Variant FCC Test Report
(Part 27)

Report No.: RFBEKK-WTW-P20080111A-3

FCC ID: 2AARN-DLWPH-8M

Test Model: DLWPH-8M-RW

Series Model: DLWPH-8M

Received Date: Dec. 22, 2021

Test Date: Jan. 11 ~ Mar. 29, 2022

Issued Date: Mar. 30, 2022

Applicant: PHIHONG TECHNOLOGY CO. LTD.

Address: No.568, Fu Xing 3rd Rd., Guishan, Tao Yuan Hsien, 333 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
RFBEKK-WTW-P20080111A-3	Original Release	Mar. 30, 2022

1 Certificate of Conformity

Product: EV charging system module 4G with WI-FI

Brand: Phihong Technology Co., Ltd.

Test Model: DLWPH-8M-RW

Series Model: DLWPH-8M

Sample Status: Engineering Sample

Applicant: PHIHONG TECHNOLOGY CO. LTD.

Test Date: Jan. 11 ~ Mar. 29, 2022

Standards: FCC Part 27, Subpart C, F, H, L, N

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:** Mar. 30, 2022

Lena Wang / Specialist

Approved by : Jeremy Lin , **Date:** Mar. 30, 2022

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2						
FCC Clause				Test Item	Result	Remarks
WCDMA B4 / LTE B4	LTE B12/ LTE B71	LTE B13	LTE B66			
2.1046 27.50(d)	2.1046 27.50(c)	2.1046 27.50(b)	2.1046 27.50(d)	Equivalent Isotropically radiated power / Effective radiated power	Pass	Meet the requirement of limit.
2.1047	2.1047	2.1047	2.1047	Modulation characteristics	N/A	Refer to note
2.1055 27.54	2.1055 27.54	2.1055 27.54	2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	2.1049	2.1049	2.1049	Emission Bandwidth	N/A	Refer to note
2.1051 27.53(h)	2.1051 27.53(g)	2.1051 27.53(c)	2.1051 27.53(h)	Out of Band Emission Measurements	N/A	Refer to note
27.50(d)(5)	--	--	27.50(d)(5)	Peak To Average Ratio	N/A	Refer to note
2.1051 27.53(h)	2.1051 27.53(g)	2.1051 27.53(c)(f)	2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to note
2.1053 27.53(h)	2.1053 27.53(g)	2.1053 27.53(c)(f))	2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -14.54 dB at 1569.00 MHz.

Note:

1. This report is a partial report, only test item of Equivalent Isotropically radiated power / Effective radiated power, Radiated Spurious Emissions and Frequency Stability test was performed for this report. Other testing data please refer to original report.
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	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Dec. 30, 2021	Dec. 29, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 15, 2021	Sep. 14, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Nov. 01, 2021	Oct. 31, 2022
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Nov. 14, 2021	Nov. 13, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Oct. 26, 2021	Oct. 25, 2022
Preamplifier Agilent (Below 1GHz)	8447D	2944A10631	Jun. 05, 2021	Jun. 04, 2022
Preamplifier KEYSIGHT (Above 1GHz)	83017A	MY53270295	Jun. 05, 2021	Jun. 04, 2022
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH4-01	Jul. 24, 2021	Jul. 23, 2022
RF Coaxial Cable EMCI	EMC102-KM-KM-3000	150929	Jul. 24, 2021	Jul. 23, 2022
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	Jul. 24, 2021	Jul. 23, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Jun. 05, 2021	Jun. 04, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Jun. 05, 2021	Jun. 04, 2022
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	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 4.

3 General Information

3.1 General Description of EUT

Product	EV charging system module 4G with WI-FI			
Brand	Phihong Technology Co., Ltd.			
Test Model	DLWPH-8M-RW			
Series Model	DLWPH-8M			
Model Difference	Refer to Note as below			
Status of EUT	Engineering Sample			
Power Supply Rating	5Vdc (for DC power supply or host equipment)			
Modulation Type	WCDMA: BPSK, QPSK HSDPA: BPSK HSUPA: QPSK LTE: QPSK, 16QAM			
Operating Frequency	WCDMA Band 4		1712.4MHz ~ 1752.6MHz	
	LTE Band 4	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1754.3MHz	
		Channel Bandwidth 3MHz	1711.5MHz ~ 1753.5MHz	
		Channel Bandwidth 5MHz	1712.5MHz ~ 1752.5MHz	
		Channel Bandwidth 10MHz	1715.0MHz ~ 1750.0MHz	
		Channel Bandwidth 15MHz	1717.5MHz ~ 1747.5MHz	
		Channel Bandwidth 20MHz	1720.0MHz ~ 1745.0MHz	
	LTE Band 12	Channel Bandwidth 1.4MHz	699.7MHz ~ 715.3MHz	
		Channel Bandwidth 3MHz	700.5MHz ~ 714.5MHz	
		Channel Bandwidth 5MHz	701.5MHz ~ 713.5MHz	
		Channel Bandwidth 10MHz	704.0MHz ~ 711.0MHz	
	LTE Band 13	Channel Bandwidth 5MHz	779.5MHz ~ 784.5MHz	
		Channel Bandwidth 10MHz	782.0MHz	
	LTE Band 66	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1779.3MHz	
		Channel Bandwidth 3MHz	1711.5MHz ~ 1778.5MHz	
		Channel Bandwidth 5MHz	1712.5MHz ~ 1777.5MHz	
		Channel Bandwidth 10MHz	1715.0MHz ~ 1775.0MHz	
		Channel Bandwidth 15MHz	1717.5MHz ~ 1772.5MHz	
		Channel Bandwidth 20MHz	1720.0MHz ~ 1770.0MHz	
	LTE Band 71	Channel Bandwidth 5MHz	665.5MHz ~ 695.5MHz	
		Channel Bandwidth 10MHz	668.0MHz ~ 693.0MHz	
		Channel Bandwidth 15MHz	670.5MHz ~ 690.5MHz	
		Channel Bandwidth 20MHz	673.0MHz ~ 688.0MHz	
Max. EIRP Power	WCDMA Band 4		289.068mW (24.61dBm)	
			QPSK	16QAM
	LTE Band 4	Channel Bandwidth 1.4MHz	299.916mW (24.77dBm)	242.103mW (23.84dBm)
		Channel Bandwidth 3MHz	296.483mW (24.72dBm)	238.781mW (23.78dBm)
		Channel Bandwidth 5MHz	303.389mW (24.82dBm)	239.332mW (23.79dBm)
		Channel Bandwidth 10MHz	299.916mW (24.77dBm)	238.781mW (23.78dBm)
		Channel Bandwidth 15MHz	283.139mW (24.52dBm)	215.278mW (23.33dBm)
		Channel Bandwidth 20MHz	304.089mW (24.83dBm)	241.546mW (23.83dBm)

			QPSK	16QAM
Max. EIRP Power	LTE Band 66	Channel Bandwidth 1.4MHz	307.610mW (24.88dBm)	246.037mW (23.91dBm)
		Channel Bandwidth 3MHz	304.789mW (24.84dBm)	243.220mW (23.86dBm)
		Channel Bandwidth 5MHz	293.765mW (24.68dBm)	243.781mW (23.87dBm)
		Channel Bandwidth 10MHz	304.789mW (24.84dBm)	242.661mW (23.85dBm)
		Channel Bandwidth 15MHz	305.492mW (24.85dBm)	236.592mW (23.74dBm)
		Channel Bandwidth 20MHz	309.742mW (24.91dBm)	246.037mW (23.91dBm)
Max. ERP Power			QPSK	16QAM
	LTE Band 12	Channel Bandwidth 1.4MHz	110.154mW (20.42dBm)	86.298mW (19.36dBm)
		Channel Bandwidth 3MHz	107.647mW (20.32dBm)	86.099mW (19.35dBm)
		Channel Bandwidth 5MHz	105.439mW (20.23dBm)	81.658mW (19.12dBm)
		Channel Bandwidth 10MHz	110.917mW (20.45dBm)	88.105mW (19.45dBm)
	LTE Band 13	Channel Bandwidth 5MHz	62.373mW (17.95dBm)	52.966mW (17.24dBm)
		Channel Bandwidth 10MHz	66.527mW (18.23dBm)	50.350mW (17.02dBm)
	LTE Band 71	Channel Bandwidth 5MHz	73.451mW (18.66dBm)	57.810mW (17.62dBm)
		Channel Bandwidth 10MHz	74.302mW (18.71dBm)	54.075mW (17.33dBm)
		Channel Bandwidth 15MHz	74.473mW (18.72dBm)	55.463mW (17.44dBm)
		Channel Bandwidth 20MHz	73.114mW (18.64dBm)	55.7191mW (17.46dBm)
Antenna Type	Refer to Note as below			
Antenna Connector	Refer to Note as below			
Accessory Device	NA			
Cable Supplied	NA			

Note:

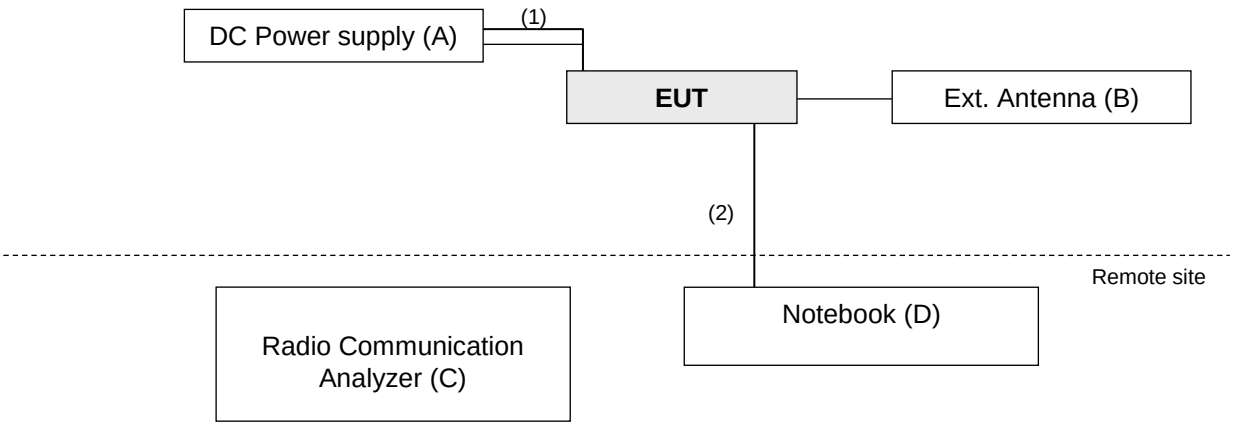
1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report to BV CPS report no. RFBEKK-WTW-P20080111-3. The difference compared with original report is changing the motherboard design and adding external antenna, therefore only Equivalent Isotropically radiated power / Effective radiated power, Radiated Spurious Emissions and Frequency Stability tests had been performed and recorded in this report.
2. All models are listed as below.

Brand	Model	Difference of WLAN Antenna type
Phihong Technology Co., Ltd.	DLWPH-8M	internal antenna
	DLWPH-8M-RW	external antenna

3. The following antennas were provided to the EUT. (New antenna is marked in gray)

Brand	Model	Antenna Gain(dBi)				Antenna Type	Connector Type
		WCDMA Band 4 / LTE Band 4 / 66	LTE Band 12	LTE Band 13	LTE Band 71		
Gortec	DR0727-4201BSM	1.70	-1.09	-3.11	-2.45	PCB	SMA Male
Aristotle	RFA-LTE-JP187-79B300	4.54	1.8	1.8	1.8	PCB	SMA PLUG

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.	DC Power Supply	JIN YIH TECHNOLOGY CO., LTD.	ODP3033	ODP30332027416	NA	-
B.	Ext. Antenna	Aristotle	RFA-LTE-JP187-79B300	NA	NA	Provided by client
C.	Notebook	DELL	E5430	2RL3YW1	NA	-
D.	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Power cable	1	2	N	0	-
2.	LAN Cable	1	5	Y	0	Provided by client

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 and antenna ports. The worst case was found when positioned on Z-plane. Following channel(s) was (were) selected for the final test as listed below.

WCDMA Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA, HSDPA, HSUPA
-	Frequency Stability	1312 to 1513	1312(1712.4MHz), 1513(1752.6MHz)	WCDMA
-	Radiated Emission Below 1GHz	1312 to 1513	1513(1752.6MHz)	WCDMA
-	Radiated Emission Above 1GHz	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA

Note:

1. This device was tested under all modulations. The worst case of conducted output power was found in WCDMA modulation. Therefore, only EIRP had been tested under WCDMA, HSDPA and HSUPA mode, the other items were performed under WCDMA mode only.
2. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) 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(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK / 16QAM	1 RB / 2 RB Offset
		19965 to 20385	19965(1711.5MHz), 20175(1732.5MHz), 20385(1753.5MHz)	3MHz	QPSK / 16QAM	1 RB / 7 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK / 16QAM	1 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20175(1732.5MHz), 20350(1750.0MHz)	10MHz	QPSK / 16QAM	1 RB / 24 RB Offset
		20025 to 20325	20025(1717.5MHz), 20175(1732.5MHz), 20325(1747.5MHz)	15MHz	QPSK / 16QAM	1 RB / 37 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK / 16QAM	1 RB / 0 RB Offset
-	Frequency Stability	19957 to 20393	19957(1710.7MHz), 20393(1754.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20385(1753.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20375(1752.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20350(1750.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20325(1747.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20300(1745.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	19975 to 20375	20375(1752.5MHz)	5MHz	QPSK	1 RB / 2 RB Offset
-	Radiated Emission Above 1GHz	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK	1 RB / 2 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) channel for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.
3. The conducted output power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only EIRP had been tested under QPSK and 16QAM modes, the other test items were performed under QPSK mode only.

LTE Band 12

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK / 16QAM	3 RB / 1 RB Offset
		23025 to 23165	23025(700.5MHz), 23095(707.5MHz), 23165(714.5MHz)	3MHz	QPSK / 16QAM	1 RB / 7 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK / 16QAM	1 RB / 12 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5 MHz), 23130(711.0 MHz)	10MHz	QPSK / 16QAM	1 RB / 24 RB Offset
-	Frequency Stability	23017 to 23173	23017(699.7MHz), 23173(715.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		23025 to 23165	23025(700.5MHz), 23165(714.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		23035 to 23155	23035(701.5MHz), 23155(713.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		23060 to 23130	23060(704.0MHz), 23130(711.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	23017 to 23173	23017(699.7MHz)	1.4MHz	QPSK	1 RB / 12 RB Offset
-	Radiated Emission Above 1GHz	23017 to 23173	23017(699.7MHz), 23095(707.5MHz), 23173(715.3MHz)	1.4MHz	QPSK	3 RB / 1 RB Offset
		23035 to 23155	23035(701.5MHz), 23095(707.5MHz), 23155(713.5MHz)	5MHz	QPSK	1 RB / 12 RB Offset
		23060 to 23130	23060(704.0MHz), 23095(707.5MHz), 23130(711.0MHz)	10MHz	QPSK	1 RB / 24 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) channel for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 1.4MHz & highest channel bandwidth for final test.
3. The conducted output power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only ERP had been tested under QPSK and 16QAM modes, the other test items were performed under QPSK mode only.

LTE Band 13

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK / 16QAM	1 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK / 16QAM	1 RB / 0 RB Offset
-	Frequency Stability	23205 to 23255	23205(779.5MHz), 23255(784.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		23230	23230(782.0MHz),	10MHz	QPSK	50 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	23205 to 23255	23255(784.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	23205 to 23255	23205(779.5MHz), 23230(782.0MHz), 23255(784.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		23230	23230(782.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) channel for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.
3. The conducted output power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only ERP had been tested under QPSK and 16QAM modes, the other test items were performed under QPSK mode only.

LTE Band 66

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK / 16QAM	3 RB / 3 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132322 (1745.0MHz), 132657 (1778.5MHz)	3MHz	QPSK / 16QAM	1 RB / 14 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK / 16QAM	1 RB / 12 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132322 (1745.0MHz), 132622 (1775.0MHz)	10MHz	QPSK / 16QAM	1 RB / 24 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132322 (1745.0MHz), 132597 (1772.5MHz)	15MHz	QPSK / 16QAM	1 RB / 37 RB Offset
		132072 to 132572	132072 (1720.0MHz), 132322 (1745.0MHz), 132572 (1770.0MHz)	20MHz	QPSK / 16QAM	1 RB / 0 RB Offset
-	Frequency Stability	131979 to 132665	131979 (1710.7MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		131987 to 132657	131987 (1711.5MHz), 132657 (1778.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132647 (1777.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		132022 to 132622	132022 (1715.0MHz), 132622 (1775.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		132047 to 132597	132047 (1717.5MHz), 132597 (1772.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		132072 to 132572	132072 (1720.0MHz), 132572 (1770.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	131979 to 132665	132665 (1779.3MHz)	1.4MHz	QPSK	3 RB / 3 RB Offset
-	Radiated Emission Above 1GHz	131979 to 132665	131979 (1710.7MHz), 132322 (1745.0MHz), 132665 (1779.3MHz)	1.4MHz	QPSK	3 RB / 3 RB Offset
		131997 to 132647	131997 (1712.5MHz), 132322 (1745.0MHz), 132647 (1777.5MHz)	5MHz	QPSK	1 RB / 12 RB Offset
		132072 to 132572	132072 (1720.0MHz), 132322 (1745.0MHz), 132572 (1770.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:
1. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) channel for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.
3. The conducted output power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only EIRP, had been tested under QPSK and 16QAM modes, the other test items were performed under QPSK mode only.

LTE Band 71

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP	133147 to 133447	133147 (665.5MHz), 133297 (680.5MHz), 133447 (695.5MHz)	5 MHz	QPSK / 16QAM	1 RB / 0 RB Offset
		133172 to 133422	133172 (668.0MHz), 133297 (680.5MHz), 133422 (693.0MHz)	10 MHz	QPSK / 16QAM	1 RB / 24 RB Offset
		133197 to 133397	133197 (670.5MHz), 133297 (680.5MHz), 133397 (690.5MHz)	15 MHz	QPSK / 16QAM	1 RB / 0 RB Offset
		133222 to 133372	133222 (673.0MHz), 133297 (680.5MHz), 133372 (688.0MHz)	20 MHz	QPSK / 16QAM	1 RB / 99 RB Offset
-	Frequency Stability	133147 to 133447	133147 (665.5MHz), 133447 (695.5MHz)	5 MHz	QPSK	25 RB / 0 RB Offset
		133172 to 133422	133172 (668.0MHz), 133422 (693.0MHz)	10 MHz	QPSK	50 RB / 0 RB Offset
		133197 to 133397	133197 (670.5MHz), 133397 (690.5MHz)	15 MHz	QPSK	75 RB / 0 RB Offset
		133222 to 133372	133222 (673.0MHz), 133372 (688.0MHz)	20 MHz	QPSK	100 RB / 0 RB Offset
-	Radiated Emission Below 1GHz	133222 to 133372	133372 (688.0MHz)	20 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission Above 1GHz	133147 to 133447	133147 (665.5MHz), 133297 (680.5MHz), 133447 (695.5MHz)	5 MHz	QPSK	1 RB / 0 RB Offset
		133222 to 133372	133222 (673.0MHz), 133297 (680.5MHz), 133372 (688.0MHz)	20 MHz	QPSK	1 RB / 99 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission (above 1GHz) channel for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the 5MHz & highest channel bandwidth for final test.
3. The conducted output power for QPSK and 16QAM, measured value of QPSK is higher than 16QAM mode. Therefore, only ERP had been tested under QPSK and 16QAM modes, the other test items were performed under QPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP / ERP	22deg. C, 69%RH	120Vac, 60Hz	Rex Wang
Frequency Stability	24deg. C, 64%RH	120Vac, 60Hz	James Yang
Radiated Emission	23deg. C, 66%RH	120Vac, 60Hz	Titan Hsu

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 LTE Band 13:
Control stations and mobile stations in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands and fixed stations transmitting in the 787-788 MHz and 805-806 MHz bands are limited to 30 watts ERP.
Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

For LTE Band 12, 71:
Control and mobile stations in the 698-746 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 band are limited to 3 watts ERP.

For WCDMA Band 4, LTE Band 4, 66:
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.

4.1.2 Test Procedures

Conducted Power Measurement:

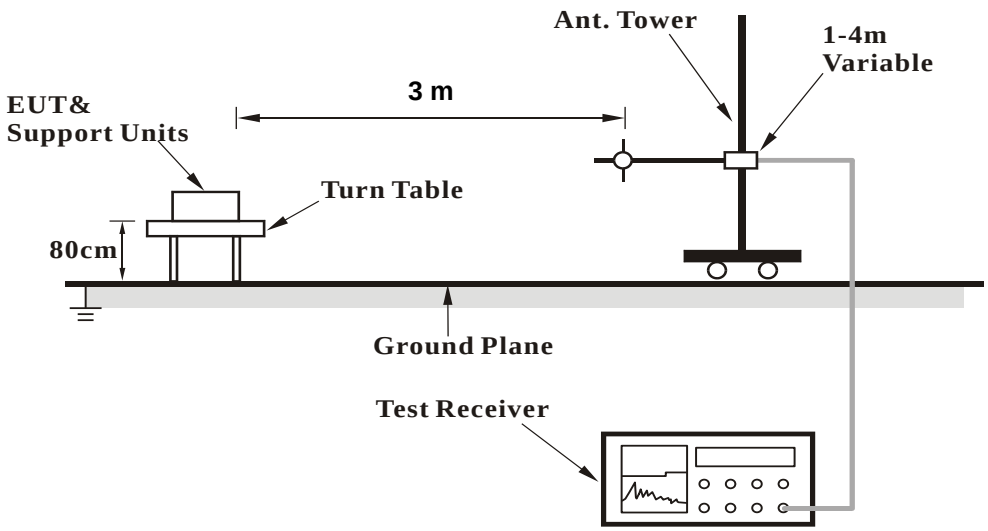
a. The EUT was set up for the maximum power with WCDMA and LTE link data modulation and link up with simulator.
b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Radiated Power EIRP / ERP Measurement:

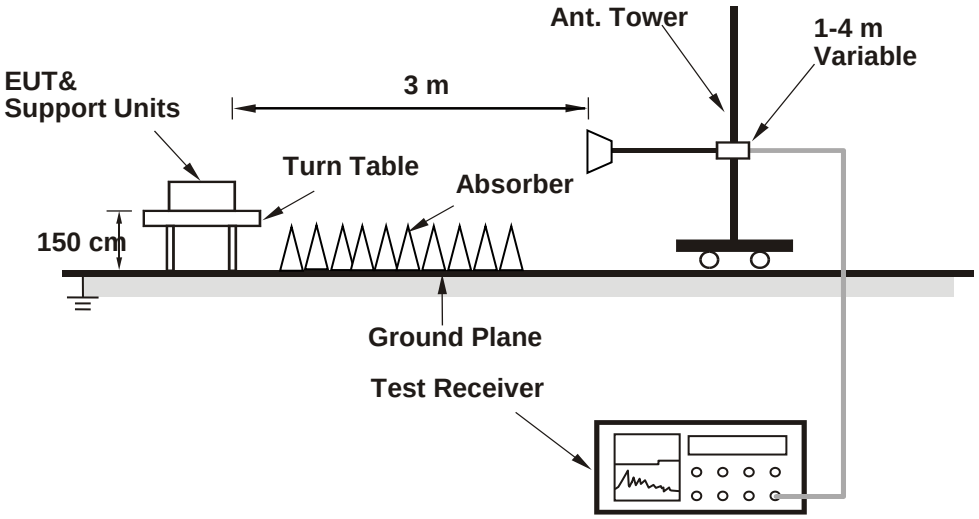
a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
d. Following C63.26 section 5.5 and 5.2.7
   - EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   - ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

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:

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

4.1.4 Test Results

EIRP Power(dBm)

WCDMA Band 4

Mode	TX channel 1312,1413, 1513							
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	1712.40	22.23	30.00	-7.77	1.04 H	98	87.96	-65.73
2	1732.60	22.25	30.00	-7.75	1.05 H	94	87.81	-65.56
3	1752.60	22.11	30.00	-7.89	1.03 H	100	87.52	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1712.40	24.55	30.00	-5.45	1.69 V	166	90.28	-65.73
2	1732.60	24.55	30.00	-5.45	1.66 V	159	90.11	-65.56
3	1752.60	24.61	30.00	-5.39	1.63 V	168	90.02	-65.41

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.

Modulation Type: QPSK

LTE Band 4, Channel Bandwidth 1.4MHz

Mode	TX channel 19957, 20175, 20393							
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	1710.70	21.85	30.00	-8.15	3.14 H	118	87.59	-65.74
2	1732.50	22.01	30.00	-7.99	3.19 H	115	87.57	-65.56
3	1754.30	21.41	30.00	-8.59	3.10 H	112	86.82	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1710.70	24.39	30.00	5.61	2.68 V	173	90.13	-65.74
2	1732.50	24.55	30.00	-5.45	2.66 V	176	90.11	-65.56
3	1754.30	24.77	30.00	-5.23	2.70 V	174	90.18	-65.41

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.

LTE Band 4, Channel Bandwidth 3MHz

Mode	TX channel 19965, 20175, 20385

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	1711.50	22.12	30.00	-7.88	3.14 H	112	87.85	-65.73
2	1732.50	21.81	30.00	-8.19	3.19 H	118	87.37	-65.56
3	1753.50	22.14	30.00	-7.86	3.13 H	121	87.55	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1711.50	24.72	30.00	-5.28	2.62 V	175	90.45	-65.73
2	1732.50	24.54	30.00	-5.46	2.66 V	173	90.10	-65.56
3	1753.50	24.44	30.00	-5.56	2.62 V	177	89.85	-65.41

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.

LTE Band 4, Channel Bandwidth 5MHz

Mode	TX channel 19975, 20175, 20375

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	1712.50	21.47	30.00	-8.53	3.09 H	115	87.20	-65.73
2	1732.50	22.02	30.00	-7.98	3.10 H	114	87.58	-65.56
3	1752.50	21.54	30.00	-8.46	3.19 H	113	86.95	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1712.50	24.82	30.00	-5.18	2.67 V	174	90.55	-65.73
2	1732.50	24.74	30.00	-5.26	2.64 V	170	90.30	-65.56
3	1752.50	24.51	30.00	-5.49	2.71 V	171	89.92	-65.41

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.

LTE Band 4, Channel Bandwidth 10MHz

Mode	TX channel 20000, 20175, 20350							
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	1715.00	22.11	30.00	-7.89	3.13 H	118	87.82	-65.71
2	1732.50	21.58	30.00	-8.42	3.18 H	116	87.14	-65.56
3	1750.00	21.42	30.00	-8.58	3.16 H	114	86.83	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1715.00	24.64	30.00	-5.36	2.67 V	177	90.35	-65.71
2	1732.50	24.77	30.00	-5.23	2.71 V	172	90.33	-65.56
3	1750.00	24.74	30.00	-5.26	2.72 V	173	90.15	-65.41

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.

LTE Band 4, Channel Bandwidth 15MHz

Mode	TX channel 20025, 20175, 20325							
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	1717.50	21.56	30.00	-8.44	3.10 H	116	87.24	-65.68
2	1732.50	21.47	30.00	-8.53	3.11 H	115	87.03	-65.56
3	1747.50	21.56	30.00	-8.44	3.13 H	118	87.00	-65.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1717.50	24.38	30.00	-5.62	2.70 V	174	90.06	-65.68
2	1732.50	24.52	30.00	-5.48	2.62 V	172	90.08	-65.56
3	1747.50	24.33	30.00	-5.67	2.70 V	177	89.77	-65.44

Remarks:

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

LTE Band 4, Channel Bandwidth 20MHz

Mode	TX channel 20050, 20175, 20300							
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	1720.00	21.47	30.00	-8.53	3.13 H	117	87.13	-65.66
2	1732.50	21.74	30.00	-8.26	3.12 H	113	87.30	-65.56
3	1745.00	21.35	30.00	-8.65	3.17 H	114	86.80	-65.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1720.00	24.41	30.00	-5.59	2.69 V	176	90.07	-65.66
2	1732.50	24.83	30.00	-5.17	2.69 V	177	90.39	-65.56
3	1745.00	24.64	30.00	-5.36	2.72 V	173	90.09	-65.45

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.

LTE Band 66, Channel Bandwidth 1.4MHz

Mode	TX channel 131979, 132322, 132665							
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	1710.70	22.19	30.00	-7.81	3.09 H	101	87.93	-65.74
2	1745.00	22.32	30.00	-7.68	3.06 H	100	87.77	-65.45
3	1779.30	22.55	30.00	-7.45	3.05 H	104	87.90	-65.35
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1710.70	24.62	30.00	-5.38	2.59 V	188	90.36	-65.74
2	1745.00	24.71	30.00	-5.29	2.57 V	184	90.16	-65.45
3	1779.30	24.88	30.00	-5.12	2.57 V	185	90.23	-65.35

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.

LTE Band 66, Channel Bandwidth 3MHz

Mode	TX channel 131987, 132322, 132657							
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	1711.50	21.95	30.00	-8.05	3.06 H	99	87.68	-65.73
2	1745.00	22.82	30.00	-7.18	3.02 H	98	88.27	-65.45
3	1778.50	22.08	30.00	-7.92	2.99 H	94	87.43	-65.35
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1711.50	24.84	30.00	-5.16	2.56 V	184	90.57	-65.73
2	1745.00	24.52	30.00	-5.48	2.64 V	181	89.97	-65.45
3	1778.50	24.74	30.00	-5.26	2.62 V	182	90.09	-65.35

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.

LTE Band 66, Channel Bandwidth 5MHz

Mode	TX channel 131997, 132322, 132647							
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	1712.50	22.85	30.00	-7.15	3.03 H	102	88.58	-65.73
2	1745.00	22.62	30.00	-7.38	3.00 H	97	88.07	-65.45
3	1777.50	22.22	30.00	-7.78	3.04 H	104	87.57	-65.35
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1712.50	24.42	30.00	-5.58	2.64 V	182	90.15	-65.73
2	1745.00	24.68	30.00	-5.32	2.55 V	186	90.13	-65.45
3	1777.50	24.67	30.00	-5.33	2.55 V	184	90.02	-65.35

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.

LTE Band 66, Channel Bandwidth 10MHz

Mode	TX channel 132022, 132322, 132622							
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	1715.00	22.42	30.00	-7.58	3.00 H	103	88.13	-65.71
2	1745.00	22.16	30.00	-7.84	3.04 H	101	87.61	-65.45
3	1775.00	22.63	30.00	-7.37	3.09 H	97	87.99	-65.36
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1715.00	24.84	30.00	-5.16	2.63 V	186	90.55	-65.71
2	1745.00	24.65	30.00	-5.35	2.56 V	185	90.10	-65.45
3	1775.00	24.68	30.00	-5.32	2.54 V	188	90.04	-65.36

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.

LTE Band 66, Channel Bandwidth 15MHz

Mode	TX channel 132047, 132322, 132597							
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	1717.50	21.97	30.00	-8.03	3.01 H	103	87.65	-65.68
2	1745.00	22.12	30.00	-7.88	3.03 H	104	87.57	-65.45
3	1772.50	22.33	30.00	-7.67	3.09 H	98	87.69	-65.36
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1717.50	24.85	30.00	-5.15	2.58 V	185	90.53	-65.68
2	1745.00	24.52	30.00	-5.48	2.61 V	182	89.97	-65.45
3	1772.50	24.79	30.00	-5.21	2.59 V	180	90.15	-65.36

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.

LTE Band 66, Channel Bandwidth 20MHz

Mode	TX channel 132072, 132322, 132572							
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	1720.00	22.31	30.00	-7.69	3.09 H	107	87.97	-65.66
2	1745.00	22.41	30.00	-7.59	3.03 H	102	87.86	-65.45
3	1770.00	22.43	30.00	-7.57	3.01 H	104	87.80	-65.37
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1720.00	24.79	30.00	-5.21	2.64 V	187	90.45	-65.66
2	1745.00	24.91	30.00	-5.09	2.61 V	187	90.36	-65.45
3	1770.00	24.59	30.00	-5.41	2.59 V	186	89.96	-65.37

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.

Modulation Type: 16QAM

LTE Band 4, Channel Bandwidth 1.4MHz

Mode	TX channel 19957, 20175, 20393							
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	1710.70	20.86	30.00	-9.14	3.11 H	16	86.60	-65.74
2	1732.50	20.82	30.00	-9.18	3.12 H	113	86.38	-65.56
3	1754.30	20.42	30.00	-9.58	3.16 H	112	85.83	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1710.70	23.34	30.00	-6.66	2.66 V	175	89.08	-65.74
2	1732.50	23.48	30.00	-6.52	2.69 V	171	89.04	-65.56
3	1754.30	23.84	30.00	-6.16	2.71 V	181	89.25	-65.41

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.

LTE Band 4, Channel Bandwidth 3MHz

Mode	TX channel 19965, 20175, 20385							
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	1711.50	21.21	30.00	-8.79	3.15 H	118	86.94	-65.73
2	1732.50	20.62	30.00	-9.38	3.18 H	119	86.18	-65.56
3	1753.50	21.16	30.00	-8.84	3.14 H	117	86.57	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1711.50	23.78	30.00	-6.22	2.62 V	176	89.51	-65.73
2	1732.50	23.62	30.00	-6.38	2.63 V	175	89.18	-65.56
3	1753.50	23.52	30.00	-6.48	2.72 V	172	88.93	-65.41

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.

LTE Band 4, Channel Bandwidth 5MHz

Mode	TX channel 19975, 20175, 20375							
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	1712.50	20.64	30.00	-9.36	3.14 H	115	86.37	-65.73
2	1732.50	21.04	30.00	-8.96	3.19 H	113	86.60	-65.56
3	1752.50	20.41	30.00	-9.59	3.12 H	111	85.82	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1712.50	23.72	30.00	-6.28	2.72 V	175	89.45	-65.73
2	1732.50	23.79	30.00	-6.21	2.64 V	170	89.35	-65.56
3	1752.50	23.41	30.00	-6.59	2.64 V	170	88.82	-65.41

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.

LTE Band 4, Channel Bandwidth 10MHz

Mode	TX channel 20000, 20175, 20350							
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	1715.00	21.22	30.00	-8.78	3.13 H	114	86.93	-65.71
2	1732.50	20.62	30.00	-9.38	3.11 H	117	86.18	-65.56
3	1750.00	20.37	30.00	-9.63	3.14 H	112	85.78	-65.41
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1715.00	23.74	30.00	-6.26	2.66 V	174	89.45	-65.71
2	1732.50	23.78	30.00	-6.22	2.69 V	172	89.34	-65.56
3	1750.00	23.55	30.00	-6.45	2.68 V	172	88.96	-65.41

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.

LTE Band 4, Channel Bandwidth 15MHz

Mode	TX channel 20025, 20175, 20325							
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	1717.50	20.67	30.00	-9.33	3.10 H	117	86.35	-65.68
2	1732.50	20.62	30.00	-9.38	3.14 H	119	86.18	-65.56
3	1747.50	20.64	30.00	-9.36	3.11 H	124	86.08	-65.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1717.50	23.28	30.00	-6.72	2.62 V	171	88.96	-65.68
2	1732.50	23.32	30.00	-6.68	2.63 V	170	88.88	-65.56
3	1747.50	23.33	30.00	-6.67	2.71 V	175	88.77	-65.44

Remarks:

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

LTE Band 4, Channel Bandwidth 20MHz

Mode	TX channel 20050, 20175, 20300							
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	1720.00	20.65	30.00	-9.35	3.18 H	115	86.31	-65.66
2	1732.50	20.79	30.00	-9.21	3.12 H	117	86.35	-65.56
3	1745.00	20.44	30.00	-9.56	3.19 H	112	85.89	-65.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1720.00	23.26	30.00	-6.74	2.65 V	173	88.92	-65.66
2	1732.50	23.83	30.00	-6.17	2.66 V	174	89.39	-65.56
3	1745.00	23.48	30.00	-6.52	2.74 V	164	88.93	-65.45

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.

LTE Band 66, Channel Bandwidth 1.4MHz

Mode	TX channel 131979, 132322, 132665							
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	1710.70	21.02	30.00	-8.98	3.08 H	98	86.76	-65.74
2	1745.00	21.41	30.00	-8.59	3.05 H	102	86.86	-65.45
3	1779.30	21.35	30.00	-8.65	3.03 H	104	86.70	-65.35
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1710.70	23.76	30.00	-6.24	2.59 V	185	89.50	-65.74
2	1745.00	23.68	30.00	-6.32	2.62 V	184	89.13	-65.45
3	1779.30	23.91	30.00	-6.09	2.57 V	187	89.26	-65.35

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.

LTE Band 66, Channel Bandwidth 3MHz

Mode	TX channel 131987, 132322, 132657							
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	1711.50	20.77	30.00	-9.23	3.00 H	103	86.50	-65.73
2	1745.00	21.85	30.00	-8.15	3.07 H	98	87.30	-65.45
3	1778.50	21.07	30.00	-8.93	3.03 H	97	86.42	-65.35
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1711.50	23.86	30.00	-6.14	2.56 V	183	89.59	-65.73
2	1745.00	23.32	30.00	-6.68	2.60 V	187	88.77	-65.45
3	1778.50	23.59	30.00	-6.41	2.61 V	184	88.94	-65.35

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.

LTE Band 66, Channel Bandwidth 5MHz

Mode	TX channel 131997, 132322, 132647							
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	1712.50	22.02	30.00	-7.98	3.01 H	101	87.75	-65.73
2	1745.00	21.62	30.00	-8.38	3.02 H	100	87.07	-65.45
3	1777.50	21.05	30.00	-8.95	3.04 H	98	86.40	-65.35
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1712.50	23.34	30.00	-6.66	2.63 V	183	89.07	-65.73
2	1745.00	23.74	30.00	-6.26	2.62 V	188	89.19	-65.45
3	1777.50	23.87	30.00	-6.13	2.57 V	182	89.22	-65.35

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.

LTE Band 66, Channel Bandwidth 10MHz

Mode	TX channel 132022, 132322, 132622							
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	1715.00	21.38	30.00	-8.62	3.03 H	94	87.09	-65.71
2	1745.00	21.09	30.00	-8.91	3.02 H	99	86.54	-65.45
3	1775.00	21.79	30.00	-8.21	3.00 H	98	87.15	-65.36
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1715.00	23.76	30.00	-6.24	2.55 V	181	89.47	-65.71
2	1745.00	23.74	30.00	-6.26	2.54 V	188	89.19	-65.45
3	1775.00	23.85	30.00	-6.15	2.55 V	187	89.21	-65.36

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.

LTE Band 66, Channel Bandwidth 15MHz

Mode	TX channel 132047, 132322, 132597							
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	1717.50	21.04	30.00	-8.96	3.06 H	101	86.72	-65.68
2	1745.00	20.96	30.00	-9.04	3.06 H	101	86.41	-65.45
3	1772.50	21.38	30.00	-8.62	3.01 H	97	86.74	-65.36
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1717.50	23.74	30.00	-6.26	2.62 V	187	89.42	-65.68
2	1745.00	23.54	30.00	-6.46	2.55 V	184	88.99	-65.45
3	1772.50	23.64	30.00	-6.36	2.57 V	181	89.00	-65.36

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.

LTE Band 66, Channel Bandwidth 20MHz

Mode	TX channel 132072, 132322, 132572							
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	1720.00	21.34	30.00	-8.66	3.00 H	97	87.00	-65.66
2	1745.00	21.45	30.00	-8.55	3.09 H	103	86.90	-65.45
3	1770.00	21.52	30.00	-8.48	3.02 H	102	86.89	-65.37
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1720.00	23.91	30.00	-6.09	2.57 V	185	89.57	-65.66
2	1745.00	23.73	30.00	-6.27	2.64 V	184	89.18	-65.45
3	1770.00	23.57	30.00	-6.43	2.57 V	186	88.94	-65.37

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.

ERP Power (dBm)

Modulation Type: QPSK

LTE Band 12, Channel Bandwidth 1.4MHz

Mode	TX channel 23017, 23095, 23173							
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	699.70	18.45	34.77	-16.32	3.02 H	224	86.20	-67.75
2	707.50	18.32	34.77	-16.45	3.11 H	227	85.99	-67.67
3	715.30	18.35	34.77	-16.42	3.01 H	225	85.75	-67.40
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	699.70	20.42	34.77	-14.35	1.55 V	129	88.17	-67.75
2	707.50	20.34	34.77	-14.43	1.56 V	132	88.01	-67.67
3	715.30	20.29	34.77	-14.48	1.48 V	124	87.69	-67.40

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.

LTE Band 12, Channel Bandwidth 3MHz

Mode	TX channel 23025, 23095, 23165							
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	700.50	18.34	34.77	-16.43	3.00 H	221	86.09	-67.75
2	707.50	18.31	34.77	-16.46	3.15 H	226	85.98	-67.67
3	714.50	18.34	34.77	-16.43	2.97 H	225	85.76	-67.42
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	700.50	20.31	34.77	-14.46	1.54 V	133	88.06	-67.75
2	707.50	20.32	34.77	-14.45	1.54 V	122	87.99	-67.67
3	714.50	20.29	34.77	-14.48	1.56 V	131	87.71	-67.42

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.

LTE Band 12, Channel Bandwidth 5MHz

Mode	TX channel 23035, 23095, 23155							
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	701.50	18.35	34.77	-16.42	3.03 H	221	86.10	-67.75
2	707.50	18.17	34.77	-16.60	2.95 H	234	85.84	-67.67
3	713.50	18.28	34.77	-16.49	3.01 H	225	85.74	-67.46
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	701.50	20.23	34.77	-14.54	1.52 V	125	87.98	-67.75
2	707.50	20.11	34.77	-14.66	1.52 V	135	87.78	-67.67
3	713.50	20.15	34.77	-14.62	1.45 V	128	87.61	-67.46

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.

LTE Band 12, Channel Bandwidth 10MHz

Mode	TX channel 23060, 23095, 23130							
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	704.00	18.45	34.77	-16.32	3.21 H	232	86.21	-67.76
2	707.50	18.53	34.77	-16.24	3.05 H	220	86.20	-67.67
3	711.00	18.46	34.77	-16.31	3.02 H	226	86.01	-67.55
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	704.00	20.33	34.77	-14.44	1.57 V	130	88.09	-67.76
2	707.50	20.41	34.77	-14.36	1.56 V	128	88.08	-67.67
3	711.00	20.45	34.77	-14.32	1.52 V	132	88.00	-67.55

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.

LTE Band 13, Channel Bandwidth 5MHz

Mode	TX channel 23205, 23230, 23255							
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	779.50	16.15	34.77	18.62	2.38 H	224	81.89	-65.74
2	782.00	15.98	34.77	-18.79	2.34 H	194	81.79	-65.81
3	784.50	16.21	34.77	-18.56	2.42 H	189	82.10	-65.89
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	779.50	17.95	34.77	-16.82	1.74 V	225	83.69	-65.74
2	782.00	17.88	34.77	-16.89	1.75 V	232	83.69	-65.81
3	784.50	17.91	34.77	-16.86	1.75 V	221	83.80	-65.89

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.

LTE Band 13, Channel Bandwidth 10MHz

Mode	TX channel 23230							
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	782.00	16.23	34.77	-18.54	2.29 H	236	82.04	-65.81
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	782.00	18.23	34.77	-16.54	1.65 V	227	84.04	-65.81

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.

LTE Band 71, Channel Bandwidth 5MHz

Mode	TX channel 133147, 133297, 133446							
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	665.50	16.49	34.77	-18.28	1.74 H	339	84.69	-68.20
2	680.50	16.45	34.77	-18.32	1.76 H	336	84.49	-68.04
3	695.50	16.58	34.77	-18.19	1.74 H	335	84.36	-67.78
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	665.50	18.66	34.77	-16.11	1.25 V	234	86.86	-68.20
2	680.50	18.64	34.77	-16.13	1.30 V	233	86.68	-68.04
3	695.50	18.59	34.77	-16.18	1.28 V	236	86.37	-67.78

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.

LTE Band 71, Channel Bandwidth 10MHz

Mode	TX channel 133172, 133297, 133421							
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	668.00	16.54	34.77	-18.23	1.74 H	335	84.75	-68.21
2	680.50	16.57	34.77	-18.20	1.72 H	342	84.61	-68.04
3	693.00	16.50	34.77	-18.27	1.75 H	333	84.32	-67.82
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	668.00	18.69	34.77	-16.08	1.23 V	228	86.90	-68.21
2	680.50	18.71	34.77	-16.06	1.26 V	234	86.75	-68.04
3	693.00	18.66	34.77	-16.11	1.23 V	236	86.48	-67.82

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.

LTE Band 71, Channel Bandwidth 15MHz

Mode	TX channel 133197, 133297, 133396							
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	670.50	16.52	34.77	-18.25	1.76 H	338	84.74	-68.22
2	680.50	16.66	34.77	-18.11	1.79 H	335	84.70	-68.04
3	690.50	16.58	34.77	-18.19	1.72 H	338	84.46	-67.88
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	670.50	18.71	34.77	-16.06	1.20 V	225	86.93	-68.22
2	680.50	18.62	34.77	-16.15	1.24 V	233	86.66	-68.04
3	690.50	18.72	34.77	-16.05	1.24 V	231	86.60	-67.88

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.

LTE Band 71, Channel Bandwidth 20MHz

Mode	TX channel 133222, 133297, 133371							
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	673.00	16.58	34.77	-18.19	1.70 H	337	84.78	-68.20
2	680.50	16.63	34.77	-18.14	1.72 H	338	84.67	-68.04
3	688.00	16.45	34.77	-18.32	1.73 H	331	84.37	-67.92
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	673.00	18.64	34.77	-16.13	1.28 V	233	86.84	-68.20
2	680.50	18.59	34.77	-16.18	1.24 V	235	86.63	-68.04
3	688.00	18.62	34.77	-16.15	1.23 V	239	86.54	-67.92

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.

Modulation Type: 16QAM

LTE Band 12, Channel Bandwidth 1.4MHz

Mode	TX channel 23017, 23095, 23173							
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	699.70	17.44	34.77	-17.33	3.03 H	223	85.19	-67.75
2	707.50	17.32	34.77	-17.45	3.08 H	230	84.99	-67.67
3	715.30	17.35	34.77	-17.42	3.00 H	225	84.75	-67.40
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	699.70	19.36	34.77	-15.41	1.51 V	133	87.11	-67.75
2	707.50	19.34	34.77	-15.43	1.58 V	125	87.01	-67.67
3	715.30	19.29	34.77	-15.48	1.48 V	120	86.69	-67.40

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.

LTE Band 12, Channel Bandwidth 3MHz

Mode	TX channel 23025, 23095, 23165							
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	700.50	17.30	34.77	-17.47	3.15 H	224	85.05	-67.75
2	707.50	17.32	34.77	-17.45	3.22 H	222	84.99	-67.67
3	714.50	17.35	34.77	-17.42	2.95 H	225	84.77	-67.42
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	700.50	19.34	34.77	-15.43	1.55 V	133	87.09	-67.75
2	707.50	19.28	34.77	-15.49	1.51 V	122	86.95	-67.67
3	714.50	19.35	34.77	-15.42	1.58 V	131	86.77	-67.42

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.

LTE Band 12, Channel Bandwidth 5MHz

Mode	TX channel 23035, 23095, 23155							
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	701.50	17.37	34.77	-17.40	3.00 H	225	85.12	-67.75
2	707.50	17.37	34.77	-17.40	2.97 H	230	85.04	-67.67
3	713.50	17.28	34.77	-17.49	3.05 H	226	84.74	-67.46
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	701.50	19.03	34.77	-15.74	1.55 V	127	86.78	-67.75
2	707.50	19.12	34.77	-15.65	1.53 V	132	86.79	-67.67
3	713.50	19.07	34.77	-15.70	1.50 V	128	86.53	-67.46

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.

LTE Band 12, Channel Bandwidth 10MHz

Mode	TX channel 23060, 23095, 23130							
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	704.00	17.43	34.77	-17.34	3.09 H	228	85.19	-67.76
2	707.50	17.53	34.77	-17.24	3.04 H	218	85.20	-67.67
3	711.00	17.46	34.77	-17.31	2.95 H	226	85.01	-67.55
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	704.00	19.34	34.77	-15.43	1.55 V	136	87.10	-67.76
2	707.50	19.39	34.77	-15.38	1.52 V	129	87.06	-67.67
3	711.00	19.45	34.77	-15.32	1.54 V	132	87.00	-67.55

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.

LTE Band 13, Channel Bandwidth 5MHz

Mode	TX channel 23205, 23230, 23255							
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	779.50	16.14	34.77	-18.63	2.38 H	225	81.88	-65.74
2	782.00	16.05	34.77	-18.72	2.27 H	225	81.86	-65.81
3	784.00	16.06	34.77	-18.71	2.36 H	239	81.94	-65.88
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	779.50	17.24	34.77	-17.53	1.78 V	223	82.98	-65.74
2	782.00	17.15	34.77	-17.62	1.77 V	232	82.96	-65.81
3	784.00	17.15	34.77	-17.62	1.75 V	221	83.03	-65.88

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.

LTE Band 13, Channel Bandwidth 10MHz

Mode	TX channel 23230							
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	782.00	15.24	34.77	-19.53	2.25 H	236	81.05	-65.81
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	782.00	17.02	34.77	-17.75	1.66 V	229	82.83	-65.81

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.

LTE Band 71, Channel Bandwidth 5MHz

Mode	TX channel 133147, 133297, 133446							
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	665.50	15.22	34.77	-19.55	1.76 H	332	83.42	-68.20
2	680.50	15.26	34.77	-19.51	1.74 H	332	83.30	-68.04
3	695.50	15.25	34.77	-19.52	1.74 H	338	83.03	-67.78
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	665.50	17.56	34.77	-17.21	1.22 V	233	85.76	-68.20
2	680.50	17.62	34.77	-17.15	1.28 V	230	85.66	-68.04
3	695.50	17.58	34.77	-17.19	1.27 V	236	85.36	-67.78

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.

LTE Band 71, Channel Bandwidth 10MHz

Mode	TX channel 133172, 133297, 133421							
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	668.00	15.54	34.77	-19.23	1.77 H	330	83.75	-68.21
2	680.50	15.62	34.77	-19.15	1.78 H	332	83.66	-68.04
3	693.00	15.56	34.77	-19.21	1.74 H	330	83.38	-67.82
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	668.00	17.33	34.77	-17.44	1.35 V	224	85.54	-68.21
2	680.50	17.25	34.77	-17.52	1.28 V	228	85.29	-68.04
3	693.00	17.24	34.77	-17.53	1.22 V	240	85.06	-67.82

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.

LTE Band 71, Channel Bandwidth 15MHz

Mode	TX channel 133197, 133297, 133396							
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	670.50	15.64	34.77	-19.13	1.72 H	330	83.86	-68.22
2	680.50	15.68	34.77	-19.09	1.78 H	336	83.72	-68.04
3	690.50	15.78	34.77	-18.99	1.79 H	338	83.66	-67.88
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	670.50	17.42	34.77	-17.35	1.24 V	233	85.64	-68.22
2	680.50	17.38	34.77	-17.39	1.23 V	229	85.42	-68.04
3	690.50	17.44	34.77	-17.33	1.33 V	225	85.32	-67.88

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.

LTE Band 71, Channel Bandwidth 20MHz

Mode	TX channel 133222, 133297, 133371							
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	673.00	15.54	34.77	-19.23	1.77 H	343	83.74	-68.20
2	680.50	15.36	34.77	-19.41	1.74 H	338	83.40	-68.04
3	688.00	15.42	34.77	-19.35	1.74 H	335	83.34	-67.92
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**ERP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	673.00	17.38	34.77	-17.39	1.25 V	227	85.58	-68.20
2	680.50	17.46	34.77	-17.31	1.27 V	232	85.50	-68.04
3	688.00	17.36	34.77	-17.41	1.24 V	233	85.28	-67.92

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.

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stability Measurement

According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT -30℃ ~ 50℃.

4.2.2 Test Procedure

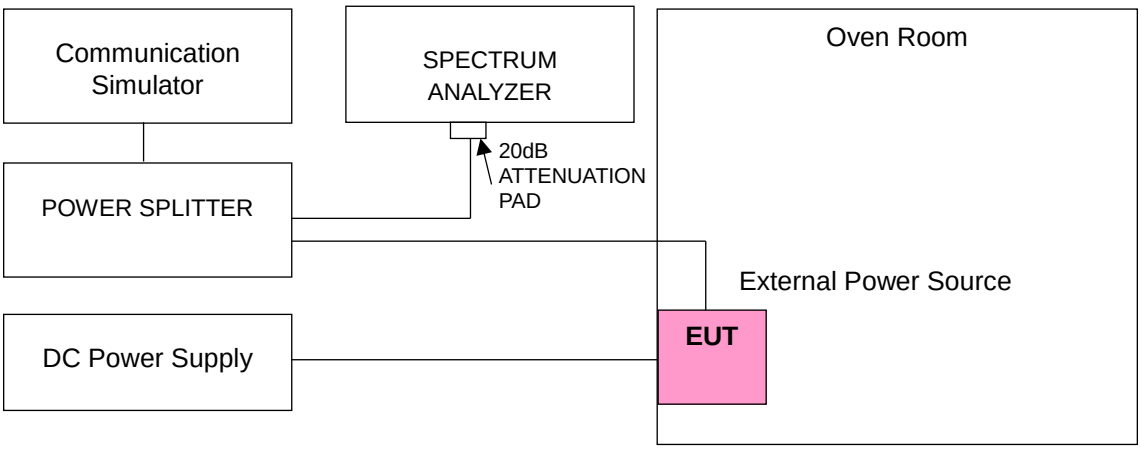
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

Note: The frequency error was recorded frequency error from the communication simulator.

4.2.3 Test Setup



4.2.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	WCDMA Band 4			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1712.400002	0.001	1752.600003	0.002
4.25	1712.400003	0.002	1752.600002	0.001
5.75	1712.400002	0.001	1752.600003	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	WCDMA Band 4			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1712.400004	0.002	1752.600003	0.002
-30	1712.400004	0.002	1752.600001	0.001
-20	1712.400001	0.001	1752.600004	0.002
-10	1712.400003	0.002	1752.600004	0.002
0	1712.400002	0.001	1752.600002	0.001
10	1712.400001	0.001	1752.600001	0.001
20	1712.399999	-0.001	1752.599997	-0.002
30	1712.399997	-0.002	1752.599999	-0.001
40	1712.399996	-0.002	1752.599996	-0.002
50	1712.399997	-0.002	1752.599997	-0.002
60	1712.399999	-0.001	1752.599997	-0.002
70	1712.399998	-0.001	1752.599996	-0.002
80	1712.399996	-0.002	1752.599997	-0.002
85	1712.399999	-0.001	1752.599998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1710.700003	0.002	1754.300004	0.002
4.25	1710.700003	0.002	1754.300002	0.001
5.75	1710.700003	0.002	1754.300004	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1710.700002	0.001	1754.300004	0.002
-30	1710.700003	0.002	1754.300001	0.001
-20	1710.700002	0.001	1754.300003	0.002
-10	1710.700004	0.002	1754.300003	0.002
0	1710.700003	0.002	1754.300001	0.001
10	1710.700004	0.002	1754.300003	0.002
20	1710.699996	-0.002	1754.299996	-0.002
30	1710.699997	-0.002	1754.299999	-0.001
40	1710.699996	-0.002	1754.299998	-0.001
50	1710.699998	-0.001	1754.299996	-0.002
60	1710.699997	-0.002	1754.299998	-0.001
70	1710.699997	-0.002	1754.299996	-0.002
80	1710.699999	-0.001	1754.299997	-0.002
85	1710.699996	-0.002	1754.299999	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1711.500002	0.001	1753.500003	0.001
4.25	1711.500004	0.002	1753.500003	0.002
5.75	1711.500003	0.002	1753.500003	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1711.500003	0.002	1753.500002	0.001
-30	1711.500002	0.001	1753.500003	0.002
-20	1711.500002	0.001	1753.500001	0.001
-10	1711.500002	0.001	1753.500001	0.001
0	1711.500002	0.001	1753.500003	0.002
10	1711.500002	0.001	1753.500002	0.001
20	1711.499998	-0.001	1753.499999	-0.001
30	1711.499997	-0.002	1753.499997	-0.002
40	1711.499996	-0.002	1753.499997	-0.002
50	1711.499998	-0.001	1753.499996	-0.002
60	1711.499998	-0.001	1753.499999	-0.001
70	1711.499997	-0.002	1753.499996	-0.002
80	1711.499997	-0.002	1753.499997	-0.002
85	1711.499999	-0.001	1753.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1712.500002	0.001	1752.500001	0.001
4.25	1712.500004	0.002	1752.500003	0.002
5.75	1712.500002	0.001	1752.500002	0.001

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1712.500002	0.001	1752.500002	0.001
-30	1712.500002	0.001	1752.500004	0.002
-20	1712.500003	0.001	1752.500004	0.002
-10	1712.500004	0.002	1752.500001	0.001
0	1712.500004	0.002	1752.500004	0.002
10	1712.500003	0.002	1752.500002	0.001
20	1712.499998	-0.001	1752.499998	-0.001
30	1712.499998	-0.001	1752.499996	-0.002
40	1712.499997	-0.002	1752.499998	-0.001
50	1712.499998	-0.001	1752.499999	-0.001
60	1712.499998	-0.001	1752.499997	-0.002
70	1712.499997	-0.002	1752.499997	-0.002
80	1712.499999	-0.001	1752.499999	-0.001
85	1712.499996	-0.002	1752.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1715.000003	0.002	1750.000003	0.002
4.25	1715.000003	0.002	1750.000001	0.001
5.75	1715.000002	0.001	1750.000001	0.001

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1715.000003	0.002	1750.000001	0.001
-30	1715.000001	0.001	1750.000003	0.001
-20	1715.000001	0.001	1750.000003	0.002
-10	1715.000001	0.001	1750.000002	0.001
0	1715.000004	0.002	1750.000003	0.002
10	1715.000001	0.001	1750.000001	0.001
20	1714.999998	-0.001	1749.999996	-0.002
30	1714.999998	-0.001	1749.999997	-0.002
40	1714.999996	-0.002	1749.999998	-0.001
50	1714.999998	-0.001	1749.999999	-0.001
60	1714.999997	-0.002	1749.999998	-0.001
70	1714.999997	-0.002	1749.999998	-0.001
80	1714.999996	-0.002	1749.999997	-0.002
85	1714.999996	-0.002	1749.999998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1717.500003	0.002	1747.500004	0.002
4.25	1717.500002	0.001	1747.500001	0.001
5.75	1717.500004	0.002	1747.500003	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1717.500002	0.001	1747.500003	0.001
-30	1717.500002	0.001	1747.500002	0.001
-20	1717.500002	0.001	1747.500003	0.002
-10	1717.500002	0.001	1747.500004	0.002
0	1717.500002	0.001	1747.500002	0.001
10	1717.500001	0.001	1747.500004	0.002
20	1717.499997	-0.002	1747.499998	-0.001
30	1717.499998	-0.001	1747.499998	-0.001
40	1717.499998	-0.001	1747.499999	-0.001
50	1717.499998	-0.001	1747.499999	-0.001
60	1717.499998	-0.001	1747.499996	-0.002
70	1717.499998	-0.001	1747.499997	-0.002
80	1717.499998	-0.001	1747.499999	-0.001
85	1717.499998	-0.001	1747.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 4			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1720.000003	0.001	1745.000004	0.002
4.25	1720.000003	0.002	1745.000002	0.001
5.75	1720.000002	0.001	1745.000003	0.001

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 4			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1720.000004	0.002	1745.000003	0.001
-30	1720.000002	0.001	1745.000002	0.001
-20	1720.000002	0.001	1745.000001	0.001
-10	1720.000003	0.002	1745.000001	0.001
0	1720.000003	0.002	1745.000001	0.001
10	1720.000002	0.001	1745.000003	0.002
20	1719.999998	-0.001	1744.999997	-0.001
30	1719.999997	-0.002	1744.999999	-0.001
40	1719.999998	-0.001	1744.999996	-0.002
50	1719.999998	-0.001	1744.999999	-0.001
60	1719.999998	-0.001	1744.999998	-0.001
70	1719.999996	-0.002	1744.999998	-0.001
80	1719.999997	-0.002	1744.999998	-0.001
85	1719.999996	-0.002	1744.999997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	699.700004	0.005	715.300004	0.005
4.25	699.700002	0.003	715.300003	0.005
5.75	699.700002	0.002	715.300003	0.004

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	699.700002	0.002	715.300003	0.004
-30	699.700001	0.002	715.300002	0.003
-20	699.700003	0.004	715.300001	0.002
-10	699.700002	0.003	715.300002	0.003
0	699.700002	0.002	715.300002	0.003
10	699.700001	0.002	715.300003	0.004
20	699.699998	-0.002	715.299997	-0.004
30	699.699999	-0.002	715.299997	-0.004
40	699.699998	-0.003	715.299996	-0.005
50	699.699998	-0.002	715.299996	-0.005
60	699.699998	-0.003	715.299999	-0.002
70	699.699999	-0.002	715.299999	-0.002
80	699.699999	-0.002	715.299998	-0.003
85	699.699996	-0.005	715.299998	-0.003

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	700.500002	0.002	714.500003	0.004
4.25	700.500002	0.002	714.500002	0.002
5.75	700.500001	0.002	714.500002	0.003

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	700.500004	0.005	714.500002	0.003
-30	700.500002	0.003	714.500004	0.005
-20	700.500003	0.004	714.500004	0.005
-10	700.500003	0.005	714.500002	0.003
0	700.500004	0.006	714.500004	0.006
10	700.500002	0.002	714.500003	0.004
20	700.499998	-0.003	714.499997	-0.004
30	700.499999	-0.002	714.499997	-0.004
40	700.499998	-0.003	714.499998	-0.003
50	700.499998	-0.003	714.499998	-0.003
60	700.499997	-0.004	714.499999	-0.002
70	700.499999	-0.002	714.499999	-0.002
80	700.499997	-0.004	714.499999	-0.001
85	700.499998	-0.003	714.499999	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	701.500002	0.003	713.500003	0.005
4.25	701.500002	0.003	713.500002	0.003
5.75	701.500002	0.002	713.500002	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	701.500004	0.006	713.500001	0.002
-30	701.500001	0.001	713.500002	0.002
-20	701.500004	0.005	713.500002	0.003
-10	701.500003	0.004	713.500002	0.003
0	701.500001	0.002	713.500004	0.005
10	701.500002	0.003	713.500003	0.004
20	701.499998	-0.004	713.499997	-0.004
30	701.499997	-0.004	713.499998	-0.003
40	701.499997	-0.005	713.499997	-0.004
50	701.499998	-0.003	713.499999	-0.002
60	701.499998	-0.004	713.499997	-0.005
70	701.499997	-0.004	713.499998	-0.003
80	701.499997	-0.005	713.499998	-0.003
85	701.499999	-0.002	713.499997	-0.005

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	704.000001	0.002	711.000004	0.005
4.25	704.000002	0.003	711.000004	0.005
5.75	704.000004	0.006	711.000002	0.003

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 12			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	704.000002	0.002	711.000004	0.006
-30	704.000002	0.003	711.000001	0.001
-20	704.000002	0.002	711.000003	0.004
-10	704.000002	0.003	711.000004	0.005
0	704.000003	0.004	711.000001	0.002
10	704.000004	0.005	711.000003	0.004
20	703.999997	-0.005	710.999998	-0.003
30	703.999996	-0.005	710.999998	-0.003
40	703.999999	-0.002	710.999998	-0.003
50	703.999998	-0.002	710.999999	-0.002
60	703.999999	-0.002	710.999998	-0.003
70	703.999997	-0.005	710.999996	-0.005
80	703.999999	-0.002	710.999998	-0.003
85	703.999998	-0.002	710.999997	-0.005

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 13			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	779.500002	0.002	784.500002	0.002
4.25	779.500003	0.004	784.500001	0.002
5.75	779.500004	0.004	784.500001	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 13			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	779.500001	0.001	784.500003	0.003
-30	779.500004	0.005	784.500003	0.004
-20	779.500001	0.002	784.500004	0.005
-10	779.500003	0.004	784.500002	0.003
0	779.500003	0.004	784.500003	0.003
10	779.500001	0.002	784.500002	0.003
20	779.499997	-0.004	784.499998	-0.003
30	779.499998	-0.003	784.499998	-0.002
40	779.499997	-0.004	784.499997	-0.004
50	779.499996	-0.005	784.499997	-0.004
60	779.499997	-0.004	784.499999	-0.001
70	779.499997	-0.004	784.499997	-0.004
80	779.499997	-0.004	784.499999	-0.002
85	779.499997	-0.004	784.499996	-0.005

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 13	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
5	782.000003	0.004
4.25	782.000002	0.002
5.75	782.000004	0.005

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 13	
	Channel Bandwidth: 10 MHz	
	Frequency (MHz)	Frequency Error (ppm)
-40	782.000003	0.003
-30	782.000001	0.002
-20	782.000003	0.004
-10	782.000001	0.002
0	782.000003	0.003
10	782.000003	0.004
20	781.999999	-0.002
30	781.999997	-0.004
40	781.999996	-0.005
50	781.999998	-0.003
60	781.999998	-0.003
70	781.999996	-0.005
80	781.999998	-0.003
85	781.999997	-0.004

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1710.700002	0.001	1779.300002	0.001
4.25	1710.700002	0.001	1779.300002	0.001
5.75	1710.700004	0.002	1779.300003	0.001

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1710.700001	0.001	1779.300004	0.002
-30	1710.700003	0.001	1779.300004	0.002
-20	1710.700003	0.002	1779.300002	0.001
-10	1710.700003	0.002	1779.300003	0.002
0	1710.700001	0.001	1779.300002	0.001
10	1710.700004	0.002	1779.300004	0.002
20	1710.699998	-0.001	1779.299999	-0.001
30	1710.699997	-0.002	1779.299998	-0.001
40	1710.699999	-0.001	1779.299998	-0.001
50	1710.699999	-0.001	1779.299998	-0.001
60	1710.699997	-0.002	1779.299998	-0.001
70	1710.699998	-0.001	1779.299997	-0.002
80	1710.699996	-0.002	1779.299997	-0.002
85	1710.699998	-0.001	1779.299998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1711.500003	0.002	1778.500003	0.002
4.25	1711.500002	0.001	1778.500004	0.002
5.75	1711.500002	0.001	1778.500003	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1711.500002	0.001	1778.500003	0.002
-30	1711.500002	0.001	1778.500004	0.002
-20	1711.500003	0.002	1778.500003	0.001
-10	1711.500003	0.002	1778.500003	0.001
0	1711.500003	0.002	1778.500001	0.001
10	1711.500001	0.001	1778.500004	0.002
20	1711.499998	-0.001	1778.499998	-0.001
30	1711.499998	-0.001	1778.499999	-0.001
40	1711.499997	-0.002	1778.499999	-0.001
50	1711.499998	-0.001	1778.499996	-0.002
60	1711.499998	-0.001	1778.499999	-0.001
70	1711.499999	-0.001	1778.499998	-0.001
80	1711.499999	-0.001	1778.499997	-0.002
85	1711.499997	-0.002	1778.499996	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1712.500003	0.002	1777.500002	0.001
4.25	1712.500003	0.002	1777.500002	0.001
5.75	1712.500003	0.002	1777.500001	0.001

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1712.500004	0.003	1777.500001	0.001
-30	1712.500003	0.002	1777.500002	0.001
-20	1712.500003	0.002	1777.500003	0.002
-10	1712.500004	0.002	1777.500003	0.002
0	1712.500002	0.001	1777.500003	0.002
10	1712.500002	0.001	1777.500002	0.001
20	1712.499997	-0.002	1777.499999	-0.001
30	1712.499997	-0.002	1777.499998	-0.001
40	1712.499997	-0.002	1777.499997	-0.002
50	1712.499998	-0.001	1777.499998	-0.001
60	1712.499998	-0.001	1777.499996	-0.002
70	1712.499998	-0.001	1777.499997	-0.002
80	1712.499997	-0.002	1777.499998	-0.001
85	1712.499998	-0.001	1777.499998	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1715.000003	0.002	1775.000003	0.002
4.25	1715.000002	0.001	1775.000002	0.001
5.75	1715.000002	0.001	1775.000004	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1715.000003	0.002	1775.000001	0.001
-30	1715.000003	0.002	1775.000002	0.001
-20	1715.000003	0.001	1775.000004	0.002
-10	1715.000002	0.001	1775.000001	0.001
0	1715.000004	0.002	1775.000004	0.002
10	1715.000004	0.002	1775.000001	0.001
20	1714.999999	-0.001	1774.999996	-0.002
30	1714.999996	-0.002	1774.999997	-0.002
40	1714.999997	-0.002	1774.999997	-0.002
50	1714.999998	-0.001	1774.999996	-0.002
60	1714.999997	-0.002	1774.999996	-0.002
70	1714.999996	-0.002	1774.999998	-0.001
80	1714.999998	-0.001	1774.999998	-0.001
85	1714.999997	-0.002	1774.999999	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1717.500004	0.002	1772.500002	0.001
4.25	1717.500003	0.002	1772.500002	0.001
5.75	1717.500002	0.001	1772.500003	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1717.500002	0.001	1772.500003	0.001
-30	1717.500001	0.001	1772.500003	0.002
-20	1717.500004	0.002	1772.500003	0.002
-10	1717.500002	0.001	1772.500003	0.002
0	1717.500004	0.002	1772.500002	0.001
10	1717.500002	0.001	1772.500002	0.001
20	1717.499997	-0.002	1772.499997	-0.002
30	1717.499999	-0.001	1772.499997	-0.002
40	1717.499997	-0.002	1772.499996	-0.002
50	1717.499998	-0.001	1772.499998	-0.001
60	1717.499997	-0.002	1772.499998	-0.001
70	1717.499996	-0.002	1772.499999	-0.001
80	1717.499996	-0.002	1772.499998	-0.001
85	1717.499998	-0.001	1772.499997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 66			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	1720.000004	0.002	1770.000003	0.001
4.25	1720.000003	0.002	1770.000003	0.002
5.75	1720.000001	0.001	1770.000004	0.002

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 66			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	1720.000002	0.001	1770.000003	0.001
-30	1720.000001	0.001	1770.000004	0.002
-20	1720.000003	0.002	1770.000003	0.002
-10	1720.000002	0.001	1770.000002	0.001
0	1720.000002	0.001	1770.000001	0.001
10	1720.000003	0.002	1770.000002	0.001
20	1719.999998	-0.001	1769.999999	-0.001
30	1719.999997	-0.002	1769.999997	-0.002
40	1719.999996	-0.002	1769.999999	-0.001
50	1719.999998	-0.001	1769.999998	-0.001
60	1719.999998	-0.001	1769.999997	-0.002
70	1719.999999	-0.001	1769.999997	-0.002
80	1719.999998	-0.001	1769.999999	-0.001
85	1719.999998	-0.001	1769.999997	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 71			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	665.500002	0.003	695.500003	0.004
4.25	665.500003	0.005	695.500002	0.002
5.75	665.500003	0.004	695.500001	0.001

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 71			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	665.500003	0.004	695.500004	0.006
-30	665.500004	0.006	695.500001	0.001
-20	665.500004	0.006	695.500002	0.003
-10	665.500003	0.005	695.500003	0.004
0	665.500004	0.006	695.500002	0.002
10	665.500002	0.002	695.500002	0.003
20	665.499999	-0.002	695.499997	-0.005
30	665.499998	-0.003	695.499996	-0.005
40	665.499996	-0.006	695.499997	-0.004
50	665.499998	-0.003	695.499997	-0.004
60	665.499999	-0.002	695.499997	-0.004
70	665.499998	-0.003	695.499999	-0.002
80	665.499997	-0.004	695.499997	-0.005
85	665.499999	-0.002	695.499999	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 71			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	668.000002	0.003	693.000002	0.003
4.25	668.000002	0.003	693.000003	0.004
5.75	668.000001	0.002	693.000003	0.005

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 71			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	668.000002	0.004	693.000002	0.003
-30	668.000002	0.002	693.000001	0.002
-20	668.000003	0.004	693.000001	0.001
-10	668.000003	0.004	693.000003	0.005
0	668.000003	0.004	693.000004	0.005
10	668.000003	0.005	693.000004	0.005
20	667.999997	-0.004	692.999998	-0.002
30	667.999997	-0.004	692.999997	-0.004
40	667.999997	-0.005	692.999998	-0.002
50	667.999997	-0.004	692.999997	-0.005
60	667.999996	-0.006	692.999996	-0.006
70	667.999997	-0.004	692.999998	-0.003
80	667.999997	-0.004	692.999996	-0.005
85	667.999998	-0.003	692.999997	-0.005

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 71			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	670.500004	0.006	690.500003	0.005
4.25	670.500004	0.005	690.500004	0.006
5.75	670.500003	0.004	690.500004	0.005

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 71			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	670.500004	0.006	690.500004	0.006
-30	670.500002	0.003	690.500004	0.006
-20	670.500002	0.003	690.500003	0.004
-10	670.500003	0.005	690.500002	0.003
0	670.500002	0.003	690.500004	0.005
10	670.500003	0.004	690.500003	0.004
20	670.499997	-0.005	690.499998	-0.002
30	670.499997	-0.004	690.499998	-0.003
40	670.499999	-0.001	690.499997	-0.005
50	670.499999	-0.002	690.499999	-0.002
60	670.499997	-0.004	690.499999	-0.002
70	670.499997	-0.005	690.499998	-0.003
80	670.499998	-0.003	690.499997	-0.004
85	670.499997	-0.005	690.499999	-0.002

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 71			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
5	673.000002	0.002	688.000004	0.005
4.25	673.000001	0.002	688.000003	0.004
5.75	673.000003	0.005	688.000002	0.003

Note: The applicant defined the normal working voltage is from 5Vdc to 5.75Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 71			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-40	673.000004	0.005	688.000004	0.005
-30	673.000004	0.006	688.000002	0.002
-20	673.000003	0.004	688.000002	0.003
-10	673.000003	0.004	688.000001	0.001
0	673.000002	0.003	688.000004	0.005
10	673.000001	0.001	688.000002	0.003
20	672.999998	-0.003	687.999996	-0.006
30	672.999999	-0.002	687.999997	-0.005
40	672.999998	-0.003	687.999997	-0.005
50	672.999997	-0.005	687.999996	-0.006
60	672.999997	-0.005	687.999997	-0.005
70	672.999997	-0.004	687.999997	-0.005
80	672.999999	-0.002	687.999996	-0.006
85	672.999996	-0.006	687.999998	-0.003

4.3 Radiated Emission Measurement

4.3.1 Limits of Radiated Emission Measurement

For WCDMA band 4, LTE Band 4, 66
According to FCC 27.53(h), for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log (P) dB.

For LTE Band 12, 71
According to FCC 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. The limit of emissions is equal to -13 dBm.

For LTE Band 13
According to FCC 27.53(c)(2), for on any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB. The limit of emissions is equal to -13 dBm.

According to FCC 27.53(f), for operations in the 775-788 MHz, emissions in the band 1559-1610MHz shall be limited to -70 dBW/MHz (EIRP). The limit of emissions is equal to -40 dBm.

4.3.2 Test Procedure

a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) 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 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
d. Following C63.26 section 5.5 and 5.2.7
   EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

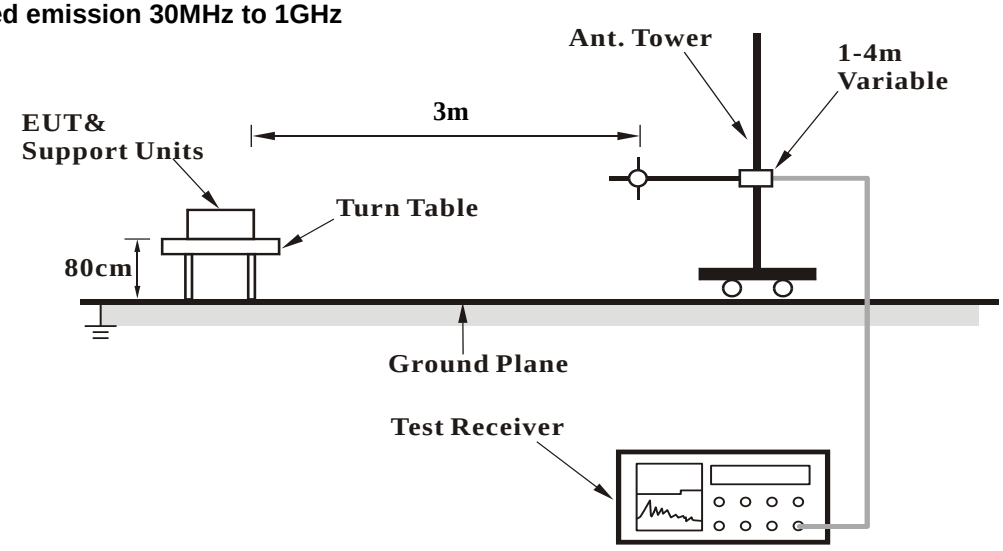
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.3.3 Deviation from Test Standard

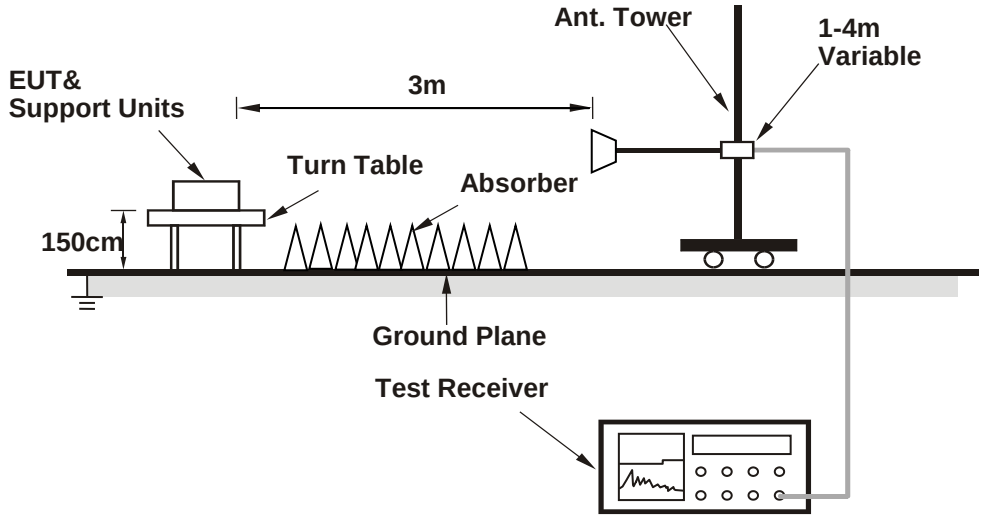
No deviation.

4.3.4 Test Setup

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



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

4.3.5 Test Results

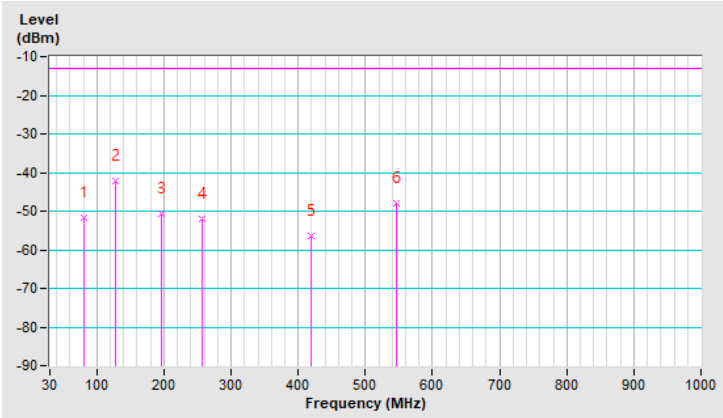
Below 1GHz
WCDMA Band 4

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	80.44	-51.6	-13.0	-38.6	1.50 H	228	56.9	-108.5
2	127.00	-42.2	-13.0	-29.2	1.00 H	156	63.7	-105.9
3	196.84	-50.8	-13.0	-37.8	1.50 H	192	56.1	-106.9
4	256.98	-52.0	-13.0	-39.0	1.00 H	156	52.5	-104.5
5	419.94	-56.4	-13.0	-43.4	1.00 H	250	44.4	-100.8
6	546.04	-47.9	-13.0	-34.9	1.00 H	152	50.9	-98.8

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.

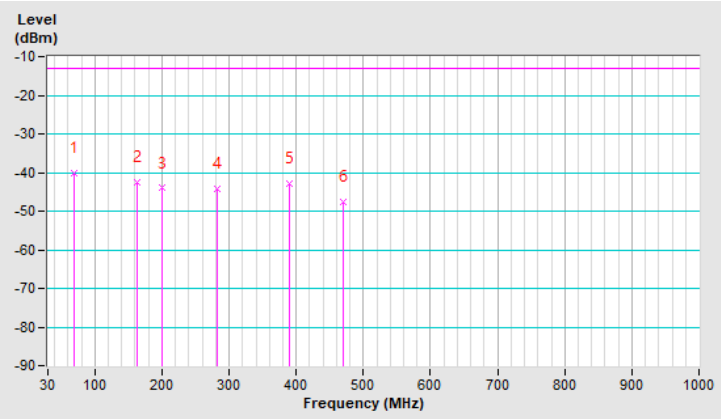


RF Mode	TX WCDMA Band IV	Channel	CH 1513：1752.6 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	68.80	-40.1	-13.0	-27.1	1.00 V	280	65.8	-105.9
2	163.86	-42.6	-13.0	-29.6	1.00 V	280	61.6	-104.2
3	200.72	-44.1	-13.0	-31.1	1.00 V	278	62.9	-107.0
4	282.20	-44.3	-13.0	-31.3	1.50 V	280	59.0	-103.3
5	388.90	-42.9	-13.0	-29.9	1.00 V	176	58.4	-101.3
6	470.38	-47.6	-13.0	-34.6	1.00 V	241	52.1	-99.7

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.



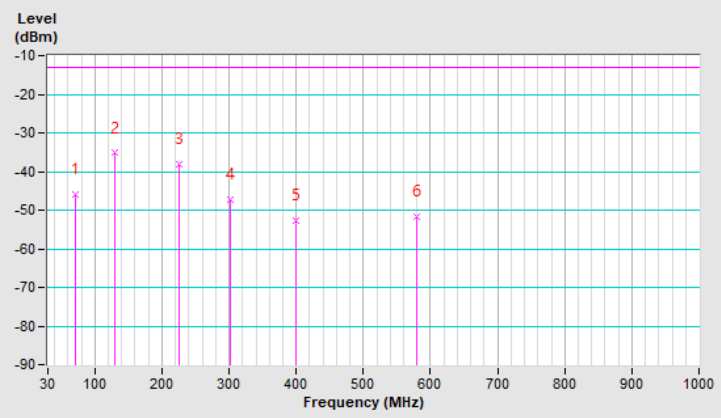
LTE Band 4

RF Mode	TX LTE Band IV-5MHz	Channel	CH 20375：1752.5 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	70.74	-46.0	-13.0	-33.0	1.49 H	292	60.1	-106.1
2	128.94	-35.3	-13.0	-22.3	1.49 H	313	70.3	-105.6
3	225.94	-38.2	-13.0	-25.2	1.49 H	5	68.6	-106.8
4	301.60	-47.2	-13.0	-34.2	1.00 H	218	55.5	-102.7
5	400.54	-52.7	-13.0	-39.7	1.49 H	201	48.6	-101.3
6	579.02	-51.6	-13.0	-38.6	1.49 H	270	46.4	-98.0

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.

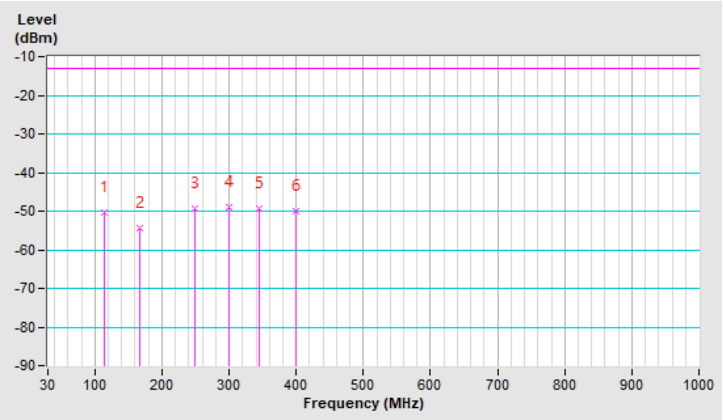


RF Mode	TX LTE Band IV-5MHz	Channel	CH 20375：1752.5 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	113.42	-50.2	-13.0	-37.2	1.50 V	19	56.8	-107.0
2	167.74	-54.4	-13.0	-41.4	1.00 V	228	49.9	-104.3
3	249.22	-49.4	-13.0	-36.4	1.50 V	166	55.3	-104.7
4	299.66	-48.9	-13.0	-35.9	1.00 V	344	53.9	-102.8
5	344.28	-49.3	-13.0	-36.3	1.00 V	188	52.8	-102.1
6	400.54	-50.1	-13.0	-37.1	1.00 V	191	51.2	-101.3

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.



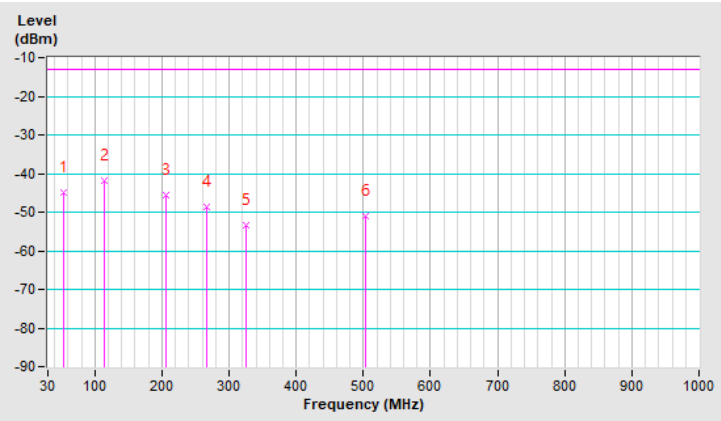
LTE Band 12

RF Mode	TX LTE Band XII-1.4MHz	Channel	CH 23017：699.7 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	53.28	-44.8	-13.0	-31.8	1.49 H	76	61.4	-106.2
2	113.42	-41.9	-13.0	-28.9	1.49 H	331	67.2	-109.2
3	206.54	-45.5	-13.0	-32.5	1.49 H	331	63.7	-109.2
4	266.68	-48.7	-13.0	-35.7	1.49 H	289	57.4	-106.1
5	324.88	-53.3	-13.0	-40.3	1.00 H	100	51.0	-104.3
6	503.36	-50.9	-13.0	-37.9	1.49 H	335	50.4	-101.3

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.

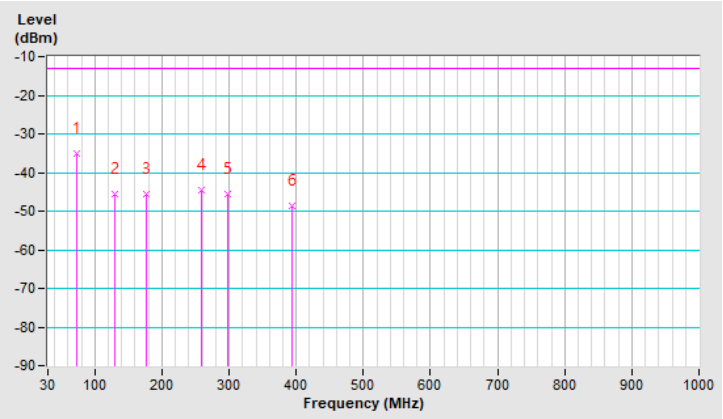


RF Mode	TX LTE Band XII-1.4MHz	Channel	CH 23017：699.7 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	72.68	-35.2	-13.0	-22.2	1.50 V	227	73.5	-108.7
2	128.94	-45.6	-13.0	-32.6	1.00 V	231	62.1	-107.8
3	177.44	-45.7	-13.0	-32.7	1.00 V	231	61.8	-107.5
4	258.92	-44.5	-13.0	-31.5	1.00 V	231	62.1	-106.6
5	297.72	-45.6	-13.0	-32.6	1.00 V	231	59.4	-105.0
6	394.72	-48.6	-13.0	-35.6	1.50 V	227	54.9	-103.5

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.



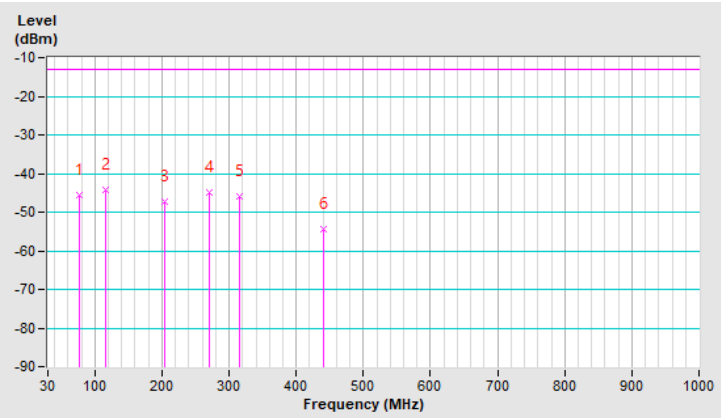
LTE Band 13

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23255：784.5 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	76.56	-45.7	-13.0	-32.7	1.01 H	287	63.9	-109.6
2	115.36	-44.1	-13.0	-31.1	1.01 H	325	65.0	-109.1
3	204.60	-47.4	-13.0	-34.4	1.01 H	329	61.8	-109.2
4	270.56	-45.0	-13.0	-32.0	1.01 H	287	60.9	-105.9
5	315.18	-45.8	-13.0	-32.8	1.01 H	327	59.0	-104.8
6	441.28	-54.3	-13.0	-41.3	1.01 H	329	48.2	-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.

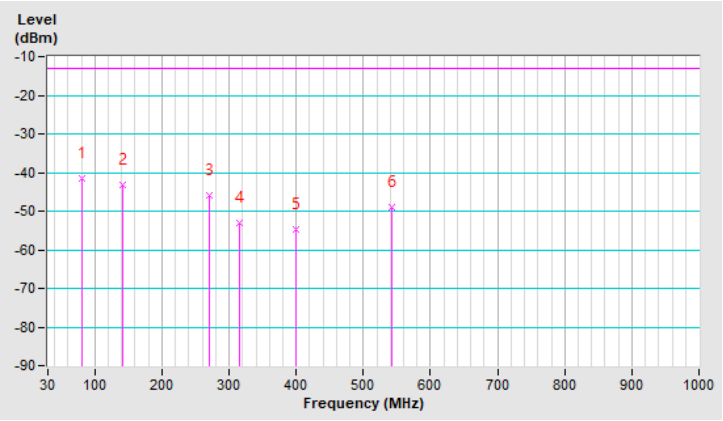


RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23255：784.5 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	80.44	-41.5	-13.0	-28.5	1.00 V	52	69.2	-110.7
2	140.58	-43.1	-13.0	-30.1	1.50 V	140	63.6	-106.7
3	270.56	-45.8	-13.0	-32.8	1.50 V	258	60.1	-105.9
4	315.18	-53.0	-13.0	-40.0	1.00 V	283	51.8	-104.8
5	400.54	-54.6	-13.0	-41.6	1.50 V	131	48.9	-103.5
6	542.16	-48.9	-13.0	-35.9	1.50 V	142	52.0	-100.9

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.



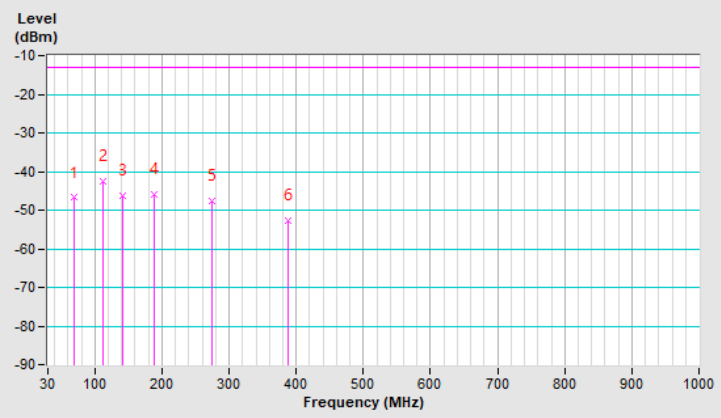
LTE Band 66

RF Mode	TX LTE Band LXVI-1.4MHz	Channel	CH 132665：1779.3 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	68.80	-46.8	-13.0	-33.8	1.01 H	288	59.1	-105.9
2	111.48	-42.7	-13.0	-29.7	1.01 H	300	64.5	-107.2
3	140.58	-46.4	-13.0	-33.4	1.01 H	288	58.1	-104.5
4	189.08	-45.8	-13.0	-32.8	1.01 H	300	60.7	-106.5
5	274.44	-47.6	-13.0	-34.6	1.01 H	326	55.9	-103.5
6	386.96	-52.8	-13.0	-39.8	1.01 H	328	48.6	-101.4

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.

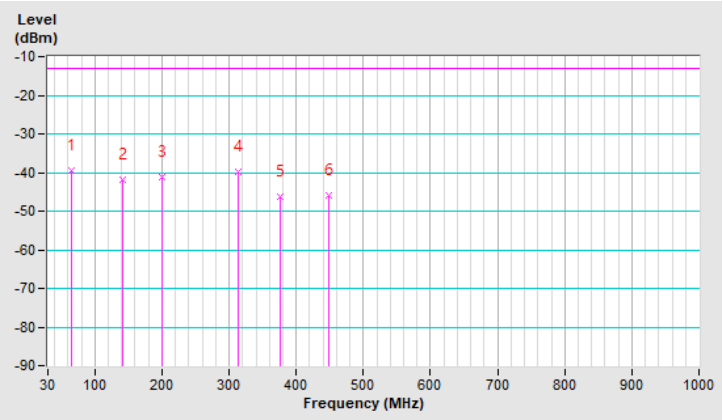


RF Mode	TX LTE Band LXVI-1.4MHz	Channel	CH 132665：1779.3 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	64.92	-39.5	-13.0	-26.5	1.50 V	325	65.8	-105.3
2	140.58	-42.0	-13.0	-29.0	1.50 V	172	62.5	-104.5
3	200.72	-41.1	-13.0	-28.1	1.00 V	209	65.9	-107.0
4	313.24	-39.8	-13.0	-26.8	1.50 V	338	62.8	-102.6
5	375.32	-46.3	-13.0	-33.3	1.50 V	338	55.3	-101.6
6	449.04	-46.1	-13.0	-33.1	1.50 V	338	53.9	-100.0

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.



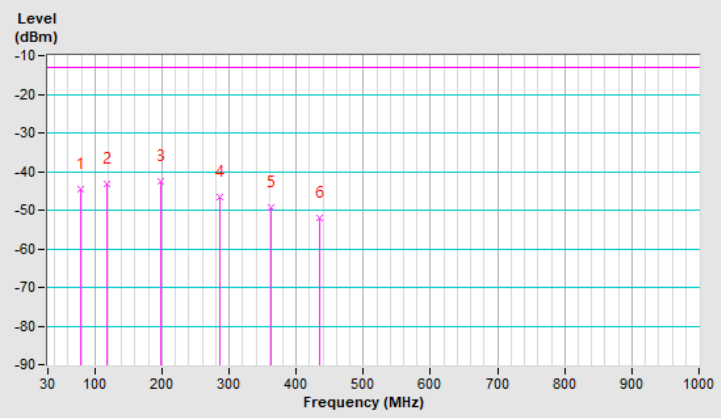
LTE Band 71

RF Mode	TX LTE Band LXXI-20MHz	Channel	CH 133372：688.0 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	78.50	-44.7	-13.0	-31.7	1.50 H	288	65.4	-110.1
2	117.30	-43.2	-13.0	-30.2	1.50 H	333	65.6	-108.8
3	198.78	-42.6	-13.0	-29.6	1.50 H	326	66.6	-109.2
4	286.08	-46.6	-13.0	-33.6	1.00 H	214	58.8	-105.4
5	361.74	-49.3	-13.0	-36.3	1.50 H	287	54.8	-104.1
6	435.46	-52.1	-13.0	-39.1	1.50 H	287	50.4	-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.

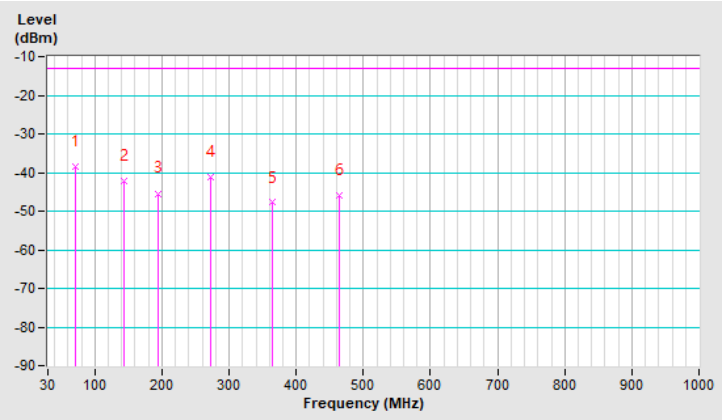


RF Mode	TX LTE Band LXXI-20MHz	Channel	CH 133372：688.0 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	70.74	-38.4	-13.0	-25.4	1.00 V	331	69.8	-108.2
2	142.52	-42.1	-13.0	-29.1	1.00 V	337	64.3	-106.5
3	194.90	-45.4	-13.0	-32.4	1.00 V	328	63.6	-109.0
4	272.50	-41.2	-13.0	-28.2	1.00 V	250	64.6	-105.8
5	363.68	-47.8	-13.0	-34.8	1.00 V	338	56.2	-104.0
6	464.56	-45.9	-13.0	-32.9	1.00 V	153	56.3	-102.2

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
WCDMA Band 4

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	-50.25	-13.00	-37.25	2.05 H	41	38.42	-88.67
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3424.80	-48.19	-13.00	-35.19	1.95 V	221	40.48	-88.67

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	-50.13	-13.00	-37.13	2.05 H	41	38.32	-88.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.20	-47.97	-13.00	-34.97	1.93 V	225	40.48	-88.45

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	-49.74	-13.00	-36.74	2.08 H	41	38.41	-88.15
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3505.20	-47.68	-13.00	-34.68	2.05 V	235	40.47	-88.15

Remarks:

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

LTE Band 4

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	-50.54	-13.00	-37.54	2.02 H	36	38.13	-88.67
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3421.40	-47.77	-13.00	-34.77	1.97 V	231	40.90	-88.67

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	-50.11	-13.00	-37.11	2.01 H	36	38.34	-88.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-48.03	-13.00	-35.03	1.99 V	230	40.42	-88.45

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	-48.86	-13.00	-35.86	2.02 H	32	39.25	-88.11
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3508.60	-47.09	-13.00	-34.09	2.04 V	234	41.02	-88.11

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	-49.94	-13.00	-36.94	1.94 H	38	38.72	-88.66
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3425.00	-47.92	-13.00	-34.92	2.00 V	235	40.74	-88.66

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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	3465.00	-50.03	-13.00	-37.03	1.99 H	37	38.42	-88.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-47.19	-13.00	-34.19	2.03 V	234	41.26	-88.45

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	-49.78	-13.00	-36.78	2.00 H	38	38.37	-88.15
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3505.00	-47.06	-13.00	-34.06	1.95 V	236	41.09	-88.15

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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	-50.07	-13.00	-37.07	1.97 H	37	38.53	-88.60
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3440.00	-48.23	-13.00	-35.23	1.97 V	235	40.37	-88.60

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	-49.46	-13.00	-36.46	1.99 H	37	38.99	-88.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-48.00	-13.00	-35.00	1.95 V	232	40.45	-88.45

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	-50.14	-13.00	-37.14	2.03 H	34	38.11	-88.25
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-47.37	-13.00	-34.37	1.97 V	234	40.88	-88.25

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.

LTE Band 12

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	-55.06	-13.00	-42.06	2.51 H	16	44.94	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1399.40	-46.43	-13.00	-33.43	2.28 V	293	53.57	-100.00

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	-54.87	-13.00	-41.87	2.53 H	13	45.13	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1415.00	-46.47	-13.00	-33.47	2.26 V	293	53.53	-100.00

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	-54.65	-13.00	-41.65	2.51 H	17	45.36	-100.01
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1430.60	-46.45	-13.00	-33.45	2.24 V	290	53.56	-100.01

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	-54.64	-13.00	-41.64	2.58 H	11	45.36	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1403.00	-47.33	-13.00	-34.33	2.29 V	288	52.67	-100.00

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	-54.39	-13.00	-41.39	2.60 H	11	45.61	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1415.00	-46.77	-13.00	-33.77	2.31 V	290	53.23	-100.00

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	-54.65	-13.00	-41.65	2.53 H	10	45.35	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1427.00	-47.36	-13.00	-34.36	2.33 V	294	52.64	-100.00

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	-54.70	-13.00	-41.70	2.55 H	12	45.30	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1408.00	-46.69	-13.00	-33.69	2.32 V	295	53.31	-100.00

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	-54.45	-13.00	-41.45	2.51 H	15	45.55	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1415.00	-46.92	-13.00	-33.92	2.29 V	291	53.08	-100.00

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	-54.85	-13.00	-41.85	2.53 H	11	45.15	-100.00
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1422.00	-46.76	-13.00	-33.76	2.24 V	293	53.24	-100.00

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.

LTE Band 13

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23205：779.5 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	1559.00	-57.12	-40.00	-17.12	2.21 H	16	40.33	-97.45
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1559.00	-54.79	-40.00	-14.79	2.44 V	301	42.66	-97.45

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 ~ 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	1564.00	-57.39	-40.00	-17.39	2.24 H	19	40.05	-97.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1564.00	-55.02	-40.00	-15.02	2.39 V	303	42.42	-97.44

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 ~ 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	1569.00	-56.75	-40.00	-16.75	2.23 H	16	40.68	-97.43
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**1569.00**	**-54.54**	**-40.00**	**-14.54**	**2.43 V**	**302**	**42.89**	**-97.43**

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 ~ 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	1564.00	-57.27	-40.00	-17.27	2.27 H	16	40.17	-97.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1564.00	-54.81	-40.00	-14.81	2.44 V	301	42.63	-97.44

Remarks:

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

LTE Band 66

RF Mode	TX LTE Band LXVI-1.4MHz	Channel	CH 131979 :1710.7MHz
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	-50.64	-13.00	-37.64	1.96 H	15	38.03	-88.67
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3421.40	-47.20	-13.00	-34.20	2.23 V	195	41.47	-88.67

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 LXVI-1.4MHz	Channel	CH 132322 :1745.0MHz
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	-50.11	-13.00	-37.11	1.89 H	17	38.14	-88.25
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-47.44	-13.00	-34.44	2.21 V	191	40.81	-88.25

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 LXVI-1.4MHz	Channel	CH 132665 :1779.3MHz
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	3558.60	-49.39	-13.00	-36.39	1.97 H	15	38.39	-87.78
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3558.60	-46.43	-13.00	-33.43	2.28 V	192	41.35	-87.78

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 LXVI-5MHz	Channel	CH 131997 :1712.5MHz
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	-50.45	-13.00	-37.45	1.87 H	12	38.21	-88.66
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3425.00	-47.50	-13.00	-34.50	2.22 V	188	41.16	-88.66

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 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 LXVI-5MHz	Channel	CH 132322 :1745.0MHz
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	-49.79	-13.00	-36.79	1.92 H	19	38.46	-88.25
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-47.54	-13.00	-34.54	2.23 V	194	40.71	-88.25

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 LXVI-5MHz	Channel	CH 132647 :1777.5MHz
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	3555.00	-49.47	-13.00	-36.47	1.96 H	17	38.31	-87.78
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3555.00	-46.72	-13.00	-33.72	2.19 V	194	41.06	-87.78

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 LXVI-20MHz	Channel	CH 132072 :1720.0MHz
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	-50.44	-13.00	-37.44	1.89 H	17	38.16	-88.60
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3440.00	-48.06	-13.00	-35.06	2.20 V	188	40.54	-88.60

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 LXVI-20MHz	Channel	CH 132322 :1745.0MH
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	-49.80	-13.00	-36.80	1.87 H	19	38.45	-88.25
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-47.25	-13.00	-34.25	2.23 V	193	41.00	-88.25

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 LXVI-20MHz	Channel	CH 132572 :1770.0MHz
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	3540.00	-49.14	-13.00	-36.14	1.89 H	19	38.75	-87.89
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3540.00	-47.45	-13.00	-34.45	2.26 V	194	40.44	-87.89

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.

LTE Band 71

RF Mode	TX LTE Band LXXI-5MHz	Channel	CH 133147 :665.5MHz
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	1331.00	-57.53	-13.00	-44.53	2.03 H	26	43.01	-100.54
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1331.00	-53.37	-13.00	-40.37	2.14 V	280	47.17	-100.54

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 LXXI-5MHz	Channel	CH 133297 :680.5MHz
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	1361.00	-57.33	-13.00	-44.33	2.00 H	23	43.10	-100.43
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1361.00	-53.26	-13.00	-40.26	2.16 V	282	47.17	-100.43

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 LXXI-5MHz	Channel	CH 133447 :695.5MHz
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	1391.00	-56.47	-13.00	-43.47	1.97 H	23	43.63	-100.10
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1391.00	-53.38	-13.00	-40.38	2.15 V	282	46.72	-100.10

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 LXXI-20MHz	Channel	CH 133447 :695.5MHz
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	1346.00	-57.26	-13.00	-44.26	2.04 H	19	43.28	-100.54
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1346.00	-53.37	-13.00	-40.37	2.08 V	284	47.17	-100.54

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 LXXI-20MHz	Channel	CH 133297 :680.5MHz
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	1361.00	-57.04	-13.00	-44.04	1.97 H	20	43.39	-100.43
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1361.00	-53.04	-13.00	-40.04	2.12 V	284	47.39	-100.43

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 LXXI-20MHz	Channel	CH 133372 :688.0MHz
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	1376.00	-56.75	-13.00	-43.75	2.04 H	22	43.51	-100.26
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1376.00	-52.89	-13.00	-39.89	2.12 V	280	47.37	-100.26

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.

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 and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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