

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 96
47 CFR FCC Part 2

Report No.: RFCDVB-WTW-P24010025-4

FCC ID: QYLFN990S5

Product: 5G NR Module

Brand: Getac

Model No.: FN990A28

Received Date: 2024/1/20

Test Date: 2024/3/9 ~ 2024/5/16

Issued Date: 2024/5/31

Applicant: Getac Technology Corporation.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: _____

Jeremy Lin

Jeremy Lin / Project Engineer

, Date: _____

2024/5/31

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Prepared by : Vera Huang / Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFCDVB-WTW-P24010025-4	Original Release	2024/5/31

1 Certificate

Product: 5G NR Module

Brand: Getac

Test Model: FN990A28

Sample Status: Engineering sample

Applicant: Getac Technology Corporation.

Test Date: 2024/3/9 ~ 2024/5/16

Standard: 47 CFR FCC Part 96
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 940660 D01 Part 96 CBRS Eqpt v03

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 96.41(b)	Maximum EIRP	Pass	Meet the requirement of limit.
Part 2.1047	Modulation Characteristics	N/A	Refer to Note
Part 2.1046 Part 96.41(b)	Maximum Power Spectral Density	N/A	Refer to Note
Part 96.41(g)	Peak to Average Ratio	N/A	Refer to Note
Part 2.1049	Bandwidth	N/A	Refer to Note
Part 2.1051 Part 96.41(e)	Conducted Spurious Emissions	N/A	Refer to Note
Part 2.1053 Part 96.41(e)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -13.07 dB at 382.86 MHz
Part 2.1053 Part 96.41(e)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -2.45 dB at 7150.00 MHz
Part 2.1055	Frequency Stability	N/A	Refer to Note

Note:

- Only test item of Equivalent Isotropically Radiated Power and Radiated Spurious Emissions were performed for this report. Other testing data please refer to SPORTON lab report no.: 270608-1 for module (Brand: Telit, Model: FN990A28).
- 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 (±)
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 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	5G NR Module
Brand	Getac
Test Model	FN990A28
Status of EUT	Engineering sample
Power Supply Rating	Refer to note

Note:

1. This report is prepared for FCC class II permissive change application. The EUT is authorized for use in specific End-product. Please refer to below for more details.

Product	Brand	Model	Difference
Notebook	Getac	S510	marketing purpose
		S510Y (Y= 10 characters, Y can be 0 to 9, A to Z, a to z, "/", "\", "-", "_" or blank for marketing purpose)	

2. The End-product uses following accessories.

Battery		
Brand	Model	Specification
Getac	BP3S2P3450P-04	Power Rating : Rating: 10.8Vdc , 6600mAh, 72Wh Typical Capacity: 6900mAh, 75Wh
AC Adapter 1		
Brand	Model	Specification
FSP	FSP065-RBBN3	AC Input : 100-240 Vac ; 50-60 Hz ; 1.5 A DC Output : 19.0Vdc ; 3.42A, 65.0W DC Output Cable : 1.45M / 1core AC Power Cord : 1.75M
AC Adapter 2		
Brand	Model	Specification
FSP	FSP090-ABBN3	AC Input : 100-240 Vac ; 50-60 Hz ; 1.2 A DC Output : 19.0Vdc ; 4.74A, 90.0W DC Output Cable : 1.2M / 1 core AC Power Cord : 1.75M
Touch Pen		
Brand	Model	
Getac	340GA8900001	

* After pretesting, Adapter 2 was the worst case and chosen for final test.

3. EUT Overview

Band / Bandwidth	TX Frequency Range (MHz)	Max. EIRP Power			
		QPSK	16QAM	64QAM	256QAM
LTE Band 42 (Channel Bandwidth 5MHz)	3552.5-3597.5	100.925mW (20.04dBm)	79.068mW (18.98dBm)	62.951mW (17.99dBm)	31.477mW (14.98dBm)
LTE Band 42 (Channel Bandwidth 10MHz)	3555.0-3595.0	102.802mW (20.12dBm)	79.799mW (19.02dBm)	64.417mW (18.09dBm)	32.359mW (15.10dBm)
LTE Band 42 (Channel Bandwidth 15MHz)	3557.5-3592.5	103.039mW (20.13dBm)	81.846mW (19.13dBm)	66.222mW (18.21dBm)	32.885mW (15.17dBm)
LTE Band 42 (Channel Bandwidth 20MHz)	3560.0-3590.0	104.472mW (20.19dBm)	83.946mW (19.24dBm)	66.222mW (18.21dBm)	33.113mW (15.20dBm)
LTE Band 43 (Channel Bandwidth 5MHz)	3602.5-3697.5	90.365mW (19.56dBm)	70.469mW (18.48dBm)	56.624mW (17.53dBm)	29.512mW (14.70dBm)
LTE Band 43 (Channel Bandwidth 10MHz)	3605.0-3695.0	90.365mW (19.56dBm)	71.285mW (18.53dBm)	55.719mW (17.46dBm)	29.309mW (14.67dBm)
LTE Band 43 (Channel Bandwidth 15MHz)	3607.5-3692.5	88.920mW (19.49dBm)	70.469mW (18.48dBm)	55.976mW (17.48dBm)	29.992mW (14.77dBm)
LTE Band 43 (Channel Bandwidth 20MHz)	3610.0-3690.0	91.411mW (19.61dBm)	72.611mW (18.61dBm)	57.016mW (17.56dBm)	30.200mW (14.80dBm)
LTE Band 48 (Channel Bandwidth 5MHz)	3552.5-3697.5	101.391mW (20.06dBm)	81.846mW (19.13dBm)	63.826mW (18.05dBm)	30.269mW (14.81dBm)
LTE Band 48 (Channel Bandwidth 10MHz)	3555.0-3695.0	101.158mW (20.05dBm)	80.910mW (19.08dBm)	63.826mW (18.05dBm)	30.339mW (14.82dBm)
LTE Band 48 (Channel Bandwidth 15MHz)	3557.5-3692.5	102.094mW (20.09dBm)	81.096mW (19.09dBm)	63.973mW (18.06dBm)	29.512mW (14.70dBm)
LTE Band 48 (Channel Bandwidth 20MHz)	3560.0-3690.0	103.514mW (20.15dBm)	80.538mW (19.06dBm)	65.766mW (18.18dBm)	30.974mW (14.91dBm)

4. 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.

Antenna Type	Antenna Connector	Band	Peak Gain (dBi)			
			Main (Ant. 0)	Aux. (Ant. 2)	MIMO1 (Ant. 1)	MIMO2 (Ant. 3)
PIFA	MHF-4	LTE 42	-	-	-	0.85
		LTE 43	-	-	-	0.85
		LTE 48	-	-	-	0.85

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

3.3 Test Mode Applicability and Tested Channel Detail

The EUT is designed to be positioned on the NB Mode only.

For LTE 42

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	43115 (3552.50MHz), 43340 (3575.00MHz), 43565 (3597.50MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	43140 (3555.00MHz), 43340 (3575.00MHz), 43540 (3595.00MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	43165 (3557.50MHz), 43340 (3575.00MHz), 43515 (3592.50MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	43190 (3560.00MHz), 43340 (3575.00MHz), 43490 (3590.00MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
RE Below 1GHz	43340 (3575.00MHz)	20 MHz	QPSK	1 RB
RE Above 1GHz	43115 (3552.50MHz), 43340 (3575.00MHz), 43565 (3597.50MHz)	5 MHz	QPSK	1 RB
	43190 (3560.00MHz), 43340 (3575.00MHz), 43490 (3590.00MHz)	20 MHz	QPSK	1 RB

For LTE 43

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	43615 (3602.50MHz), 44090 (3650.00MHz), 44565 (3697.50MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	43640 (3605.00MHz), 44090 (3650.00MHz), 44540 (3695.00MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	43665 (3607.50MHz), 44090 (3650.00MHz), 45515 (3692.50MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	43690 (3610.00MHz), 44090 (3650.00MHz), 44490 (3690.00MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
RE Below 1GHz	43690 (3610.00MHz)	20 MHz	QPSK	1 RB
RE Above 1GHz	43615 (3602.50MHz), 44090 (3650.00MHz), 44565 (3697.50MHz)	5 MHz	QPSK	1 RB
	43690 (3610.00MHz), 44090 (3650.00MHz), 44490 (3690.00MHz)	20 MHz	QPSK	1 RB

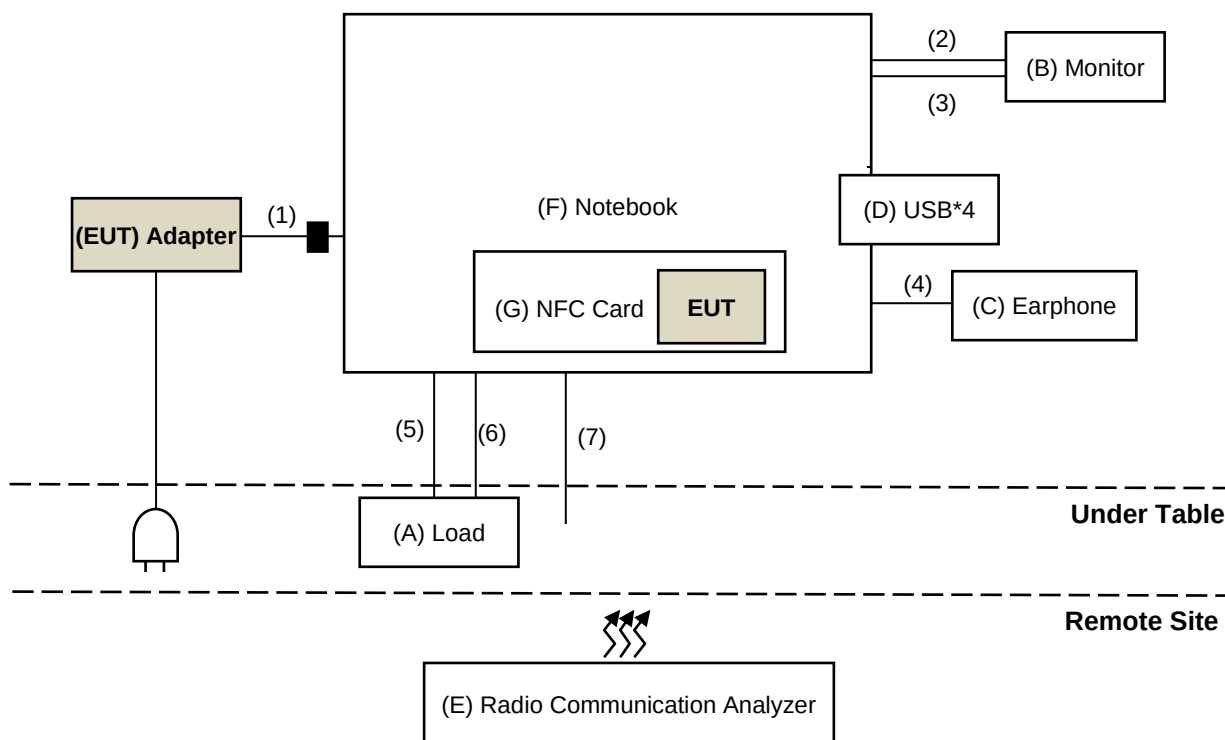
For LTE 48

Test Item	Tested Channel	Channel Bandwidth	Modulation	Mode
EIRP	55265 (3552.50 MHz) 55990 (3625.00 MHz) 56715 (3697.50 MHz)	5 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	55290 (3555.00 MHz) 55990 (3625.00 MHz) 56690 (3695.00 MHz)	10 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	55315 (3557.50 MHz) 55990 (3625.00 MHz) 56665 (3692.50 MHz)	15 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
	55340 (3560.00 MHz) 55990 (3625.00 MHz) 56640 (3690.00 MHz)	20 MHz	QPSK / 16QAM / 64QAM / 256QAM	1 RB Half RB Full RB
RE Below 1GHz	55340 (3560.00 MHz)	20 MHz	QPSK	1 RB
RE Above 1GHz	55265 (3552.50 MHz) 55990 (3625.00 MHz) 56715 (3697.50 MHz)	5 MHz	QPSK	1 RB
	55340 (3560.00 MHz) 55990 (3625.00 MHz) 56640 (3690.00 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	N/A	N/A	N/A	N/A	Provided by Lab
B	Monitor	ENVISON	TFT22W90PS1	ECRE4JA000764	N/A	Provided by Lab
C	Earphone	APPLE	MB77PFEB	N/A	N/A	Provided by Lab
D	USB*4	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
E	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	N/A	Provided by Lab
F	Notebook	Getac	S510	N/A	N/A	Supplied by applicant
G	NFC Card	TYPE-B	N/A	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	ADAPTER	1	1.2	Y	1	Accessory of EUT
2	HDMI	1	1.8	Y	0	Provided by Lab
3	D-SUB	1	1.8	Y	2	Provided by Lab
4	AUDIO	1	1.2	N	0	Provided by Lab
5	LAN	1	1.5	N	0	Provided by Lab
6	LAN	1	1.5	N	0	Provided by Lab
7	RS232	1	1.5	N	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 Maximum EIRP

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
N9030B - PXA Signal Analyzer KEYSIGHT	N9030B	MY57140488	2024/3/6	2025/3/5
Radio Communication Analyzer Anritsu	MT8821C	6201462755	2024/3/13	2025/3/12
Software BV	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/5/16

4.2 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2023/10/13	2024/10/12
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2023/5/7	2024/5/6
Preamplifier EMCI	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101582	2023/4/13 2024/4/12	2024/4/12 2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/3/9 ~ 2024/4/19

4.3 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
	BBHA 9170	9170-480	2023/11/12	2024/11/11
		BBHA9170241	2023/10/16	2024/10/15
		BBHA9170243	2023/11/12	2024/11/11
Preamplifier EMCI	EMC 184045	980116	2023/9/27	2024/9/26
Preamplifier Keysight	83017A	MY53270295	2023/5/7	2024/5/6
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2023/5/7	2024/5/6
	Sucoflex 104	MY 13380+295012/04	2023/5/7	2024/5/6
Signal & Spectrum Analyzer R&S	FSW43	101582	2023/4/13	2024/4/12
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/3/12 ~ 2024/3/29

5 Limits of Test Items

5.1 Maximum EIRP

Device		Maximum EIRP (dBm/10 MHz)
☒	End User Device	23
☐	Category A CBSD	30
☐	Category B CBSD	47

5.2 Radiated Spurious Emissions below 1GHz

The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

5.3 Radiated Spurious Emissions above 1GHz

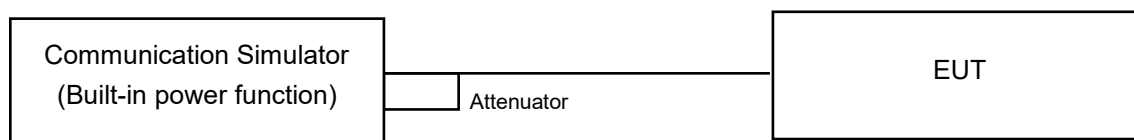
The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

6 Test Arrangements

6.1 Maximum EIRP

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 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.

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)

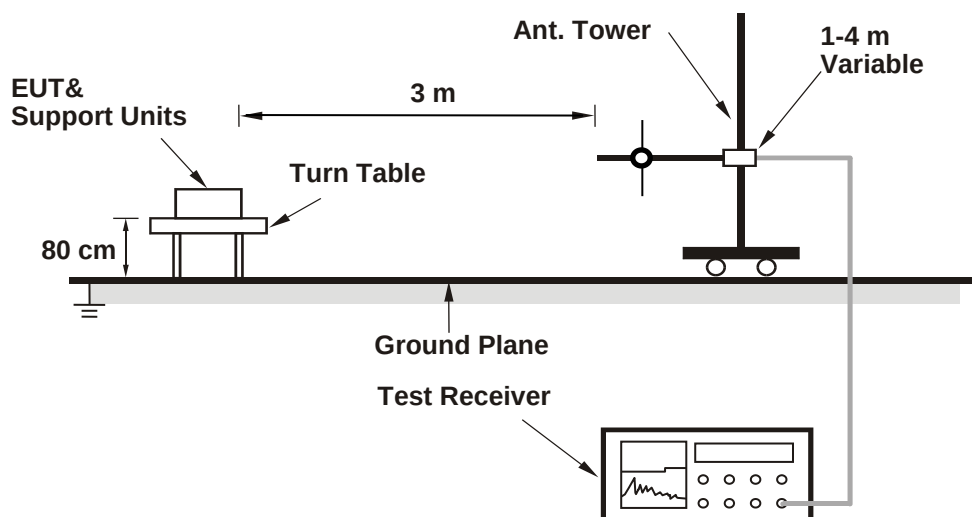
P_{Meas} measured transmitter output power or PSD, in dBm or dBW

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 30 MHz to 1 GHz



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

6.2.2 Test Procedure

The EUT is configured by test software or key-in commands to set data modulation and maximum power using WWAN technology.

- 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.
- 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.

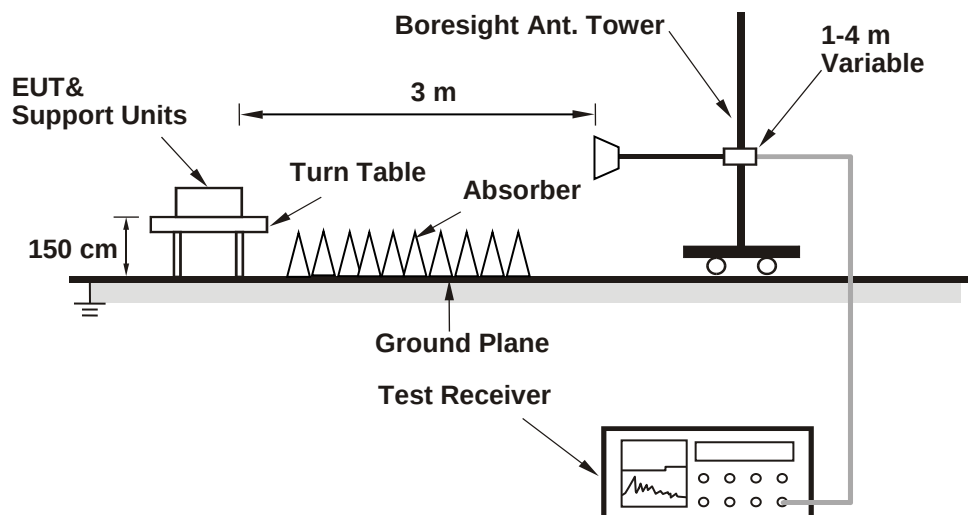
Note:

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

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 by test software or key-in commands 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 Maximum EIRP

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 65% RH	Tested By:	Willy Cheng
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7.1.1 LTE Band 42

Conducted Output Power (dBm/10MHz)

LTE Band 42						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43190	43340	43490
		Frequency (MHz)		3560	3575	3590
20M	QPSK	1	0	19.32	19.34	19.20
		1	50	19.11	19.23	19.26
		1	99	19.09	19.25	19.19
		50	0	18.18	18.26	18.22
		50	25	18.13	18.14	18.18
		50	50	18.12	18.17	18.15
		100	0	18.17	18.25	18.23
20M	16QAM	1	0	18.27	18.39	18.28
		1	50	18.17	18.25	18.24
		1	99	18.12	18.28	18.18
		50	0	17.34	17.36	17.31
		50	25	17.25	17.29	17.21
		50	50	17.08	17.12	17.08
		100	0	17.21	17.33	17.17
20M	64QAM	1	0	17.24	17.36	17.26
		1	50	17.19	17.21	17.23
		1	99	17.08	17.17	17.16
		50	0	16.31	16.37	16.37
		50	25	16.23	16.26	16.19
		50	50	16.08	16.18	16.14
		100	0	16.29	16.29	16.27
20M	256QAM	1	0	14.14	14.24	14.35
		1	50	14.00	14.17	14.19
		1	99	14.02	14.15	14.14
		50	0	14.15	14.27	14.24
		50	25	13.97	14.10	14.15
		50	50	13.90	14.10	14.06
		100	0	14.08	14.32	14.31

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.34	20.19	23.0
16QAM	18.39	19.24	23.0
64QAM	17.36	18.21	23.0
256QAM	14.35	15.20	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 42						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43165	43340	43515
		Frequency (MHz)		3557.5	3575	3592.5
15M	QPSK	1	0	19.27	19.28	19.15
		1	37	19.06	19.21	19.15
		1	74	19.01	19.16	19.13
		36	0	18.03	18.24	18.19
		36	19	18.11	18.11	18.05
		36	39	17.98	18.08	18.05
		75	0	18.06	18.15	18.20
15M	16QAM	1	0	18.14	18.28	18.25
		1	37	18.06	18.21	18.15
		1	74	17.97	18.24	18.15
		36	0	17.21	17.25	17.17
		36	19	17.10	17.23	17.18
		36	39	17.08	17.08	16.99
		75	0	17.14	17.29	17.17
15M	64QAM	1	0	17.09	17.36	17.20
		1	37	17.16	17.06	17.20
		1	74	17.03	17.13	17.14
		36	0	16.30	16.30	16.29
		36	19	16.22	16.13	16.04
		36	39	15.96	16.18	16.04
		75	0	16.15	16.15	16.12
15M	256QAM	1	0	14.11	14.23	14.26
		1	37	13.93	14.05	14.14
		1	74	13.88	14.11	14.08
		36	0	14.03	14.22	14.13
		36	19	13.83	14.04	14.06
		36	39	13.81	14.00	13.92
		75	0	14.03	14.32	14.25

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.28	20.13	23.0
16QAM	18.28	19.13	23.0
64QAM	17.36	18.21	23.0
256QAM	14.32	15.17	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 42						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43140	43340	43540
		Frequency (MHz)		3555	3575	3595
10M	QPSK	1	0	19.23	19.27	19.13
		1	24	18.93	19.14	19.02
		1	49	18.94	19.09	19.04
		25	0	17.97	18.21	18.14
		25	12	18.05	18.00	18.01
		25	25	17.86	17.99	17.93
		50	0	17.93	18.12	18.10
10M	16QAM	1	0	18.05	18.17	18.16
		1	24	17.94	18.14	18.06
		1	49	17.84	18.11	18.06
		25	0	17.17	17.15	17.17
		25	12	17.08	17.19	17.16
		25	25	16.97	17.08	16.93
		50	0	17.14	17.26	17.03
10M	64QAM	1	0	17.07	17.24	17.17
		1	24	17.08	17.02	17.06
		1	49	16.95	17.02	17.11
		25	0	16.16	16.30	16.15
		25	12	16.09	16.05	15.94
		25	25	15.90	16.09	15.99
		50	0	16.14	16.03	16.04
10M	256QAM	1	0	14.00	14.14	14.25
		1	24	13.86	13.95	14.07
		1	49	13.84	14.06	14.03
		25	0	13.99	14.07	14.01
		25	12	13.71	13.99	14.00
		25	25	13.79	13.92	13.91
		50	0	13.88	14.19	14.19

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.27	20.12	23.0
16QAM	18.17	19.02	23.0
64QAM	17.24	18.09	23.0
256QAM	14.25	15.10	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 42						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43115	43340	43565
		Frequency (MHz)		3552.5	3575	3597.5
5M	QPSK	1	0	19.17	19.19	19.07
		1	12	18.92	19.05	18.92
		1	24	18.85	19.08	18.92
		12	0	17.92	18.16	18.04
		12	6	18.04	17.98	17.87
		12	13	17.72	17.95	17.93
		25	0	17.87	18.12	18.08
5M	16QAM	1	0	17.93	18.05	18.13
		1	12	17.88	18.11	18.00
		1	24	17.73	18.08	17.95
		12	0	17.15	17.01	17.17
		12	6	17.04	17.16	17.06
		12	13	16.85	17.01	16.88
		25	0	17.06	17.23	16.94
5M	64QAM	1	0	17.04	17.14	17.05
		1	12	16.97	16.99	16.99
		1	24	16.81	16.92	17.11
		12	0	16.16	16.21	16.01
		12	6	16.06	15.97	15.81
		12	13	15.77	16.04	15.92
		25	0	16.13	15.93	15.97
5M	256QAM	1	0	13.88	14.04	14.13
		1	12	13.75	13.92	14.00
		1	24	13.83	13.91	13.97
		12	0	13.85	13.93	13.86
		12	6	13.59	13.88	13.97
		12	13	13.68	13.91	13.86
		25	0	13.87	14.04	14.13

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.19	20.04	23.0
16QAM	18.13	18.98	23.0
64QAM	17.14	17.99	23.0
256QAM	14.13	14.98	23.0

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

7.1.2 LTE Band 43

Conducted Output Power (dBm/10MHz)

LTE Band 43						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43690	44090	44490
		Frequency (MHz)		3610	3650	3690
20M	QPSK	1	0	18.76	18.67	18.61
		1	50	18.66	18.59	18.54
		1	99	18.59	18.55	18.47
		50	0	17.83	17.79	17.76
		50	25	17.76	17.74	17.67
		50	50	17.69	17.66	17.59
		100	0	17.73	17.70	17.61
20M	16QAM	1	0	17.76	17.74	17.65
		1	50	17.62	17.58	17.53
		1	99	16.76	16.72	16.62
		50	0	17.37	17.31	17.31
		50	25	16.75	16.67	16.67
		50	50	16.64	16.60	16.55
		100	0	16.77	16.69	16.68
20M	64QAM	1	0	16.71	16.69	16.62
		1	50	16.69	16.63	16.61
		1	99	16.62	16.61	16.55
		50	0	15.83	15.80	15.76
		50	25	15.77	15.74	15.67
		50	50	15.75	15.68	15.65
		100	0	15.81	15.77	15.76
20M	256QAM	1	0	13.95	13.94	13.88
		1	50	13.85	13.77	13.72
		1	99	13.62	13.62	13.52
		50	0	13.91	13.88	13.78
		50	25	13.78	13.74	13.71
		50	50	13.67	13.67	13.61
		100	0	13.81	13.81	13.74

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	18.76	19.61	23.0
16QAM	17.76	18.61	23.0
64QAM	16.71	17.56	23.0
256QAM	13.95	14.80	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 43						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43665.00	44090.00	45515.00
		Frequency (MHz)		3607.50	3650.00	3692.50
15M	QPSK	1	0	18.64	18.50	18.60
		1	37	18.57	18.44	18.36
		1	74	18.53	18.36	18.36
		36	0	17.71	17.60	17.72
		36	19	17.64	17.60	17.53
		36	39	17.45	17.46	17.40
		75	0	17.52	17.58	17.42
15M	16QAM	1	0	17.63	17.59	17.50
		1	37	17.60	17.46	17.38
		1	74	16.67	16.66	16.63
		36	0	17.19	17.07	17.30
		36	19	16.69	16.55	16.53
		36	39	16.59	16.57	16.43
		75	0	16.70	16.49	16.54
15M	64QAM	1	0	16.60	16.56	16.51
		1	37	16.63	16.50	16.53
		1	74	16.46	16.39	16.39
		36	0	15.77	15.72	15.65
		36	19	15.63	15.63	15.52
		36	39	15.67	15.59	15.60
		75	0	15.70	15.61	15.61
15M	256QAM	1	0	13.92	13.84	13.81
		1	37	13.76	13.68	13.53
		1	74	13.55	13.49	13.36
		36	0	13.66	13.70	13.60
		36	19	13.71	13.73	13.59
		36	39	13.56	13.53	13.47
		75	0	13.64	13.75	13.65

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	18.64	19.49	23.0
16QAM	17.63	18.48	23.0
64QAM	16.63	17.48	23.0
256QAM	13.92	14.77	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 43						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43640.00	44090.00	44540.00
		Frequency (MHz)		3605.00	3650.00	3695.00
10M	QPSK	1	0	18.71	18.65	18.48
		1	24	18.52	18.47	18.45
		1	49	18.37	18.48	18.36
		25	0	17.76	17.64	17.67
		25	12	17.70	17.69	17.55
		25	25	17.59	17.41	17.51
		50	0	17.59	17.58	17.52
10M	16QAM	1	0	17.68	17.51	17.64
		1	24	17.50	17.49	17.38
		1	49	16.71	16.64	16.61
		25	0	17.22	17.26	17.20
		25	12	16.63	16.61	16.50
		25	25	16.51	16.57	16.43
		50	0	16.67	16.47	16.53
10M	64QAM	1	0	16.56	16.57	16.52
		1	24	16.61	16.45	16.51
		1	49	16.48	16.57	16.41
		25	0	15.75	15.69	15.56
		25	12	15.68	15.64	15.57
		25	25	15.64	15.53	15.49
		50	0	15.74	15.62	15.67
10M	256QAM	1	0	13.77	13.79	13.82
		1	24	13.69	13.68	13.57
		1	49	13.55	13.51	13.37
		25	0	13.75	13.74	13.69
		25	12	13.69	13.56	13.54
		25	25	13.55	13.53	13.58
		50	0	13.70	13.72	13.65

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	18.71	19.56	23.0
16QAM	17.68	18.53	23.0
64QAM	16.61	17.46	23.0
256QAM	13.82	14.67	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 43						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		43615.00	44090.00	44565.00
		Frequency (MHz)		3602.50	3650.00	3697.50
5M	QPSK	1	0	18.71	18.58	18.42
		1	12	18.60	18.48	18.47
		1	24	18.50	18.41	18.43
		12	0	17.73	17.70	17.63
		12	6	17.65	17.53	17.57
		12	13	17.54	17.57	17.44
		25	0	17.66	17.55	17.36
5M	16QAM	1	0	17.59	17.63	17.60
		1	12	17.59	17.41	17.51
		1	24	16.66	16.65	16.61
		12	0	17.16	17.07	17.30
		12	6	16.59	16.48	16.58
		12	13	16.63	16.48	16.35
		25	0	16.69	16.63	16.48
5M	64QAM	1	0	16.64	16.68	16.53
		1	12	16.61	16.52	16.43
		1	24	16.43	16.49	16.43
		12	0	15.72	15.62	15.60
		12	6	15.75	15.52	15.42
		12	13	15.65	15.63	15.55
		25	0	15.66	15.62	15.58
5M	256QAM	1	0	13.85	13.70	13.71
		1	12	13.68	13.68	13.60
		1	24	13.41	13.47	13.43
		12	0	13.84	13.74	13.56
		12	6	13.68	13.54	13.46
		12	13	13.46	13.51	13.41
		25	0	13.79	13.64	13.54

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	18.71	19.56	23.0
16QAM	17.63	18.48	23.0
64QAM	16.68	17.53	23.0
256QAM	13.85	14.70	23.0

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

7.1.3 LTE Band 48

Conducted Output Power (dBm/10MHz)

LTE Band 48						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		55340	55990	56640
		Frequency (MHz)		3560	3625	3690
20M	QPSK	1	0	19.30	19.27	19.11
		1	50	19.16	19.14	19.05
		1	99	19.06	18.99	18.88
		50	0	18.36	18.33	18.15
		50	25	18.28	18.21	18.10
		50	50	18.21	18.14	17.99
		100	0	18.29	18.27	18.20
20M	16QAM	1	0	18.21	18.17	18.17
		1	50	18.14	18.09	18.10
		1	99	18.07	18.03	17.93
		50	0	17.26	17.19	17.19
		50	25	17.23	17.22	17.08
		50	50	17.19	17.18	16.99
		100	0	17.27	17.20	17.16
20M	64QAM	1	0	17.33	17.26	17.18
		1	50	17.10	17.04	17.12
		1	99	17.07	17.05	16.86
		50	0	16.43	16.38	16.18
		50	25	16.27	16.26	16.14
		50	50	16.25	16.23	15.96
		100	0	16.36	16.34	16.19
20M	256QAM	1	0	13.91	13.87	13.68
		1	50	13.88	13.82	13.63
		1	99	13.72	13.71	13.71
		50	0	13.95	13.90	13.63
		50	25	13.83	13.79	13.62
		50	50	13.62	13.59	13.44
		100	0	14.06	14.01	13.89

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.30	20.15	23.0
16QAM	18.21	19.06	23.0
64QAM	17.33	18.18	23.0
256QAM	14.06	14.91	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 48						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		55315	55990	56665
		Frequency (MHz)		3557.5	3625	3692.5
15M	QPSK	1	0	19.24	19.19	19.00
		1	37	19.15	19.09	18.99
		1	74	19.00	18.98	18.81
		36	0	18.24	18.21	18.15
		36	19	18.14	18.08	18.00
		36	39	18.03	18.02	17.88
		75	0	18.26	18.25	18.11
15M	16QAM	1	0	18.24	18.17	17.97
		1	37	18.16	18.13	17.94
		1	74	17.98	17.96	17.79
		36	0	17.19	17.18	17.14
		36	19	17.13	17.06	17.08
		36	39	17.03	17.02	16.90
		75	0	17.16	17.09	17.02
15M	64QAM	1	0	17.21	17.18	17.03
		1	37	17.16	17.15	16.99
		1	74	16.92	16.91	16.76
		36	0	16.18	16.16	16.13
		36	19	16.10	16.08	16.04
		36	39	16.10	16.09	15.92
		75	0	16.22	16.20	16.04
15M	256QAM	1	0	13.78	13.75	13.68
		1	37	13.70	13.63	13.53
		1	74	13.55	13.52	13.49
		36	0	13.79	13.72	13.72
		36	19	13.76	13.74	13.70
		36	39	13.41	13.40	13.46
		75	0	13.85	13.79	13.78

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.24	20.09	23.0
16QAM	18.24	19.09	23.0
64QAM	17.21	18.06	23.0
256QAM	13.85	14.70	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 48						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		55290	55990	56690
		Frequency (MHz)		3555	3625	3695
10M	QPSK	1	0	19.20	19.14	19.05
		1	24	19.01	18.94	18.96
		1	49	19.00	18.95	18.75
		25	0	18.26	18.19	18.05
		25	12	18.10	18.09	17.95
		25	25	18.11	18.04	17.93
		50	0	18.20	18.13	18.05
10M	16QAM	1	0	18.23	18.20	18.01
		1	24	18.09	18.08	18.05
		1	49	18.03	17.98	17.74
		25	0	17.34	17.30	16.98
		25	12	17.17	17.13	17.05
		25	25	17.14	17.09	16.89
		50	0	17.21	17.16	17.06
10M	64QAM	1	0	17.20	17.18	17.02
		1	24	17.07	17.00	17.05
		1	49	16.95	16.89	16.72
		25	0	16.26	16.23	16.02
		25	12	16.10	16.05	16.02
		25	25	16.16	16.09	15.94
		50	0	16.22	16.15	16.11
10M	256QAM	1	0	13.76	13.71	13.74
		1	24	13.75	13.74	13.57
		1	49	13.48	13.46	13.48
		25	0	13.84	13.79	13.71
		25	12	13.64	13.58	13.75
		25	25	13.50	13.44	13.42
		50	0	13.97	13.95	13.86

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.20	20.05	23.0
16QAM	18.23	19.08	23.0
64QAM	17.20	18.05	23.0
256QAM	13.97	14.82	23.0

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

Conducted Output Power (dBm/10MHz)

LTE Band 48						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		55265	55990	56715
		Frequency (MHz)		3552.5	3625	3697.5
5M	QPSK	1	0	19.21	19.15	18.98
		1	12	18.99	18.96	18.98
		1	24	18.95	18.92	18.77
		12	0	18.19	18.15	18.00
		12	6	18.21	18.18	18.00
		12	13	18.10	18.07	17.83
		25	0	18.16	18.11	18.03
5M	16QAM	1	0	18.28	18.23	18.00
		1	12	18.07	18.05	17.96
		1	24	17.97	17.90	17.77
		12	0	17.21	17.17	17.04
		12	6	17.19	17.16	17.03
		12	13	17.09	17.04	16.84
		25	0	17.17	17.14	17.05
5M	64QAM	1	0	17.20	17.15	16.98
		1	12	17.02	16.98	16.95
		1	24	16.89	16.83	16.74
		12	0	16.18	16.13	16.07
		12	6	16.16	16.12	16.00
		12	13	16.14	16.12	15.82
		25	0	16.11	16.05	16.11
5M	256QAM	1	0	13.72	13.65	13.63
		1	12	13.70	13.68	13.51
		1	24	13.53	13.52	13.51
		12	0	13.86	13.82	13.61
		12	6	13.75	13.73	13.61
		12	13	13.41	13.34	13.39
		25	0	13.96	13.90	13.93

EIRP Power (dBm/10MHz)

Maximum Output Power			
Modulation	Cond. Power (dBm/10MHz)	EIRP (dBm/10MHz)	EIRP Limit (dBm/10MHz)
QPSK	19.21	20.06	23.0
16QAM	18.28	19.13	23.0
64QAM	17.20	18.05	23.0
256QAM	13.96	14.81	23.0

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

7.2 Radiated Spurious Emissions below 1GHz

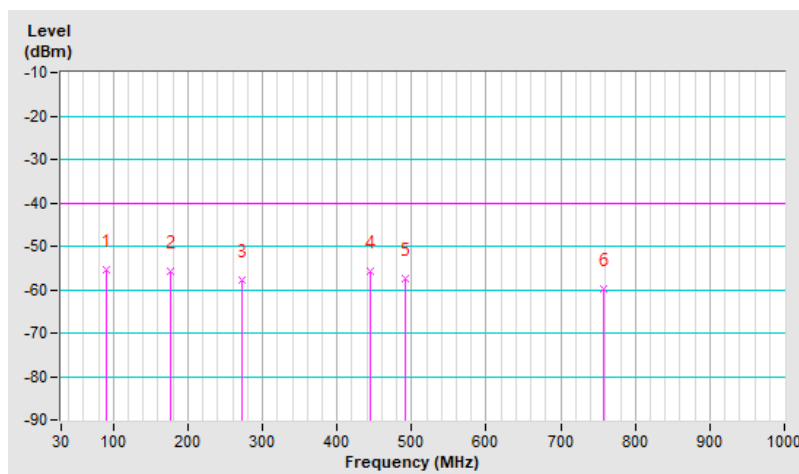
7.2.1 LTE Band 42

RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 43340 : 3575 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	91.11	-55.48	-40.00	-15.48	1.00 H	3	54.07	-109.55
2	177.44	-55.61	-40.00	-15.61	1.00 H	96	49.32	-104.93
3	271.53	-57.94	-40.00	-17.94	1.00 H	105	45.55	-103.49
4	445.16	-55.61	-40.00	-15.61	1.00 H	232	44.43	-100.04
5	490.75	-57.35	-40.00	-17.35	1.00 H	236	41.95	-99.30
6	757.50	-59.67	-40.00	-19.67	1.00 H	188	33.45	-93.12

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.

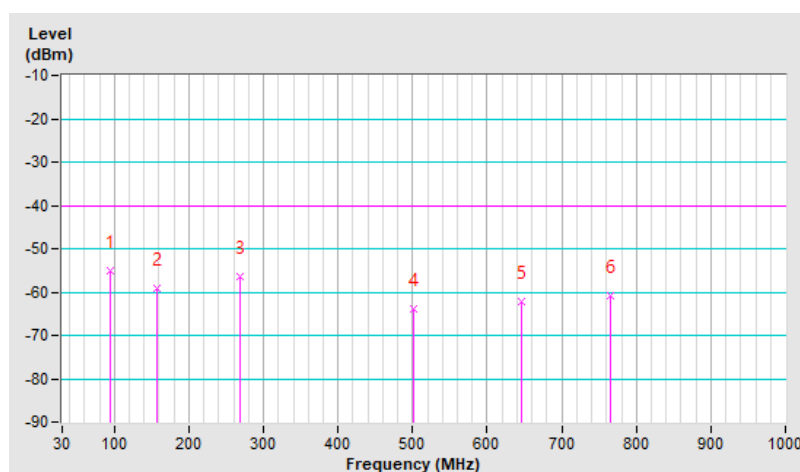


RF Mode	LTE Band 42 Channel Bandwidth: 20MHz	Channel	CH 43340 : 3575 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	94.02	-55.16	-40.00	-15.16	1.00 V	200	54.16	-109.32
2	157.07	-59.02	-40.00	-19.02	1.00 V	162	44.71	-103.73
3	267.65	-56.50	-40.00	-16.50	1.00 V	360	47.19	-103.69
4	500.45	-63.79	-40.00	-23.79	1.50 V	195	35.34	-99.13
5	646.92	-62.26	-40.00	-22.26	1.00 V	18	33.58	-95.84
6	766.23	-61.00	-40.00	-21.00	1.50 V	14	31.99	-92.99

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.



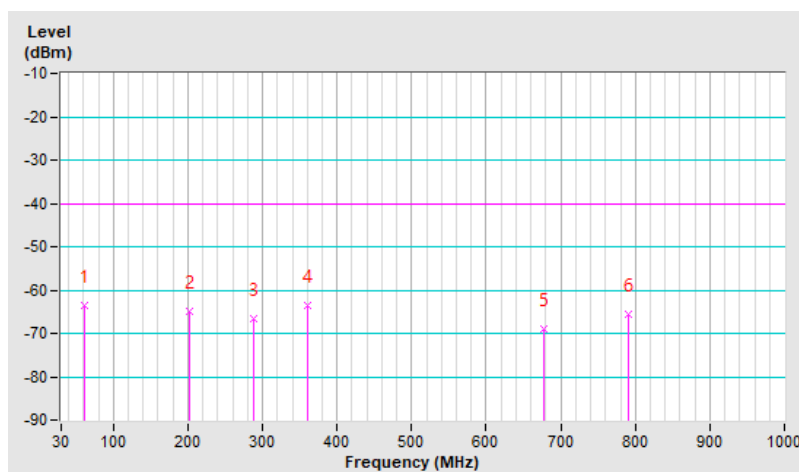
7.2.2 LTE Band 43

RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 43690 : 3610 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	61.04	-63.46	-40.00	-23.46	2.00 H	130	41.31	-104.77
2	201.69	-65.08	-40.00	-25.08	1.00 H	269	41.74	-106.82
3	288.02	-66.52	-40.00	-26.52	1.00 H	108	36.55	-103.07
4	360.77	-63.53	-40.00	-23.53	1.50 H	258	38.15	-101.68
5	676.99	-68.85	-40.00	-28.85	1.50 H	104	26.69	-95.54
6	790.48	-65.57	-40.00	-25.57	1.00 H	20	27.20	-92.77

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 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.

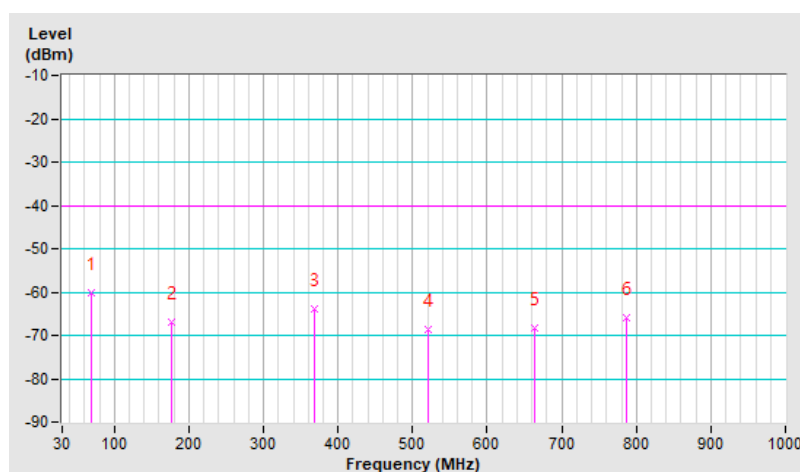


RF Mode	LTE Band 43 Channel Bandwidth: 20MHz	Channel	CH 43690 : 3610 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	69.77	-60.33	-40.00	-20.33	1.50 V	3	45.62	-105.95
2	176.47	-66.90	-40.00	-26.90	1.00 V	196	37.91	-104.81
3	367.56	-63.87	-40.00	-23.87	2.00 V	332	37.57	-101.44
4	520.82	-68.57	-40.00	-28.57	1.50 V	342	30.21	-98.78
5	663.41	-68.33	-40.00	-28.33	1.00 V	319	27.38	-95.71
6	787.57	-65.87	-40.00	-25.87	1.00 V	103	26.89	-92.76

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.



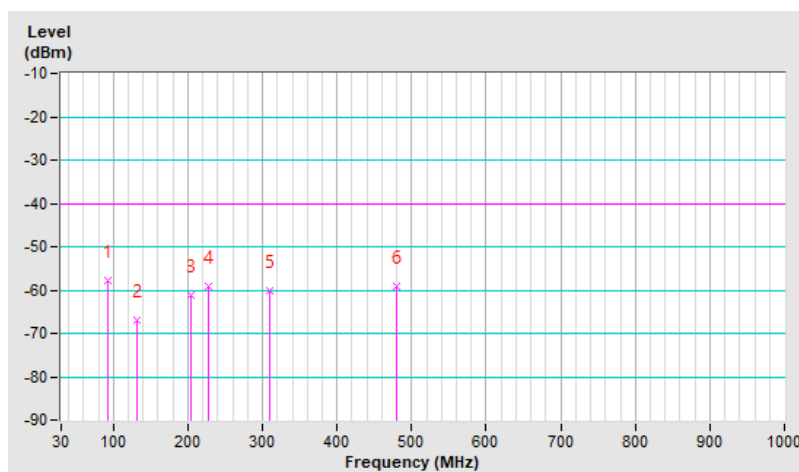
7.2.3 LTE Band 48

RF Mode	LTE Band 48 Channel Bandwidth: 20MHz	Channel	CH 55340 : 3560 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	91.86	-57.94	-40.00	-17.94	1.49 H	128	51.48	-109.42
2	132.62	-66.90	-40.00	-26.90	1.00 H	62	38.09	-104.99
3	204.32	-61.13	-40.00	-21.13	1.00 H	91	45.68	-106.81
4	226.81	-59.19	-40.00	-19.19	1.00 H	318	47.29	-106.48
5	309.75	-60.08	-40.00	-20.08	1.49 H	19	42.38	-102.46
6	479.86	-59.22	-40.00	-19.22	1.00 H	187	40.30	-99.52

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.

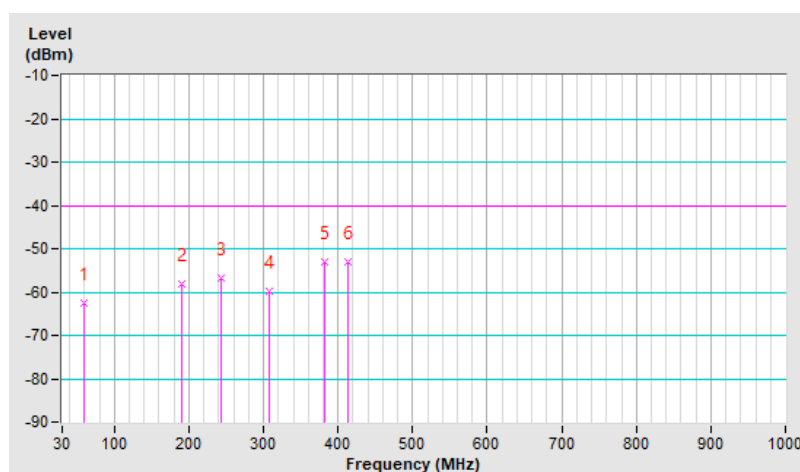


RF Mode	LTE Band 48 Channel Bandwidth: 20MHz	Channel	CH 55340 : 3560 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	59.52	-62.40	-40.00	-22.40	1.01 V	46	41.92	-104.32
2	190.26	-58.04	-40.00	-18.04	1.01 V	261	48.43	-106.47
3	243.68	-56.89	-40.00	-16.89	1.50 V	36	47.89	-104.78
4	308.35	-59.87	-40.00	-19.87	1.50 V	17	42.63	-102.50
5	382.86	-53.07	-40.00	-13.07	1.01 V	13	48.12	-101.19
6	412.38	-53.18	-40.00	-13.18	1.01 V	19	47.74	-100.92

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 42

RF Mode	LTE Band 42 Channel Bandwidth: 5MHz	Channel	CH 43115 : 3552.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7105.00	-42.69	-40.00	-2.69	1.90 H	145	42.97	-85.66
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	7105.00	-43.19	-40.00	-3.19	2.11 V	189	42.47	-85.66

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 43340 : 3575 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7150.00	-42.54	-40.00	-2.54	1.88 H	147	42.85	-85.39
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	7150.00	-43.13	-40.00	-3.13	2.13 V	185	42.26	-85.39

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 43565 : 3597.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7195.00	-42.60	-40.00	-2.60	1.80 H	144	42.48	-85.08
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	7195.00	-42.91	-40.00	-2.91	2.13 V	184	42.17	-85.08

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 43190 : 3560 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7120.00	-42.55	-40.00	-2.55	1.88 H	152	43.03	-85.58
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	7120.00	-43.38	-40.00	-3.38	2.16 V	185	42.20	-85.58

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 43340 : 3575 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7150.00	-42.45	-40.00	-2.45	1.84 H	145	42.94	-85.39
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	7150.00	-43.07	-40.00	-3.07	2.14 V	183	42.32	-85.39

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 43490 : 3590 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7180.00	-42.61	-40.00	-2.61	1.80 H	144	42.57	-85.18
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	7180.00	-43.04	-40.00	-3.04	2.10 V	188	42.14	-85.18

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.

7.3.2 LTE Band 43

RF Mode	LTE Band 43 Channel Bandwidth: 5MHz	Channel	CH 43615 : 3602.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7205.00	-42.75	-40.00	-2.75	1.85 H	158	42.28	-85.03
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	7205.00	-42.86	-40.00	-2.86	2.15 V	194	42.17	-85.03

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 44090 : 3650 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7300.00	-42.57	-40.00	-2.57	1.92 H	154	42.24	-84.81
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	7300.00	-42.67	-40.00	-2.67	2.15 V	197	42.14	-84.81

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 44565 : 3697.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7395.00	-42.72	-40.00	-2.72	1.93 H	157	42.30	-85.02
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	7395.00	-42.84	-40.00	-2.84	2.11 V	190	42.18	-85.02

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 43690 : 3610 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7220.00	-42.57	-40.00	-2.57	1.90 H	156	42.38	-84.95
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	7220.00	-43.00	-40.00	-3.00	2.14 V	193	41.95	-84.95

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 44090 : 3650 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7300.00	-42.53	-40.00	-2.53	1.94 H	155	42.28	-84.81
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	7300.00	-42.66	-40.00	-2.66	2.16 V	196	42.15	-84.81

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 44490 : 3690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7380.00	-42.55	-40.00	-2.55	1.95 H	158	42.45	-85.00
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	7380.00	-42.75	-40.00	-2.75	2.17 V	194	42.25	-85.00

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.

7.3.3 LTE Band 48

RF Mode	LTE Band 48 Channel Bandwidth: 5MHz	Channel	CH 55265 : 3552.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7105.00	-43.88	-40.00	-3.88	1.89 H	146	34.83	-78.71
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	7105.00	-44.40	-40.00	-4.40	2.24 V	187	34.31	-78.71

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 48 Channel Bandwidth: 5MHz	Channel	CH 55990 : 3625 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7250.00	-42.82	-40.00	-2.82	1.96 H	142	35.15	-77.97
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	7250.00	-43.64	-40.00	-3.64	2.20 V	191	34.33	-77.97

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 48 Channel Bandwidth: 5MHz	Channel	CH 56715 : 3697.5 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Rex Wang		

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	7395.00	-42.76	-40.00	-2.76	1.96 H	141	34.72	-77.48
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	7395.00	-43.41	-40.00	-3.41	2.29 V	190	34.07	-77.48

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.

RF Mode	LTE Band 48 Channel Bandwidth: 20MHz	Channel	CH 55340 : 3560 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	7120.00	-43.16	-40.00	-3.16	1.91 H	141	35.24	-78.40
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	7120.00	-44.19	-40.00	-4.19	2.29 V	190	34.21	-78.40

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 48 Channel Bandwidth: 20MHz	Channel	CH 55990 : 3625 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	7250.00	-43.21	-40.00	-3.21	1.92 H	142	34.76	-77.97
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	7250.00	-43.91	-40.00	-3.91	2.27 V	191	34.06	-77.97

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 48 Channel Bandwidth: 20MHz	Channel	CH 56640 : 3690 MHz
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	23°C, 67% RH
Tested By	Luis Lee		

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	7380.00	-42.47	-40.00	-2.47	1.92 H	142	35.15	-77.62
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	7380.00	-43.60	-40.00	-3.60	2.21 V	191	34.02	-77.62

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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