

Partial FCC Test Report

(PART 27)

Report No.: RFBEDW-WTW-P21031095-2

FCC ID: GKR-LN300EG3L

Test Model: Lenovo 300e Chromebook Gen 3*****(*=0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)

Received Date: Mar. 31, 2021

Test Date: Apr. 29 ~ May 05, 2021

Issued Date: May 28, 2021

Applicant: Compal Electronics Inc

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



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Release Control Record

Issue No.	Description	Date Issued
RFBEDW-WTW-P21031095-2	Original Release	May 28, 2021

1 Certificate of Conformity

Product: Notebook Computer

Brand: Lenovo

Test Model: Lenovo 300e Chromebook Gen 3*****(*=0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)

Sample Status: Engineering Sample

Applicant: Compal Electronics Inc

Test Date: Apr. 29 ~ May 05, 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 : Gina Liu, **Date:** May 28, 2021
Gina Liu / Specialist

Approved by : Dylan Chiou, **Date:** May 28, 2021
Dylan Chiou / Senior 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 1
2.1055 27.54	Frequency Stability	N/A	Refer to Note 1
2.1049	Occupied Bandwidth	N/A	Refer to Note 1
27.50(d)(5)	Peak to Average Ratio	N/A	Refer to Note 1
27.53(h)	Band Edge Measurements	N/A	Refer to Note 1
2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to Note 1
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -30.10 dB at 33.88 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 4)			
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 1
2.1055 27.54	Frequency Stability	N/A	Refer to Note 1
2.1049	Occupied Bandwidth	N/A	Refer to Note 1
27.50(d)(5)	Peak to Average Ratio	N/A	Refer to Note 1
27.53(h)	Band Edge Measurements	N/A	Refer to Note 1
2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to Note 1
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -33.73 dB at 56.19 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 12)			
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 1
2.1055 27.54	Frequency Stability	N/A	Refer to Note 1
2.1049	Occupied Bandwidth	N/A	Refer to Note 1
---	Peak to Average Ratio	N/A	Refer to Note 1
27.53(g)	Band Edge Measurements	N/A	Refer to Note 1
2.1051 27.53(g)	Conducted Spurious Emissions	N/A	Refer to Note 1
2.1053 27.53(g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -34.60 dB at 85.29 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 1
2.1055 27.54	Frequency Stability	N/A	Refer to Note 1
2.1049	Occupied Bandwidth	N/A	Refer to Note 1
---	Peak to Average Ratio	N/A	Refer to Note 1
27.53(c)(2)(4)	Band Edge Measurements	N/A	Refer to Note 1
2.1051 27.53(c)(2)&(f)	Conducted Spurious Emissions	N/A	Refer to Note 1
2.1053 27.53(c)(2)&(f)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -11.86 dB at 1559.00 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 66)			
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 1
2.1055 27.54	Frequency Stability	N/A	Refer to Note 1
2.1049	Occupied Bandwidth	N/A	Refer to Note 1
27.50(d)(5)	Peak to Average Ratio	N/A	Refer to Note 1
27.53(h)	Band Edge Measurements	N/A	Refer to Note 1
2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to Note 1
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -28.93 dB at 187.14 MHz.

Note:

1. This report is a partial report. Therefore, only test item of Output Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to BV CPS report no.: RF180704C01-4 for module (Brand: Fibocom, Model: L850-GL).
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	3.59 dB
	200 MHz ~ 1000 MHz	3.60 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 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. 12, 2020	Jun. 11, 2021
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
Loop Antenna EMCI	EM-6879	269	Sep. 17, 2020	Sep. 16, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 08, 2020	Jun. 07, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 17, 2021	Feb. 16, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM800 0	CABLE-CH9-02 (248780+171006)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(2507 95/4)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 08, 2020	Jun. 07, 2021
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, 2020	May 31, 2021
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 06, 2020	Jun. 05, 2021

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	Notebook Computer	
Brand	Lenovo	
Test Model	Lenovo 300e Chromebook Gen 3*****(*=0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)	
Status of EUT	Engineering Sample	
Power Supply Rating	20.0 Vdc from adapter 11.52 Vdc from battery	
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
	LTE Band 66 (Channel Bandwidth: 1.4 MHz)	1710.7 ~ 1779.3 MHz
	LTE Band 66 (Channel Bandwidth: 3 MHz)	1711.5 ~ 1778.5 MHz
	LTE Band 66 (Channel Bandwidth: 5 MHz)	1712.5 ~ 1777.5 MHz
	LTE Band 66 (Channel Bandwidth: 10 MHz)	1715.0 ~ 1775.0 MHz
	LTE Band 66 (Channel Bandwidth: 15 MHz)	1717.5 ~ 1772.5 MHz
LTE Band 66 (Channel Bandwidth: 20 MHz)	1720.0 ~ 1770.0 MHz	
Max. ERP Power	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	148.936 mW (21.73dBm)
	LTE Band 12 (Channel Bandwidth: 3 MHz)	145.546 mW (21.63dBm)
	LTE Band 12 (Channel Bandwidth: 5 MHz)	148.936 mW (21.73dBm)
	LTE Band 12 (Channel Bandwidth: 10 MHz)	151.008 mW (21.79dBm)
	LTE Band 13 (Channel Bandwidth: 5 MHz)	117.490 mW (20.70dBm)
	LTE Band 13 (Channel Bandwidth: 10 MHz)	118.032 mW (20.72dBm)

Max. EIRP Power	WCDMA	311.172 mW (24.93dBm)
	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	277.332 mW (24.43dBm)
	LTE Band 4 (Channel Bandwidth: 3 MHz)	276.694 mW (24.42dBm)
	LTE Band 4 (Channel Bandwidth: 5 MHz)	278.612 mW (24.45dBm)
	LTE Band 4 (Channel Bandwidth: 10 MHz)	285.102 mW (24.55dBm)
	LTE Band 4 (Channel Bandwidth: 15 MHz)	287.740 mW (24.59dBm)
	LTE Band 4 (Channel Bandwidth: 20 MHz)	288.403 mW (24.60dBm)
	LTE Band 66 (Channel Bandwidth: 1.4 MHz)	269.153 mW (24.30dBm)
	LTE Band 66 (Channel Bandwidth: 3 MHz)	268.534 mW (24.29dBm)
	LTE Band 66 (Channel Bandwidth: 5 MHz)	282.488 mW (24.51dBm)
	LTE Band 66 (Channel Bandwidth: 10 MHz)	282.488 mW (24.51dBm)
	LTE Band 66 (Channel Bandwidth: 15 MHz)	280.543 mW (24.48dBm)
	LTE Band 66 (Channel Bandwidth: 20 MHz)	292.415 mW (24.66dBm)
Antenna Type	Refer to Note as below	
Antenna Gain	Refer to Note as below	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

- The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter 1	Lenovo	ADLX45YLC2D	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20.0V===2.25A, 45.0W 1.75M / Ocore
Adapter 2	Lenovo	ADLX65YCC3D	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20.0V===3.25A, 65.0W 1.77M / Ocore
Adapter 3	Lenovo	ADLX65NLC3A	I/P: 100-240Vac, 50-60Hz, 1.8A O/P: 20.0V ===3.25A 1.55M / Ocore
Battery	Lenovo	L20M3PG0	11.52 Vdc, 3994 mAh, 46Wh
LTE module	Fibocom	L850-GL	-

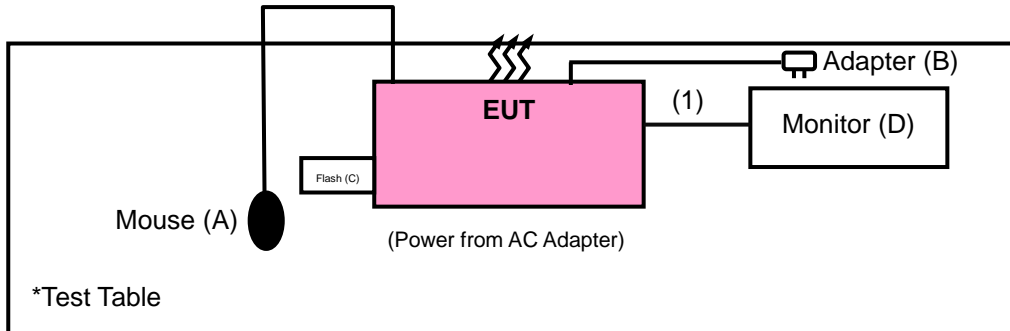
- The antenna information is listed as below.

Ant. Type	Brand	Ant.	Model	Antenna Peak Gain (dBi)				Connector
				WCDMA IV / LTE 4	LTE 12	LTE 13	LTE 66	
PIFA	Pulse	Main	SZ18665 (DC33002JN20)	1.19	1.07	-0.01	1.25	IPEX 20565 or compatible.
		Aux.	SZ1868E (DC33002JN30)					
	South Star	Main	N19-0814-R0A (DC33002J020)	-2.07	-2.08	-2.67	-2.02	
		Aux.	N19-0815-R0A (DC33002J030)					

* The Max antenna gain was chosen for final test.

- The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
- The 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



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.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Mouse	Microsoft	1113	9170515897028	FCC DOC Approved	-
B	Adapter	Lenovo	ADLX45YLC2D	NA	NA	Provided by client
C	Flash	HP	v250W	09	NA	-
D	Monitor	DELL	U2410	CN-0J257M-728 72-0A6-02YL	Doc	-

No.	Signal Cable Description Of The Above Support Units
1.	HDMI Cable: 1m

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item C acted as communication partners to transfer data.

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, XYZ axis & NB Mode, and antenna ports.

The worst case was found when positioned on NB mode for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

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

Note: For radiated emissions below 1 GHz, select the worst radiated emission channel for final testing.

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 / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20 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.
3. For radiated emissions below 1 GHz, select the worst radiated emission channel for final testing.

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 / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
-	Radiated Emission	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	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.
3. For radiated emissions below 1 GHz, select the worst radiated emission channel for final testing.

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 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		23230	23230	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 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.
3. For radiated emissions below 1 GHz, select the worst radiated emission channel for final testing.

LTE Band 66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	131979 to 132665	131979, 132322, 132665	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		131987 to 132657	131987, 132322, 132657	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		131997 to 132647	131997, 132322, 132647	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		132022 to 132622	132022, 132322, 132622	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset

		132047 to 132597	132047, 132322, 132597	15 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		132072 to 132572	132072, 132322, 132572	20 MHz	QPSK, 16QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Radiated Emission	131979 to 132665	131979, 132322, 132665	1.4 MHz	QPSK	1 RB / 0 RB Offset
		131997 to 132647	131997, 132322, 132647	5 MHz	QPSK	1 RB / 0 RB Offset
		132072 to 132572	132072, 132322, 132572	20 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.
3. For radiated emissions below 1 GHz, select the worst radiated emission channel for final testing.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP / EIRP	25 deg. C, 60 % RH	120 Vac, 60 Hz	Jones Chang
Radiated Emission	22 deg. C, 66 % 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 and references:

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

For WCDMA Band 4, LTE Band 4, LTE Band 66:
Mobile / Portable station are limited to 1 watts e.i.r.p.

For LTE Band 12, LTE Band 13:

Control and mobile stations in the 698-746 MHz, 746-757 MHz, 787-788 MHz and 805-806 MHz band are limited to 30 watts ERP.

Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink, 746-757 MHz, 787-788 MHz and 805-806 MHz band are limited to 3 watts ERP.

4.1.2 Test Procedures

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:

$$\text{EIRP} = P_{\text{Meas}} + G_{\text{T}}$$

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

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)

Conducted Power Measurement:

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

4.1.3 Test Setup

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	23.36	23.55	23.74
HSDPA Subtest-1	23.33	23.50	23.49
HSDPA Subtest-2	22.36	22.56	22.54
HSDPA Subtest-3	21.88	22.09	22.07
HSDPA Subtest-4	21.63	21.85	21.83
HSUPA Subtest-1	22.44	22.59	22.47
HSUPA Subtest-2	20.22	20.31	20.26
HSUPA Subtest-3	20.97	21.07	20.98
HSUPA Subtest-4	20.50	20.62	20.53
HSUPA Subtest-5	22.40	22.60	22.50

LTE Band 4															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				20050	20175	20300						20025	20175	20325	
				Channel Frequency (MHz)	1720.0	1732.5						1745.0	Channel Frequency (MHz)	1717.5	
20M	QPSK	1	0	22.89	23.08	22.85	0	15M	QPSK	1	0	22.85	23.01	23.17	0
		1	50	23.11	22.68	22.99	0			1	37	23.07	22.75	22.43	0
		1	99	22.84	22.96	23.01	0			1	74	22.99	22.84	22.69	0
		50	0	23.06	22.90	23.00	1			36	0	23.00	22.85	22.70	1
		50	25	23.13	22.70	23.03	1			36	19	23.09	22.76	22.43	1
		50	50	23.01	22.81	22.87	1			36	39	23.06	22.77	22.48	1
	100	0	23.17	22.85	23.15	1	75		0	23.10	22.77	22.44	1		
	16QAM	1	0	23.15	23.30	23.10	1		16QAM	1	0	23.08	23.24	23.40	1
		1	50	23.41	22.97	23.33	1			1	37	23.30	22.97	22.64	1
		1	99	23.04	23.11	23.21	1			1	74	23.21	23.08	22.95	1
		50	0	22.11	21.97	22.06	2			36	0	22.03	21.93	21.83	2
		50	25	22.17	21.77	22.07	2			36	19	22.12	21.84	21.56	2
50		50	22.03	21.87	21.90	2	36	39		22.10	21.83	21.56	2		
100	0	22.22	21.89	22.17	2	75	0	22.12	21.82	21.52	2				
10M	QPSK	1	0	22.86	22.95	23.04	0	5M	QPSK	1	0	22.84	22.84	22.89	0
		1	24	22.99	22.78	22.57	0			1	12	22.90	22.80	22.99	0
		1	49	23.15	22.78	22.41	0			1	24	22.98	22.71	23.04	0
		25	0	23.00	22.85	22.70	1			12	0	22.84	22.72	22.98	1
		25	12	23.06	22.77	22.48	1			12	6	22.91	22.74	23.02	1
		25	25	23.13	22.76	22.39	1			12	13	22.94	22.70	23.02	1
	50	0	23.04	22.81	22.58	1	25		0	22.93	22.76	23.03	1		
	16QAM	1	0	23.10	23.22	23.34	1		16QAM	1	0	23.06	23.02	23.13	1
		1	24	23.26	23.01	22.76	1			1	12	23.14	22.94	23.22	1
		1	49	23.36	23.02	22.68	1			1	24	23.18	22.92	23.26	1
		25	0	22.07	21.93	21.79	2			12	0	21.88	21.78	22.04	2
		25	12	22.10	21.85	21.60	2			12	6	21.99	21.79	22.06	2
25		25	22.16	21.83	21.50	2	12	13		22.00	21.75	22.04	2		
50	0	22.05	21.87	21.69	2	25	0	21.97	21.82	22.07	2				
3M	QPSK	1	0	22.79	22.74	22.98	0	1.4M	QPSK	1	0	22.81	22.70	23.07	0
		1	7	22.83	22.73	22.99	0			1	2	22.79	22.72	23.04	0
		1	14	22.89	22.67	23.00	0			1	5	22.82	22.73	23.09	0
		8	0	22.84	22.69	23.04	1			3	0	22.81	22.69	23.06	0
		8	3	22.83	22.73	23.01	1			3	1	22.80	22.67	23.06	0
		8	7	22.91	22.71	23.03	1			3	3	22.81	22.74	23.07	0
	15	0	22.83	22.75	23.00	1	6		0	22.81	22.74	23.07	1		
	16QAM	1	0	23.02	22.95	23.20	1		16QAM	1	0	23.08	22.94	23.24	1
		1	7	23.09	23.01	23.23	1			1	2	23.07	22.95	23.20	1
		1	14	23.13	22.94	23.23	1			1	5	23.10	22.99	23.23	1
		8	0	21.88	21.78	22.11	2			3	0	22.88	22.79	23.09	1
		8	3	21.87	21.81	22.05	2			3	1	22.89	22.78	23.10	1
8		7	21.95	21.80	22.07	2	3	3		22.90	22.83	23.10	1		
15	0	21.89	21.80	22.02	2	6	0	21.89	21.82	22.09	2				

LTE Band 12															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				23060	23095	23130						23035	23095	23155	
		Channel	23060	23095	23130	Channel	23035			23095	23155				
		Frequency (MHz)		704.0	707.5	711.0			Frequency (MHz)		701.5	707.5	713.5		
10M	QPSK	1	0	22.40	22.53	22.57	0	5M	QPSK	1	0	22.52	22.55	22.65	0
		1	24	22.44	22.49	22.64	0			1	12	22.68	22.53	22.41	0
		1	49	22.53	22.60	22.51	0			1	24	22.60	22.72	22.44	0
		25	0	22.60	22.48	22.68	1			12	0	22.50	22.56	22.47	1
		25	12	22.50	22.54	22.74	1			12	6	22.65	22.53	22.36	1
		25	25	22.52	22.72	22.48	1			12	13	22.65	22.61	22.43	1
	16QAM	50	0	22.55	22.67	22.73	1		25	0	22.71	22.59	22.38	1	
		1	0	22.69	22.87	22.81	1		16QAM	1	0	22.77	22.81	22.79	1
		1	24	22.65	22.64	22.74	1			1	12	22.78	22.78	22.75	1
		1	49	22.74	22.78	22.71	1			1	24	22.79	22.77	22.69	1
		25	0	21.73	21.67	21.74	2			12	0	21.59	21.60	21.52	2
		25	12	21.61	21.68	21.79	2			12	6	21.70	21.59	21.38	2
		25	25	21.68	21.90	21.56	2			12	13	21.68	21.66	21.42	2
		50	0	21.70	21.79	21.82	2			25	0	21.67	21.58	21.39	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				23025	23095	23165						23017	23095	23173	
		Channel	23025	23095	23165	Channel	23017			23095	23173				
		Frequency (MHz)		700.5	707.5	714.5			Frequency (MHz)		699.7	707.5	715.3		
3M	QPSK	1	0	22.10	22.22	22.16	0	1.4M	QPSK	1	0	22.42	22.44	22.22	0
		1	7	22.25	22.24	22.18	0			1	2	22.43	22.40	22.21	0
		1	14	22.32	22.36	22.11	0			1	5	22.49	22.43	22.20	0
		8	0	22.19	22.29	22.13	1			3	0	22.41	22.41	22.26	0
		8	3	22.21	22.26	22.20	1			3	1	22.41	22.40	22.23	0
		8	7	22.29	22.35	22.24	1			3	3	22.44	22.41	22.20	0
	16QAM	15	0	22.20	22.26	22.20	1		6	0	22.40	22.41	22.20	1	
		1	0	22.42	22.50	22.53	1		16QAM	1	0	22.69	22.69	22.55	1
		1	7	22.58	22.52	22.53	1			1	2	22.74	22.61	22.53	1
		1	14	22.71	22.65	22.41	1			1	5	22.81	22.64	22.49	1
		8	0	21.35	21.43	21.25	2			3	0	22.51	22.46	22.40	1
		8	3	21.36	21.40	21.34	2			3	1	22.51	22.45	22.38	1
		8	7	21.51	21.48	21.38	2			3	3	22.54	22.46	22.37	1
		15	0	21.34	21.34	21.31	2			6	0	21.51	21.47	21.35	2

LTE Band 13															
BW	MCS Index	RB Size	RB Offset	Mid			3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				Channel	23230								23205	23230	
		Frequency (MHz)	782.0			779.5	782.0			784.5					
10M	QPSK	1	0		22.44		0	5M	QPSK	1	0	22.39	22.42	22.43	0
		1	24		22.44		0			1	12	22.42	22.40	22.40	0
		1	49		22.47		0			1	24	22.47	22.42	22.40	0
		25	0		22.48		1			12	0	22.41	22.28	22.34	1
		25	12		22.51		1			12	6	22.35	22.32	22.36	1
		25	25		22.49		1			12	13	22.33	22.30	22.33	1
	16QAM	50	0		22.63		1		25	0	22.41	22.39	22.39	1	
		1	0		22.81		1		16QAM	1	0	22.74	22.80	22.80	1
		1	24		22.86		1			1	12	22.85	22.76	22.78	1
		1	49		22.88		1			1	24	22.86	22.77	22.79	1
		25	0		21.56		2			12	0	21.42	21.30	21.36	2
		25	12		21.56		2			12	6	21.39	21.35	21.39	2
		25	25		21.55		2			12	13	21.36	21.34	21.37	2
		50	0		21.71		2			25	0	21.39	21.37	21.39	2

LTE Band 66															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				Channel	132072	132322						132572	132047	132322	
		Frequency (MHz)	1720.0	1745.0	1770.0	1717.5	1745.0			1772.5					
20M	QPSK	1	0	22.84	22.89	22.91	0	15M	QPSK	1	0	22.73	22.84	22.67	0
		1	50	23.09	22.84	22.47	0			1	37	22.91	22.79	22.34	0
		1	99	22.81	22.96	22.73	0			1	74	22.91	22.78	22.66	0
		50	0	22.94	22.95	22.73	1			36	0	22.82	22.83	22.45	1
		50	25	23.08	22.92	22.52	1			36	19	22.91	22.76	22.40	1
		50	50	22.98	22.83	22.53	1			36	39	22.94	22.68	22.54	1
	16QAM	100	0	23.24	23.07	22.75	1		75	0	23.00	22.89	22.60	1	
		1	0	23.18	23.27	23.26	1		16QAM	1	0	23.13	23.19	23.05	1
		1	50	23.47	23.22	22.83	1			1	37	23.27	23.14	22.77	1
		1	99	23.17	23.29	23.06	1			1	74	23.29	23.21	23.00	1
		50	0	21.88	21.88	21.66	2			36	0	21.74	21.77	21.36	2
		50	25	22.02	21.83	21.45	2			36	19	21.82	21.70	21.36	2
		50	50	21.96	21.78	21.49	2			36	39	21.86	21.66	21.47	2
		100	0	22.21	22.04	21.74	2			75	0	21.99	21.90	21.59	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				Channel	132022	132322						132622	131997	132322	
		Frequency (MHz)	1715.0	1745.0	1775.0	1712.5	1745.0			1777.5					
10M	QPSK	1	0	22.76	22.92	22.49	0	5M	QPSK	1	0	22.70	22.90	22.47	0
		1	24	22.83	22.81	22.49	0			1	12	22.78	22.73	22.56	0
		1	49	23.03	22.80	22.75	0			1	24	22.84	22.71	22.72	0
		25	0	22.73	22.88	22.37	1			12	0	22.53	22.66	22.37	1
		25	12	22.75	22.80	22.44	1			12	6	22.60	22.59	22.44	1
		25	25	22.81	22.72	22.58	1			12	13	22.62	22.61	22.55	1
	16QAM	50	0	22.86	22.86	22.57	1		25	0	22.75	22.73	22.61	1	
		1	0	23.08	23.31	22.85	1		16QAM	1	0	23.03	23.32	22.93	1
		1	24	23.17	23.20	22.82	1			1	12	23.09	23.12	23.02	1
		1	49	23.32	23.19	23.05	1			1	24	23.15	23.11	23.08	1
		25	0	21.67	21.80	21.24	2			12	0	21.44	21.57	21.22	2
		25	12	21.72	21.71	21.33	2			12	6	21.49	21.48	21.36	2
		25	25	21.77	21.61	21.51	2			12	13	21.50	21.53	21.46	2
		50	0	21.84	21.80	21.55	2			25	0	21.65	21.69	21.52	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				Channel	131987	132322						132657	131979	132322	
		Frequency (MHz)	1711.5	1745.5	1778.5	1710.7	1745.0			1779.3					
3M	QPSK	1	0	22.60	22.83	22.60	0	1.4M	QPSK	1	0	22.54	22.84	22.72	0
		1	7	22.66	22.81	22.68	0			1	2	22.53	22.75	22.71	0
		1	14	22.73	22.72	22.70	0			1	5	22.54	22.78	22.76	0
		8	0	22.53	22.66	22.46	1			3	0	22.43	22.71	22.55	0
		8	3	22.52	22.58	22.54	1			3	1	22.45	22.69	22.53	0
		8	7	22.59	22.60	22.57	1			3	3	22.45	22.63	22.55	0
	16QAM	15	0	22.58	22.66	22.61	1		6	0	22.46	22.59	22.52	1	
		1	0	23.00	23.10	22.95	1		16QAM	1	0	22.99	23.11	23.02	1
		1	7	23.04	23.05	23.03	1			1	2	22.97	23.04	23.01	1
		1	14	23.10	23.05	23.01	1			1	5	22.99	23.07	23.03	1
		8	0	21.37	21.55	21.32	2			3	0	22.50	22.74	22.62	1
		8	3	21.36	21.53	21.37	2			3	1	22.48	22.72	22.61	1
		8	7	21.44	21.53	21.46	2			3	3	22.55	22.66	22.57	1
		15	0	21.49	21.57	21.51	2			6	0	21.45	21.55	21.44	2

ERP Power (dBm)

LTE Band 12																	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
				Channel	23060	23095						23130	Channel	23035		23095	23155
				Frequency (MHz)	704.0	707.5						711.0	Frequency (MHz)	701.5		707.5	713.5
10M	QPSK	1	0	21.32	21.45	21.49	0	5M	QPSK	1	0	21.44	21.47	21.57	0		
		1	24	21.36	21.41	21.56	0			1	12	21.60	21.45	21.33	0		
		1	49	21.45	21.52	21.43	0			1	24	21.52	21.64	21.36	0		
		25	0	21.52	21.40	21.60	1			12	0	21.42	21.48	21.39	1		
		25	12	21.42	21.46	21.66	1			12	6	21.57	21.45	21.28	1		
		25	25	21.44	21.64	21.40	1			12	13	21.57	21.53	21.35	1		
		50	0	21.47	21.59	21.65	1			25	0	21.63	21.51	21.30	1		
	16QAM	1	0	21.61	21.79	21.73	1		16QAM	1	0	21.69	21.73	21.71	1		
		1	24	21.57	21.56	21.66	1			1	12	21.70	21.70	21.67	1		
		1	49	21.66	21.70	21.63	1			1	24	21.71	21.69	21.61	1		
		25	0	20.65	20.59	20.66	2			12	0	20.51	20.52	20.44	2		
		25	12	20.53	20.60	20.71	2			12	6	20.62	20.51	20.30	2		
		25	25	20.60	20.82	20.48	2			12	13	20.60	20.58	20.34	2		
		50	0	20.62	20.71	20.74	2			25	0	20.59	20.50	20.31	2		

LTE Band 13																
BW	MCS Index	RB Size	RB Offset	Mid	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)			
				Channel						23230	Channel	23205		23230	23225	
				Frequency (MHz)						782.0	Frequency (MHz)	779.5		782.0	784.5	
10M	QPSK	1	0	20.28	0	5M	QPSK	1	0	20.23	20.26	20.27	0			
		1	24	20.28	0			1	12	20.26	20.24	20.24	0			
		1	49	20.31	0			1	24	20.31	20.26	20.24	0			
		25	0	20.32	1			12	0	20.25	20.12	20.18	1			
		25	12	20.35	1			12	6	20.19	20.16	20.20	1			
		25	25	20.33	1			12	13	20.17	20.14	20.17	1			
		50	0	20.47	1			25	0	20.25	20.23	20.23	1			
	16QAM	1	0	20.65	1		16QAM	1	0	20.58	20.64	20.64	1			
		1	24	20.70	1			1	12	20.69	20.60	20.62	1			
		1	49	20.72	1			1	24	20.70	20.61	20.63	1			
		25	0	19.40	2			12	0	19.26	19.14	19.20	2			
		25	12	19.40	2			12	6	19.23	19.19	19.23	2			
		25	25	19.39	2			12	13	19.20	19.18	19.21	2			
		50	0	19.55	2			25	0	19.23	19.21	19.23	2			

EIRP Power (dBm)

Band	WCDMA IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	24.55	24.74	24.93
HSDPA Subtest-1	24.52	24.69	24.68
HSDPA Subtest-2	23.55	23.75	23.73
HSDPA Subtest-3	23.07	23.28	23.26
HSDPA Subtest-4	22.82	23.04	23.02
HSUPA Subtest-1	23.63	23.78	23.66
HSUPA Subtest-2	21.41	21.50	21.45
HSUPA Subtest-3	22.16	22.26	22.17
HSUPA Subtest-4	21.69	21.81	21.72
HSUPA Subtest-5	23.59	23.79	23.69

LTE Band 4															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				20050	20175	20300						20025	20175	20325	
				Channel Frequency (MHz)	1720.0	1732.5						1745.0	Channel Frequency (MHz)	1717.5	
20M	QPSK	1	0	24.08	24.27	24.04	0	15M	QPSK	1	0	24.04	24.20	24.36	0
		1	50	24.30	23.87	24.18	0			1	37	24.26	23.94	23.62	0
		1	99	24.03	24.15	24.20	0			1	74	24.18	24.03	23.88	0
		50	0	24.25	24.09	24.19	1			36	0	24.19	24.04	23.89	1
		50	25	24.32	23.89	24.22	1			36	19	24.28	23.95	23.62	1
		50	50	24.20	24.00	24.06	1			36	39	24.25	23.96	23.67	1
	100	0	24.36	24.04	24.34	1	75		0	24.29	23.96	23.63	1		
	16QAM	1	0	24.34	24.49	24.29	1		16QAM	1	0	24.27	24.43	24.59	1
		1	50	24.60	24.16	24.52	1			1	37	24.49	24.16	23.83	1
		1	99	24.23	24.30	24.40	1			1	74	24.40	24.27	24.14	1
		50	0	23.30	23.16	23.25	2			36	0	23.22	23.12	23.02	2
		50	25	23.36	22.96	23.26	2			36	19	23.31	23.03	22.75	2
		50	50	23.22	23.06	23.09	2			36	39	23.29	23.02	22.75	2
	100	0	23.41	23.08	23.36	2	75		0	23.31	23.01	22.71	2		
10M	QPSK	1	0	24.05	24.14	24.23	0	5M	QPSK	1	0	24.03	24.03	24.08	0
		1	24	24.18	23.97	23.76	0			1	12	24.09	23.99	24.18	0
		1	49	24.34	23.97	23.60	0			1	24	24.17	23.90	24.23	0
		25	0	24.19	24.04	23.89	1			12	0	24.03	23.91	24.17	1
		25	12	24.25	23.96	23.67	1			12	6	24.10	23.93	24.21	1
		25	25	24.32	23.95	23.58	1			12	13	24.13	23.89	24.21	1
	50	0	24.23	24.00	23.77	1	25		0	24.12	23.95	24.22	1		
	16QAM	1	0	24.29	24.41	24.53	1		16QAM	1	0	24.25	24.21	24.32	1
		1	24	24.45	24.20	23.95	1			1	12	24.33	24.13	24.41	1
		1	49	24.55	24.21	23.87	1			1	24	24.37	24.11	24.45	1
		25	0	23.26	23.12	22.98	2			12	0	23.07	22.97	23.23	2
		25	12	23.29	23.04	22.79	2			12	6	23.18	22.98	23.25	2
		25	25	23.35	23.02	22.69	2			12	13	23.19	22.94	23.23	2
	50	0	23.24	23.06	22.88	2	25		0	23.16	23.01	23.26	2		
3M	QPSK	1	0	23.98	23.93	24.17	0	1.4M	QPSK	1	0	24.00	23.89	24.26	0
		1	7	24.02	23.92	24.18	0			1	2	23.98	23.91	24.23	0
		1	14	24.08	23.86	24.19	0			1	5	24.01	23.92	24.28	0
		8	0	24.03	23.88	24.23	1			3	0	24.00	23.88	24.25	0
		8	3	24.02	23.92	24.20	1			3	1	23.99	23.86	24.25	0
		8	7	24.10	23.90	24.22	1			3	3	24.00	23.93	24.26	0
	15	0	24.02	23.94	24.19	1	6		0	24.00	23.93	24.26	1		
	16QAM	1	0	24.21	24.14	24.39	1		16QAM	1	0	24.27	24.13	24.43	1
		1	7	24.28	24.20	24.42	1			1	2	24.26	24.14	24.39	1
		1	14	24.32	24.13	24.42	1			1	5	24.29	24.18	24.42	1
		8	0	23.07	22.97	23.30	2			3	0	24.07	23.98	24.28	1
		8	3	23.06	23.00	23.24	2			3	1	24.08	23.97	24.29	1
		8	7	23.14	22.99	23.26	2			3	3	24.09	24.02	24.29	1
	15	0	23.08	22.99	23.21	2	6		0	23.08	23.01	23.28	2		

LTE Band 66																	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
				Channel	132072	132322						132572	Channel	132047		132322	132597
				Frequency (MHz)	1720.0	1745.0						1770.0	Frequency (MHz)	1717.5		1745.0	1772.5
20M	QPSK	1	0	24.03	24.08	24.10	0	15M	QPSK	1	0	23.92	24.03	23.86	0		
		1	50	24.28	24.03	23.66	0			1	37	24.10	23.98	23.53	0		
		1	99	24.00	24.15	23.92	0			1	74	24.10	23.97	23.85	0		
		50	0	24.13	24.14	23.92	1			36	0	24.01	24.02	23.64	1		
		50	25	24.27	24.11	23.71	1			36	19	24.10	23.95	23.59	1		
		50	50	24.17	24.02	23.72	1			36	39	24.13	23.87	23.73	1		
		100	0	24.43	24.26	23.94	1			75	0	24.19	24.08	23.79	1		
	16QAM	1	0	24.37	24.46	24.45	1		16QAM	1	0	24.32	24.38	24.24	1		
		1	50	24.66	24.41	24.02	1			1	37	24.46	24.33	23.96	1		
		1	99	24.36	24.48	24.25	1			1	74	24.48	24.40	24.19	1		
		50	0	23.07	23.07	22.85	2			36	0	22.93	22.96	22.55	2		
		50	25	23.21	23.02	22.64	2			36	19	23.01	22.89	22.55	2		
		50	50	23.15	22.97	22.68	2			36	39	23.05	22.85	22.66	2		
		100	0	23.40	23.23	22.93	2			75	0	23.18	23.09	22.78	2		
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
				Channel	132022	132322						132622	Channel	131997		132322	132647
				Frequency (MHz)	1715.0	1745.0						1775.0	Frequency (MHz)	1712.5		1745.0	1777.5
10M	QPSK	1	0	23.95	24.11	23.68	0	5M	QPSK	1	0	23.89	24.09	23.66	0		
		1	24	24.02	24.00	23.68	0			1	12	23.97	23.92	23.75	0		
		1	49	24.22	23.99	23.94	0			1	24	24.03	23.90	23.91	0		
		25	0	23.92	24.07	23.56	1			12	0	23.72	23.85	23.56	1		
		25	12	23.94	23.99	23.63	1			12	6	23.79	23.78	23.63	1		
		25	25	24.00	23.91	23.77	1			12	13	23.81	23.80	23.74	1		
		50	0	24.05	24.05	23.76	1			25	0	23.94	23.92	23.80	1		
	16QAM	1	0	24.27	24.50	24.04	1		16QAM	1	0	24.22	24.51	24.12	1		
		1	24	24.36	24.39	24.01	1			1	12	24.28	24.31	24.21	1		
		1	49	24.51	24.38	24.24	1			1	24	24.34	24.30	24.27	1		
		25	0	22.86	22.99	22.43	2			12	0	22.63	22.76	22.41	2		
		25	12	22.91	22.90	22.52	2			12	6	22.68	22.67	22.55	2		
		25	25	22.96	22.80	22.70	2			12	13	22.69	22.72	22.65	2		
		50	0	23.03	22.99	22.74	2			25	0	22.84	22.88	22.71	2		
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
				Channel	131987	132322						132657	Channel	131979		132322	132665
				Frequency (MHz)	1711.5	1745.5						1778.5	Frequency (MHz)	1710.7		1745.0	1779.3
3M	QPSK	1	0	23.79	24.02	23.79	0	1.4M	QPSK	1	0	23.73	24.03	23.91	0		
		1	7	23.85	24.00	23.87	0			1	2	23.72	23.94	23.90	0		
		1	14	23.92	23.91	23.89	0			1	5	23.72	23.97	23.95	0		
		8	0	23.72	23.85	23.65	1			3	0	23.63	23.90	23.74	0		
		8	3	23.71	23.77	23.73	1			3	1	23.64	23.88	23.72	0		
		8	7	23.78	23.79	23.76	1			3	3	23.64	23.82	23.74	0		
		15	0	23.77	23.85	23.80	1			6	0	23.65	23.78	23.71	1		
	16QAM	1	0	24.19	24.29	24.14	1		16QAM	1	0	24.18	24.30	24.21	1		
		1	7	24.23	24.24	24.22	1			1	2	24.16	24.23	24.20	1		
		1	14	24.29	24.24	24.20	1			1	5	24.18	24.26	24.22	1		
		8	0	22.56	22.74	22.51	2			3	0	23.69	23.93	23.81	1		
		8	3	22.55	22.72	22.56	2			3	1	23.67	23.91	23.80	1		
		8	7	22.63	22.72	22.65	2			3	3	23.74	23.85	23.76	1		
		15	0	22.68	22.76	22.70	2			6	0	22.64	22.74	22.63	2		

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.
- b. For operations in the 775-788 MHz, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz. The limit of emissions is equal to -40 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. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- c. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}$.

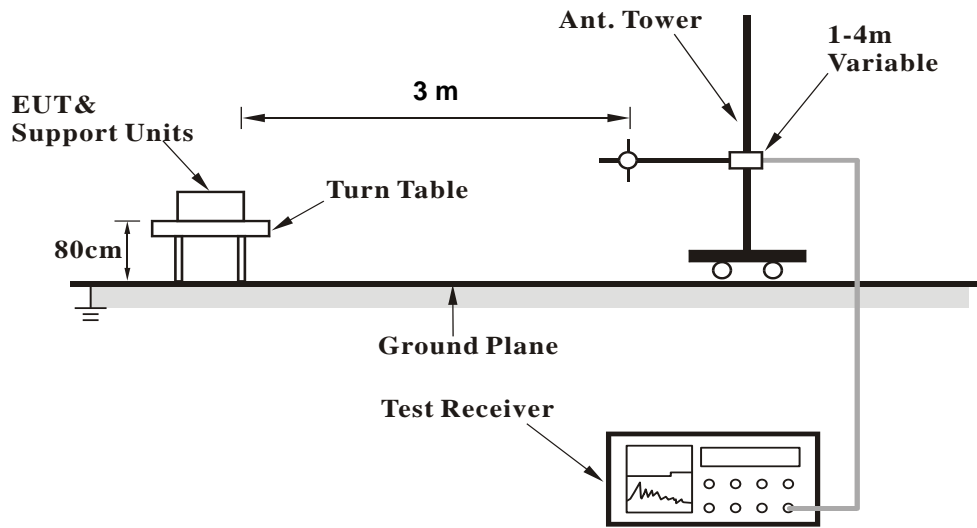
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.2.3 Deviation from Test Standard

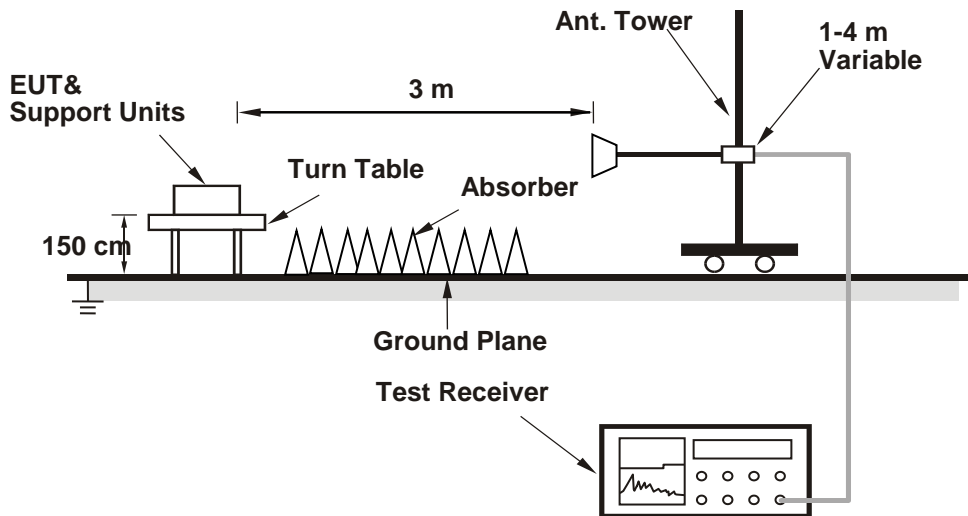
No deviation.

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	-55.90	-13.00	-42.90	1.50 H	7	49.70	-105.60
2	89.17	-49.60	-13.00	-36.60	1.00 H	60	60.00	-109.60
3	159.01	-53.00	-13.00	-40.00	1.25 H	112	50.30	-103.30
4	267.65	-54.30	-13.00	-41.30	1.25 H	296	48.80	-103.10
5	503.36	-58.80	-13.00	-45.80	1.00 H	21	39.10	-97.90
6	850.62	-53.70	-13.00	-40.70	1.50 H	7	37.70	-91.40

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	33.88	-43.10	-13.00	-30.10	1.25 V	152	62.30	-105.40
2	106.63	-48.40	-13.00	-35.40	1.25 V	223	58.90	-107.30
3	186.17	-52.90	-13.00	-39.90	1.00 V	109	52.80	-105.70
4	291.90	-56.40	-13.00	-43.40	1.50 V	101	45.90	-102.30
5	528.58	-59.60	-13.00	-46.60	1.00 V	243	37.80	-97.40
6	903.00	-50.20	-13.00	-37.20	1.00 V	15	40.00	-90.20

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	TX LTE Band IV-20MHz	Channel	CH 20300 : 1745 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	47.46	-55.41	-13.00	-42.41	1.25 H	251	48.84	-104.25
2	67.83	-49.15	-13.00	-36.15	1.25 H	7	56.41	-105.56
3	159.01	-53.02	-13.00	-40.02	1.00 H	112	50.33	-103.35
4	292.87	-52.42	-13.00	-39.42	1.00 H	106	49.80	-102.22
5	423.82	-62.08	-13.00	-49.08	1.50 H	333	37.33	-99.41
6	556.71	-58.90	-13.00	-45.90	2.00 H	183	38.10	-97.00

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	56.19	-46.73	-13.00	-33.73	1.50 V	67	57.61	-104.34
2	159.01	-48.01	-13.00	-35.01	1.00 V	61	55.34	-103.35
3	270.56	-54.24	-13.00	-41.24	2.00 V	12	48.64	-102.88
4	339.43	-55.53	-13.00	-42.53	1.50 V	104	45.62	-101.15
5	426.73	-51.62	-13.00	-38.62	1.00 V	5	47.70	-99.32
6	644.98	-52.22	-13.00	-39.22	1.25 V	141	42.69	-94.91

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	TX LTE Band XII-10MHz	Channel	CH 23095 : 707.5 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	-55.02	-13.00	-42.02	1.00 H	11	52.71	-107.73
2	85.29	-47.60	-13.00	-34.60	1.00 H	221	63.98	-111.58
3	159.01	-55.21	-13.00	-42.21	1.50 H	140	50.29	-105.50
4	294.81	-53.65	-13.00	-40.65	1.25 H	259	50.68	-104.33
5	456.80	-56.92	-13.00	-43.92	1.00 H	128	43.76	-100.68
6	610.06	-59.59	-13.00	-46.59	1.50 H	95	38.11	-97.70

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	-50.66	-13.00	-37.66	1.50 V	164	57.07	-107.73
2	89.17	-55.85	-13.00	-42.85	1.00 V	178	55.87	-111.72
3	145.43	-60.00	-13.00	-47.00	1.25 V	184	45.93	-105.93
4	268.62	-55.39	-13.00	-42.39	1.25 V	15	49.75	-105.14
5	483.96	-61.34	-13.00	-48.34	2.00 V	48	39.00	-100.34
6	894.27	-52.09	-13.00	-39.09	1.00 V	354	40.55	-92.64

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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	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	55.22	-44.57	-13.00	-31.57	1.25 H	13	61.88	-106.45
2	159.01	-55.05	-13.00	-42.05	1.00 H	132	50.45	-105.50
3	265.71	-55.39	-13.00	-42.39	1.50 H	235	49.94	-105.33
4	296.75	-54.71	-13.00	-41.71	1.00 H	291	49.56	-104.27
5	488.81	-61.52	-13.00	-48.52	1.25 H	7	38.73	-100.25
6	652.74	-58.21	-13.00	-45.21	1.00 H	251	38.87	-97.08

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	-50.56	-13.00	-37.56	1.25 V	326	57.17	-107.73
2	81.41	-40.70	-13.00	-27.70	1.00 V	309	70.32	-111.02
3	164.83	-49.31	-13.00	-36.31	1.50 V	12	56.51	-105.82
4	270.56	-53.84	-13.00	-40.84	2.00 V	12	51.19	-105.03
5	439.34	-62.00	-13.00	-49.00	1.00 V	307	39.09	-101.09
6	605.21	-59.52	-13.00	-46.52	1.00 V	218	38.31	-97.83

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 66-5MHz	Channel	CH 132647 : 1777.5 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	30.00	-44.86	-13.00	-31.86	2.00 H	116	60.72	-105.58
2	81.41	-47.36	-13.00	-34.36	1.25 H	17	61.51	-108.87
3	135.73	-48.24	-13.00	-35.24	1.50 H	204	56.26	-104.50
4	187.14	-41.93	-13.00	-28.93	1.00 H	96	63.92	-105.85
5	297.72	-51.65	-13.00	-38.65	1.00 H	292	50.44	-102.09
6	431.58	-57.20	-13.00	-44.20	2.00 H	102	41.96	-99.16

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	58.13	-45.36	-13.00	-32.36	2.00 V	59	59.20	-104.56
2	114.39	-50.47	-13.00	-37.47	1.00 V	153	56.03	-106.50
3	159.98	-57.84	-13.00	-44.84	1.50 V	243	45.67	-103.51
4	260.86	-53.30	-13.00	-40.30	1.25 V	283	50.18	-103.48
5	331.67	-55.71	-13.00	-42.71	2.00 V	200	45.56	-101.27
6	662.44	-55.91	-13.00	-42.91	1.00 V	166	38.90	-94.81

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.

ABOVE 1GHz

RF Mode	TX WCDMA Band IV	Channel	CH 19957 : 1710.7 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	3424.80	-51.30	-13.00	-38.30	2.91 H	45	45.76	-97.06
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	-52.75	-13.00	-39.75	1.67 V	198	44.31	-97.06

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 20175 : 1732.5 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	3465.20	-51.21	-13.00	-38.21	2.90 H	44	45.63	-96.84
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	-52.58	-13.00	-39.58	1.63 V	200	44.26	-96.84

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 V	Channel	CH 20393 : 1754.3 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	3505.20	-50.89	-13.00	-37.89	2.97 H	48	45.72	-96.61

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	-51.99	-13.00	-38.99	1.64 V	203	44.62	-96.61

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	TX LTE Band IV-1.4MHz	Channel	CH 19957 : 1710.7 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	3421.40	-49.58	-13.00	-36.58	2.71 H	70	47.49	-97.07
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	-51.55	-13.00	-38.55	3.05 V	338	45.52	-97.07

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 ~ 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	3465.00	-49.20	-13.00	-36.20	2.74 H	73	47.64	-96.84
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	-51.27	-13.00	-38.27	3.02 V	340	45.57	-96.84

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 ~ 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	3508.60	-48.99	-13.00	-35.99	2.75 H	76	47.59	-96.58
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	-50.94	-13.00	-37.94	2.99 V	345	45.64	-96.58

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	TX LTE Band IV-5MHz	Channel	CH 19975 : 1712.5 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	3425.00	-49.28	-13.00	-36.28	2.77 H	75	47.77	-97.05

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	-51.43	-13.00	-38.43	3.09 V	237	45.62	-97.05

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	TX LTE Band IV-5MHz	Channel	CH 20175 : 1732.5 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	3465.00	-49.24	-13.00	-36.24	2.72 H	74	47.60	-96.84

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	-51.26	-13.00	-38.26	3.04 V	339	45.58	-96.84

Remarks:

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

RF Mode	TX LTE Band IV-5MHz	Channel	CH 20375 : 1752.5 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	3505.00	-48.95	-13.00	-35.95	2.73 H	72	47.66	-96.61

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	-51.06	-13.00	-38.06	3.05 V	342	45.55	-96.61

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	TX LTE Band IV-20MHz	Channel	CH 20050 : 1720 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	3440.00	-49.25	-13.00	-36.25	2.69 H	74	47.74	-96.99

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	-50.98	-13.00	-37.98	3.05 V	344	46.01	-96.99

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.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175 : 1732.5 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	3465.00	-48.95	-13.00	-35.95	2.75 H	73	47.89	-96.84

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	-50.90	-13.00	-37.90	3.08 V	339	45.94	-96.84

Remarks:

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

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20300 : 1745 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	3490.00	-48.88	-13.00	-35.88	2.71 H	72	47.81	-96.69

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	-50.85	-13.00	-37.85	3.02 V	340	45.84	-96.69

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	TX LTE Band XII-1.4MHz	Channel	CH 23017 : 699.7 MHz
Frequency Range	1GMHz ~ 20GHz		

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	-53.47	-13.00	-40.47	2.03 H	218	49.14	-102.61
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	-53.30	-13.00	-40.30	2.49 V	48	49.31	-102.61

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 ~ 20GHz		

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	-53.73	-13.00	-40.73	2.04 H	215	48.95	-102.68
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	-53.36	-13.00	-40.36	2.45 V	43	49.32	-102.68

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 ~ 20GHz		

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	-53.54	-13.00	-40.54	2.06 H	210	49.22	-102.76
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	-53.32	-13.00	-40.32	2.48 V	45	49.44	-102.76

Remarks:

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

RF Mode	TX LTE Band XII-5MHz	Channel	CH 23035 : 701.5 MHz
Frequency Range	1GMHz ~ 20GHz		

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	-53.35	-13.00	-40.35	2.01 H	211	49.28	-102.63

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	-53.05	-13.00	-40.05	2.44 V	43	49.58	-102.63

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 ~ 20GHz		

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	-53.36	-13.00	-40.36	2.03 H	213	49.32	-102.68

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	-53.45	-13.00	-40.45	2.57 V	45	49.23	-102.68

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 ~ 20GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Correction Factor (dB/m)
1	1427.00	-53.40	-13.00	-40.40	2.04 H	217	49.34	-102.74
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	-53.51	-13.00	-40.51	2.48 V	49	49.23	-102.74

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 ~ 20GHz		

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	-53.31	-13.00	-40.31	2.01 H	214	49.33	-102.64
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	-53.16	-13.00	-40.16	2.46 V	51	49.48	-102.64

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 ~ 20GHz		

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	-53.10	-13.00	-40.10	2.04 H	208	49.58	-102.68
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	-52.80	-13.00	-39.80	2.40 V	48	49.88	-102.68

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 ~ 20GHz		

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	-53.05	-13.00	-40.05	2.08 H	215	49.66	-102.71
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	-53.47	-13.00	-40.47	2.55 V	44	49.24	-102.71

Remarks:

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

RF Mode	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	-55.39	-40.00	-15.39	2.74 H	48	45.78	-101.17

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	-51.86	-40.00	-11.86	2.69 V	334	49.31	-101.17

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	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	-55.45	-40.00	-15.45	2.68 H	51	45.75	-101.20

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	-52.40	-40.00	-12.40	2.71 V	335	48.80	-101.20

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	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	-55.37	-40.00	-15.37	2.66 H	55	45.84	-101.21

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	-52.26	-40.00	-12.26	2.73 V	330	48.95	-101.21

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	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	-55.05	-40.00	-15.05	2.66 H	57	46.15	-101.20
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	-51.98	-40.00	-11.98	2.78 V	334	49.22	-101.20

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	TX LTE Band 66-1.4MHz	Channel	CH 131979 : 1710.7 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	3421.40	-44.59	-13.00	-31.59	2.29 H	18	52.48	-97.07
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	-43.44	-13.00	-30.44	3.00 V	267	53.63	-97.07

Remarks:

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

RF Mode	TX LTE Band 66-1.4MHz	Channel	CH 132322 : 1745.0 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	3490.00	-44.29	-13.00	-31.29	2.33 H	22	52.40	-96.69
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	-43.04	-13.00	-30.04	3.08 V	266	53.65	-96.69

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	TX LTE Band 66-1.4MHz	Channel	CH 132665 : 1779.3 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	3558.60	-43.94	-13.00	-30.94	2.27 H	21	52.38	-96.32
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	3558.60	-42.74	-13.00	-29.74	3.10 V	261	53.58	-96.32

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 66-5MHz	Channel	CH 131997 : 1712.5 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	3425.00	-44.39	-13.00	-31.39	2.33 H	18	52.66	-97.05
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	-43.41	-13.00	-30.41	2.98 V	266	53.64	-97.05

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 66-5MHz	Channel	CH 132322 : 1745.0 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	3490.00	-44.19	-13.00	-31.19	2.27 H	18	52.50	-96.69
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	-43.14	-13.00	-30.14	3.03 V	264	53.55	-96.69

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 66-5MHz	Channel	CH 132647 : 1777.5 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	3555.00	-43.86	-13.00	-30.86	2.28 H	16	52.47	-96.33
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	3555.00	-42.69	-13.00	-29.69	3.05 V	260	53.64	-96.33

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 66-20MHz	Channel	CH 132072 : 1720.0 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	3440.00	-47.00	-13.00	-34.00	2.27 H	19	49.99	-96.99
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	-43.75	-13.00	-30.75	3.06 V	266	53.24	-96.99

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) + 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 66-20MHz	Channel	CH 132322 : 1745.0 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	3490.00	-46.59	-13.00	-33.59	2.27 H	17	50.10	-96.69
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	-43.29	-13.00	-30.29	3.01 V	265	53.40	-96.69

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 66-20MHz	Channel	CH 132572 : 1770.0 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	3540.00	-46.26	-13.00	-33.26	2.28 H	16	50.14	-96.40
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	3540.00	-43.02	-13.00	-30.02	3.02 V	268	53.38	-96.40

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.

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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