

FCC TEST REPORT

(PART 96)

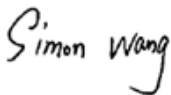
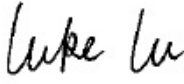
Applicant:	POINTMOBILE CO.,LTD
Address:	9F Kabul Great Valley, 32, Digital-ro 9-gil, Geumcheon-gu, Seoul, Korea 08512

Manufacturer or Supplier:	POINTMOBILE CO.,LTD
Address:	9F Kabul Great Valley, 32, Digital-ro 9-gil, Geumcheon-gu, Seoul, Korea 08512
Product:	Moblie computer
Brand Name:	Point mobile
Model Name:	PM95
FCC ID:	V2X-PM95
Date of tests:	Jan. 08, 2024 ~ May. 10, 2024

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

☒ **47 CFR FCC Part 96**

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: May. 10, 2024	Date: May. 10, 2024

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RELEASE CONTROL RECORD

ISSUE NO.	DESCRIPTION	DATE ISSUED
W7L-P23120020RF07	Original release	May. 10, 2024



1 SUMMARY OF TEST RESULTS

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

Note:

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

Test Lab Information Reference*Lab A:**

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

Lab Address:

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District Shenzhen, Guangdong, People's Republic of China

Accredited Test Lab Cert 3939.01

The 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
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 27,24	Mar. 26,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.10,23	May.09,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.09,24	May.08,25
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.02,23	Sep.01,24
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 18,23	Feb. 17,24
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Feb. 17,24	Feb. 16,25
Horn Antenna	ETS-LINDGRE N	3117	00168692	Feb. 18,23	Feb. 17,24
Horn Antenna	ETS-LINDGRE N	3117	00168692	Feb. 17,24	Feb. 16,25
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep.03, 23	Sep.02, 24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 14,23	Feb. 13,24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 13,24	Feb. 12,25
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 05,24	May. 04,25
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.10,23	May.09,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.09,24	May.08,25
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 17,23	Feb.16,24
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb.16,24	Feb.15,25
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn-CT0001143-1216	Nov. 14,23	Nov. 13,26
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
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 05,24	May. 04,25
Power Meter	Anritsu	ML2495A	1506002	Feb. 14,23	Feb. 13,24
Power Meter	Anritsu	ML2495A	1506002	Feb. 13,24	Feb. 12,25
Power Sensor	Anritsu	MA2411B	1339352	Feb. 14,23	Feb. 13,24
Power Sensor	Anritsu	MA2411B	1339352	Feb. 13,24	Feb. 12,25
Temperature Chamber	ESPEC	SH-242	93000855	May. 06,23	May. 05,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 05,24	May. 04,25
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 14,23	Feb. 13,24
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 13,24	Feb. 12,25
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.10,23	May.09,24
Base station R&S	Rohde&Schwarz	CMW500	153085	May.09,24	May.08,25



CMW500	rz				
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24
N9010B keysight SN	KEYSIGHT	N9010B	MY62170516	Aug. 01,23	Jul. 31, 24

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 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
Vector Signal Generator	R&S	SMBV100B	102176	Feb.15,24	Feb.14,26
Signal Generator	R&S	SMB100A	182185	Feb.16,22	Feb.15,24
Signal Generator	R&S	SMB100A	182185	Feb.15,24	Feb.14,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-E MC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-E MC-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	ESR26	101734	Feb.24,24	Feb.23,26
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,22	Feb.24,24
EMI TEST Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,22	Feb.27,24
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
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 (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.22,24	Feb.21,26
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
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
WIDEBANDRADIO	R&S	CMW500	169399	Jun.27,22	Jun.26,24



COMMUNICATION TESTER					
Test Software	EMC32	EMC32	N/A	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(CAB LE)	R&S	HF290-NMNM-7. 00M	N/A	N/A	N/A
TMC-AMI18843A(CAB LE)	R&S	HF290-NMNM-4. 00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20- 069	Apr.28,23	Apr.27,24
CABLE	R&S	J12J103539-00-1	SEP-03-20- 069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20- 070	Apr.28,23	Apr.27,24
CABLE	R&S	J12J103539-00-1	SEP-03-20- 070	Apr.27,24	Apr.26,25
Temperature Chamber	votsch	VT4002	5856607810 0050	May.31,22	May.30,24

- NOTE:**
1. The calibration interval of the above test instruments is 12/ 24 / 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 434559; The Designation No. is CN1325.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Moblie computer	
BRAND NAME	Point mobile	
MODEL NAME	PM95	
NOMINAL VOLTAGE	5.0Vdc (adapter) 3.87Vdc (battery)	
MODULATION TECHNOLOGY	5G NR	DFT-s-OFMA(Pi/2 BPSK,QPSK,16QAM,64QAM,256QAM); CP-OFMA(QPSK,16QAM,64QAM,256QAM);
FREQUENCY RANGE	NR Band n48	3555 MHz ~ 3694.98MHz
EMISSION DESIGNATOR	NR Band n48 Channel Bandwidth: 10MHz	QPSK: 8M58G7D 16QAM: 8M56W7D 64QAM: 8M58W7D 256QAM: 8M56W7D Pi/2BPSK: 8M57G7D
	NR Band n48 Channel Bandwidth: 20MHz	QPSK: 17M8G7D 16QAM: 17M9W7D 64QAM: 17M8W7D 256QAM: 17M8W7D Pi/2BPSK: 17M8G7D
	NR Band n48 Channel Bandwidth: 30MHz	QPSK: 26M8G7D 16QAM: 26M8W7D 64QAM: 26M8W7D 256QAM: 26M8W7D Pi/2BPSK: 26M8G7D
	NR Band n48 Channel Bandwidth: 40MHz	QPSK: 35M8G7D 16QAM: 35M8W7D 64QAM: 35M8W7D 256QAM: 35M8W7D Pi/2BPSK: 35M8G7D
MAX. EIRP POWER	NR Band n48 Channel Bandwidth: 10MHz	187.93mW
	NR Band n48 Channel Bandwidth: 20MHz	191.43mW
	NR Band n48 Channel Bandwidth: 30MHz	187.93mW



	NR Band n48 Channel Bandwidth: 40MHz	176.2mW
ANTENNA GAIN	ANT11: Internal Antenna with -1.03dBi gain for NR Band n48	
HW VERSION	MP	
SW VERSION	95.00	
I/O PORTS	Refer to user's manual	
DATA CABLE	USB cable: non-shielded cable, with w/o ferrite core, 1.5meter	
EXTREME TEMPERATURE	-20-60 °C	
EXTREME VOLTAGE	3.5V – 4.45V	

NOTE:

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

MODULATION MODE	TX FUNCTION
LTE	1TX/4RX

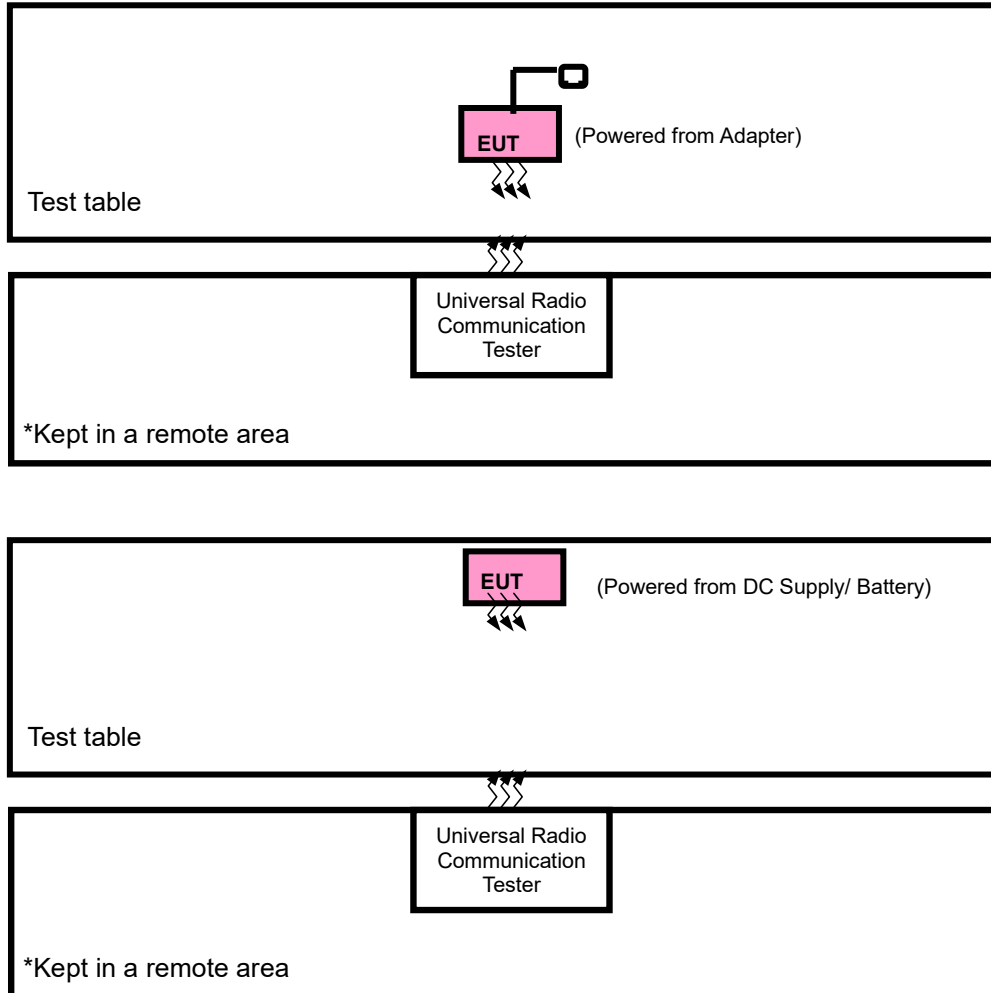
- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.
- For Band Edge and Emission Mask: The all BW combinations were tested. Combination pairs of the same BW are considered generally equivalent. The RB combinations were selected such that the signal is active closest to the band limit, as this is the worst case.
- For Out of Band Emissions: The all combination was tested. The highest power RB combination was selected as worst case.

List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Battery	N/A	Shenzhen Guangwei Electronic Technology CO., LTD	95-BTSC	Capacity: 3.87Vdc, 4820mAh
AC Adapter 1	N/A	Shenzhen Shi Ying Yuan Electronics Co Ltd	ICP12-050-2000D(ICP12-xxx-yyyf)	I/P: 100-240Vac, 0.3mA, O/P: 5.0Vdc, 2A
AC Adapter 2	N/A	SHENZHEN AQUILS TAR TECHNOLOGY CO.,LTD.	ASUC71w-050912300	I/P: 100-240V~50/60Hz, 0.7A O/P: 5.0Vdc, 3A or 9.0Vdc, 2A or 12.0Vdc, 1.5A
USB Cable	N/A	Dongguan DAWEI PRECISION Technology Co., Ltd.	SC-109B205	USB3.0, 1.5m



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	N/A	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Unshielded, Detachable, 1.5m;

2.4 TEST ITEM AND TEST CONFIGURATION

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

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



5G NR n48 MODE

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	QPSK	1RB/ 0RB Offset
		637334 to 641666	637334 to 646000	Low, Middle, High	20MHz	QPSK,	1RB/ 0RB Offset
		637668 to 645666	637668 to 645666	Low, Middle, High	30MHz	QPSK,	1RB/ 0RB Offset
		638000 to 645332	638000 to 645332	Low, Middle, High	40MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	637334 to 641666	637334 to 646000	Low, Middle, High	20MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	637334 to 641666	637334 to 646000	Low, Middle, High	20MHz	QPSK	Outer_ Full
A	OCCUPIED BANDWIDTH	637000 to 646332	637000 to 646332	Middle	10MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		637334 to 646000	637334 to 646000	Middle	20MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		637668 to 645666	637668 to 645666	Middle	30MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		638000 to 645332	638000 to 645332	Middle	40MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	637000 to 646332	637000 to 646332	Low	10MHz	QPSK	1RB/ 0RB Offset
				High	10MHz	QPSK	Outer_ Full
		637334 to 646000	637334 to 646000	Low	20MHz	QPSK	1RB/ max Offset
				High	20MHz	QPSK	Outer_ Full
		638000 to 645332	638000 to 645332	Low	40MHz	QPSK	1RB/ 0RB Offset
				High	40MHz	QPSK	Outer_ Full
				Low	40MHz	QPSK	1RB/ max Offset
				High	40MHz	QPSK	Outer_ Full
A	CONDUCTED EMISSION	637000 to 646332	637000 to 646332	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		637334 to 646000	637334 to 646000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		637668 to 645666	637668 to 645666	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		638000 to 645332	638000 to 645332	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	637000 to 646332	637000 to 646332	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset



		637334 to 646000	637334 to 646000	Middle	20MHz	QPSK	1RB/ 0RB Offset
		637668 to 645666	637668 to 645666	Middle	30MHz	QPSK	1RB/ 0RB Offset
		638000 to 645332	638000 to 645332	Middle,	40MHz	QPSK	1RB/ 0RB Offset
A	ACLR	637000 to 646332	637000 to 646332	Low	10MHz	QPSK	1RB/ 0RB Offset
				High	10MHz	QPSK	Outer Full
							1RB/ max Offset
		637334 to 646000	637334 to 646000	Low	20MHz	QPSK	Outer Full
				High	20MHz	QPSK	1RB/ 0RB Offset
							Outer Full
		638000 to 645332	638000 to 645332	Low	40MHz	QPSK	1RB/ max Offset
				High	40MHz	QPSK	Outer Full
							1RB/ 0RB Offset

**TEST CONDITION:**

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP&EIRP	23deg. C, 70%RH	DC 5.0Vdc by Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.5V/ 3.87V/ 4.45V By Battery	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5.0Vdc by Adapter	James Fu
BAND EDGE	23deg. C, 70%RH	DC 5.0Vdc by Adapter	James Fu
CONDUCTED EMISSION	23deg. C, 70%RH	DC 5.0Vdc by Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC 5.0Vdc by Adapter	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5.0Vdc by Adapter	James Fu

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

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

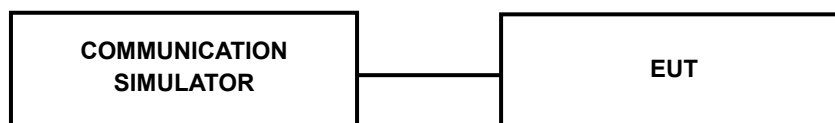
3.1 MAXIMUM EIRP MEASUREMENT

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

CONDUCTED POWER MEASUREMENT:



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

N48(ANT11)

BW	MCS Index	RB Size	RB Offset	Low CH 637000	Mid CH 641666	High CH 646332
				Frequency 3555MHz	Frequency 3624.99MHz	Frequency 3694.98MHz
10M	DFT-s-OFDM QPSK	1	1	23.76	23.77	23.59

BW	MCS Index	RB Size	RB Offset	Low CH 637334	Mid CH 641666	High CH 646000
				Frequency 3560.01MHz	Frequency 3624.99MHz	Frequency 3690MHz
20M	DFT-s-OFDM QPSK	1	1	23.85	23.70	23.61

BW	MCS Index	RB Size	RB Offset	Low CH 637668	Mid CH 641666	High CH 645666
				Frequency 3565.02MHz	Frequency 3624.99MHz	Frequency 3684.99MHz
30M	DFT-s-OFDM QPSK	1	1	23.77	23.71	23.55



BW	MCS Index	RB Size	RB Offset	Low CH 638000	Mid CH 641666	High CH 645332
				Frequency 3570MHz	Frequency 3624.99MHz	Frequency 3679.98MHz
40M	DFT-s-OFDM Pi/2 BPSK	1	1	23.16	23.18	23.06
		1	52	23.42	23.40	23.33
		1	104	23.22	23.29	23.14
		50	0	22.74	22.71	22.69
		50	28	23.29	23.19	23.14
		50	56	22.71	22.72	22.52
		100	0	22.67	22.74	22.66
	DFT-s-OFDM QPSK	1	1	23.49	23.40	23.26
		1	52	23.30	23.34	23.17
		1	104	23.44	23.42	23.37
		50	0	22.30	22.22	22.15
		50	28	23.28	23.14	23.14
		50	56	22.18	22.17	22.11
		100	0	22.15	22.27	22.10
	DFT-s-OFDM 16QAM	1	1	22.70	22.65	22.60
	DFT-s-OFDM 64QAM	1	1	20.88	20.82	20.85
	DFT-s-OFDM 256QAM	1	1	18.92	18.89	18.78



EIRP

N48 (ANT5)

CHANNEL BANDWIDTH: 40M DFT-s-OFDM Pi/2 BPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	23.42	-1.03	22.39	173.38	23
641666	3624.99	23.4	-1.03	22.37	172.58	23
645332	3679.98	23.33	-1.03	22.3	169.82	23

CHANNEL BANDWIDTH: 40M DFT-s-OFDM QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	23.42	-1.03	22.39	173.38	23
641666	3624.99	23.4	-1.03	22.37	172.58	23
645332	3679.98	23.33	-1.03	22.3	169.82	23

CHANNEL BANDWIDTH: 40M DFT-s-OFDM 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	23.49	-1.03	22.46	176.2	23
641666	3624.99	23.40	-1.03	22.37	172.58	23
645332	3679.98	23.26	-1.03	22.23	167.11	23

CHANNEL BANDWIDTH: 40M DFT-s-OFDM 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	20.88	-1.03	19.85	96.61	23
641666	3624.99	20.82	-1.03	19.79	95.28	23
645332	3679.98	20.85	-1.03	19.82	95.94	23

CHANNEL BANDWIDTH: 40M DFT-s-OFDM 256QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
638000	3570	18.92	-1.03	17.89	61.52	23
641666	3624.99	18.89	-1.03	17.86	61.09	23
645332	3679.98	18.78	-1.03	17.75	59.57	23

**CHANNEL BANDWIDTH: 30M DFT-s-OFDM QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637668	3565.02	23.77	-1.03	22.74	187.93	23
641666	3624.99	23.71	-1.03	22.68	185.35	23
645666	3684.99	23.55	-1.03	22.52	178.65	23

CHANNEL BANDWIDTH: 20M DFT-s-OFDM QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637334	3560.01	23.85	-1.03	22.82	191.43	23
641666	3624.99	23.7	-1.03	22.67	184.93	23
646000	3690	23.61	-1.03	22.58	181.13	23

CHANNEL BANDWIDTH: 10M DFT-s-OFDM QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
637000	3555	23.76	-1.03	22.73	187.5	23
641666	3624.99	23.77	-1.03	22.74	187.93	23
646332	3694.98	23.59	-1.03	22.56	180.3	23

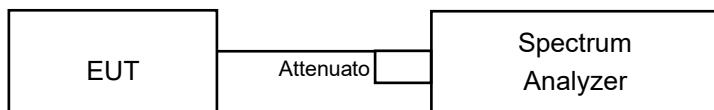
REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 CONDUCTED BAND EDGE

3.2.1 LIMITS OF CONDUCTED BAND EDGE MEASUREMENT

The conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

3.2.2 TEST SETUP



3.2.3 TEST INSTRUMENTS

Refer to section 1.2 to get information of above instrument.

3.2.4 TEST PROCEDURE

For the Conducted Band Edge:

- a. Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b. Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
- c. Set the resolution bandwidth (RBW) $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
- d. Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- e. Set the video bandwidth (VBW) to $\geq 3 \times$ RBW.
- f. Select the average power (RMS) display detector.
- g. Set the number of measurement points to ≥ 1001 .
- h. Use auto-coupled sweep time.
- i. Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- j. The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.
- k. Record the max trace plot into the test report.

For Adjacent Channel Leakage Ratio (ACLR) measurement:

1. The Adjacent Channel Leakage Ratio (ACLR) is the ratio of the average power in the assigned aggregated channel bandwidth to the average power over the equivalent adjacent channel bandwidth.
2. The option ACLR of spectrum analyzer is used and measures the ACLR ratio by setting equivalent channel bandwidth.
3. The measured ACLR ratio shall be at least 30 dB.

3.2.5 DEVIATION FROM TEST STANDARD

No deviation.

3.2.6 TEST RESULTS

Please Refer to Appendix Of this test report.



3.3 FREQUENCY STABILITY MEASUREMENT

3.3.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

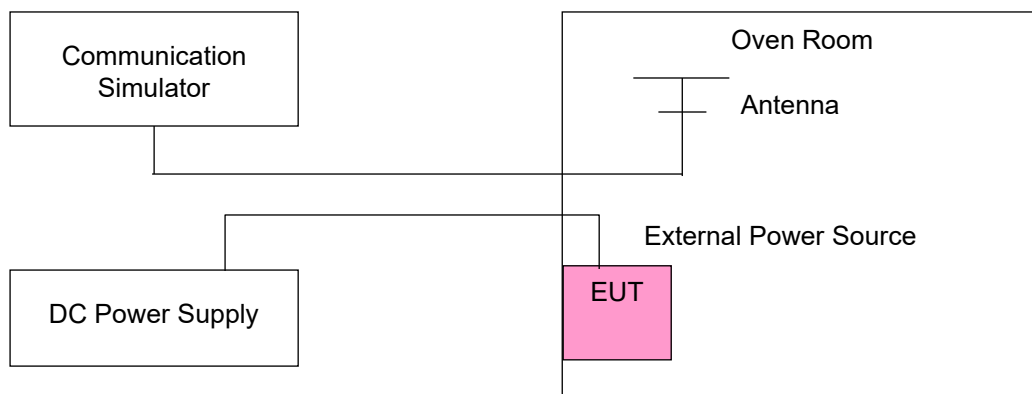
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency band.

3.3.2 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.

3.3.3 TEST SETUP





Test Report No.: W7L-P23120020RF07

3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.

Note: VL = Low voltage(3.5V); VN/NV = Normal voltage(3.87V); VH = High voltage(4.45V);
NT = Normal temperature (25°C)

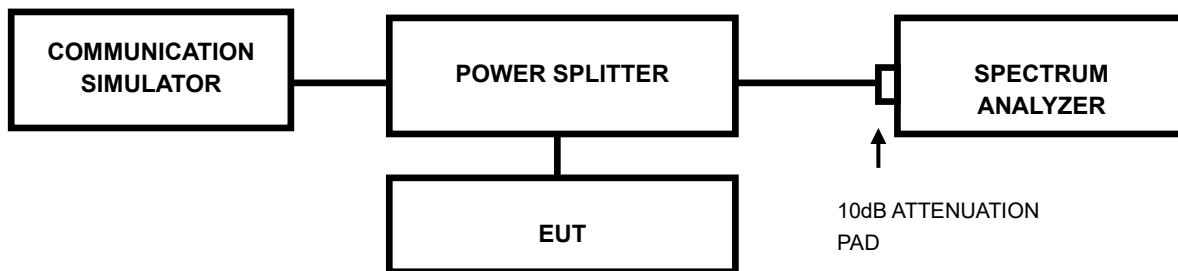


3.4 OCCUPIED BANDWIDTH MEASUREMENT

3.4.1 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.

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 1.2 to get information of above instrument.

3.4.4 TEST PROCEDURE

- 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.

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.



3.4.6 TEST RESULT

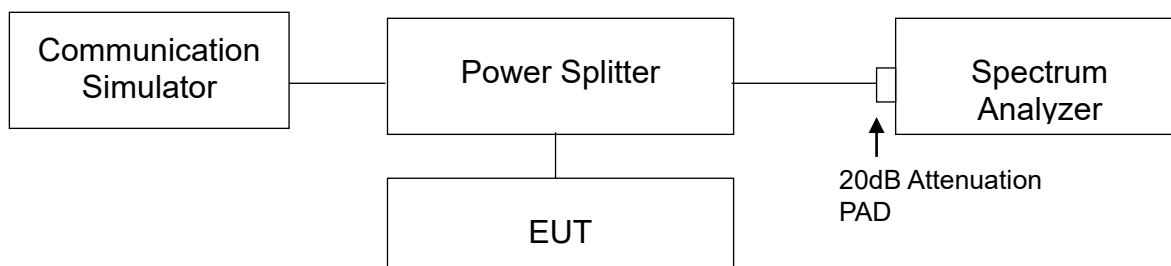
Please Refer to Appendix Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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

3.5.2 TEST SETUP



3.5.3 TEST PROCEDURE

- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 40 GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.4 TEST RESULTS

Please Refer to Appendix Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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(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 = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
$$\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}.$$

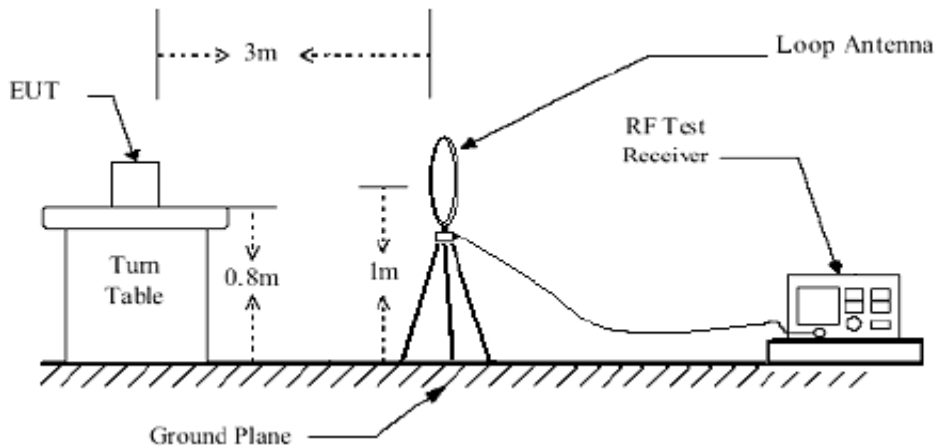
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

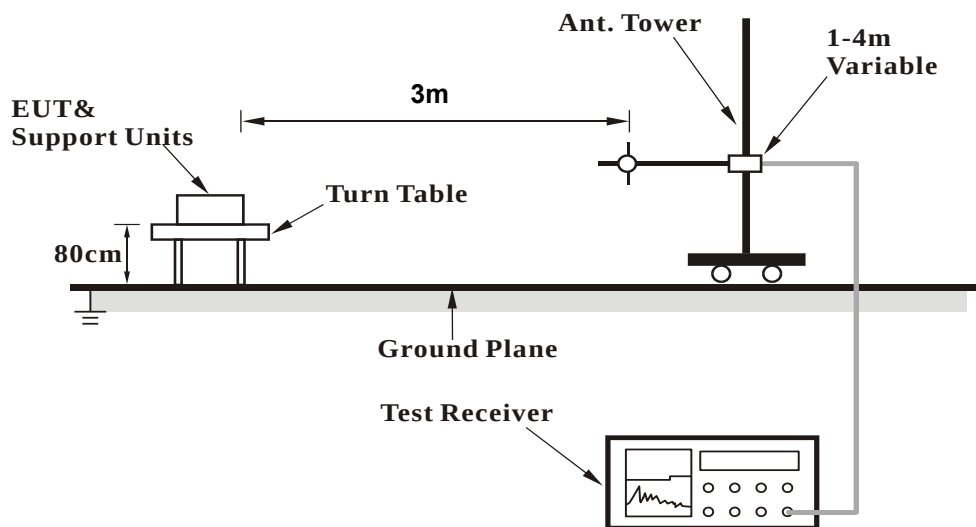
No deviation.

3.6.4 TEST SET UP

< Frequency Range below 30MHz >

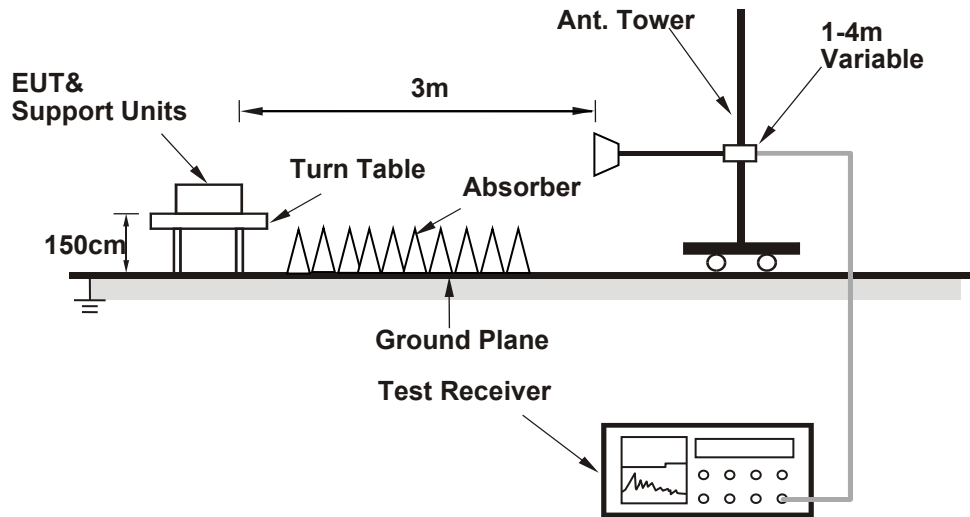


<Frequency Range below 1GHz>





<Frequency Range above 1GHz>



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



3.6.5 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

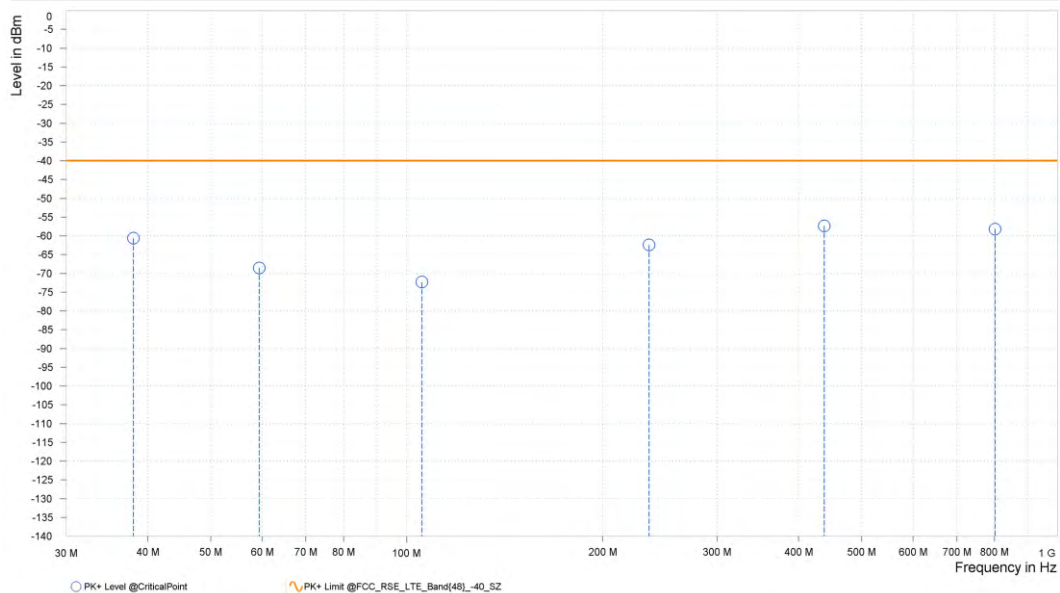
30 MHz – 1GHz data:

N48

CHANNEL BANDWIDTH: 10MHz / QPSK

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

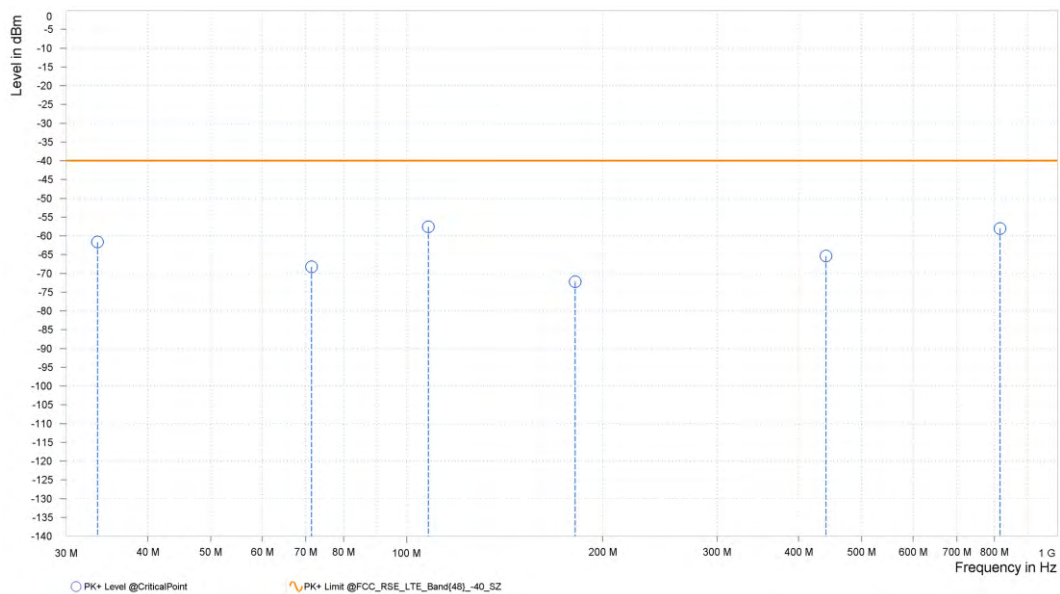
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	38.050	-60.64	-40.00	20.64	5.13	H	1.2	2.00
1	59.400	-68.53	-40.00	28.53	1.10	H	263.9	2.00
1	105.600	-72.30	-40.00	32.30	-5.63	H	359	2.00
1	235.700	-62.43	-40.00	22.43	6.08	H	225.3	1.00
1	438.050	-57.35	-40.00	17.35	7.75	H	288.6	1.00
2	801.496	-58.19	-40.00	18.19	6.38	H	1	2.00





MODE	TX channel 641666	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	33.500	-61.67	-40.00	21.67	-3.10	V	1	1.00
1	71.450	-68.24	-40.00	28.24	-3.49	V	143.1	2.00
1	107.950	-57.61	-40.00	17.61	7.13	V	1	2.00
1	181.450	-72.23	-40.00	32.23	-4.06	V	202.9	2.00
1	440.700	-65.38	-40.00	25.38	6.53	V	123.7	1.00
2	816.254	-58.02	-40.00	18.02	7.80	V	1	1.00



**ABOVE 1GHz**

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

N48

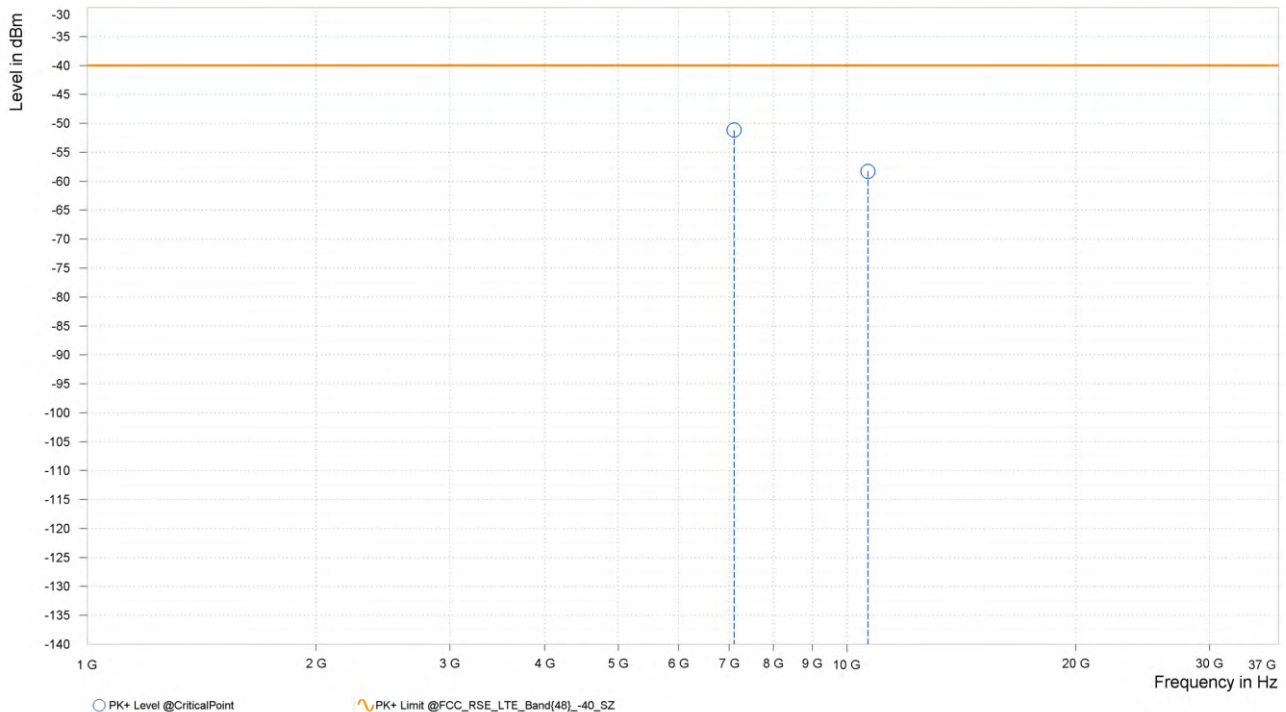
Note: For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.

CHANNEL BANDWIDTH: 10MHz / QPSK

637000

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

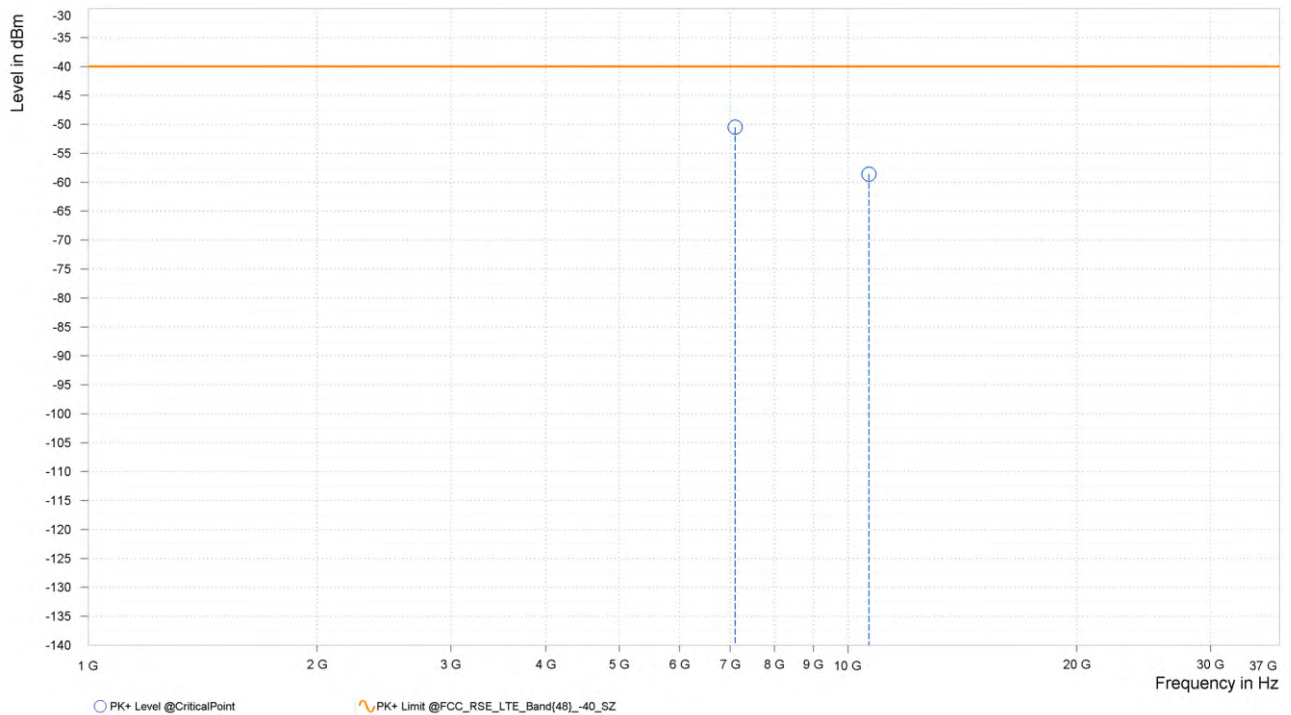
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,101.000	-51.18	-40.00	11.18	22.49	H	359.1	1.00
6	10,651.500	-58.28	-40.00	18.28	10.04	H	61.8	2.00





MODE	TX channel 637000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,101.000	-50.51	-40.00	10.51	22.49	V	357.8	1.00
6	10,651.500	-58.60	-40.00	18.60	10.04	V	1	1.00





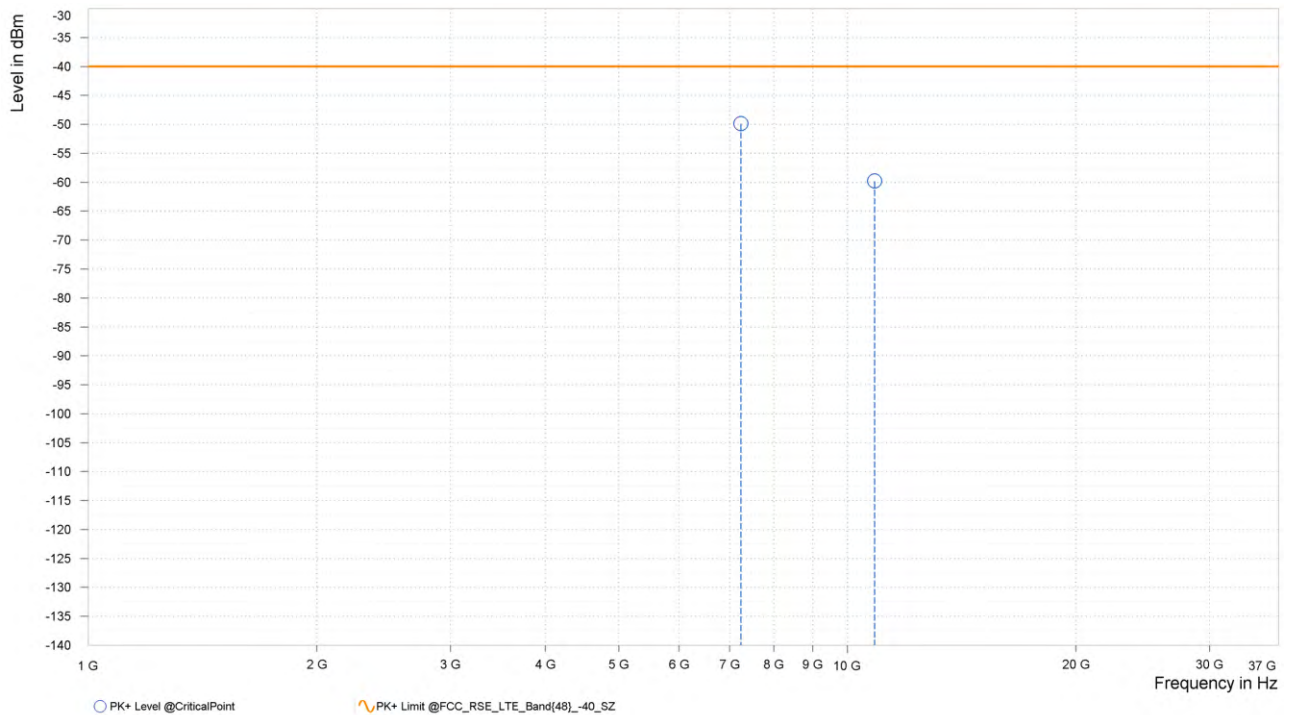
BUREAU
VERITAS

Test Report No.: W7L-P23120020RF07

CH641666

MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,241.000	-49.87	-40.00	9.87	22.51	H	282.6	1.00
6	10,861.500	-59.80	-40.00	19.80	9.62	H	1.6	2.00



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

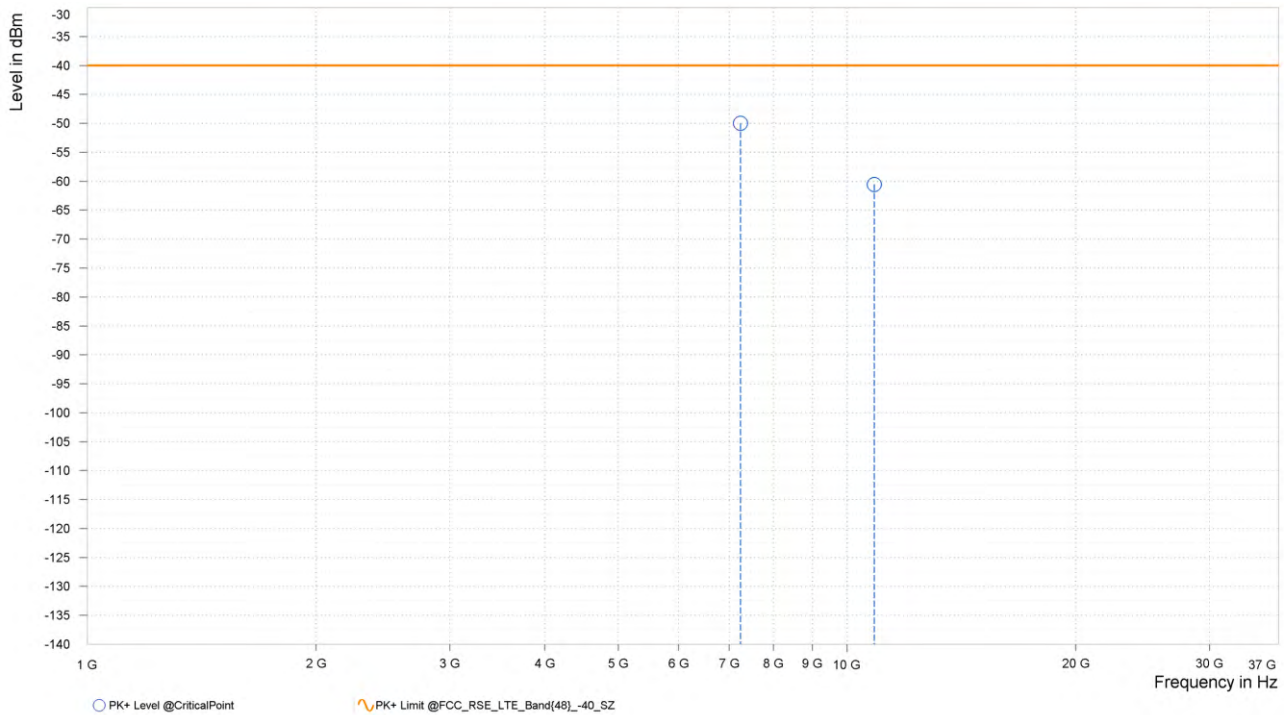
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566
Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com



MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,241.000	-49.99	-40.00	9.99	22.51	V	281.4	1.00
6	10,861.500	-60.54	-40.00	20.54	9.62	V	201.3	1.00

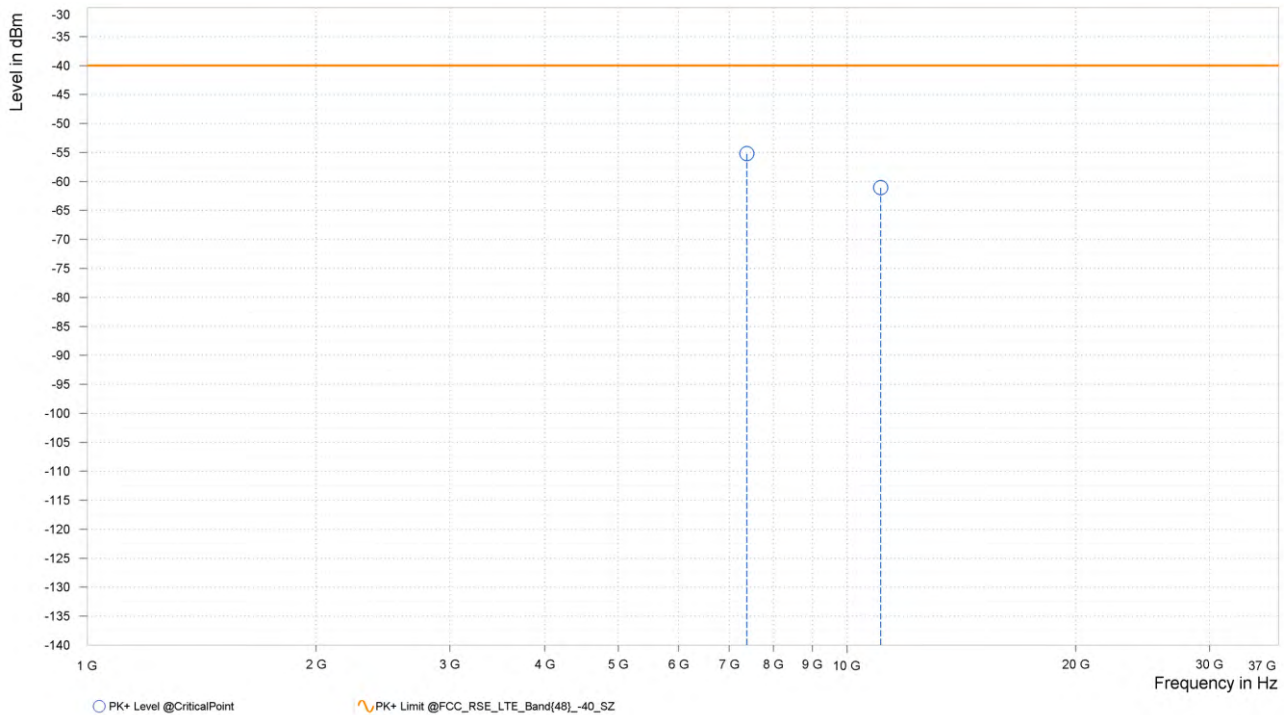




CH646332

MODE	TX channel 646332	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

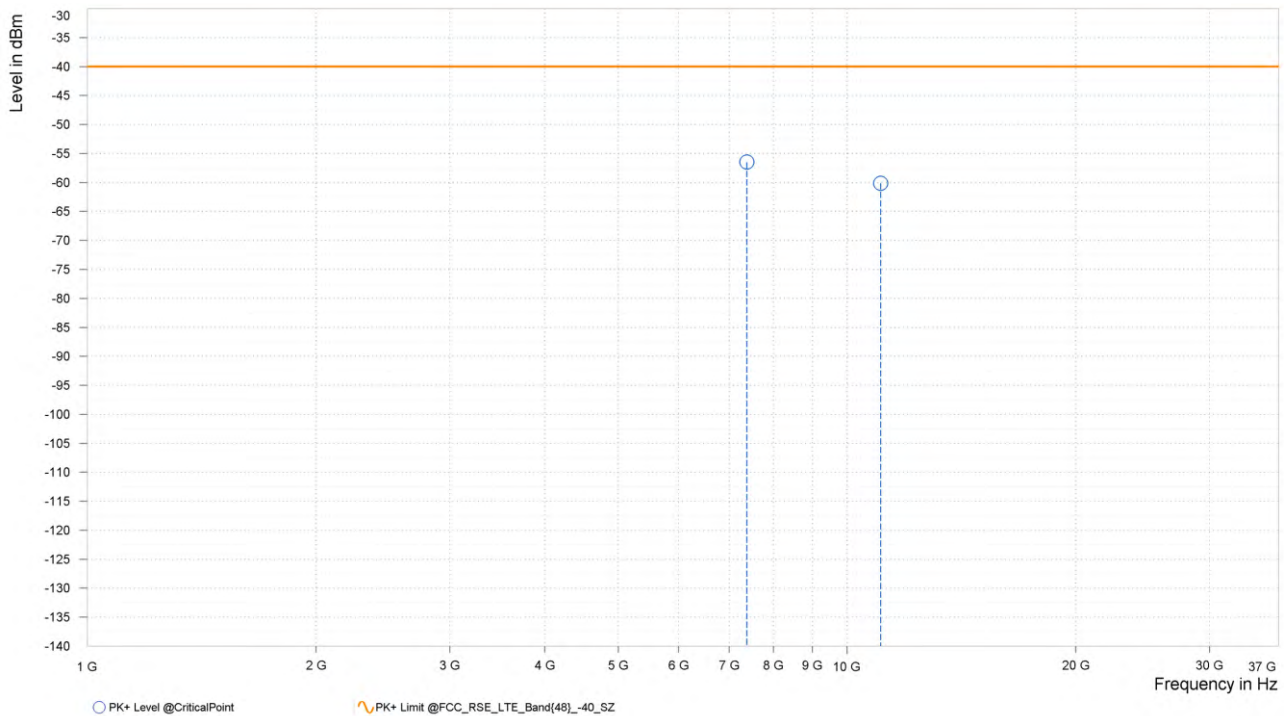
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,381.000	-55.20	-40.00	15.20	16.80	H	206.6	2.00
6	11,071.000	-61.09	-40.00	21.09	9.72	H	277.8	1.00





MODE	TX channel 646332	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,381.000	-56.50	-40.00	16.50	16.80	V	2.1	2.00
6	11,071.00 0	-60.14	-40.00	20.14	9.72	V	1.4	2.00

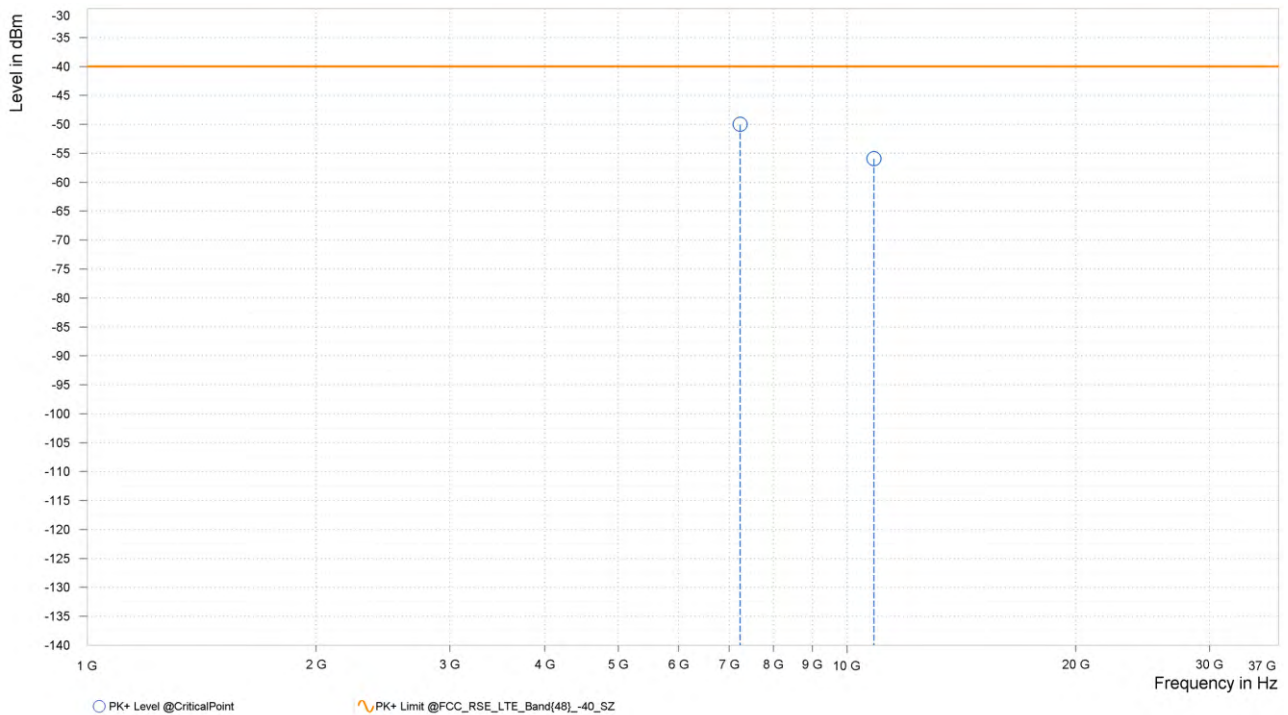




CHANNEL BANDWIDTH: 20MHz / QPSK

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

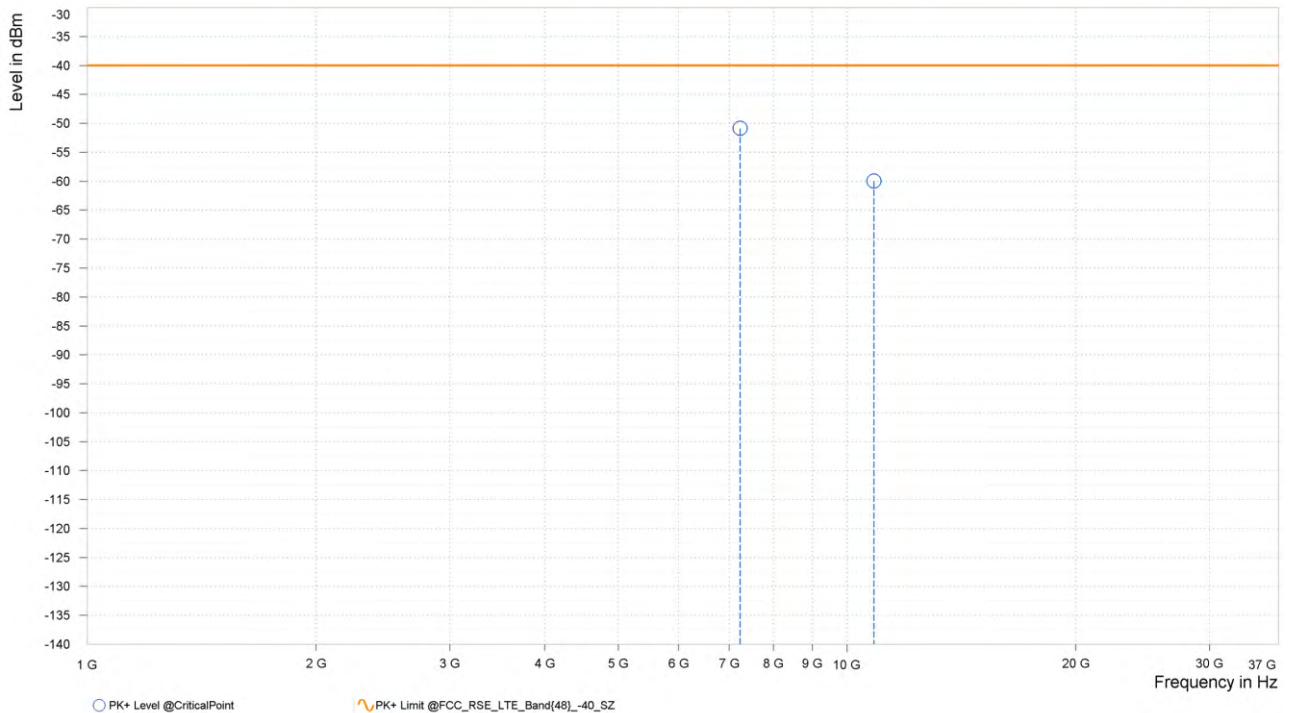
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,232.000	-50.00	-40.00	10.00	22.47	H	1	1.00
6	10,848.000	-55.95	-40.00	15.95	9.63	H	1.6	2.00





MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,232.000	-50.86	-40.00	10.86	22.47	V	2.3	2.00
6	10,848.000	-59.97	-40.00	19.97	9.63	V	0.9	2.00

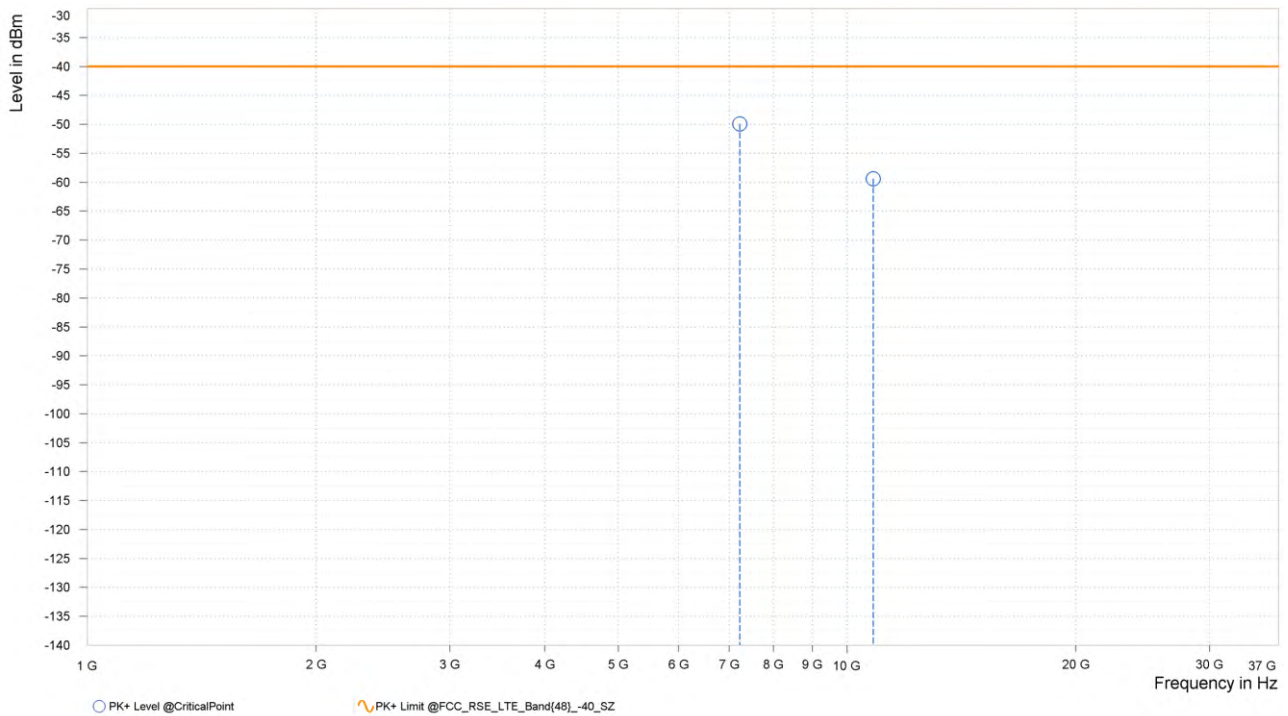




CHANNEL BANDWIDTH: 30MHz / QPSK

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

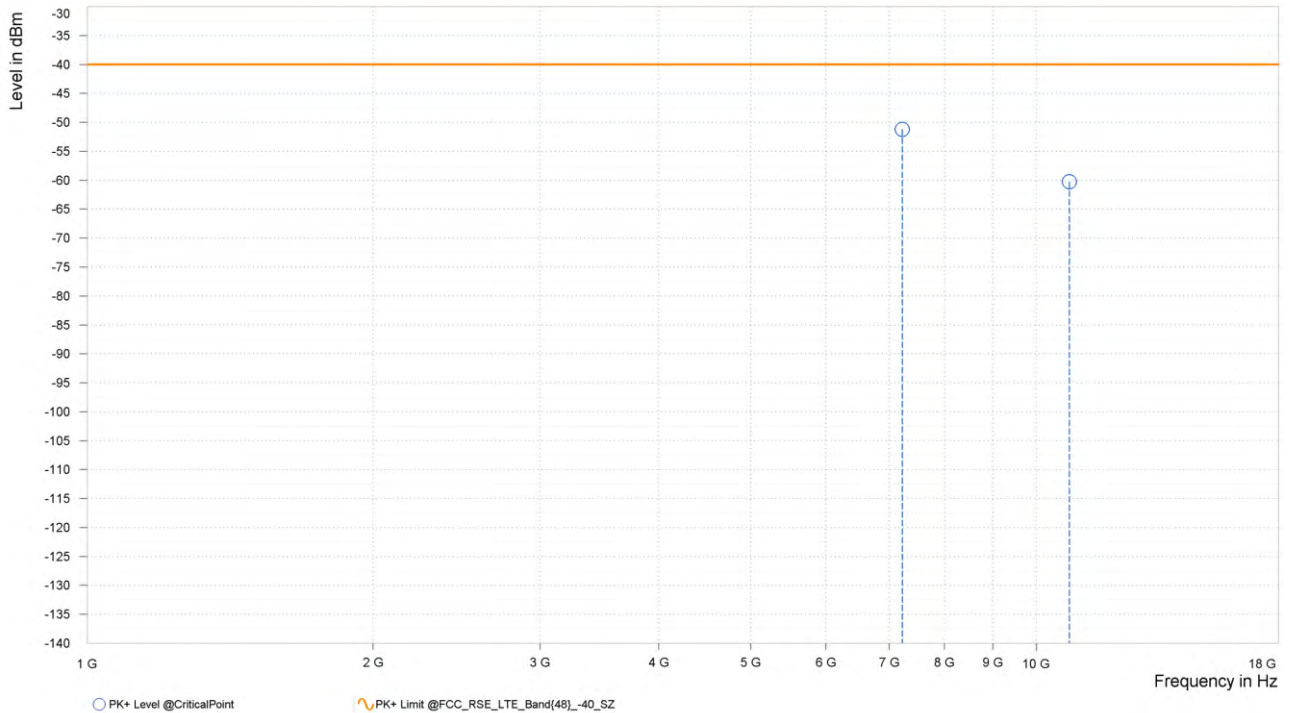
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,223.000	-49.91	-40.00	9.91	22.43	H	359	2.00
6	10,834.500	-59.40	-40.00	19.40	9.71	H	359	2.00





MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,223.000	-51.19	-40.00	11.19	22.43	V	359.1	1.00
6	10,834.500	-60.27	-40.00	20.27	9.71	V	345.2	1.00

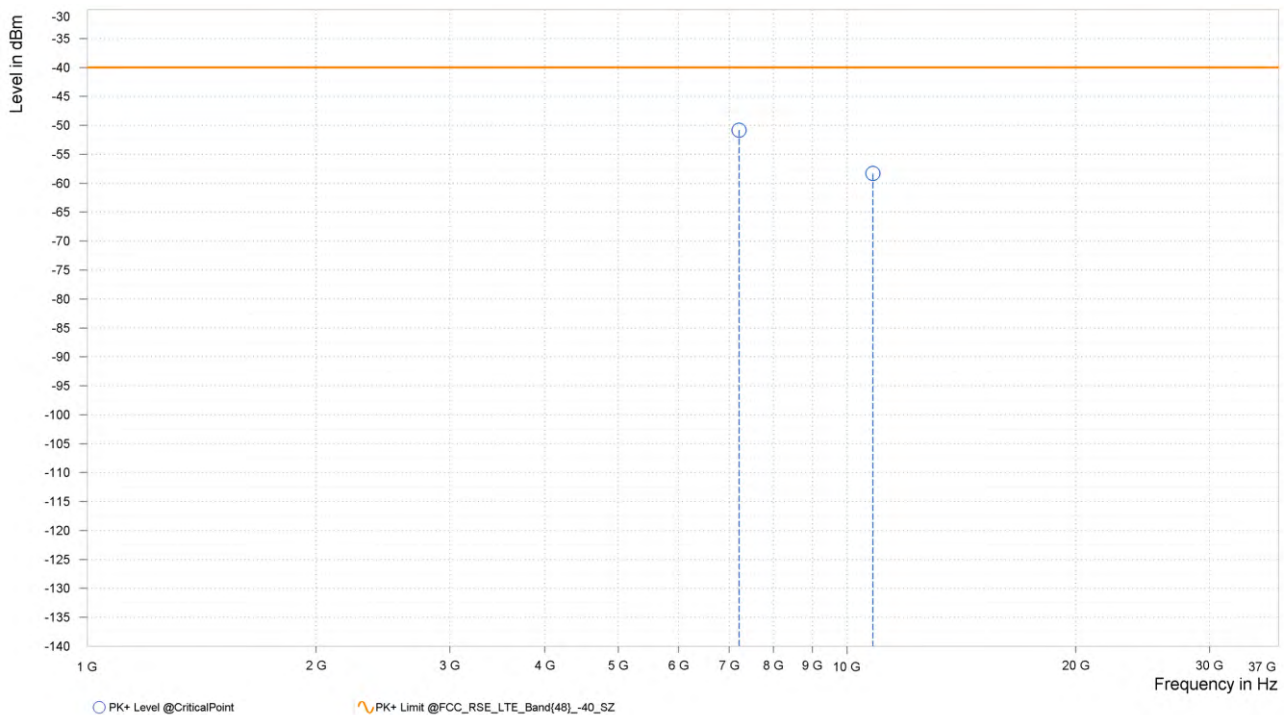




CHANNEL BANDWIDTH: 40MHz / QPSK

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

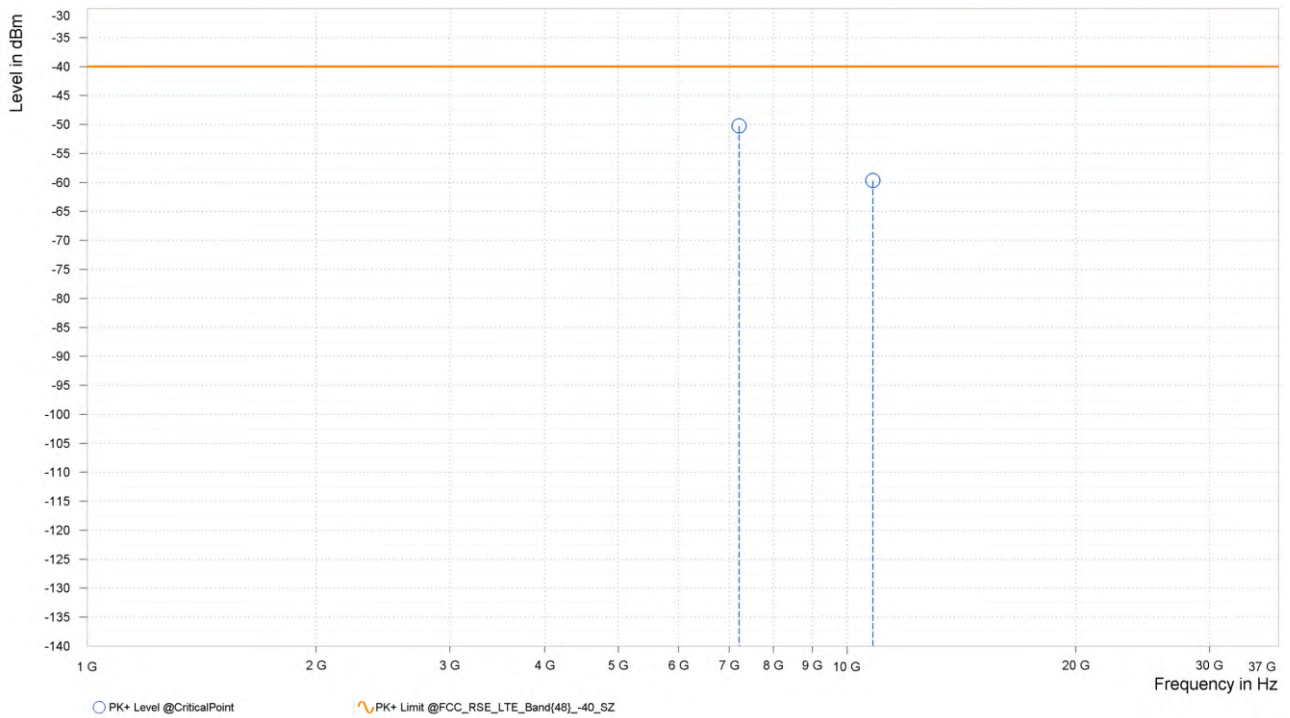
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
5	7,214.000	-50.84	-40.00	10.84	22.44	H	359	2.00
6	10,821.000	-58.32	-40.00	18.32	9.80	H	158.6	2.00





MODE	TX channel 641666	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		
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	7,214.000	-50.26	-40.00	10.26	22.44	V	150	1.00
6	10,821.000	-59.66	-40.00	19.66	9.80	V	201.4	1.00

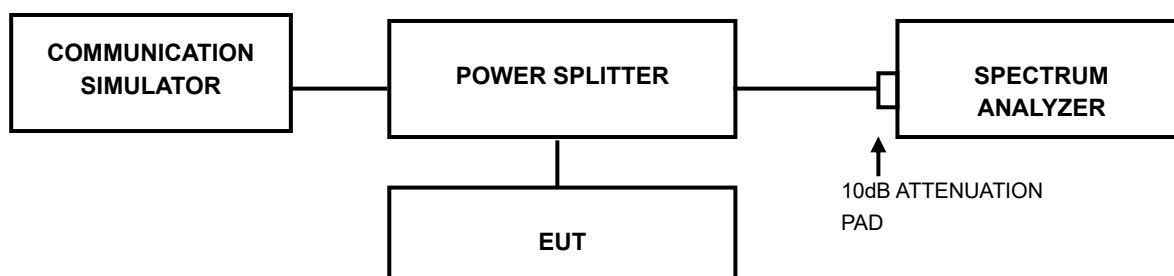


3.7 PEAK TO AVERAGE RATIO

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%.



3.7.4 TEST RESULTS

Please Refer to Appendix Of this test report.



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.



6 APPENDIX

N48 PEAK-TO-AVERAGE RATIO(CCDF)

TEST RESULT

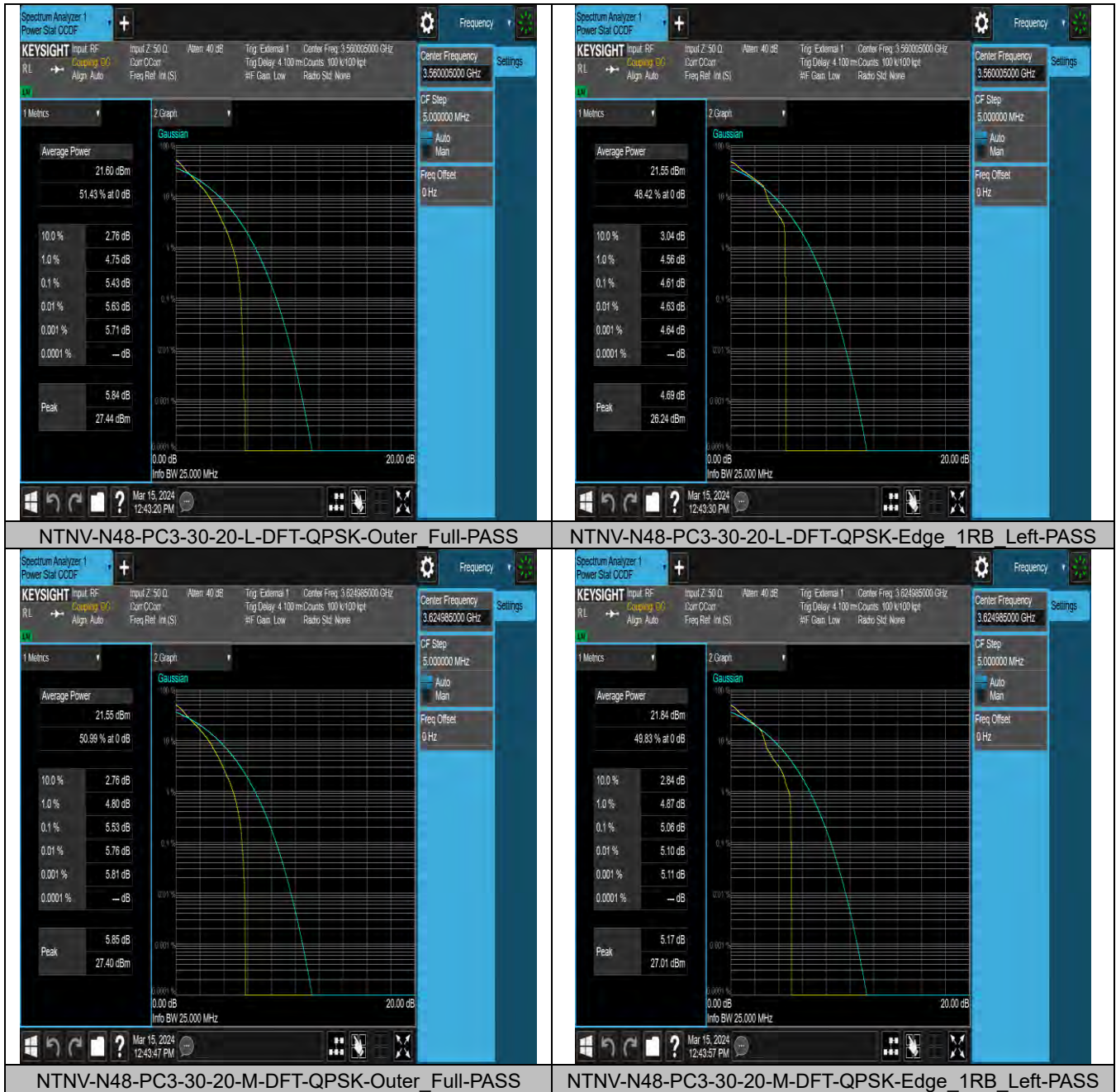
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Limit	Verdict
N48	30	20	DFT-QPSK	L	Outer_Full	5.43	≤13	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Left	4.61	≤13	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	5.53	≤13	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Left	5.06	≤13	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	5.52	≤13	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Left	4.68	≤13	PASS



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TEST GRAPHS



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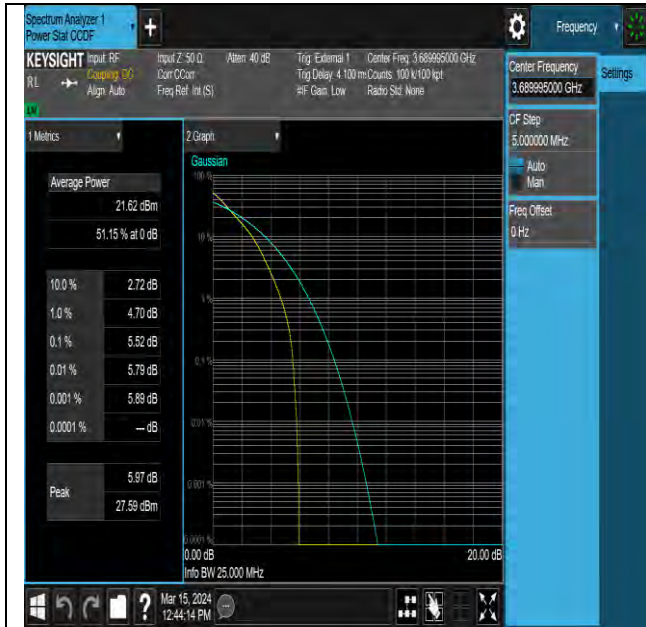
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566
Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com

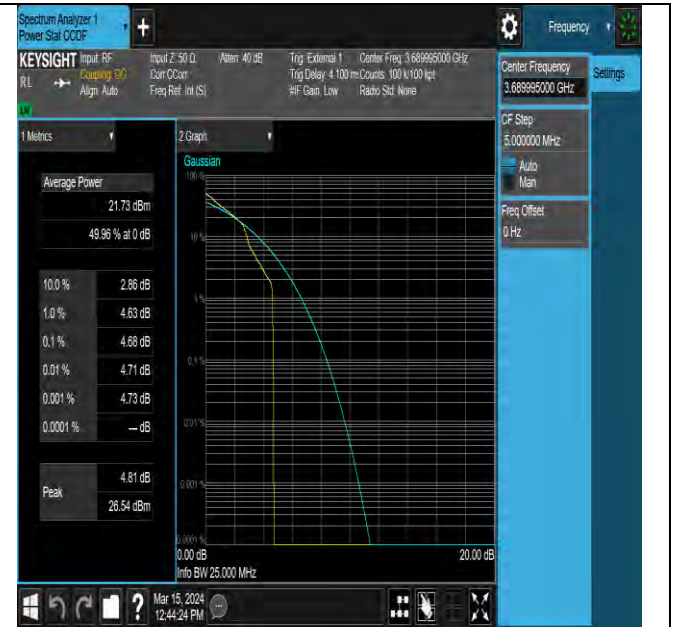


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Test Report No.: W7L-P23120020RF07



NTNV-N48-PC3-30-20-H-DFT-QPSK-Outer_Full-PASS



NTNV-N48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Left-PASS

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Guangdong, People's Republic of China

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Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com



26DB BANDWIDTH AND OCCUPIED BANDWIDTH FOR SA TEST RESULT

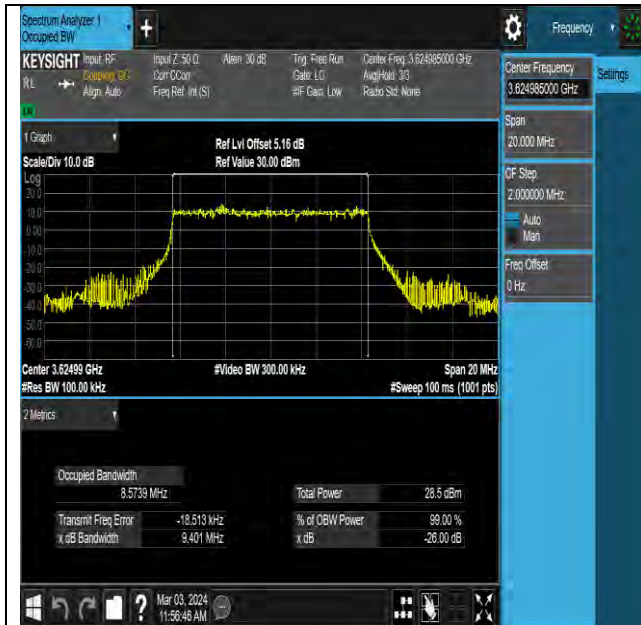
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result (99%)	Result (26dB)	Verdict
N48	30	10	DFT-PI2BPSK	M	Outer_Full	8.5739	9.401	PASS
N48	30	10	DFT-QPSK	M	Outer_Full	8.5797	9.594	PASS
N48	30	10	DFT-16QAM	M	Outer_Full	8.5572	9.421	PASS
N48	30	10	DFT-64QAM	M	Outer_Full	8.5798	9.727	PASS
N48	30	10	DFT-256QAM	M	Outer_Full	8.5593	9.617	PASS
N48	30	20	DFT-PI2BPSK	M	Outer_Full	17.781	18.79	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	17.838	19.17	PASS
N48	30	20	DFT-16QAM	M	Outer_Full	17.876	19.06	PASS
N48	30	20	DFT-64QAM	M	Outer_Full	17.820	19.35	PASS
N48	30	20	DFT-256QAM	M	Outer_Full	17.825	19.15	PASS
N48	30	30	DFT-PI2BPSK	M	Outer_Full	26.797	28.38	PASS
N48	30	30	DFT-QPSK	M	Outer_Full	26.830	28.73	PASS
N48	30	30	DFT-16QAM	M	Outer_Full	26.778	28.50	PASS
N48	30	30	DFT-64QAM	M	Outer_Full	26.789	28.75	PASS
N48	30	30	DFT-256QAM	M	Outer_Full	26.794	28.28	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	35.750	37.65	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	35.767	37.44	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	35.816	37.76	PASS
N48	30	40	DFT-64QAM	M	Outer_Full	35.792	38.45	PASS
N48	30	40	DFT-256QAM	M	Outer_Full	35.797	37.85	PASS



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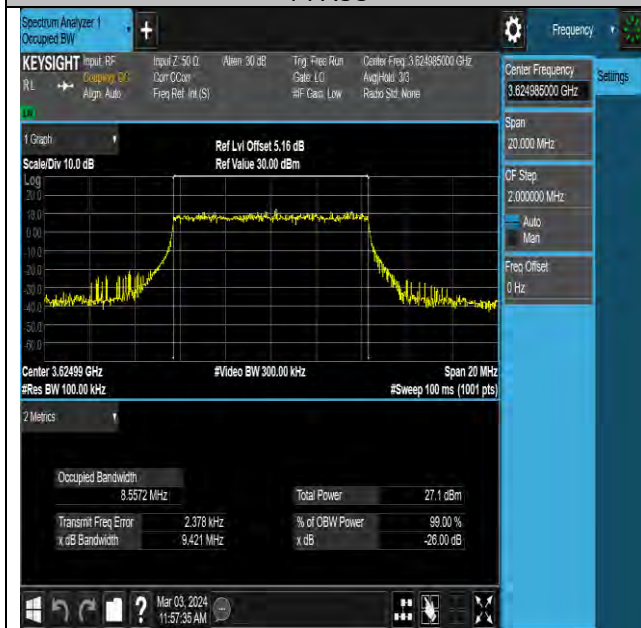
TEST GRAPHS



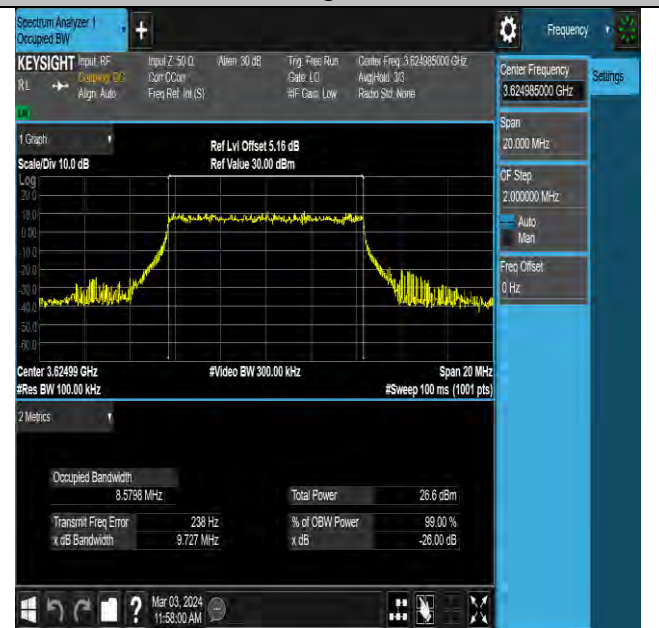
NTNV-N48-PC3-30-10-M-DFT-PI2BPSK-Outter_Full-Ant1
1-PASS



NTNV-N48-PC3-30-10-M-DFT-QPSK-Outter_Full-Ant11-PAS
S



NTNV-N48-PC3-30-10-M-DFT-16QAM-Outter_Full-Ant11-PASS

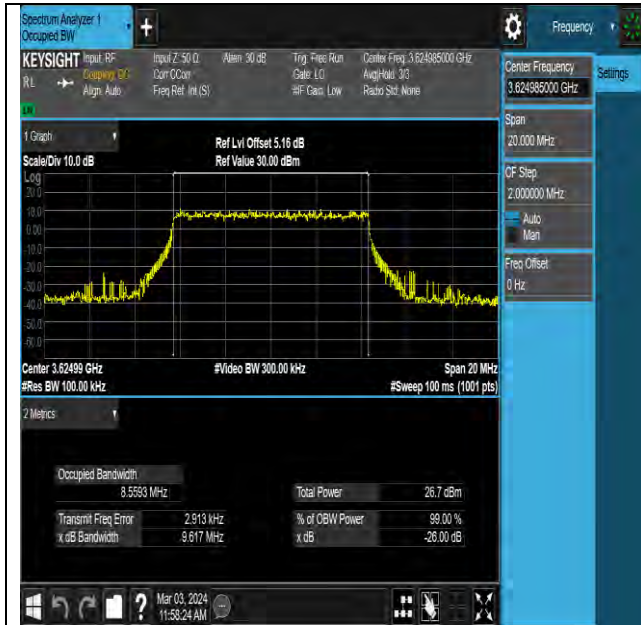


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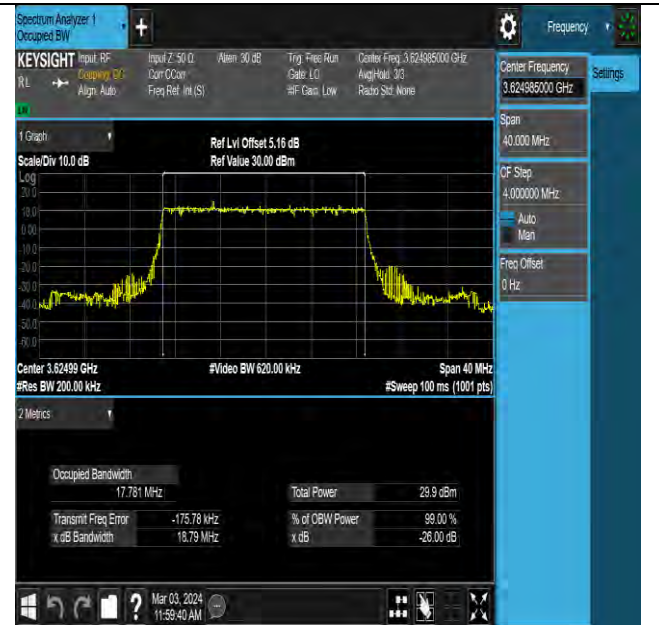


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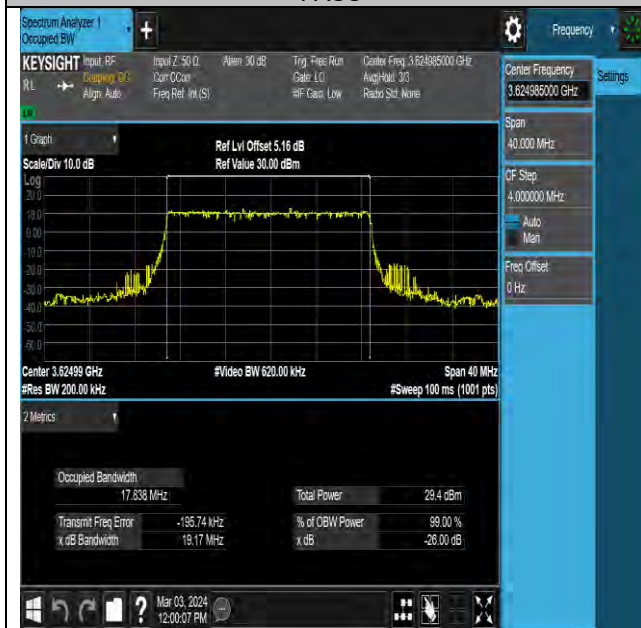
Test Report No.: W7L-P23120020RF07



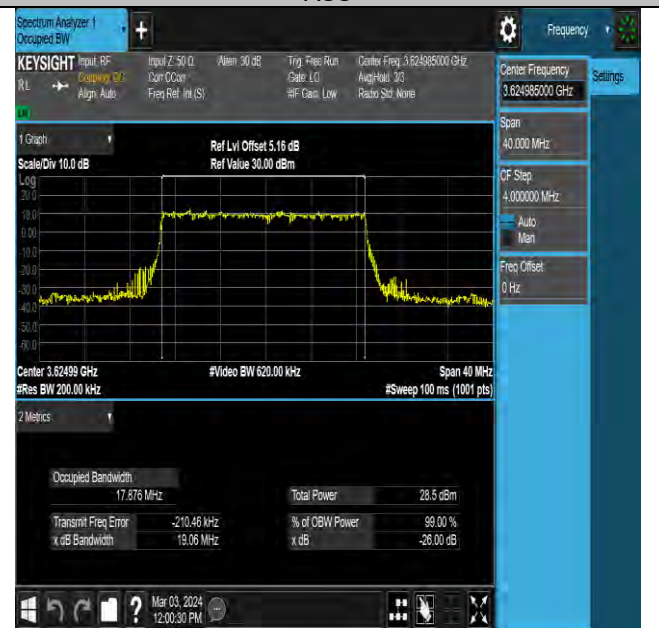
NTNV-N48-PC3-30-10-M-DFT-256QAM-Outer_Full-Ant11-PASS



NTNV-N48-PC3-30-20-M-DFT-PI2BPSK-Outer_Full-Ant11-P ASS



NTNV-N48-PC3-30-20-M-DFT-QPSK-Outer_Full-Ant11-P ASS

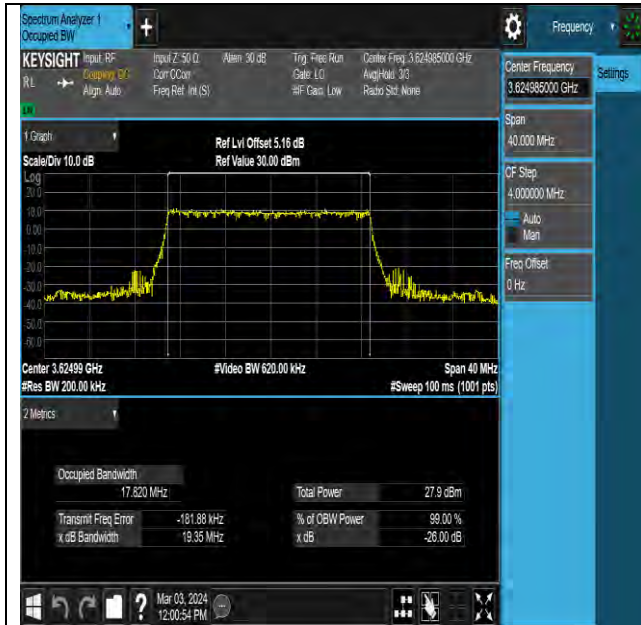


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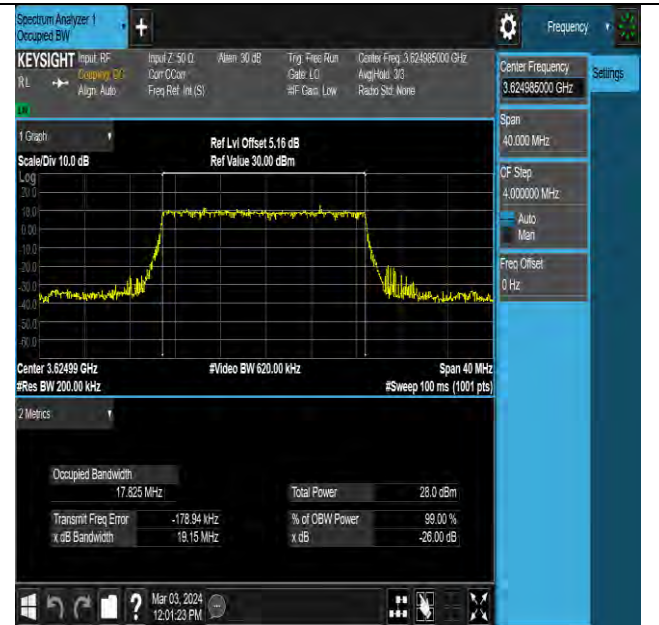


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Test Report No.: W7L-P23120020RF07



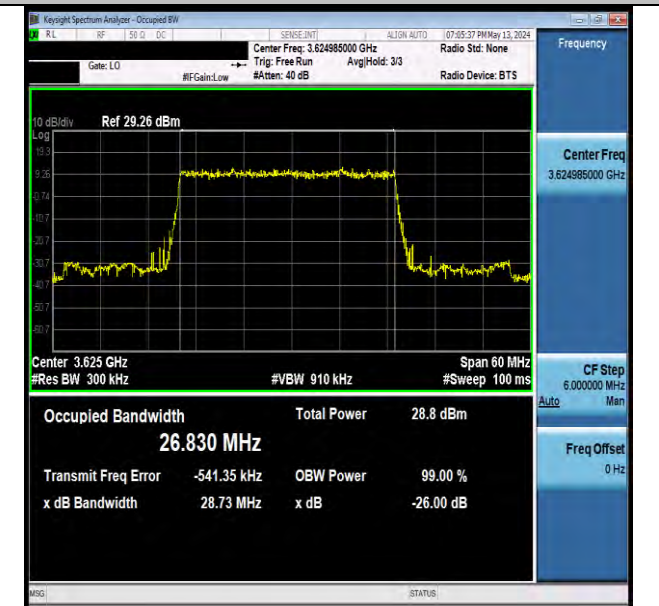
NTNV-N48-PC3-30-20-M-DFT-64QAM-Outer_Full-Ant11-PASS



NTNV-N48-PC3-30-20-M-DFT-256QAM-Outer_Full-Ant11-PASS



NTNV-N48-PC3-30-30-M-DFT-PI2BPSK-Outer_Full-Ant11-PASS



NTNV-N48-PC3-30-30-M-DFT-QPSK-Outer_Full-Ant11-PASS



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Test Report No.: W7L-P23120020RF07



NTNV-N48-PC3-30-30-M-DFT-16QAM-Outer_Full-Ant11-PASS



NTNV-N48-PC3-30-30-M-DFT-64QAM-Outer_Full-Ant11-PA-SS



NTNV-N48-PC3-30-30-M-DFT-256QAM-Outer_Full-Ant11-PASS



NTNV-N48-PC3-30-40-M-DFT-PI2BPSK-Outer_Full-Ant11-P-ASS

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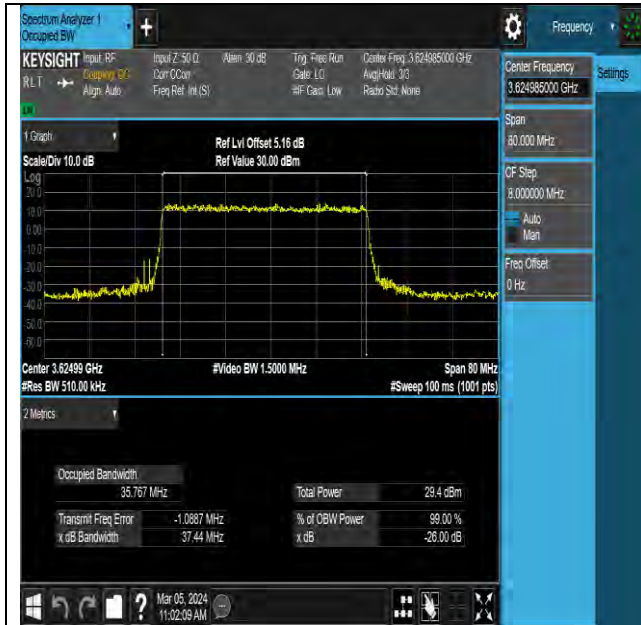
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
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Tel: +86 755 8869 6566
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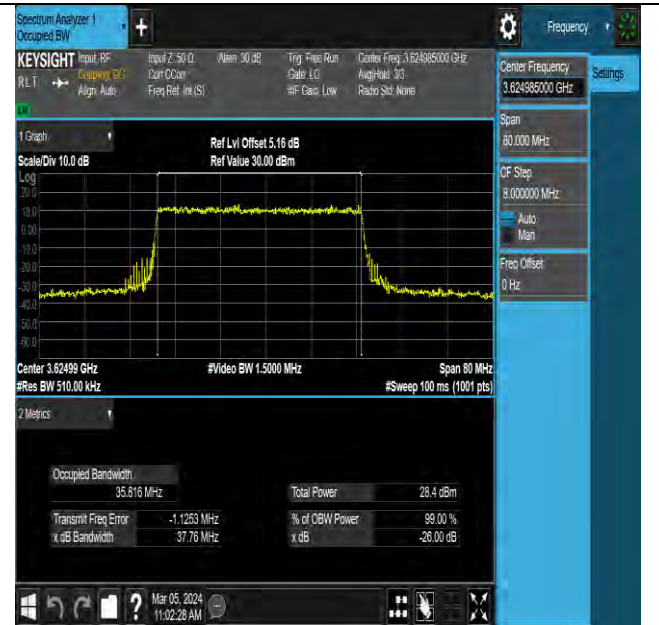


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Test Report No.: W7L-P23120020RF07



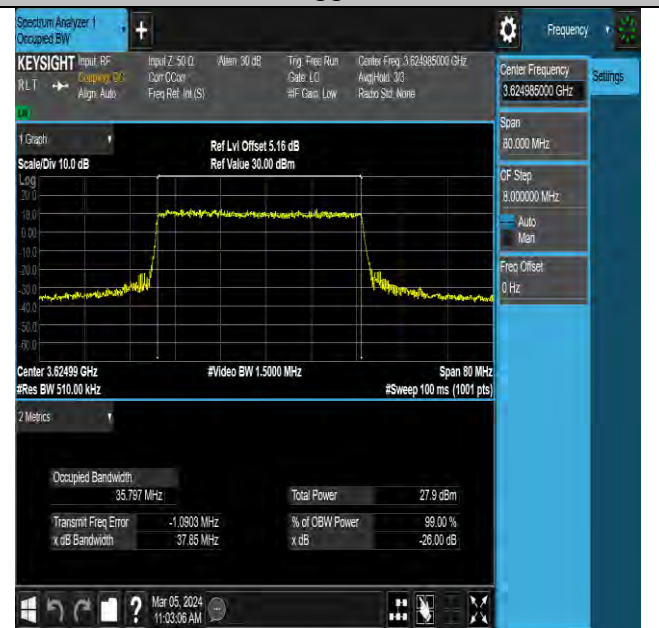
NTNV-N48-PC3-30-40-M-DFT-QPSK-Outter_Full-Ant11-P
ASS



NTNV-N48-PC3-30-40-M-DFT-16QAM-Outter_Full-Ant11-PA
SS



NTNV-N48-PC3-30-40-M-DFT-64QAM-Outter_Full-Ant11-P
PASS



NTNV-N48-PC3-30-40-M-DFT-256QAM-Outter_Full-Ant11-PA
SS



ACLR FOR SA TEST RESULT

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Verdict
N48	30	10	DFT-QPSK	L	Outer_Full	≤ -30	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Left	≤ -30	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Right	≤ -30	PASS
N48	30	10	DFT-QPSK	M	Outer_Full	≤ -30	PASS
N48	30	10	DFT-QPSK	M	Edge_1RB_Left	≤ -30	PASS
N48	30	10	DFT-QPSK	M	Edge_1RB_Right	≤ -30	PASS
N48	30	10	DFT-QPSK	H	Outer_Full	≤ -30	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Left	≤ -30	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Right	≤ -30	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	≤ -30	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Left	≤ -30	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Right	≤ -30	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	≤ -30	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Left	≤ -30	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Right	≤ -30	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	≤ -30	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Left	≤ -30	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Right	≤ -30	PASS
N48	30	40	DFT-QPSK	L	Outer_Full	≤ -30	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Left	≤ -30	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Right	≤ -30	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	≤ -30	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Left	≤ -30	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Right	≤ -30	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Right	≤ -30	PASS
N48	30	40	DFT-QPSK	H	Outer_Full	≤ -30	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Left	≤ -30	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Right	≤ -30	PASS



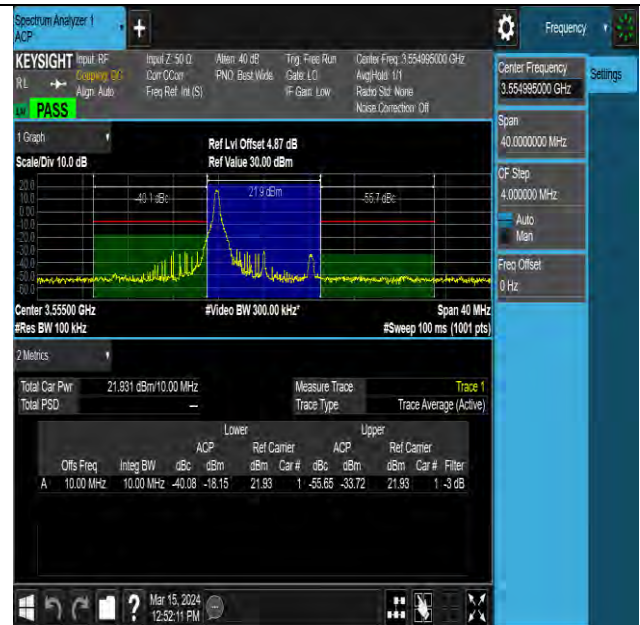
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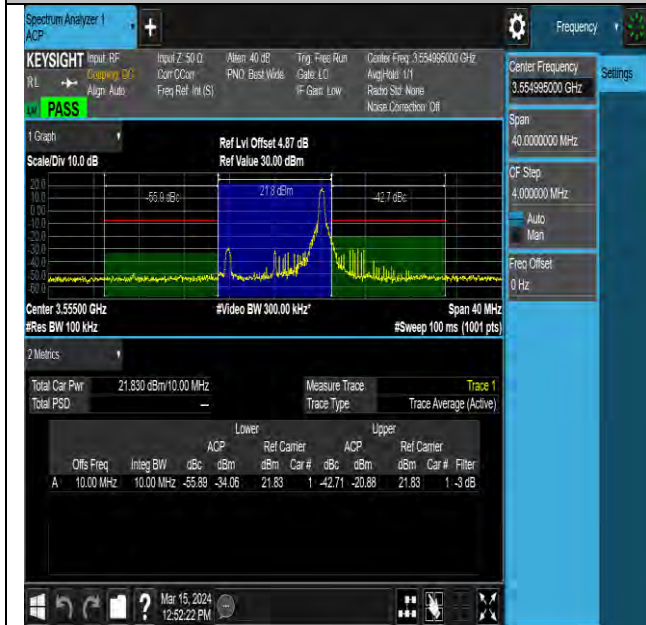
TEST GRAPHS



NTNV-N48-PC3-30-10-L-DFT-QPSK-Outter_Full-Ant1 1-PASS



NTNV-N48-PC3-30-10-L-DFT-QPSK-Edge_1RB_Left-Ant 11-PASS



NTNV-N48-PC3-30-10-L-DFT-QPSK-Edge_1RB_Rig ht-Ant11-PASS



NTNV-N48-PC3-30-10-M-DFT-QPSK-Outter_Full-Ant11-P ASS

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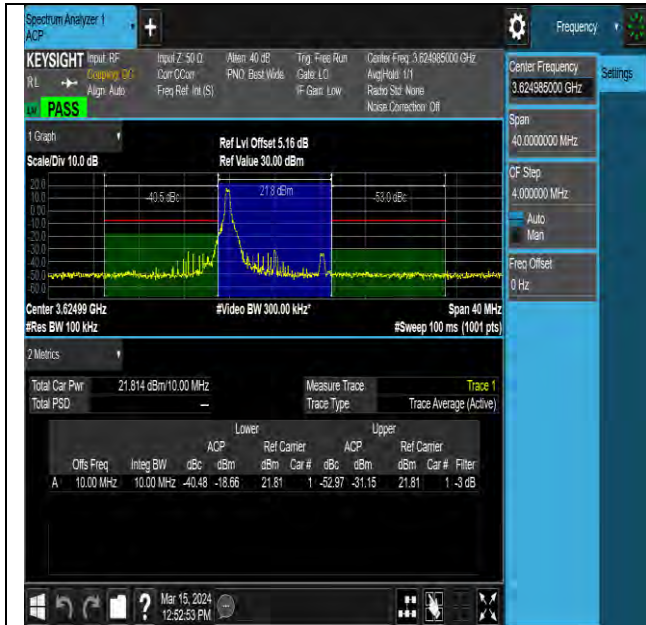
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

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Fax: +86 755 8869 6577
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NTVN-N48-PC3-30-10-M-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-10-M-DFT-QPSK-Edge_1RB_Right-A
nt11-PASS



NTVN-N48-PC3-30-10-H-DFT-QPSK-Outer_Full-Ant1
1-PASS

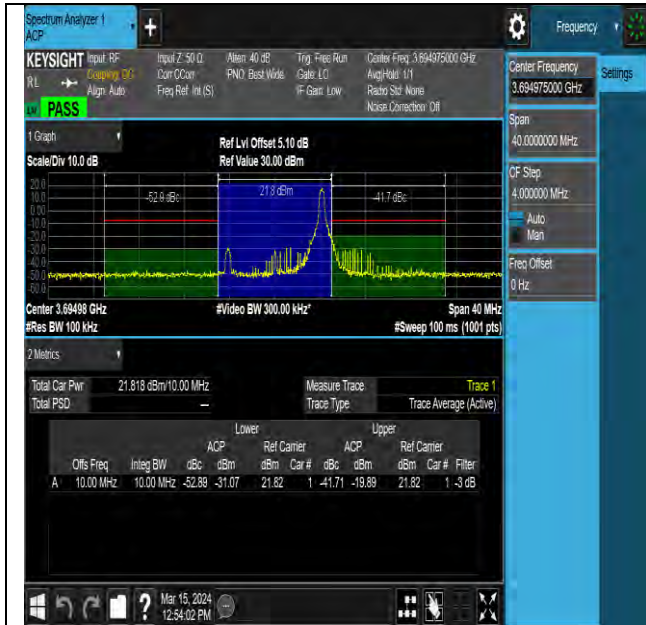


NTVN-N48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Left-Ant11-PASS



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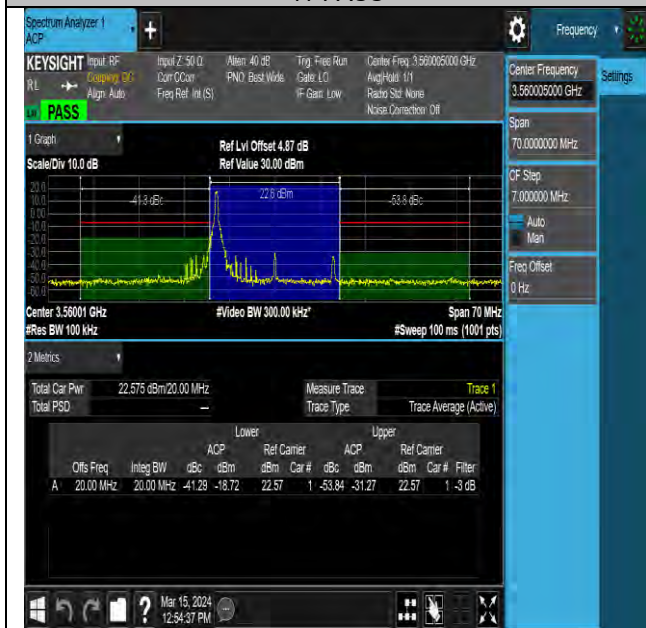
Test Report No.: W7L-P23120020RF07



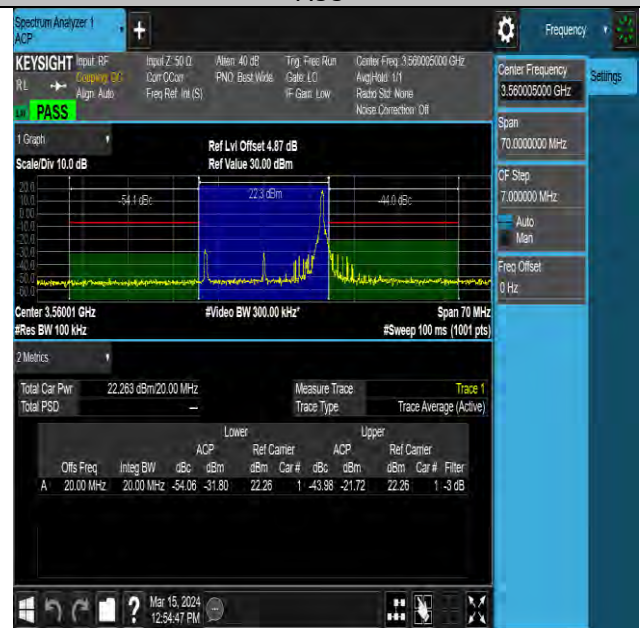
NTVN-N48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Right-Ant 11-PASS



NTVN-N48-PC3-30-20-L-DFT-QPSK-Outer_Full-Ant11-P ASS



NTVN-N48-PC3-30-20-L-DFT-QPSK-Edge_1RB_Left-Ant1 1-PASS



NTVN-N48-PC3-30-20-L-DFT-QPSK-Edge_1RB_Right-A nt11-PASS

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Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com

[illegible]

The screenshot displays the Spectrum Analyzer 1 ACP interface. The main display shows a signal spectrum with a prominent peak at 21.3 dBm. The frequency is set to 3.62499 GHz, and the resolution bandwidth (RBW) is 100 kHz. The scale is set to 10.0 dB. The interface includes various control panels for input, center frequency, span, and measurement parameters.

Top Panel:

- Keysight** logo and **Input RF** section: Input Z: 50 Ω, Input Connector: D, Input Attenuation: 0 dB, Input Impedance: 50 Ω, Input Power: 0 dBm, Input Frequency: 3.62499 GHz, Input Bandwidth: 100 kHz, Input Filter: 100 kHz, Input Noise Floor: -174 dBm/Hz, Input Noise Bandwidth: 100 kHz, Input Noise Power: -17.4 dBm, Input Noise Density: -174 dBm/Hz.
- Center Freq:** 3.624995000 GHz
- Span:** 70.000000 MHz
- CF Step:** 7.000000 MHz
- Auto:** (checked)
- Man:** (unchecked)
- Free Offset:** 0 Hz

Measurement Section:

- Ref Lvl Offset:** 5.16 dB
- Ref Value:** 30.00 dBm
- #Video BW:** 300.00 kHz
- #Sweep:** 100 ms (1001 pts)

Bottom Panel:

Lower		Upper				
Offs Freq	Integ BW	ACP	Ref Carrier	ACP	Ref Carrier	
dBm	dBm	dBm	Car #	dBm	Car #	
A	20.00 MHz	20.00 MHz	-40.07	-18.74	21.32	1
			-49.97	-28.65	21.32	1

[illegible]

The screenshot displays the Spectrum Analyzer 1 ACP interface. The main plot shows a signal trace with a prominent peak at 21.8 dBm. The x-axis represents frequency, and the y-axis represents power in dBm. The peak is labeled with its value, 21.8 dBm. The interface includes various controls and readouts:

- Top Bar:** Spectrum Analyzer 1 ACP, Frequency, and a settings icon.
- Left Panel:**
 - KEYSIGHT** logo and input/output settings: Input RF, Output Z 50 Ω, Port C On, Freq Ref Int (S).
 - Align Auto** button.
 - Trig:** Free Run, Gate: LO, IF Gain: Low, Noise Correction: Off.
 - Center Freq:** 3.689965000 GHz, Aug-Hold: 1/1, Radio Std: None, Noise Correction: Off.
- Right Panel:**
 - Center Frequency:** 3.689965000 GHz.
 - Span:** 70.000000 MHz.
 - CF Step:** 7.000000 MHz.
 - Auto/Man** toggle.
 - Freq Offset:** 0 Hz.
- Main Plot:**
 - Scale/Div:** 10.0 dB.
 - Ref Lvl Offset:** 4.84 dB.
 - Ref Value:** 30.00 dBm.
 - #Video BW:** 300.00 kHz.
 - Span:** 70 MHz.
 - #Res BW:** 100 kHz.
 - #Sweep:** 100 ms (1001 pts).
- Bottom Panel:**
 - 2 Metrics:** Total Car Pwr (21.840 dBm/20.00 MHz), Measure Trace (Trace 1), Trace Type (Trace Average (Active)).
 - Table:**

		Lower				Upper				
Offs Freq	Integ BW	dBc	dBm	Ref Carrier	Car #	dBc	dBm	Ref Carrier	Car #	Filter
A	20.00 MHz	20.00 MHz	-44.29	-22.45	21.84	1	-45.67	-23.83	21.84	1 -3 dB

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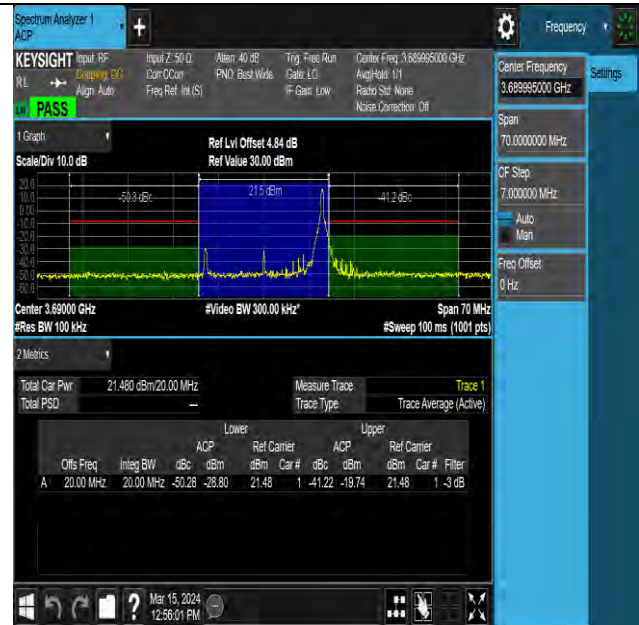


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Test Report No.: W7L-P23120020RF07



NTNV-N48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Left-Ant1-PASS



NTNV-N48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Right-Ant11-PASS



NTNV-N48-PC3-30-40-L-DFT-QPSK-Outer_Full-Ant11-PASS

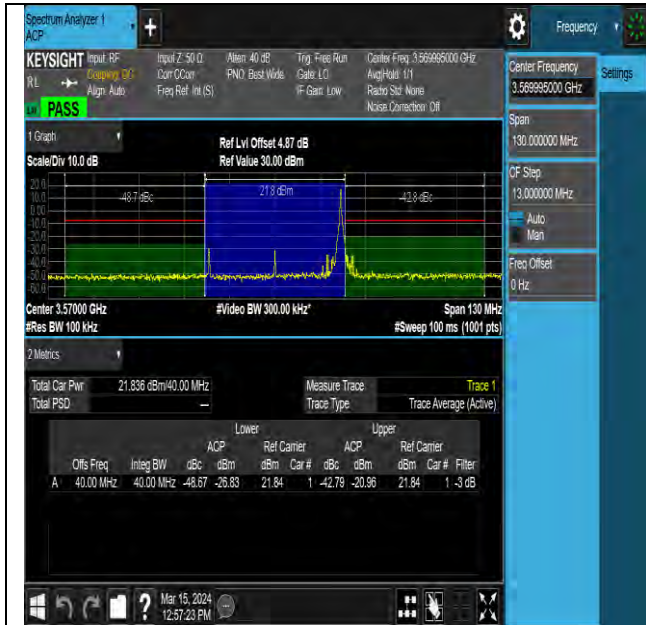


NTNV-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Left-Ant11-PASS

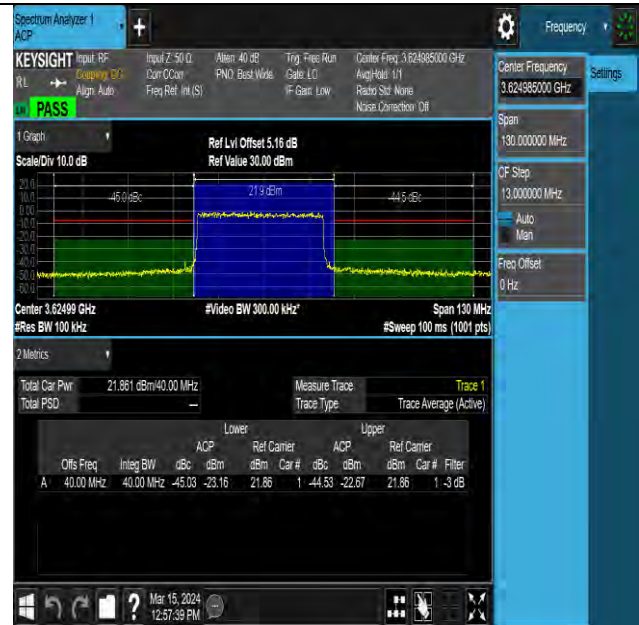


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Test Report No.: W7L-P23120020RF07



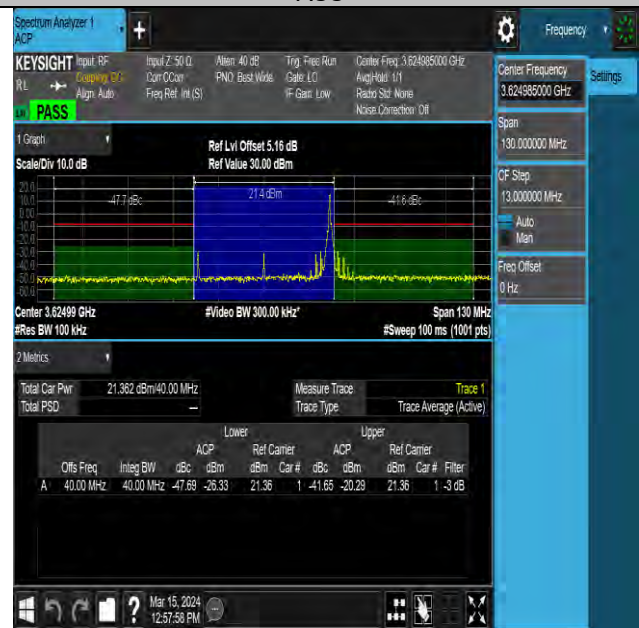
NTNV-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Right-Ant 11-PASS



NTNV-N48-PC3-30-40-M-DFT-QPSK-Outer_Full-Ant11-P ASS



NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Left-Ant1 1-PASS



NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Right-A nt11-PASS

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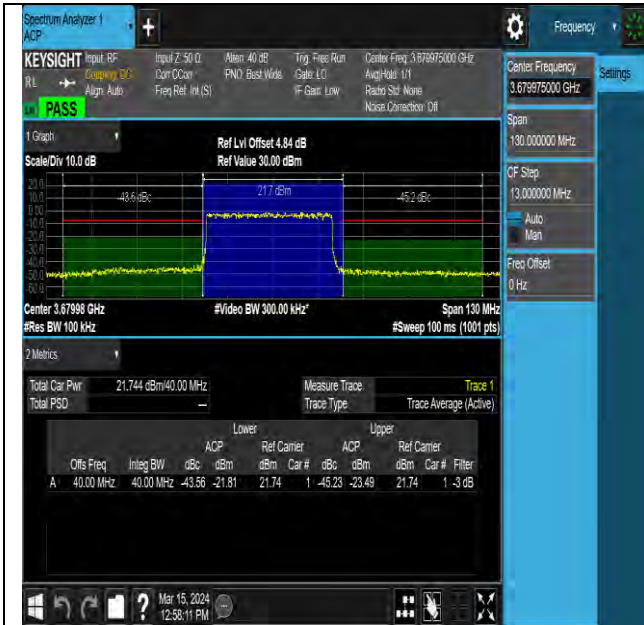
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
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Guangdong, People's Republic of China

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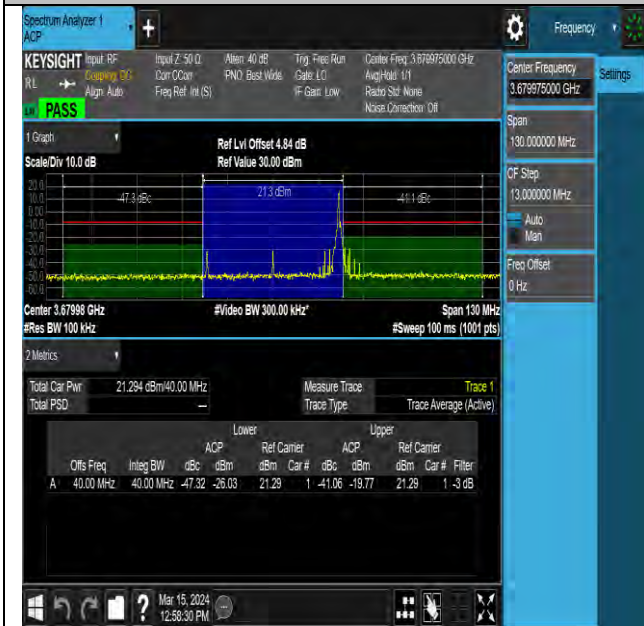
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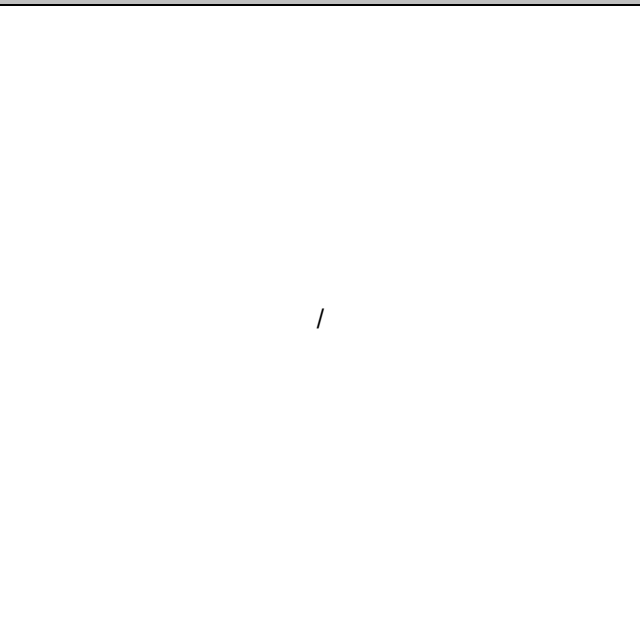
NTVN-N48-PC3-30-40-H-DFT-QPSK-Outter_Full-Ant11-PA
SS



NTVN-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Left-An
t11-PASS



NTVN-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Right-Ant
11-PASS



/



BAND EDGE FOR SA TEST RESULT

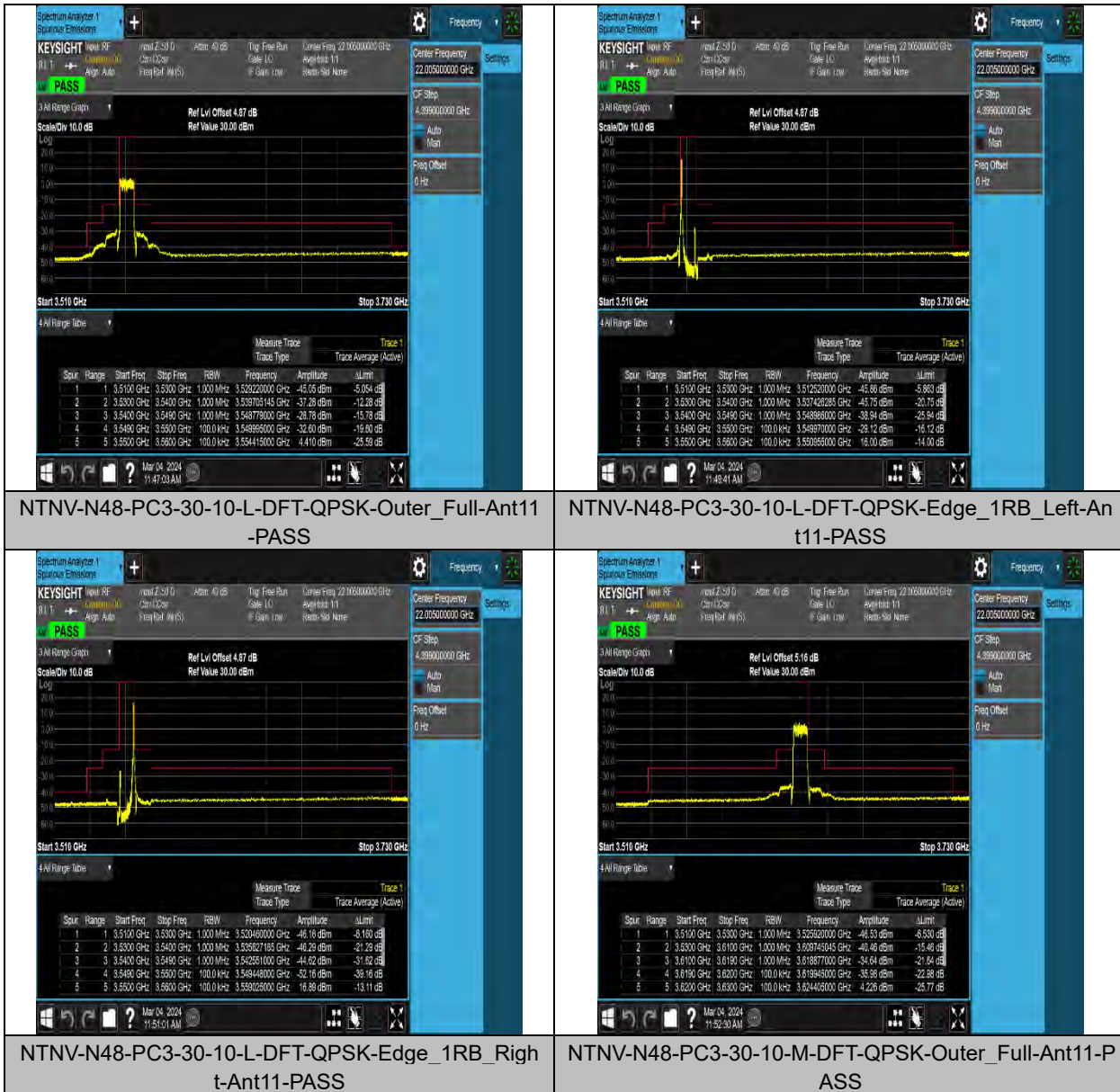
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Verdict
N48	30	10	DFT-QPSK	L	Outer_Full	-42.99	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Left	-42.92	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Right	-42.97	PASS
N48	30	10	DFT-QPSK	M	Outer_Full	-42.77	PASS
N48	30	10	DFT-QPSK	M	Edge_1RB_Left	-42.71	PASS
N48	30	10	DFT-QPSK	M	Edge_1RB_Right	-42.87	PASS
N48	30	10	DFT-QPSK	H	Outer_Full	-42.66	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Left	-42.75	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Right	-42.86	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	-41.25	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Left	-43.10	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Right	-43.05	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	-42.62	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Left	-42.85	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Right	-42.77	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	-41.24	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Left	-43.25	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Right	-42.73	PASS
N48	30	40	DFT-QPSK	L	Outer_Full	-42.54	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Left	-43.08	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Right	-42.99	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	-43.63	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Left	-42.86	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Right	-42.58	PASS
N48	30	40	DFT-QPSK	H	Outer_Full	-43.05	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Left	-42.83	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Right	-42.93	PASS



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TEST GRAPHS



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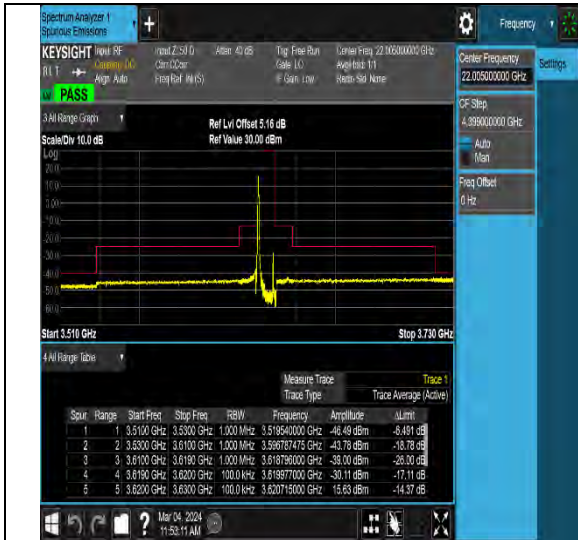
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
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NTNV-48-PC3-30-10-M-DFT-QPSK-Edge_1RB_Left-Ant11-PASS



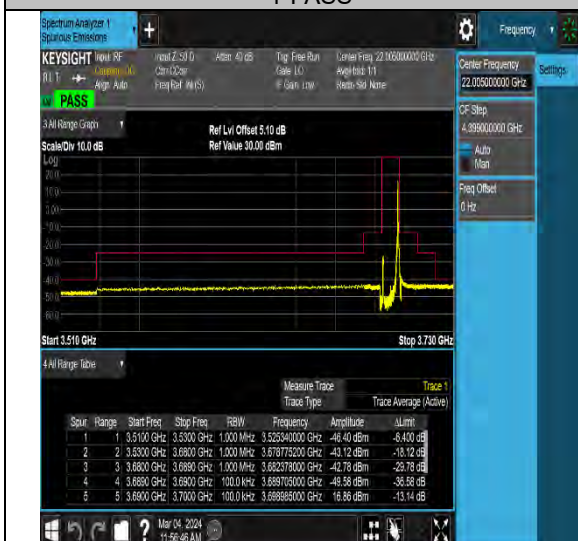
NTNV-48-PC3-30-10-M-DFT-QPSK-Edge_1RB_Right-Ant11-PASS



NTNV-48-PC3-30-10-H-DFT-QPSK-Outer_Full-Ant11-PASS



NTNV-48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Left-Ant11-PASS



NTNV-48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Right-Ant11-PASS



NTNV-48-PC3-30-20-L-DFT-QPSK-Outer_Full-Ant11-PASS

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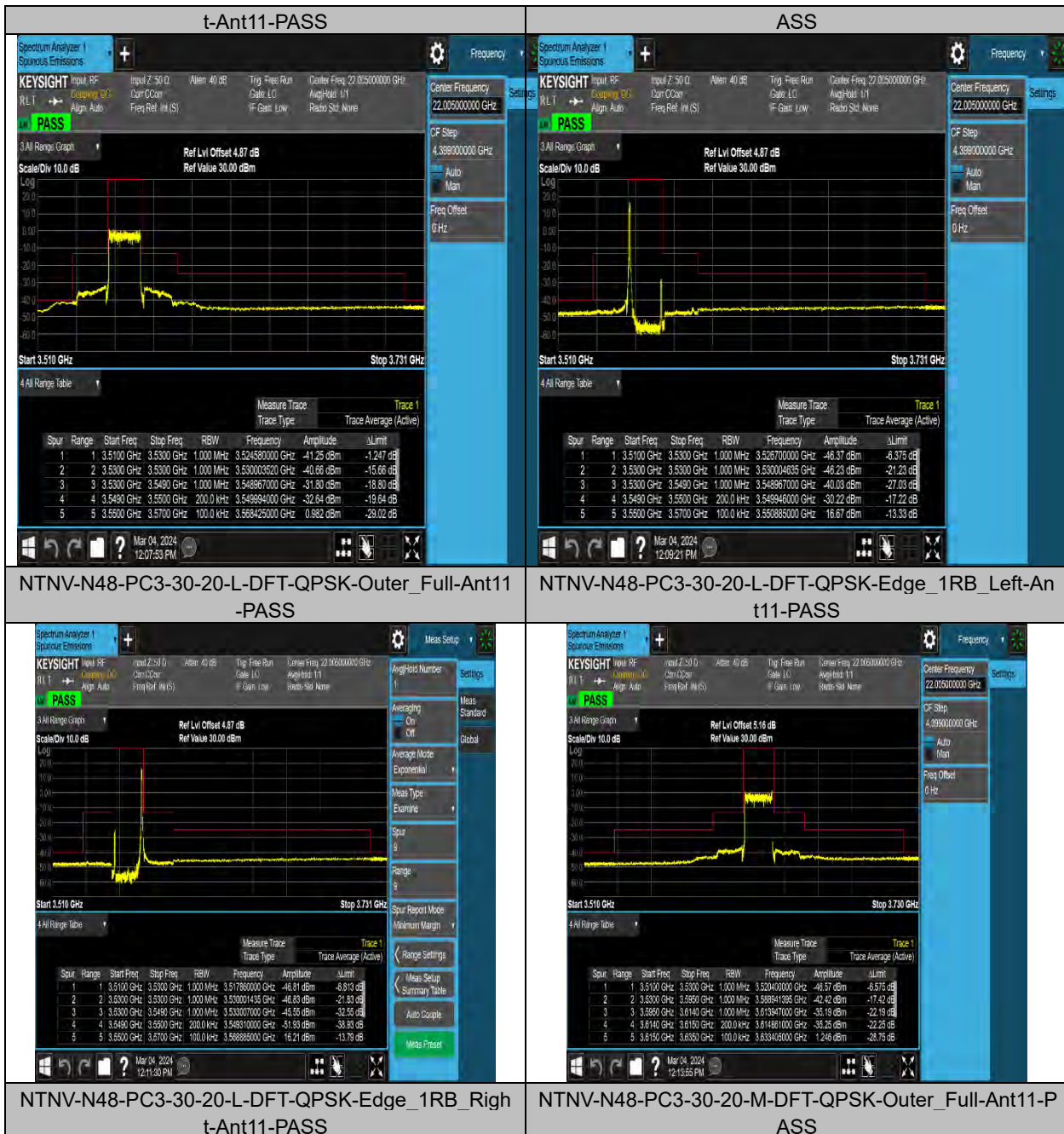
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
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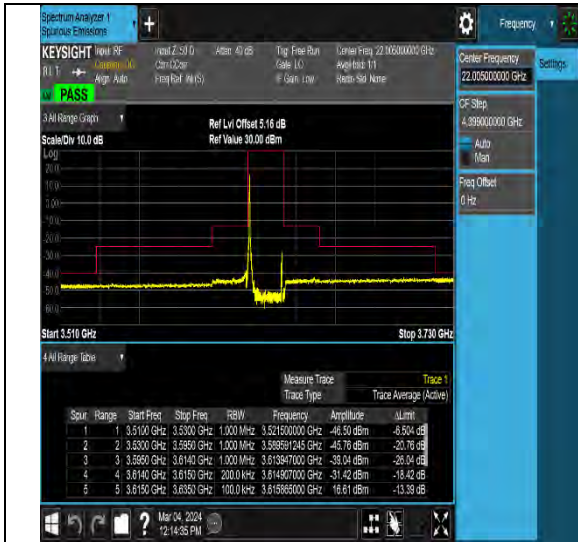
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
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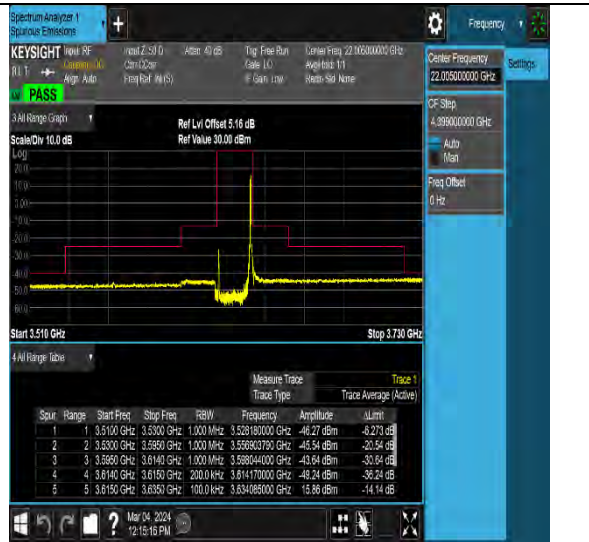


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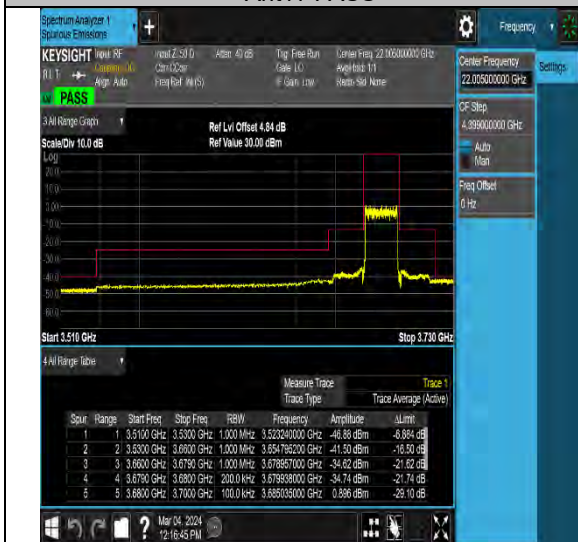
Test Report No.: W7L-P23120020RF07



NTNV-48-PC3-30-20-M-DFT-QPSK-Edge_1RB_Left-Ant11-PASS



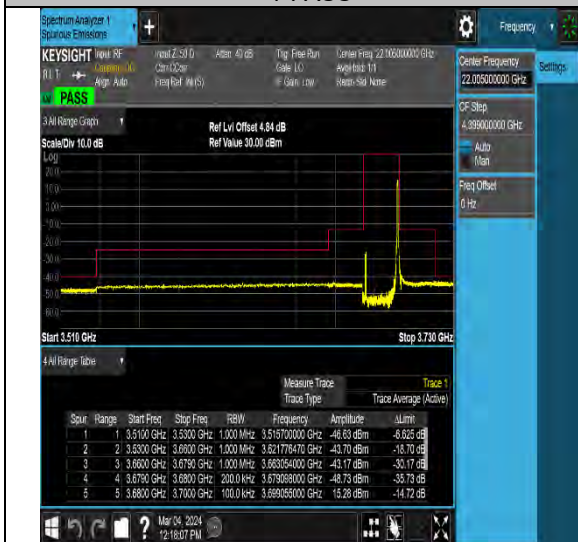
NTNV-48-PC3-30-20-M-DFT-QPSK-Edge_1RB_Right-Ant11-PASS



NTNV-48-PC3-30-20-H-DFT-QPSK-Outer_Full-Ant11-PASS



NTNV-48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Left-Ant11-PASS



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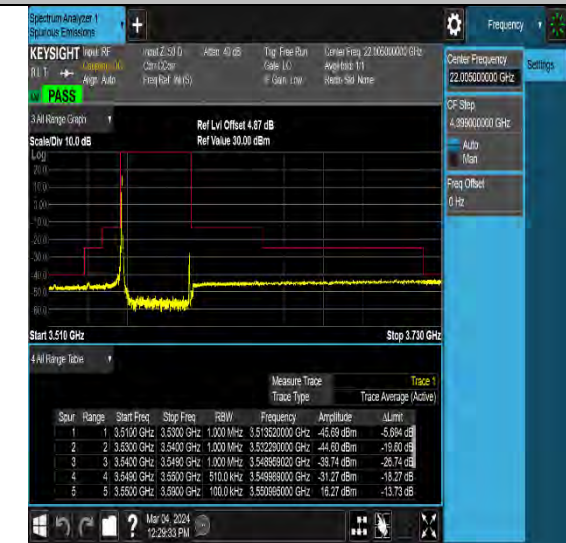
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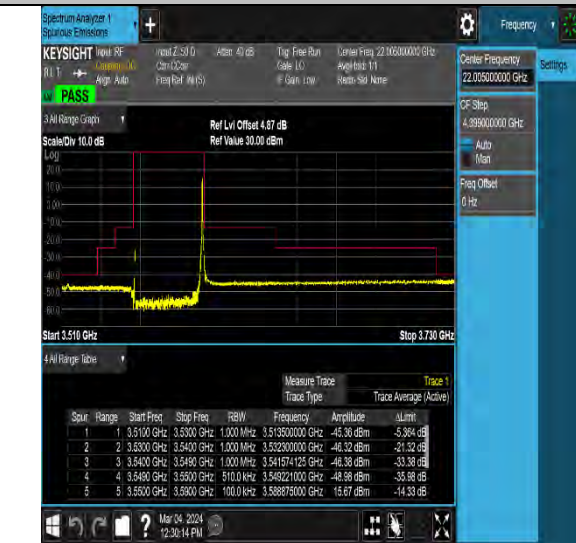
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Test Report No.: W7L-P23120020RF07

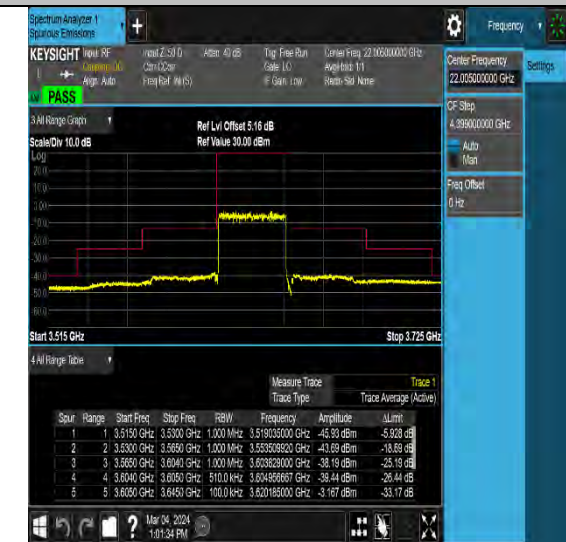
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t-Ant11-PASS



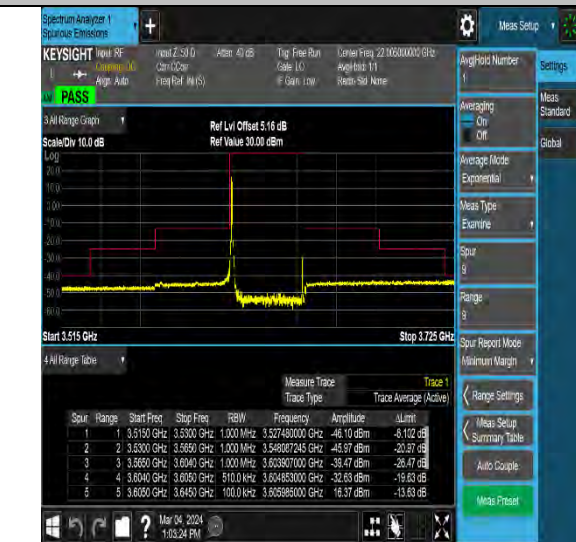
NTNV-N48-PC3-30-40-L-DFT-QPSK-Outer_Full-Ant11-P
ASS



NTNV-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Left-
Ant11-PASS



NTNV-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Right-A
nt11-PASS



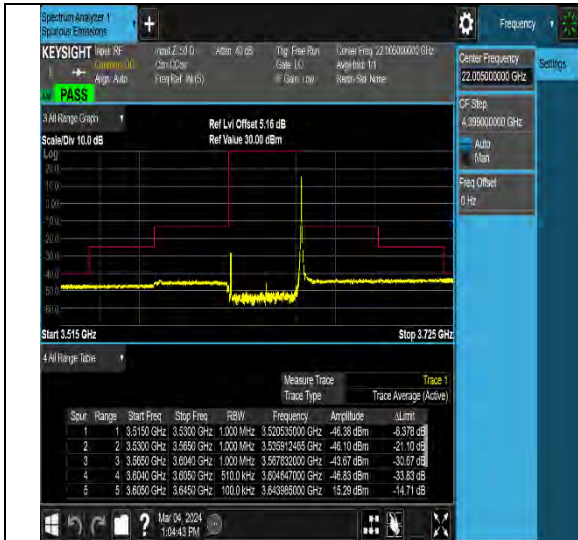
NTNV-N48-PC3-30-40-M-DFT-QPSK-Outer_Full-Ant1
1-PASS

NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Left-A
nt11-PASS



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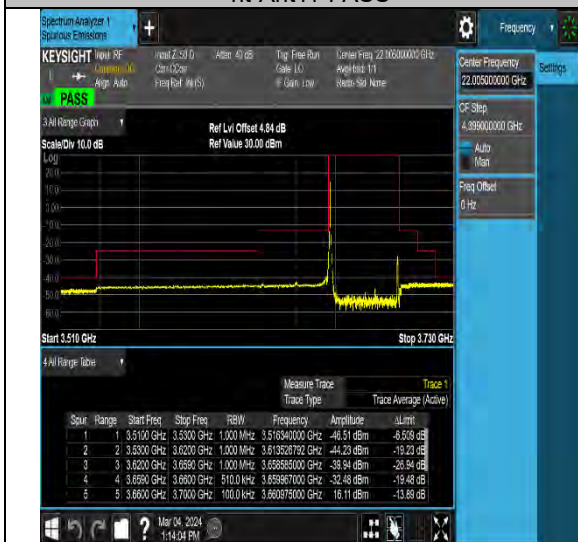
Test Report No.: W7L-P23120020RF07



NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Rig ht-Ant11-PASS



NTNV-N48-PC3-30-40-H-DFT-QPSK-Outer_Full-Ant11-P ASS



NTNV-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Left-Ant11-PASS



NTNV-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Right-Ant11-PASS



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Band	SCS	Bandwidth	Modulation	Channel	RB Config	StartFreq	StopFreq	Result	Limit	Verdict
N48	30	10	DFT-QPSK	L	Edge 1RB Left	30	1000	-47.53	-40	PASS
N48	30	10	DFT-QPSK	L	Edge 1RB Left	1000	6000	-48.51	-40	PASS
N48	30	10	DFT-QPSK	L	Edge 1RB Left	6000	40000	-43.64	-40	PASS
N48	30	10	DFT-QPSK	M	Edge 1RB Left	30	1000	-47.53	-40	PASS
N48	30	10	DFT-QPSK	M	Edge 1RB Left	1000	6000	-48.56	-40	PASS
N48	30	10	DFT-QPSK	M	Edge 1RB Left	6000	40000	-43.74	-40	PASS
N48	30	10	DFT-QPSK	H	Edge 1RB Left	30	1000	-47.45	-40	PASS
N48	30	10	DFT-QPSK	H	Edge 1RB Left	1000	6000	-47.58	-40	PASS
N48	30	10	DFT-QPSK	H	Edge 1RB Left	6000	40000	-43.42	-40	PASS
N48	30	20	DFT-QPSK	L	Edge 1RB Left	30	1000	-47.42	-40	PASS
N48	30	20	DFT-QPSK	L	Edge 1RB Left	1000	6000	-48.18	-40	PASS
N48	30	20	DFT-QPSK	L	Edge 1RB Left	6000	40000	-43.66	-40	PASS
N48	30	20	DFT-QPSK	M	Edge 1RB Left	30	1000	-47.45	-40	PASS
N48	30	20	DFT-QPSK	M	Edge 1RB Left	1000	6000	-47.72	-40	PASS
N48	30	20	DFT-QPSK	M	Edge 1RB Left	6000	40000	-43.70	-40	PASS
N48	30	20	DFT-QPSK	H	Edge 1RB Left	30	1000	-47.34	-40	PASS
N48	30	20	DFT-QPSK	H	Edge 1RB Left	1000	6000	-47.27	-40	PASS
N48	30	20	DFT-QPSK	H	Edge 1RB Left	6000	40000	-43.59	-40	PASS
N48	30	40	DFT-QPSK	L	Edge 1RB Left	30	1000	-47.10	-40	PASS
N48	30	40	DFT-QPSK	L	Edge 1RB Left	1000	6000	-43.83	-40	PASS
N48	30	40	DFT-QPSK	L	Edge 1RB Left	6000	40000	-43.85	-40	PASS
N48	30	40	DFT-QPSK	M	Edge 1RB Left	30	1000	-47.28	-40	PASS
N48	30	40	DFT-QPSK	M	Edge 1RB Left	1000	6000	-42.84	-40	PASS
N48	30	40	DFT-QPSK	M	Edge 1RB Left	6000	40000	-43.50	-40	PASS
N48	30	40	DFT-QPSK	H	Edge 1RB Left	30	1000	-47.43	-40	PASS
N48	30	40	DFT-QPSK	H	Edge 1RB Left	1000	6000	-49.68	-40	PASS
N48	30	40	DFT-QPSK	H	Edge 1RB Left	6000	40000	-43.61	-40	PASS





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Test Report No.: W7L-P23120020RF07



NTVN-N48-PC3-30-10-M-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-10-M-DFT-QPSK-Edge_1RB_Left-Ant1
t11-PASS



NTVN-N48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Left-Ant1
t11-PASS

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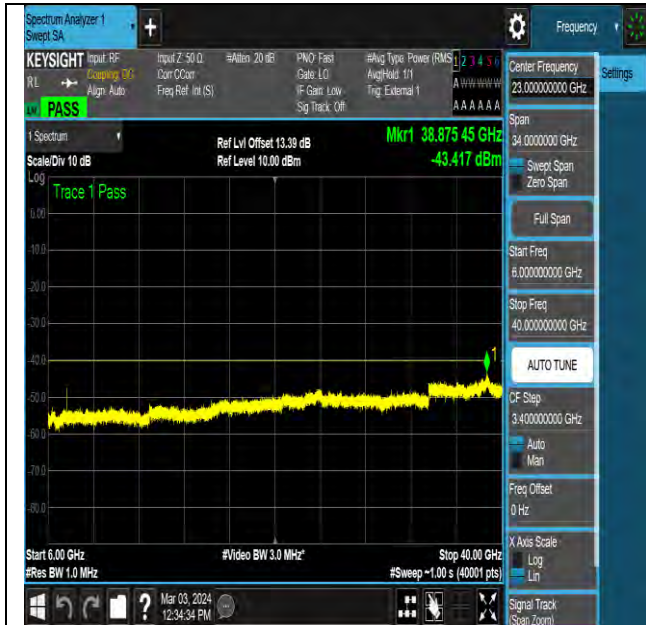
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Test Report No.: W7L-P23120020RF07



NTVN-N48-PC3-30-10-H-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-20-L-DFT-QPSK-Edge_1RB_Left-Ant
11-PASS



NTVN-N48-PC3-30-20-L-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-20-L-DFT-QPSK-Edge_1RB_Left-Ant
11-PASS

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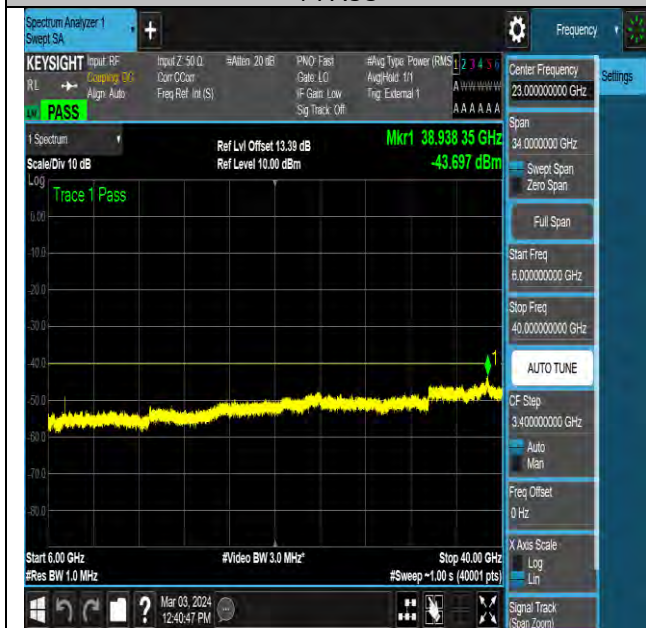
Test Report No.: W7L-P23120020RF07



NTVN-N48-PC3-30-20-M-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-20-M-DFT-QPSK-Edge_1RB_Left-Ant1
t11-PASS



NTVN-N48-PC3-30-20-M-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Left-Ant1
t11-PASS

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Test Report No.: W7L-P23120020RF07



NTVN-N48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-20-H-DFT-QPSK-Edge_1RB_Left-Ant
t11-PASS



NTVN-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTVN-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Left-Ant
11-PASS

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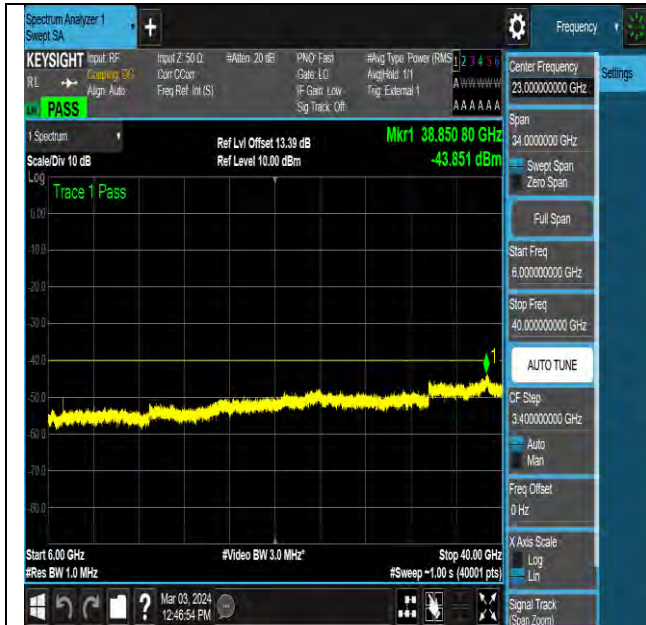
Room B37, Warehouse A5, No.3 Chiwan 4th Road,
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Email: customerservice.sw@bureauveritas.com



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Test Report No.: W7L-P23120020RF07



NTNV-N48-PC3-30-40-L-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Left-An
t11-PASS



NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTNV-N48-PC3-30-40-M-DFT-QPSK-Edge_1RB_Left-An
t11-PASS

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Email: customerservice.sw@bureauveritas.com



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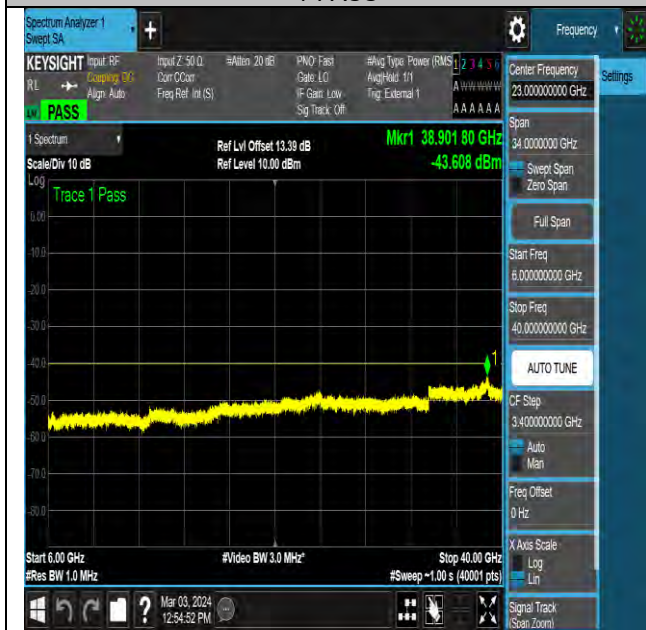
Test Report No.: W7L-P23120020RF07



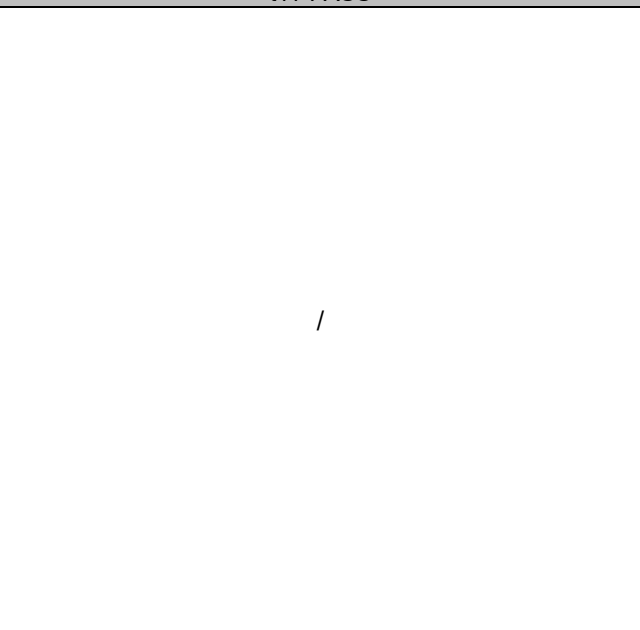
NTNV-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



NTNV-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Left-An
t11-PASS



NTNV-N48-PC3-30-40-H-DFT-QPSK-Edge_1RB_Left-Ant1
1-PASS



/

FREQUENCY STABILITY FOR SA TEST RESULT

Frequency Error VS. Voltage

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation (Hz)	Deviation (ppm)	Verdict
N48	30	20	DFT-QPSK	L	Outer_Full	VL	NT	2.000000	0.000562	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	VN	NT	8.000000	0.002247	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	VH	NT	14.000000	0.003933	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	VL	NT	16.000000	0.004414	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	VN	NT	18.000000	0.004966	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	VH	NT	12.000000	0.003310	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	VL	NT	11.000000	0.002981	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	VN	NT	17.000000	0.004607	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	VH	NT	10.000000	0.002710	PASS

Frequency Error VS. Temperature

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation (Hz)	Deviation (ppm)	Verdict
N48	30	20	DFT-QPSK	L	Outer_Full	NV	-30	7.000000	0.001966	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	-20	17.000000	0.004775	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	-10	10.000000	0.002809	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	0	4.000000	0.001124	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	10	7.000000	0.001966	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	20	19.000000	0.005337	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	30	6.000000	0.001685	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	40	15.000000	0.004213	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	NV	50	6.000000	0.001685	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	-30	6.000000	0.001655	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	-20	8.000000	0.002207	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	-10	2.000000	0.000552	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	0	14.000000	0.003862	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	10	17.000000	0.004690	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	20	11.000000	0.003034	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	30	1.000000	0.000276	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	40	14.000000	0.003862	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	NV	50	4.000000	0.001103	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	-30	13.000000	0.003523	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	-20	6.000000	0.001626	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	-10	16.000000	0.004336	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	0	6.000000	0.001626	PASS



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VERITAS

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N48	30	20	DFT-QPSK	H	Outer_Full	NV	10	19.000000	0.005149	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	20	6.000000	0.001626	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	30	18.000000	0.004878	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	40	2.000000	0.000542	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	NV	50	15.000000	0.004065	PASS

--END--