

FCC TEST REPORT

(PART 27)

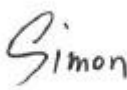
Applicant:	Telit Communications SpA
Address:	Viale Stazione di Prosecco 5/b

Manufacturer or Supplier:	Telit Communications SpA
Address:	Viale Stazione di Prosecco 5/b
Product:	Module
Brand Name:	Telit
Model Name:	LE910S1-ELG
FCC ID:	RI7LE910S1ELG
Date of tests:	Nov. 25, 2021 ~ Dec. 08, 2021

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

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

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

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Dec. 08, 2021	Date: Dec. 08, 2021

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P21110027RF03	Original release	Dec. 08, 2021

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2		
STANDARD SECTION	1.1.1.1.1 TEST TYPE AND LIMIT	RESULT
2.1046 27.50(h)(2)	Equivalent Isotropically Radiated Power	Compliance
2.1055 27.54	Frequency Stability	Compliance
2.1049 27.53(m)(6)	Occupied Bandwidth	Compliance
2.1051 27.53(m)(4)(6)	Band Edge Measurements	Compliance
2.1051 27.53(m)(4)(6)	Conducted Spurious Emissions	Compliance
2.1053 27.53(m)(4)(6)	Radiated Spurious Emissions	Compliance

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Frequency Stability	±76.97Hz
Radiated emissions & Radiated Power (30MHz~1GMHz)	±4.98dB
Radiated emissions & Radiated Power (1GMHz ~6GMHz)	±4.70dB
Radiated emissions (6GMHz ~18GMHz)	±4.60dB
Radiated emissions (18GMHz ~40GMHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,21	Apr. 21,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22
Bilog Antenna 2	ETS-LINDGREN	3143B	00161965	Mar. 05,21	Mar. 04,22
Horn Antenna 2	ETS-LINDGREN	3117	00168692	Apr. 02,21	Apr. 01,22
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 25,21	Feb. 24,22
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 20,21	May. 19,22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,22	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V 7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
Power Meter	Anritsu	ML2495A	1506002	Apr. 07,21	Apr. 06,22
Power Sensor	Anritsu	MA2411B	1339352	May. 07,21	May. 06,22
Temperature Chamber	ESPEC	SH-242	93000855	Jun. 02,21	Jun. 01,22
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 05,21	Mar. 04,22
Power Divider	MCLI/USA	PS2-15	24880	N/A	N/A

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

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Module	
BRAND NAME	Telit	
MODEL NAME	LE910S1-ELG	
NOMINAL VOLTAGE	12Vdc(adapter or host equipment) 3.8Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	LTE	QPSK, 16QAM
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 7 Channel Bandwidth: 5MHz	2502.5MHz ~ 2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505MHz ~ 2565MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510MHz ~ 2560MHz
EMISSION DESIGNATOR	LTE Band 4 Channel Bandwidth: 1.4MHz	QPSK: 1M10G7D 16QAM: 1M10W7D
	LTE Band 4 Channel Bandwidth: 3MHz	QPSK: 2M70G7D 16QAM: 2M69W7D
	LTE Band 4 Channel Bandwidth: 5MHz	QPSK: 4M50G7D 16QAM: 4M51W7D
	LTE Band 4 Channel Bandwidth: 10MHz	QPSK: 8M98G7D 16QAM: 4M93W7D
	LTE Band 4 Channel Bandwidth: 15MHz	QPSK: 13M5G7D 16QAM: 5M03W7D
	LTE Band 4 Channel Bandwidth: 20MHz	QPSK: 17M9G7D 16QAM: 5M14W7D

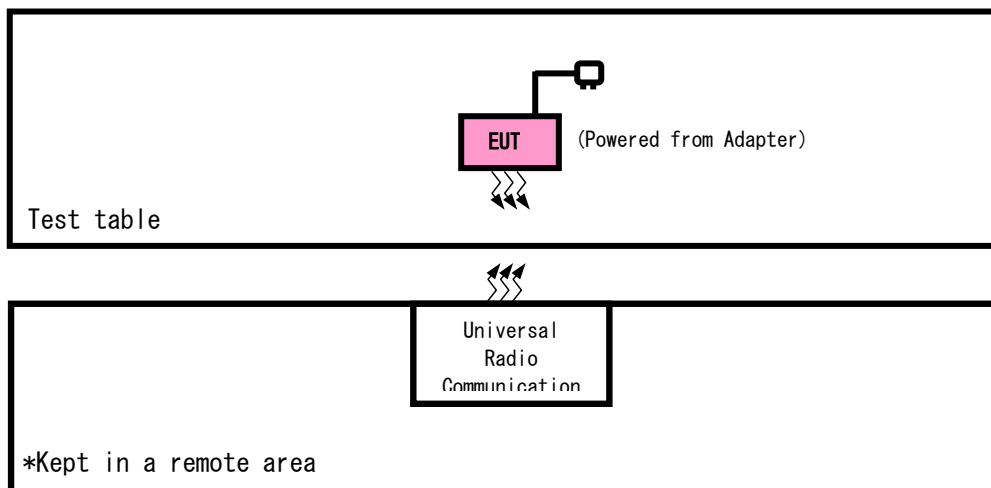
	LTE Band 7 Channel Bandwidth: 5MHz	QPSK: 4M51G7D 16QAM: 4M51W7D
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK: 8M98G7D 16QAM: 4M95W7D
	LTE Band 7 Channel Bandwidth: 15MHz	QPSK: 13M5G7D 16QAM: 5M04W7D
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK: 17M9G7D 16QAM: 5M15W7D
MAX. EIRP POWER	LTE Band 4 Channel Bandwidth: 1.4MHz	325.84mW
	LTE Band 4 Channel Bandwidth: 3MHz	327.34mW
	LTE Band 4 Channel Bandwidth: 5MHz	323.59mW
	LTE Band 4 Channel Bandwidth: 10MHz	325.84mW
	LTE Band 4 Channel Bandwidth: 15MHz	325.84mW
	LTE Band 4 Channel Bandwidth: 20MHz	328.9mW
	LTE Band 7 Channel Bandwidth: 5MHz	321.37mW
	LTE Band 7 Channel Bandwidth: 10MHz	323.59mW
	LTE Band 7 Channel Bandwidth: 15MHz	323.59mW
	LTE Band 7 Channel Bandwidth: 20MHz	326.59mW
ANTENNA TYPE	External Antenna with 2.14dBi gain for LTE B4/B7	
HW VERSION	1.0	
SW VERSION	MOK.000001	
IMEI	351626109993580/351626109993591	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	
EXTREME TEMPERATURE	-40-85 °C	
EXTREME VOLTAGE	3.4V - 4.2V	

NOTE:

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

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	1.1.1.1.1.2DESCRIPTION
A	EUT + Adapter + USB Cable with LTE link
B	EUT + Battery with LTE link

LTE BAND 4 MODE

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

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

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

LTE BAND 7 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDT H	MODULATION	MODE
B	EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	1 RB / 0RB Offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	20775 to 21425	20775, 21425	5MHz	QPSK	1 RB / 0 RB Offset
		20800 to 21400	20800, 21400	10MHz	QPSK	1 RB / 0RB Offset
		20825 to 21375	20825, 21375	15MHz	QPSK	1 RB / 0 RB Offset
		20850 to 21350	20850, 21350	20MHz	QPSK	1 RB / 0 RB Offset
B	OCCUPIED BANDWIDTH	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM	75 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	100 RB / 0 RB Offset
B	BAND EDGE	20775 to 21425	20775	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
			21425	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		20800 to 21400	20800	10MHz	QPSK, 16QAM	1 RB / 24 RB Offset
			21400	10MHz	QPSK, 16QAM	25 RB / 0 RB Offset
		20825 to 21375	20825	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
			21375	15MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		20850 to 21350	20850	20MHz	QPSK, 16QAM	1 RB / 49 RB Offset
			21350	20MHz	QPSK, 16QAM	50 RB / 0 RB Offset
		20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB Offset
			20800, 21100, 21400	10MHz	QPSK	1 RB / 0 RB Offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK	1 RB / 0 RB Offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB / 0 RB Offset
A	RADIATED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB Offset
		20800 to 21400	21100	10MHz	QPSK	1 RB / 0 RB Offset
		20825 to 21375	21100	15MHz	QPSK	1 RB / 0 RB Offset
		20850 to 21350	21100	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
ERP	23deg. C, 70%RH	DC3.8V	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC3.8V	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC3.8V	James Fu
BAND EDGE	23deg. C, 70%RH	DC3.8V	James Fu
CONDCUDED EMISSION	23deg. C, 70%RH	DC3.8V	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC3.8V	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC3.8V	James Fu



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2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC 47 CFR Part 2

FCC 47 CFR Part 27

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

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

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

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

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

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

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

Where:

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

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

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

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

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

CONDUCTED POWER MEASUREMENT:

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

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

AVERAGE CONDUCTED OUTPUT POWER (dBm)

LTE Band 4

Band/BW	Modulation	RB Size	RB Offset	Low CH 19957	Mid CH 20175	High CH 20393	MPR
				Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz	
4/ 1.4	QPSK	1	0	22.82	22.99	22.67	0
		1	2	22.69	22.83	22.57	0
		1	5	22.67	22.79	22.51	0
		3	0	22.63	22.71	22.57	0
		3	1	22.42	22.61	22.27	0
		3	3	22.39	22.49	22.28	0
		6	0	21.20	21.28	21.06	1
	16QAM	1	0	22.09	22.25	21.95	1
		1	2	21.78	21.87	21.69	1
		1	5	21.48	21.65	21.44	1
		3	0	22.44	22.60	22.37	1
		3	1	22.32	22.54	22.20	1
		3	3	21.94	22.10	21.92	1
		6	0	20.39	20.55	20.22	2
	64QAM	1	0	22.82	22.99	22.67	0
		1	2	22.69	22.83	22.57	0
		1	5	22.67	22.79	22.51	0
		3	0	22.63	22.71	22.57	0
		3	1	22.42	22.61	22.27	0
		3	3	22.39	22.49	22.28	0
		6	0	21.20	21.28	21.06	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 19965	Mid CH 20175	High CH 20385	MPR
				Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz	
4/ 3	QPSK	1	0	22.84	23.01	22.66	0
		1	7	22.65	22.84	22.57	0
		1	14	22.63	22.79	22.51	0
		8	0	21.92	22.04	21.87	1
		8	3	21.35	21.61	21.29	1
		8	7	21.36	21.56	21.32	1
		15	0	21.17	21.29	21.00	1
	16QAM	1	0	22.06	22.31	21.98	1
		1	7	21.75	21.90	21.67	1
		1	14	21.51	21.65	21.44	1
		8	0	21.40	21.61	21.37	2
		8	3	21.37	21.49	21.23	2
		8	7	20.96	21.08	20.88	2
		15	0	20.39	20.49	20.25	2
	64QAM	1	0	22.84	23.01	22.66	0
		1	7	22.65	22.84	22.57	0
		1	14	22.63	22.79	22.51	0
		8	0	21.92	22.04	21.87	1
		8	3	21.35	21.61	21.29	1
		8	7	21.36	21.56	21.32	1
		15	0	21.17	21.29	21.00	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 19975	Mid CH 20175	High CH 20375	MPR
				Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz	
4/ 5	QPSK	1	0	22.85	22.96	22.67	0
		1	12	22.70	22.81	22.57	0
		1	24	22.64	22.78	22.55	0
		12	0	21.95	22.04	21.84	1
		12	6	21.35	21.62	21.30	1
		12	13	21.40	21.52	21.33	1
		25	0	21.15	21.32	21.03	1
	16QAM	1	0	22.07	22.27	21.98	1
		1	12	21.72	21.93	21.66	1
		1	24	21.51	21.65	21.43	1
		12	0	21.40	21.59	21.34	2
		12	6	21.34	21.53	21.19	2
		12	13	20.91	21.10	20.91	2
		25	0	20.39	20.50	20.22	2
	64QAM	1	0	22.85	22.96	22.67	0
		1	12	22.70	22.81	22.57	0
		1	24	22.64	22.78	22.55	0
		12	0	21.95	22.04	21.84	1
		12	6	21.35	21.62	21.30	1
		12	13	21.40	21.52	21.33	1
		25	0	21.15	21.32	21.03	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 20000	Mid CH 20175	High CH 20350	MPR
				Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz	
4/ 10	QPSK	1	0	22.82	22.99	22.67	0
		1	24	22.70	22.81	22.58	0
		1	49	22.61	22.82	22.51	0
		25	0	21.96	22.03	21.87	1
		25	12	21.41	21.56	21.30	1
		25	25	21.38	21.49	21.32	1
		50	0	21.20	21.32	21.00	1
	16QAM	1	0	22.07	22.24	21.94	1
		1	24	21.77	21.89	21.69	1
		1	49	21.51	21.66	21.40	1
		25	0	21.42	21.57	21.40	2
		25	12	21.38	21.47	21.24	2
		25	25	20.90	21.11	20.88	2
		50	0	20.43	20.49	20.26	2
	64QAM	1	0	22.82	22.99	22.67	0
		1	24	22.70	22.81	22.58	0
		1	49	22.61	22.82	22.51	0
		25	0	21.96	22.03	21.87	1
		25	12	21.41	21.56	21.30	1
		25	25	21.38	21.49	21.32	1
		50	0	21.20	21.32	21.00	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 20025	Mid CH 20175	High CH 20325	MPR
				Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz	
4/ 15	QPSK	1	0	22.89	22.99	22.64	0
		1	37	22.68	22.86	22.53	0
		1	74	22.67	22.85	22.52	0
		36	0	21.93	22.04	21.88	1
		36	19	21.42	21.61	21.30	1
		36	39	21.36	21.50	21.32	1
		75	0	21.20	21.30	21.05	1
	16QAM	1	0	22.11	22.31	21.94	1
		1	37	21.76	21.90	21.69	1
		1	74	21.47	21.71	21.42	1
		36	0	21.46	21.57	21.41	2
		36	19	21.32	21.51	21.20	2
		36	39	20.95	21.09	20.91	2
		75	0	20.44	20.52	20.19	2
	64QAM	1	0	22.89	22.99	22.64	0
		1	37	22.68	22.86	22.53	0
		1	74	22.67	22.85	22.52	0
		36	0	21.93	22.04	21.88	1
		36	19	21.42	21.61	21.30	1
		36	39	21.36	21.50	21.32	1
		75	0	21.20	21.30	21.05	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 20050	Mid CH 20175	High CH 20300	MPR
				Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz	
4/ 20	QPSK	1	0	22.90	23.03	22.72	0
		1	50	22.72	22.89	22.59	0
		1	99	22.69	22.86	22.56	0
		50	0	21.99	22.09	21.89	1
		50	25	21.43	21.63	21.35	1
		50	50	21.44	21.57	21.34	1
		100	0	21.21	21.34	21.08	1
	16QAM	1	0	22.14	22.32	22.00	1
		1	50	21.80	21.95	21.71	1
		1	99	21.53	21.73	21.45	1
		50	0	21.48	21.65	21.42	2
		50	25	21.40	21.55	21.25	2
		50	50	20.98	21.15	20.93	2
		100	0	20.45	20.57	20.27	2
	64QAM	1	0	22.90	23.03	22.72	0
		1	50	22.72	22.89	22.59	0
		1	99	22.69	22.86	22.56	0
		50	0	21.99	22.09	21.89	1
		50	25	21.43	21.63	21.35	1
		50	50	21.44	21.57	21.34	1
		100	0	21.21	21.34	21.08	1

LTE Band 7

Band/BW	Modulation	RB Size	RB Offset	Low CH 20775	Mid CH 21100	High CH 21425	MPR
				Frequency 2502.5 MHz	Frequency 2535 MHz	Frequency 2567.5 MHz	
7/5	QPSK	1	0	22.76	22.93	22.80	0
		1	12	22.64	22.81	22.73	0
		1	24	22.66	22.86	22.79	0
		12	0	22.04	22.19	22.15	1
		12	6	21.82	22.15	21.99	1
		12	13	21.99	22.17	22.14	1
		25	0	21.45	21.68	21.55	1
	16QAM	1	0	22.25	22.51	22.38	1
		1	12	22.16	22.43	22.32	1
		1	24	22.15	22.35	22.29	1
		12	0	21.57	21.82	21.73	2
		12	6	21.76	22.01	21.83	2
		12	13	21.51	21.76	21.73	2
		25	0	20.60	20.77	20.65	2
	64QAM	1	0	22.76	22.93	22.80	0
		1	12	22.64	22.81	22.73	0
		1	24	22.66	22.86	22.79	0
		12	0	22.04	22.19	22.15	1
		12	6	21.82	22.15	21.99	1
		12	13	21.99	22.17	22.14	1
		25	0	21.45	21.68	21.55	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 20800	Mid CH 21100	High CH 21400	MPR
				Frequency 2505 MHz	Frequency 2535 MHz	Frequency 2565 MHz	
7/ 10	QPSK	1	0	22.73	22.96	22.80	0
		1	24	22.64	22.81	22.74	0
		1	49	22.63	22.90	22.75	0
		25	0	22.05	22.18	22.18	1
		25	12	21.88	22.09	21.99	1
		25	25	21.97	22.14	22.13	1
		50	0	21.50	21.68	21.52	1
	16QAM	1	0	22.25	22.48	22.34	1
		1	24	22.21	22.39	22.35	1
		1	49	22.15	22.36	22.26	1
		25	0	21.59	21.80	21.79	2
		25	12	21.80	21.95	21.88	2
		25	25	21.50	21.77	21.70	2
		50	0	20.64	20.76	20.69	2
	64QAM	1	0	22.73	22.96	22.80	0
		1	24	22.64	22.81	22.74	0
		1	49	22.63	22.90	22.75	0
		25	0	22.05	22.18	22.18	1
		25	12	21.88	22.09	21.99	1
		25	25	21.97	22.14	22.13	1
		50	0	21.50	21.68	21.52	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 20825	Mid CH 21100	High CH 21375	MPR
				Frequency 2507.5 MHz	Frequency 2535 MHz	Frequency 2562.5 MHz	
7/ 15	QPSK	1	0	22.80	22.96	22.77	0
		1	37	22.62	22.86	22.69	0
		1	74	22.69	22.93	22.76	0
		36	0	22.02	22.19	22.19	1
		36	19	21.89	22.14	21.99	1
		36	39	21.95	22.15	22.13	1
		75	0	21.50	21.66	21.57	1
	16QAM	1	0	22.29	22.55	22.34	1
		1	37	22.20	22.40	22.35	1
		1	74	22.11	22.41	22.28	1
		36	0	21.63	21.80	21.80	2
		36	19	21.74	21.99	21.84	2
		36	39	21.55	21.75	21.73	2
		75	0	20.65	20.79	20.62	2
	64QAM	1	0	22.80	22.96	22.77	0
		1	37	22.62	22.86	22.69	0
		1	74	22.69	22.93	22.76	0
		36	0	22.02	22.19	22.19	1
		36	19	21.89	22.14	21.99	1
		36	39	21.95	22.15	22.13	1
		75	0	21.50	21.66	21.57	1

Band/BW	Modulation	RB Size	RB Offset	Low CH 20850	Mid CH 21100	High CH 21350	MPR
				Frequency 2510 MHz	Frequency 2535 MHz	Frequency 2560 MHz	
7/ 20	QPSK	1	0	22.81	23.00	22.85	0
		1	50	22.66	22.89	22.75	0
		1	99	22.71	22.94	22.80	0
		50	0	22.08	22.24	22.20	1
		50	25	21.90	22.16	22.04	1
		50	50	22.03	22.22	22.15	1
		100	0	21.51	21.70	21.60	1
	16QAM	1	0	22.32	22.56	22.40	1
		1	50	22.24	22.45	22.37	1
		1	99	22.17	22.43	22.31	1
		50	0	21.65	21.88	21.81	2
		50	25	21.82	22.03	21.89	2
		50	50	21.58	21.81	21.75	2
		100	0	20.66	20.84	20.70	2
	64QAM	1	0	22.81	23.00	22.85	0
		1	50	22.66	22.89	22.75	0
		1	99	22.71	22.94	22.80	0
		50	0	22.08	22.24	22.20	1
		50	25	21.90	22.16	22.04	1
		50	50	22.03	22.22	22.15	1
		100	0	21.51	21.70	21.60	1

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	22.82	2.14	24.96	313.33	1
20175	1732.5	22.99	2.14	25.13	325.84	1
20393	1754.3	22.67	2.14	24.81	302.69	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	22.44	2.14	24.58	287.08	1
20175	1732.5	22.60	2.14	24.74	297.85	1
20393	1754.3	22.37	2.14	24.51	282.49	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	22.84	2.14	24.98	314.77	1
20175	1732.5	23.01	2.14	25.15	327.34	1
20385	1753.5	22.66	2.14	24.80	302.00	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	22.06	2.14	24.20	263.03	1
20175	1732.5	22.31	2.14	24.45	278.61	1
20385	1753.5	20.25	2.14	22.39	173.38	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	22.85	2.14	24.99	315.50	1
20175	1732.5	22.96	2.14	25.10	323.59	1
20375	1752.5	22.67	2.14	24.81	302.69	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	22.07	2.14	24.21	263.63	1
20175	1732.5	22.27	2.14	24.41	276.06	1
20375	1752.5	21.98	2.14	24.12	258.23	1

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	22.82	2.14	24.96	313.33	1
20175	1732.5	22.99	2.14	25.13	325.84	1
20350	1750	22.67	2.14	24.81	302.69	1

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20000	1715	22.07	2.14	24.21	263.63	1
20175	1732.5	22.24	2.14	24.38	274.16	1
20350	1750	21.94	2.14	24.08	255.86	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	22.89	2.14	25.03	318.42	1
20175	1732.5	22.99	2.14	25.13	325.84	1
20325	1747.5	22.64	2.14	24.78	300.61	1

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20025	1717.5	22.11	2.14	24.25	266.07	1
20175	1732.5	22.31	2.14	24.45	278.61	1
20325	1747.5	21.94	2.14	24.08	255.86	1

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	22.9	2.1	25.0	319.2	1
20175	1732.5	23.0	2.1	25.2	328.9	1
20300	1745	22.7	2.1	24.9	306.2	1

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20050	1720	22.14	2.14	24.28	267.92	1
20175	1732.5	22.32	2.14	24.46	279.25	1
20300	1745	22.00	2.14	24.14	259.42	1

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

LTE BAND 7

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	22.76	2.14	24.90	309.03	2
21100	2535.0	22.93	2.14	25.07	321.37	2
21425	2567.5	22.80	2.14	24.94	311.89	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	22.25	2.14	24.39	274.79	2
21100	2535.0	22.51	2.14	24.65	291.74	2
21425	2567.5	22.38	2.14	24.52	283.14	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505.0	22.73	2.14	24.87	306.90	2
21100	2535.0	22.96	2.14	25.10	323.59	2
21400	2565.0	22.80	2.14	24.94	311.89	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505.0	22.25	2.14	24.39	274.79	2
21100	2535.0	22.48	2.14	24.62	289.73	2
21400	2565.0	22.35	2.14	24.49	281.19	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	22.80	2.14	24.94	311.89	2
21100	2535.0	22.96	2.14	25.10	323.59	2
21375	2562.5	22.77	2.14	24.91	309.74	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	22.29	2.14	24.43	277.33	2
21100	2535.0	22.55	2.14	24.69	294.44	2
21375	2562.5	22.35	2.14	24.49	281.19	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510.0	22.81	2.14	24.95	312.61	2
21100	2535.0	23.00	2.14	25.14	326.59	2
21350	2560.0	22.85	2.14	24.99	315.50	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510.0	22.32	2.14	24.46	279.25	2
21100	2535.0	22.56	2.14	24.70	295.12	2
21350	2560.0	22.40	2.14	24.54	284.45	2

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

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

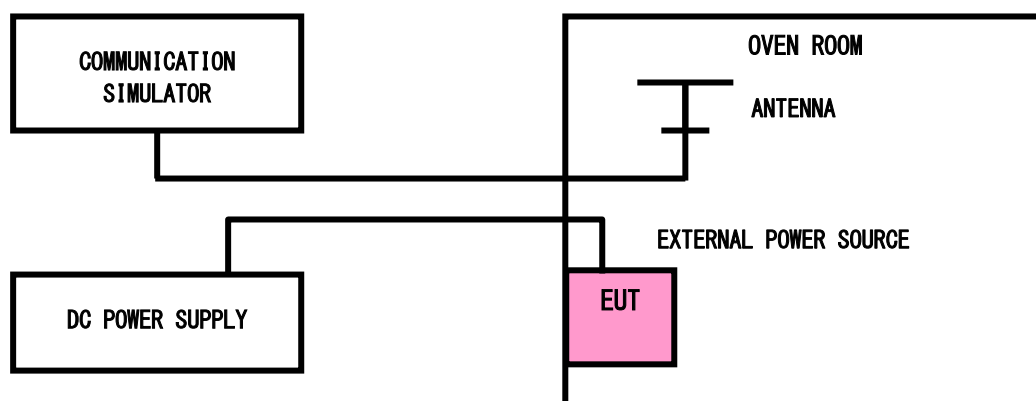
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

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

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

3.2.3 TEST SETUP





Test Report No.: W7L-P21110027RF03

3.2.4 TEST RESULTS

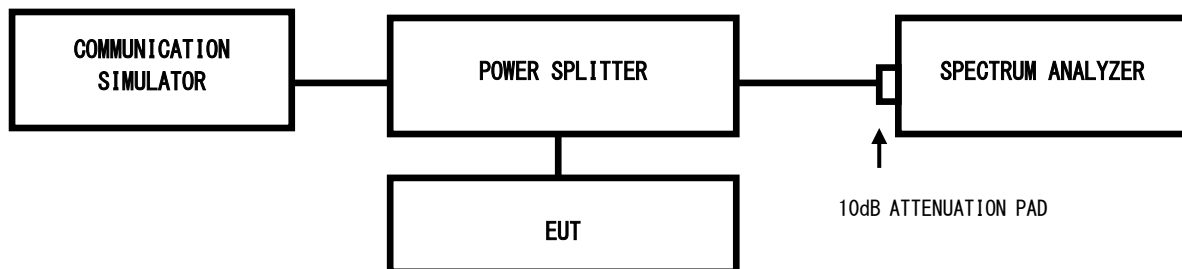
Please Refer to Appendix D Of this test report.

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

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



Test Report No.: W7L-P21110027RF03

3.3.4 TEST RESULTS

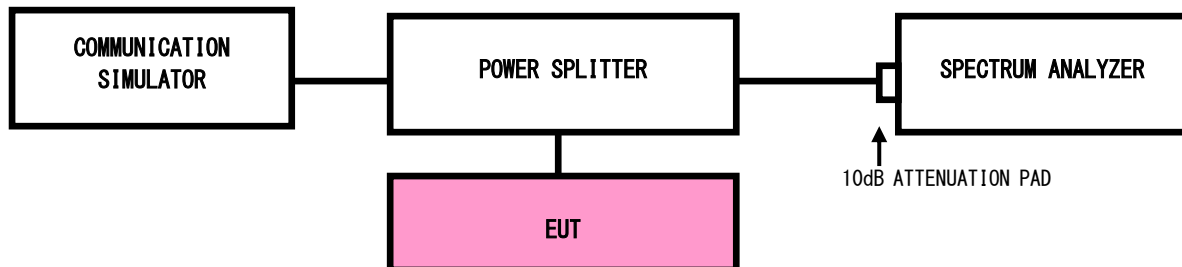
Please Refer to Appendix D Of this test report.

3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

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

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

- a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
- b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The center frequency of spectrum is the band edge frequency and span is 35MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz (Channel bandwidth 5MHz).
- d. The center frequency of spectrum is the band edge frequency and span is 50MHz. RBW of the spectrum is 200kHz and VBW of the spectrum is 1MHz (Channel bandwidth 10MHz).
- e. The center frequency of spectrum is the band edge frequency and span is 60MHz. RBW of the spectrum is 300kHz and VBW of the spectrum is 1MHz (Channel bandwidth 15MHz).
- f. The center frequency of spectrum is the band edge frequency and span is 80MHz. RBW of the spectrum is 500kHz and VBW of the spectrum is 2MHz (Channel bandwidth 20MHz).
- g. Record the max trace plot into the test report.



Test Report No.: W7L-P21110027RF03

3.4.4 TEST RESULTS

Please Refer to Appendix D Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

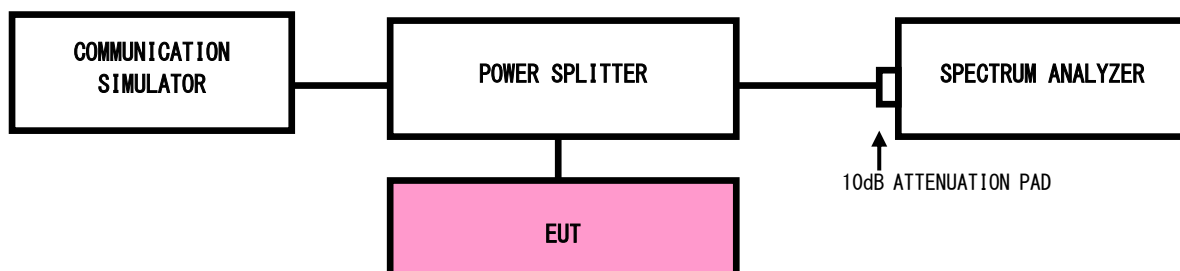
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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

3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 30MHz~27GHz for LTE Band 7 & 30MHz~26.2GHz for LTE Band 38, 30MHz~27GHz for LTE Band 41. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

3.5.3 TEST SETUP





Test Report No.: W7L-P21110027RF03

3.5.4 TEST RESULTS

Please Refer to Appendix D Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

3.6.2 TEST PROCEDURES

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

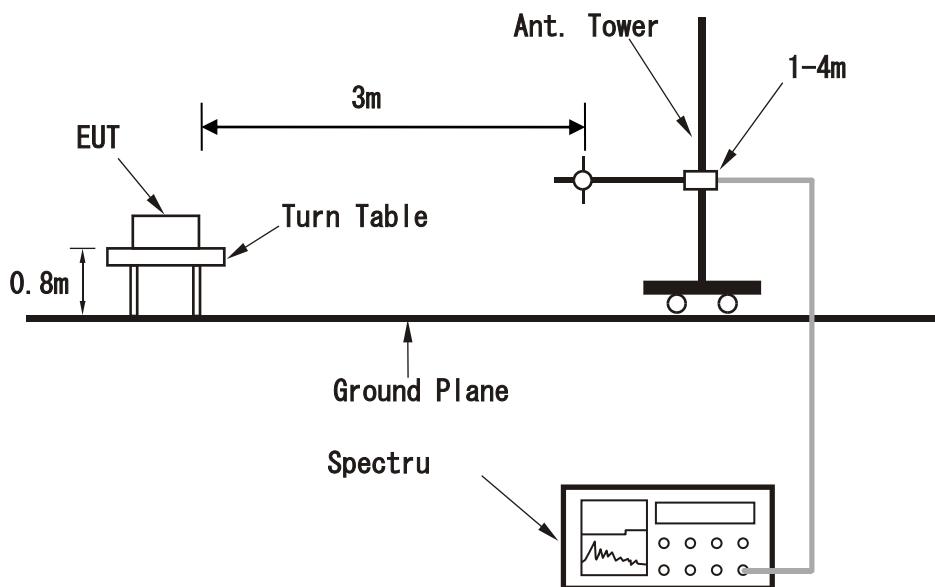
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

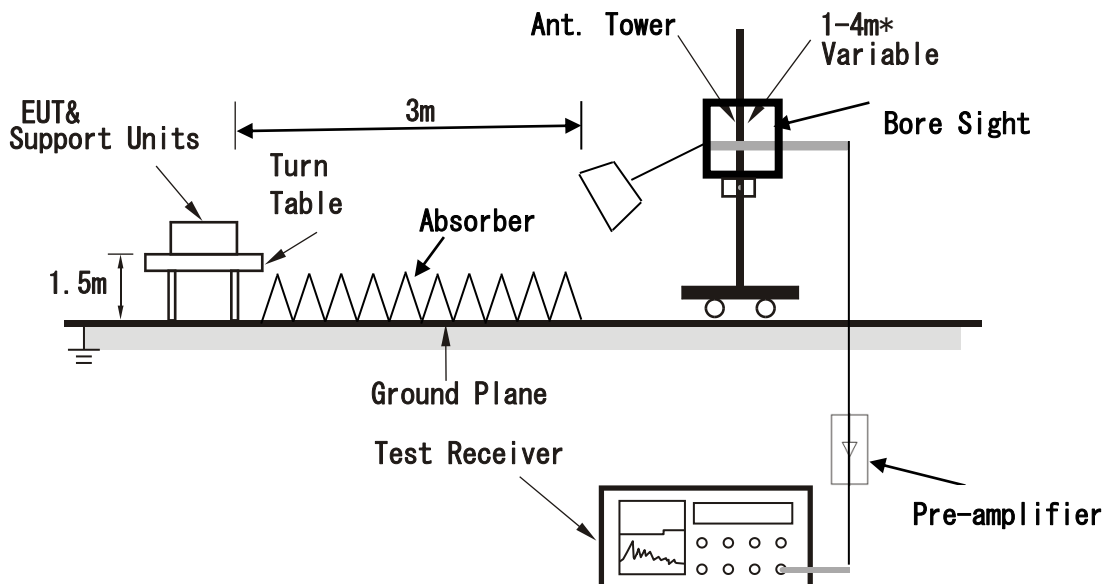
No deviation

3.6.4 TEST SETUP

< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



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

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

3.6.5 TEST RESULTS

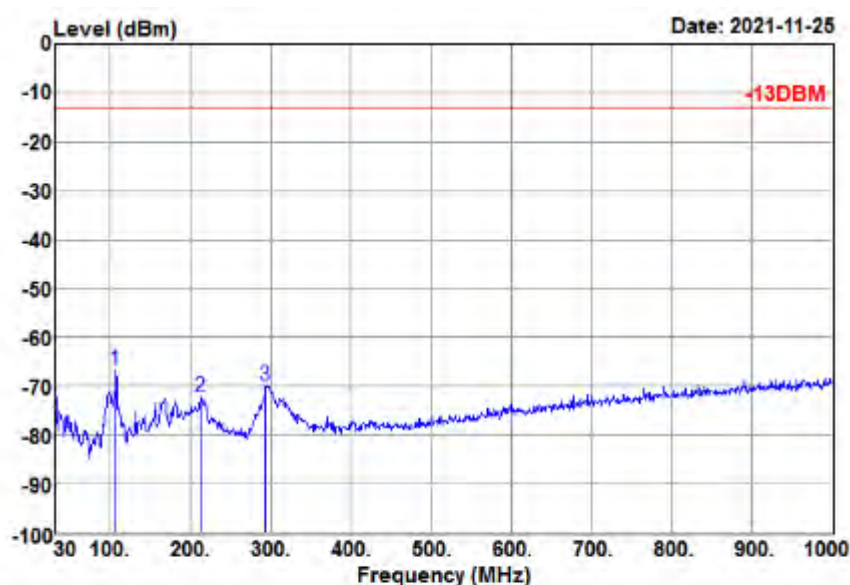
BELOW 1GHz WORST-CASE DATA

30 MHz – 1GHz data:

LTE Band 7

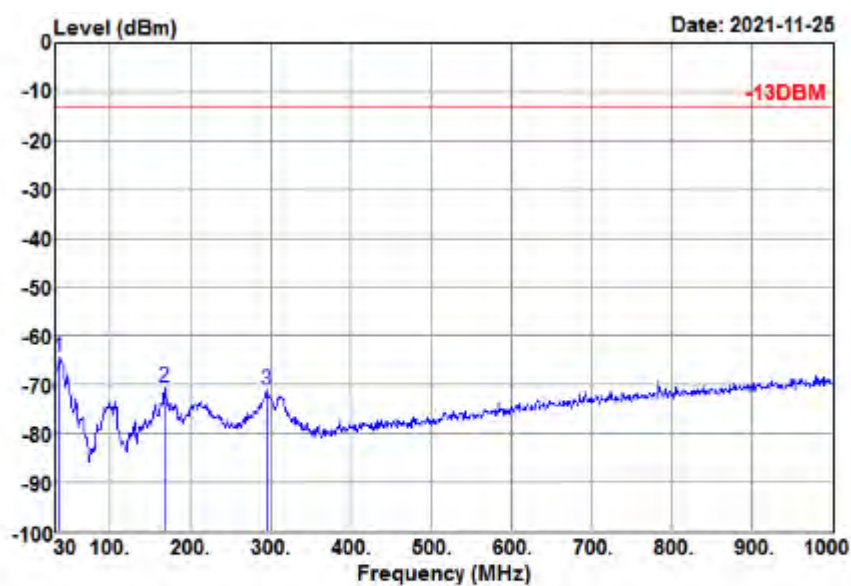
CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 20800	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 MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
107.600	-60.30	-6.33	-66.63	-13.00	-53.63	Peak
213.330	-66.23	-5.95	-72.18	-13.00	-59.18	Peak
293.840	-66.93	-2.91	-69.84	-13.00	-56.84	Peak

MODE	TX channel 20800	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 MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
37.760	-59.47	-4.78	-64.25	-13.00	-51.25	Peak
168.710	-66.44	-4.00	-70.44	-13.00	-57.44	Peak
294.810	-68.28	-2.87	-71.15	-13.00	-58.15	Peak



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Test Report No.: W7L-P21110027RF03

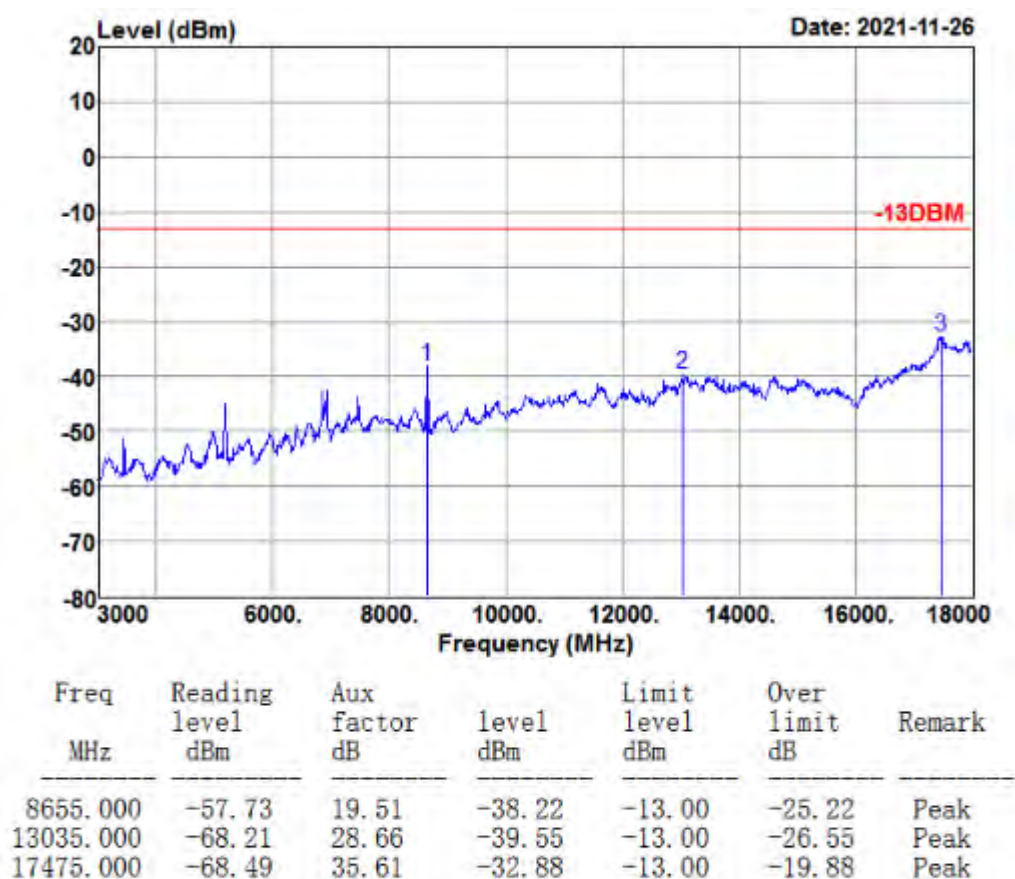
ABOVE 1GHz

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

LTE Band 4

CHANNEL BANDWIDTH: 1.4MHz / QPSK

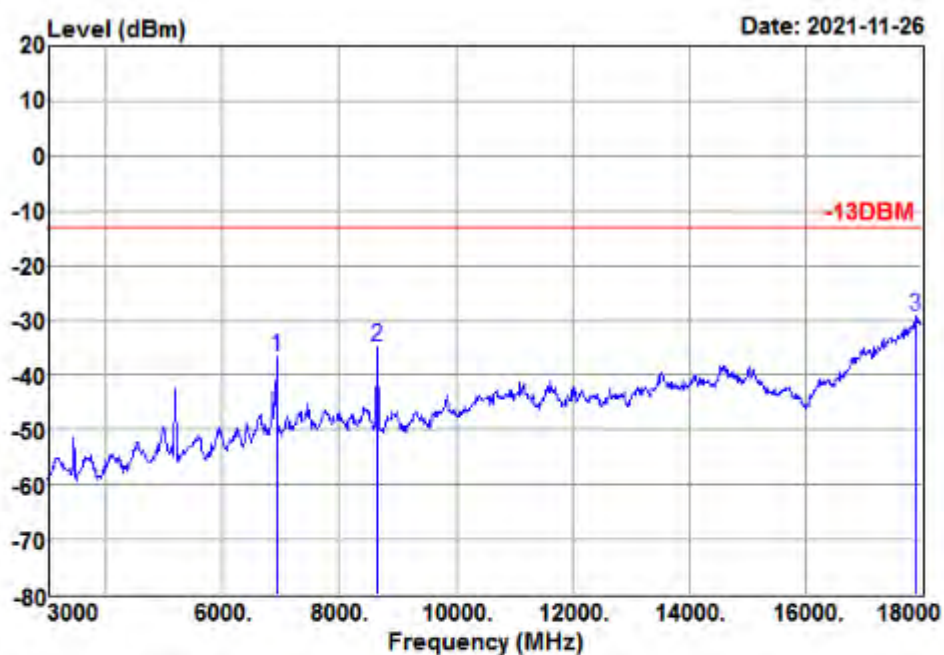
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			



Note:

Corrected Reading: Reading level + Aux factor = Level

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



Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6930.000	-55.05	18.51	-36.54	-13.00	-23.54	Peak
8655.000	-54.52	19.56	-34.96	-13.00	-21.96	Peak
17895.000	-68.94	39.55	-29.39	-13.00	-16.39	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

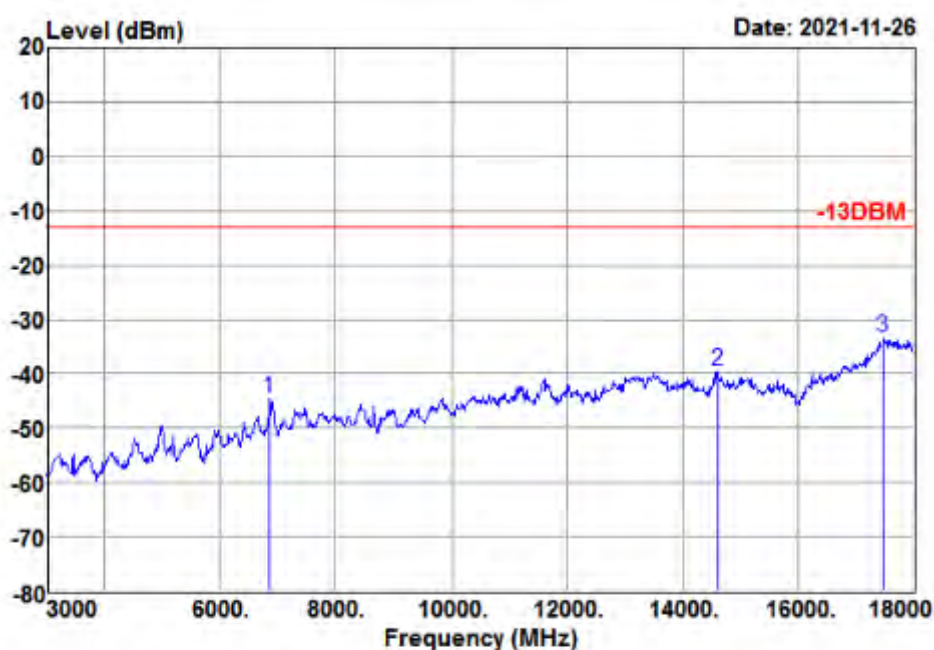


**BUREAU
VERITAS**

Test Report No.: W7L-P21110027RF03

CHANNEL BANDWIDTH: 3MHz / QPSK

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

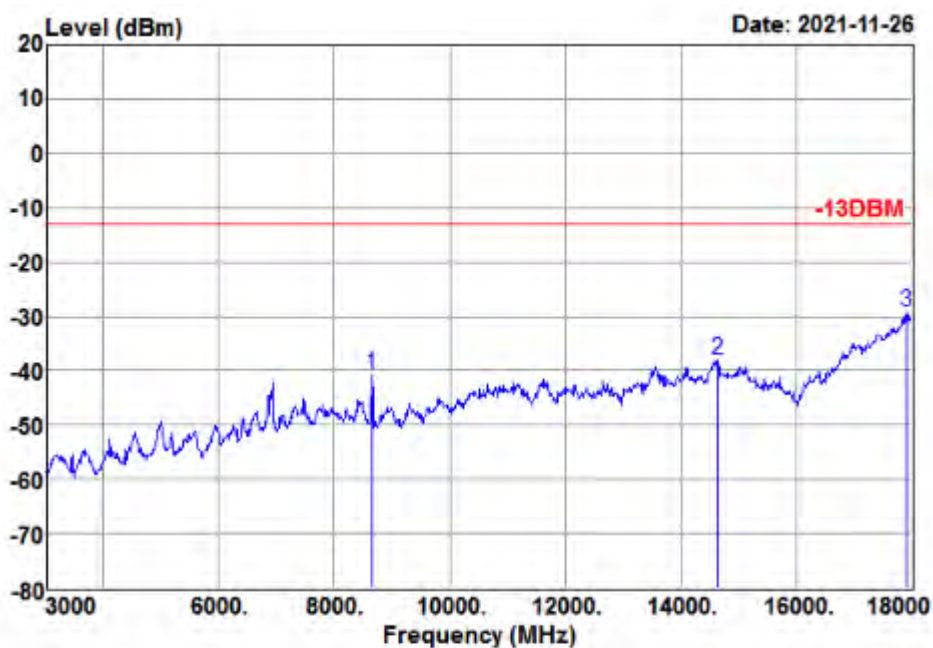


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6855.000	-62.51	17.91	-44.60	-13.00	-31.60	Peak
14610.000	-66.00	26.56	-39.44	-13.00	-26.44	Peak
17475.000	-68.92	35.61	-33.31	-13.00	-20.31	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

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



Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
8655.000	-60.26	19.56	-40.70	-13.00	-27.70	Peak
14640.000	-66.36	28.34	-38.02	-13.00	-25.02	Peak
17910.000	-68.93	39.67	-29.26	-13.00	-16.26	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

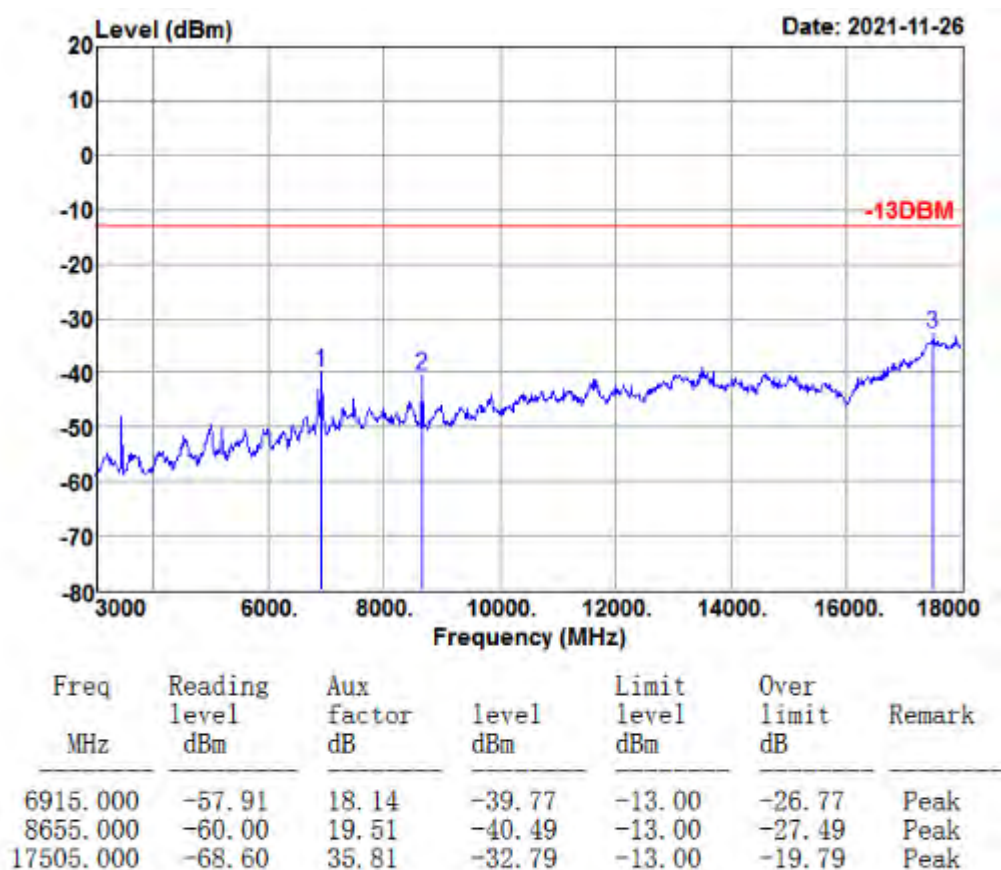


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Test Report No.: W7L-P21110027RF03

CHANNEL BANDWIDTH: 5MHz / QPSK

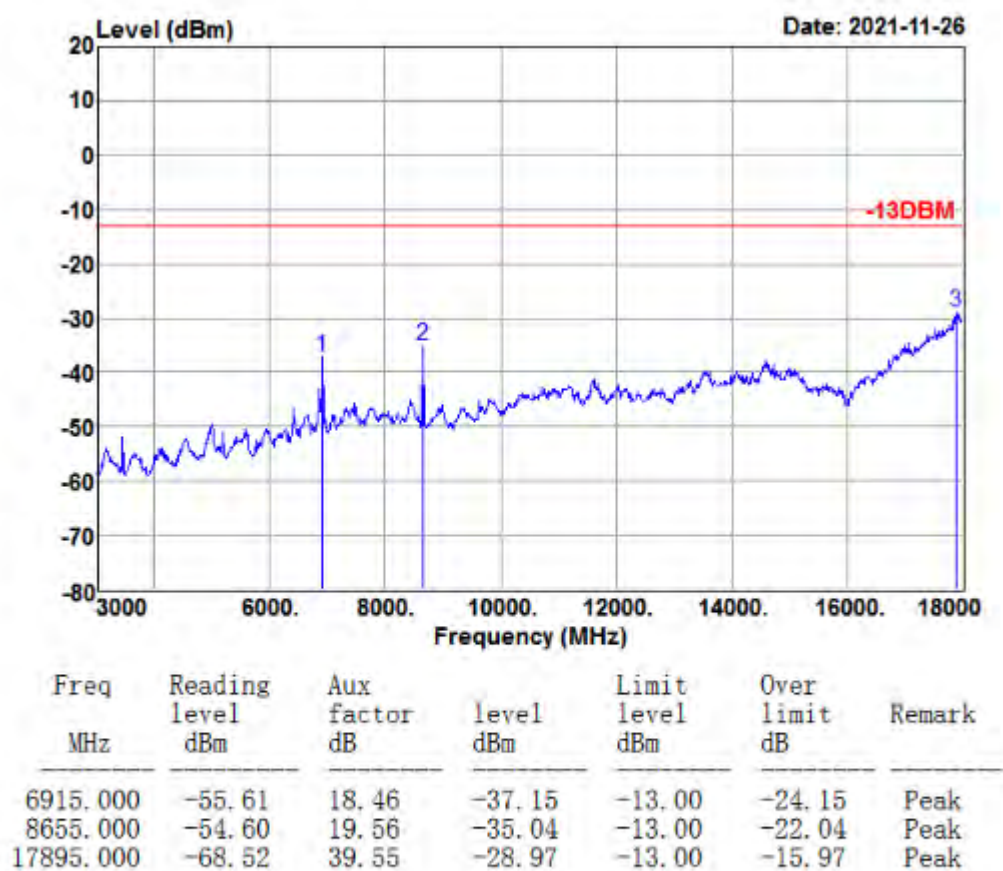
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			



Note:

Corrected Reading: Reading level + Aux factor = Level

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



Note:

Corrected Reading: Reading level + Aux factor = Level

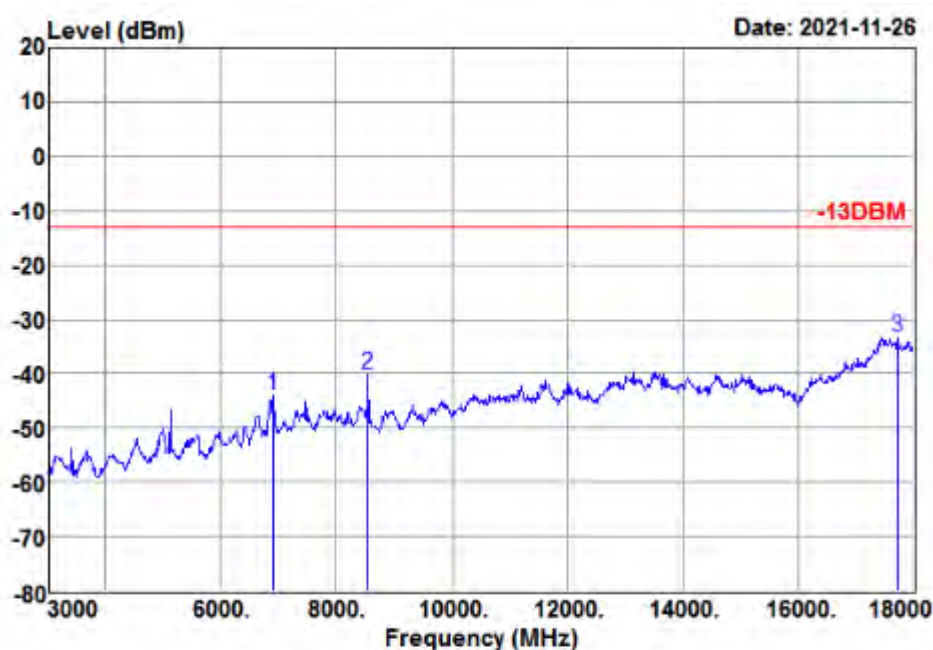


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VERITAS**

Test Report No.: W7L-P21110027RF03

CHANNEL BANDWIDTH: 10MHz / QPSK
CH20000

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

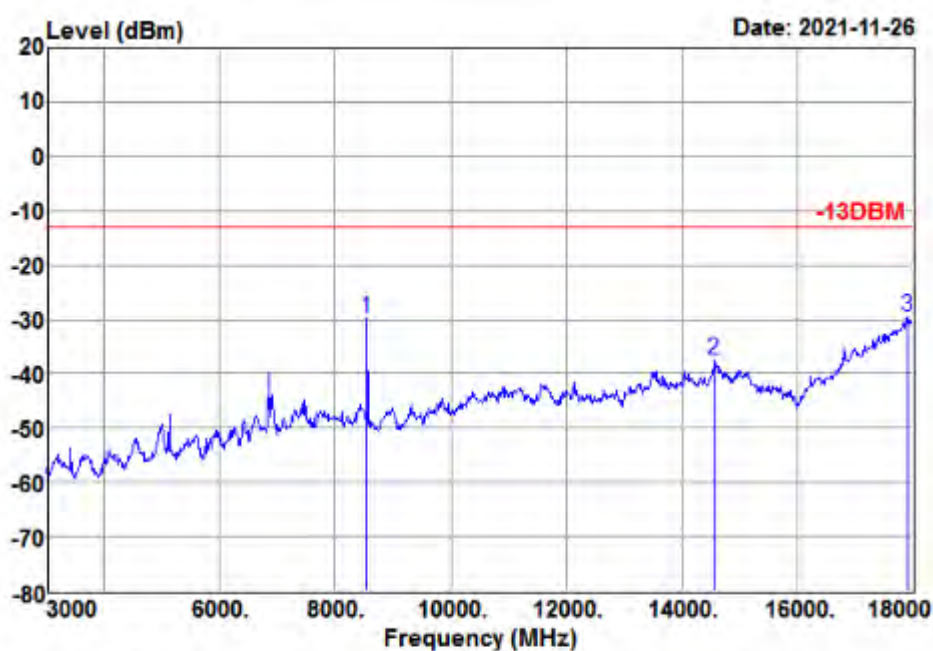


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6900.000	-62.14	18.08	-44.06	-13.00	-31.06	Peak
8550.000	-59.56	19.31	-40.25	-13.00	-27.25	Peak
17715.000	-68.80	35.51	-33.29	-13.00	-20.29	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

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



Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
8550.000	-49.35	19.40	-29.95	-13.00	-16.95	Peak
14565.000	-65.76	28.24	-37.52	-13.00	-24.52	Peak
17910.000	-69.11	39.67	-29.44	-13.00	-16.44	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

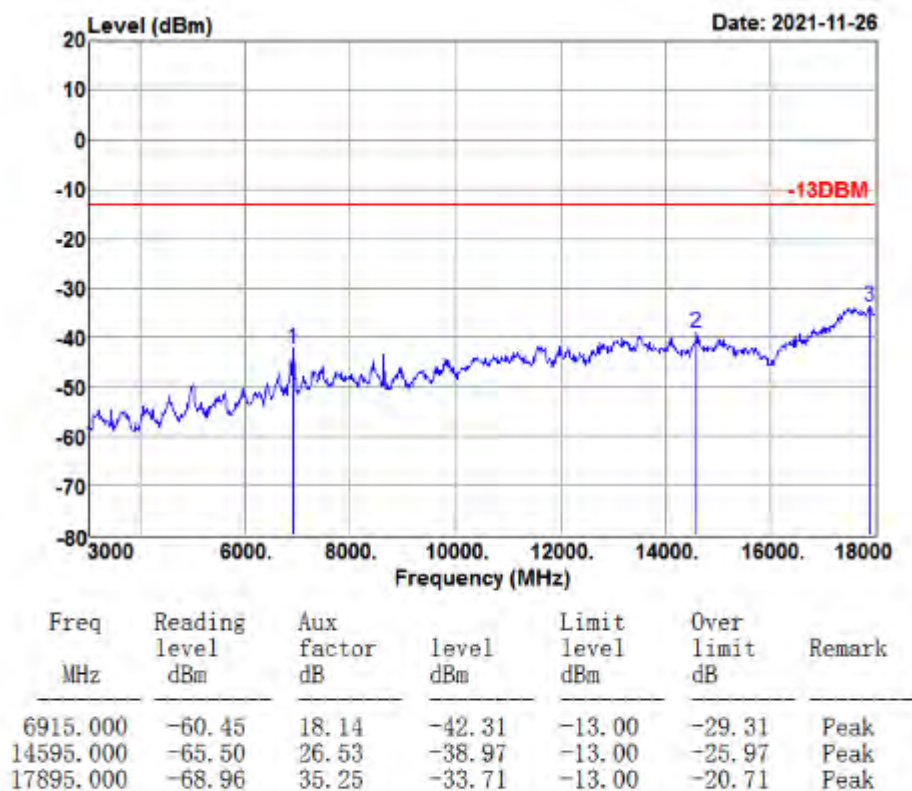


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VERITAS**

Test Report No.: W7L-P21110027RF03

CH20175

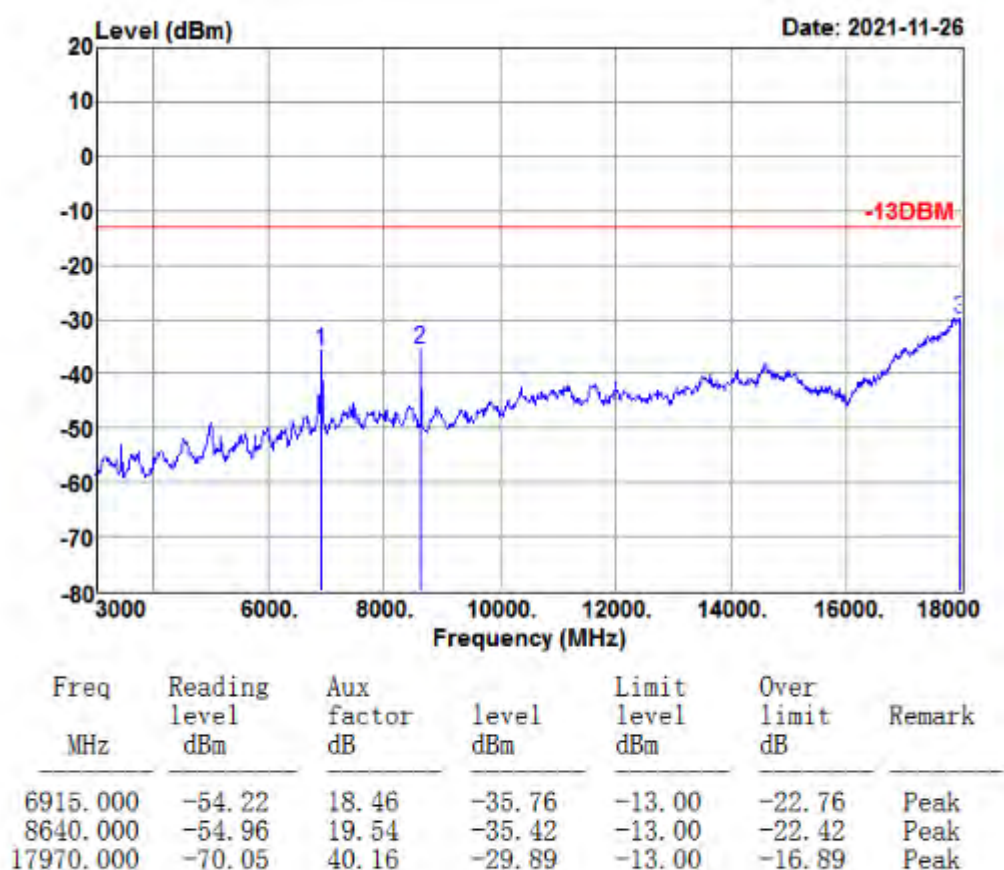
MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			



Note:

Corrected Reading: Reading level + Aux factor = Level

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



Note:

Corrected Reading: Reading level + Aux factor = Level

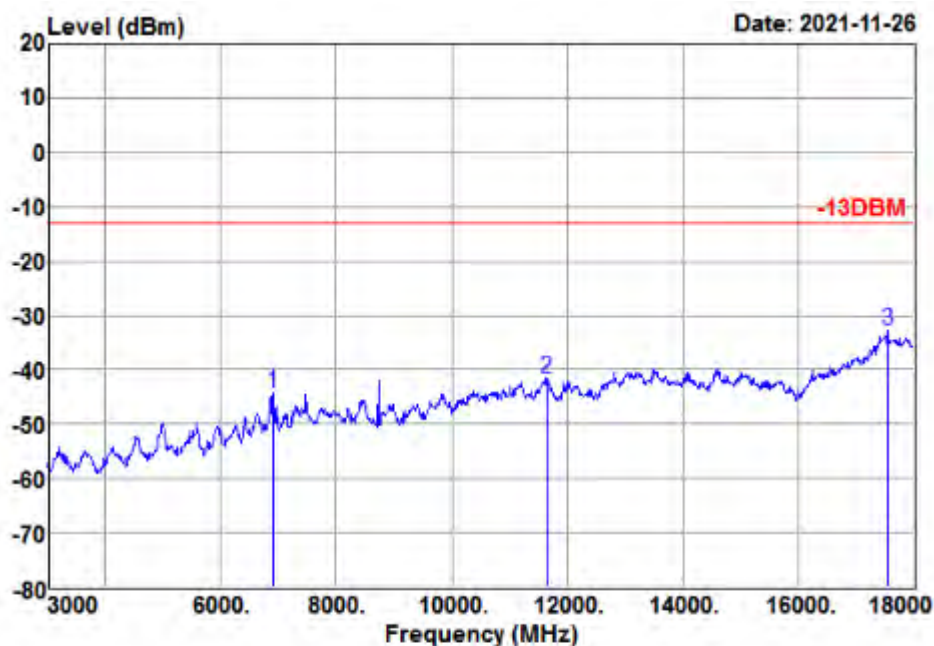


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VERITAS**

Test Report No.: W7L-P21110027RF03

CH20350

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

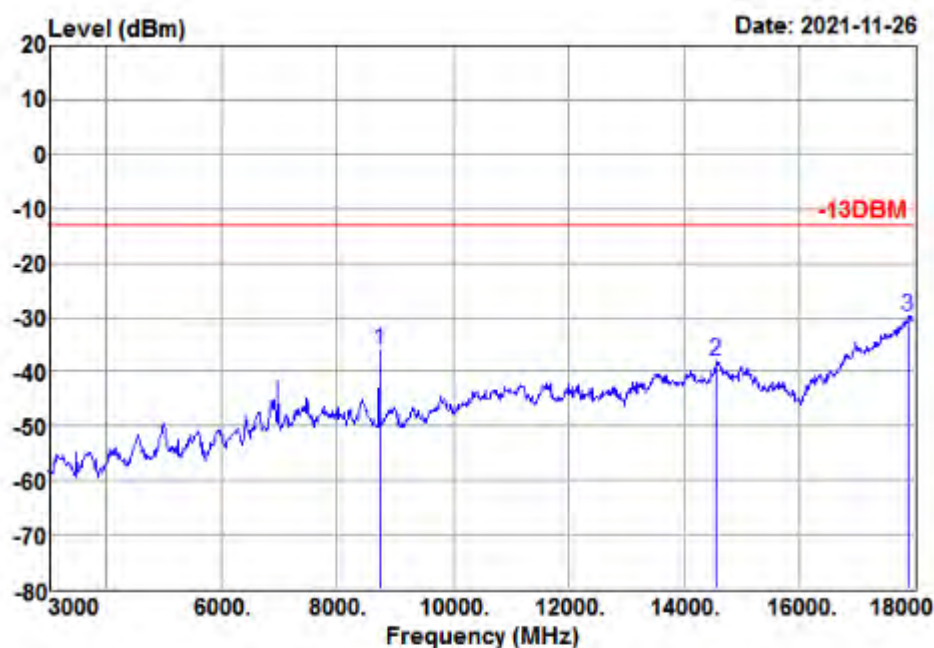


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6900.000	-62.48	18.08	-44.40	-13.00	-31.40	Peak
11640.000	-67.43	25.87	-41.56	-13.00	-28.56	Peak
17550.000	-68.62	35.75	-32.87	-13.00	-19.87	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

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



Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
8730.000	-55.65	19.68	-35.97	-13.00	-22.97	Peak
14565.000	-66.40	28.24	-38.16	-13.00	-25.16	Peak
17895.000	-69.36	39.55	-29.81	-13.00	-16.81	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

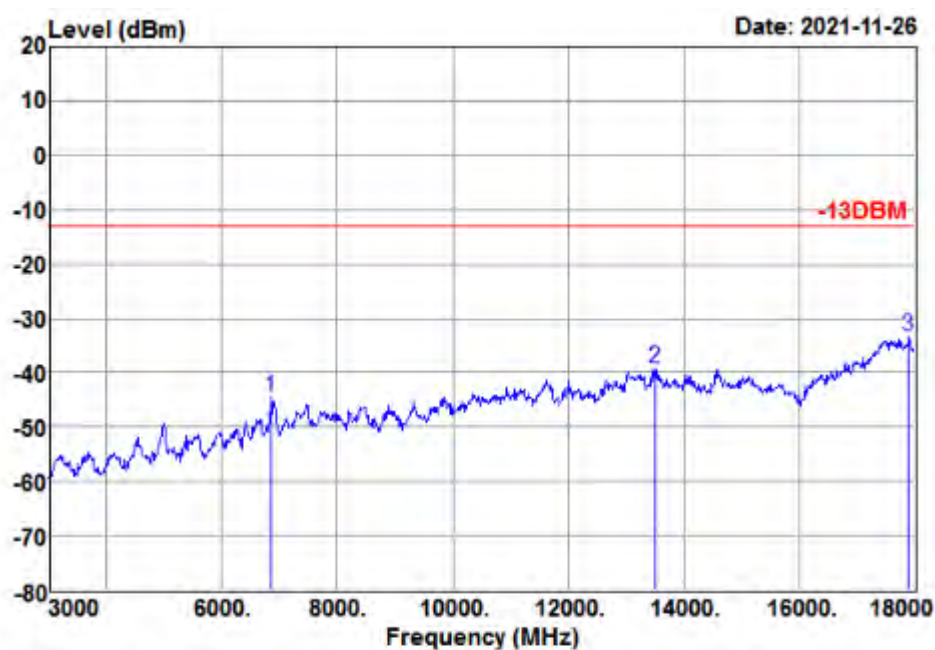


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VERITAS**

Test Report No.: W7L-P21110027RF03

CHANNEL BANDWIDTH: 15MHz / QPSK

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

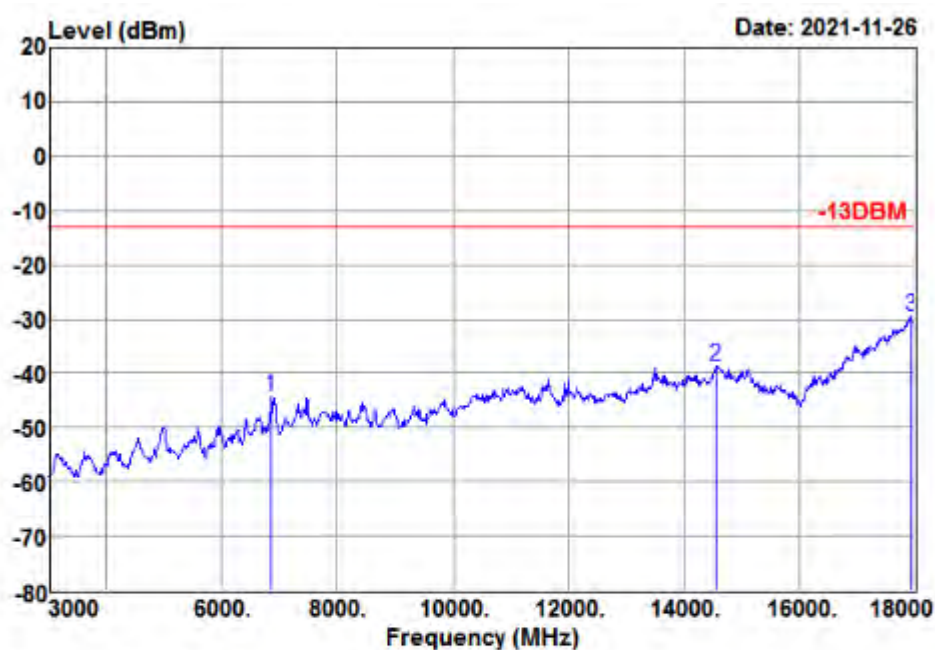


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6855.000	-62.36	17.91	-44.45	-13.00	-31.45	Peak
13515.000	-67.69	28.41	-39.28	-13.00	-26.28	Peak
17895.000	-68.64	35.25	-33.39	-13.00	-20.39	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

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



Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6855.000	-62.62	18.25	-44.37	-13.00	-31.37	Peak
14565.000	-66.85	28.24	-38.61	-13.00	-25.61	Peak
17940.000	-69.57	39.91	-29.66	-13.00	-16.66	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

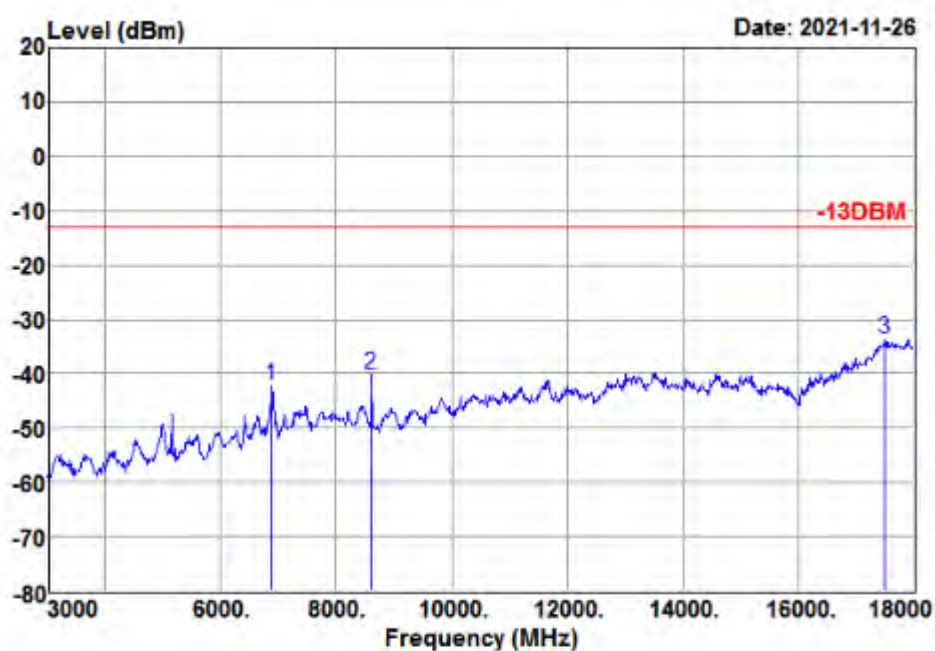


**BUREAU
VERITAS**

Test Report No.: W7L-P21110027RF03

CHANNEL BANDWIDTH: 20MHz / QPSK

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

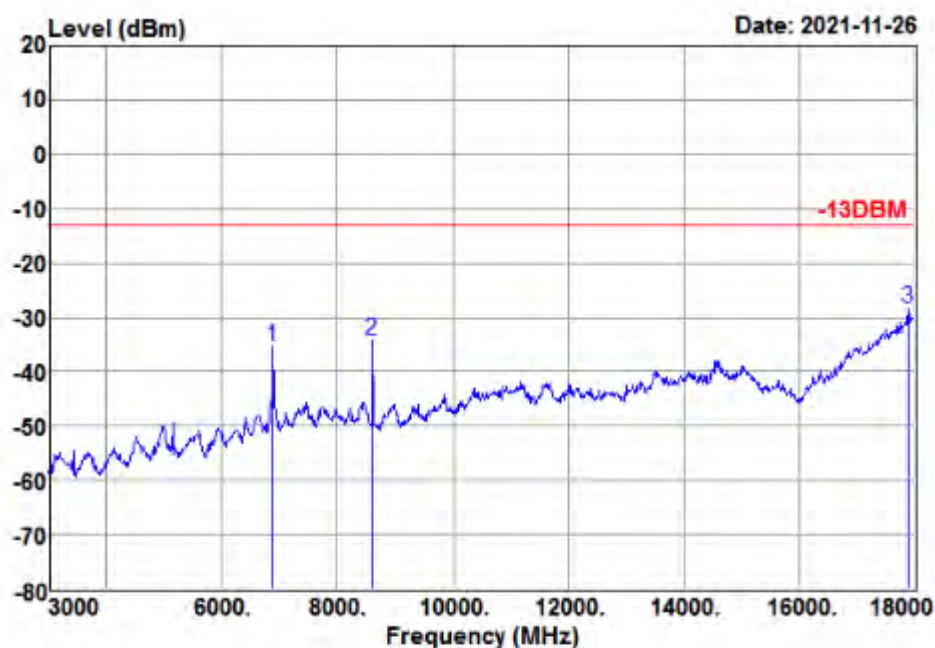


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6885.000	-60.27	18.03	-42.24	-13.00	-29.24	Peak
8610.000	-59.62	19.42	-40.20	-13.00	-27.20	Peak
17505.000	-69.47	35.81	-33.66	-13.00	-20.66	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

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



Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6885.000	-53.69	18.36	-35.33	-13.00	-22.33	Peak
8610.000	-53.88	19.49	-34.39	-13.00	-21.39	Peak
17880.000	-67.88	39.43	-28.45	-13.00	-15.45	Peak

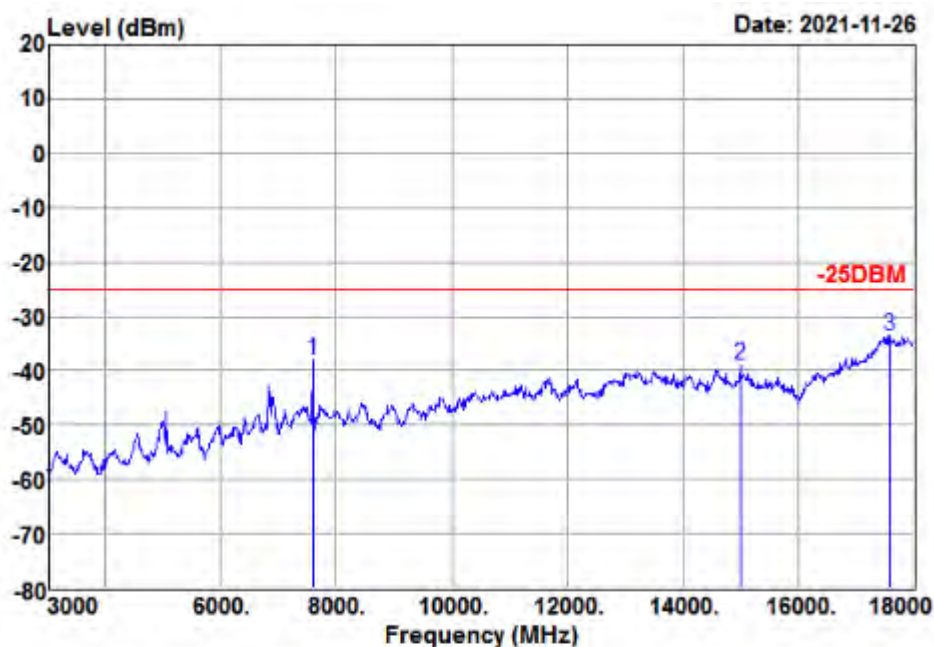
Note:

Corrected Reading: Reading level + Aux factor = Level

LTE Band 7

CHANNEL BANDWIDTH: 5MHz / QPSK

MODE	TX channel 21100	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			

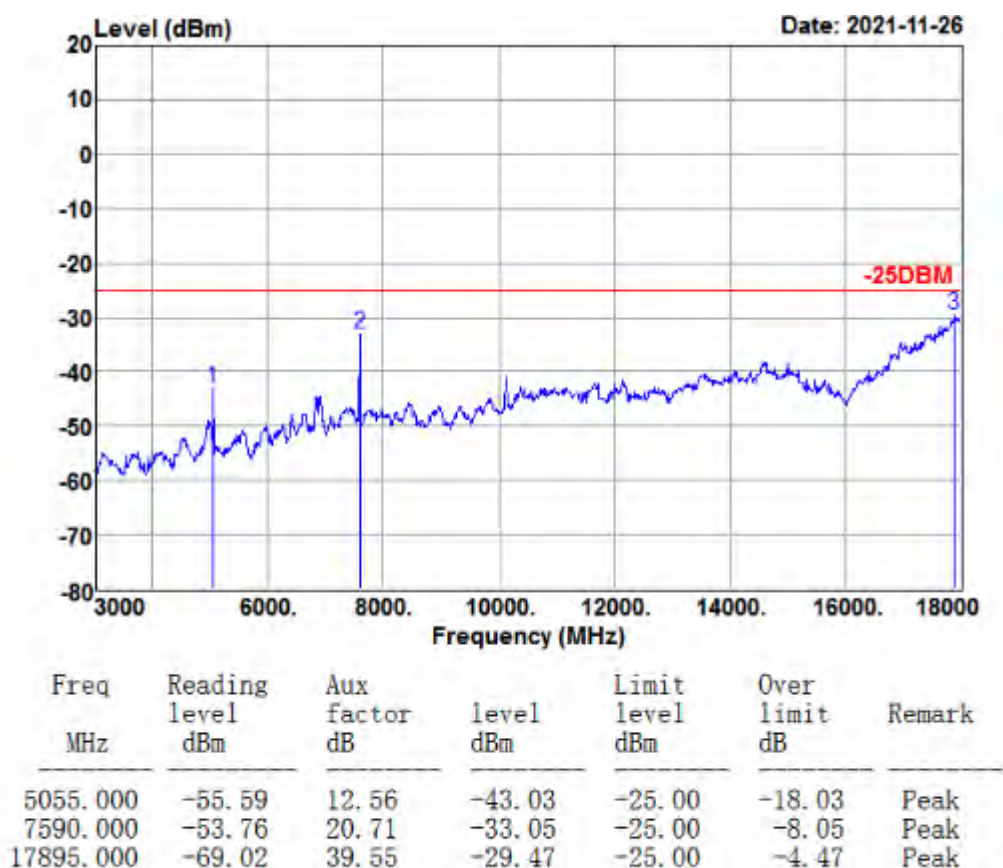


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
7590.000	-58.50	20.41	-38.09	-25.00	-13.09	Peak
15000.000	-66.51	27.42	-39.09	-25.00	-14.09	Peak
17580.000	-69.34	35.70	-33.64	-25.00	-8.64	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

MODE	TX channel 21100	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			



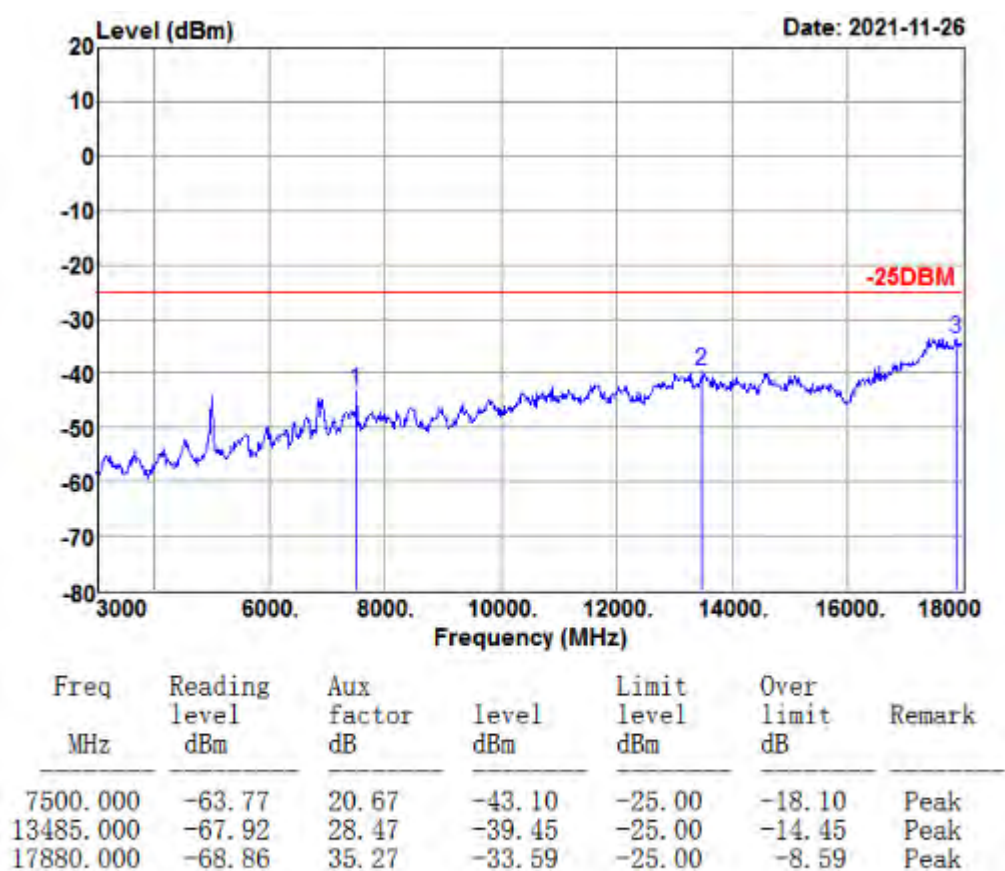
Note:

Corrected Reading: Reading level + Aux factor = Level

CHANNEL BANDWIDTH: 10MHz / QPSK

CH 20800

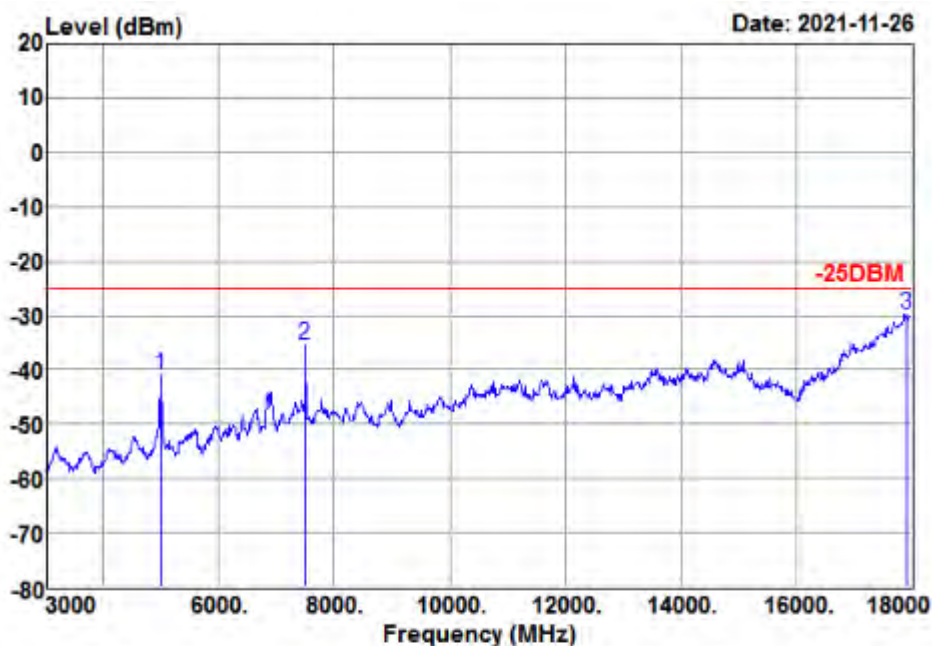
MODE	TX channel 20800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			



Note:

Corrected Reading: Reading level + Aux factor = Level

MODE	TX channel 20800	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 MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
4995.000	-53.43	12.45	-40.98	-25.00	-15.98	Peak
7500.000	-56.50	20.99	-35.51	-25.00	-10.51	Peak
17910.000	-69.51	39.67	-29.84	-25.00	-4.84	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

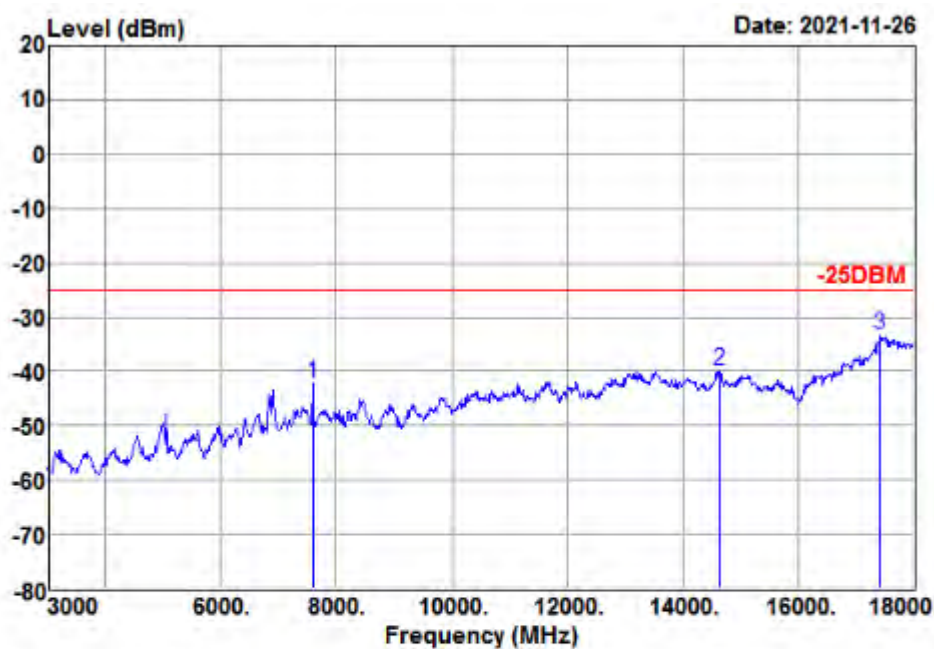


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CH 21100

MODE	TX channel 21100	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			

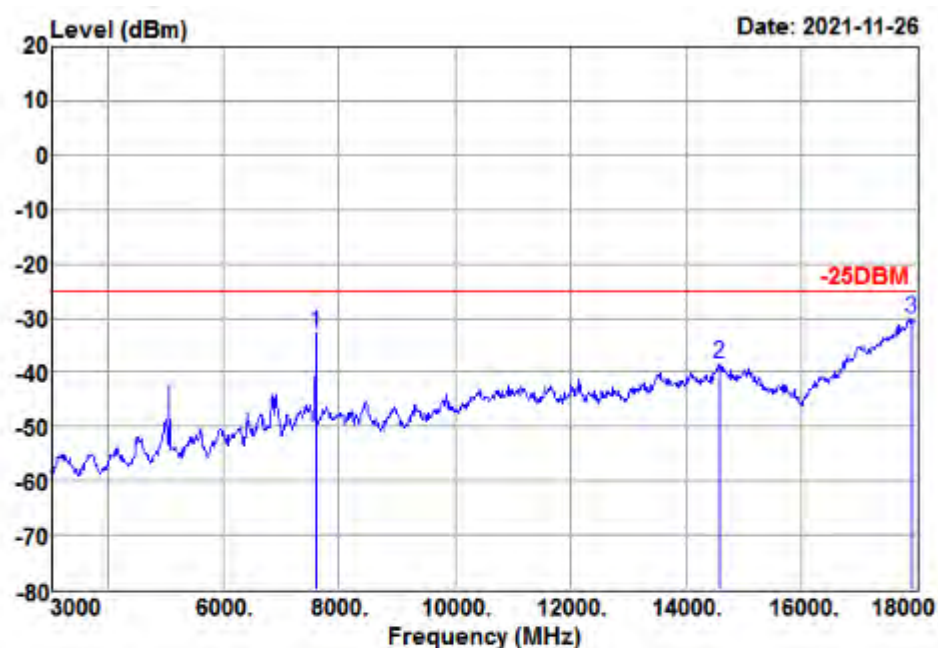


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
7590.000	-62.62	20.41	-42.21	-25.00	-17.21	Peak
14640.000	-66.65	26.63	-40.02	-25.00	-15.02	Peak
17430.000	-68.55	35.22	-33.33	-25.00	-8.33	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

MODE	TX channel 21100	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 MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
7590.000	-53.47	20.71	-32.76	-25.00	-7.76	Peak
14580.000	-66.54	28.26	-38.28	-25.00	-13.28	Peak
17910.000	-69.82	39.67	-30.15	-25.00	-5.15	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

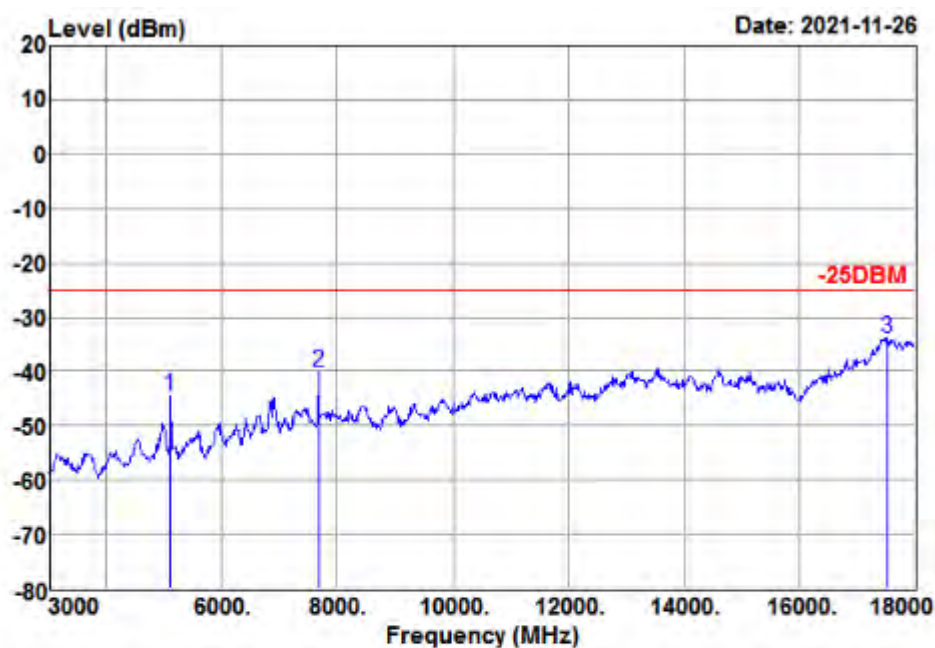


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Test Report No.: W7L-P21110027RF03

CH 21400

MODE	TX channel 21400	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			

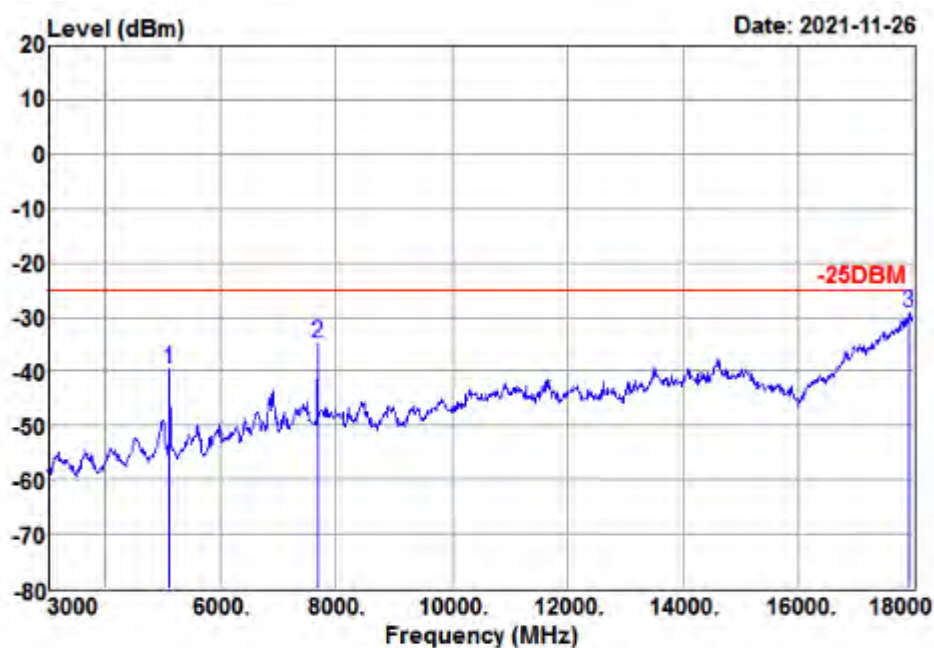


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
5115.000	-56.92	12.39	-44.53	-25.00	-19.53	Peak
7680.000	-60.28	20.15	-40.13	-25.00	-15.13	Peak
17535.000	-69.60	35.77	-33.83	-25.00	-8.83	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

MODE	TX channel 21400	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 MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
5115.000	-52.19	12.68	-39.51	-25.00	-14.51	Peak
7680.000	-55.26	20.42	-34.84	-25.00	-9.84	Peak
17925.000	-68.93	39.79	-29.14	-25.00	-4.14	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

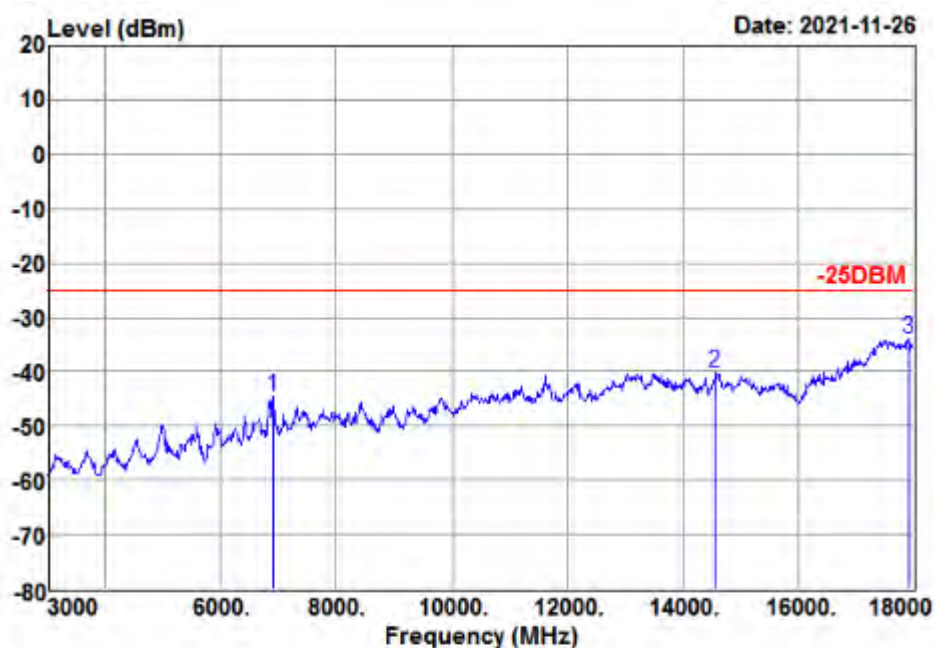


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Test Report No.: W7L-P21110027RF03

CHANNEL BANDWIDTH: 15MHz / QPSK

MODE	TX channel 21100	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			

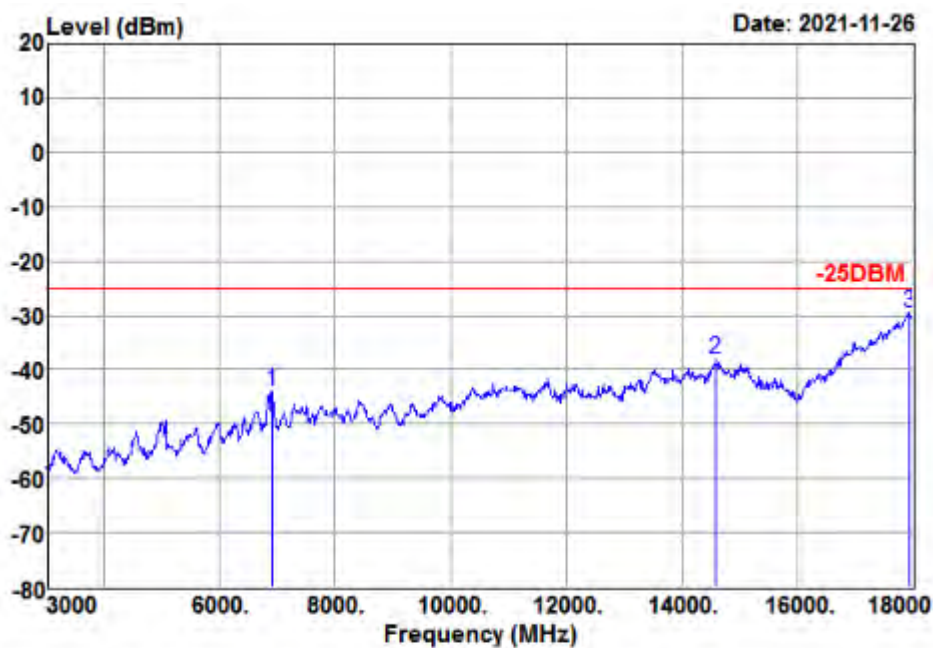


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6900.000	-62.75	18.08	-44.67	-25.00	-19.67	Peak
14565.000	-66.64	26.46	-40.18	-25.00	-15.18	Peak
17910.000	-69.07	35.23	-33.84	-25.00	-8.84	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

MODE	TX channel 21100	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 MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
6900.000	-62.55	18.41	-44.14	-25.00	-19.14	Peak
14595.000	-66.43	28.28	-38.15	-25.00	-13.15	Peak
17955.000	-69.54	40.04	-29.50	-25.00	-4.50	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

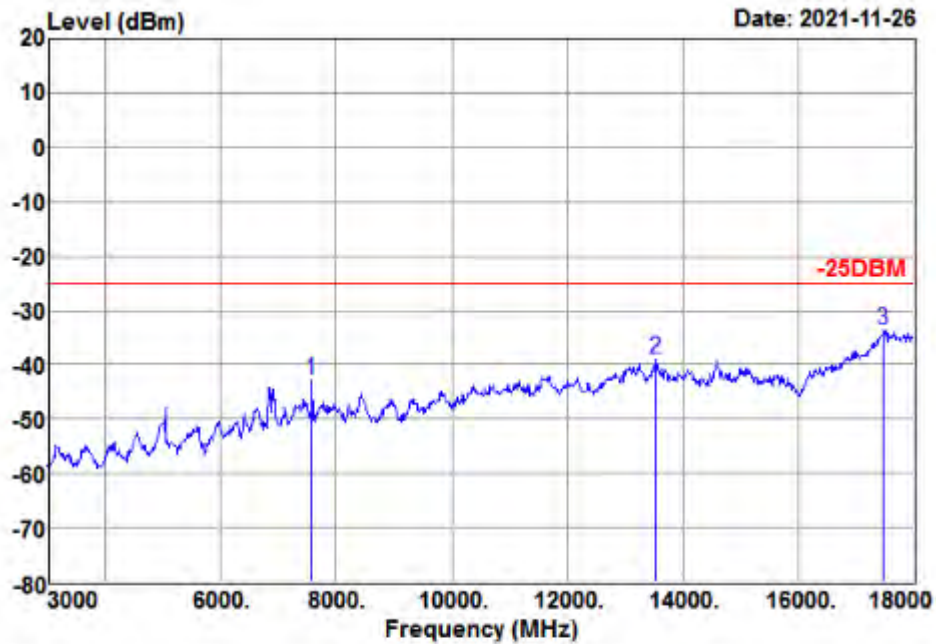


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CHANNEL BANDWIDTH: 20MHz / QPSK

MODE	TX channel 21100	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			

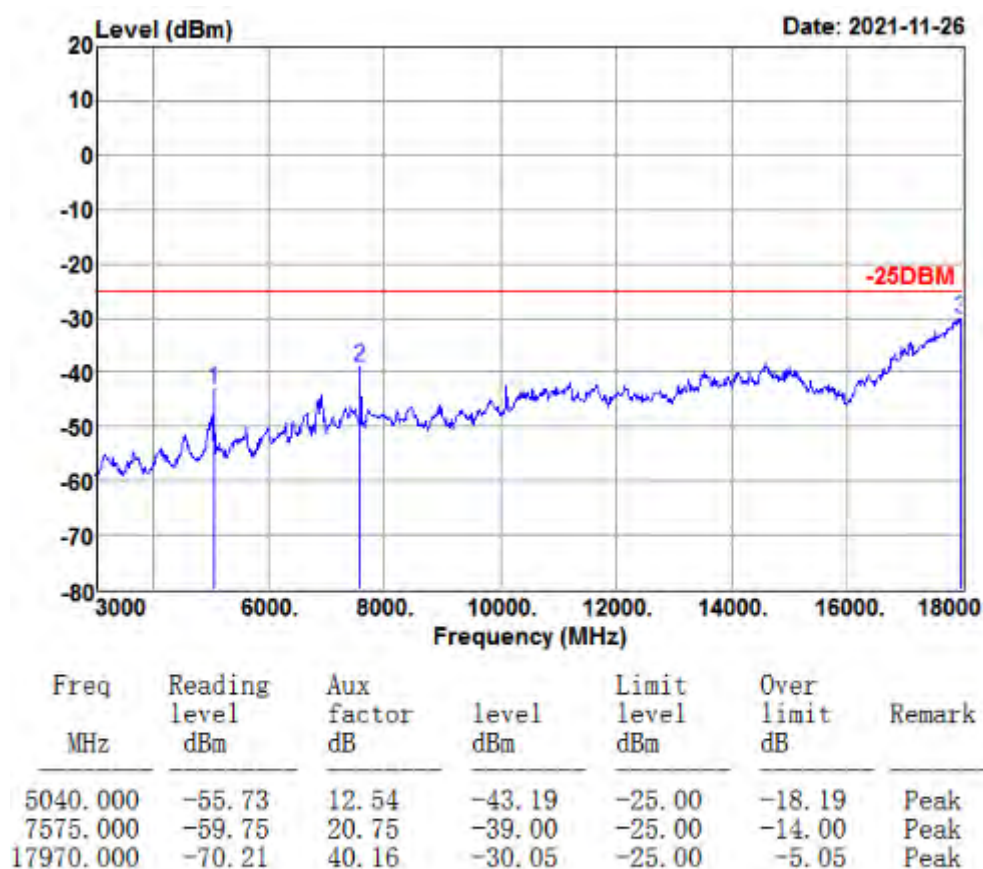


Freq MHz	Reading level dBm	Aux factor dB	level dBm	Limit level dBm	Over limit dB	Remark
7575.000	-63.33	20.45	-42.88	-25.00	-17.88	Peak
13545.000	-67.33	28.31	-39.02	-25.00	-14.02	Peak
17475.000	-69.28	35.61	-33.67	-25.00	-8.67	Peak

Note:

Corrected Reading: Reading level + Aux factor = Level

MODE	TX channel 21100	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			



Note:

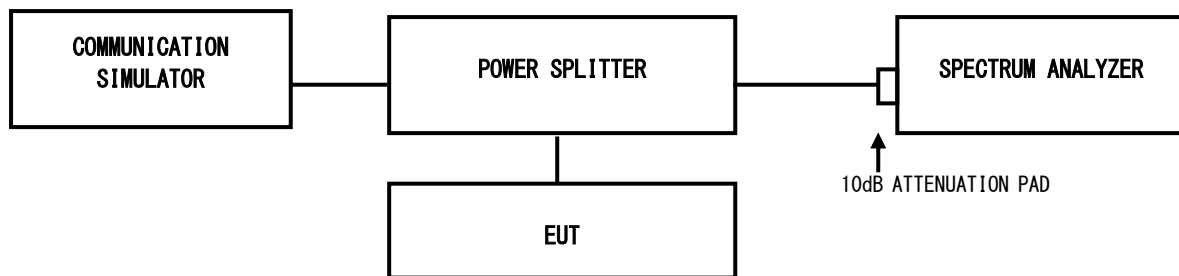
Corrected Reading: Reading level + Aux factor = Level

3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

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



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3.7.4 TEST RESULTS

Please Refer to Appendix D Of this test report.



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4 INFORMATION ON THE TESTING LABORATORIES

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

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

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.



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5 APPENDIX A – 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.

APPENDIX D:

1.1 PEAK-TO-AVERAGE RATIO(CCDF)

1.1.1 Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band4	1.4MHz	QPSK	19957	1RB#0	6.23	13	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	6.16	13	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	5.66	13	PASS
Band4	1.4MHz	QPSK	20175	6RB#0	6.02	13	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	5.56	13	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	5.76	13	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	6.88	13	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	6.77	13	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	6.32	13	PASS
Band4	1.4MHz	16QAM	20175	6RB#0	6.79	13	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	6.50	13	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	6.77	13	PASS
Band4	3MHz	QPSK	19965	1RB#0	6.07	13	PASS
Band4	3MHz	QPSK	19965	15RB#0	6.15	13	PASS
Band4	3MHz	QPSK	20175	1RB#0	5.89	13	PASS
Band4	3MHz	QPSK	20175	15RB#0	6.01	13	PASS
Band4	3MHz	QPSK	20385	1RB#0	5.47	13	PASS
Band4	3MHz	QPSK	20385	15RB#0	5.95	13	PASS
Band4	3MHz	16QAM	19965	1RB#0	6.92	13	PASS
Band4	3MHz	16QAM	19965	15RB#0	6.83	13	PASS
Band4	3MHz	16QAM	20175	1RB#0	6.59	13	PASS
Band4	3MHz	16QAM	20175	15RB#0	6.81	13	PASS
Band4	3MHz	16QAM	20385	1RB#0	6.12	13	PASS
Band4	3MHz	16QAM	20385	15RB#0	6.77	13	PASS
Band4	5MHz	QPSK	19975	1RB#0	6.27	13	PASS
Band4	5MHz	QPSK	19975	25RB#0	6.14	13	PASS
Band4	5MHz	QPSK	20175	1RB#0	6.14	13	PASS
Band4	5MHz	QPSK	20175	25RB#0	6.11	13	PASS
Band4	5MHz	QPSK	20375	1RB#0	5.83	13	PASS
Band4	5MHz	QPSK	20375	25RB#0	5.95	13	PASS
Band4	5MHz	16QAM	19975	1RB#0	6.64	13	PASS
Band4	5MHz	16QAM	19975	25RB#0	6.77	13	PASS
Band4	5MHz	16QAM	20175	1RB#0	6.66	13	PASS
Band4	5MHz	16QAM	20175	25RB#0	6.71	13	PASS
Band4	5MHz	16QAM	20375	1RB#0	6.49	13	PASS
Band4	5MHz	16QAM	20375	25RB#0	6.66	13	PASS
Band4	10MHz	QPSK	20000	1RB#0	5.99	13	PASS
Band4	10MHz	QPSK	20000	50RB#0	6.02	13	PASS
Band4	10MHz	QPSK	20175	1RB#0	5.95	13	PASS
Band4	10MHz	QPSK	20175	50RB#0	6.01	13	PASS
Band4	10MHz	QPSK	20350	1RB#0	5.80	13	PASS
Band4	10MHz	QPSK	20350	50RB#0	5.89	13	PASS
Band4	10MHz	16QAM	20000	1RB#0	6.96	13	PASS
Band4	10MHz	16QAM	20000	27RB#0	6.76	13	PASS
Band4	10MHz	16QAM	20175	1RB#0	6.97	13	PASS



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Band4	10MHz	16QAM	20175	27RB#0	6.74	13	PASS
Band4	10MHz	16QAM	20350	1RB#0	6.47	13	PASS
Band4	10MHz	16QAM	20350	27RB#0	6.69	13	PASS
Band4	15MHz	QPSK	20025	1RB#0	6.11	13	PASS
Band4	15MHz	QPSK	20025	75RB#0	6.21	13	PASS
Band4	15MHz	QPSK	20175	1RB#0	5.50	13	PASS
Band4	15MHz	QPSK	20175	75RB#0	6.21	13	PASS
Band4	15MHz	QPSK	20325	1RB#0	6.01	13	PASS
Band4	15MHz	QPSK	20325	75RB#0	6.17	13	PASS
Band4	15MHz	16QAM	20025	1RB#0	6.64	13	PASS
Band4	15MHz	16QAM	20025	27RB#0	6.76	13	PASS
Band4	15MHz	16QAM	20175	1RB#0	6.26	13	PASS
Band4	15MHz	16QAM	20175	27RB#0	6.69	13	PASS
Band4	15MHz	16QAM	20325	1RB#0	6.41	13	PASS
Band4	15MHz	16QAM	20325	27RB#0	6.72	13	PASS
Band4	20MHz	QPSK	20050	1RB#0	6.01	13	PASS
Band4	20MHz	QPSK	20050	100RB#0	5.65	13	PASS
Band4	20MHz	QPSK	20175	1RB#0	5.59	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	5.74	13	PASS
Band4	20MHz	QPSK	20300	1RB#0	6.10	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	5.76	13	PASS
Band4	20MHz	16QAM	20050	1RB#0	7.02	13	PASS
Band4	20MHz	16QAM	20050	27RB#0	6.92	13	PASS
Band4	20MHz	16QAM	20175	1RB#0	6.46	13	PASS
Band4	20MHz	16QAM	20175	27RB#0	6.85	13	PASS
Band4	20MHz	16QAM	20300	1RB#0	6.34	13	PASS
Band4	20MHz	16QAM	20300	27RB#0	6.83	13	PASS
Band7	5MHz	QPSK	20775	1RB#0	5.48	13	PASS
Band7	5MHz	QPSK	20775	25RB#0	5.68	13	PASS
Band7	5MHz	QPSK	21100	1RB#0	5.62	13	PASS
Band7	5MHz	QPSK	21100	25RB#0	5.69	13	PASS
Band7	5MHz	QPSK	21425	1RB#0	5.57	13	PASS
Band7	5MHz	QPSK	21425	25RB#0	5.64	13	PASS
Band7	5MHz	16QAM	20775	1RB#0	5.89	13	PASS
Band7	5MHz	16QAM	20775	25RB#0	6.39	13	PASS
Band7	5MHz	16QAM	21100	1RB#0	6.04	13	PASS
Band7	5MHz	16QAM	21100	25RB#0	6.34	13	PASS
Band7	5MHz	16QAM	21425	1RB#0	5.97	13	PASS
Band7	5MHz	16QAM	21425	25RB#0	6.24	13	PASS
Band7	10MHz	QPSK	20800	1RB#0	5.72	13	PASS
Band7	10MHz	QPSK	20800	50RB#0	5.50	13	PASS
Band7	10MHz	QPSK	21100	1RB#0	5.77	13	PASS
Band7	10MHz	QPSK	21100	50RB#0	5.58	13	PASS
Band7	10MHz	QPSK	21400	1RB#0	5.36	13	PASS
Band7	10MHz	QPSK	21400	50RB#0	5.55	13	PASS
Band7	10MHz	16QAM	20800	1RB#0	6.69	13	PASS
Band7	10MHz	16QAM	20800	27RB#0	6.26	13	PASS
Band7	10MHz	16QAM	21100	1RB#0	6.27	13	PASS
Band7	10MHz	16QAM	21100	27RB#0	6.25	13	PASS
Band7	10MHz	16QAM	21400	1RB#0	6.40	13	PASS
Band7	10MHz	16QAM	21400	27RB#0	6.18	13	PASS
Band7	15MHz	QPSK	20825	1RB#0	5.59	13	PASS
Band7	15MHz	QPSK	20825	75RB#0	5.81	13	PASS



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Band7	15MHz	QPSK	21100	1RB#0	5.57	13	PASS
Band7	15MHz	QPSK	21100	75RB#0	5.92	13	PASS
Band7	15MHz	QPSK	21375	1RB#0	5.44	13	PASS
Band7	15MHz	QPSK	21375	75RB#0	5.86	13	PASS
Band7	15MHz	16QAM	20825	1RB#0	6.55	13	PASS
Band7	15MHz	16QAM	20825	27RB#0	6.26	13	PASS
Band7	15MHz	16QAM	21100	1RB#0	6.28	13	PASS
Band7	15MHz	16QAM	21100	27RB#0	6.30	13	PASS
Band7	15MHz	16QAM	21375	1RB#0	6.30	13	PASS
Band7	15MHz	16QAM	21375	27RB#0	6.30	13	PASS
Band7	20MHz	QPSK	20850	1RB#0	5.61	13	PASS
Band7	20MHz	QPSK	20850	100RB#0	5.46	13	PASS
Band7	20MHz	QPSK	21100	1RB#0	5.88	13	PASS
Band7	20MHz	QPSK	21100	100RB#0	5.56	13	PASS
Band7	20MHz	QPSK	21350	1RB#0	5.70	13	PASS
Band7	20MHz	QPSK	21350	100RB#0	5.45	13	PASS
Band7	20MHz	16QAM	20850	1RB#0	6.77	13	PASS
Band7	20MHz	16QAM	20850	27RB#0	6.35	13	PASS
Band7	20MHz	16QAM	21100	1RB#0	6.81	13	PASS
Band7	20MHz	16QAM	21100	27RB#0	6.42	13	PASS
Band7	20MHz	16QAM	21350	1RB#0	6.35	13	PASS
Band7	20MHz	16QAM	21350	27RB#0	6.38	13	PASS

1.1.2 Test Graphs

Band4-1.4MHz-QPSK-19957-1RB#0



Band4-1.4MHz-QPSK-19957-6RB#0

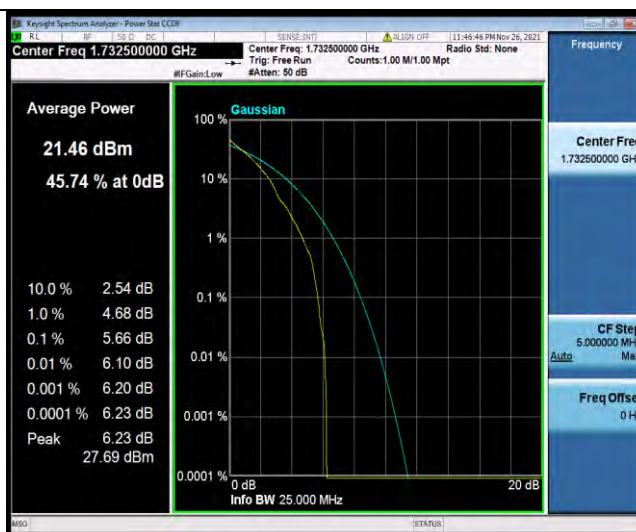


Band4-1.4MHz-QPSK-20175-1RB#0



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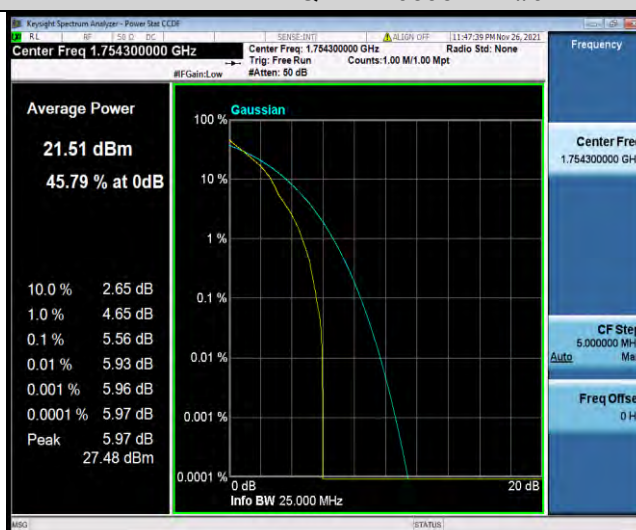
Test Report No.: W7L-P21110027RF03



Band4-1.4MHz-QPSK-20175-6RB#0



Band4-1.4MHz-QPSK-20393-1RB#0



Band4-1.4MHz-QPSK-20393-6RB#0



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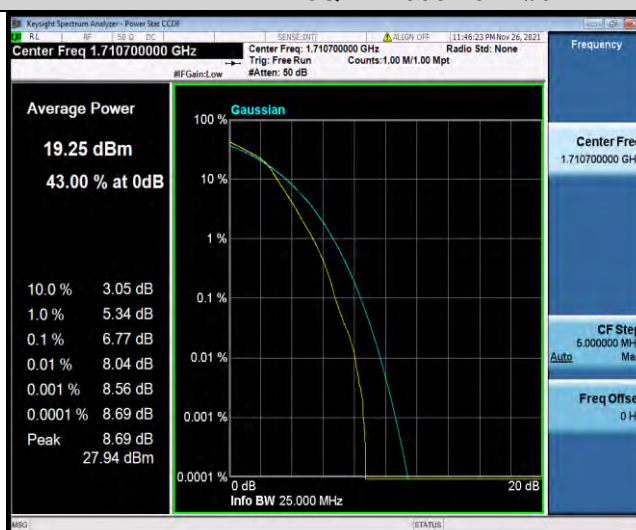
Test Report No.: W7L-P21110027RF03



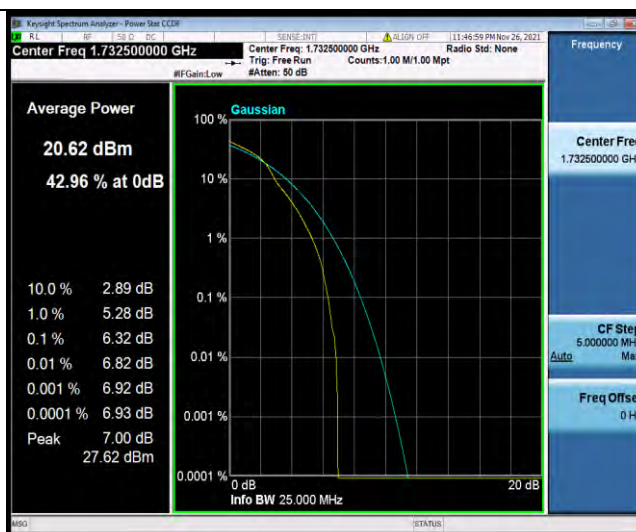
Band4-1.4MHz-16QAM-19957-1RB#0



Band4-1.4MHz-16QAM-19957-6RB#0



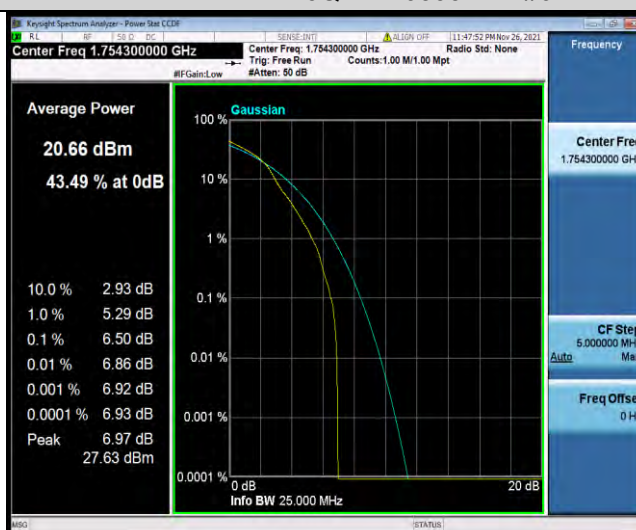
Band4-1.4MHz-16QAM-20175-1RB#0



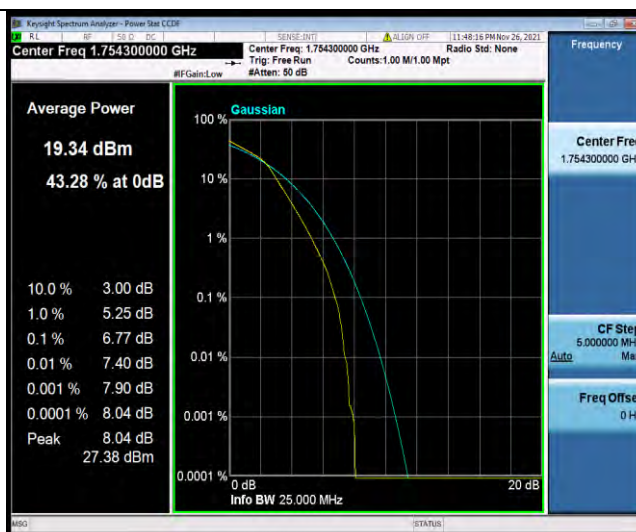
Band4-1.4MHz-16QAM-20175-6RB#0



Band4-1.4MHz-16QAM-20393-1RB#0



Band4-1.4MHz-16QAM-20393-6RB#0



Band4-3MHz-QPSK-19965-1RB#0



Band4-3MHz-QPSK-19965-15RB#0

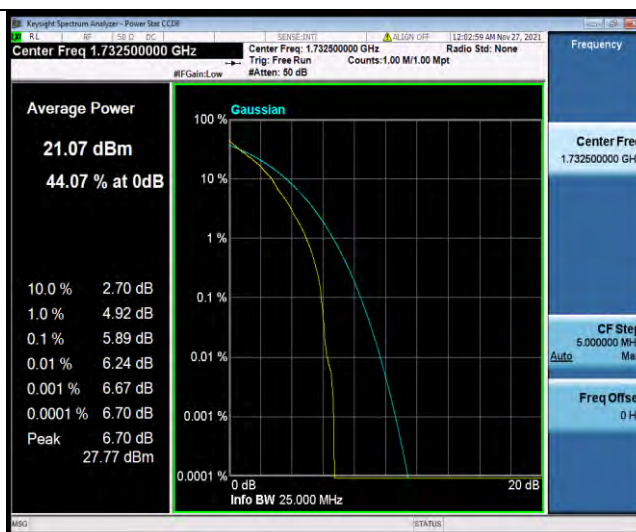


Band4-3MHz-QPSK-20175-1RB#0



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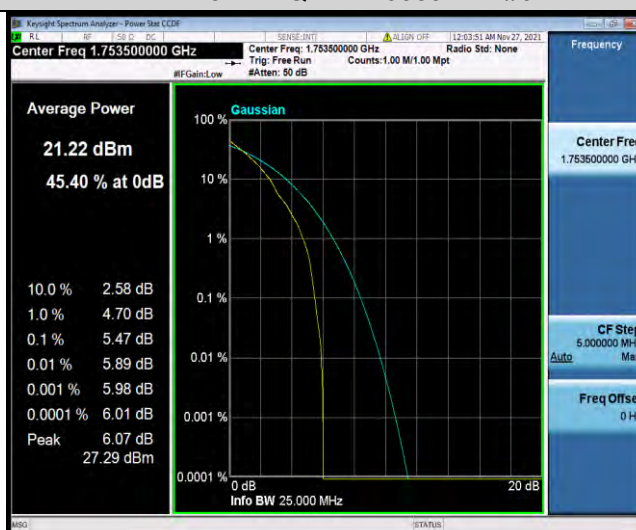
Test Report No.: W7L-P21110027RF03



Band4-3MHz-QPSK-20175-15RB#0



Band4-3MHz-QPSK-20385-1RB#0

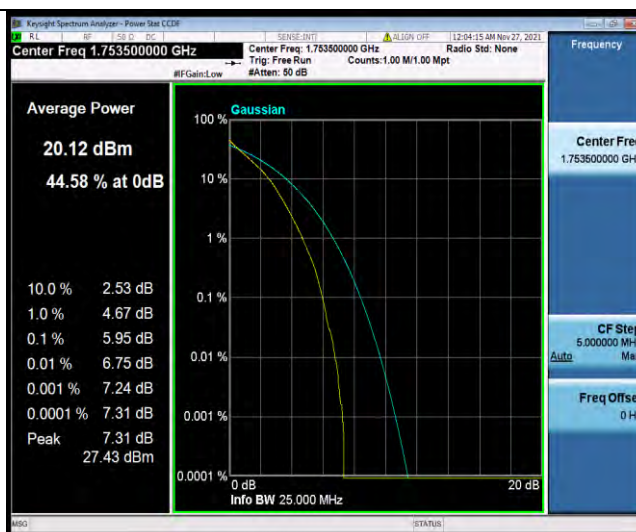


Band4-3MHz-QPSK-20385-15RB#0



BUREAU
VERITAS

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Band4-3MHz-16QAM-19965-1RB#0



Band4-3MHz-16QAM-19965-15RB#0



Band4-3MHz-16QAM-20175-1RB#0

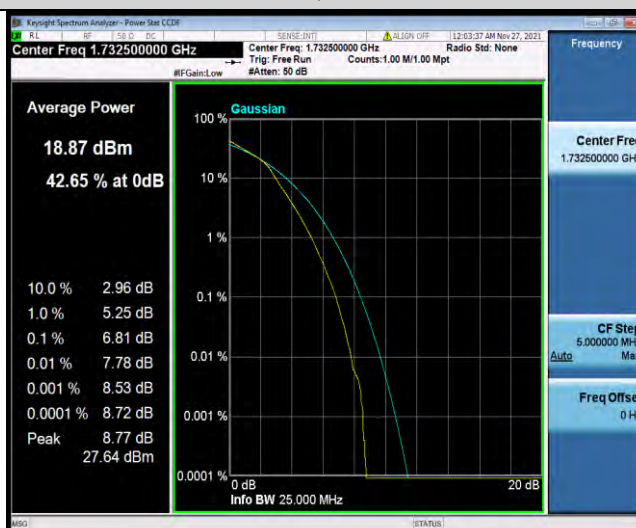


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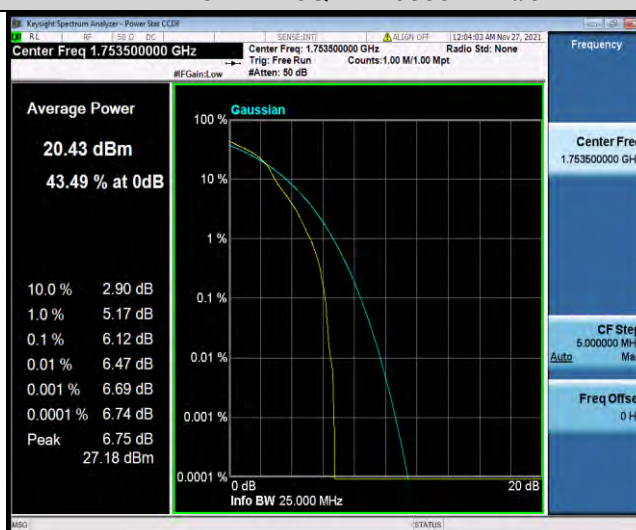
Test Report No.: W7L-P21110027RF03



Band4-3MHz-16QAM-20175-15RB#0



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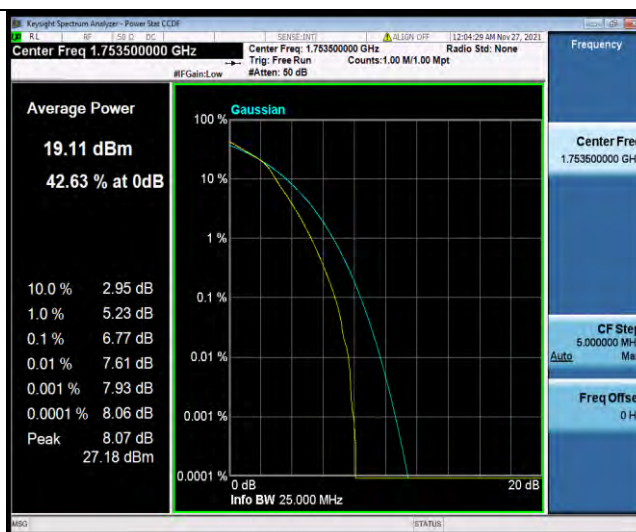


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Test Report No.: W7L-P21110027RF03



Band4-5MHz-QPSK-19975-1RB#0



Band4-5MHz-QPSK-19975-25RB#0

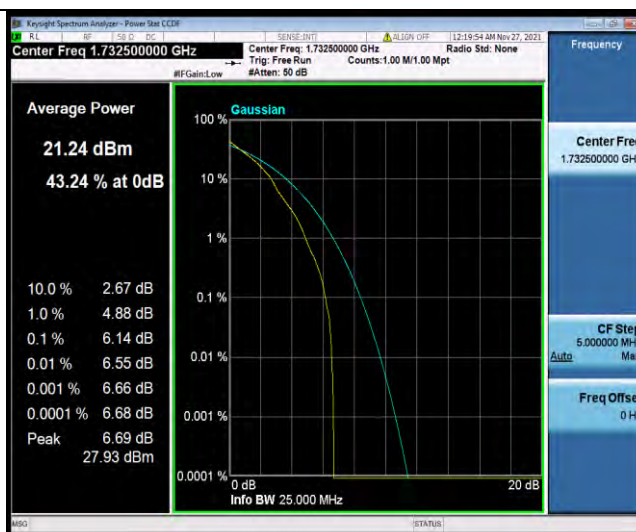


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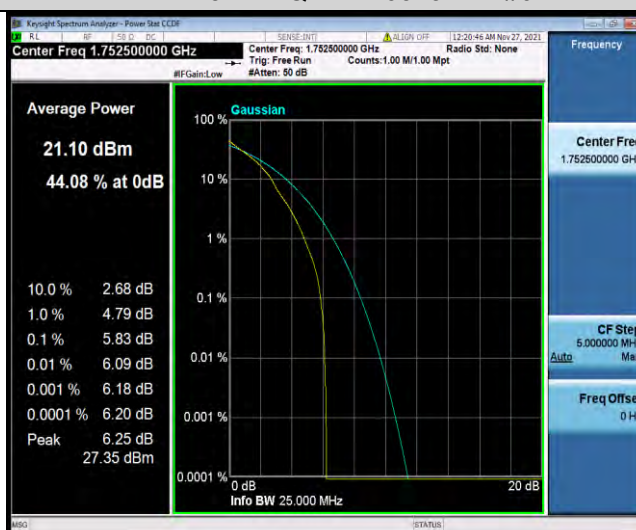
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Band4-5MHz-QPSK-20375-1RB#0



Band4-5MHz-QPSK-20375-25RB#0