

# FCC TEST REPORT (PART 24)



Applicant:	Borqs BeiJing Ltd.
Address:	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 China

Manufacturer or Supplier:	Borqs BeiJing Ltd.
Address:	Tower A, Building B23, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District Beijing, 100015 China
Product:	SKYBOX
Brand Name:	SkyCentrics
Model Name:	MA01-WBNA (Low Voltage with LTE), MA01-EP-WBNA (High Voltage with LTE)
FCC ID:	2ABDK-MA01
Date of tests:	Nov. 27, 2023 ~ Dec. 05, 2023

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

- FCC PART 24, Subpart E**  
  **FCC PART 2**  
 **ANSI/TIA/EIA-603-D**  
  **ANSI/TIA/EIA-603-E**  
  **ANSI C63.26-2015**

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

Prepared by Chao Wu Engineer / Mobile Department	Approved by Peibo Sun Manager / Mobile Department
  Date: Dec. 05, 2023	  Date: Dec. 05, 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.



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**BUREAU**  
**VERITAS**

Test Report No.: W7L-231123W001RF02

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-231123W001RF02	Original release	Dec. 05, 2023



# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

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

Note: please refer to the module report R2006A0379-R2/R6 (FCC-ID: XMR202008EG91NAXD).

### Test Lab Information Reference:

#### Lab A

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

#### Lab Address:

Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province

Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

## 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)	±2.68dB
Radiated emissions & Radiated Power (30MHz~1GHz)	±4.98dB
Radiated emissions & Radiated Power (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted Output power	±2.06dB

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.10,23	May.09,24
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,23	Sep.01,24
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 18,23	Feb. 17,24
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.03, 23	Sep.02, 24
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.10,23	May.09,24
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. 22, 23	May. 21,26
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 Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.10,23	May.09,24
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 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	SKYBOX		
<b>BRAND NAME</b>	SkyCentrics		
<b>MODEL NAME</b>	MA01-WBNA (Low Voltage with LTE), MA01-EP-WBNA (High Voltage with LTE)		
<b>NOMINAL VOLTAGE</b>	24Vac (MA01-WBNA) 120Vac (MA01-EP-WBNA)		
<b>MODULATION TYPE</b>	LTE Band 2/25: QPSK, 16QAM		
<b>FREQUENCY RANGE</b>	LTE Band 2 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1909.3MHz	
	LTE Band 2 Channel Bandwidth: 3MHz	1851.5MHz ~ 1908.5MHz	
	LTE Band 2 Channel Bandwidth: 5MHz	1852.5MHz ~ 1907.5MHz	
	LTE Band 2 Channel Bandwidth: 10MHz	1855.0MHz ~ 1905.0MHz	
	LTE Band 2 Channel Bandwidth: 15MHz	1857.5MHz ~ 1902.5MHz	
	LTE Band 2 Channel Bandwidth: 20MHz	1860.0MHz ~ 1900.0MHz	
	LTE Band 25 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1914.3MHz	
	LTE Band 25 Channel Bandwidth: 3MHz	1851.5MHz ~ 1913.5MHz	
	LTE Band 25 Channel Bandwidth: 5MHz	1852.5MHz ~ 1912.5MHz	
	LTE Band 25 Channel Bandwidth: 10MHz	1855.0MHz ~ 1910.0MHz	
	LTE Band 25 Channel Bandwidth: 15MHz	1857.5MHz ~ 1907.5MHz	
	LTE Band 25 Channel Bandwidth: 20MHz	1860.0MHz ~ 1905.0MHz	
	<b>MAX. EIRP POWER</b>	LTE Band 2 Channel Bandwidth: 1.4MHz	331.89mW
		LTE Band 2 Channel Bandwidth: 3MHz	330.37mW
LTE Band 2 Channel Bandwidth: 5MHz		328.85mW	
LTE Band 2 Channel Bandwidth: 10MHz		330.37mW	



	LTE Band 2 Channel Bandwidth: 15MHz	327.34mW
	LTE Band 2 Channel Bandwidth: 20MHz	335.74mW
	LTE Band 25 Channel Bandwidth: 1.4MHz	322.11mW
	LTE Band 25 Channel Bandwidth: 3MHz	325.09mW
	LTE Band 25 Channel Bandwidth: 5MHz	320.63mW
	LTE Band 25 Channel Bandwidth: 10MHz	323.59mW
	LTE Band 25 Channel Bandwidth: 15MHz	327.34mW
	LTE Band 25 Channel Bandwidth: 20MHz	328.1mW
	<b>EMISSION DESIGNATOR</b>	LTE Band 2 Channel Bandwidth: 1.4MHz
16QAM: 333KW7D		
64QAM: /		
LTE Band 2 Channel Bandwidth: 3MHz		QPSK: 2M74G7D
		16QAM: 411KW7D
		64QAM: /
LTE Band 2 Channel Bandwidth: 5MHz		QPSK: 4M53G7D
		16QAM: 497KW7D
		64QAM: /
LTE Band 2 Channel Bandwidth: 10MHz		QPSK: 9M05G7D
		16QAM: 915KW7D
		64QAM: /
LTE Band 2 Channel Bandwidth: 15MHz		QPSK: 13M5G7D
		16QAM: 1M17W7D
		64QAM: /
LTE Band 2 Channel Bandwidth: 20MHz		QPSK: 17M9G7D
		16QAM: 1M26W7D
		64QAM: /





<b>EMISSION DESIGNATOR</b>	<b>LTE Band 25 Channel Bandwidth: 1.4MHz</b>	QPSK: 1M10G7D
		16QAM: 1M10W7D
		64QAM: /
	<b>LTE Band 25 Channel Bandwidth: 3MHz</b>	QPSK: 2M72G7D
		16QAM: 2M70W7D
		64QAM: /
	<b>LTE Band 25 Channel Bandwidth: 5MHz</b>	QPSK: 4M52G7D
		16QAM: 4M53W7D
		64QAM: /
	<b>LTE Band 25 Channel Bandwidth: 10MHz</b>	QPSK: 8M99G7D
		16QAM: 4M75W7D
		64QAM: /
<b>LTE Band 25 Channel Bandwidth: 15MHz</b>	QPSK: 13M4G7D	
	16QAM: 1M14W7D	
	64QAM: /	
<b>LTE Band 25 Channel Bandwidth: 20MHz</b>	QPSK: 17M9G7D	
	16QAM: 1M23W7D	
	64QAM: /	
<b>ANTENNA TYPE</b>	Internal Antenna with 2.02 dBi gain for LTE Band 2/25	
<b>HW VERSION</b>	DVT	
<b>SW VERSION</b>	fft_PICO_KITE_20230828	
<b>I/O PORTS</b>	Refer to user's manual	
<b>CABLE SUPPLIED</b>	Power cable: non-shielded cable, with w/o ferrite core, 1.8 meter	
<b>EXTREME TEMPERATURE</b>	-20-50 °C	
<b>EXTREME VOLTAGE</b>	110V - 240V (MA01-EP-WBNA) 18V - 30V (MA01-WBNA)	

**NOTE:**

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- Physically, the EUT provides one completed transmitter and one receiver.

<b>MODULATION MODE</b>	<b>TX FUNCTION</b>
<b>LTE</b>	1TX/1RX

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



- 4. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.
- 5. The difference of MA01-WBNA and MA01-EP-WBNA is as follows :

No	Model	Difference Description
1	MA01-EP-WBNA	High Voltage: 120 VAC through Power Entry Module
2	MA01-WBNA	Low Voltage: 24 VAC through terminal block header

The main test model is MA01-EP-WBNA, and MA01-WBNA verified the worst-case mode of MA01-EP-WBNA. Only the data of MA01-EP-WBNA was reported in the report, because of its worse data.

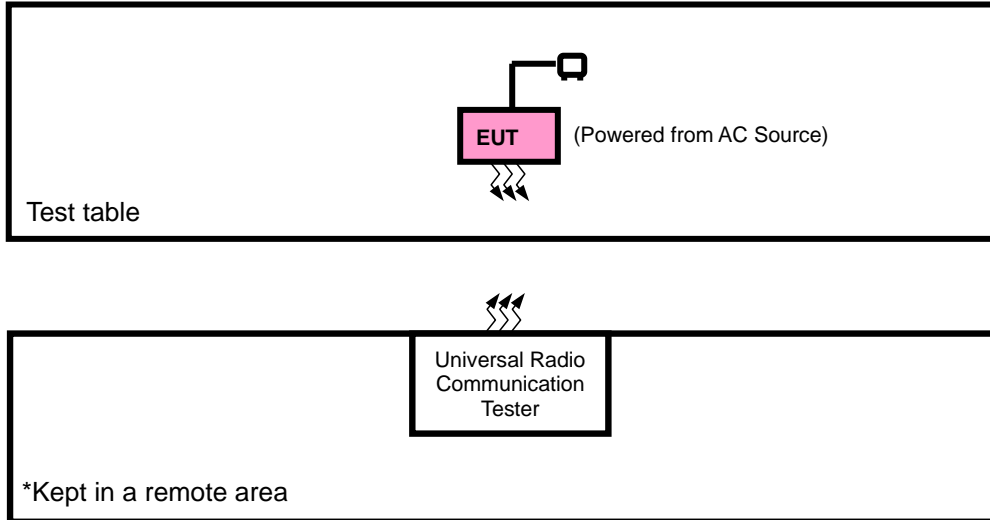
**List of Accessory:**

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Power cable	YuanSong	YS-301+SVT18/ 3CBK+ YS-302	1.8M



## 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	AC power supply	N/A	JS-AC2410	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

### 2.4 TEST ITEM AND TEST CONFIGURATION

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

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter with LTE link



LTE BAND 2 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15MHz	QPSK,16QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20MHz	QPSK,16QAM	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. For the radiated emission test, LTE Band 2 are covered by LTE Band 25, Because it is a subset of LTE Band 25 with the same output power and supported bandwidths, So the test data please refer to LTE Band 25.

LTE BAND 25 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	26047 to 26683	26365	1.4MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26365	3MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26365	5MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26365	15MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26365	20MHz	QPSK	1 RB / 0 RB Offset

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



**TEST CONDITION:**

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	25deg. C, 57%RH	AC 120V	Jace Hu
RADIATED EMISSION	23deg. C, 70%RH	AC 120V	Jace Hu

**2.5 EUT OPERATING CONDITIONS**

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

**2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS**

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

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 24**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**ANSI/TIA/EIA-603-D**

**ANSI/TIA/EIA-603-E**

**ANSI C63.26-2015**

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

## 3 TEST TYPES AND RESULTS

### 3.1 OUTPUT POWER MEASUREMENT

#### 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile and portable stations are limited to 2 watts EIRP.

#### 3.1.2 TEST PROCEDURES

##### **EIRP MEASUREMENT:**

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

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

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$L_{\text{C}}$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

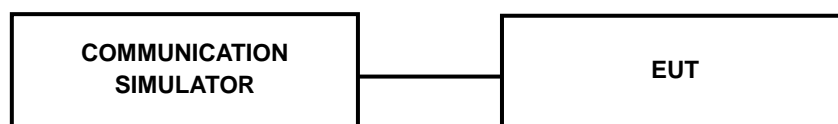
##### **CONDUCTED POWER MEASUREMENT:**

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

### 3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



### 3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

LTE BAND 2

Band/BW	Modulation	RB Size	RB Offset	Low CH 18607	Mid CH 18900	High CH 19193
				Frequency 1850.7 MHz	Frequency 1880 MHz	Frequency 1909.3 MHz
2/ 1.4	QPSK	1	0	23.14	22.99	23.15
		1	2	23.08	23.05	23.19
		1	5	22.63	22.78	22.78
		3	0	22.77	22.74	22.73
		3	1	22.64	22.74	22.88
		3	3	22.74	22.84	22.89
	16QAM	6	0	22.00	21.97	22.02
		1	0	21.78	21.94	21.94
		1	2	22.09	22.08	22.12
		1	5	21.61	21.67	21.73
		3	0	22.21	22.31	22.28
		3	1	22.11	22.20	22.19
		3	3	21.87	21.94	21.93
		6	0	21.05	20.99	20.94





Band/BW	Modulation	RB Size	RB Offset	Low CH 18615	Mid CH 18900	High CH 19185
				Frequency 1851.5 MHz	Frequency 1880 MHz	Frequency 1908.5 MHz
2/3	QPSK	1	0	23.16	23.07	23.17
		1	7	23.12	23.05	23.16
		1	14	22.64	22.76	22.86
		8	0	21.84	22.00	21.89
		8	3	21.87	22.04	22.05
		8	7	22.04	21.96	22.01
		15	0	21.99	22.02	22.01
	16QAM	1	0	21.85	21.87	21.86
		1	7	22.09	22.07	22.04
		1	14	21.60	21.75	21.70
		8	0	22.23	22.29	22.26
		8	3	22.15	22.14	22.29
		8	7	21.83	22.00	21.87
		15	0	21.08	21.06	21.04

Band/BW	Modulation	RB Size	RB Offset	Low CH 18625	Mid CH 18900	High CH 19175
				Frequency 1852.5 MHz	Frequency 1880 MHz	Frequency 1907.5 MHz
2/5	QPSK	1	0	23.11	23.11	23.14
		1	12	23.10	23.06	23.15
		1	24	22.61	22.88	22.83
		12	0	21.85	21.96	21.92
		12	6	21.94	22.00	22.07
		12	13	22.00	21.97	22.11
		25	0	22.00	22.01	22.06
	16QAM	1	0	21.84	21.87	21.85
		1	12	21.99	22.15	22.17
		1	24	21.60	21.75	21.69
		12	0	22.23	22.29	22.29
		12	6	22.15	22.18	22.24
		12	13	21.88	22.01	21.86
		25	0	21.05	21.08	20.94



Band/BW	Modulation	RB Size	RB Offset	Low CH 18650	Mid CH 18900	High CH 19150
				Frequency 1855 MHz	Frequency 1880 MHz	Frequency 1905 MHz
2/ 10	QPSK	1	0	23.17	23.00	23.17
		1	24	23.10	22.99	23.15
		1	49	22.65	22.84	22.84
		25	0	21.92	21.99	22.01
		25	12	21.95	21.92	21.98
		25	25	21.94	21.93	21.99
		50	0	21.98	21.95	22.06
	16QAM	1	0	21.72	21.85	21.91
		1	24	22.05	22.18	22.14
		1	49	21.54	21.70	21.74
		12	0	22.18	22.21	22.27
		12	17	22.21	22.17	22.25
		12	36	21.81	21.90	21.90
		27	0	21.13	20.95	21.03

Band/BW	Modulation	RB Size	RB Offset	Low CH 18675	Mid CH 18900	High CH 19125
				Frequency 1857.5 MHz	Frequency 1880 MHz	Frequency 1902.5 MHz
2/ 15	QPSK	1	0	23.13	23.07	23.06
		1	37	23.12	22.98	23.11
		1	74	22.71	22.86	22.77
		36	0	21.86	21.98	21.90
		36	19	21.87	22.02	22.03
		36	39	22.01	22.03	22.09
		75	0	21.92	21.99	21.96
	16QAM	1	0	21.75	21.94	21.88
		1	37	21.99	22.12	22.11
		1	74	21.51	21.72	21.61
		12	0	22.19	22.24	22.19
		12	30	22.19	22.12	22.31
		12	61	21.86	21.99	21.96
		27	0	21.08	21.00	20.95



Band/BW	Modulation	RB Size	RB Offset	Low CH 18700	Mid CH 18900	High CH 19100
				Frequency 1860 MHz	Frequency 1880 MHz	Frequency 1900 MHz
2/ 20	QPSK	1	0	23.19	23.13	23.18
		1	50	23.20	23.12	<b>23.24</b>
		1	99	22.76	22.89	22.91
		50	0	21.99	22.01	22.02
		50	25	21.99	22.07	22.11
		50	50	22.05	22.05	22.14
		100	0	22.06	22.04	22.09
	16QAM	1	0	21.87	21.99	22.00
		1	50	22.12	22.19	22.19
		1	99	21.66	21.81	21.76
		12	0	22.32	22.32	22.34
		12	42	22.25	22.23	22.34
		12	86	21.92	22.03	21.99
		27	0	21.15	21.10	21.09



LTE BAND 25

Band/BW	Modulation	RB Size	RB Offset	Low CH 26047	Mid CH 26365	High CH 26683
				Frequency 1850.7 MHz	Frequency 1882.5 MHz	Frequency 1914.3 MHz
25/ 1.4	QPSK	1	0	22.88	22.91	22.86
		1	2	22.99	23.06	23.01
		1	5	22.68	22.87	22.67
		3	0	22.50	22.65	22.58
		3	1	22.69	22.76	22.65
		3	3	22.79	22.80	22.70
		6	0	21.75	21.87	21.81
	16QAM	1	0	21.67	21.69	21.68
		1	2	21.86	21.82	21.74
		1	5	21.49	21.51	21.45
		3	0	22.15	22.09	21.92
		3	1	22.02	22.13	21.95
		3	3	21.88	22.03	21.78
		6	0	20.68	20.71	20.74

Band/BW	Modulation	RB Size	RB Offset	Low CH 26055	Mid CH 26365	High CH 26675
				Frequency 1851.5 MHz	Frequency 1882.5 MHz	Frequency 1913.5 MHz
25/ 3	QPSK	1	0	23.02	22.89	22.79
		1	7	23.07	23.10	22.94
		1	14	22.79	22.91	22.65
		8	0	21.70	21.76	21.80
		8	3	21.92	22.01	21.87
		8	7	21.92	21.98	21.90
		15	0	21.79	21.83	21.86
	16QAM	1	0	21.77	21.66	21.66
		1	7	21.88	21.76	21.70
		1	14	21.57	21.51	21.52
		8	0	21.85	21.77	21.62
		8	3	21.71	21.78	21.59
		8	7	21.67	21.76	21.58
		15	0	20.79	20.82	20.77



Band/BW	Modulation	RB Size	RB Offset	Low CH 26065	Mid CH 26365	High CH 26665
				Frequency 1852.5 MHz	Frequency 1882.5 MHz	Frequency 1912.5 MHz
25/ 5	QPSK	1	0	22.88	22.96	22.86
		1	12	22.97	23.04	22.89
		1	24	22.72	22.82	22.77
		12	0	21.71	21.88	21.83
		12	6	21.96	22.03	21.89
		12	13	21.98	22.02	21.89
		25	0	21.74	21.83	21.86
	16QAM	1	0	21.70	21.72	21.62
		1	12	21.85	21.86	21.75
		1	24	21.55	21.58	21.58
		12	0	21.74	21.81	21.64
		12	6	21.79	21.82	21.58
		12	13	21.64	21.65	21.51
		25	0	20.73	20.72	20.69

Band/BW	Modulation	RB Size	RB Offset	Low CH 26090	Mid CH 26365	High CH 26640
				Frequency 1855 MHz	Frequency 1882.5 MHz	Frequency 1910 MHz
25/ 10	QPSK	1	0	23.00	22.94	22.87
		1	24	23.08	23.03	22.96
		1	49	22.67	22.86	22.64
		25	0	21.78	21.79	21.81
		25	12	21.89	21.97	21.93
		25	25	21.89	21.98	21.92
		50	0	21.86	21.89	21.85
	16QAM	1	0	21.69	21.75	21.73
		1	24	21.92	21.83	21.72
		1	49	21.44	21.53	21.53
		12	0	21.75	21.86	21.66
		12	17	21.70	21.80	21.70
		12	36	21.66	21.70	21.55
		27	0	20.79	20.71	20.69



Band/BW	Modulation	RB Size	RB Offset	Low CH 26115	Mid CH 26365	High CH 26615
				Frequency 1857.5 MHz	Frequency 1882.5 MHz	Frequency 1907.5 MHz
25/ 15	QPSK	1	0	22.91	22.88	22.78
		1	37	22.95	23.13	23.00
		1	74	22.78	22.88	22.71
		36	0	21.77	21.83	21.72
		36	19	21.98	22.06	21.81
		36	39	21.98	21.98	21.92
		75	0	21.85	21.86	21.89
	16QAM	1	0	21.64	21.69	21.62
		1	37	21.84	21.82	21.73
		1	74	21.57	21.52	21.48
		12	0	21.78	21.85	21.62
		12	30	21.76	21.85	21.62
		12	61	21.55	21.73	21.58
		27	0	20.68	20.78	20.81

Band/BW	Modulation	RB Size	RB Offset	Low CH 26140	Mid CH 26365	High CH 26590
				Frequency 1860 MHz	Frequency 1882.5 MHz	Frequency 1905 MHz
25/ 20	QPSK	1	0	23.03	22.97	22.91
		1	50	23.09	<b>23.14</b>	23.03
		1	99	22.82	22.92	22.78
		50	0	21.85	21.89	21.86
		50	25	22.04	22.07	21.96
		50	50	22.00	22.06	21.98
		100	0	21.89	21.93	21.90
	16QAM	1	0	21.79	21.77	21.74
		1	50	21.94	21.91	21.83
		1	99	21.59	21.65	21.60
		12	0	21.87	21.88	21.70
		12	42	21.82	21.87	21.72
		12	86	21.68	21.78	21.63
		27	0	20.82	20.85	20.83



**EIRP POWER (dBm)**

**LTE BAND 2**

**CHANNEL BANDWIDTH: 1.4MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	23.14	2.02	25.16	328.1	2
18900	1880.0	23.05	2.02	25.07	321.37	2
19193	1909.3	23.19	2.02	25.21	331.89	2

**CHANNEL BANDWIDTH: 1.4MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	22.21	2.02	24.23	264.85	2
18900	1880.0	22.31	2.02	24.33	271.02	2
19193	1909.3	22.28	2.02	24.3	269.15	2

**CHANNEL BANDWIDTH: 3MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	23.16	2.02	25.18	329.61	2
18900	1880.0	23.07	2.02	25.09	322.85	2
19185	1908.5	23.17	2.02	25.19	330.37	2

**CHANNEL BANDWIDTH: 3MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	22.23	2.02	24.25	266.07	2
18900	1880.0	22.29	2.02	24.31	269.77	2
19185	1908.5	22.29	2.02	24.31	269.77	2



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Test Report No.: W7L-231123W001RF02

**CHANNEL BANDWIDTH: 5MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	23.11	2.02	25.13	325.84	2
18900	1880.0	23.11	2.02	25.13	325.84	2
19175	1907.5	23.15	2.02	25.17	328.85	2

**CHANNEL BANDWIDTH: 5MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	22.23	2.02	24.25	266.07	2
18900	1880.0	22.29	2.02	24.31	269.77	2
19175	1907.5	22.29	2.02	24.31	269.77	2

**CHANNEL BANDWIDTH: 10MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	23.17	2.02	25.19	330.37	2
18900	1880.0	23	2.02	25.02	317.69	2
19150	1905.0	23.17	2.02	25.19	330.37	2

**CHANNEL BANDWIDTH: 10MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>C</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	22.21	2.02	24.23	264.85	2
18900	1880.0	22.21	2.02	24.23	264.85	2
19150	1905.0	22.27	2.02	24.29	268.53	2





**CHANNEL BANDWIDTH: 15MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	23.13	2.02	25.15	327.34	2
18900	1880.0	23.07	2.02	25.09	322.85	2
19125	1902.5	23.11	2.02	25.13	325.84	2

**CHANNEL BANDWIDTH: 15MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	22.19	2.02	24.21	263.63	2
18900	1880.0	22.24	2.02	24.26	266.69	2
19125	1902.5	22.31	2.02	24.33	271.02	2

**CHANNEL BANDWIDTH: 20MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	23.2	2.02	25.22	332.66	2
18900	1880	23.13	2.02	25.15	327.34	2
19100	1900	23.24	2.02	25.26	335.74	2

**CHANNEL BANDWIDTH: 20MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	22.32	2.02	24.34	271.64	2
18900	1880	22.32	2.02	24.34	271.64	2
19100	1900	22.34	2.02	24.36	272.9	2



LTE BAND 25

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	22.99	2.02	25.01	316.96	2
26365	1882.5	23.06	2.02	25.08	322.11	2
26683	1914.3	23.01	2.02	25.03	318.42	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	22.15	2.02	24.17	261.22	2
26365	1882.5	22.13	2.02	24.15	260.02	2
26683	1914.3	21.95	2.02	23.97	249.46	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	23.07	2.02	25.09	322.85	2
26365	1882.5	23.1	2.02	25.12	325.09	2
26675	1913.5	22.94	2.02	24.96	313.33	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	21.88	2.02	23.9	245.47	2
26365	1882.5	21.78	2.02	23.8	239.88	2
26675	1913.5	21.7	2.02	23.72	235.5	2



**CHANNEL BANDWIDTH: 5MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	22.97	2.02	24.99	315.5	2
26365	1882.5	23.04	2.02	25.06	320.63	2
26665	1912.5	22.89	2.02	24.91	309.74	2

**CHANNEL BANDWIDTH: 5MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	21.85	2.02	23.87	243.78	2
26365	1882.5	21.86	2.02	23.88	244.34	2
26665	1912.5	21.75	2.02	23.77	238.23	2

**CHANNEL BANDWIDTH: 10MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	23.08	2.02	25.1	323.59	2
26365	1882.5	23.03	2.02	25.05	319.89	2
26640	1910	22.96	2.02	24.98	314.77	2

**CHANNEL BANDWIDTH: 10MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	21.92	2.02	23.94	247.74	2
26365	1882.5	21.86	2.02	23.88	244.34	2
26640	1910	21.73	2.02	23.75	237.14	2



**CHANNEL BANDWIDTH: 15MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	22.95	2.02	24.97	314.05	2
26365	1882.5	23.13	2.02	25.15	327.34	2
26615	1907.5	23	2.02	25.02	317.69	2

**CHANNEL BANDWIDTH: 15MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	21.84	2.02	23.86	243.22	2
26365	1882.5	21.85	2.02	23.87	243.78	2
26615	1907.5	21.73	2.02	23.75	237.14	2

**CHANNEL BANDWIDTH: 20MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	23.09	2.02	25.11	324.34	2
26365	1882.5	23.14	2.02	25.16	328.1	2
26590	1905	23.03	2.02	25.05	319.89	2

**CHANNEL BANDWIDTH: 20MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T-LC</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	21.94	2.02	23.96	248.89	2
26365	1882.5	21.91	2.02	23.93	247.17	2
26590	1905	21.83	2.02	23.85	242.66	2



## 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 is equal to  $-13\text{dBm}$ .

### 3.2.2 TEST PROCEDURES

- a. The substitute 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 exports the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved the receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G
- c.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .

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

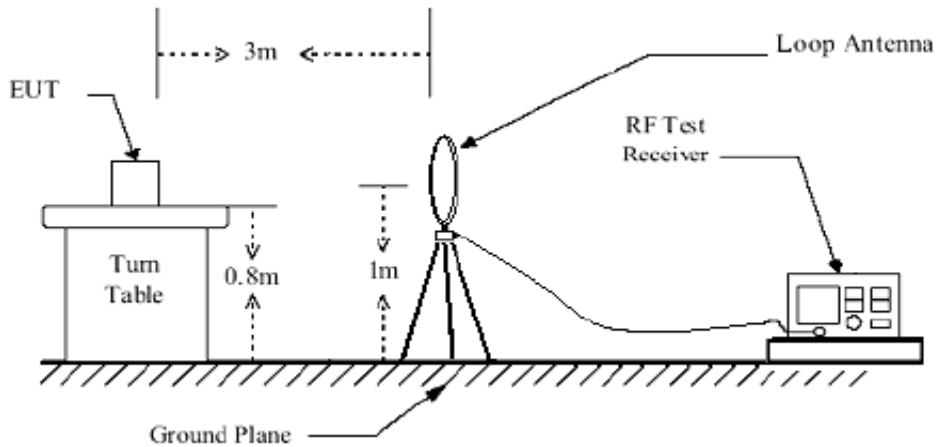
### 3.2.3 DEVIATION FROM TEST STANDARD

No deviation

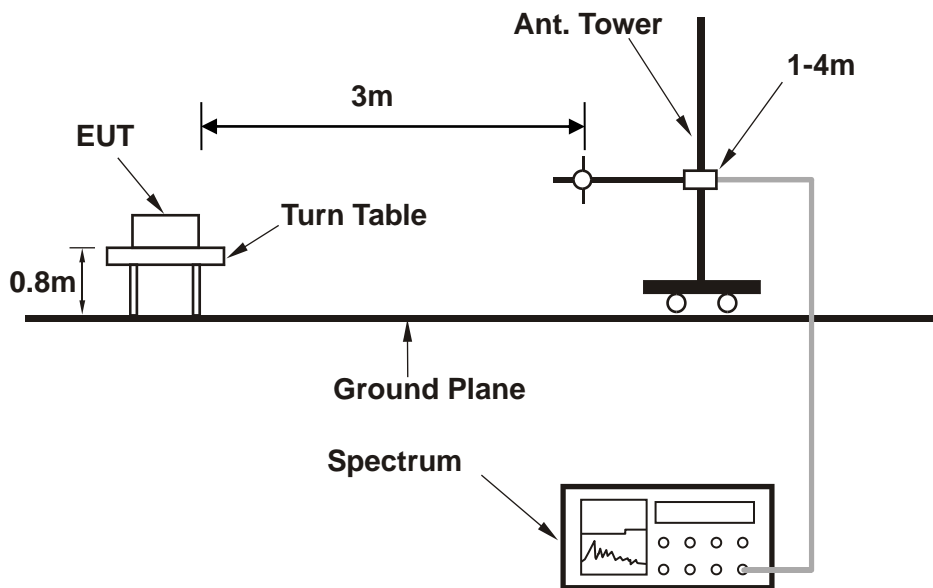


### 3.2.4 TEST SETUP

#### < Frequency Range below 30MHz >

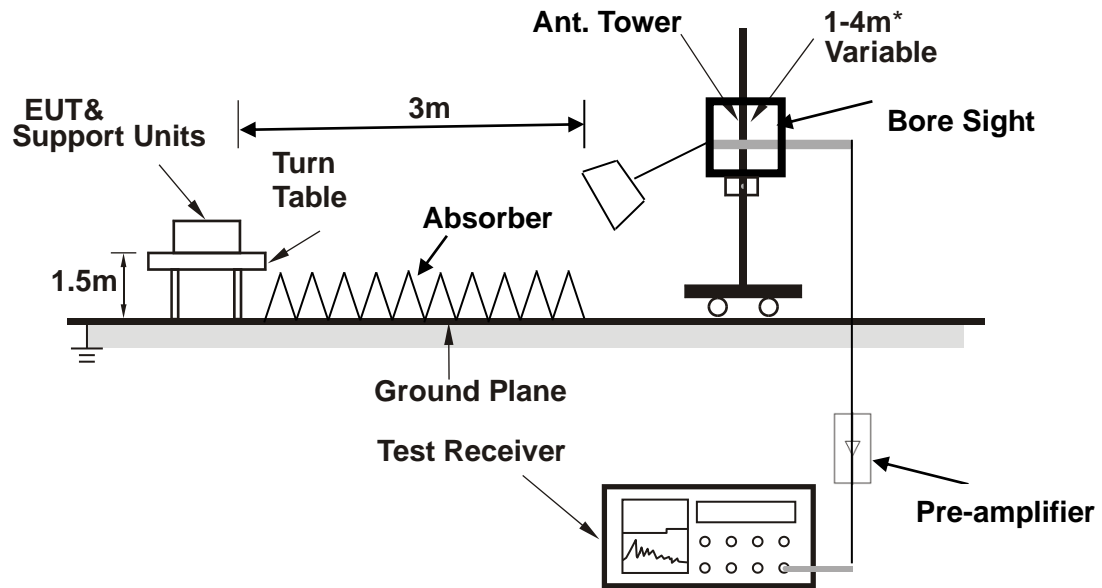


#### < Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



**Note:** Above 1G is a directional antenna

Depending on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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



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### 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

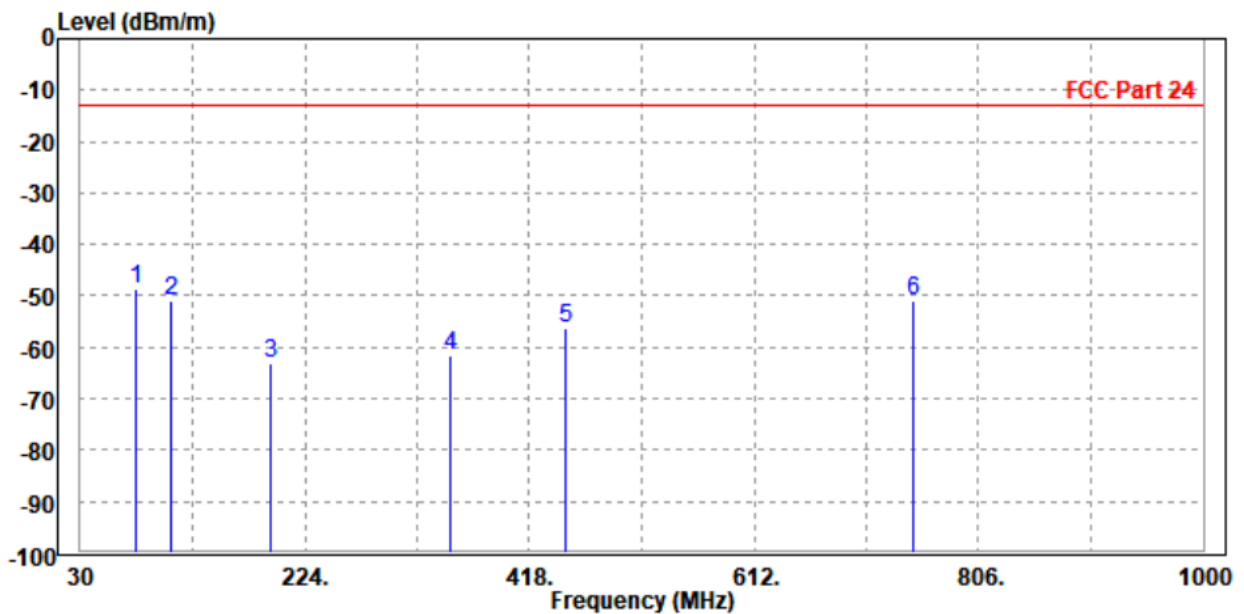
30 MHz – 1GHz data:

LTE Band 25:

CHANNEL BANDWIDTH: 10MHz / QPSK

<b>MODE</b>	TX channel 26640	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	77.530	-48.67	-36.08	-13.00	-35.67	-12.59	Peak	Horizontal
2	108.570	-50.83	-36.68	-13.00	-37.83	-14.15	Peak	Horizontal
3	193.930	-62.94	-47.28	-13.00	-49.94	-15.66	Peak	Horizontal
4	350.100	-61.63	-53.77	-13.00	-48.63	-7.86	Peak	Horizontal
5	450.010	-56.33	-50.37	-13.00	-43.33	-5.96	Peak	Horizontal
6	749.740	-51.09	-55.73	-13.00	-38.09	4.64	Peak	Horizontal





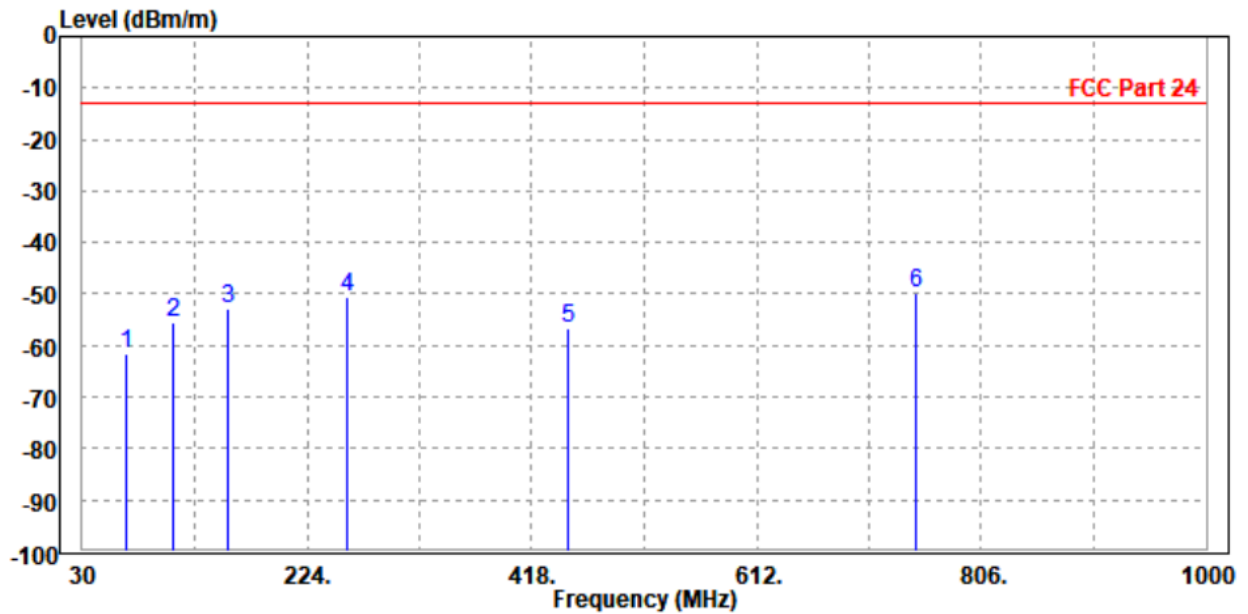


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Test Report No.: W7L-231123W001RF02

<b>MODE</b>	TX channel 26640	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	67.830	-61.45	-41.38	-13.00	-48.45	-20.07	Peak	Vertical
2	108.570	-55.40	-38.98	-13.00	-42.40	-16.42	Peak	Vertical
3	156.100	-52.85	-41.33	-13.00	-39.85	-11.52	Peak	Vertical
4	258.920	-50.58	-46.90	-13.00	-37.58	-3.68	Peak	Vertical
5	450.010	-56.69	-51.99	-13.00	-43.69	-4.70	Peak	Vertical
6 PP	749.740	-49.87	-52.40	-13.00	-36.87	2.53	Peak	Vertical





**BUREAU  
VERITAS**

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**ABOVE 1GHz DATA**

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

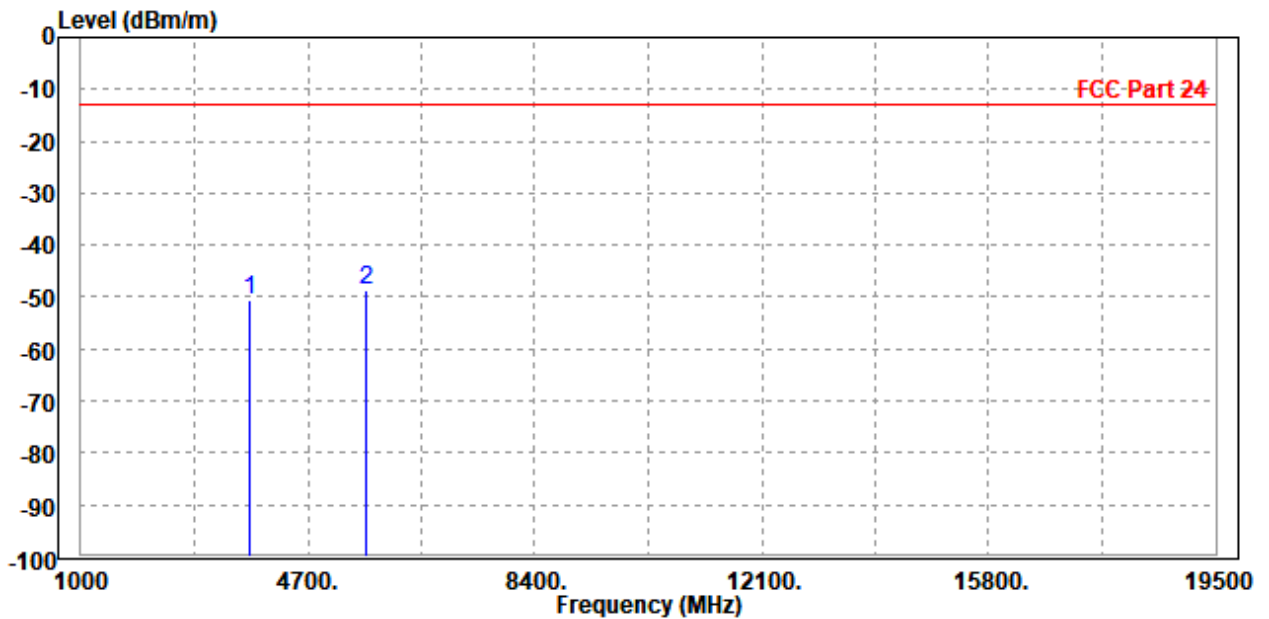
**WORST-CASE DATA**

**LTE Band 25**

**CHANNEL BANDWIDTH: 1.4MHz / QPSK**

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-50.41	-58.76	-13.00	-37.41	8.35	Peak	Horizontal
2 PP	5643.500	-48.57	-60.38	-13.00	-35.57	11.81	Peak	Horizontal



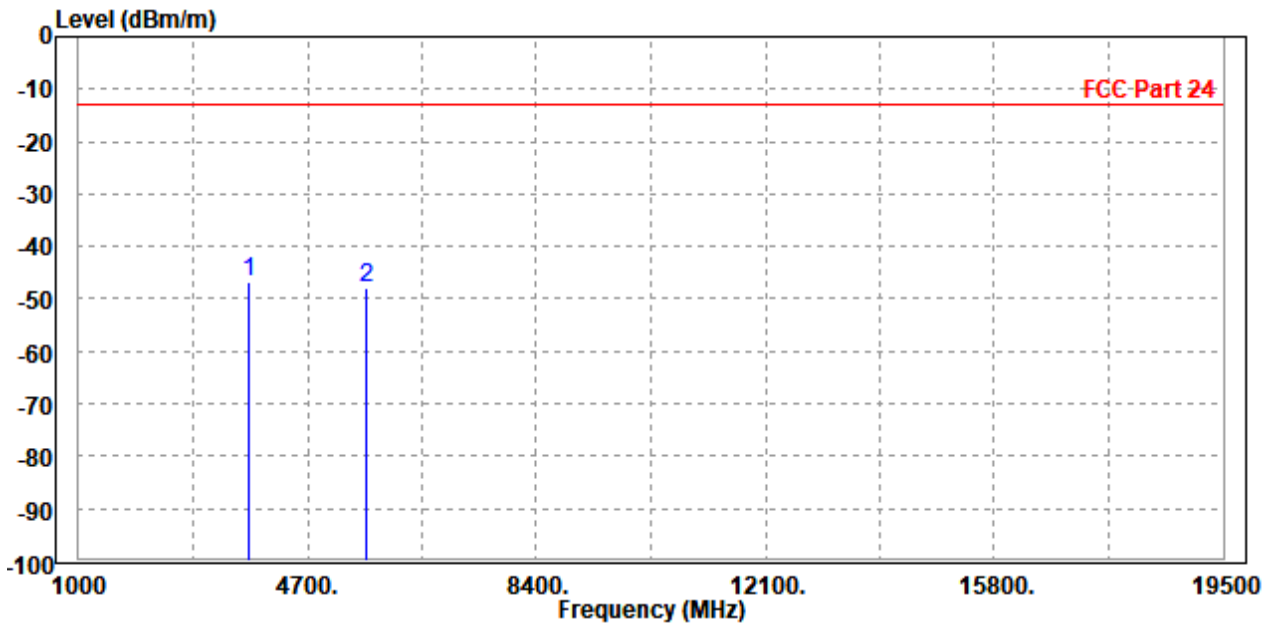


**BUREAU  
VERITAS**

Test Report No.: W7L-231123W001RF02

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3756.500	-46.60	-55.23	-13.00	-33.60	8.63	Peak	Vertical
2	5643.500	-47.83	-60.15	-13.00	-34.83	12.32	Peak	Vertical





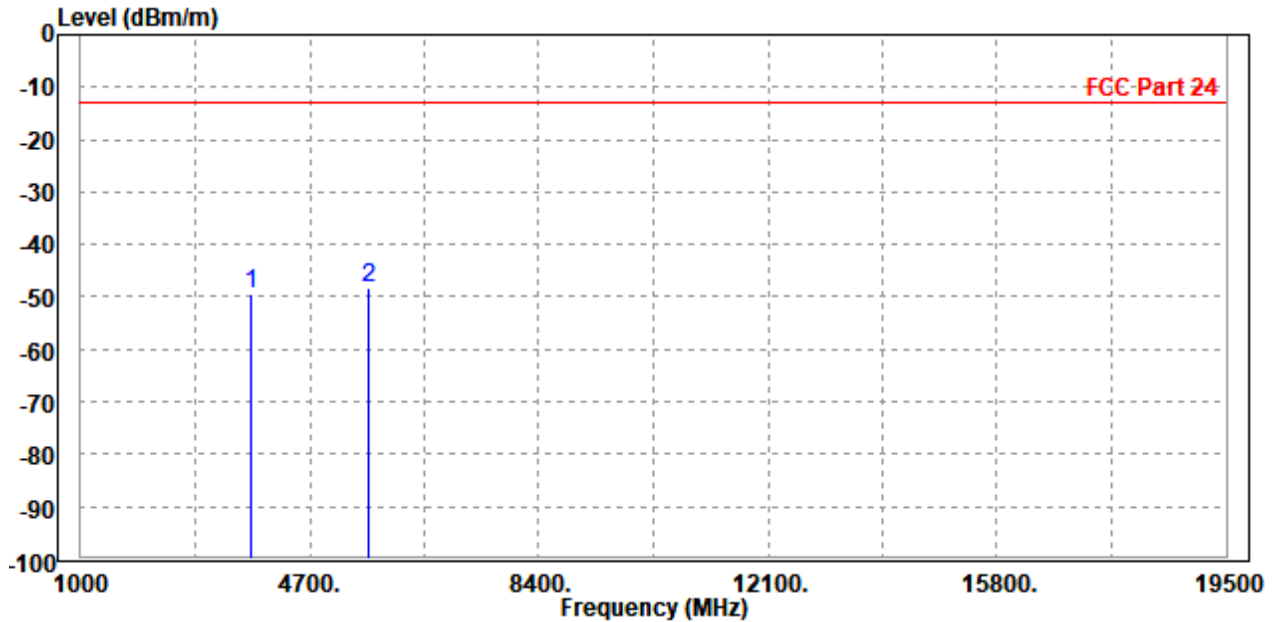
**BUREAU  
VERITAS**

Test Report No.: W7L-231123W001RF02

CHANNEL BANDWIDTH: 3MHz / QPSK

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3756.500	-49.50	-57.85	-13.00	-36.50	8.35	Peak	Horizontal
2 PP	5647.500	-48.30	-60.11	-13.00	-35.30	11.81	Peak	Horizontal



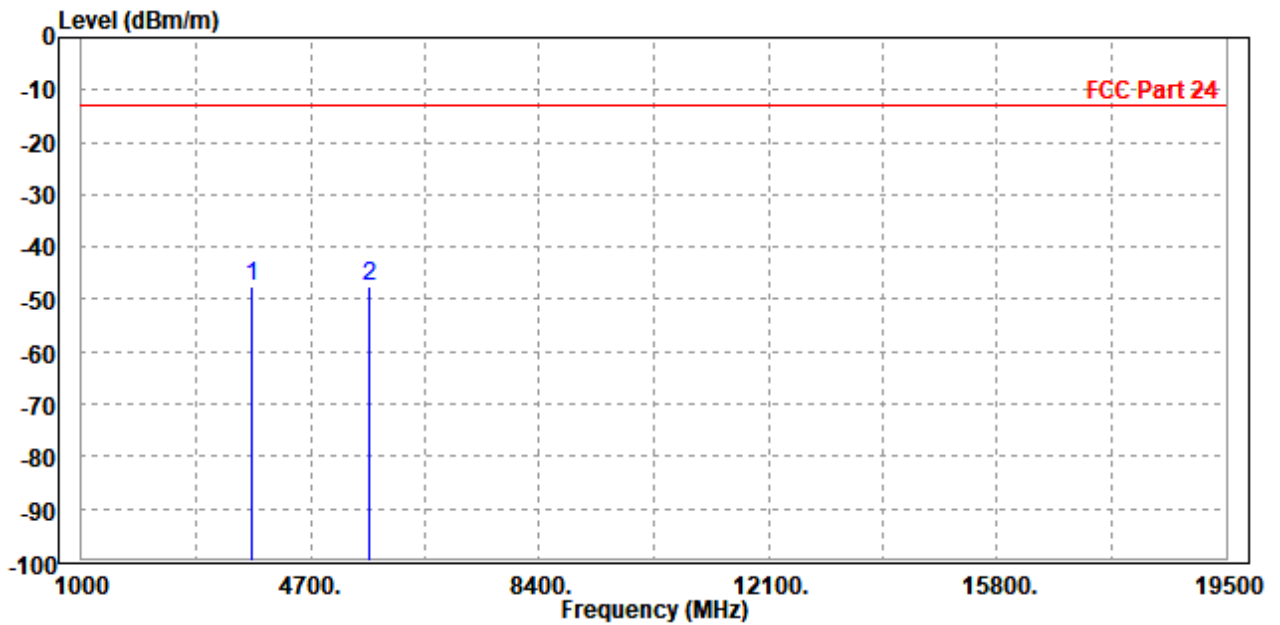


**BUREAU  
VERITAS**

Test Report No.: W7L-231123W001RF02

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3765.000	-47.39	-56.02	-13.00	-34.39	8.63	Peak	Vertical
2	5643.500	-47.48	-59.80	-13.00	-34.48	12.32	Peak	Vertical





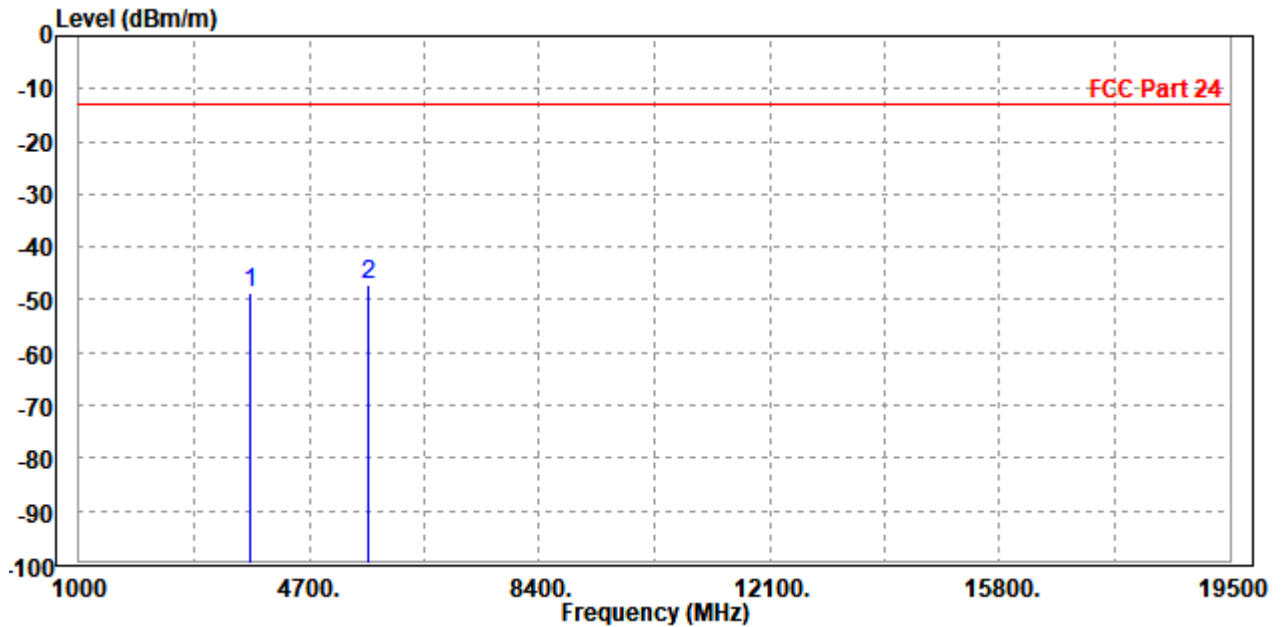
**BUREAU  
VERITAS**

Test Report No.: W7L-231123W001RF02

**CHANNEL BANDWIDTH: 5MHz / QPSK**

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3756.500	-48.72	-57.07	-13.00	-35.72	8.35	Peak	Horizontal
2 PP	5647.500	-47.03	-58.84	-13.00	-34.03	11.81	Peak	Horizontal



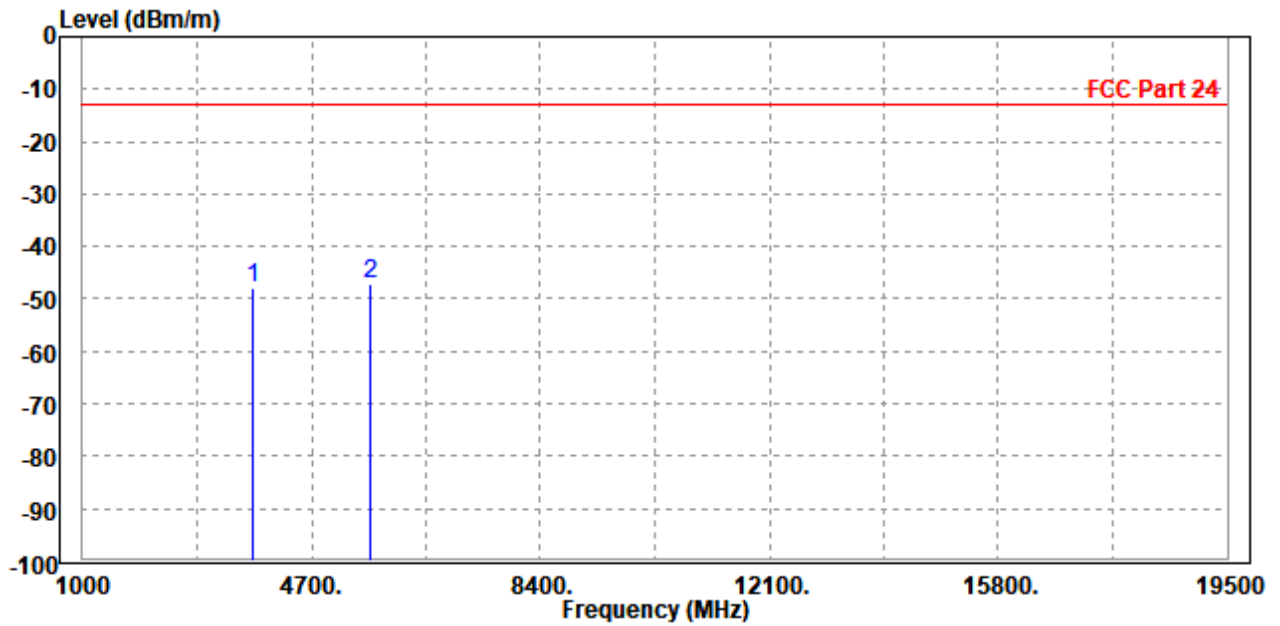


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VERITAS**

Test Report No.: W7L-231123W001RF02

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-48.06	-56.69	-13.00	-35.06	8.63	Peak	Vertical
2	PP 5643.500	-47.02	-59.34	-13.00	-34.02	12.32	Peak	Vertical





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VERITAS**

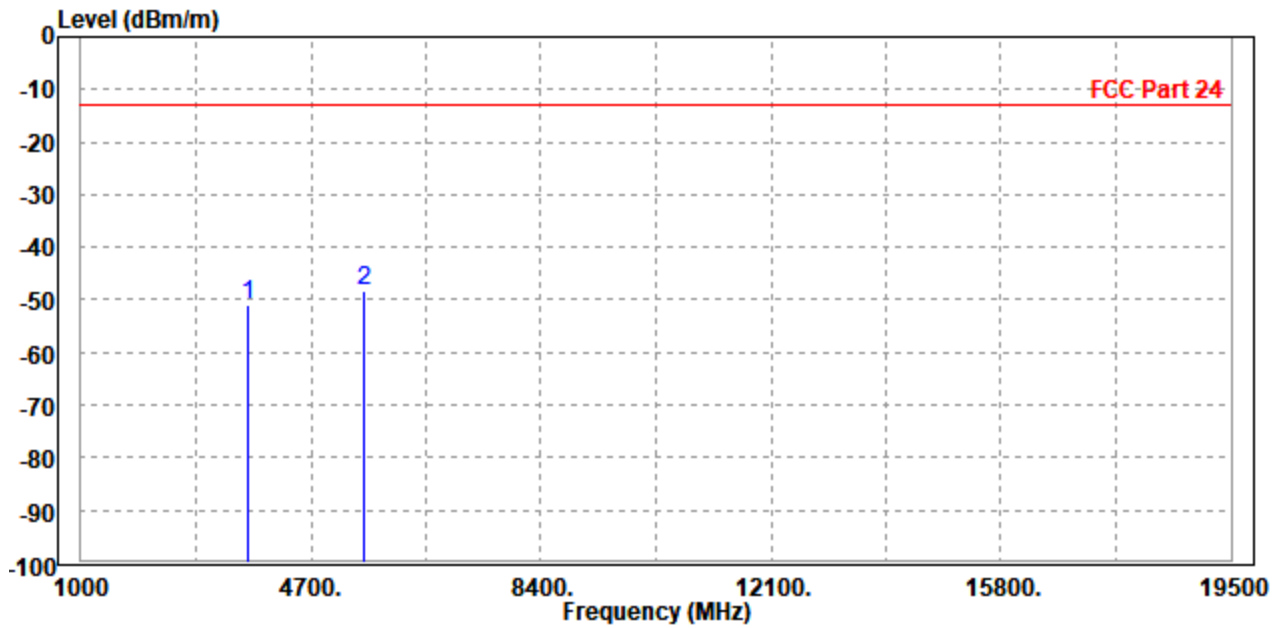
Test Report No.: W7L-231123W001RF02

**CHANNEL BANDWIDTH: 10MHz / QPSK**

**CH26090**

<b>MODE</b>	TX channel 26090	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3701.000	-50.91	-59.31	-13.00	-37.91	8.40	Peak	Horizontal
2 PP	5565.000	-48.34	-60.15	-13.00	-35.34	11.81	Peak	Horizontal





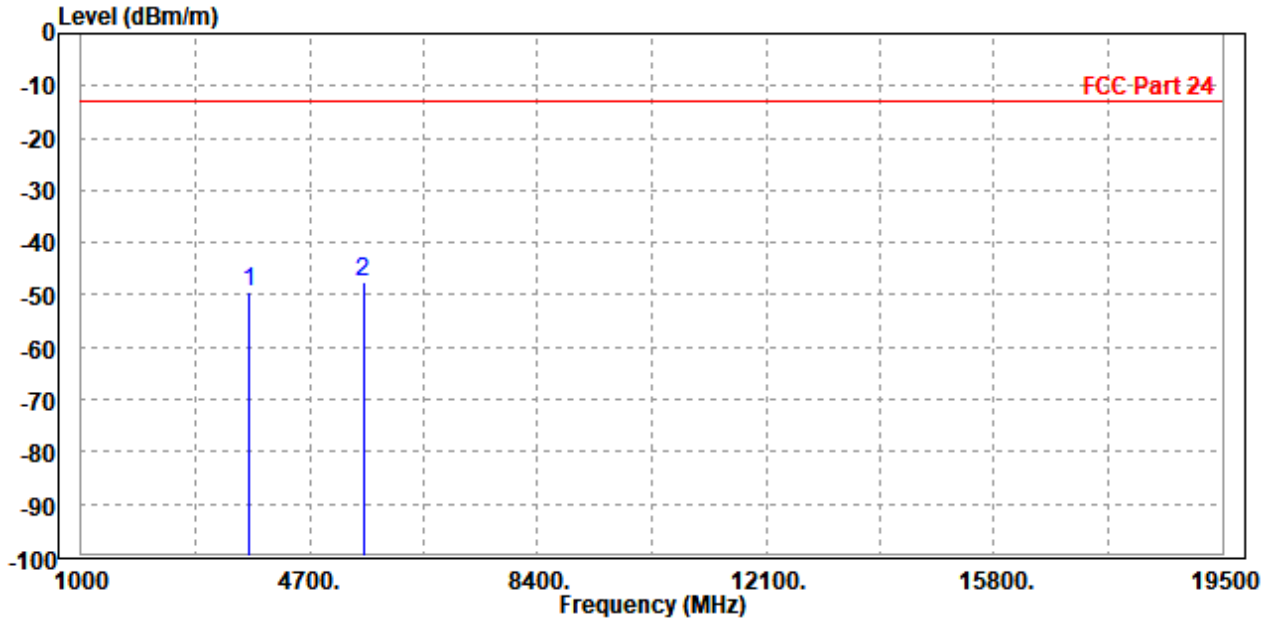


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Test Report No.: W7L-231123W001RF02

<b>MODE</b>	TX channel 26090	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3710.000	-49.29	-57.92	-13.00	-36.29	8.63	Peak	Vertical
2	PP 5569.500	-47.42	-59.75	-13.00	-34.42	12.33	Peak	Vertical





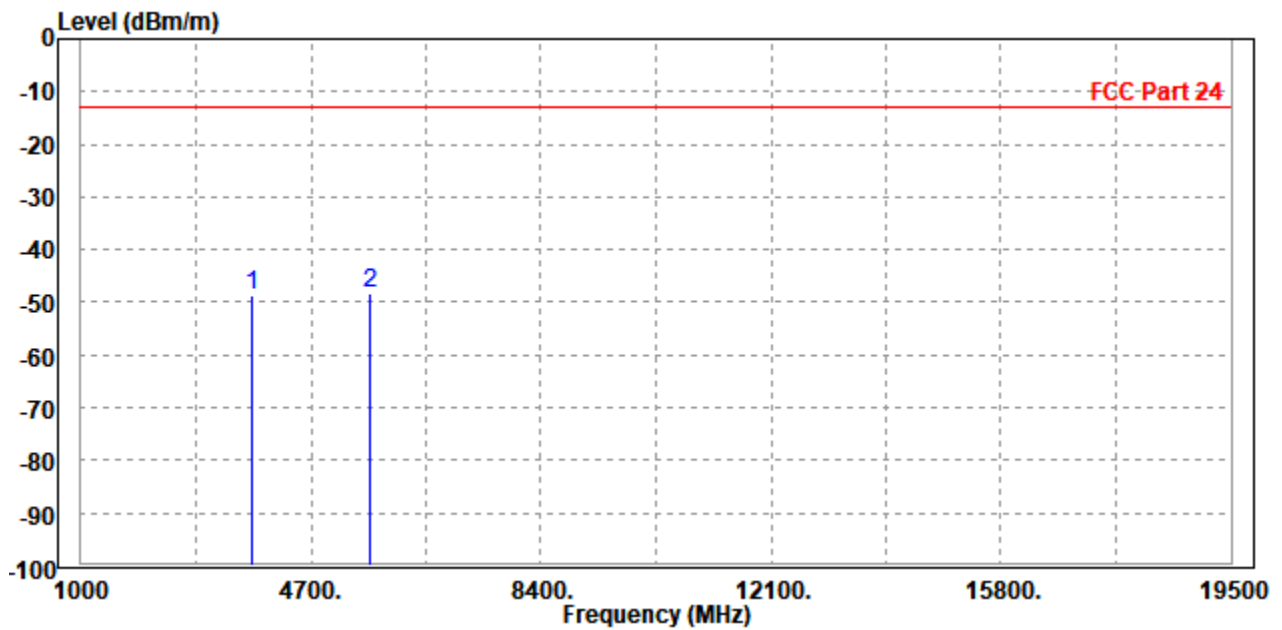
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Test Report No.: W7L-231123W001RF02

CH26365

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-48.86	-57.21	-13.00	-35.86	8.35	Peak	Horizontal
2 PP	5643.500	-48.21	-60.02	-13.00	-35.21	11.81	Peak	Horizontal



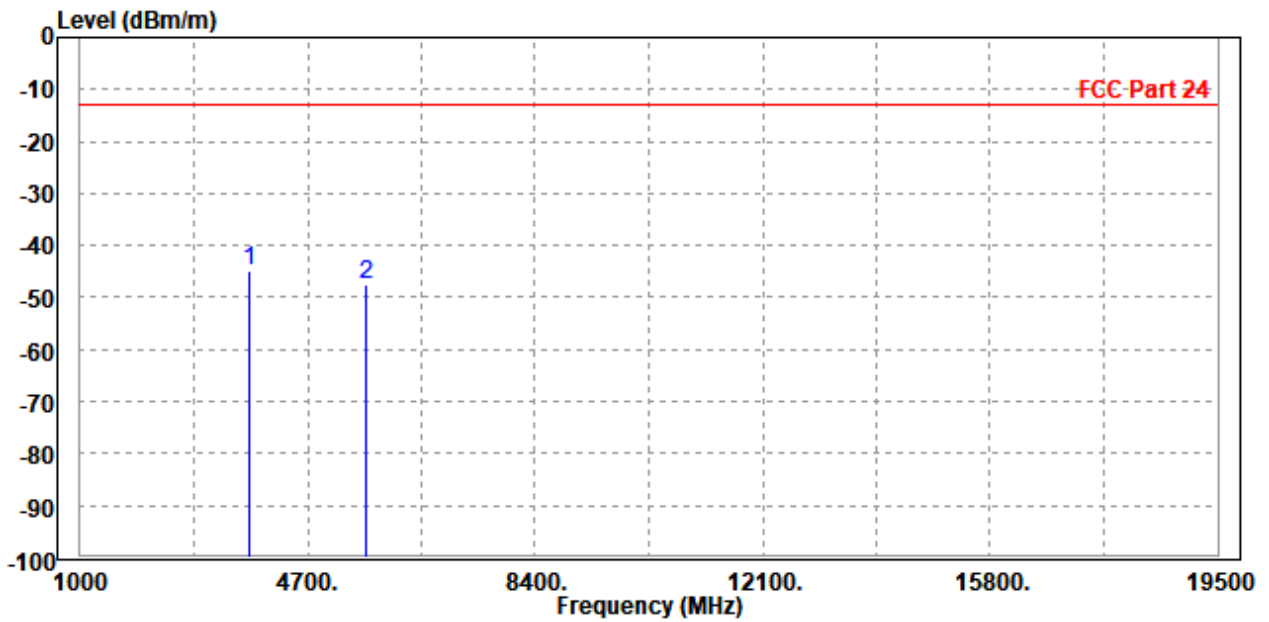


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VERITAS**

Test Report No.: W7L-231123W001RF02

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3756.500	-44.77	-53.40	-13.00	-31.77	8.63	Peak	Vertical
2	5647.500	-47.42	-59.74	-13.00	-34.42	12.32	Peak	Vertical





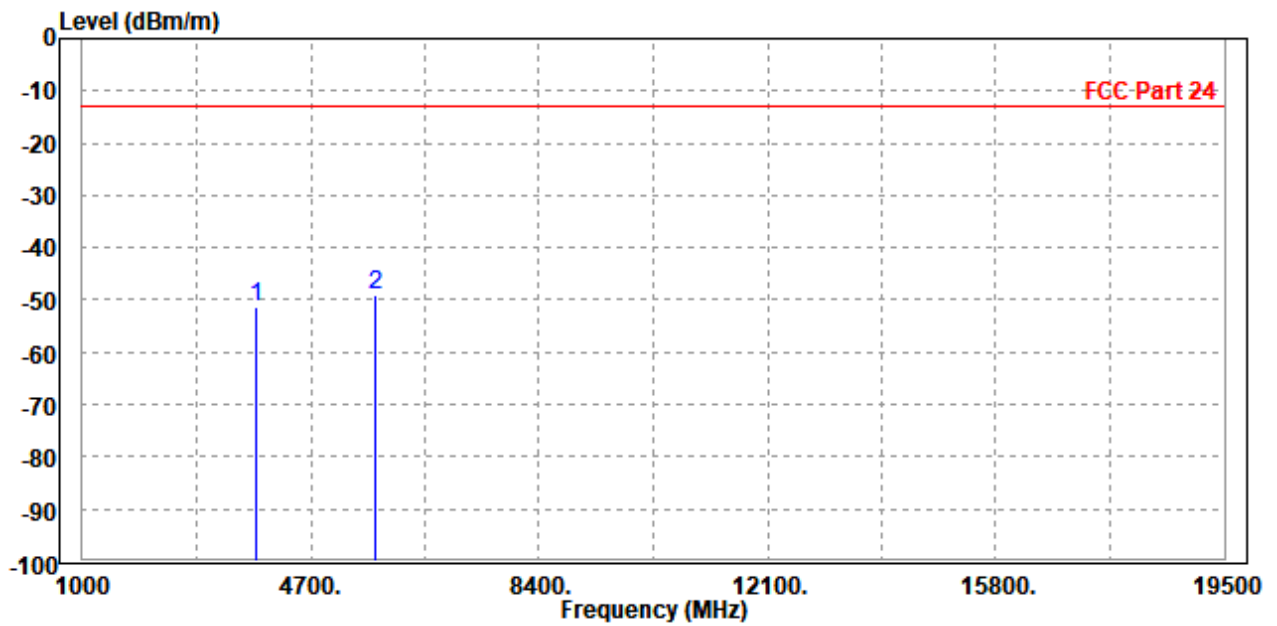
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Test Report No.: W7L-231123W001RF02

CH26640

<b>MODE</b>	TX channel 26640	<b>FREQUENCY RANGE</b>	Above 1000MHz
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3820.000	-51.27	-59.57	-13.00	-38.27	8.30	Peak	Horizontal
2	PP 5736.000	-48.90	-60.72	-13.00	-35.90	11.82	Peak	Horizontal



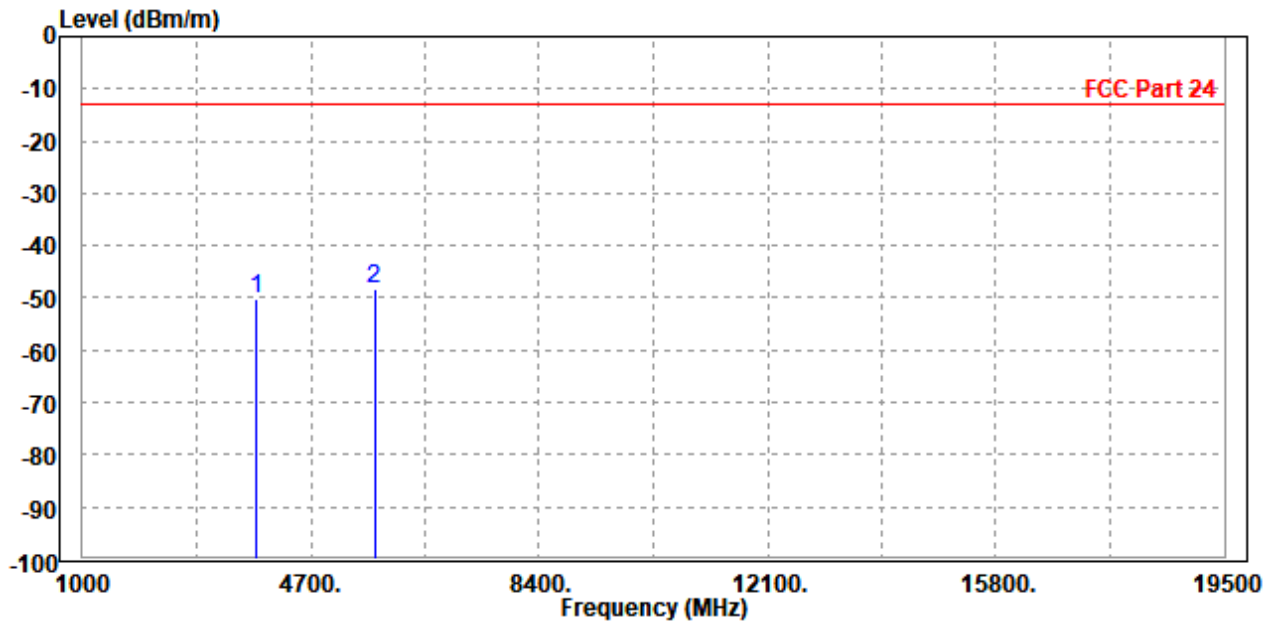


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Test Report No.: W7L-231123W001RF02

MODE	TX channel 26640	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	3812.000	-50.28	-58.91	-13.00	-37.28	8.63	Peak	Vertical
2	PP 5730.000	-48.26	-60.57	-13.00	-35.26	12.31	Peak	Vertical





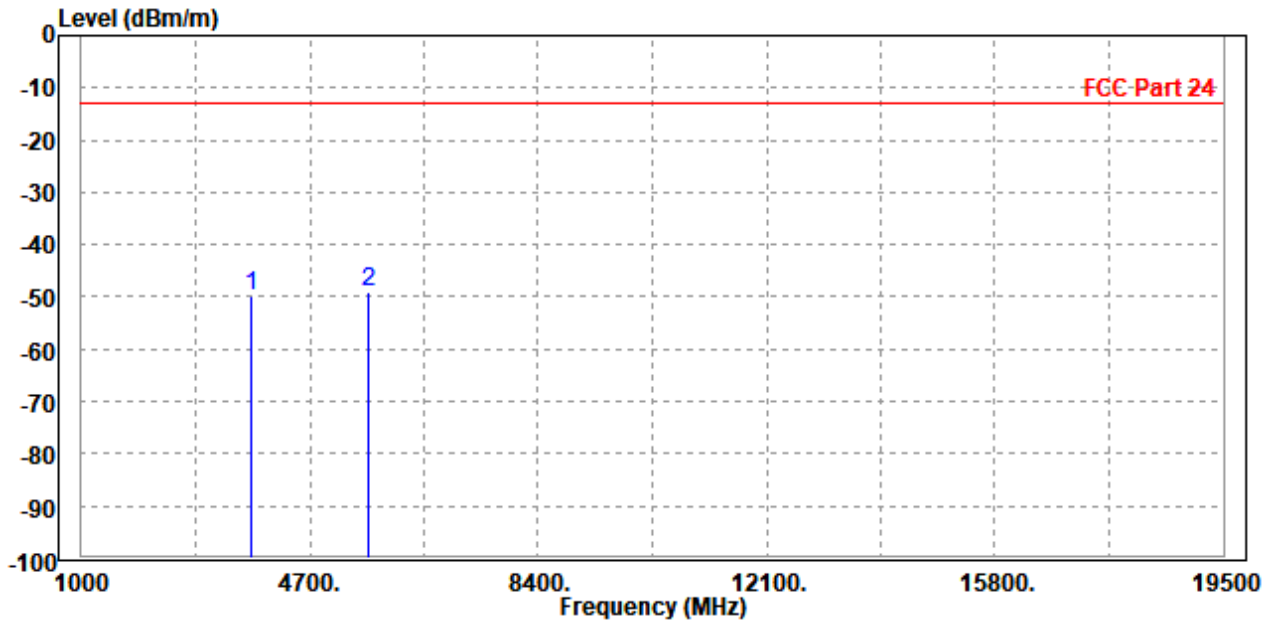
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Test Report No.: W7L-231123W001RF02

**CHANNEL BANDWIDTH: 15MHz / QPSK**

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-49.91	-58.26	-13.00	-36.91	8.35	Peak	Horizontal
2 PP	5643.500	-48.90	-60.71	-13.00	-35.90	11.81	Peak	Horizontal



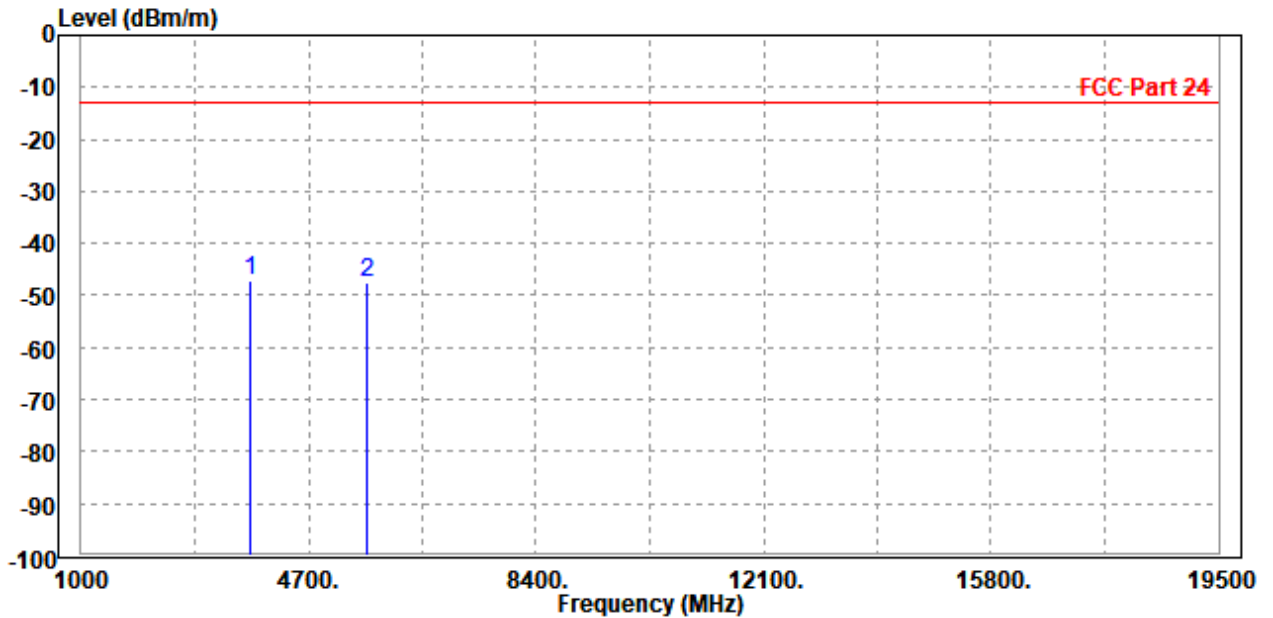


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Test Report No.: W7L-231123W001RF02

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	PP 3756.500	-47.15	-55.78	-13.00	-34.15	8.63	Peak	Vertical
2	5647.500	-47.58	-59.90	-13.00	-34.58	12.32	Peak	Vertical





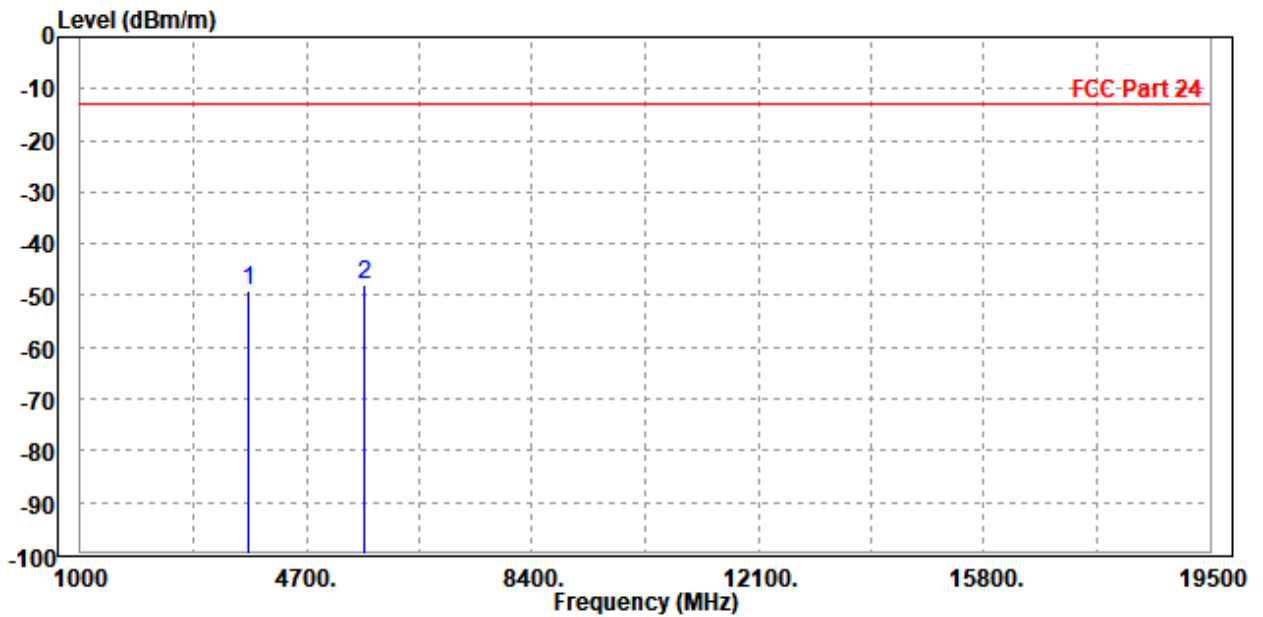
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Test Report No.: W7L-231123W001RF02

**CHANNEL BANDWIDTH: 20MHz / QPSK**

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3756.500	-49.00	-57.35	-13.00	-36.00	8.35	Peak	Horizontal
2 PP	5647.500	-48.03	-59.84	-13.00	-35.03	11.81	Peak	Horizontal





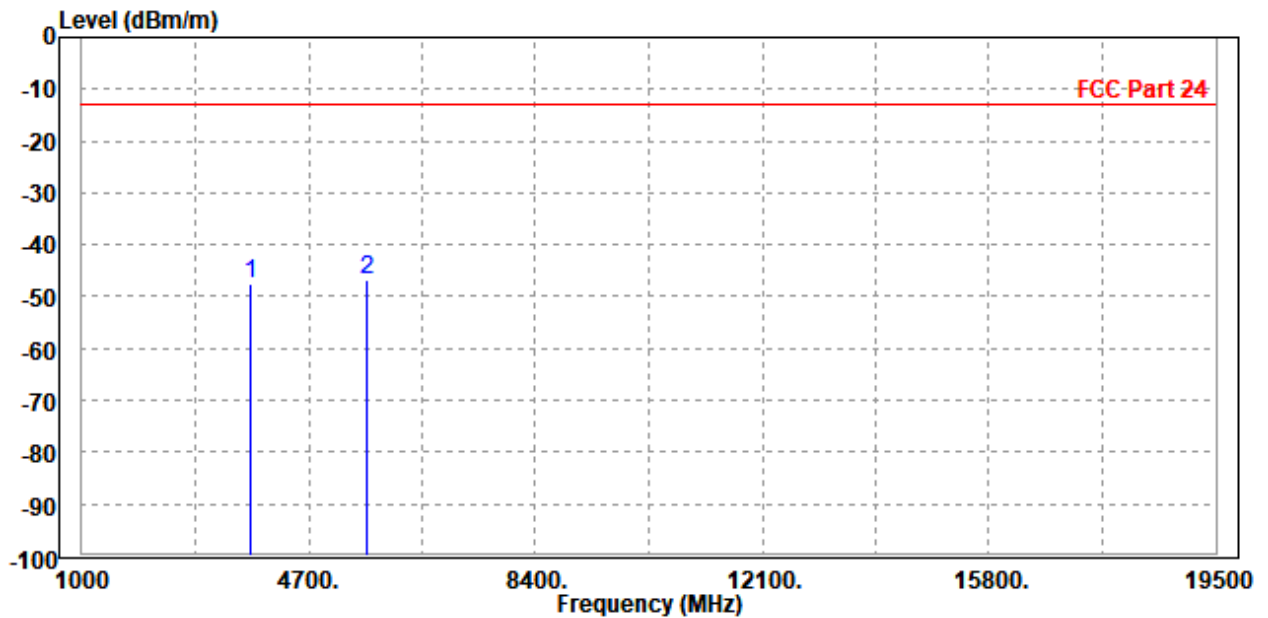


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Test Report No.: W7L-231123W001RF02

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

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3765.000	-47.55	-56.18	-13.00	-34.55	8.63	Peak	Vertical
2 PP	5643.500	-46.62	-58.94	-13.00	-33.62	12.32	Peak	Vertical





Test Report No.: W7L-231123W001RF02

## 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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Test Report No.: W7L-231123W001RF02

## 5 INFORMATION ON THE TESTING LABORATORIES

We, **Huarui 7layers High Technology (Suzhou) Co., Ltd.** were founded in 2020 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:

### **Suzhou EMC/RF Lab:**

Tel: +86 (0557) 368 1008



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Test Report No.: W7L-231123W001RF02

## **6 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--**