

FCC TEST REPORT

(PART 27)

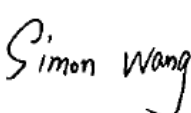
Applicant:	DataRemote Incorporated
Address:	18001 Old Cutler Rd. Suite 600, Miami, FL 33157

Manufacturer or Supplier:	DataRemote Incorporated
Address:	18001 Old Cutler Rd. Suite 600, Miami, FL 33157
Product:	Cellular Backup Router
Brand Name:	DATAREMOTE
Model Name:	90X1
FCC ID:	2AJLF-90X1
Date of tests:	Jul. 17, 2023 ~ Aug. 25, 2023

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

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

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

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: Aug. 25, 2023	 Date: Aug. 25, 2023

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

TABLE OF CONTENTS

RELEASE CONTROL RECORD	3
1 SUMMARY OF TEST RESULTS	4
1.1 MEASUREMENT UNCERTAINTY	5
1.2 TEST SITE AND INSTRUMENTS	6
2 GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF EUT	7
2.2 CONFIGURATION OF SYSTEM UNDER TEST	15
2.3 DESCRIPTION OF SUPPORT UNITS	16
2.4 TEST ITEM AND TEST CONFIGURATION	16
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS	21
3 TEST TYPES AND RESULTS	22
3.1 OUTPUT POWER MEASUREMENT	22
3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT	22
3.1.2 TEST PROCEDURES	22
3.1.3 TEST SETUP	23
3.1.4 TEST RESULTS	24
3.2 RADIATED EMISSION MEASUREMENT	52
3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT	52
3.2.2 TEST PROCEDURES	52
3.2.3 DEVIATION FROM TEST STANDARD	52
3.2.4 TEST SETUP	53
3.2.5 TEST RESULTS	55
4 INFORMATION ON THE TESTING LABORATORIES	107
5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB. 108	



Test Report No.: W7L-P23070006RF04

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P23070006RF04	Original release	Aug. 25, 2023

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
§2.1046	Conducted Output Power	See Note1
§27.50(d)(4) §27.50(h)(2) §27.50(j)(3) §27.50(k)(3)	Equivalent Isotropically Radiated Power (Band 4) (Band 38) (Band 41) (Band 42) (Band 43) (Band 66)	Compliance
§2.1055 §27.54	Frequency Stability	See Note1
§2.1049	Occupied Bandwidth	See Note1
§2.1051 §27.53(h) §27.53(m)(4)(6) §27.53(n)(2) §27.53(l)(2)	Conducted Band Edge Measurements (Band 4) (Band 38) (Band 41) (Band 42) (Band 43) (Band 66)	See Note1
§2.1051 §27.53(h) §27.53(m)(4)(6) §27.53(n)(2) §27.53(l)(2)	Conducted Spurious Emissions (Band 4) (Band 38) (Band 41) (Band 42) (Band 43) (Band 66)	See Note1
§2.1053 §27.53(h) §27.53(m)(4)(6) §27.53(n)(2) §27.53(l)(2)	Radiated Spurious Emissions (Band 4) (Band 38) (Band 41) (Band 42) (Band 43) (Band 66)	Compliance See Note2
§27.50(k)(4)	Peak to average ratio	See Note1

Note:

1. Please refer to the module report SEWA2204000008RG01(FCC ID: XMR2022RM520NGL)
2. For Inter-CA band, the report only show the worst mode RSE data of original module report, because the antenna type of module and EUT is all the same, and the power of single LTE band is larger than that in CA, so single LTE band can cover the RSE risk of CA part.

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
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions & Radiated Power (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted Output power	$\pm 2.06\text{dB}$

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 28,23	Mar. 27,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.14,23	May.13,24
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.03,22	Sep.02,23
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGRE N	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K- SG/QMS-00361	15433	Sep.04, 22	Sep.03, 23
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 14,23	Feb. 13,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,23	May.11,24
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 17,23	Feb.16,24
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn- CT0001143-121 6	May. 19,23	May. 18,26
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 06,23	May. 05,24
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 06,23	May. 05,24
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.12,23	May.11,24
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 12,22	Aug. 11,23
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24

- NOTE:**
1. The calibration interval of the above test instruments is 12 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	Cellular Backup Router	
BRAND NAME	DATAREMOTE	
MODEL NAME	90X1	
NOMINAL VOLTAGE	19Vdc(adapter or host equipment) 11.1Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	LTE	QPSK, 16QAM, 64QAM, 256QAM
FREQUENCY RANGE	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 38 Channel Bandwidth: 5MHz	2572.5MHz ~ 2617.5MHz
	LTE Band 38 Channel Bandwidth: 10MHz	2575MHz ~ 2615MHz
	LTE Band 38 Channel Bandwidth: 15MHz	2577.5MHz ~ 2612.5MHz
	LTE Band 38 Channel Bandwidth: 20MHz	2580MHz ~ 2610MHz
	LTE Band 41 Channel Bandwidth: 5MHz	2498.5MHz ~ 2687.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2501MHz ~ 2685MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2503.5MHz ~ 2682.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2506MHz ~ 2680MHz
	LTE Band 42 Channel Bandwidth: 5MHz	3452.5 MHz ~ 3547.5MHz
	LTE Band 42 Channel Bandwidth: 10MHz	3455MHz ~ 3545MHz



**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

FREQUENCY RANGE	LTE Band 42 Channel Bandwidth: 15MHz	3457.5MHz ~ 3542.5MHz
	LTE Band 42 Channel Bandwidth: 20MHz	3460MHz ~ 3540MHz
	LTE Band 43 Channel Bandwidth: 5MHz	3702.5MHz ~ 3797.5MHz
	LTE Band 43 Channel Bandwidth: 10MHz	3705MHz ~ 3795MHz
	LTE Band 43 Channel Bandwidth: 15MHz	3707.5MHz ~ 3792.5MHz
	LTE Band 43 Channel Bandwidth: 20MHz	3710MHz ~ 3790MHz
	LTE Band 66 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1779.3MHz
	LTE Band 66 Channel Bandwidth: 3MHz	1711.5MHz ~ 1778.5MHz
	LTE Band 66 Channel Bandwidth: 5MHz	1712.5MHz ~ 1777.5MHz
	LTE Band 66 Channel Bandwidth: 10MHz	1715MHz ~ 1775MHz
	LTE Band 66 Channel Bandwidth: 15MHz	1717.5MHz ~ 1772.5MHz
	LTE Band 66 Channel Bandwidth: 20MHz	1720MHz ~ 1770MHz
MAX. EIRP POWER	LTE Band 4 Channel Bandwidth: 1.4MHz	622.3mW
	LTE Band 4 Channel Bandwidth: 3MHz	625.17mW
	LTE Band 4 Channel Bandwidth: 5MHz	642.69mW
	LTE Band 4 Channel Bandwidth: 10MHz	625.17mW
	LTE Band 4 Channel Bandwidth: 15MHz	635.33mW
	LTE Band 4 Channel Bandwidth: 20MHz	633.87mW
	LTE Band 38 Channel Bandwidth: 5MHz	252.93mW
	LTE Band 38 Channel Bandwidth: 10MHz	247.74mW
	LTE Band 38 Channel Bandwidth: 15MHz	253.51mW
	LTE Band 38 Channel Bandwidth: 20MHz	245.47mW



BUREAU
VERITAS

Test Report No.: W7L-P23070006RF04

MAX. EIRP POWER	LTE Band 41 Channel Bandwidth: 5MHz	309.03mW
	LTE Band 41 Channel Bandwidth: 10MHz	319.15mW
	LTE Band 41 Channel Bandwidth: 15MHz	311.17mW
	LTE Band 41 Channel Bandwidth: 20MHz	297.85mW
	LTE Band 42 Channel Bandwidth: 5MHz	211.35mW
	LTE Band 42 Channel Bandwidth: 10MHz	212.81mW
	LTE Band 42 Channel Bandwidth: 15MHz	207.01mW
	LTE Band 42 Channel Bandwidth: 20MHz	203.24mW
	LTE Band 43 Channel Bandwidth: 5MHz	211.35mW
	LTE Band 43 Channel Bandwidth: 10MHz	222.33mW
	LTE Band 43 Channel Bandwidth: 15MHz	219.28mW
	LTE Band 43 Channel Bandwidth: 20MHz	222.33mW
	LTE Band 66 Channel Bandwidth: 1.4MHz	606.74mW
	LTE Band 66 Channel Bandwidth: 3MHz	599.79mW
	LTE Band 66 Channel Bandwidth: 5MHz	606.74mW
	LTE Band 66 Channel Bandwidth: 10MHz	608.14mW
	LTE Band 66 Channel Bandwidth: 15MHz	603.95mW
	LTE Band 66 Channel Bandwidth: 20MHz	644.17mW

EMISSION DESIGNATOR	LTE Band 4 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
		16QAM: 1M11W7D
		64QAM: 1M11W7D
		256QAM: 1M11W7D
	LTE Band 4 Channel Bandwidth: 3MHz	QPSK: 2M70G7D
		16QAM: 2M70W7D
		64QAM: 2M70W7D
		256QAM: 2M70W7D
	LTE Band 4 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M48W7D
		64QAM: 4M48W7D
		256QAM: 4M48W7D
	LTE Band 4 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M97G7D
		64QAM: 8M96W7D
		256QAM: 8M96W7D
	LTE Band 4 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 4 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 18M0W7D
		64QAM: 18M0W7D
		256QAM: 18M0W7D
	LTE Band 38 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M45W7D
		64QAM: 4M48W7D
		256QAM: 4M48W7D

EMISSION DESIGNATOR	LTE Band 38 Channel Bandwidth: 10MHz	QPSK: 8M96G7D
		16QAM: 8M95W7D
		64QAM: 8M94W7D
		256QAM: 8M96W7D
	LTE Band 38 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 38 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
		256QAM: 17M9W7D
	LTE Band 41 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M48W7D
		64QAM: 4M48W7D
		256QAM: 4M48W7D
	LTE Band 41 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M94W7D
		64QAM: 8M95W7D
		256QAM: 8M96W7D
	LTE Band 41 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 41 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
		256QAM: 17M9W7D
	LTE Band 42 Channel Bandwidth: 5MHz	QPSK: 4M51G7D
		16QAM: 4M52W7D
		64QAM: 4M51W7D
		256QAM: 4M52W7D
	LTE Band 42 Channel Bandwidth: 10MHz	QPSK: 9M00G7D
		16QAM: 9M01W7D

EMISSION DESIGNATOR		64QAM: 9M02W7D
		256QAM: 9M02W7D
	LTE Band 42 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 42 Channel Bandwidth: 20MHz	QPSK: 18M0G7D
		16QAM: 18M1W7D
		64QAM: 18M1W7D
		256QAM: 18M1W7D
	LTE Band 43 Channel Bandwidth: 5MHz	QPSK: 4M51G7D
		16QAM: 4M52W7D
		64QAM: 4M52W7D
		256QAM: 4M52W7D
	LTE Band 43 Channel Bandwidth: 10MHz	QPSK: 9M02G7D
		16QAM: 9M02W7D
		64QAM: 9M00W7D
		256QAM: 9M02W7D
	LTE Band 43 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 43 Channel Bandwidth: 20MHz	QPSK: 18M1G7D
		16QAM: 18M1W7D
		64QAM: 18M1W7D
		256QAM: 18M1W7D
	LTE Band 66 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
		16QAM: 1M11W7D
		64QAM: 1M11W7D
		256QAM: 1M11W7D
	LTE Band 66 Channel Bandwidth: 3MHz	QPSK: 2M70G7D
		16QAM: 2M71W7D
		64QAM: 2M71W7D



**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

EMISSION DESIGNATOR		256QAM: 2M70W7D
	LTE Band 66 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M48W7D
		64QAM: 4M48W7D
		256QAM: 4M48W7D
	LTE Band 66 Channel Bandwidth: 10MHz	QPSK: 8M96G7D
		16QAM: 8M96W7D
		64QAM: 8M94W7D
		256QAM: 8M96W7D
	LTE Band 66 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
		256QAM: 13M5W7D
	LTE Band 66 Channel Bandwidth: 20MHz	QPSK: 18M0G7D
		16QAM: 18M0W7D
		64QAM: 17M9W7D
		256QAM: 17M9W7D
ANTENNA TYPE	Monopole Antenna with 3.10dBi gain for LTE4 Monopole Antenna with -1.95dBi gain for LTE38 Monopole Antenna with -1.95dBi gain for LTE41 Monopole Antenna with -2.38 dBi gain for LTE42 Monopole Antenna with -2.38dBi gain for LTE43 Monopole Antenna with 3.10dBi gain for LTE66	
HW VERSION	1.0	
SW VERSION	1.0	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	Ethernet Cable: non-shielded cable, with w/o ferrite core, 1.5 meter Phone Cable: non-shielded cable, with w/o ferrite core, 1.5 meter	
EXTREME TEMPERATURE	0-40 °C	
EXTREME VOLTAGE	3.6V - 24V	



**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

NOTE:

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

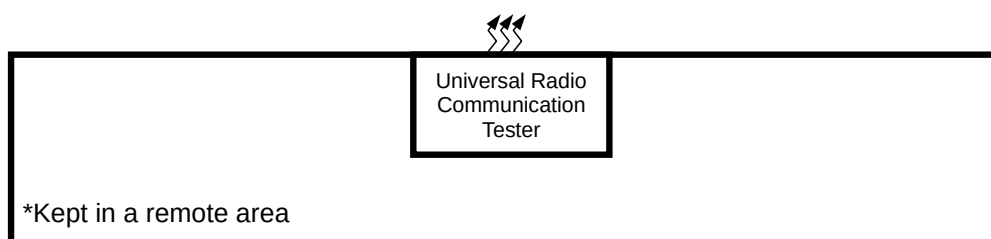
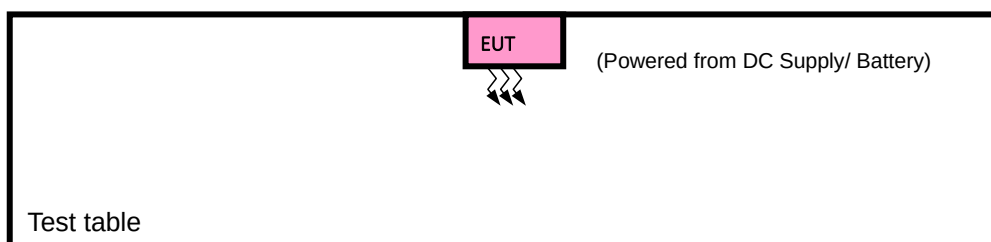
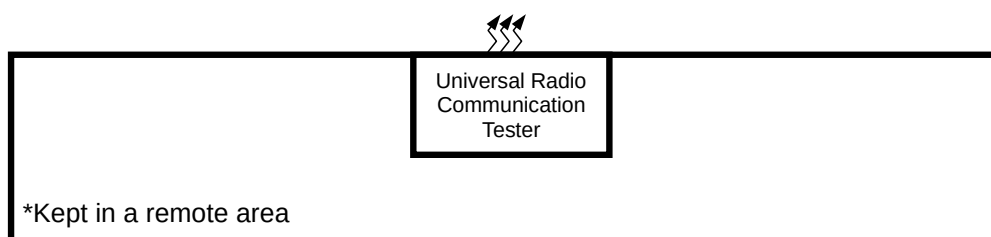
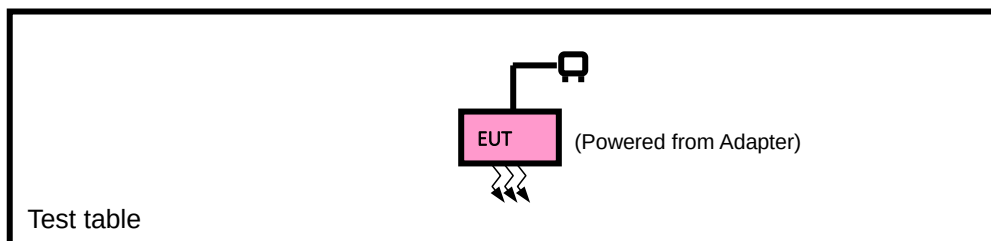
MODULATION MODE	TX FUNCTION
LTE	1TX/1RX

3. 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	MANUFACTURER	MODEL	SPECIFICATION
AC Adapter	Moso Power Supply Technology Co., Ltd.	MS-V3420R190-0 65L0-US	I/P: 100-240Vac, 1.5A, O/P: 19Vdc, 3.42A
Battery	EVE ENERGY CO., LTD.	DRI18650-3S6P	Capacity: 10.8Vdc, 15300mAh
Ethernet Cable	Wujiang Eksong Electronics Co., LTD.	HQ01-C727	Signal Line,1.5meter
Phone Cable	Wujiang Eksong Electronics Co., LTD.	HQ01-C697	Signal Line,1.5meter

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 1.8m

2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

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

LTE BAND 4 MODE

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, 64QAM, 256QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset

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

2. LTE Band 4 are covered by LTE Band 66, Because it is a subset of LTE Band 66 with the same output power and supported bandwidths, So the RSE test data please refer to LTE Band 66

LTE BAND 38 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0RB Offset
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		37850 to 38150	37850, 38000, 38150	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset

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

2. LTE Band 38 are covered by LTE Band 41, Because it is a subset of LTE Band 41 with the same output power and supported bandwidths, So the RSE test data please refer to LTE Band 41

LTE BAND 41 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	39675 to 41565	39675, 40620, 41565	5MHz	QPSK	1 RB / 0 RB Offset
		39700 to 41540	40620	10MHz	QPSK	1 RB / 0RB Offset
		39725 to 41515	40620	15MHz	QPSK	1 RB / 0 RB Offset
		39750 to 41490	40620	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 42 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	42115 to 43065	42115 (3452.5MHz), 42590 (3500.0MHz), 43065 (3547.5MHz)	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		42140 to 43040	42140 (3455.0MHz), 42590 (3500.0MHz), 43040 (3545.0MHz)	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		42165 to 43015	42165 (3457.50MHz), 42590 (3500.0MHz), 43015 (3542.5MHz)	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		42190 to 42990	42190 (3460.0MHz), 42590 (3500.0MHz), 42990 (3540.0MHz)	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	42115 to 43065	42590 (3500.0MHz),	5MHz	QPSK	1 RB / 0 RB Offset
		42140 to 43040	42140 (3455.0MHz), 42590 (3500.0MHz), 43040 (3545.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		42165 to 43015	42590 (3500.0MHz),	15MHz	QPSK	1 RB / 0 RB Offset
		42190 to 42990	42590 (3500.0MHz),	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 43 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	44615 to 45565	44615 (3702.5MHz), 45090 (3750MHz), 45565 (3797.5MHz)	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		44640 to 45540	44640 (3705MHz), 45090 (3750MHz), 45540 (3795MHz)	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		44665 to 45515	44665 (3707.5MHz), 45090 (3750MHz), 45515 (3792.5MHz)	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		44690 to 45490	44690 (3710MHz), 45090 (3750MHz), 45490 (3790MHz)	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	44615 to 45565	45090 (3750MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		44640 to 45540	45090 (3750MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		44665 to 45515	45090 (3750MHz)	15MHz	QPSK	1 RB / 0 RB Offset
		44690 to 45490	44690 (3710MHz), 45090 (3750MHz), 45490 (3790MHz)	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 66 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	131979 to 132665	131979,132322,132665	1.4MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		131987 to 132657	131987,132322,132657	3MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		131997 to 132647	131997,132322,132647	5MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		132022 to 132622	132022,132322,132622	10MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		132047 to 132597	132047,132322,132597	15MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
		132072 to 132572	132072,132322,132572	20MHz	QPSK, 16QAM, 64QAM, 256QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	131979 to 132665	132322	1.4MHz	QPSK	1 RB / 0 RB Offset
		131987 to 132657	132322	3MHz	QPSK	1 RB / 0 RB Offset
		131997 to 132647	132322	5MHz	QPSK	1 RB / 0 RB Offset
		132022 to 132622	132022,132322,132622	10MHz	QPSK	1 RB / 0 RB Offset
		132047 to 132597	132322	15MHz	QPSK	1 RB / 0 RB Offset
		132072 to 132572	132322	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.



Test Report No.: W7L-P23070006RF04

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP&EIRP	23deg. C, 70%RH	DC 19V By Adapter	Jace Hu
RADIATED EMISSION	23deg. C, 70%RH	DC 19V By Adapter	Jace Hu



Test Report No.: W7L-P23070006RF04

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

According to the specific rule Part 27.50 (k)(3) Mobile devices are limited to 1Watt (30 dBm) EIRP, Mobile devices operating inl these bands must employ a means for limiting power to the minimum necessary for successful communications.

B43:

Mobile and portable stations are limited to 1 Watt EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for 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:

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

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

EIRP

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	24.63	3.1	27.73	592.93	1
20175	1732.5	24.84	3.1	27.94	622.3	1
20393	1754.3	24.52	3.1	27.62	578.1	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	23.52	3.1	26.62	459.2	1
20175	1732.5	24.26	3.1	27.36	544.5	1
20393	1754.3	24.18	3.1	27.28	534.56	1

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	22.36	3.1	25.46	351.56	1
20175	1732.5	23.4	3.1	26.5	446.68	1
20393	1754.3	23.06	3.1	26.16	413.05	1

CHANNEL BANDWIDTH: 1.4MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19957	1710.7	20.18	3.1	23.28	212.81	1
20175	1732.5	20.48	3.1	23.58	228.03	1
20393	1754.3	20.26	3.1	23.36	216.77	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	24.81	3.1	27.91	618.02	1
20175	1732.5	24.86	3.1	27.96	625.17	1
20385	1753.5	24.6	3.1	27.7	588.84	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	23.4	3.1	26.5	446.68	1
20175	1732.5	24.36	3.1	27.46	557.19	1
20385	1753.5	24.21	3.1	27.31	538.27	1

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	22.25	3.1	25.35	342.77	1
20175	1732.5	23.31	3.1	26.41	437.52	1
20385	1753.5	23.18	3.1	26.28	424.62	1

CHANNEL BANDWIDTH: 3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19965	1711.5	19.95	3.1	23.05	201.84	1
20175	1732.5	20.49	3.1	23.59	228.56	1
20385	1753.5	20.41	3.1	23.51	224.39	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	24.98	3.1	28.08	642.69	1
20175	1732.5	24.96	3.1	28.06	639.73	1
20375	1752.5	24.71	3.1	27.81	603.95	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	23.58	3.1	26.68	465.59	1
20175	1732.5	24.35	3.1	27.45	555.9	1
20375	1752.5	24.26	3.1	27.36	544.5	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	22.41	3.1	25.51	355.63	1
20175	1732.5	23.54	3.1	26.64	461.32	1
20375	1752.5	23.28	3.1	26.38	434.51	1

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
19975	1712.5	20.21	3.1	23.31	214.29	1
20175	1732.5	20.6	3.1	23.7	234.42	1
20375	1752.5	20.31	3.1	23.41	219.28	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	24.54	3.1	27.64	580.76	1
20175	1732.5	24.77	3.1	27.87	612.35	1
20350	1750	24.86	3.1	27.96	625.17	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	23.66	3.1	26.76	474.24	1
20175	1732.5	24.41	3.1	27.51	563.64	1
20350	1750	24.17	3.1	27.27	533.33	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	22.46	3.1	25.56	359.75	1
20175	1732.5	23.39	3.1	26.49	445.66	1
20350	1750	23.39	3.1	26.49	445.66	1

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	20.26	3.1	23.36	216.77	1
20175	1732.5	20.49	3.1	23.59	228.56	1
20350	1750	20.44	3.1	23.54	225.94	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	24.9	3.1	28	630.96	1
20175	1732.5	24.93	3.1	28.03	635.33	1
20325	1747.5	24.9	3.1	28	630.96	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	23.6	3.1	26.7	467.74	1
20175	1732.5	24.15	3.1	27.25	530.88	1
20325	1747.5	24.09	3.1	27.19	523.6	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	22.33	3.1	25.43	349.14	1
20175	1732.5	23.19	3.1	26.29	425.6	1
20325	1747.5	23.53	3.1	26.63	460.26	1

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	20.12	3.1	23.22	209.89	1
20175	1732.5	20.69	3.1	23.79	239.33	1
20325	1747.5	20.35	3.1	23.45	221.31	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	24.92	3.1	28.02	633.87	1
20175	1732.5	24.8	3.1	27.9	616.6	1
20300	1745	24.69	3.1	27.79	601.17	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	23.49	3.1	26.59	456.04	1
20175	1732.5	24	3.1	27.1	512.86	1
20300	1745	24.36	3.1	27.46	557.19	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	22.38	3.1	25.48	353.18	1
20175	1732.5	23.1	3.1	26.2	416.87	1
20300	1745	23.45	3.1	26.55	451.86	1

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	20.26	3.1	23.36	216.77	1
20175	1732.5	20.36	3.1	23.46	221.82	1
20300	1745	20.45	3.1	23.55	226.46	1

LTE BAND 38

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	25.86	-1.95	23.91	246.04	2
38000	2595.0	25.85	-1.95	23.9	245.47	2
38225	2617.5	25.98	-1.95	24.03	252.93	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	25.36	-1.95	23.41	219.28	2
38000	2595.0	25.43	-1.95	23.48	222.84	2
38225	2617.5	25.31	-1.95	23.36	216.77	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	24.6	-1.95	22.65	184.08	2
38000	2595	24.68	-1.95	22.73	187.5	2
38225	2617.5	24.67	-1.95	22.72	187.07	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	21.39	-1.95	19.44	87.9	2
38000	2595	21.39	-1.95	19.44	87.9	2
38225	2617.5	21.48	-1.95	19.53	89.74	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575.0	25.89	-1.95	23.94	247.74	2
38000	2595.0	25.52	-1.95	23.57	227.51	2
38200	2615.0	25.63	-1.95	23.68	233.35	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575.0	25.4	-1.95	23.45	221.31	2
38000	2595.0	25.4	-1.95	23.45	221.31	2
38200	2615.0	25.34	-1.95	23.39	218.27	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575	24.68	-1.95	22.73	187.5	2
38000	2595	24.59	-1.95	22.64	183.65	2
38200	2615	24.65	-1.95	22.7	186.21	2

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575	21.39	-1.95	19.44	87.9	2
38000	2595	21.43	-1.95	19.48	88.72	2
38200	2615	21.48	-1.95	19.53	89.74	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	25.63	-1.95	23.68	233.35	2
38000	2595.0	25.99	-1.95	24.04	253.51	2
38175	2612.5	25.89	-1.95	23.94	247.74	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	25.32	-1.95	23.37	217.27	2
38000	2595.0	25.52	-1.95	23.57	227.51	2
38175	2612.5	25.23	-1.95	23.28	212.81	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	24.58	-1.95	22.63	183.23	2
38000	2595	24.53	-1.95	22.58	181.13	2
38175	2612.5	24.45	-1.95	22.5	177.83	2

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	21.34	-1.95	19.39	86.9	2
38000	2595	21.35	-1.95	19.4	87.1	2
38175	2612.5	21.32	-1.95	19.37	86.5	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-L_C} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	24.66	-1.95	22.71	186.64	2
38000	2595.0	25.78	-1.95	23.83	241.55	2
38150	2610.0	25.85	-1.95	23.9	245.47	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-L_C} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	25.38	-1.95	23.43	220.29	2
38000	2595.0	25.34	-1.95	23.39	218.27	2
38150	2610.0	25.18	-1.95	23.23	210.38	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-L_C} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580	24.62	-1.95	22.67	184.93	2
38000	2595	24.51	-1.95	22.56	180.3	2
38150	2610	24.54	-1.95	22.59	181.55	2

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-L_C} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580	21.42	-1.95	19.47	88.51	2
38000	2595	21.36	-1.95	19.41	87.3	2
38150	2610	21.33	-1.95	19.38	86.7	2



**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

LTE BAND 41

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	26.58	-1.95	24.63	290.4	2
40620	2593.0	26.69	-1.95	24.74	297.85	2
41565	2687.5	26.85	-1.95	24.9	309.03	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	26.42	-1.95	24.47	279.9	2
40620	2593.0	26.4	-1.95	24.45	278.61	2
41565	2687.5	26.5	-1.95	24.55	285.1	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	25.67	-1.95	23.72	235.5	2
40620	2593.0	25.77	-1.95	23.82	240.99	2
41565	2687.5	25.66	-1.95	23.71	234.96	2

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39675	2498.5	22.52	-1.95	20.57	114.02	2
40620	2593.0	22.45	-1.95	20.5	112.2	2
41565	2687.5	22.54	-1.95	20.59	114.55	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501.0	26.89	-1.95	24.94	311.89	2
40620	2593.0	26.99	-1.95	25.04	319.15	2
41540	2685.0	26.85	-1.95	24.9	309.03	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501.0	26.48	-1.95	24.53	283.79	2
40620	2593.0	26.44	-1.95	24.49	281.19	2
41540	2685.0	26.52	-1.95	24.57	286.42	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501.0	25.63	-1.95	23.68	233.35	2
40620	2593.0	25.75	-1.95	23.8	239.88	2
41540	2685.0	25.72	-1.95	23.77	238.23	2

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39700	2501.0	22.47	-1.95	20.52	112.72	2
40620	2593.0	22.5	-1.95	20.55	113.5	2
41540	2685.0	22.53	-1.95	20.58	114.29	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	26.88	-1.95	24.93	311.17	2
40620	2593.0	26.63	-1.95	24.68	293.76	2
41515	2682.5	26.88	-1.95	24.93	311.17	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	26.26	-1.95	24.31	269.77	2
40620	2593.0	26.32	-1.95	24.37	273.53	2
41515	2682.5	26.38	-1.95	24.43	277.33	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	25.36	-1.95	23.41	219.28	2
40620	2593.0	25.58	-1.95	23.63	230.67	2
41515	2682.5	25.66	-1.95	23.71	234.96	2

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39725	2503.5	22.31	-1.95	20.36	108.64	2
40620	2593.0	22.32	-1.95	20.37	108.89	2
41515	2682.5	22.43	-1.95	20.48	111.69	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	26.52	-1.95	24.57	286.42	2
40620	2593.0	26.69	-1.95	24.74	297.85	2
41490	2680.0	26.65	-1.95	24.7	295.12	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	26.31	-1.95	24.36	272.9	2
40620	2593.0	26.35	-1.95	24.4	275.42	2
41490	2680.0	26.36	-1.95	24.41	276.06	2

CHANNEL BANDWIDTH: 20 MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	25.5	-1.95	23.55	226.46	2
40620	2593.0	25.52	-1.95	23.57	227.51	2
41490	2680.0	25.55	-1.95	23.6	229.09	2

CHANNEL BANDWIDTH: 20 MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
39750	2506.0	22.33	-1.95	20.38	109.14	2
40620	2593.0	22.38	-1.95	20.43	110.41	2
41490	2680.0	22.35	-1.95	20.4	109.65	2

LTE Band 42

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42115	3452.5	25.48	-2.38	23.1	204.17	1
42590	3500	25.53	-2.38	23.15	206.54	1
43065	3547.5	25.63	-2.38	23.25	211.35	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42115	3452.5	24.6	-2.38	22.22	166.72	1
42590	3500	24.66	-2.38	22.28	169.04	1
43065	3547.5	24.75	-2.38	22.37	172.58	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42115	3452.5	23.86	-2.38	21.48	140.6	1
42590	3500	23.96	-2.38	21.58	143.88	1
43065	3547.5	23.85	-2.38	21.47	140.28	1

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42115	3452.5	20.81	-2.38	18.43	69.66	1
42590	3500	20.74	-2.38	18.36	68.55	1
43065	3547.5	20.69	-2.38	18.31	67.76	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42140	3455	24.06	-2.38	21.68	147.23	1
42590	3500	25.45	-2.38	23.07	202.77	1
43040	3545	25.66	-2.38	23.28	212.81	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42140	3455	23.24	-2.38	20.86	121.9	1
42590	3500	23.1	-2.38	20.72	118.03	1
43040	3545	23.12	-2.38	20.74	118.58	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42140	3455	22.48	-2.38	20.1	102.33	1
42590	3500	22.44	-2.38	20.06	101.39	1
43040	3545	22.44	-2.38	20.06	101.39	1

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42140	3455	19.25	-2.38	16.87	48.64	1
42590	3500	19.26	-2.38	16.88	48.75	1
43040	3545	19.16	-2.38	16.78	47.64	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42165	3457.5	23.86	-2.38	21.48	140.6	1
42590	3500	25.34	-2.38	22.96	197.7	1
43015	3542.5	25.54	-2.38	23.16	207.01	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42165	3457.5	22.98	-2.38	20.6	114.82	1
42590	3500	22.88	-2.38	20.5	112.2	1
43015	3542.5	22.92	-2.38	20.54	113.24	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42165	3457.5	22.28	-2.38	19.9	97.72	1
42590	3500	22.18	-2.38	19.8	95.5	1
43015	3542.5	22.18	-2.38	19.8	95.5	1

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42165	3457.5	19.11	-2.38	16.73	47.1	1
42590	3500	18.98	-2.38	16.6	45.71	1
43015	3542.5	19.13	-2.38	16.75	47.32	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42190	3460	23.96	-2.38	21.58	143.88	1
42590	3500	25.41	-2.38	23.03	200.91	1
42990	3540	25.46	-2.38	23.08	203.24	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42190	3460	23.15	-2.38	20.77	119.4	1
42590	3500	22.94	-2.38	20.56	113.76	1
42990	3540	22.92	-2.38	20.54	113.24	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42190	3460	22.35	-2.38	19.97	99.31	1
42590	3500	22.22	-2.38	19.84	96.38	1
42990	3540	22.31	-2.38	19.93	98.4	1

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
42190	3460	19.19	-2.38	16.81	47.97	1
42590	3500	19.05	-2.38	16.67	46.45	1
42990	3540	19.09	-2.38	16.71	46.88	1

LTE Band 43

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44615	3702.5	25.46	-2.38	23.08	203.24	1
45090	3750	25.63	-2.38	23.25	211.35	1
45565	3797.5	25.58	-2.38	23.2	208.93	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44615	3702.5	24.6	-2.38	22.22	166.72	1
45090	3750	24.64	-2.38	22.26	168.27	1
45565	3797.5	24.68	-2.38	22.3	169.82	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44615	3702.5	23.92	-2.38	21.54	142.56	1
45090	3750	23.89	-2.38	21.51	141.58	1
45565	3797.5	23.84	-2.38	21.46	139.96	1

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44615	3702.5	20.65	-2.38	18.27	67.14	1
45090	3750	20.67	-2.38	18.29	67.45	1
45565	3797.5	20.75	-2.38	18.37	68.71	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44640	3705	25.34	-2.38	22.96	197.7	1
45090	3750	25.5	-2.38	23.12	205.12	1
45540	3795	25.85	-2.38	23.47	222.33	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44640	3705	24.67	-2.38	22.29	169.43	1
45090	3750	24.59	-2.38	22.21	166.34	1
45540	3795	24.69	-2.38	22.31	170.22	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44640	3705	24.49	-2.38	22.11	162.55	1
45090	3750	23.9	-2.38	21.52	141.91	1
45540	3795	23.85	-2.38	21.47	140.28	1

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44640	3705	20.49	-2.38	18.11	64.71	1
45090	3750	20.49	-2.38	18.11	64.71	1
45540	3795	20.65	-2.38	18.27	67.14	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44665	3707.5	25.26	-2.38	22.88	194.09	1
45090	3750	25.79	-2.38	23.41	219.28	1
45515	3792.5	25.69	-2.38	23.31	214.29	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44665	3707.5	24.38	-2.38	22	158.49	1
45090	3750	24.52	-2.38	22.14	163.68	1
45515	3792.5	24.59	-2.38	22.21	166.34	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44665	3707.5	23.64	-2.38	21.26	133.66	1
45090	3750	23.75	-2.38	21.37	137.09	1
45515	3792.5	23.81	-2.38	21.43	139	1

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-LC} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44665	3707.5	20.42	-2.38	18.04	63.68	1
45090	3750	20.63	-2.38	18.25	66.83	1
45515	3792.5	20.73	-2.38	18.35	68.39	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44690	3710	25.34	-2.38	22.96	197.7	1
45090	3750	25.85	-2.38	23.47	222.33	1
45490	3790	25.69	-2.38	23.31	214.29	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44690	3710	24.52	-2.38	22.14	163.68	1
45090	3750	24.57	-2.38	22.19	165.58	1
45490	3790	24.62	-2.38	22.24	167.49	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44690	3710	23.67	-2.38	21.29	134.59	1
45090	3750	23.77	-2.38	21.39	137.72	1
45490	3790	23.78	-2.38	21.4	138.04	1

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
44690	3710	20.52	-2.38	18.14	65.16	1
45090	3750	20.54	-2.38	18.16	65.46	1
45490	3790	20.56	-2.38	18.18	65.77	1

LTE BAND 66

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	24.53	3.1	27.63	579.43	1
132322	1745	24.73	3.1	27.83	606.74	1
132665	1779.3	24.65	3.1	27.75	595.66	1

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	23.76	3.1	26.86	485.29	1
132322	1745	23.71	3.1	26.81	479.73	1
132665	1779.3	23.84	3.1	26.94	494.31	1

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	22.83	3.1	25.93	391.74	1
132322	1745	23.01	3.1	26.11	408.32	1
132665	1779.3	22.9	3.1	26	398.11	1

CHANNEL BANDWIDTH: 1.4MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131979	1710.7	19.64	3.1	22.74	187.93	1
132322	1745	19.88	3.1	22.98	198.61	1
132665	1779.3	19.89	3.1	22.99	199.07	1

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	24.62	3.1	27.72	591.56	1
132322	1745	24.68	3.1	27.78	599.79	1
132657	1778.5	24.65	3.1	27.75	595.66	1

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	23.77	3.1	26.87	486.41	1
132322	1745	23.88	3.1	26.98	498.88	1
132657	1778.5	23.82	3.1	26.92	492.04	1

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	22.93	3.1	26.03	400.87	1
132322	1745	22.98	3.1	26.08	405.51	1
132657	1778.5	22.83	3.1	25.93	391.74	1

CHANNEL BANDWIDTH: 3MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131987	1711.5	19.88	3.1	22.98	198.61	1
132322	1745	20.07	3.1	23.17	207.49	1
132657	1778.5	19.71	3.1	22.81	190.99	1

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	24.71	3.1	27.81	603.95	1
132322	1745	24.69	3.1	27.79	601.17	1
132647	1777.5	24.73	3.1	27.83	606.74	1

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	23.78	3.1	26.88	487.53	1
132322	1745	23.95	3.1	27.05	506.99	1
132647	1777.5	23.77	3.1	26.87	486.41	1

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	22.98	3.1	26.08	405.51	1
132322	1745	22.93	3.1	26.03	400.87	1
132647	1777.5	22.93	3.1	26.03	400.87	1

CHANNEL BANDWIDTH: 5MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
131997	1712.5	19.77	3.1	22.87	193.64	1
132322	1745	19.85	3.1	22.95	197.24	1
132647	1777.5	19.88	3.1	22.98	198.61	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	24.72	3.1	27.82	605.34	1
132322	1745	24.66	3.1	27.76	597.04	1
132622	1775	24.74	3.1	27.84	608.14	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	23.78	3.1	26.88	487.53	1
132322	1745	23.96	3.1	27.06	508.16	1
132622	1775	23.92	3.1	27.02	503.5	1

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	23.89	3.1	26.99	500.03	1
132322	1745	22.89	3.1	25.99	397.19	1
132622	1775	22.83	3.1	25.93	391.74	1

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132022	1715	19.7	3.1	22.8	190.55	1
132322	1745	20	3.1	23.1	204.17	1
132622	1775	19.77	3.1	22.87	193.64	1

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	24.68	3.1	27.78	599.79	1
132322	1745	24.67	3.1	27.77	598.41	1
132597	1772.5	24.71	3.1	27.81	603.95	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	23.85	3.1	26.95	495.45	1
132322	1745	23.95	3.1	27.05	506.99	1
132597	1772.5	23.84	3.1	26.94	494.31	1

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	22.86	3.1	25.96	394.46	1
132322	1745	22.86	3.1	25.96	394.46	1
132597	1772.5	22.82	3.1	25.92	390.84	1

CHANNEL BANDWIDTH: 15MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132047	1717.5	19.84	3.1	22.94	196.79	1
132322	1745	19.81	3.1	22.91	195.43	1
132597	1772.5	19.75	3.1	22.85	192.75	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	24.6	3.1	27.7	588.84	1
132322	1745	24.99	3.1	28.09	644.17	1
132572	1770	24.64	3.1	27.74	594.29	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	24.06	3.1	27.16	520	1
132322	1745	23.8	3.1	26.9	489.78	1
132572	1770	23.79	3.1	26.89	488.65	1

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	22.94	3.1	26.04	401.79	1
132322	1745	22.79	3.1	25.89	388.15	1
132572	1770	22.82	3.1	25.92	390.84	1

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
132072	1720	19.68	3.1	22.78	189.67	1
132322	1745	20.03	3.1	23.13	205.59	1
132572	1770	19.66	3.1	22.76	188.8	1

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm .

For: LTE Band7/ Band41

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

3.2.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G.
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
 $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

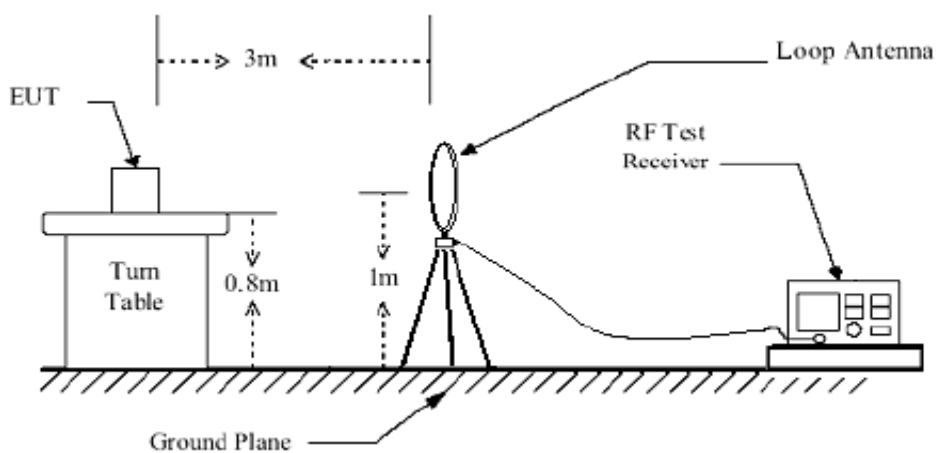
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.2.3 DEVIATION FROM TEST STANDARD

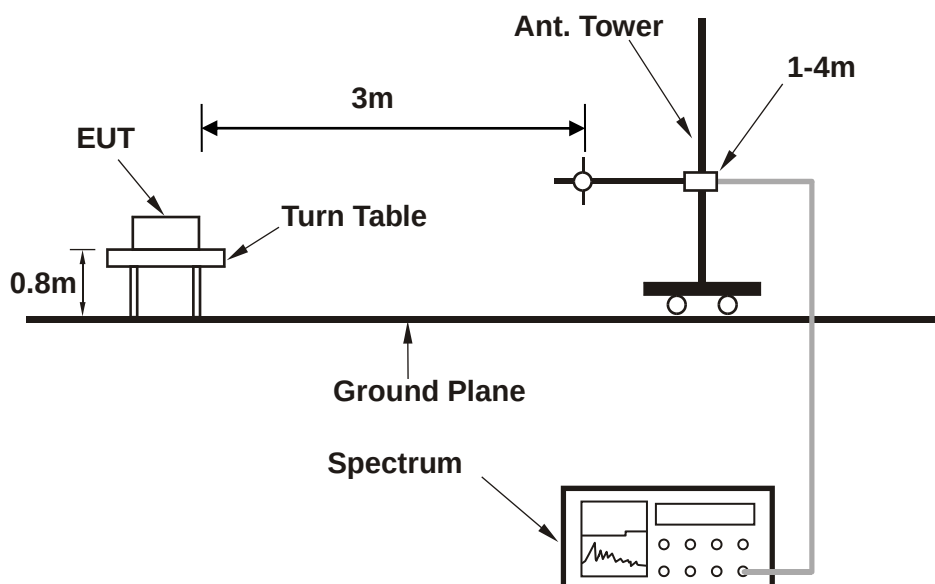
No deviation

3.2.4 TEST SETUP

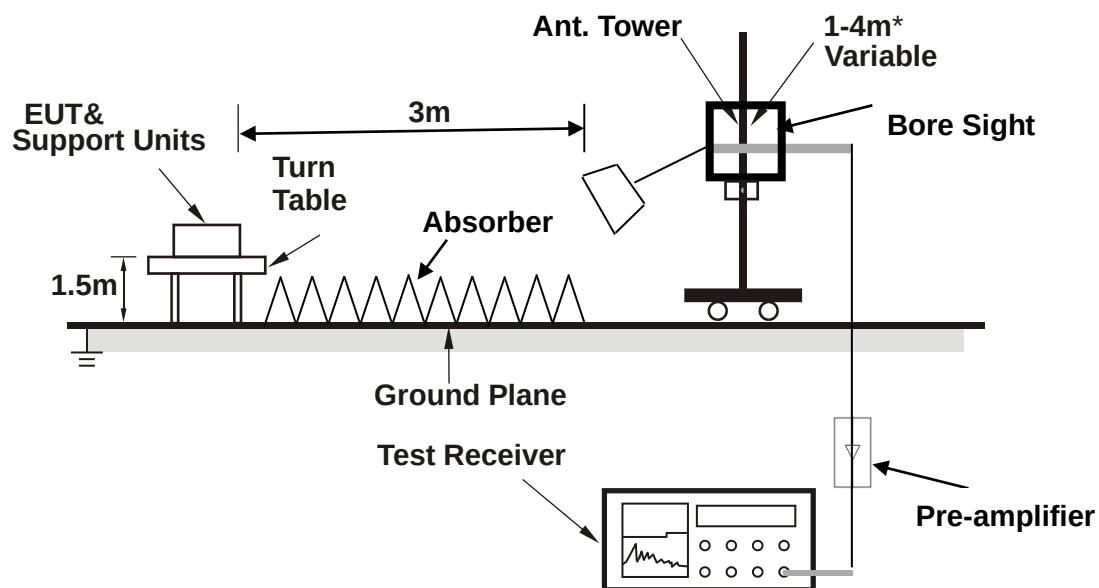
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



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

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

3.2.5 TEST RESULTS

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

BELOW 1GHz WORST-CASE DATA

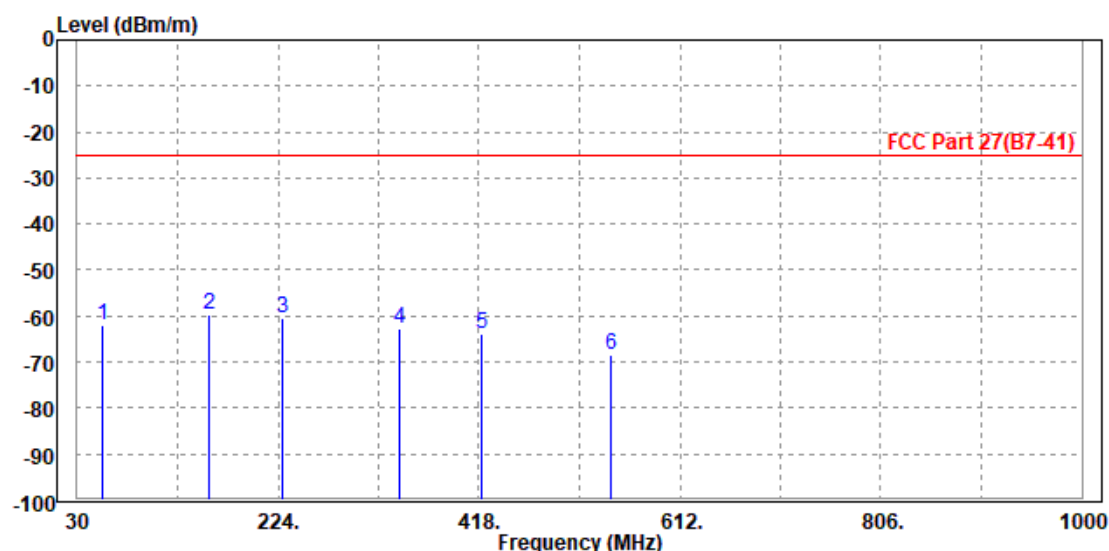
30 MHz – 1GHz data:

LTE Band 41

CHANNEL BANDWIDTH: 10MHz / QPSK

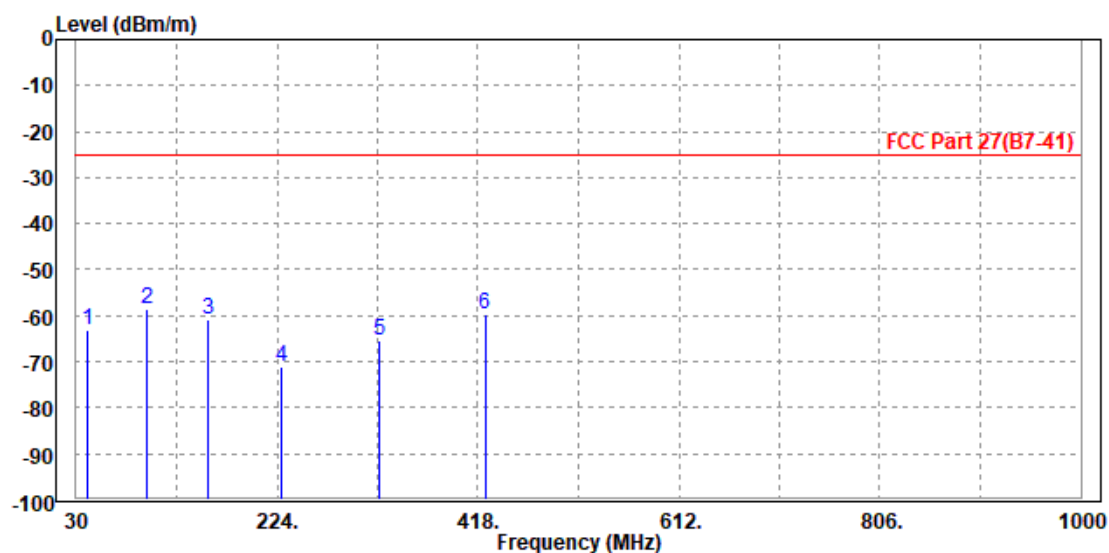
MODE	TX channel 40620	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	55.220	-61.79	-43.89	-25.00	-36.79	-17.90	Peak	Horizontal
2 PP	158.040	-59.64	-43.16	-25.00	-34.64	-16.48	Peak	Horizontal
3	228.850	-60.64	-46.66	-25.00	-35.64	-13.98	Peak	Horizontal
4	341.370	-62.62	-51.17	-25.00	-37.62	-11.45	Peak	Horizontal
5	420.910	-64.04	-54.39	-25.00	-39.04	-9.65	Peak	Horizontal
6	546.040	-68.34	-62.03	-25.00	-43.34	-6.31	Peak	Horizontal



MODE	TX channel 40620	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	40.670	-63.05	-38.13	-25.00	-38.05	-24.92	Peak	Vertical
2 PP	98.870	-58.57	-51.15	-25.00	-33.57	-7.42	Peak	Vertical
3	158.040	-60.89	-43.81	-25.00	-35.89	-17.08	Peak	Vertical
4	228.850	-70.92	-55.45	-25.00	-45.92	-15.47	Peak	Vertical
5	321.970	-65.53	-55.11	-25.00	-40.53	-10.42	Peak	Vertical
6	424.790	-59.88	-51.11	-25.00	-34.88	-8.77	Peak	Vertical





**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

ABOVE 1GHz

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

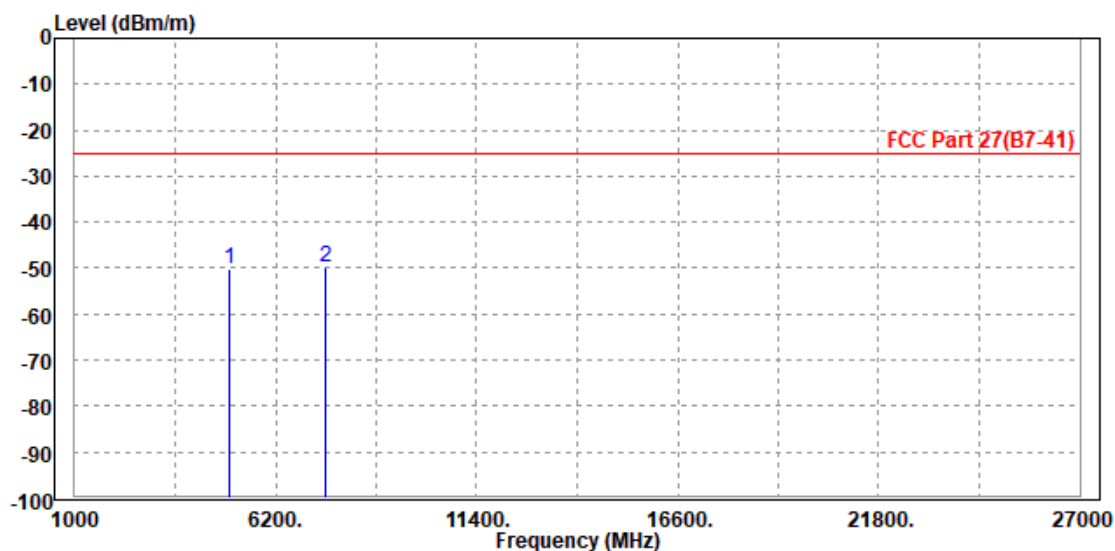
LTE BAND 41

CHANNEL BANDWIDTH: 5MHz / QPSK

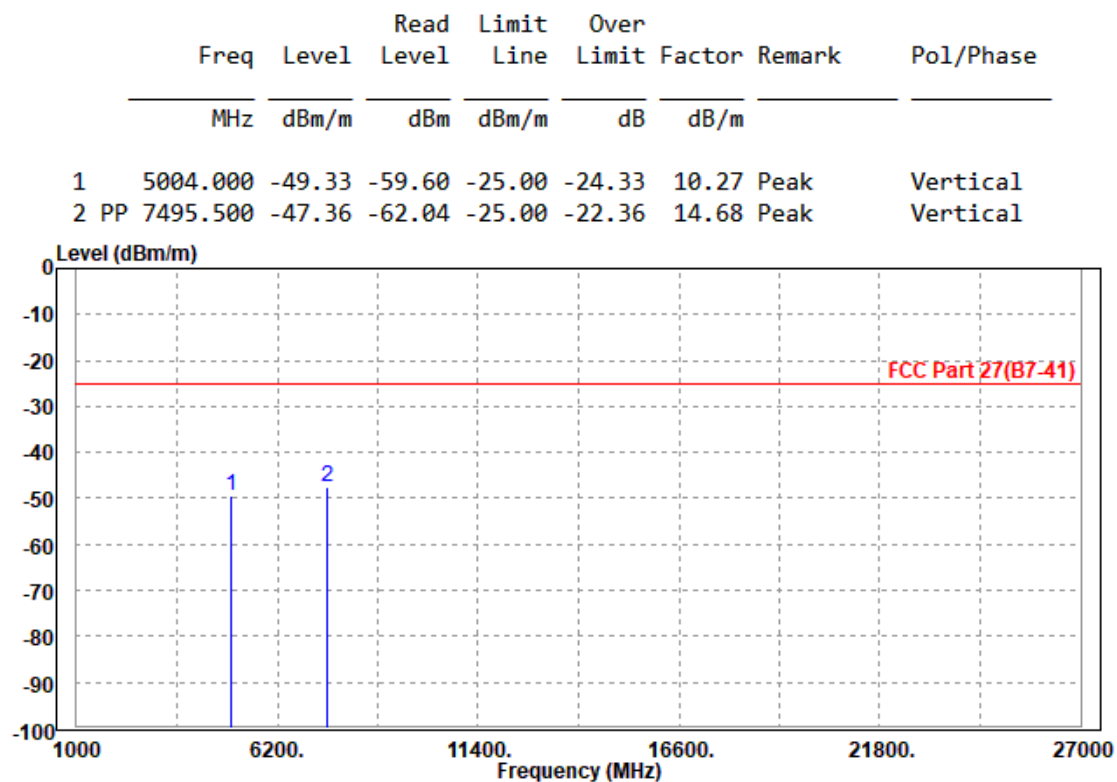
CH 39675

MODE	TX channel 39675	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	4997.000	-50.29	-59.98	-25.00	-25.29	9.69	Peak	Horizontal
2 PP	7500.000	-49.90	-61.32	-25.00	-24.90	11.42	Peak	Horizontal



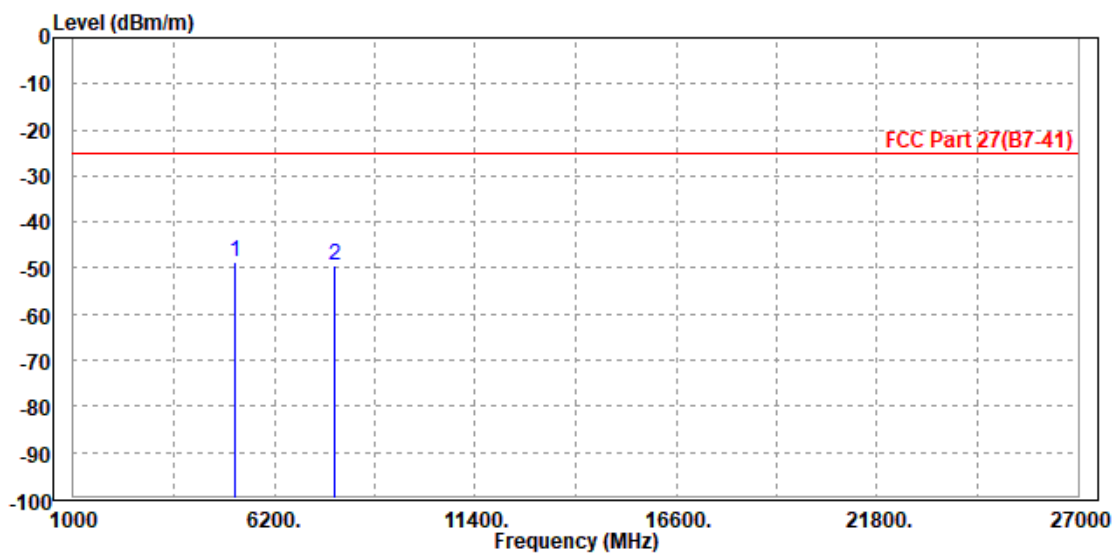
MODE	TX channel 39675	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			



CH 40620

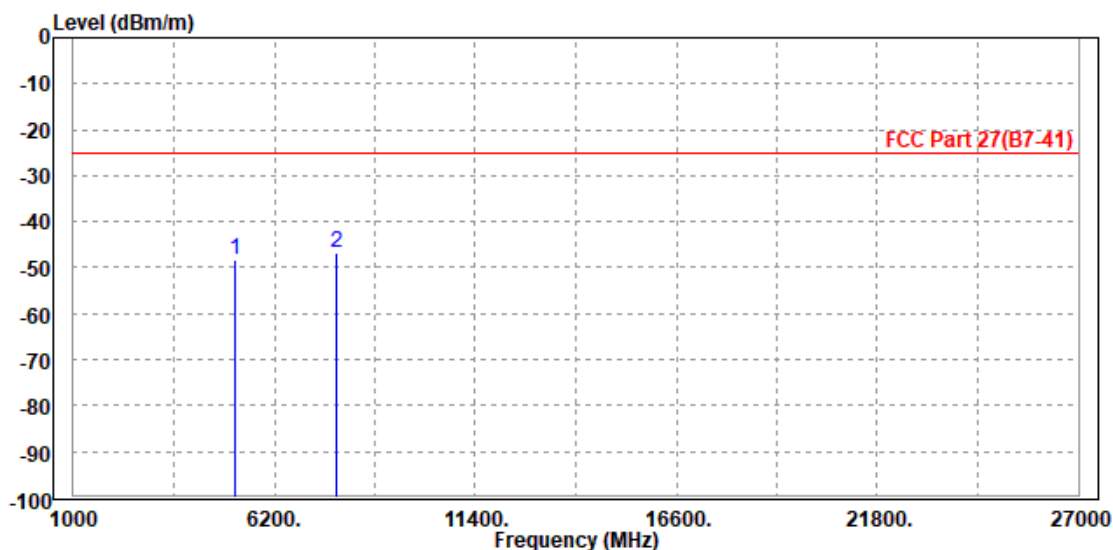
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	5186.000	-48.84	-58.82	-25.00	-23.84	9.98	Peak	Horizontal
2	7779.000	-49.60	-63.04	-25.00	-24.60	13.44	Peak	Horizontal



MODE	TX channel 40620	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			

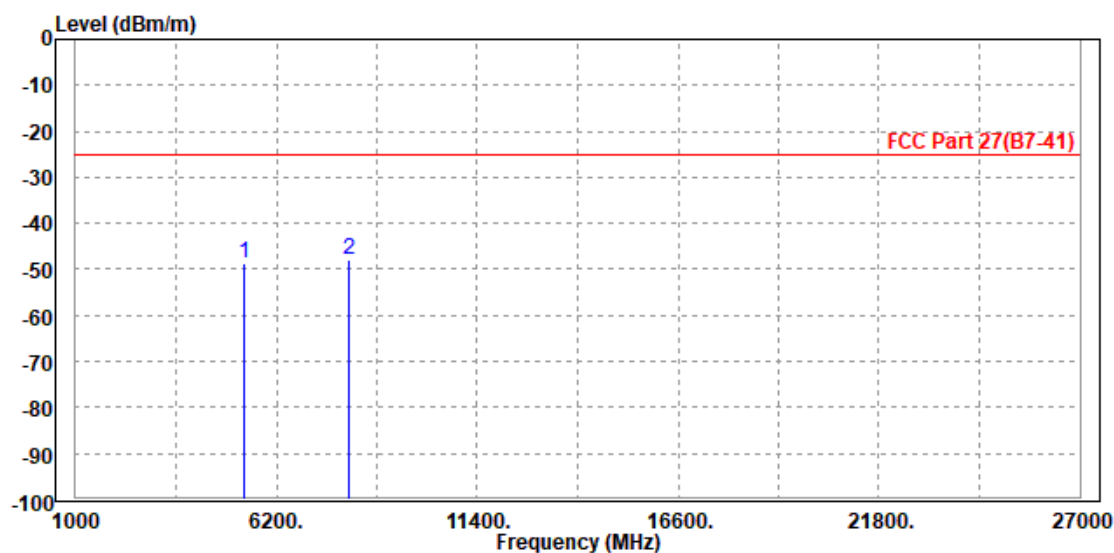
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5186.000	-48.28	-58.72	-25.00	-23.28	10.44	Peak	Vertical
2 PP	7786.000	-46.61	-61.73	-25.00	-21.61	15.12	Peak	Vertical



CH 41565

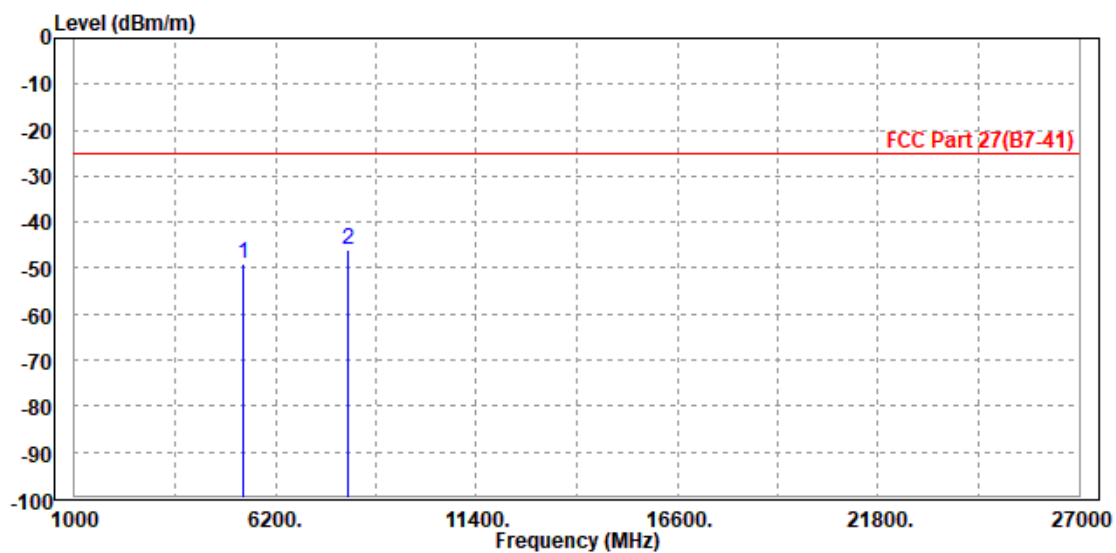
MODE	TX channel 41565	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5368.000	-48.71	-58.98	-25.00	-23.71	10.27	Peak	Horizontal
2 PP	8062.500	-47.75	-62.78	-25.00	-22.75	15.03	Peak	Horizontal



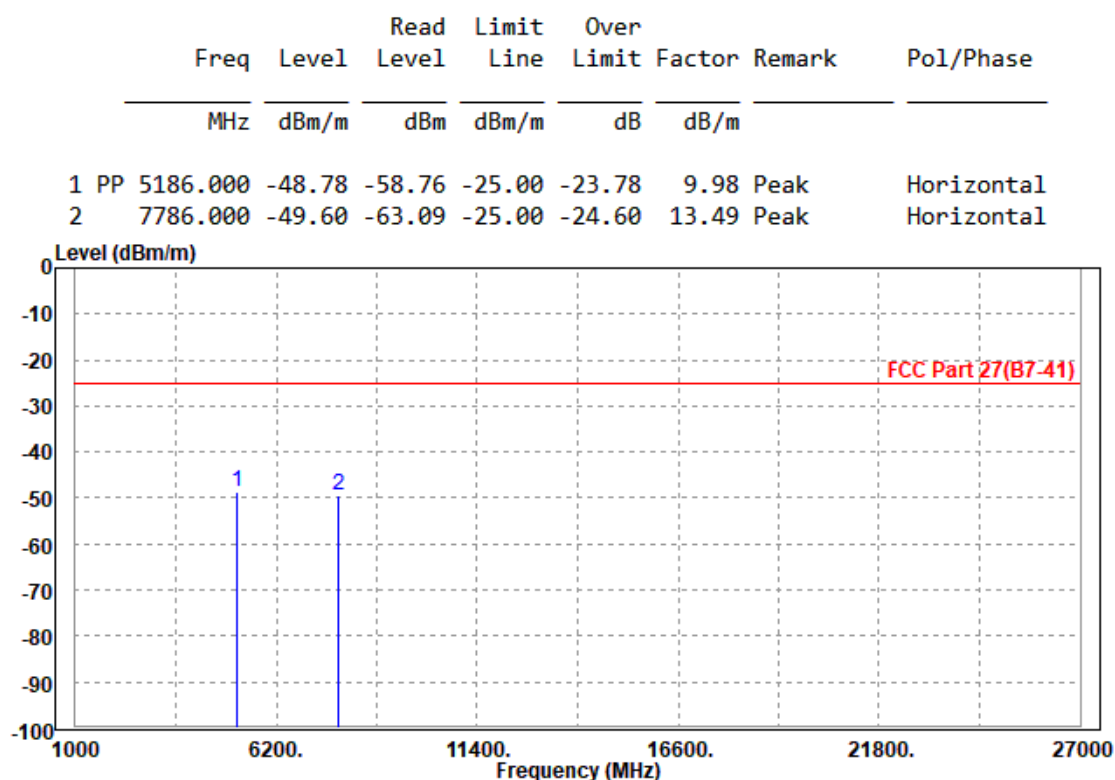
MODE	TX channel 41565	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5375.000	-48.96	-59.57	-25.00	-23.96	10.61	Peak	Vertical
2 PP	8072.000	-45.95	-61.36	-25.00	-20.95	15.41	Peak	Vertical



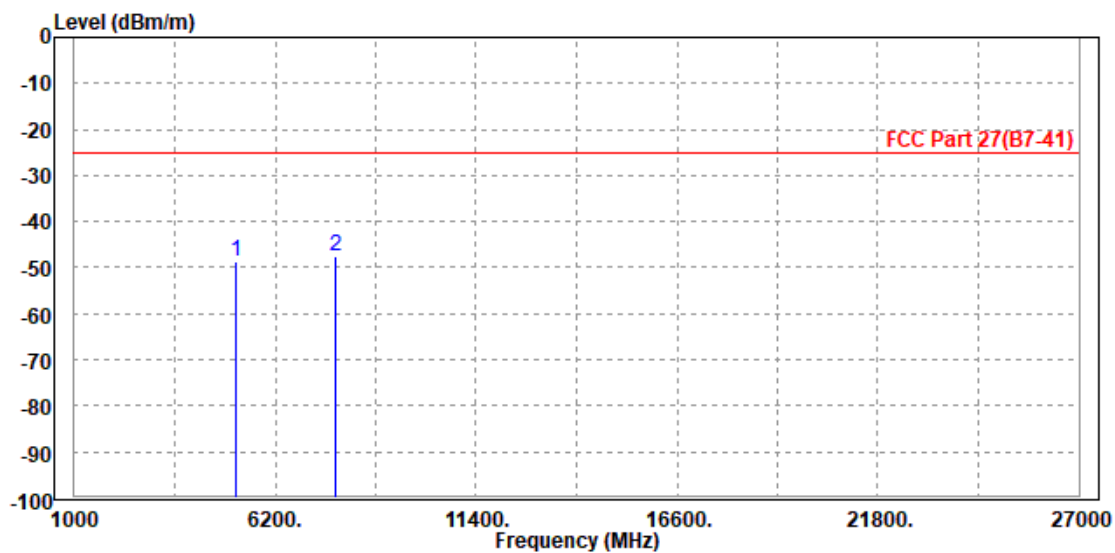
CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 40620	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			



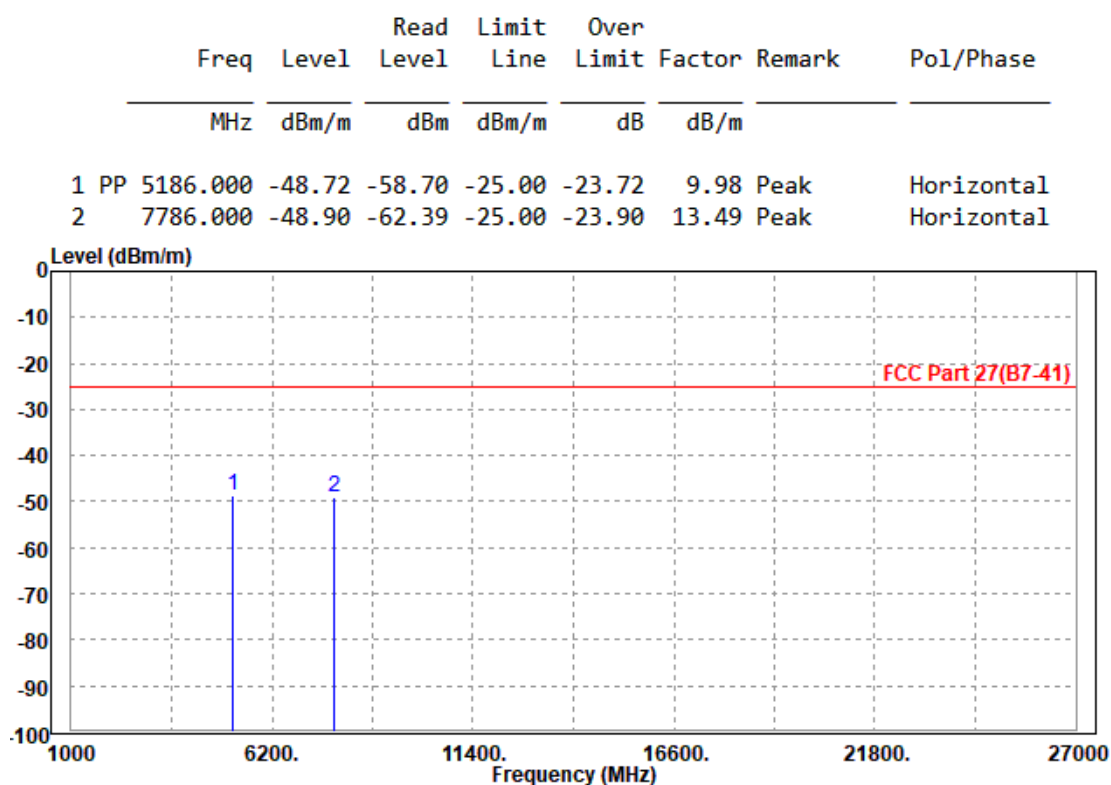
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5186.000	-48.57	-59.01	-25.00	-23.57	10.44	Peak	Vertical
2 PP	7779.000	-47.65	-62.76	-25.00	-22.65	15.11	Peak	Vertical



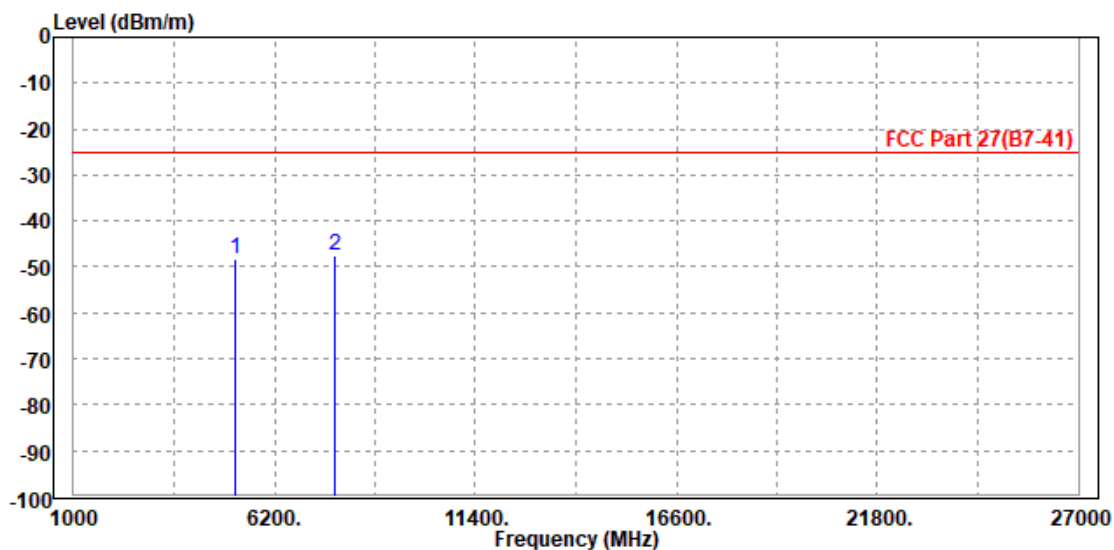
CHANNEL BANDWIDTH: 15MHz / QPSK

MODE	TX channel 40620	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			



MODE	TX channel 40620	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			

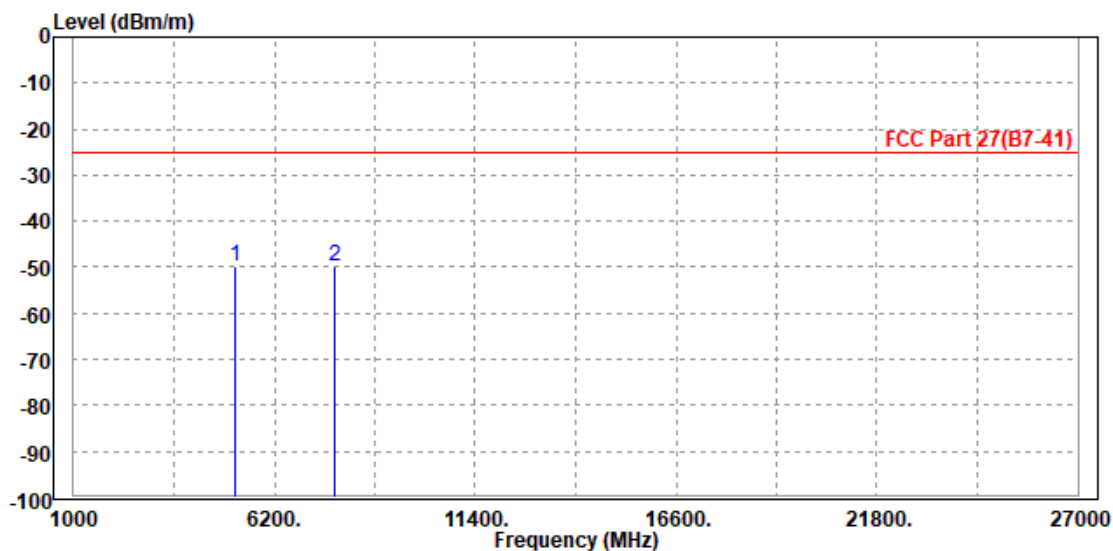
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	5186.000	-48.39	-58.83	-25.00	-23.39	10.44	Peak	Vertical
2 PP	7779.000	-47.44	-62.55	-25.00	-22.44	15.11	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

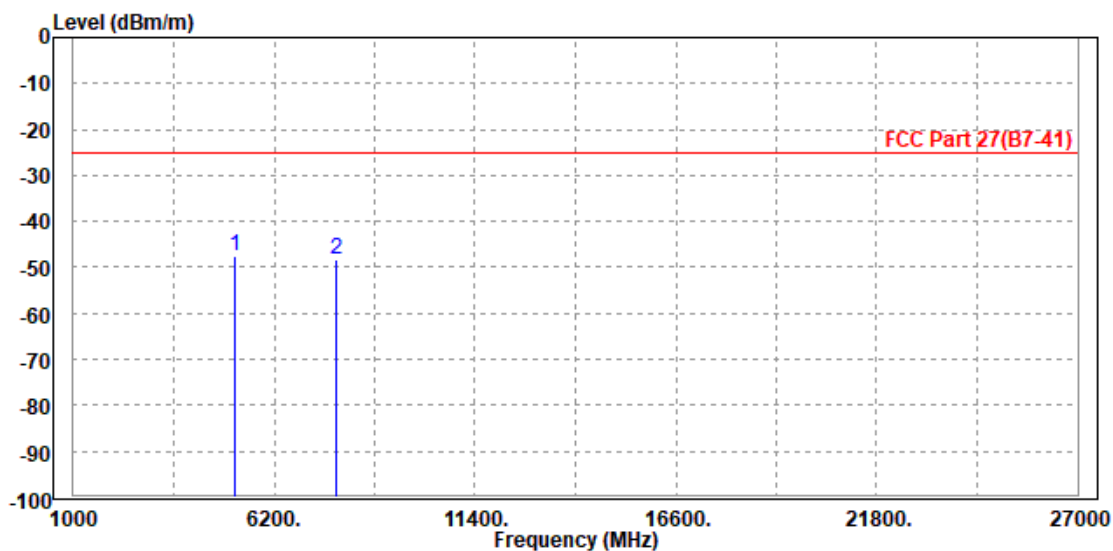
MODE	TX channel 40620	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 5186.000	-49.77	-59.75	-25.00	-24.77	9.98	Peak	Horizontal
2	7779.000	-49.90	-63.34	-25.00	-24.90	13.44	Peak	Horizontal



MODE	TX channel 40620	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	5186.000	-47.65	-58.09	-25.00	-22.65	10.44	Peak	Vertical
2	7786.000	-48.27	-63.39	-25.00	-23.27	15.12	Peak	Vertical





**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

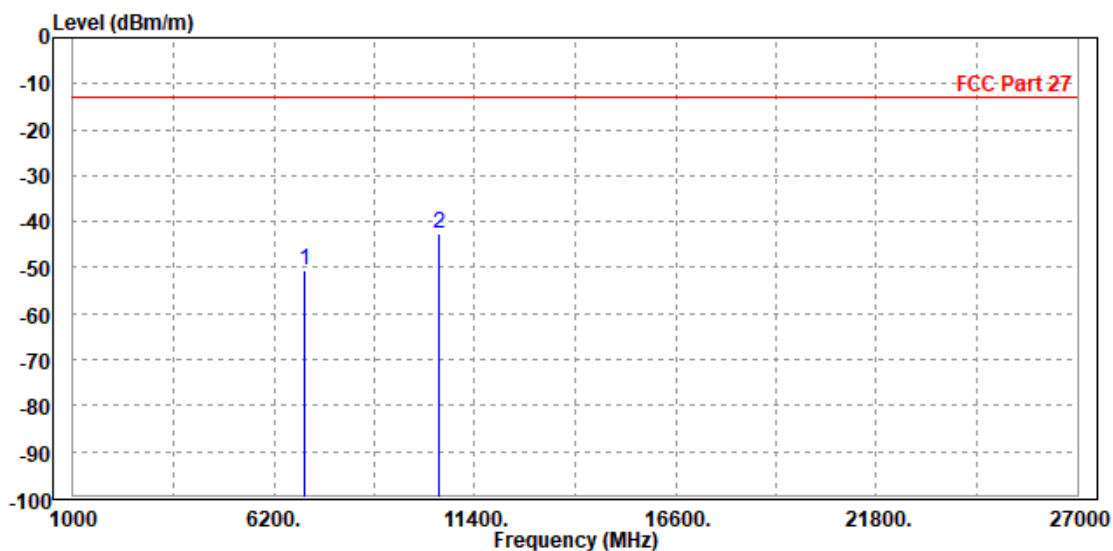
LTE BAND 42

Note: For frequency above 27GHz, the emission was tested 20db below the limit, so the data not recorded in the sheet.

CHANNEL BANDWIDTH: 5MHz / QPSK

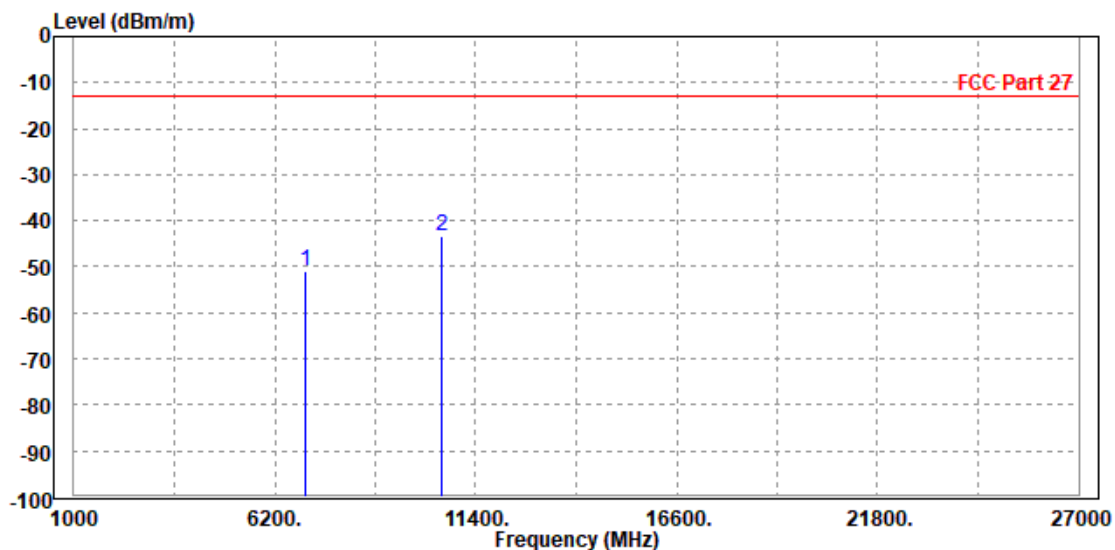
MODE	TX channel 42590	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7000.000	-50.52	-62.75	-13.00	-37.52	12.23	Peak	Horizontal
2	PP10490.000	-42.68	-61.28	-13.00	-29.68	18.60	Peak	Horizontal



MODE	TX channel 42590	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	7006.000	-50.85	-63.60	-13.00	-37.85	12.75	Peak	Vertical
2	PP10500.000	-43.52	-61.43	-13.00	-30.52	17.91	Peak	Vertical

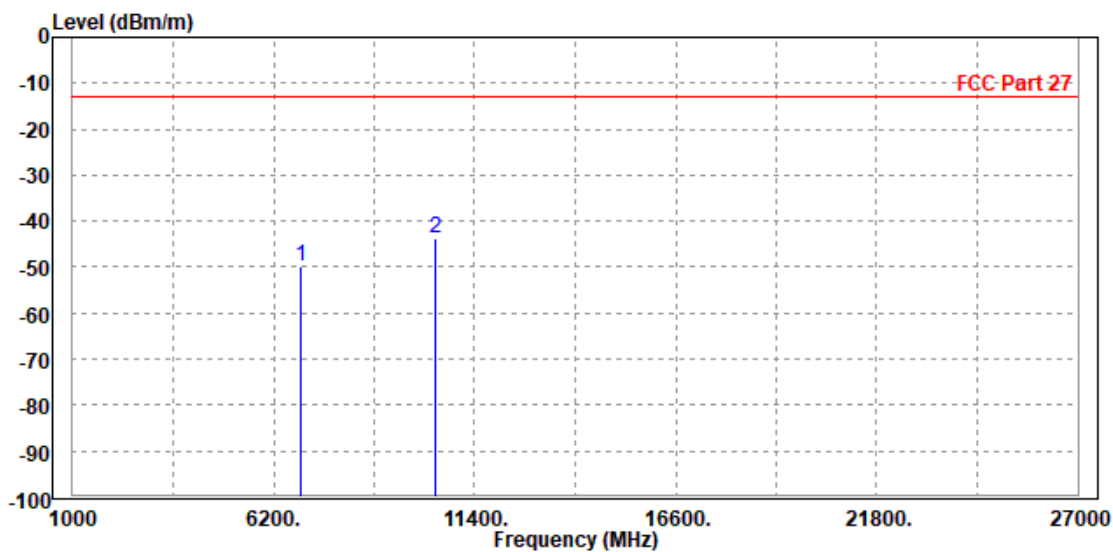


CHANNEL BANDWIDTH: 10MHz / QPSK

CH 42140

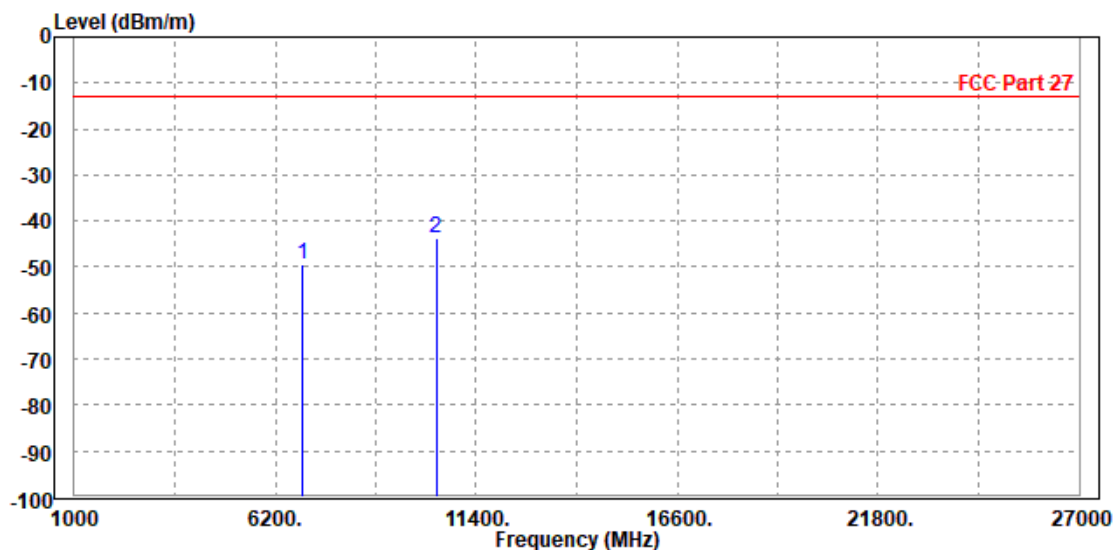
MODE	TX channel 42140	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	6902.000	-49.98	-62.09	-13.00	-36.98	12.11	Peak	Horizontal
2	PP10365.000	-43.89	-62.61	-13.00	-30.89	18.72	Peak	Horizontal



MODE	TX channel 42140	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			

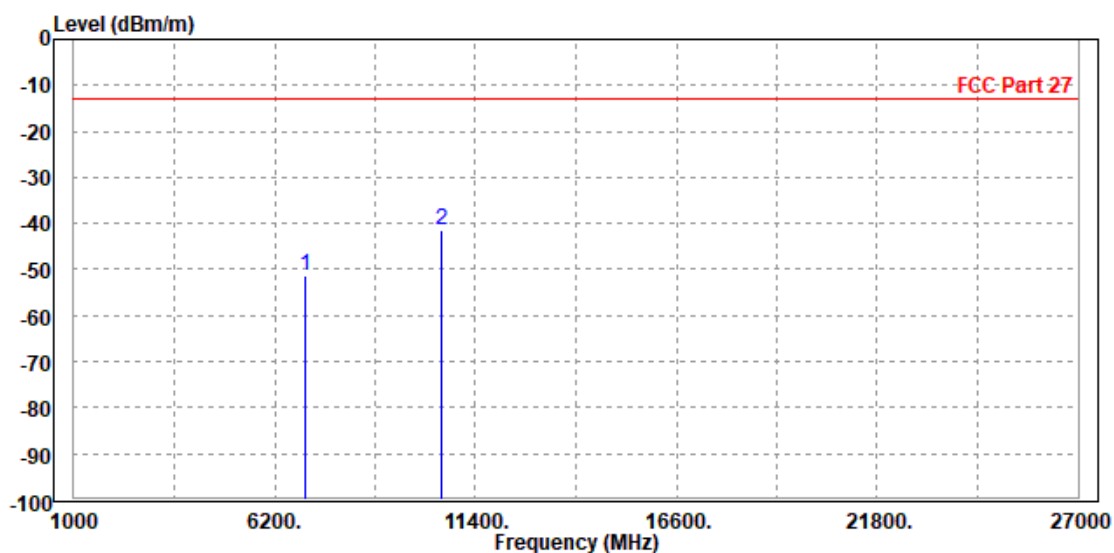
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	6910.000	-49.44	-62.13	-13.00	-36.44	12.69	Peak	Vertical
2	PP10360.000	-43.68	-61.59	-13.00	-30.68	17.91	Peak	Vertical



CH 42590

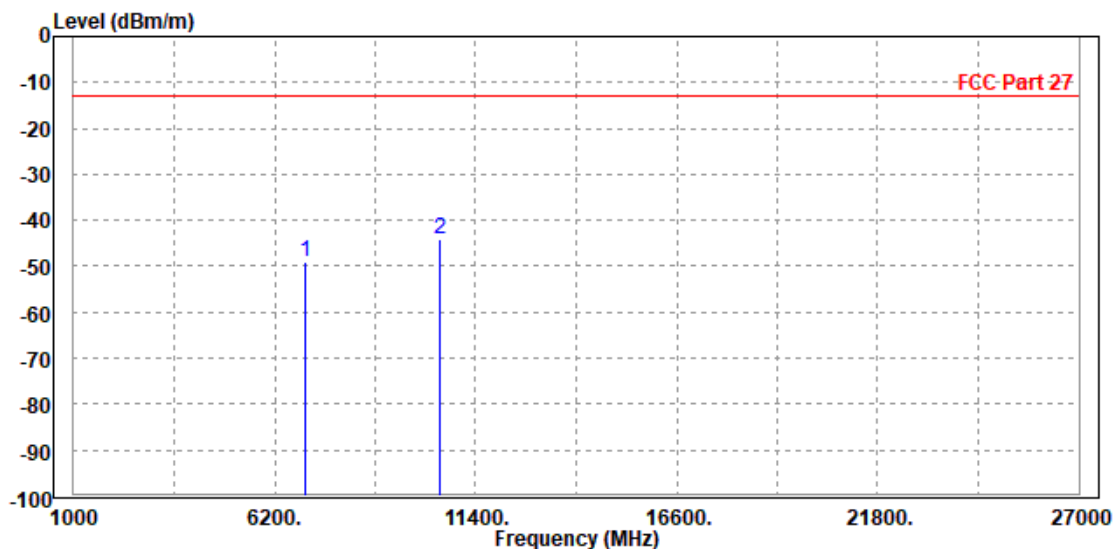
MODE	TX channel 42590	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7006.000	-51.14	-63.36	-13.00	-38.14	12.22	Peak	Horizontal
2	PP10500.000	-41.37	-59.96	-13.00	-28.37	18.59	Peak	Horizontal



MODE	TX channel 42590	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	7000.000	-49.07	-61.80	-13.00	-36.07	12.73	Peak	Vertical
2	PP10490.000	-44.12	-62.03	-13.00	-31.12	17.91	Peak	Vertical





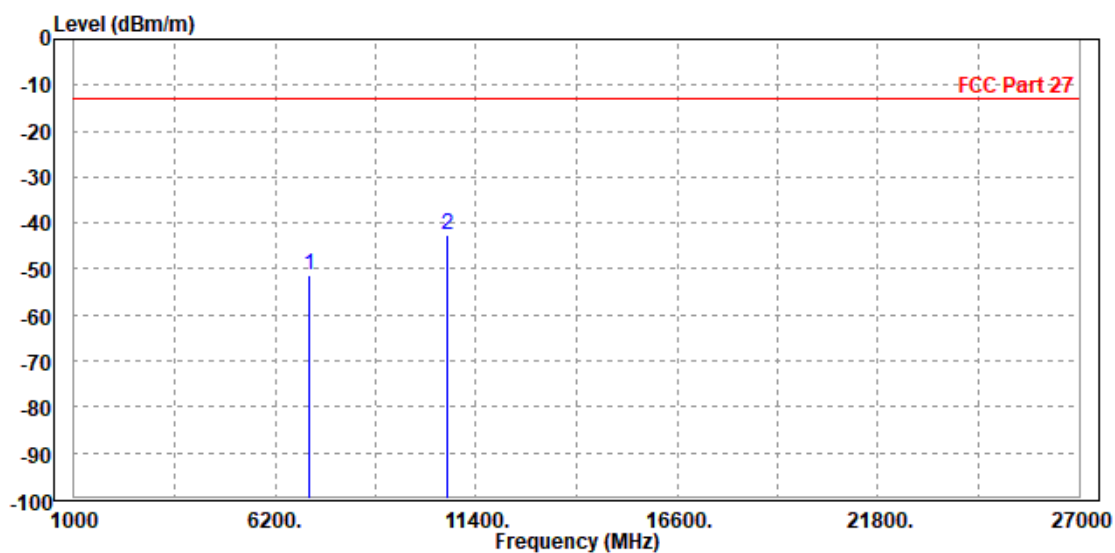
**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

CH 43040

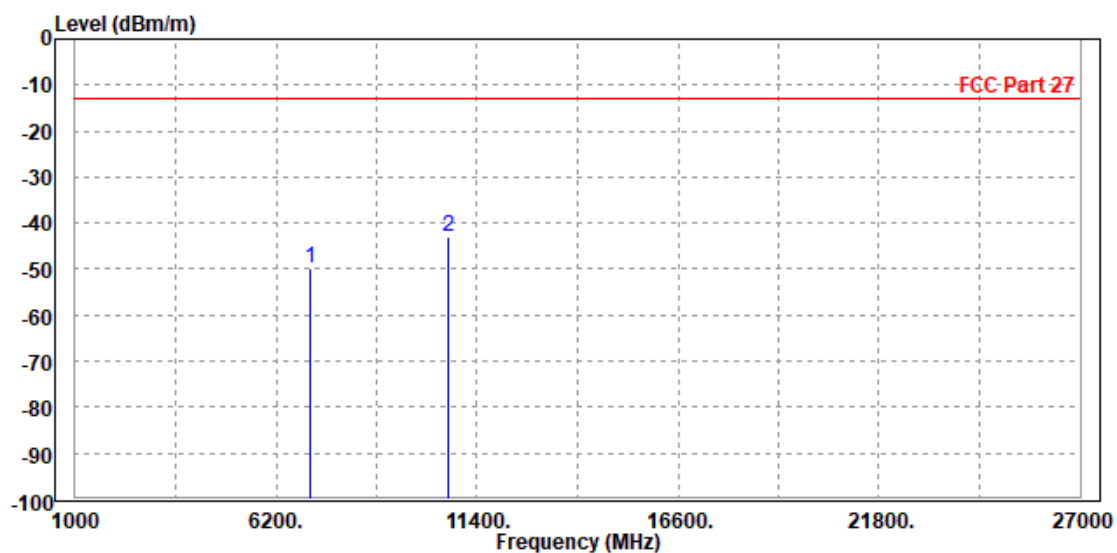
MODE	TX channel 43040	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7090.000	-51.40	-63.48	-13.00	-38.40	12.08	Peak	Horizontal
2	PP10646.000	-42.58	-61.57	-13.00	-29.58	18.99	Peak	Horizontal



MODE	TX channel 43040	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			

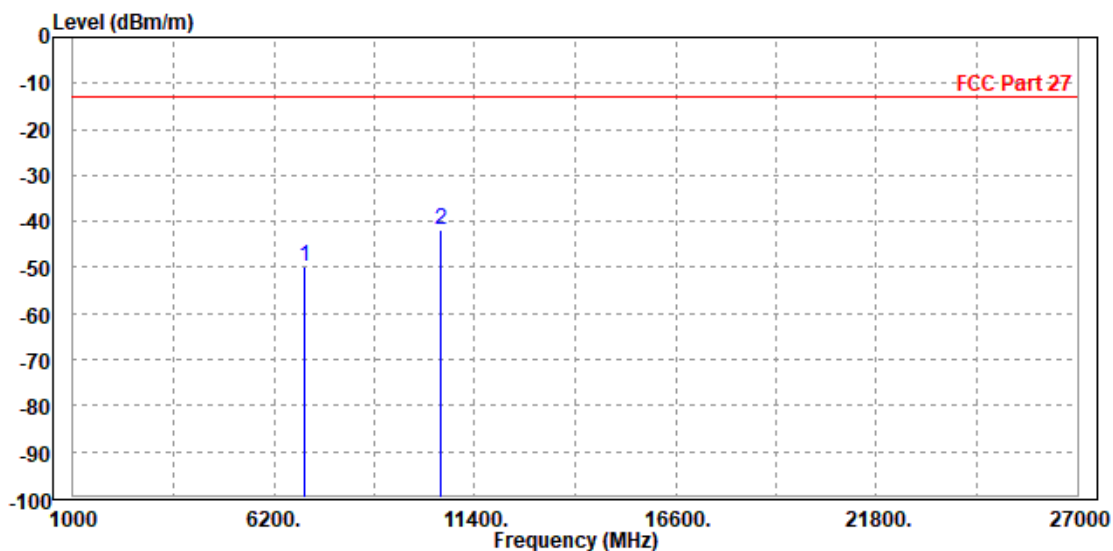
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7084.000	-49.70	-62.76	-13.00	-36.70	13.06	Peak	Vertical
2	PP10635.000	-43.09	-61.63	-13.00	-30.09	18.54	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

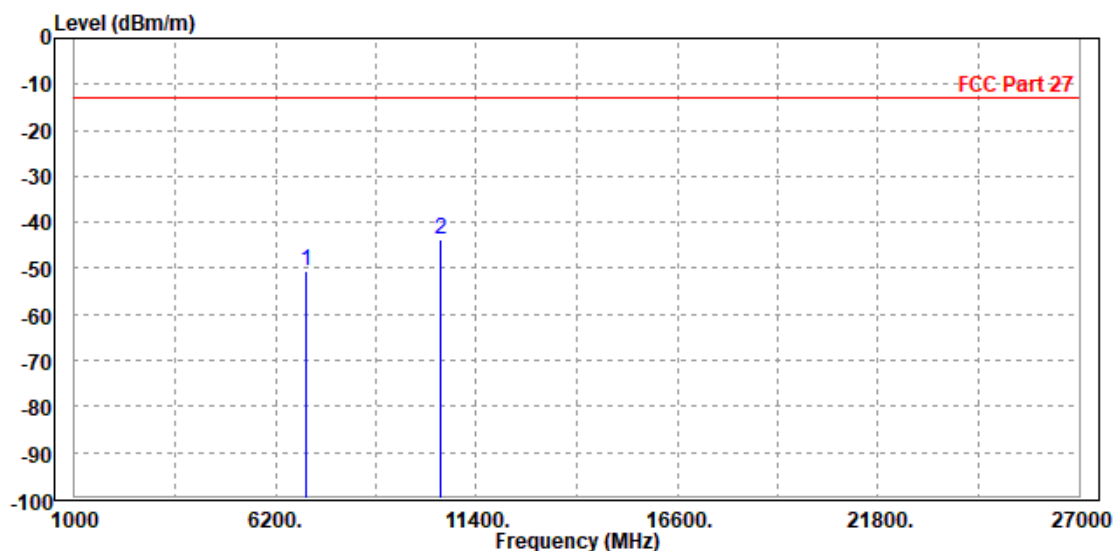
MODE	TX channel 42590	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7006.000	-49.95	-62.17	-13.00	-36.95	12.22	Peak	Horizontal
2	PP10500.000	-41.74	-60.33	-13.00	-28.74	18.59	Peak	Horizontal



MODE	TX channel 42590	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			

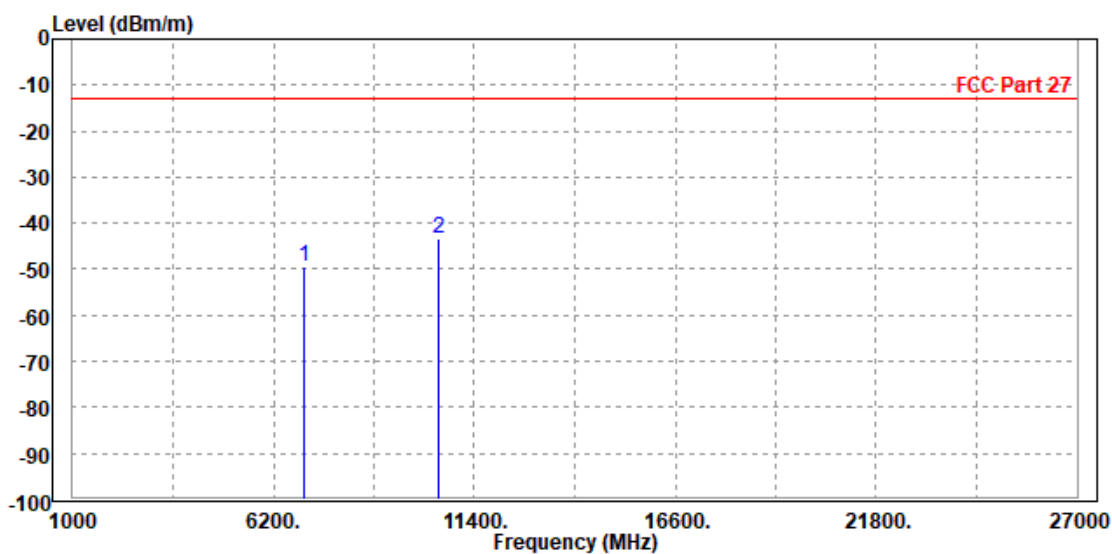
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7000.000	-50.45	-63.18	-13.00	-37.45	12.73	Peak	Vertical
2	PP10490.000	-43.84	-61.75	-13.00	-30.84	17.91	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

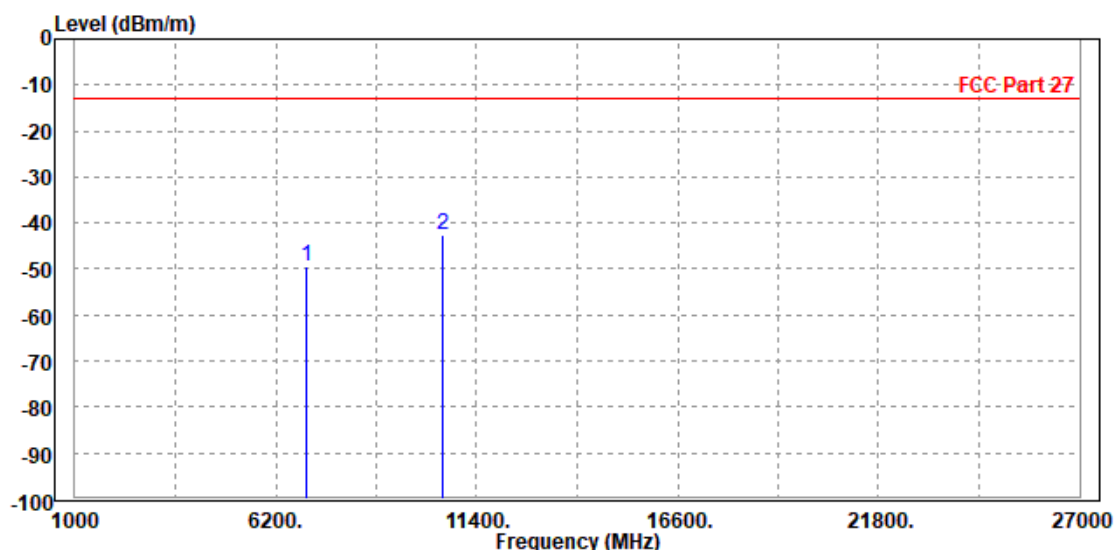
MODE	TX channel 42590	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7000.000	-49.61	-61.84	-13.00	-36.61	12.23	Peak	Horizontal
2	PP10490.000	-43.37	-61.97	-13.00	-30.37	18.60	Peak	Horizontal



MODE	TX channel 42590	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	7006.000	-49.62	-62.37	-13.00	-36.62	12.75	Peak	Vertical
2	PP10500.000	-42.58	-60.49	-13.00	-29.58	17.91	Peak	Vertical





**BUREAU
VERITAS**

Test Report No.: W7L-P23070006RF04

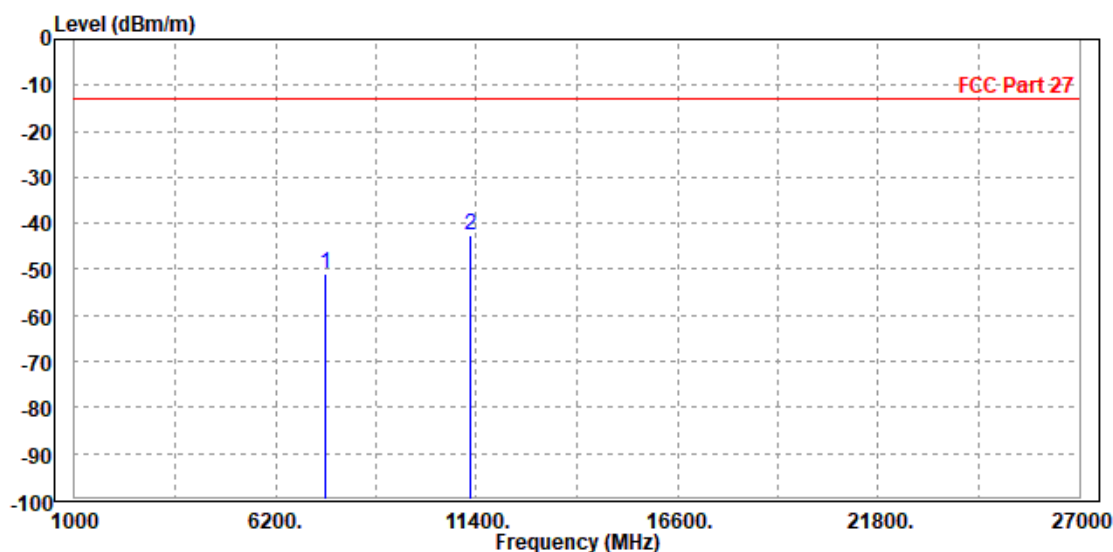
LTE BAND 43

Note: For frequency above 27GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.

CHANNEL BANDWIDTH: 5MHz / QPSK

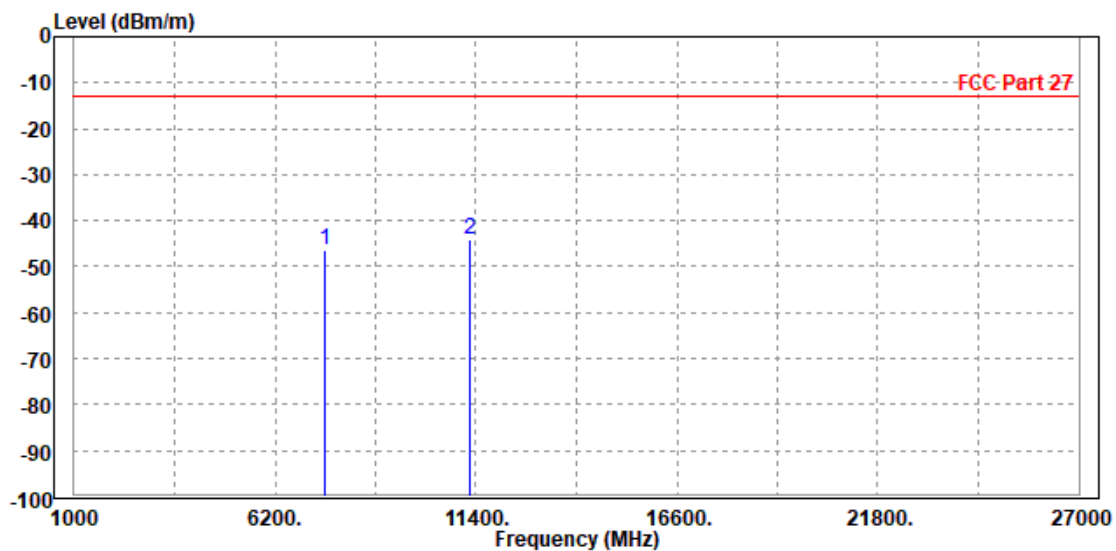
MODE	TX channel 45090	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-51.11	-62.53	-13.00	-38.11	11.42	Peak	Horizontal
2	PP11250.000	-42.55	-62.85	-13.00	-29.55	20.30	Peak	Horizontal



MODE	TX channel 45090	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			

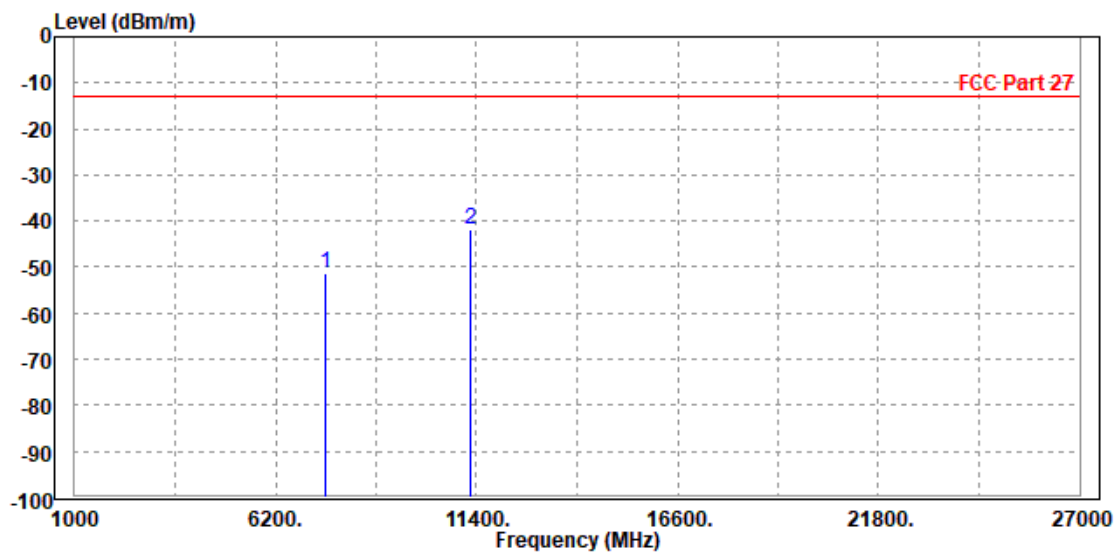
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-46.42	-61.12	-13.00	-33.42	14.70	Peak	Vertical
2	PP11244.000	-44.21	-63.16	-13.00	-31.21	18.95	Peak	Vertical



CHANNEL BANDWIDTH: 10MHz / QPSK

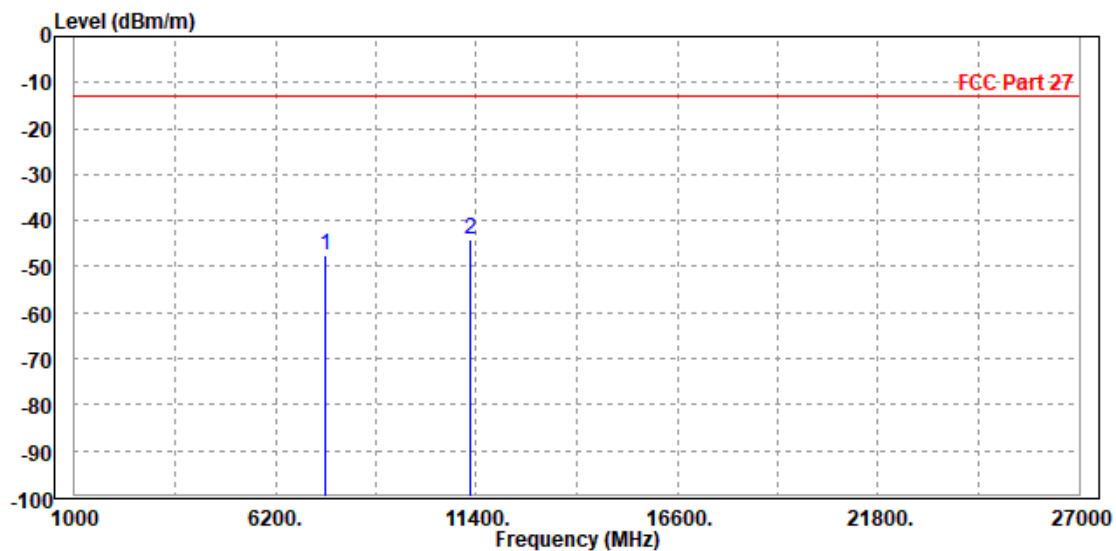
MODE	TX channel 45090	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-51.21	-62.63	-13.00	-38.21	11.42	Peak	Horizontal
2	PP11244.000	-41.93	-62.22	-13.00	-28.93	20.29	Peak	Horizontal



MODE	TX channel 45090	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			

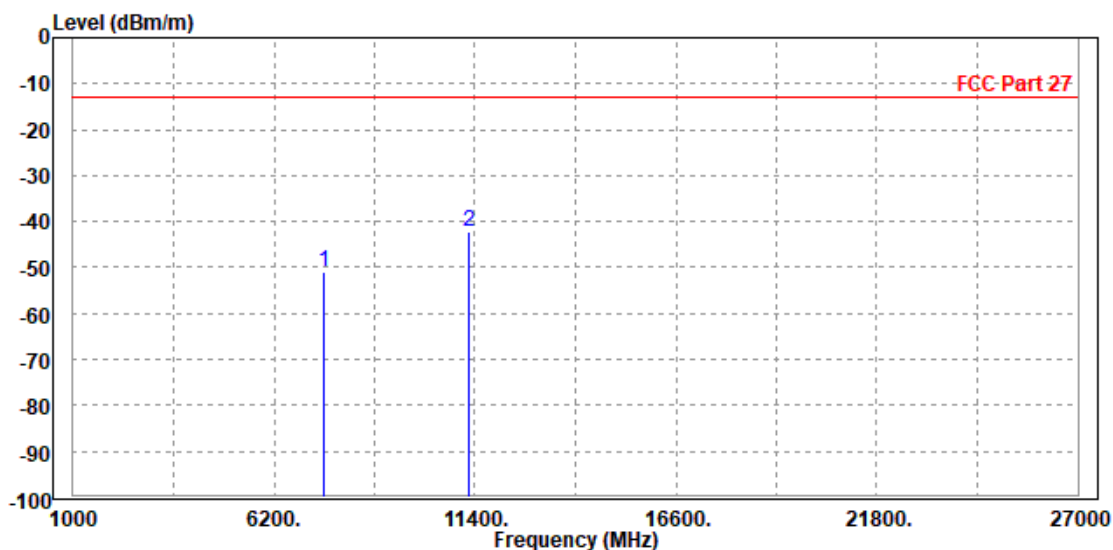
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-47.53	-62.23	-13.00	-34.53	14.70	Peak	Vertical
2	PP11250.000	-44.17	-63.08	-13.00	-31.17	18.91	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

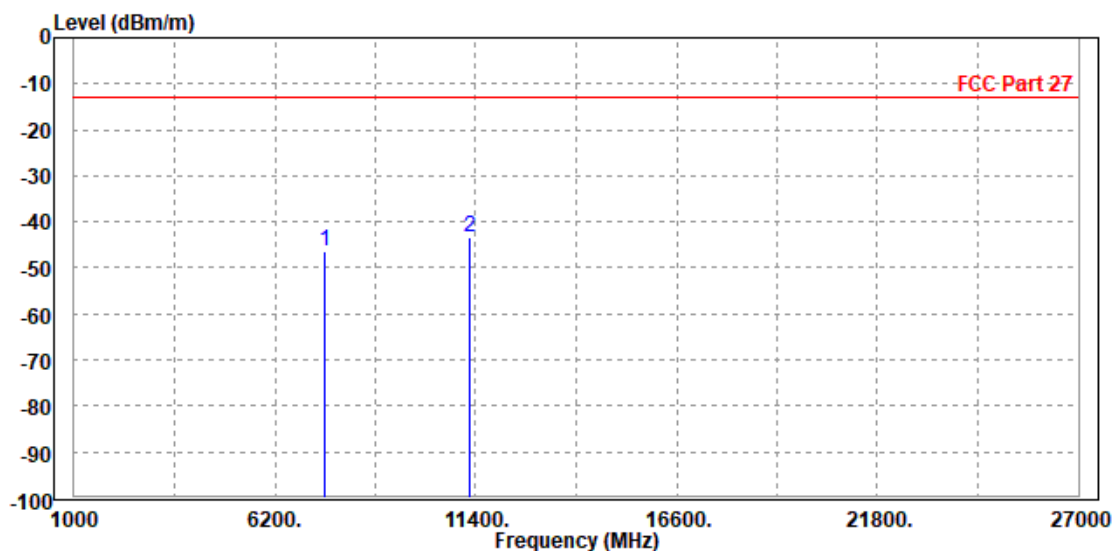
MODE	TX channel 45090	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-51.00	-62.42	-13.00	-38.00	11.42	Peak	Horizontal
2	PP11244.000	-42.24	-62.53	-13.00	-29.24	20.29	Peak	Horizontal



MODE	TX channel 45090	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	7500.000	-46.33	-61.03	-13.00	-33.33	14.70	Peak	Vertical
2	PP11250.000	-43.25	-62.16	-13.00	-30.25	18.91	Peak	Vertical

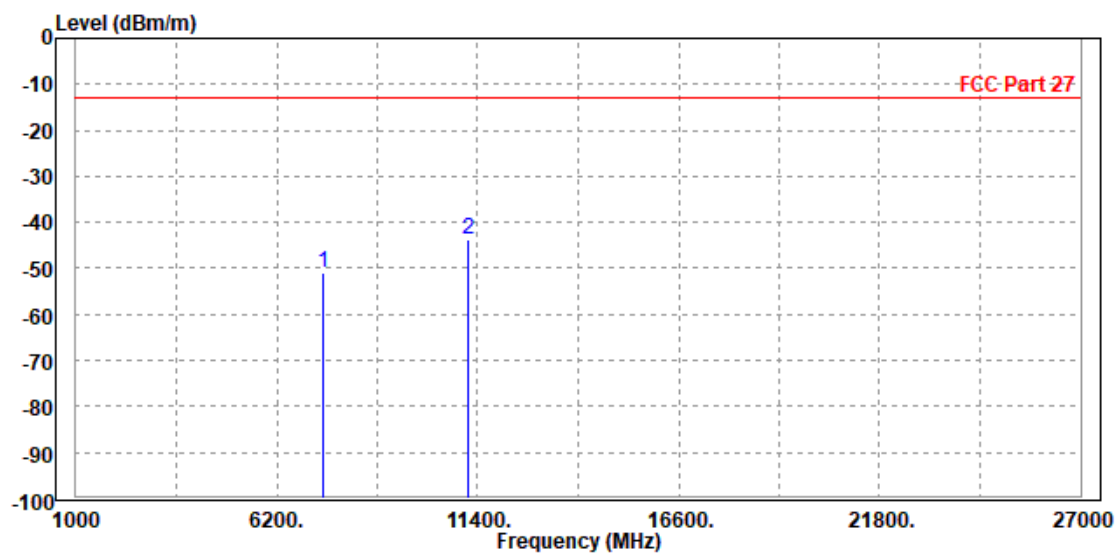


CHANNEL BANDWIDTH: 20MHz / QPSK

CH 44690

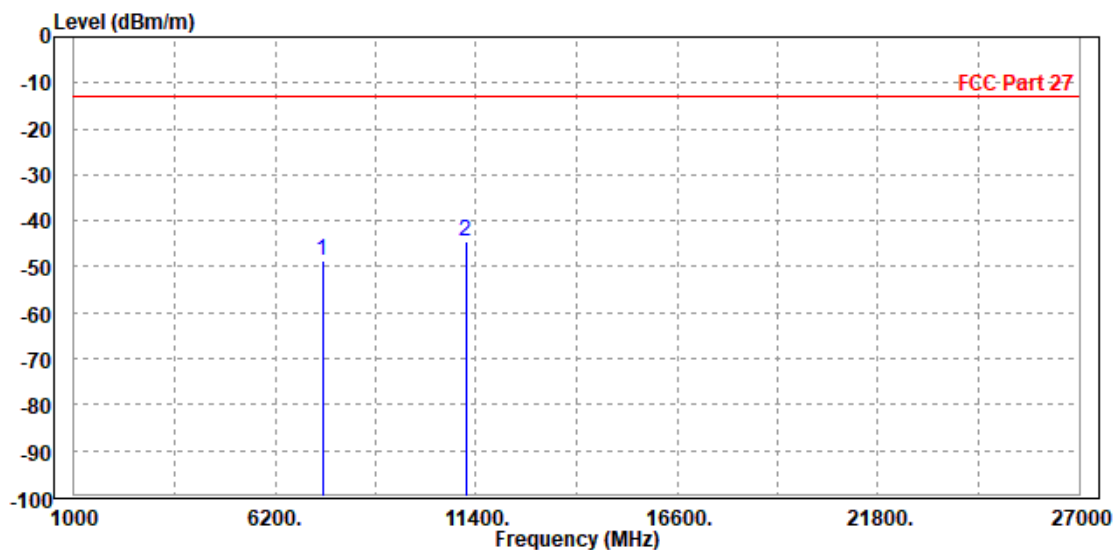
MODE	TX channel 44690	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7420.000	-51.10	-62.65	-13.00	-38.10	11.55	Peak	Horizontal
2	PP11140.000	-43.72	-63.87	-13.00	-30.72	20.15	Peak	Horizontal



MODE	TX channel 44690	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			

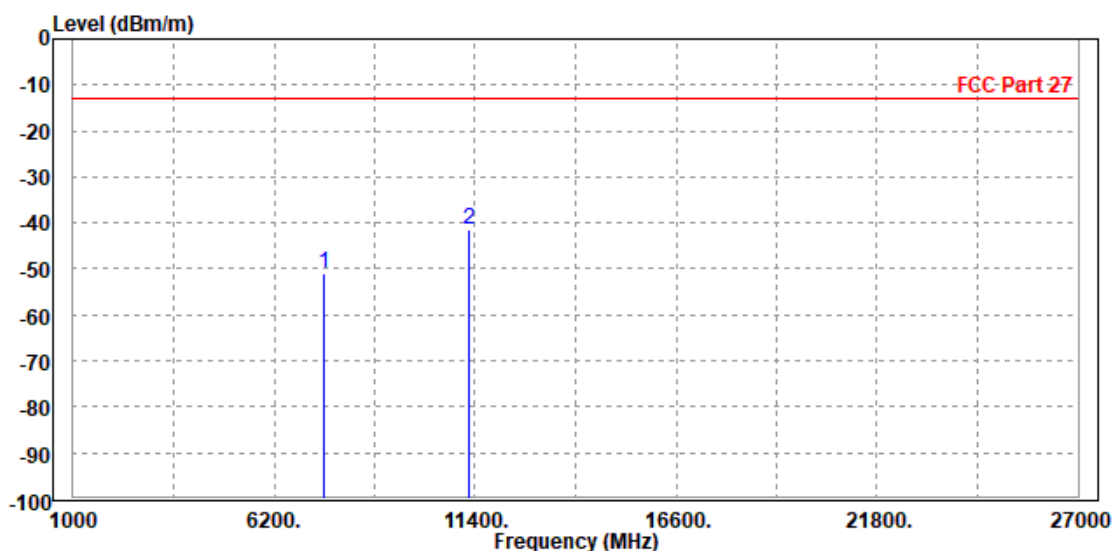
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7422.000	-48.71	-63.10	-13.00	-35.71	14.39	Peak	Vertical
2	PP11130.000	-44.35	-63.91	-13.00	-31.35	19.56	Peak	Vertical



CH 45090

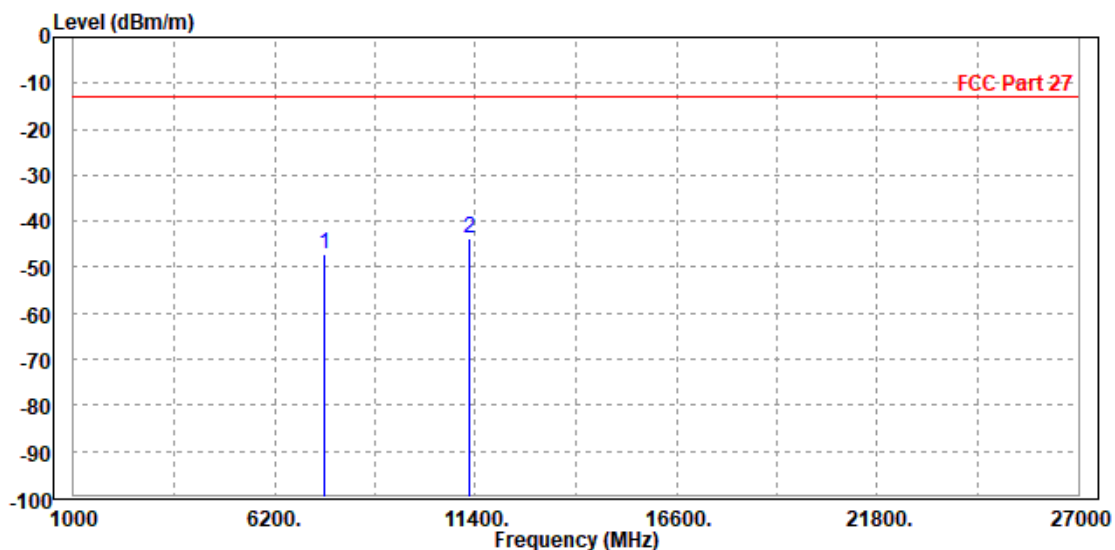
MODE	TX channel 45090	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-50.91	-62.33	-13.00	-37.91	11.42	Peak	Horizontal
2	PP11250.000	-41.63	-61.93	-13.00	-28.63	20.30	Peak	Horizontal



MODE	TX channel 45090	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			

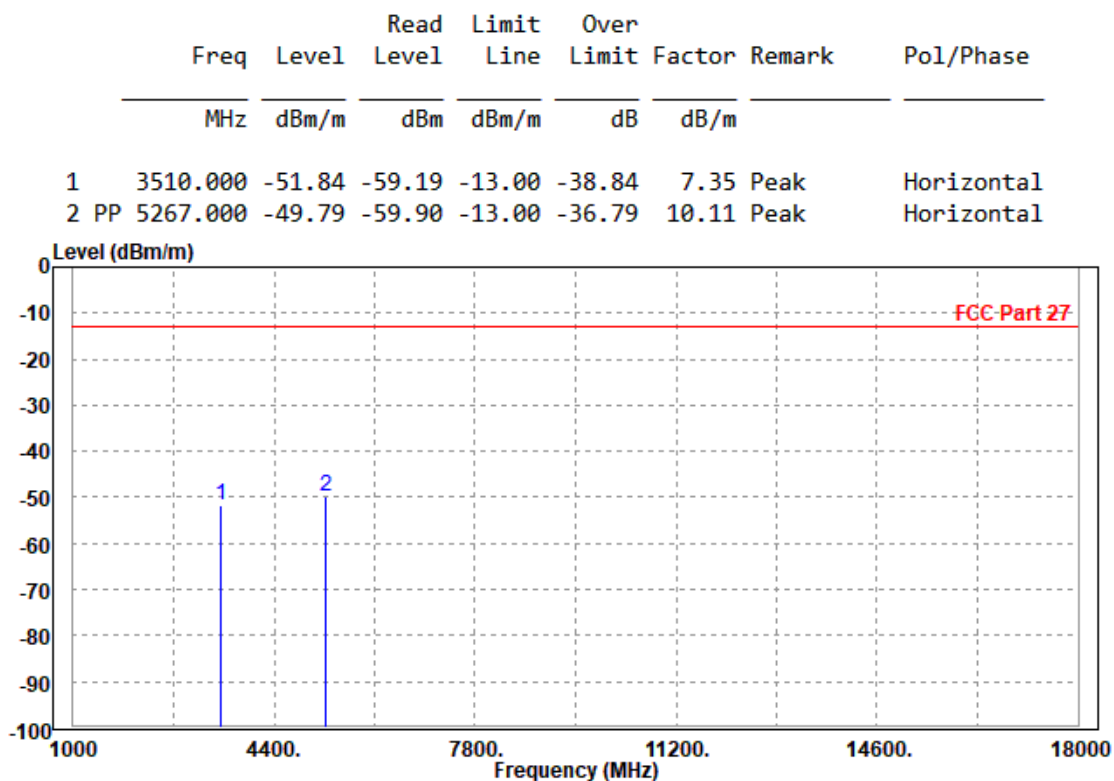
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7500.000	-47.24	-61.94	-13.00	-34.24	14.70	Peak	Vertical
2	PP11244.000	-43.74	-62.69	-13.00	-30.74	18.95	Peak	Vertical



LTE B66

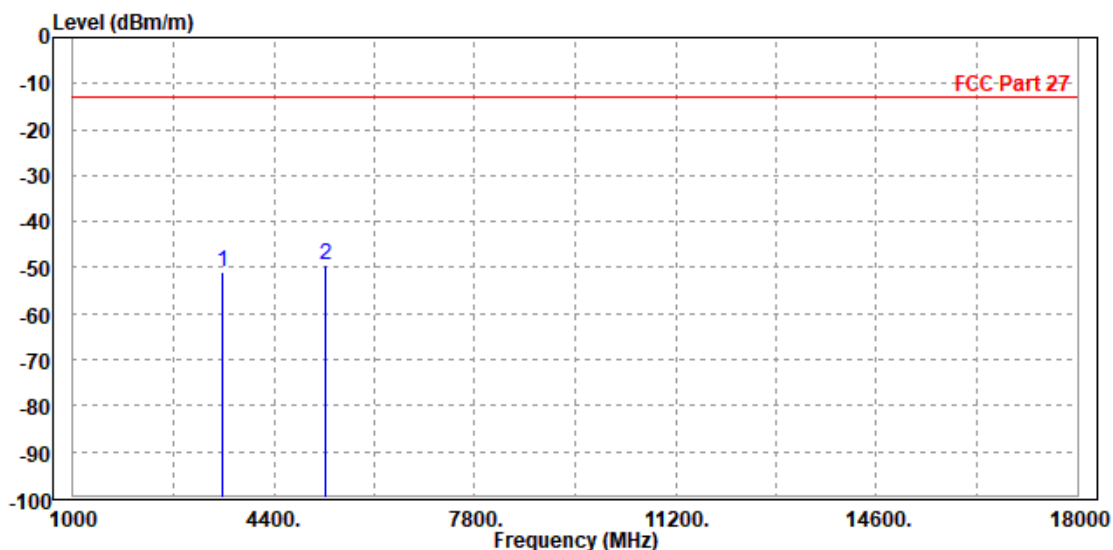
CHANNEL BANDWIDTH: 1.4MHz / QPSK

MODE	TX channel 132322	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			



MODE	TX channel 132322	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			

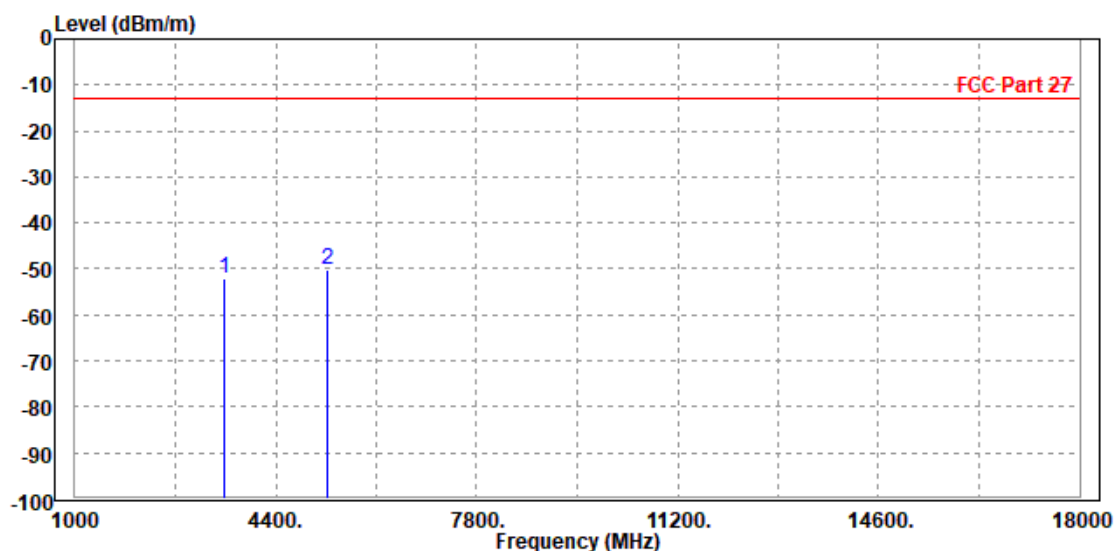
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3516.000	-51.07	-58.41	-13.00	-38.07	7.34	Peak	Vertical
2 PP	5265.000	-49.40	-59.91	-13.00	-36.40	10.51	Peak	Vertical



CHANNEL BANDWIDTH: 3MHz / QPSK

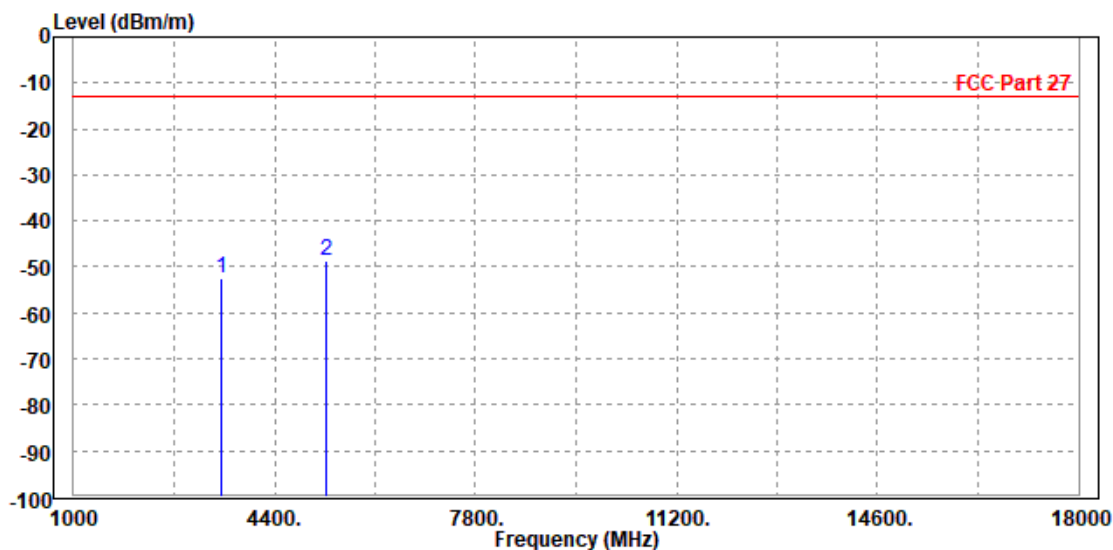
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3516.000	-52.17	-59.53	-13.00	-39.17	7.36	Peak	Horizontal
2 PP	5265.000	-50.04	-60.15	-13.00	-37.04	10.11	Peak	Horizontal



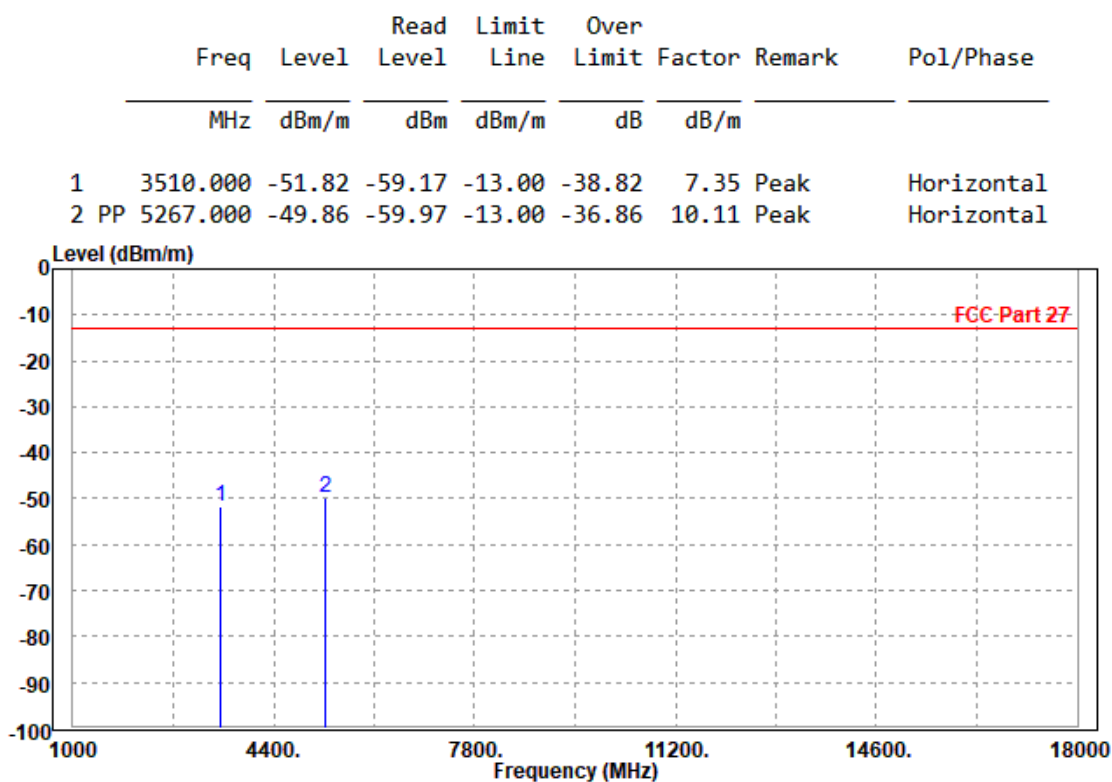
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3510.000	-52.63	-59.96	-13.00	-39.63	7.33	Peak	Vertical
2 PP	5267.000	-48.76	-59.27	-13.00	-35.76	10.51	Peak	Vertical



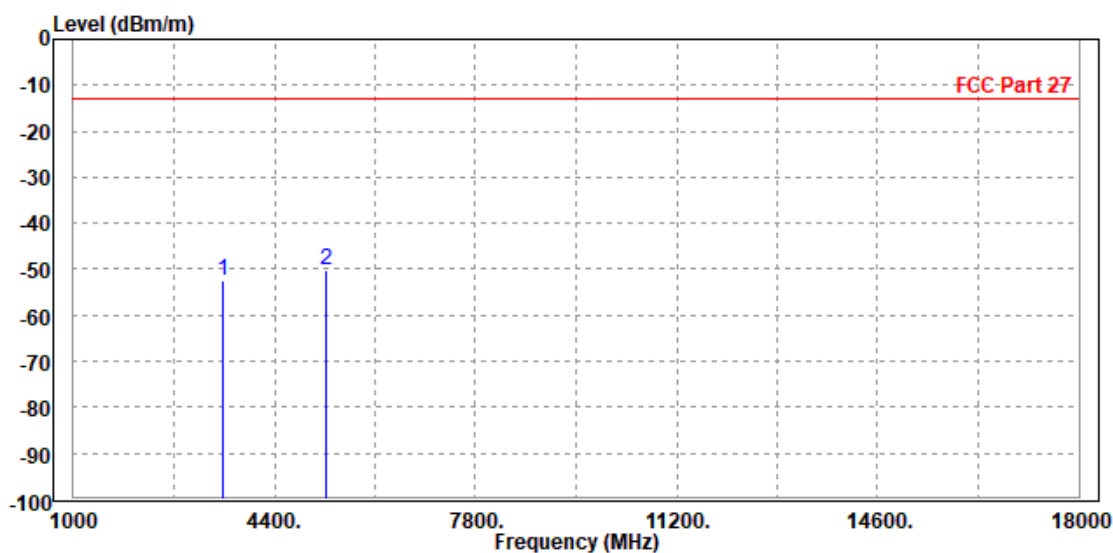
CHANNEL BANDWIDTH: 5MHz / QPSK

MODE	TX channel 132322	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			



MODE	TX channel 132322	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	3516.000	-52.45	-59.79	-13.00	-39.45	7.34	Peak	Vertical
2 PP	5265.000	-50.22	-60.73	-13.00	-37.22	10.51	Peak	Vertical

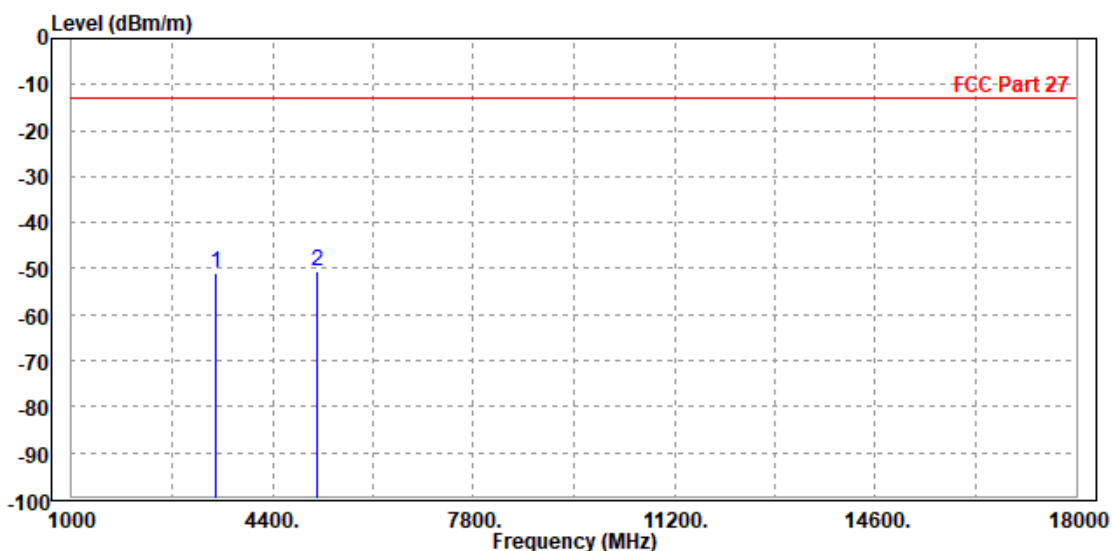


CHANNEL BANDWIDTH: 10MHz / QPSK

CH132022

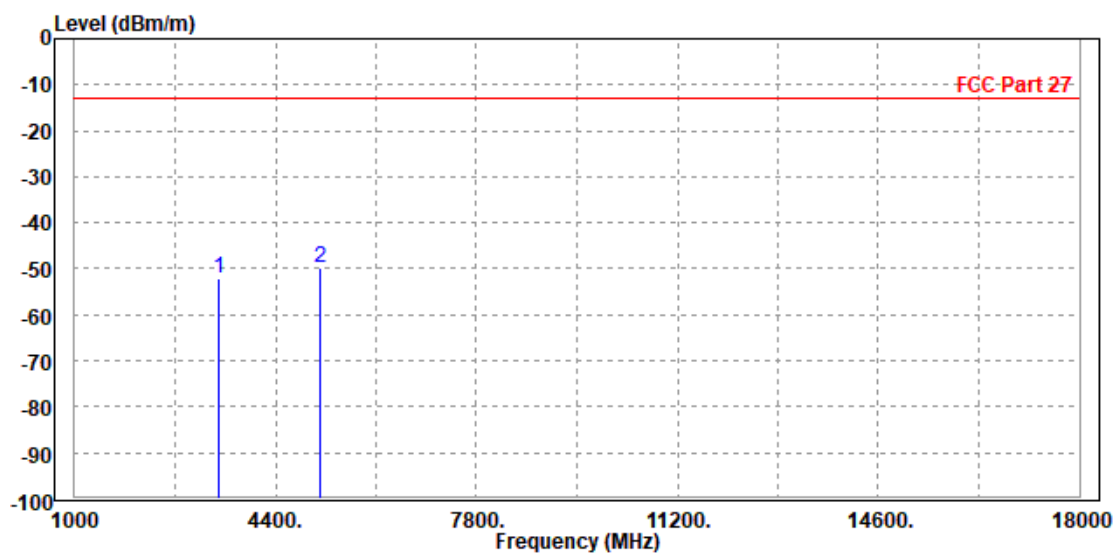
MODE	TX channel 132022	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3431.000	-50.87	-58.10	-13.00	-37.87	7.23	Peak	Horizontal
2 PP	5145.000	-50.62	-60.54	-13.00	-37.62	9.92	Peak	Horizontal



MODE	TX channel 132022	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			

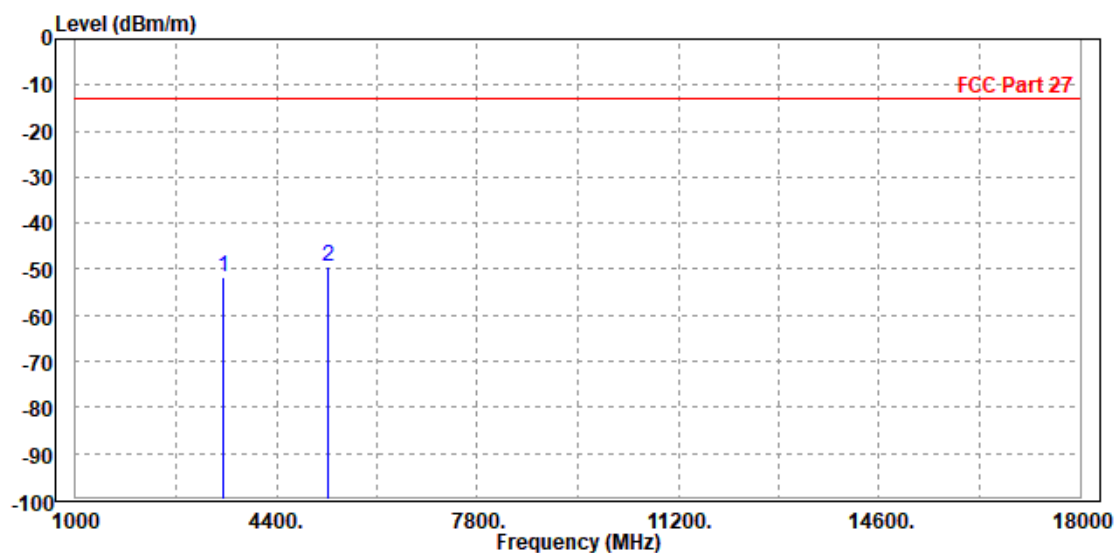
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3430.000	-52.04	-59.25	-13.00	-39.04	7.21	Peak	Vertical
2 PP	5148.000	-49.73	-60.13	-13.00	-36.73	10.40	Peak	Vertical



CH132322

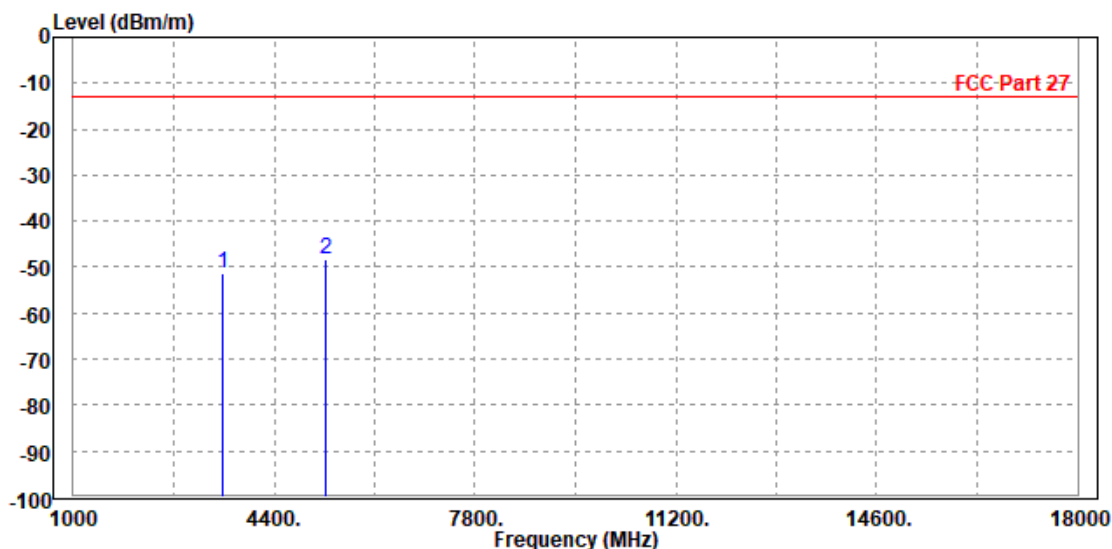
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3510.000	-51.80	-59.15	-13.00	-38.80	7.35	Peak	Horizontal
2	PP 5264.000	-49.55	-59.65	-13.00	-36.55	10.10	Peak	Horizontal



MODE	TX channel 132322	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			

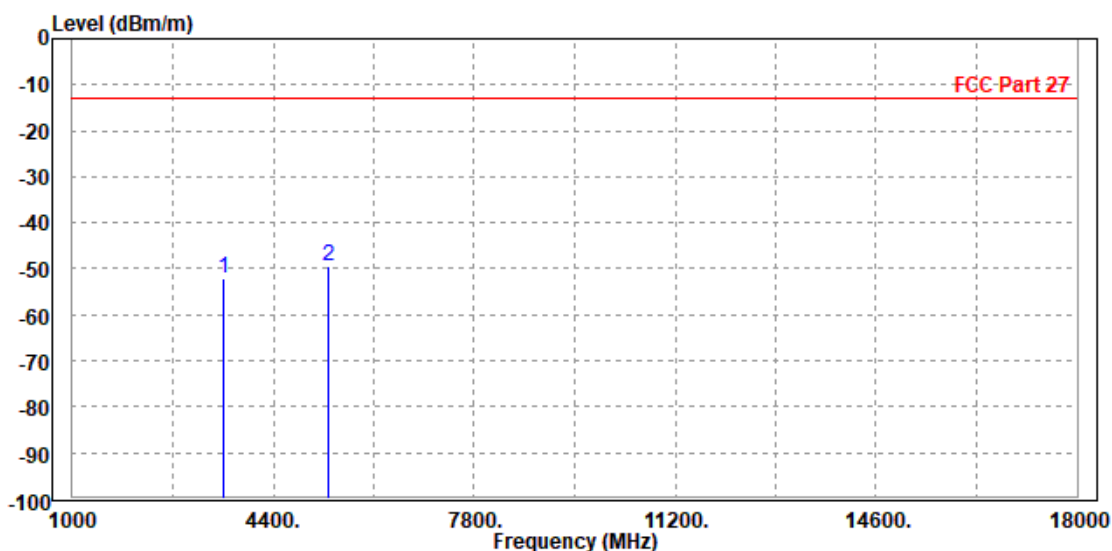
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3522.000	-51.50	-58.85	-13.00	-38.50	7.35	Peak	Vertical
2 PP	5265.000	-48.32	-58.83	-13.00	-35.32	10.51	Peak	Vertical



CH132622

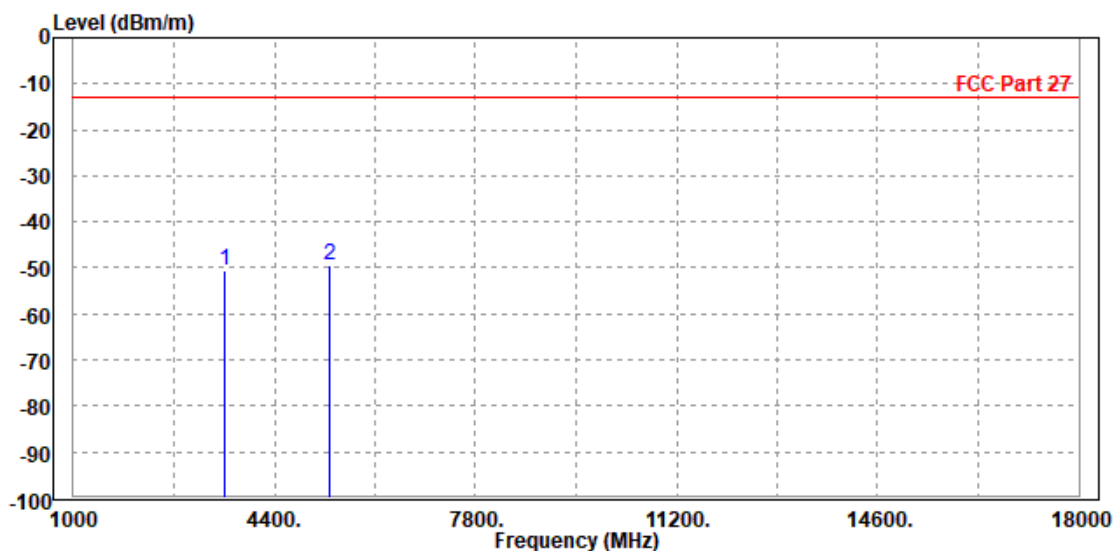
MODE	TX channel 132622	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3550.000	-52.10	-59.55	-13.00	-39.10	7.45	Peak	Horizontal
2	PP 5318.000	-49.47	-59.66	-13.00	-36.47	10.19	Peak	Horizontal



MODE	TX channel 132622	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			

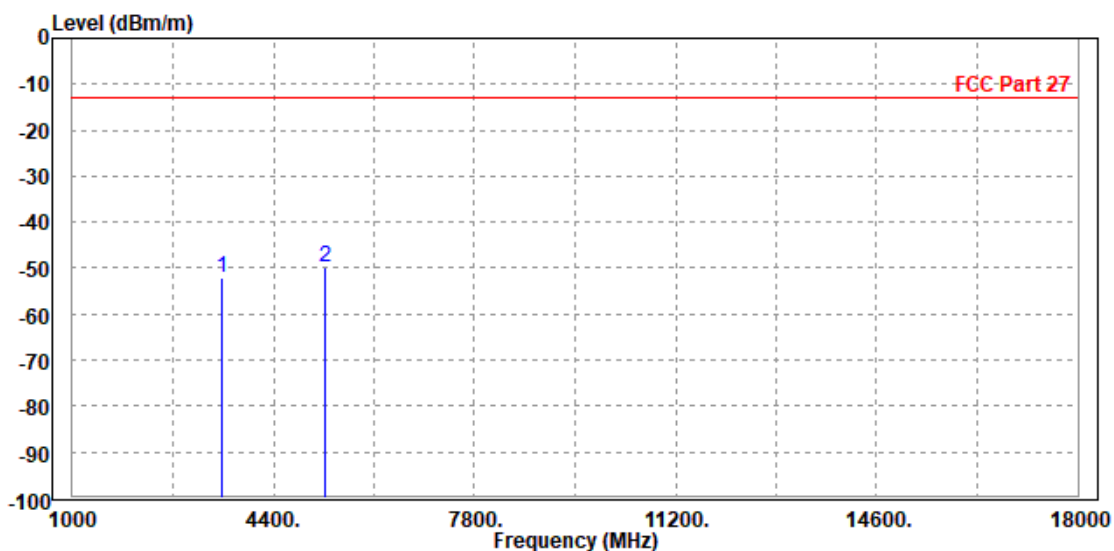
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3550.000	-50.74	-58.13	-13.00	-37.74	7.39	Peak	Vertical
2 PP	5325.000	-49.46	-60.03	-13.00	-36.46	10.57	Peak	Vertical



CHANNEL BANDWIDTH: 15MHz / QPSK

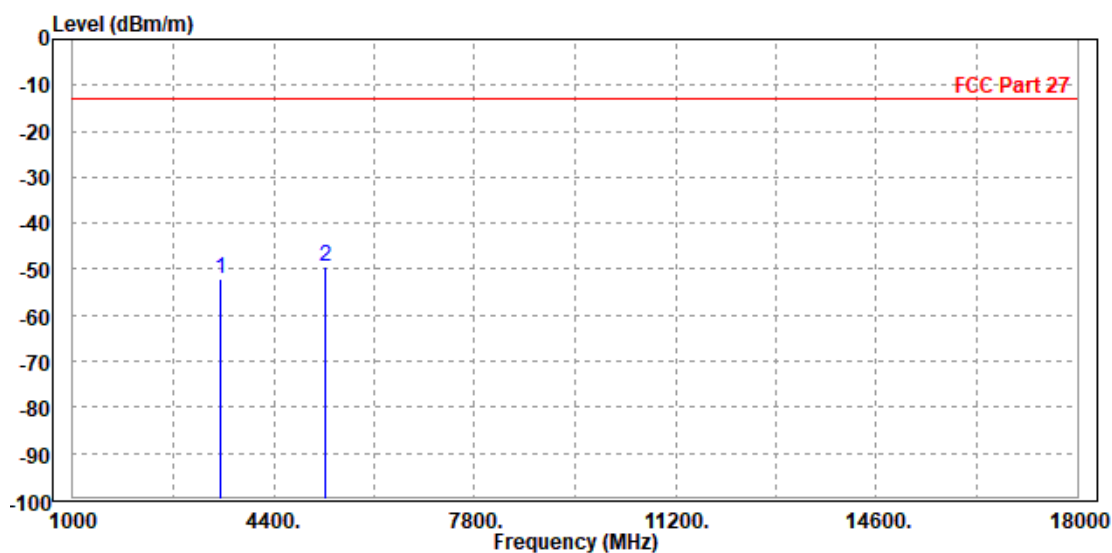
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3516.000	-52.17	-59.53	-13.00	-39.17	7.36	Peak	Horizontal
2 PP	5265.000	-49.86	-59.97	-13.00	-36.86	10.11	Peak	Horizontal



MODE	TX channel 132322	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			

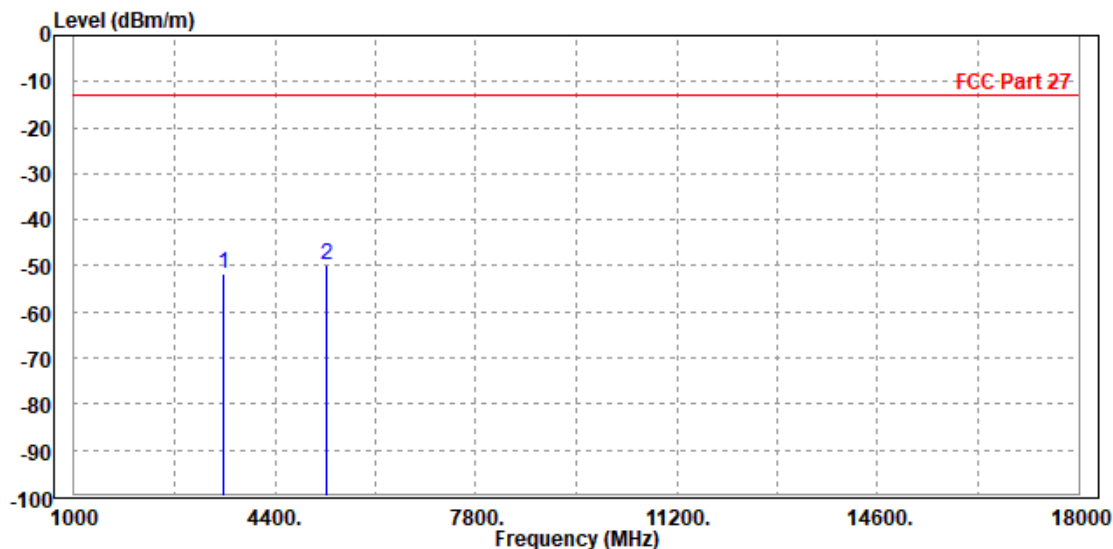
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3510.000	-52.06	-59.39	-13.00	-39.06	7.33	Peak	Vertical
2 PP	5267.000	-49.57	-60.08	-13.00	-36.57	10.51	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

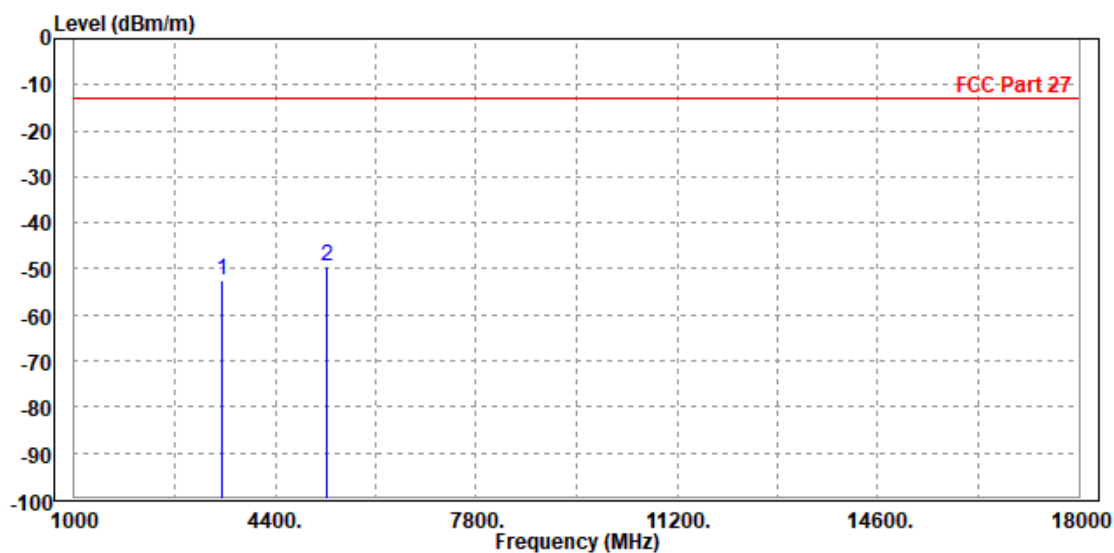
MODE	TX channel 132322	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3516.000	-51.58	-58.94	-13.00	-38.58	7.36	Peak	Horizontal
2 PP	5265.000	-49.71	-59.82	-13.00	-36.71	10.11	Peak	Horizontal



MODE	TX channel 132322	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	3510.000	-52.46	-59.79	-13.00	-39.46	7.33	Peak	Vertical
2 PP	5267.000	-49.36	-59.87	-13.00	-36.36	10.51	Peak	Vertical





Test Report No.: W7L-P23070006RF04

4 INFORMATION ON THE TESTING LABORATORIES

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

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

Shenzhen EMC/RF Lab:

Tel: +86-755-88696566

Fax: +86-755-88696577

Email: customerservice.sw@cn.bureauveritas.com

Web Site: www.adt.com.tw

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



Test Report No.: W7L-P23070006RF04

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

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

--END--