FCC Test Report
(Part 90 – LTE B14/B26)

Report No.:	RFBASM-WTW-P21071003-9
FCC ID:	QYLEM7511Z
Test Model:	EM7511
Received Date:	Jul. 28, 2021
Test Date:	Aug. 24 ~ Aug. 25, 2021
Issued Date:	Nov. 19, 2021
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 (1):	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
Test Location (2):	No. 70, Wenming Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
FCC Registration / Designation Number (1):	788550 / TW0003
FCC Registration / Designation Number (2):	281270 / TW0032

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBASM-WTW-P21071003-9	Original release	Nov. 19, 2021

1 Certificate of Conformity

Product:	Wireless Module
Brand:	Sierra Wireless, Inc.
Test Model:	EM7511
Sample Status:	Identical Prototype
Applicant:	Getac Technology Corporation.
Test Date:	Aug. 24 ~ Aug. 25, 2021
Standards:	FCC Part 90, Subpart I, R, S

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 : Polly Chien , **Date:** Nov. 19, 2021

Polly Chien / Specialist

Approved by : Jeremy Lin , **Date:** Nov. 19, 2021

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2				
FCC Clause		Test Item	Result	Remarks
LTE B14	LTE B26			
2.1046 90.542 (a)(7)	2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 90.539 (e)	2.1055 90.213	Frequency Stability	N/A	Refer to Note
2.1049	2.1049 90.209	Occupied Bandwidth	N/A	Refer to Note
90.210 (n)	2.1051 90.691	Emission Masks	N/A	Refer to Note
2.1053 90.543 (e)(2)(3)	-	Band Edge Measurements	N/A	Refer to Note
2.1051 90.543 (e)(3)	2.1051 90.691	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 90.543 (e)(f)	2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -11.49dB at 1586.00MHz.

Note:

1. This report is a partial report, only test item of Effective Radiated Power & Radiated Emissions were performed for this report. Other testing data please refer to SPORTON INTERNATIONAL INC. report no.: FG791919D_R01 for module (Brand: Sierra Wireless, Inc., Model: EM7511).
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	3.00 dB
	30MHz ~ 200MHz	2.91 dB
	200MHz ~1000MHz	2.93 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	N9038A	MY55420137	Apr. 09, 2021	Apr. 08, 2022
Spectrum Analyzer KEYSIGHT	N9020B	MY60110440	Dec. 18, 2020	Dec. 17, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-1213	Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	995	Nov. 22, 2020	Nov. 21, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
Preamplifier EMCI	EMC330N	980782	Jan. 12, 2021	Jan. 11, 2022
Preamplifier EMCI	EMC118A45SE	980808	Jan. 12, 2021	Jan. 11, 2022
Preamplifier EMCI	EMC184045SE	980788	Jan. 12, 2021	Jan. 11, 2022
RF signal cable EMCI	EMC104-SM-SM-(9000+2000+1000)	201243+ 201231+ 210102	Jan. 12, 2021	Jan. 11, 2022
RF signal cable EMCI	EMCCFD400-NM-NM-(9000+300+500)	201236+ 201235+ 201233	Jan. 12, 2021	Jan. 11, 2022
RF signal cable EMCI	EMC101G-KM-KM-(5000+3000+2000)	201260+201257+201254	Jan. 12, 2021	Jan. 11, 2022
Software BV ADT	ADT_Radiated_V7.6.15.9.5	NA	NA	NA
Antenna Tower Max-Full	MFT-151SS-0.5T	NA	NA	NA
Turn Table Max-Full	MF-7802BS	NA	NA	NA
Turn Table Controller Max-Full	MF-7802BS	MF780208674	NA	NA
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
DC Power Supply Keysight	U8002A	MY56330015	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Feb. 07, 2021	Feb. 06, 2022
Digital Multimeter Fluke	87-III	70360742	Jun. 24, 2021	Jun. 23, 2022
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2020	Nov. 24, 2021

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in WM Chamber 8.

3 General Information

3.1 General Description of EUT

Product	Wireless Module	
Brand	Sierra Wireless, Inc.	
Test Model	EM7511	
Sample Status	Identical Prototype	
Power Supply Rating	End-product : 19Vdc (from adapter) 3.84Vdc (from battery)	
Modulation Type	LTE: QPSK, 16QAM, 64QAM	
Operating Frequency	LTE Band 14 (Channel Bandwidth 5MHz)	790.5MHz ~ 795.5MHz
	LTE Band 14 (Channel Bandwidth 10MHz)	793.0MHz
	LTE Band 26 (Channel Bandwidth 1.4MHz)	814.7MHz ~ 823.3MHz
	LTE Band 26 (Channel Bandwidth 3MHz)	815.5MHz ~ 822.5MHz
	LTE Band 26 (Channel Bandwidth 5MHz)	816.5MHz ~ 821.5MHz
	LTE Band 26 (Channel Bandwidth 10MHz)	819.0MHz
Max. ERP Power	LTE Band 14 (Channel Bandwidth 5MHz)	181.552mW(22.59dBm)
	LTE Band 14 (Channel Bandwidth 10MHz)	181.970mW(22.60dBm)
	LTE Band 26 (Channel Bandwidth 1.4MHz)	214.783mW(23.32dBm)
	LTE Band 26 (Channel Bandwidth 3MHz)	193.642mW(22.87dBm)
	LTE Band 26 (Channel Bandwidth 5MHz)	193.642mW(22.87dBm)
	LTE Band 26 (Channel Bandwidth 10MHz)	190.108mW(22.79dBm)
Antenna Type	Refer to Note as below	
Antenna Connector	Refer to Note as below	
Accessory Device	Refer to Note as below	
Cable Supplied	Refer to Note as below	

Note:

1. The EUT uses the following antennas.

Antenna Type	Ant. Connector	Ant.	Antenna Gain (dBi)	
			LTE B14	LTE B26
PIFA	IPEX	Main	1.62	1.97
		Aux	-1.39	-0.76

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

2. The EUT is authorized for use in specific End-product. The model of the ZX10 was chosen for final test.

Product	Brand	Model	Description
Tablet	Getac	ZX10	For marketing purpose
		ZX10Y (Y= 10 characters, Y can be 0-9, a-z, A-Z, " - ", " _ ", " / ", " \ " or blank for marketing purpose and no impact safety related critical components and constructions.)	

3. The End-product contains following accessory devices.

Product	Brand	Model	Description
Adapter	FSP	FSP065-RBBN3	I/P: 100-240 Vac, 50-60Hz, 1.5 A O/P: 19.0 Vdc, 3.42 A 1.47m non-shielded cable with 1 core
Battery 1	Getac	BP1S2P4990B	Rating: 3.84Vdc, 9740mAh, 37.4Wh Typical Capacity: 9980mAh, 38.32Wh
Battery 2	Getac	BP1S1P4990B	Rating: 3.84Vdc, 4870mAh, 18.7Wh Typical Capacity: 4990mAh, 19.16Wh
Power cord	I-SHENG ELECTRIC WIRE & CABLE CO., LTD.	SP-305B+IS-034	1.7M
Touch pen	Getac	N52 Magnet	N/A

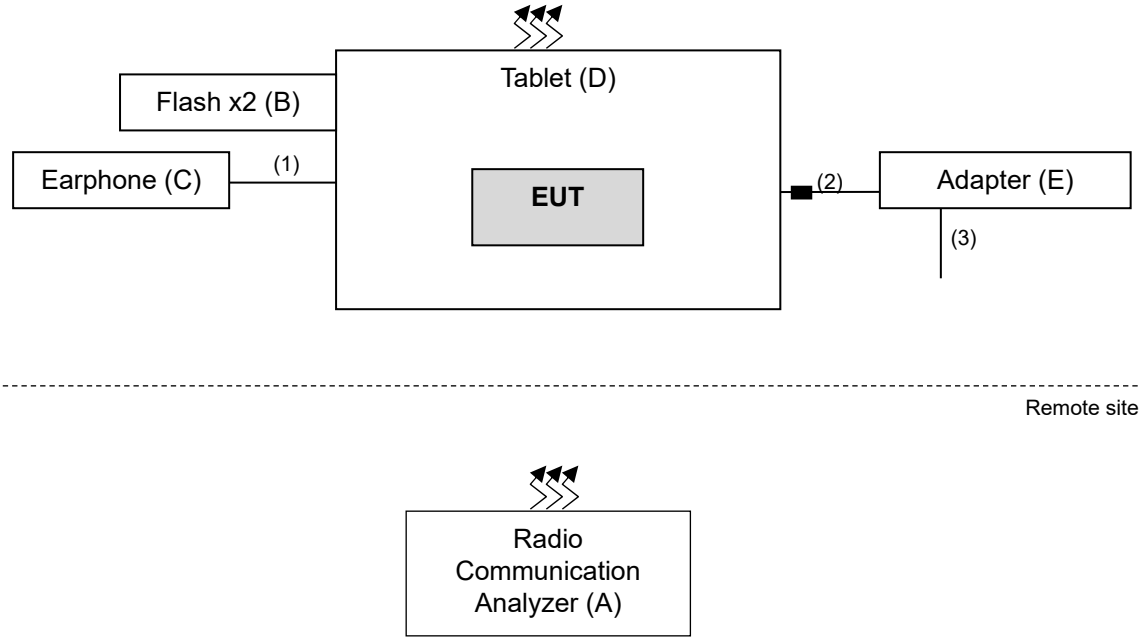
* After the pretesting battery, battery 2 mode is found to be the worst case and therefore had been chosen for final test.

4. The End-product contains following configurations.

Part	Brand	Model	Note	Configuration			
				1	2	3	4
CPU	Qualcomm	SDA 660	-	V	V	V	V
Memory	Samsung	KM3V6001CM-B705	4GB	V	V	V	V
VIDEO CONTROLLER	Qaulcomm	Adreno GU 512	-	V	V	V	V
eMMC Storage	Samsung	-	64GB	V	V	V	V
DISPLAY	AUO	G101UAN2.0	-	V	V	V	V
Touch Screen	EETI	EXC80H60	-	V	V	V	V
Real Camera	Unison	MV21A6A1-TF5D	16M PLCC MIPI	V	V	V	V
Front Camera	Unison	MV2980A1-TF4R-P	8M PLCC MIPI	V	V	V	V
WWAN	Sierra	EM7511	-	V	V	V	V
WLAN/BT	Qualcomm	WCN3990	-	V	V	V	V
HF-RFID	Getac	PN7150	-	V	V	V	V
GPS	Locosys	MC-1010-V2B	-	V	V	V	V
Barcode Reader	Honeywell	N6703SR-W5-103	-	V	V	V	V
Smart Card Option Bay	Alcor	AU9560-GBS-GR	-			V	V
Normal capacity battery	Getac	BP1S1P4990B	BYD Cell, CSL595490HPlus	V		V	
High capacity battery	Getac	BP1S2P4990B	BYD Cell, CSL595490HPlus		V		V

*After the pretesting, the configuration 3 is found to be the worst case and had been chosen for final test.

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.	Radio Communication Analyzer	Anritsu	MT8821C	6261806803	NA	-
B.	Flash	SanDisk	SDDDC3-032G	NA	NA	Type-C
	Flash	HP	v250W	05	NA	Type-A
C.	Earphone	APPLE	MB770FE	NA	NA	-
D.	Tablet	Getac	ZX10	NA	NA	Provided by client
E.	Adapter	FSP	FSP065-RBBN3	NA	NA	Provided by client

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Audio cable	1	1.2	N	0	-
2.	Power cable	1	1.47	N	1	Provided by client
3.	Power cable	1	1.7	-	0	Provided by client

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 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
LTE Band 14	X-plane
LTE Band 26	X-plane

LTE Band 14

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	RB #
-	ERP	23305 to 23355	23305 (790.5MHz), 23330 (793.0MHz), 23355 (795.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		23330	23330 (793.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission below 1GHz	23330	23330 (793.0MHz)	10MHz	QPSK	1
-	Radiated Emission above 1GHz	23305 to 23355	23305 (790.5MHz), 23330 (793.0MHz), 23355 (795.5MHz)	5MHz	QPSK	1
		23330	23330 (793.0MHz)	10MHz	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 5MHz & highest channel bandwidth for final test.

LTE Band 26

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	RB #
-	ERP	26697 to 26783	26697 (814.7MHz), 26740 (819.0MHz), 26783 (823.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 Half Full
		26705 to 26775	26705 (815.5MHz), 26740 (819.0MHz), 26775 (822.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 Half Full
		26715 to 26765	26715 (816.5MHz), 26740 (819.0MHz), 26765 (821.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 Half Full
		26740	26740 (819.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 Half Full
-	Radiated Emission Below 1GHz	26740	26740 (819.0MHz)	10MHz	QPSK	1
-	Radiated Emission Above 1GHz	26697 to 26783	26697 (814.7MHz), 26740 (819.0MHz), 26783 (823.3MHz)	1.4MHz	QPSK	1
		26715 to 26765	26715 (816.5MHz), 26740 (819.0MHz), 26765 (821.5MHz)	5MHz	QPSK	1
		26740	26740 (819.0MHz)	10MHz	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
ERP	25deg. C, 70%RH	120Vac, 60Hz	James Yang
Radiated Emission	23deg. C, 66%RH, 24deg. C, 67%RH	120Vac, 60Hz	Titan Hsu, Raymond Lee

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 90
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

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

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 971168 D02 Misc Rev Approv License Devices v02r01

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

For LTE Band 26:
The output power shall be according to the specific rule Part 90.635 that “Mobile station are limited to 100 watts e.r.p”.

For LTE Band 14:
Control stations and mobile stations transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 30 watts ERP. Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with CDMA, 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)

LTE Band 14				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		23330
		Frequency (MHz)		793
10M	QPSK	1	0	23.13
		1	24	23.10
		1	49	23.09
		25	0	22.21
		25	12	22.19
		25	25	22.13
		50	0	22.23
10M	16QAM	1	0	22.48
		1	24	22.32
		1	49	22.30
		25	0	21.30
		25	12	21.20
		25	25	21.16
		50	0	21.21
10M	64QAM	1	0	21.11
		1	24	21.10
		1	49	21.09
		25	0	20.21
		25	12	20.19
		25	25	20.13
		50	0	20.23

LTE Band 14						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23305	23330	23355
		Frequency (MHz)		790.5	793	795.5
5M	QPSK	1	0	23.11	23.12	23.09
		1	12	23.05	23.07	23.09
		1	24	23.01	23.05	23.09
		12	0	22.16	22.13	22.14
		12	6	22.10	22.14	22.16
		12	13	22.04	22.10	22.10
		25	0	22.22	22.16	22.22
5M	16QAM	1	0	22.44	22.38	22.44
		1	12	22.27	22.22	22.27
		1	24	22.25	22.30	22.21
		12	0	21.24	21.23	21.22
		12	6	21.11	21.13	21.13
		12	13	21.11	21.09	21.12
		25	0	21.13	21.13	21.16
5M	64QAM	1	0	21.11	21.10	21.10
		1	12	21.06	21.05	21.10
		1	24	21.09	21.04	21.08
		12	0	20.21	20.13	20.19
		12	6	20.10	20.09	20.18
		12	13	20.13	20.13	20.06
		25	0	20.22	20.21	20.21

LTE Band 26				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		26740
		Frequency (MHz)		819
10M	QPSK	1	0	22.97
		1	24	22.96
		1	49	22.90
		25	0	22.22
		25	12	22.08
		25	25	22.00
		50	0	22.15
10M	16QAM	1	0	22.32
		1	24	22.25
		1	49	22.14
		25	0	21.15
		25	12	21.19
		25	25	21.00
		50	0	21.18
10M	64QAM	1	0	20.98
		1	24	20.96
		1	49	20.86
		25	0	20.20
		25	12	20.04
		25	25	20.02
		50	0	20.12

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26715	26740	26765
		Frequency (MHz)		816.5	819	821.5
5M	QPSK	1	0	22.98	22.97	23.02
		1	12	22.86	22.96	23.05
		1	24	22.86	22.90	22.95
		12	0	22.08	22.22	22.55
		12	6	21.94	22.08	22.43
		12	13	21.94	22.00	22.40
		25	0	22.17	22.15	22.49
5M	16QAM	1	0	22.28	22.32	22.35
		1	12	22.25	22.25	22.32
		1	24	22.13	22.14	22.21
		12	0	21.14	21.15	21.19
		12	6	21.09	21.19	21.22
		12	13	20.94	21.00	21.10
		25	0	21.10	21.18	21.19
5M	64QAM	1	0	20.93	20.98	21.02
		1	12	21.00	20.96	21.05
		1	24	20.87	20.86	20.95
		12	0	20.18	20.20	20.25
		12	6	19.90	20.04	20.13
		12	13	20.01	20.02	20.10
		25	0	19.94	20.12	20.19

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26705	26740	26775
		Frequency (MHz)		815.5	819	822.5
3M	QPSK	1	0	22.84	22.91	22.88
		1	7	22.98	22.92	23.00
		1	14	22.81	22.81	22.82
		8	0	22.14	22.15	22.45
		8	3	21.98	22.06	22.31
		8	7	22.05	21.97	22.30
		15	0	22.11	22.08	22.41
3M	16QAM	1	0	22.22	22.31	22.20
		1	7	22.30	22.20	22.29
		1	14	22.03	22.02	22.08
		8	0	21.10	21.06	21.10
		8	3	21.14	21.11	21.11
		8	7	21.07	21.00	21.05
		15	0	21.01	21.09	21.08
3M	64QAM	1	0	20.87	20.87	20.97
		1	7	20.86	20.88	21.02
		1	14	20.76	20.80	20.86
		8	0	20.13	20.18	20.23
		8	3	20.02	19.92	20.09
		8	7	19.99	19.88	20.01
		15	0	20.15	20.07	20.16

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26697	26740	26783
		Frequency (MHz)		814.7	819	823.3
1.4M	QPSK	1	0	22.85	22.84	22.90
		1	2	22.89	22.82	22.94
		1	5	22.73	22.85	22.91
		3	0	23.05	23.21	23.45
		3	1	23.04	23.05	23.36
		3	3	22.96	22.87	23.25
		6	0	22.13	22.02	22.40
1.4M	16QAM	1	0	22.27	22.17	22.34
		1	2	22.11	22.17	22.17
		1	5	22.06	22.14	22.07
		3	0	21.97	22.10	22.07
		3	1	22.10	22.09	22.22
		3	3	21.97	21.91	21.99
		6	0	21.00	21.17	21.19
1.4M	64QAM	1	0	20.87	20.96	20.97
		1	2	20.95	20.87	21.02
		1	5	20.87	20.83	20.90
		3	0	21.05	21.11	21.10
		3	1	21.02	21.04	21.08
		3	3	20.92	21.01	20.96
		6	0	20.03	20.05	20.13

ERP Power (dBm)

LTE Band 14				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		23330
		Frequency (MHz)		793
10M	QPSK	1	0	**22.60**
		1	24	22.57
		1	49	22.56
		25	0	21.68
		25	12	21.66
		25	25	21.60
		50	0	21.70
10M	16QAM	1	0	21.95
		1	24	21.79
		1	49	21.77
		25	0	20.77
		25	12	20.67
		25	25	20.63
		50	0	20.68
10M	64QAM	1	0	20.58
		1	24	20.57
		1	49	20.56
		25	0	19.68
		25	12	19.66
		25	25	19.60
		50	0	19.70

LTE Band 14						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		23305	23330	23355
		Frequency (MHz)		790.5	793	795.5
5M	QPSK	1	0	22.58	**22.59**	22.56
		1	12	22.52	22.54	22.56
		1	24	22.48	22.52	22.56
		12	0	21.63	21.60	21.61
		12	6	21.57	21.61	21.63
		12	13	21.51	21.57	21.57
		25	0	21.69	21.63	21.69
5M	16QAM	1	0	21.91	21.85	21.91
		1	12	21.74	21.69	21.74
		1	24	21.72	21.77	21.68
		12	0	20.71	20.70	20.69
		12	6	20.58	20.60	20.60
		12	13	20.58	20.56	20.59
		25	0	20.60	20.60	20.63
5M	64QAM	1	0	20.58	20.57	20.57
		1	12	20.53	20.52	20.57
		1	24	20.56	20.51	20.55
		12	0	19.68	19.60	19.66
		12	6	19.57	19.56	19.65
		12	13	19.60	19.60	19.53
		25	0	19.69	19.68	19.68

LTE Band 26				
BW	MCS Index	RB Size	RB Offset	Mid
		Channel		26740
		Frequency (MHz)		819
10M	QPSK	1	0	**22.79**
		1	24	22.78
		1	49	22.72
		25	0	22.04
		25	12	21.90
		25	25	21.82
		50	0	21.97
10M	16QAM	1	0	22.14
		1	24	22.07
		1	49	21.96
		25	0	20.97
		25	12	21.01
		25	25	20.82
		50	0	21.00
10M	64QAM	1	0	20.80
		1	24	20.78
		1	49	20.68
		25	0	20.02
		25	12	19.86
		25	25	19.84
		50	0	19.94

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26715	26740	26765
		Frequency (MHz)		816.5	819	821.5
5M	QPSK	1	0	22.80	22.79	22.84
		1	12	22.68	22.78	**22.87**
		1	24	22.68	22.72	22.77
		12	0	21.90	22.04	22.37
		12	6	21.76	21.90	22.25
		12	13	21.76	21.82	22.22
		25	0	21.99	21.97	22.31
5M	16QAM	1	0	22.10	22.14	22.17
		1	12	22.07	22.07	22.14
		1	24	21.95	21.96	22.03
		12	0	20.96	20.97	21.01
		12	6	20.91	21.01	21.04
		12	13	20.76	20.82	20.92
		25	0	20.92	21.00	21.01
5M	64QAM	1	0	20.75	20.80	20.84
		1	12	20.82	20.78	20.87
		1	24	20.69	20.68	20.77
		12	0	20.00	20.02	20.07
		12	6	19.72	19.86	19.95
		12	13	19.83	19.84	19.92
		25	0	19.76	19.94	20.01

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26705	26740	26775
		Frequency (MHz)		815.5	819	822.5
3M	QPSK	1	0	22.66	22.75	22.83
		1	7	22.80	22.75	**22.87**
		1	14	22.63	22.70	22.63
		8	0	21.96	21.91	22.32
		8	3	21.80	21.89	22.19
		8	7	21.87	21.81	22.17
		15	0	21.93	21.89	22.30
3M	16QAM	1	0	22.04	22.08	22.13
		1	7	22.12	21.94	22.01
		1	14	21.85	21.96	21.88
		8	0	20.92	20.95	20.96
		8	3	20.96	20.95	20.94
		8	7	20.89	20.81	20.88
		15	0	20.83	20.92	20.97
3M	64QAM	1	0	20.69	20.65	20.73
		1	7	20.68	20.66	20.77
		1	14	20.58	20.65	20.75
		8	0	19.95	19.94	20.03
		8	3	19.84	19.78	19.86
		8	7	19.81	19.79	19.90
		15	0	19.97	19.83	19.87

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26697	26740	26783
		Frequency (MHz)		814.7	819	823.3
1.4M	QPSK	1	0	22.67	22.73	22.82
		1	2	22.71	22.69	22.87
		1	5	22.55	22.71	22.77
		3	0	22.87	22.92	**23.32**
		3	1	22.86	22.76	23.12
		3	3	22.78	22.76	23.12
		6	0	21.95	21.95	22.21
1.4M	16QAM	1	0	22.09	22.05	22.08
		1	2	21.93	22.03	22.09
		1	5	21.88	21.89	22.02
		3	0	21.79	21.96	21.88
		3	1	21.92	21.90	21.91
		3	3	21.79	21.76	21.92
		6	0	20.82	20.97	21.00
1.4M	64QAM	1	0	20.69	20.76	20.76
		1	2	20.77	20.66	20.77
		1	5	20.69	20.68	20.68
		3	0	20.87	21.02	21.00
		3	1	20.84	20.73	20.85
		3	3	20.74	20.73	20.78
		6	0	19.85	19.94	19.88

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm.

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz. The limit of emissions is equal to -40 dBm.

4.2.2 Test Procedure

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

b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

d. Following C63.26 section 5.5 and 5.2.7
   - EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   - ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

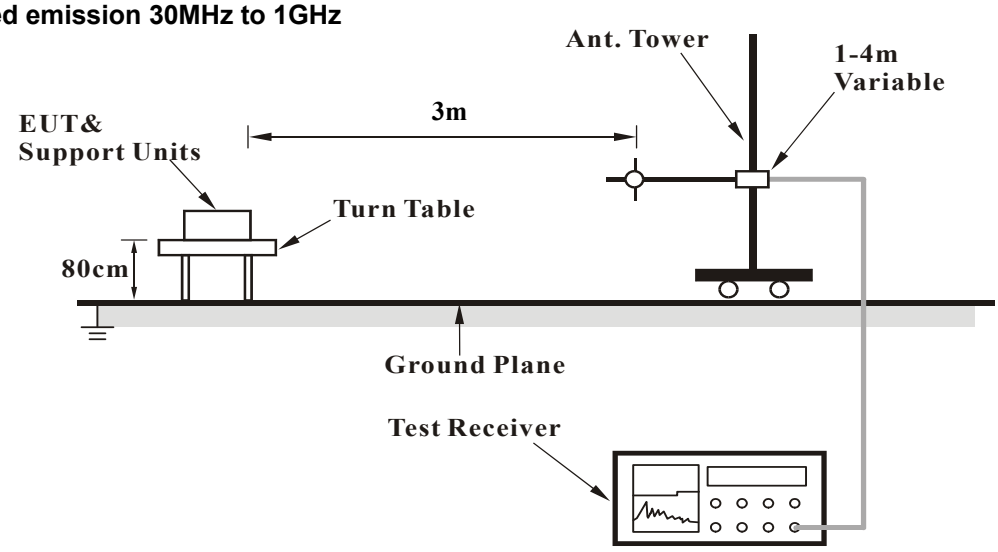
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

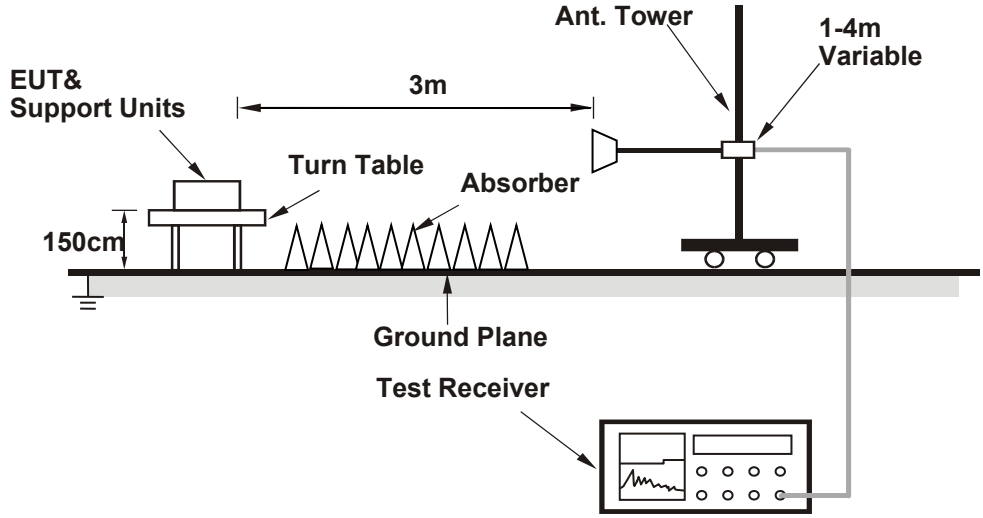
No deviation.

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

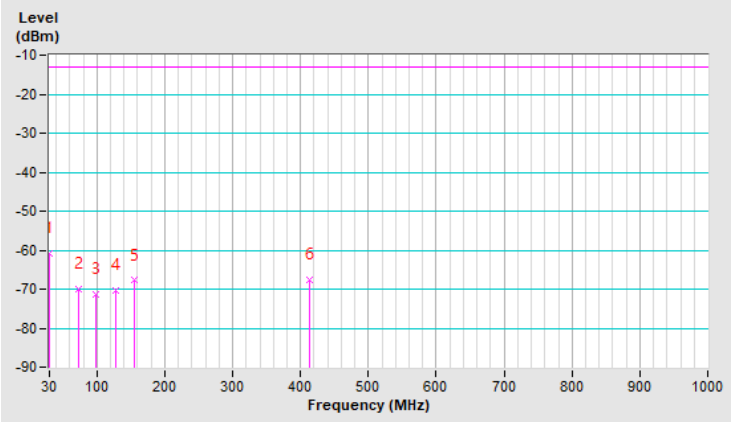
LTE Band 14, Channel Bandwidth 10MHz

Mode	TX channel 23330 (793.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	-60.90	-13.00	-47.90	1.99 H	125	56.40	-117.30
2	73.58	-69.90	-13.00	-56.90	1.49 H	226	49.60	-119.50
3	98.88	-71.40	-13.00	-58.40	1.99 H	83	49.50	-120.90
4	127.00	-70.30	-13.00	-57.30	1.49 H	237	47.10	-117.40
5	155.12	-67.80	-13.00	-54.80	1.99 H	78	47.70	-115.50
6	412.38	-67.60	-13.00	-54.60	1.00 H	252	44.60	-112.20

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.

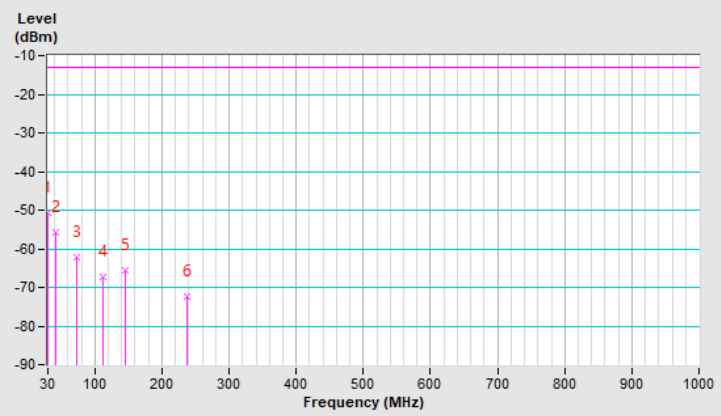


Mode	TX channel 23330 (793.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	-50.70	-13.00	-37.70	1.49 V	2	66.60	-117.30
2	42.65	-55.60	-13.00	-42.60	1.00 V	190	60.60	-116.20
3	72.17	-62.30	-13.00	-49.30	1.49 V	194	56.90	-119.20
4	111.54	-67.40	-13.00	-54.40	1.00 V	98	51.80	-119.20
5	145.28	-65.60	-13.00	-52.60	1.49 V	61	50.10	-115.70
6	238.06	-72.40	-13.00	-59.40	1.00 V	349	44.90	-117.30

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.



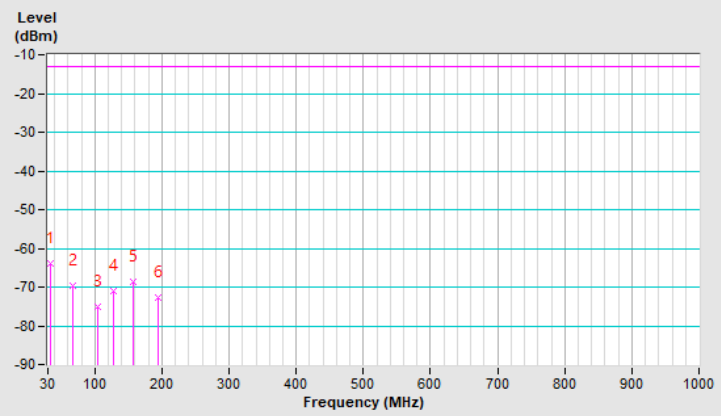
LTE Band 26, Channel Bandwidth 10MHz

Mode	TX channel 26740 (819.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

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	34.22	-63.90	-13.00	-50.90	1.50 H	74	53.00	-116.90
2	66.55	-69.80	-13.00	-56.80	2.00 H	256	47.90	-117.70
3	104.51	-75.00	-13.00	-62.00	1.00 H	127	45.00	-120.00
4	127.00	-70.90	-13.00	-57.90	1.50 H	203	46.50	-117.40
5	157.93	-68.80	-13.00	-55.80	2.00 H	82	46.70	-115.50
6	194.48	-72.60	-13.00	-59.60	1.00 H	48	46.40	-119.00

Remarks:

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

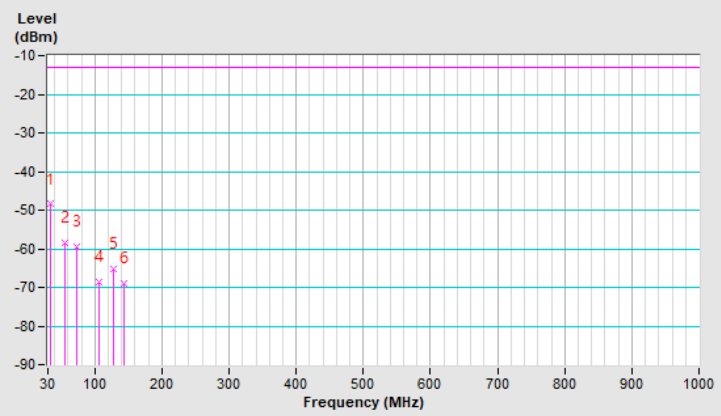


Mode	TX channel 26740 (819.0MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	34.22	-48.50	-13.00	-35.50	1.00 V	345	68.40	-116.90
2	55.30	-58.40	-13.00	-45.40	1.50 V	2	57.90	-116.30
3	73.58	-59.60	-13.00	-46.60	2.00 V	266	59.90	-119.50
4	105.91	-68.50	-13.00	-55.50	1.00 V	55	51.40	-119.90
5	127.00	-65.20	-13.00	-52.20	1.50 V	111	52.20	-117.40
6	143.87	-69.00	-13.00	-56.00	2.00 V	123	46.80	-115.80

Remarks:

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



Above 1GHz

LTE Band 14, Channel Bandwidth: 5MHz

Mode	TX channel 23305 (790.5MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

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	1581.00	-56.64	-40.00	-16.64	2.49 H	198	45.61	-102.25
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1581.00	-51.80	-40.00	-11.80	1.79 V	288	50.45	-102.25

Remarks:

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

Mode	TX channel 23330 (793.0MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

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	1586.00	-56.14	-40.00	-16.14	2.51 H	202	46.12	-102.26
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-56.42	-40.00	-16.42	1.81 V	290	45.84	-102.26

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 23355 (795.5MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

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	1591.00	-57.31	-40.00	-17.31	2.47 H	197	44.93	-102.24
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1591.00	-52.24	-40.00	-12.24	1.77 V	287	50.00	-102.24

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 14, Channel Bandwidth: 10MHz

Mode	TX channel 23330 (793.0MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Raymond Lee		

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	1586.00	-56.77	-40.00	-16.77	2.55 H	204	45.49	-102.26
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**1586.00**	**-51.49**	**-40.00**	**-11.49**	**1.74 V**	**280**	**50.77**	**-102.26**

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 26, Channel Bandwidth 1.4MHz

Mode	TX channel 26697 (814.7MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1629.40	-52.46	-13.00	-39.46	1.59 H	249	51.90	-104.36
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1629.40	-56.16	-13.00	-43.16	2.24 V	357	48.20	-104.36

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.

Mode	TX channel 26740 (819.0MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1638.00	-51.57	-13.00	-38.57	1.63 H	247	52.77	-104.34
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1638.00	-55.71	-13.00	-42.71	2.25 V	355	48.63	-104.34

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.

Mode	TX channel 26783 (823.3MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1646.60	-52.02	-13.00	-39.02	1.56 H	250	52.31	-104.33
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1646.60	-55.31	-13.00	-42.31	2.25 V	1	49.02	-104.33

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 26, Channel Bandwidth 5MHz

Mode	TX channel 26715 (816.5MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1633.00	-51.59	-13.00	-38.59	1.57 H	248	52.76	-104.35
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1633.00	-55.02	-13.00	-42.02	2.26 V	358	49.33	-104.35

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.

Mode	TX channel 26740 (819.0MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1638.00	-52.55	-13.00	-39.55	1.60 H	251	51.79	-104.34
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1638.00	-55.82	-13.00	-42.82	2.21 V	360	48.52	-104.34

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.

Mode	TX channel 26765 (821.5MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1643.00	-51.77	-13.00	-38.77	1.63 H	247	52.57	-104.34
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1643.00	-56.03	-13.00	-43.03	2.21 V	356	48.31	-104.34

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 26, Channel Bandwidth 10MHz

Mode	TX channel 26740 (819.0MHz)	Frequency Range	1GHz ~ 18GHz
Environmental Conditions	23deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Titan Hsu		

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	1638.00	-51.32	-13.00	-38.32	1.63 H	248	53.02	-104.34
Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1638.00	-55.72	-13.00	-42.72	2.23 V	354	48.62	-104.34

Remarks:

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

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

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

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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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