

FCC TEST REPORT

(PART 27)

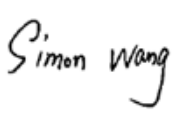
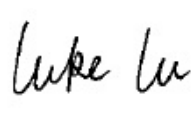
Applicant:	Juniper Systems, Inc.
Address:	1132 W 1700 N Logan, UT 84321 USA

Manufacturer or Supplier:	Juniper Systems, Inc.
Address:	1132 W 1700 N Logan, UT 84321 USA
Product:	Archer4
Brand Name:	Juniper Systems
Model Name:	AR4
FCC ID:	VSFAR4
Date of tests:	Jan. 05, 2024 ~ May. 15, 2024

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 27** ☒ **ANSI/TIA/EIA-603-D**
☒ **FCC Part 2** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: May. 15, 2024	 Date: May. 15, 2024

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-231218W001RF09	Original release	May. 15, 2024

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	TEST LAB*
§2.1046	Conducted Output Power	Compliance	A
§27.50(c)(10)	Effective Radiated Power (Band 12B)	Compliance	A
§27.50(h)(2) §27.50(d)(4)	Equivalent Isotropically Radiated Power (Band 7C) (Band 41C) (Band 66B) (Band 66C)	Compliance	A
§2.1055 §27.54	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§2.1051 §27.53(g) §27.53(h) §27.53(m)(4)(6)	Conducted Band Edge Measurements (Band 7C) (Band 12B) (Band 41C) (Band 66B) (Band 66C)	Compliance	A
§2.1051 §27.53(g) §27.53(h) §27.53(m)(4)(6)	Conducted Spurious Emissions (Band 7C) (Band 12B) (Band 41C) (Band 66B) (Band 66C)	Compliance	A
§2.1053 §27.53(g) §27.53(h) §27.53(m)(4)(6)	Radiated Spurious Emissions (Band 7C) (Band 12B) (Band 41C) (Band 66B) (Band 66C)	Compliance	A
NA	Peak to average ratio	Compliance	A



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***Test Lab Information Reference**

Lab A:

BV 7Layers Communications Technology (Shenzhen) Co., Ltd

Lab Address:

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Accredited Test Lab Cert 3939.01

FCC Site Registration No. : 525120; Designation No. : CN1171;

1.1 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	UNCERTAINTY
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions & Radiated Power (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Band Edge Measurements	$\pm 4.70\text{dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 28,23	Mar. 27,24
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 27,24	Mar. 26,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.10,23	May.09,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.09,24	May.08,25
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,23	Sep.01,24
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 18,23	Feb. 17,24
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 17,24	Feb. 16,25
Horn Antenna	ETS-LINDGRE N	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGRE N	3117	00168692	Feb. 17,24	Feb. 16,25
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K- SG/QMS-00361	15433	Sep.03, 23	Sep.02, 24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 14,23	Feb. 13,24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 13,24	Feb. 12,25
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 05,24	May. 04,25
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.10,23	May.09,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.09,24	May.08,25
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 17,23	Feb.16,24
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb.16,24	Feb.15,25
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn- CT0001143-121 6	Nov. 14,23	Nov. 13,26
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 06,23	May. 05,24
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 05,24	May. 04,25
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Meter	Anritsu	ML2495A	1506002	Feb. 13,24	Feb. 12,25
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 13,24	Feb. 12,25
Temperature Chamber	ESPEC	SH-242	93000855	May. 06,23	May. 05,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 05,24	May. 04,25
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 13,24	Feb. 12,25



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Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.10,23	May.09,24
Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.09,24	May.08,25
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 36 months and the calibrations are traceable to CEPREI/CHINA, GREGT/CHINA and NIM/CHINA.
 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Archer4	
BRAND NAME	Juniper Systems	
MODEL NAME	AR4	
NOMINAL VOLTAGE	12Vdc(adapter or host equipment) 3.8Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	LTE	QPSK, 16QAM, 64QAM, 256QAM
FREQUENCY RANGE	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	2505.5MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	2507.5MHz ~ 2564.7MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	2507.8MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	2510MHz ~ 2564.5MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	2510MHz ~ 2562.2MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	2510MHz ~ 2560MHz
	LTE Band CA_12B Channel Bandwidth: 5MHz+5MHz	701.5MHz ~ 713.5MHz
	LTE Band CA_12B Channel Bandwidth: 5MHz+10MHz	701.8MHz ~ 711MHz

FREQUENCY RANGE	LTE Band CA_41C/(HPUE) Channel Bandwidth: 5MHz+20MHz	2499.3MHz ~ 2680MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 10MHz+15MHz	2501.3MHz ~ 2682.5MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 10MHz+20MHz	2501.5MHz ~ 2680MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 15MHz+10MHz	2503.5MHz ~ 2684.7MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 15MHz+15MHz	2496MHz ~ 2682.5MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 15MHz+20MHz	2503.8MHz ~ 2680MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 20MHz+5MHz	2506MHz ~ 2686.7MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 20MHz+10MHz	2506MHz ~ 2684.5MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 20MHz+15MHz	2506MHz ~ 2682.2MHz
	LTE Band CA_41C/(HPUE) Channel Bandwidth: 20MHz+20MHz	2506MHz ~ 2680MHz
	LTE Band CA_66B Channel Bandwidth: 10MHz+10MHz	1715MHz ~ 1775MHz
	LTE Band CA_66B Channel Bandwidth: 15MHz+5MHz	1717.5MHz ~ 1777MHz
	LTE Band CA_66B Channel Bandwidth: 5MHz+15MHz	1713MHz ~ 1772.5MHz
	LTE Band CA_66B Channel Bandwidth: 10MHz+5MHz	1715MHz ~ 1777.2MHz
	LTE Band CA_66B Channel Bandwidth: 5MHz+10MHz	1712.8MHz ~ 1775MHz
	LTE Band CA_66B Channel Bandwidth: 5MHz+5MHz	1712.5MHz ~ 1777.5MHz

FREQUENCY RANGE	LTE Band CA_66C Channel Bandwidth: 20MHz+20MHz	1720MHz ~ 1770MHz
	LTE Band CA_66C Channel Bandwidth: 20MHz+15MHz	1720MHz ~ 1772.2MHz
	LTE Band CA_66C Channel Bandwidth: 15MHz+20MHz	1717.8MHz ~ 1770MHz
	LTE Band CA_66C Channel Bandwidth: 20MHz+10MHz	1720MHz ~ 1774.5MHz
	LTE Band CA_66C Channel Bandwidth: 10MHz+20MHz	1715.5MHz ~ 1770MHz
	LTE Band CA_66C Channel Bandwidth: 15MHz+15MHz	1717.5MHz ~ 1772.5MHz
	LTE Band CA_66C Channel Bandwidth: 15MHz+10MHz	1717.5MHz ~ 1774.7MHz
	LTE Band CA_66C Channel Bandwidth: 20MHz+5MHz	1715.3MHz ~ 1772.5MHz
	LTE Band CA_66C Channel Bandwidth: 10MHz+15MHz	1720MHz ~ 1776.7MHz
	LTE Band CA_66C Channel Bandwidth: 5MHz+20MHz	1713.3MHz ~ 1770MHz
MAX. EIRP or EPR POWER	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	232.81mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	228.56mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	226.99mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	230.14mW
	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	224.91mW
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	229.61mW



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MAX. EIRP or EPR POWER	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	229.09mW
	LTE Band CA_12B Channel Bandwidth: 5MHz+5MHz	62.66mW
	LTE Band CA_12B Channel Bandwidth: 5MHz+10MHz	62.66mW
	LTE Band CA_41C Channel Bandwidth: 20M+20M	211.84mW
	LTE Band CA_41C Channel Bandwidth: 20M+15M	208.45mW
	LTE Band CA_41C Channel Bandwidth: 15M+20M	206.06mW
	LTE Band CA_41C Channel Bandwidth: 20M+10M	205.12mW
	LTE Band CA_41C Channel Bandwidth: 10M+20M	205.12mW
	LTE Band CA_41C Channel Bandwidth: 15M+15M	207.49mW
	LTE Band CA_41C Channel Bandwidth: 15M+10M	206.54mW
	LTE Band CA_41C Channel Bandwidth: 10M+15M	210.38mW
	LTE Band CA_41C Channel Bandwidth: 20M+5M	210.86mW
	LTE Band CA_41C Channel Bandwidth: 5M+20M	207.01mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 20M+20M	390.84mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 20M+15M	380.19mW

MAX. EIRP or EPR POWER	LTE Band CA_41C(HPUE) Channel Bandwidth: 15M+20M	389.94mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 20M+10M	382.82mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 10M+20M	387.26mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 15M+15M	383.71mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 15M+10M	383.71mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 10M+15M	384.59mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 20M+5M	383.71mW
	LTE Band CA_41C(HPUE) Channel Bandwidth: 5M+20M	385.48mW
	LTE Band CA_66B Channel Bandwidth: 10MHz+10MHz	112.46mW
	LTE Band CA_66B Channel Bandwidth: 15MHz+5MHz	109.9mW
	LTE Band CA_66B Channel Bandwidth: 5MHz+15MHz	110.92mW
	LTE Band CA_66B Channel Bandwidth: 10MHz+5MHz	110.41mW
	LTE Band CA_66B Channel Bandwidth: 5MHz+10MHz	111.17mW
	LTE Band CA_66B Channel Bandwidth: 5MHz+5MHz	110.92mW

MAX. EIRP or EPR POWER	LTE Band CA_66C Channel Bandwidth: 20MHz+20MHz	110.92mW
	LTE Band CA_66C Channel Bandwidth: 20MHz+15MHz	108.39mW
	LTE Band CA_66C Channel Bandwidth: 15MHz+20MHz	109.4mW
	LTE Band CA_66C Channel Bandwidth: 20MHz+10MHz	109.4mW
	LTE Band CA_66C Channel Bandwidth: 10MHz+20MHz	107.4mW
	LTE Band CA_66C Channel Bandwidth: 15MHz+15MHz	110.15mW
	LTE Band CA_66C Channel Bandwidth: 15MHz+10MHz	108.64mW
	LTE Band CA_66C Channel Bandwidth: 20MHz+5MHz	110.15mW
	LTE Band CA_66C Channel Bandwidth: 10MHz+15MHz	109.14mW
	LTE Band CA_66C Channel Bandwidth: 5MHz+20MHz	108.89mW
EMISSION DESIGNATOR	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	QPSK: 27M8G7D 16QAM: 27M8W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +10MHz	QPSK: 23M2G7D 16QAM: 23M1W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +15MHz	QPSK: 28M4G7D 16QAM: 28M4W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +10MHz	QPSK: 27M8G7D 16QAM: 27M8W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +15MHz	QPSK: 32M7G7D 16QAM: 32M6W7D

EMISSION DESIGNATOR	LTE Band CA_7C Channel Bandwidth: 20MHz +20MHz	QPSK: 37M6G7D
		16QAM: 37M6W7D
	LTE Band CA_12B Channel Bandwidth: 5MHz+5MHz	QPSK: 9M31G7D
		16QAM: 9M29W7D
	LTE Band CA_12B Channel Bandwidth: 5MHz+10MHz	QPSK: 13M9G7D
		16QAM: 13M9W7D
	LTE Band CA_41C Channel Bandwidth: 5MHz+20MHz	QPSK: 23M0G7D
		16QAM: 23M0W7D
	LTE Band CA_41C Channel Bandwidth: 20MHz+5MHz	QPSK: 23M0G7D
		16QAM: 23M0W7D
	LTE Band CA_41C Channel Bandwidth: 10MHz+15MHz	QPSK: 23M2G7D
		16QAM: 23M2W7D
	LTE Band CA_41C Channel Bandwidth: 15MHz+10MHz	QPSK: 23M2G7D
		16QAM: 23M2W7D
	LTE Band CA_41C Channel Bandwidth: 15MHz+15MHz	QPSK: 28M5G7D
		16QAM: 28M5W7D
EMISSION DESIGNATOR	LTE Band CA_41C Channel Bandwidth: 10MHz+20MHz	QPSK: 27M9G7D
		16QAM: 27M9W7D
	LTE Band CA_41C Channel Bandwidth: 15MHz+20MHz	QPSK: 32M8G7D
		16QAM: 32M8W7D
	LTE Band CA_41C Channel Bandwidth: 20MHz+15MHz	QPSK: 32M8G7D
		16QAM: 32M8W7D
	LTE Band CA_41C Channel Bandwidth: 20MHz+20MHz	QPSK: 37M8G7D
		16QAM: 37M7W7D
	LTE Band CA_66B Channel Bandwidth: 10MHz+10MHz	QPSK: 18M9G7D
		16QAM: 18M9W7D
	LTE Band CA_66B Channel Bandwidth: 15MHz+5MHz	QPSK: 18M3G7D
		16QAM: 18M3W7D
	LTE Band CA_66B Channel Bandwidth: 5MHz+15MHz	QPSK: 18M3G7D
		16QAM: 18M3W7D



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	L LTE Band CA_66B Channel Bandwidth: 10MHz+5MHz	QPSK: 14M0G7D
		16QAM: 13M9W7D
	LTE Band CA_66B Channel Bandwidth: 5MHz+10MHz	QPSK: 14M0G7D
		16QAM: 13M9W7D
	LTE Band CA_66B Channel Bandwidth: 5MHz+5MHz	QPSK: 9M31G7D
		16QAM: 9M30W7D
	LTE Band CA_66C Channel Bandwidth: 20MHz+20MHz	QPSK: 37M7G7D
		16QAM: 37M7W7D
	LTE Band CA_66C Channel Bandwidth: 20MHz+15MHz	QPSK: 32M7G7D
		16QAM: 32M8W7D
	LTE Band CA_66C Channel Bandwidth: 15MHz+20MHz	QPSK: 27M8G7D
		16QAM: 27M8W7D
	LTE Band CA_66C Channel Bandwidth: 20MHz+10MHz	QPSK: 27M8G7D
		16QAM: 27M8W7D
LTE Band CA_66C Channel Bandwidth: 10MHz+20MHz	QPSK: 27M8G7D	
	16QAM: 27M7W7D	
LTE Band CA_66C Channel Bandwidth: 15MHz+15MHz	QPSK: 28M4G7D	
	16QAM: 28M4W7D	
LTE Band CA_66C Channel Bandwidth: 15MHz+10MHz	QPSK: 23M2G7D	
	16QAM: 23M2W7D	
ANTENNA TYPE	ANT0: Fixed Internal Antenna with 0.6dBi gain for LTE CA 7C Fixed Internal Antenna with -4.18dBi gain for LTE CA 12B Fixed Internal Antenna with 0.6dBi gain for LTE CA 41C Fixed Internal Antenna with -2.15dBi gain for LTE CA 66B Fixed Internal Antenna with -2.15dBi gain for LTE CA 66C	
HW VERSION	DVT2	
SW VERSION	JH_U_000.00.040.00_USERDEBUG_PCAT	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: With shielded cable, w/o ferrite core, 1.0 meter	
EXTREME TEMPERATURE	-20-60 °C	
EXTREME VOLTAGE	3.4V - 4.35V	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides two completed transmitters and four receivers.

MODULATION MODE	TX FUNCTION
LTE	2TX/4RX

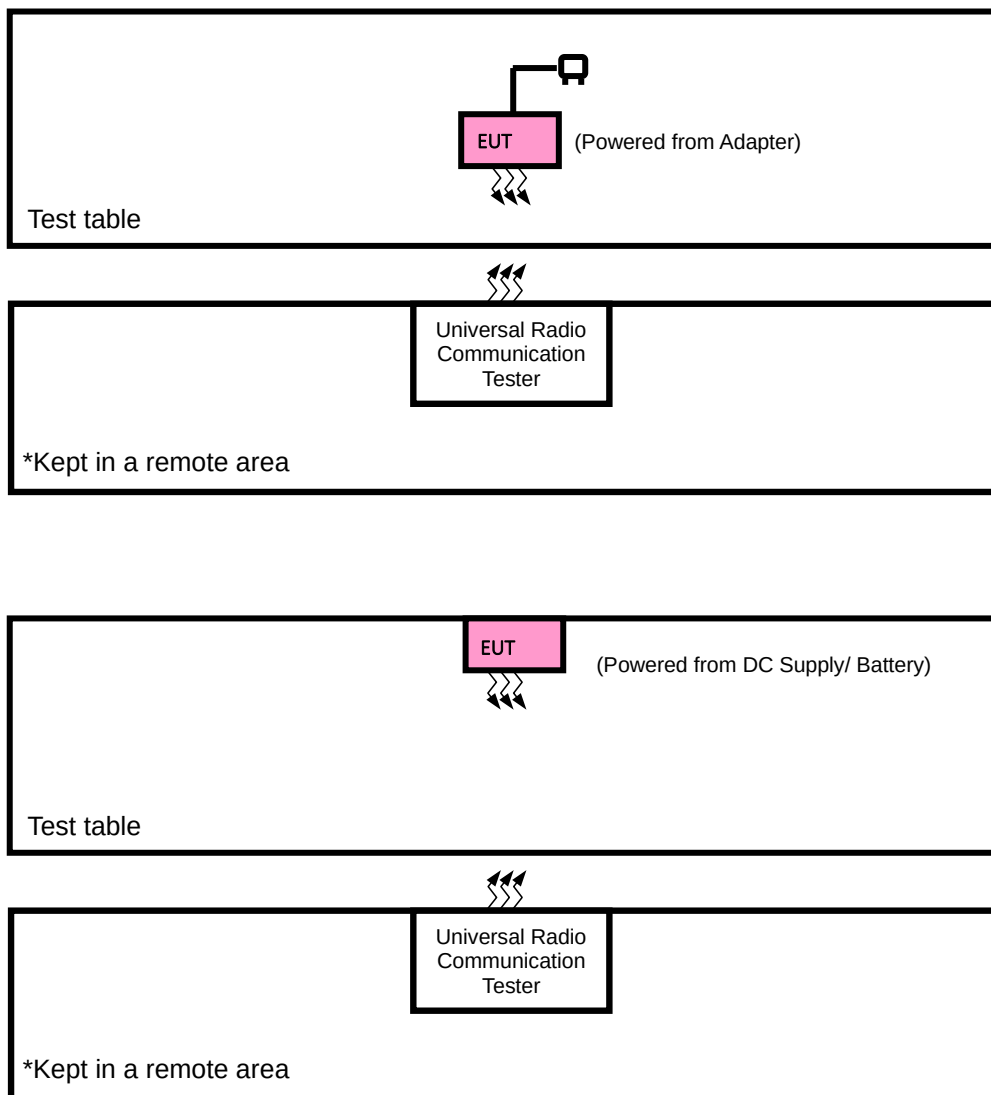
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.
5. For Band Edge and Emission Mask: The all BW combinations were tested. Combination pairs of the same BW are considered generally equivalent. The RB combinations were selected such that the signal is active closest to the band limit, as this is the worst case.
6. For Out of Band Emissions: The all combination was tested. The highest power RB combination was selected as worst case.
7. The worst-case scenario for all measurements is based on an engineering evaluation made on different modulations. Then, QPSK and 16QAM were observed as the worst mode to LTE bands respectively and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, and 256QAM modulations, and tests other than output power are performed only in worse-case QPSK and 16QAM modulations.

8. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
AC Adapter	Juniper	SHENZHEN MERRYKING ELECTRONICS CO.,LTD.	MK-PQ181EX	I/P: 100-240Vac, 0.5A, O/P: 12.0Vdc, 1.5A
Battery 1	CHOLIPOW	SHENZHEN CHOLIPOWER TECHNOLOGY CO.,LTD	CLP983	Capacity: 3.8Vdc, 4500mAh
Battery 2	CHOLIPOW	SHENZHEN CHOLIPOWER TECHNOLOGY CO.,LTD	CLP984	Capacity: 3.8Vdc, 8300mAh
Battery 3	GUANGWEI	SHENZHEN GUANGWEI ELECTRONIC TECHNOLOGY CO.,LTD	GW300	Capacity: 3.7Vdc, 300mAh
USB Cable	Keli	KELI TECHNOLOGY DEVELOPMENT CO.,LTD	KLC-5243	Signal Line,1.0meter
LCD Panel	KOTL	JIN LONG MACHINERY&ELECTRONICS (Hangzhou) CO., LTD.	304-T0662A-001-A2	6.26inch TFT, 1080(H)*2280(V) resolution

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB cable: Unshielded, Detachable 1.0m

2.4 TEST ITEM AND TEST CONFIGURATION

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 for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter + USB Cable with LTE link
B	EUT + Battery with LTE link

LTE BAND CA_7C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABL E PCC CHANNEL	AVAILABL E SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	20805 to 21206	20949 to 21350	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		20825 to 21277	20945 to 21397	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		20825 to 21225	20975 to 21375	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		20828 to 21179	20999 to 21350	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		20850 to 21251	20994 to 21395	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		20850 to 21201	21201 to 21372	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	20805 to 21206	20949 to 21350	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		20825 to 21277	20945 to 21397	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM	75RB/ 0RB Offset	50RB/ 0RB Offset
		20825 to 21225	20975 to 21375	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM	75RB/ 0RB Offset	75RB/ 0RB Offset
		20828 to 21179	20999 to 21350	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		20850 to 21251	20994 to 21395	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		20850 to 21201	21201 to 21372	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	20850 to 21152	21048 to 21350	Low	20MHz+20MHz	QPSK, 16QAM	1RB/ 25RB Offset	1RB/ 99RB Offset
				High	20MHz+20MHz	QPSK, 16QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
							1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDUCTED EMISSION	20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	20850 to 21152	21048 to 21350	Middle	20MHz+20MHz	QPSK	1RB/ 99RB Offset	1RB/ 0RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE BAND CA_12B MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABL E PCC CHANNEL	AVAILABL E SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	ERP	23035 to 23107	23083 to 23155	Low, Middle, High	5MHz+5MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
		23038 to 23058	23110 to 23130	Low, Middle, High	5MHz+10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	23035 to 23107	23083 to 23155	Low, Middle, High	5MHz+5MHz	QPSK, 16QAM	RB/ 24RB Offset	1RB/ 0RB Offset
		23038 to 23058	23110 to 23130	Low, Middle, High	5MHz+10MHz	QPSK, 16QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
A	BAND EDGE	23038 to 23058	23110 to 23130	Low	5MHz+10MHz	QPSK, 16QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
							1RB/ 24RB Offset	1RB/ 0RB Offset
							1RB/ 24RB Offset	1RB/ 0RB Offset
				High	5MHz+10MHz	QPSK, 16QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
							1RB/ 24RB Offset	1RB/ 0RB Offset
							RB/ 24RB Offset	1RB/ 0RB Offset
A	CONDUCTE D EMISSION	23038 to 23058	23110 to 23130	Low, Middle, High	5MHz+10MHz	QPSK, 16QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	23038 to 23058	23110 to 23130	Middle	5MHz+10MHz	QPSK	1RB/ 24RB Offset	1RB/ 0RB Offset

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

LTE BAND CA_41C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	39750 to 41341	39921 to 41512	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		39728 to 41319	39899 to 41490	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		39750 to 41391	39894 to 41535	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		39705 to 41346	39849 to 41490	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		39725 to 41365	39875 to 41515	Low, Middle, High	15MHz +15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		39725 to 41417	39845 to 41537	Low, Middle, High	15MHz +10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB / 74RB Offset	1RB / 0RB Offset
		39703 to 41395	39823 to 41515	Low, Middle, High	10MHz +15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		39750 to 41440	39867 to 41557	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		39683 to 41373	39800 to 41490	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
		39750 to 41292	39948 to 41490	Low, Middle, High	20MHz +20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB / 99RB Offset 1RB / 0RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	39750 to 41341	39921 to 41512	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		39728 to 41319	39899 to 41490	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		39750 to 41391	39894 to 41535	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		39705 to 41346	39849 to 41490	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		39725 to 41365	39875 to 41515	Low, Middle, High	15MHz +15MHz	QPSK, 16QAM	75RB/ 0RB Offset	75RB/ 0RB Offset
		39725 to 41417	39845 to 41537	Low, Middle, High	15MHz +10MHz	QPSK, 16QAM	75RB/ 0RB Offset	50RB/ 0RB Offset
		39703 to 41395	39823 to 41515	Low, Middle, High	10MHz +15MHz	QPSK, 16QAM	50RB/ 0RB Offset	75RB/ 0RB Offset
		39750 to 41440	39867 to 41557	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM	100RB/ 0RB Offset	25RB/ 0RB Offset
		39683 to 41373	39800 to 41490	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM	25RB/ 0RB Offset	100RB/ 0RB Offset

A	OCCUPIED BANDWIDTH	39750 to 41292	39948 to 41490	Low, Middle, High	20MHz +20MHz	QPSK, 16QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	39750 to 41292	39948 to 41490	Low	20MHz+20MHz	QPSK, 16QAM,	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz		1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDUCTED EMISSION	39750 to 41292	39948 to 41490	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	39750 to 41292	39948 to 41490	Middle	20MHz+20MHz	QPSK	1RB / 99RB Offset	1RB/ 0RB Offset

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

LTE BAND CA_66B MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	132022 to 132523	132121 to 132622	Low, Middle, High	10MHz+10MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		132047 to 132549	132140 to 132642	Low, Middle, High	15MHz+5MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		132002to 132504	132095 to 132597	Low, Middle, High	5MHz+15MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
		132022 to 132572	132094 to 132644	Low, Middle, High	10MHz+5MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		132022to 132572	132094 to 132644	Low, Middle, High	5MHz +10MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
		131997 to 132599	132045 to 132647	Low, Middle, High	5MHz +5MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	132022 to 132523	132121 to 132622	Low, Middle, High	10MHz+10MHz	QPSK, 16QAM	1RB/ 50RB Offset	1RB/ 0RB Offset
		132047 to 132549	132140 to 132642	Low, Middle, High	15MHz+5MHz	QPSK, 16QAM	1RB/ 75RB Offset	1RB/ 25RB Offset
		132002to 132504	132095 to 132597	Low, Middle, High	5MHz+15MHz	QPSK, 16QAM	1RB/ 25RB Offset	1RB/ 75RB Offset
		132022 to 132572	132094 to 132644	Low, Middle, High	10MHz+5MHz	QPSK, 16QAM	1RB/ 50RB Offset	1RB/ 25RB Offset
		132022to 132572	132094 to 132644	Low, Middle, High	5MHz +10MHz	QPSK, 16QAM	1RB/ 25RB Offset	1RB/ 50RB Offset
		131997 to 132599	132045 to 132647	Low, Middle, High	5MHz +5MHz	QPSK, 16QAM	1RB/ 25RB Offset	1RB/ 25RB Offset
A	BAND EDGE	132022 to 132523	132121 to 132622	Low	10MHz+10MHz	QPSK, 16QAM	1RB/ 0RB Offset	50RB/ 0RB Offset
							1RB/ 49RB Offset	50RB/ 0RB Offset
							50RB/ 0RB Offset	50RB/ 0RB Offset
			High	10MHz+10MHz	1RB/ 0RB Offset		50RB/ 0RB Offset	
					1RB/ 49RB Offset		50RB/ 0RB Offset	
					50RB/ 0RB Offset		50RB/ 0RB Offset	
A	CONDUCTED EMISSION	132022 to 132523	132121 to 132622	Low, Middle, High	10MHz+10MHz	QPSK, 16QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	132022 to 132523	132121 to 132622	Middle	10MHz+10MHz	QPSK,	1RB/ 49RB Offset	1RB/ 0RB Offset

Note:1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE BAND CA_66C MODE(CA_66C-71A)

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	132072 to 132374	132270 to 132572	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		132072 to 132423	132243 to 132594	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		132050to 132401	132221 to 132572	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		132072 to 132473	132216 to 132617	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		132027 to 132428	132171 to 132572	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		132047 to 132447	132197 to 132597	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		132047 to 132499	132167 to 132619	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		132025 to 132477	132145 to 132597	Low, Middle, High	10MHz+15MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		132072 to 132522	132189 to 132639	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		132005 to 132455	132122 to 132572	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM, 64QAM,256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	132072 to 132374	132270 to 132572	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM,	100RB/ 0RB Offset	100RB/ 0RB Offset
		132072 to 132423	132243 to 132594	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM,	100RB/ 0RB Offset	75RB/ 0RB Offset
		132050to 132401	132221 to 132572	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM,	75RB/ 0RB Offset	100RB/ 0RB Offset
		132072 to 132473	132216 to 132617	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM,	100RB/ 0RB Offset	50RB/ 0RB Offset
		132027 to 132428	132171 to 132572	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM,	50RB/ 0RB Offset	100RB/ 0RB Offset
		132047 to 132447	132197 to 132597	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM,	75RB/ 0RB Offset	75RB/ 0RB Offset

A	OCCUPIED BANDWIDTH	132047 to 132499	132167 to 132619	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM,	75RB/ 0RB Offset	50RB/ 0RB Offset
		132025 to 132477	132145 to 132597	Low, Middle, High	10MHz+15MHz	QPSK, 16QAM,	50RB/ 0RB Offset	75RB/ 0RB Offset
		132072 to 132522	132189 to 132639	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM,	100RB/ 0RB Offset	25RB/ 0RB Offset
		132005 to 132455	132122 to 132572	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM,	25RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	132072 to 132374	132270 to 132572	Low	20MHz+20MHz	QPSK, 16QAM,	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz		1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDUCTED EMISSION	132072 to 132374	132270 to 132572	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM,	1RB/ 99RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	39750 to 41292	39948 to 41490	Middle	20MHz+20MHz	QPSK,	1RB/ 99RB Offset	1RB/ 0RB Offset

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



Test Report No.: W7L-231218W001RF09

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP&EIRP	23deg. C, 70%RH	DC 12.0V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.4V/3.8V/4.35V By Battery	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 12.0V By Adapter	James Fu
BAND EDGE	23deg. C, 70%RH	DC 12.0V By Adapter	James Fu
CONDUCTED EMISSION	23deg. C, 70%RH	DC 12.0V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC 12.0V By Adapter	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 12.0V By Adapter	James Fu



Test Report No.: W7L-231218W001RF09

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

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

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

According to the specific rule Part 27.50(c)(10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

According to the specific rule Part 27.50(d)(4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T - L_C$$

Where:

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

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);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

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.

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

LTE Band CA_7C

CA_7C											
Combination 20MHz+20MHz (100RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20850	21048	QPSK	1	99	1	0	23.07	0.60	23.67	232.81	2
		16QAM	1	99	1	0	22.31	0.60	22.91	195.43	2
		64QAM	1	99	1	0	21.48	0.60	22.08	161.44	2
		256QAM	1	99	1	0	18.43	0.60	19.03	79.98	2
21001	21199	QPSK	1	99	1	0	23.02	0.60	23.62	230.14	2
		16QAM	1	99	1	0	22.24	0.60	22.84	192.31	2
		64QAM	1	99	1	0	21.47	0.60	22.07	161.06	2
		256QAM	1	99	1	0	18.32	0.60	18.92	77.98	2
21152	21350	QPSK	1	99	1	0	22.98	0.60	23.58	228.03	2
		16QAM	1	99	1	0	22.33	0.60	22.93	196.34	2
		64QAM	1	99	1	0	21.44	0.60	22.04	159.96	2
		256QAM	1	99	1	0	18.35	0.60	18.95	78.52	2

CA_7C											
Combination 20MHz+15MHz (100RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20850	21021	QPSK	1	99	1	0	22.99	0.60	23.59	228.56	2
		16QAM	1	99	1	0	22.21	0.60	22.81	190.99	2
		64QAM	1	99	1	0	21.41	0.60	22.01	158.85	2
		256QAM	1	99	1	0	18.38	0.60	18.98	79.07	2
21026	21197	QPSK	1	99	1	0	22.96	0.60	23.56	226.99	2
		16QAM	1	99	1	0	22.23	0.60	22.83	191.87	2
		64QAM	1	99	1	0	21.41	0.60	22.01	158.85	2
		256QAM	1	99	1	0	18.26	0.60	18.86	76.91	2
21201	21372	QPSK	1	99	1	0	22.87	0.60	23.47	222.33	2
		16QAM	1	99	1	0	22.25	0.60	22.85	192.75	2
		64QAM	1	99	1	0	21.38	0.60	21.98	157.76	2
		256QAM	1	99	1	0	18.20	0.60	18.80	75.86	2

CA_7C											
Combination 15MHz+20MHz (75RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20828	20999	QPSK	1	74	1	0	22.96	0.60	23.56	226.99	2
		16QAM	1	74	1	0	22.28	0.60	22.88	194.09	2
		64QAM	1	74	1	0	21.45	0.60	22.05	160.32	2
		256QAM	1	74	1	0	18.40	0.60	19.00	79.43	2
21003	21174	QPSK	1	74	1	0	22.90	0.60	23.50	223.87	2
		16QAM	1	74	1	0	22.19	0.60	22.79	190.11	2
		64QAM	1	74	1	0	21.35	0.60	21.95	156.68	2
		256QAM	1	74	1	0	18.18	0.60	18.78	75.51	2
21179	21350	QPSK	1	74	1	0	22.91	0.60	23.51	224.39	2
		16QAM	1	74	1	0	22.19	0.60	22.79	190.11	2
		64QAM	1	74	1	0	21.43	0.60	22.03	159.59	2
		256QAM	1	74	1	0	18.27	0.60	18.87	77.09	2

CA_7C											
Combination 20MHz+10MHz (100RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20850	20994	QPSK	1	99	1	0	23.02	0.60	23.62	230.14	2
		16QAM	1	99	1	0	22.30	0.60	22.90	194.98	2
		64QAM	1	99	1	0	21.43	0.60	22.03	159.59	2
		256QAM	1	99	1	0	18.38	0.60	18.98	79.07	2
21051	21195	QPSK	1	99	1	0	22.87	0.60	23.47	222.33	2
		16QAM	1	99	1	0	22.15	0.60	22.75	188.36	2
		64QAM	1	99	1	0	21.37	0.60	21.97	157.40	2
		256QAM	1	99	1	0	18.28	0.60	18.88	77.27	2
21251	21395	QPSK	1	99	1	0	22.89	0.60	23.49	223.36	2
		16QAM	1	99	1	0	22.19	0.60	22.79	190.11	2
		64QAM	1	99	1	0	21.34	0.60	21.94	156.31	2
		256QAM	1	99	1	0	18.25	0.60	18.85	76.74	2

CA_7C											
Combination 10MHz+20MHz (50RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20805	20949	QPSK	1	49	1	0	22.92	0.60	23.52	224.91	2
		16QAM	1	49	1	0	22.30	0.60	22.90	194.98	2
		64QAM	1	49	1	0	21.47	0.60	22.07	161.06	2
		256QAM	1	49	1	0	18.29	0.60	18.89	77.45	2
21006	21150	QPSK	1	49	1	0	22.89	0.60	23.49	223.36	2
		16QAM	1	49	1	0	22.11	0.60	22.71	186.64	2
		64QAM	1	49	1	0	21.34	0.60	21.94	156.31	2
		256QAM	1	49	1	0	18.20	0.60	18.80	75.86	2
21206	21350	QPSK	1	49	1	0	22.91	0.60	23.51	224.39	2
		16QAM	1	49	1	0	22.19	0.60	22.79	190.11	2
		64QAM	1	49	1	0	21.37	0.60	21.97	157.40	2
		256QAM	1	49	1	0	18.31	0.60	18.91	77.80	2

CA_7C											
Combination 15MHz+15MHz (75RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20825	20975	QPSK	1	74	1	0	23.00	0.60	23.60	229.09	2
		16QAM	1	74	1	0	22.17	0.60	22.77	189.23	2
		64QAM	1	74	1	0	21.46	0.60	22.06	160.69	2
		256QAM	1	74	1	0	18.28	0.60	18.88	77.27	2
21025	21175	QPSK	1	74	1	0	23.01	0.60	23.61	229.61	2
		16QAM	1	74	1	0	22.21	0.60	22.81	190.99	2
		64QAM	1	74	1	0	21.36	0.60	21.96	157.04	2
		256QAM	1	74	1	0	18.23	0.60	18.83	76.38	2
21225	21375	QPSK	1	74	1	0	22.95	0.60	23.55	226.46	2
		16QAM	1	74	1	0	22.20	0.60	22.80	190.55	2
		64QAM	1	74	1	0	21.39	0.60	21.99	158.12	2
		256QAM	1	74	1	0	18.33	0.60	18.93	78.16	2

CA_7C											
Combination 15MHz+10MHz (75RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
20825	20945	QPSK	1	74	1	0	23.00	0.60	23.60	229.09	2
		16QAM	1	74	1	0	22.23	0.60	22.83	191.87	2
		64QAM	1	74	1	0	21.47	0.60	22.07	161.06	2
		256QAM	1	74	1	0	18.28	0.60	18.88	77.27	2
21051	21171	QPSK	1	74	1	0	22.87	0.60	23.47	222.33	2
		16QAM	1	74	1	0	22.09	0.60	22.69	185.78	2
		64QAM	1	74	1	0	21.35	0.60	21.95	156.68	2
		256QAM	1	74	1	0	18.19	0.60	18.79	75.68	2
21277	21397	QPSK	1	74	1	0	22.92	0.60	23.52	224.91	2
		16QAM	1	74	1	0	22.22	0.60	22.82	191.43	2
		64QAM	1	74	1	0	21.34	0.60	21.94	156.31	2
		256QAM	1	74	1	0	18.24	0.60	18.84	76.56	2



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Test Report No.: W7L-231218W001RF09

LTE Band CA_12B

CA_12B											
Combination 5MHz+10MHz (25RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
23038	23110	QPSK	1	24	1	0	22.10	-4.18	17.92	61.94	3
		16QAM	1	24	1	0	21.53	-4.18	17.35	54.33	3
		64QAM	1	24	1	0	21.01	-4.18	16.83	48.19	3
		256QAM	1	24	1	0	17.96	-4.18	13.78	23.88	3
23048	23120	QPSK	1	24	1	0	22.08	-4.18	17.90	61.66	3
		16QAM	1	24	1	0	21.40	-4.18	17.22	52.72	3
		64QAM	1	24	1	0	20.75	-4.18	16.57	45.39	3
		256QAM	1	24	1	0	17.96	-4.18	13.78	23.88	3
23058	23130	QPSK	1	24	1	0	22.16	-4.18	17.98	62.81	3
		16QAM	1	24	1	0	21.56	-4.18	17.38	54.70	3
		64QAM	1	24	1	0	20.88	-4.18	16.70	46.77	3
		256QAM	1	24	1	0	17.76	-4.18	13.58	22.80	3

CA_12B											
Combination 5MHz+5MHz (25RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
23035	23083	QPSK	1	24	1	0	22.03	-4.18	17.85	60.95	3
		16QAM	1	24	1	0	21.45	-4.18	17.27	53.33	3
		64QAM	1	24	1	0	20.99	-4.18	16.81	47.97	3
		256QAM	1	24	1	0	17.84	-4.18	13.66	23.23	3
23071	23119	QPSK	1	24	1	0	21.93	-4.18	17.75	59.57	3
		16QAM	1	24	1	0	21.31	-4.18	17.13	51.64	3
		64QAM	1	24	1	0	20.70	-4.18	16.52	44.87	3
		256QAM	1	24	1	0	17.89	-4.18	13.71	23.50	3
23107	23155	QPSK	1	24	1	0	22.15	-4.18	17.97	62.66	3
		16QAM	1	24	1	0	21.52	-4.18	17.34	54.20	3
		64QAM	1	24	1	0	20.81	-4.18	16.63	46.03	3
		256QAM	1	24	1	0	17.61	-4.18	13.43	22.03	3

LTE Band CA_41C(PC3)

CA_41C											
Combination 20MHz+20MHz (100RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39948	QPSK	1	99	1	0	22.66	0.60	23.26	211.84	2
		16QAM	1	99	1	0	21.63	0.60	22.23	167.11	2
		64QAM	1	99	1	0	20.58	0.60	21.18	131.22	2
		256QAM	1	99	1	0	17.56	0.60	18.16	65.46	2
40521	40719	QPSK	1	99	1	0	22.27	0.60	22.87	193.64	2
		16QAM	1	99	1	0	21.18	0.60	21.78	150.66	2
		64QAM	1	99	1	0	20.12	0.60	20.72	118.03	2
		256QAM	1	99	1	0	17.06	0.60	17.66	58.34	2
41292	41490	QPSK	1	99	1	0	21.88	0.60	22.48	177.01	2
		16QAM	1	99	1	0	20.79	0.60	21.39	137.72	2
		64QAM	1	99	1	0	19.98	0.60	20.58	114.29	2
		256QAM	1	99	1	0	16.92	0.60	17.52	56.49	2

CA_41C											
Combination 20MHz+15MHz (100RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39921	QPSK	1	99	1	0	22.59	0.60	23.19	208.45	2
		16QAM	1	99	1	0	21.49	0.60	22.09	161.81	2
		64QAM	1	99	1	0	20.48	0.60	21.08	128.23	2
		256QAM	1	99	1	0	17.48	0.60	18.08	64.27	2
40546	40717	QPSK	1	99	1	0	22.17	0.60	22.77	189.23	2
		16QAM	1	99	1	0	21.13	0.60	21.73	148.94	2
		64QAM	1	99	1	0	20.03	0.60	20.63	115.61	2
		256QAM	1	99	1	0	16.99	0.60	17.59	57.41	2
41341	41512	QPSK	1	99	1	0	21.73	0.60	22.33	171.00	2
		16QAM	1	99	1	0	20.76	0.60	21.36	136.77	2
		64QAM	1	99	1	0	19.92	0.60	20.52	112.72	2
		256QAM	1	99	1	0	16.89	0.60	17.49	56.10	2

CA_41C											
Combination 15MHz+20MHz (75RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39728	39899	QPSK	1	74	1	0	22.54	0.60	23.14	206.06	2
		16QAM	1	74	1	0	21.60	0.60	22.20	165.96	2
		64QAM	1	74	1	0	20.47	0.60	21.07	127.94	2
		256QAM	1	74	1	0	17.44	0.60	18.04	63.68	2
40523	40694	QPSK	1	74	1	0	22.12	0.60	22.72	187.07	2
		16QAM	1	74	1	0	21.11	0.60	21.71	148.25	2
		64QAM	1	74	1	0	19.97	0.60	20.57	114.02	2
		256QAM	1	74	1	0	16.92	0.60	17.52	56.49	2
41319	41490	QPSK	1	74	1	0	21.86	0.60	22.46	176.20	2
		16QAM	1	74	1	0	20.66	0.60	21.26	133.66	2
		64QAM	1	74	1	0	19.89	0.60	20.49	111.94	2
		256QAM	1	74	1	0	16.85	0.60	17.45	55.59	2

CA_41C											
Combination 20MHz+10MHz (100RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39894	QPSK	1	99	1	0	22.52	0.60	23.12	205.12	2
		16QAM	1	99	1	0	21.53	0.60	22.13	163.31	2
		64QAM	1	99	1	0	20.51	0.60	21.11	129.12	2
		256QAM	1	99	1	0	17.53	0.60	18.13	65.01	2
40571	40715	QPSK	1	99	1	0	22.21	0.60	22.81	190.99	2
		16QAM	1	99	1	0	21.10	0.60	21.70	147.91	2
		64QAM	1	99	1	0	20.10	0.60	20.70	117.49	2
		256QAM	1	99	1	0	17.01	0.60	17.61	57.68	2
41391	41535	QPSK	1	99	1	0	21.78	0.60	22.38	172.98	2
		16QAM	1	99	1	0	20.66	0.60	21.26	133.66	2
		64QAM	1	99	1	0	19.96	0.60	20.56	113.76	2
		256QAM	1	99	1	0	16.83	0.60	17.43	55.34	2

CA_41C											
Combination 10MHz+20MHz (50RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39705	39849	QPSK	1	49	1	0	22.52	0.60	23.12	205.12	2
		16QAM	1	49	1	0	21.53	0.60	22.13	163.31	2
		64QAM	1	49	1	0	20.48	0.60	21.08	128.23	2
		256QAM	1	49	1	0	17.44	0.60	18.04	63.68	2
40526	40670	QPSK	1	49	1	0	22.21	0.60	22.81	190.99	2
		16QAM	1	49	1	0	21.08	0.60	21.68	147.23	2
		64QAM	1	49	1	0	20.02	0.60	20.62	115.35	2
		256QAM	1	49	1	0	17.05	0.60	17.65	58.21	2
41346	41490	QPSK	1	49	1	0	21.86	0.60	22.46	176.20	2
		16QAM	1	49	1	0	20.77	0.60	21.37	137.09	2
		64QAM	1	49	1	0	19.94	0.60	20.54	113.24	2
		256QAM	1	49	1	0	16.79	0.60	17.39	54.83	2

CA_41C											
Combination 15MHz+15MHz (75RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39725	39875	QPSK	1	74	1	0	22.57	0.60	23.17	207.49	2
		16QAM	1	74	1	0	21.58	0.60	22.18	165.20	2
		64QAM	1	74	1	0	20.49	0.60	21.09	128.53	2
		256QAM	1	74	1	0	17.42	0.60	18.02	63.39	2
40545	40695	QPSK	1	74	1	0	22.26	0.60	22.86	193.20	2
		16QAM	1	74	1	0	21.07	0.60	21.67	146.89	2
		64QAM	1	74	1	0	20.04	0.60	20.64	115.88	2
		256QAM	1	74	1	0	17.00	0.60	17.60	57.54	2
41365	41515	QPSK	1	74	1	0	21.80	0.60	22.40	173.78	2
		16QAM	1	74	1	0	20.72	0.60	21.32	135.52	2
		64QAM	1	74	1	0	19.95	0.60	20.55	113.50	2
		256QAM	1	74	1	0	16.77	0.60	17.37	54.58	2

CA_41C											
Combination 15MHz+10MHz (75RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39725	39845	QPSK	1	74	1	0	22.55	0.60	23.15	206.54	2
		16QAM	1	74	1	0	21.55	0.60	22.15	164.06	2
		64QAM	1	74	1	0	20.49	0.60	21.09	128.53	2
		256QAM	1	74	1	0	17.55	0.60	18.15	65.31	2
40571	40691	QPSK	1	74	1	0	22.18	0.60	22.78	189.67	2
		16QAM	1	74	1	0	21.14	0.60	21.74	149.28	2
		64QAM	1	74	1	0	19.99	0.60	20.59	114.55	2
		256QAM	1	74	1	0	17.03	0.60	17.63	57.94	2
41417	41537	QPSK	1	74	1	0	21.86	0.60	22.46	176.20	2
		16QAM	1	74	1	0	20.77	0.60	21.37	137.09	2
		64QAM	1	74	1	0	19.95	0.60	20.55	113.50	2
		256QAM	1	74	1	0	16.85	0.60	17.45	55.59	2

CA_41C											
Combination 10MHz+15MHz (50RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39703	39823	QPSK	1	49	1	0	22.63	0.60	23.23	210.38	2
		16QAM	1	49	1	0	21.57	0.60	22.17	164.82	2
		64QAM	1	49	1	0	20.50	0.60	21.10	128.82	2
		256QAM	1	49	1	0	17.43	0.60	18.03	63.53	2
40549	40669	QPSK	1	49	1	0	22.14	0.60	22.74	187.93	2
		16QAM	1	49	1	0	21.06	0.60	21.66	146.55	2
		64QAM	1	49	1	0	20.02	0.60	20.62	115.35	2
		256QAM	1	49	1	0	16.95	0.60	17.55	56.89	2
41395	41515	QPSK	1	49	1	0	21.84	0.60	22.44	175.39	2
		16QAM	1	49	1	0	20.68	0.60	21.28	134.28	2
		64QAM	1	49	1	0	19.84	0.60	20.44	110.66	2
		256QAM	1	49	1	0	16.88	0.60	17.48	55.98	2

CA_41C											
Combination 20MHz+5MHz (100RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39867	QPSK	1	99	1	0	22.64	0.60	23.24	210.86	2
		16QAM	1	99	1	0	21.55	0.60	22.15	164.06	2
		64QAM	1	99	1	0	20.56	0.60	21.16	130.62	2
		256QAM	1	99	1	0	17.55	0.60	18.15	65.31	2
40595	40712	QPSK	1	99	1	0	22.15	0.60	22.75	188.36	2
		16QAM	1	99	1	0	21.11	0.60	21.71	148.25	2
		64QAM	1	99	1	0	19.99	0.60	20.59	114.55	2
		256QAM	1	99	1	0	17.04	0.60	17.64	58.08	2
41440	41557	QPSK	1	99	1	0	21.87	0.60	22.47	176.60	2
		16QAM	1	99	1	0	20.75	0.60	21.35	136.46	2
		64QAM	1	99	1	0	19.95	0.60	20.55	113.50	2
		256QAM	1	99	1	0	16.84	0.60	17.44	55.46	2

CA_41C											
Combination 5MHz+20MHz (25RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39683	39800	QPSK	1	24	1	0	22.56	0.60	23.16	207.01	2
		16QAM	1	24	1	0	21.51	0.60	22.11	162.55	2
		64QAM	1	24	1	0	20.51	0.60	21.11	129.12	2
		256QAM	1	24	1	0	17.55	0.60	18.15	65.31	2
40528	40645	QPSK	1	24	1	0	22.12	0.60	22.72	187.07	2
		16QAM	1	24	1	0	21.17	0.60	21.77	150.31	2
		64QAM	1	24	1	0	20.10	0.60	20.70	117.49	2
		256QAM	1	24	1	0	17.05	0.60	17.65	58.21	2
41373	40645	QPSK	1	24	1	0	21.75	0.60	22.35	171.79	2
		16QAM	1	24	1	0	20.64	0.60	21.24	133.05	2
		64QAM	1	24	1	0	19.89	0.60	20.49	111.94	2
		256QAM	1	24	1	0	16.84	0.60	17.44	55.46	2

LTE Band CA_41C(PC2)

CA_41C											
Combination 20MHz+20MHz (100RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39948	QPSK	1	99	1	0	25.32	0.60	25.92	390.84	2
		16QAM	1	99	1	0	24.28	0.60	24.88	307.61	2
		64QAM	1	99	1	0	23.36	0.60	23.96	248.89	2
		256QAM	1	99	1	0	20.34	0.60	20.94	124.17	2
40521	40719	QPSK	1	99	1	0	25.25	0.60	25.85	384.59	2
		16QAM	1	99	1	0	24.16	0.60	24.76	299.23	2
		64QAM	1	99	1	0	23.22	0.60	23.82	240.99	2
		256QAM	1	99	1	0	20.19	0.60	20.79	119.95	2
41292	41490	QPSK	1	99	1	0	25.22	0.60	25.82	381.94	2
		16QAM	1	99	1	0	24.24	0.60	24.84	304.79	2
		64QAM	1	99	1	0	23.32	0.60	23.92	246.60	2
		256QAM	1	99	1	0	20.30	0.60	20.90	123.03	2

CA_41C											
Combination 20MHz+15MHz (100RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39921	QPSK	1	99	1	0	25.17	0.60	25.77	377.57	2
		16QAM	1	99	1	0	24.18	0.60	24.78	300.61	2
		64QAM	1	99	1	0	23.21	0.60	23.81	240.44	2
		256QAM	1	99	1	0	20.33	0.60	20.93	123.88	2
40546	40717	QPSK	1	99	1	0	25.20	0.60	25.80	380.19	2
		16QAM	1	99	1	0	24.03	0.60	24.63	290.40	2
		64QAM	1	99	1	0	23.12	0.60	23.72	235.50	2
		256QAM	1	99	1	0	20.16	0.60	20.76	119.12	2
41341	41512	QPSK	1	99	1	0	25.11	0.60	25.71	372.39	2
		16QAM	1	99	1	0	24.11	0.60	24.71	295.80	2
		64QAM	1	99	1	0	23.20	0.60	23.80	239.88	2
		256QAM	1	99	1	0	20.23	0.60	20.83	121.06	2

CA_41C											
Combination 15MHz+20MHz (75RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39728	39899	QPSK	1	74	1	0	25.31	0.60	25.91	389.94	2
		16QAM	1	74	1	0	24.17	0.60	24.77	299.92	2
		64QAM	1	74	1	0	23.31	0.60	23.91	246.04	2
		256QAM	1	74	1	0	20.25	0.60	20.85	121.62	2
40523	40694	QPSK	1	74	1	0	25.21	0.60	25.81	381.07	2
		16QAM	1	74	1	0	24.09	0.60	24.69	294.44	2
		64QAM	1	74	1	0	23.14	0.60	23.74	236.59	2
		256QAM	1	74	1	0	20.09	0.60	20.69	117.22	2
41319	41490	QPSK	1	74	1	0	25.18	0.60	25.78	378.44	2
		16QAM	1	74	1	0	24.21	0.60	24.81	302.69	2
		64QAM	1	74	1	0	23.18	0.60	23.78	238.78	2
		256QAM	1	74	1	0	20.24	0.60	20.84	121.34	2

CA_41C											
Combination 20MHz+10MHz (100RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39894	QPSK	1	99	1	0	25.19	0.60	25.79	379.31	2
		16QAM	1	99	1	0	24.22	0.60	24.82	303.39	2
		64QAM	1	99	1	0	23.27	0.60	23.87	243.78	2
		256QAM	1	99	1	0	20.28	0.60	20.88	122.46	2
40571	40715	QPSK	1	99	1	0	25.23	0.60	25.83	382.82	2
		16QAM	1	99	1	0	24.15	0.60	24.75	298.54	2
		64QAM	1	99	1	0	23.09	0.60	23.69	233.88	2
		256QAM	1	99	1	0	20.14	0.60	20.74	118.58	2
41391	41535	QPSK	1	99	1	0	25.19	0.60	25.79	379.31	2
		16QAM	1	99	1	0	24.09	0.60	24.69	294.44	2
		64QAM	1	99	1	0	23.23	0.60	23.83	241.55	2
		256QAM	1	99	1	0	20.21	0.60	20.81	120.50	2

CA_41C											
Combination 10MHz+20MHz (50RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39705	39849	QPSK	1	49	1	0	25.28	0.60	25.88	387.26	2
		16QAM	1	49	1	0	24.21	0.60	24.81	302.69	2
		64QAM	1	49	1	0	23.22	0.60	23.82	240.99	2
		256QAM	1	49	1	0	20.32	0.60	20.92	123.59	2
40526	40670	QPSK	1	49	1	0	25.10	0.60	25.70	371.54	2
		16QAM	1	49	1	0	24.10	0.60	24.70	295.12	2
		64QAM	1	49	1	0	23.08	0.60	23.68	233.35	2
		256QAM	1	49	1	0	20.07	0.60	20.67	116.68	2
41346	41490	QPSK	1	49	1	0	25.14	0.60	25.74	374.97	2
		16QAM	1	49	1	0	24.15	0.60	24.75	298.54	2
		64QAM	1	49	1	0	23.29	0.60	23.89	244.91	2
		256QAM	1	49	1	0	20.15	0.60	20.75	118.85	2

CA_41C											
Combination 15MHz+15MHz (75RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39725	39875	QPSK	1	74	1	0	25.24	0.60	25.84	383.71	2
		16QAM	1	74	1	0	24.23	0.60	24.83	304.09	2
		64QAM	1	74	1	0	23.21	0.60	23.81	240.44	2
		256QAM	1	74	1	0	20.31	0.60	20.91	123.31	2
40545	40695	QPSK	1	74	1	0	25.21	0.60	25.81	381.07	2
		16QAM	1	74	1	0	24.05	0.60	24.65	291.74	2
		64QAM	1	74	1	0	23.14	0.60	23.74	236.59	2
		256QAM	1	74	1	0	20.09	0.60	20.69	117.22	2
41365	41515	QPSK	1	74	1	0	25.14	0.60	25.74	374.97	2
		16QAM	1	74	1	0	24.16	0.60	24.76	299.23	2
		64QAM	1	74	1	0	23.21	0.60	23.81	240.44	2
		256QAM	1	74	1	0	20.16	0.60	20.76	119.12	2

CA_41C											
Combination 15MHz+10MHz (75RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39725	39845	QPSK	1	74	1	0	25.24	0.60	25.84	383.71	2
		16QAM	1	74	1	0	24.24	0.60	24.84	304.79	2
		64QAM	1	74	1	0	23.26	0.60	23.86	243.22	2
		256QAM	1	74	1	0	20.23	0.60	20.83	121.06	2
40571	40691	QPSK	1	74	1	0	25.16	0.60	25.76	376.70	2
		16QAM	1	74	1	0	24.10	0.60	24.70	295.12	2
		64QAM	1	74	1	0	23.10	0.60	23.70	234.42	2
		256QAM	1	74	1	0	20.04	0.60	20.64	115.88	2
41417	41537	QPSK	1	74	1	0	25.14	0.60	25.74	374.97	2
		16QAM	1	74	1	0	24.10	0.60	24.70	295.12	2
		64QAM	1	74	1	0	23.20	0.60	23.80	239.88	2
		256QAM	1	74	1	0	20.17	0.60	20.77	119.40	2

CA_41C											
Combination 10MHz+15MHz (50RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39703	39823	QPSK	1	49	1	0	25.25	0.60	25.85	384.59	2
		16QAM	1	49	1	0	24.18	0.60	24.78	300.61	2
		64QAM	1	49	1	0	23.29	0.60	23.89	244.91	2
		256QAM	1	49	1	0	20.30	0.60	20.90	123.03	2
40549	40669	QPSK	1	49	1	0	25.23	0.60	25.83	382.82	2
		16QAM	1	49	1	0	24.04	0.60	24.64	291.07	2
		64QAM	1	49	1	0	23.20	0.60	23.80	239.88	2
		256QAM	1	49	1	0	20.09	0.60	20.69	117.22	2
41395	41515	QPSK	1	49	1	0	25.11	0.60	25.71	372.39	2
		16QAM	1	49	1	0	24.17	0.60	24.77	299.92	2
		64QAM	1	49	1	0	23.22	0.60	23.82	240.99	2
		256QAM	1	49	1	0	20.23	0.60	20.83	121.06	2

CA_41C											
Combination 20MHz+5MHz (100RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39750	39867	QPSK	1	99	1	0	25.17	0.60	25.77	377.57	2
		16QAM	1	99	1	0	24.25	0.60	24.85	305.49	2
		64QAM	1	99	1	0	23.25	0.60	23.85	242.66	2
		256QAM	1	99	1	0	20.23	0.60	20.83	121.06	2
40595	40712	QPSK	1	99	1	0	25.24	0.60	25.84	383.71	2
		16QAM	1	99	1	0	24.04	0.60	24.64	291.07	2
		64QAM	1	99	1	0	23.17	0.60	23.77	238.23	2
		256QAM	1	99	1	0	20.12	0.60	20.72	118.03	2
41440	41557	QPSK	1	99	1	0	25.21	0.60	25.81	381.07	2
		16QAM	1	99	1	0	24.10	0.60	24.70	295.12	2
		64QAM	1	99	1	0	23.20	0.60	23.80	239.88	2
		256QAM	1	99	1	0	20.28	0.60	20.88	122.46	2

CA_41C											
Combination 5MHz+20MHz (25RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
39683	39800	QPSK	1	24	1	0	25.26	0.60	25.86	385.48	2
		16QAM	1	24	1	0	24.13	0.60	24.73	297.17	2
		64QAM	1	24	1	0	23.21	0.60	23.81	240.44	2
		256QAM	1	24	1	0	20.31	0.60	20.91	123.31	2
40528	40645	QPSK	1	24	1	0	25.21	0.60	25.81	381.07	2
		16QAM	1	24	1	0	24.05	0.60	24.65	291.74	2
		64QAM	1	24	1	0	23.20	0.60	23.80	239.88	2
		256QAM	1	24	1	0	20.13	0.60	20.73	118.30	2
41373	40645	QPSK	1	24	1	0	25.15	0.60	25.75	375.84	2
		16QAM	1	24	1	0	24.22	0.60	24.82	303.39	2
		64QAM	1	24	1	0	23.23	0.60	23.83	241.55	2
		256QAM	1	24	1	0	20.22	0.60	20.82	120.78	2

LTE Band CA_66B

CA_66B											
Combination 10MHz+10MHz (50RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132022	132121	QPSK	1	49	1	0	22.62	-2.15	20.47	111.43	1
		16QAM	1	49	1	0	21.97	-2.15	19.82	95.94	1
		64QAM	1	49	1	0	21.39	-2.15	19.24	83.95	1
		256QAM	1	49	1	0	18.26	-2.15	16.11	40.83	1
132373	132472	QPSK	1	49	1	0	22.43	-2.15	20.28	106.66	1
		16QAM	1	49	1	0	21.58	-2.15	19.43	87.70	1
		64QAM	1	49	1	0	21.13	-2.15	18.98	79.07	1
		256QAM	1	49	1	0	18.06	-2.15	15.91	38.99	1
132523	132622	QPSK	1	49	1	0	22.66	-2.15	20.51	112.46	1
		16QAM	1	49	1	0	21.94	-2.15	19.79	95.28	1
		64QAM	1	49	1	0	21.36	-2.15	19.21	83.37	1
		256QAM	1	49	1	0	18.28	-2.15	16.13	41.02	1

CA_66B											
Combination 15MHz+5MHz (75RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132047	132140	QPSK	1	74	1	0	22.56	-2.15	20.41	109.90	1
		16QAM	1	74	1	0	21.87	-2.15	19.72	93.76	1
		64QAM	1	74	1	0	21.32	-2.15	19.17	82.60	1
		256QAM	1	74	1	0	18.21	-2.15	16.06	40.36	1
132398	132491	QPSK	1	74	1	0	22.40	-2.15	20.25	105.93	1
		16QAM	1	74	1	0	21.57	-2.15	19.42	87.50	1
		64QAM	1	74	1	0	21.02	-2.15	18.87	77.09	1
		256QAM	1	74	1	0	17.98	-2.15	15.83	38.28	1
132549	132642	QPSK	1	74	1	0	22.54	-2.15	20.39	109.40	1
		16QAM	1	74	1	0	21.93	-2.15	19.78	95.06	1
		64QAM	1	74	1	0	21.24	-2.15	19.09	81.10	1
		256QAM	1	74	1	0	18.26	-2.15	16.11	40.83	1

CA_66B											
Combination 5MHz+15MHz (25RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132002	132095	QPSK	1	24	1	0	22.52	-2.15	20.37	108.89	1
		16QAM	1	24	1	0	21.89	-2.15	19.74	94.19	1
		64QAM	1	24	1	0	21.27	-2.15	19.12	81.66	1
		256QAM	1	24	1	0	18.12	-2.15	15.97	39.54	1
132353	132446	QPSK	1	24	1	0	22.28	-2.15	20.13	103.04	1
		16QAM	1	24	1	0	21.51	-2.15	19.36	86.30	1
		64QAM	1	24	1	0	21.03	-2.15	18.88	77.27	1
		256QAM	1	24	1	0	17.97	-2.15	15.82	38.19	1
132504	132597	QPSK	1	24	1	0	22.60	-2.15	20.45	110.92	1
		16QAM	1	24	1	0	21.83	-2.15	19.68	92.90	1
		64QAM	1	24	1	0	21.31	-2.15	19.16	82.41	1
		256QAM	1	24	1	0	18.18	-2.15	16.03	40.09	1

CA_66B											
Combination 10MHz+5MHz (50RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132022	132094	QPSK	1	49	1	0	22.58	-2.15	20.43	110.41	1
		16QAM	1	49	1	0	21.93	-2.15	19.78	95.06	1
		64QAM	1	49	1	0	21.36	-2.15	19.21	83.37	1
		256QAM	1	49	1	0	18.15	-2.15	16.00	39.81	1
132397	132469	QPSK	1	49	1	0	22.37	-2.15	20.22	105.20	1
		16QAM	1	49	1	0	21.50	-2.15	19.35	86.10	1
		64QAM	1	49	1	0	21.06	-2.15	18.91	77.80	1
		256QAM	1	49	1	0	17.91	-2.15	15.76	37.67	1
132572	132644	QPSK	1	49	1	0	22.55	-2.15	20.40	109.65	1
		16QAM	1	49	1	0	21.86	-2.15	19.71	93.54	1
		64QAM	1	49	1	0	21.21	-2.15	19.06	80.54	1
		256QAM	1	49	1	0	18.16	-2.15	16.01	39.90	1

CA_66B											
Combination 5MHz+10MHz (25RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132000	132072	QPSK	1	24	1	0	22.50	-2.15	20.35	108.39	1
		16QAM	1	24	1	0	21.87	-2.15	19.72	93.76	1
		64QAM	1	24	1	0	21.29	-2.15	19.14	82.04	1
		256QAM	1	24	1	0	18.11	-2.15	15.96	39.45	1
132375	132447	QPSK	1	24	1	0	22.38	-2.15	20.23	105.44	1
		16QAM	1	24	1	0	21.56	-2.15	19.41	87.30	1
		64QAM	1	24	1	0	20.98	-2.15	18.83	76.38	1
		256QAM	1	24	1	0	18.02	-2.15	15.87	38.64	1
132550	132622	QPSK	1	24	1	0	22.61	-2.15	20.46	111.17	1
		16QAM	1	24	1	0	21.89	-2.15	19.74	94.19	1
		64QAM	1	24	1	0	21.33	-2.15	19.18	82.79	1
		256QAM	1	24	1	0	18.23	-2.15	16.08	40.55	1

CA_66B											
Combination 5MHz+5MHz (25RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
131997	132045	QPSK	1	24	1	0	22.60	-2.15	20.45	110.92	1
		16QAM	1	24	1	0	21.94	-2.15	19.79	95.28	1
		64QAM	1	24	1	0	21.29	-2.15	19.14	82.04	1
		256QAM	1	24	1	0	18.18	-2.15	16.03	40.09	1
132398	132446	QPSK	1	24	1	0	22.42	-2.15	20.27	106.41	1
		16QAM	1	24	1	0	21.48	-2.15	19.33	85.70	1
		64QAM	1	24	1	0	20.98	-2.15	18.83	76.38	1
		256QAM	1	24	1	0	17.96	-2.15	15.81	38.11	1
132599	132647	QPSK	1	24	1	0	22.59	-2.15	20.44	110.66	1
		16QAM	1	24	1	0	21.86	-2.15	19.71	93.54	1
		64QAM	1	24	1	0	21.32	-2.15	19.17	82.60	1
		256QAM	1	24	1	0	18.23	-2.15	16.08	40.55	1



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Test Report No.: W7L-231218W001RF09

LTE Band CA_66C

CA_66C											
Combination 20MHz+20MHz (100RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132072	132270	QPSK	1	99	1	0	22.39	-2.15	20.24	105.68	1
		16QAM	1	99	1	0	21.71	-2.15	19.56	90.36	1
		64QAM	1	99	1	0	21.18	-2.15	19.03	79.98	1
		256QAM	1	99	1	0	18.03	-2.15	15.88	38.73	1
132323	132521	QPSK	1	99	1	0	22.54	-2.15	20.39	109.40	1
		16QAM	1	99	1	0	21.82	-2.15	19.67	92.68	1
		64QAM	1	99	1	0	21.30	-2.15	19.15	82.22	1
		256QAM	1	99	1	0	18.28	-2.15	16.13	41.02	1
132374	132572	QPSK	1	99	1	0	22.60	-2.15	20.45	110.92	1
		16QAM	1	99	1	0	21.88	-2.15	19.73	93.97	1
		64QAM	1	99	1	0	20.43	-2.15	18.28	67.30	1
		256QAM	1	99	1	0	17.35	-2.15	15.20	33.11	1

CA_66C											
Combination 20MHz+15MHz (100RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132072	132243	QPSK	1	99	1	0	22.31	-2.15	20.16	103.75	1
		16QAM	1	99	1	0	21.59	-2.15	19.44	87.90	1
		64QAM	1	99	1	0	21.05	-2.15	18.90	77.62	1
		256QAM	1	99	1	0	18.00	-2.15	15.85	38.46	1
132348	132519	QPSK	1	99	1	0	22.50	-2.15	20.35	108.39	1
		16QAM	1	99	1	0	21.67	-2.15	19.52	89.54	1
		64QAM	1	99	1	0	21.18	-2.15	19.03	79.98	1
		256QAM	1	99	1	0	18.17	-2.15	16.02	39.99	1
132423	132594	QPSK	1	99	1	0	22.46	-2.15	20.31	107.40	1
		16QAM	1	99	1	0	21.77	-2.15	19.62	91.62	1
		64QAM	1	99	1	0	20.35	-2.15	18.20	66.07	1
		256QAM	1	99	1	0	17.26	-2.15	15.11	32.43	1

CA_66C											
Combination 15MHz+20MHz (75RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132050	132221	QPSK	1	74	1	0	22.38	-2.15	20.23	105.44	1
		16QAM	1	74	1	0	21.67	-2.15	19.52	89.54	1
		64QAM	1	74	1	0	21.17	-2.15	19.02	79.80	1
		256QAM	1	74	1	0	17.97	-2.15	15.82	38.19	1
132325	132496	QPSK	1	74	1	0	22.52	-2.15	20.37	108.89	1
		16QAM	1	74	1	0	21.71	-2.15	19.56	90.36	1
		64QAM	1	74	1	0	21.27	-2.15	19.12	81.66	1
		256QAM	1	74	1	0	18.25	-2.15	16.10	40.74	1
132401	132572	QPSK	1	74	1	0	22.54	-2.15	20.39	109.40	1
		16QAM	1	74	1	0	21.73	-2.15	19.58	90.78	1
		64QAM	1	74	1	0	20.38	-2.15	18.23	66.53	1
		256QAM	1	74	1	0	17.25	-2.15	15.10	32.36	1

CA_66C											
Combination 20MHz+10MHz (100RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132072	132216	QPSK	1	99	1	0	22.25	-2.15	20.10	102.33	1
		16QAM	1	99	1	0	21.61	-2.15	19.46	88.31	1
		64QAM	1	99	1	0	21.13	-2.15	18.98	79.07	1
		256QAM	1	99	1	0	17.90	-2.15	15.75	37.58	1
132373	132517	QPSK	1	99	1	0	22.51	-2.15	20.36	108.64	1
		16QAM	1	99	1	0	21.69	-2.15	19.54	89.95	1
		64QAM	1	99	1	0	21.29	-2.15	19.14	82.04	1
		256QAM	1	99	1	0	18.14	-2.15	15.99	39.72	1
132473	132617	QPSK	1	99	1	0	22.54	-2.15	20.39	109.40	1
		16QAM	1	99	1	0	21.86	-2.15	19.71	93.54	1
		64QAM	1	99	1	0	20.30	-2.15	18.15	65.31	1
		256QAM	1	99	1	0	17.22	-2.15	15.07	32.14	1

CA_66C											
Combination 10MHz+20MHz (50RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132027	132171	QPSK	1	49	1	0	22.36	-2.15	20.21	104.95	1
		16QAM	1	49	1	0	21.57	-2.15	19.42	87.50	1
		64QAM	1	49	1	0	21.17	-2.15	19.02	79.80	1
		256QAM	1	49	1	0	18.01	-2.15	15.86	38.55	1
132328	132472	QPSK	1	49	1	0	22.46	-2.15	20.31	107.40	1
		16QAM	1	49	1	0	21.73	-2.15	19.58	90.78	1
		64QAM	1	49	1	0	21.19	-2.15	19.04	80.17	1
		256QAM	1	49	1	0	18.26	-2.15	16.11	40.83	1
132428	132572	QPSK	1	49	1	0	22.46	-2.15	20.31	107.40	1
		16QAM	1	49	1	0	21.73	-2.15	19.58	90.78	1
		64QAM	1	49	1	0	20.34	-2.15	18.19	65.92	1
		256QAM	1	49	1	0	17.25	-2.15	15.10	32.36	1

CA_66C											
Combination 15MHz+15MHz (75RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132047	132197	QPSK	1	74	1	0	22.25	-2.15	20.10	102.33	1
		16QAM	1	74	1	0	21.65	-2.15	19.50	89.13	1
		64QAM	1	74	1	0	21.16	-2.15	19.01	79.62	1
		256QAM	1	74	1	0	17.99	-2.15	15.84	38.37	1
132347	132497	QPSK	1	74	1	0	22.40	-2.15	20.25	105.93	1
		16QAM	1	74	1	0	21.68	-2.15	19.53	89.74	1
		64QAM	1	74	1	0	21.21	-2.15	19.06	80.54	1
		256QAM	1	74	1	0	18.20	-2.15	16.05	40.27	1
132447	132597	QPSK	1	74	1	0	22.57	-2.15	20.42	110.15	1
		16QAM	1	74	1	0	21.79	-2.15	19.64	92.04	1
		64QAM	1	74	1	0	20.42	-2.15	18.27	67.14	1
		256QAM	1	74	1	0	17.26	-2.15	15.11	32.43	1

CA_66C											
Combination 15MHz+10MHz (75RB+50RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132047	132167	QPSK	1	74	1	0	22.34	-2.15	20.19	104.47	1
		16QAM	1	74	1	0	21.60	-2.15	19.45	88.10	1
		64QAM	1	74	1	0	21.10	-2.15	18.95	78.52	1
		256QAM	1	74	1	0	18.01	-2.15	15.86	38.55	1
132373	132493	QPSK	1	74	1	0	22.47	-2.15	20.32	107.65	1
		16QAM	1	74	1	0	21.80	-2.15	19.65	92.26	1
		64QAM	1	74	1	0	21.28	-2.15	19.13	81.85	1
		256QAM	1	74	1	0	18.25	-2.15	16.10	40.74	1
132499	132619	QPSK	1	74	1	0	22.51	-2.15	20.36	108.64	1
		16QAM	1	74	1	0	21.74	-2.15	19.59	90.99	1
		64QAM	1	74	1	0	20.42	-2.15	18.27	67.14	1
		256QAM	1	74	1	0	17.29	-2.15	15.14	32.66	1

CA_66C											
Combination 10MHz+15MHz (50RB+75RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132025	132145	QPSK	1	49	1	0	22.27	-2.15	20.12	102.80	1
		16QAM	1	49	1	0	21.69	-2.15	19.54	89.95	1
		64QAM	1	49	1	0	21.04	-2.15	18.89	77.45	1
		256QAM	1	49	1	0	18.01	-2.15	15.86	38.55	1
132351	132471	QPSK	1	49	1	0	22.48	-2.15	20.33	107.89	1
		16QAM	1	49	1	0	21.77	-2.15	19.62	91.62	1
		64QAM	1	49	1	0	21.24	-2.15	19.09	81.10	1
		256QAM	1	49	1	0	18.21	-2.15	16.06	40.36	1
132477	132597	QPSK	1	49	1	0	22.57	-2.15	20.42	110.15	1
		16QAM	1	49	1	0	21.80	-2.15	19.65	92.26	1
		64QAM	1	49	1	0	20.37	-2.15	18.22	66.37	1
		256QAM	1	49	1	0	17.26	-2.15	15.11	32.43	1

CA_66C											
Combination 20MHz+5MHz (100RB+25RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132072	132189	QPSK	1	99	1	0	22.34	-2.15	20.19	104.47	1
		16QAM	1	99	1	0	21.66	-2.15	19.51	89.33	1
		64QAM	1	99	1	0	21.08	-2.15	18.93	78.16	1
		256QAM	1	99	1	0	17.88	-2.15	15.73	37.41	1
132397	132514	QPSK	1	99	1	0	22.41	-2.15	20.26	106.17	1
		16QAM	1	99	1	0	21.74	-2.15	19.59	90.99	1
		64QAM	1	99	1	0	21.15	-2.15	19.00	79.43	1
		256QAM	1	99	1	0	18.19	-2.15	16.04	40.18	1
132522	132639	QPSK	1	99	1	0	22.53	-2.15	20.38	109.14	1
		16QAM	1	99	1	0	21.79	-2.15	19.64	92.04	1
		64QAM	1	99	1	0	20.28	-2.15	18.13	65.01	1
		256QAM	1	99	1	0	17.26	-2.15	15.11	32.43	1

CA_66C											
Combination 5MHz+20MHz (25RB+100RB)											
PCC	SCC	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
Channel	Channel		RB Size	RB offset	RB Size	RB offset					
132005	132122	QPSK	1	24	1	0	22.37	-2.15	20.22	105.20	1
		16QAM	1	24	1	0	21.68	-2.15	19.53	89.74	1
		64QAM	1	24	1	0	21.11	-2.15	18.96	78.70	1
		256QAM	1	24	1	0	17.93	-2.15	15.78	37.84	1
132330	132447	QPSK	1	24	1	0	22.48	-2.15	20.33	107.89	1
		16QAM	1	24	1	0	21.75	-2.15	19.60	91.20	1
		64QAM	1	24	1	0	21.20	-2.15	19.05	80.35	1
		256QAM	1	24	1	0	18.21	-2.15	16.06	40.36	1
132455	132572	QPSK	1	24	1	0	22.52	-2.15	20.37	108.89	1
		16QAM	1	24	1	0	21.81	-2.15	19.66	92.47	1
		64QAM	1	24	1	0	20.41	-2.15	18.26	66.99	1
		256QAM	1	24	1	0	17.25	-2.15	15.10	32.36	1

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

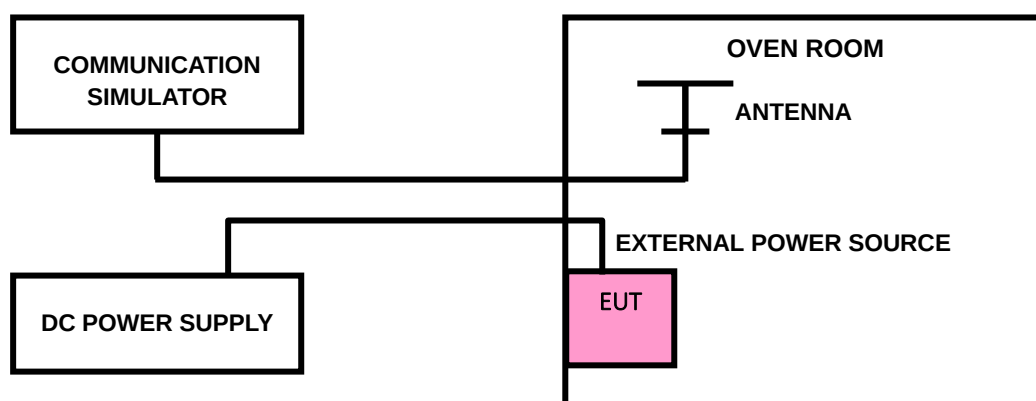
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

LTE BAND CA_7C

LTE BAND CA_7C channel and Frequency List					
BW(MHz)	Channel/Frequency(MHz)		Lowest	Middle	Highest
10+20	PCC	channel	20805	21006	21206
		Frequency	2505.5	2525.6	2545.6
	SCC	channel	20949	21150	21350
		Frequency	2519.9	2540	2560
15+10	PCC	channel	20825	21051	21277
		Frequency	2507.5	2530.1	2552.7
	SCC	channel	20945	21171	21397
		Frequency	2519.5	2542.1	2564.7
15+15	PCC	channel	20825	21025	21225
		Frequency	2507.5	2527.5	2547.5
	SCC	channel	20975	21175	21375
		Frequency	2522.5	2542.5	2562.5
15+20	PCC	channel	20828	21003	21179
		Frequency	2507.8	2525.3	2542.9
	SCC	channel	20999	21174	21350
		Frequency	2524.9	2542.4	2560
20+10	PCC	channel	20850	21051	21251
		Frequency	2510	2530.1	2550.1
	SCC	channel	20994	21195	21395
		Frequency	2524.4	2544.5	2564.5
20+15	PCC	channel	20850	21026	21201
		Frequency	2510	2527.6	2545.1
	SCC	channel	21021	21197	21372
		Frequency	2527.1	2544.7	2562.2
20+20	PCC	channel	20850	21001	21152
		Frequency	2510	2525.1	2540.2
	SCC	channel	21048	21199	21350
		Frequency	2529.8	2544.9	2560

LTE BAND CA_12B

LTE BAND CA_38C channel and Frequency List					
BW(MHz)	Channel/Frequency(MHz)		Lowest	Middle	Highest
5+10	PCC	channel	23038	23048	23058
		Frequency	701.8	702.8	703.8
	SCC	channel	23110	23120	23130
		Frequency	709	710	711
5+5	PCC	channel	23035	23071	23107
		Frequency	701.5	705.1	708.7
	SCC	channel	23083	23119	23155
		Frequency	706.3	709.9	713.5

LTE BAND CA_41C

LTE BAND CA_41C channel and Frequency List					
BW(MHz)	Channel/Frequency(MHz)		Lowest	Middle	Highest
5+20	PCC	channel	39683	40528	41373
		Frequency	2499.3	2583.8	2668.3
	SCC	channel	39800	40645	41490
		Frequency	2511	2595.5	2680
10+15	PCC	channel	39703	40549	41395
		Frequency	2501.3	2585.9	2670.5
	SCC	channel	39823	40669	41515
		Frequency	2513.3	2597.9	2682.5
10+20	PCC	channel	39705	40526	41346
		Frequency	2501.5	2583.6	2665.6
	SCC	channel	39849	40670	41490
		Frequency	2515.9	2598.0	2680
15+10	PCC	channel	39725	40571	41417
		Frequency	2503.5	2588.1	2672.7
	SCC	channel	39845	40691	41537
		Frequency	2515.5	2600.1	2684.7

15+15	PCC	channel	39725	40545	41365
		Frecucncy	2503.5	2585.5	2667.5
	SCC	channel	39875	40695	41515
		Frecucncy	2518.5	2600.5	2682.5
15+20	PCC	channel	39728	40523	41319
		Frecucncy	2503.8	2583.3	2662.9
	SCC	channel	39899	40694	41490
		Frecucncy	2520.9	2600.4	2680
20+5	PCC	channel	39750	40595	41440
		Frecucncy	2506	2590.5	2675
	SCC	channel	39867	40712	41557
		Frecucncy	2517.7	2602.2	2686.7
20+10	PCC	channel	39750	40571	41391
		Frecucncy	2506	2588.1	2670.1
	SCC	channel	39894	40715	41535
		Frecucncy	2520.4	2602.5	2684.5
20+15	PCC	channel	39750	40546	41341
		Frecucncy	2506	2585.6	2665.1
	SCC	channel	39921	40717	41512
		Frecucncy	2523.1	2602.7	2682.2
20+20	PCC	channel	39750	40521	41292
		Frecucncy	2506	2583.1	2660.2
	SCC	channel	39948	40719	41490
		Frecucncy	2525.8	2602.9	2680



**BUREAU
VERITAS**

Test Report No.: W7L-231218W001RF09

LTE BAND CA_66B

LTE BAND CA_66B channel and Frequency List					
BW(MHz)	Channel/Frequency(MHz)		Lowest	Middle	Highest
10+10	PCC	channel	132022	132373	132523
		Frequency	1715	1750.1	1765.1
	SCC	channel	132121	132472	132622
		Frequency	1724.9	1760	1775
15+5	PCC	channel	132002	132353	132504
		Frequency	1713	1748.1	1763.2
	SCC	channel	132095	132446	132597
		Frequency	1722.3	1757.4	1772.5
10+5	PCC	channel	132022	132397	132572
		Frequency	1715	1752.5	1770
	SCC	channel	132094	132469	132644
		Frequency	1722.2	1759.7	1777.2
5+10	PCC	channel	132000	132375	132550
		Frequency	1712.8	1750.3	1767.8
	SCC	channel	132072	132447	132622
		Frequency	1720	1757.5	1775
5+5	PCC	channel	131997	132398	132599
		Frequency	1712.5	1777.5	1772.7
	SCC	channel	132045	132446	132647
		Frequency	1717.3	1782.3	1777.5



**BUREAU
VERITAS**

Test Report No.: W7L-231218W001RF09

LTE BAND CA_66C

LTE BAND CA_66B channel and Frequency List					
BW(MHz)	Channel/Frequency(MHz)		Lowest	Middle	Highest
20+20	PCC	channel	132072	132323	132374
		Frequency	1720	1745.1	1750.2
	SCC	channel	132270	132521	132572
		Frequency	1739.8	1764.9	1770
20+15	PCC	channel	132072	132348	132423
		Frequency	1720	1747.6	1755.1
	SCC	channel	132243	132519	132594
		Frequency	1737.1	1764.7	1772.2
15+20	PCC	channel	132050	132325	132401
		Frequency	1717.8	1745.3	1752.9
	SCC	channel	132221	132496	132572
		Frequency	1734.9	1762.4	1770
20+10	PCC	channel	132072	132373	132473
		Frequency	1720	1750.1	1760.1
	SCC	channel	132216	132517	132617
		Frequency	1734.4	1764.5	1774.5
10+20	PCC	channel	132027	132328	132428
		Frequency	1715.5	1745.6	1755.6
	SCC	channel	132171	132472	132572
		Frequency	1729.9	1760	1770
15+15	PCC	channel	132047	132347	132447
		Frequency	1717.5	1747.5	1757.5
	SCC	channel	132197	132497	132597
		Frequency	1732.5	1762.5	1772.5
15+10	PCC	channel	132047	132373	132499
		Frequency	1717.5	1750.1	1762.7
	SCC	channel	132167	132493	132619
		Frequency	1729.5	1762.1	1774.7
10+15	PCC	channel	132025	132351	132477
		Frequency	1715.3	1747.9	1760.5
	SCC	channel	132145	132471	132597



BUREAU
VERITAS

Test Report No.: W7L-231218W001RF09

		Frequency	1727.3	1759.9	1772.5
20+5	PCC	channel	132072	132397	132522
		Frequency	1720	1752.5	1765
	SCC	channel	132189	132514	132639
		Frequency	1731.7	1764.2	1776.7
5+20	PCC	channel	132005	132330	132455
		Frequency	1713.3	1745.8	1758.3
	SCC	channel	132122	132447	132572
		Frequency	1725	1757.5	1770

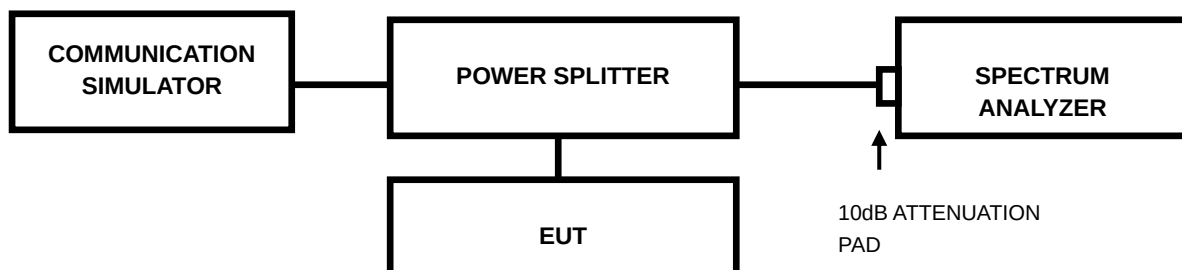
Note: VL = Low voltage(3.4V); VN/NV = Normal voltage(3.8V); VH = High voltage(4.35V);
NT = Normal temperature (25°C)

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.



Test Report No.: W7L-231218W001RF09

3.3.4 TEST RESULTS

Please Refer to Appendix I Of this test report.

3.4 BAND EDGE MEASUREMENT

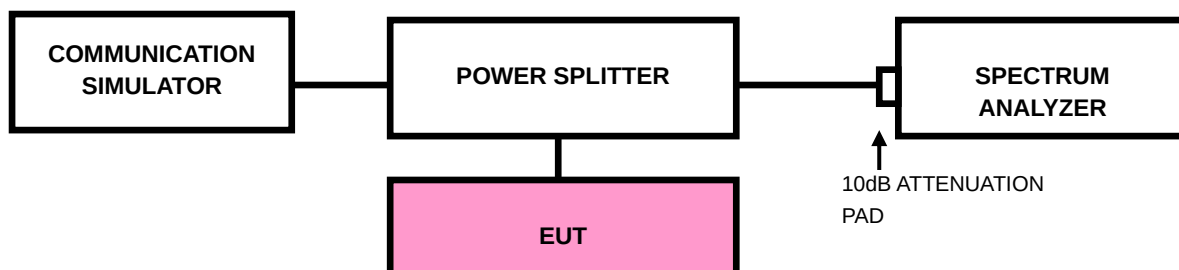
3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

- a) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
- c) Set the resolution bandwidth (RBW) $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
- d) Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- e) Set the video bandwidth (VBW) to $\geq 3 \times$ RBW.
- f) Select the average power (RMS) display detector.
- g) Set the number of measurement points to ≥ 1001 .
- h) Use auto-coupled sweep time.
- i) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- j) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.
- k) Record the max trace plot into the test report.

3.4.4 TEST RESULTS

Please Refer to Appendix I Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS 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 .

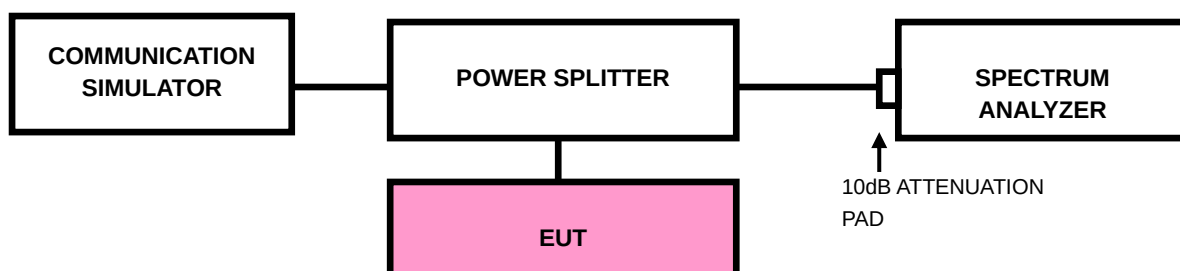
For: LTE Band7C/Band41C

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP





Test Report No.: W7L-231218W001RF09

3.5.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix I Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 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 .

For: LTE Band7C/ Band41C

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m 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 substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G.
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

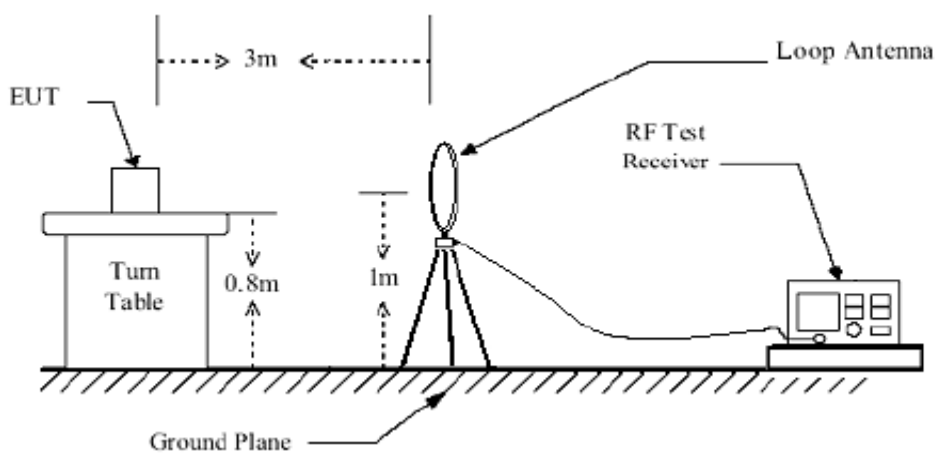
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

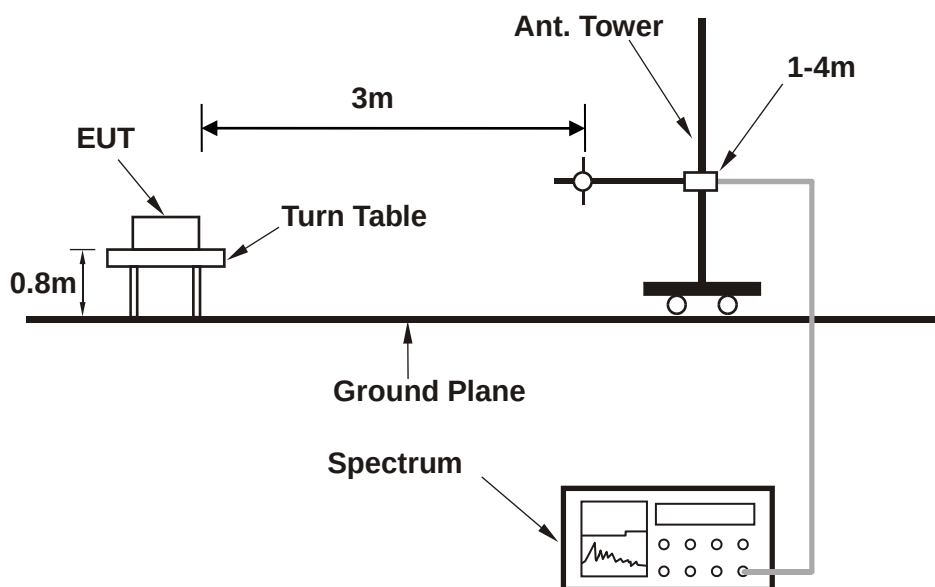
No deviation

3.6.4 TEST SETUP

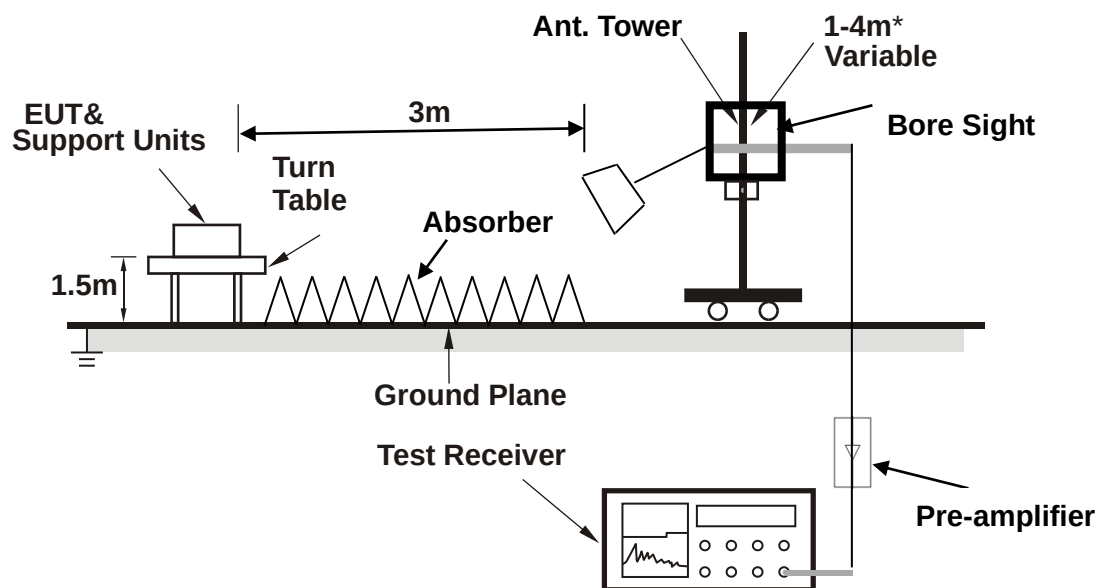
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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

3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

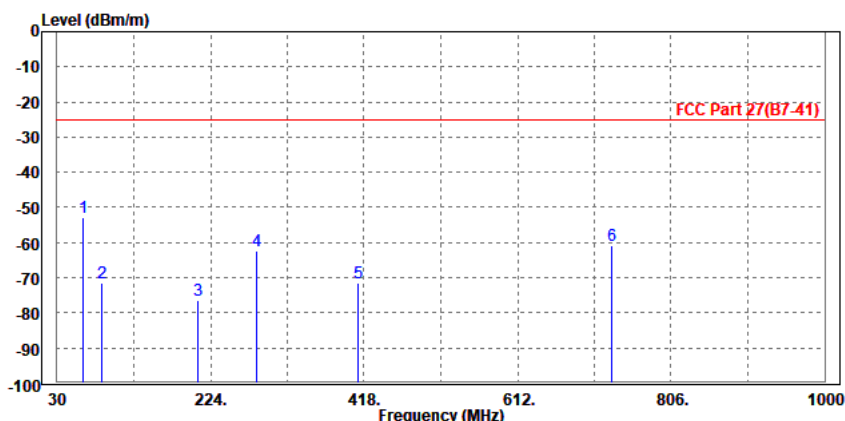
30 MHz – 1GHz data:

LTE Band CA_41C

CHANNEL BANDWIDTH: (20+20) MHz / QPSK

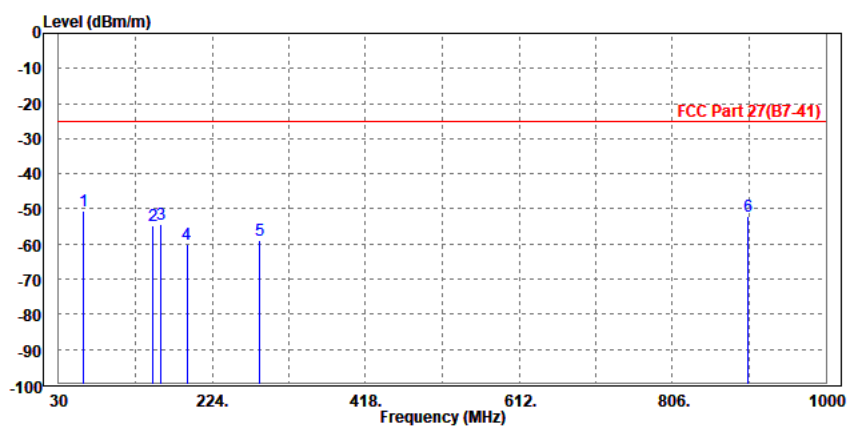
MODE	TX channel PCC 40521	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 40719		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	62.980	-52.75	-40.37	-25.00	-27.75	-12.38	Peak	Horizontal
2	86.260	-71.67	-58.95	-25.00	-46.67	-12.72	Peak	Horizontal
3	207.510	-76.55	-61.82	-25.00	-51.55	-14.73	Peak	Horizontal
4	282.200	-62.50	-52.85	-25.00	-37.50	-9.65	Peak	Horizontal
5	411.210	-71.49	-64.78	-25.00	-46.49	-6.71	Peak	Horizontal
6	731.310	-60.72	-65.14	-25.00	-35.72	4.42	Peak	Horizontal



MODE	TX channel PCC 40521	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 40719		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	61.040	-50.65	-32.16	-25.00	-25.65	-18.49	Peak	Vertical
2		149.310	-54.59	-41.19	-25.00	-29.59	-13.40	Peak	Vertical
3		159.010	-54.21	-43.54	-25.00	-29.21	-10.67	Peak	Vertical
4		191.990	-60.25	-53.20	-25.00	-35.25	-7.05	Peak	Vertical
5		284.140	-58.96	-55.45	-25.00	-33.96	-3.51	Peak	Vertical
6		902.030	-52.12	-63.99	-25.00	-27.12	11.87	Peak	Vertical





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Test Report No.: W7L-231218W001RF09

ABOVE 1GHz

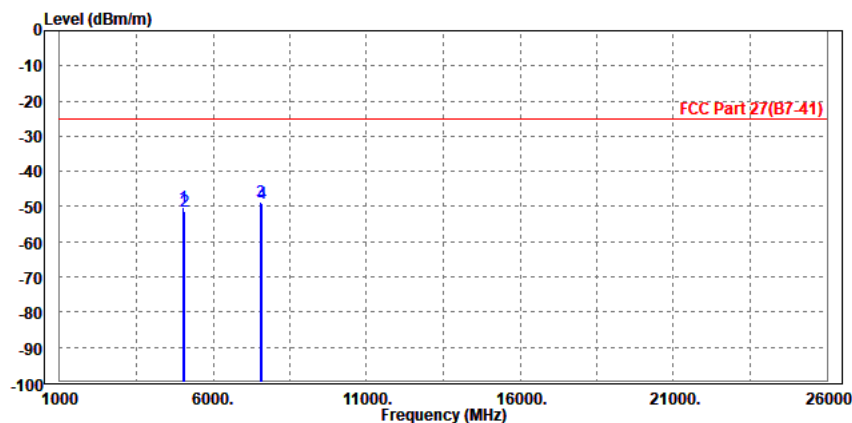
Note: For higher frequency, the emission is too low to be detected.

LTE Band CA _7C

CHANNEL BANDWIDTH: (20+20) MHz / QPSK

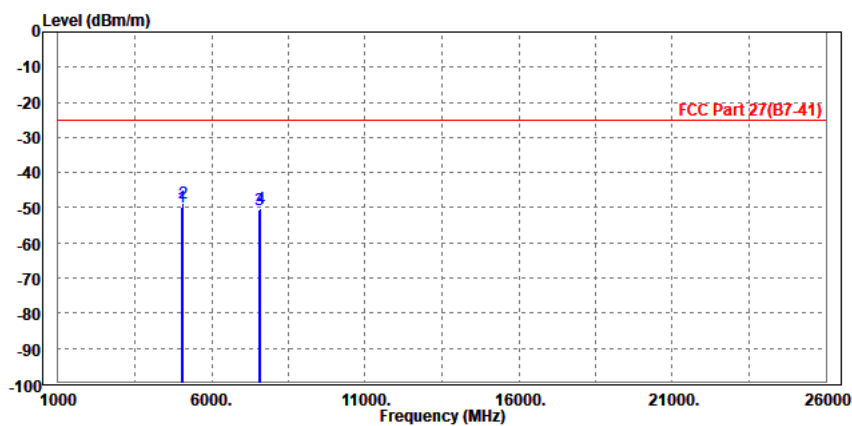
MODE	TX channel PCC 21001	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 21199		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5020.000	-50.27	-61.36	-25.00	-25.27	11.09	Peak	Horizontal
2	5059.600	-51.37	-62.52	-25.00	-26.37	11.15	Peak	Horizontal
3 PP	7530.000	-48.59	-62.98	-25.00	-23.59	14.39	Peak	Horizontal
4	7600.000	-48.95	-63.46	-25.00	-23.95	14.51	Peak	Horizontal



MODE	TX channel PCC 21001	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 21199		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5020.000	-49.90	-61.31	-25.00	-24.90	11.41	Peak	Vertical
2 PP	5059.600	-48.78	-60.27	-25.00	-23.78	11.49	Peak	Vertical
3	7525.000	-50.62	-63.75	-25.00	-25.62	13.13	Peak	Vertical
4	7589.400	-50.07	-63.48	-25.00	-25.07	13.41	Peak	Vertical





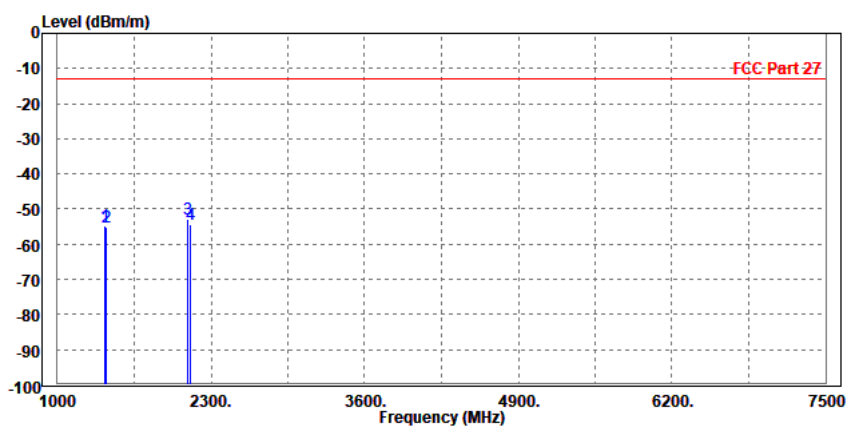
Test Report No.: W7L-231218W001RF09

LTE CA_12B

CHANNEL BANDWIDTH: (5+10) MHz / QPSK

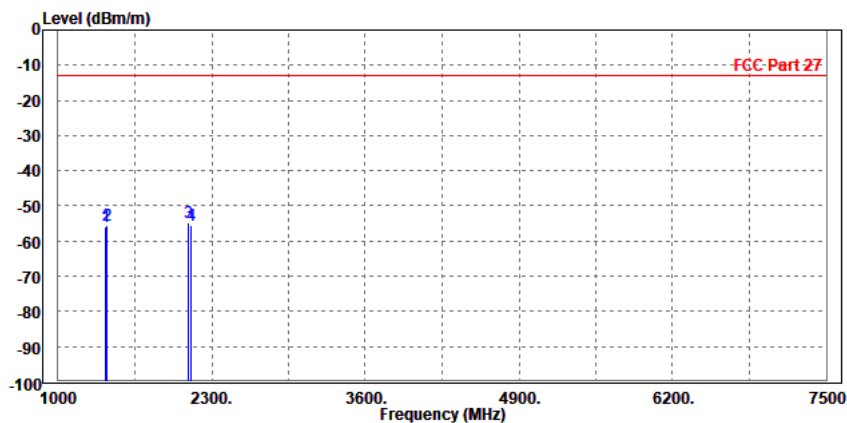
MODE	TX channel PCC 23048	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 23120		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1403.600	-54.89	-57.79	-13.00	-41.89	2.90	Peak	Horizontal
2	1418.000	-55.05	-58.00	-13.00	-42.05	2.95	Peak	Horizontal
3 PP	2105.000	-52.97	-58.00	-13.00	-39.97	5.03	Peak	Horizontal
4	2124.500	-54.51	-59.60	-13.00	-41.51	5.09	Peak	Horizontal



MODE	TX channel PCC 23048	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 23120		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1403.000	-55.79	-58.69	-13.00	-42.79	2.90	Peak	Vertical
2	1416.000	-55.65	-58.58	-13.00	-42.65	2.93	Peak	Vertical
3 PP	2105.400	-54.62	-59.00	-13.00	-41.62	4.38	Peak	Vertical
4	2127.000	-55.69	-60.14	-13.00	-42.69	4.45	Peak	Vertical

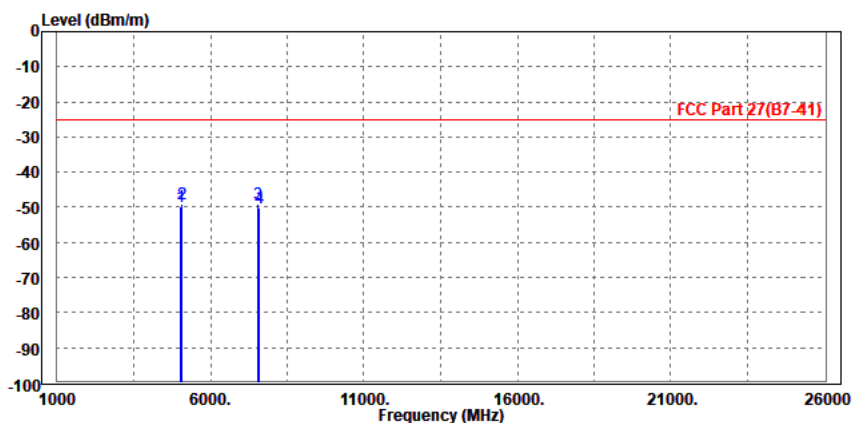


LTE Band CA _41C

CHANNEL BANDWIDTH: (20+20) MHz / QPSK

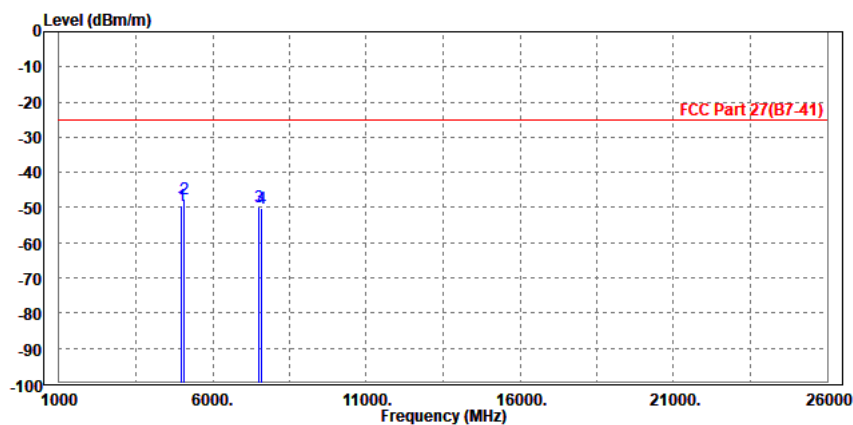
MODE	TX channel PCC 40521	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 40719		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5012.000	-49.87	-60.95	-25.00	-24.87	11.08	Peak	Horizontal
2	5051.600	-49.23	-60.37	-25.00	-24.23	11.14	Peak	Horizontal
3 PP	7525.000	-49.06	-63.44	-25.00	-24.06	14.38	Peak	Horizontal
4	7575.000	-50.07	-64.54	-25.00	-25.07	14.47	Peak	Horizontal



MODE	TX channel PCC 40521	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 40719		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5000.000	-49.25	-60.62	-25.00	-24.25	11.37	Peak	Vertical
2 PP	5050.000	-47.68	-59.15	-25.00	-22.68	11.47	Peak	Vertical
3	7518.000	-49.71	-62.81	-25.00	-24.71	13.10	Peak	Vertical
4	7577.400	-50.36	-63.72	-25.00	-25.36	13.36	Peak	Vertical





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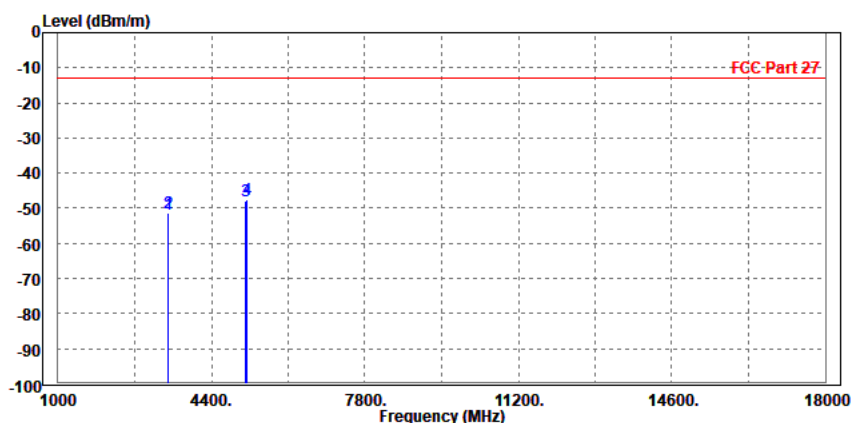
Test Report No.: W7L-231218W001RF09

LTE Band CA _66B

CHANNEL BANDWIDTH: (10+10) MHz / QPSK

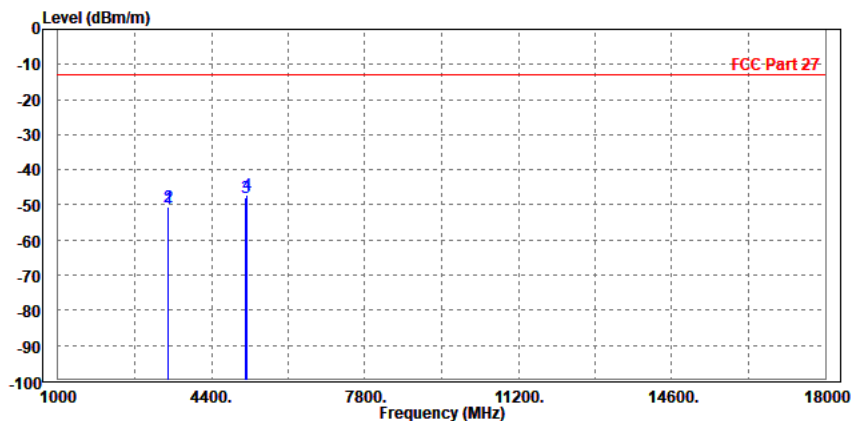
MODE	TX channel PCC 132373	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 132472		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3430.000	-51.59	-60.11	-13.00	-38.59	8.52	Peak	Horizontal
2	3449.800	-51.40	-59.93	-13.00	-38.40	8.53	Peak	Horizontal
3	5148.000	-47.83	-59.11	-13.00	-34.83	11.28	Peak	Horizontal
4 PP	5182.000	-47.52	-58.85	-13.00	-34.52	11.33	Peak	Horizontal



MODE	TX channel PCC 132373	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 132472		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3431.000	-51.06	-59.73	-13.00	-38.06	8.67	Peak	Vertical
2	3448.000	-50.47	-59.13	-13.00	-37.47	8.66	Peak	Vertical
3	5145.000	-47.84	-59.49	-13.00	-34.84	11.65	Peak	Vertical
4 PP	5174.700	-47.08	-58.79	-13.00	-34.08	11.71	Peak	Vertical

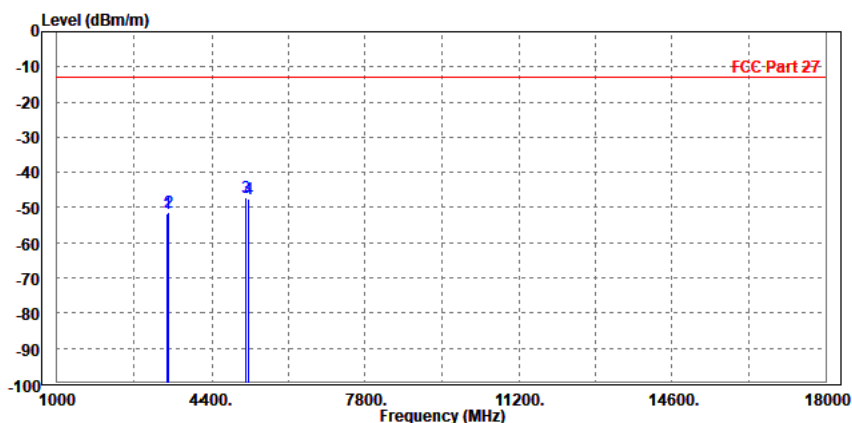


LTE Band CA _66C

CHANNEL BANDWIDTH: (20+20) MHz / QPSK

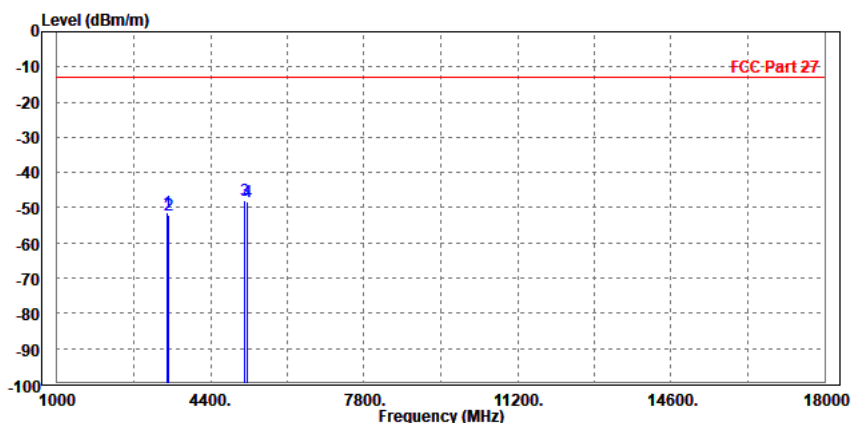
MODE	TX channel PCC 132323	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 132521		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3448.000	-51.81	-60.34	-13.00	-38.81	8.53	Peak	Horizontal
2	3482.000	-51.25	-59.80	-13.00	-38.25	8.55	Peak	Horizontal
3 PP	5160.000	-47.14	-58.44	-13.00	-34.14	11.30	Peak	Horizontal
4	5219.400	-47.55	-58.93	-13.00	-34.55	11.38	Peak	Horizontal



MODE	TX channel PCC 132323	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 132521		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3440.000	-51.28	-59.94	-13.00	-38.28	8.66	Peak	Vertical
2	3479.600	-52.00	-60.65	-13.00	-39.00	8.65	Peak	Vertical
3 PP	5165.000	-47.97	-59.66	-13.00	-34.97	11.69	Peak	Vertical
4	5216.000	-48.38	-60.17	-13.00	-35.38	11.79	Peak	Vertical

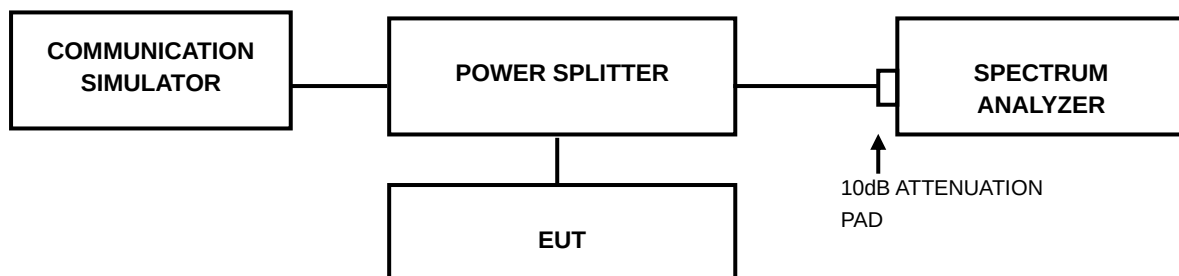


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.



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3.7.4 TEST RESULTS

Please Refer to Appendix I Of this test report.



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4 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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

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Email: customerservice.sw@cn.bureauveritas.com

Web Site: www.adt.com.tw

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



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5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

--END--