

FCC Test Report

(Spot Check: Part 27 – WCDMA B4, LTE B4/B12/B13/B17/B38/B41)

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FCC ID: APYHRO00316

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Test Date: Jul. 26 ~ Jul. 27, 2022

Issued Date: Aug. 25, 2022

Applicant: SHARP Corporation Mobile Communication BU

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FCC Registration / 788550 / TW0003

Designation Number: 281270 / TW0032



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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty	6
2.2 Test Site and Instruments	7
3 General Information	8
3.1 General Description of EUT	8
3.2 Configuration of System under Test	11
3.2.1 Description of Support Units	11
3.3 Test Mode Applicability and Tested Channel Detail	12
3.4 EUT Operating Conditions	15
3.5 General Description of Applied Standards and References	15
4 Test Types and Results	16
4.1 Output Power Measurement	16
4.1.1 Limits of Output Power Measurement	16
4.1.2 Test Procedures	16
4.1.3 Test Setup	16
4.1.4 Test Results	17
4.2 Radiated Emission Measurement	63
4.2.1 Limits of Radiated Emission Measurement	63
4.2.2 Test Procedure	63
4.2.3 Deviation from Test Standard	64
4.2.4 Test Setup	64
4.2.5 Test Results	65
5 Pictures of Test Arrangements	83
Appendix – Information of the Testing Laboratories	84

Release Control Record

Issue No.	Description	Date Issued
RFBGTL-WTW-P22070227-8	Original Release	Aug. 25, 2022

1 Certificate of Conformity

Product: Smart Phone

Brand: SHARP

Sample Status: Engineering Sample

Applicant: SHARP Corporation Mobile Communication BU

Manufacturer: Sharp Corporation

Test Date: Jul. 26 ~ Jul. 27, 2022

Standards: FCC Part 27, Subpart C, H, L, M

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: _____ Aug. 25, 2022

Lena Wang / Specialist

Approved by : _____

Jeremy Lin

Date: _____ Aug. 25, 2022

Jeremy Lin / Project Engineer

2 Summary of Test Results

For WCDMA Band 4, LTE Band 4

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (d)	Equivalent Isotropically radiated power	Pass	Meet the requirement of limit.
2.1053 27.53 (h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -31.12dB at 37.76MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 38, LTE Band 41

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (h)(2)	Equivalent Isotropically radiated power	Pass	Meet the requirement of limit.
2.1053 27.53 (m)(4)(6)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -22.63dB at 5190.00MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 12, LTE Band 17

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50 (c)	Equivalent radiated power	Pass	Meet the requirement of limit.
2.1053 27.53 (g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -36.79dB at 1420.00MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 13

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(b)	Equivalent radiated power	Pass	Meet the requirement of limit.
2.1053 27.53(c)(f)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -12.32dB at 1564.00MHz.

Note: 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) (\pm)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.00 dB
	30MHz ~ 200MHz	2.91 dB
	200MHz ~ 1000MHz	2.92 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	1.76 dB
	18GHz ~ 40GHz	1.77 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver Rohde & Schwarz	ESR3	102579	Jul. 01, 2022	Jun. 30, 2023
Spectrum Analyzer KEYSIGHT	N9020B	MY60110462	Dec. 21, 2021	Dec. 20, 2022
BILOG Antenna SCHWARZBECK	VULB9168	995	Oct. 28, 2021	Oct. 27, 2022
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-404	Nov. 14, 2021	Nov. 13, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	995	Nov. 14, 2021	Nov. 13, 2022
Loop Antenna EMCI	EM-6879	269	Sep. 16, 2021	Sep. 15, 2022
Preamplifier EMCI	EMC330N	980783	Jan. 17, 2022	Jan. 16, 2023
Preamplifier EMCI	EMC118A45SE	980810	Dec. 30, 2021	Dec. 29, 2022
Preamplifier EMCI	EMC184045SE	980787	Jan. 17, 2022	Jan. 16, 2023
RF signal cable EMCI	EMC104-SM-SM- (9000+2000+1000)	201230+ 201242+ 210101	Jan. 17, 2022	Jan. 16, 2023
RF signal cable EMCI	EMCCFD400-NM- NM- (9000+300+500)	201252+ 201250+ 201245	Jan. 17, 2022	Jan. 16, 2023
RF signal cable EMCI	EMC101G-KM-KM- (5000+3000+2000)	201261+201258+ 201249	Jan. 17, 2022	Jan. 16, 2023
Software BV CPS	ADT_Radiated_V7. 6.15.9.5	NA	NA	NA
Turn Table Max-Full	MFT-151SS-0.5T	NA	NA	NA
Turn Table Controller Max-Full	MF-7802BS	MF780208675	NA	NA
Antenna Tower KaiTuo	NA	NA	NA	NA
Antenna Tower Controller KaiTuo	KT-2000	NA	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190 004/MY55190007/MY55 210005	Jul. 13, 2022	Jul. 12, 2023
Radio Communication Analyzer Anritsu	MT8821C	6261806803	Feb. 16, 2022	Feb. 15, 2023

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 WM Chamber 7.

3 General Information

3.1 General Description of EUT

Product	Smart Phone	
Brand	SHARP	
Sample Status	Engineering Sample	
Power Supply	5.0Vdc (from adapter)	
Rating	3.87Vdc (Battery)	
Modulation Type	WCDMA: BPSK, QPSK HSDPA: BPSK HSUPA: QPSK LTE: QPSK, 16QAM, 64QAM	
Operating Frequency	WCDMA Band 4	1712.4MHz ~ 1752.6MHz
	LTE Band 4 (Channel Bandwidth 1.4MHz)	1710.7MHz ~ 1754.3MHz
	LTE Band 4 (Channel Bandwidth 3MHz)	1711.5MHz ~ 1753.5MHz
	LTE Band 4 (Channel Bandwidth 5MHz)	1712.5MHz ~ 1752.5MHz
	LTE Band 4 (Channel Bandwidth 10MHz)	1715.0MHz ~ 1750.0MHz
	LTE Band 4 (Channel Bandwidth 15MHz)	1717.5MHz ~ 1747.5MHz
	LTE Band 4 (Channel Bandwidth 20MHz)	1720.0MHz ~ 1745.0MHz
	LTE Band 12 (Channel Bandwidth 1.4MHz)	699.7MHz ~ 715.3MHz
	LTE Band 12 (Channel Bandwidth 3MHz)	700.5MHz ~ 714.5MHz
	LTE Band 12 (Channel Bandwidth 5MHz)	701.5MHz ~ 713.5MHz
	LTE Band 12 (Channel Bandwidth 10MHz)	704.0MHz ~ 711.0MHz
	LTE Band 13 (Channel Bandwidth 5MHz)	779.5MHz ~ 784.5MHz
	LTE Band 13 (Channel Bandwidth 10MHz)	782.0MHz
	LTE Band 17 (Channel Bandwidth 5MHz)	706.5MHz ~ 713.5MHz
	LTE Band 17 (Channel Bandwidth 10MHz)	709.0MHz ~ 711.0MHz
	LTE Band 38 (Channel Bandwidth 5MHz)	2572.5MHz ~ 2617.5MHz
	LTE Band 38 (Channel Bandwidth 10MHz)	2575.0MHz ~ 2615.0MHz
	LTE Band 38 (Channel Bandwidth 15MHz)	2577.5MHz ~ 2612.5MHz
	LTE Band 38 (Channel Bandwidth 20MHz)	2580.0MHz ~ 2610.0MHz
	LTE Band 41 (Channel Bandwidth 5MHz)	2498.5MHz ~ 2687.5MHz
LTE Band 41 (Channel Bandwidth 10MHz)	2501.0MHz ~ 2685.0 MHz	
LTE Band 41 (Channel Bandwidth 15MHz)	2503.5MHz ~ 2682.5MHz	
LTE Band 41 (Channel Bandwidth 20MHz)	2506.0MHz ~ 2680.0 MHz	

Max. EIRP Power	WCDMA Band 4	64.863mW (18.12dBm)		
		QPSK	16QAM	64QAM
	LTE Band 4 (Channel Bandwidth 1.4MHz)	46.452mW (16.67dBm)	39.537mW (15.97dBm)	31.117mW (14.93dBm)
	LTE Band 4 (Channel Bandwidth 3MHz)	46.666mW (16.69dBm)	39.537mW (15.97dBm)	31.623mW (15.00dBm)
	LTE Band 4 (Channel Bandwidth 5MHz)	46.452mW (16.67dBm)	39.174mW (15.93dBm)	31.333mW (14.96dBm)
	LTE Band 4 (Channel Bandwidth 10MHz)	46.452mW (16.67dBm)	39.719mW (15.99dBm)	31.333mW (14.96dBm)
	LTE Band 4 (Channel Bandwidth 15MHz)	46.559mW (16.68dBm)	39.628mW (15.98dBm)	31.189mW (14.94dBm)
	LTE Band 4 (Channel Bandwidth 20MHz)	58.210mW (17.65dBm)	49.659mW (16.96dBm)	39.537mW (15.97dBm)
	LTE Band 38 (Channel Bandwidth 5MHz)	107.647mW (20.32dBm)	82.414mW (19.16dBm)	62.087mW (17.93dBm)
	LTE Band 38 (Channel Bandwidth 10MHz)	107.647mW (20.32dBm)	82.035mW (19.14dBm)	61.802mW (17.91dBm)
	LTE Band 38 (Channel Bandwidth 15MHz)	109.548mW (20.40dBm)	82.224mW (19.15dBm)	62.230mW (17.94dBm)
	LTE Band 38 (Channel Bandwidth 20MHz)	146.555mW (21.66dBm)	110.917mW (20.45dBm)	84.333mW (19.26dBm)
	LTE Band 41 (Channel Bandwidth 5MHz)	124.451mW (20.95dBm)	104.472mW (20.19dBm)	79.799mW (19.02dBm)
	LTE Band 41 (Channel Bandwidth 10MHz)	123.880mW (20.93dBm)	105.682mW (20.24dBm)	79.250mW (18.99dBm)
	LTE Band 41 (Channel Bandwidth 15MHz)	125.893mW (21.00dBm)	105.925mW (20.25dBm)	79.250mW (18.99dBm)
	LTE Band 41 (Channel Bandwidth 20MHz)	152.757mW (21.84dBm)	129.718mW (21.13dBm)	96.383mW (19.84dBm)
Max. ERP Power		QPSK	16QAM	64QAM
	LTE Band 12 (Channel Bandwidth 1.4MHz)	29.854mW (14.75dBm)	24.434mW (13.88dBm)	18.880mW (12.76dBm)
	LTE Band 12 (Channel Bandwidth 3MHz)	29.648mW (14.72dBm)	24.434mW (13.88dBm)	19.011mW (12.79dBm)
	LTE Band 12 (Channel Bandwidth 5MHz)	29.854mW (14.75dBm)	24.604mW (13.91dBm)	19.011mW (12.79dBm)
	LTE Band 12 (Channel Bandwidth 10MHz)	37.670mW (15.76dBm)	31.046mW (14.92dBm)	23.988mW (13.80dBm)
	LTE Band 13 (Channel Bandwidth 5MHz)	32.434mW (15.11dBm)	27.669mW (14.42dBm)	21.827mW (13.39dBm)
	LTE Band 13 (Channel Bandwidth 10MHz)	39.264mW (15.94dBm)	32.734mW (15.15dBm)	26.242mW (14.19dBm)
	LTE Band 17 (Channel Bandwidth 5MHz)	31.477mW (14.98dBm)	25.586mW (14.08dBm)	20.045mW (13.02dBm)

	LTE Band 17 (Channel Bandwidth 10MHz)	37.757mW (15.77dBm)	30.832mW (14.89dBm)	24.378mW (13.87dBm)
Antenna Type	Refer to note			
Antenna Connector	Refer to note			
Accessory Device	NA			
Cable Supplied	NA			

Note:

- This report is a supplementary report to the original BV CPS report no.: RFBGTL-WTW-P22020475-8. Exhibit prepared for FCC Spot Check Verification report, the format, test items and amount of spot-check test data are decided by applicant's engineering judgment, for more details please refer to declaration letter exhibit. Radiated emission and output power verification worst test refer to original report.
- There are differences between FCC ID: APYHRO00314 & FCC ID: APYHRO00316:

FCC ID	APYHRO00314	APYHRO00316
FM Radio	Supports	Doesn't support

- The EUT contains following support units.

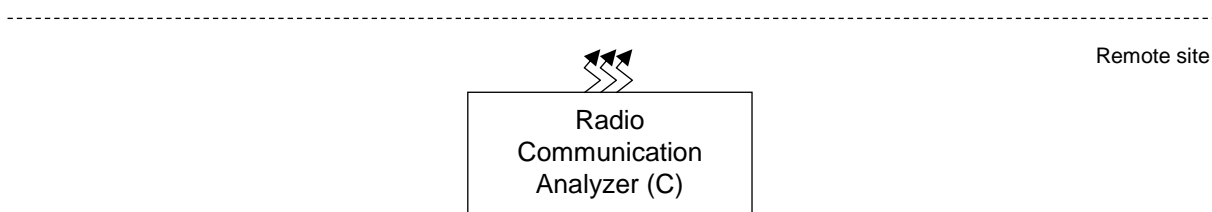
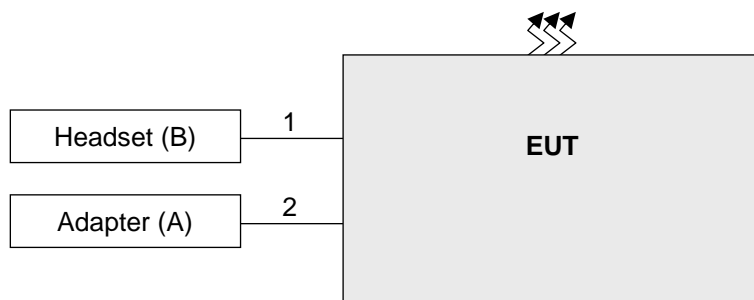
Product	Brand	Model	Description
Adapter (Support unit)	Salom	XN-2QC25	Input: 100-240Vac, 50/60Hz, 0.2A Output: 5.0Vdc, 800mA
Battery	-	-	3.87Vdc, Rated 4870mAh (18.9Wh), Typ. 5000mAh (19.4Wh)
Headset (Support unit)	Ambibio	AB-HI02JS	-
USB cable (Support unit)	Luxshare-ICT	L6KU2007-CS-H	0.95m shielded cable without core

- The antenna information is listed as below.

Ant. No.	Type	Connector	Gain (dBi)										
			GSM 850	GSM 1900	WCDMA B2 / LTE B2	WCDMA B4 / LTE B4	WCDMA B5 / LTE B5	LTE B7	LTE B12	LTE B13	LTE B17	LTE B38	LTE B41
1	PIFA	IPEX	-	-2.9	-2.9	-4.9	-	-1.8	-	-	-	-1.9	-1.9
3	PIFA	IPEX	-4.8	-	-	-	-4.8	-	-5.6	-5.3	-5.6	-	-

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

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.	Adapter	Salom	XN-2QC25	N/A	N/A	Provided by client
B.	Headset	Ambibio	AB-HI02JS	N/A	N/A	Provided by client
C.	Radio Communication Analyzer	Anritsu	MT8821C	6261806803	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	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Earphone Cable	1	1.1	N	0	Provided by client
2.	USB Cable	1	1	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 as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	Radiated Emission
WCDMA Band 4	Z-plane
LTE Band 4	Z-plane
LTE Band 12	X-plane
LTE Band 13	X-plane
LTE Band 17	X-plane
LTE Band 38	Z-plane
LTE Band 41	Z-plane

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
-	Radiated Emission	1312 to 1513	1413 (1732.6MHz)	WCDMA

LTE Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	RB #
-	EIRP	19957 to 20393	19957 (1710.7MHz), 20175 (1732.5MHz), 20393 (1754.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 Half Full
		19965 to 20385	19965 (1711.5MHz), 20175 (1732.5MHz), 20385 (1753.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 Half Full
		19975 to 20375	19975 (1712.5MHz), 20175 (1732.5MHz), 20375 (1752.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		20000 to 20350	20000 (1715.0MHz), 20175 (1732.5MHz), 20350 (1750.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
		20025 to 20325	20025 (1717.5MHz), 20175 (1732.5MHz), 20325 (1747.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 Half Full
		20050 to 20300	20050 (1720.0MHz), 20175 (1732.5MHz), 20300 (1745.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission	20050 to 20300	20175 (1732.5MHz)	20MHz	QPSK	1

LTE Band 12

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	RB #
-	ERP	23017 to 23173	23017 (699.7MHz), 23095 (707.5MHz), 23173 (715.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 Half Full
		23025 to 23165	23025 (700.5MHz), 23095 (707.5MHz), 23165 (714.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 Half Full
		23035 to 23155	23035 (701.5MHz), 23095 (707.5MHz), 23155 (713.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		23060 to 23130	23060 (704.0MHz), 23095 (707.5MHz), 23130 (711.0 MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission	23060 to 23130	23095 (707.5MHz)	10MHz	QPSK	1

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 / 64QAM	1 Half Full
		23230	23230 (782.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission	23230	23230 (782.0MHz)	10MHz	QPSK	1

LTE Band 17

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	RB #
-	ERP	23755 to 23825	23755 (706.5MHz), 23790 (710.0MHz), 23825 (713.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		23780 to 23800	23780 (709.0MHz), 23790 (710.0MHz), 23800 (711.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission	23780 to 23800	23790 (710.0MHz)	10MHz	QPSK	1

LTE Band 38

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	37775 to 38225	37775 (2572.5MHz), 38000 (2595.0MHz), 38225 (2617.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		37800 to 38200	37800 (2575.0MHz), 38000 (2595.0MHz), 38200 (2615.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
		37825 to 38175	37825 (2577.5MHz), 38000 (2595.0MHz), 38175 (2612.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 Half Full
		37850 to 38150	37850 (2580.0MHz), 38000 (2595.0MHz), 38150 (2610.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission	37850 to 38150	38000 (2595.0MHz)	20MHz	QPSK	1

LTE Band 41

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	39675 to 41565	39675 (2498.5MHz), 40620 (2593.0MHz), 41565 (2687.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		39700 to 41540	39700 (2501.0MHz), 40620 (2593.0MHz), 41540 (2685.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
		39725 to 41515	39725 (2503.5MHz), 40620 (2593.0MHz), 41515 (2682.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 Half Full
		39750 to 41490	39750 (2506.0MHz), 40620 (2593.0MHz), 41490 (2680.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission	39750 to 41490	40620 (2593.0MHz)	20MHz	QPSK	1

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP / ERP	25deg. C, 60%RH	3.87Vdc	Willy Cheng
Radiated Emission	22deg. C, 67%RH	120Vac, 60Hz	Edison Lee, Wade Huang

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/TIA/EIA-603-E 2016

ANSI 63.26-2015

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

For WCDMA Band 4, LTE Band 4:

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

For LTE Band 38, LTE Band 41:

Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

For LTE Band 12, LTE Band 17:

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 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.

4.1.2 Test Procedures

Conducted Power Measurement:

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

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is

given in Equation as follows:

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

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

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g., dBm or dBW)

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

G_{T} gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

4.1.3 Test Setup

Conducted Power Measurement:



4.1.4 Test Results

Conducted Output Power (dBm)

Band	WCDMA IV		
	1312	1413	1513
TX Channel	1537	1638	1738
Rx Channel	1712.4	1732.6	1752.6
Frequency	22.28	23.02	22.46
RMC 12.2K	21.24	21.96	21.45
HSDPA Subtest-1	21.20	21.97	21.51
HSDPA Subtest-2	20.68	21.47	21.03
HSDPA Subtest-3	20.74	21.50	21.04
HSDPA Subtest-4	21.26	22.00	21.47
HSUPA Subtest-1	19.26	20.00	19.47
HSUPA Subtest-2	20.17	21.01	20.45
HSUPA Subtest-3	19.27	19.94	19.54
HSUPA Subtest-4	21.26	21.89	21.52
HSUPA Subtest-5			

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20050	20175	20300
		Frequency (MHz)		1720	1732.5	1745
20M	QPSK	1	0	22.43	22.55	22.38
		1	50	22.20	22.26	22.09
		1	99	22.11	22.22	22.17
		50	0	21.29	21.51	21.28
		50	25	21.18	21.39	21.21
		50	50	21.11	21.29	21.17
		100	0	21.18	21.35	21.17
20M	16QAM	1	0	21.62	21.86	21.61
		1	50	21.37	21.52	21.33
		1	99	21.34	21.47	21.32
		50	0	20.24	20.38	20.20
		50	25	20.21	20.33	20.15
		50	50	20.10	20.28	20.17
		100	0	20.15	20.29	20.17
20M	64QAM	1	0	20.69	20.87	20.67
		1	50	20.58	20.77	20.56
		1	99	20.37	20.52	20.39
		50	0	19.26	19.37	19.23
		50	25	19.19	19.34	19.21
		50	50	19.09	19.31	19.13
		100	0	19.20	19.40	19.22

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20025	20175	20325
		Frequency (MHz)		1717.5	1732.5	1747.5
15M	QPSK	1	0	21.46	21.58	21.39
		1	37	21.19	21.32	21.16
		1	74	21.16	21.18	21.21
		36	0	20.35	20.50	20.39
		36	19	20.21	20.37	20.22
		36	39	20.24	20.32	20.23
		75	0	20.18	20.35	20.15
15M	16QAM	1	0	20.69	20.88	20.71
		1	37	20.49	20.65	20.47
		1	74	20.38	20.50	20.37
		36	0	19.27	19.48	19.32
		36	19	19.25	19.39	19.22
		36	39	19.24	19.38	19.20
		75	0	19.14	19.32	19.17
15M	64QAM	1	0	19.70	19.84	19.69
		1	37	19.65	19.84	19.68
		1	74	19.42	19.60	19.36
		36	0	18.29	18.39	18.23
		36	19	18.22	18.44	18.23
		36	39	18.22	18.38	18.19
		75	0	18.26	18.45	18.26

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20000	20175	20350
		Frequency (MHz)		1715	1732.5	1750
10M	QPSK	1	0	21.40	21.57	21.43
		1	24	21.20	21.37	21.18
		1	49	21.11	21.21	21.20
		25	0	20.41	20.53	20.38
		25	12	20.22	20.38	20.23
		25	25	20.17	20.32	20.20
		50	0	20.23	20.42	20.17
10M	16QAM	1	0	20.67	20.89	20.68
		1	24	20.47	20.63	20.39
		1	49	20.38	20.52	20.27
		25	0	19.31	19.49	19.30
		25	12	19.22	19.44	19.21
		25	25	19.22	19.41	19.17
		50	0	19.16	19.32	19.17
10M	64QAM	1	0	19.75	19.84	19.67
		1	24	19.67	19.86	19.62
		1	49	19.40	19.59	19.40
		25	0	18.30	18.43	18.31
		25	12	18.28	18.41	18.17
		25	25	18.22	18.35	18.24
		50	0	18.28	18.41	18.21

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		19975	20175	20375
		Frequency (MHz)		1712.5	1732.5	1752.5
5M	QPSK	1	0	21.39	21.57	21.46
		1	12	21.17	21.39	21.15
		1	24	21.16	21.20	21.13
		12	0	20.41	20.47	20.37
		12	6	20.19	20.41	20.24
		12	13	20.21	20.37	20.23
		25	0	20.17	20.37	20.19
5M	16QAM	1	0	20.67	20.83	20.74
		1	12	20.45	20.60	20.39
		1	24	20.38	20.53	20.28
		12	0	19.24	19.46	19.23
		12	6	19.21	19.42	19.24
		12	13	19.24	19.32	19.18
		25	0	19.12	19.31	19.13
5M	64QAM	1	0	19.73	19.84	19.66
		1	12	19.63	19.86	19.62
		1	24	19.45	19.54	19.34
		12	0	18.33	18.40	18.31
		12	6	18.22	18.38	18.16
		12	13	18.22	18.29	18.18
		25	0	18.23	18.47	18.29

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		19965	20175	20385
		Frequency (MHz)		1711.5	1732.5	1753.5
3M	QPSK	1	0	21.42	21.59	21.40
		1	7	21.22	21.34	21.14
		1	14	21.14	21.20	21.18
		8	0	20.36	20.56	20.34
		8	3	20.28	20.37	20.22
		8	7	20.20	20.34	20.22
		15	0	20.18	20.43	20.18
3M	16QAM	1	0	20.76	20.87	20.73
		1	7	20.42	20.55	20.42
		1	14	20.37	20.55	20.37
		8	0	19.32	19.41	19.25
		8	3	19.27	19.39	19.20
		8	7	19.18	19.32	19.16
		15	0	19.11	19.30	19.20
3M	64QAM	1	0	19.71	19.90	19.64
		1	7	19.66	19.80	19.69
		1	14	19.36	19.53	19.35
		8	0	18.28	18.44	18.27
		8	3	18.18	18.38	18.19
		8	7	18.18	18.37	18.17
		15	0	18.23	18.37	18.25

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		19957	20175	20393
		Frequency (MHz)		1710.7	1732.5	1754.3
1.4M	QPSK	1	0	21.44	21.57	21.43
		1	2	21.15	21.40	21.14
		1	5	21.21	21.25	21.15
		3	0	21.37	21.54	21.34
		3	1	21.26	21.37	21.25
		3	3	21.26	21.34	21.15
		6	0	20.27	20.33	20.20
1.4M	16QAM	1	0	20.77	20.87	20.70
		1	2	20.49	20.55	20.37
		1	5	20.38	20.45	20.28
		3	0	20.26	20.48	20.25
		3	1	20.27	20.37	20.26
		3	3	20.22	20.32	20.15
		6	0	19.14	19.28	19.20
1.4M	64QAM	1	0	19.68	19.83	19.73
		1	2	19.68	19.77	19.60
		1	5	19.39	19.58	19.42
		3	0	19.25	19.49	19.21
		3	1	19.19	19.41	19.20
		3	3	19.13	19.34	19.25
		6	0	18.21	18.46	18.22

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	23.42	23.51	23.27
		1	24	23.26	23.29	23.14
		1	49	23.21	23.24	22.98
		25	0	22.41	22.45	22.31
		25	12	22.30	22.33	22.11
		25	25	22.29	22.30	22.09
		50	0	22.31	22.38	22.14
10M	16QAM	1	0	22.64	22.67	22.51
		1	24	22.44	22.54	22.29
		1	49	22.39	22.49	22.20
		25	0	21.37	21.47	21.20
		25	12	21.32	21.42	21.24
		25	25	21.31	21.38	21.13
		50	0	21.34	21.40	21.24
10M	64QAM	1	0	21.41	21.55	21.28
		1	24	21.46	21.43	21.32
		1	49	21.34	21.45	21.25
		25	0	20.44	20.44	20.33
		25	12	20.35	20.40	20.21
		25	25	20.37	20.40	20.23
		50	0	20.37	20.40	20.20

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	22.35	22.50	22.18
		1	12	22.24	22.29	22.09
		1	24	22.11	22.23	21.89
		12	0	21.40	21.43	21.22
		12	6	21.23	21.32	21.05
		12	13	21.24	21.22	21.03
		25	0	21.25	21.28	21.10
5M	16QAM	1	0	21.64	21.66	21.44
		1	12	21.44	21.48	21.25
		1	24	21.30	21.41	21.15
		12	0	20.34	20.38	20.11
		12	6	20.31	20.35	20.15
		12	13	20.26	20.33	20.09
		25	0	20.32	20.39	20.14
5M	64QAM	1	0	20.33	20.54	20.21
		1	12	20.37	20.39	20.31
		1	24	20.28	20.42	20.25
		12	0	19.35	19.38	19.28
		12	6	19.35	19.32	19.15
		12	13	19.32	19.37	19.16
		25	0	19.34	19.30	19.10

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23025	23095	23165
		Frequency (MHz)		700.5	707.5	714.5
3M	QPSK	1	0	22.34	22.47	22.24
		1	7	22.22	22.27	22.14
		1	14	22.20	22.23	21.93
		8	0	21.34	21.40	21.30
		8	3	21.22	21.23	21.06
		8	7	21.20	21.28	21.02
		15	0	21.29	21.29	21.04
3M	16QAM	1	0	21.63	21.62	21.41
		1	7	21.41	21.46	21.22
		1	14	21.38	21.44	21.15
		8	0	20.31	20.37	20.18
		8	3	20.28	20.33	20.16
		8	7	20.29	20.31	20.13
		15	0	20.27	20.37	20.19
3M	64QAM	1	0	20.39	20.54	20.23
		1	7	20.42	20.43	20.28
		1	14	20.24	20.37	20.18
		8	0	19.35	19.34	19.26
		8	3	19.35	19.38	19.11
		8	7	19.35	19.33	19.21
		15	0	19.37	19.34	19.12

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23017	23095	23173
		Frequency (MHz)		699.7	707.5	715.3
1.4M	QPSK	1	0	22.32	22.50	22.27
		1	2	22.25	22.24	22.05
		1	5	22.14	22.14	21.90
		3	0	22.41	22.40	22.28
		3	1	22.22	22.32	22.10
		3	3	22.29	22.28	22.06
		6	0	21.26	21.38	21.05
1.4M	16QAM	1	0	21.57	21.63	21.44
		1	2	21.42	21.49	21.19
		1	5	21.38	21.40	21.15
		3	0	21.31	21.44	21.13
		3	1	21.30	21.38	21.23
		3	3	21.25	21.32	21.09
		6	0	20.24	20.32	20.15
1.4M	64QAM	1	0	20.39	20.51	20.19
		1	2	20.44	20.33	20.22
		1	5	20.26	20.40	20.22
		3	0	20.43	20.34	20.30
		3	1	20.32	20.32	20.15
		3	3	20.31	20.40	20.15
		6	0	19.35	19.34	19.12

LTE Band 13				
BW	MCS Index	RB Size	RB Offset	Low
		Channel		23230
		Frequency (MHz)		782
10M	QPSK	1	0	23.39
		1	24	23.31
		1	49	23.13
		25	0	22.45
		25	12	22.31
		25	25	22.35
		50	0	22.36
10M	16QAM	1	0	22.60
		1	24	22.42
		1	49	22.32
		25	0	21.41
		25	12	21.26
		25	25	21.32
		50	0	21.38
10M	64QAM	1	0	21.64
		1	24	21.63
		1	49	21.29
		25	0	20.35
		25	12	20.26
		25	25	20.24
		50	0	20.44

LTE Band 13						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	22.48	22.56	22.46
		1	12	22.34	22.43	22.40
		1	24	22.24	22.27	22.35
		12	0	21.63	21.65	21.58
		12	6	21.54	21.54	21.49
		12	13	21.51	21.50	21.40
		25	0	21.47	21.54	21.52
5M	16QAM	1	0	21.83	21.87	21.81
		1	12	21.57	21.67	21.54
		1	24	21.37	21.53	21.37
		12	0	20.53	20.58	20.55
		12	6	20.47	20.43	20.44
		12	13	20.52	20.50	20.46
		25	0	20.52	20.56	20.56
5M	64QAM	1	0	20.74	20.78	20.66
		1	12	20.75	20.80	20.84
		1	24	20.56	20.55	20.51
		12	0	19.59	19.57	19.61
		12	6	19.48	19.51	19.37
		12	13	19.34	19.44	19.36
		25	0	19.70	19.73	19.63

LTE Band 17						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23780	23790	23800
		Frequency (MHz)		709	710	711
10M	QPSK	1	0	23.39	23.52	23.33
		1	24	23.24	23.44	23.16
		1	49	23.19	23.35	23.13
		25	0	22.24	22.37	22.16
		25	12	22.22	22.31	22.08
		25	25	22.12	22.36	22.15
		50	0	22.17	22.38	22.17
10M	16QAM	1	0	22.17	22.26	22.34
		1	24	22.54	22.64	22.44
		1	49	22.43	22.57	22.29
		25	0	21.24	21.40	21.20
		25	12	21.19	21.32	21.02
		25	25	21.16	21.25	21.02
		50	0	21.21	21.35	21.16
10M	64QAM	1	0	21.50	21.62	21.42
		1	24	21.41	21.46	21.29
		1	49	21.24	21.46	21.19
		25	0	20.32	20.46	20.21
		25	12	20.26	20.45	20.18
		25	25	20.31	20.40	20.19
		50	0	20.26	20.38	20.15

LTE Band 17						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23755	23790	23825
		Frequency (MHz)		706.5	710	713.5
5M	QPSK	1	0	22.54	22.73	22.53
		1	12	22.41	22.65	22.41
		1	24	22.41	22.54	22.29
		12	0	21.49	21.57	21.41
		12	6	21.37	21.48	21.23
		12	13	21.29	21.52	21.39
		25	0	21.38	21.63	21.37
5M	16QAM	1	0	21.42	21.43	21.59
		1	12	21.79	21.83	21.62
		1	24	21.60	21.82	21.53
		12	0	20.43	20.63	20.38
		12	6	20.41	20.56	20.24
		12	13	20.40	20.49	20.20
		25	0	20.46	20.55	20.36
5M	64QAM	1	0	20.69	20.77	20.61
		1	12	20.60	20.71	20.44
		1	24	20.40	20.61	20.43
		12	0	19.52	19.65	19.42
		12	6	19.46	19.63	19.40
		12	13	19.55	19.63	19.39
		25	0	19.49	19.54	19.37

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37850	38000	38150
		Frequency (MHz)		2580	2595	2610
20M	QPSK	1	0	23.43	23.35	23.56
		1	50	22.97	23.06	23.19
		1	99	22.97	23.03	23.15
		50	0	21.95	22.03	22.21
		50	25	21.95	22.08	22.14
		50	50	21.80	21.97	22.07
		100	0	21.92	21.99	22.13
20M	16QAM	1	0	22.13	22.25	22.35
		1	50	21.94	22.03	22.14
		1	99	21.86	22.06	22.08
		50	0	20.91	20.98	21.16
		50	25	20.87	21.00	21.13
		50	50	20.77	20.96	21.04
		100	0	20.88	20.94	21.04
20M	64QAM	1	0	20.88	21.06	21.16
		1	50	20.88	20.89	20.99
		1	99	20.84	20.84	20.92
		50	0	19.95	20.08	20.18
		50	25	19.82	19.94	20.00
		50	50	19.84	19.91	19.96
		100	0	19.86	19.90	20.05

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37825	38000	38175
		Frequency (MHz)		2577.5	2595	2612.5
15M	QPSK	1	0	22.08	22.06	22.30
		1	37	21.70	21.79	21.85
		1	74	21.65	21.72	21.85
		36	0	20.64	20.71	20.88
		36	19	20.65	20.75	20.79
		36	39	20.49	20.70	20.76
		75	0	20.63	20.64	20.83
15M	16QAM	1	0	20.88	20.92	21.05
		1	37	20.61	20.69	20.88
		1	74	20.52	20.81	20.79
		36	0	19.56	19.71	19.86
		36	19	19.61	19.73	19.80
		36	39	19.46	19.71	19.77
		75	0	19.62	19.62	19.71
15M	64QAM	1	0	19.57	19.81	19.84
		1	37	19.62	19.59	19.71
		1	74	19.54	19.59	19.59
		36	0	18.65	18.82	18.90
		36	19	18.47	18.65	18.74
		36	39	18.55	18.58	18.67
		75	0	18.59	18.58	18.70

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37800	38000	38200
		Frequency (MHz)		2575	2595	2615
10M	QPSK	1	0	22.11	22.10	22.22
		1	24	21.70	21.74	21.89
		1	49	21.68	21.71	21.82
		25	0	20.66	20.78	20.90
		25	12	20.68	20.74	20.86
		25	25	20.51	20.64	20.78
		50	0	20.59	20.71	20.88
10M	16QAM	1	0	20.82	20.90	21.04
		1	24	20.63	20.72	20.84
		1	49	20.61	20.81	20.79
		25	0	19.60	19.66	19.82
		25	12	19.61	19.75	19.86
		25	25	19.45	19.70	19.74
		50	0	19.58	19.66	19.76
10M	64QAM	1	0	19.55	19.77	19.81
		1	24	19.53	19.61	19.70
		1	49	19.57	19.57	19.57
		25	0	18.69	18.77	18.89
		25	12	18.51	18.63	18.73
		25	25	18.57	18.59	18.67
		50	0	18.60	18.62	18.77

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37775	38000	38225
		Frequency (MHz)		2572.5	2595	2617.5
5M	QPSK	1	0	22.12	22.06	22.22
		1	12	21.62	21.72	21.85
		1	24	21.68	21.78	21.87
		12	0	20.70	20.73	20.94
		12	6	20.66	20.76	20.80
		12	13	20.45	20.67	20.80
		25	0	20.66	20.72	20.86
5M	16QAM	1	0	20.80	20.91	21.06
		1	12	20.67	20.68	20.80
		1	24	20.54	20.72	20.76
		12	0	19.64	19.71	19.90
		12	6	19.56	19.74	19.78
		12	13	19.51	19.67	19.69
		25	0	19.57	19.68	19.72
5M	64QAM	1	0	19.61	19.72	19.83
		1	12	19.63	19.63	19.65
		1	24	19.49	19.50	19.62
		12	0	18.65	18.81	18.92
		12	6	18.56	18.65	18.75
		12	13	18.58	18.57	18.64
		25	0	18.53	18.61	18.77

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39750	40620	41490
		Frequency (MHz)		2506	2593	2680
20M	QPSK	1	0	23.93	23.72	23.74
		1	50	23.88	23.62	23.69
		1	99	23.73	23.63	23.66
		50	0	22.88	22.70	22.71
		50	25	22.86	22.69	22.73
		50	50	22.84	22.57	22.63
		100	0	22.86	22.69	22.68
20M	16QAM	1	0	23.19	22.95	22.96
		1	50	22.94	22.75	22.81
		1	99	22.98	22.69	22.72
		50	0	21.92	21.74	21.78
		50	25	21.87	21.69	21.70
		50	50	21.88	21.66	21.68
		100	0	21.91	21.69	21.72
20M	64QAM	1	0	21.97	21.65	21.74
		1	50	21.76	21.70	21.63
		1	99	21.79	21.68	21.70
		50	0	20.95	20.73	20.79
		50	25	20.87	20.65	20.72
		50	50	20.78	20.71	20.61
		100	0	20.84	20.74	20.61

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39725	40620	41515
		Frequency (MHz)		2503.5	2593	2682.5
15M	QPSK	1	0	22.90	22.67	22.74
		1	37	22.78	22.58	22.61
		1	74	22.70	22.61	22.66
		36	0	21.86	21.69	21.66
		36	19	21.80	21.65	21.73
		36	39	21.79	21.54	21.58
		75	0	21.86	21.67	21.59
15M	16QAM	1	0	22.15	21.94	21.87
		1	37	21.90	21.71	21.73
		1	74	21.94	21.63	21.72
		36	0	20.90	20.64	20.72
		36	19	20.77	20.66	20.70
		36	39	20.85	20.66	20.63
		75	0	20.81	20.63	20.66
15M	64QAM	1	0	20.89	20.62	20.67
		1	37	20.70	20.67	20.57
		1	74	20.77	20.63	20.62
		36	0	19.94	19.70	19.69
		36	19	19.87	19.65	19.67
		36	39	19.68	19.69	19.53
		75	0	19.78	19.72	19.58

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39700	40620	41540
		Frequency (MHz)		2501	2593	2685
10M	QPSK	1	0	22.83	22.72	22.66
		1	24	22.79	22.54	22.63
		1	49	22.67	22.59	22.66
		25	0	21.85	21.68	21.61
		25	12	21.77	21.65	21.69
		25	25	21.82	21.57	21.62
		50	0	21.77	21.64	21.59
10M	16QAM	1	0	22.14	21.95	21.89
		1	24	21.87	21.66	21.76
		1	49	21.94	21.61	21.65
		25	0	20.90	20.71	20.73
		25	12	20.77	20.63	20.63
		25	25	20.87	20.57	20.61
		50	0	20.84	20.62	20.68
10M	64QAM	1	0	20.89	20.65	20.70
		1	24	20.67	20.62	20.63
		1	49	20.73	20.63	20.69
		25	0	19.91	19.68	19.76
		25	12	19.77	19.58	19.69
		25	25	19.72	19.65	19.59
		50	0	19.82	19.64	19.59

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39675	40620	41565
		Frequency (MHz)		2498.5	2593	2687.5
5M	QPSK	1	0	22.83	22.62	22.70
		1	12	22.85	22.56	22.60
		1	24	22.72	22.53	22.66
		12	0	21.81	21.60	21.71
		12	6	21.80	21.68	21.70
		12	13	21.78	21.49	21.61
		25	0	21.82	21.65	21.62
5M	16QAM	1	0	22.09	21.88	21.96
		1	12	21.86	21.66	21.81
		1	24	21.88	21.59	21.65
		12	0	20.83	20.65	20.76
		12	6	20.78	20.63	20.62
		12	13	20.86	20.65	20.65
		25	0	20.86	20.59	20.69
5M	64QAM	1	0	20.92	20.60	20.69
		1	12	20.71	20.61	20.58
		1	24	20.69	20.58	20.70
		12	0	19.90	19.71	19.69
		12	6	19.87	19.57	19.64
		12	13	19.69	19.64	19.56
		25	0	19.77	19.65	19.60

EIRP / ERP Power (dBm)

Band	WCDMA IV		
TX Channel	1312	1413	1513
Rx Channel	1537	1638	1738
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	17.38	18.12	17.56
HSDPA Subtest-1	16.34	17.06	16.55
HSDPA Subtest-2	16.30	17.07	16.61
HSDPA Subtest-3	15.78	16.57	16.13
HSDPA Subtest-4	15.84	16.60	16.14
HSUPA Subtest-1	16.36	17.10	16.57
HSUPA Subtest-2	14.36	15.10	14.57
HSUPA Subtest-3	15.27	16.11	15.55
HSUPA Subtest-4	14.37	15.04	14.64
HSUPA Subtest-5	16.36	16.99	16.62

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20050	20175	20300
		Frequency (MHz)		1720	1732.5	1745
20M	QPSK	1	0	17.53	17.65	17.48
		1	50	17.30	17.36	17.19
		1	99	17.21	17.32	17.27
		50	0	16.39	16.61	16.38
		50	25	16.28	16.49	16.31
		50	50	16.21	16.39	16.27
		100	0	16.28	16.45	16.27
20M	16QAM	1	0	16.72	16.96	16.71
		1	50	16.47	16.62	16.43
		1	99	16.44	16.57	16.42
		50	0	15.34	15.48	15.30
		50	25	15.31	15.43	15.25
		50	50	15.20	15.38	15.27
		100	0	15.25	15.39	15.27
20M	64QAM	1	0	15.79	15.97	15.77
		1	50	15.68	15.87	15.66
		1	99	15.47	15.62	15.49
		50	0	14.36	14.47	14.33
		50	25	14.29	14.44	14.31
		50	50	14.19	14.41	14.23
		100	0	14.30	14.50	14.32

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20025	20175	20325
		Frequency (MHz)		1717.5	1732.5	1747.5
15M	QPSK	1	0	16.56	16.68	16.49
		1	37	16.29	16.42	16.26
		1	74	16.26	16.28	16.31
		36	0	15.45	15.60	15.49
		36	19	15.31	15.47	15.32
		36	39	15.34	15.42	15.33
		75	0	15.28	15.45	15.25
15M	16QAM	1	0	15.79	15.98	15.81
		1	37	15.59	15.75	15.57
		1	74	15.48	15.60	15.47
		36	0	14.37	14.58	14.42
		36	19	14.35	14.49	14.32
		36	39	14.34	14.48	14.30
		75	0	14.24	14.42	14.27
15M	64QAM	1	0	14.80	14.94	14.79
		1	37	14.75	14.94	14.78
		1	74	14.52	14.70	14.46
		36	0	13.39	13.49	13.33
		36	19	13.32	13.54	13.33
		36	39	13.32	13.48	13.29
		75	0	13.36	13.55	13.36

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		20000	20175	20350
		Frequency (MHz)		1715	1732.5	1750
10M	QPSK	1	0	16.50	16.67	16.53
		1	24	16.30	16.47	16.28
		1	49	16.21	16.31	16.30
		25	0	15.51	15.63	15.48
		25	12	15.32	15.48	15.33
		25	25	15.27	15.42	15.30
		50	0	15.33	15.52	15.27
10M	16QAM	1	0	15.77	15.99	15.78
		1	24	15.57	15.73	15.49
		1	49	15.48	15.62	15.37
		25	0	14.41	14.59	14.40
		25	12	14.32	14.54	14.31
		25	25	14.32	14.51	14.27
		50	0	14.26	14.42	14.27
10M	64QAM	1	0	14.85	14.94	14.77
		1	24	14.77	14.96	14.72
		1	49	14.50	14.69	14.50
		25	0	13.40	13.53	13.41
		25	12	13.38	13.51	13.27
		25	25	13.32	13.45	13.34
		50	0	13.38	13.51	13.31

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		19975	20175	20375
		Frequency (MHz)		1712.5	1732.5	1752.5
5M	QPSK	1	0	16.49	16.67	16.56
		1	12	16.27	16.49	16.25
		1	24	16.26	16.30	16.23
		12	0	15.51	15.57	15.47
		12	6	15.29	15.51	15.34
		12	13	15.31	15.47	15.33
		25	0	15.27	15.47	15.29
5M	16QAM	1	0	15.77	15.93	15.84
		1	12	15.55	15.70	15.49
		1	24	15.48	15.63	15.38
		12	0	14.34	14.56	14.33
		12	6	14.31	14.52	14.34
		12	13	14.34	14.42	14.28
		25	0	14.22	14.41	14.23
5M	64QAM	1	0	14.83	14.94	14.76
		1	12	14.73	14.96	14.72
		1	24	14.55	14.64	14.44
		12	0	13.43	13.50	13.41
		12	6	13.32	13.48	13.26
		12	13	13.32	13.39	13.28
		25	0	13.33	13.57	13.39

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		19965	20175	20385
		Frequency (MHz)		1711.5	1732.5	1753.5
3M	QPSK	1	0	16.52	16.69	16.50
		1	7	16.32	16.44	16.24
		1	14	16.24	16.30	16.28
		8	0	15.46	15.66	15.44
		8	3	15.38	15.47	15.32
		8	7	15.30	15.44	15.32
		15	0	15.28	15.53	15.28
3M	16QAM	1	0	15.86	15.97	15.83
		1	7	15.52	15.65	15.52
		1	14	15.47	15.65	15.47
		8	0	14.42	14.51	14.35
		8	3	14.37	14.49	14.30
		8	7	14.28	14.42	14.26
		15	0	14.21	14.40	14.30
3M	64QAM	1	0	14.81	15.00	14.74
		1	7	14.76	14.90	14.79
		1	14	14.46	14.63	14.45
		8	0	13.38	13.54	13.37
		8	3	13.28	13.48	13.29
		8	7	13.28	13.47	13.27
		15	0	13.33	13.47	13.35

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 4						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		19957	20175	20393
		Frequency (MHz)		1710.7	1732.5	1754.3
1.4M	QPSK	1	0	16.54	16.67	16.53
		1	2	16.25	16.50	16.24
		1	5	16.31	16.35	16.25
		3	0	16.47	16.64	16.44
		3	1	16.36	16.47	16.35
		3	3	16.36	16.44	16.25
		6	0	15.37	15.43	15.30
1.4M	16QAM	1	0	15.87	15.97	15.80
		1	2	15.59	15.65	15.47
		1	5	15.48	15.55	15.38
		3	0	15.36	15.58	15.35
		3	1	15.37	15.47	15.36
		3	3	15.32	15.42	15.25
		6	0	14.24	14.38	14.30
1.4M	64QAM	1	0	14.78	14.93	14.83
		1	2	14.78	14.87	14.70
		1	5	14.49	14.68	14.52
		3	0	14.35	14.59	14.31
		3	1	14.29	14.51	14.30
		3	3	14.23	14.44	14.35
		6	0	13.31	13.56	13.32

*EIRP = Conducted + antenna gain (-4.90dBi)

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23060	23095	23130
		Frequency (MHz)		704	707.5	711
10M	QPSK	1	0	15.67	15.76	15.52
		1	24	15.51	15.54	15.39
		1	49	15.46	15.49	15.23
		25	0	14.66	14.70	14.56
		25	12	14.55	14.58	14.36
		25	25	14.54	14.55	14.34
		50	0	14.56	14.63	14.39
10M	16QAM	1	0	14.89	14.92	14.76
		1	24	14.69	14.79	14.54
		1	49	14.64	14.74	14.45
		25	0	13.62	13.72	13.45
		25	12	13.57	13.67	13.49
		25	25	13.56	13.63	13.38
		50	0	13.59	13.65	13.49
10M	64QAM	1	0	13.66	13.80	13.53
		1	24	13.71	13.68	13.57
		1	49	13.59	13.70	13.50
		25	0	12.69	12.69	12.58
		25	12	12.60	12.65	12.46
		25	25	12.62	12.65	12.48
		50	0	12.62	12.65	12.45

*ERP = Conducted + antenna gain (-5.60dBi) - 2.15

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23035	23095	23155
		Frequency (MHz)		701.5	707.5	713.5
5M	QPSK	1	0	14.60	14.75	14.43
		1	12	14.49	14.54	14.34
		1	24	14.36	14.48	14.14
		12	0	13.65	13.68	13.47
		12	6	13.48	13.57	13.30
		12	13	13.49	13.47	13.28
		25	0	13.50	13.53	13.35
5M	16QAM	1	0	13.89	13.91	13.69
		1	12	13.69	13.73	13.50
		1	24	13.55	13.66	13.40
		12	0	12.59	12.63	12.36
		12	6	12.56	12.60	12.40
		12	13	12.51	12.58	12.34
		25	0	12.57	12.64	12.39
5M	64QAM	1	0	12.58	12.79	12.46
		1	12	12.62	12.64	12.56
		1	24	12.53	12.67	12.50
		12	0	11.60	11.63	11.53
		12	6	11.60	11.57	11.40
		12	13	11.57	11.62	11.41
		25	0	11.59	11.55	11.35

*ERP = Conducted + antenna gain (-5.60dBi) - 2.15

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23025	23095	23165
		Frequency (MHz)		700.5	707.5	714.5
3M	QPSK	1	0	14.59	14.72	14.49
		1	7	14.47	14.52	14.39
		1	14	14.45	14.48	14.18
		8	0	13.59	13.65	13.55
		8	3	13.47	13.48	13.31
		8	7	13.45	13.53	13.27
		15	0	13.54	13.54	13.29
3M	16QAM	1	0	13.88	13.87	13.66
		1	7	13.66	13.71	13.47
		1	14	13.63	13.69	13.40
		8	0	12.56	12.62	12.43
		8	3	12.53	12.58	12.41
		8	7	12.54	12.56	12.38
		15	0	12.52	12.62	12.44
3M	64QAM	1	0	12.64	12.79	12.48
		1	7	12.67	12.68	12.53
		1	14	12.49	12.62	12.43
		8	0	11.60	11.59	11.51
		8	3	11.60	11.63	11.36
		8	7	11.60	11.58	11.46
		15	0	11.62	11.59	11.37

*ERP = Conducted + antenna gain (-5.60dBi) - 2.15

LTE Band 12						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23017	23095	23173
		Frequency (MHz)		699.7	707.5	715.3
1.4M	QPSK	1	0	14.57	14.75	14.52
		1	2	14.50	14.49	14.30
		1	5	14.39	14.39	14.15
		3	0	14.66	14.65	14.53
		3	1	14.47	14.57	14.35
		3	3	14.54	14.53	14.31
		6	0	13.51	13.63	13.30
1.4M	16QAM	1	0	13.82	13.88	13.69
		1	2	13.67	13.74	13.44
		1	5	13.63	13.65	13.40
		3	0	13.56	13.69	13.38
		3	1	13.55	13.63	13.48
		3	3	13.50	13.57	13.34
		6	0	12.49	12.57	12.40
1.4M	64QAM	1	0	12.64	12.76	12.44
		1	2	12.69	12.58	12.47
		1	5	12.51	12.65	12.47
		3	0	12.68	12.59	12.55
		3	1	12.57	12.57	12.40
		3	3	12.56	12.65	12.40
		6	0	11.60	11.59	11.37

*ERP = Conducted + antenna gain (-5.60dBi) - 2.15

LTE Band 13				
BW	MCS Index	RB Size	RB Offset	Low
		Channel		23230
		Frequency (MHz)		782
10M	QPSK	1	0	15.94
		1	24	15.86
		1	49	15.68
		25	0	15.00
		25	12	14.86
		25	25	14.90
		50	0	14.91
10M	16QAM	1	0	15.15
		1	24	14.97
		1	49	14.87
		25	0	13.96
		25	12	13.81
		25	25	13.87
		50	0	13.93
10M	64QAM	1	0	14.19
		1	24	14.18
		1	49	13.84
		25	0	12.90
		25	12	12.81
		25	25	12.79
		50	0	12.99

*ERP = Conducted + antenna gain (-5.30dBi) - 2.15

LTE Band 13						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23205	23230	23255
		Frequency (MHz)		779.5	782	784.5
5M	QPSK	1	0	15.03	15.11	15.01
		1	12	14.89	14.98	14.95
		1	24	14.79	14.82	14.90
		12	0	14.18	14.20	14.13
		12	6	14.09	14.09	14.04
		12	13	14.06	14.05	13.95
		25	0	14.02	14.09	14.07
5M	16QAM	1	0	14.38	14.42	14.36
		1	12	14.12	14.22	14.09
		1	24	13.92	14.08	13.92
		12	0	13.08	13.13	13.10
		12	6	13.02	12.98	12.99
		12	13	13.07	13.05	13.01
		25	0	13.07	13.11	13.11
5M	64QAM	1	0	13.29	13.33	13.21
		1	12	13.30	13.35	13.39
		1	24	13.11	13.10	13.06
		12	0	12.14	12.12	12.16
		12	6	12.03	12.06	11.92
		12	13	11.89	11.99	11.91
		25	0	12.25	12.28	12.18

*ERP = Conducted + antenna gain (-5.30dBi) - 2.15

LTE Band 17						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23780	23790	23800
		Frequency (MHz)		709	710	711
10M	QPSK	1	0	15.64	15.77	15.58
		1	24	15.49	15.69	15.41
		1	49	15.44	15.60	15.38
		25	0	14.49	14.62	14.41
		25	12	14.47	14.56	14.33
		25	25	14.37	14.61	14.40
		50	0	14.42	14.63	14.42
10M	16QAM	1	0	14.42	14.51	14.59
		1	24	14.79	14.89	14.69
		1	49	14.68	14.82	14.54
		25	0	13.49	13.65	13.45
		25	12	13.44	13.57	13.27
		25	25	13.41	13.50	13.27
		50	0	13.46	13.60	13.41
10M	64QAM	1	0	13.75	13.87	13.67
		1	24	13.66	13.71	13.54
		1	49	13.49	13.71	13.44
		25	0	12.57	12.71	12.46
		25	12	12.51	12.70	12.43
		25	25	12.56	12.65	12.44
		50	0	12.51	12.63	12.40

*ERP = Conducted + antenna gain (-5.60dBi) - 2.15

LTE Band 17						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23755	23790	23825
		Frequency (MHz)		706.5	710	713.5
5M	QPSK	1	0	14.79	14.98	14.78
		1	12	14.66	14.90	14.66
		1	24	14.66	14.79	14.54
		12	0	13.74	13.82	13.66
		12	6	13.62	13.73	13.48
		12	13	13.54	13.77	13.64
		25	0	13.63	13.88	13.62
5M	16QAM	1	0	13.67	13.68	13.84
		1	12	14.04	14.08	13.87
		1	24	13.85	14.07	13.78
		12	0	12.68	12.88	12.63
		12	6	12.66	12.81	12.49
		12	13	12.65	12.74	12.45
		25	0	12.71	12.80	12.61
5M	64QAM	1	0	12.94	13.02	12.86
		1	12	12.85	12.96	12.69
		1	24	12.65	12.86	12.68
		12	0	11.77	11.90	11.67
		12	6	11.71	11.88	11.65
		12	13	11.80	11.88	11.64
		25	0	11.74	11.79	11.62

*ERP = Conducted + antenna gain (-5.60dBi) - 2.15

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37850	38000	38150
		Frequency (MHz)		2580	2595	2610
20M	QPSK	1	0	21.53	21.45	21.66
		1	50	21.07	21.16	21.29
		1	99	21.07	21.13	21.25
		50	0	20.05	20.13	20.31
		50	25	20.05	20.18	20.24
		50	50	19.90	20.07	20.17
		100	0	20.02	20.09	20.23
20M	16QAM	1	0	20.23	20.35	20.45
		1	50	20.04	20.13	20.24
		1	99	19.96	20.16	20.18
		50	0	19.01	19.08	19.26
		50	25	18.97	19.10	19.23
		50	50	18.87	19.06	19.14
		100	0	18.98	19.04	19.14
20M	64QAM	1	0	18.98	19.16	19.26
		1	50	18.98	18.99	19.09
		1	99	18.94	18.94	19.02
		50	0	18.05	18.18	18.28
		50	25	17.92	18.04	18.10
		50	50	17.94	18.01	18.06
		100	0	17.96	18.00	18.15

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37825	38000	38175
		Frequency (MHz)		2577.5	2595	2612.5
15M	QPSK	1	0	20.18	20.16	20.40
		1	37	19.80	19.89	19.95
		1	74	19.75	19.82	19.95
		36	0	18.74	18.81	18.98
		36	19	18.75	18.85	18.89
		36	39	18.59	18.80	18.86
		75	0	18.73	18.74	18.93
15M	16QAM	1	0	18.98	19.02	19.15
		1	37	18.71	18.79	18.98
		1	74	18.62	18.91	18.89
		36	0	17.66	17.81	17.96
		36	19	17.71	17.83	17.90
		36	39	17.56	17.81	17.87
		75	0	17.72	17.72	17.81
15M	64QAM	1	0	17.67	17.91	17.94
		1	37	17.72	17.69	17.81
		1	74	17.64	17.69	17.69
		36	0	16.75	16.92	17.00
		36	19	16.57	16.75	16.84
		36	39	16.65	16.68	16.77
		75	0	16.69	16.68	16.80

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37800	38000	38200
		Frequency (MHz)		2575	2595	2615
10M	QPSK	1	0	20.21	20.20	20.32
		1	24	19.80	19.84	19.99
		1	49	19.78	19.81	19.92
		25	0	18.76	18.88	19.00
		25	12	18.78	18.84	18.96
		25	25	18.61	18.74	18.88
		50	0	18.69	18.81	18.98
10M	16QAM	1	0	18.92	19.00	19.14
		1	24	18.73	18.82	18.94
		1	49	18.71	18.91	18.89
		25	0	17.70	17.76	17.92
		25	12	17.71	17.85	17.96
		25	25	17.55	17.80	17.84
		50	0	17.68	17.76	17.86
10M	64QAM	1	0	17.65	17.87	17.91
		1	24	17.63	17.71	17.80
		1	49	17.67	17.67	17.67
		25	0	16.79	16.87	16.99
		25	12	16.61	16.73	16.83
		25	25	16.67	16.69	16.77
		50	0	16.70	16.72	16.87

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 38						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		37775	38000	38225
		Frequency (MHz)		2572.5	2595	2617.5
5M	QPSK	1	0	20.22	20.16	20.32
		1	12	19.72	19.82	19.95
		1	24	19.78	19.88	19.97
		12	0	18.80	18.83	19.04
		12	6	18.76	18.86	18.90
		12	13	18.55	18.77	18.90
		25	0	18.76	18.82	18.96
5M	16QAM	1	0	18.90	19.01	19.16
		1	12	18.77	18.78	18.90
		1	24	18.64	18.82	18.86
		12	0	17.74	17.81	18.00
		12	6	17.66	17.84	17.88
		12	13	17.61	17.77	17.79
		25	0	17.67	17.78	17.82
5M	64QAM	1	0	17.71	17.82	17.93
		1	12	17.73	17.73	17.75
		1	24	17.59	17.60	17.72
		12	0	16.75	16.91	17.02
		12	6	16.66	16.75	16.85
		12	13	16.68	16.67	16.74
		25	0	16.63	16.71	16.87

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39750	40620	41490
		Frequency (MHz)		2506	2593	2680
20M	QPSK	1	0	21.82	21.84	21.82
		1	50	21.72	21.79	21.78
		1	99	21.73	21.76	21.69
		50	0	20.80	20.81	20.84
		50	25	20.79	20.83	20.84
		50	50	20.67	20.73	20.75
		100	0	20.79	20.78	20.88
20M	16QAM	1	0	21.05	21.06	21.13
		1	50	20.85	20.91	20.91
		1	99	20.79	20.82	20.85
		50	0	19.84	19.88	19.82
		50	25	19.79	19.80	19.83
		50	50	19.76	19.78	19.74
		100	0	19.79	19.82	19.88
20M	64QAM	1	0	19.75	19.84	19.83
		1	50	19.80	19.73	19.70
		1	99	19.78	19.80	19.84
		50	0	18.83	18.89	18.86
		50	25	18.75	18.82	18.78
		50	50	18.81	18.71	18.71
		100	0	18.84	18.71	18.73

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39725	40620	41515
		Frequency (MHz)		2503.5	2593	2682.5
15M	QPSK	1	0	21.00	20.77	20.84
		1	37	20.88	20.68	20.71
		1	74	20.80	20.71	20.76
		36	0	19.96	19.79	19.76
		36	19	19.90	19.75	19.83
		36	39	19.89	19.64	19.68
		75	0	19.96	19.77	19.69
15M	16QAM	1	0	20.25	20.04	19.97
		1	37	20.00	19.81	19.83
		1	74	20.04	19.73	19.82
		36	0	19.00	18.74	18.82
		36	19	18.87	18.76	18.80
		36	39	18.95	18.76	18.73
		75	0	18.91	18.73	18.76
15M	64QAM	1	0	18.99	18.72	18.77
		1	37	18.80	18.77	18.67
		1	74	18.87	18.73	18.72
		36	0	18.04	17.80	17.79
		36	19	17.97	17.75	17.77
		36	39	17.78	17.79	17.63
		75	0	17.88	17.82	17.68

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39700	40620	41540
		Frequency (MHz)		2501	2593	2685
10M	QPSK	1	0	20.93	20.82	20.76
		1	24	20.89	20.64	20.73
		1	49	20.77	20.69	20.76
		25	0	19.95	19.78	19.71
		25	12	19.87	19.75	19.79
		25	25	19.92	19.67	19.72
		50	0	19.87	19.74	19.69
10M	16QAM	1	0	20.24	20.05	19.99
		1	24	19.97	19.76	19.86
		1	49	20.04	19.71	19.75
		25	0	19.00	18.81	18.83
		25	12	18.87	18.73	18.73
		25	25	18.97	18.67	18.71
		50	0	18.94	18.72	18.78
10M	64QAM	1	0	18.99	18.75	18.80
		1	24	18.77	18.72	18.73
		1	49	18.83	18.73	18.79
		25	0	18.01	17.78	17.86
		25	12	17.87	17.68	17.79
		25	25	17.82	17.75	17.69
		50	0	17.92	17.74	17.69

*EIRP = Conducted + antenna gain (-1.90dBi)

LTE Band 41						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		39675	40620	41565
		Frequency (MHz)		2498.5	2593	2687.5
5M	QPSK	1	0	20.93	20.72	20.80
		1	12	20.95	20.66	20.70
		1	24	20.82	20.63	20.76
		12	0	19.91	19.70	19.81
		12	6	19.90	19.78	19.80
		12	13	19.88	19.59	19.71
		25	0	19.92	19.75	19.72
5M	16QAM	1	0	20.19	19.98	20.06
		1	12	19.96	19.76	19.91
		1	24	19.98	19.69	19.75
		12	0	18.93	18.75	18.86
		12	6	18.88	18.73	18.72
		12	13	18.96	18.75	18.75
		25	0	18.96	18.69	18.79
5M	64QAM	1	0	19.02	18.70	18.79
		1	12	18.81	18.71	18.68
		1	24	18.79	18.68	18.80
		12	0	18.00	17.81	17.79
		12	6	17.97	17.67	17.74
		12	13	17.79	17.74	17.66
		25	0	17.87	17.75	17.70

*EIRP = Conducted + antenna gain (-1.90dBi)

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

For WCDMA Band 4, LTE Band 4:

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 38, LTE Band 41:

According to FCC 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log (P)$ dB. The emission limit equal to -25dBm .

For LTE Band 12, LTE Band 17:

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 .

4.2.2 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
 - $\text{EIRP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
 - $\text{ERP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note:

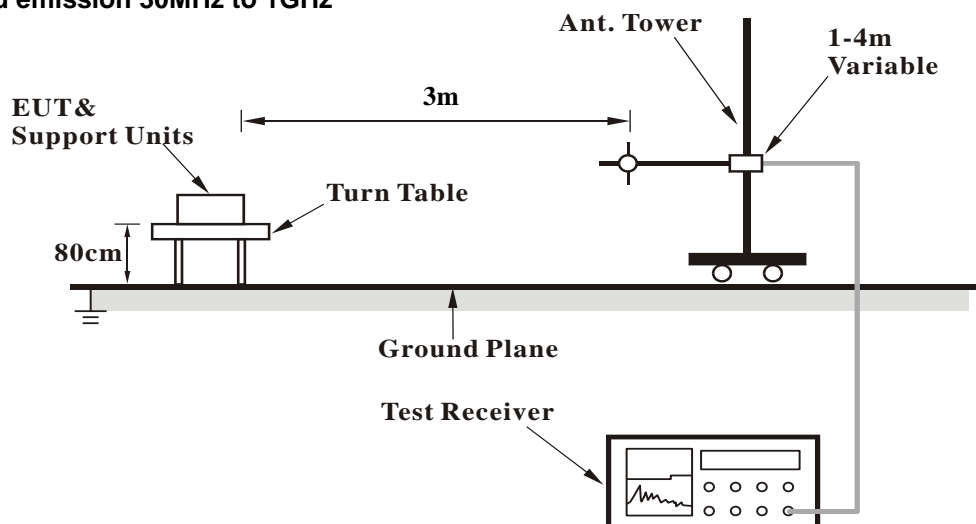
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

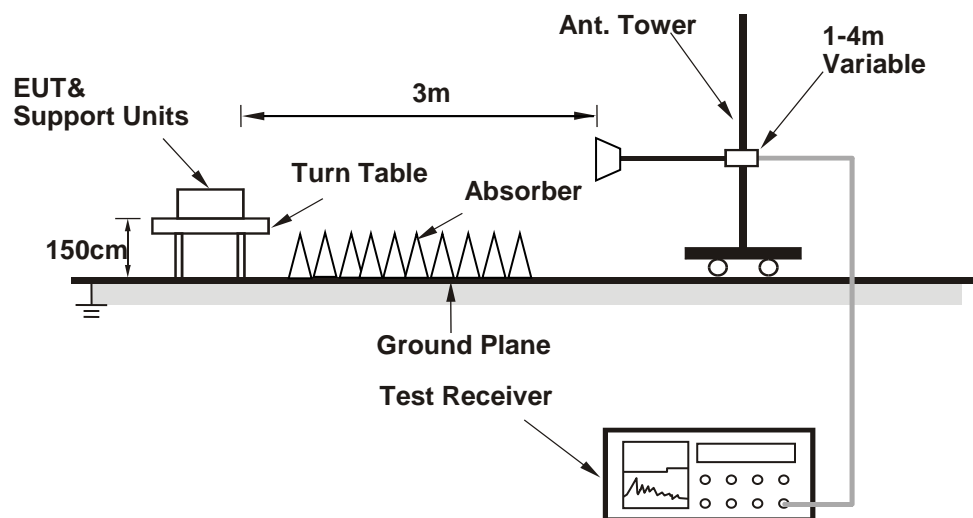
No deviation.

4.2.4 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).

4.2.5 Test Results

Below 1GHz

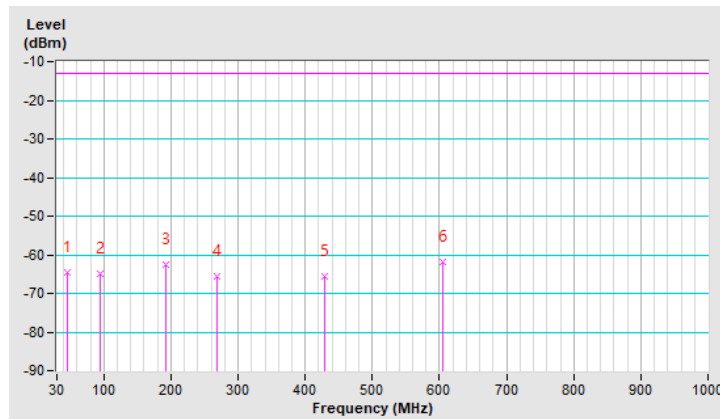
WCDMA Band 4

RF Mode	TX WCDMA Band IV	Channel	CH 1413 : 1732.6 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	45.52	-64.61	-13.00	-51.61	2.00 H	104	43.89	-108.50
2	94.99	-65.08	-13.00	-52.08	1.00 H	197	48.77	-113.85
3	191.99	-62.58	-13.00	-49.58	1.50 H	108	48.80	-111.38
4	268.62	-65.53	-13.00	-52.53	1.00 H	57	43.69	-109.22
5	428.67	-65.56	-13.00	-52.56	1.50 H	95	39.34	-104.90
6	605.21	-61.90	-13.00	-48.90	1.00 H	353	39.15	-101.05

Remarks:

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

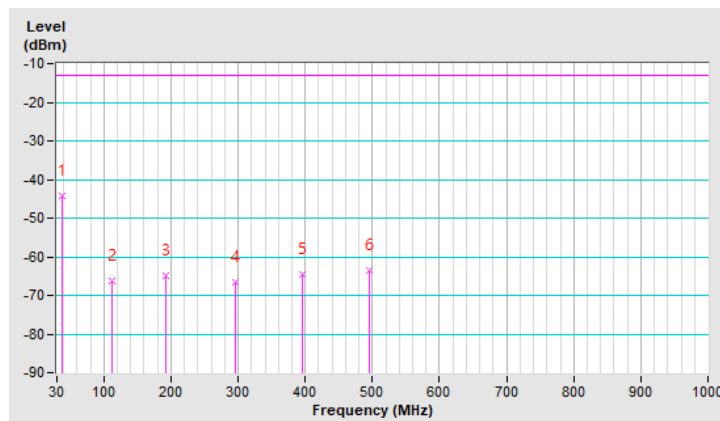


RF Mode	TX WCDMA Band IV	Channel	CH 1413 : 1732.6 MHz
Frequency Range	30MHz ~ 1GHz		

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	37.76	-44.12	-13.00	-31.12	2.00 V	153	64.99	-109.11
2	112.45	-66.25	-13.00	-53.25	1.00 V	180	45.13	-111.38
3	191.99	-64.95	-13.00	-51.95	1.50 V	213	46.43	-111.38
4	296.75	-66.55	-13.00	-53.55	1.50 V	303	41.84	-108.39
5	395.69	-64.50	-13.00	-51.50	1.00 V	84	41.29	-105.79
6	495.60	-63.66	-13.00	-50.66	1.00 V	50	39.91	-103.57

Remarks:

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



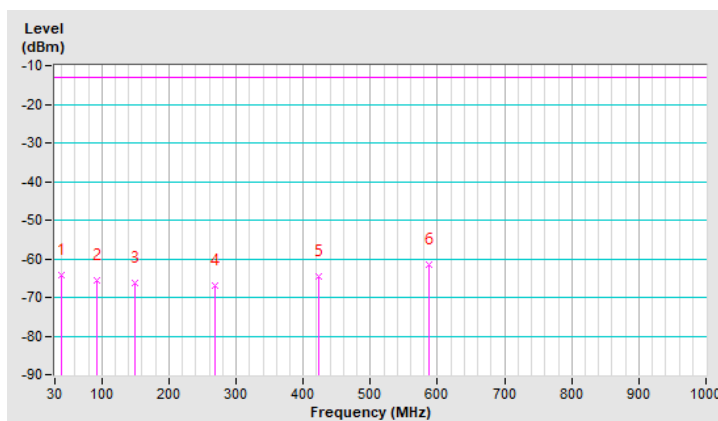
LTE Band 4 (Channel Bandwidth 20MHz)

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175 : 1732.5 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBUV)	Correction Factor (dB/m)
1	39.70	-64.26	-13.00	-51.26	1.50 H	270	44.77	-109.03
2	93.05	-65.56	-13.00	-52.56	1.00 H	187	48.56	-114.12
3	148.34	-66.32	-13.00	-53.32	2.00 H	151	42.20	-108.52
4	268.62	-66.81	-13.00	-53.81	1.00 H	225	42.41	-109.22
5	423.82	-64.74	-13.00	-51.74	2.00 H	208	40.31	-105.05
6	587.75	-61.60	-13.00	-48.60	1.00 H	182	39.85	-101.45

Remarks:

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

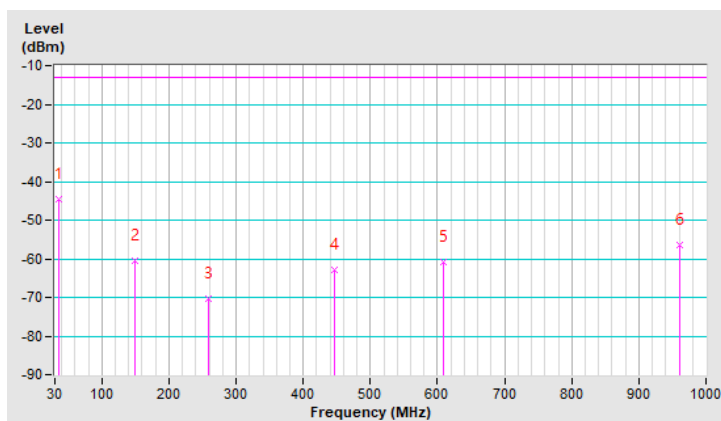


RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175 : 1732.5 MHz
Frequency Range	30MHz ~ 1GHz		

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	36.79	-44.67	-13.00	-31.67	2.00 V	237	64.66	-109.33
2	148.34	-60.56	-13.00	-47.56	1.00 V	185	47.96	-108.52
3	257.95	-70.28	-13.00	-57.28	1.00 V	2	39.51	-109.79
4	446.13	-62.73	-13.00	-49.73	1.50 V	36	41.60	-104.33
5	609.09	-60.91	-13.00	-47.91	1.00 V	41	40.02	-100.93
6	961.20	-56.44	-13.00	-43.44	1.00 V	27	39.40	-95.84

Remarks:

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



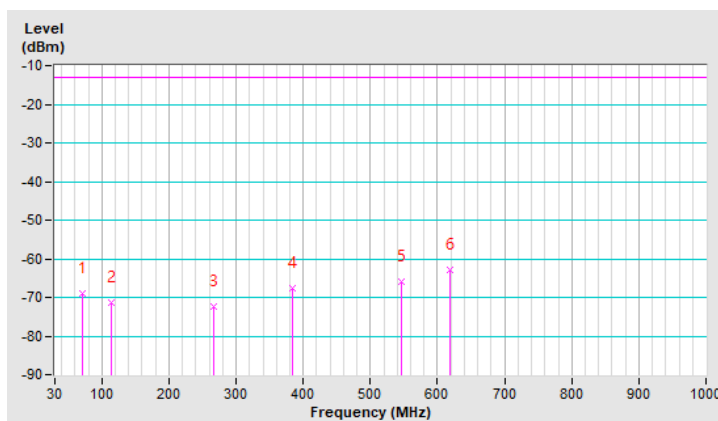
LTE Band 12 (Channel Bandwidth 10MHz)

RF Mode	TX LTE Band XII-10MHz	Channel	CH 23095 : 707.5 MHz
Frequency Range	30MHz ~ 1GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	71.71	-68.91	-13.00	-55.91	1.00 H	332	44.52	-113.43
2	113.42	-71.43	-13.00	-58.43	1.00 H	4	42.02	-113.45
3	266.68	-72.40	-13.00	-59.40	1.00 H	302	39.09	-111.49
4	384.05	-67.79	-13.00	-54.79	2.00 H	132	40.39	-108.18
5	546.04	-65.86	-13.00	-52.86	1.50 H	102	38.89	-104.75
6	618.79	-62.82	-13.00	-49.82	1.00 H	222	40.13	-102.95

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.

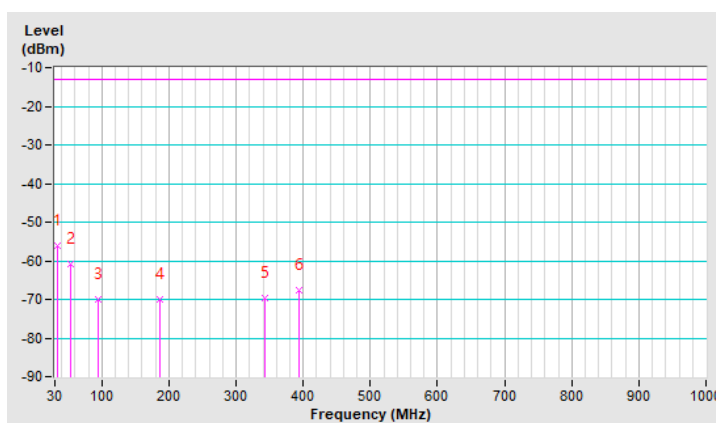


RF Mode	TX LTE Band XII-10MHz	Channel	CH 23095 : 707.5 MHz
Frequency Range	30MHz ~ 1GHz		

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	33.88	-55.98	-13.00	-42.98	2.00 V	116	55.83	-111.81
2	53.28	-60.90	-13.00	-47.90	1.00 V	70	49.87	-110.77
3	94.02	-69.94	-13.00	-56.94	1.00 V	61	46.17	-116.11
4	186.17	-70.12	-13.00	-57.12	1.50 V	221	42.78	-112.90
5	343.31	-69.50	-13.00	-56.50	2.00 V	172	39.82	-109.32
6	394.72	-67.64	-13.00	-54.64	1.00 V	65	40.32	-107.96

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.



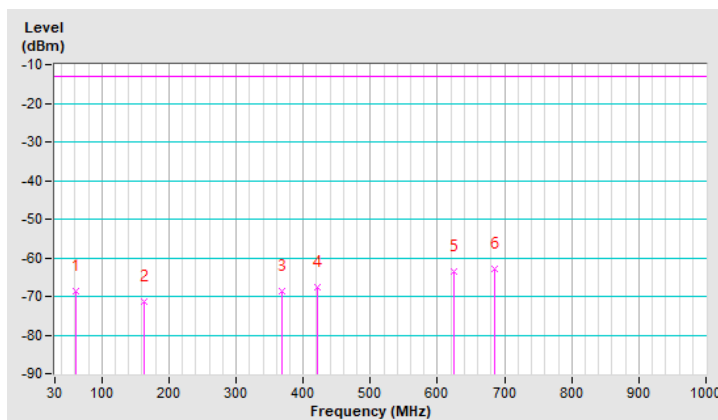
LTE Band 13 (Channel Bandwidth 10MHz)

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	62.01	-68.70	-13.00	-55.70	2.00 H	243	42.97	-111.67
2	163.86	-71.33	-13.00	-58.33	1.00 H	198	39.56	-110.89
3	368.53	-68.56	-13.00	-55.56	1.00 H	62	40.05	-108.61
4	421.88	-67.70	-13.00	-54.70	1.00 H	2	39.57	-107.27
5	623.64	-63.57	-13.00	-50.57	1.50 H	250	39.32	-102.89
6	685.72	-62.96	-13.00	-49.96	1.00 H	2	39.05	-102.01

Remarks:

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

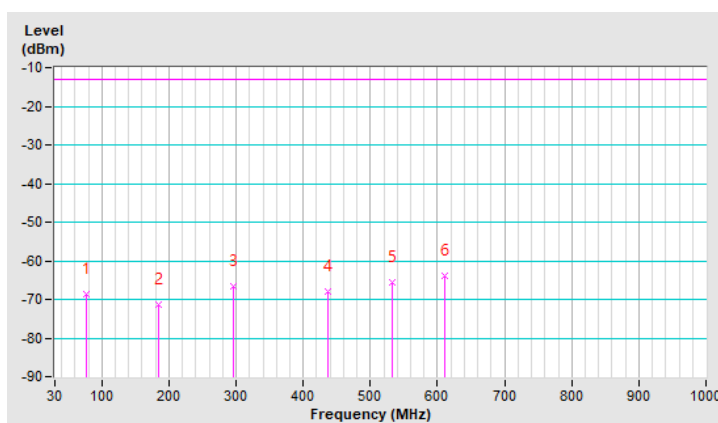


RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230 : 782 MHz
Frequency Range	30MHz ~ 1GHz		

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	77.53	-68.80	-13.00	-55.80	2.00 V	344	46.26	-115.06
2	184.23	-71.34	-13.00	-58.34	1.00 V	106	41.36	-112.70
3	296.75	-66.67	-13.00	-53.67	2.00 V	298	43.87	-110.54
4	437.40	-67.92	-13.00	-54.92	1.00 V	355	38.75	-106.67
5	532.46	-65.57	-13.00	-52.57	1.50 V	77	39.40	-104.97
6	610.06	-63.99	-13.00	-50.99	1.00 V	104	39.06	-103.05

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.



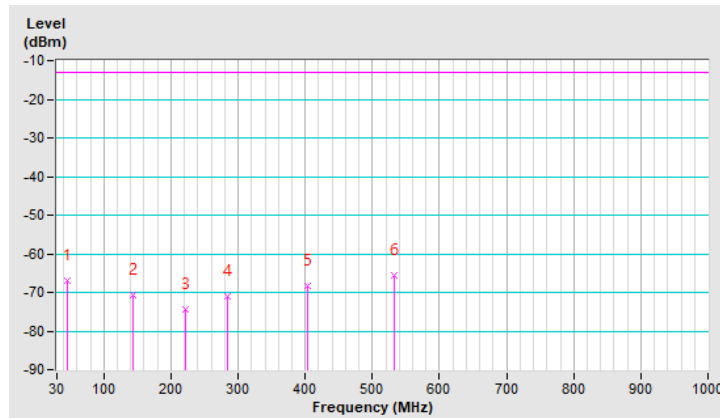
LTE Band 17 (Channel Bandwidth 10MHz)

RF Mode	TX LTE Band XVII-10MHz	Channel	CH 23790 : 710 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	45.52	-66.97	-13.00	-53.97	1.50 H	64	43.68	-110.65
2	143.49	-70.81	-13.00	-57.81	1.00 H	227	40.00	-110.81
3	222.06	-74.31	-13.00	-61.31	1.00 H	227	39.98	-114.29
4	285.11	-71.17	-13.00	-58.17	1.00 H	47	39.51	-110.68
5	403.45	-68.37	-13.00	-55.37	2.00 H	112	39.42	-107.79
6	533.43	-65.49	-13.00	-52.49	1.00 H	12	39.49	-104.98

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.

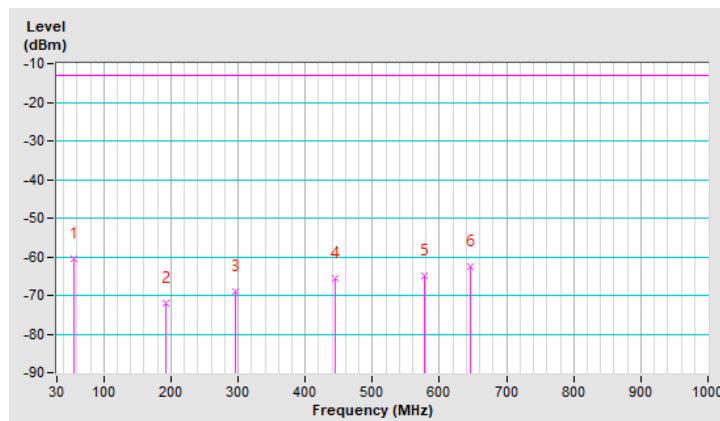


RF Mode	TX LTE Band XVII-10MHz	Channel	CH 23790 : 710 MHz
Frequency Range	30MHz ~ 1GHz		

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	56.19	-60.57	-13.00	-47.57	2.00 V	2	50.31	-110.88
2	191.99	-72.02	-13.00	-59.02	1.00 V	230	41.51	-113.53
3	296.75	-68.99	-13.00	-55.99	1.50 V	98	41.55	-110.54
4	445.16	-65.70	-13.00	-52.70	1.00 V	2	40.80	-106.50
5	578.05	-64.79	-13.00	-51.79	1.50 V	65	39.12	-103.91
6	646.92	-62.68	-13.00	-49.68	1.00 V	350	39.87	-102.55

Remarks:

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



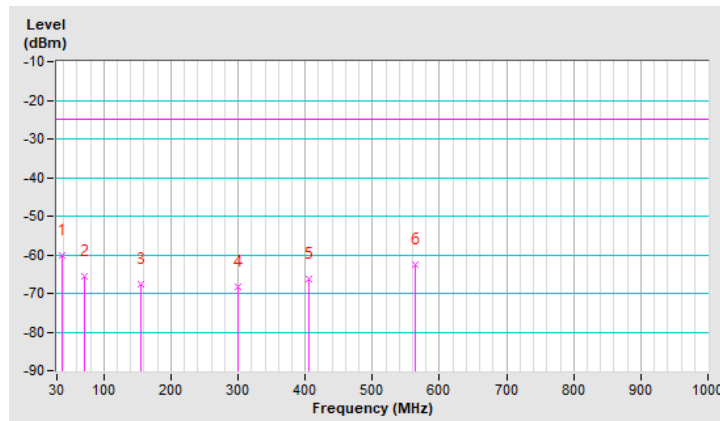
LTE Band 38 (Channel Bandwidth 20MHz)

RF Mode	TX LTE Band XXXVIII-20MHz	Channel	CH 38000 : 2595.0 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	37.76	-60.17	-25.00	-35.17	2.00 H	105	48.94	-109.11
2	71.71	-65.76	-25.00	-40.76	1.00 H	171	45.52	-111.28
3	155.13	-67.69	-25.00	-42.69	1.00 H	89	40.69	-108.38
4	299.66	-68.29	-25.00	-43.29	1.00 H	246	40.02	-108.31
5	405.39	-66.24	-25.00	-41.24	1.50 H	2	39.34	-105.58
6	564.47	-62.48	-25.00	-37.48	1.00 H	197	39.66	-102.14

Remarks:

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

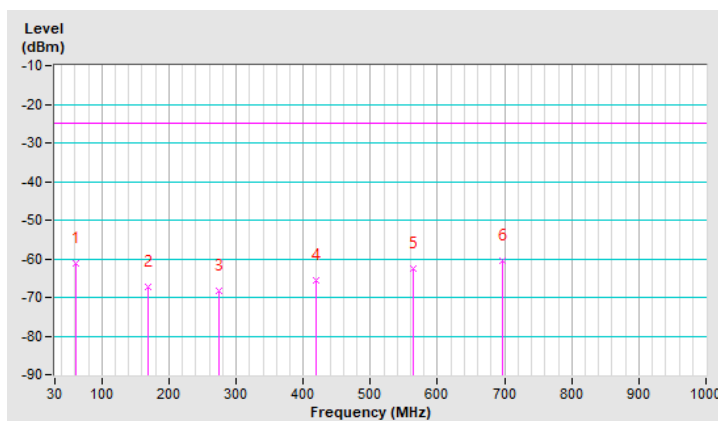


RF Mode	TX LTE Band XXXVIII-20MHz	Channel	CH 38000 : 2595.0 MHz
Frequency Range	30MHz ~ 1GHz		

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	62.01	-61.13	-25.00	-36.13	1.50 V	78	48.39	-109.52
2	169.68	-67.45	-25.00	-42.45	1.00 V	234	41.55	-109.00
3	275.41	-68.34	-25.00	-43.34	1.00 V	292	40.53	-108.87
4	418.97	-65.54	-25.00	-40.54	1.00 V	222	39.68	-105.22
5	564.47	-62.60	-25.00	-37.60	2.00 V	18	39.54	-102.14
6	696.39	-60.36	-25.00	-35.36	1.00 V	150	39.22	-99.58

Remarks:

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



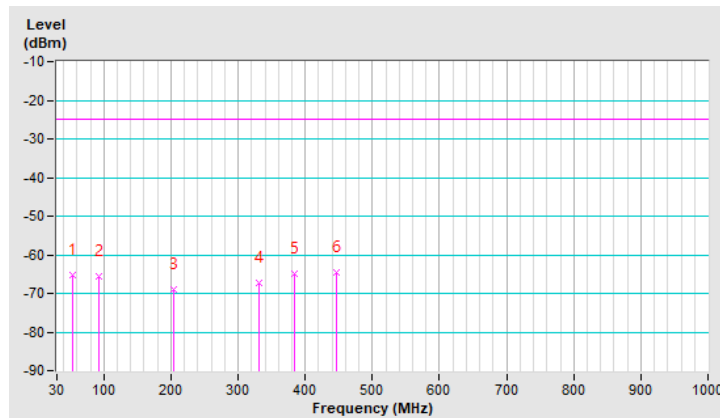
LTE Band 41 (Channel Bandwidth 20MHz)

RF Mode	TX LTE Band XLI-20MHz	Channel	CH 40620 : 2593.0 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	54.25	-65.30	-25.00	-40.30	1.50 H	322	43.45	-108.75
2	92.08	-65.60	-25.00	-40.60	1.00 H	169	48.56	-114.16
3	203.63	-69.08	-25.00	-44.08	1.00 H	223	43.10	-112.18
4	331.67	-67.24	-25.00	-42.24	2.00 H	292	39.98	-107.22
5	384.05	-64.75	-25.00	-39.75	1.00 H	298	41.28	-106.03
6	447.10	-64.53	-25.00	-39.53	2.00 H	16	39.79	-104.32

Remarks:

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

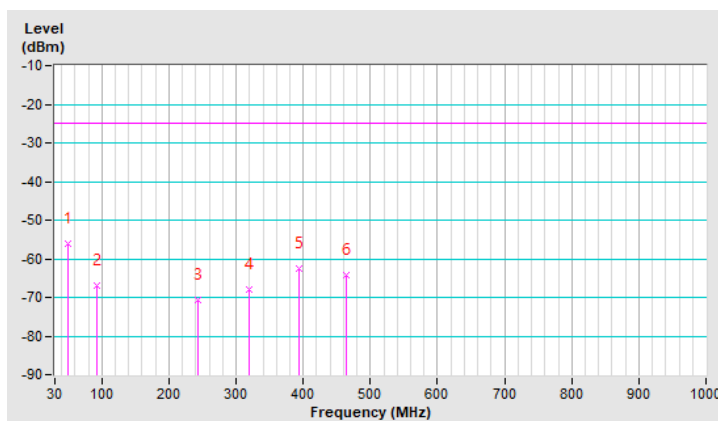


RF Mode	TX LTE Band XLI-20MHz	Channel	CH 40620 : 2593.0 MHz
Frequency Range	30MHz ~ 1GHz		

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	50.37	-56.23	-25.00	-31.23	2.00 V	149	52.28	-108.51
2	93.05	-66.94	-25.00	-41.94	1.00 V	50	47.18	-114.12
3	242.43	-70.66	-25.00	-45.66	1.00 V	172	39.58	-110.24
4	320.03	-67.96	-25.00	-42.96	2.00 V	179	39.68	-107.64
5	394.72	-62.68	-25.00	-37.68	1.50 V	84	43.13	-105.81
6	463.59	-64.38	-25.00	-39.38	1.00 V	205	39.72	-104.10

Remarks:

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



Above 1GHz

WCDMA Band 4

RF Mode	TX WCDMA Band IV	Channel	CH 1413 : 1732.6 MHz
Frequency Range	1GHz ~ 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	-53.40	-13.00	-40.40	1.11 H	169	44.81	-98.21
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	-55.10	-13.00	-42.10	2.09 V	332	43.11	-98.21

Remarks:

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

LTE Band 4 (Channel Bandwidth 20MHz)

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175 : 1732.5 MHz
Frequency Range	1GHz ~ 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	-52.48	-13.00	-39.48	2.58 H	170	45.73	-98.21
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	-52.55	-13.00	-39.55	1.42 V	157	45.66	-98.21

Remarks:

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

LTE Band 12 (Channel Bandwidth 10MHz)

RF Mode	TX LTE Band XII-10MHz	Channel	CH 23095 : 707.5 MHz
Frequency Range	1GHz ~ 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	-51.38	-13.00	-38.38	2.12 H	317	54.39	-105.77
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	-50.42	-13.00	-37.42	1.42 V	218	55.35	-105.77

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

RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230 : 782 MHz
Frequency Range	1GHz ~ 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	-52.62	-40.00	-12.62	1.70 H	39	50.87	-103.49
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	-52.32	-40.00	-12.32	1.39 V	147	51.17	-103.49

Remarks:

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

LTE Band 17 (Channel Bandwidth 10MHz)

RF Mode	TX LTE Band XVII-10MHz	Channel	CH 23790 : 710 MHz
Frequency Range	1GHz ~ 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	1420.00	-51.48	-13.00	-38.48	1.64 H	321	54.30	-105.78
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	1420.00	-49.79	-13.00	-36.79	1.61 V	221	55.99	-105.78

Remarks:

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

LTE Band 38, Channel Bandwidth 20MHz

RF Mode	TX LTE Band XXXVIII-20MHz	Channel	CH 38000 : 2595.0 MHz
Frequency Range	1GHz ~ 27GHz		

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	5190.00	-47.63	-25.00	-22.63	2.03 H	168	45.88	-93.51
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	5190.00	-47.92	-25.00	-22.92	2.57 V	103	45.59	-93.51

Remarks:

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

LTE Band 41, Channel Bandwidth 20MHz

RF Mode	TX LTE Band XLI-20MHz	Channel	CH 40620 : 2593.0 MHz
Frequency Range	1GHz ~ 27GHz		

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	5186.00	-47.73	-25.00	-22.73	2.11 H	100	45.78	-93.51

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	5186.00	-47.95	-25.00	-22.95	2.51 V	204	45.56	-93.51

Remarks:

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

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

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

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

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

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