer to Note
Part 27.50(k)(4) Part 27.50(j)(4)	Peak to Average Ratio	NA	Refer to Note
Part 2.1049	Bandwidth	NA	Refer to Note
Part 2.1051 Part 27.53(g) Part 27.53(a) Part 27.53(n) Part 27.53(l) Part 90.543(e)(f)	Conducted Spurious Emissions	NA	Refer to Note
Part 2.1053 Part 27.53(g) Part 27.53(a) Part 27.53(n) Part 27.53(l) Part 90.543(e)(f)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -5.12 dB at 189.08 MHz
Part 2.1053 Part 27.53(g) Part 27.53(a) Part 27.53(n) Part 27.53(l) Part 90.543(e)(f)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -3.40 dB at 4620.00 MHz
Part 2.1055 Part 27.54 Part 90.539(e)	Frequency Stability	NA	Refer to Note

Note:

1. This report is issued as a supplementary report. Therefore, only test item of Maximum Peak Output Power and Radiated Spurious Emissions were performed for this report. Other testing data please refer to MRT Technology (Suzhou) Co., Ltd report no.: 2211RSU034-U1, 2211RSU034-U4 and 2211RSU034-U2, for module (Brand: Quectel, Model: RG525F-NA). The EUT has disabled the LTE CA mode by software.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Parameter	Specification	Uncertainty (±)
Effective Radiated Power and Equivalent Isotropically Radiated Power	-	1.371 dB
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	2.44 dB
	30 MHz ~ 1 GHz	2.95 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Module
Brand	Vantiva
Test Model	RG525FNA
Status of EUT	Engineering sample
Power Supply Rating	Refer to Note
EUT Category	Mobile station

Note:

1. This report is a supplementary report to BV CPS report no.: RFBEDV-WTW-P23030565-3. The difference compared with the original report is to enable LTE Band: Band 14, 17, 29 (down link only), 30, 42, 43 & LTE Band 42, 43 (HPUE PC2) & 5GNR Band: n7, n14, n26, n30, n48 by software. Therefore, only the Effective Radiated Power and Equivalent Isotropically Radiated Power and Radiated Spurious Emissions test had been an addendum test to this report. Refer to original report for the other test data.

2. EUT Overview

LTE Band 14

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)
5 MHz	790.5 ~ 795.5	QPSK	0.17	22.30
		16QAM	0.15	21.75
		64QAM	0.117	20.69
		256QAM	0.059	17.73
10 MHz	793	QPSK	0.172	22.35
		16QAM	0.147	21.68
		64QAM	0.117	20.67
		256QAM	0.058	17.67

LTE Band 17

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. ERP (W)	Max. ERP (dBm)
5 MHz	706.5 ~ 713.5	QPSK	0.12	20.78
		16QAM	0.104	20.19
		64QAM	0.08	19.04
		256QAM	0.041	16.12
10 MHz	709 ~ 711	QPSK	0.121	20.84
		16QAM	0.106	20.25
		64QAM	0.082	19.13
		256QAM	0.042	16.21

LTE Band 30

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W/5MHz)	Max. EIRP (dBm/5MHz)
5 MHz	2307.5 ~ 2312.5	QPSK	0.176	22.46
		16QAM	0.143	21.54
		64QAM	0.12	20.79
		256QAM	0.055	17.39
10 MHz	2310	QPSK	0.177	22.49
		16QAM	0.146	21.65
		64QAM	0.12	20.80
		256QAM	0.055	17.40

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC2

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)
5 MHz	3452.5 ~ 3547.5	QPSK	0.807	29.07
		16QAM	0.649	28.12
		64QAM	0.513	27.10
		256QAM	0.254	24.05
10 MHz	3455 ~ 3545	QPSK	0.793	28.99
		16QAM	0.652	28.14
		64QAM	0.52	27.16
		256QAM	0.254	24.05
15 MHz	3457.5 ~ 3542.5	QPSK	0.811	29.09
		16QAM	0.684	28.35
		64QAM	0.499	26.98
		256QAM	0.254	24.05
20 MHz	3460 ~ 3540	QPSK	0.818	29.13
		16QAM	0.684	28.35
		64QAM	0.52	27.16
		256QAM	0.259	24.13

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC3

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)
5 MHz	3452.5 ~ 3547.5	QPSK	0.521	27.17
		16QAM	0.444	26.47
		64QAM	0.369	25.67
		256QAM	0.175	22.43
10 MHz	3455 ~ 3545	QPSK	0.535	27.28
		16QAM	0.451	26.54
		64QAM	0.360	25.56
		256QAM	0.178	22.51
15 MHz	3457.5 ~ 3542.5	QPSK	0.526	27.21
		16QAM	0.436	26.39
		64QAM	0.356	25.51
		256QAM	0.177	22.49
20 MHz	3460 ~ 3540	QPSK	0.535	27.28
		16QAM	0.447	26.50
		64QAM	0.352	25.47
		256QAM	0.180	22.55

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC2

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)
5 MHz	3702.5 ~ 3797.5	QPSK	0.735	28.66
		16QAM	0.573	27.58
		64QAM	0.499	26.98
		256QAM	0.23	23.61
10 MHz	3705 ~ 3795	QPSK	0.753	28.77
		16QAM	0.569	27.55
		64QAM	0.506	27.04
		256QAM	0.236	23.72
15 MHz	3707.5 ~ 3792.5	QPSK	0.726	28.61
		16QAM	0.583	27.66
		64QAM	0.497	26.96
		256QAM	0.23	23.61
20 MHz	3710 ~ 3790	QPSK	0.76	28.81
		16QAM	0.59	27.71
		64QAM	0.508	27.06
		256QAM	0.238	23.77

LTE Band 43 (3.7 GHz ~ 3.8 GHz) – PC3

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)
5 MHz	3702.5 ~ 3797.5	QPSK	0.497	26.96
		16QAM	0.403	26.05
		64QAM	0.356	25.51
		256QAM	0.163	22.13
10 MHz	3705 ~ 3795	QPSK	0.513	27.10
		16QAM	0.406	26.09
		64QAM	0.364	25.61
		256QAM	0.164	22.16
15 MHz	3707.5 ~ 3792.5	QPSK	0.521	27.17
		16QAM	0.417	26.20
		64QAM	0.343	25.35
		256QAM	0.167	22.22
20 MHz	3710 ~ 3790	QPSK	0.533	27.27
		16QAM	0.428	26.31
		64QAM	0.344	25.37
		256QAM	0.175	22.44

3. The EUT is authorized for use in specific End-product. Please refer to below for more details. (New model is marked in boldface.)

Item	Brand	Model	Note
WIFI Gateway	Vantiva	MGA5331	Model difference only for marketing strategy.
		MGA5331VBV5	

*The RF characteristics of the above two host models are the same as the newly added frequency band of this module.

4. The adapter for the End-product.

AC Adapter		
Brand	Model	Specification
HONOR	ADS-42FI-12 12042EPCU-L	AC Input: 100-120V~ 50/60Hz 1.2A max. DC Output: 12VDC, 3.5A, 42W DC Output Cable: 1.5m, Non-Shielded

5. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Ant. No.	Ant. 0	Ant. 3
Antenna Type	PCB	PCB
Antenna Connector	Ipex(MHF)	Ipex(MHF)
Band	Gain (dBi)	Gain (dBi)
Band 2	5.05	3.47
Band 4	4.84	3.96
Band 5	2.38	1.58
Band 7	5.02	5.70
Band 12	1.12	1.99
Band 13	2.02	0.87
Band 14	2.02	0.87
Band 17	0.50	1.76
Band 25	5.05	3.47
Band 26 (824 ~ 849MHz)	2.38	1.75
Band 26 (814 ~ 824MHz)	2.30	1.75
Band 30	4.65	2.00
Band 38	5.43	6.11
Band 41	5.43	6.17
Band 42	4.29	4.85
Band 43	4.47	4.85
Band 66	4.84	3.96
Band 71	1.12	1.99
Band 77 (3450 to 3550 MHz)	3.65	3.72
Band 77 (3700 to 3980 MHz)	5.37	4.59
Band 78	5.08	4.85

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible. The EUT LTE bands 7, 30, 38 and 41 are transmitted via antenna 3, and other LTE bands are transmitted via antenna 0.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition: X-axis 2. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation. Therefore, only EIRP/ERP, had been tested under BPSK, QPSK, 16QAM, 64QAM and 256QAM mode, the other items were performed under QPSK mode only. 3. For radiated spurious emissions, the maximum EIRP/ERP power and 1RB mode worst case were selected for the final test. 4. The EUT LTE Band 42, 43 supports HPUE mode (PC2 and PC3). After evaluation, the worst case was found in PC2. Therefore, only EIRP had been tested under PC2 and PC3 mode, the other items were performed under PC2 mode only.

3.3.1 LTE Band 14

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	23305(790.50 MHz) 23330(793.00 MHz) 23355(795.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	23330(793.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Radiated Spurious Emissions below 1GHz	23330(793.00 MHz)	10 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	23305(790.50 MHz) 23330(793.00 MHz) 23355(795.50 MHz)	5 MHz	QPSK	1 RB
	23330(793.00 MHz)	10 MHz	QPSK	1 RB

3.3.2 LTE Band 17

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Radiated Spurious Emissions below 1GHz	23790(710.00 MHz)	10 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	23755(706.50 MHz) 23790(710.00 MHz) 23825(713.50 MHz)	5 MHz	QPSK	1 RB
	23780(709.00 MHz) 23790(710.00 MHz) 23800(711.00 MHz)	10 MHz	QPSK	1 RB

3.3.3 LTE Band 30

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Effective Radiated Power	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	27710(2310.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Radiated Spurious Emissions below 1GHz	27710(2310.00 MHz)	10 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	27685(2307.50 MHz) 27710(2310.00 MHz) 27735(2312.50 MHz)	5 MHz	QPSK	1 RB
	27710(2310.00 MHz)	10 MHz	QPSK	1 RB

3.3.4 LTE Band 42 (3.45 GHz ~ 3.55 GHz)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	42115(3452.50 MHz) 42590(3500.00 MHz) 43065(3547.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	42140(3455.00 MHz) 42590(3500.00 MHz) 43040(3545.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	42165(3457.50 MHz) 42590(3500.00 MHz) 43015(3542.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	42190(3460.00 MHz) 42590(3500.00 MHz) 42990(3540.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Radiated Spurious Emissions below 1GHz	42590(3500.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	42115(3452.50 MHz) 42590(3500.00 MHz) 43065(3547.50 MHz)	5 MHz	QPSK	1 RB
	42190(3460.00 MHz) 42590(3500.00 MHz) 42990(3540.00 MHz)	20 MHz	QPSK	1 RB

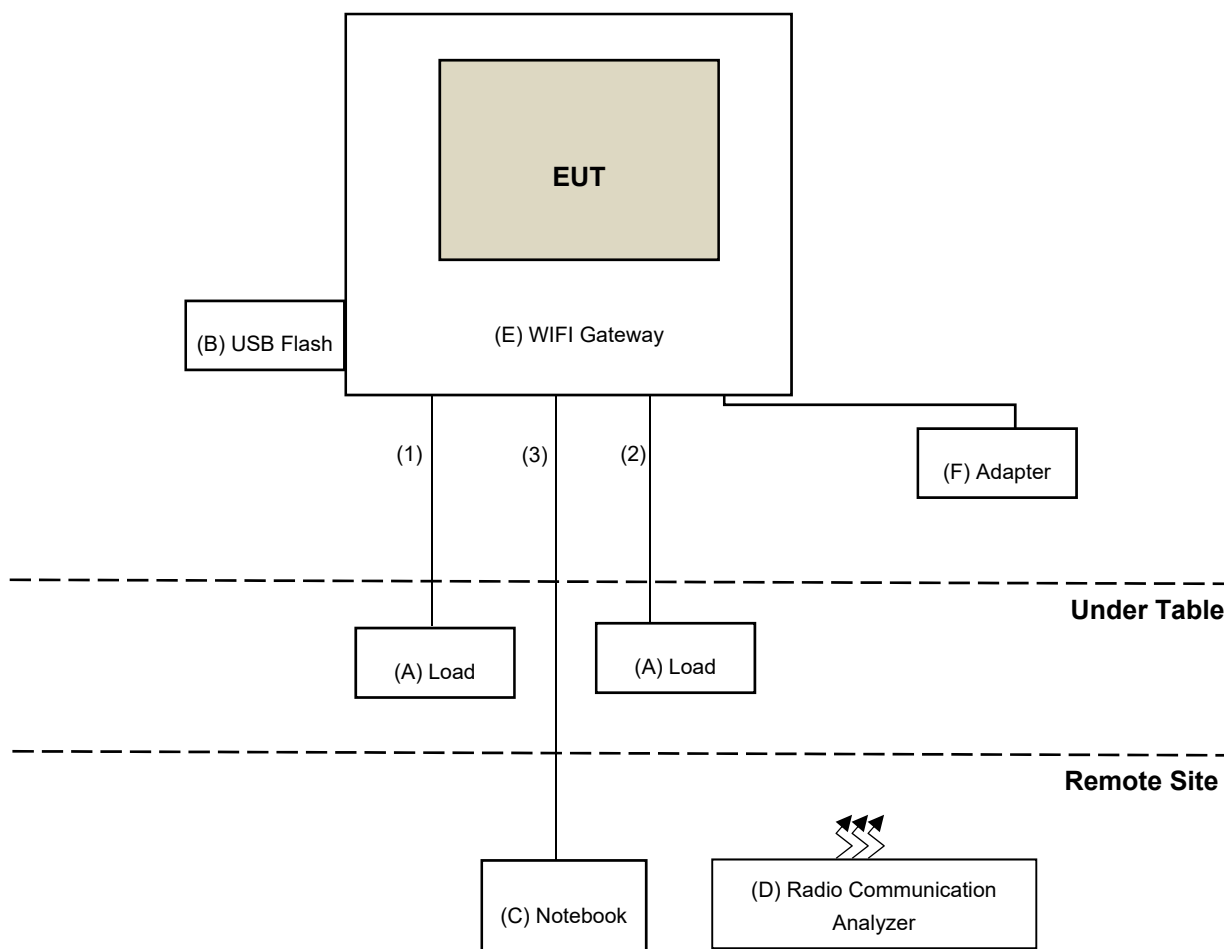
3.3.5 LTE Band 43 (3.7 GHz ~ 3.8 GHz)

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
Equivalent Isotropically Radiated Power	44615(3702.50 MHz) 45090(3750.00 MHz) 45565(3797.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	44640(3705.00 MHz) 45090(3750.00 MHz) 45540(3795.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	44665(3607.50 MHz) 45090(3750.00 MHz) 45515(3792.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	44690(3710.00 MHz) 45090(3750.00 MHz) 45490(3790.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
Radiated Spurious Emissions below 1GHz	45090(3750.00 MHz)	20 MHz	QPSK	1 RB
Radiated Spurious Emissions above 1GHz	44615(3702.50 MHz) 45090(3700.00 MHz) 45565(3797.50 MHz)	5 MHz	QPSK	1 RB
	44690(3710.00 MHz) 45090(3750.00 MHz) 45490(3790.00 MHz)	20 MHz	QPSK	1 RB

3.4 Test Program Used and Operation Descriptions

There is no need to controlling software during the test, and the EUT can be paired with the Radio Communication Analyzer to test the connection when it is powered on.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Load*2	N/A	N/A	N/A	N/A	Provided by Lab
B.	USB Flash	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
C.	Notebook	Lenovo	X250ALT5	PC06HPSE	N/A	Provided by Lab
D.	Radio Communication Analyzer	Anritsu	MT8821C	6272278310	NA	Provided by Lab
E.	WIFI Gateway	Vantiva	MGA5331ROG	NA	NA	Provided by applicant
F.	Adapter	HONOR	ADS-42FI-12 12042EPCU-L	NA	NA	Provided by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ11 Cable	1	1.5	NO	0	Provided by Lab
2	RJ45 Cable	4	1.5	NO	0	Provided by Lab
3	RJ45 Cable	1	10	NO	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030B	MY57140938	2024/3/20	2025/3/19
Radio Communication Analyzer Anritsu	MT8821C	6261806803	2024/2/15	2025/2/14
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/10/25 ~ 2025/1/21

4.2 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-472	2024/10/14	2025/10/13
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/12/28	2024/12/27
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Keysight	N9038A	MY55420137	2024/5/8	2025/5/7
Preamplifier EMCI	EMC 330H	980112	2024/9/24	2025/9/23
	EMC001340	980201	2024/9/24	2025/9/23
RF Coaxial Cable Woken	8D-FB	Cable-Ch10-01	2024/9/24	2025/9/23
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2024/11/13

4.3 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	7	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/12/28	2024/12/27
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2023/11/12 2024/11/10	2024/11/11 2025/11/9
	BBHA 9170	148	2023/11/12 2024/11/10	2024/11/11 2025/11/9
MXE EMI Receiver Keysight	N9038A	MY55420137	2024/5/8	2025/5/7
Preamplifier EMCI	EMC 012645	980115	2024/9/24	2025/9/23
	EMC 184045	980116	2024/9/24	2025/9/23
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2024/7/6	2025/7/5
	EMC102-KM-KM-3000	150929	2024/7/6	2025/7/5
	EMC104-SM-SM- 8000+3000	171005	2024/9/24	2025/9/23
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	2024/9/24	2025/9/23
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2024/10/25 ~ 2024/12/4

5 Limits of Test Items

5.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

For LTE Band 14:

Control stations and mobile stations transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 30 watts ERP.

For LTE Band 17:

Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.

For LTE Band 30:

For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth.

For LTE Band 43 (3.7 GHz ~ 3.8 GHz):

Mobile and portable stations are limited to 1 Watt EIRP.

For LTE Band 42 (3.45 GHz ~ 3.55 GHz):

Mobile devices are limited to 1Watt (30 dBm) EIRP.

5.2 Radiated Spurious Emissions below 1GHz

For LTE Band 14:

According to FCC 47 CFR part 90.543 (e), for operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log (P)$ dB.

For LTE Band 17:

According to FCC 47 CFR part 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. The limit of emissions is equal to -13 dBm.

For LTE Band 30:

According to FCC 47 CFR part 27.53(a)(4)(ii)(iii), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $70 + 10 \log (P)$ dB. The limit of emission is equal to -40 dBm.

For LTE Band 43 (3.7 GHz ~ 3.8 GHz):

According to FCC 47 CFR part 27.53(l), for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

For LTE Band 42 (3.45 GHz ~ 3.55 GHz):

According to FCC 47 CFR part 27.53(n), for operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

5.3 Radiated Spurious Emissions above 1GHz

For LTE Band 14:

According to FCC 47 CFR part 90.543 (e), for operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log (P)$ dB.

According to FCC 47 CFR part 90.543 (f), for operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics 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.

For LTE Band 17:

According to FCC 47 CFR part 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. The limit of emissions is equal to -13 dBm.

For LTE Band 30:

According to FCC 47 CFR part 27.53(a)(4)(ii)(iii), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $70 + 10 \log (P)$ dB. The limit of emission is equal to -40 dBm.

For LTE Band 43 (3.7 GHz ~ 3.8 GHz):

According to FCC 47 CFR part 27.53(l), for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

For LTE Band 42 (3.45 GHz ~ 3.55 GHz):

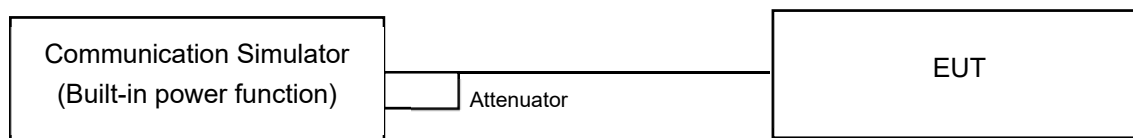
According to FCC 47 CFR part 27.53(n), for operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

6 Test Arrangements

6.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

6.1.1 Test Setup

Conducted Power Measurement:



6.1.2 Test Procedure

Conducted Power Measurement:

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology. The average (rms) power measurement was performed on emulator and power value was measured from power function on emulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator. The EUT is configured by emulator to set data modulation and maximum power using WWAN technology and link to spectrum analyzer measurements. Set the EUT to transmit under low, middle and high channel and record the power level shown on spectrum analyzer. Power measurements use detector average (rms).

Measurement method refers to ANSI C63.26 section 5.2.4.4.

- Set span to 2 × to 3 × the OBW.
- Set RBW = 1% to 5% of the OBW.
- Set VBW ≥ 3 × RBW.
- Set number of measurement points in sweep ≥ 2 × span / RBW.
- Set Sweep time = auto-couple.
- Detector = power averaging (rms).
- Set sweep trigger to “free run.”
- Trace average at least 100 traces in power averaging (rms) mode.
- Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band or channel power measurement function with band/channel limits set equal to the OBW band edges.
- If Duty cycle < 98%, Add 10 log (1/duty cycle) to the measured power level to compute the average power during continuous transmission.

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$

$$\text{ERP} = P_{\text{Meas}} + G_T - 2.15$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as P_{Meas} , e.g., dBm or dBW)

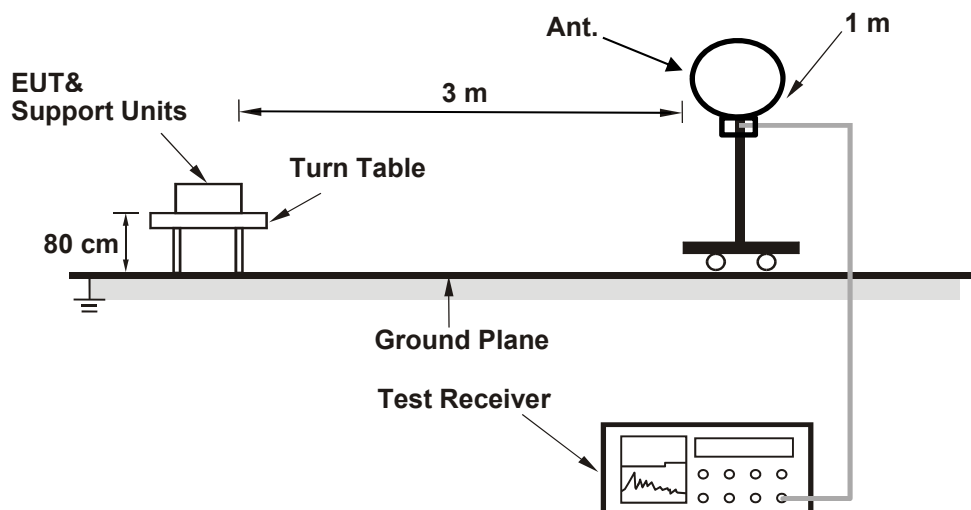
P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

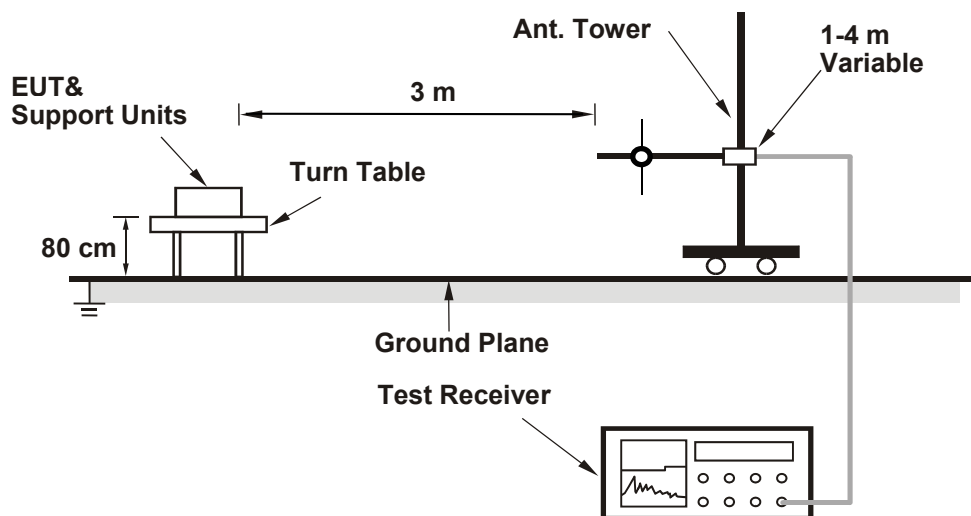
6.2 Radiated Spurious Emissions below 1GHz

6.2.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.2.2 Test Procedure

The EUT is configured to set data modulation and maximum power using WWAN technology.

- a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following ANSI C63.26 section 5.5 and 5.2.7
- e. $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- f. $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

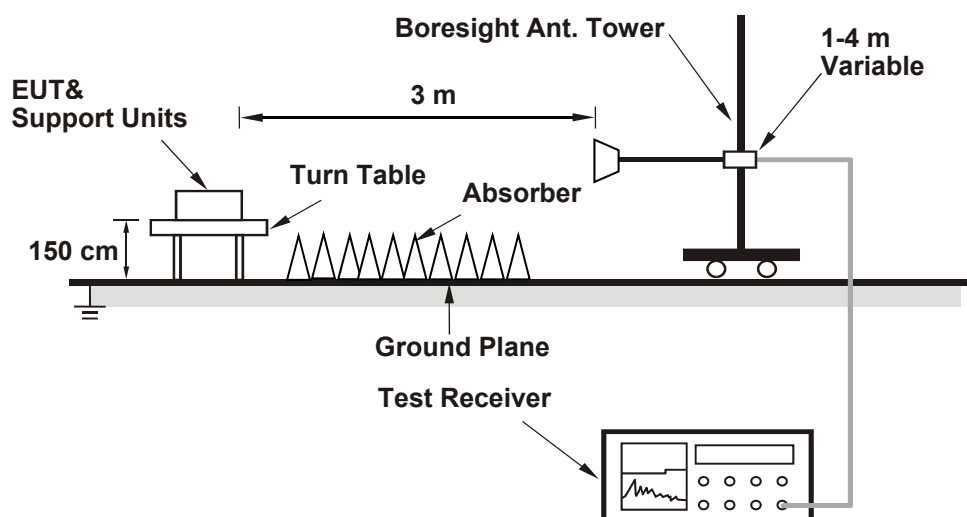
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
2. The amplitude of spurious emissions in the range 9 kHz to 30 MHz which are attenuated more than 20 dB below the permissible value need not be reported.

6.3 Radiated Spurious Emissions above 1GHz

6.3.1 Test Setup

For radiated emission above 1 GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.3.2 Test Procedure

The EUT is configured to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 1.5 m height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following ANSI C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

7 Test Results of Test Item

7.1 Effective Radiated Power and Equivalent Isotropically Radiated Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	23°C, 67% RH	Tested By:	Charles Hsiao
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7.1.1 LTE Band 14

LTE Band 14 - Ant 0, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23305	CH 23330	CH 23355
			790.5 MHz	793 MHz	795.5 MHz
QPSK	1	0	22.35	22.36	22.30
	1	12	22.41	22.41	22.28
	1	24	22.43	22.39	22.32
	12	0	21.72	21.64	21.75
	12	6	21.79	21.82	21.78
	12	13	21.71	21.76	21.84
	25	0	21.70	21.57	21.61
16QAM	1	0	21.88	21.79	21.80
	1	12	21.79	21.82	21.86
	1	24	21.80	21.87	21.69
	12	0	20.69	20.58	20.69
	12	6	20.77	20.73	20.80
	12	13	20.70	20.63	20.62
	25	0	20.65	20.54	20.51
64QAM	1	0	20.75	20.74	20.82
	1	12	20.76	20.81	20.73
	1	24	20.55	20.46	20.53
	12	0	19.77	19.84	19.83
	12	6	19.56	19.68	19.59
	12	13	19.49	19.56	19.63
	25	0	19.63	19.69	19.62
256QAM	1	0	17.84	17.79	17.78
	1	12	17.86	17.75	17.68
	1	24	17.71	17.77	17.74
	12	0	17.30	17.32	17.36
	12	6	17.27	17.28	17.31
	12	13	17.20	17.14	17.22
	25	0	17.13	17.22	17.29

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.57	22.43	21.44	22.30	44.77
16QAM	20.51	21.88	20.38	21.75	44.77
64QAM	19.49	20.82	19.36	20.69	44.77
256QAM	17.13	17.86	17.00	17.73	44.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 14 - Ant 0, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)
			CH 23330
			793 MHz
QPSK	1	0	22.48
	1	24	22.44
	1	49	22.45
	25	0	21.80
	25	12	21.82
	25	25	21.87
	50	0	21.74
16QAM	1	0	21.81
	1	24	21.74
	1	49	21.77
	25	0	20.77
	25	12	20.80
	25	25	20.81
	50	0	20.69
64QAM	1	0	20.80
	1	24	20.74
	1	49	20.65
	25	0	19.65
	25	12	19.70
	25	25	19.66
	50	0	19.60
256QAM	1	0	17.80
	1	24	17.76
	1	49	17.54
	25	0	17.34
	25	12	17.35
	25	25	17.32
	50	0	17.29

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.74	22.48	21.61	22.35	44.77
16QAM	20.69	21.81	20.56	21.68	44.77
64QAM	19.60	20.80	19.47	20.67	44.77
256QAM	17.29	17.80	17.16	17.67	44.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

ERP (dBm) = EIRP (dBm) - 2.15

7.1.2 LTE Band 17

LTE Band 17 - Ant 0, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23755	CH 23790	CH 23825
			706.5 MHz	710 MHz	713.5 MHz
QPSK	1	0	22.41	22.41	22.29
	1	12	22.30	22.34	22.31
	1	24	22.33	22.43	22.17
	12	0	21.53	21.63	21.29
	12	6	21.66	21.65	21.39
	12	13	21.43	21.73	21.76
	25	0	21.45	21.56	21.48
16QAM	1	0	21.71	21.84	21.68
	1	12	21.64	21.78	21.63
	1	24	21.51	21.83	21.58
	12	0	20.61	20.99	20.90
	12	6	20.65	20.78	20.66
	12	13	20.56	20.71	20.78
	25	0	20.62	20.87	20.46
64QAM	1	0	20.32	20.61	20.69
	1	12	20.60	20.66	20.60
	1	24	20.30	20.52	20.45
	12	0	19.50	19.61	19.54
	12	6	19.52	19.64	19.54
	12	13	19.54	19.57	19.49
	25	0	19.42	19.61	19.35
256QAM	1	0	17.72	17.74	17.77
	1	12	17.70	17.70	17.73
	1	24	17.60	17.65	17.67
	12	0	16.96	16.99	16.76
	12	6	17.06	17.16	16.81
	12	13	16.85	17.13	16.97
	25	0	17.08	17.16	16.77

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.29	22.43	19.64	20.78	44.77
16QAM	20.46	21.84	18.81	20.19	44.77
64QAM	19.35	20.69	17.70	19.04	44.77
256QAM	16.76	17.77	15.11	16.12	44.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

ERP (dBm) = EIRP (dBm) - 2.15

LTE Band 17 - Ant 0, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 23780	CH 23790	CH 23800
			709 MHz	710 MHz	711 MHz
QPSK	1	0	22.43	22.49	22.45
	1	24	22.39	22.46	22.41
	1	49	22.40	22.44	22.35
	25	0	21.70	21.73	21.45
	25	12	21.68	21.70	21.45
	25	25	21.56	21.81	21.81
	50	0	21.55	21.68	21.49
16QAM	1	0	21.81	21.90	21.85
	1	24	21.74	21.87	21.78
	1	49	21.69	21.88	21.68
	25	0	20.75	20.99	20.99
	25	12	20.68	20.87	20.66
	25	25	20.72	20.89	20.81
	50	0	20.70	20.90	20.61
64QAM	1	0	20.51	20.78	20.71
	1	24	20.61	20.74	20.61
	1	49	20.46	20.65	20.55
	25	0	19.58	19.74	19.56
	25	12	19.61	19.80	19.66
	25	25	19.67	19.69	19.61
	50	0	19.52	19.74	19.50
256QAM	1	0	17.81	17.78	17.77
	1	24	17.76	17.84	17.82
	1	49	17.79	17.82	17.86
	25	0	17.04	17.11	16.87
	25	12	17.23	17.25	16.98
	25	25	16.98	17.22	17.13
	50	0	17.17	17.20	16.91

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum ERP (dBm)	Maximum ERP (dBm)	ERP Limit (dBm)
QPSK	21.45	22.49	19.80	20.84	44.77
16QAM	20.61	21.90	18.96	20.25	44.77
64QAM	19.50	20.78	17.85	19.13	44.77
256QAM	16.87	17.86	15.22	16.21	44.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

ERP (dBm) = EIRP (dBm) - 2.15

7.1.3 LTE Band 30

LTE Band 30 - Ant 3, Channel Bandwidth: 5 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm/5MHz)		
			CH 27685	CH 27710	CH 27735
			2307.5 MHz	2310 MHz	2312.5 MHz
QPSK	1	0	20.30	20.46	20.40
	1	12	20.29	20.33	20.37
	1	24	20.34	20.38	20.31
	12	0	19.43	19.41	19.30
	12	6	19.46	19.35	19.37
	12	13	19.46	19.46	19.35
	25	0	19.41	19.44	19.43
16QAM	1	0	19.48	19.48	19.54
	1	12	19.45	19.49	19.40
	1	24	19.38	19.37	19.39
	12	0	18.74	18.67	18.72
	12	6	18.80	18.84	18.67
	12	13	18.75	18.71	18.81
	25	0	18.66	18.74	18.70
64QAM	1	0	18.79	18.66	18.73
	1	12	18.65	18.71	18.70
	1	24	18.52	18.49	18.46
	12	0	17.58	17.62	17.59
	12	6	17.42	17.55	17.44
	12	13	17.72	17.65	17.77
	25	0	17.76	17.76	17.73
256QAM	1	0	15.32	15.19	15.22
	1	12	15.39	15.29	15.38
	1	24	15.29	15.24	15.21
	12	0	14.18	14.20	14.31
	12	6	14.41	14.34	14.33
	12	13	14.31	14.36	14.42
	25	0	14.13	14.14	14.12

Output Power

Modulation	Minimum Cond. Power (dBm/5MHz)	Maximum Cond. Power (dBm/5MHz)	Minimum EIRP (dBm/5MHz)	Maximum EIRP (dBm/5MHz)	EIRP Limit (dBm/5MHz)
QPSK	19.30	20.46	21.30	22.46	23.98
16QAM	18.66	19.54	20.66	21.54	23.98
64QAM	17.42	18.79	19.42	20.79	23.98
256QAM	14.12	15.39	16.12	17.39	23.98

Note: EIRP (dBm/5MHz) = Cond. Power (dBm/5MHz) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 30 - Ant 3, Channel Bandwidth: 10 MHz

Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm/5MHz)
			CH 27710
			2310 MHz
QPSK	1	0	20.49
	1	24	20.43
	1	49	20.46
	25	0	19.44
	25	12	19.53
	25	25	19.52
	50	0	19.48
16QAM	1	0	19.65
	1	24	19.57
	1	49	19.50
	25	0	18.77
	25	12	18.85
	25	25	18.89
	50	0	18.85
64QAM	1	0	18.80
	1	24	18.71
	1	49	18.65
	25	0	17.66
	25	12	17.58
	25	25	17.84
	50	0	17.77
256QAM	1	0	15.33
	1	24	15.40
	1	49	15.32
	25	0	14.33
	25	12	14.45
	25	25	14.46
	50	0	14.30

Output Power

Modulation	Minimum Cond. Power (dBm/5MHz)	Maximum Cond. Power (dBm/5MHz)	Minimum EIRP (dBm/5MHz)	Maximum EIRP (dBm/5MHz)	EIRP Limit (dBm/5MHz)
QPSK	19.44	20.49	21.44	22.49	23.98
16QAM	18.77	19.65	20.77	21.65	23.98
64QAM	17.58	18.80	19.58	20.80	23.98
256QAM	14.30	15.40	16.30	17.40	23.98

Note: EIRP (dBm/5MHz) = Cond. Power (dBm/5MHz) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.4 LTE Band 42 (3.45 GHz ~ 3.55 GHz)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC2-Ant 0, Channel Bandwidth: 5 MHz

LTE Band 42 5M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42115	CH 42590	CH 43065
			3452.5 MHz	3500 MHz	3547.5 MHz
QPSK	1	0	24.02	24.78	24.46
	1	12	24.17	24.60	24.67
	1	24	23.74	24.49	24.27
	12	0	22.91	23.44	23.51
	12	6	23.07	23.68	23.66
	12	13	23.74	23.69	23.84
	25	0	23.10	23.76	23.55
16QAM	1	0	23.17	23.80	23.83
	1	12	23.41	23.82	23.59
	1	24	23.00	23.67	23.57
	12	0	22.68	22.92	22.73
	12	6	22.28	22.80	22.51
	12	13	22.36	22.73	22.77
	25	0	22.12	22.69	22.71
64QAM	1	0	22.65	22.72	22.74
	1	12	22.67	22.62	22.49
	1	24	21.94	22.81	22.80
	12	0	21.37	21.76	21.89
	12	6	21.36	21.71	21.65
	12	13	21.15	21.87	21.73
	25	0	21.08	21.68	21.59
256QAM	1	0	19.76	19.68	19.70
	1	12	18.99	19.73	19.49
	1	24	19.19	19.44	19.06
	12	0	17.90	18.61	18.40
	12	6	18.51	18.50	18.48
	12	13	17.65	18.59	18.22
	25	0	18.11	18.31	18.18

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.91	24.78	27.20	29.07	30
16QAM	22.12	23.83	26.41	28.12	30
64QAM	21.08	22.81	25.37	27.10	30
256QAM	17.65	19.76	21.94	24.05	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC2-Ant 0, Channel Bandwidth: 10 MHz

LTE Band 42 10M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42140	CH 42590	CH 43040
			3455 MHz	3500 MHz	3545 MHz
QPSK	1	0	24.07	24.70	24.53
	1	24	24.22	24.56	24.59
	1	49	23.81	24.36	24.36
	25	0	22.89	23.45	23.65
	25	12	22.98	23.59	23.44
	25	25	23.88	23.88	23.70
	50	0	22.93	23.79	23.37
16QAM	1	0	23.02	23.81	23.85
	1	24	23.29	23.80	23.64
	1	49	23.10	23.75	23.83
	25	0	22.64	22.77	22.82
	25	12	22.39	22.70	22.62
	25	25	22.35	22.69	22.63
	50	0	22.11	22.70	22.71
64QAM	1	0	22.50	22.87	22.65
	1	24	22.71	22.70	22.45
	1	49	21.98	22.57	22.81
	25	0	21.27	21.87	21.66
	25	12	21.16	21.88	21.68
	25	25	21.29	21.81	21.52
	50	0	21.20	21.72	21.59
256QAM	1	0	19.76	19.62	19.71
	1	24	19.06	19.73	19.51
	1	49	19.15	19.50	19.09
	25	0	17.95	18.58	18.40
	25	12	18.33	18.60	18.50
	25	25	17.82	18.45	18.24
	50	0	18.32	18.40	18.28

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.89	24.70	27.18	28.99	30
16QAM	22.11	23.85	26.40	28.14	30
64QAM	21.16	22.87	25.45	27.16	30
256QAM	17.82	19.76	22.11	24.05	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC2-Ant 0, Channel Bandwidth: 15 MHz

LTE Band 42 15M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42165	CH 42590	CH 43015
			3457.5 MHz	3500 MHz	3542.5 MHz
QPSK	1	0	23.87	24.80	24.53
	1	37	24.25	24.70	24.55
	1	74	23.71	24.26	24.37
	36	0	22.96	23.66	23.68
	36	19	22.96	23.71	23.62
	36	39	23.84	23.76	23.88
	75	0	22.99	23.64	23.36
16QAM	1	0	23.03	24.06	23.72
	1	37	23.17	23.80	23.80
	1	74	22.93	23.67	23.66
	36	0	22.80	22.90	22.75
	36	19	22.23	22.73	22.54
	36	39	22.47	22.84	22.86
	75	0	22.14	22.65	22.71
64QAM	1	0	22.69	22.58	22.64
	1	37	22.61	22.45	22.45
	1	74	22.07	22.60	22.69
	36	0	21.48	21.78	21.72
	36	19	21.24	21.77	21.65
	36	39	21.24	21.64	21.77
	75	0	21.16	21.56	21.57
256QAM	1	0	19.65	19.76	19.59
	1	37	19.12	19.69	19.44
	1	74	19.00	19.34	19.05
	36	0	18.04	18.58	18.46
	36	19	18.50	18.52	18.76
	36	39	17.67	18.58	18.45
	75	0	18.13	18.37	18.17

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.96	24.80	27.25	29.09	30
16QAM	22.14	24.06	26.43	28.35	30
64QAM	21.16	22.69	25.45	26.98	30
256QAM	17.67	19.76	21.96	24.05	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC2-Ant 0, Channel Bandwidth: 20 MHz

LTE Band 42 20M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42190	CH 42590	CH 42990
			3460 MHz	3500 MHz	3540 MHz
QPSK	1	0	24.11	24.84	24.70
	1	50	24.34	24.73	24.69
	1	99	24.00	24.50	24.39
	50	0	23.06	23.71	23.69
	50	25	23.23	23.75	23.67
	50	50	23.89	23.90	23.88
	100	0	23.10	23.82	23.64
16QAM	1	0	23.27	24.06	23.94
	1	50	23.43	24.00	23.85
	1	99	23.12	23.87	23.86
	50	0	22.93	22.94	22.84
	50	25	22.46	22.90	22.79
	50	50	22.52	22.93	22.92
	100	0	22.38	22.88	22.83
64QAM	1	0	22.69	22.87	22.83
	1	50	22.71	22.74	22.58
	1	99	22.14	22.81	22.81
	50	0	21.49	21.96	21.91
	50	25	21.39	21.94	21.93
	50	50	21.30	21.90	21.77
	100	0	21.32	21.85	21.75
256QAM	1	0	19.82	19.84	19.77
	1	50	19.21	19.74	19.64
	1	99	19.28	19.50	19.32
	50	0	18.13	18.68	18.61
	50	25	18.57	18.77	18.77
	50	50	17.94	18.59	18.46
	100	0	18.34	18.60	18.44

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.06	24.84	27.35	29.13	30
16QAM	22.38	24.06	26.67	28.35	30
64QAM	21.30	22.87	25.59	27.16	30
256QAM	17.94	19.84	22.23	24.13	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC3-Ant 0, Channel Bandwidth: 5 MHz

LTE Band 42 5M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42115	CH 42590	CH 43065
			3452.5 MHz	3500 MHz	3547.5 MHz
QPSK	1	0	22.72	22.88	22.86
	1	12	22.73	22.79	22.74
	1	24	22.73	22.73	22.56
	12	0	22.04	22.16	22.07
	12	6	22.15	22.23	21.99
	12	13	22.11	22.31	22.09
	25	0	21.98	22.19	22.05
16QAM	1	0	22.04	22.18	22.12
	1	12	21.90	22.05	21.97
	1	24	21.88	22.04	21.86
	12	0	21.24	21.32	21.17
	12	6	20.91	21.16	21.05
	12	13	21.12	21.26	21.15
	25	0	21.24	21.33	21.29
64QAM	1	0	21.10	21.15	21.12
	1	12	20.95	21.05	20.89
	1	24	21.34	21.38	21.33
	12	0	20.24	20.31	20.24
	12	6	20.19	20.23	20.11
	12	13	20.16	20.34	20.24
	25	0	20.08	20.24	19.97
256QAM	1	0	17.73	17.84	17.73
	1	12	17.80	18.09	17.87
	1	24	18.03	18.14	18.04
	12	0	17.95	17.99	17.91
	12	6	17.89	17.98	17.96
	12	13	18.07	18.00	18.11
	25	0	18.06	17.93	18.05

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.98	22.88	26.27	27.17	30
16QAM	20.91	22.18	25.20	26.47	30
64QAM	19.97	21.38	24.26	25.67	30
256QAM	17.73	18.14	22.02	22.43	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC3-Ant 0, Channel Bandwidth: 10 MHz

LTE Band 42 10M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42140	CH 42590	CH 43040
			3455 MHz	3500 MHz	3545 MHz
QPSK	1	0	22.82	22.99	22.91
	1	24	22.75	22.95	22.86
	1	49	22.71	22.88	22.72
	25	0	22.22	22.35	22.16
	25	12	22.23	22.34	22.07
	25	25	22.30	22.42	22.23
	50	0	22.11	22.22	22.06
16QAM	1	0	22.14	22.25	22.24
	1	24	22.11	22.24	22.05
	1	49	21.98	22.15	22.02
	25	0	21.22	21.39	21.33
	25	12	21.03	21.29	21.06
	25	25	21.24	21.45	21.20
	50	0	21.26	21.42	21.28
64QAM	1	0	21.16	21.27	21.24
	1	24	21.12	21.21	21.00
	1	49	21.14	21.12	21.16
	25	0	20.30	20.39	20.37
	25	12	20.24	20.35	20.32
	25	25	20.30	20.50	20.25
	50	0	20.20	20.27	20.06
256QAM	1	0	17.84	18.02	17.87
	1	24	17.92	18.20	18.03
	1	49	18.04	18.22	18.13
	25	0	18.18	18.09	18.21
	25	12	18.11	18.19	18.13
	25	25	18.06	18.01	18.10
	50	0	18.16	18.20	18.12

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.06	22.99	26.35	27.28	30
16QAM	21.03	22.25	25.32	26.54	30
64QAM	20.06	21.27	24.35	25.56	30
256QAM	17.84	18.22	22.13	22.51	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC3-Ant 0, Channel Bandwidth: 15 MHz

LTE Band 42 15M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42165	CH 42590	CH 43015
			3457.5 MHz	3500 MHz	3542.5 MHz
QPSK	1	0	22.90	22.92	22.82
	1	37	22.80	22.01	22.85
	1	74	22.85	22.78	22.79
	36	0	22.23	22.34	22.21
	36	19	22.18	22.40	22.12
	36	39	22.27	22.42	22.30
	75	0	22.11	22.34	22.18
16QAM	1	0	22.09	22.07	22.01
	1	37	22.10	22.03	22.10
	1	74	22.02	22.05	22.00
	36	0	21.26	21.43	21.38
	36	19	21.08	21.30	21.12
	36	39	21.29	21.47	21.20
	75	0	21.40	21.47	21.34
64QAM	1	0	21.15	21.11	21.17
	1	37	21.16	21.22	21.04
	1	74	21.04	21.06	21.14
	36	0	20.34	20.42	20.39
	36	19	20.31	20.38	20.33
	36	39	20.25	20.44	20.38
	75	0	20.15	20.37	20.15
256QAM	1	0	17.87	18.07	17.94
	1	37	17.98	18.18	18.11
	1	74	18.10	18.20	18.12
	36	0	18.06	18.07	18.10
	36	19	18.01	18.00	18.03
	36	39	18.04	18.08	18.09
	75	0	17.98	17.95	17.97

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.01	22.92	26.30	27.21	30
16QAM	21.08	22.10	25.37	26.39	30
64QAM	20.15	21.22	24.44	25.51	30
256QAM	17.87	18.20	22.16	22.49	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 42 (3.45 GHz ~ 3.55 GHz) - PC3-Ant 0, Channel Bandwidth: 20 MHz

LTE Band 42 20M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 42190	CH 42590	CH 42990
			3460 MHz	3500 MHz	3540 MHz
QPSK	1	0	22.98	22.99	22.92
	1	50	22.90	22.88	22.91
	1	99	22.90	22.82	22.83
	50	0	22.30	22.40	22.25
	50	25	22.31	22.41	22.22
	50	50	22.36	22.48	22.37
	100	0	22.23	22.39	22.25
16QAM	1	0	22.21	22.20	22.12
	1	50	22.18	22.16	22.19
	1	99	22.15	22.13	22.14
	50	0	21.40	21.51	21.38
	50	25	21.20	21.38	21.24
	50	50	21.34	21.51	21.32
	100	0	21.41	21.55	21.45
64QAM	1	0	21.18	21.14	21.12
	1	50	21.18	21.10	21.12
	1	99	21.05	21.07	21.04
	50	0	20.43	20.56	20.45
	50	25	20.42	20.52	20.37
	50	50	20.38	20.55	20.42
	100	0	20.27	20.39	20.24
256QAM	1	0	17.96	18.13	17.94
	1	50	18.08	18.09	18.16
	1	99	18.22	18.15	18.20
	50	0	18.07	18.08	18.17
	50	25	18.26	18.14	18.13
	50	50	18.11	18.01	18.05
	100	0	18.05	18.06	18.10

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.22	22.99	26.51	27.28	30
16QAM	21.20	22.21	25.49	26.50	30
64QAM	20.24	21.18	24.53	25.47	30
256QAM	17.94	18.26	22.23	22.55	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.1.5 LTE Band 43 (3.7 GHz ~ 3.8 GHz)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC2-Ant 0, Channel Bandwidth: 5 MHz

LTE Band 43 5M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44615	CH 45090	CH 45565
			3702.5 MHz	3750 MHz	3797.5 MHz
QPSK	1	0	24.01	24.19	24.06
	1	12	23.94	24.17	23.98
	1	24	23.68	23.89	23.85
	12	0	23.15	23.20	23.24
	12	6	23.15	23.07	23.13
	12	13	23.11	23.07	23.24
	25	0	22.86	23.19	23.06
16QAM	1	0	22.81	22.96	23.11
	1	12	22.76	22.97	22.56
	1	24	22.89	23.06	22.75
	12	0	21.85	22.05	22.07
	12	6	22.34	22.29	22.23
	12	13	22.09	22.14	21.91
	25	0	22.07	22.12	21.80
64QAM	1	0	22.35	22.29	22.12
	1	12	22.15	22.19	22.25
	1	24	22.35	22.51	22.42
	12	0	21.55	21.61	21.42
	12	6	21.33	21.32	21.30
	12	13	21.39	21.44	21.12
	25	0	21.17	21.31	21.08
256QAM	1	0	19.01	19.08	19.07
	1	12	19.08	19.14	19.08
	1	24	18.91	19.07	18.96
	12	0	18.32	18.21	18.14
	12	6	18.02	18.25	18.36
	12	13	18.28	18.08	18.13
	25	0	17.97	18.08	17.98

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.86	24.19	27.33	28.66	30
16QAM	21.80	23.11	26.27	27.58	30
64QAM	21.08	22.51	25.55	26.98	30
256QAM	17.97	19.14	22.44	23.61	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC2-Ant 0, Channel Bandwidth: 10 MHz

LTE Band 43 10M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44640	CH 45090	CH 45540
			3705 MHz	3750 MHz	3795 MHz
QPSK	1	0	24.02	24.25	24.30
	1	24	23.73	24.00	23.89
	1	49	23.63	24.00	23.75
	25	0	23.21	23.03	23.09
	25	12	23.11	23.02	23.00
	25	25	22.87	23.19	23.03
	50	0	23.09	23.19	22.94
16QAM	1	0	23.04	23.06	23.08
	1	24	22.70	23.05	22.76
	1	49	22.77	22.91	22.86
	25	0	21.78	22.26	21.95
	25	12	22.12	22.07	22.11
	25	25	22.02	21.97	21.79
	50	0	21.99	22.10	21.80
64QAM	1	0	22.36	22.57	22.26
	1	24	22.22	22.35	22.01
	1	49	22.16	22.39	22.25
	25	0	21.47	21.61	21.32
	25	12	21.13	21.59	21.03
	25	25	21.35	21.25	21.08
	50	0	21.12	21.28	21.12
256QAM	1	0	19.01	19.08	19.02
	1	24	18.86	19.12	19.25
	1	49	18.87	19.08	19.00
	25	0	18.15	18.38	18.22
	25	12	18.14	18.30	18.20
	25	25	18.17	18.17	18.01
	50	0	18.07	18.13	17.97

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.87	24.30	27.34	28.77	30
16QAM	21.78	23.08	26.25	27.55	30
64QAM	21.03	22.57	25.50	27.04	30
256QAM	17.97	19.25	22.44	23.72	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC2-Ant 0, Channel Bandwidth: 15 MHz

LTE Band 43 15M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44665	CH 45090	CH 45515
			3707.5 MHz	3750 MHz	3792.5 MHz
QPSK	1	0	24.10	24.09	24.08
	1	37	23.88	24.06	24.14
	1	74	23.77	23.95	23.93
	36	0	23.09	23.09	22.97
	36	19	23.18	23.15	23.25
	36	39	23.10	23.08	23.13
	75	0	22.93	23.08	23.12
16QAM	1	0	22.92	23.19	23.03
	1	37	22.62	23.08	22.61
	1	74	22.80	23.10	22.81
	36	0	21.96	22.21	21.95
	36	19	22.28	22.15	22.20
	36	39	22.00	22.06	21.88
	75	0	22.03	21.99	21.89
64QAM	1	0	22.26	22.40	22.04
	1	37	22.10	22.42	22.06
	1	74	22.11	22.49	22.36
	36	0	21.47	21.42	21.30
	36	19	21.30	21.51	21.06
	36	39	21.24	21.43	21.21
	75	0	21.11	21.28	21.17
256QAM	1	0	19.09	19.05	18.94
	1	37	19.08	19.05	18.98
	1	74	18.93	19.14	19.01
	36	0	18.38	18.32	18.24
	36	19	18.10	18.32	18.13
	36	39	18.03	18.22	18.08
	75	0	18.04	18.23	17.96

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	22.93	24.14	27.40	28.61	30
16QAM	21.88	23.19	26.35	27.66	30
64QAM	21.06	22.49	25.53	26.96	30
256QAM	17.96	19.14	22.43	23.61	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC2-Ant 0, Channel Bandwidth: 20 MHz

LTE Band 43 20M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44690	CH 45090	CH 45490
			3710 MHz	3750 MHz	3790 MHz
QPSK	1	0	24.17	24.34	24.32
	1	50	24.00	24.18	24.17
	1	99	23.79	24.03	23.96
	50	0	23.26	23.28	23.26
	50	25	23.20	23.25	23.25
	50	50	23.16	23.34	23.31
	100	0	23.14	23.29	23.17
16QAM	1	0	23.10	23.24	23.21
	1	50	22.84	23.09	22.80
	1	99	23.02	23.15	22.86
	50	0	22.07	22.34	22.13
	50	25	22.35	22.36	22.29
	50	50	22.10	22.21	22.03
	100	0	22.09	22.20	21.92
64QAM	1	0	22.37	22.58	22.30
	1	50	22.38	22.45	22.26
	1	99	22.40	22.59	22.51
	50	0	21.57	21.64	21.53
	50	25	21.33	21.60	21.32
	50	50	21.47	21.53	21.36
	100	0	21.30	21.44	21.17
256QAM	1	0	19.18	19.24	19.07
	1	50	19.09	19.30	19.27
	1	99	19.13	19.25	19.20
	50	0	18.41	18.41	18.27
	50	25	18.26	18.40	18.39
	50	50	18.31	18.32	18.22
	100	0	18.09	18.25	18.21

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	23.14	24.34	27.61	28.81	30
16QAM	21.92	23.24	26.39	27.71	30
64QAM	21.17	22.59	25.64	27.06	30
256QAM	18.09	19.30	22.56	23.77	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC3-Ant 0, Channel Bandwidth: 5 MHz

LTE Band 43 5M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44615	CH 45090	CH 45565
			3702.5 MHz	3750 MHz	3797.5 MHz
QPSK	1	0	22.31	22.49	22.28
	1	12	22.39	22.25	22.37
	1	24	22.27	22.25	22.48
	12	0	21.26	21.19	21.42
	12	6	21.43	21.25	21.60
	12	13	21.38	21.48	21.56
	25	0	21.23	21.30	21.60
16QAM	1	0	21.16	21.18	21.40
	1	12	21.25	21.22	21.58
	1	24	21.34	21.18	21.41
	12	0	20.23	20.18	20.37
	12	6	20.36	20.50	20.60
	12	13	20.31	20.41	20.50
	25	0	20.29	20.49	20.53
64QAM	1	0	20.49	20.52	20.83
	1	12	20.93	20.88	21.04
	1	24	20.69	20.64	20.88
	12	0	19.73	19.81	19.92
	12	6	19.93	19.99	20.08
	12	13	19.87	19.89	20.04
	25	0	19.90	20.04	20.17
256QAM	1	0	17.09	17.24	17.38
	1	12	17.48	17.45	17.66
	1	24	17.39	17.42	17.62
	12	0	16.43	16.48	16.63
	12	6	16.58	16.53	16.74
	12	13	16.50	16.51	16.69
	25	0	16.48	16.54	16.66

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.19	22.49	25.66	26.96	30
16QAM	20.18	21.58	24.65	26.05	30
64QAM	19.73	21.04	24.2	25.51	30
256QAM	16.43	17.66	20.9	22.13	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC3-Ant 0, Channel Bandwidth: 10 MHz

LTE Band 43 10M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44640	CH 45090	CH 45540
			3705 MHz	3750 MHz	3795 MHz
QPSK	1	0	22.43	22.63	22.48
	1	24	22.52	22.31	22.39
	1	49	22.30	22.41	22.56
	25	0	21.37	21.34	21.49
	25	12	21.50	21.37	21.74
	25	25	21.42	21.51	21.60
	50	0	21.34	21.36	21.64
16QAM	1	0	21.23	21.20	21.44
	1	24	21.33	21.32	21.62
	1	49	21.45	21.25	21.45
	25	0	20.26	20.23	20.40
	25	12	20.37	20.59	20.74
	25	25	20.41	20.49	20.55
	50	0	20.33	20.56	20.67
64QAM	1	0	20.65	20.73	20.82
	1	24	21.00	21.00	21.14
	1	49	20.82	20.66	20.91
	25	0	19.84	19.84	20.09
	25	12	20.05	20.01	20.31
	25	25	19.98	19.95	20.14
	50	0	19.97	20.16	20.23
256QAM	1	0	17.30	17.36	17.58
	1	24	17.64	17.55	17.69
	1	49	17.49	17.44	17.60
	25	0	16.46	16.55	16.66
	25	12	16.65	16.60	16.91
	25	25	16.48	16.62	16.79
	50	0	16.64	16.68	16.84

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.34	22.63	25.81	27.10	30
16QAM	20.23	21.62	24.7	26.09	30
64QAM	19.84	21.14	24.31	25.61	30
256QAM	16.46	17.69	20.93	22.16	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC3-Ant 0, Channel Bandwidth: 15 MHz

LTE Band 43 15M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44665	CH 45090	CH 45515
			3707.5 MHz	3750 MHz	3792.5 MHz
QPSK	1	0	22.43	22.70	22.56
	1	37	22.49	22.38	22.54
	1	74	22.43	22.39	22.67
	36	0	21.35	21.44	21.61
	36	19	21.50	21.48	21.81
	36	39	21.53	21.51	21.71
	75	0	21.51	21.45	21.77
16QAM	1	0	21.29	21.24	21.49
	1	37	21.35	21.49	21.73
	1	74	21.38	21.31	21.62
	36	0	20.42	20.37	20.53
	36	19	20.41	20.65	20.71
	36	39	20.54	20.58	20.71
	75	0	20.41	20.54	20.63
64QAM	1	0	20.65	20.78	20.83
	1	37	20.86	20.88	20.75
	1	74	20.83	20.79	20.80
	36	0	19.92	20.00	20.09
	36	19	20.20	20.21	20.34
	36	39	20.05	19.98	20.16
	75	0	20.15	20.20	20.33
256QAM	1	0	17.38	17.47	17.65
	1	37	17.71	17.64	17.75
	1	74	17.53	17.62	17.67
	36	0	16.53	16.62	16.79
	36	19	16.78	16.78	16.96
	36	39	16.59	16.70	16.77
	75	0	16.64	16.68	16.81

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.35	22.70	25.82	27.17	30
16QAM	20.37	21.73	24.84	26.20	30
64QAM	19.92	20.88	24.39	25.35	30
256QAM	16.53	17.75	21.00	22.22	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

LTE Band 43 (3.7 GHz ~ 3.8 GHz) - PC3-Ant 0, Channel Bandwidth: 20 MHz

LTE Band 43 20M					
Modulation	RB Size	RB Offset	Measurement Conducted Power (dBm)		
			CH 44690	CH 45090	CH 45490
			3710 MHz	3750 MHz	3790 MHz
QPSK	1	0	22.63	22.80	22.66
	1	50	22.69	22.58	22.65
	1	99	22.58	22.59	22.79
	50	0	21.55	21.58	21.78
	50	25	21.73	21.65	21.92
	50	50	21.65	21.74	21.87
	100	0	21.62	21.63	21.88
16QAM	1	0	21.45	21.48	21.67
	1	50	21.56	21.60	21.84
	1	99	21.62	21.49	21.76
	50	0	20.53	20.48	20.69
	50	25	20.64	20.79	20.91
	50	50	20.66	20.75	20.86
	100	0	20.57	20.75	20.86
64QAM	1	0	20.87	20.90	20.83
	1	50	20.78	20.81	20.77
	1	99	20.73	20.89	20.82
	50	0	20.03	20.10	20.31
	50	25	20.30	20.31	20.48
	50	50	20.15	20.15	20.38
	100	0	20.26	20.33	20.45
256QAM	1	0	17.49	17.61	17.75
	1	50	17.85	17.77	17.97
	1	99	17.66	17.75	17.89
	50	0	16.77	16.85	16.96
	50	25	16.92	16.91	17.09
	50	50	16.78	16.80	17.00
	100	0	16.88	16.88	17.01

Output Power

Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)	EIRP Limit (dBm)
QPSK	21.55	22.80	26.02	27.27	30
16QAM	20.48	21.84	24.95	26.31	30
64QAM	20.03	20.90	24.50	25.37	30
256QAM	16.77	17.97	21.24	22.44	30

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

7.2 Radiated Spurious Emissions below 1GHz

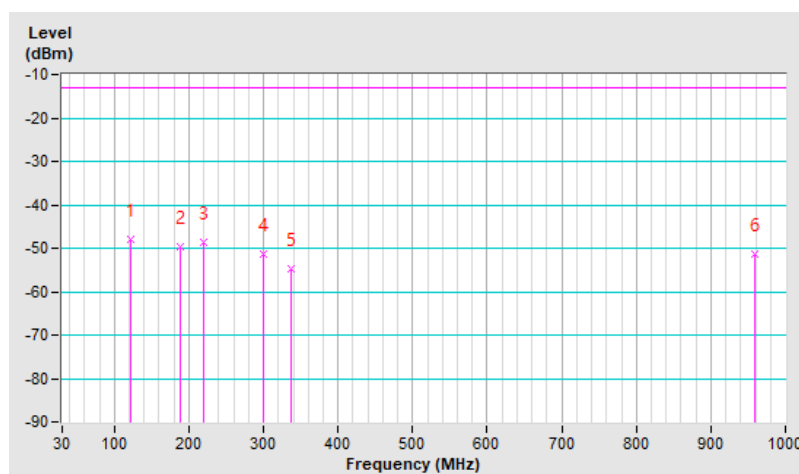
7.2.1 LTE Band 14

RF Mode	LTE Band 14 Channel Bandwidth: 10MHz	Channel	CH 23330 : 793 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	122.15	-48.02	-13.00	-35.02	1.49 H	253	63.23	-111.25
2	189.08	-49.50	-13.00	-36.50	1.49 H	116	62.77	-112.27
3	219.15	-48.76	-13.00	-35.76	1.49 H	76	64.19	-112.95
4	300.63	-51.32	-13.00	-38.32	1.00 H	104	57.67	-108.99
5	336.52	-54.86	-13.00	-41.86	1.00 H	211	53.28	-108.14
6	959.26	-51.47	-13.00	-38.47	2.00 H	67	45.17	-96.64

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

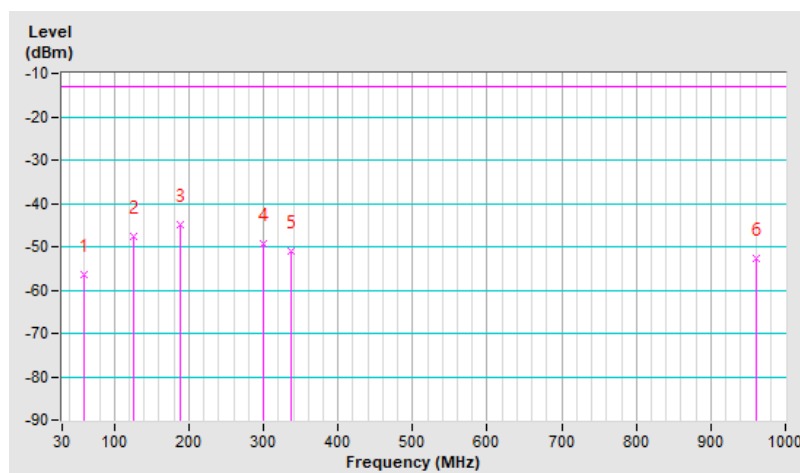


RF Mode	LTE Band 14 Channel Bandwidth: 10MHz	Channel	CH 23330 : 793 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	59.10	-56.54	-13.00	-43.54	1.01 V	18	53.66	-110.20
2	125.06	-47.70	-13.00	-34.70	1.01 V	155	63.30	-111.00
3	189.08	-44.86	-13.00	-31.86	1.01 V	117	67.41	-112.27
4	299.66	-49.19	-13.00	-36.19	1.51 V	179	59.83	-109.02
5	337.49	-51.11	-13.00	-38.11	1.51 V	198	57.03	-108.14
6	960.23	-52.67	-13.00	-39.67	1.01 V	60	43.96	-96.63

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



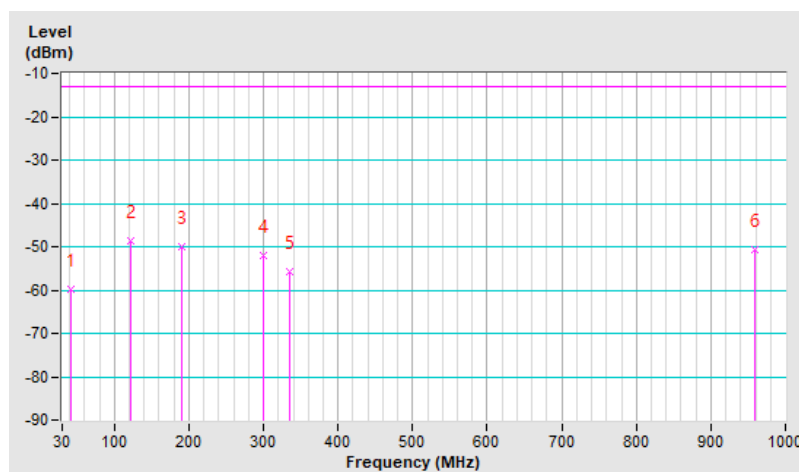
7.2.2 LTE Band 17

RF Mode	LTE Band 17 Channel Bandwidth: 10MHz	Channel	CH 23790 : 710 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	42.61	-59.80	-13.00	-46.80	2.00 H	224	49.88	-109.68
2	121.18	-48.51	-13.00	-35.51	2.00 H	68	62.88	-111.39
3	190.05	-49.98	-13.00	-36.98	1.01 H	107	62.40	-112.38
4	299.66	-52.12	-13.00	-39.12	1.01 H	213	56.90	-109.02
5	335.55	-55.71	-13.00	-42.71	1.01 H	202	52.42	-108.13
6	959.26	-50.51	-13.00	-37.51	1.51 H	70	46.13	-96.64

Remarks:

- ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
- Margin value = ERP – Limit value
- The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
- The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

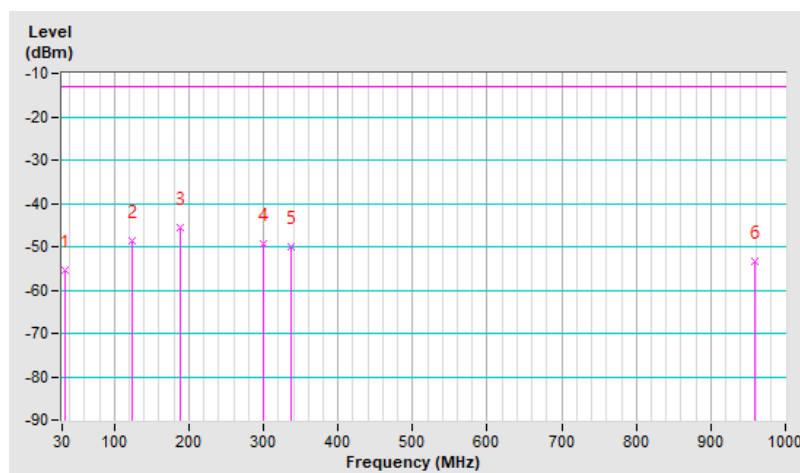


RF Mode	LTE Band 17 Channel Bandwidth: 10MHz	Channel	CH 23790 : 710 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	34.85	-55.41	-13.00	-42.41	1.00 V	154	54.75	-110.16
2	124.09	-48.57	-13.00	-35.57	1.49 V	130	62.58	-111.15
3	189.08	-45.65	-13.00	-32.65	1.00 V	114	66.62	-112.27
4	300.63	-49.32	-13.00	-36.32	1.49 V	176	59.67	-108.99
5	337.49	-50.04	-13.00	-37.04	1.49 V	190	58.10	-108.14
6	958.29	-53.34	-13.00	-40.34	2.00 V	56	43.33	-96.67

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



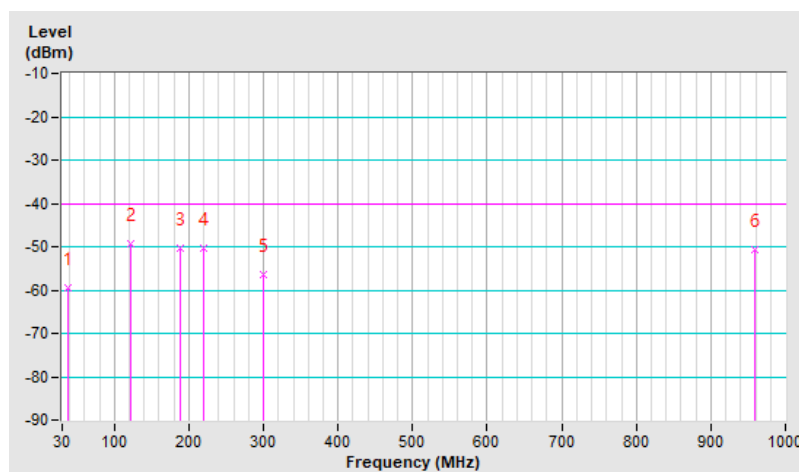
7.2.3 LTE Band 30

RF Mode	LTE Band 30 Channel Bandwidth: 10MHz	Channel	CH 27710 : 2310 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.76	-59.44	-40.00	-19.44	1.00 H	49	48.34	-107.78
2	121.18	-49.18	-40.00	-9.18	1.99 H	249	60.06	-109.24
3	189.08	-50.25	-40.00	-10.25	1.00 H	115	59.87	-110.12
4	219.15	-50.47	-40.00	-10.47	1.49 H	105	60.33	-110.80
5	299.66	-56.41	-40.00	-16.41	1.00 H	116	50.46	-106.87
6	959.26	-50.55	-40.00	-10.55	1.49 H	68	43.94	-94.49

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

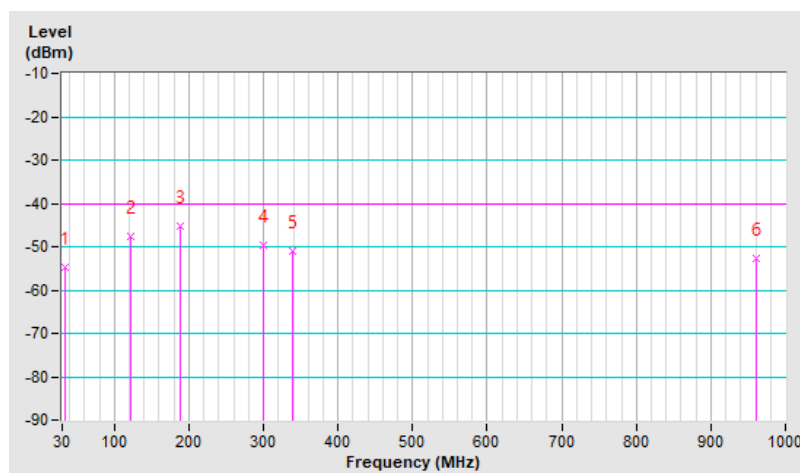


RF Mode	LTE Band 30 Channel Bandwidth: 10MHz	Channel	CH 27710 : 2310 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	34.85	-54.67	-40.00	-14.67	1.51 V	142	53.34	-108.01
2	122.15	-47.53	-40.00	-7.53	1.01 V	344	61.57	-109.10
3	189.08	-45.12	-40.00	-5.12	1.01 V	116	65.00	-110.12
4	300.63	-49.65	-40.00	-9.65	1.01 V	175	57.19	-106.84
5	338.46	-50.88	-40.00	-10.88	2.00 V	198	55.11	-105.99
6	960.23	-52.57	-40.00	-12.57	1.51 V	55	41.91	-94.48

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



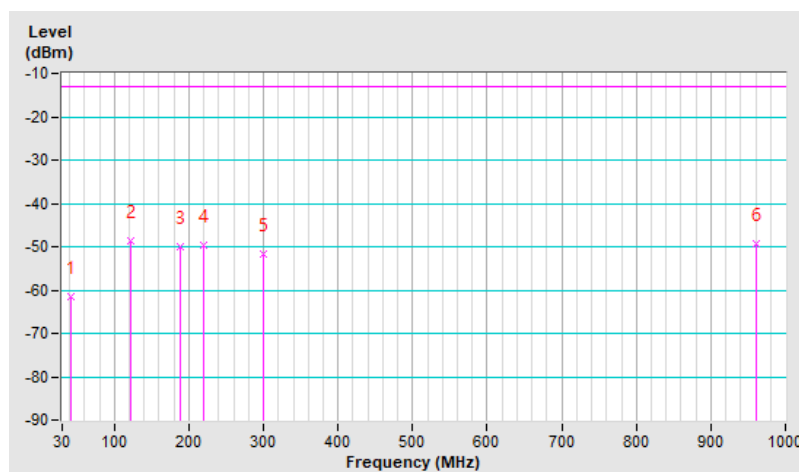
7.2.4 LTE Band 42 (3.45 GHz ~ 3.55 GHz)

RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 42590 : 3500 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.64	-61.56	-13.00	-48.56	2.00 H	312	46.03	-107.59
2	121.18	-48.65	-13.00	-35.65	1.51 H	93	60.59	-109.24
3	189.08	-49.89	-13.00	-36.89	1.00 H	112	60.23	-110.12
4	220.12	-49.74	-13.00	-36.74	1.51 H	118	61.09	-110.83
5	300.63	-51.62	-13.00	-38.62	1.00 H	103	55.22	-106.84
6	960.23	-49.26	-13.00	-36.26	1.51 H	66	45.22	-94.48

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

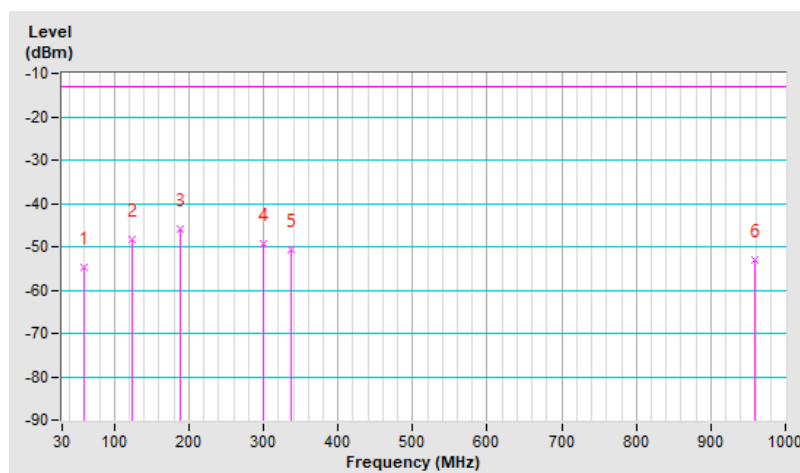


RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 42590 : 3500 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	59.10	-54.65	-13.00	-41.65	1.00 V	40	53.40	-108.05
2	124.09	-48.47	-13.00	-35.47	1.49 V	167	60.53	-109.00
3	189.08	-45.92	-13.00	-32.92	1.00 V	142	64.20	-110.12
4	299.66	-49.23	-13.00	-36.23	1.49 V	191	57.64	-106.87
5	337.49	-50.77	-13.00	-37.77	1.49 V	198	55.22	-105.99
6	959.26	-53.22	-13.00	-40.22	2.00 V	59	41.27	-94.49

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



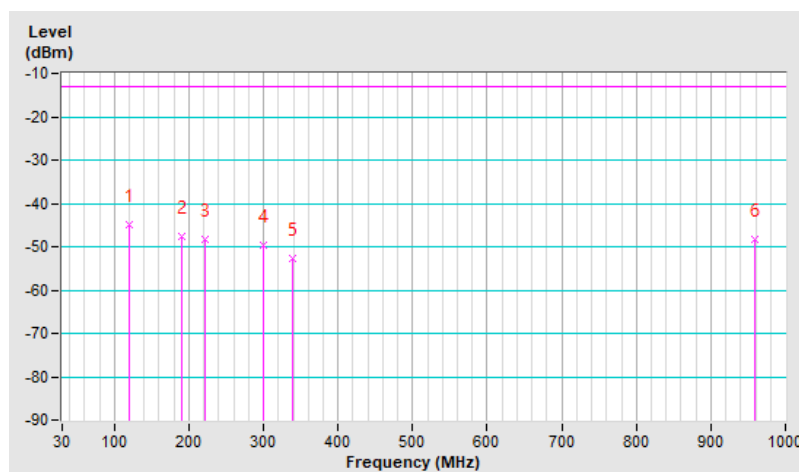
7.2.5 LTE Band 43 (3.7 GHz ~ 3.8 GHz)

RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 45090 : 3750 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	120.21	-44.99	-13.00	-31.99	1.00 H	80	64.31	-109.30
2	190.05	-47.48	-13.00	-34.48	1.51 H	99	62.75	-110.23
3	222.06	-48.20	-13.00	-35.20	2.00 H	100	62.68	-110.88
4	300.63	-49.56	-13.00	-36.56	1.01 H	98	57.28	-106.84
5	339.43	-52.70	-13.00	-39.70	1.01 H	209	53.30	-106.00
6	958.29	-48.18	-13.00	-35.18	1.51 H	69	46.34	-94.52

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

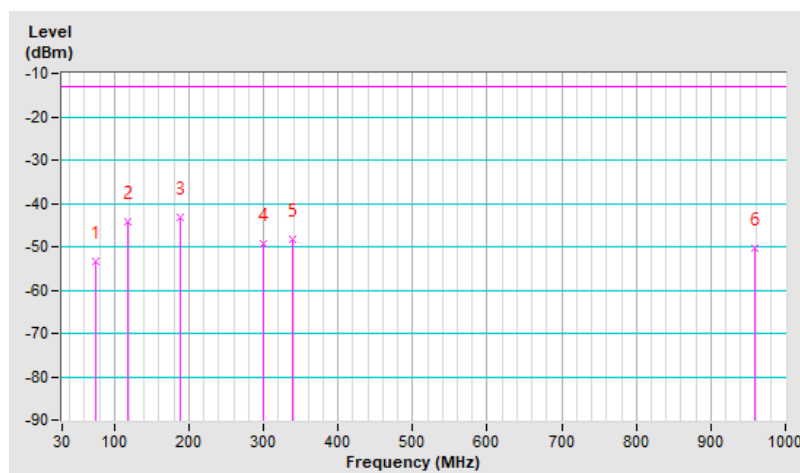


RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 45090 : 3750 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	74.62	-53.34	-13.00	-40.34	1.00 V	344	57.47	-110.81
2	117.30	-44.40	-13.00	-31.40	1.00 V	150	65.16	-109.56
3	189.08	-43.14	-13.00	-30.14	1.49 V	127	66.98	-110.12
4	300.63	-49.29	-13.00	-36.29	1.49 V	204	57.55	-106.84
5	338.46	-48.45	-13.00	-35.45	2.00 V	209	57.54	-105.99
6	958.29	-50.30	-13.00	-37.30	1.00 V	57	44.22	-94.52

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.3 Radiated Spurious Emissions above 1GHz

7.3.1 LTE Band 14

RF Mode	LTE Band 14 Channel Bandwidth: 5MHz	Channel	CH 23305 : 790.5 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1581.00	-52.49	-40.00	-12.49	1.59 H	203	46.65	-99.14
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1581.00	-52.16	-40.00	-12.16	1.69 V	108	46.98	-99.14

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 14 Channel Bandwidth: 5MHz	Channel	CH 23330 : 793 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-52.12	-40.00	-12.12	1.62 H	215	47.02	-99.14
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-51.68	-40.00	-11.68	1.57 V	113	47.46	-99.14

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 14 Channel Bandwidth: 5MHz	Channel	CH 23355 : 795.5 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1591.00	-52.51	-40.00	-12.51	1.70 H	221	46.63	-99.14
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1591.00	-51.91	-40.00	-11.91	1.66 V	95	47.23	-99.14

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 14 Channel Bandwidth: 10MHz	Channel	CH 23330 : 793 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-52.43	-40.00	-12.43	1.69 H	215	46.71	-99.14
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-51.45	-40.00	-11.45	1.57 V	121	47.69	-99.14

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

7.3.2 LTE Band 17

RF Mode	LTE Band 17 Channel Bandwidth: 5MHz	Channel	CH 23755 : 706.5 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1413.00	-53.16	-13.00	-40.16	1.81 H	288	47.44	-100.60
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1413.00	-52.31	-13.00	-39.31	3.19 V	34	48.29	-100.60

Remarks:

- ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
+ 20log(D) – 104.8 – 2.15
- Margin value = ERP – Limit value
- The other ERP levels were very low against the limit.

RF Mode	LTE Band 17 Channel Bandwidth: 5MHz	Channel	CH 23790 : 710 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1420.00	-53.00	-13.00	-40.00	1.86 H	282	47.63	-100.63
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1420.00	-52.22	-13.00	-39.22	3.22 V	40	48.41	-100.63

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

RF Mode	LTE Band 17 Channel Bandwidth: 5MHz	Channel	CH 23825 : 713.5 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1427.00	-53.18	-13.00	-40.18	1.82 H	255	47.51	-100.69
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1427.00	-52.57	-13.00	-39.57	3.13 V	49	48.12	-100.69

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

RF Mode	LTE Band 17 Channel Bandwidth: 10MHz	Channel	CH 23780 : 709 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1418.00	-53.01	-13.00	-40.01	1.79 H	259	47.62	-100.63
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1418.00	-52.18	-13.00	-39.18	3.17 V	32	48.45	-100.63

Remarks:

1. $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

RF Mode	LTE Band 17 Channel Bandwidth: 10MHz	Channel	CH 23790 : 710 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1420.00	-52.82	-13.00	-39.82	1.82 H	271	47.81	-100.63
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1420.00	-51.91	-13.00	-38.91	3.19 V	37	48.72	-100.63

Remarks:

- ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
+ 20log(D) – 104.8 – 2.15
- Margin value = ERP – Limit value
- The other ERP levels were very low against the limit.

RF Mode	LTE Band 17 Channel Bandwidth: 10MHz	Channel	CH 23800 : 711 MHz
Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1422.00	-52.99	-13.00	-39.99	1.76 H	258	47.67	-100.66
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1422.00	-52.19	-13.00	-39.19	3.18 V	40	48.47	-100.66

Remarks:

- ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
+ 20log(D) – 104.8 – 2.15
- Margin value = ERP – Limit value
- The other ERP levels were very low against the limit.

7.3.3 LTE Band 30

RF Mode	LTE Band 30 Channel Bandwidth: 5MHz	Channel	CH 27685 : 2307.5 MHz
Frequency Range	1 GHz ~ 27 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4615.00	-44.12	-40.00	-4.12	1.53 H	149	46.72	-90.84
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4615.00	-46.12	-40.00	-6.12	1.86 V	93	44.72	-90.84

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 30 Channel Bandwidth: 5MHz	Channel	CH 27710 : 2310 MHz
Frequency Range	1 GHz ~ 27 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4620.00	-44.01	-40.00	-4.01	1.48 H	143	46.83	-90.84
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4620.00	-45.72	-40.00	-5.72	1.81 V	88	45.12	-90.84

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 30 Channel Bandwidth: 5MHz	Channel	CH 27735 : 2312.5 MHz
Frequency Range	1 GHz ~ 27 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4625.00	-44.29	-40.00	-4.29	1.33 H	163	46.54	-90.83
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4625.00	-45.57	-40.00	-5.57	1.77 V	92	45.26	-90.83

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 30 Channel Bandwidth: 10MHz	Channel	CH 27710 : 2310 MHz
Frequency Range	1 GHz ~ 27 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4620.00	-43.40	-40.00	-3.40	1.52 H	158	47.44	-90.84
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4620.00	-45.21	-40.00	-5.21	1.73 V	95	45.63	-90.84

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

7.3.4 LTE Band 42 (3.45 GHz ~ 3.55 GHz)

RF Mode	LTE Band 42 Channel Bandwidth: 5MHz	Channel	CH 42115 : 3452.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	6905.00	-41.81	-13.00	-28.81	1.74 H	37	44.57	-86.38
2	10357.50	-34.00	-13.00	-21.00	1.58 H	138	49.76	-83.76
3	13810.00	-30.90	-13.00	-17.90	1.88 H	136	53.80	-84.70
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	6905.00	-43.11	-13.00	-30.11	1.54 V	77	43.27	-86.38
2	10357.50	-35.39	-13.00	-22.39	2.39 V	81	48.37	-83.76
3	13810.00	-33.23	-13.00	-20.23	1.31 V	139	51.47	-84.70

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 42 Channel Bandwidth: 5MHz	Channel	CH 42590 : 3500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7000.00	-40.70	-13.00	-27.70	1.69 H	44	45.02	-85.72
2	10500.00	-33.12	-13.00	-20.12	1.62 H	144	49.96	-83.08
3	14000.00	-29.51	-13.00	-16.51	1.97 H	138	54.43	-83.94
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7000.00	-42.16	-13.00	-29.16	1.70 V	85	43.56	-85.72
2	10500.00	-34.30	-13.00	-21.30	2.11 V	87	48.78	-83.08
3	14000.00	-32.35	-13.00	-19.35	1.24 V	140	51.59	-83.94

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 42 Channel Bandwidth: 5MHz	Channel	CH 43065 : 3547.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7095.00	-39.97	-13.00	-26.97	1.61 H	57	45.26	-85.23
2	10642.50	-33.25	-13.00	-20.25	1.52 H	131	50.08	-83.33
3	14190.00	-28.74	-13.00	-15.74	1.47 H	137	55.44	-84.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7095.00	-41.61	-13.00	-28.61	1.69 V	89	43.62	-85.23
2	10642.50	-34.43	-13.00	-21.43	2.03 V	91	48.90	-83.33
3	14190.00	-32.47	-13.00	-19.47	1.30 V	141	51.71	-84.18

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 42190 : 3460 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	6920.00	-41.04	-13.00	-28.04	1.69 H	45	45.26	-86.30
2	10380.00	-33.11	-13.00	-20.11	1.66 H	132	50.61	-83.72
3	13840.00	-29.95	-13.00	-16.95	1.97 H	138	54.82	-84.77
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	6920.00	-42.35	-13.00	-29.35	1.59 V	81	43.95	-86.30
2	10380.00	-34.60	-13.00	-21.60	2.27 V	89	49.12	-83.72
3	13840.00	-32.44	-13.00	-19.44	1.41 V	130	52.33	-84.77

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 42590 : 3500 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7000.00	-39.94	-13.00	-26.94	1.62 H	51	45.78	-85.72
2	10500.00	-32.46	-13.00	-19.46	1.59 H	137	50.62	-83.08
3	14000.00	-27.98	-13.00	-14.98	2.01 H	132	55.96	-83.94
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7000.00	-41.62	-13.00	-28.62	1.71 V	80	44.10	-85.72
2	10500.00	-33.55	-13.00	-20.55	2.08 V	92	49.53	-83.08
3	14000.00	-31.57	-13.00	-18.57	1.29 V	143	52.37	-83.94

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 42990 : 3540 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7080.00	-39.24	-13.00	-26.24	1.59 H	60	46.02	-85.26
2	10620.00	-32.77	-13.00	-19.77	1.59 H	138	50.57	-83.34
3	14160.00	-28.24	-13.00	-15.24	1.43 H	130	56.02	-84.26
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7080.00	-41.13	-13.00	-28.13	1.71 V	82	44.13	-85.26
2	10620.00	-34.02	-13.00	-21.02	2.11 V	96	49.32	-83.34
3	14160.00	-31.89	-13.00	-18.89	1.36 V	150	52.37	-84.26

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

7.3.5 LTE Band 43 (3.7 GHz ~ 3.8 GHz)

RF Mode	LTE Band 43 Channel Bandwidth: 5MHz	Channel	CH 44615 : 3702.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7405.00	-50.23	-13.00	-37.23	1.03 H	141	34.91	-85.14
2	11107.50	-43.22	-13.00	-30.22	1.53 H	151	40.65	-83.87
3	14810.00	-41.18	-13.00	-28.18	1.24 H	146	43.26	-84.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7405.00	-52.62	-13.00	-39.62	2.73 V	75	32.52	-85.14
2	11107.50	-43.84	-13.00	-30.84	1.41 V	97	40.03	-83.87
3	14810.00	-41.84	-13.00	-28.84	1.60 V	74	42.60	-84.44

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 43 Channel Bandwidth: 5MHz	Channel	CH 45090 : 3750 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7500.00	-49.90	-13.00	-36.90	1.27 H	149	35.21	-85.11
2	11250.00	-43.74	-13.00	-30.74	1.55 H	143	40.12	-83.86
3	15000.00	-41.32	-13.00	-28.32	1.36 H	139	43.75	-85.07
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7500.00	-52.41	-13.00	-39.41	2.59 V	77	32.70	-85.11
2	11250.00	-44.25	-13.00	-31.25	1.61 V	60	39.61	-83.86
3	15000.00	-41.43	-13.00	-28.43	1.65 V	78	43.64	-85.07

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 43 Channel Bandwidth: 5MHz	Channel	CH 44465 : 3797.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7595.00	-49.77	-13.00	-36.77	1.63 H	137	35.62	-85.39
2	11392.50	-43.54	-13.00	-30.54	1.25 H	139	40.29	-83.83
3	15190.00	-41.49	-13.00	-28.49	1.30 H	167	44.16	-85.65
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7595.00	-52.50	-13.00	-39.50	1.47 V	83	32.89	-85.39
2	11392.50	-43.94	-13.00	-30.94	1.59 V	66	39.89	-83.83
3	15190.00	-41.69	-13.00	-28.69	1.61 V	83	43.96	-85.65

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 44690 : 3710 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7420.00	-50.09	-13.00	-37.09	1.27 H	152	35.10	-85.19
2	11130.00	-43.04	-13.00	-30.04	1.49 H	159	40.94	-83.98
3	14840.00	-41.10	-13.00	-28.10	1.42 H	137	43.30	-84.40
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7420.00	-52.34	-13.00	-39.34	2.62 V	83	32.85	-85.19
2	11130.00	-43.57	-13.00	-30.57	1.52 V	103	40.41	-83.98
3	14840.00	-41.57	-13.00	-28.57	1.59 V	72	42.83	-84.40

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 45090 : 3750 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7500.00	-49.51	-13.00	-36.51	1.39 H	151	35.95	-85.46
2	11250.00	-43.57	-13.00	-30.57	1.62 H	137	40.43	-84.00
3	15000.00	-41.04	-13.00	-28.04	1.30 H	147	44.11	-85.15
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7500.00	-52.01	-13.00	-39.01	2.47 V	90	33.45	-85.46
2	11250.00	-43.90	-13.00	-30.90	1.77 V	70	40.10	-84.00
3	15000.00	-41.26	-13.00	-28.26	1.70 V	63	43.89	-85.15

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 45490 : 3790 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 65 % RH
Tested By	Tank Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7580.00	-49.38	-13.00	-36.38	1.37 H	144	35.96	-85.34
2	11370.00	-43.34	-13.00	-30.34	1.27 H	132	40.62	-83.96
3	15160.00	-41.30	-13.00	-28.30	1.59 H	168	44.56	-85.86
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	7580.00	-51.97	-13.00	-38.97	1.51 V	70	33.37	-85.34
2	11370.00	-43.65	-13.00	-30.65	1.66 V	77	40.31	-83.96
3	15160.00	-41.46	-13.00	-28.46	1.71 V	95	44.40	-85.86

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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