Partial FCC Test Report

(PART 27)

Report No.:	RFBHDI-WTW-P21060617-2
FCC ID:	2ATM8EG25G
Test Model:	EG25G MINPCIE
Received Date:	Jun. 21, 2021
Test Date:	Jun. 28 ~ Jul. 22, 2021
Issued Date:	Jul. 30, 2021
Applicant:	Hawkeye Tech Co., Ltd.
Address:	13F. No.736, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBHDI-WTW-P21060617-2	Original Release	Jul. 30, 2021

1 Certificate of Conformity

Product:	LTE Module
Brand:	Quectel
Test Model:	EG25G MINPCIE
Sample Status:	Engineering Sample
Applicant:	Hawkeye Tech Co., Ltd.
Test Date:	Jun. 28 ~ Jul. 22, 2021
Standards:	FCC Part 27, Subpart C, H, F, L

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.

Prepared by : Lena Wang , **Date:** Jul. 30, 2021

Lena Wang / Specialist

Approved by : , **Date:** Jul. 30, 2021

Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2 (WCDMA)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 27.50(d)(4)	Equivalent Isotropic Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 27.54	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
27.50(d)(5)	Peak to Average Ratio	N/A	Refer to Note
27.53(h)	Band Edge Measurements	N/A	Refer to Note
2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -33.1 dB at 30.00 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE B4)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 27.50(d)(4)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 27.54	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
27.50(d)(5)	Peak to Average Ratio	N/A	Refer to Note
27.53(h)	Band Edge Measurements	N/A	Refer to Note
2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -32.3 dB at 3465.00 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE B12)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 27.50(c)(10)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 27.54	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
---	Peak to Average Ratio	N/A	Refer to Note
27.53(g)	Band Edge Measurements	N/A	Refer to Note
2.1051 27.53(g)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53(g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -23.2 dB at 1408.00 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 13)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 27.50(b)(10)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 27.54	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
---	Peak to Average Ratio	N/A	Refer to Note
27.53(c)(2)(4)	Band Edge Measurements	N/A	Refer to Note
2.1051 27.53(c)(2)&(f)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53(c)(2)&(f)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -6.2 dB at 1559.00 MHz.

Note:

1. This report is a partial report. Therefore, only test item of Effective Radiated Power / Effective Isotropic Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to SGS report no.: HR/2019/1001601 for module (Brand: Quectel, Model: EG25G MINPCIE).
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:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 09, 2021	Apr. 08, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 10, 2021	Jun. 09, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 06, 2020	Nov. 05, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 05, 2021	Jun. 04, 2022
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 17, 2021	Feb. 16, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 05, 2021	Jun. 04, 2022
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 01, 2021	May 31, 2022
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 02, 2021	Jun. 01, 2022
Radio Communication Analyzer Anritsu	MT8820C	6201010284	Dec. 28, 2020	Dec. 27, 2021
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 09, 2020	Sep. 08, 2021
DC Power Supply Topward	33010D	807748	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 9.

3 General Information

3.1 General Description of EUT

Product	LTE Module		
Brand	Quectel		
Test Model	EG25G MINPCIE		
Status of EUT	Engineering Sample		
Power Supply Rating	48 Vdc (POE)		
Modulation Type	WCDMA	QPSK	
	LTE	QPSK, 16QAM	
Frequency Range	WCDMA	1712.4 ~ 1752.6 MHz	
	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	1710.7 ~ 1754.3 MHz	
	LTE Band 4 (Channel Bandwidth: 3 MHz)	1711.5 ~ 1753.5 MHz	
	LTE Band 4 (Channel Bandwidth: 5 MHz)	1712.5 ~ 1752.5 MHz	
	LTE Band 4 (Channel Bandwidth: 10 MHz)	1715.0 ~ 1750.0 MHz	
	LTE Band 4 (Channel Bandwidth: 15 MHz)	1717.5 ~ 1747.5 MHz	
	LTE Band 4 (Channel Bandwidth: 20 MHz)	1720.0 ~ 1745.0 MHz	
	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	699.7 ~ 715.3 MHz	
	LTE Band 12 (Channel Bandwidth: 3 MHz)	700.5 ~ 714.5 MHz	
	LTE Band 12 (Channel Bandwidth: 5 MHz)	701.5 ~ 713.5 MHz	
	LTE Band 12 (Channel Bandwidth: 10 MHz)	704.0 ~ 711.0 MHz	
	LTE Band 13 (Channel Bandwidth: 5 MHz)	779.5 ~ 784.5 MHz	
	LTE Band 13 (Channel Bandwidth: 10 MHz)	782.0 MHz	
Max. ERP Power		QPSK	16QAM
	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	248.313 mW (23.95dBm)	163.682 mW (22.14dBm)
	LTE Band 12 (Channel Bandwidth: 3 MHz)	232.274 mW (23.66dBm)	168.267 mW (22.26dBm)
	LTE Band 12 (Channel Bandwidth: 5 MHz)	239.332 mW (23.79dBm)	161.436 mW (22.08dBm)
	LTE Band 12 (Channel Bandwidth: 10 MHz)	238.781 mW (23.78dBm)	162.181 mW (22.10dBm)
	LTE Band 13 (Channel Bandwidth: 5 MHz)	215.278 mW (23.33dBm)	150.661 mW (21.78dBm)
	LTE Band 13 (Channel Bandwidth: 10 MHz)	211.349 mW (23.25dBm)	149.279 mW (21.74dBm)
Max. EIRP Power	WCDMA	331.894 mW (25.21dBm)	
		QPSK	16QAM
	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	238.232 mW (23.77dBm)	202.768 mW (23.07dBm)
	LTE Band 4 (Channel Bandwidth: 3 MHz)	229.615 mW (23.61dBm)	195.434 mW (22.91dBm)
	LTE Band 4 (Channel Bandwidth: 5 MHz)	234.423 mW (23.70dBm)	199.986 mW (23.01dBm)
	LTE Band 4 (Channel Bandwidth: 10 MHz)	238.781 mW (23.78dBm)	194.089 mW (22.88dBm)

	LTE Band 4 (Channel Bandwidth: 15 MHz)	238.781 mW (23.78dBm)	195.434 mW (22.91dBm)
	LTE Band 4 (Channel Bandwidth: 20 MHz)	231.739 mW (23.65dBm)	192.309 mW (22.84dBm)
Antenna Type	Dipole Antenna		
Antenna Gain	WCDMA	1.5 dBi	
	LTE Band 4	1.5 dBi	
	LTE Band 12	1.6 dBi	
	LTE Band 13	1.6 dBi	
Accessory Device	N/A		
Data Cable Supplied	N/A		

Note:

1. The EUT was installed in a specific End-product.

Product	Brand	Model	FCC ID
veeaHub	veeaHub	VHE10XXXXX (X=A-Z, 0-9, blank or "-")	2ARXKVHE10

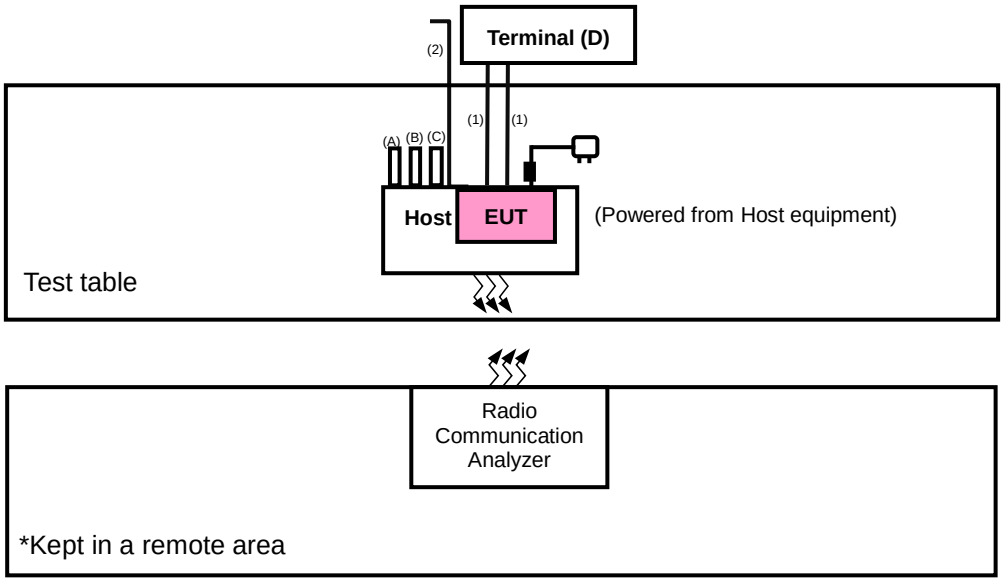
2. The End-product contains following accessory devices.

Product	Brand	Model	Description
AC Adapter	EDACPOWER ELEC.	EA1062SGR-480	I/P: 100-240 Vac, 50/60 Hz, 2.5 A O/P: 48 Vdc, 1.35 A 1.2m DC cable with 1 core

3. 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.
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 Configuration of System under Test

<Radiated Emission Test> & <E.R.P. / E.I.R.P. Test>



3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
A	FLASH	HP	v250W	09	N/A
B	FLASH	HP	v250W	05	N/A
C	FLASH	HP	v250W	03	N/A
D	Terminal	N/A	N/A	N/A	N/A

No.	Signal Cable Description Of The Above Support Units
1.	LAN Cable: 1.5m
2.	RS232 to A Cable: 1.6m

Note:

1. All power cords of the above support units are non-shielded (1.8m).

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, antenna degree 90° and 180°, and antenna ports
The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	Radiated Emission
WCDMA	X-plane
LTE Band 4	X-plane
LTE Band 12	X-plane
LTE Band 13	X-plane

WCDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	1312 to 1513	1312, 1413, 1513	WCDMA
-	Radiated Emission	1312 to 1513	1312, 1413, 1513	WCDMA

LTE Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK, 16QAM	1 RB / 3 RB Offset
		19965 to 20385	19965, 20175, 20385	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK, 16QAM	1 RB / 24 RB Offset
		20000 to 20350	20000, 20175, 20350	10 MHz	QPSK, 16QAM	1 RB / 49 RB Offset
		20025 to 20325	20025, 20175, 20325	15 MHz	QPSK, 16QAM	1 RB / 37 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK, 16QAM	1 RB / 49 RB Offset
-	Radiated Emission	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK	1 RB / 3 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK	1 RB / 24 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK	1 RB / 49 RB Offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation and RB configurations according to Module report worst maximum output power.
2. For radiated emission, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.

LTE Band 12

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM	1 RB / 5 RB Offset
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM	1 RB / 7 RB Offset
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM	1 RB / 12 RB Offset
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM	1 RB / 49 RB Offset
-	Radiated Emission	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK	1 RB / 5 RB Offset
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK	1 RB / 12 RB Offset
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK	1 RB / 49 RB Offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation and RB configurations according to Module report worst maximum output power.
2. For radiated emission according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.

LTE Band 13

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	23205 to 23255	23205, 23230, 23255	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	23205 to 23255	23205, 23230, 23255	5 MHz	QPSK	1 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK	1 RB / 0 RB Offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission above 1 GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP / EIRP	25 deg. C, 65 % RH	120 Vac, 60 Hz	Rex Wang
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Rex Wang

3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

3.5 General Description of Applied Standards and references

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test Standard:
FCC 47 CFR Part 2
FCC 47 CFR Part 27
ANSI 63.26-2015

Note: All test items have been performed and recorded as per the above standards.

References Test Guidance:
KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA-603-E 2016

Note: All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. (For band 4)

Portable stations (hand-held devices) operating in the 746-757 MHz, 776-788 MHz and 805-806 MHz band are limited to 3 watts ERP (For band 13)

Portable stations (hand-held device) operating in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP. (For band 12)

4.1.2 Test Procedures

EIRP / ERP Measurement:

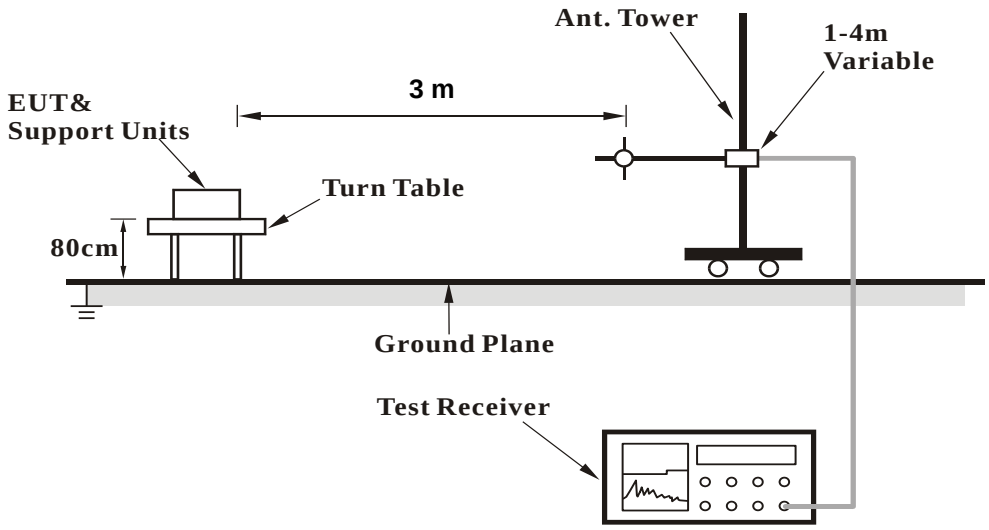
a. All measurements were done at low, middle and high operational frequency range. RBW is 5 MHz for WCDMA and 1.4 MHz、5 MHz、10 MHz、15 MHz、 20 MHz for LTE mode, and VBW ≥ 3 x RBW.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 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.
c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G.
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB.

Conducted Power Measurement:

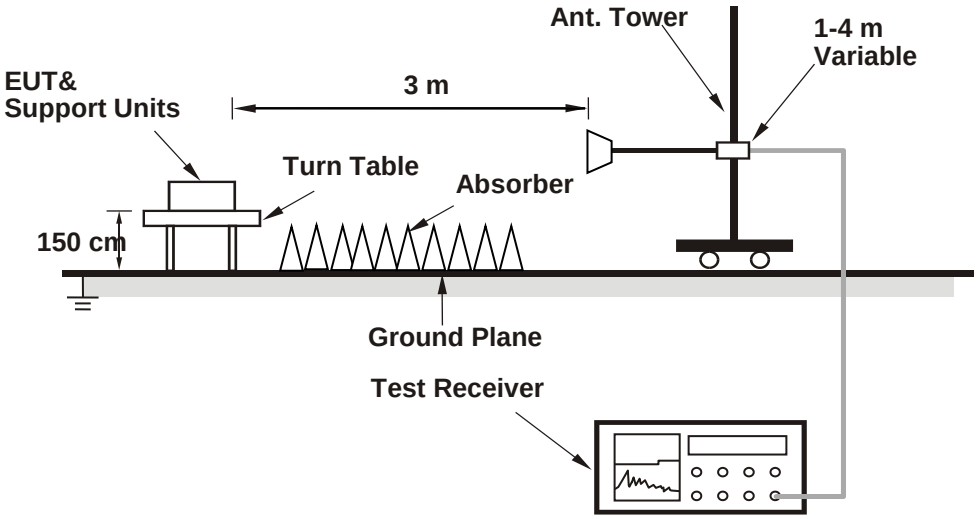
a. The EUT was set up for the maximum power with WCDMA and LTE link data modulation and link up with simulator.
b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 Test Setup

EIRP / ERP Measurement:
<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

Band	WCDMA IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	23.52	23.71	23.67
HSDPA Subtest-1	22.70	22.85	22.77
HSUPA Subtest-1	21.88	21.97	21.93

LTE Band 4						
BW	MCS Index	Channel		19957	20175	20393
		Frequency (MHz)		1710.7	1732.5	1754.3
1.4M	QPSK	1	0	**22.11**	21.75	21.98
		1	2	21.84	22.02	21.44
		1	5	21.70	21.49	21.29
		3	0	20.82	20.56	20.62
		3	1	20.69	20.60	20.53
		3	3	20.64	20.58	20.16
		6	0	20.90	20.74	20.66
	16QAM	1	0	20.66	20.58	20.58
		1	2	**21.44**	21.40	21.24
		1	5	20.53	20.20	20.17
		3	0	19.78	20.01	19.73
		3	1	19.87	19.73	19.40
		3	3	19.65	19.39	19.26
		6	0	19.91	19.63	19.26

LTE Band 4						
BW	MCS Index	Channel		19965	20175	20385
		Frequency (MHz)		1711.5	1732.5	1753.5
3M	QPSK	1	0	**22.11**	21.58	22.01
		1	7	22.01	21.96	21.34
		1	14	21.90	21.42	21.25
		8	0	20.73	20.67	20.78
		8	3	20.76	20.73	20.39
		8	7	20.58	20.53	20.16
		15	0	20.80	20.49	20.58
	16QAM	1	0	20.56	20.27	20.51
		1	7	21.21	**21.41**	21.10
		1	14	20.41	20.09	20.56
		8	0	19.74	19.88	19.50
		8	3	19.65	19.46	19.42
		8	7	19.71	19.50	19.27
		15	0	19.81	19.53	19.52
BW	MCS Index	Channel		19975	20175	20375
		Frequency (MHz)		1712.5	1732.5	1752.5
5M	QPSK	1	0	22.07	21.89	21.89
		1	12	21.83	**22.20**	21.42
		1	24	21.82	21.37	21.25
		12	0	20.75	20.55	20.62
		12	6	20.82	20.85	20.69
		12	13	20.83	20.63	20.45
		25	0	20.91	20.50	20.50
	16QAM	1	0	20.74	20.54	20.50
		1	12	21.28	**21.51**	21.39
		1	24	20.50	20.13	20.17
		12	0	19.79	19.69	19.48
		12	6	20.01	19.55	19.28
		12	13	19.86	19.44	19.13
		25	0	19.76	19.56	19.51

LTE Band 4						
BW	MCS Index	Channel		20000	20175	20350
		Frequency (MHz)		1715	1732.5	1750
10M	QPSK	1	0	21.87	21.81	22.07
		1	24	21.99	**22.28**	21.52
		1	49	21.73	21.68	21.09
		25	0	20.87	20.86	20.81
		25	12	20.67	20.77	20.70
		25	25	20.55	20.74	20.39
		50	0	21.02	20.42	20.37
	16QAM	1	0	20.49	20.31	20.69
		1	24	21.29	**21.38**	21.24
		1	49	20.34	20.27	20.44
		25	0	19.87	19.78	19.57
		25	12	19.79	19.75	19.19
		25	25	19.87	19.50	19.28
		50	0	19.76	19.37	19.65
BW	MCS Index	Channel		20025	20175	20325
		Frequency (MHz)		1717.5	1732.5	1747.5
15M	QPSK	1	0	21.99	21.84	21.83
		1	37	22.11	**22.28**	21.48
		1	74	21.86	21.57	21.31
		36	0	21.04	20.60	20.56
		36	19	20.99	20.87	20.68
		36	39	20.67	20.68	20.13
		75	0	20.97	20.68	20.49
	16QAM	1	0	20.38	20.23	20.38
		1	37	21.31	**21.41**	21.38
		1	74	20.29	20.20	20.28
		36	0	19.75	19.76	19.55
		36	19	19.82	19.40	19.30
		36	39	19.95	19.62	19.38
		75	0	19.64	19.61	19.62

LTE Band 4						
BW	MCS Index	Channel		20050	20175	20300
		Frequency (MHz)		1720	1732.5	1745
20M	QPSK	1	0	21.98	21.72	21.91
		1	50	22.03	**22.15**	21.53
		1	99	21.82	21.52	21.22
		50	0	20.86	20.72	20.72
		50	25	20.81	20.75	20.52
		50	50	20.75	20.61	20.29
		100	0	20.89	20.59	20.55
	16QAM	1	0	20.55	20.43	20.50
		1	50	21.32	**21.34**	21.25
		1	99	20.36	20.25	20.36
		50	0	19.89	19.83	19.67
		50	25	19.85	19.55	19.37
		50	50	19.79	19.51	19.23
		100	0	19.71	19.47	19.45

LTE Band 12						
BW	MCS Index	Channel		23017	23095	23173
		Frequency (MHz)		699.7	707.5	715.3
1.4M	QPSK	1	0	23.74	23.62	23.93
		1	2	24.08	24.10	**24.50**
		1	5	23.77	23.54	24.01
		3	0	22.61	22.54	22.89
		3	1	22.84	22.67	23.10
		3	3	22.60	22.88	23.05
		6	0	22.51	22.77	22.88
	16QAM	1	0	22.48	22.23	22.34
		1	2	22.16	22.28	**22.69**
		1	5	22.18	22.55	22.20
		3	0	21.55	21.44	21.78
		3	1	21.69	21.70	22.13
		3	3	21.71	21.67	21.91
		6	0	21.68	21.68	22.05
BW	MCS Index	Channel		23025	23095	23165
		Frequency (MHz)		700.5	707.5	714.5
3M	QPSK	1	0	23.75	23.76	24.01
		1	7	24.06	24.11	**24.21**
		1	14	23.83	23.77	23.77
		8	0	22.40	22.71	22.65
		8	3	22.68	23.00	22.86
		8	7	22.70	22.86	22.76
		15	0	22.71	22.51	22.74
	16QAM	1	0	22.47	22.24	22.61
		1	7	22.05	22.26	**22.81**
		1	14	22.06	22.58	22.27
		8	0	21.81	21.45	21.92
		8	3	21.78	21.94	21.93
		8	7	21.53	21.77	21.97
		15	0	21.70	21.72	22.01

LTE Band 12						
BW	MCS Index	Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	23.74	23.50	24.02
		1	12	23.81	**24.34**	24.21
		1	24	23.79	23.80	23.94
		12	0	22.55	22.73	22.82
		12	6	22.59	22.64	23.03
		12	13	22.78	23.00	22.66
		25	0	22.75	22.58	22.68
	16QAM	1	0	22.37	22.44	**22.63**
		1	12	22.32	22.44	22.60
		1	24	22.40	22.62	22.15
		12	0	21.81	21.61	21.82
		12	6	21.51	21.96	21.92
		12	13	21.57	21.77	22.03
		25	0	21.65	21.62	21.99
BW	MCS Index	Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	23.85	23.67	23.87
		1	24	23.96	24.19	**24.33**
		1	49	23.82	23.72	23.92
		25	0	22.59	22.71	22.85
		25	12	22.65	22.84	22.90
		25	25	22.71	22.80	22.86
		50	0	22.66	22.70	22.79
	16QAM	1	0	22.31	22.43	22.44
		1	24	22.20	22.31	**22.65**
		1	49	22.20	22.42	22.35
		25	0	21.67	21.60	21.78
		25	12	21.60	21.76	22.08
		25	25	21.71	21.87	21.86
		50	0	21.76	21.76	21.96

LTE Band 13						
BW	MCS Index	Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	23.62	23.79	23.71
		1	12	23.80	23.85	23.83
		1	24	23.72	23.69	**23.88**
		12	0	22.56	22.76	22.71
		12	6	22.62	22.76	22.78
		12	13	22.56	22.70	22.72
		25	0	22.56	22.76	22.71
	16QAM	1	0	22.31	22.30	22.23
		1	12	22.24	22.16	22.31
		1	24	22.24	22.15	**22.33**
		12	0	21.55	21.44	21.64
		12	6	21.53	21.69	21.61
		12	13	21.70	21.65	21.27
		25	0	21.43	21.85	21.74

BW	MCS Index	Channel		23230
		Frequency (MHz)		782
10M	QPSK	1	0	23.75
		1	24	23.69
		1	49	**23.80**
		25	0	22.79
		25	12	22.60
		25	25	22.67
		50	0	22.74
	16QAM	1	0	22.19
		1	24	22.07
		1	49	**22.29**
		25	0	21.57
		25	12	21.61
		25	25	21.53
		50	0	21.78

EIRP Power(dBm)

Band	WCDMA IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	25.02	**25.21**	25.17
HSDPA Subtest-1	24.20	24.35	24.27
HSUPA Subtest-1	23.38	23.47	23.43

*EIRP = Conducted + antenna gain (1.5dBi)

LTE Band 4						
BW	MCS Index	Channel		19957	20175	20393
		Frequency (MHz)		1710.7	1732.5	1754.3
1.4M	QPSK	1	0	23.71	23.69	23.40
		1	2	**23.77**	23.70	23.43
		1	5	23.69	23.63	23.48
		3	0	23.72	23.71	23.43
		3	1	23.75	23.75	23.56
		3	3	23.76	23.60	23.43
		6	0	22.83	22.69	22.52
	16QAM	1	0	22.91	23.00	22.98
		1	2	23.04	23.05	22.50
		1	5	22.94	**23.07**	22.44
		3	0	22.85	22.68	22.63
		3	1	22.82	22.69	22.64
		3	3	22.81	22.63	22.59
		6	0	21.79	21.86	21.44
BW	MCS Index	Channel		19965	20175	20385
		Frequency (MHz)		1711.5	1732.5	1753.5
3M	QPSK	1	0	**23.61**	23.08	23.51
		1	7	23.51	23.46	22.84
		1	14	23.40	22.92	22.75
		8	0	22.23	22.17	22.28
		8	3	22.26	22.23	21.89
		8	7	22.08	22.03	21.66
		15	0	22.30	21.99	22.08
	16QAM	1	0	22.06	21.77	22.01
		1	7	22.71	**22.91**	22.60
		1	14	21.91	21.59	22.06
		8	0	21.24	21.38	21.00
		8	3	21.15	20.96	20.92
		8	7	21.21	21.00	20.77
		15	0	21.31	21.03	21.02

*EIRP = Conducted + antenna gain (1.5dBi)

LTE Band 4						
BW	MCS Index	Channel		19975	20175	20375
		Frequency (MHz)		1712.5	1732.5	1752.5
5M	QPSK	1	0	23.57	23.39	23.39
		1	12	23.33	**23.70**	22.92
		1	24	23.32	22.87	22.75
		12	0	22.25	22.05	22.12
		12	6	22.32	22.35	22.19
		12	13	22.33	22.13	21.95
		25	0	22.41	22.00	22.00
	16QAM	1	0	22.24	22.04	22.00
		1	12	22.78	**23.01**	22.89
		1	24	22.00	21.63	21.67
		12	0	21.29	21.19	20.98
		12	6	21.51	21.05	20.78
		12	13	21.36	20.94	20.63
		25	0	21.26	21.06	21.01
BW	MCS Index	Channel		20000	20175	20350
		Frequency (MHz)		1715	1732.5	1750
10M	QPSK	1	0	23.37	23.31	23.57
		1	24	23.49	**23.78**	23.02
		1	49	23.23	23.18	22.59
		25	0	22.37	22.36	22.31
		25	12	22.17	22.27	22.20
		25	25	22.05	22.24	21.89
		50	0	22.52	21.92	21.87
	16QAM	1	0	21.99	21.81	22.19
		1	24	22.79	**22.88**	22.74
		1	49	21.84	21.77	21.94
		25	0	21.37	21.28	21.07
		25	12	21.29	21.25	20.69
		25	25	21.37	21.00	20.78
		50	0	21.26	20.87	21.15

*EIRP = Conducted + antenna gain (1.5dBi)

LTE Band 4						
BW	MCS Index	Channel		20025	20175	20325
		Frequency (MHz)		1717.5	1732.5	1747.5
15M	QPSK	1	0	23.49	23.34	23.33
		1	37	23.61	**23.78**	22.98
		1	74	23.36	23.07	22.81
		36	0	22.54	22.10	22.06
		36	19	22.49	22.37	22.18
		36	39	22.17	22.18	21.63
		75	0	22.47	22.18	21.99
	16QAM	1	0	21.88	21.73	21.88
		1	37	22.81	**22.91**	22.88
		1	74	21.79	21.70	21.78
		36	0	21.25	21.26	21.05
		36	19	21.32	20.90	20.80
		36	39	21.45	21.12	20.88
		75	0	21.14	21.11	21.12
BW	MCS Index	Channel		20050	20175	20300
		Frequency (MHz)		1720	1732.5	1745
20M	QPSK	1	0	23.48	23.22	23.41
		1	50	23.53	**23.65**	23.03
		1	99	23.32	23.02	22.72
		50	0	22.36	22.22	22.22
		50	25	22.31	22.25	22.02
		50	50	22.25	22.11	21.79
		100	0	22.39	22.09	22.05
	16QAM	1	0	22.05	21.93	22.00
		1	50	22.82	**22.84**	22.75
		1	99	21.86	21.75	21.86
		50	0	21.39	21.33	21.17
		50	25	21.35	21.05	20.87
		50	50	21.29	21.01	20.73
		100	0	21.21	20.97	20.95

*EIRP = Conducted + antenna gain (1.5dBi)

ERP Power (dBm)

LTE Band 12						
BW	**MCS Index**	**Channel**		**23017**	**23095**	**23173**
		Frequency (MHz)		**699.7**	**707.5**	**715.3**
1.4M	QPSK	1	0	23.19	23.07	23.38
		1	2	23.53	23.55	**23.95**
		1	5	23.22	22.99	23.46
		3	0	22.06	21.99	22.34
		3	1	22.29	22.12	22.55
		3	3	22.05	22.33	22.50
		6	0	21.96	22.22	22.33
	16QAM	1	0	21.93	21.68	21.79
		1	2	21.61	21.73	**22.14**
		1	5	21.63	22.00	21.65
		3	0	21.00	20.89	21.23
		3	1	21.14	21.15	21.58
		3	3	21.16	21.12	21.36
		6	0	21.13	21.13	21.50
BW	**MCS Index**	**Channel**		**23025**	**23095**	**23165**
		Frequency (MHz)		**700.5**	**707.5**	**714.5**
3M	QPSK	1	0	23.20	23.21	23.46
		1	7	23.51	23.56	**23.66**
		1	14	23.28	23.22	23.22
		8	0	21.85	22.16	22.10
		8	3	22.13	22.45	22.31
		8	7	22.15	22.31	22.21
		15	0	22.16	21.96	22.19
	16QAM	1	0	21.92	21.69	22.06
		1	7	21.50	21.71	**22.26**
		1	14	21.51	22.03	21.72
		8	0	21.26	20.90	21.37
		8	3	21.23	21.39	21.38
		8	7	20.98	21.22	21.42
		15	0	21.15	21.17	21.46

*ERP = Conducted + antenna gain (1.6dBi)-2.15

LTE Band 12						
BW	MCS Index	Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	23.19	22.95	23.47
		1	12	23.26	**23.79**	23.66
		1	24	23.24	23.25	23.39
		12	0	22.00	22.18	22.27
		12	6	22.04	22.09	22.48
		12	13	22.23	22.45	22.11
		25	0	22.20	22.03	22.13
	16QAM	1	0	21.82	21.89	**22.08**
		1	12	21.77	21.89	22.05
		1	24	21.85	22.07	21.60
		12	0	21.26	21.06	21.27
		12	6	20.96	21.41	21.37
		12	13	21.02	21.22	21.48
		25	0	21.10	21.07	21.44
BW	MCS Index	Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	23.30	23.12	23.32
		1	24	23.41	23.64	**23.78**
		1	49	23.27	23.17	23.37
		25	0	22.04	22.16	22.30
		25	12	22.10	22.29	22.35
		25	25	22.16	22.25	22.31
		50	0	22.11	22.15	22.24
	16QAM	1	0	21.76	21.88	21.89
		1	24	21.65	21.76	**22.10**
		1	49	21.65	21.87	21.80
		25	0	21.12	21.05	21.23
		25	12	21.05	21.21	21.53
		25	25	21.16	21.32	21.31
		50	0	21.21	21.21	21.41

*ERP = Conducted + antenna gain (1.6dBi)-2.15

LTE Band 13						
BW	MCS Index	Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	23.07	23.24	23.16
		1	12	23.25	23.30	23.28
		1	24	23.17	23.14	**23.33**
		12	0	22.01	22.21	22.16
		12	6	22.07	22.21	22.23
		12	13	22.01	22.15	22.17
		25	0	22.01	22.21	22.16
	16QAM	1	0	21.76	21.75	21.68
		1	12	21.69	21.61	21.76
		1	24	21.69	21.60	**21.78**
		12	0	21.00	20.89	21.09
		12	6	20.98	21.14	21.06
		12	13	21.15	21.10	20.72
		25	0	20.88	21.30	21.19
BW	MCS Index	Channel		23230		
		Frequency (MHz)		782		
10M	QPSK	1	0	23.20		
		1	24	23.14		
		1	49	**23.25**		
		25	0	22.24		
		25	12	22.05		
		25	25	22.12		
		50	0	22.19		
	16QAM	1	0	21.64		
		1	24	21.52		
		1	49	**21.74**		
		25	0	21.02		
		25	12	21.06		
		25	25	20.98		
		50	0	21.23		

*ERP = Conducted + antenna gain (1.6dBi)-2.15

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

a. The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log (P) dB. The limit of emission is equal to -13 dBm.

4.2.2 Test Procedure

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 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 substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G.
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB.

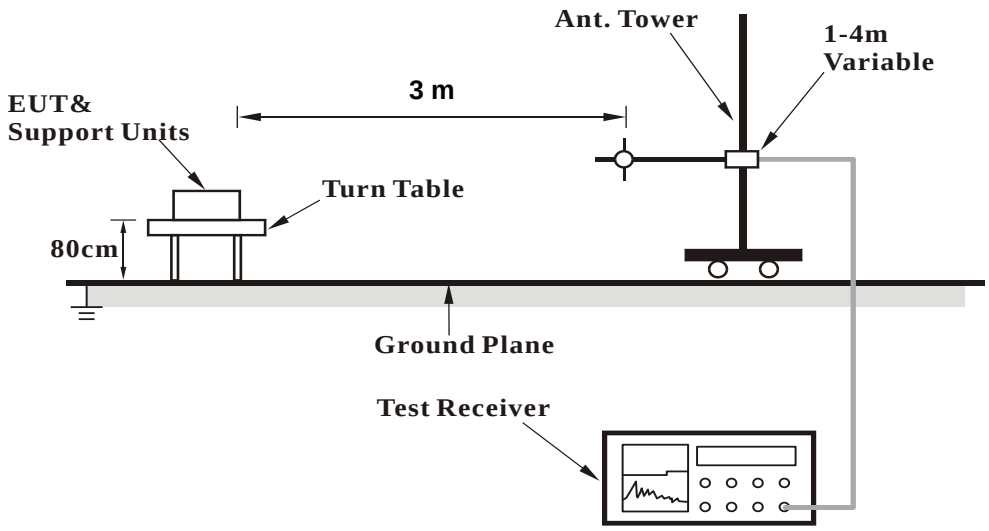
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.2.3 Deviation from Test Standard

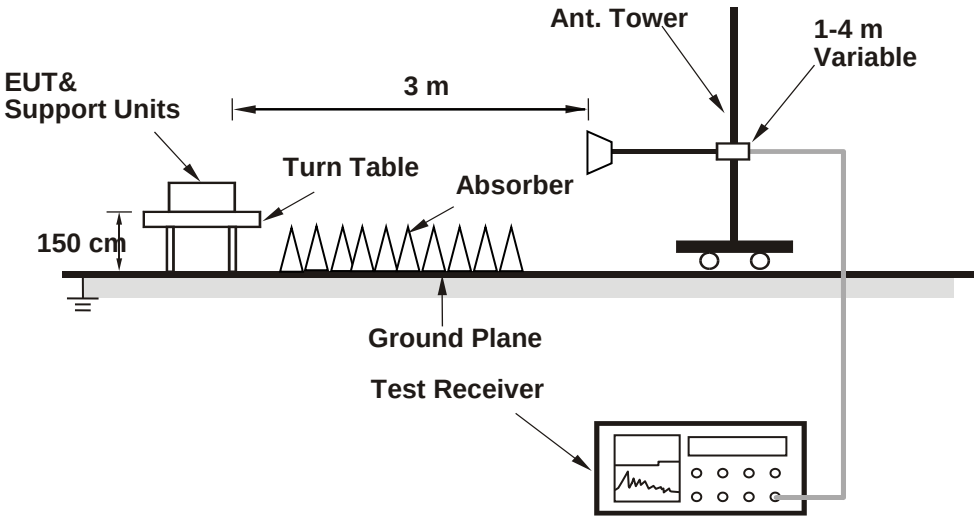
No deviation.

4.2.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

4.2.5 Test Results

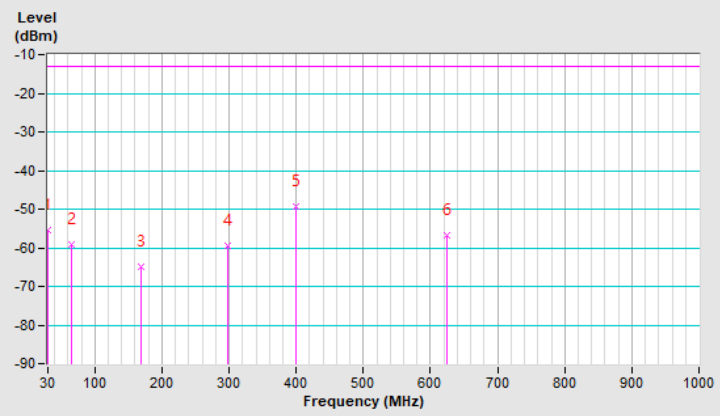
Below 1GHz

RF Mode	TX WCDMA Band IV	Channel	CH 1513：1752.6 MHz
Frequency Range	30MHz ~ 1GHz		

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	30.00	-55.4	-13.0	-42.4	1.50 H	82	59.8	-115.2
2	65.89	-59.2	-13.0	-46.2	1.00 H	65	56.4	-115.6
3	169.68	-65.0	-13.0	-52.0	1.50 H	259	49.0	-114.0
4	297.72	-59.3	-13.0	-46.3	1.25 H	278	53.9	-113.2
5	399.57	-49.5	-13.0	-36.5	1.25 H	261	61.2	-110.7
6	624.61	-56.9	-13.0	-43.9	1.00 H	0	48.7	-105.6

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

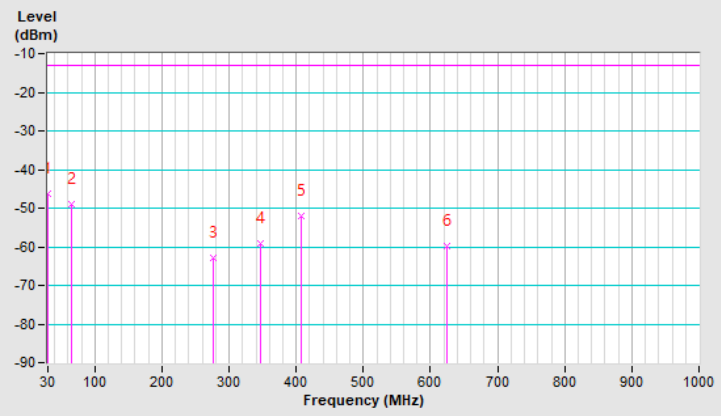


RF Mode	TX WCDMA Band IV	Channel	CH 1513：1752.6 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**30.00**	**-46.1**	**-13.0**	**-33.1**	**1.25 V**	**0**	**69.1**	**-115.2**
2	65.89	-48.9	-13.0	-35.9	1.25 V	172	66.7	-115.6
3	277.35	-63.0	-13.0	-50.0	1.00 V	198	50.7	-113.7
4	346.22	-59.1	-13.0	-46.1	1.00 V	317	52.9	-112.0
5	408.30	-52.2	-13.0	-39.2	1.50 V	348	58.3	-110.5
6	624.61	-59.7	-13.0	-46.7	1.00 V	264	45.9	-105.6

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

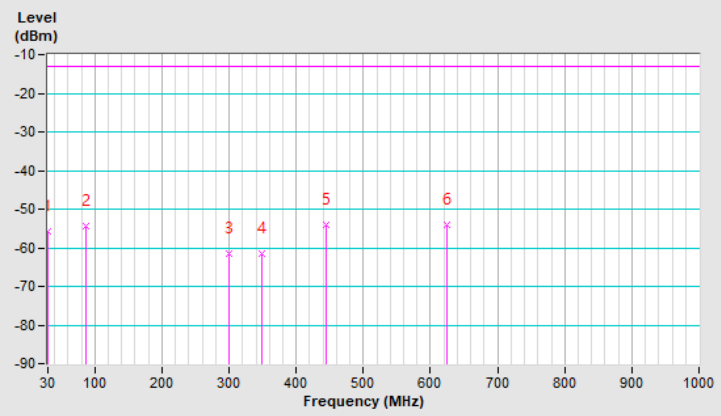


RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	30MHz ~ 1GHz		

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	30.97	-55.8	-13.0	-42.8	1.25 H	149	59.7	-115.5
2	86.26	-54.5	-13.0	-41.5	1.00 H	170	64.8	-119.3
3	300.63	-61.4	-13.0	-48.4	1.50 H	102	51.7	-113.1
4	349.13	-61.6	-13.0	-48.6	1.00 H	18	50.3	-112.0
5	444.19	-54.0	-13.0	-41.0	1.50 H	182	55.2	-109.3
6	624.61	-54.2	-13.0	-41.2	1.00 H	106	51.4	-105.6

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

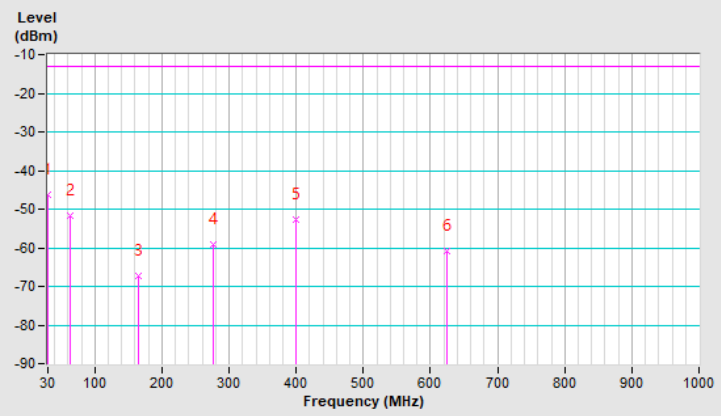


RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	-46.3	-13.0	-33.3	1.50 V	102	68.9	-115.2
2	62.98	-51.6	-13.0	-38.6	2.00 V	102	63.3	-114.9
3	165.80	-67.2	-13.0	-54.2	1.00 V	181	46.7	-113.8
4	277.35	-59.1	-13.0	-46.1	1.00 V	178	54.6	-113.7
5	399.57	-52.6	-13.0	-39.6	2.00 V	102	58.1	-110.7
6	624.61	-60.7	-13.0	-47.7	1.25 V	141	44.9	-105.6

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

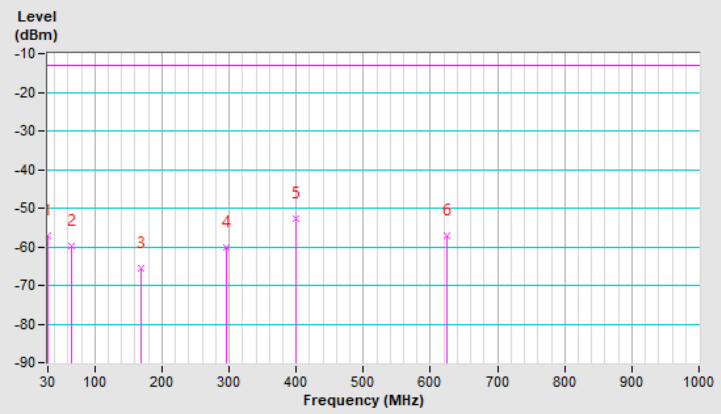


RF Mode	TX LTE Band XII-10MHz	Channel	CH 23130：711 MHz
Frequency Range	30MHz ~ 1GHz		

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	30.00	-57.0	-13.0	-44.0	1.25 H	75	60.4	-117.4
2	65.89	-60.0	-13.0	-47.0	1.25 H	75	57.7	-117.7
3	169.68	-65.7	-13.0	-52.7	1.00 H	255	50.5	-116.1
4	295.78	-60.2	-13.0	-47.2	1.50 H	279	55.2	-115.4
5	399.57	-52.7	-13.0	-39.7	1.00 H	266	60.1	-112.8
6	624.61	-57.2	-13.0	-44.2	1.00 H	188	50.6	-107.8

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

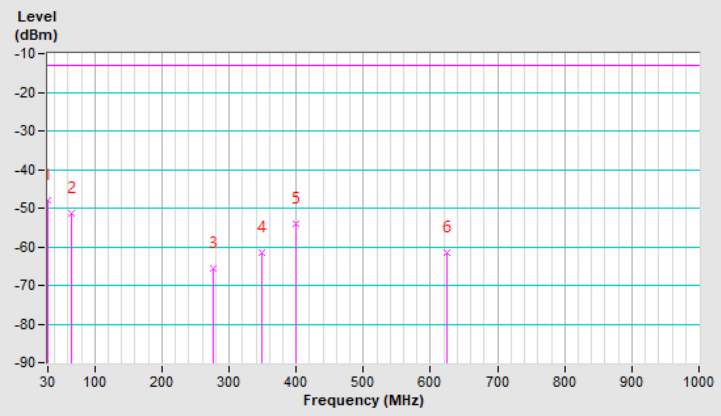


RF Mode	TX LTE Band XII-10MHz	Channel	CH 23130：711 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	-48.1	-13.0	-35.1	1.50 V	131	69.3	-117.4
2	65.89	-51.3	-13.0	-38.3	1.00 V	147	66.4	-117.7
3	276.38	-65.6	-13.0	-52.6	1.25 V	347	50.3	-115.9
4	349.13	-61.6	-13.0	-48.6	1.25 V	349	52.5	-114.1
5	399.57	-54.2	-13.0	-41.2	1.00 V	0	58.6	-112.8
6	624.61	-61.6	-13.0	-48.6	2.00 V	255	46.2	-107.8

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

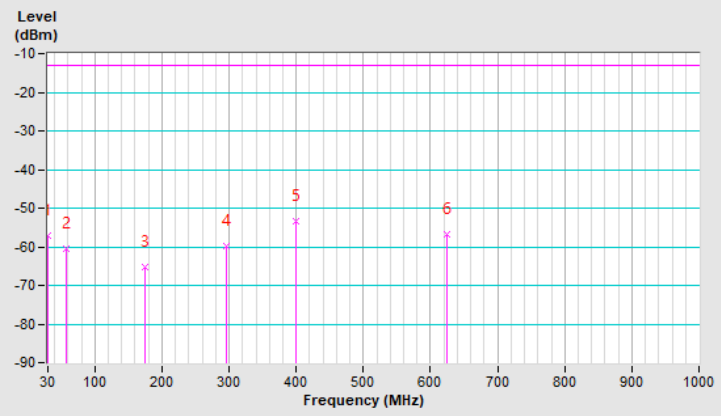


RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230：782 MHz
Frequency Range	30MHz ~ 1GHz		

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	30.00	-57.2	-13.0	-44.2	1.00 H	74	60.1	-117.4
2	58.13	-60.6	-13.0	-47.6	1.00 H	41	56.0	-116.7
3	174.53	-65.4	-13.0	-52.4	1.50 H	262	51.2	-116.6
4	295.78	-59.8	-13.0	-46.8	1.50 H	289	55.6	-115.4
5	400.54	-53.3	-13.0	-40.3	1.00 H	278	59.5	-112.8
6	624.61	-56.8	-13.0	-43.8	1.25 H	0	51.0	-107.8

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

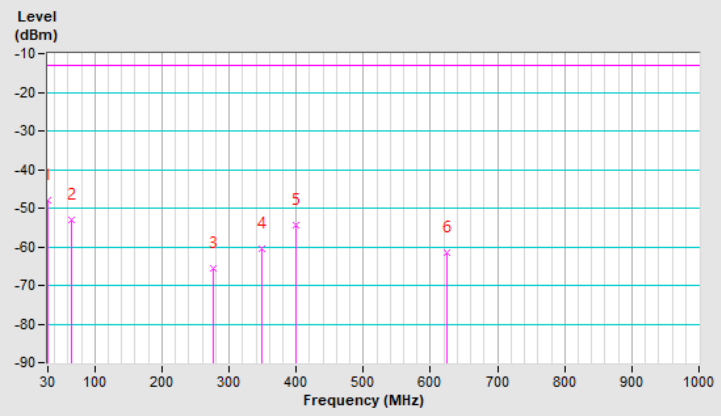


RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230：782 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	-47.8	-13.0	-34.8	1.25 V	78	69.5	-117.4
2	64.92	-52.9	-13.0	-39.9	1.00 V	192	64.8	-117.7
3	277.35	-65.7	-13.0	-52.7	1.00 V	200	50.2	-115.9
4	349.13	-60.4	-13.0	-47.4	1.50 V	322	53.7	-114.1
5	399.57	-54.4	-13.0	-41.4	2.00 V	2	58.4	-112.8
6	624.61	-61.4	-13.0	-48.4	1.00 V	138	46.4	-107.8

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



Above 1GHz

RF Mode	TX WCDMA Band IV	Channel	CH 1312：1712.4 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3424.80	-48.2	-13.0	-35.2	2.65 H	155	49.2	-97.3
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3424.80	-47.6	-13.0	-34.6	2.63 V	351	49.7	-97.3

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX WCDMA Band IV	Channel	CH 1413：1732.6 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3465.20	-48.1	-13.0	-35.1	2.64 H	159	49.0	-97.1
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.20	-47.5	-13.0	-34.5	2.66 V	350	49.6	-97.1

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX WCDMA Band IV	Channel	CH 1513：1752.6 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3505.20	-47.2	-13.0	-34.2	2.68 H	159	49.6	-96.8
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3505.20	-47.2	-13.0	-34.2	2.64 V	355	49.6	-96.8

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 19957：1710.7 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3421.40	-48.4	-13.0	-35.4	2.65 H	162	48.9	-97.3
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3421.40	-46.0	-13.0	-33.0	2.47 V	121	51.3	-97.3

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3465.00	-48.1	-13.0	-35.1	2.66 H	168	49.0	-97.1
Antenna Polarity & Test Distance : Vertical at 3m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	**3465.00**	**-45.3**	**-13.0**	**-32.3**	**2.55 V**	**119**	**51.8**	**-97.1**

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 20393：1754.3 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3508.60	-47.4	-13.0	-34.4	2.65 H	163	49.3	-96.8
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3508.60	-46.4	-13.0	-33.4	2.56 V	120	50.3	-96.8

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-5MHz	Channel	CH 19975：1712.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3425.00	-48.7	-13.0	-35.7	2.68 H	159	48.7	-97.3
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3425.00	-46.1	-13.0	-33.1	2.58 V	115	51.2	-97.3

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-5MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3425.00	-48.8	-13.0	-35.8	2.64 H	167	48.6	-97.3
Antenna Polarity & Test Distance : Vertical at 3m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	**3425.00**	**-45.3**	**-13.0**	**-32.3**	**2.59 V**	**119**	**52.0**	**-97.3**

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-5MHz	Channel	CH 20375：1752.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3505.00	-48.4	-13.0	-35.4	2.69 H	160	48.4	-96.8
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3505.00	-46.6	-13.0	-33.6	2.55 V	123	50.2	-96.8

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20050：1720 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3440.00	-48.8	-13.0	-35.8	2.64 H	165	48.5	-97.2
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3440.00	-46.5	-13.0	-33.5	2.48 V	116	50.7	-97.2

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3465.00	-47.7	-13.0	-34.7	2.59 H	163	49.3	-97.1
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-45.7	-13.0	-32.7	2.47 V	125	51.3	-97.1

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20300：1745 MHz
Frequency Range	1GMHz ~ 18GHz		

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	3490.00	-48.1	-13.0	-35.1	2.65 H	160	48.8	-96.9
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-46.0	-13.0	-33.0	2.52 V	113	50.9	-96.9

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XII-1.4MHz	Channel	CH 23017：699.7 MHz
Frequency Range	1GMHz ~ 18GHz		

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	1399.40	-40.1	-13.0	-27.1	2.07 H	322	62.3	-102.4
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1399.40	-42.4	-13.0	-29.4	2.07 V	116	60.0	-102.4

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-1.4MHz	Channel	CH 23095：707.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	1415.00	-39.9	-13.0	-26.9	2.06 H	318	62.6	-102.4
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1415.00	-42.3	-13.0	-29.3	2.06 V	114	60.1	-102.4

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-1.4MHz	Channel	CH 23173：715.3 MHz
Frequency Range	1GMHz ~ 18GHz		

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	1430.60	-40.1	-13.0	-27.1	2.04 H	325	62.4	-102.5
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1430.60	-42.3	-13.0	-29.3	2.03 V	114	60.2	-102.5

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-5MHz	Channel	CH 23035：701.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	1403.00	-39.1	-13.0	-26.1	2.05 H	320	63.3	-102.4
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1403.00	-42.1	-13.0	-29.1	1.98 V	115	60.3	-102.4

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-5MHz	Channel	CH 23095：707.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	1415.00	-38.8	-13.0	-25.8	2.05 H	320	63.7	-102.4
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1415.00	-42.2	-13.0	-29.2	2.05 V	119	60.2	-102.4

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-5MHz	Channel	CH 23155：713.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	-38.8	-13.0	-25.8	2.04 H	315	63.7	-102.5
Antenna Polarity & Test Distance : Vertical at 3m								
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	-42.4	-13.0	-29.4	2.03 V	113	60.1	-102.5

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-10MHz	Channel	CH 23060：704 MHz
Frequency Range	1GMHz ~ 18GHz		

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	**1408.00**	**-36.2**	**-13.0**	**-23.2**	**2.02 H**	**318**	**66.2**	**-102.4**
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1408.00	-41.3	-13.0	-28.3	2.03 V	114	61.1	-102.4

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-10MHz	Channel	CH 23095：707.5 MHz
Frequency Range	1GMHz ~ 18GHz		

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	**1415.00**	**-36.2**	**-13.0**	**-23.2**	**2.05 H**	**320**	**66.2**	**-102.4**
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1415.00	-40.9	-13.0	-27.9	2.08 V	113	61.5	-102.4

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XII-10MHz	Channel	CH 23130：711 MHz
Frequency Range	1GMHz ~ 18GHz		

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**	**-36.2**	**-13.0**	**-23.2**	**2.04 H**	**319**	**66.3**	**-102.5**
Antenna Polarity & Test Distance : Vertical at 3m								
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	-41.0	-13.0	-28.0	2.07 V	115	61.4	-102.5

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) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23205：779.5 MHz
Frequency Range	1GMHz ~ 20GHz		

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	1559.00	-50.9	-40.0	-10.9	2.00 H	144	50.0	-101.0
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**1559.00**	**-46.2**	**-40.0**	**-6.2**	**2.88 V**	**95**	**54.8**	**-101.0**

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23230：782 MHz
Frequency Range	1GMHz ~ 20GHz		

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	1564.00	-50.9	-40.0	-10.9	1.98 H	147	50.1	-101.0
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1564.00	-46.4	-40.0	-6.4	2.86 V	100	54.6	-101.0

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23255：784.5 MHz
Frequency Range	1GMHz ~ 20GHz		

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	1569.00	-51.1	-40.0	-11.1	1.99 H	145	49.9	-101.0
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1569.00	-46.4	-40.0	-6.4	2.92 V	98	54.6	-101.0

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230：782 MHz
Frequency Range	1GMHz ~ 20GHz		

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	1564.00	-50.9	-40.0	-10.9	1.98 H	144	50.1	-101.0
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1564.00	-46.3	-40.0	-6.3	2.85 V	102	54.7	-101.0

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – 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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