FCC Test Report
(Part 27: CA mode (LTE Band 7C, 41C))

Report No.:	RFBASM-WTW-P21071003-10
FCC ID:	QYLEM7511Z
Test Model:	EM7511
Received Date:	Jul. 28, 2021
Test Date:	Dec. 16, 2021
Issued Date:	Dec. 20, 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

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBASM-WTW-P21071003-10	Original release	Dec. 20, 2021

1 Certificate of Conformity

Product:	Wireless Module
Brand:	Getac
Test Model:	EM7511
Sample Status:	Identical Prototype
Applicant:	Getac Technology Corporation.
Test Date:	Dec. 16, 2021
Standards:	FCC Part 27, Subpart C, M, L

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Polly Chien , **Date:** Dec. 20, 2021

Polly Chien / Specialist

Approved by : Jeremy Lin , **Date:** Dec. 20, 2021

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2			
FCC Clause LTE B7 / LTE B41	Test Item	Result	Remarks
2.1046 27.50 (h)(2)	Equivalent Isotropically Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
---	Peak To Average Ratio	N/A	Refer to Note
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	N/A	Refer to Note
2.1049	Emission Bandwidth	N/A	Refer to Note
2.1051 27.53 (m)(4)(6)	Band Edge Measurements	N/A	Refer to Note
2.1051 27.53 (m)(4)(6)	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 27.53 (m)(4)(6)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -15.66dB at 5166.20MHz.

Note:

1. This report is a partial report, only test item of Equivalent Isotropically Radiated Power / Equivalent Radiated Power & Radiated Emissions were performed for this report. Other testing data please refer to SPORTON INTERNATIONAL INC. report no.: FG791919B_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	9kHz ~ 30MHz	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	102782	Dec. 21, 2020	Dec. 20, 2021
Spectrum Analyzer Rohde & Schwarz	FSW43	101582	Apr. 01, 2021	Mar. 31, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-1213	Oct. 27, 2021	Oct. 26, 2022
HORN Antenna RF SPIN	DRH18-E	210103A18E	Jan. 08, 2021	Jan. 07, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	9170-1048	Nov. 14, 2021	Nov. 13, 2022
Loop Antenna TESEQ	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
Preamplifier EMCI	EMC330N	980782	Jan. 19, 2021	Jan. 18, 2022
Preamplifier EMCI	EMC118A45SE	980808	Jan. 03, 2021	Jan. 02, 2022
Preamplifier EMCI	EMC184045SE	980788	Jan. 18, 2021	Jan. 17, 2022
RF signal cable EMCI	EMC104-SM-SM-(9000+2000+1000)	201243+ 201231+ 210102	Jan. 18, 2021	Jan. 17, 2022
RF signal cable EMCI	EMCCFD400-NM-NM-(9000+300+500)	201236+ 201235+ 201233	Jan. 18, 2021	Jan. 17, 2022
RF signal cable EMCI	EMC101G-KM-KM-(5000+3000+2000)	201260+201257+201254	Jan. 18, 2021	Jan. 17, 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
Peak Power Analyzer KEYSIGHT	8990B	MY51000485	Jan. 19, 2021	Jan. 18, 2022
Wideband Power Sensor KEYSIGHT	N1923A	MY58020002	Jan. 11, 2021	Jan. 10, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSV40	100979	Mar. 29, 2021	Mar. 28, 2022
Digital Multimeter Fluke	87-III	70360742	Jun. 24, 2021	Jun. 23, 2022

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	Getac			
Test Model	EM7511			
Status of EUT	Identical Prototype			
Power Supply Rating	End-product : 19Vdc (from adapter) 3.84Vdc (from battery)			
Modulation Type	LTE: QPSK, 16QAM, 64QAM			
Operating Frequency	LTE Band 7C	2502.5MHz ~ 2567.5MHz		
	LTE Band 41C	2498.5MHz ~ 2687.5MHz		
Max. EIRP Power		QPSK	16QAM	64QAM
	LTE Band 7C (20MHz+20MHz)	332.660mW (25.22dBm)	276.694mW (24.42dBm)	210.863mW (23.24dBm)
	LTE Band 7C (15MHz+15MHz)	320.627mW (25.06dBm)	260.615mW (24.16dBm)	211.836mW (23.26dBm)
	LTE Band 41C (20MHz+20MHz)	337.287mW (25.28dBm)	268.534mW (24.29dBm)	223.357mW (23.49dBm)
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.

Type	Connector	Ant.	Gain (dBi)	
			LTE B7	LTE B41
PIFA	IPEX	Main	3.68	3.68
		Aux	1.87	1.87

* 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.

5. For CA mode configuration, please consult the manufacturer to declare the test mode.

6. The EUT support the following CA Configuration.

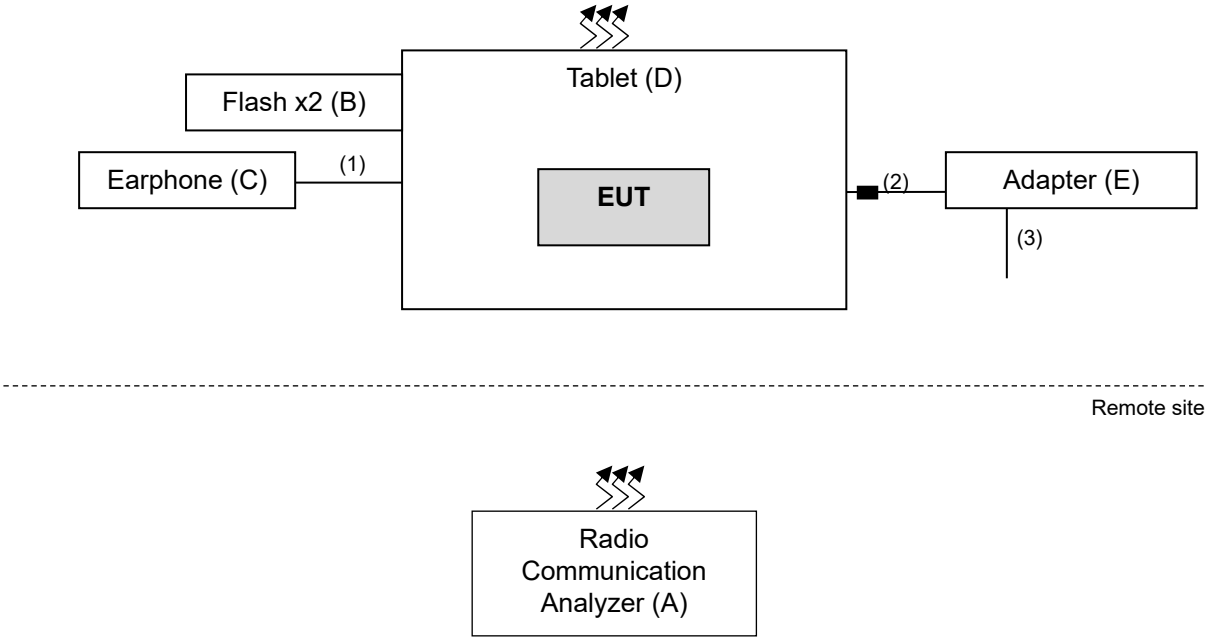
Band Configuration
7C
41C

7. E-UTRA CA configuration / Bandwidth combination set.

E-UTRA CA configuration / Bandwidth combination set					
E-UTRA CA configuration	Uplink CA configurations	Component carriers in order of increasing carrier frequency		Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_7C	CA_7C	15	15	40	0
		20	20		
		10	20	40	1
		15	15, 20		
		20	10, 15, 20		
		15	10, 15	40	2
		20	15, 20		
CA_41C	CA_41C	10	20	40	0
		15	15, 20		
		20	10, 15, 20		
		5, 10	20	40	1
		15	15, 20		
		20	5, 10, 15, 20		
		10	15, 20	40	2
		15	10, 15, 20		
		20	10, 15, 20		
		10	20	40	3
		20	20		

*7C is continuous CA and maximum combination is 20M+20M and 15M+15M.
*41C is continuous CA and maximum combination is 20M+20M.

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 on Y-plane. Following channel(s) was (were) selected for the final test as listed below.

LTE Band 7 (CA 7C)

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	20850 to 21152 21048 to 21350	20850(2510.0MHz)+ 21048(2529.8MHz), 21001(2525.1MHz)+ 21199(2544.9MHz), 21152(2540.2MHz)+ 21350(2560.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 74 RB Offset 1 RB / 99 RB Offset
		20825 to 21225 20975 to 21375	20825(2507.5MHz)+ 20975(2522.5MHz), 21025(2527.5MHz)+ 21175(2542.5MHz), 21225(2547.5MHz)+ 21375(2562.5MHz)	15MHz + 15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 74 RB Offset
-	Radiated Emission Below 1GHz	20850 to 21152 21048 to 21350	20850(2510.0MHz)+ 21048(2529.8MHz)	20MHz + 20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset
-	Radiated Emission Above 1GHz	20850 to 21152 21048 to 21350	20850(2510.0MHz)+ 21048(2529.8MHz), 21001(2525.1MHz)+ 21199(2544.9MHz), 21152(2540.2MHz)+ 21350(2560.0MHz)	20MHz + 20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 41 (CA 41C)

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	EIRP	39750 to 41292 39948 to 41490	39750(2506.0MHz)+ 39948(2525.8MHz), 40521(2583.1MHz)+ 40719(2602.9MHz), 41292(2660.2MHz)+ 41490(2680.0MHz)	20MHz + 20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 99 RB Offset
-	Radiated Emission Below 1GHz	39750 to 41292 39948 to 41490	40521(2583.1MHz)+ 40719(2602.9MHz),	20MHz + 20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset
-	Radiated Emission Above 1GHz	39750 to 41292 39948 to 41490	39750(2506.0MHz)+ 39948(2525.8MHz), 40521(2583.1MHz)+ 40719(2602.9MHz), 41292(2660.2MHz)+ 41490(2680.0MHz)	20MHz + 20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	25deg. C, 70%RH	120Vac, 60Hz	James Yang
Radiated Emission	22deg. C, 67%RH	120Vac, 60Hz	Rex Wang

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards and References

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

ANSI/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

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

LTE Band 7, LTE Band 41:
Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with 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

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:
ERP or EIRP = P_{Meas} + G_T
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:

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

4.1.4 Test Results

Conducted Output Power (dBm)

LTE Band 7 (CA 7C)

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	20	QPSK	1	0	20850	2510	7	20	QPSK	1	99	21048	2529.8	13.40
					1	99						1	0			21.46
		7	20	QPSK	1	0	21001	2525.1	7	20	QPSK	1	99	21199	2544.9	13.42
					1	99						1	0			21.25
		7	20	QPSK	1	0	21152	2540.2	7	20	QPSK	1	99	21350	2560	13.53
					1	99						1	0			21.54

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	15	QPSK	1	0	20825	2507.5	7	15	QPSK	1	99	20975	2522.5	13.30
					1	99						1	0			21.34
		7	15	QPSK	1	0	21025	2527.5	7	15	QPSK	1	99	21175	2542.5	13.22
					1	99						1	0			21.09
		7	15	QPSK	1	0	21225	2547.5	7	15	QPSK	1	99	21375	2562.5	13.34
					1	99						1	0			21.38

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	20	16QAM	1	0	20850	2510	7	20	16QAM	1	99	21048	2529.8	12.50
					1	99						1	0			20.36
		7	20	16QAM	1	0	21001	2525.1	7	20	16QAM	1	99	21199	2544.9	12.32
					1	99						1	0			20.15
		7	20	16QAM	1	0	21152	2540.2	7	20	16QAM	1	99	21350	2560	12.63
					1	99						1	0			20.74

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	15	16QAM	1	0	20825	2507.5	7	15	16QAM	1	99	20975	2522.5	12.50
					1	99						1	0			20.24
		7	15	16QAM	1	0	21025	2527.5	7	15	16QAM	1	99	21175	2542.5	12.22
					1	99						1	0			20.09
		7	15	16QAM	1	0	21225	2547.5	7	15	16QAM	1	99	21375	2562.5	12.14
					1	99						1	0			20.48

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	20	64QAM	1	0	20850	2510	7	20	64QAM	1	99	21048	2529.8	11.40
					1	99						1	0			19.56
		7	20	64QAM	1	0	21001	2525.1	7	20	64QAM	1	99	21199	2544.9	11.12
					1	99						1	0			19.35
		7	20	64QAM	1	0	21152	2540.2	7	20	64QAM	1	99	21350	2560	11.73
					1	99						1	0			19.54

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	15	64QAM	1	0	20825	2507.5	7	15	64QAM	1	99	20975	2522.5	11.70
					1	99						1	0			19.04
		7	15	64QAM	1	0	21025	2527.5	7	15	64QAM	1	99	21175	2542.5	11.42
					1	99						1	0			18.99
		7	15	64QAM	1	0	21225	2547.5	7	15	64QAM	1	99	21375	2562.5	11.14
					1	99						1	0			19.58

LTE Band 41 (CA 41C)

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_41C	41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	14.48
					1	99						1	0			21.41
		41	20	QPSK	1	0	40521	2583.1	41	20	QPSK	1	99	40719	2602.9	14.69
					1	99						1	0			21.46
		41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	14.45
					1	99						1	0			21.60

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_41C	41	20	16QAM	1	0	39750	2506	41	20	16QAM	1	99	39948	2525.8	13.68
					1	99						1	0			20.61
		41	20	16QAM	1	0	40521	2583.1	41	20	16QAM	1	99	40719	2602.9	13.89
					1	99						1	0			20.26
		41	20	16QAM	1	0	41292	2660.2	41	20	16QAM	1	99	41490	2680	13.25
					1	99						1	0			20.50

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_41C	41	20	64QAM	1	0	39750	2506	41	20	64QAM	1	99	39948	2525.8	12.78
					1	99						1	0			19.81
		41	20	64QAM	1	0	40521	2583.1	41	20	64QAM	1	99	40719	2602.9	12.79
					1	99						1	0			19.36
		41	20	64QAM	1	0	41292	2660.2	41	20	64QAM	1	99	41490	2680	12.45
					1	99						1	0			19.70

EIRP Power (dBm)

LTE Band 7 (CA 7C)

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	20	QPSK	1	0	20850	2510	7	20	QPSK	1	99	21048	2529.8	17.08
					1	99						1	0			25.14
		7	20	QPSK	1	0	21001	2525.1	7	20	QPSK	1	99	21199	2544.9	17.10
					1	99						1	0			24.93
		7	20	QPSK	1	0	21152	2540.2	7	20	QPSK	1	99	21350	2560	17.21
					1	99						1	0			**25.22**

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	15	QPSK	1	0	20825	2507.5	7	15	QPSK	1	99	20975	2522.5	16.98
					1	99						1	0			25.02
		7	15	QPSK	1	0	21025	2527.5	7	15	QPSK	1	99	21175	2542.5	16.90
					1	99						1	0			24.77
		7	15	QPSK	1	0	21225	2547.5	7	15	QPSK	1	99	21375	2562.5	17.02
					1	99						1	0			**25.06**

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	20	16QAM	1	0	20850	2510	7	20	16QAM	1	99	21048	2529.8	16.18
					1	99						1	0			24.04
		7	20	16QAM	1	0	21001	2525.1	7	20	16QAM	1	99	21199	2544.9	16.00
					1	99						1	0			23.83
		7	20	16QAM	1	0	21152	2540.2	7	20	16QAM	1	99	21350	2560	16.31
					1	99						1	0			**24.42**

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	15	16QAM	1	0	20825	2507.5	7	15	16QAM	1	99	20975	2522.5	16.18
					1	99						1	0			23.92
		7	15	16QAM	1	0	21025	2527.5	7	15	16QAM	1	99	21175	2542.5	15.90
					1	99						1	0			23.77
		7	15	16QAM	1	0	21225	2547.5	7	15	16QAM	1	99	21375	2562.5	15.82
					1	99						1	0			**24.16**

*EIRP = Conducted + antenna gain (3.68dBi)

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	20	64QAM	1	0	20850	2510	7	20	64QAM	1	99	21048	2529.8	15.08
					1	99						1	0			**23.24**
		7	20	64QAM	1	0	21001	2525.1	7	20	64QAM	1	99	21199	2544.9	14.80
					1	99						1	0			23.03
		7	20	64QAM	1	0	21152	2540.2	7	20	64QAM	1	99	21350	2560	15.41
					1	99						1	0			23.22

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_7C	7	15	64QAM	1	0	20825	2507.5	7	15	64QAM	1	99	20975	2522.5	15.38
					1	99						1	0			22.72
		7	15	64QAM	1	0	21025	2527.5	7	15	64QAM	1	99	21175	2542.5	15.10
					1	99						1	0			22.67
		7	15	64QAM	1	0	21225	2547.5	7	15	64QAM	1	99	21375	2562.5	14.82
					1	99						1	0			**23.26**

*EIRP = Conducted + antenna gain (3.68dBi)

LTE Band 41 (CA 41C)

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_41C	41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	18.16
					1	99						1	0			25.09
		41	20	QPSK	1	0	40521	2583.1	41	20	QPSK	1	99	40719	2602.9	18.37
					1	99						1	0			25.14
		41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	18.13
					1	99						1	0			**25.28**

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_41C	41	20	16QAM	1	0	39750	2506	41	20	16QAM	1	99	39948	2525.8	17.36
					1	99						1	0			**24.29**
		41	20	16QAM	1	0	40521	2583.1	41	20	16QAM	1	99	40719	2602.9	17.57
					1	99						1	0			23.94
		41	20	16QAM	1	0	41292	2660.2	41	20	16QAM	1	99	41490	2680	16.93
					1	99						1	0			24.18

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	EIRP (dBm)
																Total
Intra Band Conti-guous	CA_41C	41	20	64QAM	1	0	39750	2506	41	20	64QAM	1	99	39948	2525.8	16.46
					1	99						1	0			**23.49**
		41	20	64QAM	1	0	40521	2583.1	41	20	64QAM	1	99	40719	2602.9	16.47
					1	99						1	0			23.04
		41	20	64QAM	1	0	41292	2660.2	41	20	64QAM	1	99	41490	2680	16.13
					1	99						1	0			23.38

*EIRP = Conducted + antenna gain (3.68dBi)

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

For LTE Band 7, 41
In the FCC 27.53(m) (4)(6),On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least 55 + 10 log (P) dB. The emission limit equal to –25dBm.

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.

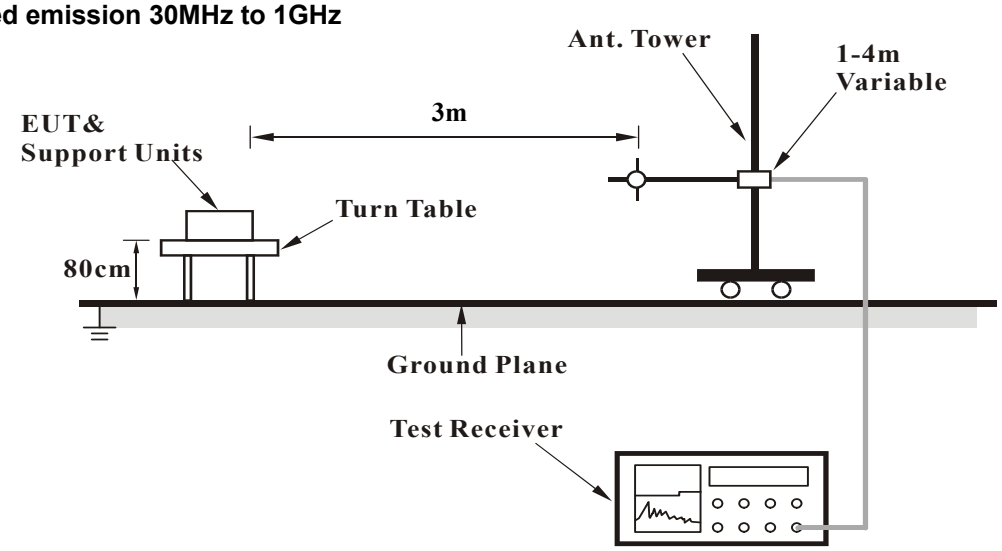
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

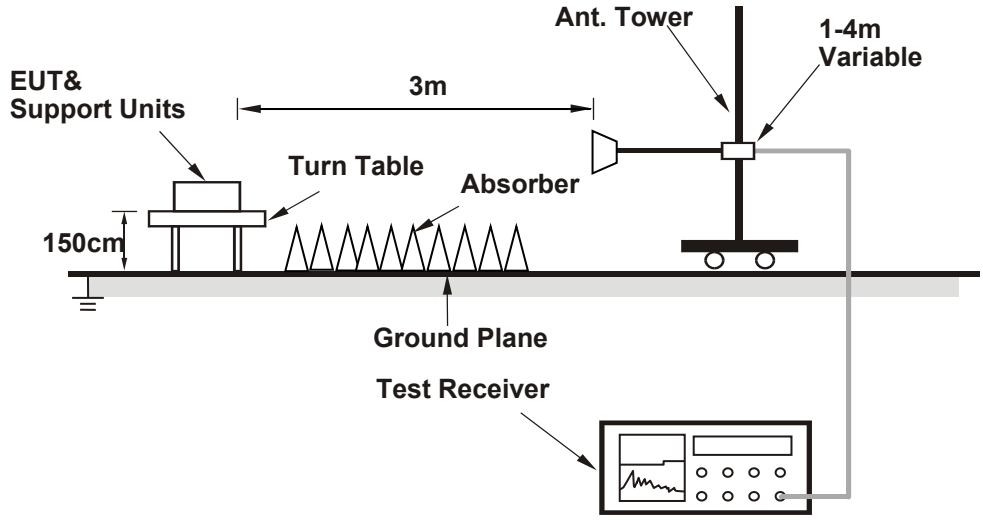
No deviation.

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

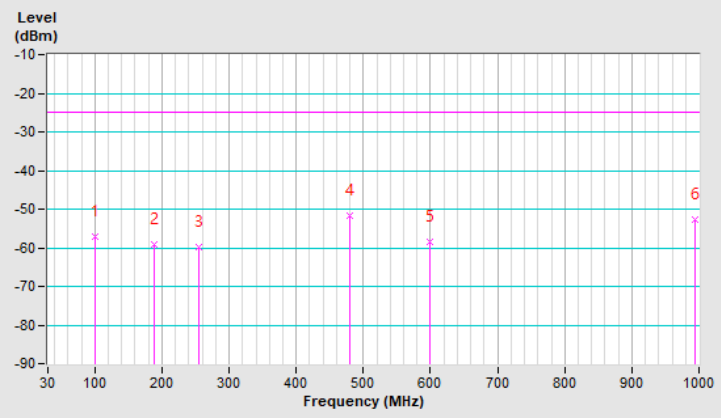
Below 1GHz
LTE Band 7 (CA 7C)

Mode	TX channel 20850 (2510.0MHz)+ TX channel 21048 (2529.8MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	100.81	-57.18	-25.00	-32.18	1.25 H	208	51.55	-108.73
2	188.11	-59.17	-25.00	-34.17	1.00 H	85	47.22	-106.39
3	254.07	-59.94	-25.00	-34.94	1.50 H	85	44.20	-104.14
4	480.08	-51.65	-25.00	-26.65	2.00 H	135	46.62	-98.27
5	599.39	-58.40	-25.00	-33.40	1.00 H	17	37.23	-95.63
6	994.18	-52.71	-25.00	-27.71	1.00 H	33	36.53	-89.24

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.

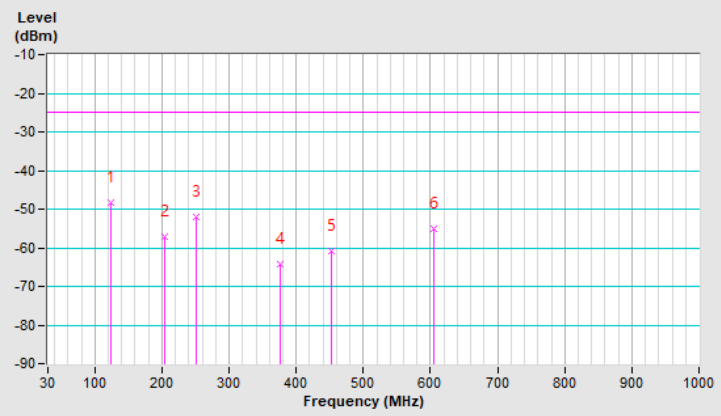


Mode	TX channel 20850 (2510.0MHz)+ TX channel 21048 (2529.8MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Rex Wang		

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	124.09	-48.36	-25.00	-23.36	1.25 V	145	57.88	-106.24
2	204.60	-56.96	-25.00	-31.96	1.25 V	145	49.84	-106.80
3	251.16	-52.03	-25.00	-27.03	1.00 V	145	52.16	-104.19
4	375.32	-64.38	-25.00	-39.38	1.50 V	6	36.33	-100.71
5	452.92	-60.83	-25.00	-35.83	2.00 V	83	37.82	-98.65
6	605.21	-55.12	-25.00	-30.12	1.00 V	112	40.40	-95.52

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.



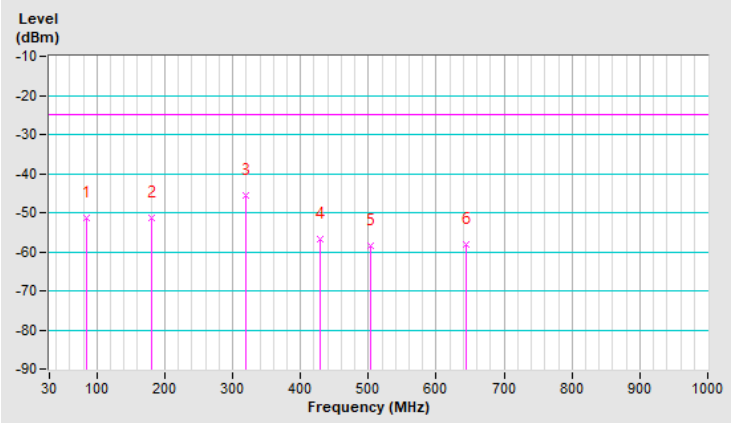
LTE Band 41 (CA 41C)

Mode	TX channel 40521 (2583.1MHz)+ TX channel 40719 (2602.9MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	84.32	-51.44	-25.00	-26.44	1.50 H	5	58.15	-109.59
2	181.32	-51.36	-25.00	-26.36	1.00 H	113	54.25	-105.61
3	320.03	-45.66	-25.00	-20.66	2.00 H	22	56.02	-101.68
4	429.64	-56.90	-25.00	-31.90	1.25 H	241	42.30	-99.20
5	503.36	-58.44	-25.00	-33.44	1.00 H	22	39.30	-97.74
6	644.98	-58.11	-25.00	-33.11	1.25 H	279	36.83	-94.94

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.

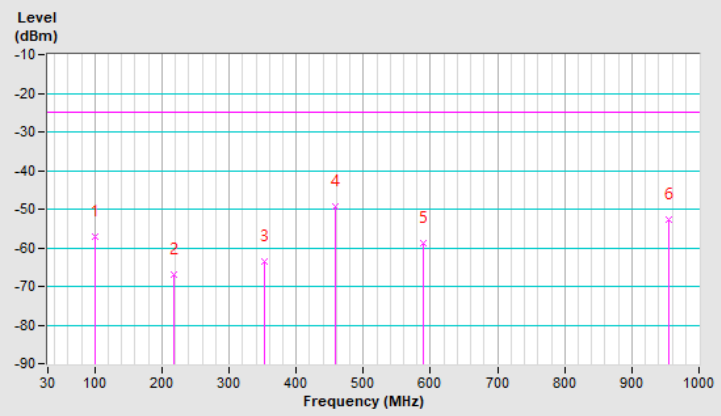


Mode	TX channel 40521 (2583.1MHz)+ TX channel 40719 (2602.9MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Rex Wang		

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	100.81	-57.18	-25.00	-32.18	1.50 V	126	51.55	-108.73
2	218.18	-67.00	-25.00	-42.00	1.00 V	145	39.37	-106.37
3	353.01	-63.54	-25.00	-38.54	1.25 V	130	37.72	-101.26
4	457.77	-49.28	-25.00	-24.28	1.25 V	130	49.28	-98.56
5	588.72	-58.93	-25.00	-33.93	1.00 V	269	36.93	-95.86
6	954.41	-52.70	-25.00	-27.70	1.00 V	93	36.35	-89.05

Remarks:

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



Above 1GHz
LTE Band 7 (CA 7C)

Mode	TX channel 20850 (2510.0MHz)+ TX channel 21048 (2529.8MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	5020.00	-41.10	-25.00	-16.10	2.95 H	335	46.84	-87.94
2	5059.60	-40.68	-25.00	-15.68	2.94 H	328	46.95	-87.63
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	5020.00	-41.49	-25.00	-16.49	1.66 V	205	46.45	-87.94
2	5059.60	-41.11	-25.00	-16.11	1.59 V	197	46.52	-87.63

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 21001 (2525.1MHz)+ TX channel 21199 (2544.9MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	5050.20	-40.84	-25.00	-15.84	2.97 H	332	46.74	-87.58
2	5089.80	-40.90	-25.00	-15.90	2.98 H	336	46.88	-87.78
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	5050.20	-41.09	-25.00	-16.09	1.64 V	203	46.49	-87.58
2	5089.80	-41.23	-25.00	-16.23	1.61 V	200	46.55	-87.78

Remarks:

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

Mode	TX channel 21152 (2540.2MHz)+ TX channel 21350 (2560.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	5080.40	-40.84	-25.00	-15.84	3.00 H	335	46.89	-87.73
2	5120.00	-40.96	-25.00	-15.96	2.95 H	330	46.94	-87.90
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	5080.40	-41.17	-25.00	-16.17	1.65 V	203	46.56	-87.73
2	5120.00	-41.29	-25.00	-16.29	1.64 V	210	46.61	-87.90

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 41 (CA 41C)

Mode	TX channel 39750 (2506.0MHz)+ TX channel 39948 (2525.8MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	5012.00	-41.80	-25.00	-16.80	2.15 H	49	46.23	-88.03
2	5051.60	-40.99	-25.00	-15.99	2.15 H	47	46.60	-87.59
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	5012.00	-41.48	-25.00	-16.48	1.99 V	267	46.55	-88.03
2	5051.60	-41.03	-25.00	-16.03	1.97 V	267	46.56	-87.59

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 40521 (2583.1MHz)+ TX channel 40719 (2602.9MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	5166.20	-41.09	-25.00	-16.09	2.23 H	53	46.89	-87.98
2	5205.80	-41.09	-25.00	-16.09	2.14 H	51	46.88	-87.97
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	**5166.20**	**-40.66**	**-25.00**	**-15.66**	**1.92 V**	**262**	**47.32**	**-87.98**
2	5205.80	-40.74	-25.00	-15.74	1.99 V	267	47.23	-87.97

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 41292 (2660.2MHz)+ TX channel 41490 (2680.0MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	22deg. C, 67%RH	Input Power	120Vac, 60Hz
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	5320.40	-42.00	-25.00	-17.00	2.24 H	50	46.41	-88.41
2	5360.00	-41.93	-25.00	-16.93	2.14 H	52	46.36	-88.29
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	5320.40	-41.42	-25.00	-16.42	2.01 V	268	46.99	-88.41
2	5360.00	-41.70	-25.00	-16.70	1.95 V	262	46.59	-88.29

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

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

--- END ---