

FCC TEST REPORT

(PART 24)

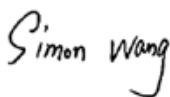
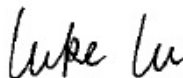
Applicant:	Juniper Systems, Inc.
Address:	1132 W 1700 N Logan, UT 84321 USA

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 24, Subpart E** ☒ **FCC PART 2**
☒ **ANSI/TIA/EIA-603-D** ☒ **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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-231218W001RF06	Original release	May. 15, 2024

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2		
STANDARD SECTION	TEST TYPE	RESULT
§2.1046	Conducted Output Power	Compliance
§24.232(c)	Equivalent Isotropic Radiated Power	Compliance
§2.1055 §24.235	Frequency Stability	Compliance
§2.1049	Occupied Bandwidth	Compliance
§24.232(d)	Peak to average ratio	Compliance
§24.238(a)(b)	Band Edge Measurements	Compliance
§2.1051 §24.238(a)(b)	Conducted Spurious Emissions	Compliance
§2.1053 §24.238(a)(b)	Radiated Spurious Emissions	Compliance

*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

The 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	$\pm 4.70\text{dB}$
Peak to average ratio	$\pm 0.76\text{dB}$

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. 03,24
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
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



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DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24
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- NOTE:** 1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/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 TYPE	LTE Band 2/25: QPSK, 16QAM, 64QAM,256QAM	
FREQUENCY RANGE	LTE Band 2 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1909.3MHz
	LTE Band 2 Channel Bandwidth: 3MHz	1851.5MHz ~ 1908.5MHz
	LTE Band 2 Channel Bandwidth: 5MHz	1852.5MHz ~ 1907.5MHz
	LTE Band 2 Channel Bandwidth: 10MHz	1855.0MHz ~ 1905.0MHz
	LTE Band 2 Channel Bandwidth: 15MHz	1857.5MHz ~ 1902.5MHz
	LTE Band 2 Channel Bandwidth: 20MHz	1860.0MHz ~ 1900.0MHz
	LTE Band CA_2C Channel Bandwidth: 5MHz+20MHz	1860.0MHz ~ 1900.0MHz
	LTE Band CA_2C Channel Bandwidth: 10MHz+15MHz	1855.3 MHz ~ 1902.5 MHz
	LTE Band CA_2C Channel Bandwidth: 10MHz+20MHz	1855.5 MHz ~ 1900.0MHz
	LTE Band CA_2C Channel Bandwidth: 15MHz+10MHz	1857.5 MHz ~ 1904.7 MHz
	LTE Band CA_2C Channel Bandwidth: 15MHz+15MHz	1857.5 MHz ~ 1902.5 MHz
	LTE Band CA_2C Channel Bandwidth: 15MHz+20MHz	1857.8 MHz ~ 1900.0MHz
	LTE Band CA_2C Channel Bandwidth: 20MHz+5MHz	1860.0MHz ~ 1906.7MHz



	LTE Band CA_2C Channel Bandwidth: 20MHz+10MHz	1860.0MHz ~ 1904.5MHz
	LTE Band CA_2C Channel Bandwidth: 20MHz+15MHz	1860.0MHz ~ 1902.2MHz
	LTE Band CA_2C Channel Bandwidth: 20MHz+20MHz	1860.0MHz ~ 1900.0MHz
	LTE Band 25 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1914.3MHz
	LTE Band 25 Channel Bandwidth: 3MHz	1851.5MHz ~ 1913.5MHz
	LTE Band 25 Channel Bandwidth: 5MHz	1852.5MHz ~ 1912.5MHz
	LTE Band 25 Channel Bandwidth: 10MHz	1855.0MHz ~ 1910.0MHz
	LTE Band 25 Channel Bandwidth: 15MHz	1857.5MHz ~ 1907.5MHz
	LTE Band 25 Channel Bandwidth: 20MHz	1860.0MHz ~ 1905.0MHz
MAX. EIRP POWER	LTE Band 2 Channel Bandwidth: 1.4MHz	159.59mW
	LTE Band 2 Channel Bandwidth: 3MHz	157.04mW
	LTE Band 2 Channel Bandwidth: 5MHz	156.31mW
	LTE Band 2 Channel Bandwidth: 10MHz	156.31mW
	LTE Band 2 Channel Bandwidth: 15MHz	154.88mW
	LTE Band 2 Channel Bandwidth: 20MHz	160.32mW
	LTE Band CA_2C Channel Bandwidth: 5MHz+20MHz	151.36 mW
	LTE Band CA_2C Channel Bandwidth: 10MHz+15MHz	151.71 mW
	LTE Band CA_2C Channel Bandwidth: 10MHz+20MHz	150.66 mW
	LTE Band CA_2C Channel Bandwidth: 15MHz+10MHz	153.82 mW



	LTE Band CA_2C Channel Bandwidth: 15MHz+15MHz	153.82 mW
	LTE Band CA_2C Channel Bandwidth: 15MHz+20MHz	152.76 mW
	LTE Band CA_2C Channel Bandwidth: 20MHz+5MHz	152.76mW
	LTE Band CA_2C Channel Bandwidth: 20MHz+10MHz	152.41mW
	LTE Band CA_2C Channel Bandwidth: 20MHz+15MHz	151.71 mW
	LTE Band CA_2C Channel Bandwidth: 20MHz+20MHz	154.17 mW
	LTE Band 25 Channel Bandwidth: 1.4MHz	169.43mW
	LTE Band 25 Channel Bandwidth: 3MHz	166.72mW
	LTE Band 25 Channel Bandwidth: 5MHz	169.82mW
	LTE Band 25 Channel Bandwidth: 10MHz	165.96mW
	LTE Band 25 Channel Bandwidth: 15MHz	165.96mW
	LTE Band 25 Channel Bandwidth: 20MHz	171.4mW
EMISSION DESIGNATOR	LTE Band CA_2C Channel Bandwidth: 5MHz+20MHz	QPSK: 23M0G7D 16QAM: 23M0W7D
	LTE Band CA_2C Channel Bandwidth: 10MHz+15MHz	QPSK: 23M2G7D 16QAM: 23M2W7D
	LTE Band CA_2C Channel Bandwidth: 10MHz+20MHz	QPSK: 27M9G7D 16QAM: 27M9W7D
	LTE Band CA_2C Channel Bandwidth: 15MHz+10MHz	QPSK: 23M2G7D 16QAM: 23M2W7D
	LTE Band CA_2C Channel Bandwidth: 15MHz+15MHz	QPSK: 28M5G7D 16QAM: 28M4W7D
	LTE Band CA_2C	QPSK: 32M8G7D



	Channel Bandwidth: 15MHz+20MHz	16QAM: 32M8W7D
	LTE Band CA_2C Channel Bandwidth: 20MHz+5MHz	QPSK: 23M0G7D
		16QAM: 22M9W7D
	LTE Band CA_2C Channel Bandwidth: 20MHz+10MHz	QPSK: 27M9G7D
		16QAM: 27M9W7D
	LTE Band CA_2C Channel Bandwidth: 20MHz+15MHz	QPSK: 32M8G7D
		16QAM: 32M8W7D
	LTE Band CA_2C Channel Bandwidth: 20MHz+20MHz	QPSK: 37M7G7D
		16QAM: 37M7W7D
	LTE Band 25 Channel Bandwidth: 1.4MHz	QPSK: 1M09G7D
		16QAM: 1M10W7D
	LTE Band 25 Channel Bandwidth: 3MHz	QPSK: 2M72G7D
		16QAM: 2M71W7D
	LTE Band 25 Channel Bandwidth: 5MHz	QPSK: 4M53G7D
		16QAM: 4M54W7D
	LTE Band 25 Channel Bandwidth: 10MHz	QPSK: 9M05G7D
		16QAM: 9M03W7D
	LTE Band 25 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
	LTE Band 25 Channel Bandwidth: 20MHz	QPSK: 18M0G7D
		16QAM: 18M0W7D
ANTENNA TYPE	ANT0 Fixed Internal with -0.63dBi gain for LTE B2/LTE B25	
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.



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MODULATION MODE	TX FUNCTION
LTE	2TX/4RX

- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- 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.
- 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.

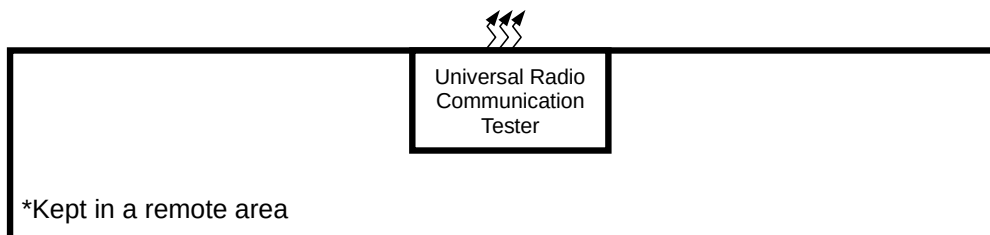
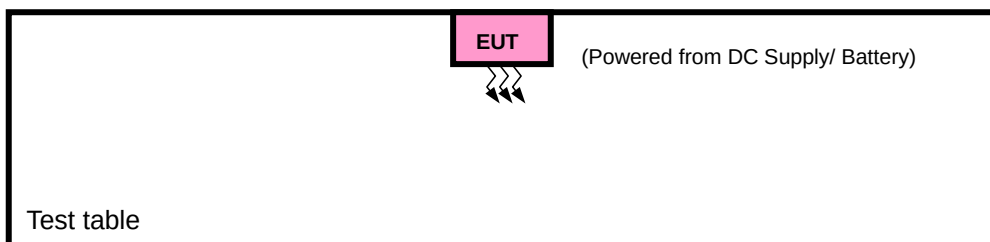
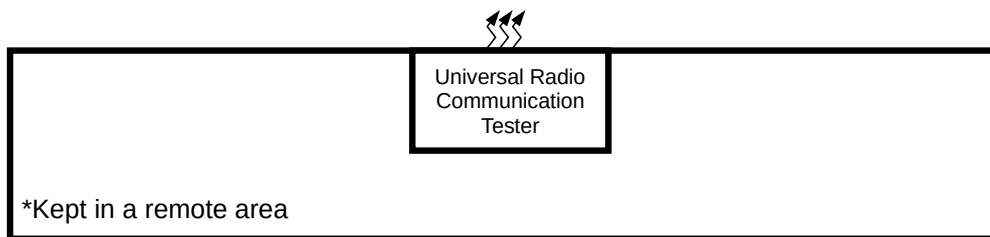
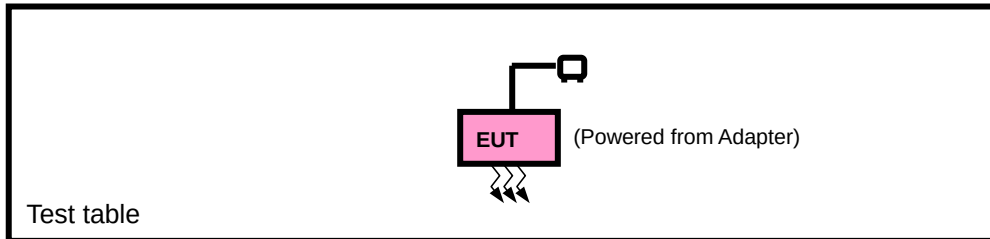
6. List of Accessory:

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&ELE CTRONICS (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 in EIRP and radiated emission was found when positioned on X-plane for GSM/EDGE/ LTE. Following channel(s) was (were) selected for the final test as listed below:

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

LTE BAND 2 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20MHz	QPSK,16QAM,64QAM,256QAM	1 RB / 0 RB Offset

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

2. LTE Band 2 are covered by LTE Band 25, Because it is a subset of LTE Band 25 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE



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LTE BAND 25 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM,64QAM, 256QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM	50 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM	6 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM	15 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM	25 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM	50 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM	75 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	100 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
A	BAND EDGE	26047 to 26683	26047	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset 6 RB / 0 RB Offset
			26683	1.4MHz	QPSK,16QAM	1 RB / 5 RB Offset 6 RB / 0 RB Offset
		26055 to 26675	26055	3MHz	QPSK,16QAM	1 RB / 0 RB Offset 15 RB / 0 RB Offset
			26675	3MHz	QPSK,16QAM	1 RB / 14 RB Offset 15 RB / 0 RB Offset
		26065 to 26665	26065	5MHz	QPSK,16QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset
			26665	5MHz	QPSK,16QAM	1 RB / 24 RB Offset 25 RB / 0 RB Offset
		26090 to 26640	26090	10MHz	QPSK,16QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
			26640	10MHz	QPSK,16QAM	1 RB / 49 RB Offset 50 RB / 0 RB Offset
		26115 to 26615	26115	15MHz	QPSK,16QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset
			26615	15MHz	QPSK,16QAM	1 RB / 74 RB Offset 75 RB / 0 RB Offset
		26140 to 26590	26140	20MHz	QPSK,16QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
			26590	20MHz	QPSK,16QAM	1 RB / 99 RB Offset 100 RB / 0 RB Offset
A	CONDUCTED EMISSION	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM	1 RB / 0 RB Offset

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		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	26047 to 26683	26365	1.4MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26365	3MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26365	5MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26365	10MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26365	20MHz	QPSK	1 RB / 0 RB Offset

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

LTE BAND CA_2C 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	18700 to 18902	18898 to 19100	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		18700 to 18951	18871 to 19122	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		18678 to 18929	18849 to 19100	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		18700 to 19001	18844 to 19145	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		18655 to 18956	18799 to 19100	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		18675 to 18975	18825 to 19125	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		18675 to 19027	18795 to 19147	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		18653 to 19005	18773 to 19125	Low, Middle, High	10MHz+15MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		18700 to 19050	18817 to 1906.7	Low, Middle, High	20MHz+5MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		18633 to 18983	18750 to 19100	Low, Middle, High	5MHz+20MHz	QPSK, 16QAM, 64QAM, 256QAM	1RB/ 24RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	18700 to 18902	18898 to 19100	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
		18700 to 18951	18871 to 19122	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		18678 to 18929	18849 to 19100	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		18700 to 19001	18844 to 19145	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		18655 to 18956	18799 to 19100	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		18675 to 18975	18825 to 19125	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM	50RB/ 0RB Offset	75RB/ 0RB Offset
		18675 to 19027	18795 to 19147	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM	75RB/ 0RB Offset	50RB/ 0RB Offset
		18653 to 19005	18773 to 19125	Low, Middle, High	10MHz+15MHz	QPSK, 16QAM	50RB/ 0RB Offset	75RB/ 0RB Offset
		18700 to 19050	18817 to 1906.7	Low, Middle, High	20MHz+5MHz	QPSK, 16QAM	100RB/ 0RB Offset	25RB/ 0RB Offset
		18633 to 18983	18750 to 19100	Low, Middle, High	5MHz+20MHz	QPSK, 16QAM	25RB/ 0RB Offset	100RB/ 0RB Offset



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A	BAND EDGE	18700 to 18902	18898 to 19100	Low	20MHz+20MHz	QPSK, 16QAM	1RB/ 0RB Offset	100RB/ 0RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz	QPSK, 16QAM	1RB/ 0RB Offset	100RB/ 0RB 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.

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	25deg. C, 57%RH	DC 12V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 61%RH	DC 3.4V/3.8V/4.35V By DC Supply	James Fu
OCCUPIED BANDWIDTH	23deg. C, 61%RH	DC 3.8V By Adapter	James Fu
PEAK TO AVERAGE RATIO	23deg. C, 61%RH	DC 3.8V By Adapter	James Fu
BAND EDGE	23deg. C, 61%RH	DC 3.8V By Adapter	James Fu
CONDUCTED EMISSION	23deg. C, 61%RH	DC 3.8V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC 3.8V By Adapter	Jace Hu

2.5 EUT OPERATING CONDITIONS

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

2.6 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 24

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

Mobile and portable stations are limited to 2 watts 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.

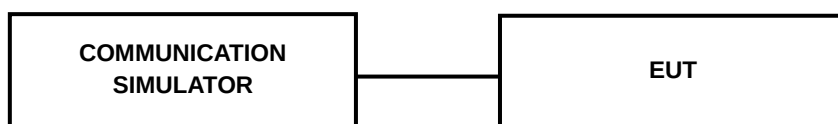
CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with WCDMA 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

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

LTE Band 2

LTE Band 2						
		RB Size	RB Offset	Low	Mid	High
BW	Modulation	Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	22.29	22.40	22.48
		1	50	22.31	22.40	22.51
		1	99	22.29	22.37	22.68
		50	0	21.32	21.41	21.66
		50	25	21.42	21.38	21.60
		50	50	21.38	21.55	21.68
		100	0	21.46	21.53	21.58
	16QAM	1	0	21.45	21.47	21.63
		1	50	21.53	21.54	21.66
		1	99	21.45	21.65	21.64
		50	0	20.38	20.40	20.58
		50	25	20.51	20.44	20.68
		50	50	20.42	20.63	20.69
		100	0	20.37	20.41	20.51
	64QAM	1	0	20.48	20.60	20.59
		1	50	20.41	20.64	20.75
		1	99	20.52	20.47	20.66
		50	0	19.43	19.41	19.60
		50	25	19.44	19.46	19.55
		50	50	19.55	19.49	19.56
		100	0	19.34	19.41	19.70
	256QAM	1	0	17.33	17.48	17.58
		1	50	17.29	17.57	17.64
		1	99	17.47	17.43	17.65
		50	0	17.39	17.27	17.55
		50	25	17.29	17.37	17.49
		50	50	17.44	17.47	17.48
		100	0	17.27	17.34	17.63

LTE Band 2						
BW	Modulation	Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	22.25	22.37	22.34
		1	37	22.25	22.32	22.48
		1	74	22.18	22.32	22.53
		36	0	21.30	21.26	21.64
		36	19	21.37	21.27	21.52
		36	39	21.31	21.42	21.58
		75	0	21.34	21.38	21.53
	16QAM	1	0	21.30	21.45	21.62
		1	37	21.49	21.48	21.65
		1	74	21.33	21.57	21.51
		36	0	20.30	20.33	20.52
		36	19	20.38	20.34	20.60
		36	39	20.41	20.56	20.55
		75	0	20.34	20.29	20.38
	64QAM	1	0	20.37	20.57	20.45
		1	37	20.40	20.51	20.62
		1	74	20.46	20.32	20.65
		36	0	19.37	19.35	19.53
		36	19	19.41	19.45	19.46
		36	39	19.44	19.43	19.48
		75	0	19.32	19.33	19.56
	256QAM	1	0	17.30	17.47	17.53
		1	37	17.28	17.47	17.61
		1	74	17.41	17.33	17.53
		36	0	17.26	17.25	17.46
		36	19	17.24	17.36	17.45
		36	39	17.34	17.46	17.41
		75	0	17.12	17.22	17.52

LTE Band 2						
BW	Modulation	Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	22.24	22.33	22.43
		1	24	22.20	22.30	22.43
		1	49	22.17	22.33	22.57
		25	0	21.22	21.27	21.55
		25	12	21.38	21.29	21.58
		25	25	21.28	21.54	21.64
		50	0	21.38	21.42	21.53
	16QAM	1	0	21.43	21.45	21.49
		1	24	21.45	21.40	21.52
		1	49	21.36	21.54	21.55
		25	0	20.33	20.31	20.46
		25	12	20.39	20.43	20.67
		25	25	20.34	20.55	20.55
		50	0	20.32	20.38	20.49
	64QAM	1	0	20.35	20.45	20.58
		1	24	20.33	20.58	20.63
		1	49	20.40	20.45	20.63
		25	0	19.42	19.40	19.57
		25	12	19.35	19.38	19.50
		25	25	19.51	19.46	19.49
		50	0	19.19	19.38	19.64
	256QAM	1	0	17.28	17.40	17.47
		1	24	17.18	17.46	17.49
		1	49	17.42	17.38	17.63
		25	0	17.35	17.20	17.50
		25	12	17.22	17.27	17.46
		25	25	17.29	17.38	17.35
		50	0	17.15	17.26	17.53

LTE Band 2						
BW	Modulation	Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	22.14	22.38	22.34
		1	12	22.25	22.29	22.50
		1	24	22.26	22.26	22.57
		12	0	21.31	21.28	21.56
		12	6	21.32	21.23	21.46
		12	13	21.37	21.51	21.61
		25	0	21.43	21.51	21.54
	16QAM	1	0	21.37	21.34	21.59
		1	12	21.42	21.52	21.57
		1	24	21.43	21.56	21.52
		12	0	20.30	20.25	20.56
		12	6	20.42	20.30	20.61
		12	13	20.41	20.58	20.55
		25	0	20.23	20.32	20.37
	64QAM	1	0	20.41	20.55	20.54
		1	12	20.27	20.57	20.73
		1	24	20.39	20.42	20.55
		12	0	19.28	19.38	19.55
		12	6	19.30	19.45	19.44
		12	13	19.51	19.35	19.50
		25	0	19.21	19.27	19.67
	256QAM	1	0	17.26	17.40	17.56
		1	12	17.26	17.53	17.51
		1	24	17.39	17.35	17.50
		12	0	17.36	17.12	17.50
		12	6	17.19	17.23	17.35
		12	13	17.38	17.39	17.38
		25	0	17.24	17.22	17.56

LTE Band 2						
BW	Modulation	Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	22.14	22.38	22.40
		1	7	22.17	22.33	22.44
		1	14	22.21	22.36	22.59
		8	0	21.18	21.40	21.58
		8	3	21.40	21.37	21.53
		8	7	21.35	21.44	21.55
		15	0	21.43	21.46	21.53
	16QAM	1	0	21.38	21.46	21.56
		1	7	21.46	21.39	21.59
		1	14	21.44	21.60	21.58
		8	0	20.35	20.36	20.46
		8	3	20.50	20.29	20.65
		8	7	20.39	20.51	20.65
		15	0	20.25	20.26	20.38
	64QAM	1	0	20.45	20.53	20.50
		1	7	20.27	20.57	20.61
		1	14	20.48	20.38	20.53
		8	0	19.39	19.32	19.58
		8	3	19.36	19.37	19.52
		8	7	19.46	19.36	19.45
		15	0	19.33	19.37	19.58
	256QAM	1	0	17.32	17.47	17.55
		1	7	17.15	17.52	17.51
		1	14	17.37	17.28	17.52
		8	0	17.31	17.20	17.51
		8	3	17.23	17.27	17.46
		8	7	17.30	17.34	17.35
		15	0	17.13	17.27	17.54

LTE Band 2						
BW	Modulation	Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	22.26	22.26	22.46
		1	2	22.21	22.31	22.40
		1	5	22.15	22.34	22.66
		3	0	21.99	21.97	22.34
		3	1	22.11	22.02	22.28
		3	3	21.95	22.12	22.35
		6	0	21.43	21.39	21.43
	16QAM	1	0	21.33	21.43	21.61
		1	2	21.45	21.46	21.51
		1	5	21.31	21.50	21.62
		3	0	21.00	21.02	21.20
		3	1	21.13	21.06	21.26
		3	3	21.05	21.30	21.28
		6	0	20.34	20.36	20.49
	64QAM	1	0	20.43	20.57	20.51
		1	2	20.38	20.58	20.61
		1	5	20.50	20.45	20.53
		3	0	20.07	19.96	20.27
		3	1	20.08	20.01	20.18
		3	3	20.20	20.11	20.18
		6	0	19.32	19.38	19.58
	256QAM	1	0	17.30	17.36	17.47
		1	2	17.28	17.52	17.60
		1	5	17.46	17.39	17.55
		3	0	17.36	17.15	17.49
		3	1	17.21	17.23	17.46
		3	3	17.42	17.36	17.34
		6	0	17.22	17.28	17.52



LTE BAND 25

LTE Band 25						
		RB Size	RB Offset	Low	Mid	High
BW	Modulation	Channel		26140	26340	26590
		Frequency (MHz)		1860	1880	1905
20M	QPSK	1	0	22.58	22.71	22.77
		1	50	22.74	22.80	22.97
		1	99	22.66	22.80	22.87
		50	0	21.89	21.80	21.85
		50	25	21.82	21.91	22.02
		50	50	21.96	21.93	22.17
		100	0	21.74	21.91	21.96
	16QAM	1	0	21.73	21.77	21.97
		1	50	21.83	21.99	22.00
		1	99	21.88	21.89	22.04
		50	0	20.81	20.64	20.80
		50	25	20.88	20.77	21.07
		50	50	20.85	20.95	21.04
		100	0	20.78	20.85	21.06
	64QAM	1	0	21.02	20.89	21.10
		1	50	21.06	20.93	21.21
		1	99	20.92	20.99	21.01
		50	0	19.75	19.80	19.92
		50	25	19.81	19.92	20.10
		50	50	19.72	19.86	19.95
		100	0	19.88	19.91	19.95
	256QAM	1	0	18.02	17.89	18.10
		1	50	18.06	17.93	18.21
		1	99	17.92	17.99	18.01
		50	0	17.75	17.80	17.92
		50	25	17.81	17.92	18.10
		50	50	17.72	17.86	17.95
		100	0	17.88	17.91	17.95

LTE Band 25						
BW	Modulation	Channel		26115	26340	26615
		Frequency (MHz)		1857.5	1880	1907.5
15M	QPSK	1	0	22.44	22.58	22.71
		1	37	22.72	22.67	22.83
		1	74	22.57	22.77	22.78
		36	0	21.86	21.71	21.81
		36	19	21.71	21.83	21.93
		36	39	21.94	21.79	22.10
		75	0	21.60	21.76	21.95
	16QAM	1	0	21.67	21.67	21.92
		1	37	21.72	21.97	21.91
		1	74	21.83	21.74	21.97
		36	0	20.69	20.52	20.71
		36	19	20.74	20.69	20.98
		36	39	20.75	20.87	20.99
		75	0	20.66	20.77	21.05
	64QAM	1	0	20.95	20.75	20.96
		1	37	20.99	20.85	21.16
		1	74	20.84	20.90	20.95
		36	0	19.70	19.74	19.89
		36	19	19.79	19.83	20.01
		36	39	19.57	19.79	19.86
		75	0	19.87	19.86	19.89
	256QAM	1	0	17.92	17.77	17.98
		1	37	17.97	17.91	18.19
		1	74	17.81	17.89	17.98
		36	0	17.68	17.75	17.89
		36	19	17.76	17.82	17.96
		36	39	17.66	17.74	17.82
		75	0	17.80	17.88	17.80

LTE Band 25						
BW	Modulation	Channel		26090	26340	26640
		Frequency (MHz)		1855	1880	1910
10M	QPSK	1	0	22.57	22.59	22.70
		1	24	22.61	22.67	22.83
		1	49	22.62	22.68	22.79
		25	0	21.81	21.73	21.76
		25	12	21.80	21.88	21.90
		25	25	21.81	21.92	22.06
		50	0	21.60	21.83	21.93
	16QAM	1	0	21.72	21.70	21.89
		1	24	21.82	21.85	21.99
		1	49	21.83	21.88	21.99
		25	0	20.71	20.54	20.65
		25	12	20.79	20.73	20.96
		25	25	20.82	20.90	20.94
		50	0	20.77	20.75	21.00
	64QAM	1	0	20.98	20.83	20.95
		1	24	20.93	20.90	21.14
		1	49	20.79	20.89	20.91
		25	0	19.65	19.78	19.77
		25	12	19.73	19.91	20.05
		25	25	19.58	19.78	19.93
		50	0	19.80	19.79	19.82
	256QAM	1	0	17.94	17.81	17.95
		1	24	17.95	17.92	18.13
		1	49	17.90	17.93	17.97
		25	0	17.74	17.72	17.86
		25	12	17.69	17.77	18.05
		25	25	17.58	17.81	17.86
		50	0	17.83	17.79	17.88

LTE Band 25						
BW	Modulation	Channel		26065	26340	26665
		Frequency (MHz)		1852.5	1880	1912.5
5M	QPSK	1	0	22.44	22.61	22.72
		1	12	22.64	22.77	22.93
		1	24	22.52	22.72	22.75
		12	0	21.82	21.65	21.79
		12	6	21.68	21.90	21.90
		12	13	21.88	21.88	22.07
		25	0	21.69	21.82	21.85
	16QAM	1	0	21.62	21.66	21.86
		1	12	21.78	21.86	21.96
		1	24	21.79	21.76	21.95
		12	0	20.67	20.59	20.73
		12	6	20.76	20.65	21.04
		12	13	20.75	20.92	20.89
		25	0	20.73	20.72	21.05
	64QAM	1	0	20.95	20.81	21.00
		1	12	20.99	20.90	21.16
		1	24	20.84	20.92	20.88
		12	0	19.74	19.75	19.86
		12	6	19.74	19.90	20.09
		12	13	19.65	19.81	19.93
		25	0	19.81	19.80	19.90
	256QAM	1	0	17.92	17.81	18.05
		1	12	17.94	17.88	18.07
		1	24	17.77	17.87	17.88
		12	0	17.60	17.66	17.90
		12	6	17.79	17.82	17.95
		12	13	17.65	17.81	17.83
		25	0	17.74	17.76	17.93

LTE Band 25						
BW	Modulation	Channel		26055	26340	26675
		Frequency (MHz)		1851.5	1880	1913.5
3M	QPSK	1	0	22.47	22.69	22.69
		1	7	22.72	22.77	22.84
		1	14	22.56	22.68	22.85
		8	0	21.74	21.76	21.72
		8	3	21.75	21.77	21.93
		8	7	21.82	21.82	22.13
		15	0	21.65	21.77	21.88
	16QAM	1	0	21.64	21.66	21.87
		1	7	21.82	21.84	21.95
		1	14	21.82	21.81	21.99
		8	0	20.71	20.62	20.66
		8	3	20.83	20.64	21.02
		8	7	20.79	20.85	20.96
		15	0	20.72	20.72	20.98
	64QAM	1	0	20.94	20.83	20.96
		1	7	20.96	20.78	21.09
		1	14	20.84	20.93	20.99
		8	0	19.74	19.70	19.84
		8	3	19.76	19.86	20.03
		8	7	19.65	19.81	19.84
		15	0	19.83	19.90	19.80
	256QAM	1	0	17.97	17.75	18.08
		1	7	18.05	17.78	18.11
		1	14	17.81	17.95	17.97
		8	0	17.65	17.75	17.81
		8	3	17.74	17.89	18.05
		8	7	17.61	17.82	17.93
		15	0	17.80	17.77	17.90

LTE Band 25						
BW	Modulation	Channel		26047	26340	26683
		Frequency (MHz)		1850.7	1880	1914.3
1.4M	QPSK	1	0	22.50	22.59	22.63
		1	2	22.65	22.65	22.92
		1	5	22.59	22.79	22.86
		3	0	22.44	22.42	22.43
		3	1	22.45	22.53	22.59
		3	3	22.60	22.61	22.83
		6	0	21.73	21.85	21.81
	16QAM	1	0	21.72	21.64	21.85
		1	2	21.73	21.95	21.85
		1	5	21.82	21.74	21.93
		3	0	21.47	21.25	21.43
		3	1	21.44	21.38	21.72
		3	3	21.54	21.59	21.67
		6	0	20.68	20.82	20.96
	64QAM	1	0	20.89	20.84	20.96
		1	2	20.92	20.85	21.07
		1	5	20.79	20.90	20.94
		3	0	20.34	20.45	20.56
		3	1	20.37	20.51	20.71
		3	3	20.37	20.45	20.56
		6	0	19.82	19.76	19.90
	256QAM	1	0	17.92	17.78	18.02
		1	2	17.95	17.81	18.12
		1	5	17.90	17.95	17.96
		3	0	17.62	17.78	17.83
		3	1	17.67	17.78	17.98
		3	3	17.67	17.81	17.87
		6	0	17.75	17.80	17.94



CA_2C

CA_2C									
Combination 20MHz+20MHz (100RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18700	1860	18898	1879.8	QPSK	1	99	1	0	22.51
				16QAM	1	99	1	0	21.57
				64QAM	1	99	1	0	20.69
				256QAM	1	99	1	0	17.58
18801	1870.1	18999	1889.9	QPSK	1	99	1	0	22.47
				16QAM	1	99	1	0	21.56
				64QAM	1	99	1	0	20.58
				256QAM	1	99	1	0	17.49
18902	1880.2	19100	1900	QPSK	1	99	1	0	22.49
				16QAM	1	99	1	0	21.45
				64QAM	1	99	1	0	20.44
				256QAM	1	99	1	0	17.36
Combination 20MHz+15MHz (100RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18700	1860	18871	1877.1	QPSK	1	99	1	0	22.44
				16QAM	1	99	1	0	21.55
				64QAM	1	99	1	0	20.56
				256QAM	1	99	1	0	17.47
18826	1872.6	18997	1889.7	QPSK	1	99	1	0	22.37
				16QAM	1	99	1	0	21.46
				64QAM	1	99	1	0	20.50
				256QAM	1	99	1	0	17.47
18951	1885.1	19122	1902.2	QPSK	1	99	1	0	22.42
				16QAM	1	99	1	0	21.35
				64QAM	1	99	1	0	20.38
				256QAM	1	99	1	0	17.27

CA_2C									
Combination 15MHz+20MHz (75RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18678	1857.8	18849	1874.9	QPSK	1	74	1	0	22.47
				16QAM	1	74	1	0	21.48
				64QAM	1	74	1	0	20.63
				256QAM	1	74	1	0	17.49
18803	1870.3	18974	1887.4	QPSK	1	74	1	0	22.35
				16QAM	1	74	1	0	21.55
				64QAM	1	74	1	0	20.51
				256QAM	1	74	1	0	17.40
18929	1882.9	19100	1900	QPSK	1	74	1	0	22.34
				16QAM	1	74	1	0	21.32
				64QAM	1	74	1	0	20.38
				256QAM	1	74	1	0	17.27
Combination 20MHz+10MHz (100RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18700	1860	18844	1874.4	QPSK	1	99	1	0	22.46
				16QAM	1	99	1	0	21.50
				64QAM	1	99	1	0	20.61
				256QAM	1	99	1	0	17.53
18851	1875.1	18995	1889.5	QPSK	1	99	1	0	22.33
				16QAM	1	99	1	0	21.55
				64QAM	1	99	1	0	20.44
				256QAM	1	99	1	0	17.35
19001	1890.1	19145	1904.5	QPSK	1	99	1	0	22.45
				16QAM	1	99	1	0	21.41
				64QAM	1	99	1	0	20.36
				256QAM	1	99	1	0	17.25

CA_2C									
Combination 10MHz+20MHz (50RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18655	1855.5	18799	1869.9	QPSK	1	49	1	0	22.36
				16QAM	1	49	1	0	21.49
				64QAM	1	49	1	0	20.63
				256QAM	1	49	1	0	17.47
18806	1870.6	18950	1885	QPSK	1	49	1	0	22.40
				16QAM	1	49	1	0	21.45
				64QAM	1	49	1	0	20.55
				256QAM	1	49	1	0	17.39
18956	1885.6	19100	1900	QPSK	1	49	1	0	22.41
				16QAM	1	49	1	0	21.41
				64QAM	1	49	1	0	20.41
				256QAM	1	49	1	0	17.24
Combination 15MHz+15MHz (75RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18675	1857.5	18825	1872.5	QPSK	1	74	1	0	22.50
				16QAM	1	74	1	0	21.56
				64QAM	1	74	1	0	20.63
				256QAM	1	74	1	0	17.55
18825	1872.5	18975	1887.5	QPSK	1	74	1	0	22.44
				16QAM	1	74	1	0	21.47
				64QAM	1	74	1	0	20.57
				256QAM	1	74	1	0	17.38
18975	1887.5	19125	1902.5	QPSK	1	74	1	0	22.42
				16QAM	1	74	1	0	21.40
				64QAM	1	74	1	0	20.38
				256QAM	1	74	1	0	17.26

CA_2C									
Combination 15MHz+10MHz (75RB+50RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18675	1857.5	18795	1869.5	QPSK	1	74	1	0	22.50
				16QAM	1	74	1	0	21.54
				64QAM	1	74	1	0	20.67
				256QAM	1	74	1	0	17.51
18851	1875.1	18971	1887.1	QPSK	1	74	1	0	22.41
				16QAM	1	74	1	0	21.45
				64QAM	1	74	1	0	20.56
				256QAM	1	74	1	0	17.48
19027	1892.7	19147	1904.7	QPSK	1	74	1	0	22.35
				16QAM	1	74	1	0	21.42
				64QAM	1	74	1	0	20.33
				256QAM	1	74	1	0	17.22
Combination 10MHz+15MHz (50RB+75RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18653	1855.3	18773	1867.3	QPSK	1	49	1	0	22.39
				16QAM	1	49	1	0	21.50
				64QAM	1	49	1	0	20.60
				256QAM	1	49	1	0	17.48
18829	1872.9	18949	1884.9	QPSK	1	49	1	0	22.34
				16QAM	1	49	1	0	21.52
				64QAM	1	49	1	0	20.52
				256QAM	1	49	1	0	17.36
19005	1890.5	19125	1902.5	QPSK	1	49	1	0	22.44
				16QAM	1	49	1	0	21.39
				64QAM	1	49	1	0	20.39
				256QAM	1	49	1	0	17.35

CA_2C									
Combination 20MHz+5MHz (100RB+25RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18700	1860	18817	1871.7	QPSK	1	99	1	0	22.39
				16QAM	1	99	1	0	21.53
				64QAM	1	99	1	0	20.67
				256QAM	1	99	1	0	17.57
18875	1877.5	18992	1889.2	QPSK	1	99	1	0	22.42
				16QAM	1	99	1	0	21.46
				64QAM	1	99	1	0	20.43
				256QAM	1	99	1	0	17.34
19050	1895	19167	1906.7	QPSK	1	99	1	0	22.47
				16QAM	1	99	1	0	21.39
				64QAM	1	99	1	0	20.33
				256QAM	1	99	1	0	17.24
Combination 5MHz+20MHz (25RB+100RB)									
PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC		SCC		Measured Power (dBm)
					RB Size	RB offset	RB Size	RB offset	
18633	1853.3	18750	1865	QPSK	1	24	1	0	22.43
				16QAM	1	24	1	0	21.53
				64QAM	1	24	1	0	20.62
				256QAM	1	24	1	0	17.57
18808	1870.8	18925	1882.5	QPSK	1	24	1	0	22.40
				16QAM	1	24	1	0	21.49
				64QAM	1	24	1	0	20.46
				256QAM	1	24	1	0	17.34
18983	1888.3	19100	1900	QPSK	1	24	1	0	22.34
				16QAM	1	24	1	0	21.43
				64QAM	1	24	1	0	20.39
				256QAM	1	24	1	0	17.21



**BUREAU
VERITAS**

Test Report No.: W7L-231218W001RF06

EIRP POWER (dBm)

LTE BAND 2

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	22.26	-0.63	21.63	145.55	2
18900	1880	22.34	-0.63	21.71	148.25	2
19193	1909.3	22.66	-0.63	22.03	159.59	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	21.45	-0.63	20.82	120.78	2
18900	1880	21.5	-0.63	20.87	122.18	2
19193	1909.3	21.62	-0.63	20.99	125.6	2

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	20.5	-0.63	19.87	97.05	2
18900	1880	20.58	-0.63	19.95	98.86	2
19193	1909.3	20.61	-0.63	19.98	99.54	2

CHANNEL BANDWIDTH: 1.4MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	17.46	-0.63	16.83	48.19	2
18900	1880	17.52	-0.63	16.89	48.87	2
19193	1909.3	17.6	-0.63	16.97	49.77	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	22.21	-0.63	21.58	143.88	2
18900	1880	22.38	-0.63	21.75	149.62	2
19185	1908.5	22.59	-0.63	21.96	157.04	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	21.46	-0.63	20.83	121.06	2
18900	1880	21.6	-0.63	20.97	125.03	2
19185	1908.5	21.59	-0.63	20.96	124.74	2

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	20.48	-0.63	19.85	96.61	2
18900	1880	20.57	-0.63	19.94	98.63	2
19185	1908.5	20.61	-0.63	19.98	99.54	2

CHANNEL BANDWIDTH: 3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	17.37	-0.63	16.74	47.21	2
18900	1880	17.52	-0.63	16.89	48.87	2
19185	1908.5	17.55	-0.63	16.92	49.2	2

**CHANNEL BANDWIDTH: 5MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	22.26	-0.63	21.63	145.55	2
18900	1880	22.38	-0.63	21.75	149.62	2
19175	1907.5	22.57	-0.63	21.94	156.31	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	21.43	-0.63	20.8	120.23	2
18900	1880	21.56	-0.63	20.93	123.88	2
19175	1907.5	21.59	-0.63	20.96	124.74	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	20.41	-0.63	19.78	95.06	2
18900	1880	20.57	-0.63	19.94	98.63	2
19175	1907.5	20.73	-0.63	20.1	102.33	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	17.39	-0.63	16.76	47.42	2
18900	1880	17.53	-0.63	16.9	48.98	2
19175	1907.5	17.56	-0.63	16.93	49.32	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	22.24	-0.63	21.61	144.88	2
18900	1880	22.33	-0.63	21.7	147.91	2
19150	1905	22.57	-0.63	21.94	156.31	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	21.45	-0.63	20.82	120.78	2
18900	1880	21.54	-0.63	20.91	123.31	2
19150	1905	21.55	-0.63	20.92	123.59	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	20.4	-0.63	19.77	94.84	2
18900	1880	20.58	-0.63	19.95	98.86	2
19150	1905	20.63	-0.63	20	100	2

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855	17.42	-0.63	16.79	47.75	2
18900	1880	17.46	-0.63	16.83	48.19	2
19150	1905	17.63	-0.63	17	50.12	2



CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	22.25	-0.63	21.62	145.21	2
18900	1880	22.37	-0.63	21.74	149.28	2
19125	1902.5	22.53	-0.63	21.9	154.88	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	21.49	-0.63	20.86	121.9	2
18900	1880	21.57	-0.63	20.94	124.17	2
19125	1902.5	21.65	-0.63	21.02	126.47	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	20.46	-0.63	19.83	96.16	2
18900	1880	20.57	-0.63	19.94	98.63	2
19125	1902.5	20.65	-0.63	20.02	100.46	2

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	17.41	-0.63	16.78	47.64	2
18900	1880	17.47	-0.63	16.84	48.31	2
19125	1902.5	17.61	-0.63	16.98	49.89	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	22.31	-0.63	21.68	147.23	2
18900	1880	22.4	-0.63	21.77	150.31	2
19100	1900	22.68	-0.63	22.05	160.32	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	21.53	-0.63	20.9	123.03	2
18900	1880	21.65	-0.63	21.02	126.47	2
19100	1900	21.66	-0.63	21.03	126.77	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	20.52	-0.63	19.89	97.5	2
18900	1880	20.64	-0.63	20.01	100.23	2
19100	1900	20.75	-0.63	20.12	102.8	2

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	17.47	-0.63	16.84	48.31	2
18900	1880	17.57	-0.63	16.94	49.43	2
19100	1900	17.65	-0.63	17.02	50.35	2

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



LTE BAND 25

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	22.65	-0.63	22.02	159.22	2
26340	1880	22.79	-0.63	22.16	164.44	2
26683	1914.3	22.92	-0.63	22.29	169.43	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	21.82	-0.63	21.19	131.52	2
26340	1880	21.95	-0.63	21.32	135.52	2
26683	1914.3	21.93	-0.63	21.3	134.9	2

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	20.92	-0.63	20.29	106.91	2
26340	1880	20.9	-0.63	20.27	106.41	2
26683	1914.3	21.07	-0.63	20.44	110.66	2

CHANNEL BANDWIDTH: 1.4MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	17.95	-0.63	17.32	53.95	2
26340	1880	17.95	-0.63	17.32	53.95	2
26683	1914.3	18.12	-0.63	17.49	56.1	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	22.72	-0.63	22.09	161.81	2
26340	1880	22.77	-0.63	22.14	163.68	2
26675	1913.5	22.85	-0.63	22.22	166.72	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	21.82	-0.63	21.19	131.52	2
26340	1880	21.84	-0.63	21.21	132.13	2
26675	1913.5	21.99	-0.63	21.36	136.77	2

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	20.96	-0.63	20.33	107.89	2
26340	1880	20.93	-0.63	20.3	107.15	2
26675	1913.5	21.09	-0.63	20.46	111.17	2

CHANNEL BANDWIDTH: 3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	18.05	-0.63	17.42	55.21	2
26340	1880	17.95	-0.63	17.32	53.95	2
26675	1913.5	18.11	-0.63	17.48	55.98	2



BUREAU
VERITAS

Test Report No.: W7L-231218W001RF06

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	22.64	-0.63	22.01	158.85	2
26340	1880	22.77	-0.63	22.14	163.68	2
26665	1912.5	22.93	-0.63	22.3	169.82	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	21.79	-0.63	21.16	130.62	2
26340	1880	21.86	-0.63	21.23	132.74	2
26665	1912.5	21.96	-0.63	21.33	135.83	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	20.99	-0.63	20.36	108.64	2
26340	1880	20.92	-0.63	20.29	106.91	2
26665	1912.5	21.16	-0.63	20.53	112.98	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	17.94	-0.63	17.31	53.83	2
26340	1880	17.88	-0.63	17.25	53.09	2
26665	1912.5	18.07	-0.63	17.44	55.46	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	22.62	-0.63	21.99	158.12	2
26340	1880	22.68	-0.63	22.05	160.32	2
26640	1910	22.83	-0.63	22.2	165.96	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	21.83	-0.63	21.2	131.83	2
26340	1880	21.88	-0.63	21.25	133.35	2
26640	1910	21.99	-0.63	21.36	136.77	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	20.98	-0.63	20.35	108.39	2
26340	1880	20.9	-0.63	20.27	106.41	2
26640	1910	21.14	-0.63	20.51	112.46	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	17.95	-0.63	17.32	53.95	2
26340	1880	17.93	-0.63	17.3	53.7	2
26640	1910	18.13	-0.63	17.5	56.23	2



CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	22.72	-0.63	22.09	161.81	2
26340	1880	22.77	-0.63	22.14	163.68	2
26615	1907.5	22.83	-0.63	22.2	165.96	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	21.83	-0.63	21.2	131.83	2
26340	1880	21.97	-0.63	21.34	136.14	2
26615	1907.5	21.97	-0.63	21.34	136.14	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	20.99	-0.63	20.36	108.64	2
26340	1880	20.9	-0.63	20.27	106.41	2
26615	1907.5	21.16	-0.63	20.53	112.98	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	17.97	-0.63	17.34	54.2	2
26340	1880	17.91	-0.63	17.28	53.46	2
26615	1907.5	18.19	-0.63	17.56	57.02	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	22.74	-0.63	22.11	162.55	2
26340	1880	22.8	-0.63	22.17	164.82	2
26590	1905	22.97	-0.63	22.34	171.4	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	21.88	-0.63	21.25	133.35	2
26340	1880	21.99	-0.63	21.36	136.77	2
26590	1905	22.04	-0.63	21.41	138.36	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	21.06	-0.63	20.43	110.41	2
26340	1880	20.99	-0.63	20.36	108.64	2
26590	1905	21.21	-0.63	20.58	114.29	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	18.06	-0.63	17.43	55.34	2
26340	1880	17.99	-0.63	17.36	54.45	2
26590	1905	18.21	-0.63	17.58	57.28	2

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

CA_2C											
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					
18700	18898	QPSK	1	99	1	0	22.51	-0.63	21.88	154.17	2
		16QAM	1	99	1	0	21.57	-0.63	20.94	124.17	2
		64QAM	1	99	1	0	20.69	-0.63	20.06	101.39	2
		256QAM	1	99	1	0	17.58	-0.63	16.95	49.55	2
18801	18999	QPSK	1	99	1	0	22.47	-0.63	21.84	152.76	2
		16QAM	1	99	1	0	21.56	-0.63	20.93	123.88	2
		64QAM	1	99	1	0	20.58	-0.63	19.95	98.86	2
		256QAM	1	99	1	0	17.49	-0.63	16.86	48.53	2
18902	19100	QPSK	1	99	1	0	22.49	-0.63	21.86	153.46	2
		16QAM	1	99	1	0	21.45	-0.63	20.82	120.78	2
		64QAM	1	99	1	0	20.44	-0.63	19.81	95.72	2
		256QAM	1	99	1	0	17.36	-0.63	16.73	47.10	2

CA_2C											
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					
18700	18871	QPSK	1	99	1	0	22.44	-0.63	21.81	151.71	2
		16QAM	1	99	1	0	21.55	-0.63	20.92	123.59	2
		64QAM	1	99	1	0	20.56	-0.63	19.93	98.40	2
		256QAM	1	99	1	0	17.47	-0.63	16.84	48.31	2
18826	18997	QPSK	1	99	1	0	22.37	-0.63	21.74	149.28	2
		16QAM	1	99	1	0	21.46	-0.63	20.83	121.06	2
		64QAM	1	99	1	0	20.50	-0.63	19.87	97.05	2
		256QAM	1	99	1	0	17.47	-0.63	16.84	48.31	2
18951	19122	QPSK	1	99	1	0	22.42	-0.63	21.79	151.01	2
		16QAM	1	99	1	0	21.35	-0.63	20.72	118.03	2
		64QAM	1	99	1	0	20.38	-0.63	19.75	94.41	2
		256QAM	1	99	1	0	17.27	-0.63	16.64	46.13	2

CA_2C											
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					
18678	18849	QPSK	1	74	1	0	22.47	-0.63	21.84	152.76	2
		16QAM	1	74	1	0	21.48	-0.63	20.85	121.62	2
		64QAM	1	74	1	0	20.63	-0.63	20.00	100.00	2
		256QAM	1	74	1	0	17.49	-0.63	16.86	48.53	2
18803	18974	QPSK	1	74	1	0	22.35	-0.63	21.72	148.59	2
		16QAM	1	74	1	0	21.55	-0.63	20.92	123.59	2
		64QAM	1	74	1	0	20.51	-0.63	19.88	97.27	2
		256QAM	1	74	1	0	17.40	-0.63	16.77	47.53	2
18929	19100	QPSK	1	74	1	0	22.34	-0.63	21.71	148.25	2
		16QAM	1	74	1	0	21.32	-0.63	20.69	117.22	2
		64QAM	1	74	1	0	20.38	-0.63	19.75	94.41	2
		256QAM	1	74	1	0	17.27	-0.63	16.64	46.13	2

CA_2C											
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					
18700	18844	QPSK	1	99	1	0	22.46	-0.63	21.83	152.41	2
		16QAM	1	99	1	0	21.50	-0.63	20.87	122.18	2
		64QAM	1	99	1	0	20.61	-0.63	19.98	99.54	2
		256QAM	1	99	1	0	17.53	-0.63	16.90	48.98	2
18851	18995	QPSK	1	99	1	0	22.33	-0.63	21.70	147.91	2
		16QAM	1	99	1	0	21.55	-0.63	20.92	123.59	2
		64QAM	1	99	1	0	20.44	-0.63	19.81	95.72	2
		256QAM	1	99	1	0	17.35	-0.63	16.72	46.99	2
19001	19145	QPSK	1	99	1	0	22.45	-0.63	21.82	152.05	2
		16QAM	1	99	1	0	21.41	-0.63	20.78	119.67	2
		64QAM	1	99	1	0	20.36	-0.63	19.73	93.97	2
		256QAM	1	99	1	0	17.25	-0.63	16.62	45.92	2

CA_2C											
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					
18655	18799	QPSK	1	49	1	0	22.36	-0.63	21.73	148.94	2
		16QAM	1	49	1	0	21.49	-0.63	20.86	121.90	2
		64QAM	1	49	1	0	20.63	-0.63	20.00	100.00	2
		256QAM	1	49	1	0	17.47	-0.63	16.84	48.31	2
18806	18950	QPSK	1	49	1	0	22.40	-0.63	21.77	150.31	2
		16QAM	1	49	1	0	21.45	-0.63	20.82	120.78	2
		64QAM	1	49	1	0	20.55	-0.63	19.92	98.17	2
		256QAM	1	49	1	0	17.39	-0.63	16.76	47.42	2
18956	19100	QPSK	1	49	1	0	22.41	-0.63	21.78	150.66	2
		16QAM	1	49	1	0	21.41	-0.63	20.78	119.67	2
		64QAM	1	49	1	0	20.41	-0.63	19.78	95.06	2
		256QAM	1	49	1	0	17.24	-0.63	16.61	45.81	2

CA_2C											
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					
18675	18825	QPSK	1	74	1	0	22.50	-0.63	21.87	153.82	2
		16QAM	1	74	1	0	21.56	-0.63	20.93	123.88	2
		64QAM	1	74	1	0	20.63	-0.63	20.00	100.00	2
		256QAM	1	74	1	0	17.55	-0.63	16.92	49.20	2
18825	18975	QPSK	1	74	1	0	22.44	-0.63	21.81	151.71	2
		16QAM	1	74	1	0	21.47	-0.63	20.84	121.34	2
		64QAM	1	74	1	0	20.57	-0.63	19.94	98.63	2
		256QAM	1	74	1	0	17.38	-0.63	16.75	47.32	2
18975	19125	QPSK	1	74	1	0	22.42	-0.63	21.79	151.01	2
		16QAM	1	74	1	0	21.40	-0.63	20.77	119.40	2
		64QAM	1	74	1	0	20.38	-0.63	19.75	94.41	2
		256QAM	1	74	1	0	17.26	-0.63	16.63	46.03	2

CA_2C											
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					
18675	18795	QPSK	1	74	1	0	22.50	-0.63	21.87	153.82	2
		16QAM	1	74	1	0	21.54	-0.63	20.91	123.31	2
		64QAM	1	74	1	0	20.67	-0.63	20.04	100.93	2
		256QAM	1	74	1	0	17.51	-0.63	16.88	48.75	2
18851	18971	QPSK	1	74	1	0	22.41	-0.63	21.78	150.66	2
		16QAM	1	74	1	0	21.45	-0.63	20.82	120.78	2
		64QAM	1	74	1	0	20.56	-0.63	19.93	98.40	2
		256QAM	1	74	1	0	17.48	-0.63	16.85	48.42	2
19027	19147	QPSK	1	74	1	0	22.35	-0.63	21.72	148.59	2
		16QAM	1	74	1	0	21.42	-0.63	20.79	119.95	2
		64QAM	1	74	1	0	20.33	-0.63	19.70	93.33	2
		256QAM	1	74	1	0	17.22	-0.63	16.59	45.60	2

CA_2C											
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					
18653	18773	QPSK	1	49	1	0	22.39	-0.63	21.76	149.97	2
		16QAM	1	49	1	0	21.50	-0.63	20.87	122.18	2
		64QAM	1	49	1	0	20.60	-0.63	19.97	99.31	2
		256QAM	1	49	1	0	17.48	-0.63	16.85	48.42	2
18829	18949	QPSK	1	49	1	0	22.34	-0.63	21.71	148.25	2
		16QAM	1	49	1	0	21.52	-0.63	20.89	122.74	2
		64QAM	1	49	1	0	20.52	-0.63	19.89	97.50	2
		256QAM	1	49	1	0	17.36	-0.63	16.73	47.10	2
19005	19125	QPSK	1	49	1	0	22.44	-0.63	21.81	151.71	2
		16QAM	1	49	1	0	21.39	-0.63	20.76	119.12	2
		64QAM	1	49	1	0	20.39	-0.63	19.76	94.62	2
		256QAM	1	49	1	0	17.35	-0.63	16.72	46.99	2

CA_2C											
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					
18700	18817	QPSK	1	99	1	0	22.39	-0.63	21.76	149.97	2
		16QAM	1	99	1	0	21.53	-0.63	20.90	123.03	2
		64QAM	1	99	1	0	20.67	-0.63	20.04	100.93	2
		256QAM	1	99	1	0	17.57	-0.63	16.94	49.43	2
18875	18992	QPSK	1	99	1	0	22.42	-0.63	21.79	151.01	2
		16QAM	1	99	1	0	21.46	-0.63	20.83	121.06	2
		64QAM	1	99	1	0	20.43	-0.63	19.80	95.50	2
		256QAM	1	99	1	0	17.34	-0.63	16.71	46.88	2
19050	19167	QPSK	1	99	1	0	22.47	-0.63	21.84	152.76	2
		16QAM	1	99	1	0	21.39	-0.63	20.76	119.12	2
		64QAM	1	99	1	0	20.33	-0.63	19.70	93.33	2
		256QAM	1	99	1	0	17.24	-0.63	16.61	45.81	2

CA_2C											
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					
18633	18750	QPSK	1	24	1	0	22.43	-0.63	21.80	151.36	2
		16QAM	1	24	1	0	21.53	-0.63	20.90	123.03	2
		64QAM	1	24	1	0	20.62	-0.63	19.99	99.77	2
		256QAM	1	24	1	0	17.57	-0.63	16.94	49.43	2
18808	18925	QPSK	1	24	1	0	22.40	-0.63	21.77	150.31	2
		16QAM	1	24	1	0	21.49	-0.63	20.86	121.90	2
		64QAM	1	24	1	0	20.46	-0.63	19.83	96.16	2
		256QAM	1	24	1	0	17.34	-0.63	16.71	46.88	2
18983	19100	QPSK	1	24	1	0	22.34	-0.63	21.71	148.25	2
		16QAM	1	24	1	0	21.43	-0.63	20.80	120.23	2
		64QAM	1	24	1	0	20.39	-0.63	19.76	94.62	2
		256QAM	1	24	1	0	17.21	-0.63	16.58	45.50	2



3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

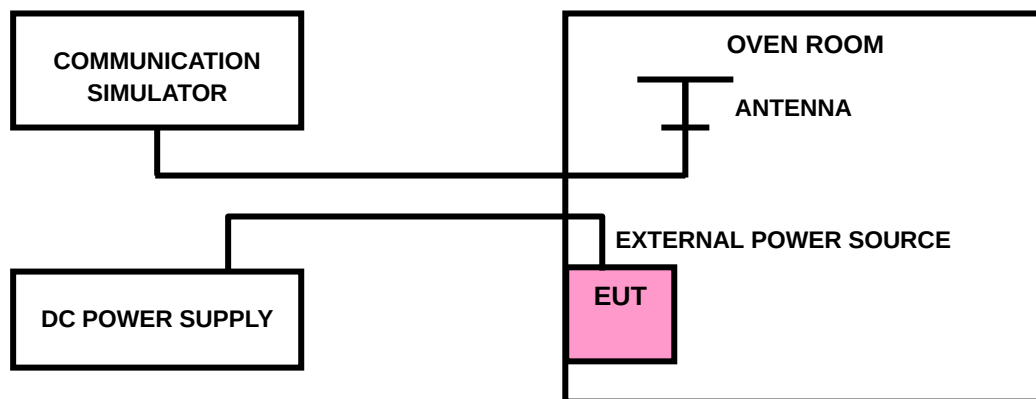
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

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





Test Report No.: W7L-231218W001RF06

3.2.4 TEST RESULTS

Please Refer to Appendix F Of this test report.

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

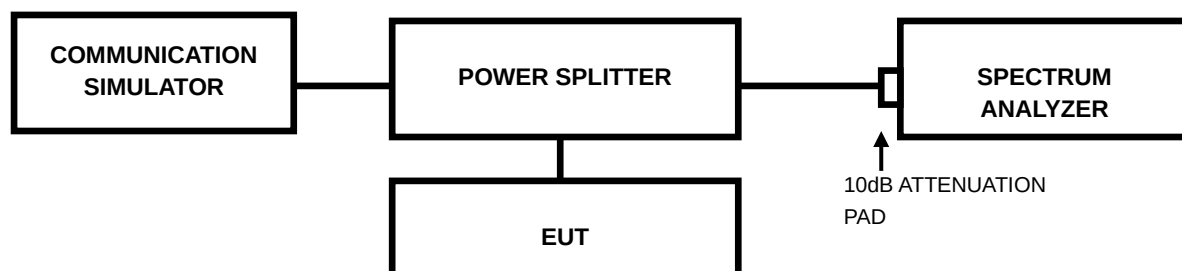


3.3 OCCUPIED BANDWIDTH MEASUREMENT

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-231218W001RF06

3.3.4 TEST RESULTS

Please Refer to Appendix F Of this test report.

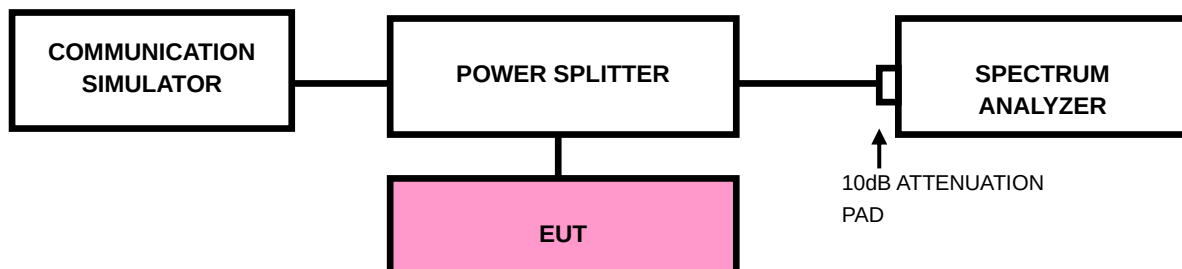


3.4 BAND EDGE MEASUREMENTC

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

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



Test Report No.: W7L-231218W001RF06

3.4.4. TEST RESULTS

Please Refer to Appendix F Of this test report.



3.5 CONDUCTED SPURIOUS EMISSIONS

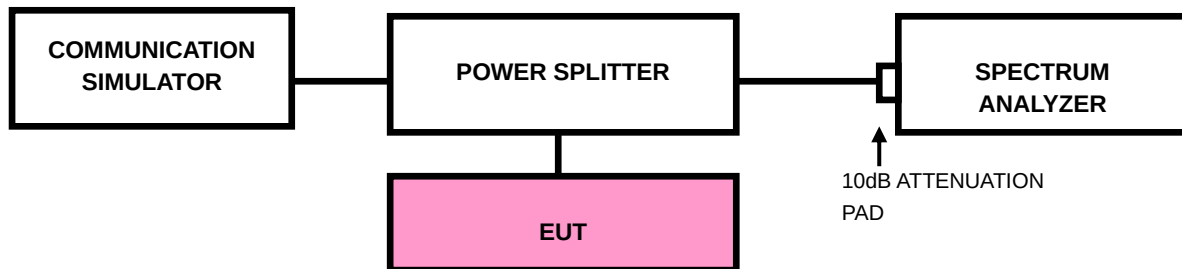
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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 .

3.5.2 TEST PROCEDURE

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 30MHz 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





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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 F 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 .

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. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$

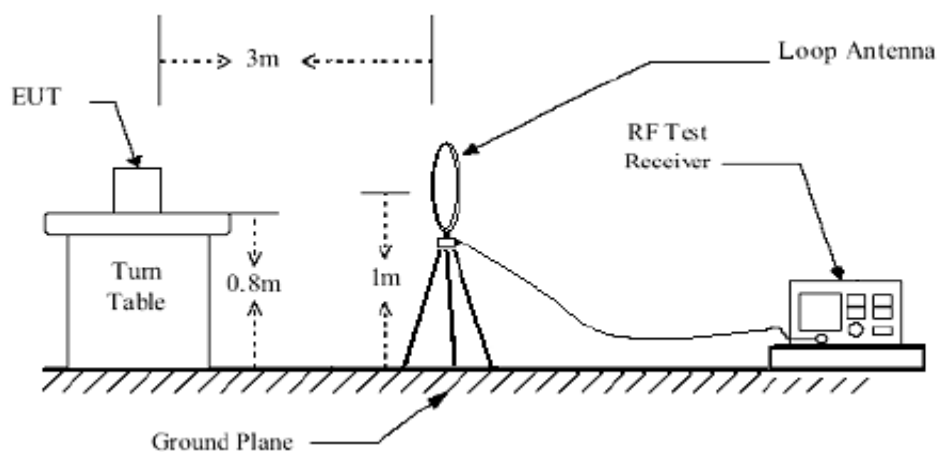
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.6.3 DEVIATION FROM TEST STANDARD

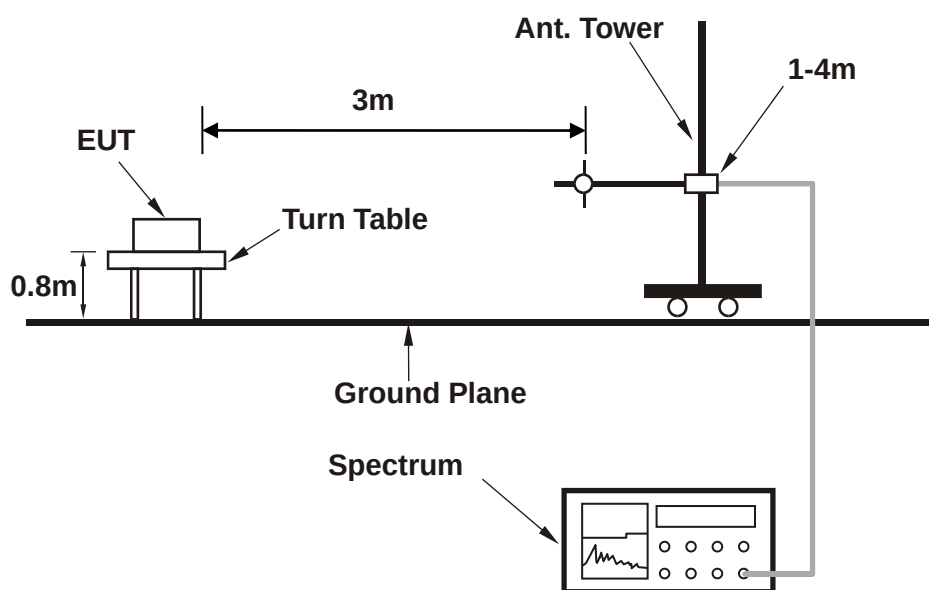
No deviation

3.6.4 TEST SETUP

< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >

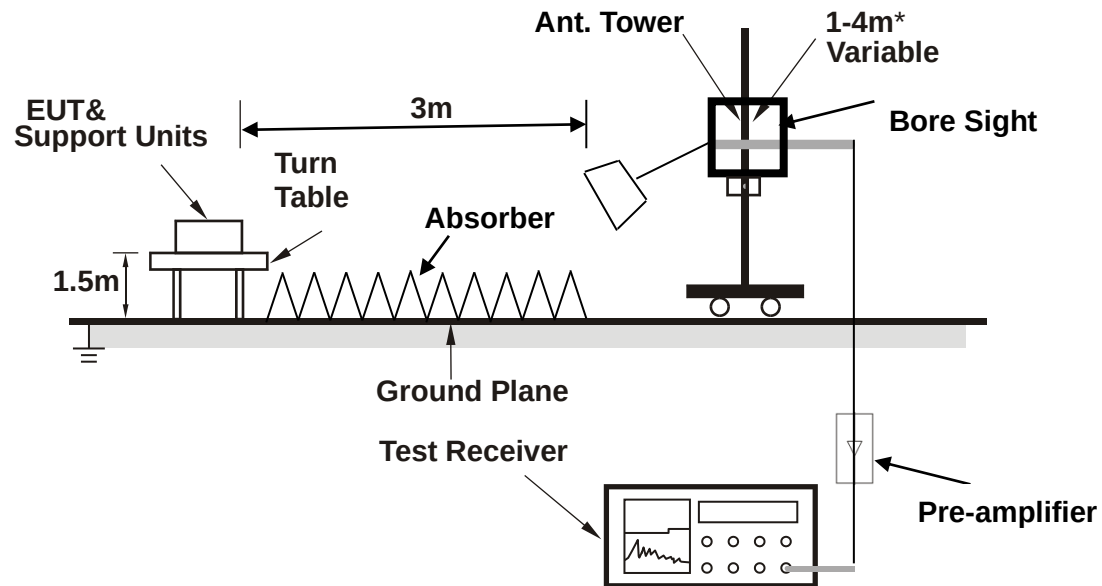




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VERITAS

Test Report No.: W7L-231218W001RF06

<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).



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Test Report No.: W7L-231218W001RF06

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:

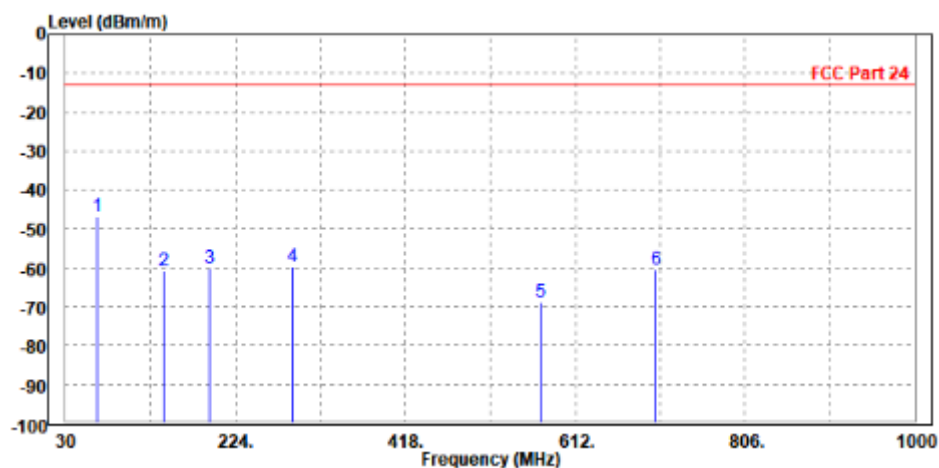
LTE Band 25:

CHANNEL BANDWIDTH: 15MHz / QPSK

CH 26365

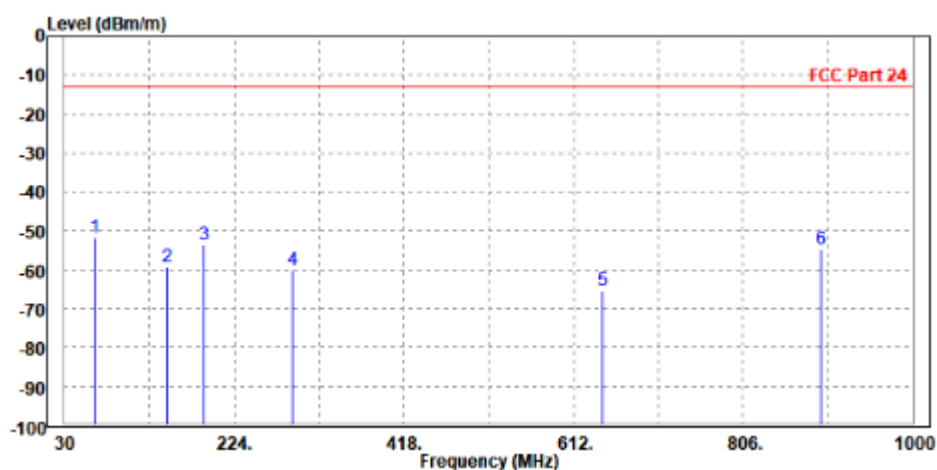
MODE	TX channel 26365	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	65.890	-46.83	-34.52	-13.00	-33.83	-12.31	Peak	Horizontal
2		141.550	-60.79	-45.91	-13.00	-47.79	-14.88	Peak	Horizontal
3		193.930	-59.95	-44.29	-13.00	-46.95	-15.66	Peak	Horizontal
4		288.990	-59.84	-50.51	-13.00	-46.84	-9.33	Peak	Horizontal
5		572.230	-68.63	-64.13	-13.00	-55.63	-4.50	Peak	Horizontal
6		703.180	-60.48	-64.56	-13.00	-47.48	4.08	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Below 1000MHz
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	63.950	-51.53	-32.36	-13.00	-38.53	-19.17	Peak	Vertical
2	147.370	-59.32	-45.67	-13.00	-46.32	-13.65	Peak	Vertical
3	190.050	-53.73	-47.20	-13.00	-40.73	-6.53	Peak	Vertical
4	289.960	-59.97	-56.49	-13.00	-46.97	-3.48	Peak	Vertical
5	644.980	-65.26	-64.73	-13.00	-52.26	-0.53	Peak	Vertical
6	895.240	-54.91	-66.70	-13.00	-41.91	11.79	Peak	Vertical





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Test Report No.: W7L-231218W001RF06

ABOVE 1GHz DATA

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

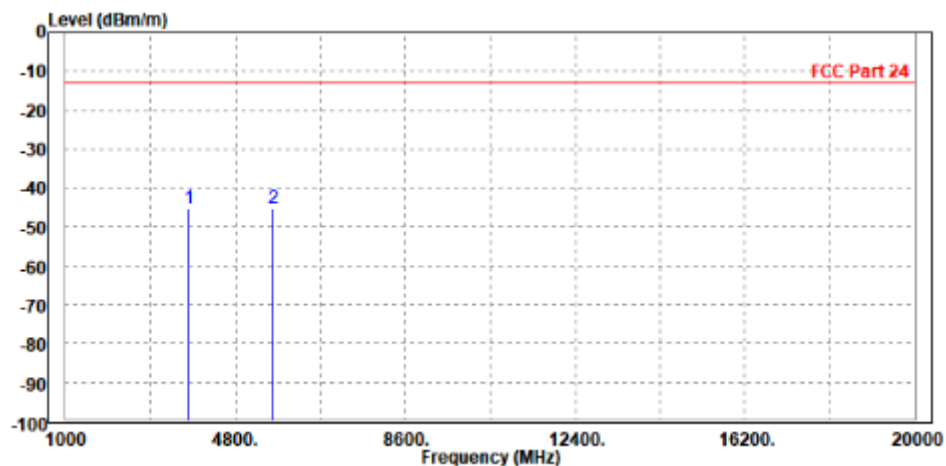
WORST-CASE DATA

LTE Band 25

CHANNEL BANDWIDTH: 1.4MHz / QPSK

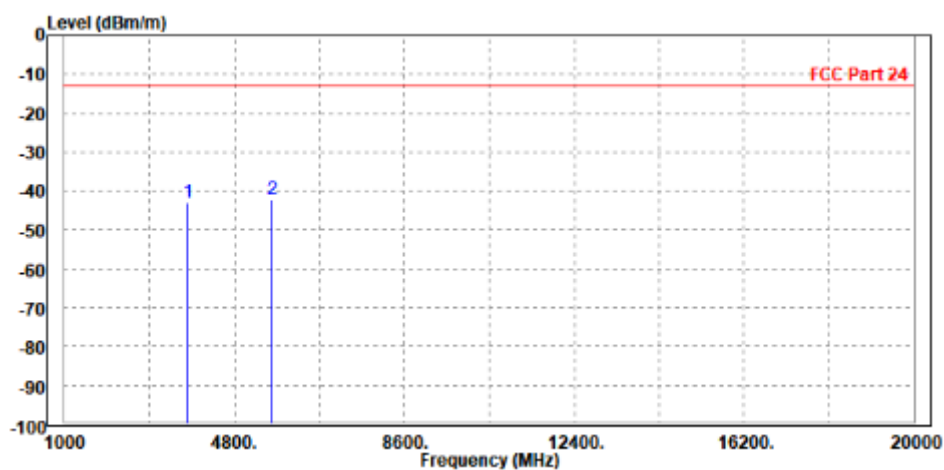
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHZ
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3760.000	-45.40	-53.75	-13.00	-32.40	8.35	Peak	Horizontal
2 PP	5636.000	-45.14	-56.95	-13.00	-32.14	11.81	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
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	3755.000	-43.14	-51.77	-13.00	-30.14	8.63	Peak	Vertical
2 PP	5636.000	-42.18	-54.50	-13.00	-29.18	12.32	Peak	Vertical





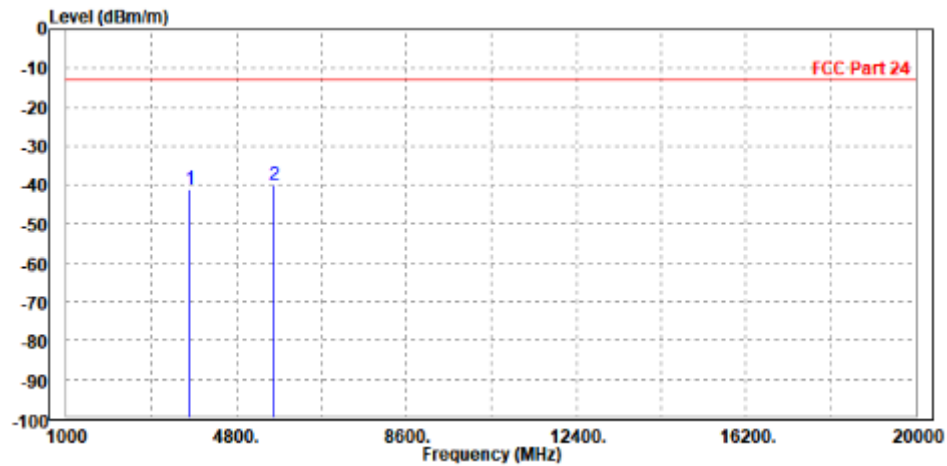
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Test Report No.: W7L-231218W001RF06

CHANNEL BANDWIDTH: 3MHz / QPSK

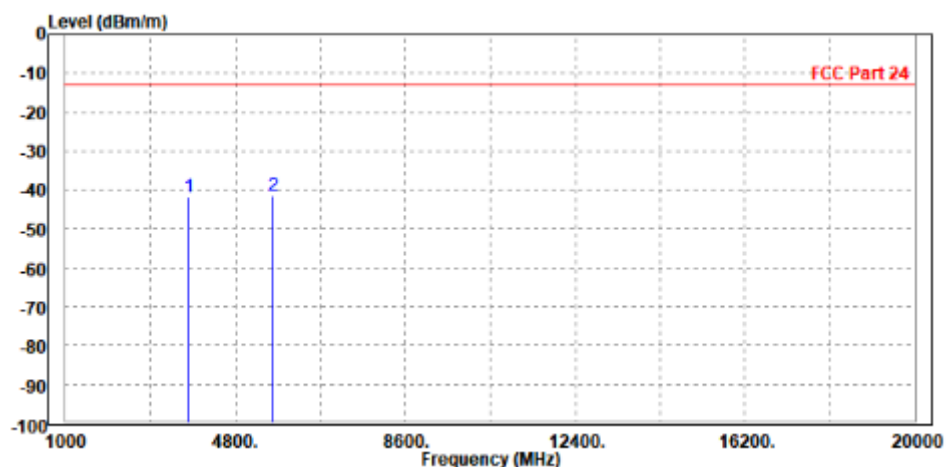
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-40.99	-49.35	-13.00	-27.99	8.36	Peak	Horizontal
2 PP	5636.000	-40.09	-51.90	-13.00	-27.09	11.81	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

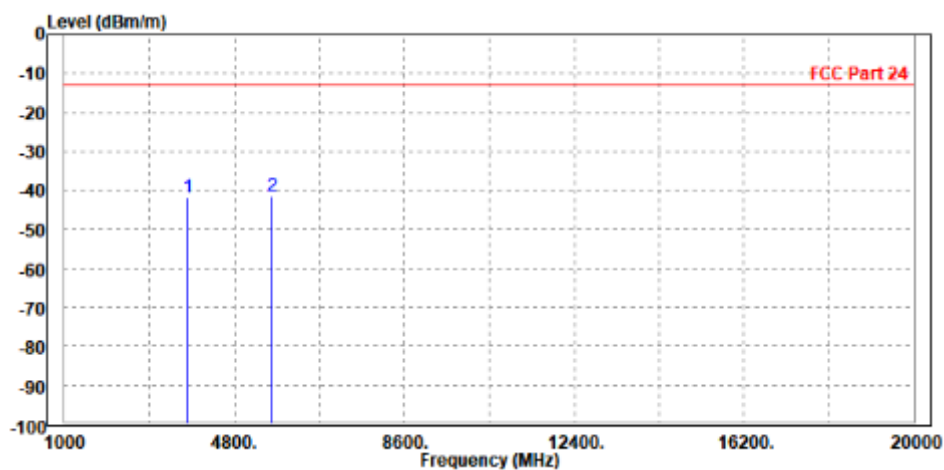
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-41.95	-50.58	-13.00	-28.95	8.63	Peak	Vertical
2 PP	5636.000	-41.29	-53.61	-13.00	-28.29	12.32	Peak	Vertical



CHANNEL BANDWIDTH: 5MHz / QPSK

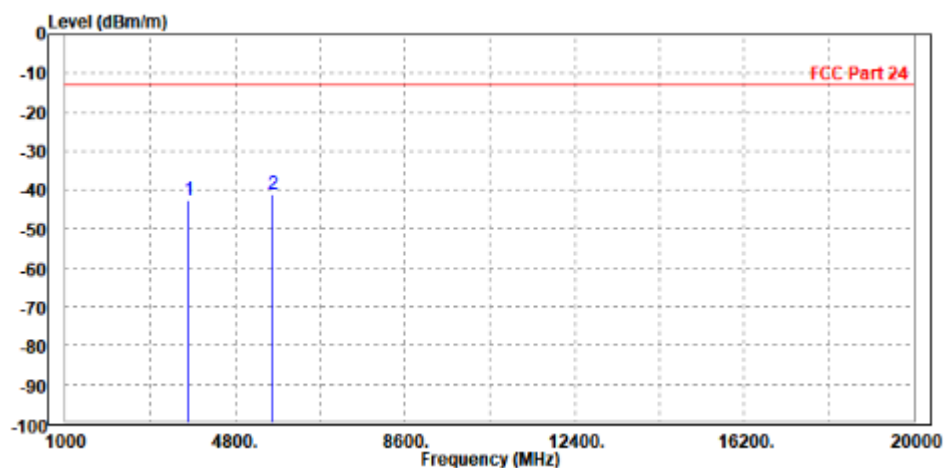
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-41.82	-50.18	-13.00	-28.82	8.36	Peak	Horizontal
2 PP	5636.000	-41.51	-53.32	-13.00	-28.51	11.81	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

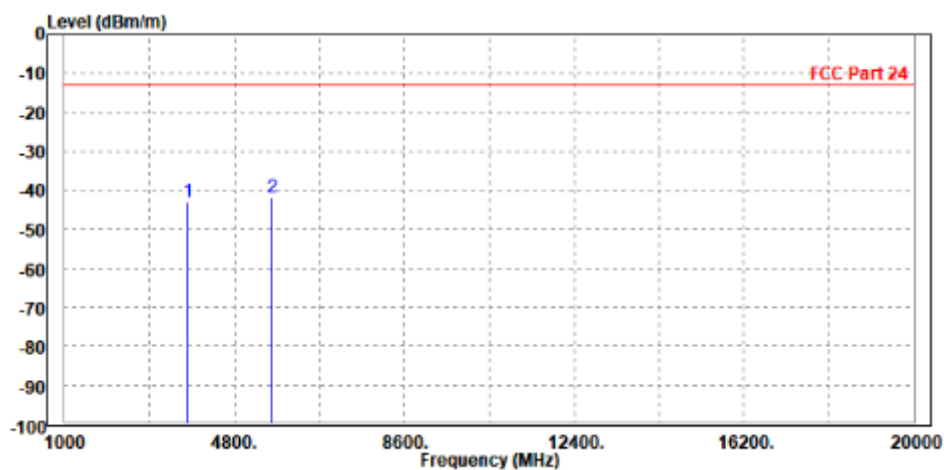
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-42.64	-51.27	-13.00	-29.64	8.63	Peak	Vertical
2 PP	5636.000	-41.16	-53.48	-13.00	-28.16	12.32	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

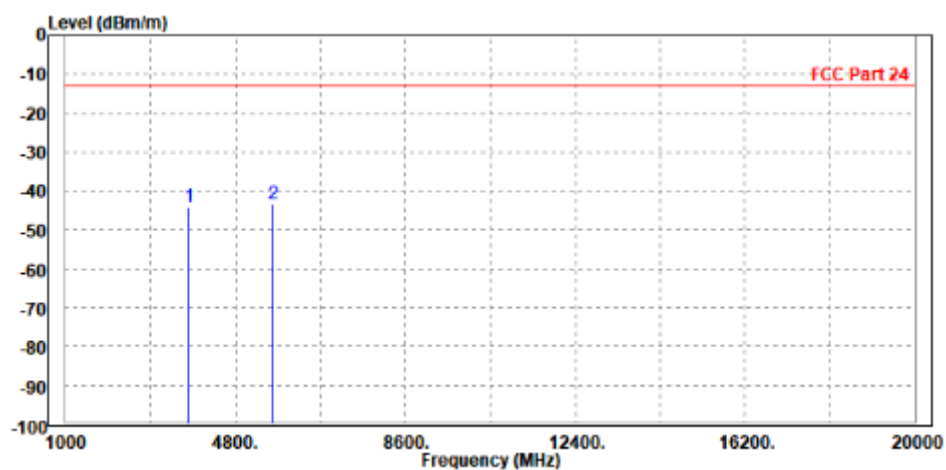
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-43.12	-51.48	-13.00	-30.12	8.36	Peak	Horizontal
2 PP	5636.000	-41.92	-53.73	-13.00	-28.92	11.81	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
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	3755.000	-44.11	-52.74	-13.00	-31.11	8.63	Peak	Vertical
2 PP	5636.000	-43.24	-55.56	-13.00	-30.24	12.32	Peak	Vertical

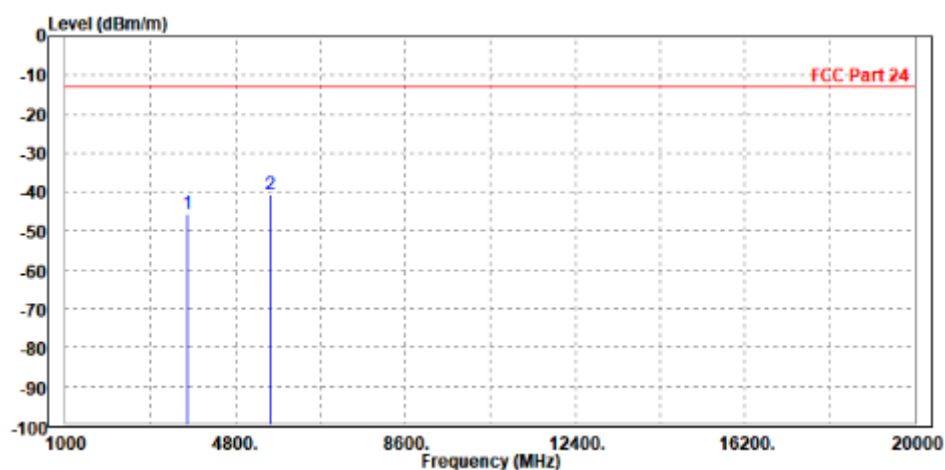


CHANNEL BANDWIDTH: 15MHz / QPSK

CH26115

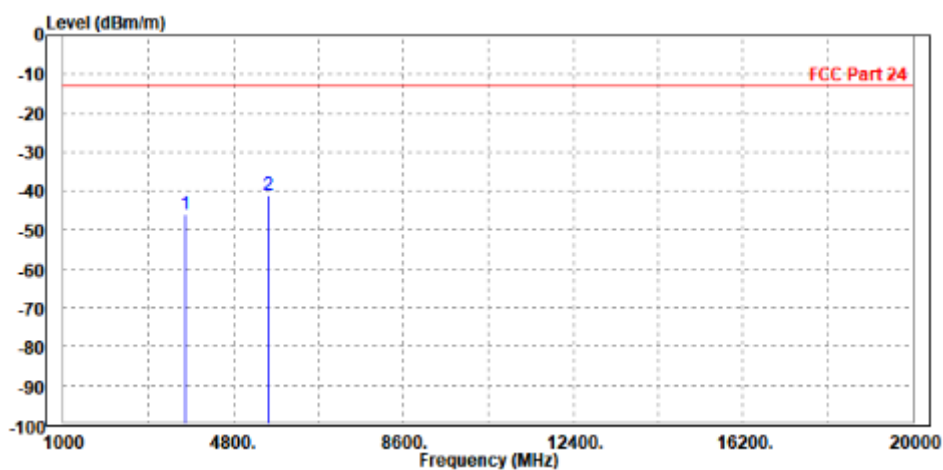
MODE	TX channel 26115	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3717.000	-45.55	-53.94	-13.00	-32.55	8.39	Peak	Horizontal
2 PP	5579.000	-40.52	-52.33	-13.00	-27.52	11.81	Peak	Horizontal



MODE	TX channel 26115	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

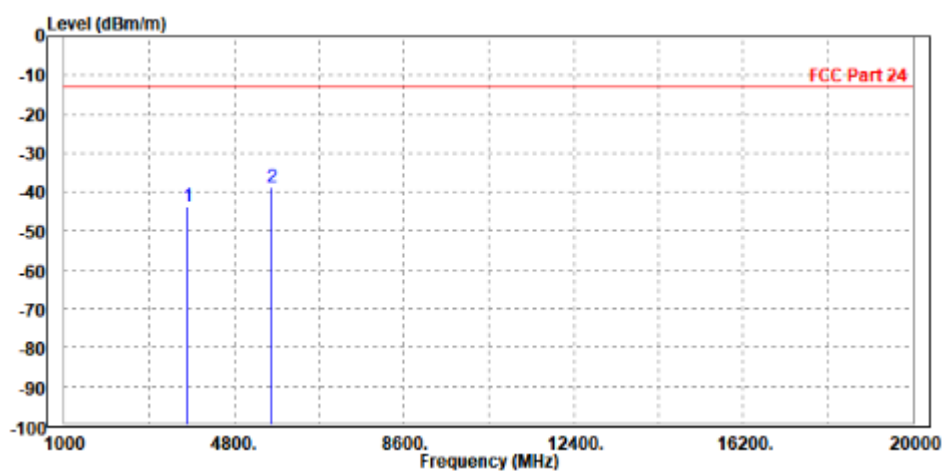
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3717.000	-46.08	-54.71	-13.00	-33.08	8.63	Peak	Vertical
2 PP	5572.500	-41.04	-53.37	-13.00	-28.04	12.33	Peak	Vertical



CH26365

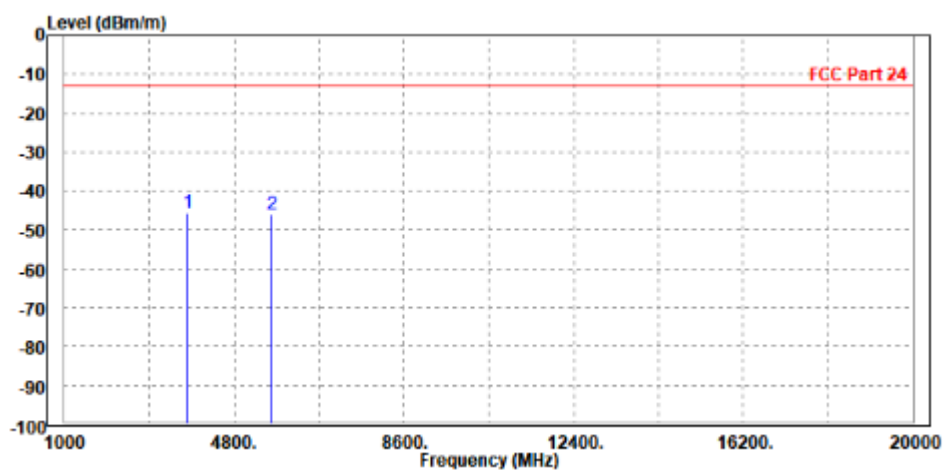
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-43.76	-52.12	-13.00	-30.76	8.36	Peak	Horizontal
2 PP	5636.000	-38.77	-50.58	-13.00	-25.77	11.81	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
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	3755.000	-45.61	-54.24	-13.00	-32.61	8.63	Peak	Vertical
2	5640.000	-45.86	-58.18	-13.00	-32.86	12.32	Peak	Vertical





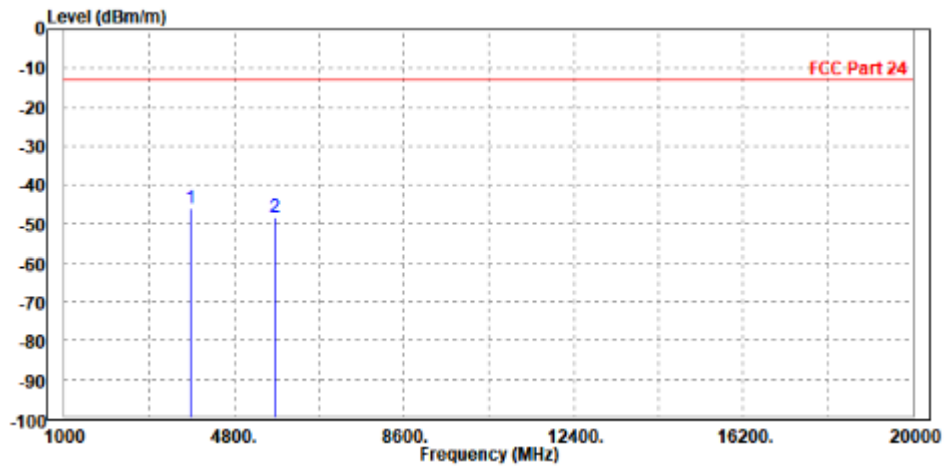
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CH26615

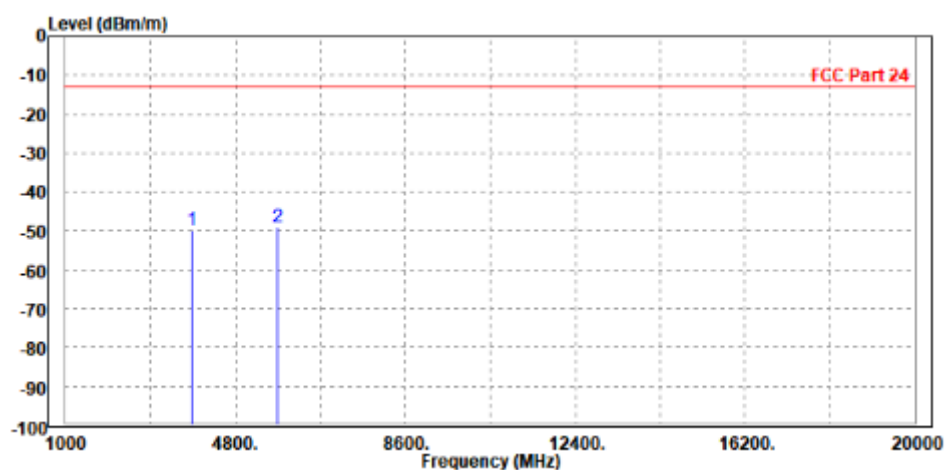
MODE	TX channel 26615	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

			Read	Limit	Over			
	Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3812.000	-46.15	-54.46	-13.00	-33.15	8.31	Peak	Horizontal
2	5722.500	-48.34	-60.16	-13.00	-35.34	11.82	Peak	Horizontal



MODE	TX channel 26615	FREQUENCY RANGE	Above 1000MHz
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	3815.000	-49.88	-58.51	-13.00	-36.88	8.63	Peak	Vertical
2 PP	5731.000	-48.86	-61.17	-13.00	-35.86	12.31	Peak	Vertical



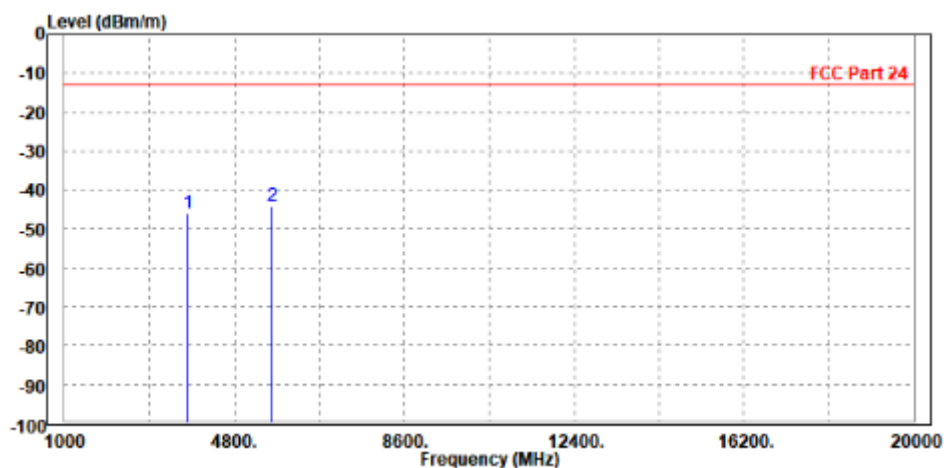


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CHANNEL BANDWIDTH: 20MHz / QPSK

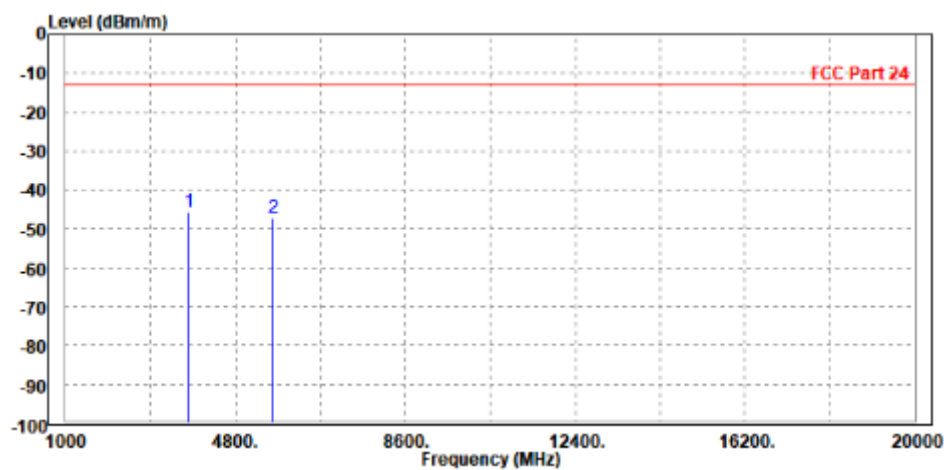
MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3755.000	-46.17	-54.53	-13.00	-33.17	8.36	Peak	Horizontal
2 PP	5636.000	-44.15	-55.96	-13.00	-31.15	11.81	Peak	Horizontal



MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
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	3760.000	-45.65	-54.28	-13.00	-32.65	8.63	Peak	Vertical
2	5636.000	-47.15	-59.47	-13.00	-34.15	12.32	Peak	Vertical

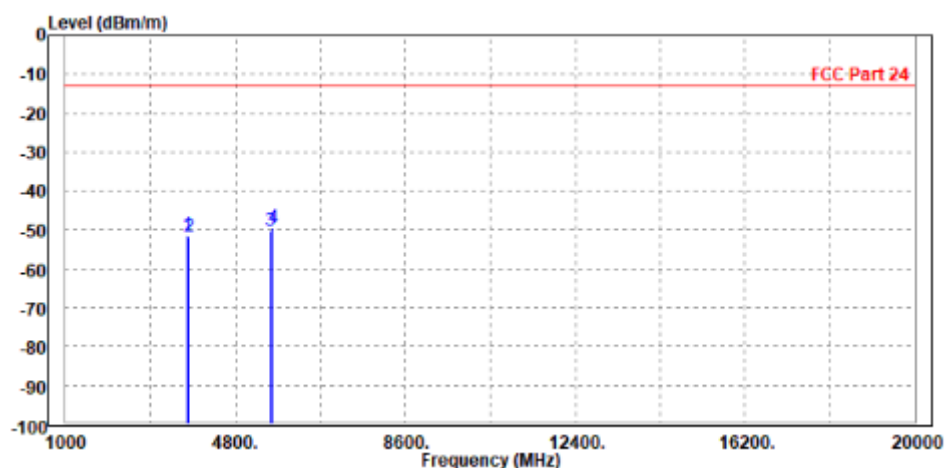


CA_2C

CHANNEL BANDWIDTH: 20MHz+20MHz / QPSK

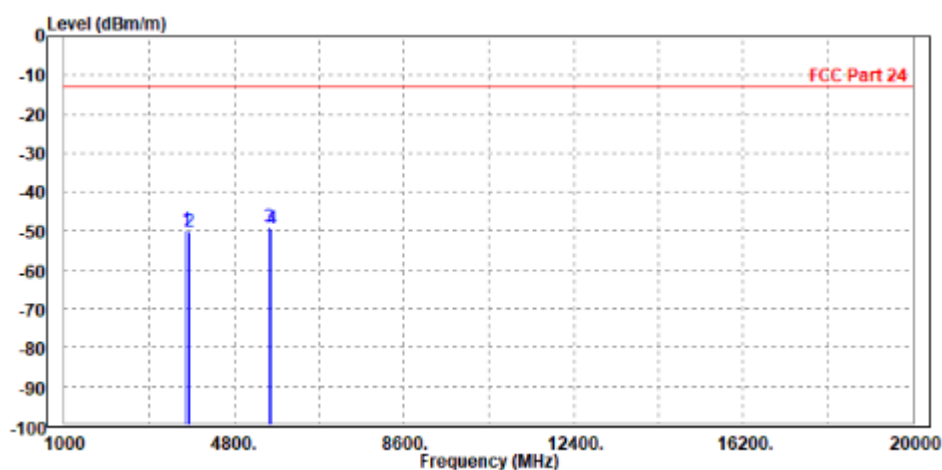
MODE	TX channel 18801	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3717.000	-51.39	-59.78	-13.00	-38.39	8.39	Peak	Horizontal
2	3756.600	-51.66	-60.01	-13.00	-38.66	8.35	Peak	Horizontal
3	5580.000	-50.32	-62.13	-13.00	-37.32	11.81	Peak	Horizontal
4 PP	5636.000	-49.44	-61.25	-13.00	-36.44	11.81	Peak	Horizontal



MODE	TX channel 18801	FREQUENCY RANGE	Above 1000MHz
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	3720.000	-49.69	-58.32	-13.00	-36.69	8.63	Peak	Vertical
2	3793.000	-50.33	-58.96	-13.00	-37.33	8.63	Peak	Vertical
3 PP	5579.000	-49.24	-61.57	-13.00	-36.24	12.33	Peak	Vertical
4	5639.400	-49.35	-61.67	-13.00	-36.35	12.32	Peak	Vertical

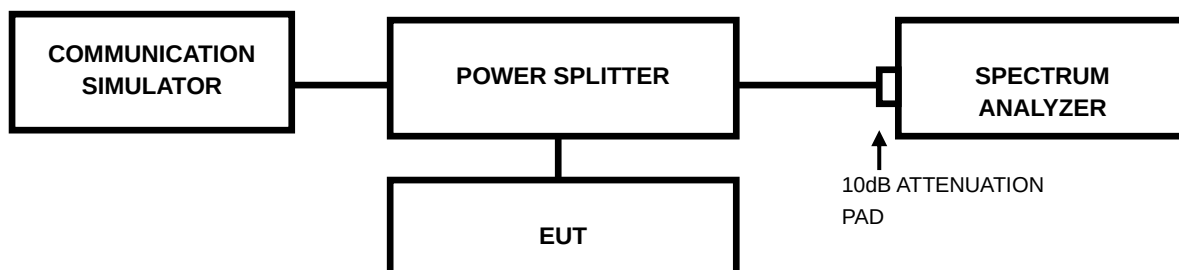


3.7 PEAK TO AVERAGE RATIO

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 F 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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Fax: +86-755-88696577

Email: customerservice.sw@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---