

FCC TEST REPORT

(PART 96)

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

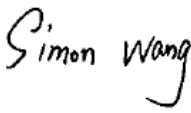
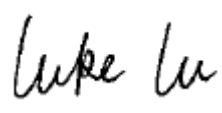
Manufacturer or Supplier:	DataRemote Incorporated
Address:	18001 Old Cutler Rd. Suite 600, Miami, FL 33157
Product:	Cellular Backup Router
Brand Name:	DATAREMOTE
Model Name:	90X1
FCC ID:	2AJLF-90X1
Date of tests:	Jul. 17, 2023 ~ Aug. 25, 2023

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

☒ **47 CFR FCC Part 96**

☒ **ANSI 63.26-2015**

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

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

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



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RELEASE CONTROL RECORD

ISSUE NO.	DESCRIPTION	DATE ISSUED
W7L-P23070006RF11	Original release	Aug. 25, 2023

1 SUMMARY OF TEST RESULTS

47 CFR FCC PART 96			
FCC CLAUSE	TEST ITEM	RESULT	TEST LAB*
2.1046 96.41(b)	Maximum Peak Output Power and Maximum EIRP	Compliance	A
2.1051 96.41(e)	Conducted Band Edge	See Note 2	-
2.1049	Occupied Bandwidth	See Note 2	-
2.1055	Frequency Stability	See Note 2	-
2.1051 96.41(e)	Conducted Spurious Emissions	See Note 2	-
2.1053 96.41(e)	Radiated Spurious Emissions	Compliance See Note 3	A/B
96.41(g)	Peak-to-Average Power Ratio	See Note 2	-

Note:1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2. Refer to Module report FYCR220600021102, FCC ID: XMR2022RM520NGL.

3. For ENDC band, the report only show the worst mode RSE data of original module report, because the antenna type of module and EUT is all the same, and the power of single LTE/NR band is larger than that in ENDC, so single LTE/NR band can cover the RSE risk of ENDC part.

*Test Lab Information Reference

Lab A:

BV 7Layers Communications Technology (Shenzhen) Co., Ltd

Lab Address:

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

Accredited Test Lab Cert 3939.01

FCC Site Registration No. : 525120; Designation No. : CN1171;

Lab B:

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
Maximum Peak Output Power	$\pm 2.06\text{dB}$
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Band Edge Measurements	$\pm 4.70\text{dB}$
Peak to average ratio	$\pm 0.76\text{dB}$

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 28,23	Mar. 27,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.13,23	May.12,24
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.03,22	Sep.02,23
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGRE N	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K- SG/QMS-00361	15433	Sep.04, 22	Sep.03, 23
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 14,23	Feb. 13,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.11,23	May.10,24
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. 18,23	May. 17,26
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 06,23	May. 05,24
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 06,23	May. 05,24
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.11,23	May.10,24
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24
Radio Communication Analyzer	Starpoint	SP9500-CTS	20460	Oct. 13,22	Oct. 12,23

- 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.



Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Vector Signal Generator	R&S	SMBV100B	102176	Feb.16,22	Feb.15,24
Signal Generator	R&S	SMB100A	182185	Feb.16,22	Feb.15,24
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.25,22	Feb.24,24
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,22	Feb.24,24
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,22	Feb.27,24
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.23,22	Feb.22,24
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,22	Feb.22,24
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
Test Software	EMC32	EMC32	N/A	N/A	N/A
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Oct.01,22	Sep.30,24
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.28,23	Oct.27,23
CABLE	R&S	W12.14	N/A	Apr.28,23	Oct.27,23
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.28,23	Oct.27,23
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.28,23	Oct.27,23
Temperature Chamber	votsch	VT4002	58566078100050	May.31,22	May.30,24

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GREGT/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 434559; The Designation No. is CN1325.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Cellular Backup Router	
BRAND NAME	DATAREMOTE	
MODEL NAME	90X1	
NOMINAL VOLTAGE	19Vdc(adapter or host equipment) 11.1Vdc (Li-ion, battery)	
MODULATION TECHNOLOGY	5G NR	DFT-s-OFDM(Pi/2BPSK,QPSK,16QAM,64QAM,256QAM); CP-OFDM(QPSK,16QAM,64QAM,256QAM);
SUPPORT ENDC COMBINE	NR Band n48	2A_n48A
		5A_n48A
		13A_n48A
		66A_n48A
FREQUENCY RANGE	NR Band n48	3555 MHz ~ 3694.98MHz
EMISSION DESIGNATOR	NR Band n48 Channel Bandwidth: 10MHz	QPSK: 8M75G7D 16QAM: 8M80W7D 64QAM: 8M71W7D 256QAM: 8M71W7D
	NR Band n48 Channel Bandwidth: 20MHz	QPSK: 18M4G7D 16QAM: 18M5W7D 64QAM: 18M4W7D 256QAM: 18M4W7D
	NR Band n48 Channel Bandwidth: 40MHz	QPSK: 38M2G7D 16QAM: 38M3W7D 64QAM: 38M2W7D 256QAM: 38M1W7D
MAX. EIRP POWER	NR Band n48 Channel Bandwidth: 10MHz	117.5mW
	NR Band n48 Channel Bandwidth: 20MHz	120.79mW
	NR Band n48 Channel Bandwidth: 40MHz	124.75mW



ANTENNA GAIN	Monopole Antenna with -2.38 dBi gain for NR Band n48
HW VERSION	1.0
SW VERSION	1.0
I/O PORTS	Refer to user's manual
DATA CABLE	Ethernet cable: non-shielded cable, with w/o ferrite core, 1.5 meter Phone Cable: non-shielded cable, with w/o ferrite core, 1.5 meter
EXTREME TEMPERATURE	0-40 °C
EXTREME VOLTAGE	3.6V - 24V

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

MODULATION MODE	TX FUNCTION
NR	2TX/2RX

- For UL_MIMO Mode, according to the KDB 662911 D01, Basic methodology with N_{ANT} transmit antennas, each with the same directional gain G_{ANT} dBi, being driven by N_{ANT} transmitter outputs of equal power. Directional gain is to be computed as follows:
Directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi (For any transmit signals that are *correlated* with each other).
So the Gain of N48 can be calculated as below:

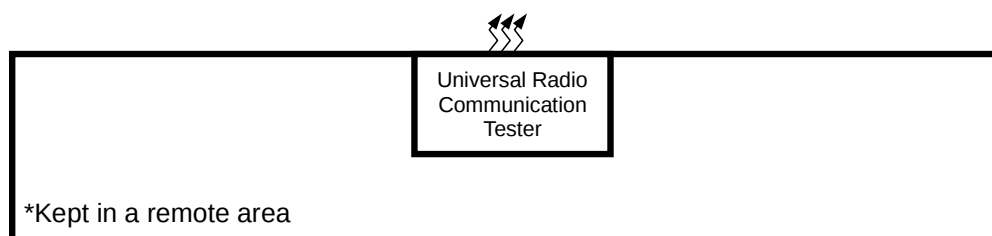
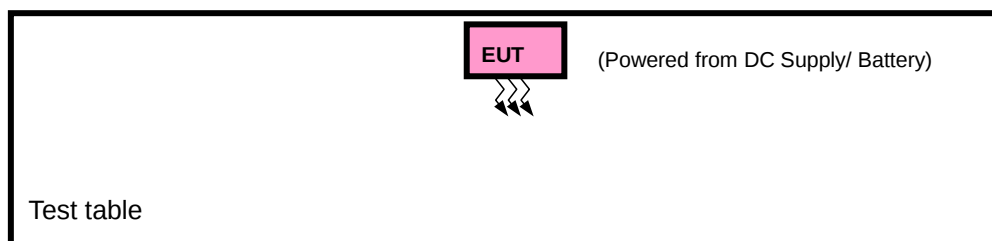
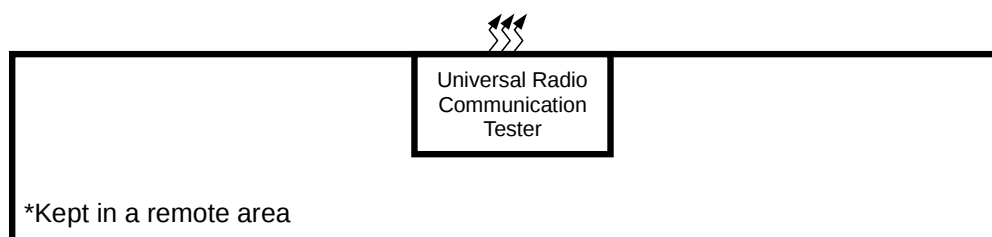
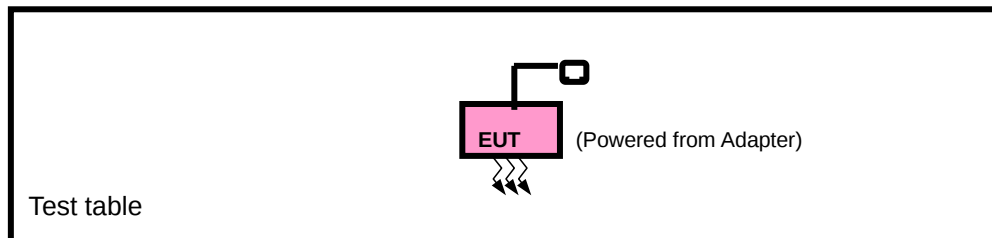
NR Band	G_{ANT} (All antennas with the same Gain)	Directional gain
48	-2.38dBi	0.63dBi

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

List of Accessory:

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

2.2 CONFIGURATION OF SYSTEM UNDER TEST FOR RADIATION EMISSION TEST



2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	LONG WEI	PS-6403D	010934269	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.8m

2.4 TEST ITEM AND TEST CONFIGURATION

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

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter + USB Cable with 5G NR link
B	EUT + DC Supply with 5G NR link

5G NR n48 MODE (SA_n48, DC_2A_n48A, DC_5A_n48A, DC_13A_n48A, DC_66A_n48A)

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	637000 to 646332	637000 to 646332	Low, Middle, High	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
		637334 to 646000	637334 to 646000	Low, Middle, High	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
		638000 to 645332	638000 to 645332	Low, Middle, High	40MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	RADIATED EMISSION	637000 to 646332	637000 to 646332	Middle	10MHz	QPSK	1RB/ 0RB Offset
		637334 to 646000	637334 to 646000	Middle	20MHz	QPSK	1RB/ 0RB Offset
		638000 to 645332	638000 to 645332	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset

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

2. The test data presented in the report from worst SA_n48



TEST CONDITION:

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

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 96

KDB 971168 D02 Power Meas License Digital Systems v02r02

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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

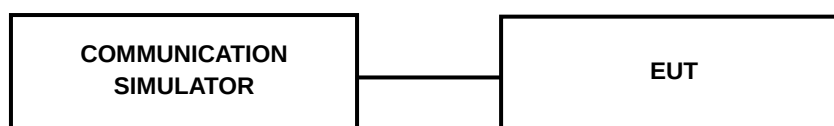
3 TEST TYPES AND RESULTS

4.1 MAXIMUM EIRP MEASUREMENT

3.1.1 LIMITS OF MAXIMUM EIRP MEASUREMENT

Device	Maximum EIRP (dBm/10 MHz)
End User Device	23
Category A CBSD	30
Category B CBSD	47

3.1.2 TEST SETUP



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

3.1.3 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.

3.1.4 DEVIATION FROM TEST STANDARD

No deviation.

3.1.5 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

5G SA

EIRP

SISO

N48

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	21.8	-2.38	19.42	87.5	23
641666	3624.99	21.86	-2.38	19.48	88.72	23
646332	3694.98	21.92	-2.38	19.54	89.95	23

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	21.8	-2.38	19.42	87.5	23
641666	3624.99	21.87	-2.38	19.49	88.92	23
646332	3694.98	21.75	-2.38	19.37	86.5	23

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	20.33	-2.38	17.95	62.37	23
641666	3624.99	20.42	-2.38	18.04	63.68	23
646332	3694.98	20.32	-2.38	17.94	62.23	23

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	18.34	-2.38	15.96	39.45	23
641666	3624.99	18.41	-2.38	16.03	40.09	23
646332	3694.98	18.41	-2.38	16.03	40.09	23

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	22.1	-2.38	19.72	93.76	23
641666	3624.99	22.05	-2.38	19.67	92.68	23
646000	3690	21.93	-2.38	19.55	90.16	23

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	22.23	-2.38	19.85	96.61	23
641666	3624.99	22.11	-2.38	19.73	93.97	23
646000	3690	21.94	-2.38	19.56	90.36	23

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	20.63	-2.38	18.25	66.83	23
641666	3624.99	20.56	-2.38	18.18	65.77	23
646000	3690	20.46	-2.38	18.08	64.27	23

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	18.63	-2.38	16.25	42.17	23
641666	3624.99	18.59	-2.38	16.21	41.78	23
646000	3690	18.43	-2.38	16.05	40.27	23

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	22.12	-2.38	19.74	94.19	23
641666	3624.99	22.12	-2.38	19.74	94.19	23
645332	3679.98	22.03	-2.38	19.65	92.26	23

CHANNEL BANDWIDTH: 40MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	22.05	-2.38	19.67	92.68	23
641666	3624.99	22.01	-2.38	19.63	91.83	23
645332	3679.98	22.03	-2.38	19.65	92.26	23

CHANNEL BANDWIDTH: 40MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	20.65	-2.38	18.27	67.14	23
641666	3624.99	20.55	-2.38	18.17	65.61	23
645332	3679.98	20.42	-2.38	18.04	63.68	23

CHANNEL BANDWIDTH: 40MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	18.65	-2.38	16.27	42.36	23
641666	3624.99	18.63	-2.38	16.25	42.17	23
645332	3679.98	18.42	-2.38	16.04	40.18	23



MIMO

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CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	19.79	0.63	20.42	110.16	23
641666	3624.99	20.07	0.63	20.70	117.5	23
646332	3694.98	19.81	0.63	20.44	110.67	23

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	19.3	0.63	19.93	98.41	23
641666	3624.99	19.53	0.63	20.16	103.76	23
646332	3694.98	19.26	0.63	19.89	97.51	23

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	17.77	0.63	18.40	69.19	23
641666	3624.99	17.85	0.63	18.48	70.47	23
646332	3694.98	18.13	0.63	18.76	75.17	23

CHANNEL BANDWIDTH: 10MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	15.19	0.63	15.82	38.2	23
641666	3624.99	15.37	0.63	16.00	39.81	23
646332	3694.98	14.95	0.63	15.58	36.14	23

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	20.08	0.63	20.71	117.77	23
641666	3624.99	20.19	0.63	20.82	120.79	23
646000	3690	19.86	0.63	20.49	111.95	23

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	19.5	0.63	20.13	103.05	23
641666	3624.99	19.76	0.63	20.39	109.4	23
646000	3690	19.43	0.63	20.06	101.4	23

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	18.32	0.63	18.95	78.53	23
641666	3624.99	18.08	0.63	18.71	74.31	23
646000	3690	17.77	0.63	18.40	69.19	23

CHANNEL BANDWIDTH: 20MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	15.4	0.63	16.03	40.09	23
641666	3624.99	15.5	0.63	16.13	41.02	23
646000	3690	15.2	0.63	15.83	38.29	23

CHANNEL BANDWIDTH: 40MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	20.33	0.63	20.96	124.75	23
641666	3624.99	20.17	0.63	20.80	120.23	23
645332	3679.98	20.17	0.63	20.80	120.23	23

CHANNEL BANDWIDTH: 40MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	19.84	0.63	20.47	111.44	23
641666	3624.99	19.72	0.63	20.35	108.4	23
645332	3679.98	19.53	0.63	20.16	103.76	23

CHANNEL BANDWIDTH: 40MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	18.03	0.63	18.66	73.46	23
641666	3624.99	17.99	0.63	18.62	72.78	23
645332	3679.98	17.82	0.63	18.45	69.99	23

CHANNEL BANDWIDTH: 40MHz 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	15.68	0.63	16.31	42.76	23
641666	3624.99	15.51	0.63	16.14	41.12	23
645332	3679.98	15.32	0.63	15.95	39.36	23

4.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

3.2.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) 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 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,
 $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi}.$

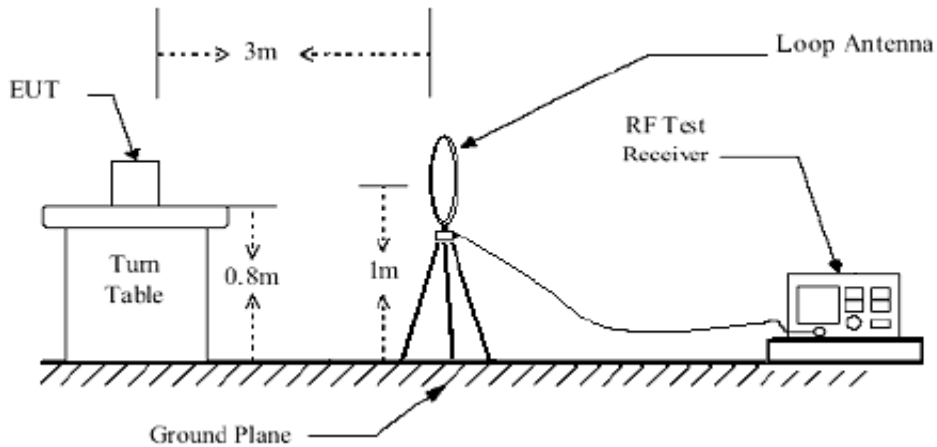
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.2.3 DEVIATION FROM TEST STANDARD

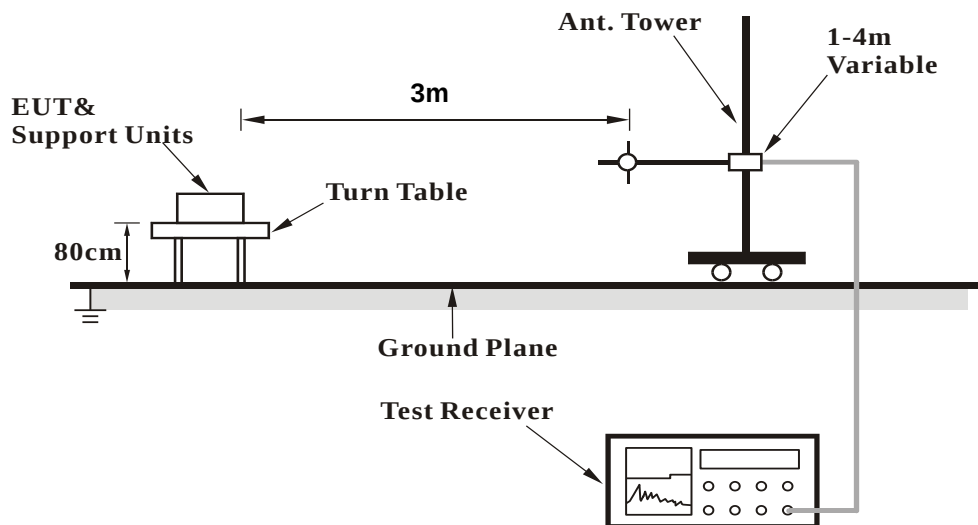
No deviation.

3.2.4 TEST SET UP

< Frequency Range below 30MHz >

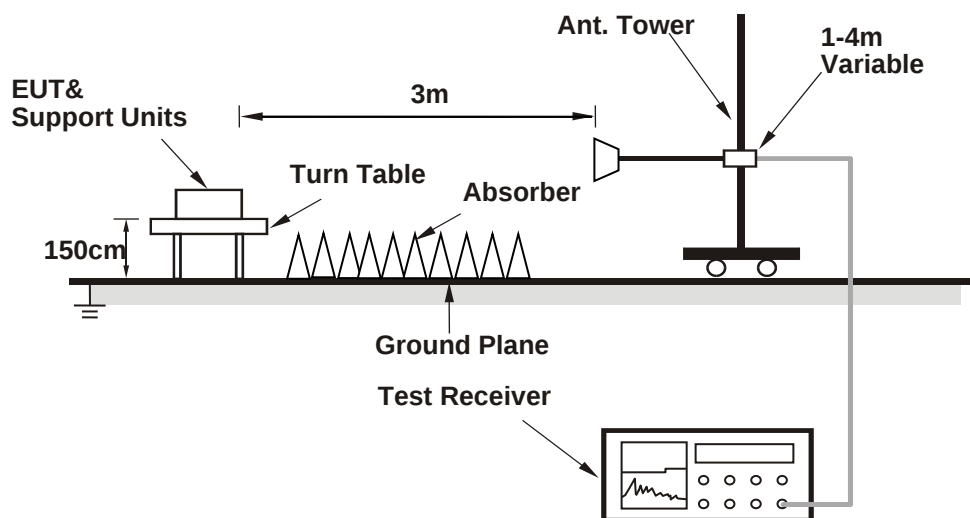


<Frequency Range below 1GHz>





<Frequency Range above 1GHz>



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

3.2.5 TEST RESULTS

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

5G SA BELOW 1GHz WORST-CASE DATA

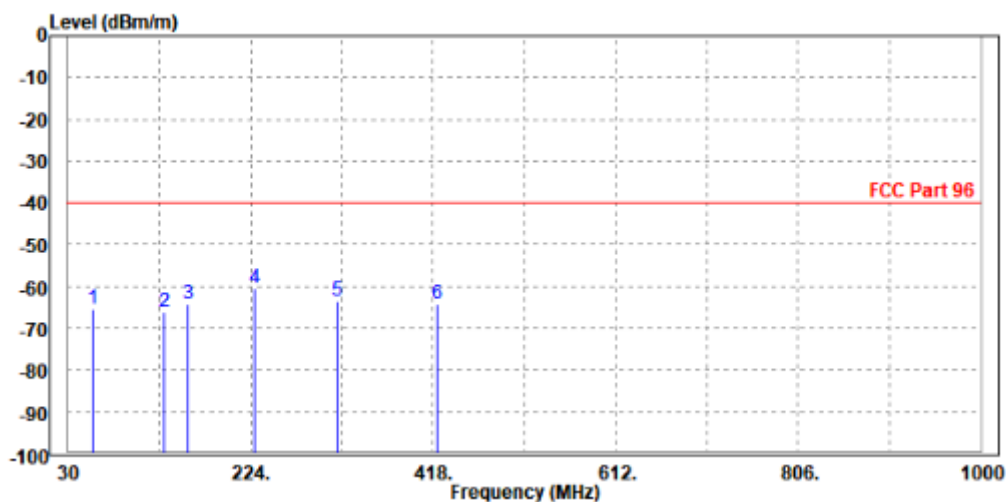
30 MHz – 1GHz data:

N48

CHANNEL BANDWIDTH: 40MHz / QPSK

MODE	TX channel 645332	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

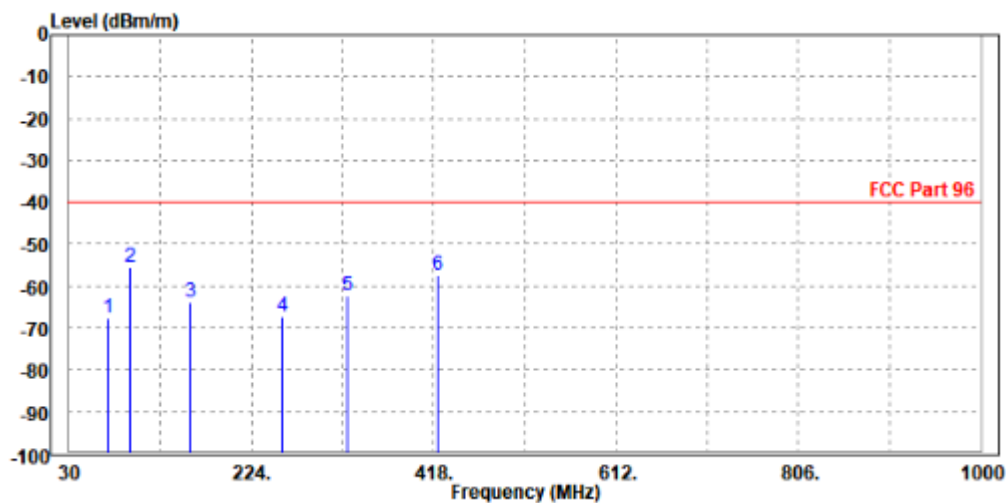
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	56.190	-65.37	-47.29	-40.00	-25.37	-18.08	Peak	Horizontal
2	132.820	-66.05	-45.30	-40.00	-26.05	-20.75	Peak	Horizontal
3	158.040	-64.08	-47.60	-40.00	-24.08	-16.48	Peak	Horizontal
4 PP	228.850	-60.52	-46.54	-40.00	-20.52	-13.98	Peak	Horizontal
5	316.150	-63.67	-51.60	-40.00	-23.67	-12.07	Peak	Horizontal
6	422.850	-64.08	-54.46	-40.00	-24.08	-9.62	Peak	Horizontal





MODE	TX channel 645332	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	70.740	-67.64	-45.22	-40.00	-27.64	-22.42	Peak	Vertical
2 PP	94.990	-55.66	-44.59	-40.00	-15.66	-11.07	Peak	Vertical
3	159.010	-64.04	-47.10	-40.00	-24.04	-16.94	Peak	Vertical
4	256.980	-67.17	-53.96	-40.00	-27.17	-13.21	Peak	Vertical
5	326.820	-62.44	-52.11	-40.00	-22.44	-10.33	Peak	Vertical
6	421.880	-57.46	-48.66	-40.00	-17.46	-8.80	Peak	Vertical





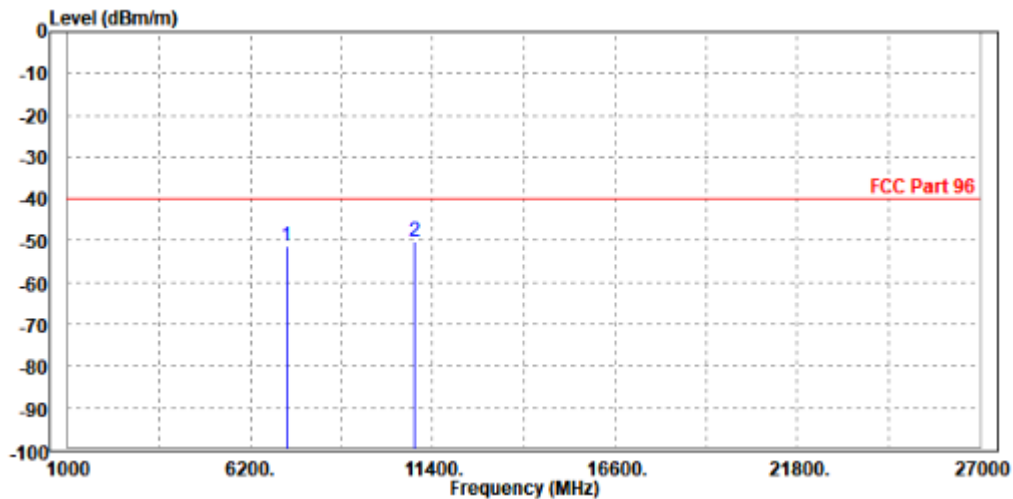
ABOVE 1GHz

N48

CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 641666	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			

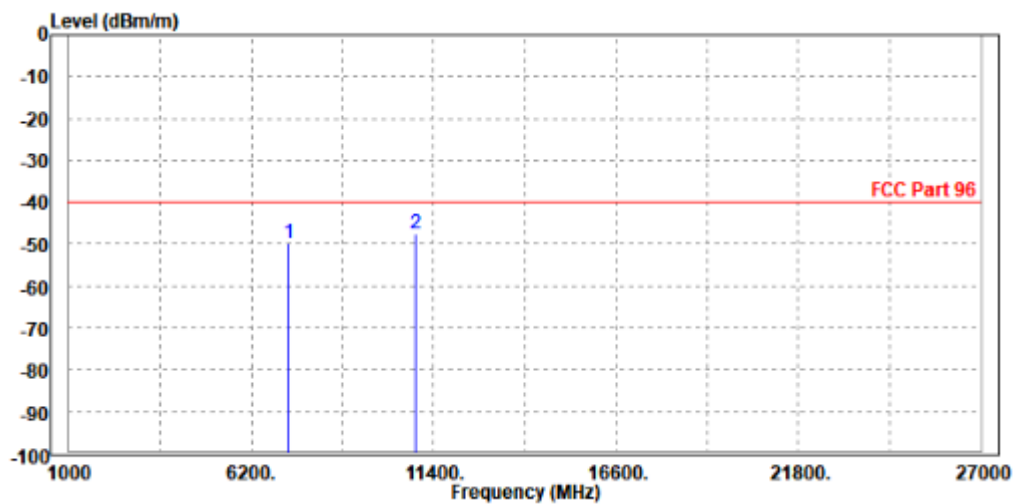
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7240.000	-51.16	-63.00	-40.00	-11.16	11.84	Peak	Horizontal
2	PP10874.970	-50.17	-69.78	-40.00	-10.17	19.61	Peak	Horizontal





MODE	TX channel 641666	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			

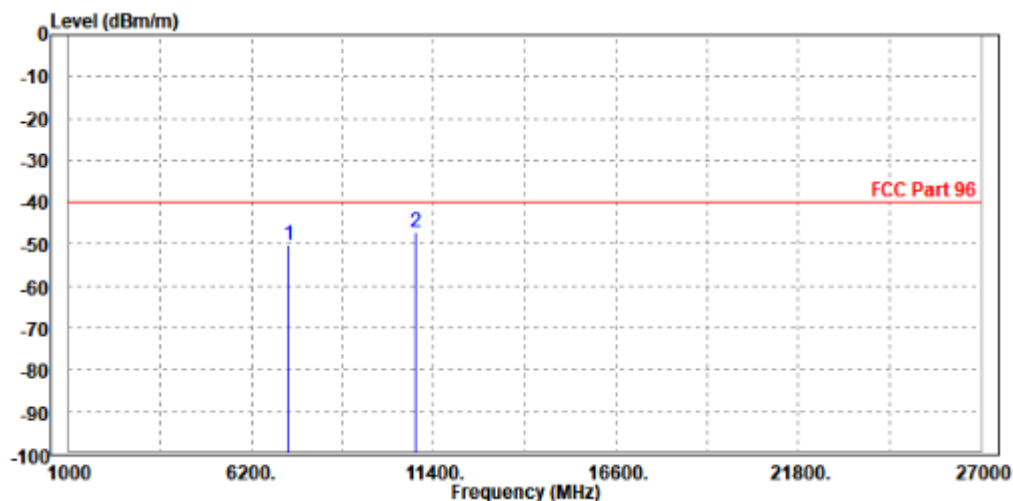
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7249.980	-49.63	-63.34	-40.00	-9.63	13.71	Peak	Vertical
2	PP10874.970	-47.64	-67.31	-40.00	-7.64	19.67	Peak	Vertical



CHANNEL BANDWIDTH: 20MHz / QPSK

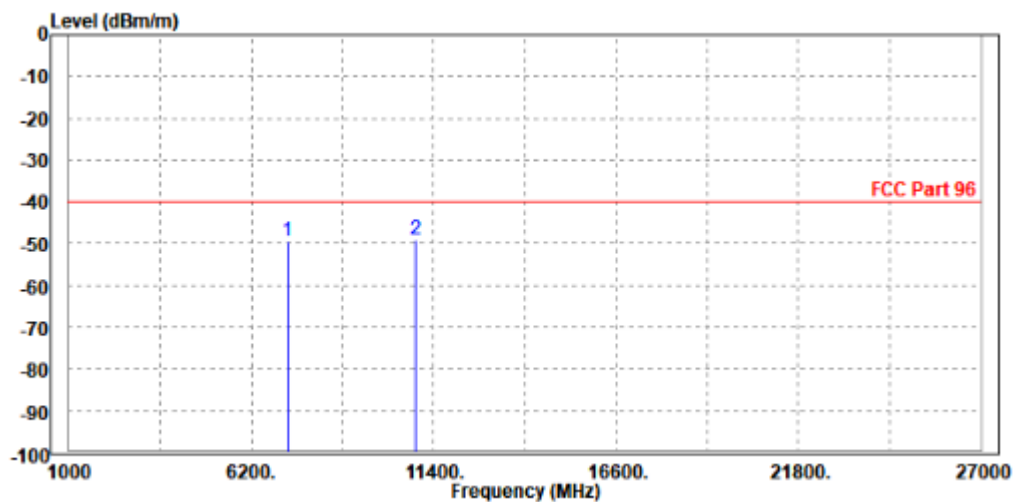
MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7249.980	-50.15	-61.97	-40.00	-10.15	11.82	Peak	Horizontal
2	PP10874.970	-47.32	-66.93	-40.00	-7.32	19.61	Peak	Horizontal



MODE	TX channel 641666	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	7240.000	-49.51	-63.18	-40.00	-9.51	13.67	Peak	Vertical
2	PP10874.970	-48.97	-68.64	-40.00	-8.97	19.67	Peak	Vertical

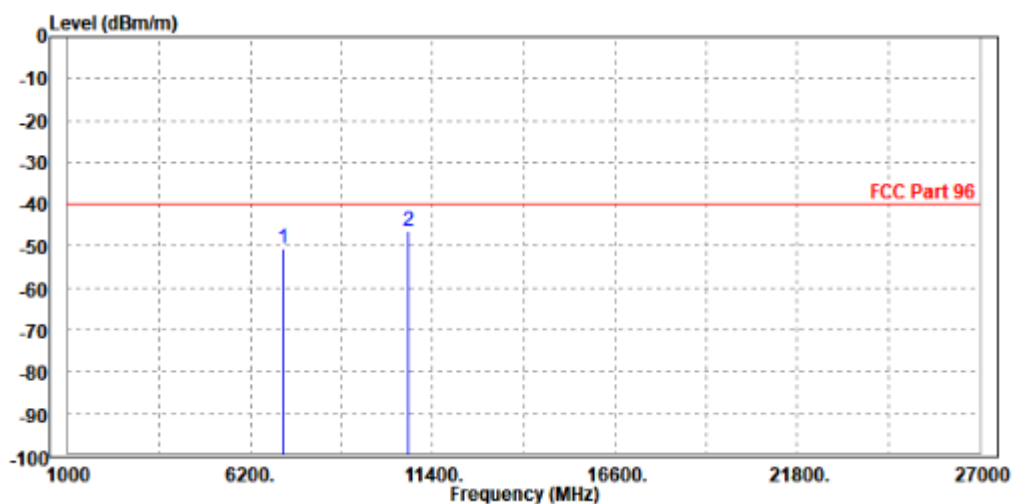


CHANNEL BANDWIDTH: 40MHz / QPSK

CH638000:

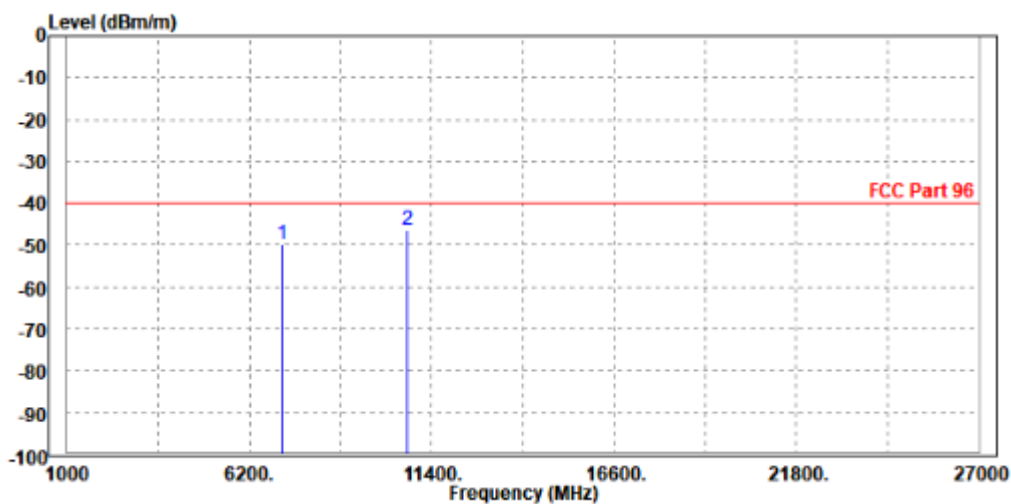
MODE	TX channel 638000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7140.000	-50.71	-62.71	-40.00	-10.71	12.00	Peak	Horizontal
2	PP10698.000	-46.55	-65.68	-40.00	-6.55	19.13	Peak	Horizontal



MODE	TX channel 638000	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			

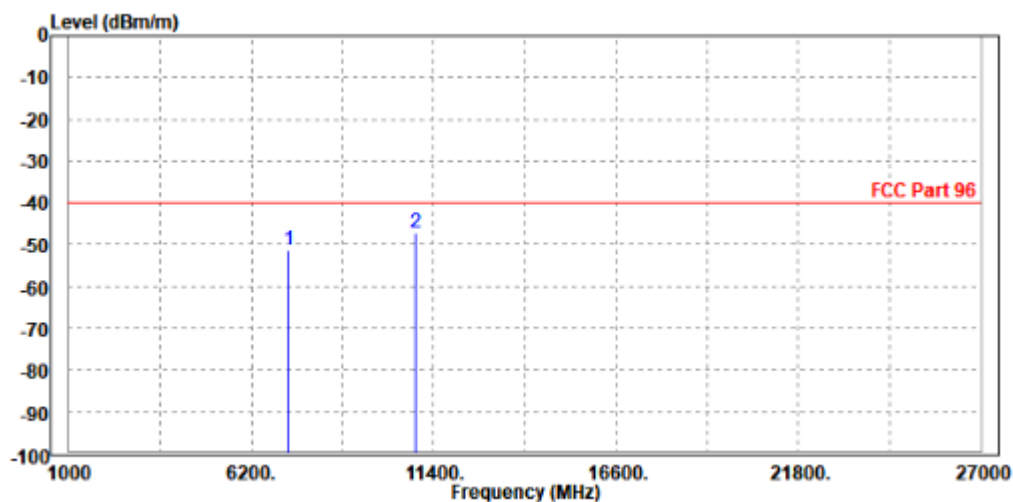
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7136.000	-49.92	-63.19	-40.00	-9.92	13.27	Peak	Vertical
2	PP10698.000	-46.56	-65.40	-40.00	-6.56	18.84	Peak	Vertical



CH641666:

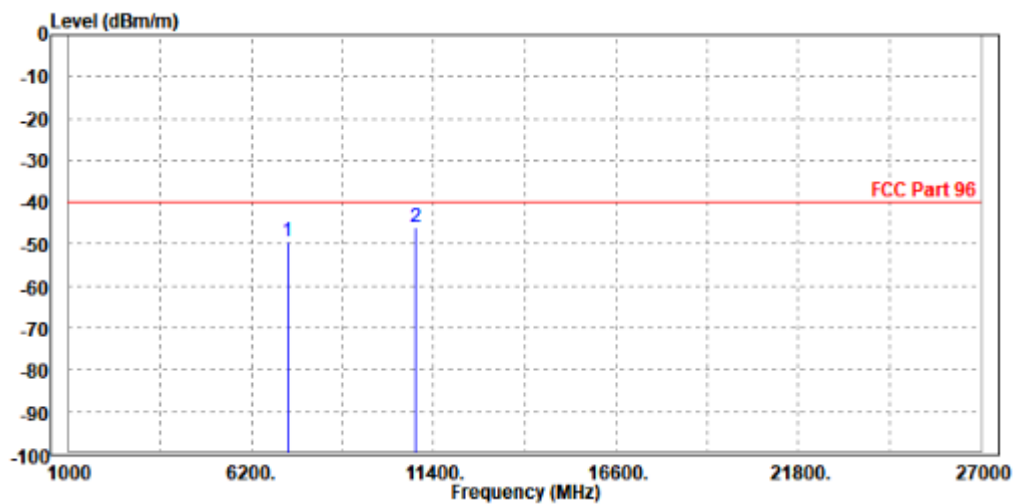
MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7249.980	-51.47	-63.29	-40.00	-11.47	11.82	Peak	Horizontal
2	PP10874.970	-46.99	-66.60	-40.00	-6.99	19.61	Peak	Horizontal



MODE	TX channel 641666	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			

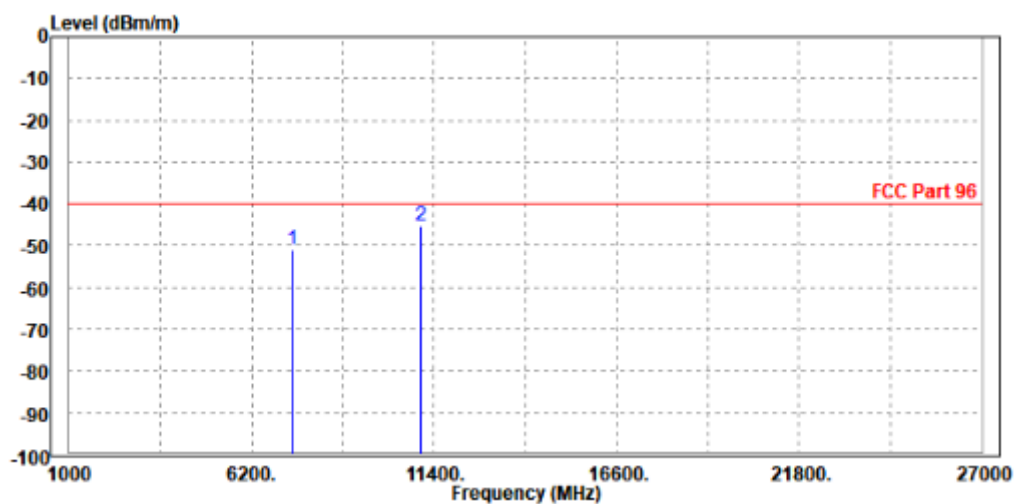
	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7240.000	-49.59	-63.26	-40.00	-9.59	13.67	Peak	Vertical
2	PP10874.970	-46.01	-65.68	-40.00	-6.01	19.67	Peak	Vertical



CH645332:

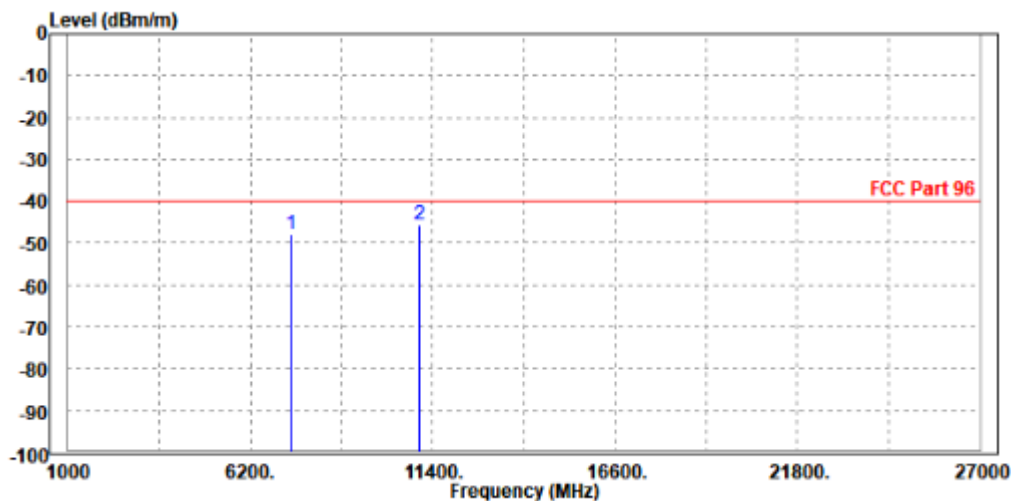
MODE	TX channel 645332	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	7370.000	-51.04	-62.67	-40.00	-11.04	11.63	Peak	Horizontal
2	PP11036.000	-45.30	-65.30	-40.00	-5.30	20.00	Peak	Horizontal



MODE	TX channel 645332	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	7359.960	-47.85	-62.00	-40.00	-7.85	14.15	Peak	Vertical
2	PP11036.000	-45.60	-65.66	-40.00	-5.60	20.06	Peak	Vertical



UL_MIMO:

5G SA

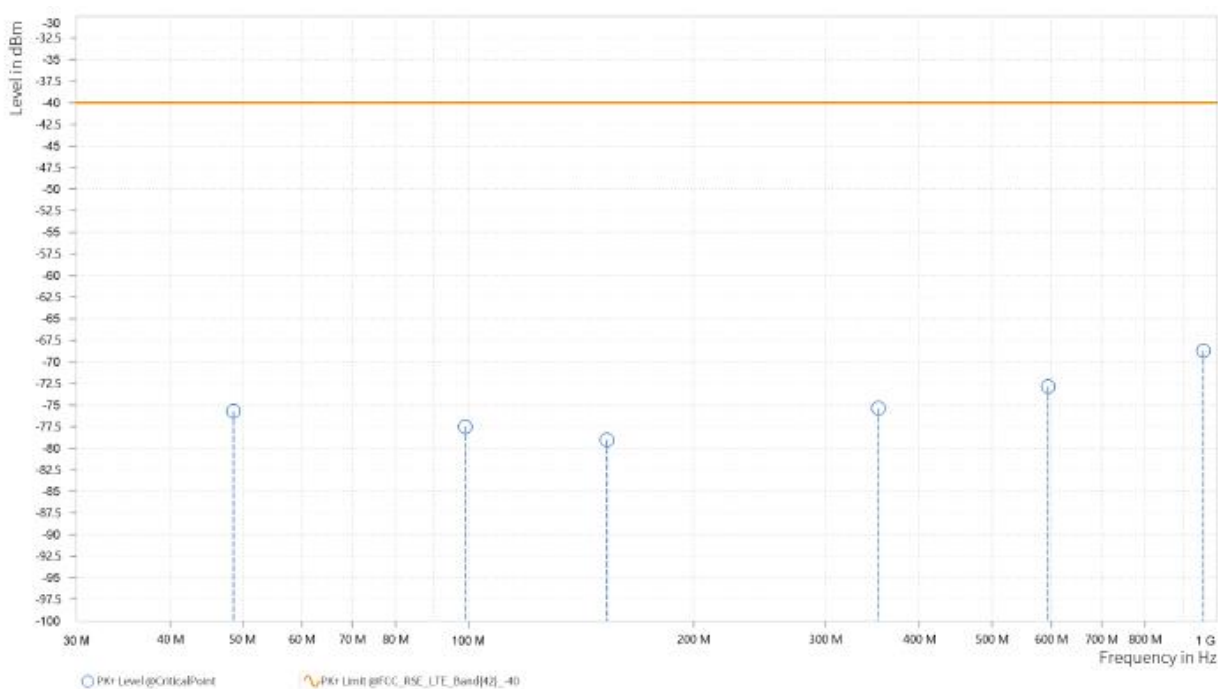
30 MHz – 1GHz data:

N48

CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 646332	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			

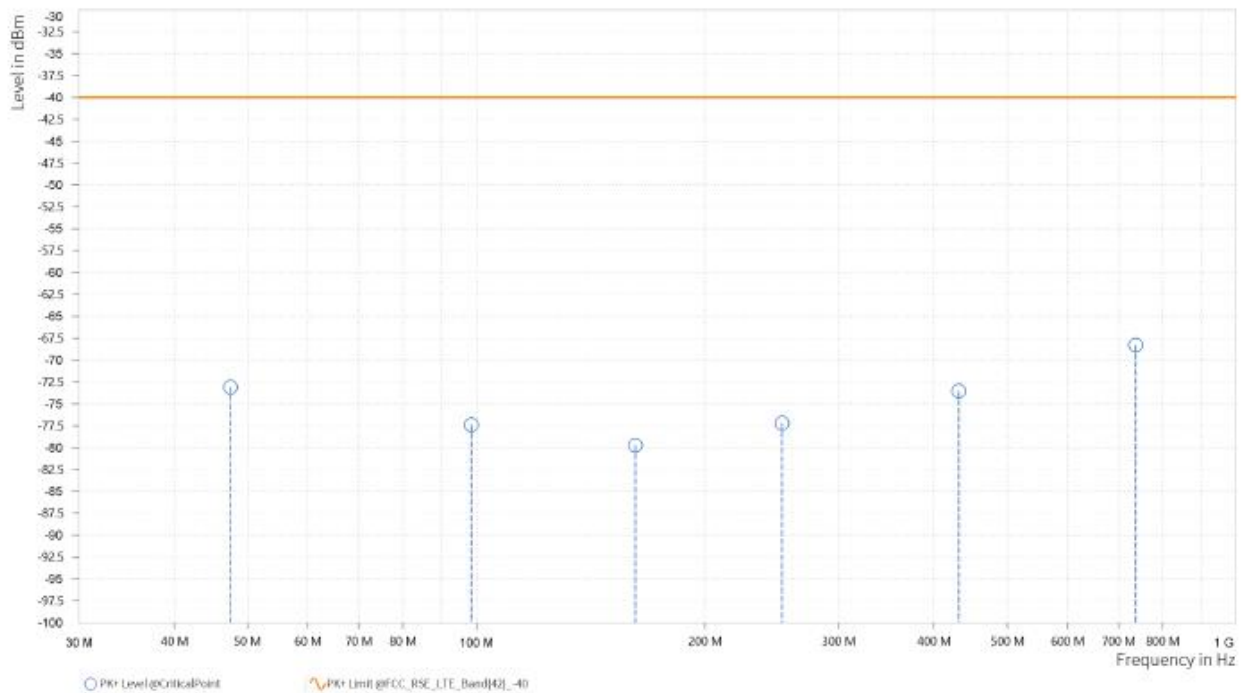
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	48.600	-75.73	-40.00	35.73	-0.65	H	177.4	2
1	99.100	-77.50	-40.00	37.50	-2.65	H	177.4	2
1	153.050	-79.03	-40.00	39.03	-9.09	H	26.8	2
1	352.950	-75.37	-40.00	35.37	1.78	H	355.4	2
2	594.238	-72.87	-40.00	32.87	5.42	H	359	1
2	957.513	-68.72	-40.00	28.72	10.75	H	115.4	1





MODE	TX channel 646332	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			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	47.450	-73.08	-40.00	33.08	1.45	V	182.3	1
1	98.550	-77.39	-40.00	37.39	1.56	V	182.3	1
1	162.000	-79.73	-40.00	39.73	-6.47	V	1	1
1	252.450	-77.19	-40.00	37.19	-0.96	V	175.1	2
1	431.350	-73.54	-40.00	33.54	4.14	V	0.9	2
2	737.329	-68.27	-40.00	28.27	7.90	V	99.8	2



**ABOVE 1GHz**

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

N48

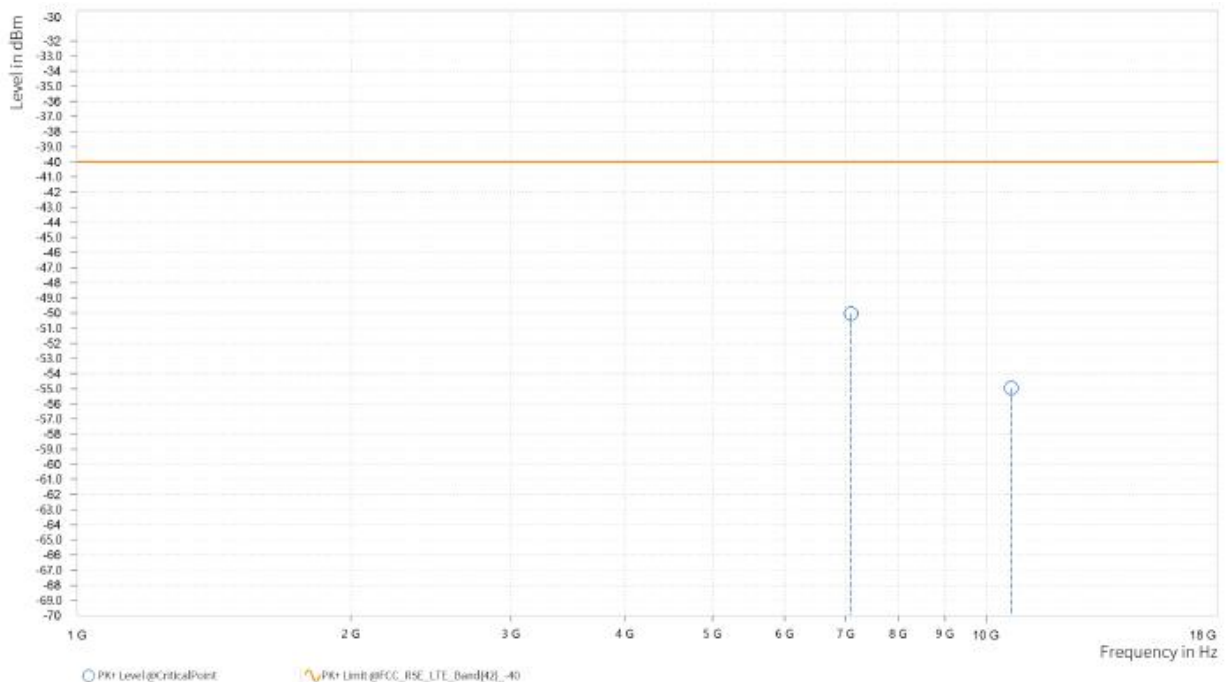
Note: For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.

CHANNEL BANDWIDTH: 10MHz / QPSK

CH637000

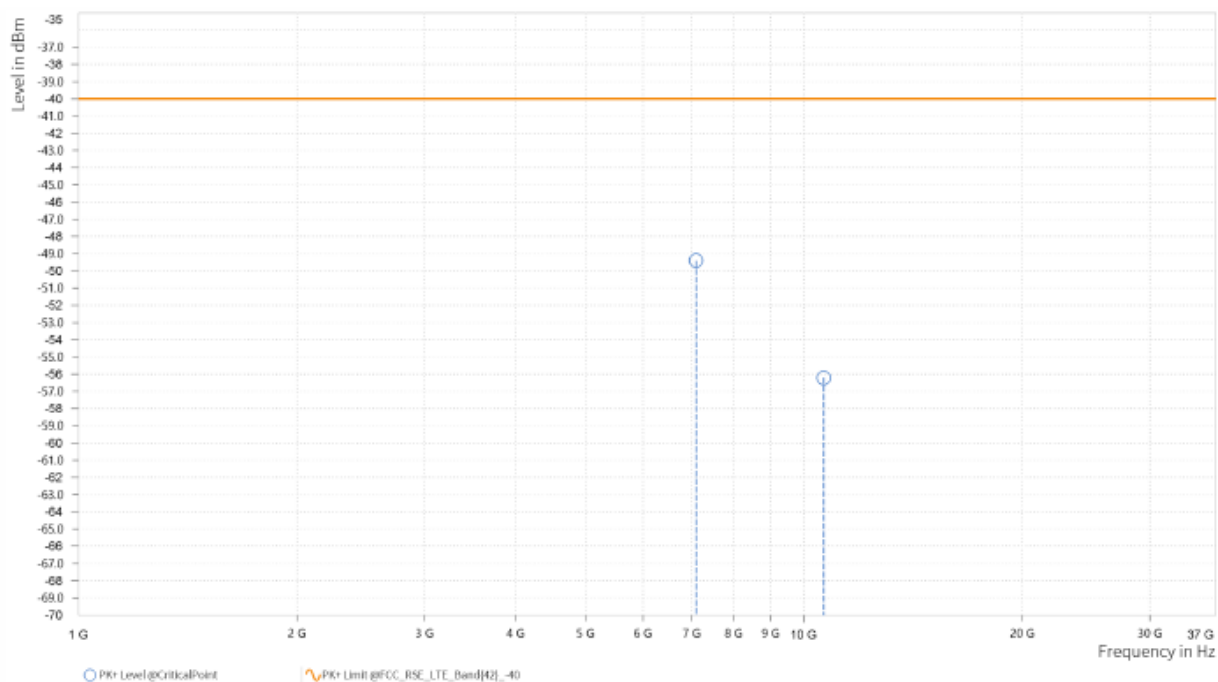
MODE	TX channel 637000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,100.030	-50.05	-40.00	10.05	23.81	H	1	1
6	10,649.500	-54.97	-40.00	14.97	15.58	H	1	2



MODE	TX channel 637000	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			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,100.030	-49.40	-40.00	9.40	23.79	V	359	2
6	10,650.000	-56.21	-40.00	16.21	15.78	V	6.6	2

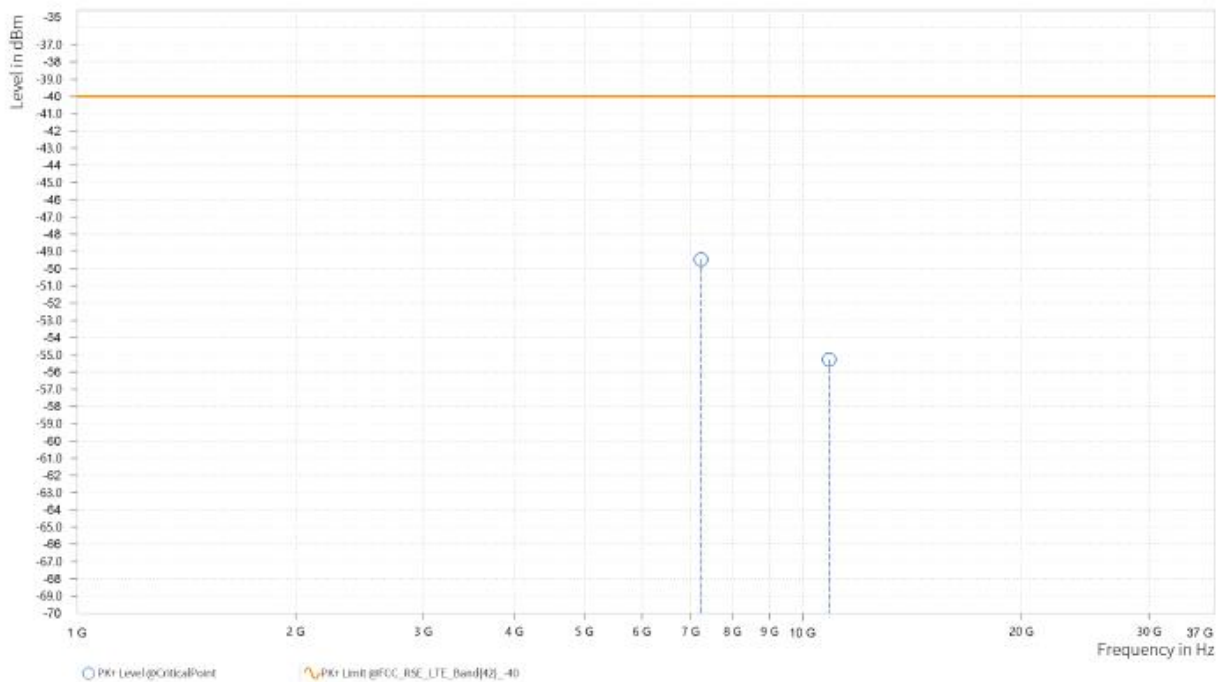




CH641666

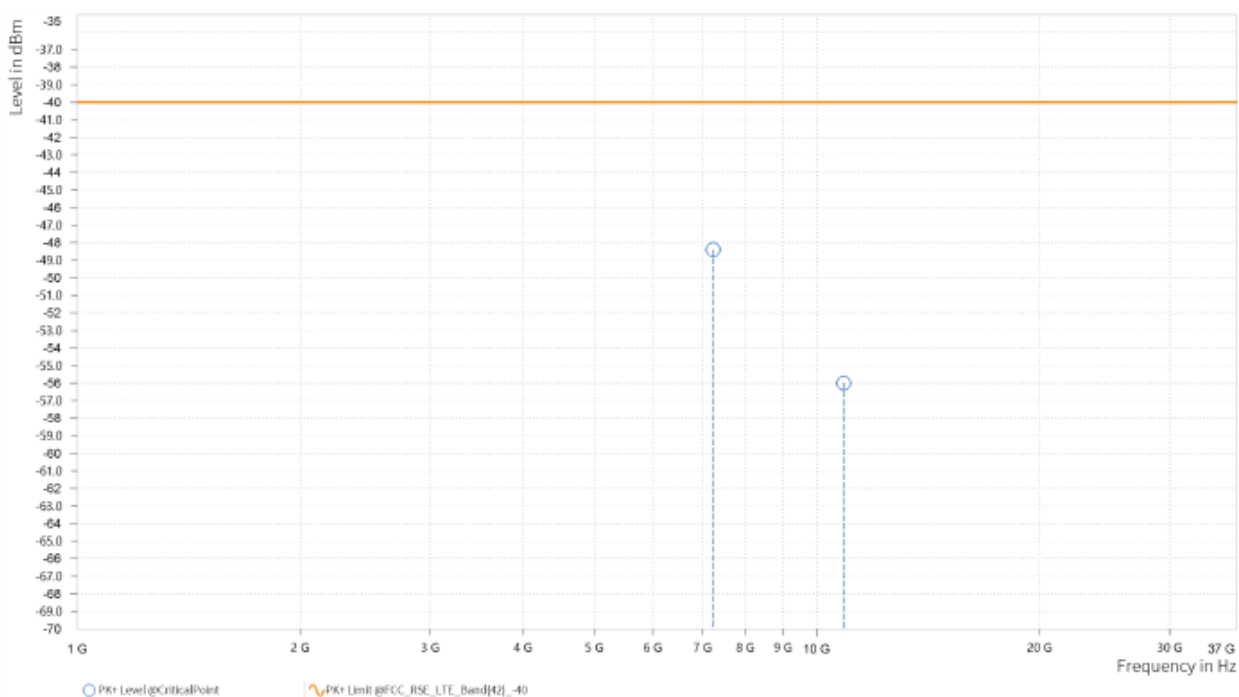
MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,240.152	-49.46	-40.00	9.46	24.65	H	1.6	2
6	10,860.000	-55.27	-40.00	15.27	16.03	H	359	1



MODE	TX channel 641666	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			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,239.894	-48.40	-40.00	8.40	24.62	V	275.6	1
6	10,860.000	-55.99	-40.00	15.99	16.16	V	0.9	2





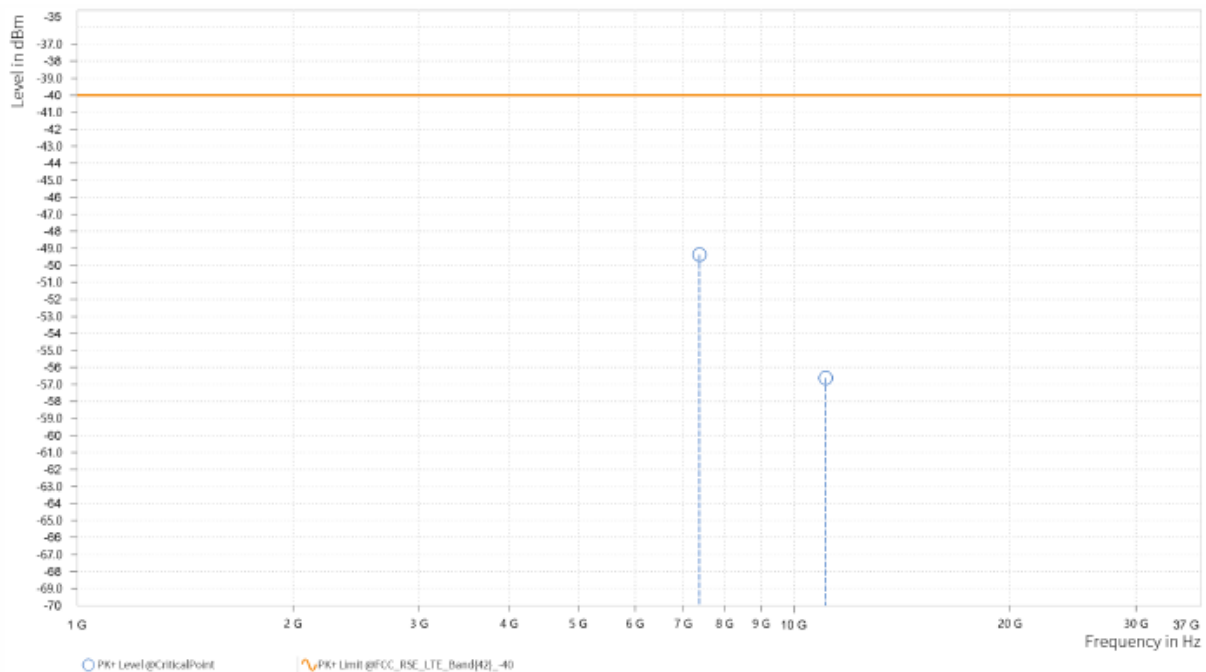
BUREAU
VERITAS

Test Report No.: W7L-P23070006RF08

CH646332

MODE	TX channel 646332	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			

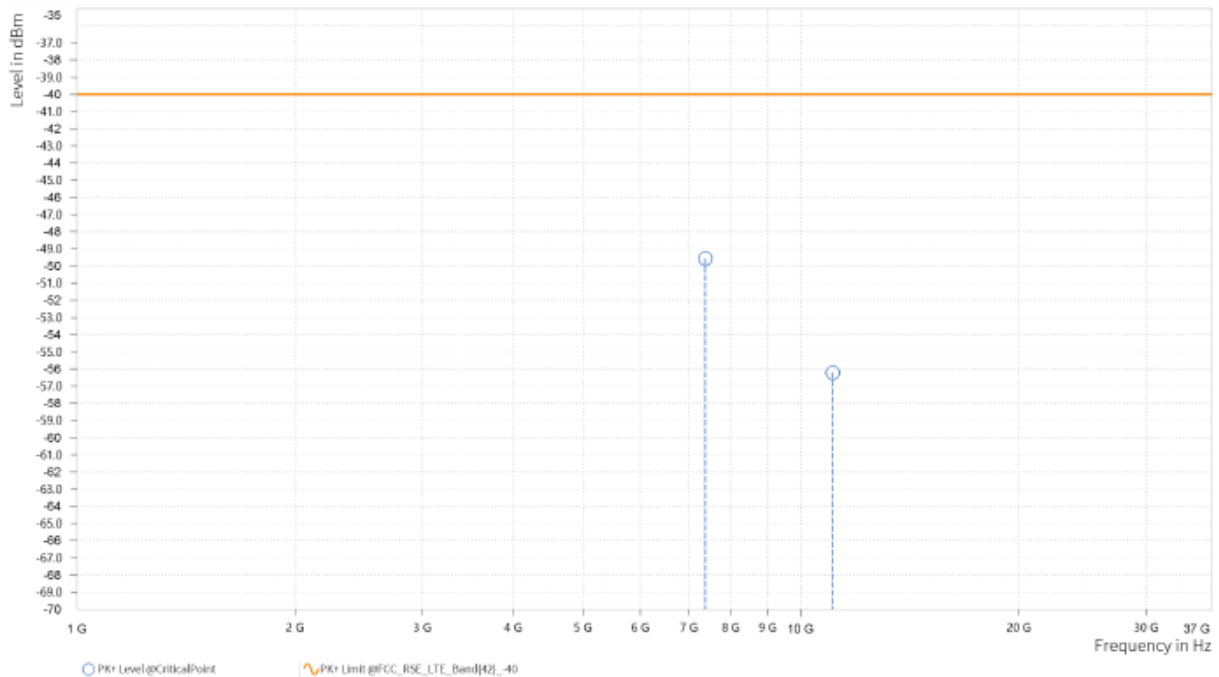
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,380.015	-49.38	-40.00	9.38	24.36	H	1	1
6	11,070.000	-56.62	-40.00	16.62	16.09	H	359	2





MODE	TX channel 646332	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			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,380.015	-49.57	-40.00	9.57	24.40	V	359	2
6	11,070.000	-56.21	-40.00	16.21	16.28	V	352.6	1

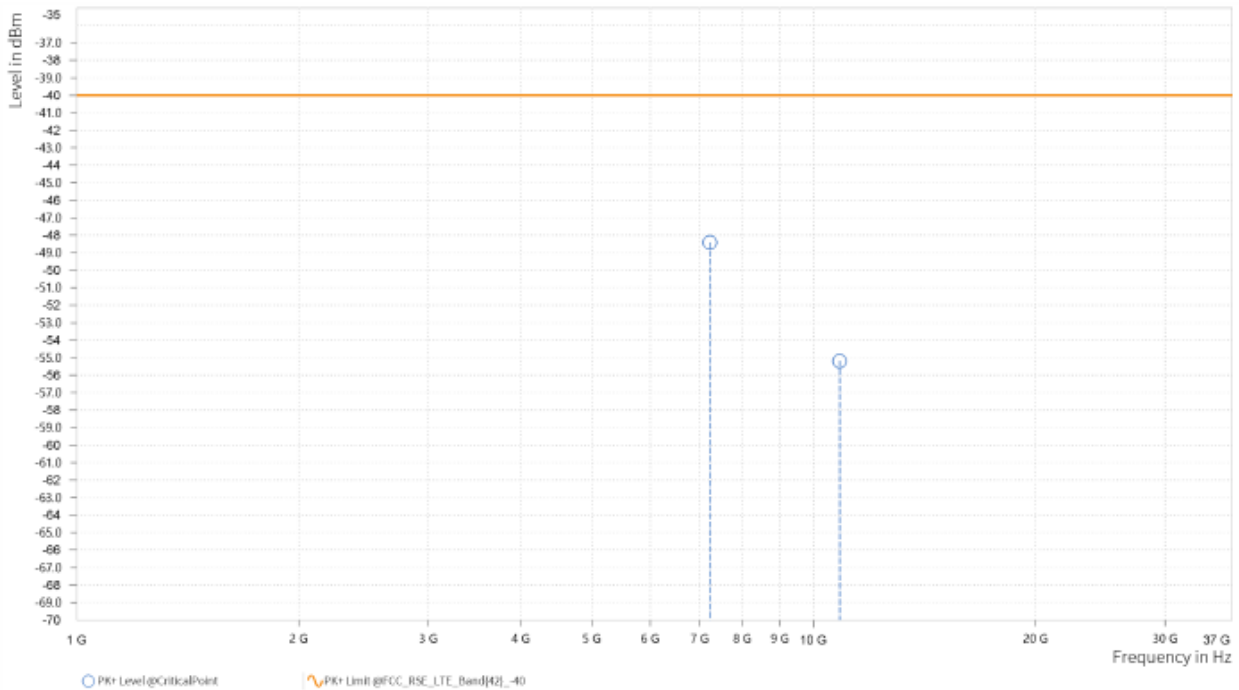




CHANNEL BANDWIDTH: 20MHz / QPSK

MODE	TX channel 641666	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			

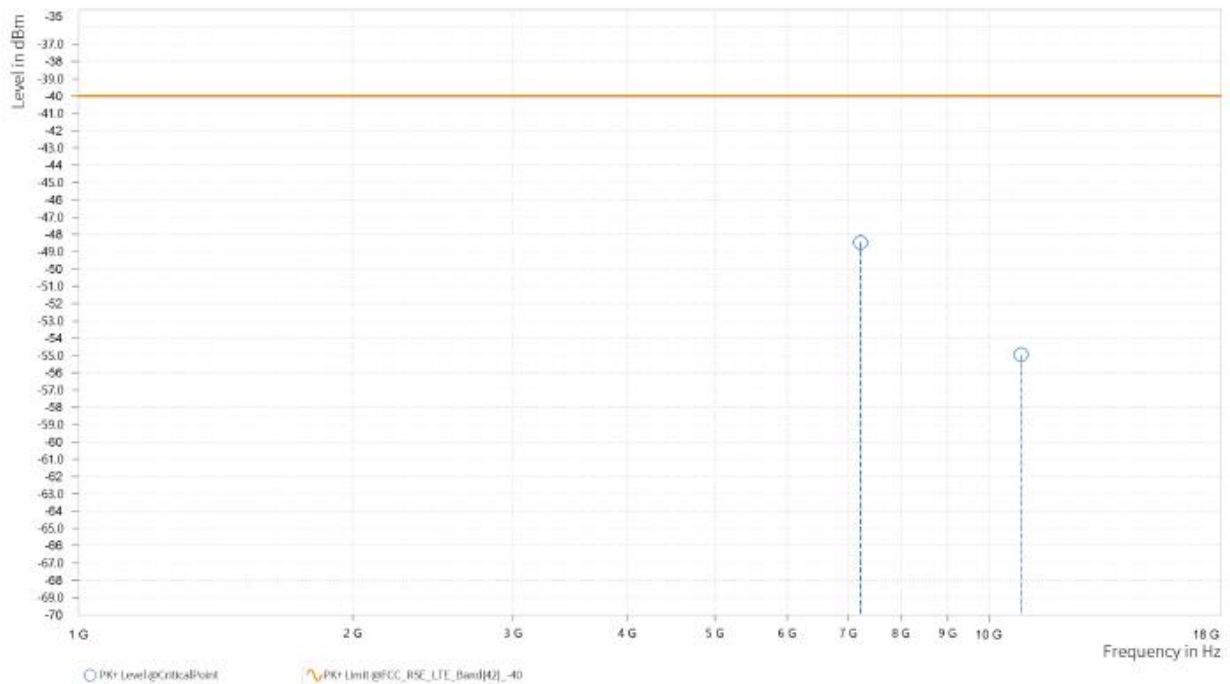
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,229.848	-48.41	-40.00	8.41	24.53	H	0.9	2
6	10,845.000	-55.19	-40.00	15.19	16.08	H	359.1	1





MODE	TX channel 641666	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			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,223.409	-48.47	-40.00	8.47	24.42	V	278	1
6	10,844.500	-54.94	-40.00	14.94	16.21	V	353	1

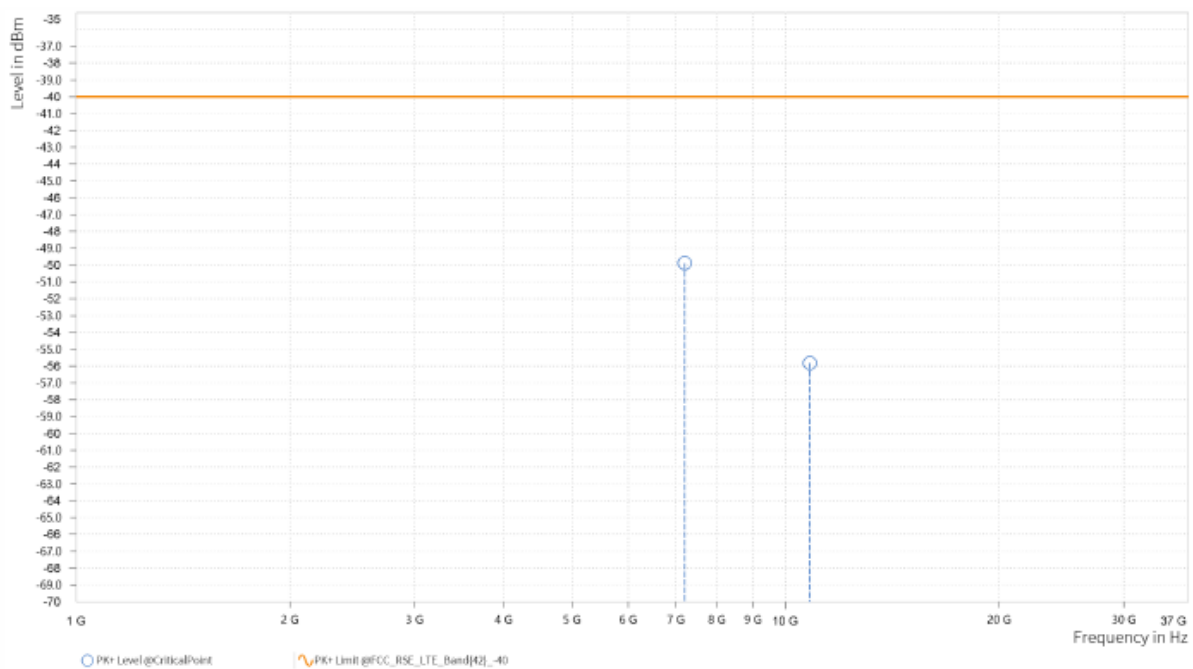




CHANNEL BANDWIDTH: 40MHz / QPSK

MODE	TX channel 641666	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			

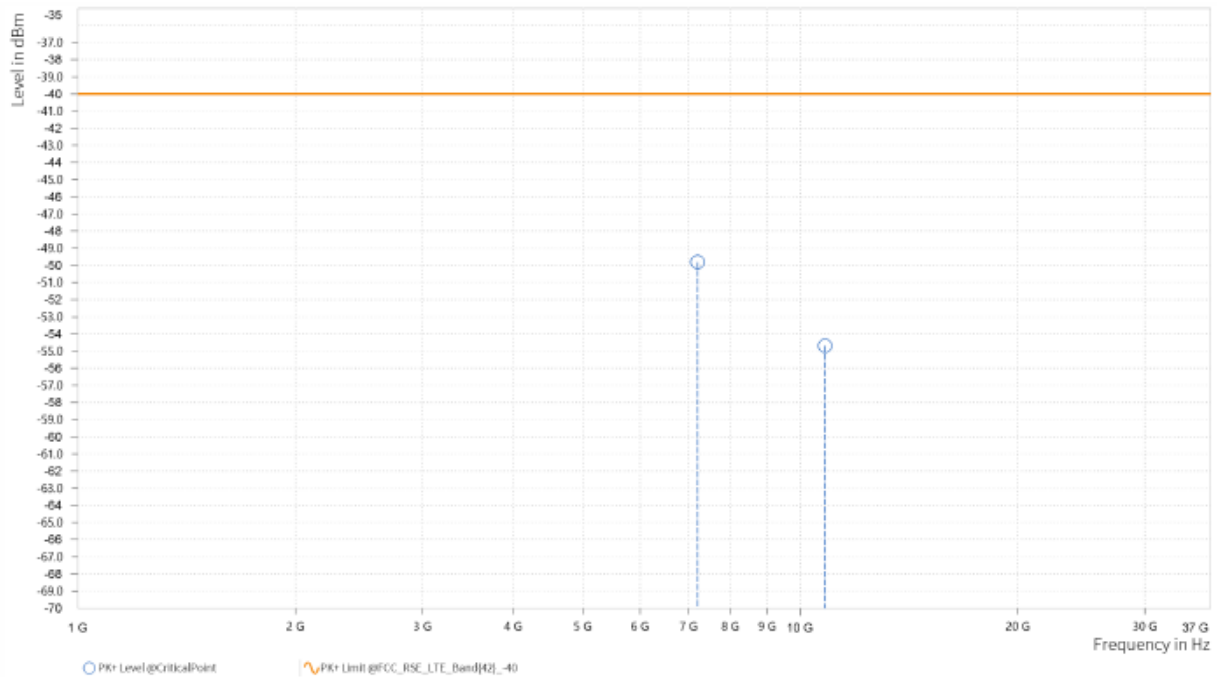
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,210.015	-49.89	-40.00	9.89	24.28	H	359	1
6	10,815.000	-55.82	-40.00	15.82	16.18	H	0.9	2





MODE	TX channel 641666	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			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,209.758	-49.81	-40.00	9.81	24.24	V	83.1	2
6	10,815.000	-54.69	-40.00	14.69	16.32	V	359	1



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.



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

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

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