

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 96
47 CFR FCC Part 2

Report No.: RFBEIH-WTW-P25080111-1 R1

FCC ID: P27-SCP5173P

Product: Moso Canopy 5GOD2

Brand: Sercomm / Moso networks

Model No.: SCP5173P

Received Date: 2025/8/7

Test Date: 2025/8/15 ~ 2025/11/28

Issued Date: 2025/12/1

Applicant: Sercomm Corp.

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FCC Registration / 788550 / TW0003 for Test Location(1)

Designation Number: 281270 / TW0032 for Test Location(2)

Approved by: Jeremy Lin, Date: 2025/12/1
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Prepared by : Pettie Chen / Senior Specialist



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Release Control Record

Issue No.	Description	Date Issued
RFBEIH-WTW-P25080111-1	Original release.	2025/11/21
RFBEIH-WTW-P25080111-1 R1	Page 7, 8: 64QAM emission designators revised Page 7, 8: Note 2 add remark Page 9: Note C, D revised Page 24: Item 6.6.2 Item h revised Page 34 ~ 36: Conducted power revised Page 37, 38: EIRP plot revised Page 58: 26dB bandwidth (256QAM Ant. 3) revised Page 139-142: upper frequency revised	2025/12/1

1 Certificate

Product: Moso Canopy 5GOD2

Brand: Sercomm / Moso networks

Test Model: SCP5173P

Sample Status: Engineering sample

Applicant: Sercomm Corp.

Test Date: 2025/8/15 ~ 2025/11/28

Standard: 47 CFR FCC Part 96
47 CFR FCC Part 2

Measurement procedure: ANSI/TIA/EIA-603-E 2016
ANSI C63.26-2015
KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 940660 D01 Part 96 CBRS Eqpt v03
KDB 662911 D01 Multiple Transmitter Output v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

Standard / Clause	Test Item	Result	Remark
Part 2.1046 Part 96.41(b)	Maximum EIRP	Pass	Meet the requirement of limit.
Part 2.1047 Part 96.41(a)	Modulation Characteristics	Pass	Meet the requirement of limit.
Part 2.1046 Part 96.41(b)	Maximum Power Spectral Density	Pass	Meet the requirement of limit.
Part 96.41(g)	Peak to Average Ratio	Pass	Meet the requirement of limit.
Part 2.1049	Bandwidth	Pass	Meet the requirement of limit.
Part 2.1051 Part 96.41(e)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
Part 2.1053 Part 96.41(e)	Radiated Spurious Emissions below 1GHz	Pass	Minimum passing margin is -13.00 dB at 794.36 MHz
Part 2.1053 Part 96.41(e)	Radiated Spurious Emissions above 1GHz	Pass	Minimum passing margin is -1.30 dB at 7389.96 MHz
Part 2.1055	Frequency Stability	Pass	Meet the requirement of limit.

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

2.1 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:

Parameter	Specification	Uncertainty (±)
Effective Radiated Power and Equivalent Isotropically Radiated Power	-	1.371 dB
Peak to Average Ratio	-	0.920 dB
Bandwidth	-	960 Hz
Conducted Spurious Emissions	-	2.12 dB
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	3 dB
	30 MHz ~ 1 GHz	2.93 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	1.76 dB
	18 GHz ~ 40 GHz	1.77 dB
Frequency Stability	-	0.176 ppm

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Moso Canopy 5GOD2
Brand	Sercomm / Moso networks
Test Model	SCP5173P
Status of EUT	Engineering sample
Power Supply Rating	48Vdc from adapter 40 ~ 57Vdc from power supply
EUT Category	Category B
Modulation Type	QPSK, 64QAM, 256QAM

Note:

1. Simultaneously transmission combination.

Combination	Technology	
1	WLAN (2.4 GHz)	WWAN (5G NR)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

2. EUT Overview

NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

Output Power: Full Power

1CC

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
10 MHz	3555 ~ 3694.98	QPSK	38.194	45.82	8M58G7D
		64QAM	37.411	45.73	8M57D7W
		256QAM	36.728	45.65	8M57D7W
20 MHz	3560.01 ~ 3690	QPSK	78.886	48.97	18M2G7D
		64QAM	77.446	48.89	18M2D7W
		256QAM	76.033	48.81	18M2D7W
40 MHz	3570 ~ 3679.98	QPSK	168.655	52.27	37M8G7D
		64QAM	165.577	52.19	37M8D7W
		256QAM	162.555	52.11	37M8D7W

2CC

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm)	Emission Designator
10M+20M	3555 ~ 3690	QPSK	58.749	47.69	28M3G7D
		64QAM	57.677	47.61	28M3D7W
		256QAM	56.494	47.52	28M3D7W
20M+10M	3560.01 ~ 3694.98	QPSK	56.234	47.5	28M3G7D
		64QAM	55.208	47.42	28M3D7W
		256QAM	54.200	47.34	28M3D7W
20M+20M	3560.01 ~ 3690	QPSK	78.163	48.93	38M1G7D
		64QAM	76.736	48.85	38M1D7W
		256QAM	75.336	48.77	38M1D7W

*2CC mode supports contiguous configuration only.

Output Power: dBm/10 MHz

1CC

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm/10MHz)	Emission Designator
10 MHz	3555 ~ 3694.98	QPSK	38.194	45.82	8M58G7D
		64QAM	37.411	45.73	8M57D7W
		256QAM	36.728	45.65	8M57D7W
20 MHz	3560.01 ~ 3690	QPSK	43.451	46.38	18M2G7D
		64QAM	42.658	46.3	18M2D7W
		256QAM	41.783	46.21	18M2D7W
40 MHz	3570 ~ 3679.98	QPSK	48.753	46.88	37M8G7D
		64QAM	47.863	46.8	37M8D7W
		256QAM	46.989	46.72	37M8D7W

2CC

Bandwidth	TX Frequency Range (MHz)	Modulation	Max. EIRP (W)	Max. EIRP (dBm/10MHz)	Emission Designator
10M+20M	3555 ~ 3690	QPSK	40.738	46.1	28M3G7D
		64QAM	39.994	46.02	28M3D7W
		256QAM	39.264	45.94	28M3D7W
20M+10M	3560.01 ~ 3694.98	QPSK	38.994	45.91	28M3G7D
		64QAM	38.282	45.83	28M3D7W
		256QAM	37.670	45.76	28M3D7W
20M+20M	3560.01 ~ 3690	QPSK	40.738	46.1	38M1G7D
		64QAM	39.994	46.02	38M1D7W
		256QAM	39.264	45.94	38M1D7W

*2CC mode supports contiguous configuration only.

- For detailed information about each WWAN bands frequency range, bandwidth mode of the product, please refer to section 3.3 of the report.
- The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Type	Patch				
Connector Type	NEX 10 Female				
Band	Freq. Range (MHz)	Peak Gain without cable loss (dBi)			
		Ant. 0	Ant. 1	Ant. 2	Ant. 3
NR n48	3300	11.52	11.48	11.53	11.66
	3500	11.89	11.85	11.94	11.95
	3800	12.55	12.36	12.25	12.54

Note:

- Correlated Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2/2] = 15.45\text{dBi}$
 - This device operates with Multiple Antennas Using Multiple-input, Multiple-output (MIMO) Technology for correlated Transmission.
 - This device has four antennas: Antennas 0 and 2 are +45° polarized, and Antennas 1 and 3 are -45° polarized. The two groups of same-polarization antennas are orthogonal to each other.
 - According to the regulation KDB 662911, the correlated gain for Ant 0 & 2 and Ant 1 & 3 can be calculated respectively. Then select the maximum value between them as directional gain
 - The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
- * The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 2. There are two pre-test modes: EUT+Adapter and EUT+DC. Pre-scan these ways and find the worst case as a representative test condition. 3. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. Y-axis/ Z-axis Worst Condition: Z-axis 2. EUT+Adapter and EUT+DC Worst Condition: EUT+Adapter

3.3.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

Test Item	Tx/Rx condition	Tested Channel	Channel Bandwidth	Modulation
Maximum EIRP	1CC	637000(3555.00 MHz) 641666(3624.99 MHz) 646332(3694.98 MHz)	10 MHz	QPSK / 64QAM / 256QAM
		637334(3560.01 MHz) 641666(3624.99 MHz) 646000(3690.00 MHz)	20 MHz	QPSK / 64QAM / 256QAM
		638000(3570.00 MHz) 641666(3624.99 MHz) 645332(3679.98 MHz)	40 MHz	QPSK / 64QAM / 256QAM
	2CC	637000 (3555 MHz) + 638000 (3570 MHz) 645000 (3675 MHz) + 646000 (3690 MHz)	10 MHz + 20 MHz	QPSK / 64QAM / 256QAM
		637334 (3560.01 MHz) + 638334 (3575.01 MHz) 645332 (3679.98 MHz) + 646332 (3694.98 MHz)	20 MHz + 10 MHz	QPSK / 64QAM / 256QAM
		637334 (3560.01 MHz) + 638668 (3580.02 MHz) 644668 (3670.02 MHz) + 646000 (3690 MHz)	20 MHz + 20 MHz	QPSK / 64QAM / 256QAM
Modulation Characteristics	1CC	641666(3624.99 MHz)	40 MHz	QPSK / 64QAM / 256QAM

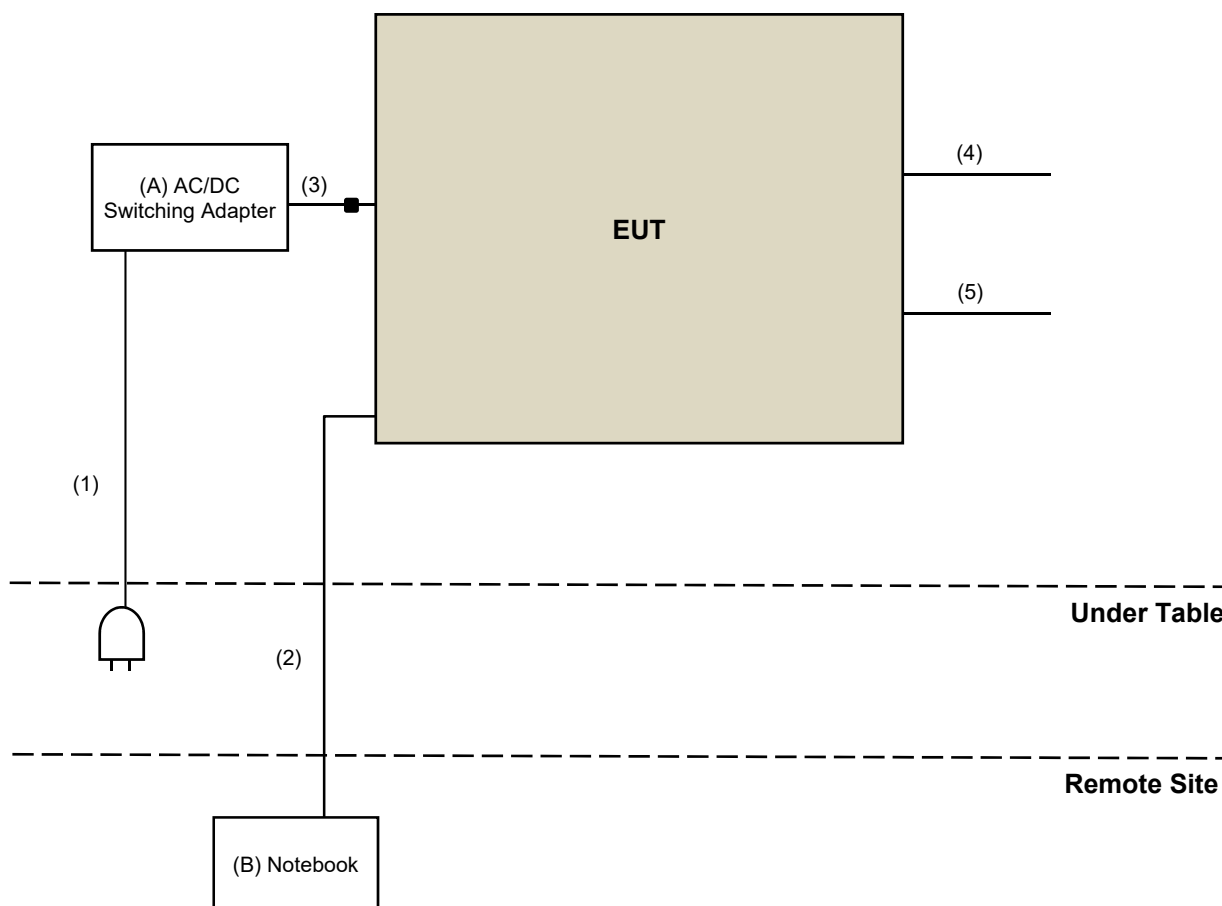
Test Item	Tx/Rx condition	Tested Channel	Channel Bandwidth	Modulation
Maximum Power Spectral Density / Peak to Average Ratio / Bandwidth / Conducted Spurious Emissions	1CC	637000(3555.00 MHz) 641666(3624.99 MHz) 646332(3694.98 MHz)	10 MHz	QPSK / 64QAM / 256QAM
		637334(3560.01 MHz) 641666(3624.99 MHz) 646000(3690.00 MHz)	20 MHz	QPSK / 64QAM / 256QAM
		638000(3570.00 MHz) 641666(3624.99 MHz) 645332(3679.98 MHz)	40 MHz	QPSK / 64QAM / 256QAM
	2CC	637000 (3555 MHz) + 638000 (3570 MHz) 645000 (3675 MHz) + 646000 (3690 MHz)	10 MHz + 20 MHz	QPSK / 64QAM / 256QAM
		637334 (3560.01 MHz) + 638334 (3575.01 MHz) 645332 (3679.98 MHz) + 646332 (3694.98 MHz)	20 MHz + 10 MHz	QPSK / 64QAM / 256QAM
		637334 (3560.01 MHz) + 638668 (3580.02 MHz) 644668 (3670.02 MHz) + 646000 (3690 MHz)	20 MHz + 20 MHz	QPSK / 64QAM / 256QAM
Radiated Spurious Emissions below 1GHz	1CC	645332(3679.98 MHz)	40 MHz	QPSK
Radiated Spurious Emissions above 1GHz	1CC	637000(3555.00 MHz) 641666(3624.99 MHz) 646332(3694.98 MHz)	10 MHz	QPSK
		637334(3560.01 MHz) 641666(3624.99 MHz) 646000(3690.00 MHz)	20 MHz	QPSK
		638000(3570.00 MHz) 641666(3624.99 MHz) 645332(3679.98 MHz)	40 MHz	QPSK
	2CC	637000 (3555 MHz) + 638000 (3570 MHz) 645000 (3675 MHz) + 646000 (3690 MHz)	10 MHz + 20 MHz	QPSK
		637334 (3560.01 MHz) + 638334 (3575.01 MHz) 645332 (3679.98 MHz) + 646332 (3694.98 MHz)	20 MHz + 10 MHz	QPSK
		637334 (3560.01 MHz) + 638668 (3580.02 MHz) 644668 (3670.02 MHz) + 646000 (3690 MHz)	20 MHz + 20 MHz	QPSK

Test Item	Tx/Rx condition	Tested Channel	Channel Bandwidth	Modulation
Frequency Stability	1CC	637000(3555.00 MHz) 641666(3624.99 MHz) 646332(3694.98 MHz)	10 MHz	QPSK
		637334(3560.01 MHz) 641666(3624.99 MHz) 646000(3690.00 MHz)	20 MHz	QPSK
		638000(3570.00 MHz) 641666(3624.99 MHz) 645332(3679.98 MHz)	40 MHz	QPSK
	2CC	637000 (3555 MHz) + 638000 (3570 MHz) 645000 (3675 MHz) + 646000 (3690 MHz)	10 MHz + 20 MHz	QPSK
		637334 (3560.01 MHz) + 638334 (3575.01 MHz) 645332 (3679.98 MHz) + 646332 (3694.98 MHz)	20 MHz + 10 MHz	QPSK
		637334 (3560.01 MHz) + 638668 (3580.02 MHz) 644668 (3670.02 MHz) + 646000 (3690 MHz)	20 MHz + 20 MHz	QPSK

3.4 Test Program Used and Operation Descriptions

Controlling software QRCT4 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	AC/DC Switching Adapter	MW MEAN WELL	GST360A48	SC40193279	NA	Supplied by applicant
B	Notebook	DELL	Latitude 3400	9GPDW2	NA	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Power Cable	1	1.5	No	0	Provided by Lab
2	RJ-45 Cable	1	10	Yes	0	Provided by Lab
3	DC Cable	1	1	Yes	1	Supplied by applicant
4	Fiber optic cable	1	1	No	0	Provided by Lab
5	USB typeC Cable	1	0.5	No	0	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Maximum EIRP

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030B	MY57140938	2025/3/24	2026/3/23
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
UXM 5G Wireless Test Platform Keysight	E7515B	MY60102115	2025/5/26	2026/5/25

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/8/15 ~ 2025/9/12, 2025/11/28

4.2 Modulation Characteristics

Refer to section 4.1 to get the tested date and information of the instruments.

4.3 Maximum Power Spectral Density

Refer to section 4.1 to get the tested date and information of the instruments.

4.4 Peak to Average Ratio

Refer to section 4.1 to get the tested date and information of the instruments.

4.5 Bandwidth

Refer to section 4.1 to get the tested date and information of the instruments.

4.6 Conducted Spurious Emissions

Refer to section 4.1 to get the tested date and information of the instruments.

4.7 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1213	2024/10/14	2025/10/13
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2025/9/1	2026/8/31
MXE EMI Receiver Keysight	N9038B	MY60180019	2025/1/15	2026/1/14
Preamplifier EMCI	EMC330N	980782	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMCCFD400-NM-NM-500	201233	2025/1/14	2026/1/13
	EMCCFD400-NM-NM-3000	201235	2025/1/14	2026/1/13
	EMCCFD400-NM-NM-9000	201236(with PAD)	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2025/9/12

4.8 Radiated Spurious Emissions above 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFT-151SS-0.5T	N/A	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna RFSPIN	DRH18-E	210103A18E	2024/11/10	2025/11/9
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2024/11/10	2025/11/9
MXE EMI Receiver Keysight	N9038B	MY60180019	2025/1/15	2026/1/14
Preamplifier EMCI	EMC118A45SE	980808	2024/12/26	2025/12/25
	EMC184045SE	980788	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2025/1/14	2026/1/13
	EMC101G-KM-KM-3000	201258	2025/1/14	2026/1/13
	EMC101G-KM-KM-5000	201261	2025/1/14	2026/1/13
	EMC104-SM-SM-1000	210102	2025/1/14	2026/1/13
	EMC104-SM-SM-3000	201231	2025/1/14	2026/1/13
	EMC104-SM-SM-9000	201243	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MF-7802BS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208674	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 8.
2. Tested Date: 2025/9/10

4.9 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
3-channel DC power supply OWON	ODP3033	ODP30332128138	N/A	N/A
Digital Multimeter Fluke	8050A	4660081	2025/6/6	2026/6/5
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
PXA Signal Analyzer Keysight	N9030B	MY57140938	2025/3/24	2026/3/23
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	MHU-225AU	920842	2025/6/25	2026/6/24
UXM 5G Wireless Test Platform Keysight	E7515B	MY60102115	2025/5/26	2026/5/25

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/7/15

5 Limits of Test Items

5.1 Maximum EIRP

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

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

5.2 Modulation Characteristics

Systems operating in the Citizens Broadband Radio Service must use digital modulation techniques.

A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

5.3 Maximum Power Spectral Density

Device Category	Maximum PSD (dBm/MHz)
End User Device	n/a
Category A CBSD	20
Category B CBSD	37

5.4 Peak to Average Ratio

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.

5.5 Bandwidth

According to FCC 47 CFR part 2.1049, the occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission.

5.6 Conducted Spurious Emissions

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

Power of any emissions outside the Fundamental	Limit
Within 0-10 MHz above the Assigned Channel	-13 dBm/MHz
Within 0-10 MHz below the Assigned Channel	
Greater than 10 MHz above the Assigned Channel	-25 dBm/MHz
Greater than 10 MHz below the Assigned Channel	
Power of any emission below 3530 MHz	-40 dBm/MHz
Power of any emission above 3720 MHz	

5.7 Radiated Spurious Emissions below 1GHz

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

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

5.8 Radiated Spurious Emissions above 1GHz

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

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

5.9 Frequency Stability

For NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz):

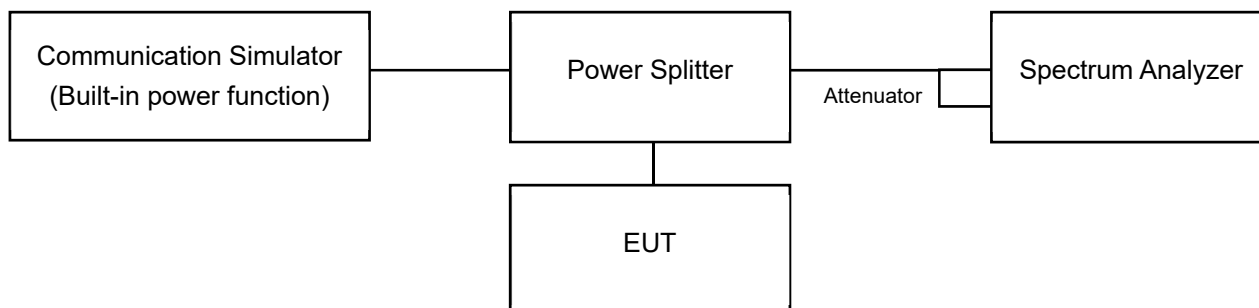
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation (authorized frequency block).

6 Test Arrangements

6.1 Maximum EIRP

6.1.1 Test Setup

Conducted Power Measurement:



6.1.2 Test Procedure

Conducted Power Measurement:

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology and link to spectrum analyzer measurements. Set the EUT to transmit under low, middle and high channel and record the power level shown on spectrum analyzer. Power measurements use detector average (rms).

Measurement method refers to ANSI C63.26 section 5.2.4.4.

- Set span to 2 × to 3 × the OBW.
- Set RBW = 1% to 5% of the OBW.
- Set VBW ≥ 3 × RBW.
- Set number of measurement points in sweep ≥ 2 × span / RBW.
- Set Sweep time = auto-couple.
- Detector = power averaging (rms).
- Set sweep trigger to “free run.”
- Trace average at least 100 traces in power averaging (rms) mode.
- Use the Band/Channel Power function to determine the integrated power per 10 MHz bandwidth and full bandwidth, according to the 47 CFR FCC Part 96 standard.
- If Duty cycle < 98%, Add 10 log (1/duty cycle) to the measured power level to compute the average power during continuous transmission.

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$

$$\text{ERP} = P_{\text{Meas}} + G_T - 2.15$$

where

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

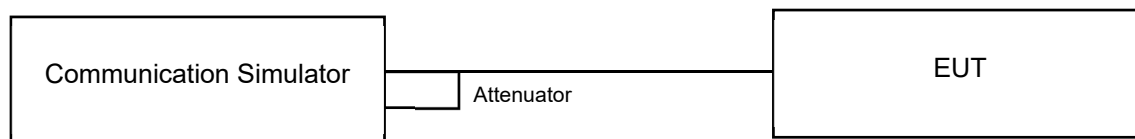
(expressed in the same units as P_{Meas} , e.g., dBm or dBW)

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)

6.2 Modulation Characteristics

6.2.1 Test Setup

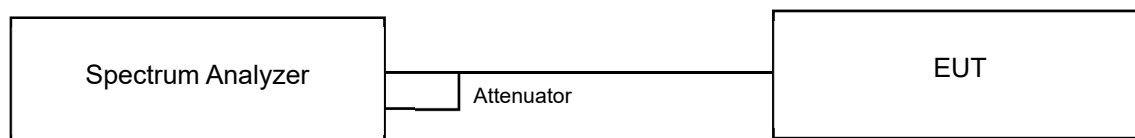


6.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, the frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

6.3 Maximum Power Spectral Density

6.3.1 Test Setup

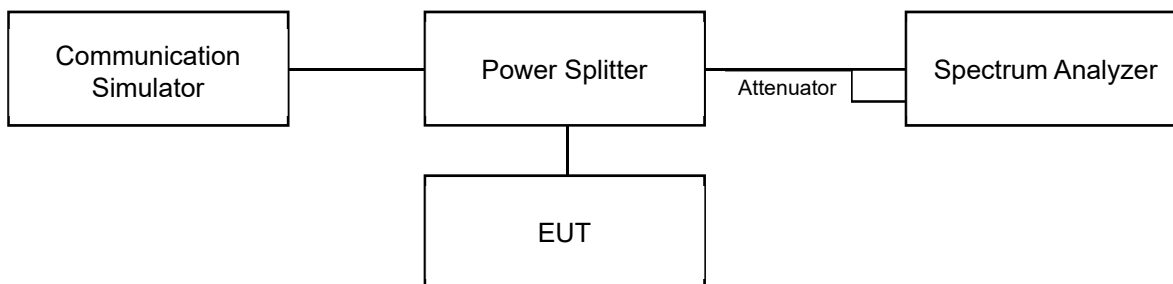


6.3.2 Test Procedure

- a. Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b. Set instrument center frequency to OBW center frequency.
- c. Set span to $2 \times$ to $3 \times$ the OBW.
- d. Set the RBW to the specified reference bandwidth (often 1 MHz).
- e. Set VBW $\geq 3 \times$ RBW.
- f. Detector = RMS (power averaging).
- g. Ensure that the number of measurement points in the sweep $\geq 2 \times$ span/RBW.
- h. Sweep time = auto couple.
- i. Employ trace averaging (RMS) mode over a minimum of 100 traces.
- j. Use the peak marker function to determine the maximum amplitude level within the reference bandwidth (PSD).

6.4 Peak to Average Ratio

6.4.1 Test Setup

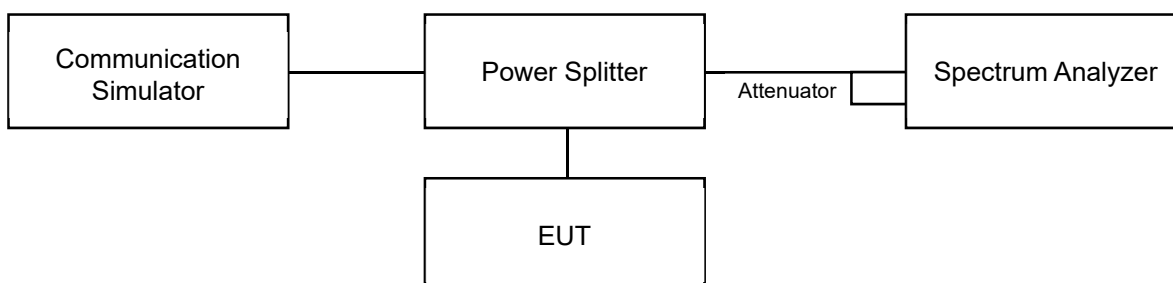


6.4.2 Test Procedure

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

6.5 Bandwidth

6.5.1 Test Setup



6.5.2 Test Procedure

For the 26 dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

- The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- Determine the following reference values: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.

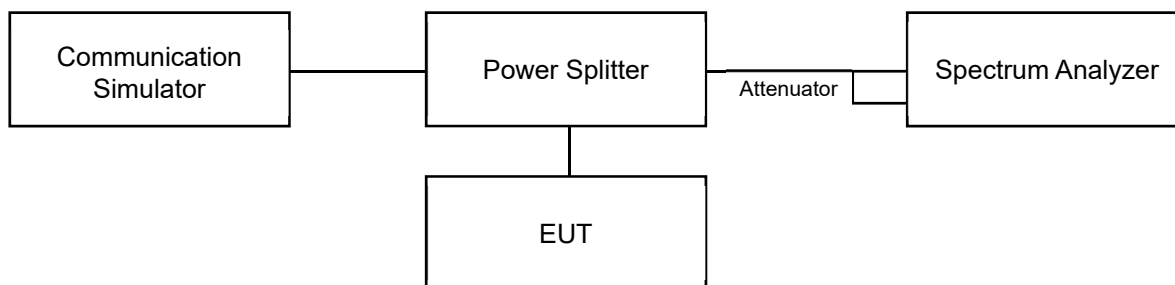
- h. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- i. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

For the occupied bandwidth measurement method, please refer to section 5.4.4 of ANSI C63.26.

- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
- b. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set $\geq 3 \times$ RBW.
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
- e. Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
- f. Determine the reference value by either of the following:
 - g. 1) Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
 - h. 2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- i. Determine the “-X dB amplitude” as equal to (Reference Value - X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
- j. If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).
- k. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB amplitude” determined in step f). If a marker is below this “-X dB amplitude” value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. The spectral envelope can cross the “-X dB amplitude” at multiple points. The lowest or highest frequency shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the “-X dB amplitude.”
- l. The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

6.6 Conducted Spurious Emissions

6.6.1 Test Setup



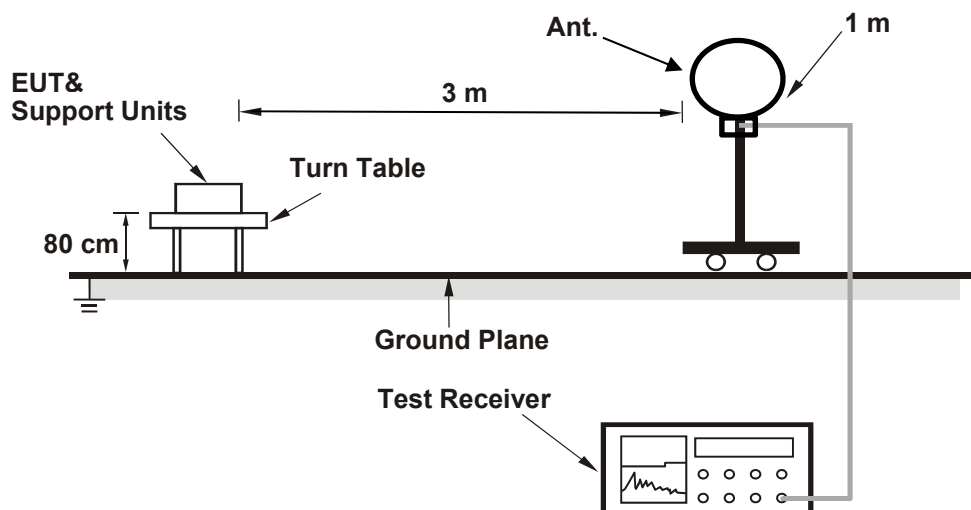
6.6.2 Test Procedure

- Measurement refer to ANSI C63.26 section 5.7.
- All measurements were done at 3 channels: low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. 20 dB attenuation pad is connected with spectrum.
- The fundamental frequency above 1 GHz, the spectrum set RBW = 1 MHz, VBW = 3 MHz, Detector = Average.
- The fundamental frequency below 1 GHz, the spectrum set RBW $\geq$ 100 kHz, VBW $\geq$ 3 x RBW, Detector = Average.
- Measuring frequency band edge, narrow RBW (no less than 1% of the OBW) is used for conducted emission measurement.
- For the emissions measurement method, certain channel BW modes demonstrate compliance by integrating with the smaller RBW allowed by the rule.
For example: Where Reference RBW = 1 MHz and a smaller RBW = 100 kHz is used, worst-case integrated BW power = [Max Measured Value (dBm) with RBW = 100 kHz] + $10 \cdot \log(1000/100)$. To compensate for this integration before comparison to the value, the adjusted reference level offset was increase by 10 dB accordingly.
- The device has MIMO function, so the limit of conducted spurious emissions need to be measurement add $10\log(\text{Numbers}_{\text{ANT}})$ according to FCC KDB 662911 D01 guidance. Therefore, the $10\log(\text{Numbers}_{\text{ANT}})$ value is added to the spectrum Ref. level offset during testing. For example, the band edge and conducted spurious emission plots for the MIMO (4TX) WWAN bands show that a reference level offset of 16.75 dB is used (10.73dB includes attenuation (10dB) and cable loss (0.73dB) + $10 \cdot \log(4)$ to account for MIMO WWAN bands reference level = $10.73 + 6.02 = 16.75$ dB).
- Record the maximum power value test plot.

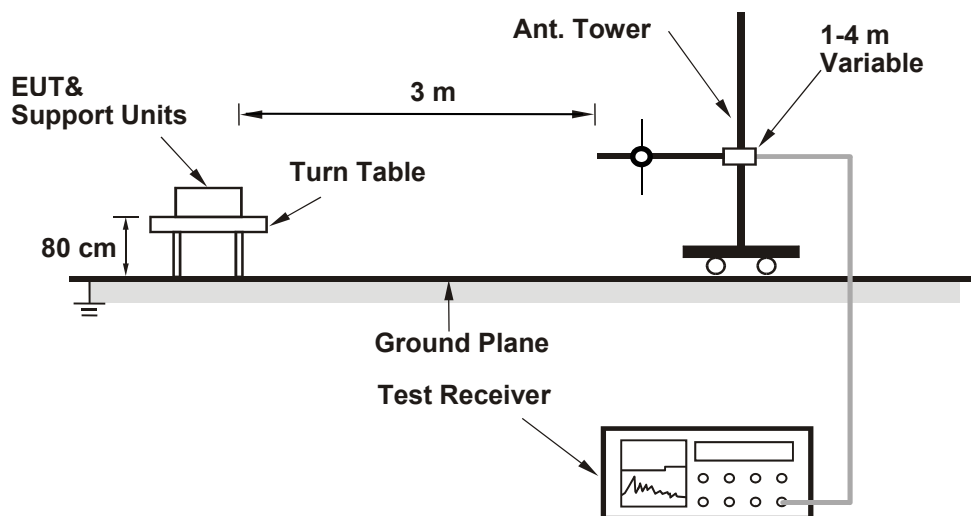
6.7 Radiated Spurious Emissions below 1GHz

6.7.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.7.2 Test Procedure

The EUT is configured to set data modulation and maximum power using WWAN technology.

- a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following ANSI C63.26 section 5.5 and 5.2.7
- e. $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- f. $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

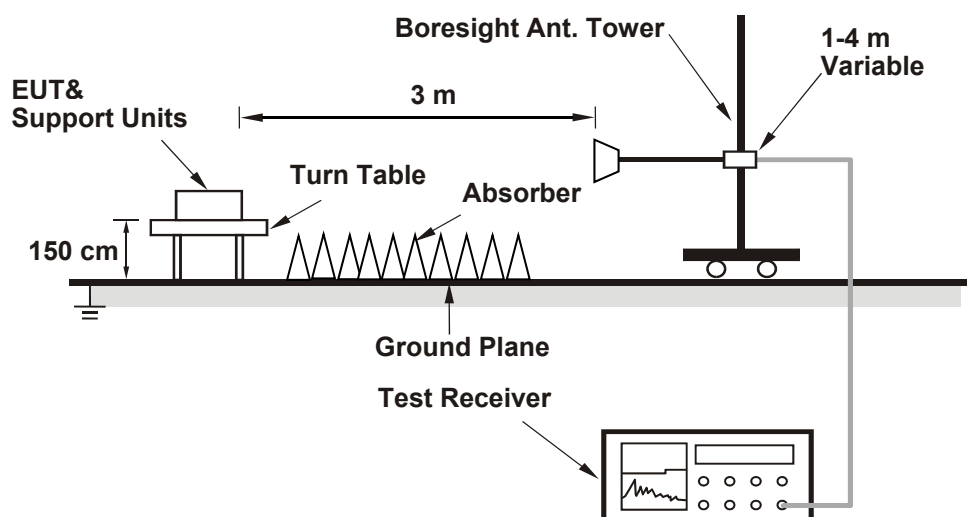
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
2. The amplitude of spurious emissions in the range 9 kHz to 30 MHz which are attenuated more than 20 dB below the permissible value need not be reported.

6.8 Radiated Spurious Emissions above 1GHz

6.8.1 Test Setup

For radiated emission above 1 GHz



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

6.8.2 Test Procedure

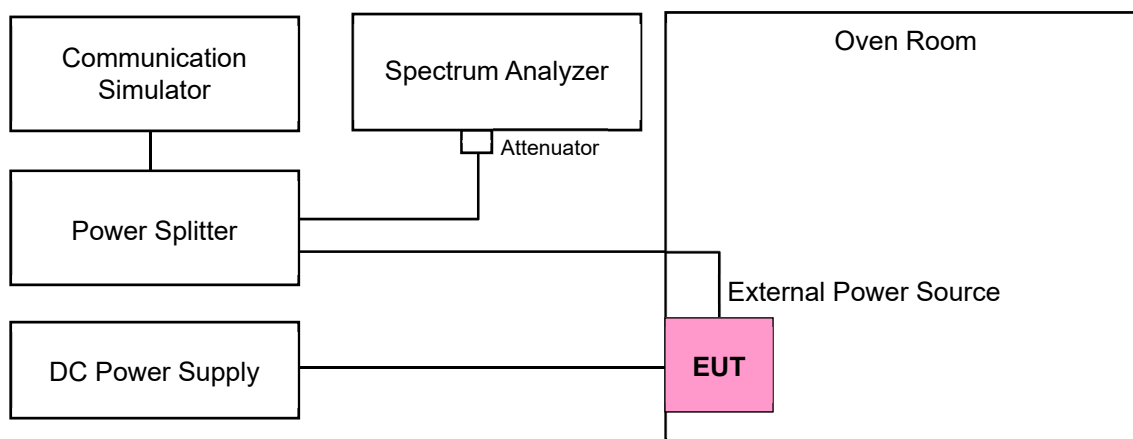
The EUT is configured to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 1.5 m 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 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following ANSI C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

6.9 Frequency Stability

6.9.1 Test Setup



6.9.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- 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.

7 Test Results of Test Item

7.1 Maximum EIRP

Input Power:	3.8 Vdc	Environmental Conditions:	23°C, 62% RH	Tested By:	Charles Hsiao
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7.1.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

1CC: Output Power: Full Power

1CC Full Power_SCS 30kHz									
Bandwidth	Frequency	Setting	Modulation	Ant.0	Ant.1	Ant.2	Ant.3	Total	EIRP
10M	3555	25.5	QPSK	24.46	24.23	24.24	23.95	30.24	45.69
			64QAM	24.38	24.14	24.17	23.86	30.16	45.61
			256QAM	24.30	24.04	24.08	23.77	30.07	45.52
	3624.99	26	QPSK	24.39	24.42	24.44	24.12	30.37	45.82
			64QAM	24.30	24.34	24.37	24.03	30.28	45.73
			256QAM	24.21	24.26	24.29	23.96	30.20	45.65
	3694.98	26	QPSK	24.46	24.38	24.40	24.05	30.35	45.80
			64QAM	24.38	24.29	24.32	23.98	30.27	45.72
			256QAM	24.31	24.22	24.23	23.89	30.19	45.64
20M	3560.01	28.5	QPSK	27.51	27.28	27.47	27.30	33.41	48.86
			64QAM	27.42	27.19	27.39	27.21	33.32	48.77
			256QAM	27.34	27.11	27.30	27.14	33.24	48.69
	3624.99	29	QPSK	27.65	27.43	27.45	27.48	33.52	48.97
			64QAM	27.56	27.34	27.36	27.41	33.44	48.89
			256QAM	27.49	27.25	27.29	27.32	33.36	48.81
	3690	29	QPSK	27.51	27.37	27.48	27.09	33.39	48.84
			64QAM	27.43	27.27	27.40	27.01	33.30	48.75
			256QAM	27.35	27.18	27.32	26.94	33.22	48.67
40M	3570	31.5	QPSK	30.49	30.07	30.26	30.33	36.31	51.76
			64QAM	30.42	29.99	30.19	30.25	36.24	51.69
			256QAM	30.34	29.91	30.10	30.18	36.16	51.61
	3624.99	31.5	QPSK	30.47	30.93	30.17	30.34	36.51	51.96
			64QAM	30.37	30.84	30.10	30.25	36.42	51.87
			256QAM	30.30	30.76	30.02	30.17	36.34	51.79
	3679.98	32	QPSK	31.04	30.81	30.78	30.56	36.82	52.27
			64QAM	30.97	30.73	30.68	30.49	36.74	52.19
			256QAM	30.89	30.65	30.61	30.41	36.66	52.11

Output Power				
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)
QPSK	30.24	36.82	45.69	52.27
64QAM	30.16	36.74	45.61	52.19
256QAM	30.07	36.66	45.52	52.11

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

1CC: Output Power: dBm/10 MHz

1CC Per 10MHz power_SCS 30kHz										
Bandwidth	Frequency	Setting	Modulation	Ant.0	Ant. 1	Ant.2	Ant.3	Total	EIRP	Verdict
10M	3555	25.5	QPSK	24.46	24.23	24.24	23.95	30.24	45.69	PASS
			64QAM	24.38	24.14	24.17	23.86	30.16	45.61	PASS
			256QAM	24.3	24.04	24.08	23.77	30.07	45.52	PASS
	3624.99	26	QPSK	24.39	24.42	24.44	24.12	30.37	45.82	PASS
			64QAM	24.3	24.34	24.37	24.03	30.28	45.73	PASS
			256QAM	24.21	24.26	24.29	23.96	30.20	45.65	PASS
	3694.98	26	QPSK	24.46	24.38	24.4	24.05	30.35	45.80	PASS
			64QAM	24.38	24.29	24.32	23.98	30.27	45.72	PASS
			256QAM	24.31	24.22	24.23	23.89	30.19	45.64	PASS
20M	3560.01	28.5	QPSK	24.89	24.57	24.95	24.66	30.79	46.24	PASS
			64QAM	24.8	24.5	24.87	24.59	30.71	46.16	PASS
			256QAM	24.72	24.43	24.78	24.51	30.63	46.08	PASS
	3624.99	29	QPSK	25.01	24.84	25	24.77	30.93	46.38	PASS
			64QAM	24.93	24.76	24.91	24.7	30.85	46.30	PASS
			256QAM	24.85	24.66	24.83	24.62	30.76	46.21	PASS
	3690	29	QPSK	24.92	24.82	25	24.37	30.80	46.25	PASS
			64QAM	24.84	24.73	24.91	24.28	30.72	46.17	PASS
			256QAM	24.76	24.66	24.82	24.2	30.64	46.09	PASS
40M	3570	31.5	QPSK	25.61	25.3	25.43	25.28	31.43	46.88	PASS
			64QAM	25.53	25.22	25.36	25.18	31.35	46.80	PASS
			256QAM	25.45	25.15	25.27	25.11	31.27	46.72	PASS
	3624.99	31.5	QPSK	24.49	25.21	24.73	24.37	30.73	46.18	PASS
			64QAM	24.41	25.12	24.65	24.28	30.65	46.10	PASS
			256QAM	24.34	25.05	24.58	24.19	30.57	46.02	PASS
	3679.98	32	QPSK	24.27	24.96	24.49	24.1	30.49	45.94	PASS
			64QAM	24.2	24.86	24.42	24.03	30.41	45.86	PASS
			256QAM	24.12	24.79	24.35	23.96	30.34	45.79	PASS

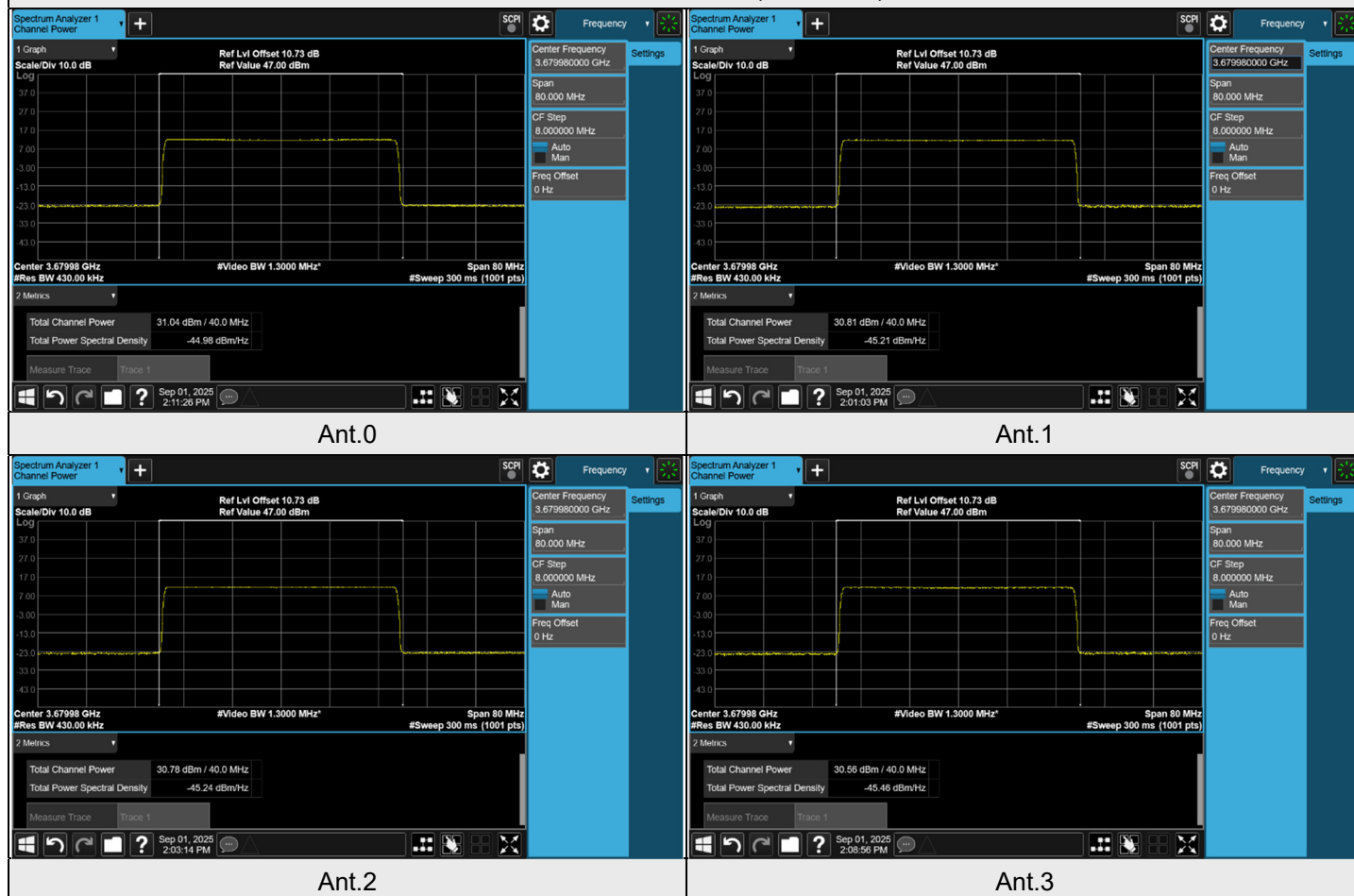
Output Power					
Modulation	Minimum Cond. Power (dBm/10MHz)	Maximum Cond. Power (dBm/10MHz)	Minimum EIRP (dBm/10MHz)	Maximum EIRP (dBm/10MHz)	EIRP Limit (dBm)
QPSK	30.24	31.43	45.69	46.88	47
64QAM	30.16	31.35	45.61	46.80	47
256QAM	30.07	31.27	45.52	46.72	47

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

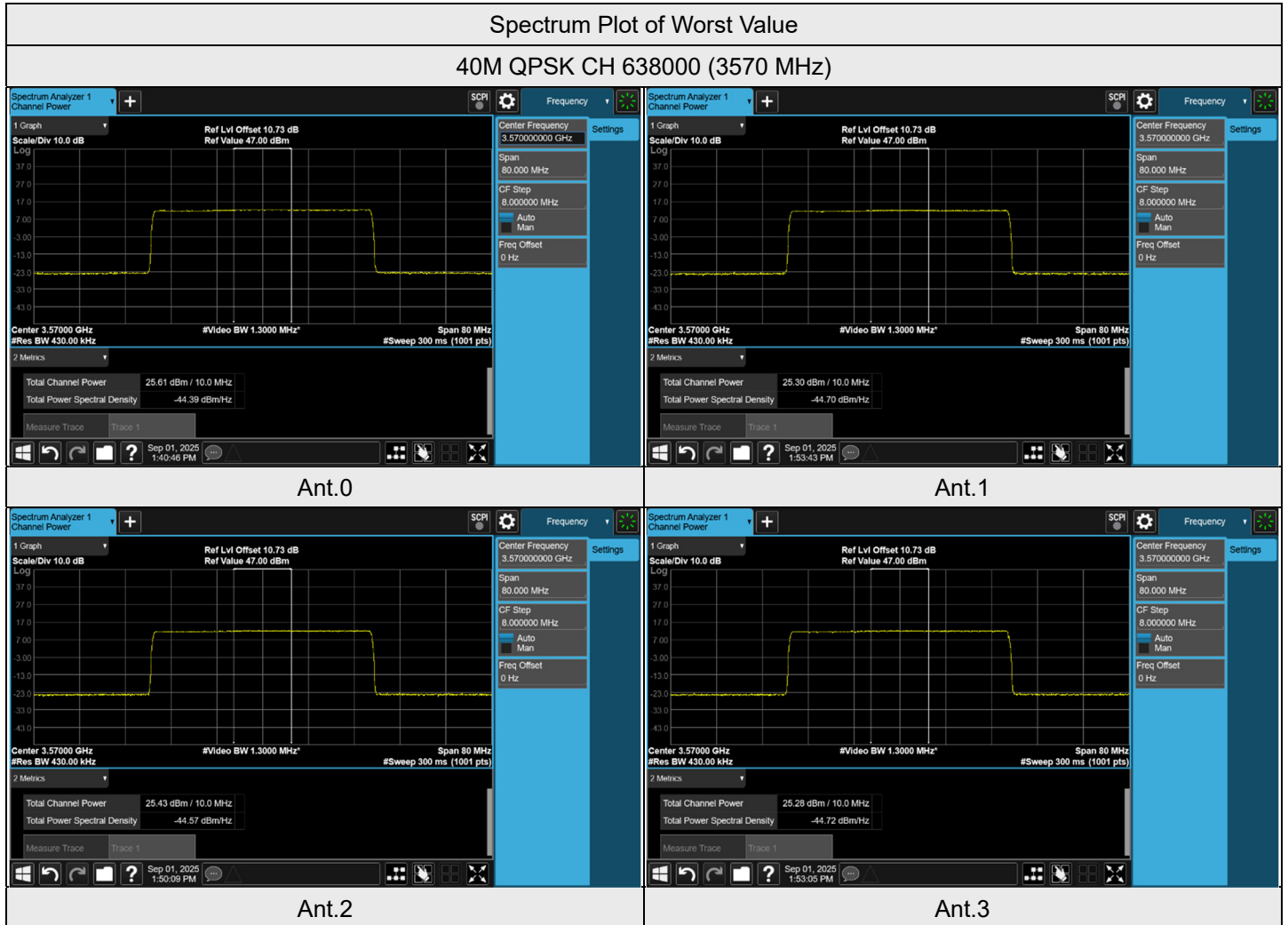
1CC: Output Power: Full Power

Spectrum Plot of Worst Value

40M QPSK CH 638000 (3570 MHz)



1CC: Output Power: dBm/10 MHz



2CC: Output Power: Full Power

2CC Full power_SCS 30kHz											
Bandwidth	Frequency	Setting	Modulation	Carrier	Ant.0	Ant.1	Ant.2	Ant.3	Total	EIRP	Verdict
10M+20M	3555+3570	27	QPSK	CC0	21.7	20.84	21.15	20.81	32.24	47.69	PASS
				CC1	24.69	24.54	24.77	24.39			
			64QAM	CC0	21.61	20.77	21.06	20.72	32.16	47.61	PASS
				CC1	24.61	24.46	24.7	24.32			
			256QAM	CC0	21.52	20.69	20.97	20.63	32.07	47.52	PASS
				CC1	24.52	24.37	24.61	24.24			
	3675+3690	27.5	QPSK	CC0	21.19	20.92	21.11	21.01	32.04	47.49	PASS
				CC1	24.55	24.43	24.44	23.96			
			64QAM	CC0	21.12	20.83	21.02	20.92	31.96	47.41	PASS
				CC1	24.48	24.36	24.35	23.89			
			256QAM	CC0	21.05	20.74	20.93	20.85	31.88	47.33	PASS
				CC1	24.39	24.27	24.27	23.82			
20M+10M	3560.01+3575.01	26.5	QPSK	CC0	24.56	24.34	24.17	23.82	31.99	47.44	PASS
				CC1	21.42	21.41	20.9	20.81			
			64QAM	CC0	24.47	24.25	24.1	23.75	31.91	47.36	PASS
				CC1	21.34	21.34	20.83	20.72			
			256QAM	CC0	24.42	24.19	24.03	23.65	31.83	47.28	PASS
				CC1	21.25	21.25	20.74	20.64			
	3679.98+3694.98	27.5	QPSK	CC0	24.58	24.35	24.46	24.01	32.05	47.50	PASS
				CC1	21.49	21.17	21.06	20.56			
			64QAM	CC0	24.5	24.26	24.37	23.94	31.97	47.42	PASS
				CC1	21.41	21.09	20.97	20.48			
			256QAM	CC0	24.43	24.17	24.3	23.85	31.89	47.34	PASS
				CC1	21.34	21.02	20.9	20.41			
20M+20M	3560.01+3580.02	28	QPSK	CC0	24.66	24.14	24.37	23.99	33.48	48.93	PASS
				CC1	24.79	24.6	24.5	24.45			
			64QAM	CC0	24.58	24.05	24.28	23.91	33.40	48.85	PASS
				CC1	24.72	24.51	24.43	24.38			
			256QAM	CC0	24.5	23.97	24.21	23.82	33.32	48.77	PASS
				CC1	24.65	24.44	24.34	24.29			
	3670.02+3690	28.5	QPSK	CC0	24.38	24.22	24.28	24.04	33.21	48.66	PASS
				CC1	24.36	24.36	24.33	23.37			
			64QAM	CC0	24.3	24.14	24.21	23.94	33.13	48.58	PASS
				CC1	24.27	24.29	24.25	23.29			
			256QAM	CC0	24.23	24.06	24.14	23.85	33.05	48.50	PASS
				CC1	24.18	24.2	24.16	23.22			

Output Power				
Modulation	Minimum Cond. Power (dBm)	Maximum Cond. Power (dBm)	Minimum EIRP (dBm)	Maximum EIRP (dBm)
QPSK	31.99	33.48	47.44	48.93
64QAM	31.91	33.40	47.36	48.85
256QAM	31.83	33.32	47.28	48.77

Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

2CC: Output Power: dBm/10 MHz

2CC Per 10MHz power_SCS 30kHz											
Bandwidth	Frequency	Setting	Modulation	Carrier	Ant.0	Ant.1	Ant.2	Ant.3	Total	EIRP	Verdict
10M+20M	3555+3570	27	QPSK	CC0	21.7	20.84	21.15	20.81	30.65	46.10	PASS
				CC1	22.16	21.99	22.23	21.81			
			64QAM	CC0	21.61	20.77	21.06	20.72	30.57	46.02	PASS
				CC1	22.09	21.9	22.16	21.73			
			256QAM	CC0	21.52	20.69	20.97	20.63	30.49	45.94	PASS
				CC1	22	21.82	22.09	21.65			
	3675+3690	27.5	QPSK	CC0	21.19	20.92	21.11	21.01	30.46	45.91	PASS
				CC1	21.95	21.88	21.86	21.35			
			64QAM	CC0	21.12	20.83	21.02	20.92	30.37	45.82	PASS
				CC1	21.86	21.79	21.77	21.27			
			256QAM	CC0	21.05	20.74	20.93	20.85	30.29	45.74	PASS
				CC1	21.78	21.7	21.7	21.2			
20M+10M	3560.01+3575.01	26.5	QPSK	CC0	21.87	21.66	21.57	21.16	30.39	45.84	PASS
				CC1	21.42	21.41	20.9	20.81			
			64QAM	CC0	21.79	21.57	21.48	21.09	30.31	45.76	PASS
				CC1	21.34	21.34	20.83	20.72			
			256QAM	CC0	21.72	21.47	21.39	21	30.23	45.68	PASS
				CC1	21.25	21.25	20.74	20.64			
	3679.98+3694.98	27.5	QPSK	CC0	21.92	21.75	21.89	21.42	30.46	45.91	PASS
				CC1	21.49	21.17	21.06	20.56			
			64QAM	CC0	21.85	21.68	21.81	21.35	30.38	45.83	PASS
				CC1	21.41	21.09	20.97	20.48			
			256QAM	CC0	21.76	21.59	21.73	21.28	30.31	45.76	PASS
				CC1	21.34	21.02	20.9	20.41			
20M+20M	3560.01+3580.02	28	QPSK	CC0	21.94	21.46	21.77	21.35	30.43	45.88	PASS
				CC1	21.33	21.21	21.01	21.06			
			64QAM	CC0	21.85	21.39	21.69	21.27	30.35	45.80	PASS
				CC1	21.24	21.13	20.93	20.99			
			256QAM	CC0	21.77	21.32	21.61	21.18	30.27	45.72	PASS
				CC1	21.17	21.06	20.84	20.89			
	3670.02+3690	28.5	QPSK	CC0	21.76	21.6	21.69	21.49	30.65	46.10	PASS
				CC1	21.75	21.78	21.77	21.08			
			64QAM	CC0	21.69	21.51	21.6	21.42	30.57	46.02	PASS
				CC1	21.68	21.71	21.69	21			
			256QAM	CC0	21.6	21.41	21.51	21.34	30.49	45.94	PASS
				CC1	21.6	21.63	21.6	20.91			

Output Power

Modulation	Minimum Cond. Power (dBm/10MHz)	Maximum Cond. Power (dBm/10MHz)	Minimum EIRP (dBm/10MHz)	Maximum EIRP (dBm/10MHz)	EIRP Limit (dBm)
QPSK	30.39	30.65	45.84	46.10	47
64QAM	30.31	30.57	45.76	46.02	47
256QAM	30.23	30.49	45.68	45.94	47

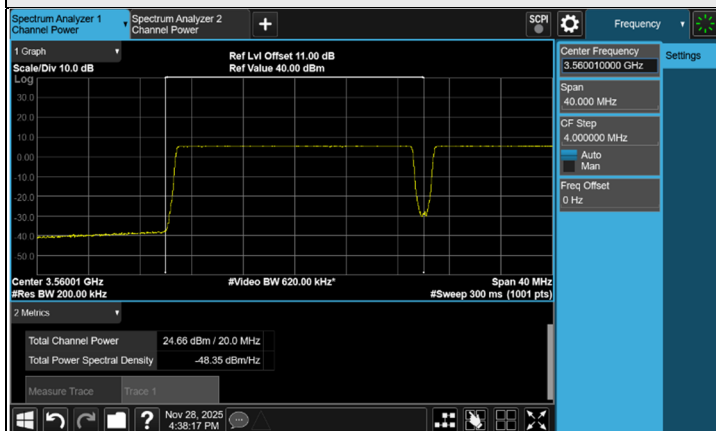
Note: EIRP (dBm) = Cond. Power (dBm) + Antenna Gain (dBi) + Array Gain (if applicable)

2CC: Output Power: Full Power

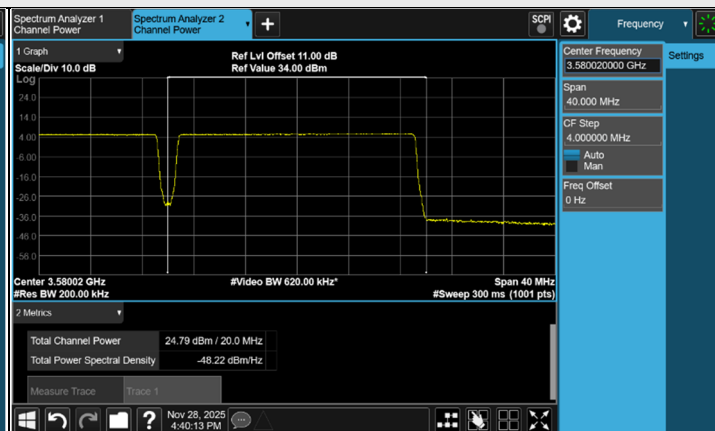
Spectrum Plot of Worst Value

20M+20M QPSK CH 637334 + CH 638668 (3560.01 MHz + 3580.02MHz)

Ant.0

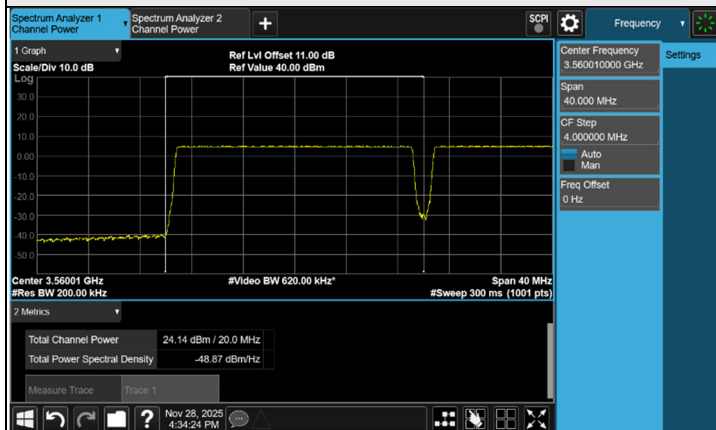


CH 637334 (3560.01 MHz)

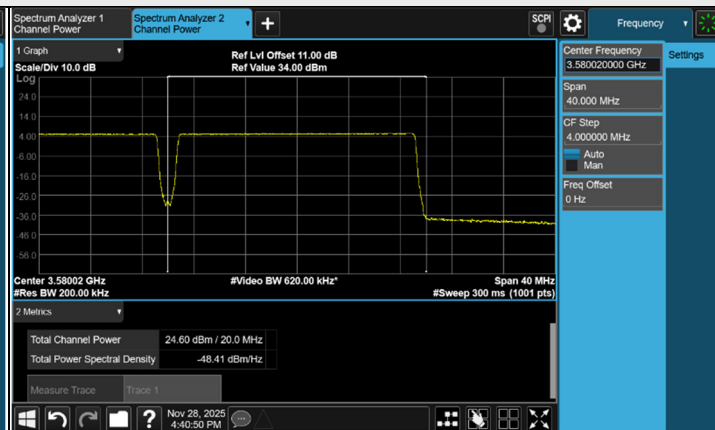


CH 638668 (3580.02MHz)

Ant.1

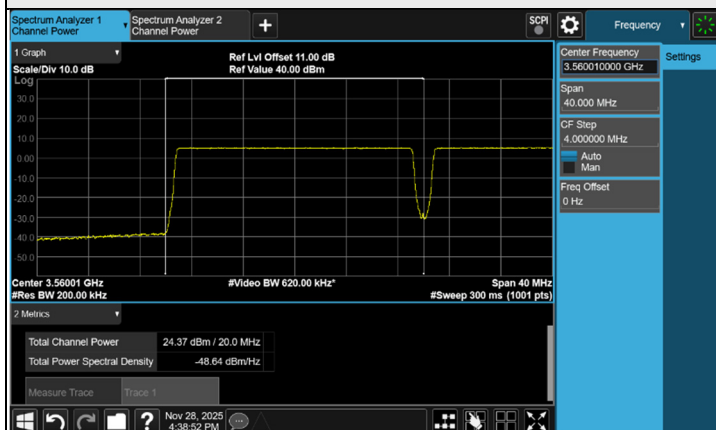


CH 637334 (3560.01 MHz)

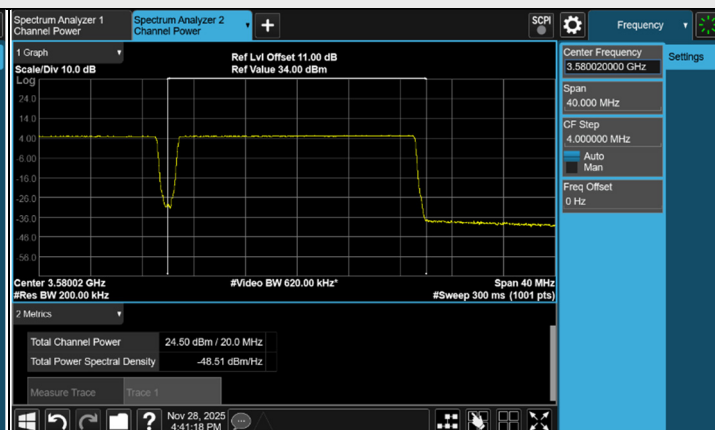


CH 638668 (3580.02MHz)

Ant.2

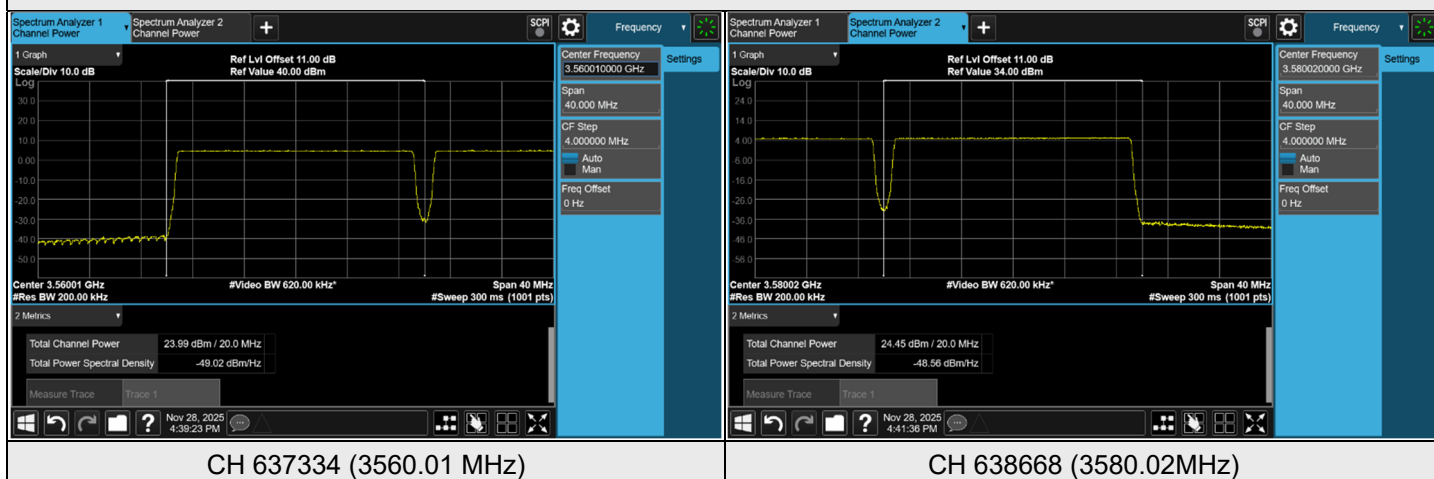


CH 637334 (3560.01 MHz)



CH 638668 (3580.02MHz)

Ant.3

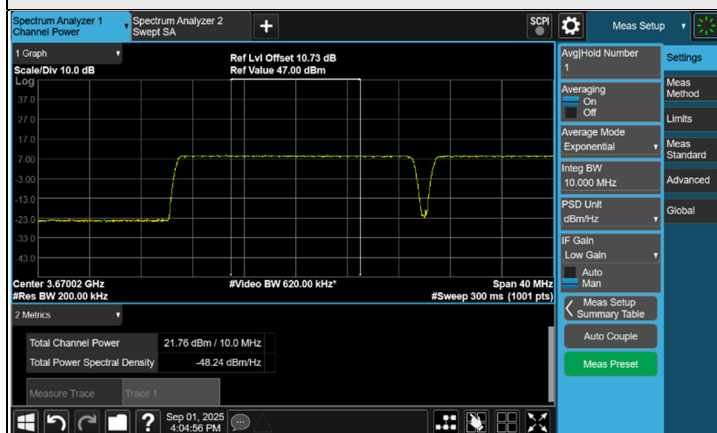


2CC: Output Power: dBm/10 MHz

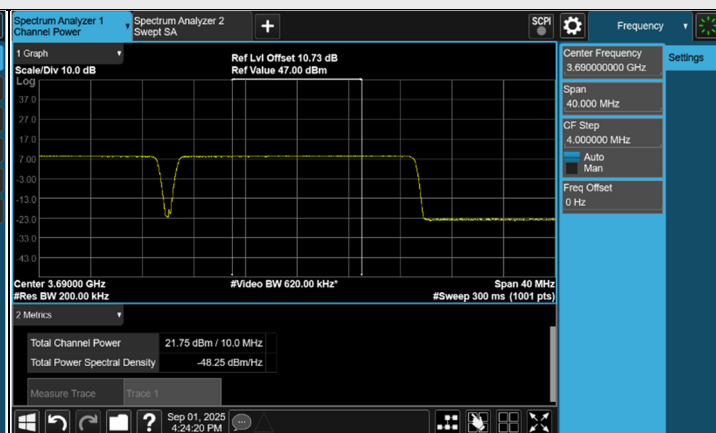
Spectrum Plot of Worst Value

20M+20M QPSK CH 644668 + CH 646000 (3670.02 MHz + 3690 MHz)

Ant.0

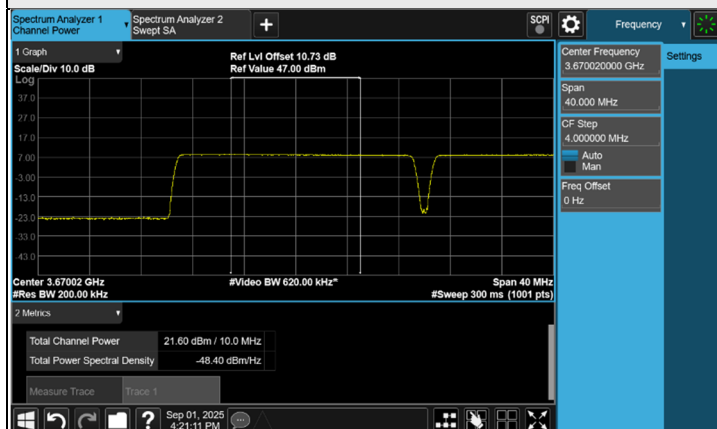


CH 644668 (3670.02 MHz)

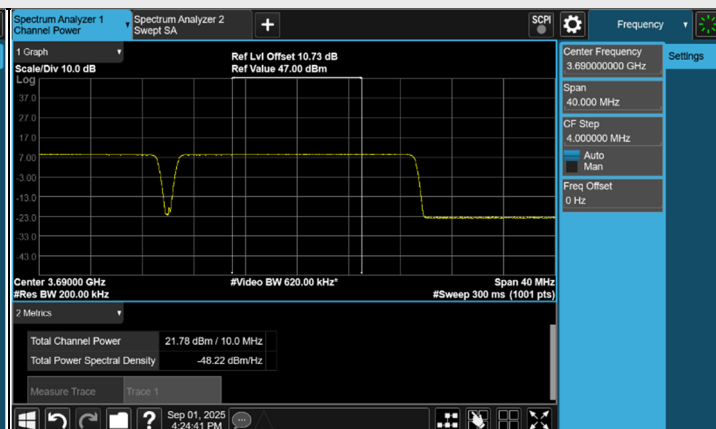


CH 646000 (3690 MHz)

Ant.1

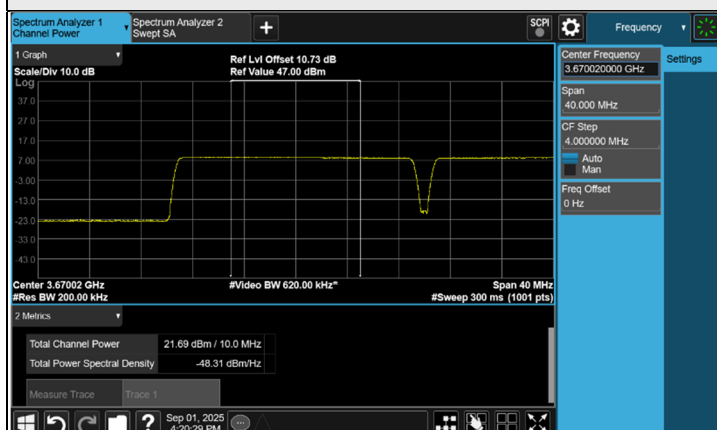


CH 644668 (3670.02 MHz)

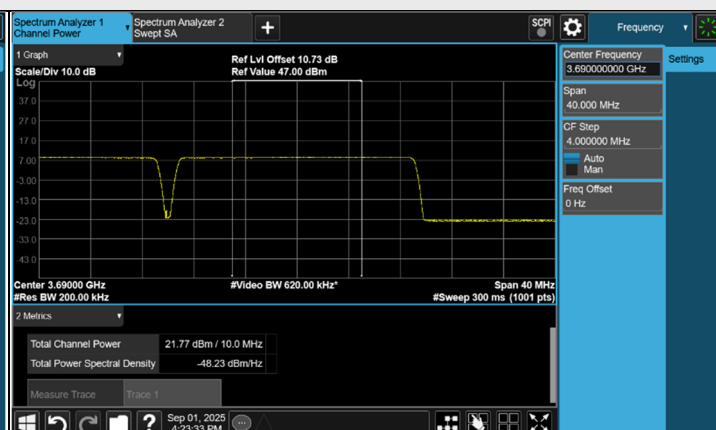


CH 646000 (3690 MHz)

Ant.2

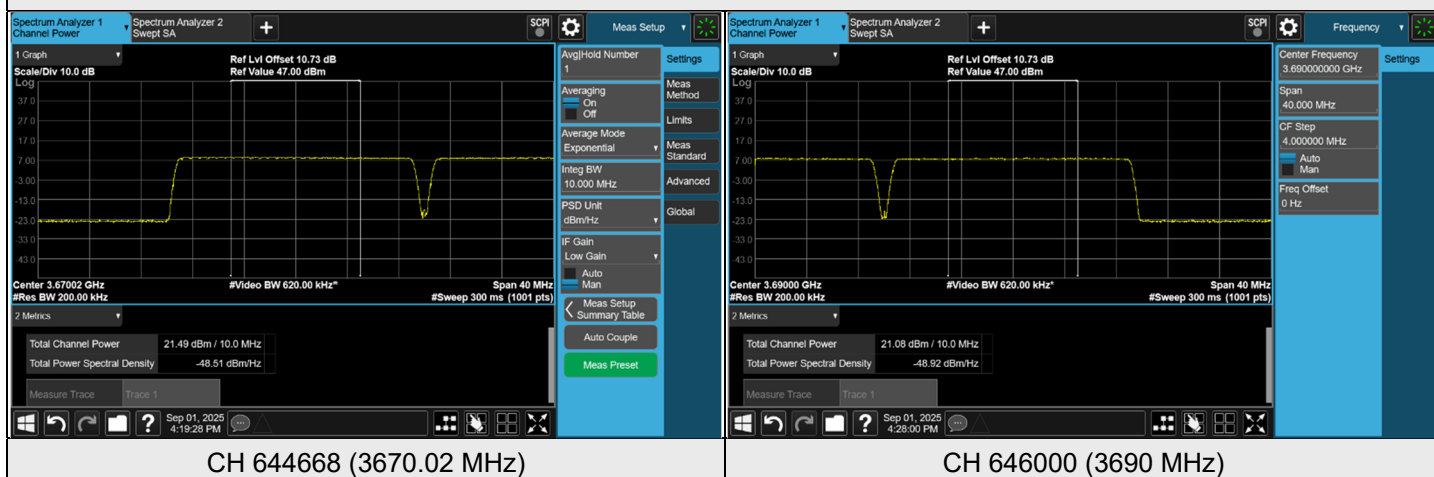


CH 644668 (3670.02 MHz)



CH 646000 (3690 MHz)

Ant.3

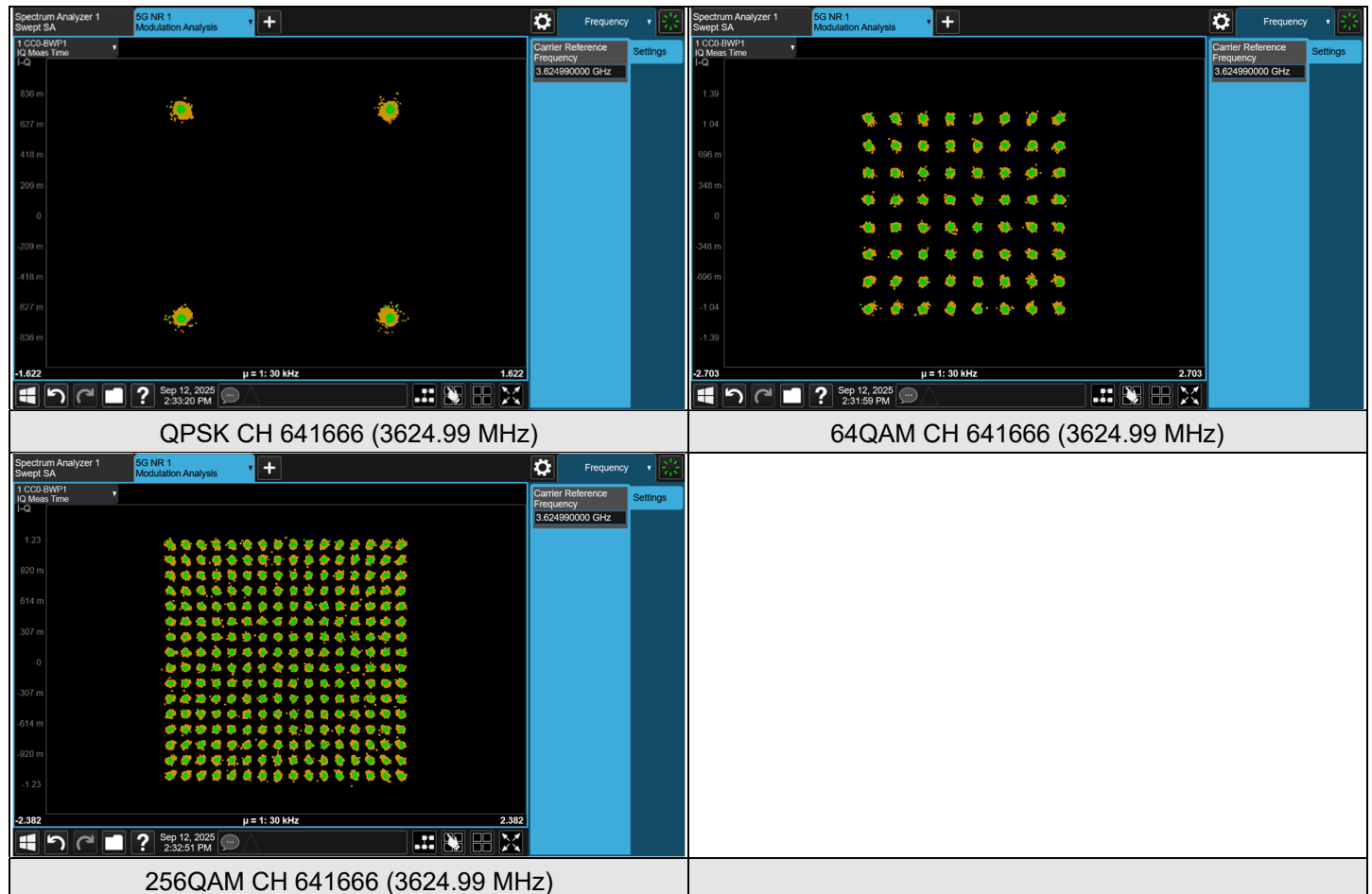


7.2 Modulation Characteristics

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 73% RH	Tested By:	Noah Chang
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7.2.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

1CC, Channel Bandwidth: 40 MHz



7.3 Maximum Power Spectral Density

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	22°C, 73% RH	Tested By:	Noah Chang
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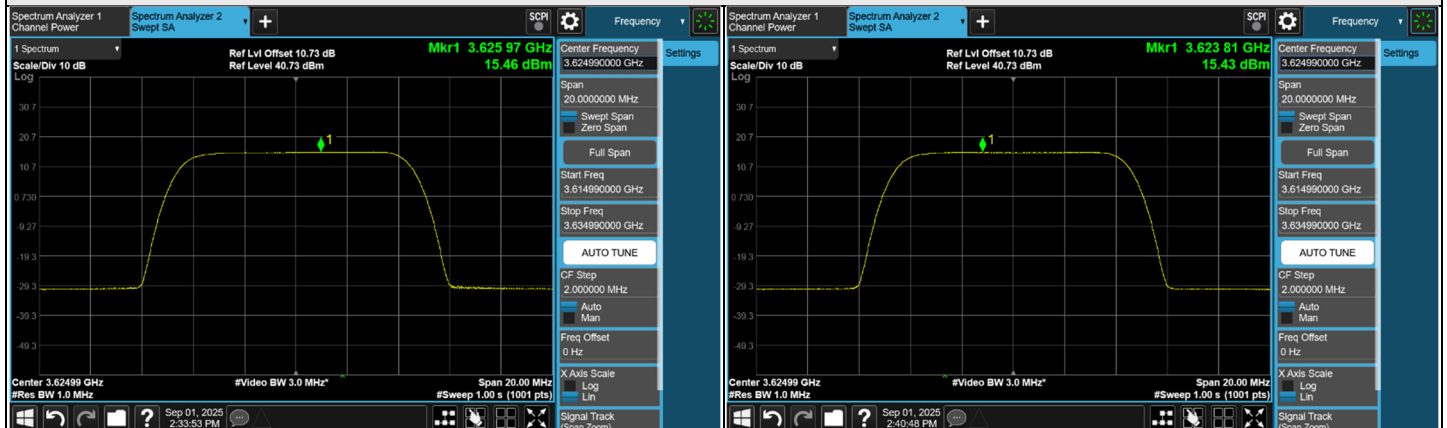
7.3.1 NR n48 SCS 30 kHz (3.55 GHz ~ 3.7 GHz)

1CC

1CC PSD_SCS 30kHz											
Bandwidth	Frequency	Setting	Modulation	Ant.0	Ant.1	Ant.2	Ant.3	Total	EIRP	Limit	Verdict
10M	3555	25.5	QPSK	15.45	15.32	15.21	15.02	21.27	36.72	37	PASS
			64QAM	15.37	15.25	15.12	14.94	21.19	36.64	37	PASS
			256QAM	15.29	15.17	15.05	14.85	21.11	36.56	37	PASS
	3624.99	26	QPSK	15.46	15.43	15.52	15.23	21.43	36.88	37	PASS
			64QAM	15.39	15.35	15.43	15.16	21.35	36.80	37	PASS
			256QAM	15.31	15.28	15.36	15.07	21.28	36.73	37	PASS
	3694.98	26	QPSK	15.56	15.41	15.41	15.14	21.40	36.85	37	PASS
			64QAM	15.48	15.33	15.32	15.06	21.32	36.77	37	PASS
			256QAM	15.39	15.26	15.25	14.97	21.24	36.69	37	PASS
20M	3560.01	28.5	QPSK	15.44	15.21	15.46	15.15	21.34	36.79	37	PASS
			64QAM	15.36	15.14	15.39	15.08	21.27	36.72	37	PASS
			256QAM	15.27	15.05	15.30	15.00	21.18	36.63	37	PASS
	3624.99	29	QPSK	15.65	15.30	15.34	15.16	21.39	36.84	37	PASS
			64QAM	15.58	15.22	15.27	15.09	21.31	36.76	37	PASS
			256QAM	15.50	15.15	15.20	14.99	21.23	36.68	37	PASS
	3690	29	QPSK	15.35	15.15	15.20	14.84	21.16	36.61	37	PASS
			64QAM	15.27	15.06	15.11	14.75	21.07	36.52	37	PASS
			256QAM	15.18	14.99	15.04	14.67	20.99	36.44	37	PASS
40M	3570	31.5	QPSK	15.56	15.07	15.18	15.35	21.31	36.76	37	PASS
			64QAM	15.49	14.98	15.11	15.27	21.24	36.69	37	PASS
			256QAM	15.42	14.89	15.04	15.19	21.16	36.61	37	PASS
	3624.99	31.5	QPSK	15.48	15.70	15.22	15.00	21.38	36.83	37	PASS
			64QAM	15.40	15.62	15.15	14.93	21.30	36.75	37	PASS
			256QAM	15.33	15.52	15.07	14.84	21.22	36.67	37	PASS
	3679.98	32	QPSK	15.58	15.32	15.44	15.26	21.42	36.87	37	PASS
			64QAM	15.50	15.24	15.37	15.19	21.35	36.80	37	PASS
			256QAM	15.42	15.16	15.28	15.10	21.26	36.71	37	PASS

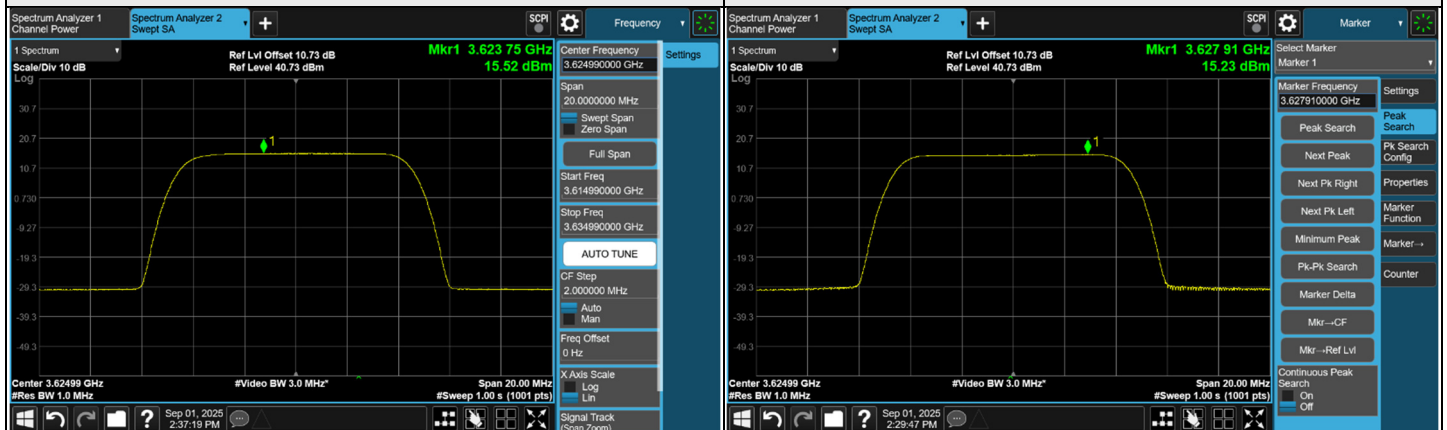
Spectrum Plot of Worst Value

10M QPSK CH 641666 (3624.99 MHz)



Ant.0

Ant.1



Ant.2

Ant.3

2CC

2CC PSD_SCS 30kHz												
Bandwidth	Frequency	Setting	Modulation	Carrier	Ant.0	Ant. 1	Ant.2	Ant.3	Total	EIRP	Limit	Verdict
10M+20M	3555+3570	27	QPSK	CC0	12.26	11.98	12.18	12.06	18.14	36.82	37	PASS
				CC1	12.54	12.48	12.7	12.43	18.56			
			64QAM	CC0	12.17	11.9	12.1	11.97	18.06	36.73	37	PASS
				CC1	12.45	12.4	12.63	12.36	18.48			
			256QAM	CC0	12.07	11.8	12.02	11.89	17.97	36.65	37	PASS
				CC1	12.38	12.31	12.54	12.28	18.40			
	3675+3690	27.5	QPSK	CC0	12.23	12.05	12.24	12.17	18.19	36.66	37	PASS
				CC1	12.35	12.2	12.3	11.85	18.20			
			64QAM	CC0	12.16	11.98	12.16	12.08	18.12	36.58	37	PASS
				CC1	12.26	12.13	12.23	11.76	18.12			
			256QAM	CC0	12.06	11.89	12.07	11.99	18.02	36.49	37	PASS
				CC1	12.19	12.06	12.14	11.68	18.04			
20M+10M	3560.01+3575.01	26.5	QPSK	CC0	12.57	12.26	12.19	11.69	18.21	36.69	37	PASS
				CC1	12.55	12.46	11.97	11.9	18.25			
			64QAM	CC0	12.5	12.16	12.12	11.62	18.13	36.61	37	PASS
				CC1	12.48	12.37	11.88	11.81	18.17			
			256QAM	CC0	12.43	12.09	12.05	11.54	18.06	36.54	37	PASS
				CC1	12.41	12.28	11.81	11.74	18.09			
	3679.98+3694.98	27.5	QPSK	CC0	12.42	12.24	12.29	11.91	18.24	36.71	37	PASS
				CC1	12.52	12.3	12.15	11.93	18.25			
			64QAM	CC0	12.35	12.16	12.22	11.84	18.17	36.63	37	PASS
				CC1	12.44	12.22	12.06	11.85	18.17			
			256QAM	CC0	12.28	12.07	12.13	11.75	18.08	36.55	37	PASS
				CC1	12.37	12.12	11.99	11.77	18.09			
20M+20M	3560.01+3580.02	28	QPSK	CC0	12.54	12.15	12.39	11.96	18.29	36.82	37	PASS
				CC1	12.47	12.38	12.38	12.38	18.42			
			64QAM	CC0	12.47	12.06	12.32	11.87	18.21	36.73	37	PASS
				CC1	12.4	12.29	12.29	12.28	18.34			
			256QAM	CC0	12.39	11.98	12.23	11.77	18.12	36.65	37	PASS
				CC1	12.33	12.21	12.2	12.21	18.26			
	3670.02+3690	28.5	QPSK	CC0	12.25	12.15	12.21	11.92	18.15	36.59	37	PASS
				CC1	12.17	12.16	12.2	11.8	18.11			
			64QAM	CC0	12.17	12.06	12.13	11.83	18.07	36.51	37	PASS
				CC1	12.08	12.09	12.12	11.73	18.03			
			256QAM	CC0	12.08	11.97	12.06	11.76	17.99	36.43	37	PASS
				CC1	11.99	12	12.05	11.64	17.94			