

FCC TEST REPORT

(PART 27)

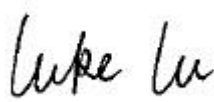
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Address:	401 and 402, Building 3, Shenzhen Software Park, Nanshan District, Shenzhen City, Guangdong Province, P.R.C.
Product:	Smart Mobile Payment Terminal
Brand Name:	PAX
Model Name:	A920
FCC ID:	V5PA920MG
Date of tests:	Jan. 06, 2022 ~ Mar. 04, 2022

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

☒ **FCC Part 27, Subpart C, M** ☒ **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: Mar. 04, 2022	Date: Mar. 04, 2022

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P22010007RF04	Original release	Mar. 04, 2022

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	RESULT
§2.1046	Coducted Output Power	Compliance
§27.50(b)(10) §27.50(c)(10)	Equivalent Radiated Power (Band12) (Band13) (Band17)	Compliance
§27.50(d)(4) §27.50(h)(2)	Equivalent Isotropically Radiated Power (Band4)	Compliance
§2.1055 §27.54	Frequency Stability	Compliance
§2.1049	Occupied Bandwidth	Compliance
§2.1051 §27.53(c)(2)(4) §27.53(g) §27.53(h) §27.53(m)(4)(6)	Band Edge Measurements	Compliance
§2.1051 §27.53(c)(2)(4) §27.53(g) §27.53(h) §27.53(m)(4)(6)	Conducted Spurious Emissions	Compliance
§2.1053 §27.53(c)(2)(4) §27.53(g) §27.53(h) §27.53(m)(4)(6)	Radiated Spurious Emissions	Compliance
NA	Peak to average ratio	Compliance

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 & Radiated Power (30MHz~1GMHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GMHz ~6GMHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GMHz ~18GMHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GMHz ~40GMHz)	$\pm 4.12\text{dB}$
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	Apr. 22,21	Apr. 21,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 05,21	Mar. 04,22
Horn Antenna	ETS-LINDGREN	3117	00168728	Apr. 02,21	Apr. 01,22
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 25,21	Feb. 24,22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 24,22	Feb. 23,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V 7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
Power Meter	Anritsu	ML2495A	1506002	Apr. 07,21	Apr. 06,22
Power Sensor	Anritsu	MA2411B	1339352	May. 07,21	May. 06,22



BUREAU
VERITAS

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Temperature Chamber	ESPEC	SH-242	93000855	Jun. 02,21	Jun. 01,22
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 05,21	Mar. 04,22
Power Divider	MCLI/USA	PS2-15	24880	N/A	N/A

- 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	Smart Mobile Payment Terminal	
BRAND NAME	PAX	
MODEL NAME	A920	
NOMINAL VOLTAGE	5Vdc (adapter) 3.7Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	WCDMA IV	HSDPA, HSUPA
	LTE	QPSK, 16QAM
FREQUENCY RANGE	WCDMA IV	1712.4MHz ~ 1752.6MHz
	LTE Band 4 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1754.3MHz
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.5MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~ 1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715MHz ~ 1750MHz
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5 MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720MHz ~ 1745MHz
	LTE Band 12 Channel Bandwidth: 1.4MHz	699.7MHz ~ 715.3MHz
	LTE Band 12 Channel Bandwidth: 3MHz	700.5MHz ~ 714.5MHz
	LTE Band 12 Channel Bandwidth: 5MHz	701.5MHz ~ 713.5MHz
	LTE Band 12 Channel Bandwidth: 10MHz	704MHz ~ 711MHz
	LTE Band 13 Channel Bandwidth: 5MHz	779.5MHz ~ 784.5MHz
	LTE Band 13 Channel Bandwidth: 10MHz	782MHz
	LTE Band 17 Channel Bandwidth: 5MHz	706.5MHz ~ 713.5MHz
	LTE Band 17 Channel Bandwidth: 10MHz	709MHz ~ 711 MHz

EMISSION DESIGNATOR	WCDMA IV	4M18F9W
	LTE Band 4	QPSK: 1M10G7D
	Channel Bandwidth: 1.4MHz	16QAM: 1M10W7D
	LTE Band 4	QPSK: 2M70G7D
	Channel Bandwidth: 3MHz	16QAM: 2M70W7D
	LTE Band 4	QPSK: 4M51G7D
	Channel Bandwidth: 5MHz	16QAM: 4M51W7D
	LTE Band 4	QPSK: 8M99G7D
	Channel Bandwidth: 10MHz	16QAM: 8M97W7D
	LTE Band 4	QPSK: 13M5G7D
	Channel Bandwidth: 15MHz	16QAM: 13M5W7D
	LTE Band 4	QPSK: 18M0G7D
	Channel Bandwidth: 20MHz	16QAM: 18M0W7D
	LTE Band 12	QPSK: 1M10G7D
	Channel Bandwidth: 1.4MHz	16QAM: 1M10W7D
	LTE Band 12	QPSK: 2M70G7D
	Channel Bandwidth: 3MHz	16QAM: 2M70W7D
	LTE Band 12	QPSK: 4M50G7D
	Channel Bandwidth: 5MHz	16QAM: 4M51W7D
	LTE Band 12	QPSK: 9M00G7D
	Channel Bandwidth: 10MHz	16QAM: 9M00W7D
MAX. ERP/EIRP POWER	LTE Band 13	QPSK: 4M51G7D
	Channel Bandwidth: 5MHz	16QAM: 4M51W7D
	LTE Band 13	QPSK: 8M97G7D
	Channel Bandwidth: 10MHz	16QAM: 8M95W7D
	LTE Band 17	QPSK: 4M51G7D
	Channel Bandwidth: 5MHz	16QAM: 4M51W7D
	LTE Band 17	QPSK: 9M01G7D
	Channel Bandwidth: 10MHz	16QAM: 9M00W7D
	WCDMA IV	203.24mW
	LTE Band 4	207.97mW
	Channel Bandwidth: 1.4MHz	
	LTE Band 4	208.93mW
	Channel Bandwidth: 3MHz	
	LTE Band 4	206.54mW
	Channel Bandwidth: 5MHz	
	LTE Band 4	207.97mW
	Channel Bandwidth: 10MHz	

	LTE Band 4 Channel Bandwidth: 15MHz	207.97mW
	LTE Band 4 Channel Bandwidth: 20MHz	209.89mW
	LTE Band 12 Channel Bandwidth: 1.4MHz	140.60mW
	LTE Band 12 Channel Bandwidth: 3MHz	140.60mW
	LTE Band 12 Channel Bandwidth: 5MHz	140.60mW
	LTE Band 12 Channel Bandwidth: 10MHz	141.25mW
	LTE Band 13 Channel Bandwidth: 5MHz	146.55mW
	LTE Band 13 Channel Bandwidth: 10MHz	148.25mW
	LTE Band 17 Channel Bandwidth: 5MHz	135.21mW
	LTE Band 17 Channel Bandwidth: 10MHz	136.46mW
ANTENNA TYPE	PIFA Antenna with 1.5dBi gain for WCDMA B4/LTE B4 PIFA Antenna with 1dBi gain for LTE B12/B13/B17	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: unshielded without ferrite, 1 meter	
EXTREME TEMPERATURE	-10-50 °C	
EXTREME VOLTAGE	3.1V- 4.2V	

NOTE:

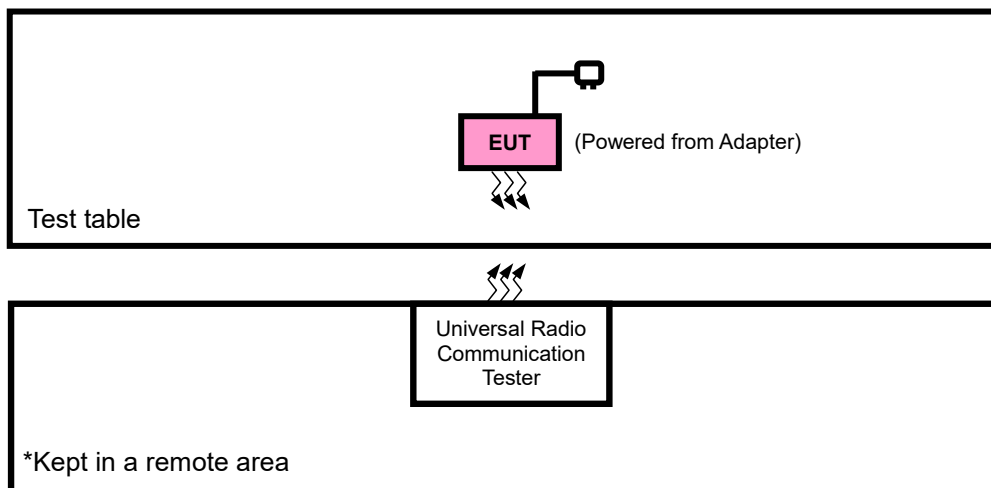
- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery	/	IS900	Capacity : 3.7vdc 5250mAh
AC Adapter	/	GLH50D2000HW	I/P:100-240Vac, 0.4A O/P: 5Vdc, 2A
USB Cable	/	/	Signal Line, 1.0meter

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	DC source	LONG WEI	PS-6403D	010934269	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: 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 with WCDMA or LTE link
B	EUT + Battery with WCDMA or LTE link

WCDMA MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	EIRP	1312 to 1513	1312, 1413, 1513	WCDMA
B	FREQUENCY STABILITY	1312 to 1513	1312, 1513	WCDMA
A	OCCUPIED BANDWIDTH	1312 to 1513	1312, 1413, 1513	WCDMA
A	BAND EDGE	1312 to 1513	1312, 1513	WCDMA
A	PEAK TO AVERAGE RATIO	1312 to 1513	1312, 1413, 1513	WCDMA
A	CONDUCTED EMISSION	1312 to 1513	1312, 1413, 1513	WCDMA
A	RADIATED EMISSION	1312 to 1513	1312, 1413, 1513	WCDMA

LTE BAND 4

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	19957 to 20393	19957, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	19965, 20385	3MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975, 20375	5MHz	QPSK	1 RB / 0 RB Offset
		20000 to 20350	20000, 20350	10MHz	QPSK	1 RB / 0 RB Offset
		20025 to 20325	20025, 20325	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20300	20MHz	QPSK	1 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	6 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	15 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	75 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	100 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
A	BAND EDGE	19957 to 20393	19957	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
		19965 to 20385	20393	1.4MHz	QPSK, 16QAM	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		19975 to 20375	19965	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
		20000 to 20350	20385	3MHz	QPSK, 16QAM	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		20025 to 20325	19975	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
		20050 to 20300	20375	5MHz	QPSK, 16QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		20000 to 20350	20000	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
		20025 to 20325	20350	10MHz	QPSK, 16QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset

A	BAND EDGE	20025 to 20325	20025	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
		20050 to 20300	20325	15MHz	QPSK, 16QAM	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
			20050	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
A	CONDCUDED EMISSION	20050 to 20300	20300	20MHz	QPSK, 16QAM	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
		19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	20025 to 20325	20025, 20175, 20325	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK	1 RB / 0 RB Offset
		19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	20175	3MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	20175	5MHz	QPSK	1 RB / 0 RB Offset
		20000 to 20350	20175	10MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	20025 to 20325	20175	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20175	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 12

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	23017 to 23173	23017, 23173	1.4MHz	QPSK	1 RB / 0 RB Offset
		23025 to 23165	23025, 23165	3MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035, 23155	5MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060, 23130	10MHz	QPSK	1 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	6 RB / 0 RB Offset
		23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	15 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
A	BAND EDGE	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 0 RB Offset
			23173	1.4MHz	QPSK	6 RB / 0 RB Offset
		23025 to 23165	23025	3MHz	QPSK	1 RB / 5 RB Offset
			23165	3MHz	QPSK	6 RB / 0 RB Offset
		23035 to 23155	23035	5MHz	QPSK	1 RB / 0 RB Offset
			23155	5MHz	QPSK	15 RB / 0 RB Offset
		23060 to 23130	23060	10MHz	QPSK	1 RB / 14 RB Offset
			23130	10MHz	QPSK	15 RB / 0 RB Offset
		23017 to 23173	23017	1.4MHz	QPSK	1 RB / 0 RB Offset
			23173	1.4MHz	QPSK	25 RB / 0 RB Offset
		23025 to 23165	23025	3MHz	QPSK	1 RB / 24 RB Offset
			23165	3MHz	QPSK	25 RB / 0 RB Offset
A	CONDCUETED EMISSION	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK	1 RB / 0 RB Offset
		23025 to 23165	23025, 23095, 23165	3MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK	1 RB / 0 RB Offset
		23025 to 23165	23095	3MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23095	5MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23095	10MHz	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 13

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23205 to 23255	20025, 20175, 20325	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23230	23230	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	23205 to 23255	20025, 20325	1.4MHz	QPSK	1 RB / 0 RB Offset
		23230	23230	10MHz	QPSK	1 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	23205 to 23255	20025, 20175, 20325	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		23230	23230	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
A	BAND EDGE	23205 to 23255	23250	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			23255	5MHz	QPSK, 16QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		23230	23230	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			/	10MHz	QPSK, 16QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
A	CONDCUDED EMISSION	23205 to 23255	20025, 20175, 20325	5MHz	QPSK	1 RB / 0 RB Offset
		23230	23230	10MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	23205 to 23255	20025, 20175, 20325	5MHz	QPSK	1 RB / 0 RB Offset
		23230	23230	10MHz	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 17

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	23755 to 23825	23755, 23825	5MHz	QPSK	1 RB / 0 RB Offset
		23780 to 23800	23780, 23800	10MHz	QPSK	1 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
A	BAND EDGE	23755 to 23825	23755	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			23825	5MHz	QPSK, 16QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		23780 to 23800	23780	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
A	CONDCUDED EMISSION	23755 to 23825	23755, 23790, 23825	5MHz	QPSK	1 RB / 0 RB Offset
		23780 to 23800	23780, 23790, 23800	10MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	23755 to 23825	23790	5MHz	QPSK	1 RB / 0 RB Offset
		23780 to 23800	23780, 23790, 23800	10MHz	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.

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP/EIRP	23deg. C, 70%RH	5V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	5V By Battery	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	5V By Adapter	James Fu
BAND EDGE	23deg. C, 70%RH	5V By Adapter	James Fu
CONDCUDED EMISSION	23deg. C, 70%RH	5V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	5V By Adapter	Jace Hu



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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.”

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

Portable stations (hand-held devices) transmitting in the 776-788 MHz bands are limited to 3 watts ERP.

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.

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 determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

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:



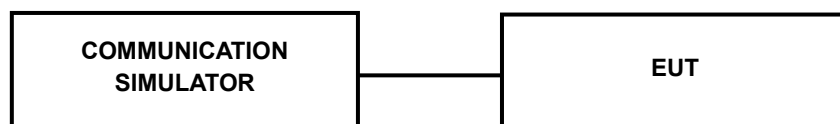
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- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

AVERAGE CONDUCTED OUTPUT POWER (dBm)

Band	WCDMA IV			Max. Tune-up Power
Channel	1312	1413	1513	
Frequency (MHz)	1712.4	1732.6	1752.6	
RMC 12.2K	21.58	21.57	21.55	22.5
HSDPA Subtest-1	20.57	20.55	20.53	21.5
HSDPA Subtest-2	20.54	20.56	20.54	21.5
HSDPA Subtest-3	20.06	20.07	20.04	21.0
HSDPA Subtest-4	20.07	20.06	20.03	21.0
HSUPA Subtest-1	20.56	20.55	20.52	21.5
HSUPA Subtest-2	18.64	18.62	18.59	19.5
HSUPA Subtest-3	19.57	19.54	19.55	20.5
HSUPA Subtest-4	18.61	18.59	18.58	19.5
HSUPA Subtest-5	20.57	20.53	20.54	21.5

LTE Band 4

Band/BW	Modulation	RB Size	RB Offset	Low CH 19957	Mid CH 20175	High CH 20393	MPR
				Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz	
4/ 1.4	QPSK	1	0	21.58	21.68	21.51	0
		1	2	21.52	21.55	21.43	0
		1	5	21.46	21.47	21.33	0
		3	0	21.36	21.40	21.30	0
		3	1	21.33	21.38	21.16	0
		3	3	21.23	21.26	21.12	0
		6	0	20.39	20.40	20.28	1
	16QAM	1	0	20.74	20.78	20.64	1
		1	2	20.56	20.56	20.46	1
		1	5	20.62	20.65	20.56	1
		3	0	20.45	20.50	20.34	1
		3	1	20.12	20.25	20.05	1
		3	3	20.40	20.45	20.33	1
		6	0	19.34	19.44	19.25	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 19965	Mid CH 20175	High CH 20385	MPR
				Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz	
4/ 3	QPSK	1	0	21.60	21.70	21.50	0
		1	7	21.48	21.56	21.43	0
		1	14	21.42	21.47	21.33	0
		8	0	20.35	20.43	20.30	1
		8	3	20.26	20.38	20.18	1
		8	7	20.20	20.33	20.16	1
		15	0	20.36	20.41	20.22	1
	16QAM	1	0	20.71	20.84	20.67	1
		1	7	20.53	20.59	20.44	1
		1	14	20.65	20.65	20.56	1
		8	0	19.41	19.51	19.34	2
		8	3	19.17	19.20	19.08	2
		8	7	19.42	19.43	19.29	2
		15	0	19.34	19.38	19.28	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 19975	Mid CH 20175	High CH 20375	MPR
				Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz	
4/ 5	QPSK	1	0	21.61	21.65	21.51	0
		1	12	21.53	21.53	21.43	0
		1	24	21.43	21.46	21.37	0
		12	0	20.38	20.43	20.27	1
		12	6	20.26	20.39	20.19	1
		12	13	20.24	20.29	20.17	1
		25	0	20.34	20.44	20.25	1
	16QAM	1	0	20.72	20.80	20.67	1
		1	12	20.50	20.62	20.43	1
		1	24	20.65	20.65	20.55	1
		12	0	19.41	19.49	19.31	2
		12	6	19.14	19.24	19.04	2
		12	13	19.37	19.45	19.32	2
		25	0	19.34	19.39	19.25	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20000	Mid CH 20175	High CH 20350	MPR
				Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz	
4/ 10	QPSK	1	0	21.58	21.68	21.51	0
		1	24	21.53	21.53	21.44	0
		1	49	21.40	21.50	21.33	0
		25	0	20.39	20.42	20.30	1
		25	12	20.32	20.33	20.19	1
		25	25	20.22	20.26	20.16	1
		50	0	20.39	20.44	20.22	1
	16QAM	1	0	20.72	20.77	20.63	1
		1	24	20.55	20.58	20.46	1
		1	49	20.65	20.66	20.52	1
		25	0	19.43	19.47	19.37	2
		25	12	19.18	19.18	19.09	2
		25	25	19.36	19.46	19.29	2
		50	0	19.38	19.38	19.29	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20025	Mid CH 20175	High CH 20325	MPR
				Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz	
4/ 15	QPSK	1	0	21.65	21.68	21.48	0
		1	37	21.51	21.58	21.39	0
		1	74	21.46	21.53	21.34	0
		36	0	20.36	20.43	20.31	1
		36	19	20.33	20.38	20.19	1
		36	39	20.20	20.27	20.16	1
		75	0	20.39	20.42	20.27	1
	16QAM	1	0	20.76	20.84	20.63	1
		1	37	20.54	20.59	20.46	1
		1	74	20.61	20.71	20.54	1
		36	0	19.47	19.47	19.38	2
		36	19	19.12	19.22	19.05	2
		36	39	19.41	19.44	19.32	2
		75	0	19.39	19.41	19.22	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20050	Mid CH 20175	High CH 20300	MPR
				Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz	
4/ 20	QPSK	1	0	21.66	21.72	21.56	0
		1	50	21.55	21.61	21.45	0
		1	99	21.48	21.54	21.38	0
		50	0	20.42	20.48	20.32	1
		50	25	20.34	20.40	20.24	1
		50	50	20.28	20.34	20.18	1
		100	0	20.40	20.46	20.30	1
	16QAM	1	0	20.79	20.85	20.69	1
		1	50	20.58	20.64	20.48	1
		1	99	20.67	20.73	20.57	1
		50	0	19.49	19.55	19.39	2
		50	25	19.20	19.26	19.10	2
		50	50	19.44	19.50	19.34	2
		100	0	19.40	19.46	19.30	2



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LTE Band 12

Band/BW	Modulation	RB Size	RB Offset	Low CH 23017	Mid CH 23095	High CH 23173	MPR
				Frequency 699.7 MHz	Frequency 707.5 MHz	Frequency 715.3 MHz	
12/ 1.4	QPSK	1	0	22.28	22.33	22.50	0
		1	2	22.43	22.41	22.63	0
		1	5	22.36	22.32	22.52	0
		3	0	22.23	22.22	22.46	0
		3	1	22.26	22.26	22.38	0
		3	3	22.19	22.17	22.37	0
		6	0	21.24	21.20	21.42	1
	16QAM	1	0	21.21	21.20	21.40	1
		1	2	21.13	21.08	21.32	1
		1	5	21.15	21.13	21.38	1
		3	0	21.14	21.14	21.32	1
		3	1	21.22	21.30	21.44	1
		3	3	21.28	21.28	21.50	1
		6	0	20.17	20.22	20.37	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 23025	Mid CH 23095	High CH 23165	MPR
				Frequency 700.5 MHz	Frequency 707.5 MHz	Frequency 714.5 MHz	
12/ 3	QPSK	1	0	22.30	22.35	22.49	0
		1	7	22.39	22.42	22.63	0
		1	14	22.32	22.32	22.52	0
		8	0	21.22	21.25	21.46	1
		8	3	21.19	21.26	21.40	1
		8	7	21.16	21.24	21.41	1
		15	0	21.21	21.21	21.36	1
	16QAM	1	0	21.18	21.26	21.43	1
		1	7	21.10	21.11	21.30	1
		1	14	21.18	21.13	21.38	1
		8	0	20.10	20.15	20.32	2
		8	3	20.27	20.25	20.47	2
		8	7	20.30	20.26	20.46	2
		15	0	20.17	20.16	20.40	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 23035	Mid CH 23095	High CH 23155	MPR
				Frequency 701.5 MHz	Frequency 707.5 MHz	Frequency 713.5 MHz	
12/ 5	QPSK	1	0	22.31	22.30	22.50	0
		1	12	22.44	22.39	22.63	0
		1	24	22.33	22.31	22.56	0
		12	0	21.25	21.25	21.43	1
		12	6	21.19	21.27	21.41	1
		12	13	21.20	21.20	21.42	1
		25	0	21.19	21.24	21.39	1
	16QAM	1	0	21.19	21.22	21.43	1
		1	12	21.07	21.14	21.29	1
		1	24	21.18	21.13	21.37	1
		12	0	20.10	20.13	20.29	2
		12	6	20.24	20.29	20.43	2
		12	13	20.25	20.28	20.49	2
		25	0	20.17	20.17	20.37	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 23060	Mid CH 23095	High CH 23130	MPR
				Frequency 704 MHz	Frequency 707.5 MHz	Frequency 711 MHz	
12/ 10	QPSK	1	0	22.36	22.37	22.55	0
		1	24	22.46	22.47	22.65	0
		1	49	22.38	22.39	22.57	0
		25	0	21.29	21.30	21.48	1
		25	12	21.27	21.28	21.46	1
		25	25	21.24	21.25	21.43	1
		50	0	21.25	21.26	21.44	1
	16QAM	1	0	21.26	21.27	21.45	1
		1	24	21.15	21.16	21.34	1
		1	49	21.20	21.21	21.39	1
		25	0	20.18	20.19	20.37	2
		25	12	20.30	20.31	20.49	2
		25	25	20.32	20.33	20.51	2
		50	0	20.23	20.24	20.42	2



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LTE Band 13

Band/BW	Modulation	RB Size	RB Offset	Low CH 23205	Mid CH 23230	High CH 23255	MPR
				Frequency 779.5 MHz	Frequency 782.0 MHz	Frequency 784.5 MHz	
13/ 5	QPSK	1	0	22.81	22.79	22.81	0
		1	12	22.60	22.54	22.60	0
		1	24	22.68	22.65	22.72	0
		12	0	21.72	21.71	21.71	1
		12	6	21.59	21.66	21.62	1
		12	13	21.70	21.69	21.73	1
		25	0	21.72	21.76	21.73	1
	16QAM	1	0	21.99	22.01	22.04	1
		1	12	21.99	22.05	22.02	1
		1	24	22.00	21.94	22.00	1
		12	0	20.72	20.74	20.72	2
		12	6	20.49	20.53	20.49	2
		12	13	20.48	20.50	20.53	2
		25	0	20.49	20.48	20.50	2

Band/BW	Modulation	RB Size	RB Offset	/	Mid CH 23230	/	MPR
				/	Frequency 782.0 MHz	/	
13/ 10	QPSK	1	0	/	22.86	/	0
		1	24	/	22.62	/	0
		1	49	/	22.73	/	0
		25	0	/	21.76	/	1
		25	12	/	21.67	/	1
		25	25	/	21.74	/	1
		50	0	/	21.78	/	1
	16QAM	1	0	/	22.06	/	1
		1	24	/	22.07	/	1
		1	49	/	22.02	/	1
		25	0	/	20.80	/	2
		25	12	/	20.55	/	2
		25	25	/	20.55	/	2
		50	0	/	20.55	/	2

LTE Band 17

Band/BW	Modulation	RB Size	RB Offset	Low CH 23755	Mid CH 23790	High CH 23825	MPR
				Frequency 706.5 MHz	Frequency 710 MHz	Frequency 713.5 MHz	
17/ 5	QPSK	1	0	22.43	22.32	22.40	0
		1	12	22.41	22.26	22.38	0
		1	24	22.45	22.33	22.46	0
		12	0	21.40	21.30	21.36	1
		12	6	21.31	21.29	21.31	1
		12	13	21.47	21.37	21.47	1
		25	0	21.41	21.36	21.39	1
	16QAM	1	0	21.41	21.34	21.43	1
		1	12	21.26	21.23	21.26	1
		1	24	21.36	21.21	21.33	1
		12	0	20.35	20.28	20.32	2
		12	6	20.43	20.38	20.40	2
		12	13	20.51	20.44	20.53	2
		25	0	20.31	20.21	20.29	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 23780	Mid CH 23790	High CH 23800	MPR
				Frequency 709 MHz	Frequency 710 MHz	Frequency 711 MHz	
17/ 10	QPSK	1	0	22.48	22.39	22.45	0
		1	24	22.43	22.34	22.40	0
		1	49	22.50	22.41	22.47	0
		25	0	21.44	21.35	21.41	1
		25	12	21.39	21.30	21.36	1
		25	25	21.51	21.42	21.48	1
		50	0	21.47	21.38	21.44	1
	16QAM	1	0	21.48	21.39	21.45	1
		1	24	21.34	21.25	21.31	1
		1	49	21.38	21.29	21.35	1
		25	0	20.43	20.34	20.40	2
		25	12	20.49	20.40	20.46	2
		25	25	20.58	20.49	20.55	2
		50	0	20.37	20.28	20.34	2

ERP/EIRP POWER (dBm)

WCDMA IV

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
1312	1712.4	21.58	1.5	23.08	203.24	1
1413	1732.6	21.57	1.5	23.07	202.77	1
1513	1752.6	21.55	1.5	23.05	201.84	1

LTE BAND 4

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	21.58	1.5	23.08	203.24	1
20175	1732.5	21.68	1.5	23.18	207.97	1
20393	1754.3	21.51	1.5	23.01	199.99	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	20.74	1.5	22.24	167.49	1
20175	1732.5	20.78	1.5	22.28	169.04	1
20393	1754.3	20.64	1.5	22.14	163.68	1

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	21.6	1.5	23.1	204.17	1
20175	1732.5	21.7	1.5	23.2	208.93	1
20385	1753.5	21.5	1.5	23	199.53	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	20.71	1.5	22.21	166.34	1
20175	1732.5	20.84	1.5	22.34	171.4	1
20385	1753.5	19.08	1.5	20.58	114.29	1

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	21.61	1.5	23.11	204.64	1
20175	1732.5	21.65	1.5	23.15	206.54	1
20375	1752.5	21.51	1.5	23.01	199.99	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	20.72	1.5	22.22	166.72	1
20175	1732.5	20.8	1.5	22.3	169.82	1
20375	1752.5	20.67	1.5	22.17	164.82	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	21.58	1.5	23.08	203.24	1
20175	1732.5	21.68	1.5	23.18	207.97	1
20350	1750	21.51	1.5	23.01	199.99	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	20.72	1.5	22.22	166.72	1
20175	1732.5	20.77	1.5	22.27	168.66	1
20350	1750	20.63	1.5	22.13	163.31	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	21.65	1.5	23.15	206.54	1
20175	1732.5	21.68	1.5	23.18	207.97	1
20325	1747.5	21.48	1.5	22.98	198.61	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	20.76	1.5	22.26	168.27	1
20175	1732.5	20.84	1.5	22.34	171.4	1
20325	1747.5	20.63	1.5	22.13	163.31	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	21.66	1.5	23.16	207.01	1
20175	1732.5	21.72	1.5	23.22	209.89	1
20300	1745	21.56	1.5	23.06	202.3	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	20.79	1.5	22.29	169.43	1
20175	1732.5	20.85	1.5	22.35	171.79	1
20300	1745	20.69	1.5	22.19	165.58	1

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

LTE BAND 12

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23017	699.7	22.43	1	21.28	134.28	3
23095	707.5	22.41	1	21.26	133.66	3
23173	715.3	22.63	1	21.48	140.6	3

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23017	699.7	21.28	1	20.13	103.04	3
23095	707.5	21.3	1	20.15	103.51	3
23173	715.3	21.5	1	20.35	108.39	3

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23025	700.5	22.39	1	21.24	133.05	3
23095	707.5	22.42	1	21.27	133.97	3
23165	714.5	22.63	1	21.48	140.6	3

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23025	700.5	21.18	1	20.03	100.69	3
23095	707.5	21.26	1	20.11	102.57	3
23165	714.5	21.43	1	20.28	106.66	3

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23035	701.5	22.44	1	21.29	134.59	3
23095	707.5	22.39	1	21.24	133.05	3
23155	713.5	22.63	1	21.48	140.6	3

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23035	701.5	21.19	1	20.04	100.93	3
23095	707.5	21.22	1	20.07	101.62	3
23155	713.5	21.43	1	20.28	106.66	3

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23060	704	22.46	1	21.31	135.21	3
23095	707.5	22.47	1	21.32	135.52	3
23130	711	22.65	1	21.5	141.25	3

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23060	704	21.26	1	20.11	102.57	3
23095	707.5	21.27	1	20.12	102.8	3
23130	711	21.45	1	20.3	107.15	3

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

LTE BAND 13

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23205	779.5	22.81	1	21.66	146.55	3
23230	782	22.79	1	21.64	145.88	3
23255	784.5	22.81	1	21.66	146.55	3

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23205	779.5	22	1	20.85	121.62	3
23230	782	22.05	1	20.9	123.03	3
23255	784.5	22.04	1	20.89	122.74	3

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
-	-	-	-	-	-	-
23230	782	22.86	1	21.71	148.25	3
-	-	-	-	-	-	-

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
-	-	-	-	-	-	-
23230	782	22.07	1	20.92	123.59	3
-	-	-	-	-	-	-

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

LTE BAND 17

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23755	706.5	22.45	1	21.3	134.9	3
23790	710	22.33	1	21.18	131.22	3
23825	713.5	22.46	1	21.31	135.21	3

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23755	706.5	21.41	1	20.26	106.17	3
23790	710	21.34	1	20.19	104.47	3
23825	713.5	21.43	1	20.28	106.66	3

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23780	709	22.5	1	21.35	136.46	3
23790	710	22.41	1	21.26	133.66	3
23800	711	22.47	1	21.32	135.52	3

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	ERP (dBm)	ERP (mW)	Limit (W)
23780	709	21.48	1	20.33	107.89	3
23790	710	21.39	1	20.24	105.68	3
23800	711	21.45	1	20.3	107.15	3

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

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

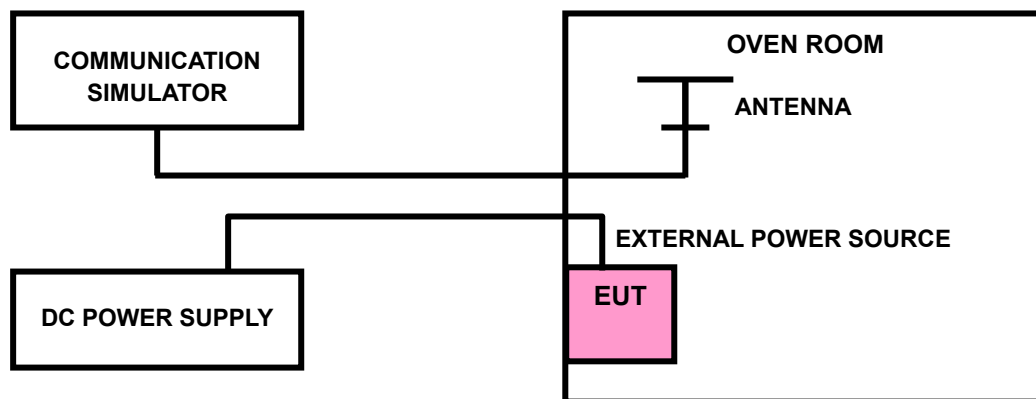
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

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





Test Report No.: W7L-P22010007RF04

3.2.4 TEST RESULTS

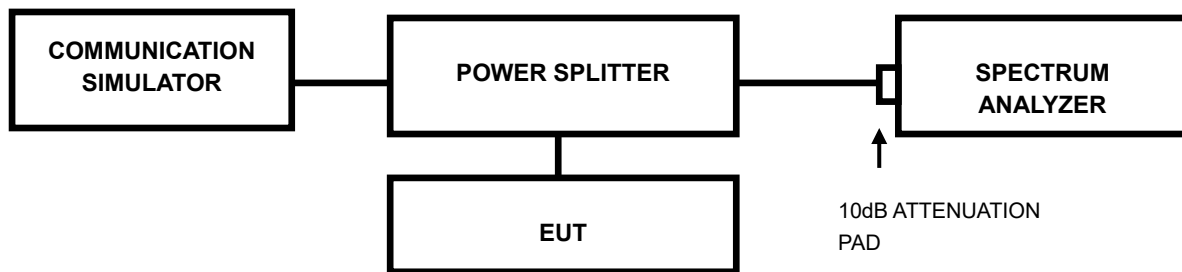
Please Refer to Appendix Of this test report.

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-P22010007RF04

3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

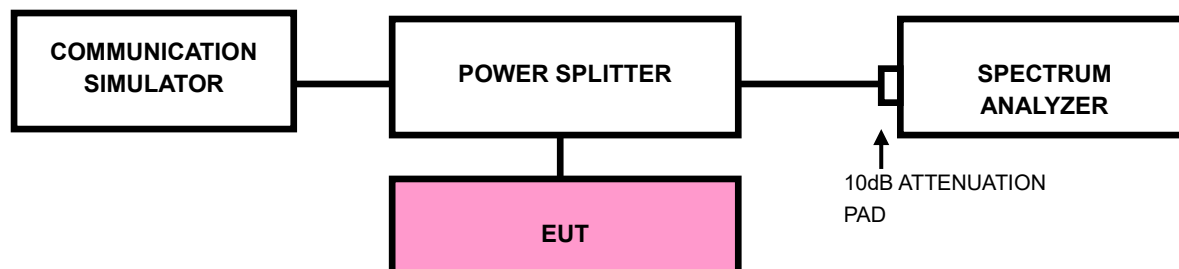
According to FCC 27.53(c) specified that For operations in the 746-758 MHz band and the 776-788 MHz band , the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. In addition, the power of any unwanted emission in an 6.25kHz bandwidth for all frequencies between 763-775 MHz and 793-805 MHz shall be attenuated below the transmitter power, $P(\text{dBW})$, by at least $65 + 10 \log 10 P(P)$, dB, for mobile and portable equipment.

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





Test Report No.: W7L-P22010007RF04

3.4.3 TEST PROCEDURES

- a. All measurements were done at low and high operational frequency range.
- b. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz.
RBW of the spectrum is 10kHz and VBW of the spectrum is 30kHz (LTE bandwidth for (1.4M/3M/5M/10M/15M/20M)1RB/0RB&1RB/MAXRB).
- c. The center frequency of spectrum is the band edge frequency and span is 10MHz.
RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz (WCDMA).
- d. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz.
RBW of the spectrum is $\geq 1\% \cdot \text{EBW}$ kHz and VBW of the spectrum is $3 \cdot \text{RBW}$ kHz.
(LTE bandwidth 1.4M/3M/5M/10M/15M/20MHz).
- e. Record the max trace plot into the test report.



Test Report No.: W7L-P22010007RF04

3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

According to FCC 27.53(c) specified that For operations in the 746-758 MHz band and the 776-788 MHz band , the power of any emission shall be attenuated outside the band below the transmitter power (P) 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. In addition, the power of any unwanted emission in an 6.25kHz bandwidth for all frequencies between 763-775 MHz and 793-805 MHz shall be attenuated below the transmitter power, P(dBW), by at least $65 + 10 \log 10p(P)$, dB, for mobile and portable equipment.

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.

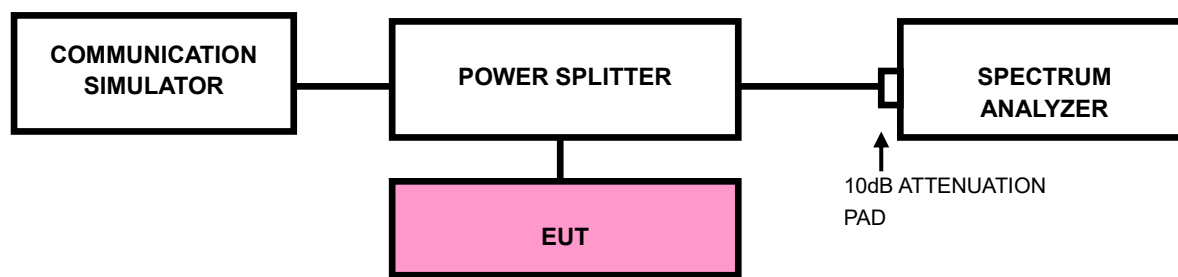
According to FCC 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ 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.

3.5.2 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 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





Test Report No.: W7L-P22010007RF04

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 Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC 27.53(c) specified that For operations in the 746-758 MHz band and the 776-788 MHz band , the power of any emission shall be attenuated outside the band below the transmitter power (P) 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. In addition, the power of any unwanted emission in an 6.25kHz bandwidth for all frequencies between 763-775 MHz and 793-805 MHz shall be attenuated below the transmitter power, $P(\text{dBW})$, by at least $65 + 10 \log 10p(P)$, dB, for mobile and portable equipment.

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.

3.6.2 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. EIRP = Output power level of S.G – TX cable loss + 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,
 $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi}$.

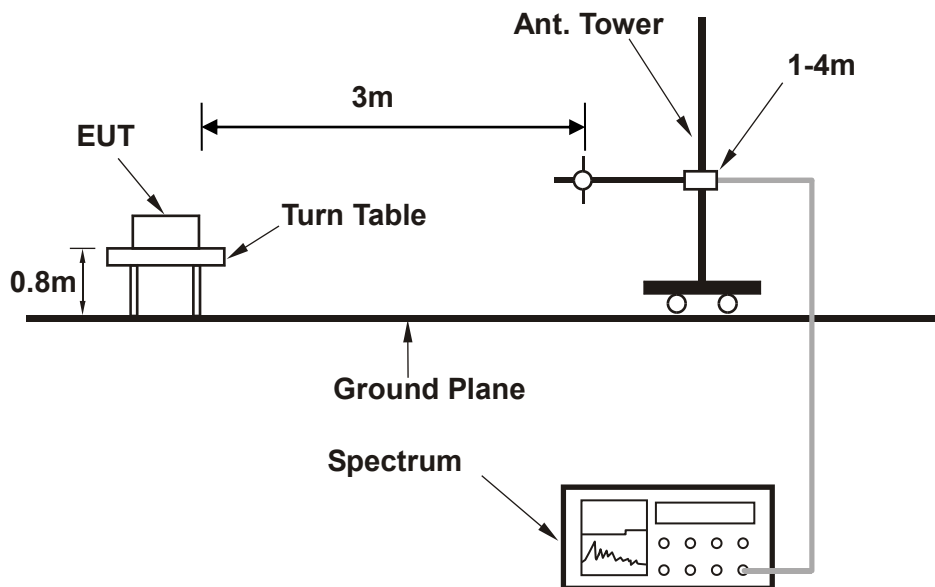
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

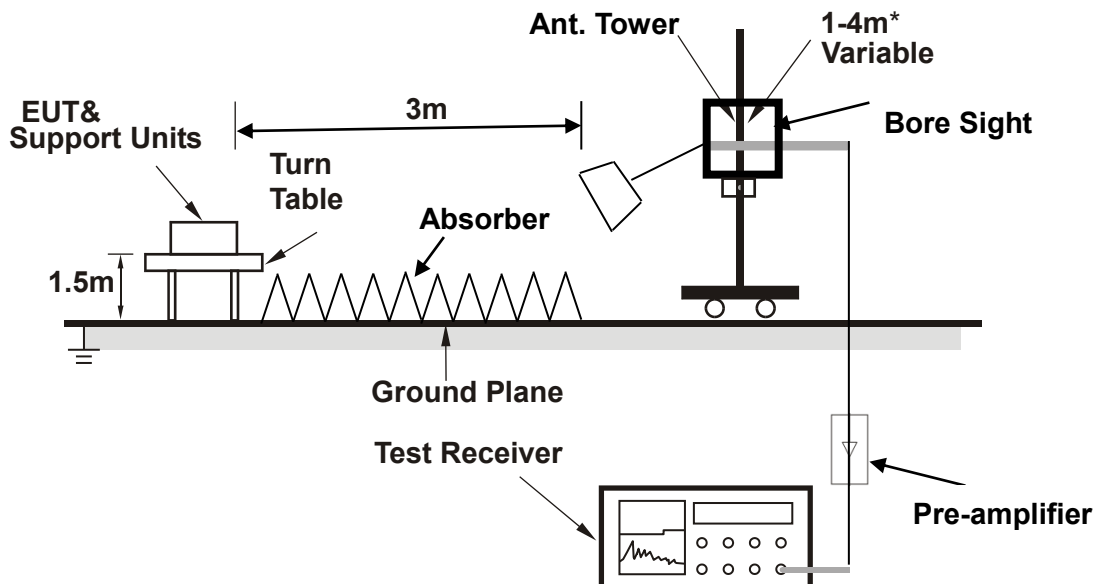
No deviation

3.6.4 TEST SETUP

< Frequency Range 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

BELOW 1GHz WORST-CASE DATA

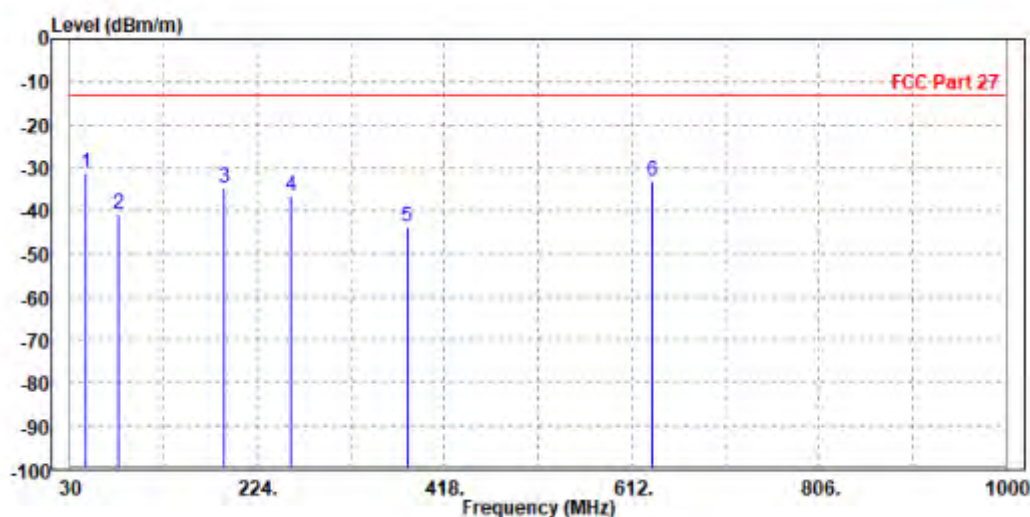
30 MHz – 1GHz data:

WCDMA Band IV:

CHANNEL BANDWIDTH: 1.4MHz / QPSK

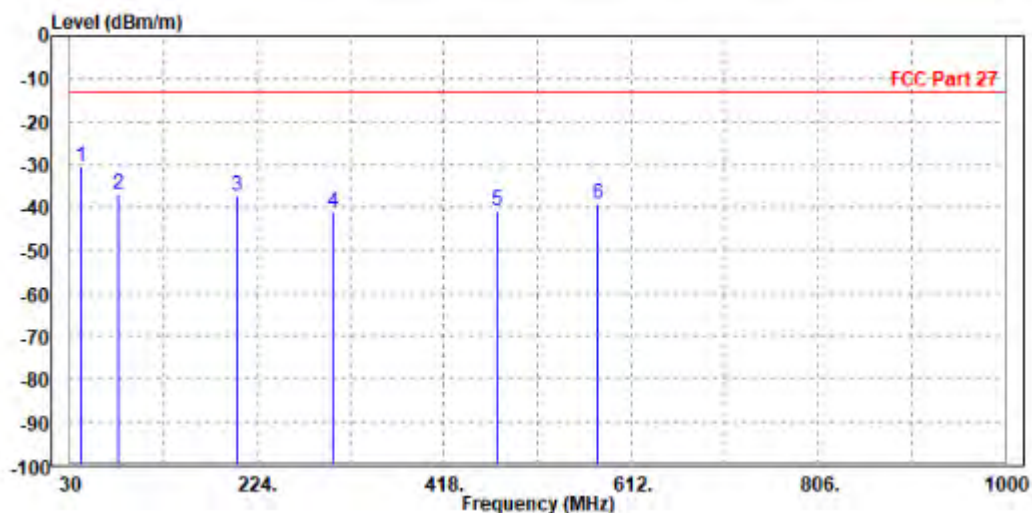
MODE	TX channel 1312	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	45.520	-31.09	-42.11	-13.00	-18.09	11.02	Peak	Horizontal
2	80.440	-40.63	-48.53	-13.00	-27.63	7.90	Peak	Horizontal
3	189.080	-34.77	-45.33	-13.00	-21.77	10.56	Peak	Horizontal
4	258.920	-36.66	-50.00	-13.00	-23.66	13.34	Peak	Horizontal
5	379.200	-43.83	-60.13	-13.00	-30.83	16.30	Peak	Horizontal
6	632.370	-33.09	-54.44	-13.00	-20.09	21.35	Peak	Horizontal



MODE	TX channel 1312	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	41.640	-30.59	-42.27	-13.00	-17.59	11.68	Peak	Vertical
2		80.440	-36.87	-45.18	-13.00	-23.87	8.31	Peak	Vertical
3		202.660	-37.26	-48.88	-13.00	-24.26	11.62	Peak	Vertical
4		302.570	-41.04	-56.10	-13.00	-28.04	15.06	Peak	Vertical
5		472.320	-40.79	-59.36	-13.00	-27.79	18.57	Peak	Vertical
6		578.050	-39.25	-59.75	-13.00	-26.25	20.50	Peak	Vertical





Test Report No.: W7L-P22010007RF04

ABOVE 1GHz

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

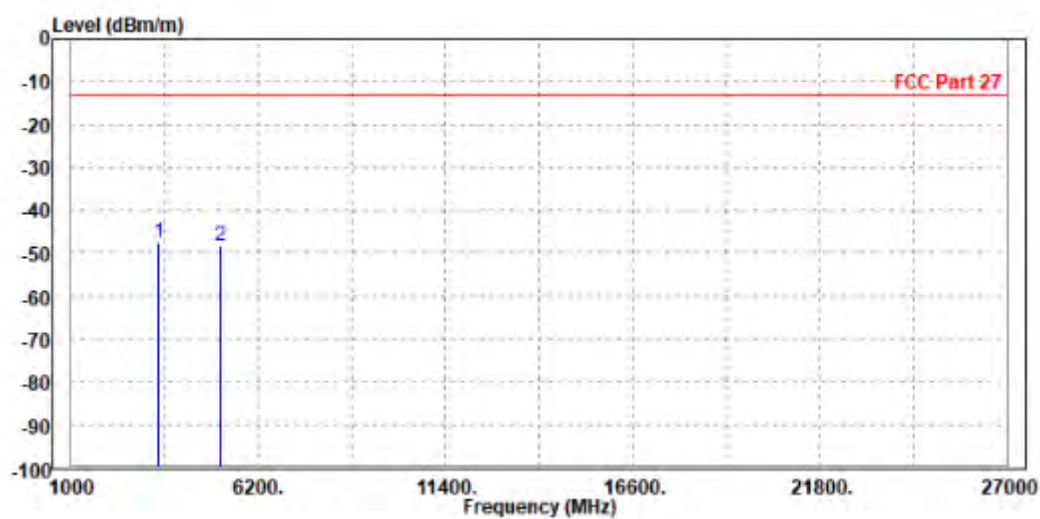
WORST-CASE DATA

WCDMA Band IV:

CH 1312

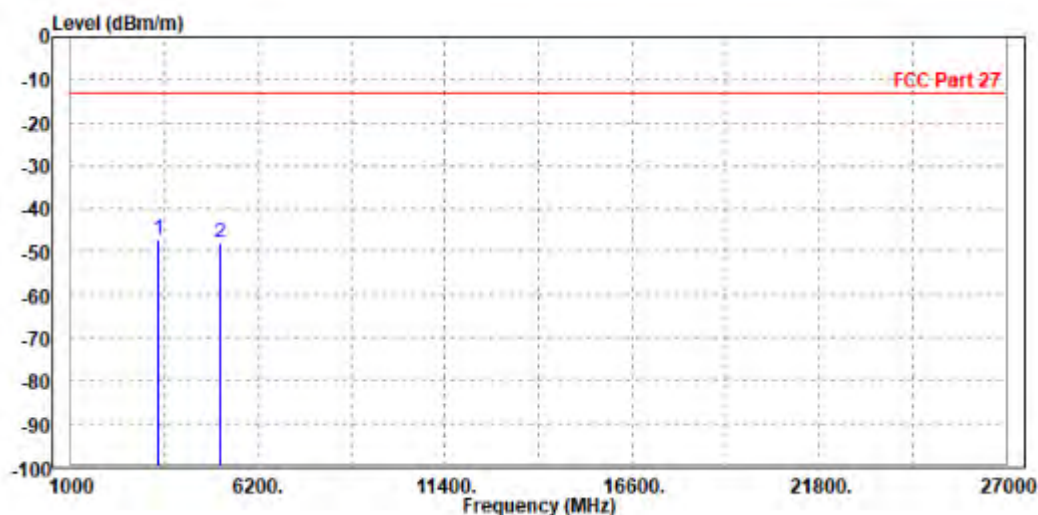
MODE	TX channel 1312	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3418.000	-47.53	-56.12	-13.00	-34.53	8.59	Peak	Horizontal
2		5137.200	-48.26	-57.20	-13.00	-35.26	8.94	Peak	Horizontal



MODE	TX channel 1312	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			

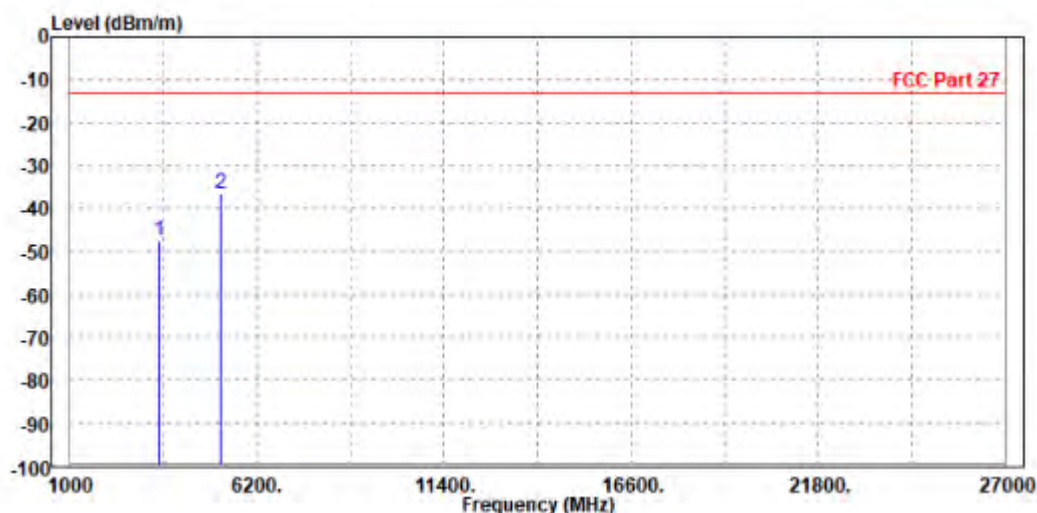
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3418.000	-47.14	-56.25	-13.00	-34.14	9.11	Peak	Vertical
2	5137.200	-47.97	-57.82	-13.00	-34.97	9.85	Peak	Vertical



CH 1413

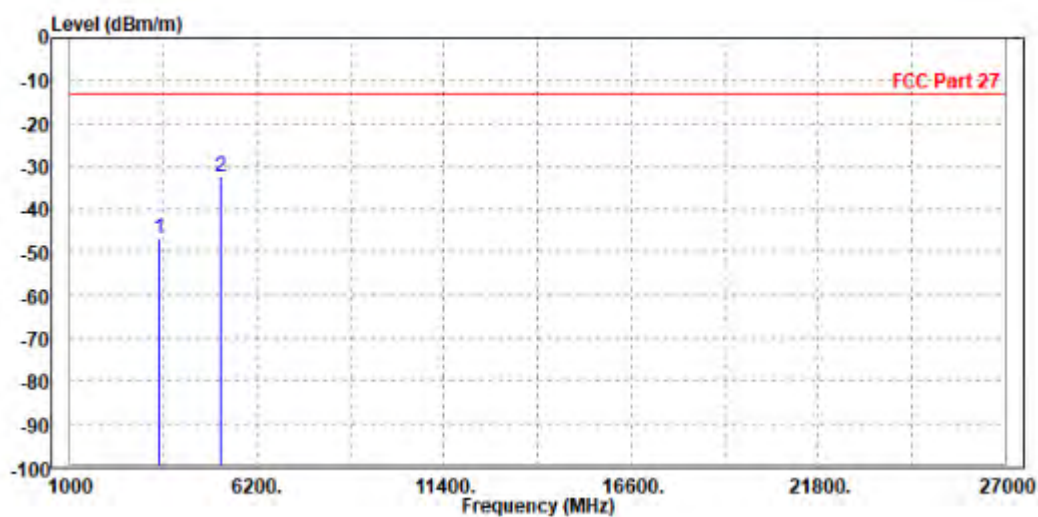
MODE	TX channel 1413	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3465.200	-47.54	-56.12	-13.00	-34.54	8.58	Peak	Horizontal
2 PP	5186.000	-36.43	-45.51	-13.00	-23.43	9.08	Peak	Horizontal



MODE	TX channel 1413	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			

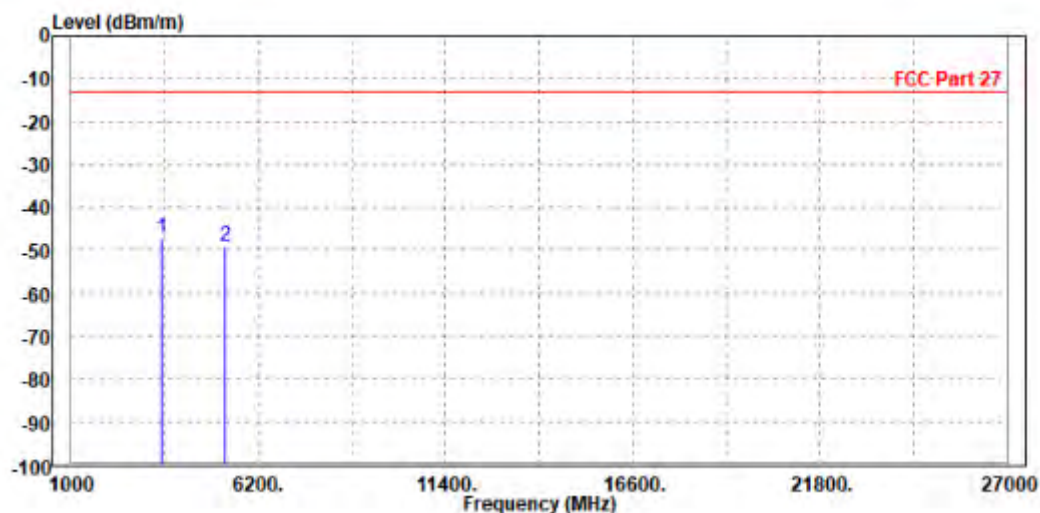
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3470.000	-46.67	-55.83	-13.00	-33.67	9.16	Peak	Vertical
2 PP	5197.800	-32.46	-42.28	-13.00	-19.46	9.82	Peak	Vertical



CH 1513

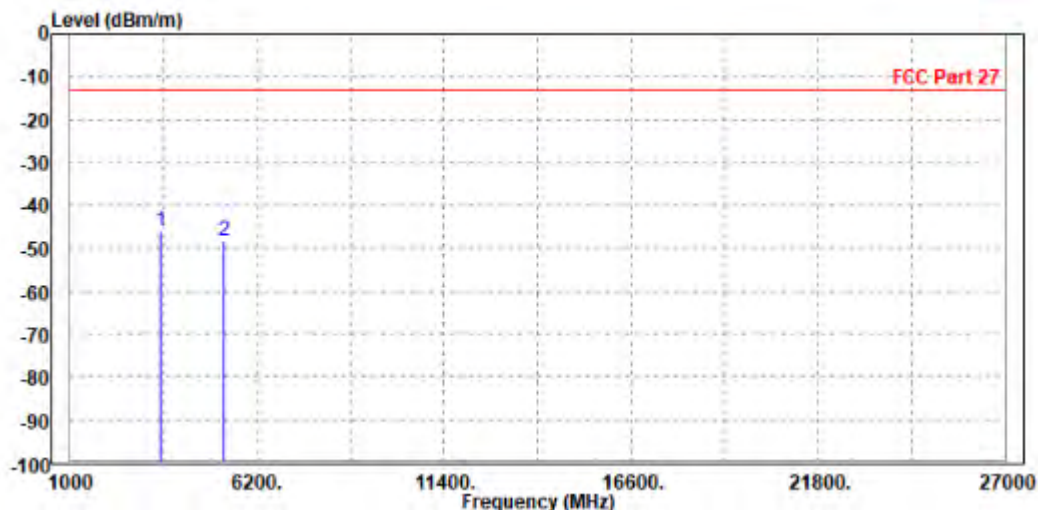
MODE	TX channel 1513	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	3505.200	-47.22	-55.80	-13.00	-34.22	8.58	Peak	Horizontal
2	5264.000	-48.86	-58.18	-13.00	-35.86	9.32	Peak	Horizontal



MODE	TX channel 1513	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	3496.000	-46.16	-55.35	-13.00	-33.16	9.19	Peak	Vertical
2		5257.800	-48.24	-58.04	-13.00	-35.24	9.80	Peak	Vertical

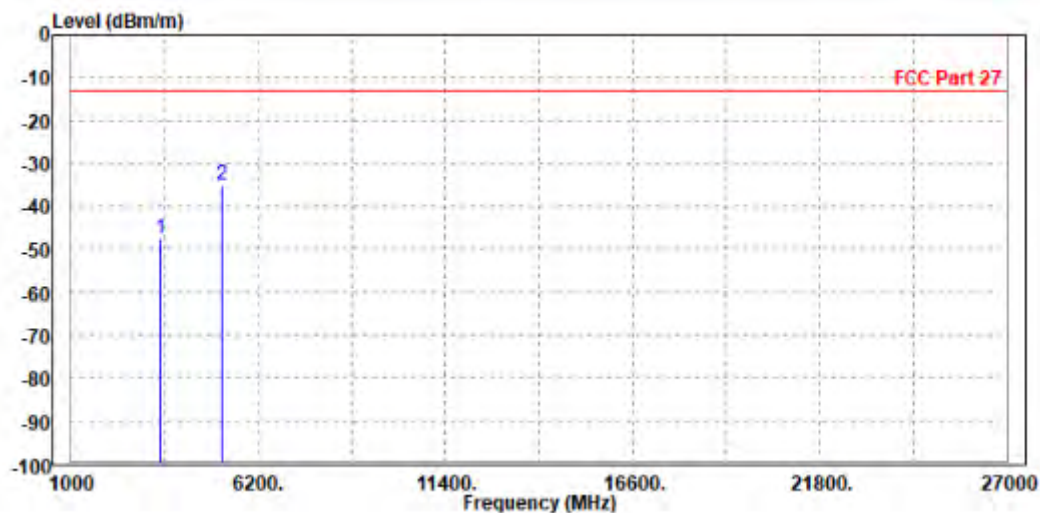


LTE Band 4

CHANNEL BANDWIDTH: 1.4MHz / QPSK

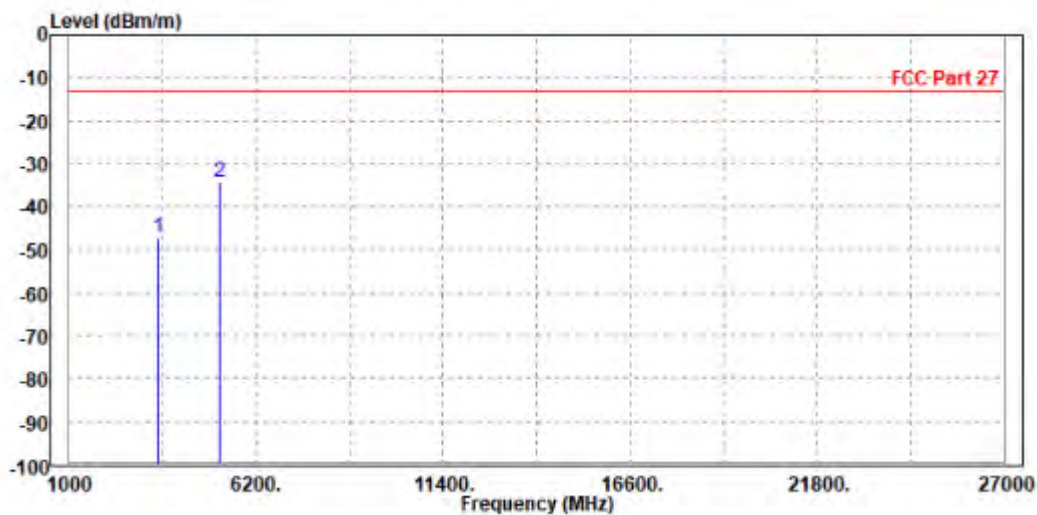
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3470.000	-47.51	-56.09	-13.00	-34.51	8.58	Peak	Horizontal
2 PP	5197.500	-35.03	-44.15	-13.00	-22.03	9.12	Peak	Horizontal



MODE	TX channel 20175	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	3465.000	-47.30	-56.46	-13.00	-34.30	9.16	Peak	Vertical
2 PP	5186.000	-34.23	-44.06	-13.00	-21.23	9.83	Peak	Vertical





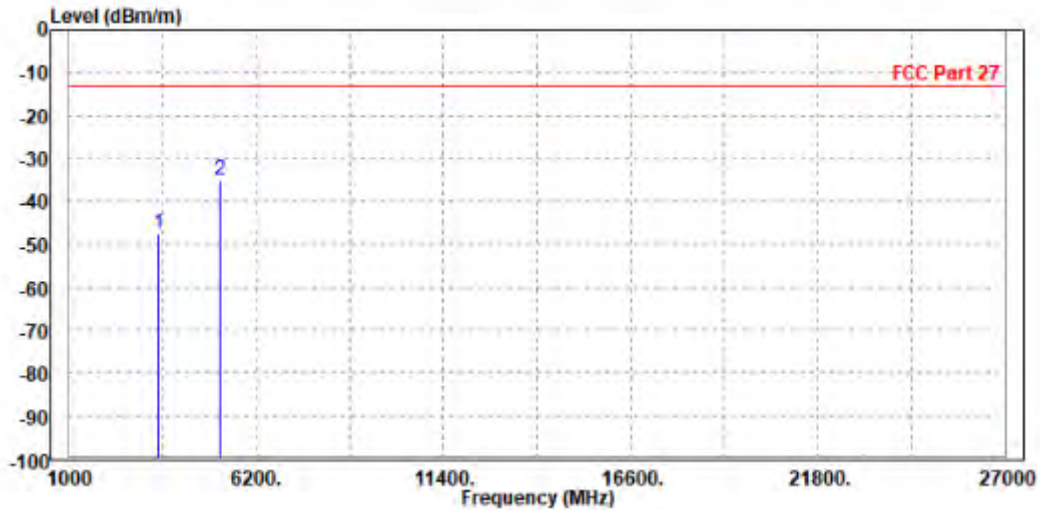
**BUREAU
VERITAS**

Test Report No.: W7L-P22010007RF04

CHANNEL BANDWIDTH: 3MHz / QPSK

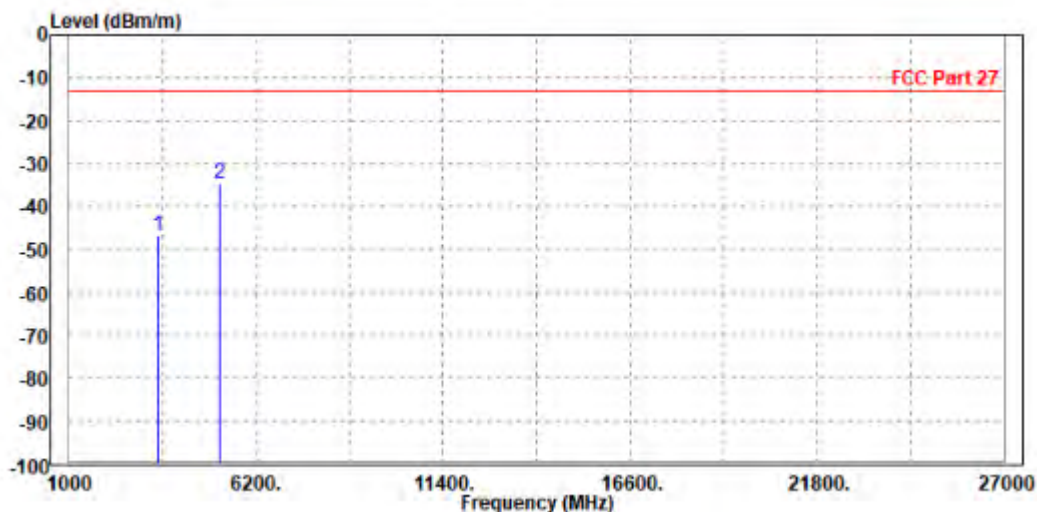
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3465.000	-47.64	-56.22	-13.00	-34.64	8.58	Peak	Horizontal
2 PP	5186.000	-34.82	-43.90	-13.00	-21.82	9.08	Peak	Horizontal



MODE	TX channel 20175	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	3470.000	-46.65	-55.81	-13.00	-33.65	9.16	Peak	Vertical
2 PP	5197.500	-34.70	-44.52	-13.00	-21.70	9.82	Peak	Vertical



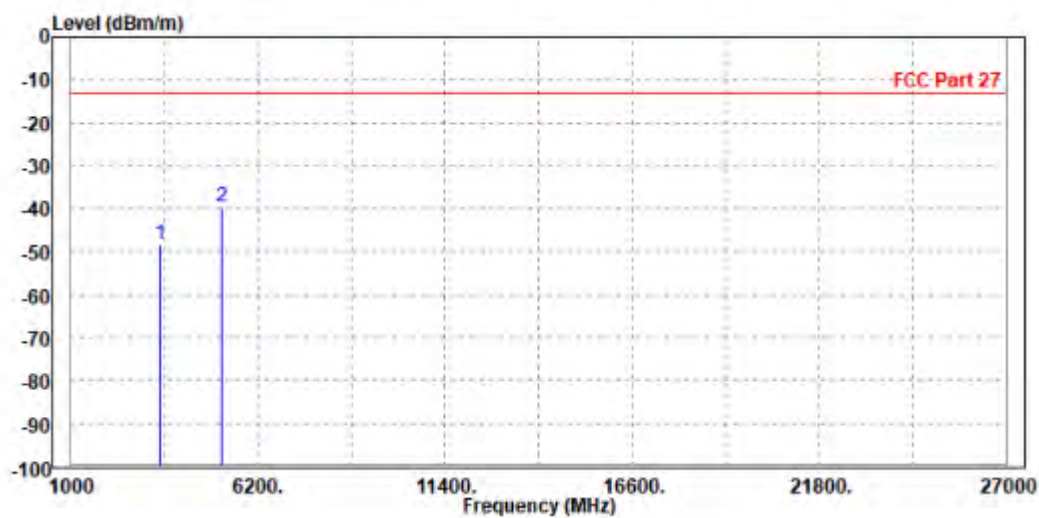


Test Report No.: W7L-P22010007RF04

CHANNEL BANDWIDTH: 5MHz / QPSK

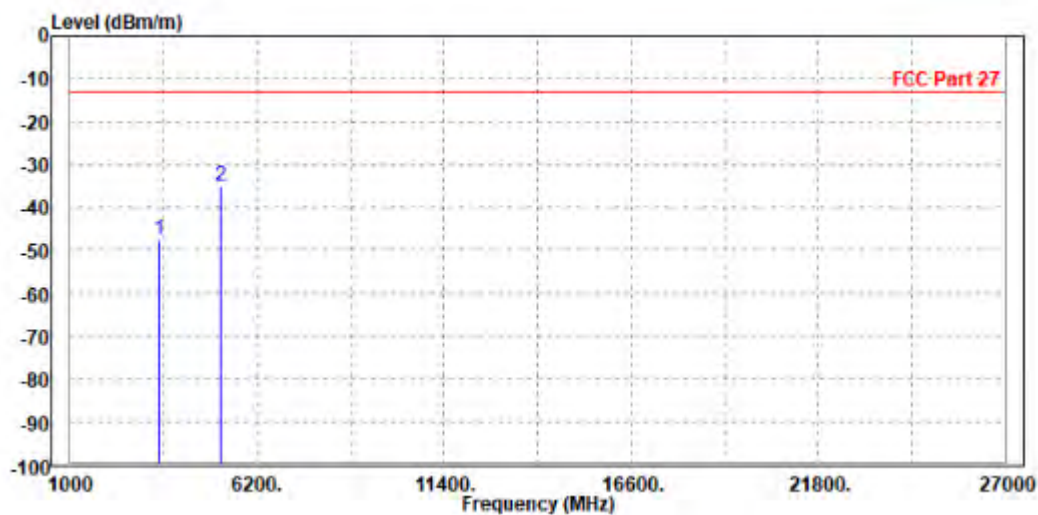
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3470.000	-48.18	-56.76	-13.00	-35.18	8.58	Peak	Horizontal
2 PP	5197.500	-39.68	-48.80	-13.00	-26.68	9.12	Peak	Horizontal



MODE	TX channel 20175	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	3465.000	-47.56	-56.72	-13.00	-34.56	9.16	Peak	Vertical
2 PP	5186.000	-34.86	-44.69	-13.00	-21.86	9.83	Peak	Vertical





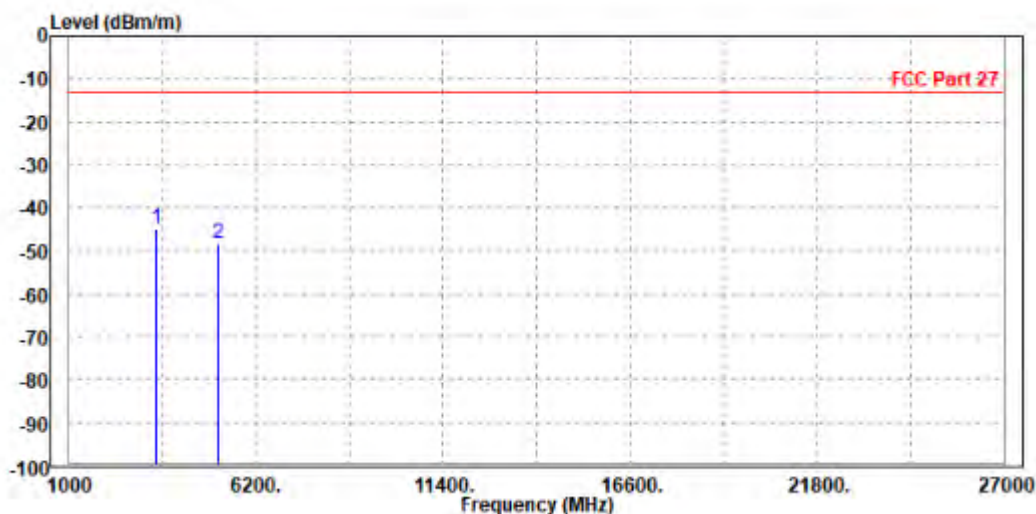
BUREAU
VERITAS

Test Report No.: W7L-P22010007RF04

CHANNEL BANDWIDTH: 10MHz / QPSK
CH20000

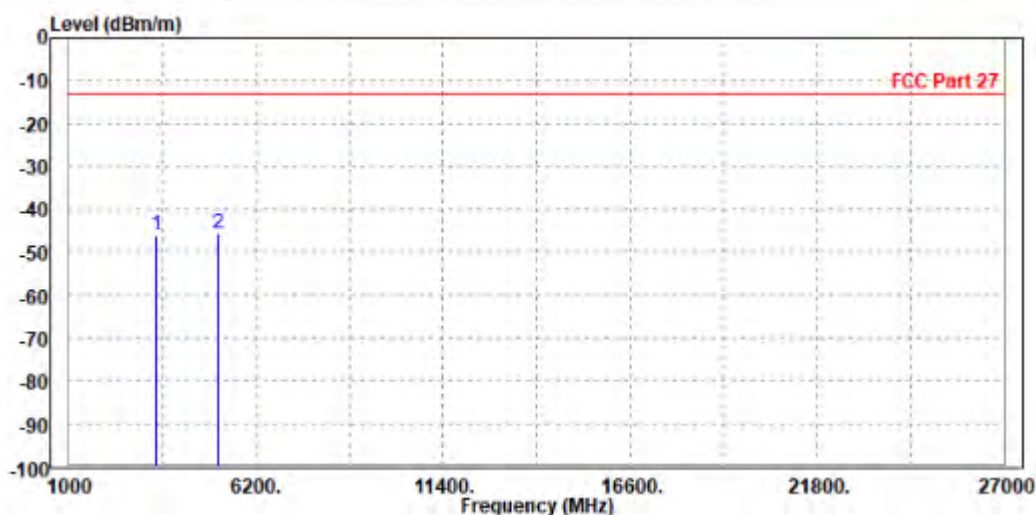
MODE	TX channel 20000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	3418.000	-45.04	-53.63	-13.00	-32.04	8.59	Peak	Horizontal
2		5145.000	-48.45	-57.41	-13.00	-35.45	8.96	Peak	Horizontal



MODE	TX channel 20000	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			

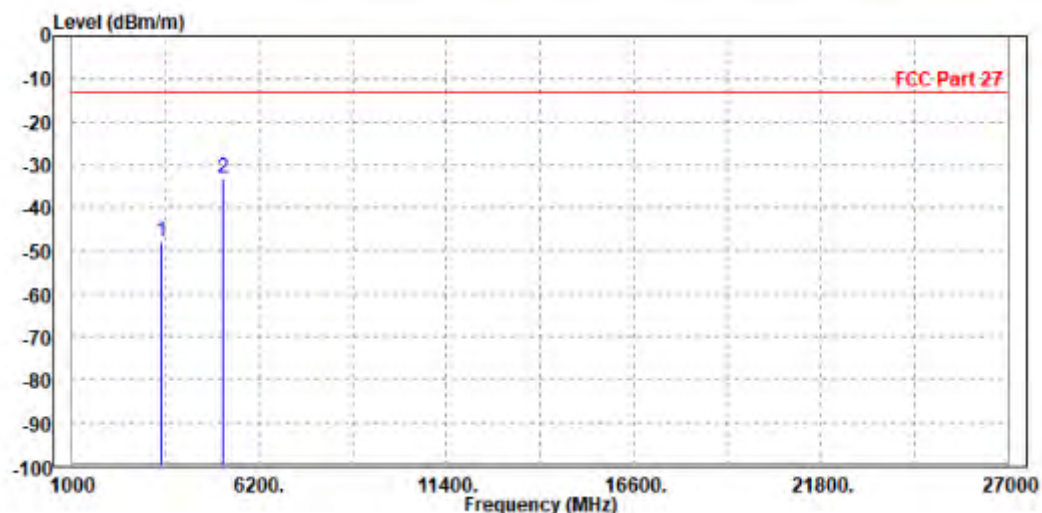
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3418.000	-46.11	-55.22	-13.00	-33.11	9.11	Peak	Vertical
2 PP	5145.000	-45.63	-55.47	-13.00	-32.63	9.84	Peak	Vertical



CH20175

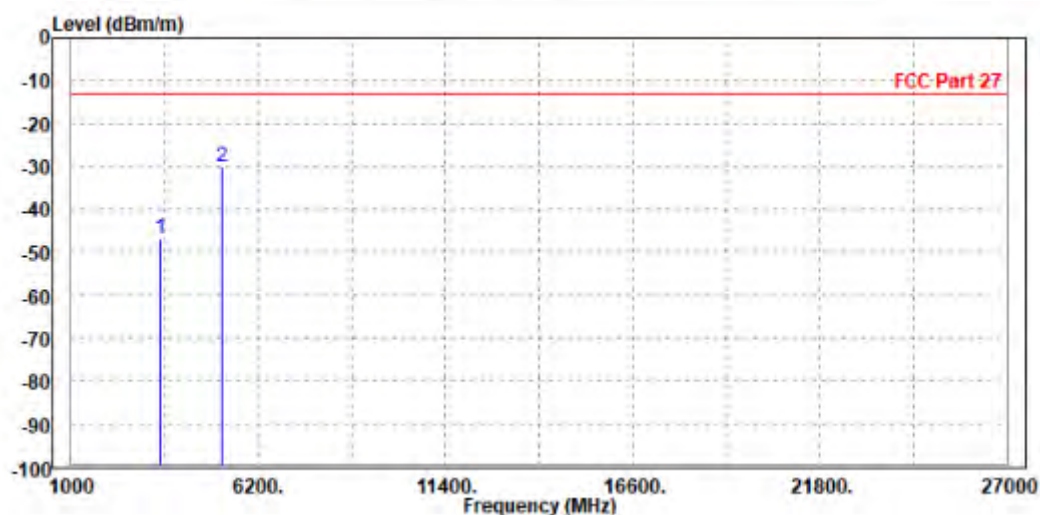
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3470.000	-47.99	-56.57	-13.00	-34.99	8.58	Peak	Horizontal
2 PP	5197.500	-32.91	-42.03	-13.00	-19.91	9.12	Peak	Horizontal



MODE	TX channel 20175	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	3470.000	-46.85	-56.01	-13.00	-33.85	9.16	Peak	Vertical
2 PP	5197.500	-30.11	-39.93	-13.00	-17.11	9.82	Peak	Vertical





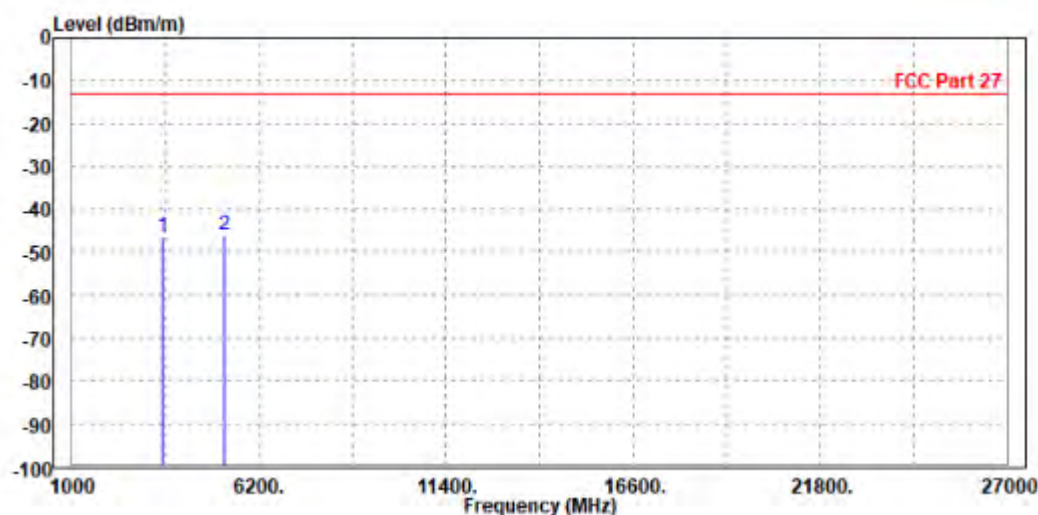
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VERITAS

Test Report No.: W7L-P22010007RF04

CH20350

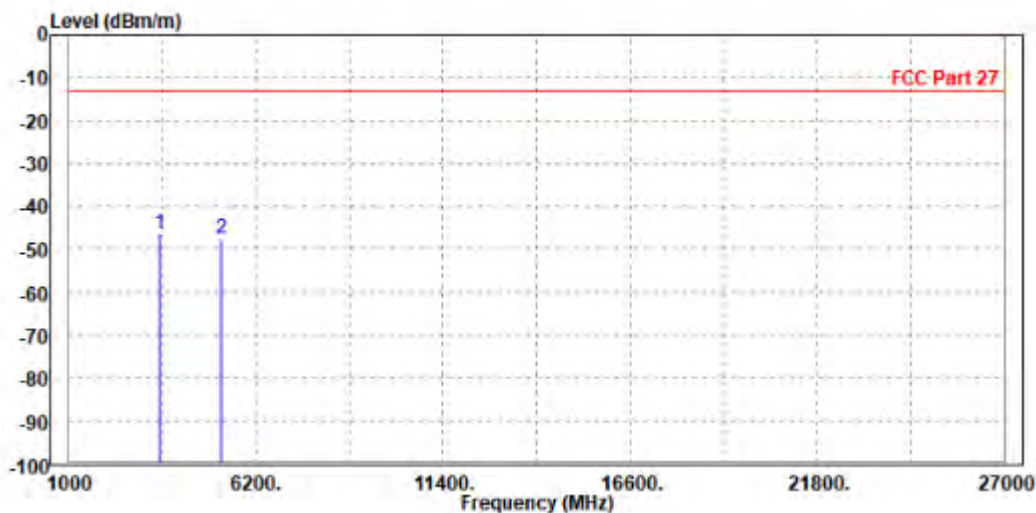
MODE	TX channel 20350	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3496.000	-46.41	-54.98	-13.00	-33.41	8.57	Peak	Horizontal
2 PP	5250.000	-46.11	-55.38	-13.00	-33.11	9.27	Peak	Horizontal



MODE	TX channel 20350	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	3496.000	-46.33	-55.52	-13.00	-33.33	9.19	Peak	Vertical
2		5250.000	-47.41	-57.21	-13.00	-34.41	9.80	Peak	Vertical



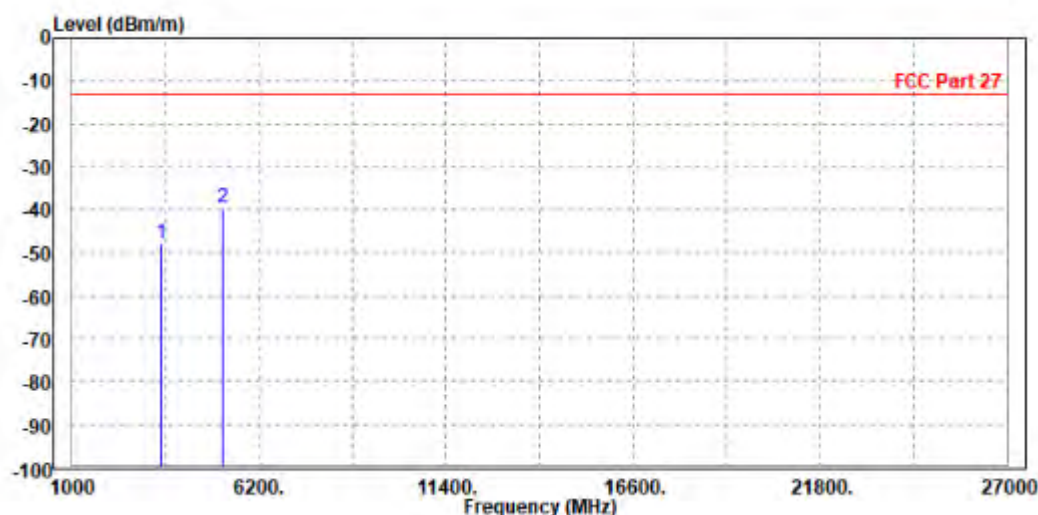


Test Report No.: W7L-P22010007RF04

CHANNEL BANDWIDTH: 15MHz / QPSK

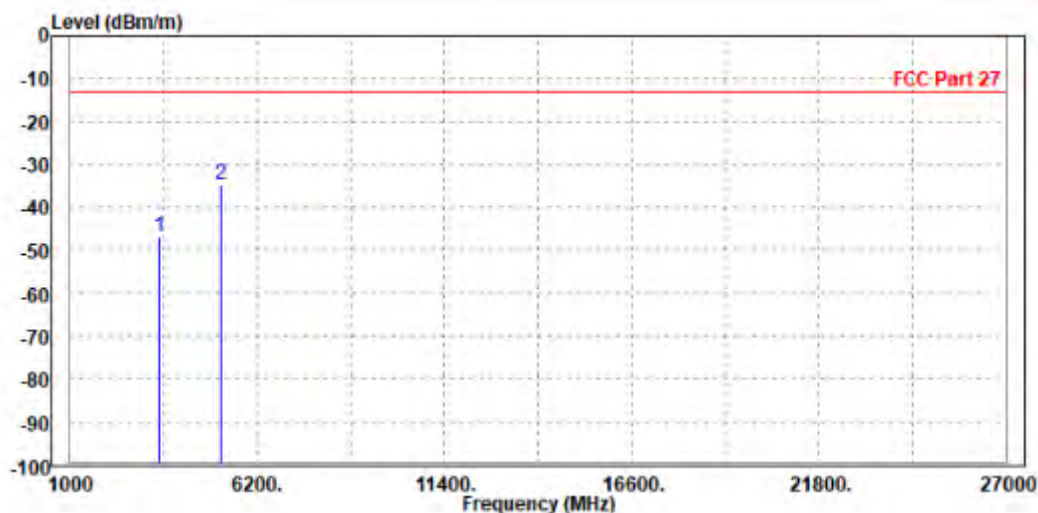
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3465.000	-47.97	-56.55	-13.00	-34.97	8.58	Peak	Horizontal
2 PP	5186.000	-39.44	-48.52	-13.00	-26.44	9.08	Peak	Horizontal



MODE	TX channel 20175	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	3470.000	-46.76	-55.92	-13.00	-33.76	9.16	Peak	Vertical
2 PP	5197.500	-34.75	-44.57	-13.00	-21.75	9.82	Peak	Vertical



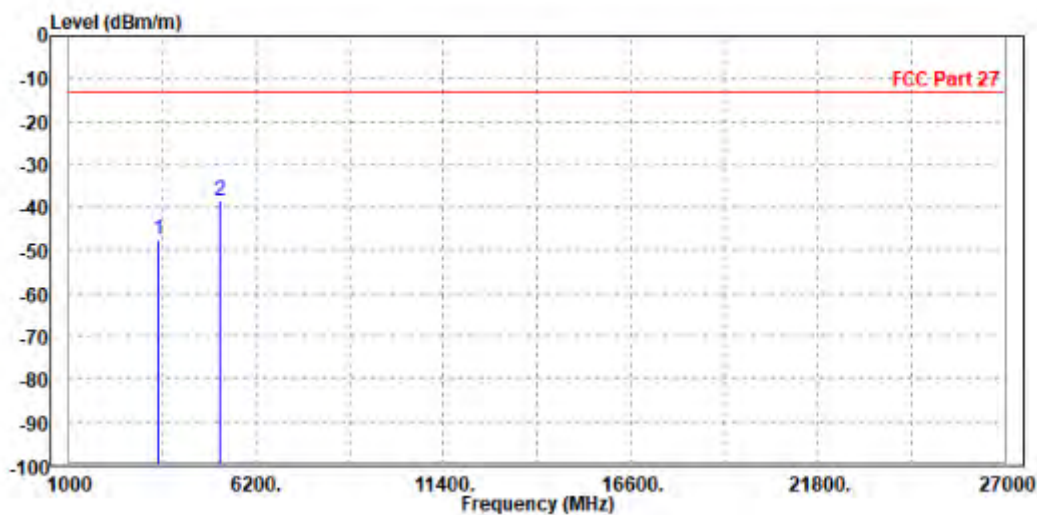


Test Report No.: W7L-P22010007RF04

CHANNEL BANDWIDTH: 20MHz / QPSK

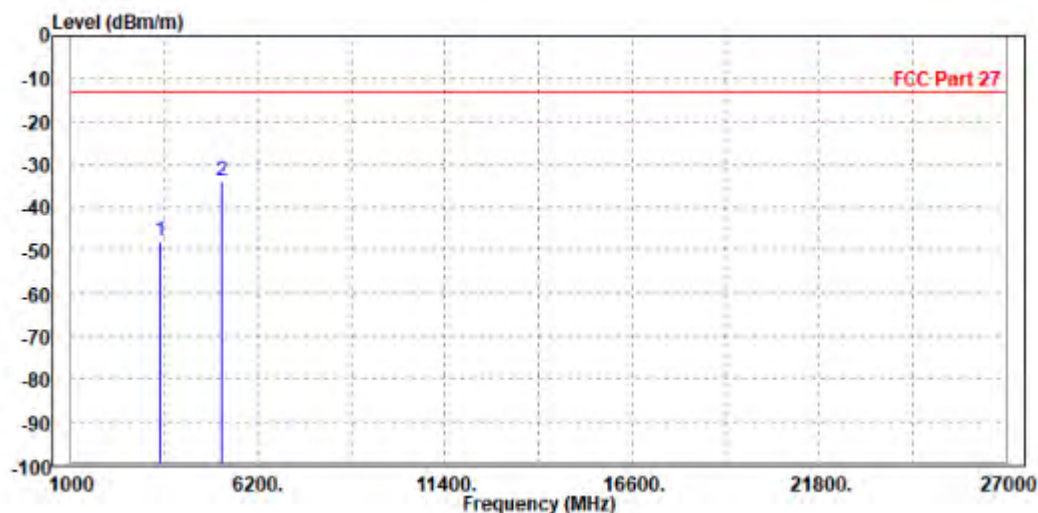
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3470.000	-47.72	-56.30	-13.00	-34.72	8.58	Peak	Horizontal
2 PP	5197.500	-38.41	-47.53	-13.00	-25.41	9.12	Peak	Horizontal



MODE	TX channel 20175	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	3465.000	-47.73	-56.89	-13.00	-34.73	9.16	Peak	Vertical
2 PP	5186.000	-33.85	-43.68	-13.00	-20.85	9.83	Peak	Vertical





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VERITAS**

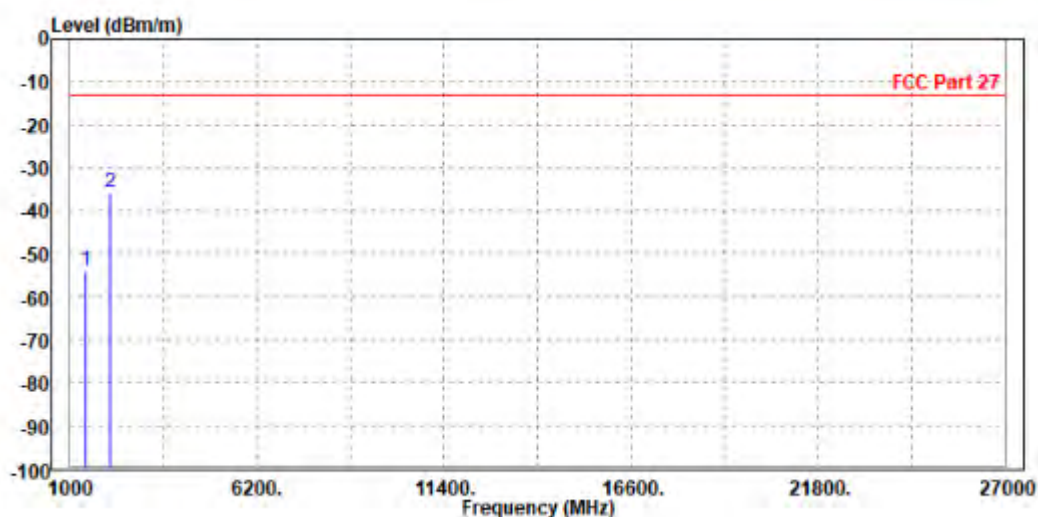
Test Report No.: W7L-P22010007RF04

LTE BAND 12

CHANNEL BANDWIDTH: 1.4MHz / QPSK

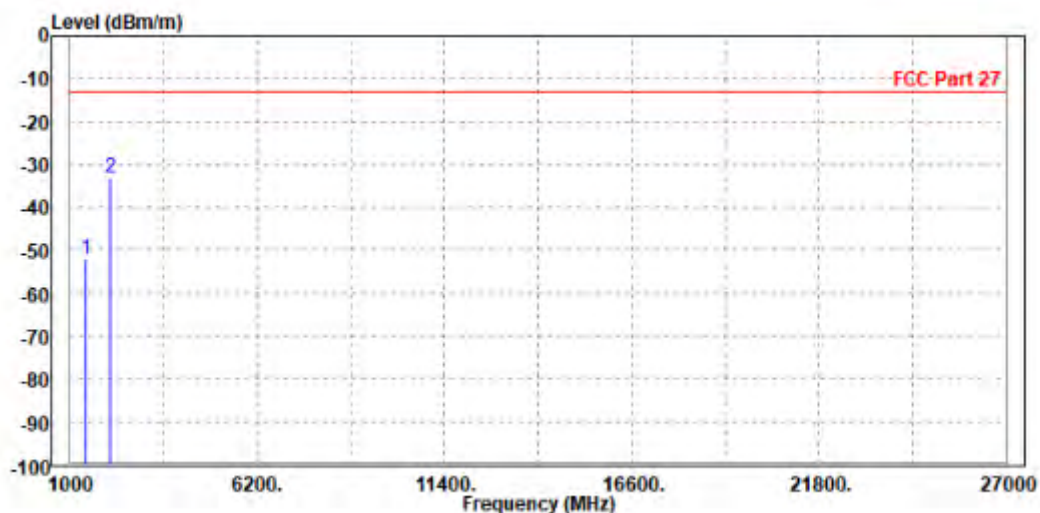
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-53.97	-55.05	-13.00	-40.97	1.08	Peak	Horizontal
2 PP	2122.500	-35.62	-43.29	-13.00	-22.62	7.67	Peak	Horizontal



MODE	TX channel 23095	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	1416.000	-52.11	-53.80	-13.00	-39.11	1.69	Peak	Vertical
2 PP	2122.500	-32.90	-39.59	-13.00	-19.90	6.69	Peak	Vertical





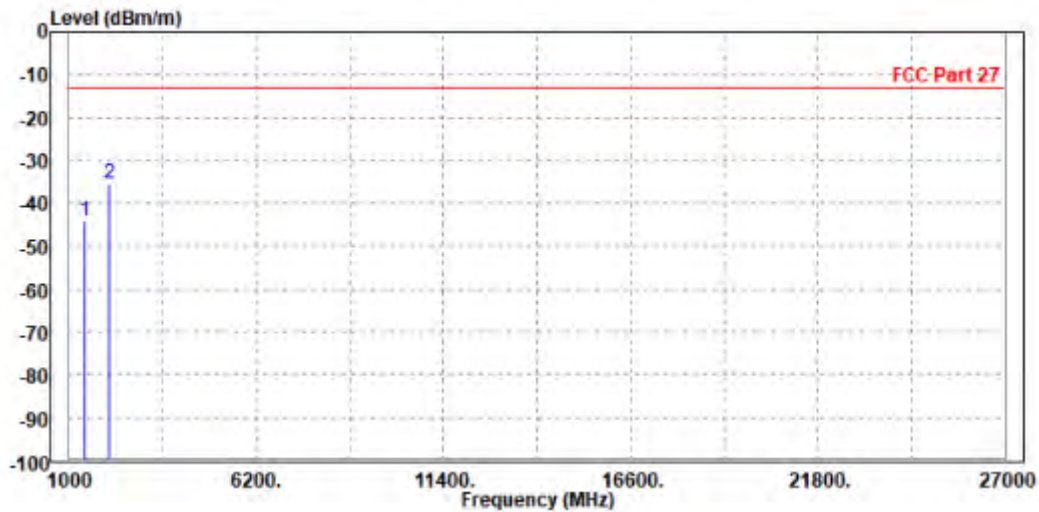
BUREAU
VERITAS

Test Report No.: W7L-P22010007RF04

CHANNEL BANDWIDTH: 3MHz / QPSK

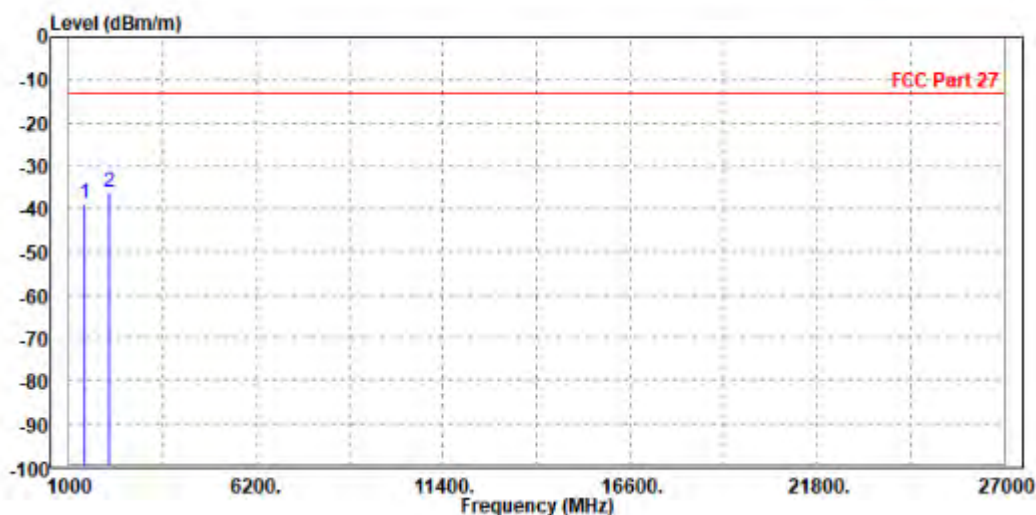
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-44.27	-45.35	-13.00	-31.27	1.08	Peak	Horizontal
2 PP	2122.500	-35.24	-42.91	-13.00	-22.24	7.67	Peak	Horizontal



MODE	TX channel 23095	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			

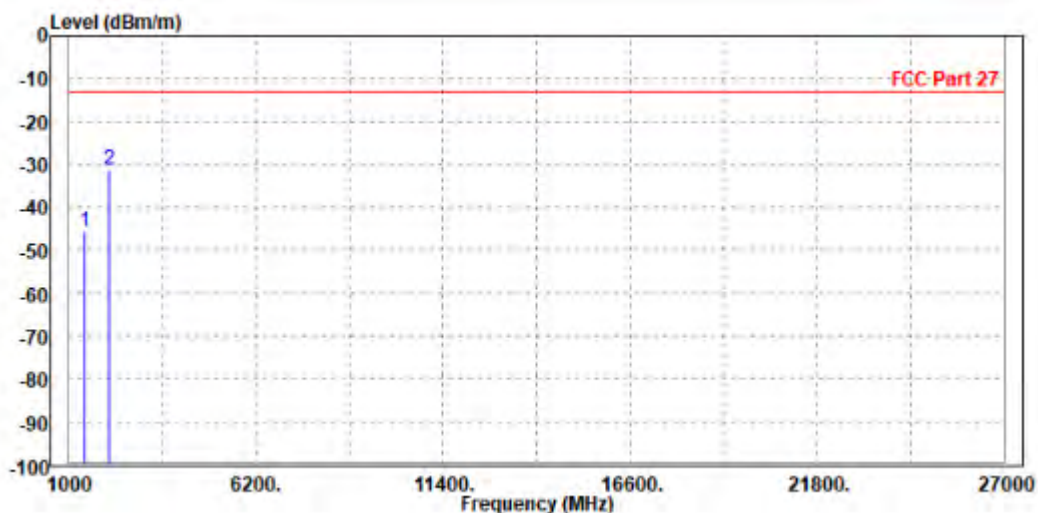
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-38.69	-40.38	-13.00	-25.69	1.69	Peak	Vertical
2 PP	2122.500	-36.02	-42.71	-13.00	-23.02	6.69	Peak	Vertical



CHANNEL BANDWIDTH: 5MHz / QPSK

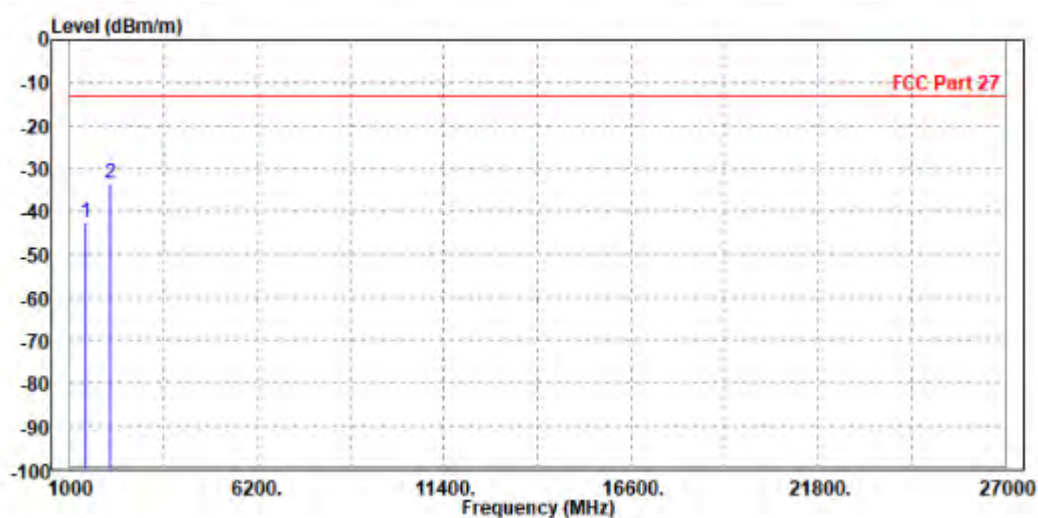
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-45.59	-46.67	-13.00	-32.59	1.08	Peak	Horizontal
2 PP	2122.500	-31.32	-38.99	-13.00	-18.32	7.67	Peak	Horizontal



MODE	TX channel 23095	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	1416.000	-42.70	-44.39	-13.00	-29.70	1.69	Peak	Vertical
2 PP	2122.500	-33.64	-40.33	-13.00	-20.64	6.69	Peak	Vertical

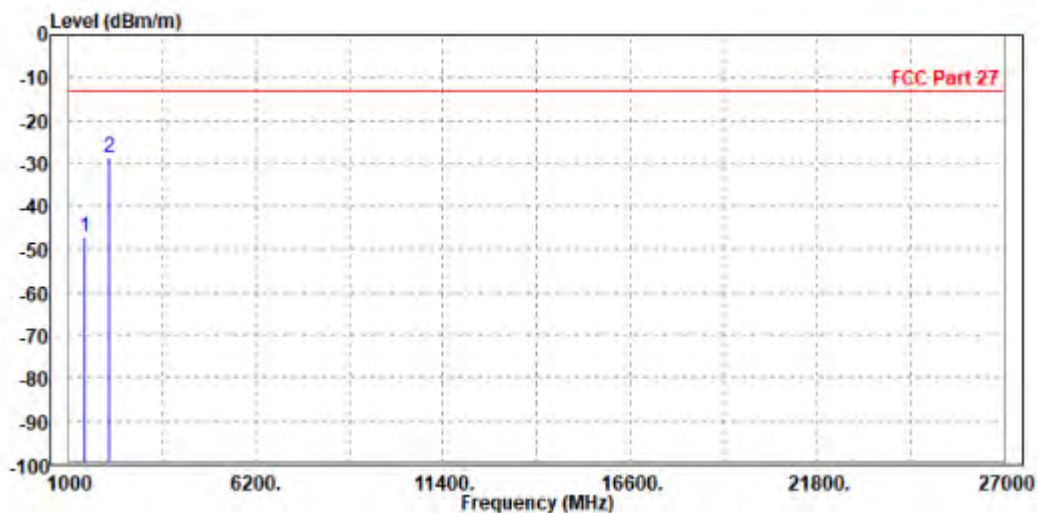


CHANNEL BANDWIDTH: 10MHz / QPSK

CH23060

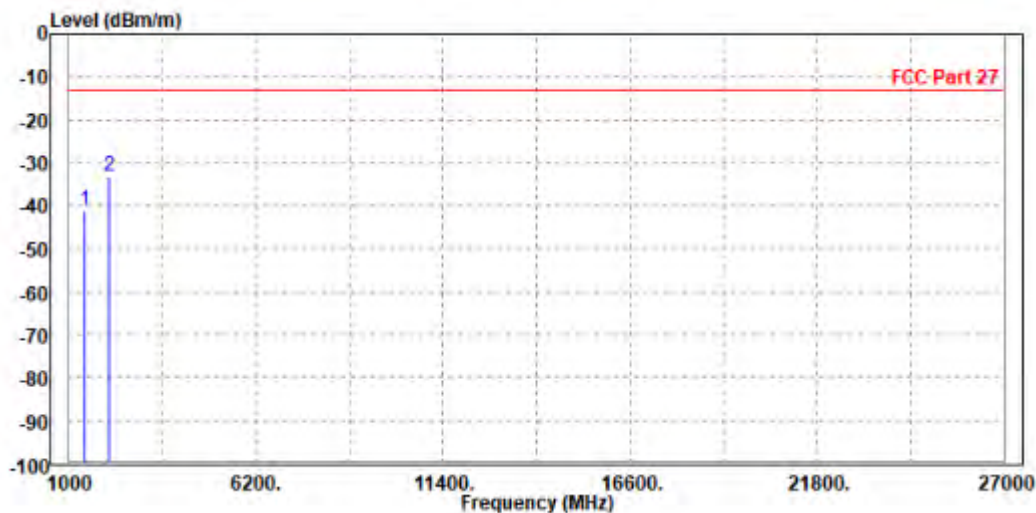
MODE	TX channel 23060	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-47.29	-48.37	-13.00	-34.29	1.08	Peak	Horizontal
2 PP	2112.000	-28.61	-36.27	-13.00	-15.61	7.66	Peak	Horizontal



MODE	TX channel 23060	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			

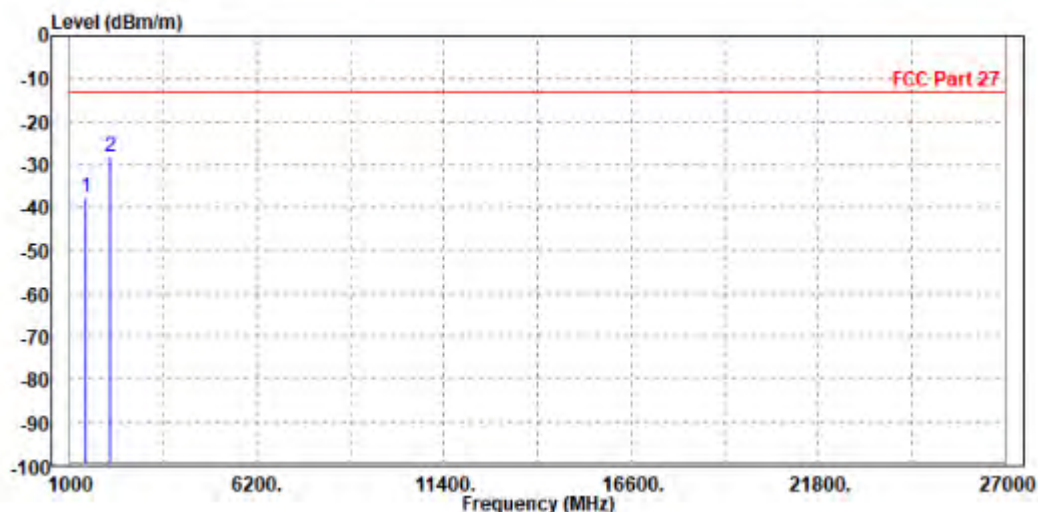
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-41.25	-42.94	-13.00	-28.25	1.69	Peak	Vertical
2 PP	2112.000	-33.22	-39.90	-13.00	-20.22	6.68	Peak	Vertical



CH23095

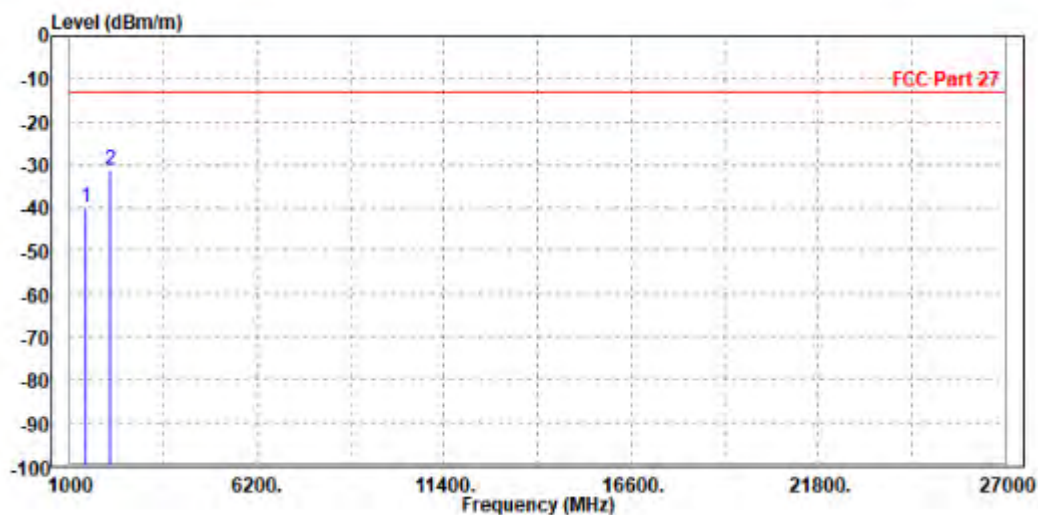
MODE	TX channel 23095	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-37.58	-38.66	-13.00	-24.58	1.08	Peak	Horizontal
2 PP	2122.500	-28.03	-35.70	-13.00	-15.03	7.67	Peak	Horizontal



MODE	TX channel 23095	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			

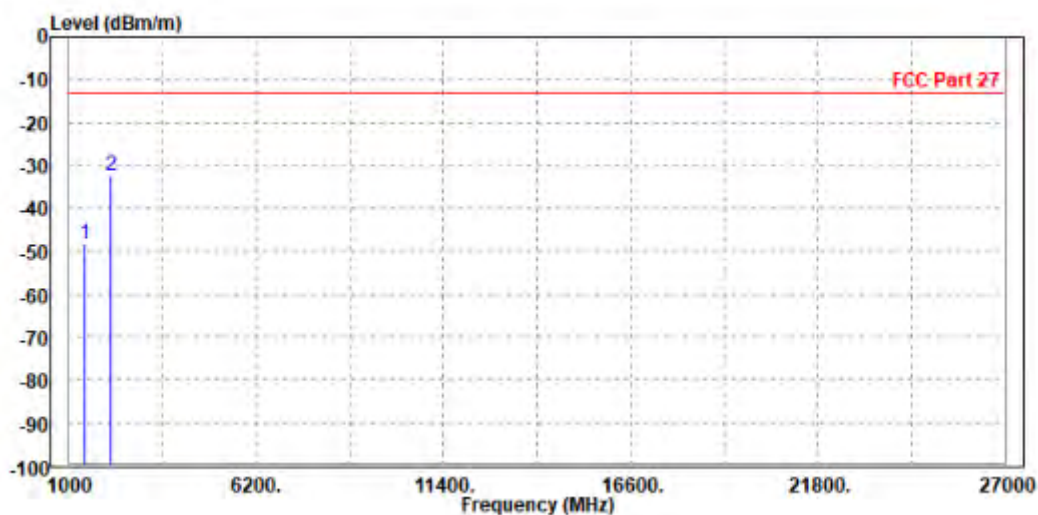
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-39.84	-41.53	-13.00	-26.84	1.69	Peak	Vertical
2 PP	2122.500	-31.25	-37.94	-13.00	-18.25	6.69	Peak	Vertical



CH23130

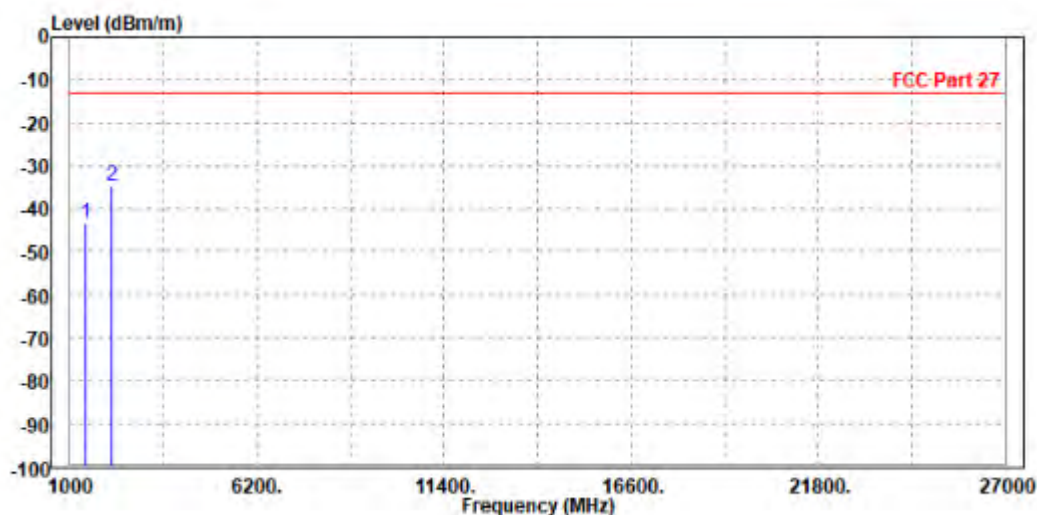
MODE	TX channel 23130	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1416.000	-48.22	-49.30	-13.00	-35.22	1.08	Peak	Horizontal
2 PP	2133.000	-32.24	-39.92	-13.00	-19.24	7.68	Peak	Horizontal



MODE	TX channel 23130	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	1416.000	-43.35	-45.04	-13.00	-30.35	1.69	Peak	Vertical
2 PP	2133.000	-34.64	-41.34	-13.00	-21.64	6.70	Peak	Vertical



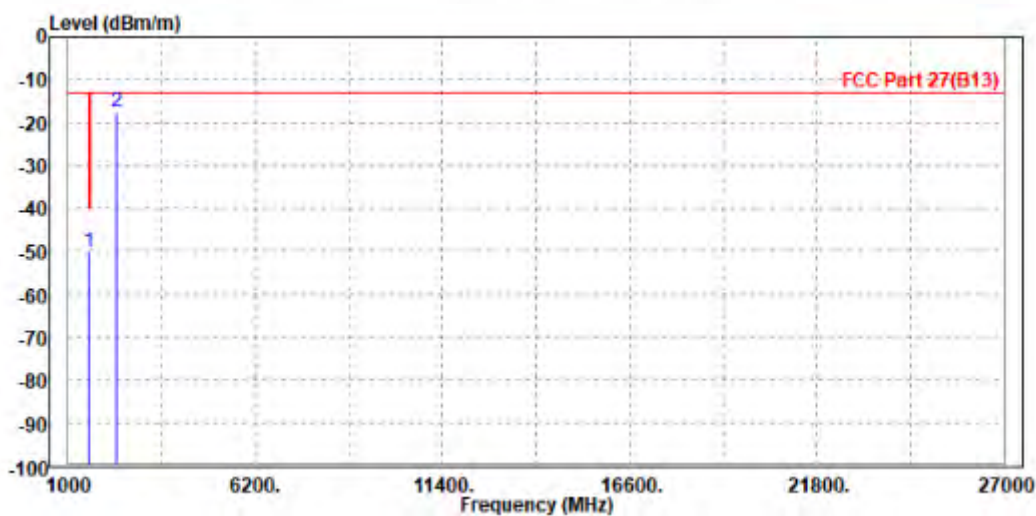
LTE B13

CHANNEL BANDWIDTH: 5MHz / QPSK

CH23205

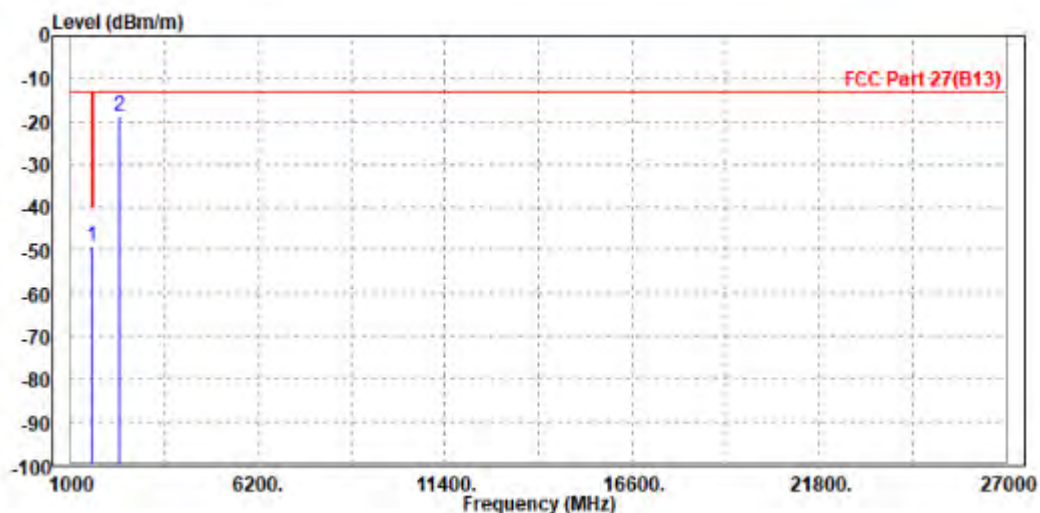
MODE	TX channel 23205	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1559.000	-50.12	-52.29	-40.00	-10.12	2.17	Peak	Horizontal
2 PP	2338.500	-17.33	-25.22	-13.00	-4.33	7.89	Peak	Horizontal



MODE	TX channel 23205	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			

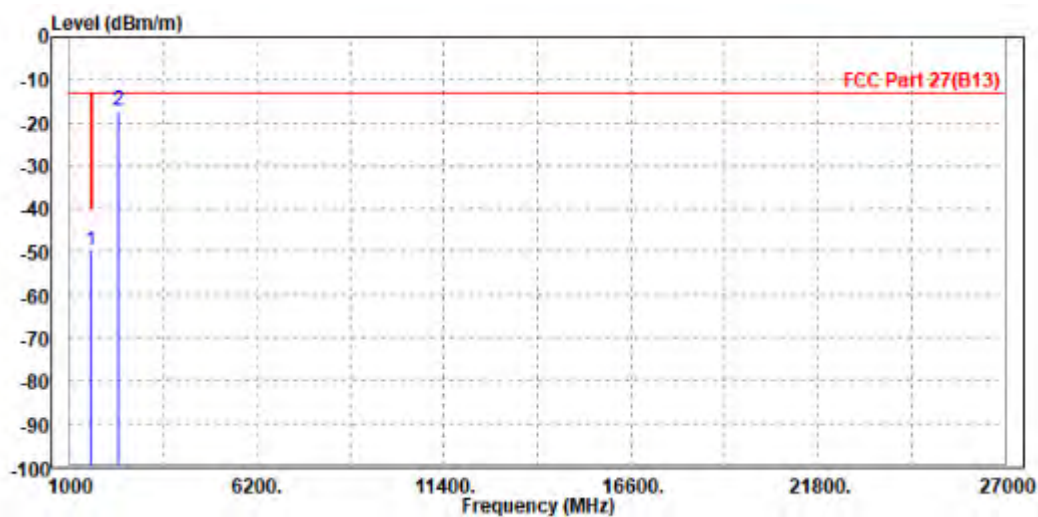
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1572.000	-48.89	-51.59	-40.00	-8.89	2.70	Peak	Vertical
2 PP	2338.500	-18.59	-25.49	-13.00	-5.59	6.90	Peak	Vertical



CH23230

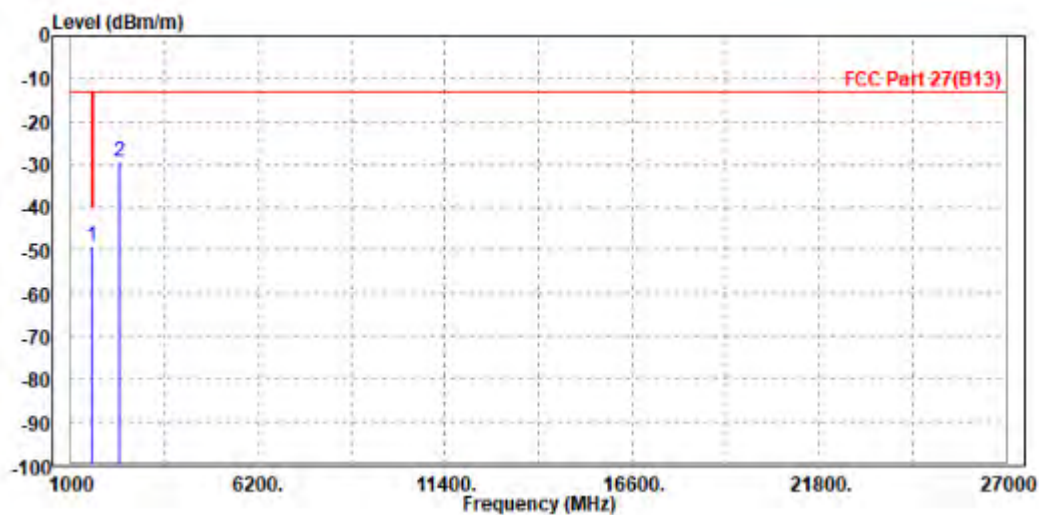
MODE	TX channel 23230	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1572.000	-49.85	-52.17	-40.00	-9.85	2.32	Peak	Horizontal
2 PP	2346.000	-17.06	-24.96	-13.00	-4.06	7.90	Peak	Horizontal



MODE	TX channel 23230	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			

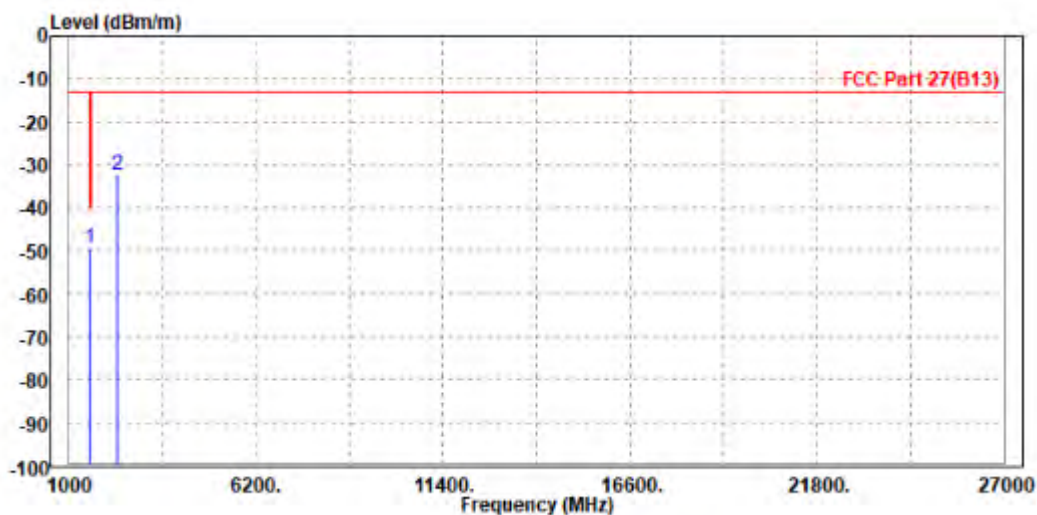
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 1572.000	-49.24	-51.94	-40.00	-9.24	2.70	Peak	Vertical
2	2346.000	-29.41	-36.32	-13.00	-16.41	6.91	Peak	Vertical



CH23255

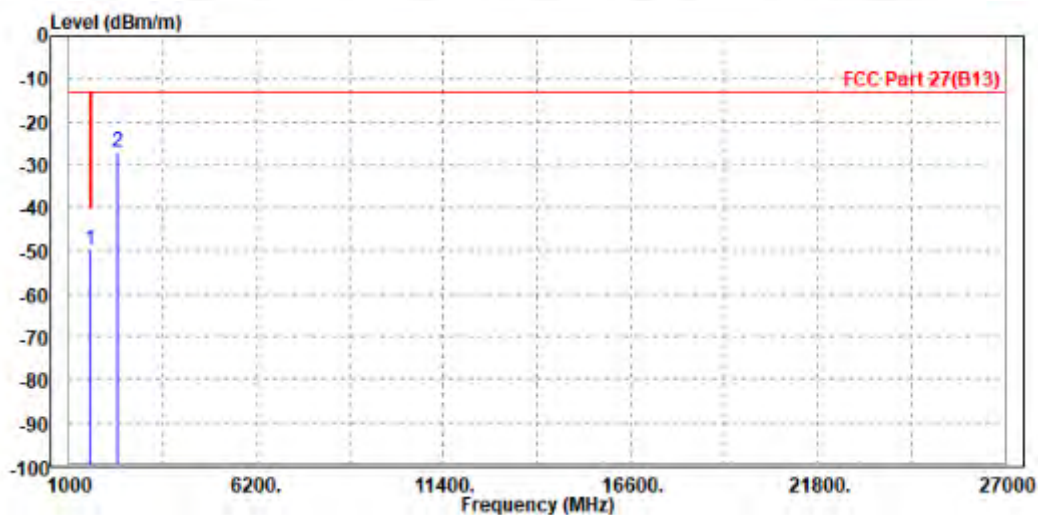
MODE	TX channel 23255	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	1572.000	-49.58	-51.90	-40.00	-9.58	2.32	Peak	Horizontal
2	2353.500	-32.42	-40.32	-13.00	-19.42	7.90	Peak	Horizontal



MODE	TX channel 23255	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			

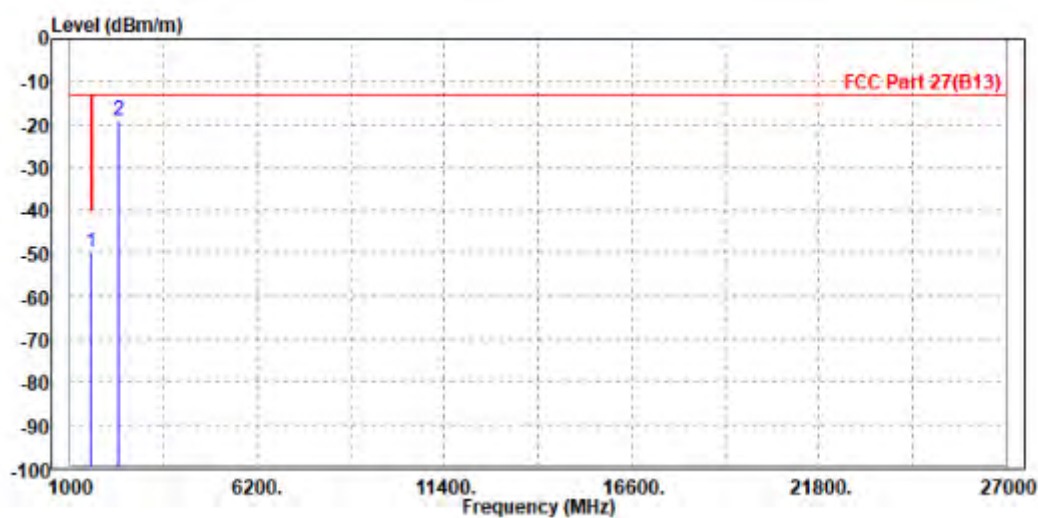
		Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
		MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP	1572.000	-49.76	-52.46	-40.00	-9.76	2.70	Peak	Vertical
2		2353.500	-27.17	-34.09	-13.00	-14.17	6.92	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz /QPSK

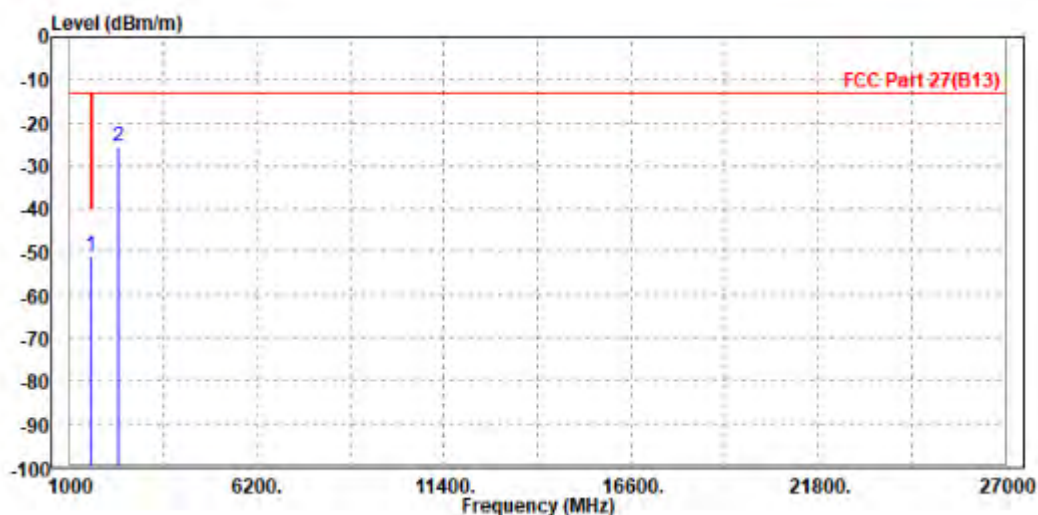
MODE	TX channel 23230	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1572.000	-49.77	-52.09	-40.00	-9.77	2.32	Peak	Horizontal
2 PP	2352.000	-19.09	-26.99	-13.00	-6.09	7.90	Peak	Horizontal



MODE	TX channel 23230	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	1572.000	-50.78	-53.48	-40.00	-10.78	2.70	Peak	Vertical
2		2346.000	-25.36	-32.27	-13.00	-12.36	6.91	Peak	Vertical

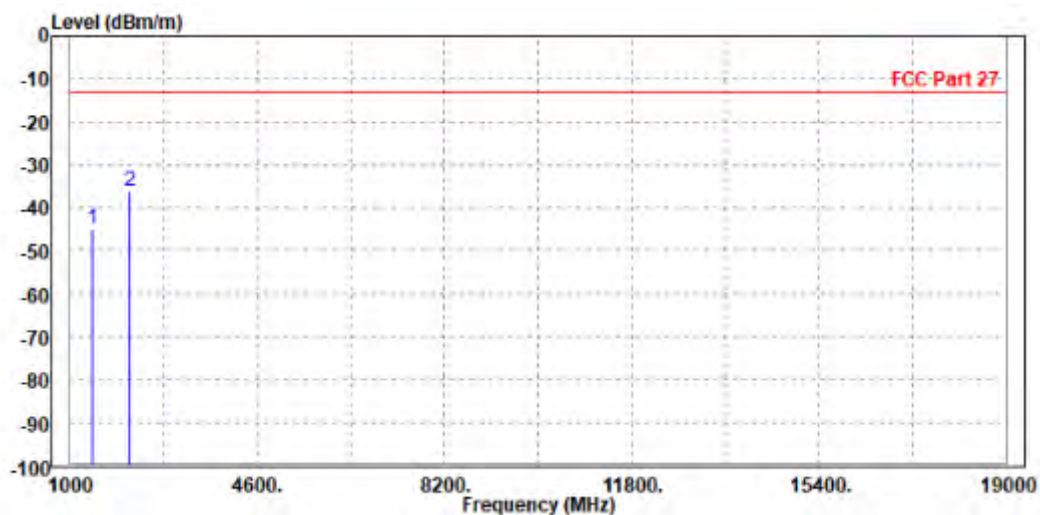


LTE B17

CHANNEL BANDWIDTH: 5MHz / QPSK

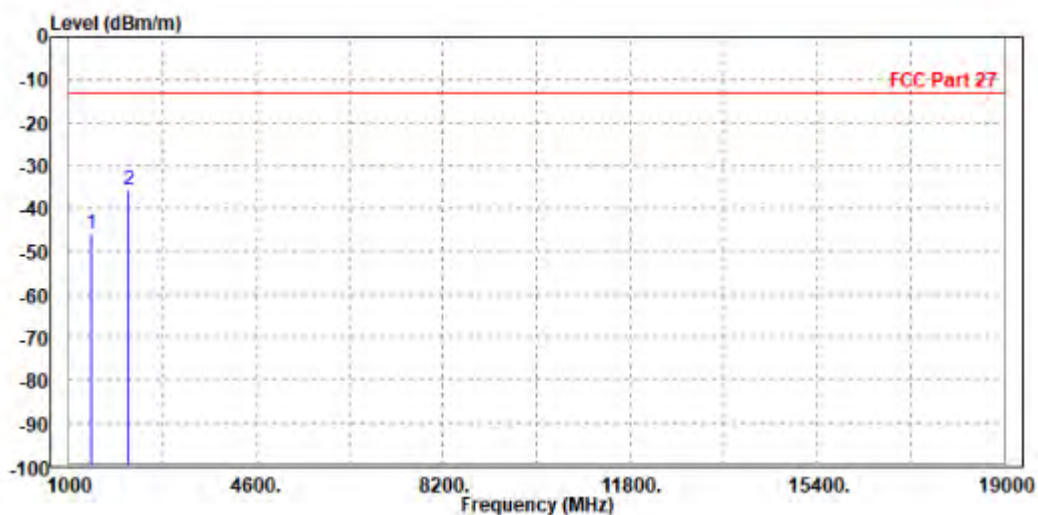
MODE	TX channel 23790	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1420.000	-44.91	-46.01	-13.00	-31.91	1.10	Peak	Horizontal
2 PP	2134.000	-36.24	-43.92	-13.00	-23.24	7.68	Peak	Horizontal



MODE	TX channel 23790	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	1414.000	-46.17	-47.85	-13.00	-33.17	1.68	Peak	Vertical
2 PP	2130.000	-35.87	-42.57	-13.00	-22.87	6.70	Peak	Vertical

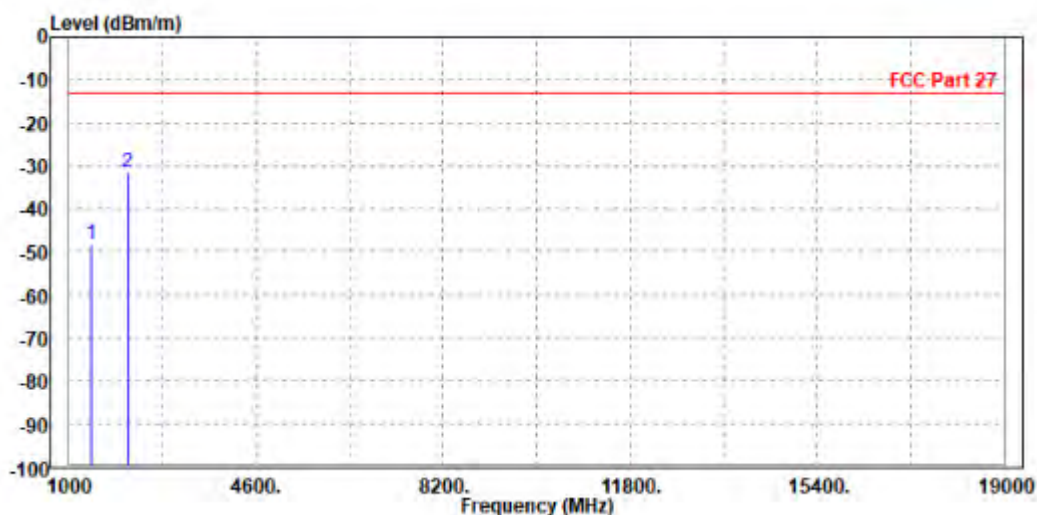


CHANNEL BANDWIDTH: 10MHz / QPSK

CH23780

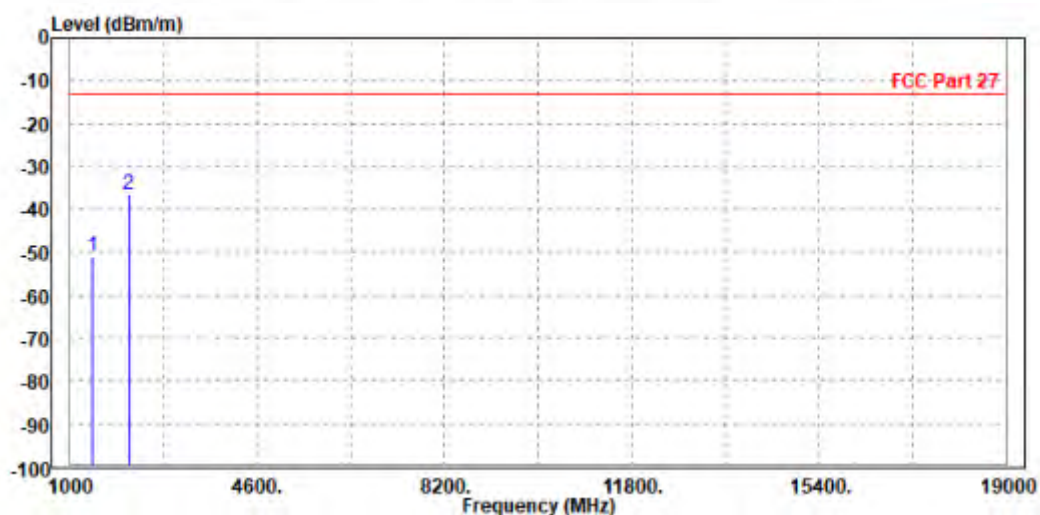
MODE	TX channel 23780	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1414.000	-48.26	-49.33	-13.00	-35.26	1.07	Peak	Horizontal
2 PP	2127.000	-31.73	-39.40	-13.00	-18.73	7.67	Peak	Horizontal



MODE	TX channel 23780	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			

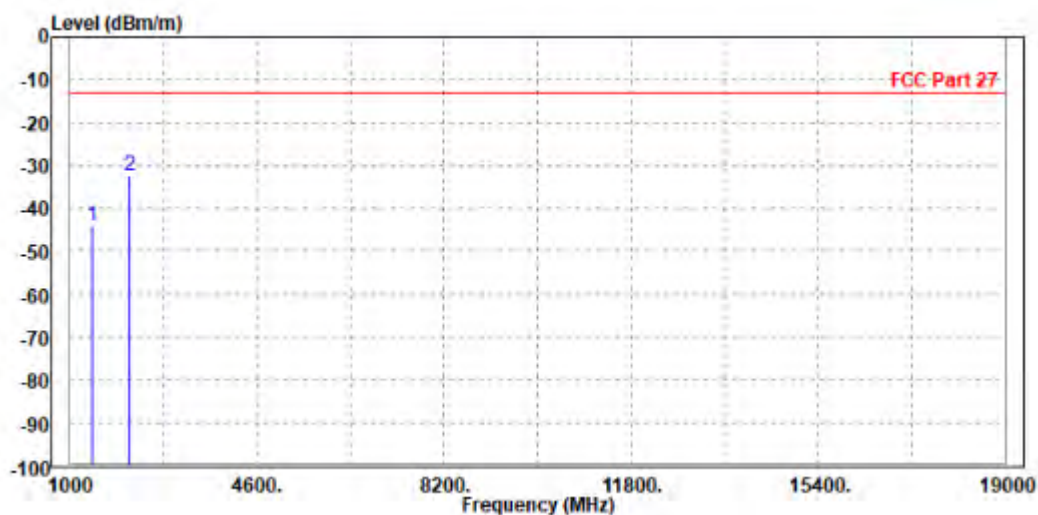
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1414.000	-50.88	-52.56	-13.00	-37.88	1.68	Peak	Vertical
2	PP 2127.000	-36.39	-43.08	-13.00	-23.39	6.69	Peak	Vertical



CH23790

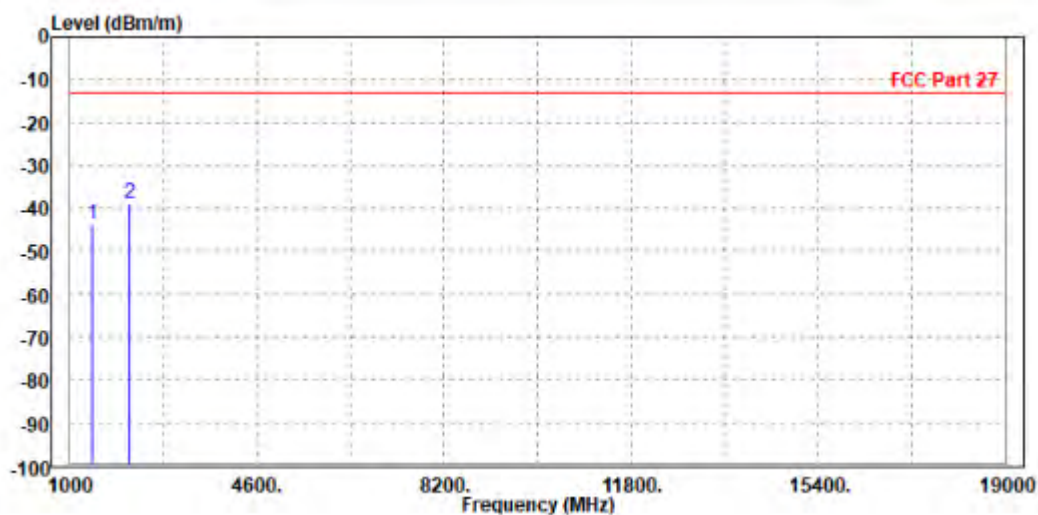
CH20700			
MODE	TX channel 23790	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1414.000	-44.27	-45.34	-13.00	-31.27	1.07	Peak	Horizontal
2 PP	2130.000	-32.47	-40.15	-13.00	-19.47	7.68	Peak	Horizontal



MODE	TX channel 23790	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			

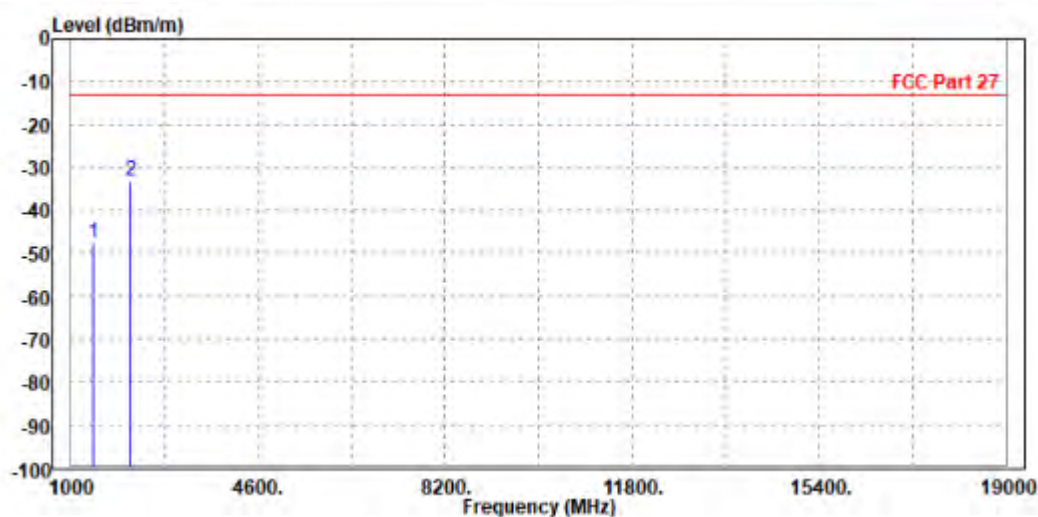
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1414.000	-43.84	-45.52	-13.00	-30.84	1.68	Peak	Vertical
2 PP	2130.000	-38.81	-45.51	-13.00	-25.81	6.70	Peak	Vertical



CH23800

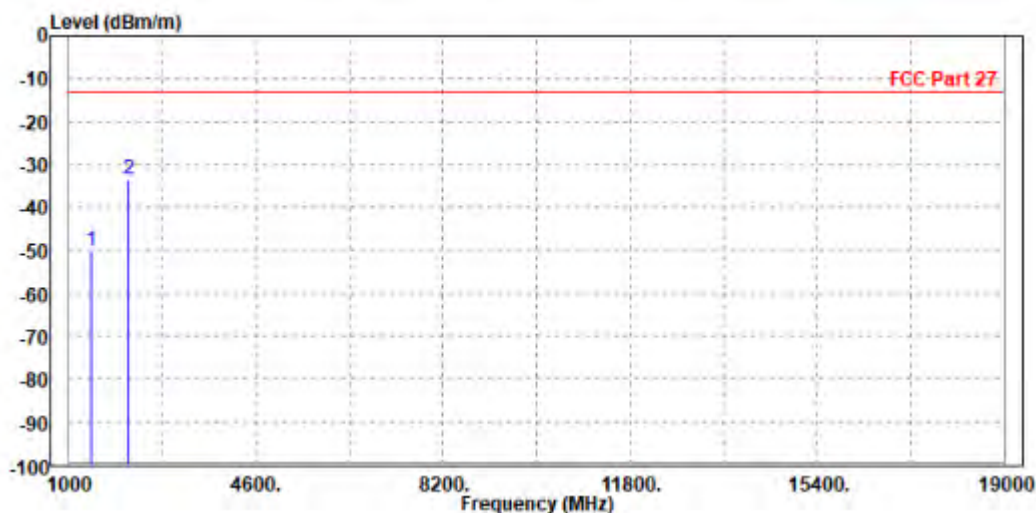
MODE	TX channel 23800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	1414.000	-47.41	-48.48	-13.00	-34.41	1.07	Peak	Horizontal
2 PP	2133.000	-33.25	-40.93	-13.00	-20.25	7.68	Peak	Horizontal



MODE	TX channel 23800	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	1422.000	-50.33	-52.05	-13.00	-37.33	1.72	Peak	Vertical
2 PP	2134.000	-33.29	-39.99	-13.00	-20.29	6.70	Peak	Vertical

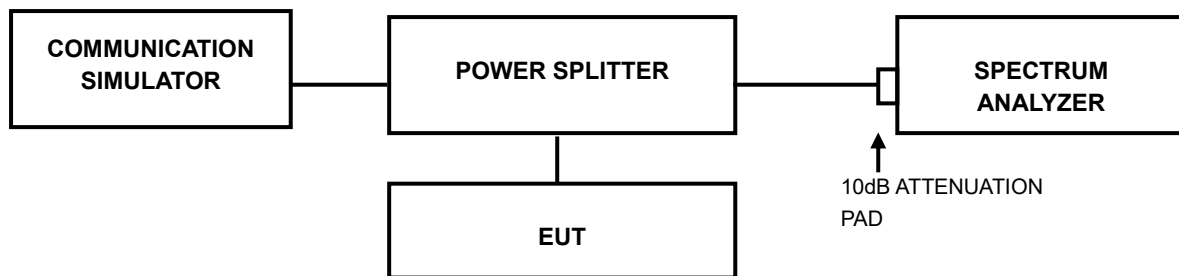


3.7 PEAK TO AVERAGE RATIO

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%.



Test Report No.: W7L-P22010007RF04

3.7.4 TEST RESULTS

Please Refer to Appendix Of this test report.



Test Report No.: W7L-P22010007RF04

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.

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



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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.

Please Refer to Appendix Of this test report.



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6 Appendix A

WCDMA BAND4

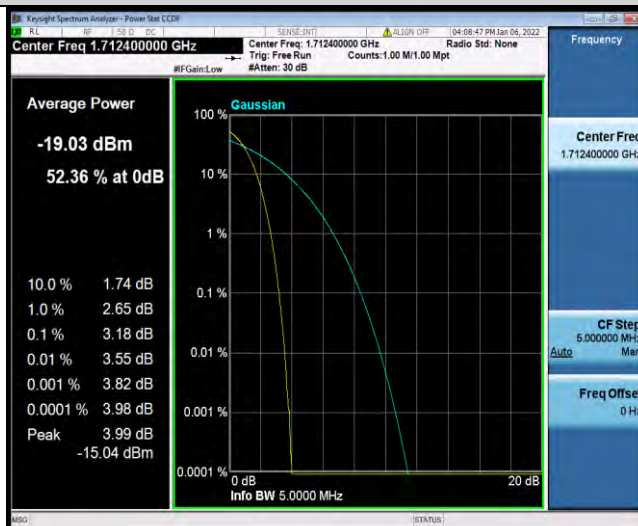
PEAK-TO-AVERAGE RATIO

Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band4	1312	3.18	13	PASS
Band4	1413	2.78	13	PASS
Band4	1513	2.86	13	PASS

Test Graphs

Band4-1312



Band4-1413



Band4-1513



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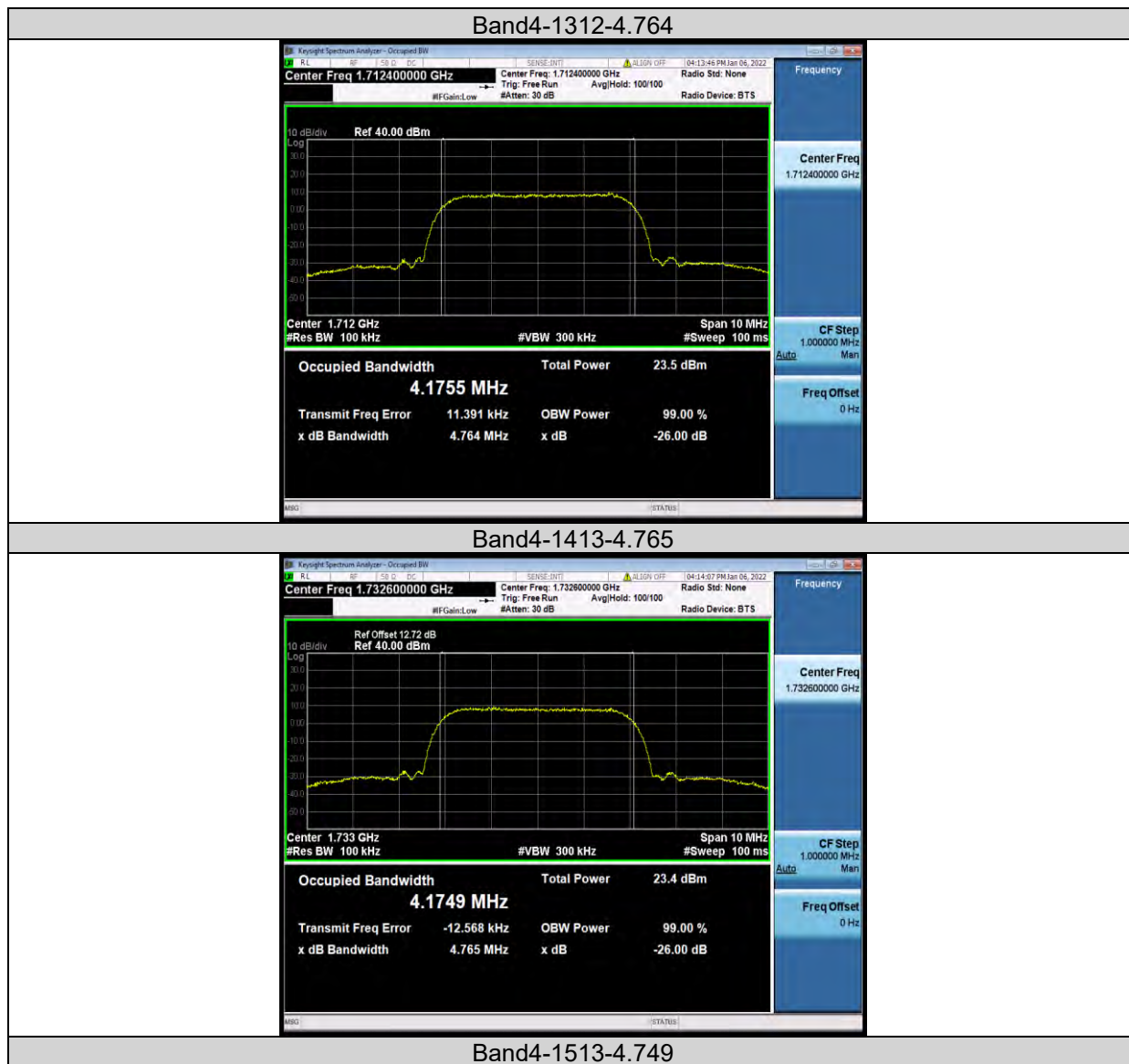


26DB BANDWIDTH AND OCCUPIED BANDWIDTH

Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit(MHz)	Verdict
Band4	1312	4.1755	4.764	---	PASS
Band4	1413	4.1749	4.765	---	PASS
Band4	1513	4.1735	4.749	---	PASS

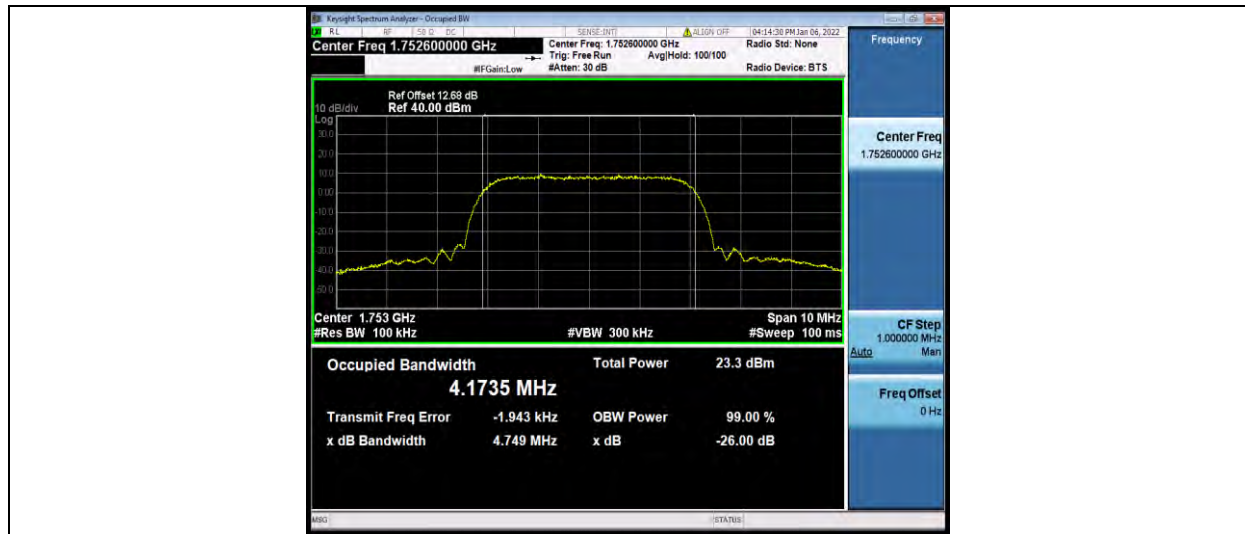
Test Graphs





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BAND EDGE

Test Result

Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band4	1312	1710.00	-26.86	-13	PASS
Band4	1513	1755.00	-26.73	-13	PASS

Test Graphs

Band4-1312



CONDUCTED SPURIOUS EMISSION

Test Result

Band	Channel	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band4	1312	30~1000MHz	963.14	-37.56	-13	PASS
Band4	1312	1000~3000MHz	2622.2	-36.56	-13	PASS
Band4	1312	3000~20000MHz	19178.33	-33.37	-13	PASS
Band4	1413	30~1000MHz	867.01	-36.9	-13	PASS
Band4	1413	1000~3000MHz	2640.4	-36.54	-13	PASS
Band4	1413	3000~20000MHz	19140.93	-33.36	-13	PASS
Band4	1513	30~1000MHz	887.71	-37.7	-13	PASS
Band4	1513	1000~3000MHz	2639.4	-36.61	-13	PASS
Band4	1513	3000~20000MHz	19153.4	-33.32	-13	PASS

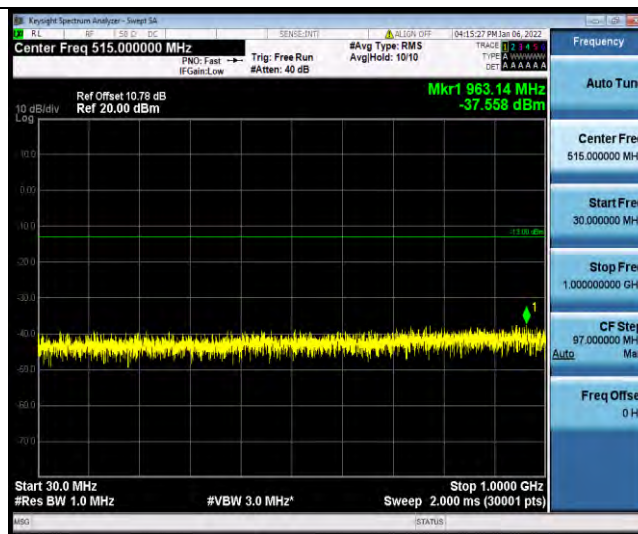
Test Graphs

Band4-1312-30~1000MHz



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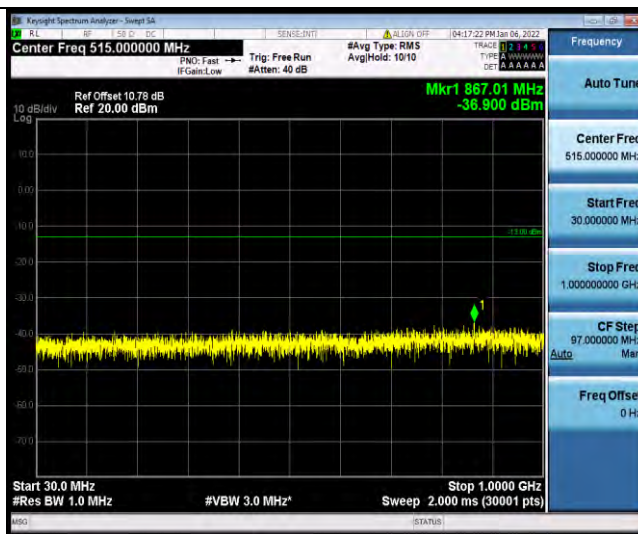
Band4-1312-1000~3000MHz



Band4-1312-3000~20000MHz



Band4-1413-30~1000MHz



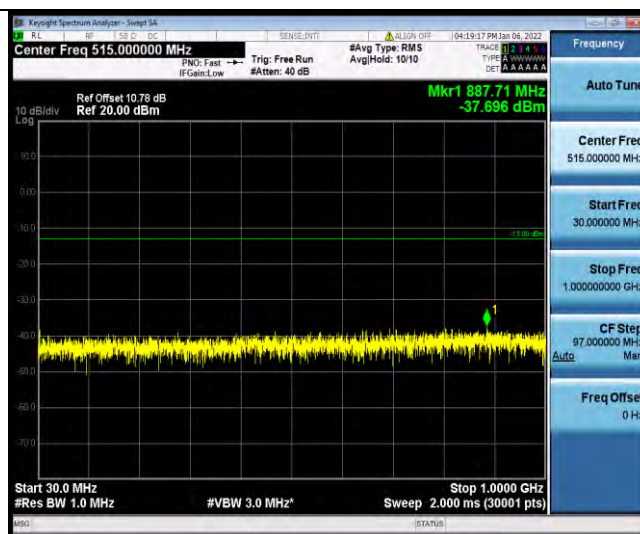
Band4-1413-1000~3000MHz



Band4-1413-3000~20000MHz



Band4-1513-30~1000MHz



Band4-1513-1000~3000MHz



Band4-1513-3000~20000MHz



FREQUENCY STABILITY

Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band4	1312	VL	NT	0.39	0.000228	±2.5	PASS
Band4	1312	VN	NT	-0.16	-0.000093	±2.5	PASS
Band4	1312	VH	NT	0.67	0.000391	±2.5	PASS
Band4	1413	VL	NT	0.36	0.000208	±2.5	PASS
Band4	1413	VN	NT	0.20	0.000115	±2.5	PASS
Band4	1413	VH	NT	0.67	0.000387	±2.5	PASS
Band4	1513	VL	NT	0.59	0.000337	±2.5	PASS
Band4	1513	VN	NT	0.60	0.000342	±2.5	PASS
Band4	1513	VH	NT	0.52	0.000297	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band4	1312	NV	-30	0.91	0.000531	±2.5	PASS
Band4	1312	NV	-20	0.51	0.000298	±2.5	PASS
Band4	1312	NV	0	0.9	0.000526	±2.5	PASS
Band4	1312	NV	10	1.17	0.000683	±2.5	PASS
Band4	1312	NV	20	0.94	0.000549	±2.5	PASS
Band4	1312	NV	30	-0.46	-0.00055	±2.5	PASS
Band4	1312	NV	40	-0.15	-0.000187	±2.5	PASS
Band4	1312	NV	50	-0.22	-0.000268	±2.5	PASS
Band4	1413	NV	-30	0.65	0.000375	±2.5	PASS
Band4	1413	NV	-20	-0.21	-0.000121	±2.5	PASS
Band4	1413	NV	0	0.51	0.000294	±2.5	PASS
Band4	1413	NV	10	0.36	0.000208	±2.5	PASS
Band4	1413	NV	20	0.16	0.000092	±2.5	PASS
Band4	1413	NV	30	-0.45	-0.00054	±2.5	PASS
Band4	1413	NV	40	-0.36	-0.000435	±2.5	PASS
Band4	1413	NV	50	-0.15	-0.000177	±2.5	PASS
Band4	1513	NV	-30	1.04	0.000593	±2.5	PASS
Band4	1513	NV	-20	0.87	0.000496	±2.5	PASS
Band4	1513	NV	0	0.91	0.000519	±2.5	PASS
Band4	1513	NV	10	0.95	0.000542	±2.5	PASS
Band4	1513	NV	20	0.99	0.000565	±2.5	PASS



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Band4	1513	NV	30	-0.45	-0.000541	±2.5	PASS
Band4	1513	NV	40	-0.21	-0.00025	±2.5	PASS
Band4	1513	NV	50	-0.4	-0.000479	±2.5	PASS

LTE BAND4

PEAK-TO-AVERAGE RATIO (CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band4	1.4MHz	QPSK	19957	1RB#0	5.09	13	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	5.50	13	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	4.93	13	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	5.35	13	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	4.49	13	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	5.06	13	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	5.99	13	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	6.32	13	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	5.91	13	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	6.20	13	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	5.45	13	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	5.84	13	PASS
Band4	3MHz	QPSK	19965	1RB#0	5.08	13	PASS
Band4	3MHz	QPSK	19965	15RB#0	5.52	13	PASS
Band4	3MHz	QPSK	20175	1RB#0	4.98	13	PASS
Band4	3MHz	QPSK	20175	15RB#0	5.39	13	PASS
Band4	3MHz	QPSK	20385	1RB#0	4.59	13	PASS
Band4	3MHz	QPSK	20385	15RB#0	5.12	13	PASS
Band4	3MHz	16QAM	19965	1RB#0	5.99	13	PASS
Band4	3MHz	16QAM	19965	15RB#0	6.36	13	PASS
Band4	3MHz	16QAM	20175	1RB#0	5.72	13	PASS
Band4	3MHz	16QAM	20175	15RB#0	6.26	13	PASS
Band4	3MHz	16QAM	20385	1RB#0	5.50	13	PASS
Band4	3MHz	16QAM	20385	15RB#0	5.96	13	PASS
Band4	5MHz	QPSK	19975	1RB#0	5.01	13	PASS
Band4	5MHz	QPSK	19975	25RB#0	5.58	13	PASS
Band4	5MHz	QPSK	20175	1RB#0	4.76	13	PASS
Band4	5MHz	QPSK	20175	25RB#0	5.47	13	PASS
Band4	5MHz	QPSK	20375	1RB#0	4.64	13	PASS
Band4	5MHz	QPSK	20375	25RB#0	5.17	13	PASS
Band4	5MHz	16QAM	19975	1RB#0	5.86	13	PASS
Band4	5MHz	16QAM	19975	25RB#0	6.35	13	PASS
Band4	5MHz	16QAM	20175	1RB#0	5.71	13	PASS
Band4	5MHz	16QAM	20175	25RB#0	6.22	13	PASS
Band4	5MHz	16QAM	20375	1RB#0	5.40	13	PASS
Band4	5MHz	16QAM	20375	25RB#0	5.96	13	PASS
Band4	10MHz	QPSK	20000	1RB#0	4.96	13	PASS
Band4	10MHz	QPSK	20000	50RB#0	5.43	13	PASS
Band4	10MHz	QPSK	20175	1RB#0	4.64	13	PASS
Band4	10MHz	QPSK	20175	50RB#0	5.41	13	PASS
Band4	10MHz	QPSK	20350	1RB#0	4.83	13	PASS
Band4	10MHz	QPSK	20350	50RB#0	5.20	13	PASS



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Band4	10MHz	16QAM	20000	1RB#0	5.88	13	PASS
Band4	10MHz	16QAM	20000	50RB#0	6.21	13	PASS
Band4	10MHz	16QAM	20175	1RB#0	5.43	13	PASS
Band4	10MHz	16QAM	20175	50RB#0	6.17	13	PASS
Band4	10MHz	16QAM	20350	1RB#0	5.73	13	PASS
Band4	10MHz	16QAM	20350	50RB#0	6.01	13	PASS
Band4	15MHz	QPSK	20025	1RB#0	4.95	13	PASS
Band4	15MHz	QPSK	20025	75RB#0	5.45	13	PASS
Band4	15MHz	QPSK	20175	1RB#0	4.53	13	PASS
Band4	15MHz	QPSK	20175	75RB#0	5.65	13	PASS
Band4	15MHz	QPSK	20325	1RB#0	4.96	13	PASS
Band4	15MHz	QPSK	20325	75RB#0	5.52	13	PASS
Band4	15MHz	16QAM	20025	1RB#0	5.78	13	PASS
Band4	15MHz	16QAM	20025	75RB#0	6.18	13	PASS
Band4	15MHz	16QAM	20175	1RB#0	5.38	13	PASS
Band4	15MHz	16QAM	20175	75RB#0	6.30	13	PASS
Band4	15MHz	16QAM	20325	1RB#0	5.82	13	PASS
Band4	15MHz	16QAM	20325	75RB#0	6.22	13	PASS
Band4	20MHz	QPSK	20050	1RB#0	4.94	13	PASS
Band4	20MHz	QPSK	20050	100RB#0	4.99	13	PASS
Band4	20MHz	QPSK	20175	1RB#0	4.50	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.48	13	PASS
Band4	20MHz	QPSK	20300	1RB#0	4.96	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.38	13	PASS
Band4	20MHz	16QAM	20050	1RB#0	5.79	13	PASS
Band4	20MHz	16QAM	20050	100RB#0	5.93	13	PASS
Band4	20MHz	16QAM	20175	1RB#0	5.46	13	PASS
Band4	20MHz	16QAM	20175	100RB#0	6.20	13	PASS
Band4	20MHz	16QAM	20300	1RB#0	5.79	13	PASS
Band4	20MHz	16QAM	20300	100RB#0	6.18	13	PASS