Partial FCC Test Report
(Part 24 – WCDMA B2, LTE B2/B25)

Report No.:	RFCDVB-WTW-P22100074-1
FCC ID:	QYLEM9190V
Test Model:	EM9190
Received Date:	Nov. 15, 2022
Test Date:	Nov. 29, 2022 ~ Dec. 06, 2022
Issued Date:	Apr. 07, 2023
Applicant:	Getac Technology Corporation.
Address:	5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, Taiwan, R.O.C.
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

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Release Control Record

Issue No.	Description	Date Issued
RFCDVB-WTW-P22100074-1	Original Release	Apr. 07, 2023

1 Certificate of Conformity

Product:	Radio Module
Brand:	Getac
Test Model:	EM9190
Sample Status:	Engineering Sample
Applicant:	Getac Technology Corporation.
Test Date:	Nov. 29, 2022 ~ Dec. 06, 2022
Standards:	FCC Part 24, Subpart E

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 : Vera Huang , **Date:** Apr. 07, 2023

Vera Huang / Specialist

Approved by : Jeremy Lin , **Date:** Apr. 07, 2023

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective Isotropically Radiated Power	Pass	Meet the requirement of limit.
2.1046 24.232 (d)	Peak To Average Ratio	N/A	Refer to Note
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 24.235	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
24.238	Band Edge Measurements	N/A	Refer to Note
2.1051 24.238	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -27.65dB at 3815.00MHz.

Note:

1. This report is a Class II change partial report. Therefore, only test item of Radiated Spurious Emissions tests and Equivalent Isotropic Radiated Power were performed for this report. Other testing data please refer to Sporton International (Shenzhen) Inc. report no.: FG021501A_Rev. 02 and FG021501B_Rev. 02 for module (Brand: Airprime, Model: EM9190).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1000 MHz	3.6 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.	Calibrated Date	Calibrated Until
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 27, 2022	Apr. 26, 2023
Spectrum Analyzer R&S	FSW43	101867	Jan. 07, 2022	Jan. 06, 2023
Loop Antenna TESEQ	HLA 6121	45745	Jul. 27, 2022	Jul. 26, 2023
Loop Antenna EMCI	EM-6879	269	Sep. 19, 2022	Sep. 18, 2023
Pre-amplifier EMCI	EMC001340	980201	Sep. 23, 2022	Sep. 22, 2023
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	Jan. 15, 2022	Jan. 14, 2023
Preamplifier Agilent	8447D	2944A10638	May 14, 2022	May 13, 2023
Bi_Log Antenna Schwarbeck	VULB9168	9168-160	Oct. 20, 2022	Oct. 19, 2023
RF Coaxial Cable WOKEN	8D-FB	Cable-CH9-01	May 14, 2022	May 13, 2023
Horn Antenna Schwarzbeck	9120D	9120D-1169	Nov. 13, 2022	Nov. 12, 2023
Preamplifier Agilent	8449B	3008A02367	Feb. 16, 2022	Feb. 15, 2023
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 15, 2022	Jan. 14, 2023
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9- (250795/4)	Jan. 15, 2022	Jan. 14, 2023
RF FLITER MICRO-TRONICS	BRM50716	060	Jan. 10, 2022	Jan. 09, 2023
RF FLITER MICRO-TRONICS	BRM17690	004	Jan. 10, 2022	Jan. 09, 2023
Boresight antenna tower fixture BV	BAF-02	5	NA	NA
Pre-Ammlifier EMCI	EMC 184045	980116	Oct. 01, 2022	Sep. 30, 2023
Horn Antenna Schwarzbeck	BBHA 9170	9170-480	Nov. 13, 2022	Nov. 12, 2023
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170243	Nov. 13, 2022	Nov. 12, 2023
RF Coaxial Cable EMCI	EMC102-KM-KM-3000	150929	Jul. 09, 2022	Jul. 08, 2023
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	Jul. 09, 2022	Jul. 08, 2023
Boresight antenna tower fixture BV	BAF-02	5	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Mar. 03, 2022	Mar. 02, 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 HY - 966 chamber 4.

3 General Information

3.1 General Description of EUT

Product	Radio Module	
Brand	Getac	
Test Model	EM9190	
Status of EUT	Engineering Sample	
Power Supply Rating	3.3 Vdc (Host equipment)	
Modulation Type	WCDMA: BPSK HSDPA/DC-HSDPA: QPSK HSUPA: QPSK LTE: QPSK, 16QAM, 64QAM, 256QAM	
Operating Frequency	WCDMA Band 2	1852.4MHz ~ 1907.6MHz
	LTE Band 2 (Channel Bandwidth 1.4MHz)	1850.7MHz ~ 1909.3MHz
	LTE Band 2 (Channel Bandwidth 3MHz)	1851.5MHz ~ 1908.5MHz
	LTE Band 2 (Channel Bandwidth 5MHz)	1852.5MHz ~ 1907.5MHz
	LTE Band 2 (Channel Bandwidth 10MHz)	1855.0MHz ~ 1905.0MHz
	LTE Band 2 (Channel Bandwidth 15MHz)	1857.5MHz ~ 1902.5MHz
	LTE Band 2 (Channel Bandwidth 20MHz)	1860.0MHz ~ 1900.0MHz
	LTE Band 25 (Channel Bandwidth 1.4MHz)	1850.7MHz ~ 1914.3MHz
	LTE Band 25 (Channel Bandwidth 3MHz)	1851.5MHz ~ 1913.5MHz
	LTE Band 25 (Channel Bandwidth 5MHz)	1852.5MHz ~ 1912.5MHz
	LTE Band 25 (Channel Bandwidth 10MHz)	1855.0MHz ~ 1910.0MHz
	LTE Band 25 (Channel Bandwidth 15MHz)	1857.5MHz ~ 1907.5MHz
	LTE Band 25 (Channel Bandwidth 20MHz)	1860.0MHz ~ 1905.0MHz
Max. EIRP Power	WCDMA Band 2	400.867mW (26.03dBm)
	LTE Band 2 (Channel Bandwidth 1.4MHz)	359.749mW (25.56dBm)
	LTE Band 2 (Channel Bandwidth 3MHz)	351.560mW (25.46dBm)
	LTE Band 2 (Channel Bandwidth 5MHz)	358.922mW (25.55dBm)
	LTE Band 2 (Channel Bandwidth 10MHz)	355.631mW (25.51dBm)
	LTE Band 2 (Channel Bandwidth 15MHz)	353.183mW (25.48dBm)
	LTE Band 2 (Channel Bandwidth 20MHz)	360.579mW (25.57dBm)
	LTE Band 25 (Channel Bandwidth 1.4MHz)	338.844mW (25.30dBm)
	LTE Band 25 (Channel Bandwidth 3MHz)	344.350mW (25.37dBm)
	LTE Band 25 (Channel Bandwidth 5MHz)	345.144mW (25.38dBm)
	LTE Band 25 (Channel Bandwidth 10MHz)	345.144mW (25.38dBm)
	LTE Band 25 (Channel Bandwidth 15MHz)	331.131mW (25.20dBm)
	LTE Band 25 (Channel Bandwidth 20MHz)	345.939mW (25.39dBm)
Antenna Type	Refer to Note as below	
Accessory Device	N/A	
Cable Supplied	N/A	

Note:

1. The EUT is authorized for use in specific End-product.

Product	Brand	Model	Difference
Notebook	Getac	V110	For marketing purpose
		V110G7	
		V110Y (Y= 10 characters, Y can be 0 to 9, A to Z, a to z, "/", "\", "-", "_" or blank for marketing purpose)	

* The model of the V110G7 was chosen for final test.

2. The antenna information is listed as below.

Antenna Type	Antenna Gain (dBi)		
	WCDMA II	LTE B2	LTE B25
PIFA	2.48	2.48	2.48

* Detail antenna specification please refer to antenna datasheet or an antenna gain measurement report.

3. The End-product contains following accessory devices.

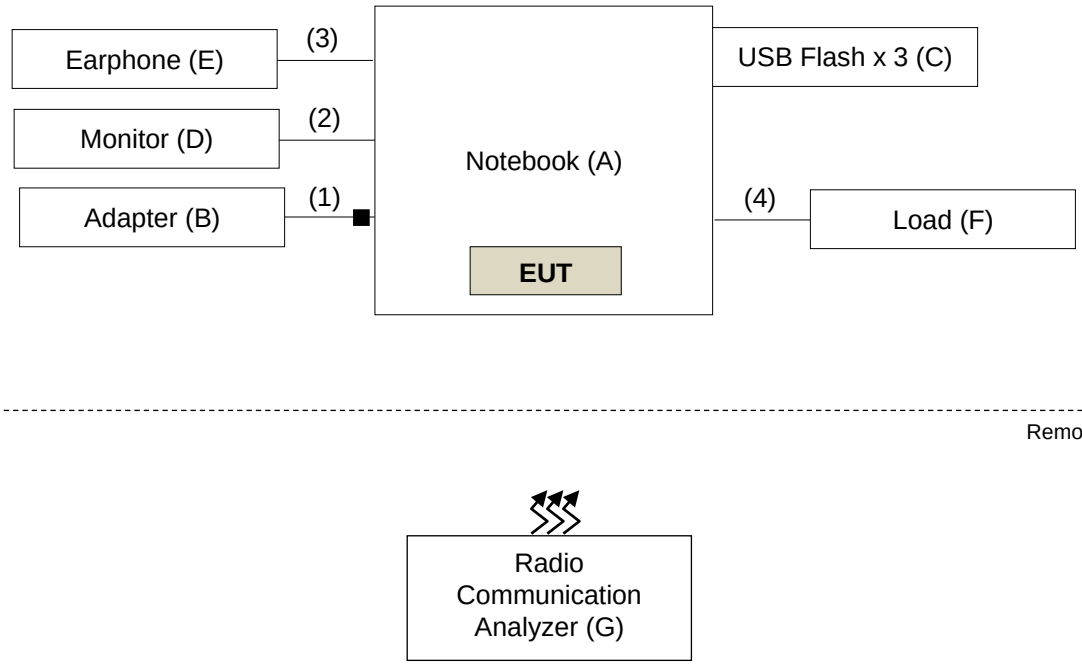
Part	Brand	Model	Specification
Adapter 1	FSP	FSP065-RBBN3	I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 19.0Vdc, 3.42A 1.5m DC power cable with one core attached on adapter
Adapter 2	Getac	MTA190474W4	I/P: 100-240Vac, 50-60Hz, 1.6A O/P: 19.0Vdc, 4.74A 1.55m DC power cable with two cores attached on adapter
Battery	Getac	BP3S1P2100-S	Rating: 11.1Vdc, 2040mAh, 23Wh Typical name: 2100mAh, 24Wh
Digitizer Pen	EMpen Technology Corp	DIGITIZER PEN	-

4. The End-product has three SKUs for sale, after pre-test. SKU 3 was chosen for final test and presented in the test report.

Part	Brand	Model	Specification	Configuration		
				SKU 1	SKU 2	SKU 3
CPU	Intel	Alder Lake	i5-1235U (Non Vpro)	V		V
			i7-1265U (Vpro)		V	
DDR	Kingston	---	16GB (8GB+8GB)	V		
		---	32GB (16GB+16GB)		V	
		---	64GB (32GB+32GB)			V
SSD	SSSTC	---	256GB	V		
		---	512GB		V	
		---	1TB			V
LCD Panel	AUO	G116HAN01	11.6"	V	V	V
Finger Print	Egistec	---	---	V	V	V
WLAN Module	Intel	AX211NGW	---	V	V	V
WWAN Module	Sierra	EM9190	---	V	V	V
GPS	GlobalSat	MC1010G	---	V	V	V
RFID Module	NXP	PN-7462	---		V	V
Digitizer Module	Getac	EMR116-UA00	---		V	V
Bottom Camera	FOXLINK	FN80AF-443H	---	V	V	V
	Chicony	CKAM816	---	V	V	V
Camera	FOXLINK	FN20FF-679H	---	V	V	V
IR Camera	FOXLINK	FN23FF-678H	---		V	V
Option Bay	Honeywell	N6703	Barcode	V		V
	Getac	---	SD Card reader		V	
	Getac	---	Smart Card		V	

5. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test



3.2.1 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	Getac	V110G7	NA	NA	Provided by manufacturer
B.	Adapter	FSP	FSP065-RBBN3	NA	NA	Provided by manufacturer
C.	USB Flash x 3	SanDisk	SDDDC3-032G	NA	NA	-
D.	Monitor	ASUS	VA24EHE	LCLMTF243824	NA	-
E.	Earphone	Apple	MB77PFEB	NA	NA	-
F.	Load	NA	NA	NA	NA	-
G.	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Power Cable	1	1.5	N	1	Provided by manufacturer Attached on adapter
2.	HDMI Cable	1	1.0	Y	0	-
3.	Earphone Cable	1	1.5	N	0	-
4.	RJ45 Cable	1	1.5	N	0	-

Note: The core(s) is(are) originally attached to the cable(s).

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 for tablet mode, and NB mode. 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 2	NB mode
LTE Band 2	NB mode
LTE Band 25	NB mode

WCDMA Band 2

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA, HSDPA, HSUPA
-	Radiated Emission Below 1GHz	9262 to 9538	9538 (1907.6MHz)	WCDMA
-	Radiated Emission Above 1GHz	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA

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

LTE Band 2

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		18615 to 19185	18615 (1851.5MHz), 18900 (1880.0MHz), 19185 (1908.5MHz)	3MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		18650 to 19150	18650 (1855.0MHz), 18900 (1880.0MHz), 19150 (1905.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		18675 to 19125	18675 (1857.5MHz), 18900 (1880.0MHz), 19125 (1902.5MHz)	15MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
-	Radiated Emission Below 1GHz	18700 to 19100	19175 (1907.5MHz)	5MHz	QPSK	1
-	Radiated Emission Above 1GHz	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK	1
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK	1
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK	1

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. 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.

LTE Band 25

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		26055 to 26675	26055 (1851.5MHz), 26365 (1882.5MHz), 26675 (1913.5MHz)	3MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		26090 to 26640	26090 (1855.0MHz), 26365 (1882.5MHz), 26640 (1910.0MHz)	10MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		26115 to 26615	26115 (1857.5MHz), 26365 (1882.5MHz), 26615 (1907.5MHz)	15MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK / 16QAM / 64QAM / 256QAM	1 Half Full
-	Radiated Emission Below 1GHz	26140 to 26590	26365 (1882.5MHz)	20MHz	QPSK	1
-	Radiated Emission Above 1GHz	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK	1
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK	1
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK	1

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
3. 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.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	25deg. C, 60%RH	120Vac, 60Hz (System)	Willy Cheng
Radiated Emission	23deg. C, 67%RH	120Vac, 60Hz (System)	Rex Wang Adair Peng

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards and References

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

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 and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 2 watts e.i.r.p.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with WCDMA, 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:

$EIRP = P_{Meas} + G_T$

$ERP = P_{Meas} + G_T - 2.15$

where

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

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

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

4.1.3 Test Setup

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

Band	WCDMA II		
TX Channel	9262	9400	9538
Frequency	1852.4	1880	1907.6
RMC 12.2K	23.55	23.42	23.30
HSDPA Subtest-1	22.92	22.92	22.66
HSDPA Subtest-2	22.95	22.93	22.69
HSDPA Subtest-3	22.44	22.41	22.20
HSDPA Subtest-4	22.39	22.42	22.20
DC-HSDPA Subtest-1	22.81	22.80	22.56
DC-HSDPA Subtest-2	22.83	22.81	22.58
DC-HSDPA Subtest-3	22.32	22.32	22.10
DC-HSDPA Subtest-4	22.28	22.34	22.08
HSUPA Subtest-1	22.88	22.73	22.65
HSUPA Subtest-2	20.76	20.69	20.51
HSUPA Subtest-3	21.71	21.70	21.53
HSUPA Subtest-4	20.80	20.69	20.55
HSUPA Subtest-5	22.76	22.71	22.54

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	23.09	22.97	22.88
		1	50	23.04	22.95	22.95
		1	99	23.00	23.00	22.90
		50	0	22.19	22.13	22.05
		50	25	22.17	22.11	22.11
		50	50	22.16	22.08	22.05
		100	0	22.15	22.13	22.10
20M	16QAM	1	0	22.39	22.39	22.33
		1	50	22.28	22.28	22.18
		1	99	22.26	22.18	22.09
		50	0	21.22	21.18	21.11
		50	25	21.16	21.13	21.06
		50	50	21.10	21.04	20.99
		100	0	21.06	20.96	20.95
20M	64QAM	1	0	21.34	21.31	21.24
		1	50	21.29	21.27	21.27
		1	99	21.23	21.16	21.08
		50	0	20.11	20.11	20.01
		50	25	20.23	20.15	20.13
		50	50	20.17	20.11	20.06
		100	0	20.15	20.08	20.08
20M	256QAM	1	0	18.25	18.22	18.13
		1	50	18.23	18.16	18.08
		1	99	18.19	18.10	18.08
		50	0	18.16	18.11	18.11
		50	25	18.13	18.10	18.06
		50	50	18.10	18.00	17.94
		100	0	18.08	18.06	18.05

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	23.00	22.93	22.82
		1	37	22.96	22.86	22.91
		1	74	22.94	22.96	22.87
		36	0	22.10	22.07	22.04
		36	19	22.13	22.01	22.02
		36	39	22.12	22.07	22.00
		75	0	22.15	22.09	22.05
15M	16QAM	1	0	22.38	22.35	22.26
		1	37	22.23	22.28	22.14
		1	74	22.17	22.08	22.08
		36	0	21.14	21.13	21.03
		36	19	21.07	21.06	20.97
		36	39	21.01	21.02	20.94
		75	0	20.97	20.94	20.95
15M	64QAM	1	0	21.28	21.28	21.24
		1	37	21.27	21.19	21.25
		1	74	21.13	21.09	20.98
		36	0	20.02	20.07	19.92
		36	19	20.21	20.14	20.03
		36	39	20.10	20.11	19.97
		75	0	20.13	20.05	20.02
15M	256QAM	1	0	18.23	18.16	18.12
		1	37	18.14	18.10	18.03
		1	74	18.14	18.07	18.04
		36	0	18.13	18.03	18.10
		36	19	18.05	18.06	18.00
		36	39	18.10	17.94	17.92
		75	0	17.99	18.01	17.95

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	23.03	22.87	22.81
		1	24	23.03	22.92	22.88
		1	49	22.93	22.91	22.83
		25	0	22.17	22.12	22.04
		25	12	22.08	22.02	22.01
		25	25	22.08	22.08	21.98
		50	0	22.10	22.08	22.06
10M	16QAM	1	0	22.29	22.35	22.26
		1	24	22.27	22.21	22.10
		1	49	22.17	22.17	22.04
		25	0	21.19	21.10	21.10
		25	12	21.14	21.04	21.04
		25	25	21.09	21.03	20.91
		50	0	21.06	20.94	20.94
10M	64QAM	1	0	21.30	21.27	21.18
		1	24	21.29	21.18	21.26
		1	49	21.15	21.12	21.03
		25	0	20.08	20.01	19.99
		25	12	20.22	20.11	20.13
		25	25	20.13	20.03	20.02
		50	0	20.15	19.99	20.06
10M	256QAM	1	0	18.24	18.22	18.08
		1	24	18.18	18.13	18.05
		1	49	18.16	18.03	18.01
		25	0	18.12	18.10	18.10
		25	12	18.08	18.02	18.00
		25	25	18.06	17.97	17.88
		50	0	18.01	17.97	18.00

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	23.07	22.93	22.86
		1	12	22.99	22.91	22.92
		1	24	23.00	22.98	22.84
		12	0	22.10	22.09	22.03
		12	6	22.15	22.04	22.02
		12	13	22.06	21.98	22.04
		25	0	22.09	22.13	22.10
5M	16QAM	1	0	22.39	22.34	22.27
		1	12	22.24	22.27	22.17
		1	24	22.17	22.14	21.99
		12	0	21.17	21.18	21.04
		12	6	21.14	21.10	21.03
		12	13	21.09	20.99	20.94
		25	0	21.02	20.91	20.85
5M	64QAM	1	0	21.33	21.28	21.23
		1	12	21.26	21.17	21.21
		1	24	21.13	21.16	21.04
		12	0	20.08	20.08	20.00
		12	6	20.18	20.08	20.13
		12	13	20.11	20.01	20.03
		25	0	20.10	20.04	20.00
5M	256QAM	1	0	18.19	18.18	18.12
		1	12	18.23	18.12	18.06
		1	24	18.09	18.00	18.03
		12	0	18.16	18.07	18.05
		12	6	18.11	18.01	17.99
		12	13	18.03	17.95	17.88
		25	0	18.02	17.96	17.99

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	22.98	22.91	22.82
		1	7	22.96	22.89	22.88
		1	14	22.95	22.94	22.87
		8	0	22.11	22.05	22.03
		8	3	22.14	22.08	22.04
		8	7	22.12	22.07	21.97
		15	0	22.12	22.04	22.10
3M	16QAM	1	0	22.31	22.35	22.24
		1	7	22.27	22.21	22.18
		1	14	22.18	22.14	22.05
		8	0	21.20	21.10	21.09
		8	3	21.12	21.05	21.06
		8	7	21.06	20.96	20.93
		15	0	21.00	20.94	20.95
3M	64QAM	1	0	21.27	21.26	21.22
		1	7	21.24	21.23	21.21
		1	14	21.16	21.11	20.98
		8	0	20.06	20.11	19.96
		8	3	20.18	20.09	20.12
		8	7	20.08	20.01	20.01
		15	0	20.12	20.04	20.03
3M	256QAM	1	0	18.18	18.22	18.07
		1	7	18.21	18.15	18.05
		1	14	18.15	18.05	17.98
		8	0	18.14	18.05	18.06
		8	3	18.04	18.02	17.99
		8	7	18.03	17.97	17.93
		15	0	18.00	18.03	18.03

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	22.84	22.79	22.78
		1	2	22.94	22.85	22.75
		1	5	22.87	22.95	22.88
		3	0	23.04	22.98	22.91
		3	1	23.02	22.99	23.04
		3	3	23.08	22.92	23.03
		6	0	22.03	21.99	21.96
1.4M	16QAM	1	0	22.23	22.32	22.21
		1	2	22.16	22.16	22.09
		1	5	22.06	21.96	22.00
		3	0	22.10	22.16	21.99
		3	1	22.02	21.96	21.91
		3	3	21.91	21.90	21.88
		6	0	20.95	20.87	20.80
1.4M	64QAM	1	0	21.18	21.19	21.05
		1	2	21.17	21.13	21.05
		1	5	21.21	20.95	20.96
		3	0	20.95	20.94	20.85
		3	1	21.00	21.12	21.07
		3	3	21.03	21.08	20.89
		6	0	20.11	19.91	20.02
1.4M	256QAM	1	0	18.18	18.14	18.11
		1	2	18.22	18.16	18.07
		1	5	18.12	18.07	18.00
		3	0	18.06	18.03	18.05
		3	1	18.07	18.07	17.98
		3	3	18.03	17.96	17.93
		6	0	18.08	18.06	17.99

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26140	26365	26590
		Frequency (MHz)		1860	1882.5	1905
20M	QPSK	1	0	22.91	22.85	22.76
		1	50	22.87	22.78	22.78
		1	99	22.81	22.75	22.75
		50	0	21.88	21.84	21.81
		50	25	21.86	21.84	21.74
		50	50	21.81	21.78	21.72
		100	0	21.79	21.76	21.71
20M	16QAM	1	0	22.21	22.16	22.09
		1	50	22.18	22.10	22.03
		1	99	22.16	22.12	22.12
		50	0	20.96	20.93	20.83
		50	25	20.93	20.84	20.78
		50	50	20.90	20.81	20.78
		100	0	20.88	20.80	20.73
20M	64QAM	1	0	21.08	21.05	21.03
		1	50	21.06	20.96	20.92
		1	99	21.01	20.94	20.92
		50	0	20.21	20.16	20.13
		50	25	20.18	20.18	20.12
		50	50	20.14	20.07	20.06
		100	0	20.11	20.01	19.92
20M	256QAM	1	0	18.12	18.06	17.96
		1	50	18.08	18.06	17.96
		1	99	18.06	17.96	17.96
		50	0	18.01	17.94	17.89
		50	25	17.98	17.92	17.86
		50	50	17.96	17.94	17.88
		100	0	17.94	17.87	17.85

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26115	26365	26615
		Frequency (MHz)		1857.5	1882.5	1907.5
15M	QPSK	1	0	22.72	22.70	22.62
		1	37	22.69	22.68	22.66
		1	74	22.70	22.64	22.65
		36	0	21.75	21.70	21.69
		36	19	21.72	21.70	21.57
		36	39	21.61	21.73	21.63
		75	0	21.66	21.68	21.70
15M	16QAM	1	0	22.15	22.03	22.03
		1	37	22.05	21.94	21.98
		1	74	22.06	22.02	21.96
		36	0	20.85	20.77	20.70
		36	19	20.80	20.61	20.56
		36	39	20.73	20.66	20.68
		75	0	20.80	20.78	20.52
15M	64QAM	1	0	20.90	20.87	20.97
		1	37	20.96	20.78	20.82
		1	74	20.89	20.85	20.79
		36	0	19.99	20.06	19.98
		36	19	19.99	20.08	19.94
		36	39	20.03	19.99	20.03
		75	0	19.92	19.91	19.75
15M	256QAM	1	0	18.06	18.00	17.96
		1	37	18.03	18.02	17.95
		1	74	18.02	17.91	17.93
		36	0	17.99	17.87	17.84
		36	19	17.94	17.85	17.80
		36	39	17.92	17.89	17.85
		75	0	17.92	17.84	17.80

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26090	26365	26640
		Frequency (MHz)		1855	1882.5	1910
10M	QPSK	1	0	22.90	22.79	22.69
		1	24	22.83	22.68	22.72
		1	49	22.78	22.69	22.67
		25	0	21.83	21.77	21.79
		25	12	21.86	21.81	21.65
		25	25	21.74	21.77	21.70
		50	0	21.78	21.75	21.63
10M	16QAM	1	0	22.15	22.08	22.02
		1	24	22.16	22.02	21.99
		1	49	22.11	22.08	22.08
		25	0	20.89	20.87	20.75
		25	12	20.88	20.81	20.73
		25	25	20.87	20.79	20.72
		50	0	20.85	20.70	20.63
10M	64QAM	1	0	20.99	21.00	21.02
		1	24	21.00	20.88	20.88
		1	49	20.93	20.88	20.92
		25	0	20.12	20.15	20.07
		25	12	20.11	20.18	20.05
		25	25	20.05	19.97	19.97
		50	0	20.09	19.97	19.89
10M	256QAM	1	0	18.08	17.98	17.87
		1	24	18.08	17.97	17.94
		1	49	17.97	17.96	17.94
		25	0	17.95	17.86	17.80
		25	12	17.96	17.85	17.79
		25	25	17.93	17.87	17.83
		50	0	17.93	17.84	17.78

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26065	26365	26665
		Frequency (MHz)		1852.5	1882.5	1912.5
5M	QPSK	1	0	22.90	22.85	22.71
		1	12	22.85	22.73	22.70
		1	24	22.71	22.65	22.74
		12	0	21.88	21.83	21.79
		12	6	21.84	21.76	21.70
		12	13	21.80	21.77	21.65
		25	0	21.70	21.72	21.65
5M	16QAM	1	0	22.14	22.14	22.08
		1	12	22.11	22.01	21.95
		1	24	22.13	22.10	22.07
		12	0	20.95	20.83	20.80
		12	6	20.86	20.80	20.68
		12	13	20.82	20.77	20.72
		25	0	20.88	20.77	20.66
5M	64QAM	1	0	21.01	20.99	21.00
		1	12	21.01	20.95	20.86
		1	24	20.95	20.84	20.88
		12	0	20.19	20.09	20.08
		12	6	20.08	20.13	20.02
		12	13	20.14	19.99	20.03
		25	0	20.02	19.97	19.87
5M	256QAM	1	0	18.02	18.03	17.88
		1	12	18.00	18.02	17.88
		1	24	18.02	17.94	17.93
		12	0	17.91	17.94	17.80
		12	6	17.88	17.82	17.84
		12	13	17.96	17.92	17.79
		25	0	17.91	17.84	17.81

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26055	26365	26675
		Frequency (MHz)		1851.5	1882.5	1913.5
3M	QPSK	1	0	22.89	22.80	22.70
		1	7	22.86	22.72	22.77
		1	14	22.79	22.66	22.69
		8	0	21.86	21.80	21.74
		8	3	21.85	21.83	21.67
		8	7	21.76	21.76	21.63
		15	0	21.76	21.67	21.69
3M	16QAM	1	0	22.13	22.09	21.99
		1	7	22.14	22.07	22.01
		1	14	22.08	22.05	22.07
		8	0	20.89	20.91	20.78
		8	3	20.85	20.80	20.73
		8	7	20.87	20.75	20.71
		15	0	20.84	20.79	20.70
3M	64QAM	1	0	21.01	21.00	21.03
		1	7	20.97	20.94	20.87
		1	14	20.95	20.87	20.83
		8	0	20.19	20.14	20.08
		8	3	20.08	20.18	20.11
		8	7	20.06	19.99	19.98
		15	0	20.06	19.95	19.91
3M	256QAM	1	0	18.11	18.06	17.92
		1	7	18.06	18.01	17.89
		1	14	18.01	17.96	17.91
		8	0	17.93	17.85	17.85
		8	3	17.96	17.82	17.86
		8	7	17.96	17.92	17.86
		15	0	17.91	17.78	17.85

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26047	26365	26683
		Frequency (MHz)		1850.7	1882.5	1914.3
1.4M	QPSK	1	0	22.78	22.73	22.69
		1	2	22.82	22.66	22.77
		1	5	22.74	22.54	22.64
		3	0	22.72	22.76	22.69
		3	1	22.73	22.77	22.52
		3	3	22.64	22.67	22.53
		6	0	21.73	21.54	21.57
1.4M	16QAM	1	0	22.06	21.96	21.99
		1	2	22.11	21.92	22.00
		1	5	22.01	22.02	22.07
		3	0	21.82	21.90	21.72
		3	1	21.83	21.75	21.68
		3	3	21.85	21.72	21.70
		6	0	20.81	20.67	20.60
1.4M	64QAM	1	0	20.98	20.96	20.93
		1	2	20.86	20.90	20.87
		1	5	20.90	20.79	20.77
		3	0	21.15	21.11	21.00
		3	1	21.03	21.12	20.96
		3	3	20.97	20.94	20.92
		6	0	20.03	19.93	19.87
1.4M	256QAM	1	0	18.06	18.03	17.91
		1	2	18.06	18.03	17.88
		1	5	17.97	17.89	17.87
		3	0	17.94	17.87	17.85
		3	1	17.93	17.90	17.84
		3	3	17.92	17.84	17.86
		6	0	17.86	17.78	17.75

EIRP Power (dBm)

Band	WCDMA II		
TX Channel	9262	9400	9538
Frequency	1852.4	1880	1907.6
RMC 12.2K	**26.03**	25.90	25.78
HSDPA Subtest-1	25.40	25.40	25.14
HSDPA Subtest-2	25.43	25.41	25.17
HSDPA Subtest-3	24.92	24.89	24.68
HSDPA Subtest-4	24.87	24.90	24.68
DC-HSDPA Subtest-1	25.29	25.28	25.04
DC-HSDPA Subtest-2	25.31	25.29	25.06
DC-HSDPA Subtest-3	24.80	24.80	24.58
DC-HSDPA Subtest-4	24.76	24.82	24.56
HSUPA Subtest-1	25.36	25.21	25.13
HSUPA Subtest-2	23.24	23.17	22.99
HSUPA Subtest-3	24.19	24.18	24.01
HSUPA Subtest-4	23.28	23.17	23.03
HSUPA Subtest-5	25.24	25.19	25.02

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	**25.57**	25.45	25.36
		1	50	25.52	25.43	25.43
		1	99	25.48	25.48	25.38
		50	0	24.67	24.61	24.53
		50	25	24.65	24.59	24.59
		50	50	24.64	24.56	24.53
		100	0	24.63	24.61	24.58
20M	16QAM	1	0	24.87	24.87	24.81
		1	50	24.76	24.76	24.66
		1	99	24.74	24.66	24.57
		50	0	23.70	23.66	23.59
		50	25	23.64	23.61	23.54
		50	50	23.58	23.52	23.47
		100	0	23.54	23.44	23.43
20M	64QAM	1	0	23.82	23.79	23.72
		1	50	23.77	23.75	23.75
		1	99	23.71	23.64	23.56
		50	0	22.59	22.59	22.49
		50	25	22.71	22.63	22.61
		50	50	22.65	22.59	22.54
		100	0	22.63	22.56	22.56
20M	256QAM	1	0	20.73	20.70	20.61
		1	50	20.71	20.64	20.56
		1	99	20.67	20.58	20.56
		50	0	20.64	20.59	20.59
		50	25	20.61	20.58	20.54
		50	50	20.58	20.48	20.42
		100	0	20.56	20.54	20.53

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	**25.48**	25.41	25.30
		1	37	25.44	25.34	25.39
		1	74	25.42	25.44	25.35
		36	0	24.58	24.55	24.52
		36	19	24.61	24.49	24.50
		36	39	24.60	24.55	24.48
		75	0	24.63	24.57	24.53
15M	16QAM	1	0	24.86	24.83	24.74
		1	37	24.71	24.76	24.62
		1	74	24.65	24.56	24.56
		36	0	23.62	23.61	23.51
		36	19	23.55	23.54	23.45
		36	39	23.49	23.50	23.42
		75	0	23.45	23.42	23.43
15M	64QAM	1	0	23.76	23.76	23.72
		1	37	23.75	23.67	23.73
		1	74	23.61	23.57	23.46
		36	0	22.50	22.55	22.40
		36	19	22.69	22.62	22.51
		36	39	22.58	22.59	22.45
		75	0	22.61	22.53	22.50
15M	256QAM	1	0	20.71	20.64	20.60
		1	37	20.62	20.58	20.51
		1	74	20.62	20.55	20.52
		36	0	20.61	20.51	20.58
		36	19	20.53	20.54	20.48
		36	39	20.58	20.42	20.40
		75	0	20.47	20.49	20.43

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	**25.51**	25.35	25.29
		1	24	**25.51**	25.40	25.36
		1	49	25.41	25.39	25.31
		25	0	24.65	24.60	24.52
		25	12	24.56	24.50	24.49
		25	25	24.56	24.56	24.46
		50	0	24.58	24.56	24.54
10M	16QAM	1	0	24.77	24.83	24.74
		1	24	24.75	24.69	24.58
		1	49	24.65	24.65	24.52
		25	0	23.67	23.58	23.58
		25	12	23.62	23.52	23.52
		25	25	23.57	23.51	23.39
		50	0	23.54	23.42	23.42
10M	64QAM	1	0	23.78	23.75	23.66
		1	24	23.77	23.66	23.74
		1	49	23.63	23.60	23.51
		25	0	22.56	22.49	22.47
		25	12	22.70	22.59	22.61
		25	25	22.61	22.51	22.50
		50	0	22.63	22.47	22.54
10M	256QAM	1	0	20.72	20.70	20.56
		1	24	20.66	20.61	20.53
		1	49	20.64	20.51	20.49
		25	0	20.60	20.58	20.58
		25	12	20.56	20.50	20.48
		25	25	20.54	20.45	20.36
		50	0	20.49	20.45	20.48

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	**25.55**	25.41	25.34
		1	12	25.47	25.39	25.40
		1	24	25.48	25.46	25.32
		12	0	24.58	24.57	24.51
		12	6	24.63	24.52	24.50
		12	13	24.54	24.46	24.52
		25	0	24.57	24.61	24.58
5M	16QAM	1	0	24.87	24.82	24.75
		1	12	24.72	24.75	24.65
		1	24	24.65	24.62	24.47
		12	0	23.65	23.66	23.52
		12	6	23.62	23.58	23.51
		12	13	23.57	23.47	23.42
		25	0	23.50	23.39	23.33
5M	64QAM	1	0	23.81	23.76	23.71
		1	12	23.74	23.65	23.69
		1	24	23.61	23.64	23.52
		12	0	22.56	22.56	22.48
		12	6	22.66	22.56	22.61
		12	13	22.59	22.49	22.51
		25	0	22.58	22.52	22.48
5M	256QAM	1	0	20.67	20.66	20.60
		1	12	20.71	20.60	20.54
		1	24	20.57	20.48	20.51
		12	0	20.64	20.55	20.53
		12	6	20.59	20.49	20.47
		12	13	20.51	20.43	20.36
		25	0	20.50	20.44	20.47

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	**25.46**	25.39	25.30
		1	7	25.44	25.37	25.36
		1	14	25.43	25.42	25.35
		8	0	24.59	24.53	24.51
		8	3	24.62	24.56	24.52
		8	7	24.60	24.55	24.45
		15	0	24.60	24.52	24.58
3M	16QAM	1	0	24.79	24.83	24.72
		1	7	24.75	24.69	24.66
		1	14	24.66	24.62	24.53
		8	0	23.68	23.58	23.57
		8	3	23.60	23.53	23.54
		8	7	23.54	23.44	23.41
		15	0	23.48	23.42	23.43
3M	64QAM	1	0	23.75	23.74	23.70
		1	7	23.72	23.71	23.69
		1	14	23.64	23.59	23.46
		8	0	22.54	22.59	22.44
		8	3	22.66	22.57	22.60
		8	7	22.56	22.49	22.49
		15	0	22.60	22.52	22.51
3M	256QAM	1	0	20.66	20.70	20.55
		1	7	20.69	20.63	20.53
		1	14	20.63	20.53	20.46
		8	0	20.62	20.53	20.54
		8	3	20.52	20.50	20.47
		8	7	20.51	20.45	20.41
		15	0	20.48	20.51	20.51

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	25.32	25.27	25.26
		1	2	25.42	25.33	25.23
		1	5	25.35	25.43	25.36
		3	0	25.52	25.46	25.39
		3	1	25.50	25.47	25.52
		3	3	**25.56**	25.40	25.51
		6	0	24.51	24.47	24.44
1.4M	16QAM	1	0	24.71	24.80	24.69
		1	2	24.64	24.64	24.57
		1	5	24.54	24.44	24.48
		3	0	24.58	24.64	24.47
		3	1	24.50	24.44	24.39
		3	3	24.39	24.38	24.36
		6	0	23.43	23.35	23.28
1.4M	64QAM	1	0	23.66	23.67	23.53
		1	2	23.65	23.61	23.53
		1	5	23.69	23.43	23.44
		3	0	23.43	23.42	23.33
		3	1	23.48	23.60	23.55
		3	3	23.51	23.56	23.37
		6	0	22.59	22.39	22.50
1.4M	256QAM	1	0	20.66	20.62	20.59
		1	2	20.70	20.64	20.55
		1	5	20.60	20.55	20.48
		3	0	20.54	20.51	20.53
		3	1	20.55	20.55	20.46
		3	3	20.51	20.44	20.41
		6	0	20.56	20.54	20.47

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26140	26365	26590
		Frequency (MHz)		1860	1882.5	1905
20M	QPSK	1	0	**25.39**	25.33	25.24
		1	50	25.35	25.26	25.26
		1	99	25.29	25.23	25.23
		50	0	24.36	24.32	24.29
		50	25	24.34	24.32	24.22
		50	50	24.29	24.26	24.20
		100	0	24.27	24.24	24.19
20M	16QAM	1	0	24.69	24.64	24.57
		1	50	24.66	24.58	24.51
		1	99	24.64	24.60	24.60
		50	0	23.44	23.41	23.31
		50	25	23.41	23.32	23.26
		50	50	23.38	23.29	23.26
		100	0	23.36	23.28	23.21
20M	64QAM	1	0	23.56	23.53	23.51
		1	50	23.54	23.44	23.40
		1	99	23.49	23.42	23.40
		50	0	22.69	22.64	22.61
		50	25	22.66	22.66	22.60
		50	50	22.62	22.55	22.54
		100	0	22.59	22.49	22.40
20M	256QAM	1	0	20.60	20.54	20.44
		1	50	20.56	20.54	20.44
		1	99	20.54	20.44	20.44
		50	0	20.49	20.42	20.37
		50	25	20.46	20.40	20.34
		50	50	20.44	20.42	20.36
		100	0	20.42	20.35	20.33

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26115	26365	26615
		Frequency (MHz)		1857.5	1882.5	1907.5
15M	QPSK	1	0	**25.20**	25.18	25.10
		1	37	25.17	25.16	25.14
		1	74	25.18	25.12	25.13
		36	0	24.23	24.18	24.17
		36	19	24.20	24.18	24.05
		36	39	24.09	24.21	24.11
		75	0	24.14	24.16	24.18
15M	16QAM	1	0	24.63	24.51	24.51
		1	37	24.53	24.42	24.46
		1	74	24.54	24.50	24.44
		36	0	23.33	23.25	23.18
		36	19	23.28	23.09	23.04
		36	39	23.21	23.14	23.16
		75	0	23.28	23.26	23.00
15M	64QAM	1	0	23.38	23.35	23.45
		1	37	23.44	23.26	23.30
		1	74	23.37	23.33	23.27
		36	0	22.47	22.54	22.46
		36	19	22.47	22.56	22.42
		36	39	22.51	22.47	22.51
		75	0	22.40	22.39	22.23
15M	256QAM	1	0	20.54	20.48	20.44
		1	37	20.51	20.50	20.43
		1	74	20.50	20.39	20.41
		36	0	20.47	20.35	20.32
		36	19	20.42	20.33	20.28
		36	39	20.40	20.37	20.33
		75	0	20.40	20.32	20.28

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26090	26365	26640
		Frequency (MHz)		1855	1882.5	1910
10M	QPSK	1	0	**25.38**	25.27	25.17
		1	24	25.31	25.16	25.20
		1	49	25.26	25.17	25.15
		25	0	24.31	24.25	24.27
		25	12	24.34	24.29	24.13
		25	25	24.22	24.25	24.18
		50	0	24.26	24.23	24.11
10M	16QAM	1	0	24.63	24.56	24.50
		1	24	24.64	24.50	24.47
		1	49	24.59	24.56	24.56
		25	0	23.37	23.35	23.23
		25	12	23.36	23.29	23.21
		25	25	23.35	23.27	23.20
		50	0	23.33	23.18	23.11
10M	64QAM	1	0	23.47	23.48	23.50
		1	24	23.48	23.36	23.36
		1	49	23.41	23.36	23.40
		25	0	22.60	22.63	22.55
		25	12	22.59	22.66	22.53
		25	25	22.53	22.45	22.45
		50	0	22.57	22.45	22.37
10M	256QAM	1	0	20.56	20.46	20.35
		1	24	20.56	20.45	20.42
		1	49	20.45	20.44	20.42
		25	0	20.43	20.34	20.28
		25	12	20.44	20.33	20.27
		25	25	20.41	20.35	20.31
		50	0	20.41	20.32	20.26

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26065	26365	26665
		Frequency (MHz)		1852.5	1882.5	1912.5
5M	QPSK	1	0	**25.38**	25.33	25.19
		1	12	25.33	25.21	25.18
		1	24	25.19	25.13	25.22
		12	0	24.36	24.31	24.27
		12	6	24.32	24.24	24.18
		12	13	24.28	24.25	24.13
		25	0	24.18	24.20	24.13
5M	16QAM	1	0	24.62	24.62	24.56
		1	12	24.59	24.49	24.43
		1	24	24.61	24.58	24.55
		12	0	23.43	23.31	23.28
		12	6	23.34	23.28	23.16
		12	13	23.30	23.25	23.20
		25	0	23.36	23.25	23.14
5M	64QAM	1	0	23.49	23.47	23.48
		1	12	23.49	23.43	23.34
		1	24	23.43	23.32	23.36
		12	0	22.67	22.57	22.56
		12	6	22.56	22.61	22.50
		12	13	22.62	22.47	22.51
		25	0	22.50	22.45	22.35
5M	256QAM	1	0	20.50	20.51	20.36
		1	12	20.48	20.50	20.36
		1	24	20.50	20.42	20.41
		12	0	20.39	20.42	20.28
		12	6	20.36	20.30	20.32
		12	13	20.44	20.40	20.27
		25	0	20.39	20.32	20.29

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26055	26365	26675
		Frequency (MHz)		1851.5	1882.5	1913.5
3M	QPSK	1	0	**25.37**	25.28	25.18
		1	7	25.34	25.20	25.25
		1	14	25.27	25.14	25.17
		8	0	24.34	24.28	24.22
		8	3	24.33	24.31	24.15
		8	7	24.24	24.24	24.11
		15	0	24.24	24.15	24.17
3M	16QAM	1	0	24.61	24.57	24.47
		1	7	24.62	24.55	24.49
		1	14	24.56	24.53	24.55
		8	0	23.37	23.39	23.26
		8	3	23.33	23.28	23.21
		8	7	23.35	23.23	23.19
		15	0	23.32	23.27	23.18
3M	64QAM	1	0	23.49	23.48	23.51
		1	7	23.45	23.42	23.35
		1	14	23.43	23.35	23.31
		8	0	22.67	22.62	22.56
		8	3	22.56	22.66	22.59
		8	7	22.54	22.47	22.46
		15	0	22.54	22.43	22.39
3M	256QAM	1	0	20.59	20.54	20.40
		1	7	20.54	20.49	20.37
		1	14	20.49	20.44	20.39
		8	0	20.41	20.33	20.33
		8	3	20.44	20.30	20.34
		8	7	20.44	20.40	20.34
		15	0	20.39	20.26	20.33

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26047	26365	26683
		Frequency (MHz)		1850.7	1882.5	1914.3
1.4M	QPSK	1	0	25.26	25.21	25.17
		1	2	**25.30**	25.14	25.25
		1	5	25.22	25.02	25.12
		3	0	25.20	25.24	25.17
		3	1	25.21	25.25	25.00
		3	3	25.12	25.15	25.01
		6	0	24.21	24.02	24.05
1.4M	16QAM	1	0	24.54	24.44	24.47
		1	2	24.59	24.40	24.48
		1	5	24.49	24.50	24.55
		3	0	24.30	24.38	24.20
		3	1	24.31	24.23	24.16
		3	3	24.33	24.20	24.18
		6	0	23.29	23.15	23.08
1.4M	64QAM	1	0	23.46	23.44	23.41
		1	2	23.34	23.38	23.35
		1	5	23.38	23.27	23.25
		3	0	23.63	23.59	23.48
		3	1	23.51	23.60	23.44
		3	3	23.45	23.42	23.40
		6	0	22.51	22.41	22.35
1.4M	256QAM	1	0	20.54	20.51	20.39
		1	2	20.54	20.51	20.36
		1	5	20.45	20.37	20.35
		3	0	20.42	20.35	20.33
		3	1	20.41	20.38	20.32
		3	3	20.40	20.32	20.34
		6	0	20.34	20.26	20.23

*EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

4.2.2 Test Procedure

a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The 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.

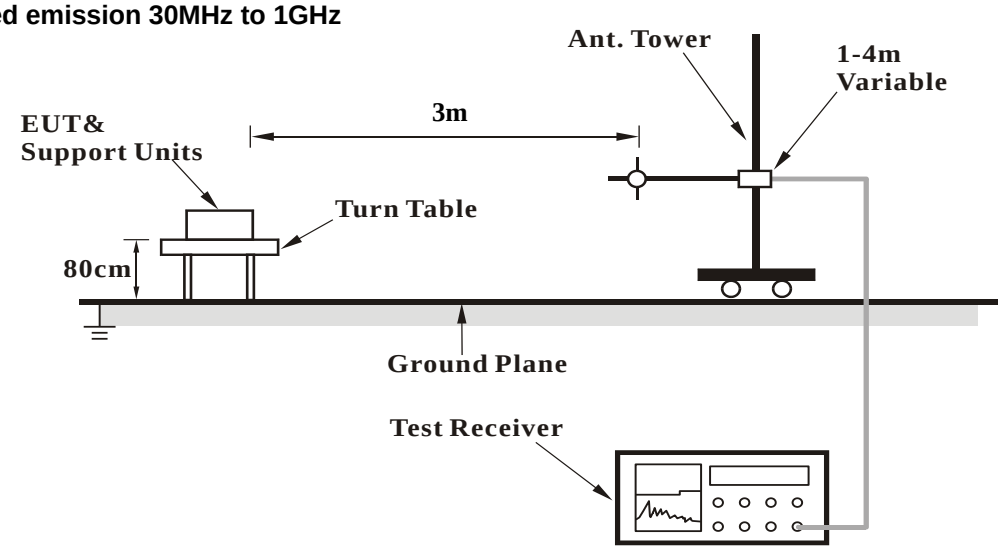
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

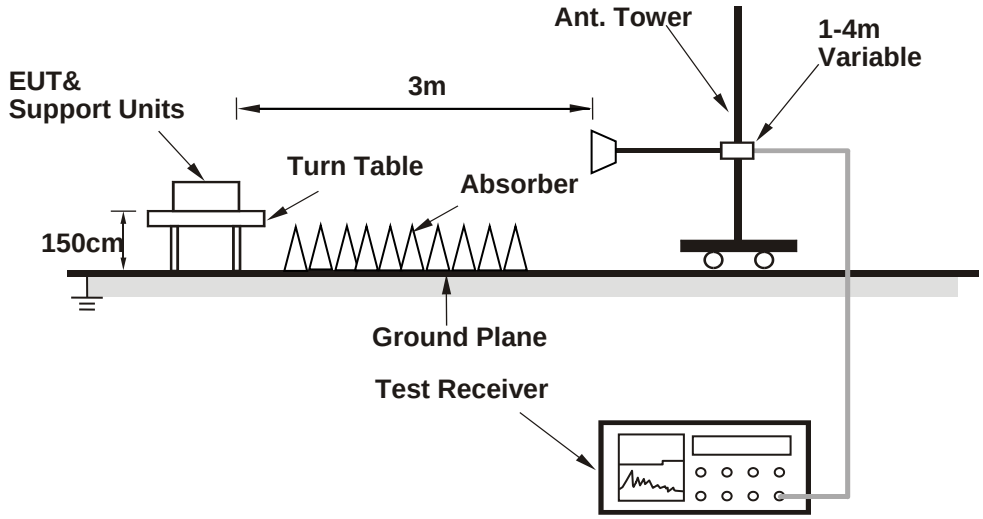
No deviation.

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

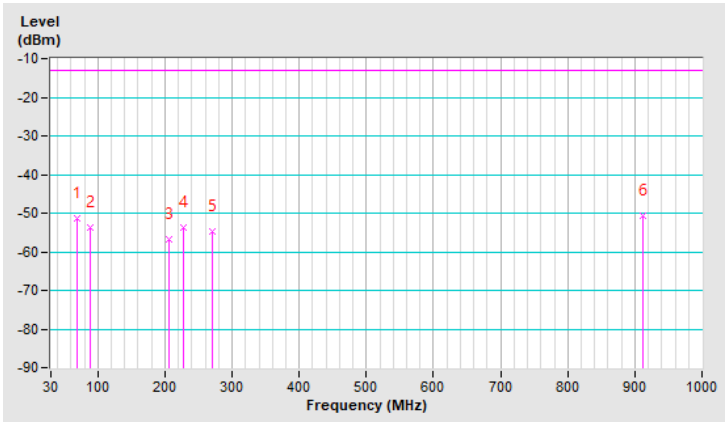
WCDMA Band 2

Mode	TX channel 9538 (1907.6MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Rex Wang		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	69.77	-51.23	-13.00	-38.23	1.00 H	121	55.08	-106.31
2	89.17	-53.85	-13.00	-40.85	1.50 H	231	56.15	-110.00
3	205.57	-56.64	-13.00	-43.64	2.00 H	155	50.17	-106.81
4	226.91	-53.71	-13.00	-40.71	1.00 H	176	52.64	-106.35
5	270.56	-54.71	-13.00	-41.71	1.50 H	281	48.44	-103.15
6	911.73	-50.53	-13.00	-37.53	1.00 H	61	39.14	-89.67

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.

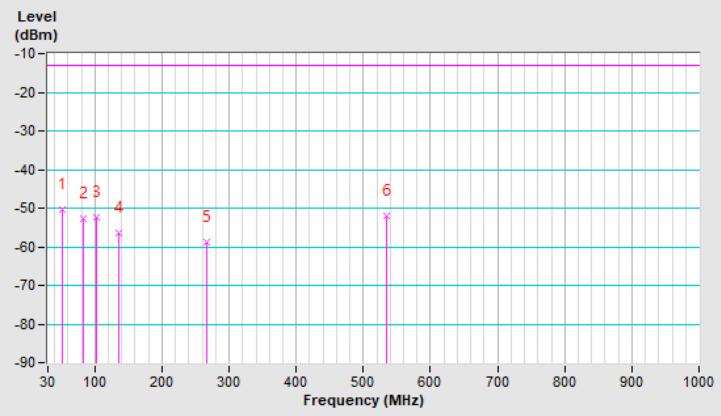


Mode	TX channel 9262 (1852.4MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Rex Wang		

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	51.34	-50.25	-13.00	-37.25	1.25 V	241	54.07	-104.32
2	83.35	-52.70	-13.00	-39.70	1.00 V	6	56.76	-109.46
3	101.78	-52.30	-13.00	-39.30	1.50 V	29	56.35	-108.65
4	135.73	-56.44	-13.00	-43.44	1.50 V	325	48.51	-104.95
5	266.68	-58.74	-13.00	-45.74	1.00 V	39	44.68	-103.42
6	534.40	-52.18	-13.00	-39.18	1.00 V	120	45.06	-97.24

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.



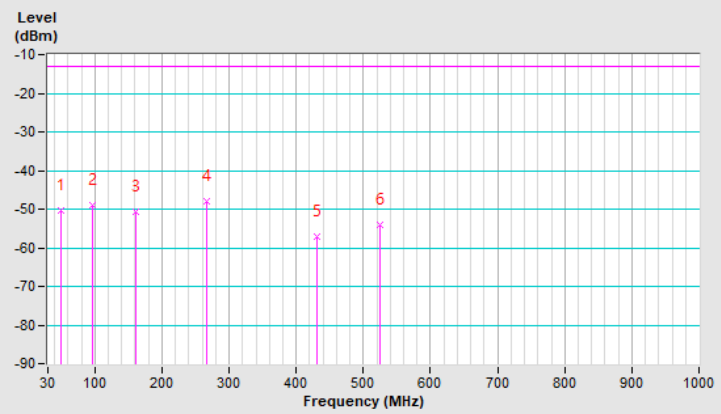
LTE Band 2, Channel Bandwidth 5MHz

Mode	TX channel 19175 (1907.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	50.37	-50.40	-13.00	-37.40	2.00 H	60	53.91	-104.31
2	96.93	-49.11	-13.00	-36.11	1.00 H	157	60.39	-109.50
3	161.92	-50.62	-13.00	-37.62	1.50 H	282	53.39	-104.01
4	266.68	-47.95	-13.00	-34.95	1.00 H	306	55.47	-103.42
5	431.58	-57.25	-13.00	-44.25	1.50 H	339	41.82	-99.07
6	525.67	-54.14	-13.00	-41.14	1.00 H	347	43.17	-97.31

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.

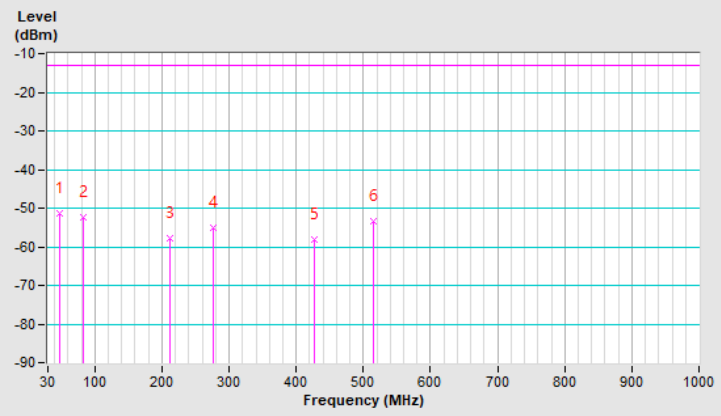


Mode	TX channel 19175 (1907.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	48.43	-51.41	-13.00	-38.41	1.50 V	315	52.89	-104.30
2	82.38	-52.25	-13.00	-39.25	1.00 V	357	57.04	-109.29
3	212.36	-57.87	-13.00	-44.87	1.50 V	262	48.70	-106.57
4	276.38	-55.04	-13.00	-42.04	2.00 V	174	47.84	-102.88
5	426.73	-58.12	-13.00	-45.12	1.00 V	247	41.13	-99.25
6	515.00	-53.24	-13.00	-40.24	1.00 V	189	44.26	-97.50

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.



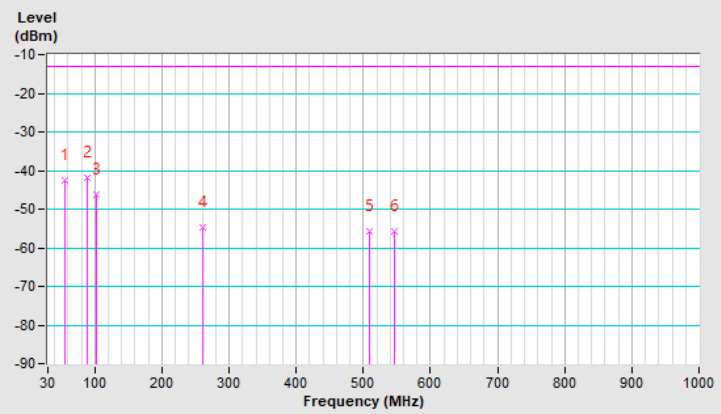
LTE Band 25, Channel Bandwidth 20MHz

Mode	TX channel 26365 (1882.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	55.22	-42.49	-13.00	-29.49	2.00 H	224	61.97	-104.46
2	89.17	-41.99	-13.00	-28.99	1.50 H	258	68.01	-110.00
3	101.78	-46.19	-13.00	-33.19	1.00 H	27	62.46	-108.65
4	260.86	-54.73	-13.00	-41.73	2.00 H	2	49.08	-103.81
5	509.18	-55.72	-13.00	-42.72	1.00 H	206	41.90	-97.62
6	546.04	-55.80	-13.00	-42.80	1.00 H	321	41.30	-97.10

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

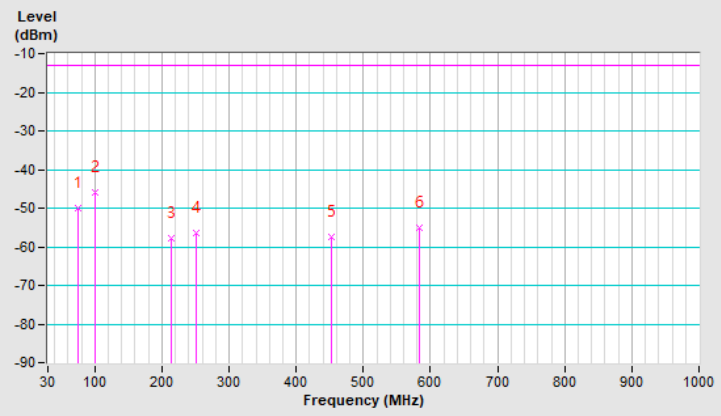


Mode	TX channel 26365 (1882.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	75.59	-49.88	-13.00	-36.88	1.50 V	129	57.81	-107.69
2	100.81	-46.02	-13.00	-33.02	1.00 V	6	62.71	-108.73
3	214.30	-57.92	-13.00	-44.92	2.00 V	275	48.57	-106.49
4	251.16	-56.61	-13.00	-43.61	1.50 V	310	47.59	-104.20
5	452.92	-57.51	-13.00	-44.51	1.00 V	24	41.10	-98.61
6	582.90	-55.08	-13.00	-42.08	1.00 V	270	41.12	-96.20

Remarks:

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



Above 1GHz

WCDMA Band 2

Mode	TX channel 9262 (1852.4MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3704.80	-48.59	-13.00	-35.59	1.46 H	326	44.82	-93.41
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	3704.80	-48.11	-13.00	-35.11	2.44 V	262	45.30	-93.41

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.

Mode	TX channel 9400 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3760.00	-48.42	-13.00	-35.42	1.59 H	342	44.76	-93.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3760.00	-47.79	-13.00	-34.79	2.53 V	270	45.39	-93.18

Remarks:

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

Mode	TX channel 9538 (1907.6MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3815.20	-47.95	-13.00	-34.95	1.53 H	337	44.93	-92.88
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	3815.20	-47.51	-13.00	-34.51	2.47 V	263	45.37	-92.88

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 2, Channel Bandwidth 1.4MHz

Mode	TX channel 18607 (1850.7MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3701.40	-44.17	-13.00	-31.17	1.61 H	246	49.25	-93.42
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	3701.40	-42.31	-13.00	-29.31	1.54 V	156	51.11	-93.42

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.

Mode	TX channel 18900 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3760.00	-43.26	-13.00	-30.26	1.71 H	250	49.92	-93.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3760.00	-42.29	-13.00	-29.29	1.52 V	158	50.89	-93.18

Remarks:

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

Mode	TX channel 19193 (1909.3MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3818.60	-43.46	-13.00	-30.46	1.62 H	250	49.42	-92.88
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	3818.60	-41.55	-13.00	-28.55	1.56 V	160	51.33	-92.88

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 2, Channel Bandwidth 5MHz

Mode	TX channel 18625 (1852.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3705.00	-44.18	-13.00	-31.18	1.58 H	248	49.23	-93.41
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	3705.00	-42.29	-13.00	-29.29	1.49 V	157	51.12	-93.41

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.

Mode	TX channel 18900 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3760.00	-44.07	-13.00	-31.07	1.64 H	245	49.11	-93.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3760.00	-42.35	-13.00	-29.35	1.57 V	160	50.83	-93.18

Remarks:

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

Mode	TX channel 19175 (1907.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3815.00	-42.41	-13.00	-29.41	1.57 H	246	50.47	-92.88
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	**3815.00**	**-40.65**	**-13.00**	**-27.65**	**1.59 V**	**156**	**52.23**	**-92.88**

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 2, Channel Bandwidth 20MHz

Mode	TX channel 18700 (1860.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3720.00	-43.51	-13.00	-30.51	1.59 H	249	49.83	-93.34
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	3720.00	-41.55	-13.00	-28.55	1.58 V	161	51.79	-93.34

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.

Mode	TX channel 18900 (1880.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3760.00	-43.61	-13.00	-30.61	1.59 H	247	49.57	-93.18
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3760.00	-42.21	-13.00	-29.21	1.57 V	156	50.97	-93.18

Remarks:

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

Mode	TX channel 19100 (1900.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3800.00	-42.38	-13.00	-29.38	1.66 H	245	50.52	-92.90
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	3800.00	-41.48	-13.00	-28.48	1.49 V	157	51.42	-92.90

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 25, Channel Bandwidth 1.4MHz

Mode	TX channel 26047 (1850.7MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3701.40	-48.09	-13.00	-35.09	2.77 H	310	45.33	-93.42
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	3701.40	-46.22	-13.00	-33.22	3.14 V	282	47.20	-93.42

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.

Mode	TX channel 26365 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3765.00	-47.75	-13.00	-34.75	2.78 H	314	45.39	-93.14
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	3765.00	-46.70	-13.00	-33.70	3.13 V	279	46.44	-93.14

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

Mode	TX channel 26683 (1914.3MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3828.60	-47.71	-13.00	-34.71	2.71 H	311	45.16	-92.87
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	3828.60	-46.45	-13.00	-33.45	3.17 V	284	46.42	-92.87

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 25, Channel Bandwidth 5MHz

Mode	TX channel 26065 (1852.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3705.00	-48.16	-13.00	-35.16	2.68 H	310	45.25	-93.41
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	3705.00	-46.38	-13.00	-33.38	3.16 V	280	47.03	-93.41

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.

Mode	TX channel 26365 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3765.00	-47.80	-13.00	-34.80	2.77 H	316	45.34	-93.14
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	3765.00	-46.07	-13.00	-33.07	3.16 V	285	47.07	-93.14

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

Mode	TX channel 26665 (1912.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3825.00	-47.86	-13.00	-34.86	2.69 H	313	45.01	-92.87
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	3825.00	-46.38	-13.00	-33.38	3.16 V	279	46.49	-92.87

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 25, Channel Bandwidth 20MHz

Mode	TX channel 26140 (1860.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3720.00	-48.26	-13.00	-35.26	2.70 H	312	45.08	-93.34
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	3720.00	-46.39	-13.00	-33.39	3.14 V	282	46.95	-93.34

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.

Mode	TX channel 26365 (1882.5MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3765.00	-47.28	-13.00	-34.28	2.77 H	315	45.86	-93.14
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	3765.00	-45.88	-13.00	-32.88	3.18 V	285	47.26	-93.14

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

Mode	TX channel 26590 (1905.0MHz)	Frequency Range	1GHz ~ 20GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz (System)
Tested By	Adair Peng		

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	3810.00	-47.58	-13.00	-34.58	2.73 H	313	45.30	-92.88
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	3810.00	-46.61	-13.00	-33.61	3.10 V	284	46.27	-92.88

Remarks:

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

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited 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@bureauveritas.com
Web Site: http://ee.bureauveritas.com.tw

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

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