

FCC Test Report (Part 96 – NR B48)

Report No.: RFBEDV-WTW-P25030060-1

FCC ID: VUIPS1400-48

Test Model: PS1400-48I

Series Model: PS1400-48E (refer to item 3.1 for more details)

Received Date: 2025/2/17

Test Date: 2025/6/10 ~ 2025/7/17

Issued Date: 2025/7/28

Applicant: PEGATRON CORPORATION

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FCC Registration / 788550 / TW0003

Designation Number: 281270 / TW0032



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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P25030060-1	Original Release	2025/7/28

1 Certificate of Conformity

Product: 5G Integrated Small Cell

Brand: PEGATRON

Test Model: PS1400-48I

Series Model: PS1400-48E (refer to item 3.1 for more details)

Sample Status: Engineering Sample

Applicant: PEGATRON CORPORATION

Test Date: 2025/6/10 ~ 2025/7/17

Standards: 47 CFR FCC Part 96

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.

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Date: 2025/7/28

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Date: 2025/7/28

Jeremy Lin / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 96			
FCC Clause	Test Item	Result	Remarks
2.1046 96.41(b)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1047 96.41(a)	Modulation Characteristics	Pass	Meet the requirement of limit.
2.1046 96.41(b)	Maximum Power Spectral Density	Pass	Meet the requirement of limit.
96.41(g)	Peak to Average Ration	Pass	Meet the requirement of limit.
2.1049	Emission Bandwidth	Pass	Meet the requirement of limit.
2.1055	Frequency Stability	Pass	Meet the requirement of limit.
2.1051 96.41(e)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 96.41(e)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -0.48dB at 7380.00MHz.

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:

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.00 dB
	30MHz ~ 1000MHz	2.93 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	1.76 dB
	18GHz ~ 40GHz	1.77 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	5G Integrated Small Cell	
Brand	PEGATRON	
Test Model	PS1400-48I	
Series Model	PS1400-48E	
Sample Status	Engineering Sample	
Power Supply Rating	Refer to Note	
Modulation Type	QPSK, 64QAM, 256QAM	
Operating Frequency	NR Band 48 (Channel Bandwidth 10MHz)	3555.00MHz ~ 3694.98MHz
	NR Band 48 (Channel Bandwidth 20MHz)	3560.01MHz ~ 3690.00MHz
	NR Band 48 (Channel Bandwidth 40MHz)	3570.00MHz ~ 3679.98MHz

Note:

1. All models are listed as below.

Model	Difference
PS1400-48I	Internal Antenna
PS1400-48E	External Antenna

2. The EUT uses the following accessories.

Item	Brand	Model	Specification
AC Adapter (Optional)	ASIAN POWER DEVICES	DA-60Z12	AC Input: 100-240V~50-60Hz; 1.5A Max. DC Output: 12.0V; 5.0A; 60.0W DC Output Cable: 1.5m without core
Power Cord (Optional)	WEIHAI HONGLIN ELECTRONIC CO.,LTD	HL-061+HL-052(7A)	Signal Line: 1M
POE (Support unit)	DELTA	ADH-90AR N	AC Input: 100-240V; 50-60 Hz; 2.0 A DC Output: 56.0V1dc, 0.805A, 56.0V2dc, 0.805A, 1.61A(Max), 90.2W
Power Cord (Support unit)	WEIHAI HONGLIN ELECTRONIC CO.,LTD	HL-061+HL-026(7A)	Signal Line: 1M
Wall Mount	PEGATRON	RU_MOUNTING_CELL-	

3. The EUT supports the following configuration.

5GNR	FCC 5G FR1	
	1CC_SCS_30kHz	2CC_SCS_30kHz
Bandwidth (MHz)	10/20/40	10+20 / 20+20

4. The following antennas were provided to the EUT.

Antenna spec – 1 (Internal Antenna)				
	Ant. 1	Ant. 2	Ant. 3	Ant. 4
Brand	PEGATRON	PEGATRON	PEGATRON	PEGATRON
Model	1415-0B0A000	1415-0B0B000	1415-0B0C000	1415-0B0D000
Antenna Type	PIFA	PIFA	PIFA	PIFA
Connector Type	ipex(MHF)	ipex(MHF)	ipex(MHF)	ipex(MHF)
Frequency Range	Antenna Gain (dBi)			
3500MHz	7.27	7.72	6.7	6.94
3600MHz	7.55	7.81	8.21	6.8
3700MHz	6.95	8.72	7.84	7.41

Antenna spec – 2 (External Antenna)				
	Ant. 1	Ant. 2	Ant. 3	Ant. 4
Brand	PEGATRON	PEGATRON	PEGATRON	PEGATRON
Model	1415-0BAQ000	1415-0BAQ000	1415-0BAQ000	1415-0BAQ000
Antenna Type	Dipole	Dipole	Dipole	Dipole
Connector Type	SMA	SMA	SMA	SMA
Frequency Range	Antenna Gain (dBi)			
3550MHz	7.41	7.41	7.41	7.41
3600MHz	7.91	7.91	7.91	7.91
3650MHz	7.66	7.66	7.66	7.66
3700MHz	7.52	7.52	7.52	7.52

Note:

- According to the regulation KDB 662911 , choose highest gain antenna (Antenna spec – 1 internal antenna) for evaluation. Therefore, the maximum directional gain $= 10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 8$ dBi. Antenna spec – 2 (External antenna) directional gain = 7.91 dBi.
- This device operates with Multiple Antennas Using Multiple-input, Multiple-output (MIMO) Technology for uncorrelated Transmission.
- 2CC antenna configuration: Ant.0+1+2+3, to achieve full 2CC bandwidth. Due to the product RF characteristics, each antenna port in 2CC will transmit the same separate carrier.
- 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.

1. EUT Overview

Mode A1

NR Band 48			
Bandwidth	Max. EIRP Power (Per 10M Power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10MHz	688.652 mW (28.38dBm)	663.743 mW (28.22dBm)	662.217 mW (28.21dBm)
Channel Bandwidth 20MHz	758.578 mW (28.80Bm)	736.207 mW (28.67dBm)	732.825 mW (28.65dBm)
Channel Bandwidth 40MHz	763.836 mW (28.83dBm)	734.514 mW (28.66dBm)	732.825 mW (28.65dBm)
Bandwidth	Max. EIRP Power (Full power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10MHz	688.652 mW (28.38dBm)	663.743 mW (28.22dBm)	662.217 mW (28.21dBm)
Channel Bandwidth 20MHz	1355.189 mW (31.32dBm)	1309.182 mW (31.17dBm)	1303.167 mW (31.15dBm)
Channel Bandwidth 40MHz	2818.383 mW (34.50dBm)	2735.269 mW (34.37dBm)	2710.192 mW (34.33dBm)

NR Band 48			
Bandwidth	Emission Designator		
	QPSK	64QAM	256QAM
Channel Bandwidth 10MHz	8M57G7D	8M57D7W	8M57D7W
Channel Bandwidth 20MHz	18M2G7D	18M2D7W	18M2D7W
Channel Bandwidth 40MHz	37M8G7D	37M8D7W	37M8D7W

Mode A3

NR Band 48			
Bandwidth	Max. EIRP Power (Per 10M Power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10+20MHz Contiguous	751.623 mW (28.76dBm)	717.794 mW (28.56dBm)	698.232 mW (28.44dBm)
Channel Bandwidth 10+20MHz Non-Contiguous	763.836 mW (28.83dBm)	732.825 mW (28.65dBm)	709.578 mW (28.51dBm)
Channel Bandwidth 20+20MHz Contiguous	893.305 mW (29.51dBm)	864.968 mW (29.37dBm)	827.942 mW (29.18dBm)
Channel Bandwidth 20+20MHz Non-Contiguous	918.333 mW (29.63dBm)	889.201 mW (29.49dBm)	853.100 mW (29.31dBm)
Bandwidth	Max. EIRP Power (Full power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10+20MHz Contiguous	1056.818 mW (30.24dBm)	1011.579 mW (30.05dBm)	979.490 mW (29.91dBm)
Channel Bandwidth 10+20MHz Non-Contiguous	1073.989 mW (30.31dBm)	1025.652 mW (30.11dBm)	1000.000 mW (30.00dBm)
Channel Bandwidth 20+20MHz Contiguous	1621.810 mW (32.10dBm)	1559.553 mW (31.93dBm)	1517.050 mW (31.81dBm)
Channel Bandwidth 20+20MHz Non-Contiguous	1584.893 mW (32.00dBm)	1517.050 mW (31.81dBm)	1468.926 mW (31.67dBm)

NR Band 48 Contiguous			
Bandwidth	Emission Designator		
	QPSK	64QAM	256QAM
Channel Bandwidth 10MHz+20MHz	28M3G7D	28M3D7W	28M3D7W
Channel Bandwidth 20MHz+20MHz	38M1G7D	38M6D7W	38M1D7W

NR Band 48 Non-Contiguous						
Bandwidth	Emission Designator					
	QPSK		64QAM		256QAM	
	CC0	CC1	CC0	CC1	CC0	CC1
Channel Bandwidth 10MHz+20MHz	8M59G7D	18M2G7D	8M59D7W	18M2D7W	8M59D7W	18M2D7W
Channel Bandwidth 20MHz+20MHz	18M2G7D	18M2G7D	18M2D7W	18M2D7W	18M2D7W	18M2D7W

Mode B1

NR Band 48			
Bandwidth	Max. EIRP Power (Per 10M Power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10MHz	674.528 mW (28.29dBm)	650.130 mW (28.13dBm)	648.634 mW (28.12dBm)
Channel Bandwidth 20MHz	743.019 mW (28.71dBm)	721.107 mW (28.58dBm)	717.794 mW (28.56dBm)
Channel Bandwidth 40MHz	748.170 mW (28.74dBm)	719.449 mW (28.57dBm)	717.794 mW (28.56dBm)
Bandwidth	Max. EIRP Power (Full power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10MHz	674.528 mW (28.29dBm)	650.130 mW (28.13dBm)	648.634 mW (28.12dBm)
Channel Bandwidth 20MHz	1327.394 mW (31.23dBm)	1282.331 mW (31.08dBm)	1276.439 mW (31.06dBm)
Channel Bandwidth 40MHz	2760.578 mW (34.41dBm)	2679.168 mW (34.28dBm)	2654.606 mW (34.24dBm)

Mode B3

NR Band 48			
Bandwidth	Max. EIRP Power (Per 10M Power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10+20MHz Contiguous	736.207 mW (28.67dBm)	703.072 mW (28.47dBm)	683.912 mW (28.35dBm)
Channel Bandwidth 10+20MHz Non-Contiguous	748.170 mW (28.74dBm)	717.794 mW (28.56dBm)	695.024 mW (28.42dBm)
Channel Bandwidth 20+20MHz Contiguous	874.984 mW (29.42dBm)	847.227 mW (29.28dBm)	810.961 mW (29.09dBm)
Channel Bandwidth 20+20MHz Non-Contiguous	899.498 mW (29.54dBm)	870.964 mW (29.40dBm)	835.603 mW (29.22dBm)
Bandwidth	Max. EIRP Power (Full power)		
	QPSK	64QAM	256QAM
Channel Bandwidth 10+20MHz Contiguous	1035.142 mW (30.15dBm)	990.832 mW (29.96dBm)	959.401 mW (29.82dBm)
Channel Bandwidth 10+20MHz Non-Contiguous	1051.962 mW (30.22dBm)	1004.616 mW (30.02dBm)	979.490 mW (29.91dBm)
Channel Bandwidth 20+20MHz Contiguous	1588.547 mW (32.01dBm)	1527.566 mW (31.84dBm)	1485.936 mW (31.72dBm)
Channel Bandwidth 20+20MHz Non-Contiguous	1552.387 mW (31.91dBm)	1485.936 mW (31.72dBm)	1438.799 mW (31.58dBm)

3.2 Test Mode Applicability and Tested Channel Detail

Test results are presented in the report as below.

Test Mode	Test Condition		
A1	EUT with internal antenna	1CC mode	Power from adapter
A2			Power from PoE
A3		2CC mode	Power from adapter
B1	EUT with external antenna	1CC mode	Power from adapter
B2			Power from PoE
B3		2CC mode	Power from adapter

Pre-Scan:	1. For Unwanted Emission (below 1GHz) items: Adapter/PoE. Pre-scan these modes and find the worst case as a representative test condition. 2. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 3. This device was tested under all bandwidths and modulations. The worst case was found in QPSK modulation. Therefore, only EIRP, modulation characteristics, occupied bandwidth and peak to average ratio items had been tested under QPSK, 64QAM and 256QAM mode, the other items were performed under QPSK mode only. 4. For peak to average ratio and radiated spurious emissions, choose the maximum EIRP power worst case for final test.
Worst Case:	1. AC Adapter 2. X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis (Wall Mount)

Following channel(s) was (were) selected for the final test as listed below:

Mode A1

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Output Power	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK / 64QAM / 256QAM
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK / 64QAM / 256QAM
Maximum Power Spectral Density	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK
Modulation Characteristics	638000 to 645332	641666 (3624.99MHz)	40MHz	QPSK / 64QAM / 256QAM
Frequency Stability	637000 to 646332	637000 (3555.00MHz), 646332 (3694.98MHz)	10MHz	QPSK
	637334 to 646000	637334 (3560.01MHz), 646000 (3690.00MHz)	20MHz	QPSK
	638000 to 645332	638000 (3570.00MHz), 645332 (3679.98MHz)	40MHz	QPSK
Occupied Bandwidth	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK / 64QAM / 256QAM
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK / 64QAM / 256QAM
Peak to Average Ratio	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK / 64QAM / 256QAM
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK / 64QAM / 256QAM

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Conducted Emission	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK
Radiated Emission Below 1GHz	638000 to 645332	638000 (3570.00MHz)	40MHz	QPSK
Radiated Emission Above 1GHz	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK

Mode A2

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Radiated Emission Below 1GHz	638000 to 645332	638000 (3570.00MHz)	40MHz	QPSK

Mode A3

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Output Power	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690.00MHz)	20MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690.00MHz)	20MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Power Spectral Density	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
Frequency Stability	637000 to 646000	637000 (3555.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK
	637000 to 646000	637000 (3555.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK
	637334 to 646000	637334 (3560.01MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK
	637334 to 646000	637334 (3560.01MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK
Occupied Bandwidth	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Peak to Average Ratio	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
Conducted Emission	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Radiated Emission Above 1GHz	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690.00MHz)	20MHz+20MHz Contiguous	QPSK
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690.00MHz)	20MHz+20MHz Non-Contiguous	QPSK

Mode B1

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Output Power	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK / 64QAM / 256QAM
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK / 64QAM / 256QAM
Maximum Power Spectral Density	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK
Radiated Emission Below 1GHz	638000 to 645332	638000 (3570.00MHz)	40MHz	QPSK
Radiated Emission Above 1GHz	637000 to 646332	637000 (3555.00MHz), 641666 (3624.99MHz), 646332 (3694.98MHz)	10MHz	QPSK
	637334 to 646000	637334 (3560.01MHz), 641666 (3624.99MHz), 646000 (3690.00MHz)	20MHz	QPSK
	638000 to 645332	638000 (3570.00MHz), 641666 (3624.99MHz), 645332 (3679.98MHz)	40MHz	QPSK

Mode B2

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Radiated Emission Below 1GHz	638000 to 645332	638000 (3570.00MHz)	40MHz	QPSK

Mode B3

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Output Power	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
Maximum Power Spectral Density	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Contiguous	QPSK / 64QAM / 256QAM
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690 .00MHz)	20MHz+20MHz Non-Contiguous	QPSK / 64QAM / 256QAM

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Radiated Emission Above 1GHz	637000 to 646000	637000 (3555.00MHz) + 638000 (3570.00MHz), 641000 (3615.00MHz) + 642000 (3630.00MHz), 645000 (3675.00MHz) + 646000 (3690.00MHz)	10MHz+20MHz Contiguous	QPSK
	637000 to 646000	637000 (3555.00MHz) + 638668 (3580.02MHz), 640668 (3610.02MHz) + 642336 (3635.04MHz), 644332 (3664.98MHz) + 646000 (3690.00MHz)	10MHz+20MHz Non-Contiguous	QPSK
	637334 to 664666	637334 (3560.01MHz) + 638668 (3580.02 MHz), 641000 (3615.00 MHz) + 642334 (3635.01 MHz), 664666 (3669.99 MHz) + 646000 (3690.00MHz)	20MHz+20MHz Contiguous	QPSK
	637334 to 646000	637334 (3560.01MHz) + 639334 (3590.01 MHz), 640668 (3610.02 MHz) + 642668 (3640.02 MHz), 644000 (3660.00 MHz) + 646000 (3690.00MHz)	20MHz+20MHz Non-Contiguous	QPSK

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Maximum Output Power	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Maximum Power Spectral Density	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Modulation Characteristics	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Frequency Stability	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Occupied Bandwidth	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Peak To Average Ratio	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Conducted Emission	25deg. C, 60%RH	120 Vac, 60 Hz	Ian Chang
Radiated Emission	23deg. C, 75%RH	120 Vac, 60 Hz	Rex Wang

3.3 Description of Support Units

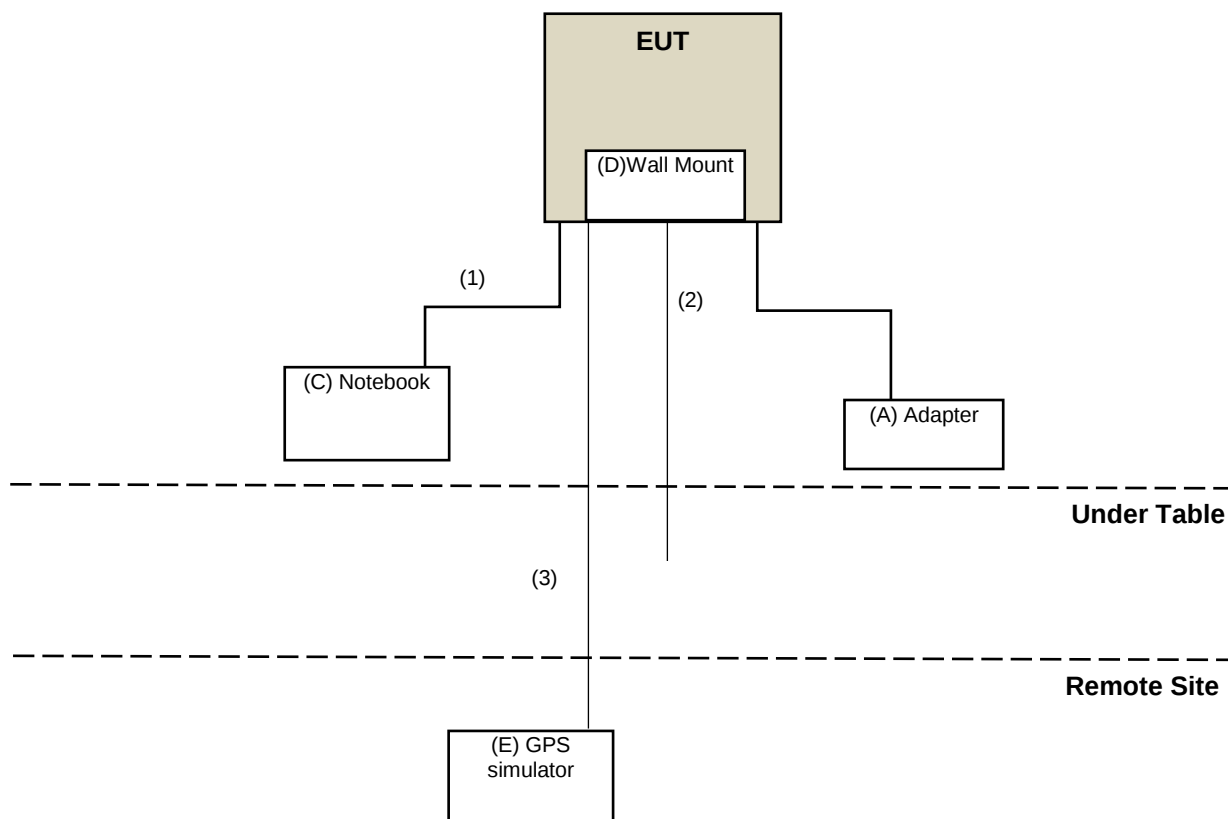
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	GPS Ant	HL tronics (kunshan) co., Ltd	GPS active antenna	N/A	N/A	Supplied by applicant
B.	LAN Load	BV	LP-04	N/A	N/A	Provided by Lab
C.	Notebook	Lenovo	TP00133C	N/A	N/A	Supplied by applicant
D.	Adapter	Mass Power Electronics Inc.	NBS100A120600M2	N/A	N/A	Supplied by applicant
E.	PoE	Delta	ADH-90AR N	N/A	N/A	Supplied by applicant
F.	50 ohm Terminal*4	N/A	N/A	N/A	N/A	Provided by Lab

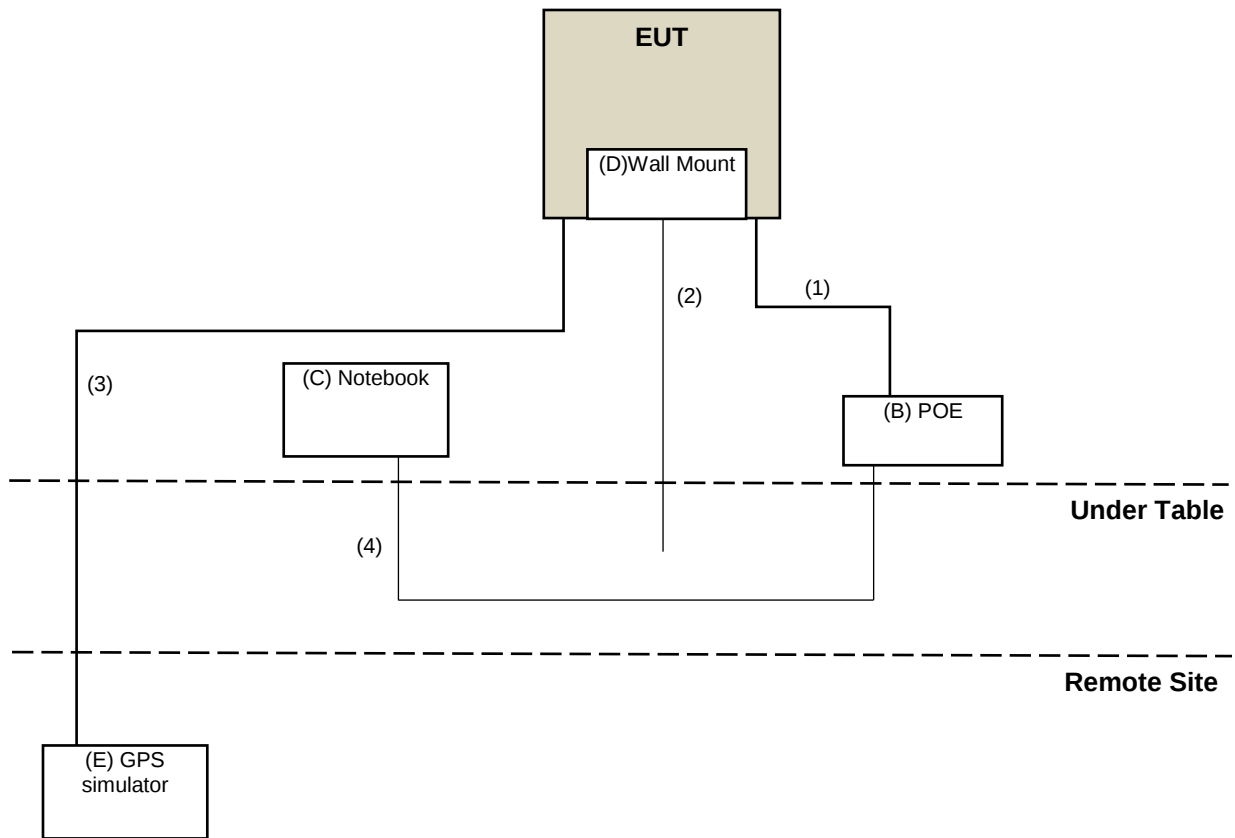
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Console Cable	1	0.25	No	0	Supplied by applicant
2.	RJ 45 Cable	1	1.5	No	0	Provided by Lab
3.	RJ 45 Cable	1	1.5	No	0	Provided by Lab
4.	Fiber Optical Cable	1	3	No	0	Provided by Lab
5.	RJ 45 Cable	1	10	No	0	Provided by Lab

3.3.1 Configuration of System under Test

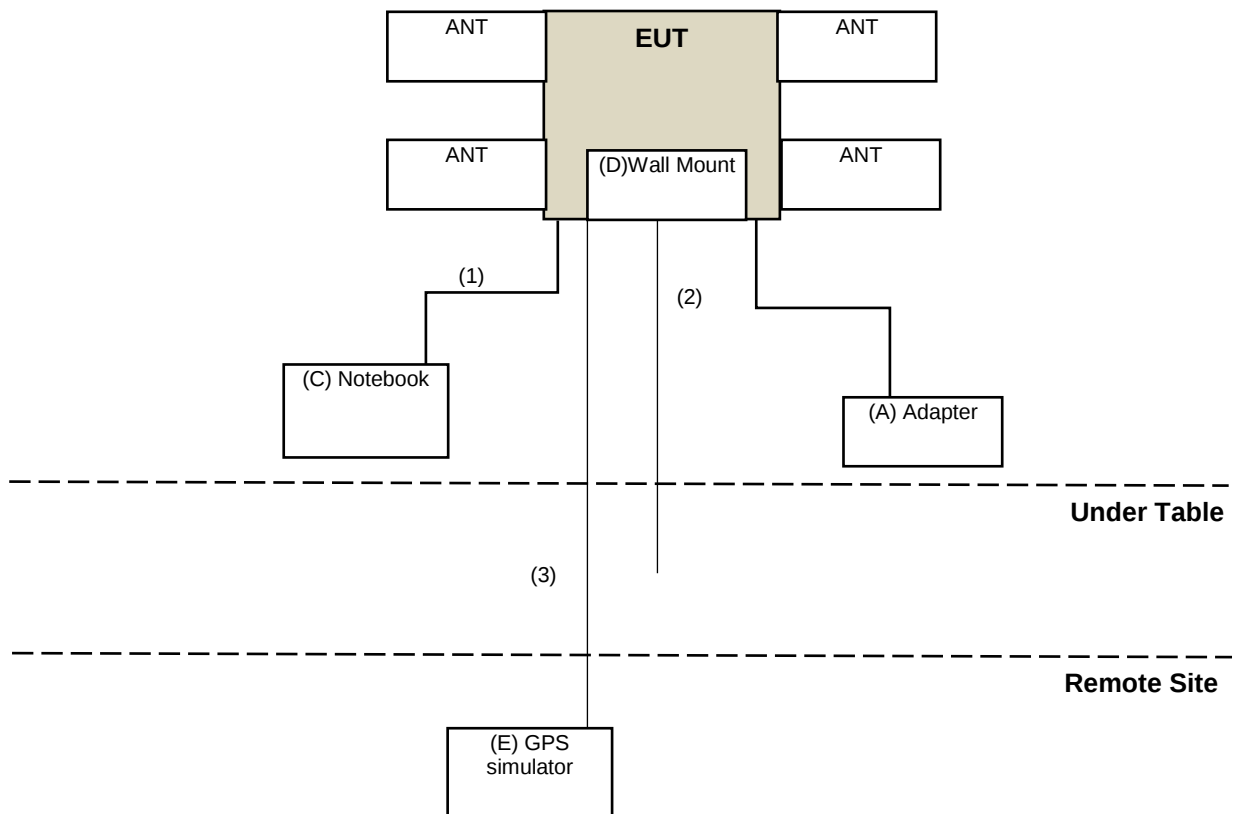
Mode A1, A3



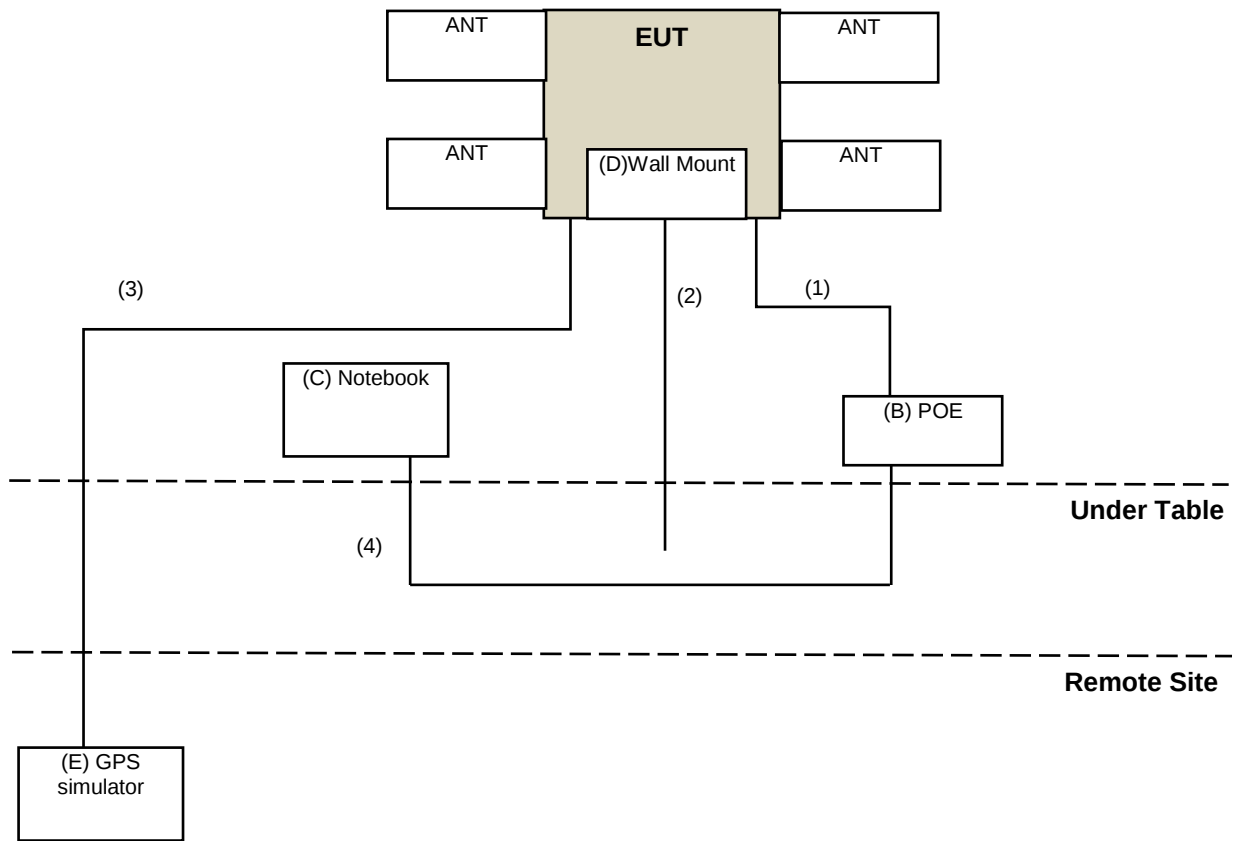
Mode A2



Mode B1, B3



Mode B2



3.4 General Description of Applied Standards and References

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

Test standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 96

ANSI/TIA/EIA-603-E-2016

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

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 940660 D01 Part 96 CBRS Eqpt v03

All test items have been performed as a reference to the above KDB test guidance.

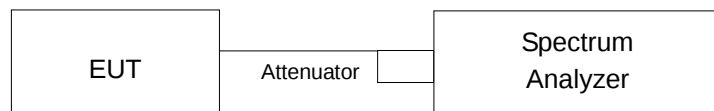
4 Test Types and Results

4.1 Maximum Output Power Measurement

4.1.1 Limits of Maximum Output Power Measurement

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

4.1.2 Test Setup



4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer KEYSIGHT	N9030B	MY57140488	2025/3/11	2026/3/10
RF cable	JB200	Cable-OVEN-02	NA	NA
DC-6GHz 20dB 50W Fixed attenuator Woken	MDC9331N-20	0724	2024/7/15	2026/7/14

Note: 1. The calibration interval of the above test instruments is 12/24 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1.4 Test Procedures

Conducted output power measurement

- a. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b. Set span to at least 1.5 times the OBW.
- c. Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
- d. Set VBW $\geq 3 \times$ RBW.
- e. Set number of points in sweep $\geq 2 \times$ span / RBW.
- f. Sweep time = auto-couple.
- g. Detector = RMS (power averaging).
- h. If the EUT can be configured to transmit continuously (i.e., burst duty cycle $\geq 98\%$), then set the trigger to free run.
- i. If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle $< 98\%$), then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Ensure that the sweep time is less than or equal to the transmission burst duration.
- j. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- k. Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
- l. For per 10MHz method, channel power integrating bandwidth 10MHz is used for bandwidth 10M, 20M, and 40M. For full power method, channel power integrating bandwidth 10MHz is used for bandwidth 10M, integrating bandwidth 20MHz is used for bandwidth 20M, integrating bandwidth 40MHz is used for bandwidth 40M.

Maximum EIRP

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

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

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)

4.1.5 Deviation from Test Standard

No deviation.

4.1.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.1.7 Test Results

Mode A1

Conducted Output Power and EIRP Power (dBm/10MHz)

Bandwidth	Frequency (MHz)	Modulation	Antenna				Total	EIRP (dBm/10MHz)	Verdict
			1	2	3	4			
10M	3555	QPSK	14.28	13.73	14.02	14.04	20.04	28.04	PASS
		64QAM	14.15	13.60	13.86	13.92	19.91	27.91	PASS
		256QAM	14.09	13.54	13.87	13.91	19.88	27.88	PASS
	3624.99	QPSK	14.28	13.96	14.62	14.54	20.38	28.38	PASS
		64QAM	14.08	13.78	14.46	14.43	20.22	28.22	PASS
		256QAM	14.11	13.82	14.47	14.34	20.21	28.21	PASS
	3694.98	QPSK	14.17	14.12	14.34	14.48	20.30	28.30	PASS
		64QAM	14.06	14.02	14.19	14.37	20.18	28.18	PASS
		256QAM	13.98	13.94	14.14	14.32	20.12	28.12	PASS
20M	3560.01	QPSK	14.99	14.32	14.63	14.51	20.64	28.64	PASS
		64QAM	14.89	14.20	14.53	14.38	20.53	28.53	PASS
		256QAM	14.87	14.13	14.44	14.37	20.48	28.48	PASS
	3624.99	QPSK	14.47	14.02	14.44	14.42	20.36	28.36	PASS
		64QAM	14.34	13.85	14.33	14.31	20.23	28.23	PASS
		256QAM	14.29	13.87	14.24	14.28	20.19	28.19	PASS
	3690	QPSK	14.86	14.33	15.04	14.84	20.80	28.80	PASS
		64QAM	14.75	14.21	14.94	14.66	20.67	28.67	PASS
		256QAM	14.66	14.23	14.93	14.67	20.65	28.65	PASS
40M	3570	QPSK	14.68	14.69	14.82	15.02	20.83	28.83	PASS
		64QAM	14.54	14.51	14.63	14.88	20.66	28.66	PASS
		256QAM	14.50	14.50	14.67	14.84	20.65	28.65	PASS
	3624.99	QPSK	14.17	13.72	14.64	14.00	20.17	28.17	PASS
		64QAM	13.99	13.60	14.52	13.84	20.02	28.02	PASS
		256QAM	14.03	13.55	14.44	13.89	20.01	28.01	PASS
	3679.98	QPSK	14.74	14.16	14.87	14.98	20.72	28.72	PASS
		64QAM	14.58	14.04	14.70	14.78	20.56	28.56	PASS
		256QAM	14.55	13.98	14.71	14.82	20.55	28.55	PASS

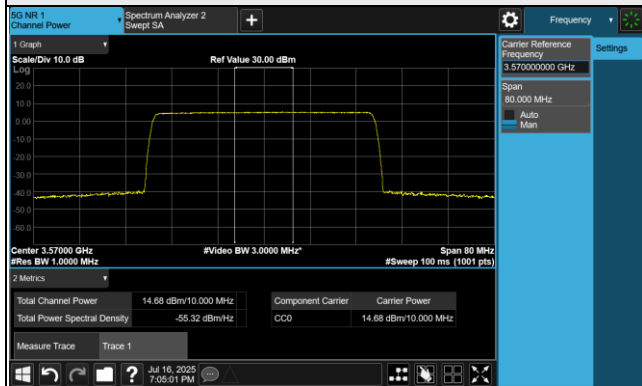
Note:

1. Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 8\text{dBi}$
2. EIRP (dBm/10MHz) = Total Conducted Output Power (dBm/10MHz) + Directional Gain

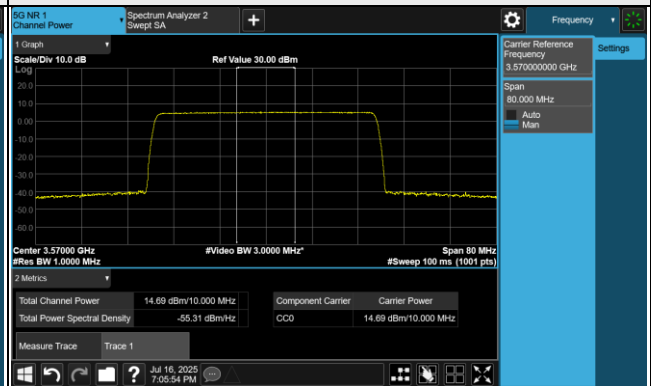
Spectrum Plot of Worst Value

40MHz / QPSK

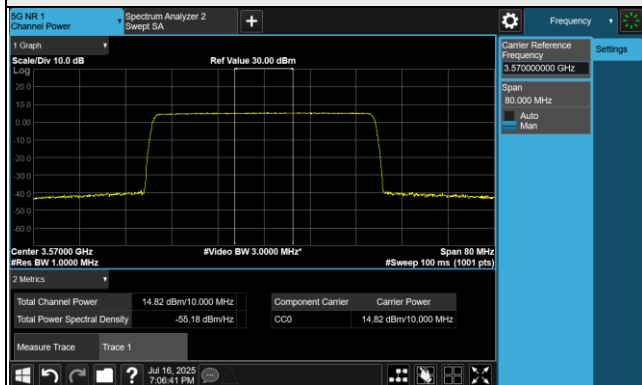
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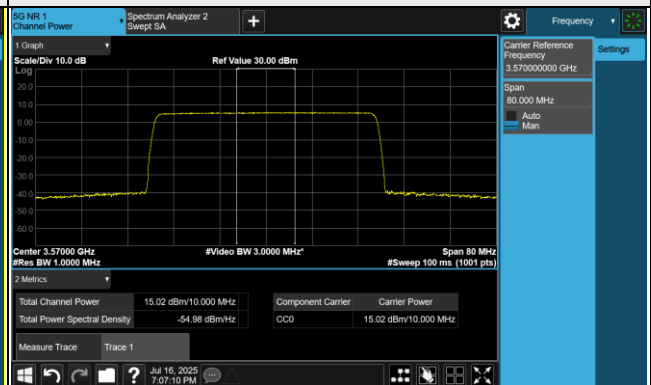
Ant.2



Ant.3



Ant.4



Full Conducted Output Power and Full EIRP Power (dBm/Channel Bandwidth)

Bandwidth	Frequency (MHz)	Modulation	Antenna				Total	EIRP (dBm/Channel Bandwidth)	Verdict
			1	2	3	4			
10M	3555	QPSK	14.28	13.73	14.02	14.04	20.04	28.04	PASS
		64QAM	14.15	13.60	13.86	13.92	19.91	27.91	PASS
		256QAM	14.09	13.54	13.87	13.91	19.88	27.88	PASS
	3624.99	QPSK	14.28	13.96	14.62	14.54	20.38	28.38	PASS
		64QAM	14.08	13.78	14.46	14.43	20.22	28.22	PASS
		256QAM	14.11	13.82	14.47	14.34	20.21	28.21	PASS
	3694.98	QPSK	14.17	14.12	14.34	14.48	20.30	28.30	PASS
		64QAM	14.06	14.02	14.19	14.37	20.18	28.18	PASS
		256QAM	13.98	13.94	14.14	14.32	20.12	28.12	PASS
20M	3560.01	QPSK	17.61	16.91	17.19	17.14	23.24	31.24	PASS
		64QAM	17.51	16.76	17.01	16.99	23.10	31.10	PASS
		256QAM	17.51	16.73	17.02	16.96	23.09	31.09	PASS
	3624.99	QPSK	16.73	16.65	16.98	17.05	22.88	30.88	PASS
		64QAM	16.63	16.47	16.83	16.94	22.74	30.74	PASS
		256QAM	16.61	16.46	16.82	16.89	22.72	30.72	PASS
	3690	QPSK	17.51	16.98	17.32	17.36	23.32	31.32	PASS
		64QAM	17.40	16.82	17.20	17.16	23.17	31.17	PASS
		256QAM	17.35	16.79	17.12	17.25	23.15	31.15	PASS
40M	3570	QPSK	20.49	20.17	20.58	20.65	26.50	34.50	PASS
		64QAM	20.31	20.07	20.47	20.55	26.37	34.37	PASS
		256QAM	20.29	20.02	20.43	20.47	26.33	34.33	PASS
	3624.99	QPSK	20.05	19.62	20.50	20.03	26.08	34.08	PASS
		64QAM	19.90	19.50	20.34	19.91	25.94	33.94	PASS
		256QAM	19.86	19.44	20.32	19.83	25.89	33.89	PASS
	3679.98	QPSK	19.48	19.85	20.57	20.71	26.20	34.20	PASS
		64QAM	19.37	19.67	20.46	20.51	26.05	34.05	PASS
		256QAM	19.29	19.66	20.38	20.52	26.01	34.01	PASS

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 8\text{dBi}$
- EIRP (dBm/Channel Bandwidth) = Total Conducted Output Power (dBm/Channel Bandwidth) + Directional Gain

Mode A3

Conducted Output Power and EIRP Power (dBm/10MHz)

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/10MHz)	Verdict
				1	2	3	4			
10M+20M Contiguous	3555+3570	QPSK	CF1	10.90	10.40	10.64	11.28	20.32	28.32	PASS
			CF2	11.74	11.31	11.77	12.01			
			Total	14.35	13.89	14.25	14.67			
		64QAM	CF1	10.71	10.30	10.46	11.16	20.15	28.15	PASS
			CF2	11.51	11.12	11.63	11.84			
			Total	14.14	13.74	14.09	14.52			
		256QAM	CF1	10.65	10.08	10.38	11.03	20.01	28.01	PASS
			CF2	11.41	10.92	11.46	11.67			
			Total	14.06	13.53	13.96	14.37			
	3615+3630	QPSK	CF1	11.25	10.63	11.63	11.01	20.51	28.51	PASS
			CF2	11.47	11.36	12.42	11.80			
			Total	14.37	14.02	15.05	14.43			
		64QAM	CF1	11.08	10.50	11.53	10.81	20.33	28.33	PASS
			CF2	11.24	11.15	12.21	11.68			
			Total	14.17	13.85	14.89	14.28			
		256QAM	CF1	10.87	10.33	11.24	10.63	20.16	28.16	PASS
			CF2	11.15	11.02	12.13	11.41			
			Total	14.02	13.70	14.72	14.05			
	3675+3690	QPSK	CF1	12.00	11.37	12.08	11.81	20.76	28.76	PASS
			CF2	11.67	10.98	11.93	11.87			
			Total	14.85	14.19	15.02	14.85			
		64QAM	CF1	11.76	11.20	11.90	11.57	20.56	28.56	PASS
			CF2	11.42	10.78	11.74	11.77			
			Total	14.60	14.01	14.83	14.68			
		256QAM	CF1	11.64	11.12	11.76	11.56	20.44	28.44	PASS
			CF2	11.31	10.71	11.59	11.52			
			Total	14.49	13.93	14.69	14.55			
10M+20M Non-Contiguous	3555+3580.02	QPSK	CF1	11.23	10.72	10.66	10.74	20.54	28.54	PASS
			CF2	12.23	11.82	12.18	12.11			
			Total	14.77	14.32	14.50	14.49			
		64QAM	CF1	11.01	10.57	10.48	10.57	20.36	28.36	PASS
			CF2	12.04	11.60	11.97	11.97			
			Total	14.57	14.13	14.30	14.34			
		256QAM	CF1	10.83	10.44	10.39	10.38	20.23	28.23	PASS
			CF2	11.91	11.57	11.85	11.84			
			Total	14.41	14.05	14.19	14.18			
	3610.02+3635.04	QPSK	CF1	11.12	10.52	11.29	11.34	20.48	28.48	PASS
			CF2	11.53	11.23	12.08	12.25			
			Total	14.34	13.90	14.71	14.83			
		64QAM	CF1	10.87	10.28	11.12	11.19	20.30	28.30	PASS
			CF2	11.32	11.11	11.84	12.15			
			Total	14.11	13.73	14.51	14.71			
		256QAM	CF1	10.79	10.25	11.00	11.02	20.17	28.17	PASS
			CF2	11.22	10.91	11.78	11.91			
			Total	14.02	13.60	14.42	14.50			
	3664.98+3690	QPSK	CF1	11.95	11.07	12.36	11.76	20.83	28.83	PASS
			CF2	11.72	11.23	12.33	11.78			
			Total	14.85	14.16	15.36	14.78			
		64QAM	CF1	11.71	10.94	12.23	11.66	20.65	28.65	PASS
			CF2	11.53	11.06	12.12	11.54			
			Total	14.63	14.01	15.19	14.61			
		256QAM	CF1	11.67	10.76	12.03	11.37	20.51	28.51	PASS
			CF2	11.46	10.92	12.02	11.42			
			Total	14.58	13.85	15.04	14.41			

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/10MHz)	Verdict
				1	2	3	4			
20M+20M Contiguous	3560.01+3580.02	QPSK	CF1	12.44	12.08	12.34	12.22	21.51	29.51	PASS
			CF2	12.73	12.38	12.97	12.64			
			Total	15.60	15.24	15.68	15.45			
		64QAM	CF1	12.21	11.93	12.16	12.11	21.37	29.37	PASS
			CF2	12.62	12.27	12.84	12.53			
			Total	15.43	15.11	15.52	15.34			
		256QAM	CF1	12.15	11.70	12.07	11.83	21.18	29.18	PASS
			CF2	12.46	12.03	12.57	12.29			
			Total	15.32	14.88	15.34	15.08			
	3615+3635.01	QPSK	CF1	11.52	11.05	12.11	11.60	20.68	28.68	PASS
			CF2	11.55	11.25	12.33	11.66			
			Total	14.55	14.16	15.23	14.64			
		64QAM	CF1	11.29	10.90	11.94	11.39	20.53	28.53	PASS
			CF2	11.45	11.14	12.21	11.54			
			Total	14.38	14.03	15.09	14.48			
		256QAM	CF1	11.13	10.67	11.79	11.30	20.35	28.35	PASS
			CF2	11.16	10.99	12.01	11.35			
			Total	14.16	13.84	14.91	14.34			
	3669.99+3690	QPSK	CF1	11.99	11.66	12.77	11.97	20.81	28.81	PASS
			CF2	11.24	10.86	12.02	11.48			
			Total	14.64	14.29	15.42	14.74			
		64QAM	CF1	11.85	11.43	12.57	11.87	20.65	28.65	PASS
			CF2	11.03	10.76	11.87	11.29			
			Total	14.47	14.12	15.24	14.60			
		256QAM	CF1	11.62	11.26	12.45	11.57	20.46	28.46	PASS
			CF2	10.85	10.58	11.72	11.13			
			Total	14.26	13.94	15.11	14.37			
20M+20M Non-Contiguous	3560.01+3590.01	QPSK	CF1	12.65	12.33	12.58	12.46	21.63	29.63	PASS
			CF2	12.77	12.25	13.03	12.65			
			Total	15.72	15.30	15.82	15.57			
		64QAM	CF1	12.49	12.21	12.47	12.35	21.49	29.49	PASS
			CF2	12.62	12.13	12.92	12.41			
			Total	15.57	15.18	15.71	15.39			
		256QAM	CF1	12.26	11.97	12.23	12.14	21.31	29.31	PASS
			CF2	12.46	11.95	12.78	12.36			
			Total	15.37	14.97	15.52	15.26			
	3610.02+3640.02	QPSK	CF1	11.99	11.51	12.47	12.02	21.03	29.03	PASS
			CF2	11.80	11.55	12.52	12.05			
			Total	14.91	14.54	15.51	15.05			
		64QAM	CF1	11.84	11.39	12.27	11.89	20.87	28.87	PASS
			CF2	11.61	11.33	12.37	11.88			
			Total	14.74	14.37	15.33	14.90			
		256QAM	CF1	11.71	11.26	12.13	11.77	20.73	28.73	PASS
			CF2	11.51	11.17	12.25	11.65			
			Total	14.62	14.23	15.20	14.72			
	3660+3690	QPSK	CF1	12.22	11.78	12.78	12.42	20.90	28.90	PASS
			CF2	11.21	10.63	12.05	11.45			
			Total	14.75	14.25	15.44	14.97			
		64QAM	CF1	12.11	11.68	12.65	12.17	20.74	28.74	PASS
			CF2	10.98	10.45	11.90	11.34			
			Total	14.59	14.12	15.30	14.79			
		256QAM	CF1	11.93	11.49	12.48	12.02	20.57	28.57	PASS
			CF2	10.82	10.26	11.68	11.20			
			Total	14.42	13.93	15.11	14.64			

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + 10^{G_3/10} + 10^{G_4/10})/4] = 8\text{dBi}$
- EIRP (dBm/10MHz) = Total Conducted Output Power (dBm/10MHz) + Directional Gain

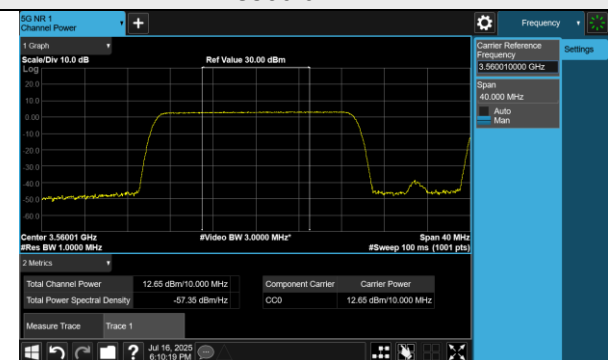
Spectrum Plot of Worst Value

20MHz+20MHz / QPSK

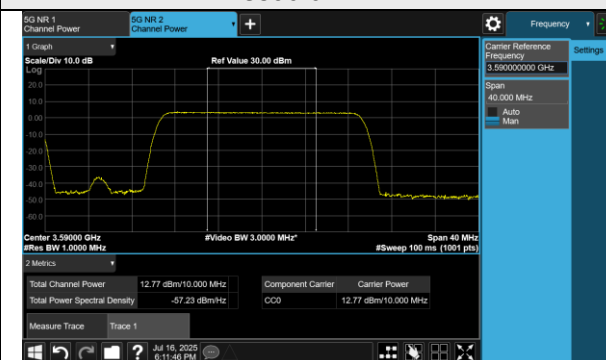
3560.01 MHz+3590.01 MHz

Ant.1

3560.01 MHz

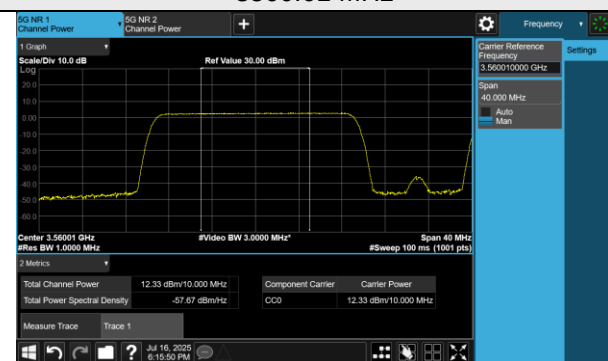


3590.01 MHz

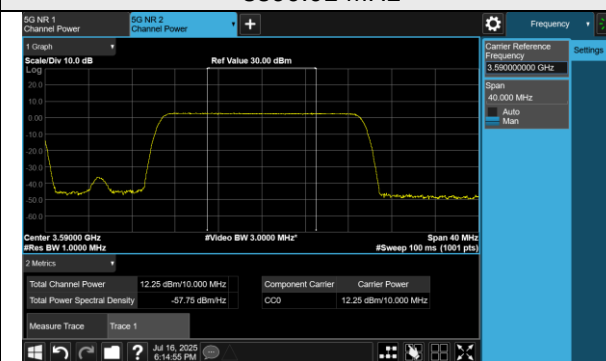


Ant.2

3560.01 MHz

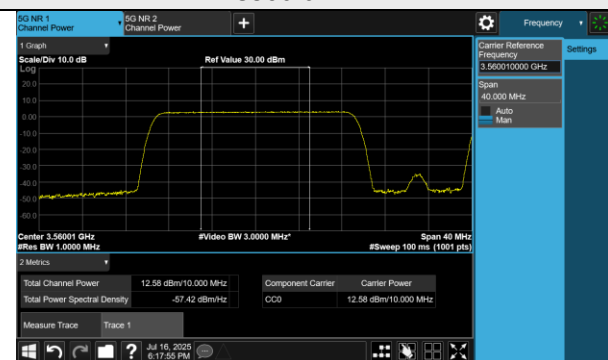


3590.01 MHz

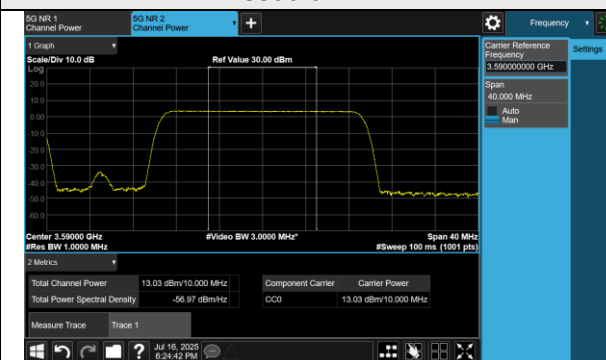


Ant.3

3560.01 MHz

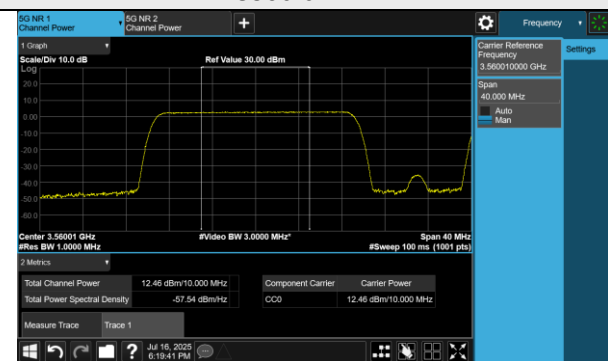


3590.01 MHz

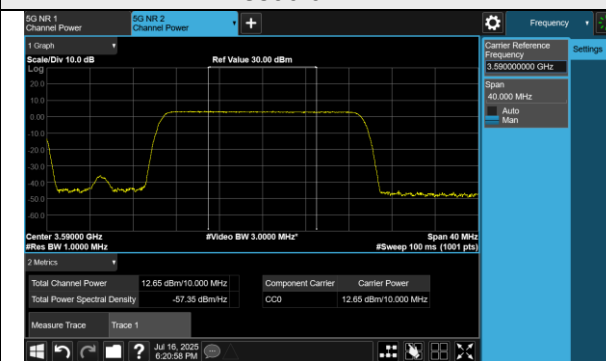


Ant.4

3560.01 MHz



3590.01 MHz



Full Conducted Output Power and Full EIRP Power (dBm/Channel Bandwidth)

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/CH. BW)	Verdict
				1	2	3	4			
10M+20M Contiguous	3555+3570	QPSK	CF1	10.90	10.40	10.64	11.28	21.87	29.87	PASS
			CF2	14.34	13.89	14.33	14.28			
			Total	15.96	15.50	15.88	16.04			
		64QAM	CF1	10.71	10.30	10.46	11.16	21.71	29.71	PASS
			CF2	14.13	13.76	14.23	14.08			
			Total	15.76	15.38	15.75	15.87			
		256QAM	CF1	10.65	10.08	10.38	11.03	21.58	29.58	PASS
			CF2	14.05	13.59	13.95	14.03			
			Total	15.68	15.19	15.53	15.79			
	3615+3630	QPSK	CF1	11.25	10.63	11.63	11.01	22.17	30.17	PASS
			CF2	14.47	14.00	15.04	14.42			
			Total	16.16	15.64	16.67	16.05			
		64QAM	CF1	11.08	10.50	11.53	10.81	22.00	30.00	PASS
			CF2	14.28	13.77	14.93	14.24			
			Total	15.98	15.45	16.56	15.87			
		256QAM	CF1	10.87	10.33	11.24	10.63	21.84	29.84	PASS
			CF2	14.18	13.66	14.79	14.06			
			Total	15.84	15.32	16.38	15.69			
	3675+3690	QPSK	CF1	12.00	11.37	12.08	11.81	22.24	30.24	PASS
			CF2	14.32	13.63	14.53	14.50			
			Total	16.32	15.66	16.49	16.37			
		64QAM	CF1	11.76	11.20	11.90	11.57	22.05	30.05	PASS
			CF2	14.09	13.40	14.34	14.39			
			Total	16.09	15.45	16.30	16.22			
		256QAM	CF1	11.64	11.12	11.76	11.56	21.91	29.91	PASS
			CF2	13.94	13.37	14.18	14.12			
			Total	15.95	15.40	16.15	16.04			
10M+20M Non-Contiguous	3555+3580.02	QPSK	CF1	11.23	10.72	10.66	10.74	22.18	30.18	PASS
			CF2	14.82	14.39	14.75	14.63			
			Total	16.40	15.94	16.18	16.12			
		64QAM	CF1	11.08	10.61	10.43	10.59	22.03	30.03	PASS
			CF2	14.72	14.24	14.52	14.49			
			Total	16.28	15.80	15.95	15.97			
		256QAM	CF1	10.92	10.46	10.39	10.37	21.85	29.85	PASS
			CF2	14.48	14.06	14.36	14.33			
			Total	16.07	15.63	15.82	15.80			
	3610.02+3635.04	QPSK	CF1	11.12	10.52	11.29	11.34	22.06	30.06	PASS
			CF2	14.11	13.82	14.65	14.83			
			Total	15.88	15.49	16.30	16.44			
		64QAM	CF1	11.02	10.33	11.15	11.22	21.91	29.91	PASS
			CF2	13.97	13.60	14.50	14.70			
			Total	15.75	15.28	16.15	16.31			
		256QAM	CF1	10.79	10.20	10.98	11.06	21.75	29.75	PASS
			CF2	13.75	13.47	14.38	14.55			
			Total	15.53	15.15	16.01	16.16			
	3664.98+3690	QPSK	CF1	11.95	11.07	12.36	11.76	22.31	30.31	PASS
			CF2	14.35	13.72	14.89	14.46			
			Total	16.32	15.60	16.82	16.33			
		64QAM	CF1	11.73	10.83	12.17	11.63	22.11	30.11	PASS
			CF2	14.17	13.47	14.72	14.23			
			Total	16.13	15.36	16.64	16.13			
		256QAM	CF1	11.65	10.79	12.10	11.37	22.00	30.00	PASS
			CF2	14.10	13.34	14.60	14.11			
			Total	16.06	15.26	16.54	15.96			

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/CH. BW)	Verdict
				1	2	3	4			
20M+20M Contiguous	3560.01+3580.02	QPSK	CF1	15.06	14.65	14.92	14.79	24.10	32.10	PASS
			CF2	15.34	15.00	15.53	15.23			
			Total	18.21	17.84	18.25	18.03			
		64QAM	CF1	14.93	14.48	14.77	14.59	23.93	31.93	PASS
			CF2	15.22	14.75	15.29	15.13			
			Total	18.09	17.63	18.05	17.88			
		256QAM	CF1	14.77	14.29	14.65	14.53	23.81	31.81	PASS
			CF2	15.08	14.66	15.26	14.93			
			Total	17.94	17.49	17.98	17.74			
	3615+3635.01	QPSK	CF1	14.24	13.66	14.51	14.18	23.30	31.30	PASS
			CF2	13.94	13.79	14.65	15.01			
			Total	17.10	16.74	17.59	17.63			
		64QAM	CF1	14.03	13.46	14.36	13.97	23.11	31.11	PASS
			CF2	13.79	13.56	14.40	14.89			
			Total	16.92	16.52	17.39	17.46			
		256QAM	CF1	13.94	13.38	14.22	13.84	22.99	30.99	PASS
			CF2	13.68	13.50	14.34	14.61			
			Total	16.82	16.45	17.29	17.25			
	3669.99+3690	QPSK	CF1	14.54	14.10	15.19	14.72	23.33	31.33	PASS
			CF2	13.78	13.13	14.57	14.02			
			Total	17.19	16.65	17.90	17.39			
		64QAM	CF1	14.39	13.86	15.09	14.53	23.16	31.16	PASS
			CF2	13.65	12.93	14.38	13.86			
			Total	17.05	16.43	17.76	17.22			
		256QAM	CF1	14.17	13.85	14.81	14.43	23.00	31.00	PASS
			CF2	13.41	12.84	14.31	13.63			
			Total	16.82	16.38	17.58	17.06			
20M+20M Non-Contiguous	3560.01+3590.01	QPSK	CF1	15.26	14.80	15.19	15.03	24.00	32.00	PASS
			CF2	15.01	14.42	15.18	14.79			
			Total	18.15	17.62	18.20	17.92			
		64QAM	CF1	15.09	14.62	14.99	14.88	23.81	31.81	PASS
			CF2	14.80	14.17	15.07	14.54			
			Total	17.96	17.41	18.04	17.72			
		256QAM	CF1	14.96	14.45	14.83	14.74	23.67	31.67	PASS
			CF2	14.64	14.16	14.87	14.44			
			Total	17.81	17.32	17.86	17.60			
	3610.02+3640.02	QPSK	CF1	14.55	13.83	14.83	14.48	23.51	31.51	PASS
			CF2	14.30	14.13	15.08	14.54			
			Total	17.44	16.99	17.97	17.52			
		64QAM	CF1	14.41	13.65	14.70	14.38	23.37	31.37	PASS
			CF2	14.17	13.93	14.94	14.39			
			Total	17.30	16.80	17.83	17.40			
		256QAM	CF1	14.24	13.45	14.44	14.17	23.19	31.19	PASS
			CF2	14.03	13.87	14.81	14.15			
			Total	17.15	16.68	17.64	17.17			
	3660+3690	QPSK	CF1	14.93	14.55	15.46	14.79	23.53	31.53	PASS
			CF2	13.86	13.33	14.60	14.15			
			Total	17.44	16.99	18.06	17.49			
		64QAM	CF1	14.79	14.40	15.22	14.56	23.35	31.35	PASS
			CF2	13.70	13.16	14.40	13.99			
			Total	17.29	16.83	17.84	17.29			
		256QAM	CF1	14.53	14.16	15.19	14.44	23.20	31.20	PASS
			CF2	13.58	12.98	14.34	13.81			
			Total	17.09	16.62	17.80	17.15			

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + 10^{G_3/10} + 10^{G_4/10})/4] = 8\text{dBi}$
- EIRP (dBm/Channel Bandwidth) = Total Conducted Output Power (dBm/Channel Bandwidth) + Directional Gain

Mode B1

Conducted Output Power and EIRP Power (dBm/10MHz)

Bandwidth	Frequency (MHz)	Modulation	Antenna				Total	EIRP (dBm/10MHz)	Verdict
			1	2	3	4			
10M	3555	QPSK	14.28	13.73	14.02	14.04	20.04	27.95	PASS
		64QAM	14.15	13.60	13.86	13.92	19.91	27.82	PASS
		256QAM	14.09	13.54	13.87	13.91	19.88	27.79	PASS
	3624.99	QPSK	14.28	13.96	14.62	14.54	20.38	28.29	PASS
		64QAM	14.08	13.78	14.46	14.43	20.22	28.13	PASS
		256QAM	14.11	13.82	14.47	14.34	20.21	28.12	PASS
	3694.98	QPSK	14.17	14.12	14.34	14.48	20.30	28.21	PASS
		64QAM	14.06	14.02	14.19	14.37	20.18	28.09	PASS
		256QAM	13.98	13.94	14.14	14.32	20.12	28.03	PASS
20M	3560.01	QPSK	14.99	14.32	14.63	14.51	20.64	28.55	PASS
		64QAM	14.89	14.20	14.53	14.38	20.53	28.44	PASS
		256QAM	14.87	14.13	14.44	14.37	20.48	28.39	PASS
	3624.99	QPSK	14.47	14.02	14.44	14.42	20.36	28.27	PASS
		64QAM	14.34	13.85	14.33	14.31	20.23	28.14	PASS
		256QAM	14.29	13.87	14.24	14.28	20.19	28.10	PASS
	3690	QPSK	14.86	14.33	15.04	14.84	20.80	28.71	PASS
		64QAM	14.75	14.21	14.94	14.66	20.67	28.58	PASS
		256QAM	14.66	14.23	14.93	14.67	20.65	28.56	PASS
40M	3570	QPSK	14.68	14.69	14.82	15.02	20.83	28.74	PASS
		64QAM	14.54	14.51	14.63	14.88	20.66	28.57	PASS
		256QAM	14.50	14.50	14.67	14.84	20.65	28.56	PASS
	3624.99	QPSK	14.17	13.72	14.64	14.00	20.17	28.08	PASS
		64QAM	13.99	13.60	14.52	13.84	20.02	27.93	PASS
		256QAM	14.03	13.55	14.44	13.89	20.01	27.92	PASS
	3679.98	QPSK	14.74	14.16	14.87	14.98	20.72	28.63	PASS
		64QAM	14.58	14.04	14.70	14.78	20.56	28.47	PASS
		256QAM	14.55	13.98	14.71	14.82	20.55	28.46	PASS

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 7.91\text{dB}$
- EIRP (dBm/10MHz) = Total Conducted Output Power (dBm/10MHz) + Antenna Gain

Full Conducted Output Power and Full EIRP Power (dBm/Channel Bandwidth)

Bandwidth	Frequency (MHz)	Modulation	Antenna				Total	EIRP (dBm/Channel Bandwidth)	Verdict
			1	2	3	4			
10M	3555	QPSK	14.28	13.73	14.02	14.04	20.04	27.95	PASS
		64QAM	14.15	13.60	13.86	13.92	19.91	27.82	PASS
		256QAM	14.09	13.54	13.87	13.91	19.88	27.79	PASS
	3624.99	QPSK	14.28	13.96	14.62	14.54	20.38	28.29	PASS
		64QAM	14.08	13.78	14.46	14.43	20.22	28.13	PASS
		256QAM	14.11	13.82	14.47	14.34	20.21	28.12	PASS
	3694.98	QPSK	14.17	14.12	14.34	14.48	20.30	28.21	PASS
		64QAM	14.06	14.02	14.19	14.37	20.18	28.09	PASS
		256QAM	13.98	13.94	14.14	14.32	20.12	28.03	PASS
20M	3560.01	QPSK	17.61	16.91	17.19	17.14	23.24	31.15	PASS
		64QAM	17.51	16.76	17.01	16.99	23.10	31.01	PASS
		256QAM	17.51	16.73	17.02	16.96	23.09	31.00	PASS
	3624.99	QPSK	16.73	16.65	16.98	17.05	22.88	30.79	PASS
		64QAM	16.63	16.47	16.83	16.94	22.74	30.65	PASS
		256QAM	16.61	16.46	16.82	16.89	22.72	30.63	PASS
	3690	QPSK	17.51	16.98	17.32	17.36	23.32	31.23	PASS
		64QAM	17.40	16.82	17.20	17.16	23.17	31.08	PASS
		256QAM	17.35	16.79	17.12	17.25	23.15	31.06	PASS
40M	3570	QPSK	20.49	20.17	20.58	20.65	26.50	34.41	PASS
		64QAM	20.31	20.07	20.47	20.55	26.37	34.28	PASS
		256QAM	20.29	20.02	20.43	20.47	26.33	34.24	PASS
	3624.99	QPSK	20.05	19.62	20.50	20.03	26.08	33.99	PASS
		64QAM	19.90	19.50	20.34	19.91	25.94	33.85	PASS
		256QAM	19.86	19.44	20.32	19.83	25.89	33.80	PASS
	3679.98	QPSK	19.48	19.85	20.57	20.71	26.20	34.11	PASS
		64QAM	19.37	19.67	20.46	20.51	26.05	33.96	PASS
		256QAM	19.29	19.66	20.38	20.52	26.01	33.92	PASS

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 7.91\text{dBi}$
- EIRP (dBm/10MHz) = Total Conducted Output Power (dBm/10MHz) + Antenna Gain

Mode B3

Conducted Output Power and EIRP Power (dBm/10MHz)

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/10MHz)	Verdict
				1	2	3	4			
10M+20M Contiguous	3555+3570	QPSK	CF1	10.90	10.40	10.64	11.28	20.32	28.23	PASS
			CF2	11.74	11.31	11.77	12.01			
			Total	14.35	13.89	14.25	14.67			
		64QAM	CF1	10.71	10.30	10.46	11.16	20.15	28.06	PASS
			CF2	11.51	11.12	11.63	11.84			
			Total	14.14	13.74	14.09	14.52			
		256QAM	CF1	10.65	10.08	10.38	11.03	20.01	27.92	PASS
			CF2	11.41	10.92	11.46	11.67			
			Total	14.06	13.53	13.96	14.37			
	3615+3630	QPSK	CF1	11.25	10.63	11.63	11.01	20.51	28.42	PASS
			CF2	11.47	11.36	12.42	11.80			
			Total	14.37	14.02	15.05	14.43			
		64QAM	CF1	11.08	10.50	11.53	10.81	20.33	28.24	PASS
			CF2	11.24	11.15	12.21	11.68			
			Total	14.17	13.85	14.89	14.28			
		256QAM	CF1	10.87	10.33	11.24	10.63	20.16	28.07	PASS
			CF2	11.15	11.02	12.13	11.41			
			Total	14.02	13.70	14.72	14.05			
	3675+3690	QPSK	CF1	12.00	11.37	12.08	11.81	20.76	28.67	PASS
			CF2	11.67	10.98	11.93	11.87			
			Total	14.85	14.19	15.02	14.85			
		64QAM	CF1	11.76	11.20	11.90	11.57	20.56	28.47	PASS
			CF2	11.42	10.78	11.74	11.77			
			Total	14.60	14.01	14.83	14.68			
		256QAM	CF1	11.64	11.12	11.76	11.56	20.44	28.35	PASS
			CF2	11.31	10.71	11.59	11.52			
			Total	14.49	13.93	14.69	14.55			
10M+20M Non-Contiguous	3555+3580.02	QPSK	CF1	11.23	10.72	10.66	10.74	20.54	28.45	PASS
			CF2	12.23	11.82	12.18	12.11			
			Total	14.77	14.32	14.50	14.49			
		64QAM	CF1	11.01	10.57	10.48	10.57	20.36	28.27	PASS
			CF2	12.04	11.60	11.97	11.97			
			Total	14.57	14.13	14.30	14.34			
		256QAM	CF1	10.83	10.44	10.39	10.38	20.23	28.14	PASS
			CF2	11.91	11.57	11.85	11.84			
			Total	14.41	14.05	14.19	14.18			
	3610.02+3635.04	QPSK	CF1	11.12	10.52	11.29	11.34	20.48	28.39	PASS
			CF2	11.53	11.23	12.08	12.25			
			Total	14.34	13.90	14.71	14.83			
		64QAM	CF1	10.87	10.28	11.12	11.19	20.30	28.21	PASS
			CF2	11.32	11.11	11.84	12.15			
			Total	14.11	13.73	14.51	14.71			
		256QAM	CF1	10.79	10.25	11.00	11.02	20.17	28.08	PASS
			CF2	11.22	10.91	11.78	11.91			
			Total	14.02	13.60	14.42	14.50			
	3664.98+3690	QPSK	CF1	11.95	11.07	12.36	11.76	20.83	28.74	PASS
			CF2	11.72	11.23	12.33	11.78			
			Total	14.85	14.16	15.36	14.78			
		64QAM	CF1	11.71	10.94	12.23	11.66	20.65	28.56	PASS
			CF2	11.53	11.06	12.12	11.54			
			Total	14.63	14.01	15.19	14.61			
		256QAM	CF1	11.67	10.76	12.03	11.37	20.51	28.42	PASS
			CF2	11.46	10.92	12.02	11.42			
			Total	14.58	13.85	15.04	14.41			

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/10MHz)	Verdict
				1	2	3	4			
20M+20M Contiguous	3560.01+3580.02	QPSK	CF1	12.44	12.08	12.34	12.22	21.51	29.42	PASS
			CF2	12.73	12.38	12.97	12.64			
			Total	15.60	15.24	15.68	15.45			
		64QAM	CF1	12.21	11.93	12.16	12.11	21.37	29.28	PASS
			CF2	12.62	12.27	12.84	12.53			
			Total	15.43	15.11	15.52	15.34			
		256QAM	CF1	12.15	11.70	12.07	11.83	21.18	29.09	PASS
			CF2	12.46	12.03	12.57	12.29			
			Total	15.32	14.88	15.34	15.08			
	3615+3635.01	QPSK	CF1	11.52	11.05	12.11	11.60	20.68	28.59	PASS
			CF2	11.55	11.25	12.33	11.66			
			Total	14.55	14.16	15.23	14.64			
		64QAM	CF1	11.29	10.90	11.94	11.39	20.53	28.44	PASS
			CF2	11.45	11.14	12.21	11.54			
			Total	14.38	14.03	15.09	14.48			
		256QAM	CF1	11.13	10.67	11.79	11.30	20.35	28.26	PASS
			CF2	11.16	10.99	12.01	11.35			
			Total	14.16	13.84	14.91	14.34			
	3669.99+3690	QPSK	CF1	11.99	11.66	12.77	11.97	20.81	28.72	PASS
			CF2	11.24	10.86	12.02	11.48			
			Total	14.64	14.29	15.42	14.74			
		64QAM	CF1	11.85	11.43	12.57	11.87	20.65	28.56	PASS
			CF2	11.03	10.76	11.87	11.29			
			Total	14.47	14.12	15.24	14.60			
		256QAM	CF1	11.62	11.26	12.45	11.57	20.46	28.37	PASS
			CF2	10.85	10.58	11.72	11.13			
			Total	14.26	13.94	15.11	14.37			
20M+20M Non-Contiguous	3560.01+3590.01	QPSK	CF1	12.65	12.33	12.58	12.46	21.63	29.54	PASS
			CF2	12.77	12.25	13.03	12.65			
			Total	15.72	15.30	15.82	15.57			
		64QAM	CF1	12.49	12.21	12.47	12.35	21.49	29.40	PASS
			CF2	12.62	12.13	12.92	12.41			
			Total	15.57	15.18	15.71	15.39			
		256QAM	CF1	12.26	11.97	12.23	12.14	21.31	29.22	PASS
			CF2	12.46	11.95	12.78	12.36			
			Total	15.37	14.97	15.52	15.26			
	3610.02+3640.02	QPSK	CF1	11.99	11.51	12.47	12.02	21.03	28.94	PASS
			CF2	11.80	11.55	12.52	12.05			
			Total	14.91	14.54	15.51	15.05			
		64QAM	CF1	11.84	11.39	12.27	11.89	20.87	28.78	PASS
			CF2	11.61	11.33	12.37	11.88			
			Total	14.74	14.37	15.33	14.90			
		256QAM	CF1	11.71	11.26	12.13	11.77	20.73	28.64	PASS
			CF2	11.51	11.17	12.25	11.65			
			Total	14.62	14.23	15.20	14.72			
	3660+3690	QPSK	CF1	12.22	11.78	12.78	12.42	20.90	28.81	PASS
			CF2	11.21	10.63	12.05	11.45			
			Total	14.75	14.25	15.44	14.97			
		64QAM	CF1	12.11	11.68	12.65	12.17	20.74	28.65	PASS
			CF2	10.98	10.45	11.90	11.34			
			Total	14.59	14.12	15.30	14.79			
		256QAM	CF1	11.93	11.49	12.48	12.02	20.57	28.48	PASS
			CF2	10.82	10.26	11.68	11.20			
			Total	14.42	13.93	15.11	14.64			

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + 10^{G_3/10} + 10^{G_4/10})/4] = 7.91\text{dBi}$
- EIRP (dBm/10MHz) = Total Conducted Output Power (dBm/10MHz) + Antenna Gain

Full Conducted Output Power and Full EIRP Power (dBm/Channel Bandwidth)

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/CH. BW)	Verdict
				1	2	3	4			
10M+20M Contiguous	3555+3570	QPSK	CF1	10.90	10.40	10.64	11.28	21.87	29.78	PASS
			CF2	14.34	13.89	14.33	14.28			
			Total	15.96	15.50	15.88	16.04			
		64QAM	CF1	10.71	10.30	10.46	11.16	21.71	29.62	PASS
			CF2	14.13	13.76	14.23	14.08			
			Total	15.76	15.38	15.75	15.87			
		256QAM	CF1	10.65	10.08	10.38	11.03	21.58	29.49	PASS
			CF2	14.05	13.59	13.95	14.03			
			Total	15.68	15.19	15.53	15.79			
	3615+3630	QPSK	CF1	11.25	10.63	11.63	11.01	22.17	30.08	PASS
			CF2	14.47	14.00	15.04	14.42			
			Total	16.16	15.64	16.67	16.05			
		64QAM	CF1	11.08	10.50	11.53	10.81	22.00	29.91	PASS
			CF2	14.28	13.77	14.93	14.24			
			Total	15.98	15.45	16.56	15.87			
		256QAM	CF1	10.87	10.33	11.24	10.63	21.84	29.75	PASS
			CF2	14.18	13.66	14.79	14.06			
			Total	15.84	15.32	16.38	15.69			
	3675+3690	QPSK	CF1	12.00	11.37	12.08	11.81	22.24	30.15	PASS
			CF2	14.32	13.63	14.53	14.50			
			Total	16.32	15.66	16.49	16.37			
		64QAM	CF1	11.76	11.20	11.90	11.57	22.05	29.96	PASS
			CF2	14.09	13.40	14.34	14.39			
			Total	16.09	15.45	16.30	16.22			
		256QAM	CF1	11.64	11.12	11.76	11.56	21.91	29.82	PASS
			CF2	13.94	13.37	14.18	14.12			
			Total	15.95	15.40	16.15	16.04			
10M+20M Non-Contiguous	3555+3580.02	QPSK	CF1	11.23	10.72	10.66	10.74	22.18	30.09	PASS
			CF2	14.82	14.39	14.75	14.63			
			Total	16.40	15.94	16.18	16.12			
		64QAM	CF1	11.08	10.61	10.43	10.59	22.03	29.94	PASS
			CF2	14.72	14.24	14.52	14.49			
			Total	16.28	15.80	15.95	15.97			
		256QAM	CF1	10.92	10.46	10.39	10.37	21.85	29.76	PASS
			CF2	14.48	14.06	14.36	14.33			
			Total	16.07	15.63	15.82	15.80			
	3610.02+3635.04	QPSK	CF1	11.12	10.52	11.29	11.34	22.06	29.97	PASS
			CF2	14.11	13.82	14.65	14.83			
			Total	15.88	15.49	16.30	16.44			
		64QAM	CF1	11.02	10.33	11.15	11.22	21.91	29.82	PASS
			CF2	13.97	13.60	14.50	14.70			
			Total	15.75	15.28	16.15	16.31			
		256QAM	CF1	10.79	10.20	10.98	11.06	21.75	29.66	PASS
			CF2	13.75	13.47	14.38	14.55			
			Total	15.53	15.15	16.01	16.16			
	3664.98+3690	QPSK	CF1	11.95	11.07	12.36	11.76	22.31	30.22	PASS
			CF2	14.35	13.72	14.89	14.46			
			Total	16.32	15.60	16.82	16.33			
		64QAM	CF1	11.73	10.83	12.17	11.63	22.11	30.02	PASS
			CF2	14.17	13.47	14.72	14.23			
			Total	16.13	15.36	16.64	16.13			
		256QAM	CF1	11.65	10.79	12.10	11.37	22.00	29.91	PASS
			CF2	14.10	13.34	14.60	14.11			
			Total	16.06	15.26	16.54	15.96			

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/CH. BW)	Verdict
				1	2	3	4			
20M+20M Contiguous	3560.01+3580.02	QPSK	CF1	15.06	14.65	14.92	14.79	24.10	32.01	PASS
			CF2	15.34	15.00	15.53	15.23			
			Total	18.21	17.84	18.25	18.03			
		64QAM	CF1	14.93	14.48	14.77	14.59	23.93	31.84	PASS
			CF2	15.22	14.75	15.29	15.13			
			Total	18.09	17.63	18.05	17.88			
		256QAM	CF1	14.77	14.29	14.65	14.53	23.81	31.72	PASS
			CF2	15.08	14.66	15.26	14.93			
			Total	17.94	17.49	17.98	17.74			
	3615+3635.01	QPSK	CF1	14.24	13.66	14.51	14.18	23.30	31.21	PASS
			CF2	13.94	13.79	14.65	15.01			
			Total	17.10	16.74	17.59	17.63			
		64QAM	CF1	14.03	13.46	14.36	13.97	23.11	31.02	PASS
			CF2	13.79	13.56	14.40	14.89			
			Total	16.92	16.52	17.39	17.46			
		256QAM	CF1	13.94	13.38	14.22	13.84	22.99	30.90	PASS
			CF2	13.68	13.50	14.34	14.61			
			Total	16.82	16.45	17.29	17.25			
	3669.99+3690	QPSK	CF1	14.54	14.10	15.19	14.72	23.33	31.24	PASS
			CF2	13.78	13.13	14.57	14.02			
			Total	17.19	16.65	17.90	17.39			
		64QAM	CF1	14.39	13.86	15.09	14.53	23.16	31.07	PASS
			CF2	13.65	12.93	14.38	13.86			
			Total	17.05	16.43	17.76	17.22			
		256QAM	CF1	14.17	13.85	14.81	14.43	23.00	30.91	PASS
			CF2	13.41	12.84	14.31	13.63			
			Total	16.82	16.38	17.58	17.06			
20M+20M Non-Contiguous	3560.01+3590.01	QPSK	CF1	15.26	14.80	15.19	15.03	24.00	31.91	PASS
			CF2	15.01	14.42	15.18	14.79			
			Total	18.15	17.62	18.20	17.92			
		64QAM	CF1	15.09	14.62	14.99	14.88	23.81	31.72	PASS
			CF2	14.80	14.17	15.07	14.54			
			Total	17.96	17.41	18.04	17.72			
		256QAM	CF1	14.96	14.45	14.83	14.74	23.67	31.58	PASS
			CF2	14.64	14.16	14.87	14.44			
			Total	17.81	17.32	17.86	17.60			
	3610.02+3640.02	QPSK	CF1	14.55	13.83	14.83	14.48	23.51	31.42	PASS
			CF2	14.30	14.13	15.08	14.54			
			Total	17.44	16.99	17.97	17.52			
		64QAM	CF1	14.41	13.65	14.70	14.38	23.37	31.28	PASS
			CF2	14.17	13.93	14.94	14.39			
			Total	17.30	16.80	17.83	17.40			
		256QAM	CF1	14.24	13.45	14.44	14.17	23.19	31.10	PASS
			CF2	14.03	13.87	14.81	14.15			
			Total	17.15	16.68	17.64	17.17			
	3660+3690	QPSK	CF1	14.93	14.55	15.46	14.79	23.53	31.44	PASS
			CF2	13.86	13.33	14.60	14.15			
			Total	17.44	16.99	18.06	17.49			
		64QAM	CF1	14.79	14.40	15.22	14.56	23.35	31.26	PASS
			CF2	13.70	13.16	14.40	13.99			
			Total	17.29	16.83	17.84	17.29			
		256QAM	CF1	14.53	14.16	15.19	14.44	23.20	31.11	PASS
			CF2	13.58	12.98	14.34	13.81			
			Total	17.09	16.62	17.80	17.15			

Note:

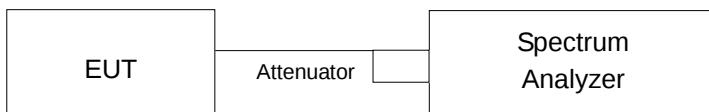
- Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 7.91\text{dBi}$
- EIRP (dBm/10MHz) = Total Conducted Output Power (dBm/10MHz) + Antenna Gain

4.2 Maximum Power Spectral Density Measurement

4.2.1 Limits of Maximum Power Spectral Density Measurement

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

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.2.4 Test Procedure

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.7 Test Results

Mode A1

Power Spectral Density (dBm/MHz)

Bandwidth	Frequency (MHz)	Modulation	Antenna				Total	EIRP (dBm/MHz)	Verdict
			1	2	3	4			
10M	3555	QPSK	5.65	5.56	5.46	5.45	11.55	19.55	PASS
		64QAM	5.33	5.31	5.28	5.21	11.30	19.30	PASS
		256QAM	5.16	5.04	5.12	5.17	11.14	19.14	PASS
	3624.99	QPSK	5.97	5.39	5.39	5.80	11.67	19.67	PASS
		64QAM	5.68	5.16	5.02	5.42	11.35	19.35	PASS
		256QAM	5.32	4.98	4.93	5.25	11.14	19.14	PASS
	3694.98	QPSK	5.19	5.19	5.35	5.39	11.30	19.30	PASS
		64QAM	5.10	5.02	5.00	5.10	11.08	19.08	PASS
		256QAM	4.96	4.88	4.81	4.98	10.93	18.93	PASS
20M	3560.01	QPSK	5.69	5.31	5.40	5.43	11.48	19.48	PASS
		64QAM	5.38	5.30	5.18	5.17	11.28	19.28	PASS
		256QAM	5.28	5.19	5.01	5.05	11.15	19.15	PASS
	3624.99	QPSK	4.97	4.70	4.64	5.31	10.93	18.93	PASS
		64QAM	4.67	4.51	4.36	5.18	10.71	18.71	PASS
		256QAM	4.52	4.30	4.52	5.09	10.64	18.64	PASS
	3690	QPSK	5.56	5.76	5.65	5.87	11.73	19.73	PASS
		64QAM	5.29	5.52	5.41	5.58	11.47	19.47	PASS
		256QAM	5.21	5.42	5.39	5.45	11.39	19.39	PASS
40M	3570	QPSK	5.59	4.87	5.65	5.97	11.56	19.56	PASS
		64QAM	5.43	4.74	5.55	5.78	11.41	19.41	PASS
		256QAM	5.32	4.61	5.38	5.56	11.25	19.25	PASS
	3624.99	QPSK	4.48	4.15	4.90	5.09	10.69	18.69	PASS
		64QAM	4.36	4.01	4.78	4.89	10.54	18.54	PASS
		256QAM	4.18	3.94	4.63	4.77	10.41	18.41	PASS
	3679.98	QPSK	4.82	5.36	5.36	5.81	11.37	19.37	PASS
		64QAM	4.71	5.16	5.21	5.69	11.23	19.23	PASS
		256QAM	4.53	5.09	5.08	5.51	11.09	19.09	PASS

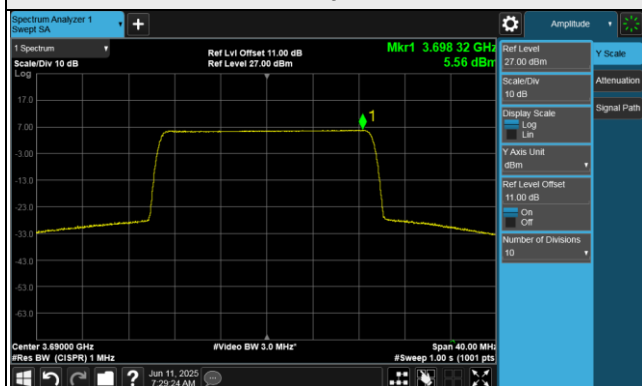
Note:

- Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 8\text{dBi}$
- EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

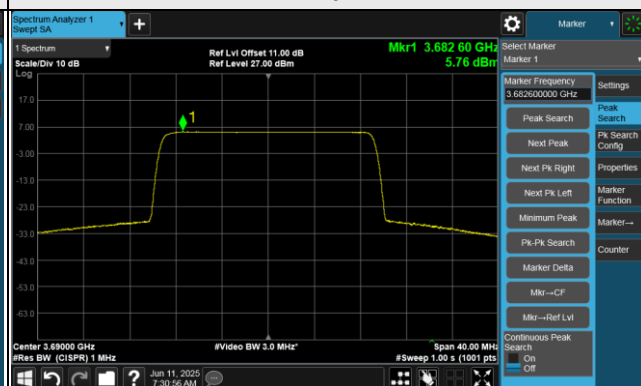
Spectrum Plot of Worst Value

20MHz / QPSK

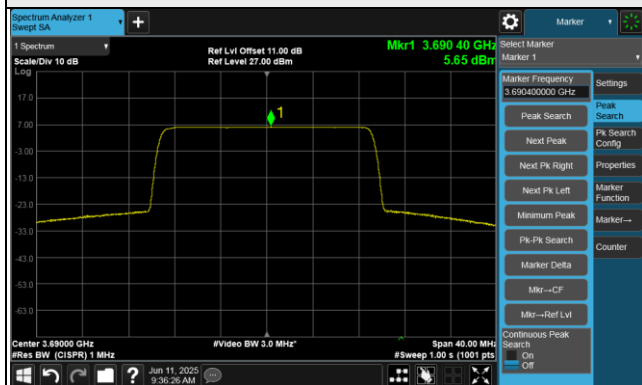
Ant.1



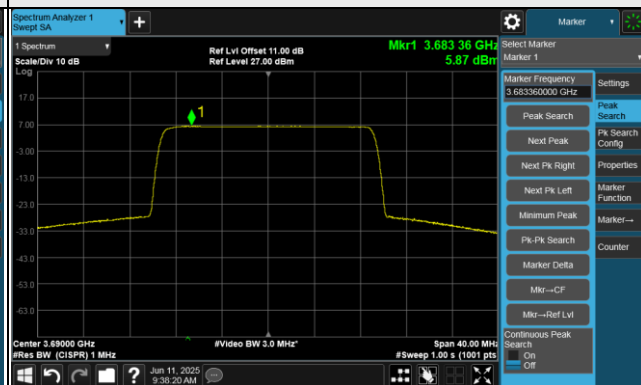
Ant.2



Ant.3



Ant.4



Mode A3

Power Spectral Density (dBm/MHz)

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/MHz)	Verdict
				1	2	3	4			
10M+20M Contiguous	3555+3570	QPSK	CF1	1.97	1.58	1.86	1.91	11.09	19.09	PASS
			CF2	2.15	1.96	2.51	2.45			
			Total	5.07	4.78	5.21	5.20			
		64QAM	CF1	1.85	1.44	1.76	1.82	10.96	18.96	PASS
			CF2	1.96	1.84	2.39	2.31			
			Total	4.92	4.65	5.10	5.08			
		256QAM	CF1	1.76	1.32	1.62	1.71	10.83	18.83	PASS
			CF2	1.85	1.69	2.21	2.13			
			Total	4.82	4.52	4.94	4.94			
	3615+3630	QPSK	CF1	2.22	2.03	2.00	2.48	11.23	19.23	PASS
			CF2	2.53	1.75	2.37	2.17			
			Total	5.39	4.90	5.20	5.34			
		64QAM	CF1	2.11	1.98	1.85	2.29	11.09	19.09	PASS
			CF2	2.38	1.62	2.16	2.01			
			Total	5.26	4.81	5.02	5.16			
		256QAM	CF1	1.97	1.81	1.75	2.02	10.93	18.93	PASS
			CF2	2.16	1.48	2.03	1.91			
			Total	5.08	4.66	4.90	4.98			
	3675+3690	QPSK	CF1	2.60	2.80	3.29	3.11	11.77	19.77	PASS
			CF2	2.08	2.43	2.76	2.74			
			Total	5.36	5.63	6.04	5.94			
		64QAM	CF1	2.43	2.76	3.04	2.99	11.63	19.63	PASS
			CF2	1.86	2.26	2.66	2.64			
			Total	5.16	5.53	5.86	5.83			
		256QAM	CF1	2.21	2.63	2.92	2.81	11.45	19.45	PASS
			CF2	1.72	2.02	2.42	2.52			
			Total	4.98	5.35	5.69	5.68			
10M+20M Non-Contiguous	3555+3580.02	QPSK	CF1	2.16	1.81	1.90	1.99	11.24	19.24	PASS
			CF2	2.38	2.12	2.66	2.55			
			Total	5.28	4.98	5.31	5.29			
		64QAM	CF1	2.02	1.75	1.79	1.82	11.08	19.08	PASS
			CF2	2.13	1.98	2.46	2.41			
			Total	5.09	4.88	5.15	5.14			
		256QAM	CF1	1.89	1.63	1.59	1.74	10.98	18.98	PASS
			CF2	2.01	1.84	2.52	2.26			
			Total	4.96	4.75	5.09	5.02			
	3610.02+3635.04	QPSK	CF1	2.10	2.04	2.07	2.97	11.35	19.35	PASS
			CF2	2.53	1.63	2.47	2.58			
			Total	5.33	4.85	5.28	5.79			
		64QAM	CF1	1.94	1.89	1.91	2.81	11.17	19.17	PASS
			CF2	2.41	1.46	2.26	2.32			
			Total	5.19	4.69	5.10	5.58			
		256QAM	CF1	1.81	1.75	1.79	2.69	11.01	19.01	PASS
			CF2	2.23	1.28	2.02	2.15			
			Total	5.04	4.53	4.92	5.44			
	3664.98+3690	QPSK	CF1	2.59	2.63	3.40	3.07	11.64	19.64	PASS
			CF2	1.83	2.00	2.52	2.62			
			Total	5.24	5.34	5.99	5.86			
		64QAM	CF1	2.35	2.45	3.13	2.89	11.45	19.45	PASS
			CF2	1.75	1.88	2.29	2.42			
			Total	5.07	5.18	5.74	5.67			
		256QAM	CF1	2.13	2.24	3.00	2.68	11.25	19.25	PASS
			CF2	1.59	1.69	2.04	2.21			
			Total	4.88	4.98	5.56	5.46			

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/MHz)	Verdict
				1	2	3	4			
20M+20M Contiguous	3560.01+3580.02	QPSK	CF1	2.98	2.63	3.08	2.95	11.98	19.98	PASS
			CF2	3.00	2.63	3.19	3.13			
			Total	6.00	5.64	6.15	6.05			
		64QAM	CF1	2.75	2.41	2.91	2.81	11.81	19.81	PASS
			CF2	2.84	2.43	3.01	2.99			
			Total	5.81	5.43	5.97	5.91			
		256QAM	CF1	2.58	2.12	2.79	2.77	11.63	19.63	PASS
			CF2	2.63	2.11	2.92	2.83			
			Total	5.62	5.13	5.87	5.81			
	3615+3635.01	QPSK	CF1	1.99	1.69	2.17	2.33	11.06	19.06	PASS
			CF2	2.27	1.33	2.43	1.94			
			Total	5.14	4.52	5.31	5.15			
		64QAM	CF1	1.78	1.52	2.02	2.13	10.89	18.89	PASS
			CF2	2.10	1.13	2.25	1.82			
			Total	4.95	4.34	5.15	4.99			
		256QAM	CF1	1.61	1.41	1.87	1.95	10.74	18.74	PASS
			CF2	1.98	1.01	2.02	1.69			
			Total	4.81	4.22	4.96	4.83			
	3669.99+3690	QPSK	CF1	2.31	1.53	2.14	2.62	11.23	19.23	PASS
			CF2	1.54	2.14	2.97	2.15			
			Total	4.95	4.86	5.59	5.40			
		64QAM	CF1	2.15	1.24	1.99	2.32	11.05	19.05	PASS
			CF2	1.41	2.03	2.81	2.02			
			Total	4.81	4.66	5.43	5.18			
		256QAM	CF1	1.98	1.10	1.71	2.13	10.90	18.90	PASS
			CF2	1.23	1.96	2.68	1.92			
			Total	4.63	4.56	5.23	5.04			
20M+20M Non-Contiguous	3560.01+3590.01	QPSK	CF1	3.15	2.80	3.21	3.13	11.60	19.60	PASS
			CF2	1.80	1.45	2.28	2.40			
			Total	5.54	5.19	5.78	5.79			
		64QAM	CF1	2.97	2.68	3.05	2.96	11.41	19.41	PASS
			CF2	1.43	1.21	2.12	2.21			
			Total	5.28	5.02	5.62	5.61			
		256QAM	CF1	2.85	2.42	2.94	2.82	11.24	19.24	PASS
			CF2	1.25	1.02	1.96	2.02			
			Total	5.13	4.79	5.49	5.45			
	3610.02+3640.02	QPSK	CF1	1.90	1.90	2.15	2.55	11.21	19.21	PASS
			CF2	2.37	1.58	2.64	2.25			
			Total	5.15	4.75	5.41	5.41			
		64QAM	CF1	1.77	1.76	2.03	2.32	11.05	19.05	PASS
			CF2	2.26	1.43	2.45	2.02			
			Total	5.03	4.61	5.26	5.18			
		256QAM	CF1	1.62	1.62	1.96	2.10	10.87	18.87	PASS
			CF2	2.01	1.26	2.21	1.89			
			Total	4.83	4.45	5.10	5.01			
	3660+3690	QPSK	CF1	2.59	2.10	3.19	2.81	11.39	19.39	PASS
			CF2	1.67	1.53	2.30	2.41			
			Total	5.16	4.83	5.78	5.62			
		64QAM	CF1	2.36	1.96	3.02	2.66	11.21	19.21	PASS
			CF2	1.45	1.35	2.13	2.26			
			Total	4.94	4.68	5.61	5.47			
		256QAM	CF1	2.20	1.84	2.91	2.42	11.04	19.04	PASS
			CF2	1.25	1.16	2.00	2.04			
			Total	4.76	4.52	5.49	5.24			

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + 10^{G_3/10} + 10^{G_4/10})/4] = 8\text{dBi}$
- EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

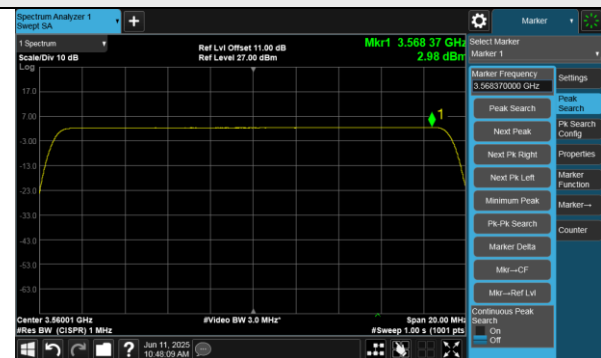
Spectrum Plot of Worst Value

20MHz+20MHz / QPSK

3560.01 MHz+3580.02 MHz

Ant.1

3560.01 MHz

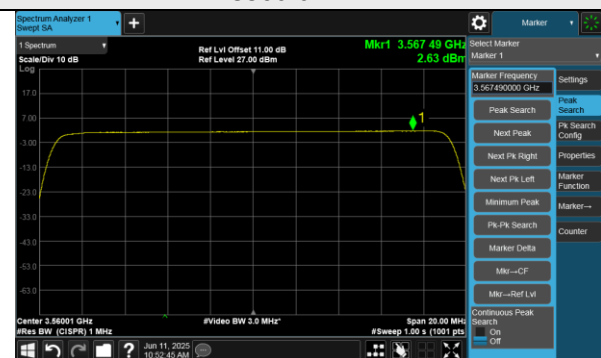


3580.02 MHz

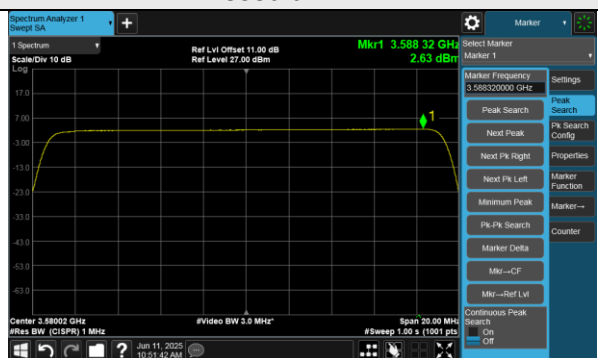


Ant.2

3560.01 MHz

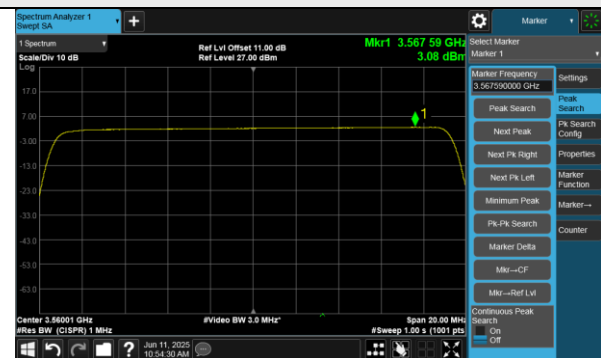


3580.02 MHz

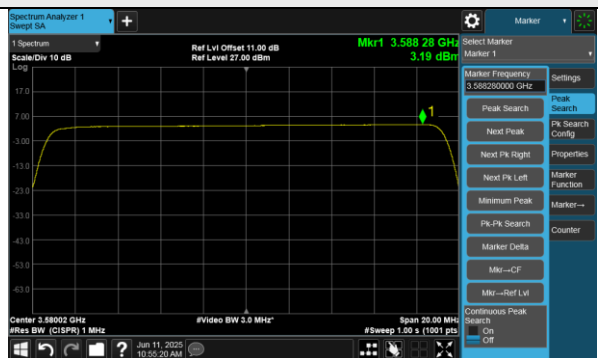


Ant.3

3560.01 MHz

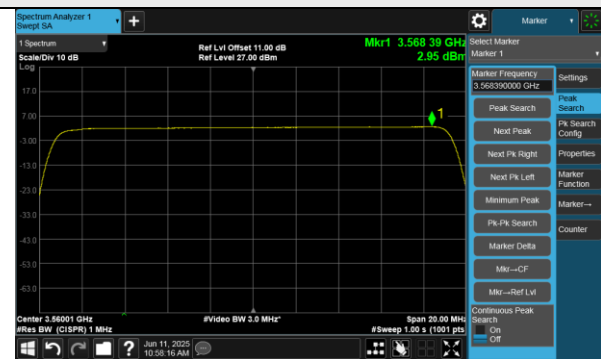


3580.02 MHz

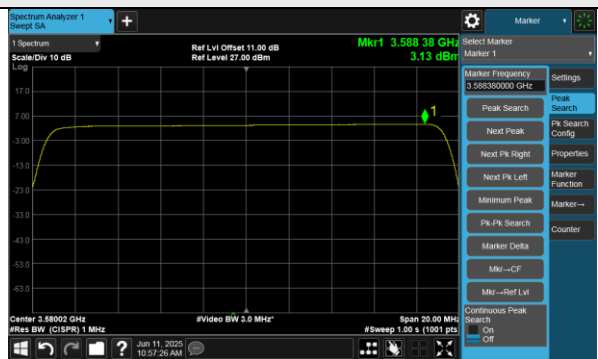


Ant.4

3560.01 MHz



3580.02 MHz



Mode B1

Power Spectral Density (dBm/MHz)

Bandwidth	Frequency (MHz)	Modulation	Antenna				Total	EIRP (dBm/MHz)	Verdict
			1	2	3	4			
10M	3555	QPSK	5.65	5.56	5.46	5.45	11.55	19.46	PASS
		64QAM	5.33	5.31	5.28	5.21	11.30	19.21	PASS
		256QAM	5.16	5.04	5.12	5.17	11.14	19.05	PASS
	3624.99	QPSK	5.97	5.39	5.39	5.80	11.67	19.58	PASS
		64QAM	5.68	5.16	5.02	5.42	11.35	19.26	PASS
		256QAM	5.32	4.98	4.93	5.25	11.14	19.05	PASS
	3694.98	QPSK	5.19	5.19	5.35	5.39	11.30	19.21	PASS
		64QAM	5.10	5.02	5.00	5.10	11.08	18.99	PASS
		256QAM	4.96	4.88	4.81	4.98	10.93	18.84	PASS
20M	3560.01	QPSK	5.69	5.31	5.40	5.43	11.48	19.39	PASS
		64QAM	5.38	5.30	5.18	5.17	11.28	19.19	PASS
		256QAM	5.28	5.19	5.01	5.05	11.15	19.06	PASS
	3624.99	QPSK	4.97	4.70	4.64	5.31	10.93	18.84	PASS
		64QAM	4.67	4.51	4.36	5.18	10.71	18.62	PASS
		256QAM	4.52	4.30	4.52	5.09	10.64	18.55	PASS
	3690	QPSK	5.56	5.76	5.65	5.87	11.73	19.64	PASS
		64QAM	5.29	5.52	5.41	5.58	11.47	19.38	PASS
		256QAM	5.21	5.42	5.39	5.45	11.39	19.30	PASS
40M	3570	QPSK	5.59	4.87	5.65	5.97	11.56	19.47	PASS
		64QAM	5.43	4.74	5.55	5.78	11.41	19.32	PASS
		256QAM	5.32	4.61	5.38	5.56	11.25	19.16	PASS
	3624.99	QPSK	4.48	4.15	4.90	5.09	10.69	18.60	PASS
		64QAM	4.36	4.01	4.78	4.89	10.54	18.45	PASS
		256QAM	4.18	3.94	4.63	4.77	10.41	18.32	PASS
	3679.98	QPSK	4.82	5.36	5.36	5.81	11.37	19.28	PASS
		64QAM	4.71	5.16	5.21	5.69	11.23	19.14	PASS
		256QAM	4.53	5.09	5.08	5.51	11.09	19.00	PASS

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + 10^{G3/10} + 10^{G4/10})/4] = 7.91\text{dB}$
- EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

Mode B3

Power Spectral Density (dBm/MHz)

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/MHz)	Verdict
				1	2	3	4			
10M+20M Contiguous	3555+3570	QPSK	CF1	1.97	1.58	1.86	1.91	11.09	19.00	PASS
			CF2	2.15	1.96	2.51	2.45			
			Total	5.07	4.78	5.21	5.20			
		64QAM	CF1	1.85	1.44	1.76	1.82	10.96	18.87	PASS
			CF2	1.96	1.84	2.39	2.31			
			Total	4.92	4.65	5.10	5.08			
		256QAM	CF1	1.76	1.32	1.62	1.71	10.83	18.74	PASS
			CF2	1.85	1.69	2.21	2.13			
			Total	4.82	4.52	4.94	4.94			
	3615+3630	QPSK	CF1	2.22	2.03	2.00	2.48	11.23	19.14	PASS
			CF2	2.53	1.75	2.37	2.17			
			Total	5.39	4.90	5.20	5.34			
		64QAM	CF1	2.11	1.98	1.85	2.29	11.09	19.00	PASS
			CF2	2.38	1.62	2.16	2.01			
			Total	5.26	4.81	5.02	5.16			
		256QAM	CF1	1.97	1.81	1.75	2.02	10.93	18.84	PASS
			CF2	2.16	1.48	2.03	1.91			
			Total	5.08	4.66	4.90	4.98			
	3675+3690	QPSK	CF1	2.60	2.80	3.29	3.11	11.77	19.68	PASS
			CF2	2.08	2.43	2.76	2.74			
			Total	5.36	5.63	6.04	5.94			
		64QAM	CF1	2.43	2.76	3.04	2.99	11.63	19.54	PASS
			CF2	1.86	2.26	2.66	2.64			
			Total	5.16	5.53	5.86	5.83			
		256QAM	CF1	2.21	2.63	2.92	2.81	11.45	19.36	PASS
			CF2	1.72	2.02	2.42	2.52			
			Total	4.98	5.35	5.69	5.68			
10M+20M Non-Contiguous	3555+3580.02	QPSK	CF1	2.16	1.81	1.90	1.99	11.24	19.15	PASS
			CF2	2.38	2.12	2.66	2.55			
			Total	5.28	4.98	5.31	5.29			
		64QAM	CF1	2.02	1.75	1.79	1.82	11.08	18.99	PASS
			CF2	2.13	1.98	2.46	2.41			
			Total	5.09	4.88	5.15	5.14			
		256QAM	CF1	1.89	1.63	1.59	1.74	10.98	18.89	PASS
			CF2	2.01	1.84	2.52	2.26			
			Total	4.96	4.75	5.09	5.02			
	3610.02+3635.04	QPSK	CF1	2.10	2.04	2.07	2.97	11.35	19.26	PASS
			CF2	2.53	1.63	2.47	2.58			
			Total	5.33	4.85	5.28	5.79			
		64QAM	CF1	1.94	1.89	1.91	2.81	11.17	19.08	PASS
			CF2	2.41	1.46	2.26	2.32			
			Total	5.19	4.69	5.10	5.58			
		256QAM	CF1	1.81	1.75	1.79	2.69	11.01	18.92	PASS
			CF2	2.23	1.28	2.02	2.15			
			Total	5.04	4.53	4.92	5.44			
	3664.98+3690	QPSK	CF1	2.59	2.63	3.40	3.07	11.64	19.55	PASS
			CF2	1.83	2.00	2.52	2.62			
			Total	5.24	5.34	5.99	5.86			
		64QAM	CF1	2.35	2.45	3.13	2.89	11.45	19.36	PASS
			CF2	1.75	1.88	2.29	2.42			
			Total	5.07	5.18	5.74	5.67			
		256QAM	CF1	2.13	2.24	3.00	2.68	11.25	19.16	PASS
			CF2	1.59	1.69	2.04	2.21			
			Total	4.88	4.98	5.56	5.46			

Bandwidth	Frequency (MHz)	Modulation	CF	Antenna				Total	EIRP (dBm/MHz)	Verdict
				1	2	3	4			
20M+20M Contiguous	3560.01+3580.02	QPSK	CF1	2.98	2.63	3.08	2.95	11.98	19.89	PASS
			CF2	3.00	2.63	3.19	3.13			
			Total	6.00	5.64	6.15	6.05			
		64QAM	CF1	2.75	2.41	2.91	2.81	11.81	19.72	PASS
			CF2	2.84	2.43	3.01	2.99			
			Total	5.81	5.43	5.97	5.91			
	3615+3635.01	QPSK	CF1	2.58	2.12	2.79	2.77	11.63	19.54	PASS
			CF2	2.63	2.11	2.92	2.83			
			Total	5.62	5.13	5.87	5.81			
		64QAM	CF1	1.99	1.69	2.17	2.33	11.06	18.97	PASS
			CF2	2.27	1.33	2.43	1.94			
			Total	5.14	4.52	5.31	5.15			
		256QAM	CF1	1.78	1.52	2.02	2.13	10.89	18.80	PASS
			CF2	2.10	1.13	2.25	1.82			
			Total	4.95	4.34	5.15	4.99			
	3669.99+3690	QPSK	CF1	1.61	1.41	1.87	1.95	10.74	18.65	PASS
			CF2	1.98	1.01	2.02	1.69			
			Total	4.81	4.22	4.96	4.83			
		64QAM	CF1	2.31	1.53	2.14	2.62	11.23	19.14	PASS
			CF2	1.54	2.14	2.97	2.15			
			Total	4.95	4.86	5.59	5.40			
		256QAM	CF1	2.15	1.24	1.99	2.32	11.05	18.96	PASS
			CF2	1.41	2.03	2.81	2.02			
			Total	4.81	4.66	5.43	5.18			
		256QAM	CF1	1.98	1.10	1.71	2.13	10.90	18.81	PASS
			CF2	1.23	1.96	2.68	1.92			
			Total	4.63	4.56	5.23	5.04			
20M+20M Non-Contiguous	3560.01+3590.01	QPSK	CF1	3.15	2.80	3.21	3.13	11.60	19.51	PASS
			CF2	1.80	1.45	2.28	2.40			
			Total	5.54	5.19	5.78	5.79			
		64QAM	CF1	2.97	2.68	3.05	2.96	11.41	19.32	PASS
			CF2	1.43	1.21	2.12	2.21			
			Total	5.28	5.02	5.62	5.61			
		256QAM	CF1	2.85	2.42	2.94	2.82	11.24	19.15	PASS
			CF2	1.25	1.02	1.96	2.02			
			Total	5.13	4.79	5.49	5.45			
	3610.02+3640.02	QPSK	CF1	1.90	1.90	2.15	2.55	11.21	19.12	PASS
			CF2	2.37	1.58	2.64	2.25			
			Total	5.15	4.75	5.41	5.41			
		64QAM	CF1	1.77	1.76	2.03	2.32	11.05	18.96	PASS
			CF2	2.26	1.43	2.45	2.02			
			Total	5.03	4.61	5.26	5.18			
		256QAM	CF1	1.62	1.62	1.96	2.10	10.87	18.78	PASS
			CF2	2.01	1.26	2.21	1.89			
			Total	4.83	4.45	5.10	5.01			
	3660+3690	QPSK	CF1	2.59	2.10	3.19	2.81	11.39	19.30	PASS
			CF2	1.67	1.53	2.30	2.41			
			Total	5.16	4.83	5.78	5.62			
		64QAM	CF1	2.36	1.96	3.02	2.66	11.21	19.12	PASS
			CF2	1.45	1.35	2.13	2.26			
			Total	4.94	4.68	5.61	5.47			
		256QAM	CF1	2.20	1.84	2.91	2.42	11.04	18.95	PASS
			CF2	1.25	1.16	2.00	2.04			
			Total	4.76	4.52	5.49	5.24			

Note:

- Uncorrelated Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + 10^{G_3/10} + 10^{G_4/10})/4] = 7.91\text{dBi}$
- EIRP Power Spectral Density (dBm/MHz) = Total Power Spectral Density (dBm/MHz) + Directional Gain

4.3 Modulation Characteristics Measurement

4.3.1 Limits of Modulation Characteristics

N/A

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.3.4 Deviation from Test Standard

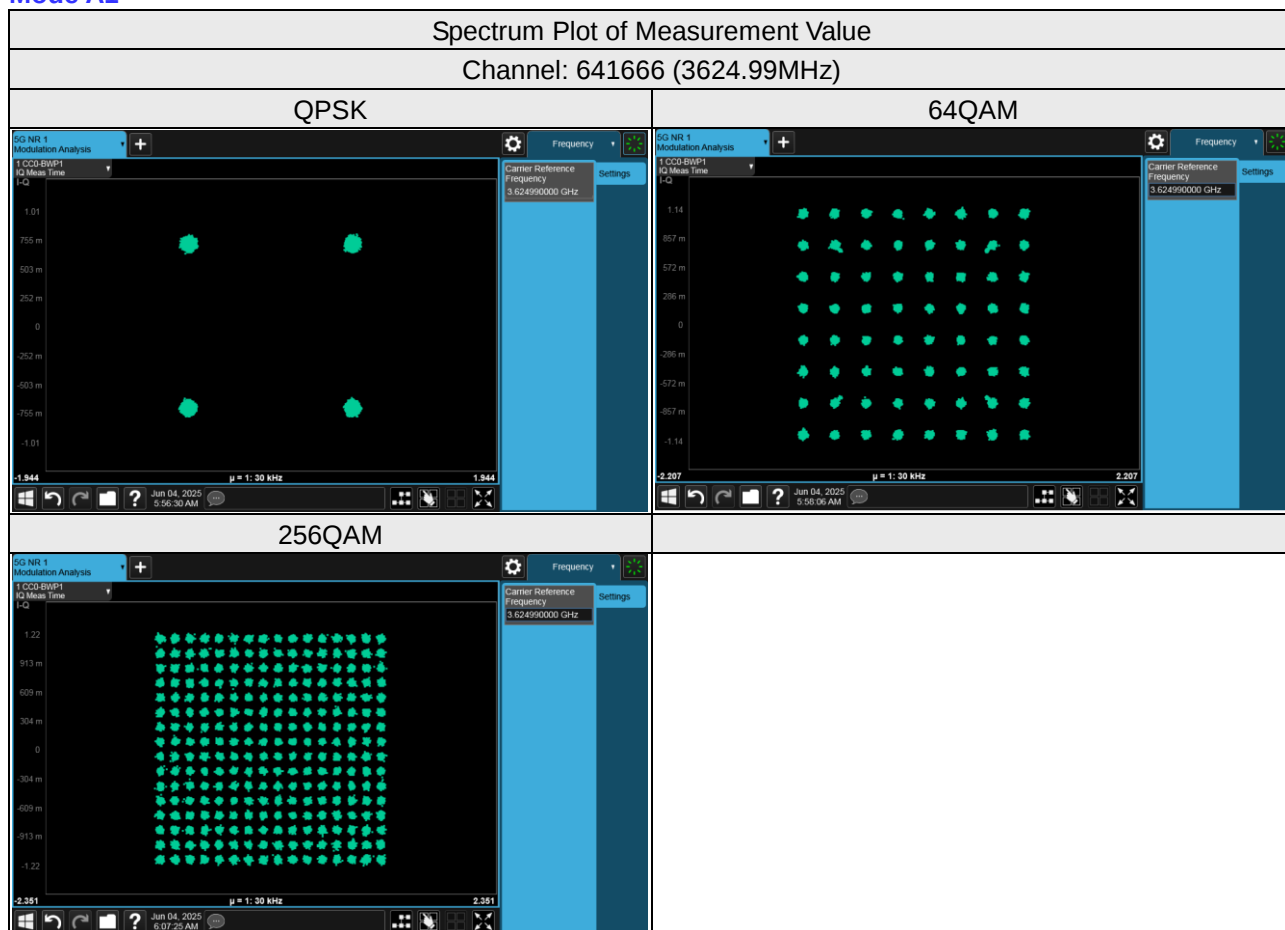
No deviation.

4.3.5 EUT Operating Conditions

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.

4.3.6 Test Results

Mode A1

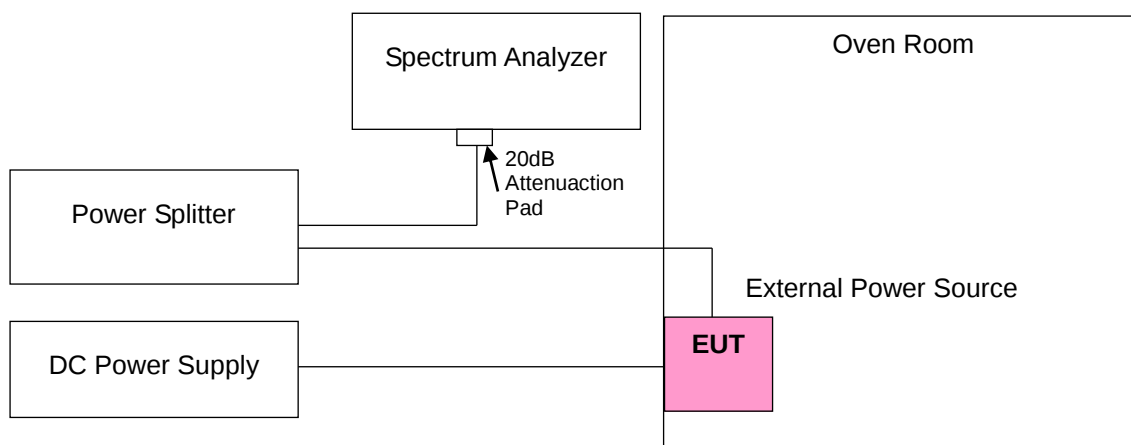


4.4 Frequency Stability Measurement

4.4.1 Limits of Frequency Stability Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer KEYSIGHT	N9030B	MY57140488	2025/3/11	2026/3/10
STANDARD TEMPERATURE & HUMIDITY CHAMBER TERCHY	MHU-225AU	911033	2024/10/29	2025/10/28
Three-phase coupling / decoupling network TESEQ	CDN 3063	4006	2025/3/6	2026/3/5
DC Power Supply Topward	6306A	727263	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.4.4 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.

4.4.5 Test Results

Mode A1

Antenna 1

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3555.000002	0.000563	3694.980001	0.000271
56.0	3555.000001	0.000281	3694.980003	0.000812
64.4	3554.999997	-0.000844	3694.980001	0.000271

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000001	0.000281	3694.979998	-0.000541
-20	3554.999998	-0.000563	3694.980003	0.000812
-10	3554.999997	-0.000844	3694.979999	-0.000271
0	3554.999999	-0.000281	3694.980001	0.000271
10	3555.000001	0.000281	3694.980002	0.000541
20	3555.000003	0.000844	3694.980003	0.000812
30	3554.999998	-0.000563	3694.979998	-0.000541
40	3555.000003	0.000844	3694.980001	0.000271
50	3554.999998	-0.000563	3694.979998	-0.000541

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009999	-0.000281	3690.000002	0.000542
56.0	3560.010001	0.000281	3690.000003	0.000813
64.4	3560.010001	0.000281	3689.999999	-0.000271

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009999	-0.000281	3689.999997	-0.000813
-20	3560.009998	-0.000562	3689.999999	-0.000271
-10	3560.009997	-0.000843	3690.000002	0.000542
0	3560.010001	0.000281	3690.000001	0.000271
10	3560.010002	0.000562	3690.000003	0.000813
20	3560.010001	0.000281	3690.000004	0.001084
30	3560.010001	0.000281	3689.999998	-0.000542
40	3560.010002	0.000562	3690.000001	0.000271
50	3560.009997	-0.000843	3689.999998	-0.000542

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3569.999998	0.000842	3679.979999	-0.001085
56.0	3570.000001	-0.001122	3679.980002	-0.000271
64.4	3570.000002	-0.000561	3679.980001	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3570.000001	-0.000842	3679.980002	-0.000543
-20	3570.000002	0.000561	3679.980001	0.000271
-10	3569.999998	-0.000561	3679.979998	-0.000543
0	3570.000002	0.000561	3679.980002	0.000543
10	3569.999997	-0.000842	3679.980002	0.000543
20	3569.999999	-0.000281	3679.980001	0.000271
30	3569.999997	-0.000842	3679.980001	0.000271
40	3570.000002	0.000561	3679.980004	0.001085
50	3570.000002	0.000561	3679.979999	-0.000271

Antenna 2

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3555.000002	0.000563	3694.979999	-0.000271
56.0	3555.000001	0.000281	3694.980002	0.000541
64.4	3555.000003	0.000844	3694.980001	0.000271

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000002	0.000563	3694.979999	-0.000271
-20	3554.999999	-0.000281	3694.979998	-0.000541
-10	3555.000001	0.000281	3694.980001	0.000271
0	3554.999997	-0.000844	3694.979997	-0.000812
10	3554.999998	-0.000563	3694.979998	-0.000541
20	3554.999998	-0.000563	3694.980001	0.000271
30	3555.000001	0.000281	3694.979998	-0.000541
40	3555.000002	0.000563	3694.980001	0.000271
50	3555.000003	0.000844	3694.979997	-0.000812

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.010002	0.000562	3690.000002	0.000542
56.0	3560.010003	0.000843	3690.000001	0.000271
64.4	3560.010001	0.000281	3690.000003	0.000813

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009997	-0.000843	3689.999999	-0.000271
-20	3560.009998	-0.000562	3689.999997	-0.000813
-10	3560.010002	0.000562	3690.000002	0.000542
0	3560.009999	-0.000281	3689.999997	-0.000813
10	3560.010002	0.000562	3690.000002	0.000542
20	3560.010003	0.000843	3690.000001	0.000271
30	3560.009998	-0.000562	3689.999996	-0.001084
40	3560.009998	-0.000562	3690.000002	0.000542
50	3560.010003	0.000843	3690.000002	0.000542

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3569.999999	0.000842	3679.980002	-0.001085
56.0	3570.000001	-0.001122	3679.979999	-0.000271
64.4	3569.999998	-0.000561	3679.980001	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3569.999998	-0.000842	3679.980004	-0.000543
-20	3569.999997	-0.000842	3679.980002	0.000543
-10	3570.000001	0.000281	3679.980001	0.000271
0	3569.999999	-0.000281	3679.980004	0.001085
10	3570.000002	0.000561	3679.980002	0.000543
20	3570.000001	0.000281	3679.980002	0.000543
30	3570.000003	0.000842	3679.980000	0.000000
40	3569.999997	-0.000842	3679.979997	-0.000814
50	3569.999997	-0.000842	3679.979997	-0.000814

Antenna 3

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3554.999997	-0.000844	3694.979998	-0.000541
56.0	3554.999999	-0.000281	3694.980001	0.000271
64.4	3555.000004	0.001125	3694.980002	0.000541

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000001	0.000281	3694.980001	0.000271
-20	3555.000002	0.000563	3694.979998	-0.000541
-10	3554.999997	-0.000844	3694.979998	-0.000541
0	3554.999998	-0.000563	3694.979999	-0.000271
10	3554.999998	-0.000563	3694.980001	0.000271
20	3554.999999	-0.000281	3694.979997	-0.000812
30	3555.000001	0.000281	3694.980003	0.000812
40	3555.000001	0.000281	3694.980002	0.000541
50	3554.999998	-0.000563	3694.980001	0.000271

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009999	-0.000281	3690.000002	0.000542
56.0	3560.009997	-0.000843	3689.999999	-0.000271
64.4	3560.009998	-0.000562	3690.000003	0.000813

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.010003	0.000843	3689.999997	-0.000813
-20	3560.010001	0.000281	3690.000002	0.000542
-10	3560.009996	-0.001124	3690.000001	0.000271
0	3560.009997	-0.000843	3689.999997	-0.000813
10	3560.009996	-0.001124	3689.999998	-0.000542
20	3560.009996	-0.001124	3690.000002	0.000542
30	3560.010004	0.001124	3690.000001	0.000271
40	3560.010004	0.001124	3690.000002	0.000542
50	3560.009999	-0.000281	3689.999997	-0.000813

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3570.000002	0.000842	3679.979999	-0.001085
56.0	3570.000001	-0.001122	3679.979999	-0.000271
64.4	3570.000001	-0.000561	3679.980002	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3569.999997	-0.000842	3679.980003	-0.000543
-20	3569.999998	-0.000561	3679.980002	0.000543
-10	3570.000002	0.000561	3679.980004	0.001085
0	3570.000001	0.000281	3679.980001	0.000271
10	3570.000004	0.001122	3679.979997	-0.000814
20	3570.000002	0.000561	3679.979998	-0.000543
30	3569.999997	-0.000842	3679.980002	0.000543
40	3570.000002	0.000561	3679.980001	0.000271
50	3570.000001	0.000281	3679.980001	0.000271

Antenna 4

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3554.999999	-0.000281	3694.979999	-0.000271
56.0	3555.000001	0.000281	3694.980001	0.000271
64.40	3555.000001	0.000281	3694.980002	0.000541

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3554.999998	-0.000563	3694.979997	-0.000812
-20	3554.999999	-0.000281	3694.980002	0.000541
-10	3554.999998	-0.000563	3694.980002	0.000541
0	3555.000002	0.000563	3694.980001	0.000271
10	3555.000003	0.000844	3694.979996	-0.001083
20	3555.000001	0.000281	3694.979997	-0.000812
30	3554.999998	-0.000563	3694.980002	0.000541
40	3554.999999	-0.000281	3694.979998	-0.000541
50	3554.999998	-0.000563	3694.980001	0.000271

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009998	-0.000562	3690.000001	0.000271
56.0	3560.009998	-0.000562	3689.999998	-0.000542
64.4	3560.010003	0.000843	3690.000003	0.000813

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009998	-0.000562	3689.999998	-0.000542
-20	3560.009997	-0.000843	3690.000002	0.000542
-10	3560.010002	0.000562	3690.000002	0.000542
0	3560.010003	0.000843	3690.000003	0.000813
10	3560.010002	0.000562	3689.999997	-0.000813
20	3560.010004	0.001124	3689.999999	-0.000271
30	3560.009999	-0.000281	3689.999996	-0.001084
40	3560.009998	-0.000562	3689.999998	-0.000542
50	3560.010001	0.000281	3690.000001	0.000271

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3569.999998	0.000842	3679.979999	-0.001085
56.0	3569.999998	-0.001122	3679.979998	-0.000271
64.4	3570.000003	-0.000561	3679.980003	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 40MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3569.999997	-0.000842	3679.979999	-0.000543
-20	3570.000002	0.000561	3679.980001	0.000271
-10	3570.000003	0.000842	3679.980001	0.000271
0	3569.999999	-0.000281	3679.980002	0.000543
10	3570.000003	0.000842	3679.979997	-0.000814
20	3570.000002	0.000561	3679.980002	0.000543
30	3570.000002	0.000561	3679.979998	-0.000543
40	3569.999998	-0.000561	3679.979998	-0.000543
50	3570.000002	0.000561	3679.980002	0.000543

Mode A3

Antenna 1

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3555.000002	0.000563	3690.000002	0.000544
56.0	3554.999999	-0.000281	3689.999997	-0.000816
64.4	3554.999997	-0.000844	3690.000001	0.000272

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000001	0.000281	3689.999998	-0.000544
-20	3555.000002	0.000563	3689.999997	-0.000816
-10	3554.999997	-0.000844	3690.000002	0.000544
0	3554.999998	-0.000563	3690.000003	0.000816
10	3554.999999	-0.000281	3689.999999	-0.000272
20	3554.999997	-0.000844	3690.000002	0.000544
30	3555.000002	0.000563	3689.999999	-0.000272
40	3555.000002	0.000563	3690.000004	0.001088
50	3555.000003	0.000844	3689.999998	-0.000544

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3554.999999	-0.000281	3689.999999	-0.000271
56.0	3555.000002	0.000563	3690.000002	0.000542
64.4	3555.000003	0.000844	3689.999997	-0.000813

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000001	0.000281	3690.000001	0.000271
-20	3555.000002	0.000563	3689.999999	-0.000271
-10	3554.999998	-0.000563	3689.999999	-0.000271
0	3554.999997	-0.000844	3690.000002	0.000542
10	3555.000002	0.000563	3689.999998	-0.000542
20	3555.000003	0.000844	3689.999997	-0.000813
30	3555.000004	0.001125	3689.999999	-0.000271
40	3555.000001	0.000281	3689.999999	-0.000271
50	3554.999998	-0.000563	3690.000003	0.000813

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009998	-0.000562	3690.000002	0.000545
56	3560.009998	-0.000562	3689.999997	-0.000817
64.4	3560.010001	0.000281	3690.000003	0.000817

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009998	-0.000562	3690.000002	0.000545
-20	3560.010001	0.000281	3690.000003	0.000817
-10	3560.010002	0.000562	3690.000003	0.000817
0	3560.010003	0.000843	3690.000002	0.000545
10	3560.009997	-0.000843	3690.000001	0.000272
20	3560.010002	0.000562	3689.999998	-0.000545
30	3560.010001	0.000281	3690.000002	0.000545
40	3560.010002	0.000562	3689.999998	-0.000545
50	3560.010002	0.000562	3689.999999	-0.000272

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009998	0.000842	3690.000001	-0.001085
56	3560.010001	-0.001122	3689.999998	-0.000271
64.4	3560.010002	-0.000561	3690.000001	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009998	-0.000842	3690.000002	-0.000543
-20	3560.010002	0.000561	3689.999999	-0.000271
-10	3560.010003	0.000842	3689.999997	-0.000814
0	3560.009999	-0.000281	3690.000002	0.000543
10	3560.009996	-0.001122	3690.000001	0.000271
20	3560.009998	-0.000561	3689.999998	-0.000543
30	3560.010001	0.000281	3689.999997	-0.000814
40	3560.010002	0.000561	3690.000001	0.000271
50	3560.009997	-0.000842	3689.999998	-0.000543

Antenna 2

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3555.000002	0.000563	3690.000002	0.000544
56.0	3554.999998	-0.000563	3689.999997	-0.000816
64.4	3554.999999	-0.000281	3689.999999	-0.000272

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000001	0.000281	3689.999999	-0.000272
-20	3554.999998	-0.000563	3690.000002	0.000544
-10	3555.000003	0.000844	3689.999998	-0.000544
0	3554.999998	-0.000563	3690.000002	0.000544
10	3554.999998	-0.000563	3689.999999	-0.000272
20	3554.999999	-0.000281	3690.000002	0.000544
30	3555.000002	0.000563	3689.999998	-0.000544
40	3554.999997	-0.000844	3690.000002	0.000544
50	3555.000002	0.000563	3689.999998	-0.000544

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3554.999999	-0.000281	3689.999998	-0.000542
56.0	3555.000002	0.000563	3689.999997	-0.000813
64.4	3554.999996	-0.001125	3689.999999	-0.000271

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3554.999997	-0.000844	3689.999999	-0.000271
-20	3555.000003	0.000844	3690.000002	0.000542
-10	3555.000002	0.000563	3690.000003	0.000813
0	3555.000003	0.000844	3690.000001	0.000271
10	3555.000001	0.000281	3689.999998	-0.000542
20	3554.999998	-0.000563	3690.000001	0.000271
30	3554.999998	-0.000563	3690.000001	0.000271
40	3555.000002	0.000563	3690.000002	0.000542
50	3555.000003	0.000844	3690.000002	0.000542

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.010002	0.000562	3689.999997	-0.000817
56	3560.009998	-0.000562	3690.000002	0.000545
64.4	3560.010003	0.000843	3690.000001	0.000272

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009998	-0.000562	3690.000002	0.000545
-20	3560.010002	0.000562	3690.000001	0.000272
-10	3560.010002	0.000562	3690.000002	0.000545
0	3560.010003	0.000843	3689.999997	-0.000817
10	3560.009999	-0.000281	3690.000003	0.000817
20	3560.010002	0.000562	3689.999998	-0.000545
30	3560.009997	-0.000843	3690.000003	0.000817
40	3560.010002	0.000562	3690.000002	0.000545
50	3560.009999	-0.000281	3689.999998	-0.000545

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009999	0.000842	3690.000002	-0.001085
56	3560.009999	-0.001122	3690.000001	-0.000271
64.4	3560.009997	-0.000561	3689.999996	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.010002	-0.000842	3690.000002	-0.000543
-20	3560.010001	0.000281	3689.999998	-0.000543
-10	3560.009997	-0.000842	3689.999999	-0.000271
0	3560.009998	-0.000561	3689.999997	-0.000814
10	3560.010002	0.000561	3689.999999	-0.000271
20	3560.010001	0.000281	3690.000002	0.000543
30	3560.010003	0.000842	3690.000002	0.000543
40	3560.009997	-0.000842	3690.000001	0.000271
50	3560.009998	-0.000561	3690.000003	0.000814

Antenna 3

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3555.000002	0.000563	3689.999998	-0.000544
56.0	3554.999999	-0.000281	3689.999998	-0.000544
64.4	3555.000002	0.000563	3689.999999	-0.000272

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000002	0.000563	3689.999998	-0.000544
-20	3555.000001	0.000281	3689.999998	-0.000544
-10	3555.000002	0.000563	3689.999997	-0.000816
0	3555.000003	0.000844	3689.999999	-0.000272
10	3554.999998	-0.000563	3689.999998	-0.000544
20	3554.999998	-0.000563	3689.999998	-0.000544
30	3555.000001	0.000281	3690.000002	0.000544
40	3555.000003	0.000844	3689.999997	-0.000816
50	3554.999998	-0.000563	3689.999999	-0.000272

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3555.000002	0.000563	3689.999999	-0.000271
56.0	3554.999997	-0.000844	3689.999998	-0.000542
64.4	3554.999999	-0.000281	3690.000003	0.000813

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000003	0.000844	3690.000002	0.000542
-20	3555.000002	0.000563	3690.000002	0.000542
-10	3555.000002	0.000563	3690.000002	0.000542
0	3555.000002	0.000563	3690.000001	0.000271
10	3555.000001	0.000281	3689.999999	-0.000271
20	3555.000002	0.000563	3690.000003	0.000813
30	3555.000003	0.000844	3689.999997	-0.000813
40	3554.999997	-0.000844	3690.000002	0.000542
50	3554.999996	-0.001125	3689.999998	-0.000542

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009999	-0.000281	3690.000002	0.000545
56.0	3560.010002	0.000562	3690.000003	0.000817
64.4	3560.010002	0.000562	3690.000001	0.000272

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.010002	0.000562	3689.999998	-0.000545
-20	3560.009998	-0.000562	3690.000003	0.000817
-10	3560.009997	-0.000843	3689.999996	-0.001090
0	3560.009999	-0.000281	3690.000002	0.000545
10	3560.009998	-0.000562	3690.000001	0.000272
20	3560.009998	-0.000562	3689.999998	-0.000545
30	3560.010002	0.000562	3689.999997	-0.000817
40	3560.010003	0.000843	3689.999998	-0.000545
50	3560.009998	-0.000562	3690.000001	0.000272

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009998	0.000842	3689.999998	-0.001085
56.0	3560.009999	-0.001122	3689.999999	-0.000271
64.4	3560.009998	-0.000561	3689.999997	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.010002	-0.000842	3689.999996	-0.000543
-20	3560.009997	-0.000842	3690.000001	0.000271
-10	3560.010001	0.000281	3690.000002	0.000543
0	3560.009999	-0.000281	3689.999998	-0.000543
10	3560.009998	-0.000561	3689.999997	-0.000814
20	3560.009997	-0.000842	3690.000002	0.000543
30	3560.010002	0.000561	3690.000002	0.000543
40	3560.010002	0.000561	3689.999997	-0.000814
50	3560.009996	-0.001122	3689.999999	-0.000271

Antenna 4

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3554.999998	-0.000563	3689.999998	-0.000542
56.0	3555.000002	0.000563	3690.000003	0.000813
64.4	3555.000003	0.000844	3690.000001	0.000271

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3555.000001	0.000281	3689.999999	-0.000271
-20	3554.999998	-0.000563	3690.000002	0.000542
-10	3554.999997	-0.000844	3690.000002	0.000542
0	3555.000003	0.000844	3690.000003	0.000813
10	3554.999999	-0.000281	3690.000001	0.000271
20	3554.999998	-0.000563	3689.999998	-0.000542
30	3555.000002	0.000563	3690.000003	0.000813
40	3554.999998	-0.000563	3689.999996	-0.001084
50	3554.999996	-0.001125	3690.000002	0.000542

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3554.999998	-0.000563	3690.000001	0.000271
56.0	3555.000002	0.000563	3690.000002	0.000542
64.4	3555.000001	0.000281	3689.999999	-0.000271

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 10MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3554.999999	-0.000281	3689.999999	-0.000271
-20	3554.999997	-0.000844	3689.999998	-0.000542
-10	3555.000002	0.000563	3689.999999	-0.000271
0	3555.000002	0.000563	3689.999998	-0.000542
10	3555.000001	0.000281	3690.000002	0.000542
20	3554.999996	-0.001125	3690.000003	0.000813
30	3554.999997	-0.000844	3689.999998	-0.000542
40	3554.999998	-0.000563	3690.000001	0.000271
50	3554.999999	-0.000281	3690.000002	0.000542

Frequency Error vs. Voltage

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.010002	0.000562	3689.999998	-0.000545
56.0	3560.009998	-0.000562	3690.000001	0.000272
64.4	3560.009997	-0.000843	3689.999997	-0.000817

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.010001	0.000281	3690.000003	0.000817
-20	3560.010002	0.000562	3689.999998	-0.000545
-10	3560.010003	0.000843	3690.000001	0.000272
0	3560.009998	-0.000562	3690.000003	0.000817
10	3560.009998	-0.000562	3689.999998	-0.000545
20	3560.009996	-0.001124	3689.999998	-0.000545
30	3560.009997	-0.000843	3690.000003	0.000817
40	3560.010002	0.000562	3689.999996	-0.001090
50	3560.010002	0.000562	3690.000002	0.000545

Voltage (Vdc)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
47.6	3560.009999	0.000842	3689.999998	-0.001085
56.0	3560.010001	-0.001122	3689.999997	-0.000271
64.4	3560.010001	-0.000561	3690.000002	0.000543

Note: The applicant defined the normal working voltage is from 47.6Vdc to 64.4Vdc.

Frequency Error vs. Temperature

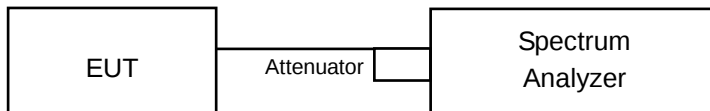
Temp. (°C)	NR Band 48, Channel Bandwidth: 20MHz+20MHz Non-Contiguous			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	3560.009997	-0.000842	3689.999999	-0.000543
-20	3560.010002	0.000561	3689.999998	-0.000543
-10	3560.009999	-0.000281	3690.000003	0.000814
0	3560.009998	-0.000561	3690.000003	0.000814
10	3560.009998	-0.000561	3689.999996	-0.001085
20	3560.009997	-0.000842	3689.999998	-0.000543
30	3560.010002	0.000561	3689.999996	-0.001085
40	3560.010002	0.000561	3690.000002	0.000543
50	3560.009997	-0.000842	3690.000001	0.000271

4.5 Emission Bandwidth Measurement

4.5.1 Limits of Emission Bandwidth Measurement

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.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.5.4 Test Procedure

Occupied Bandwidth & 26dBc Bandwidth

- 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 $\geq 3 \times \text{RBW}$.
- 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.
NOTE—Step 1), step 2), and step 3) may require iteration to adjust within the specified tolerances.
- 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 reference value by either of the following:
 - 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).
 - Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.
- 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.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.5.7 Test Result

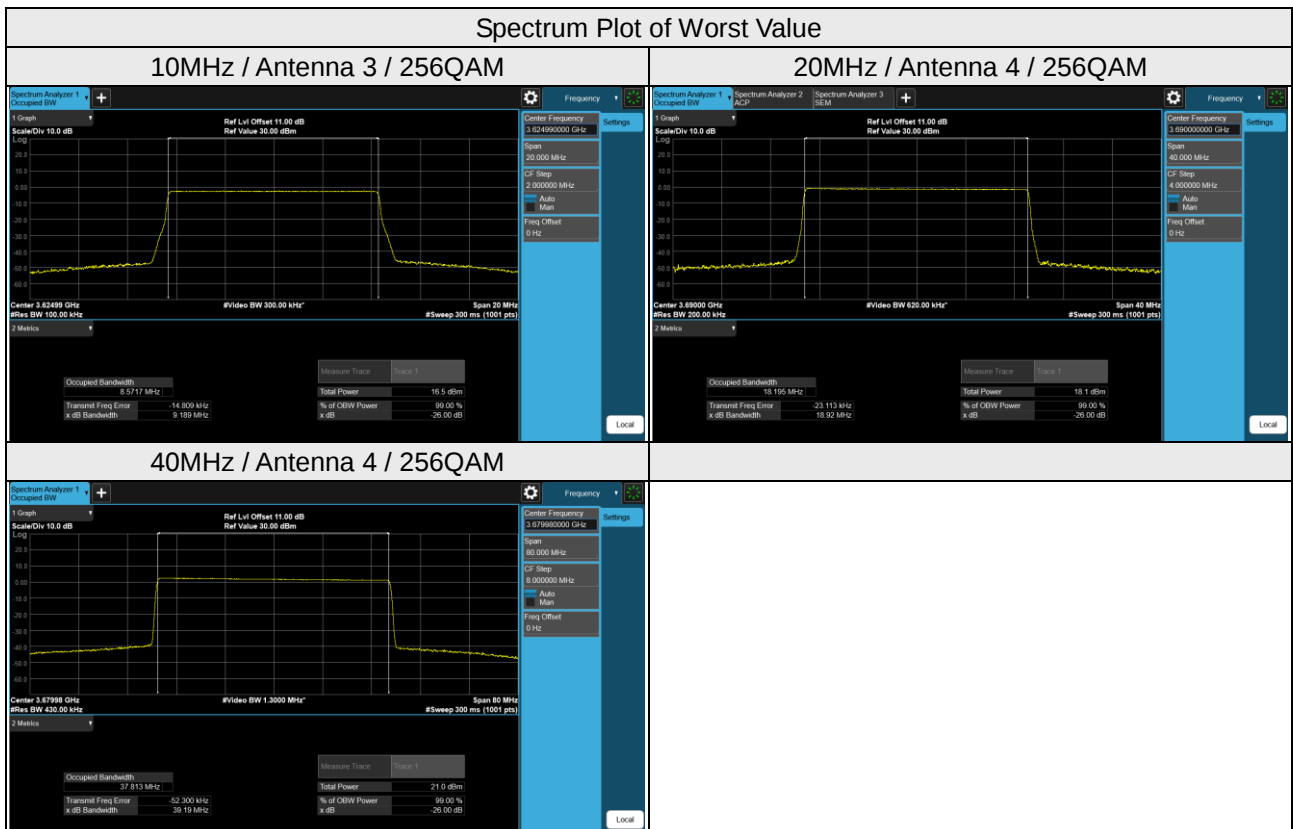
Mode A1

Occupied Bandwidth

NR Band 48, Channel Bandwidth 10MHz							
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000	3555.00	8.5696	8.5680	8.5682	8.5663	8.5694	8.5684
641666	3624.99	8.5677	8.5686	8.5671	8.5680	8.5694	8.5711
646332	3694.98	8.5668	8.5683	8.5672	8.5696	8.5658	8.5671
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000	3555.00	8.5649	8.5661	8.5684	8.5686	8.5671	8.5679
641666	3624.99	8.5688	8.5709	8.5717	8.5660	8.5687	8.5713
646332	3694.98	8.5668	8.5689	8.5679	8.5667	8.5686	8.5657

NR Band 48, Channel Bandwidth 20MHz							
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334	3560.01	18.1900	18.1910	18.1890	18.1890	18.1880	18.1900
641666	3624.99	18.1870	18.1900	18.1910	18.1920	18.1940	18.1920
646000	3690.00	18.1920	18.1920	18.1910	18.1910	18.1930	18.1920
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334	3560.01	18.1890	18.1900	18.1890	18.1890	18.1870	18.1870
641666	3624.99	18.1910	18.1890	18.1910	18.1910	18.1900	18.1930
646000	3690.00	18.1920	18.1930	18.1910	18.1920	18.1920	18.1950

NR Band 48, Channel Bandwidth 40MHz							
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
638000	3570.00	37.788	37.788	37.785	37.782	37.784	37.783
641666	3624.99	37.801	37.800	37.799	37.799	37.798	37.796
645332	3679.98	37.808	37.807	37.811	37.809	37.813	37.813
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
638000	3570.00	37.789	37.785	37.789	37.790	37.788	37.786
641666	3624.99	37.803	37.801	37.802	37.798	37.797	37.797
645332	3679.98	37.805	37.808	37.805	37.810	37.812	37.813



26dB Bandwidth

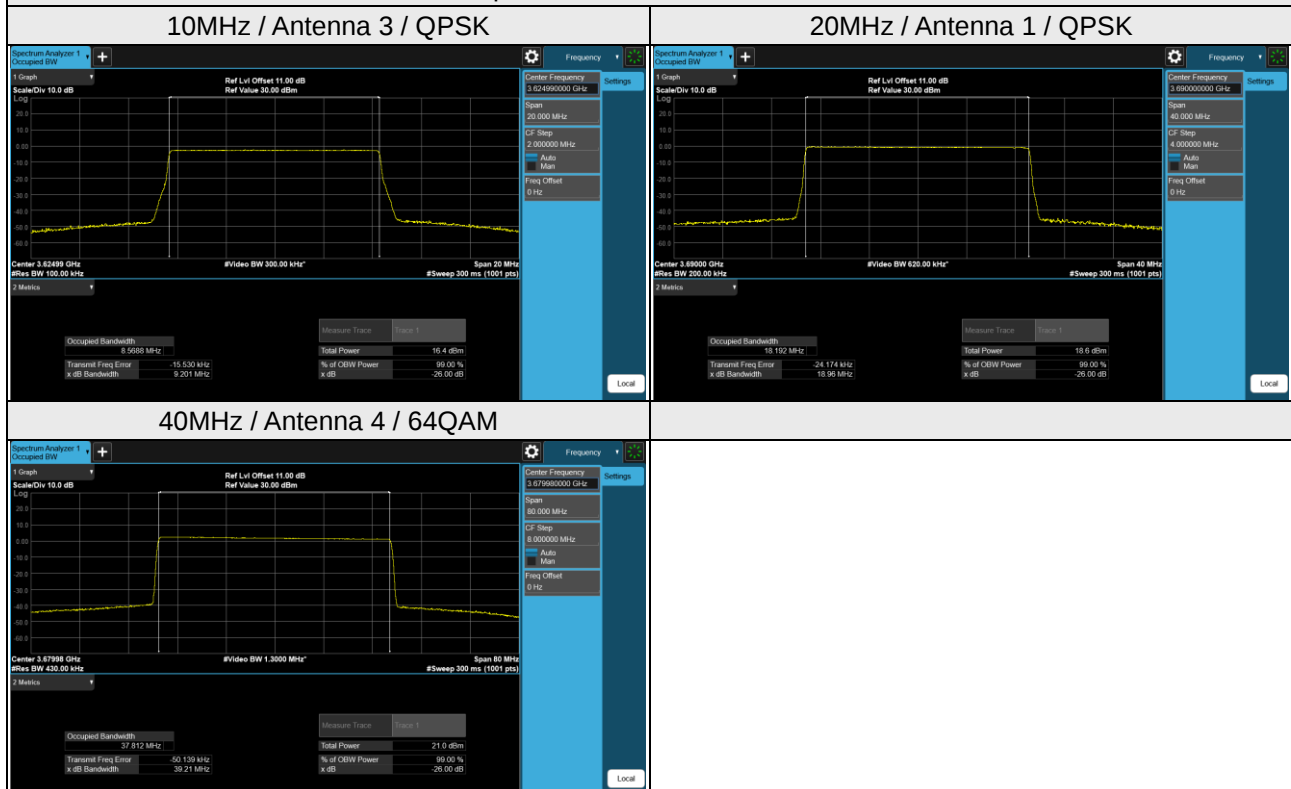
NR Band 48, Channel Bandwidth 10MHz							
Channel	Frequency (MHz)	26dB Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000	3555.00	9.18	9.15	9.15	9.17	9.16	9.14
641666	3624.99	9.16	9.19	9.18	9.18	9.19	9.19
646332	3694.98	9.13	9.12	9.17	9.16	9.14	9.14
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000	3555.00	9.16	9.14	9.15	9.14	9.18	9.14
641666	3624.99	9.20	9.20	9.19	9.16	9.17	9.19
646332	3694.98	9.14	9.12	9.14	9.13	9.14	9.16

NR Band 48, Channel Bandwidth 20MHz							
Channel	Frequency (MHz)	26dB Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334	3560.01	18.94	18.94	18.92	18.93	18.93	18.92
641666	3624.99	18.93	18.94	18.92	18.95	18.96	18.93
646000	3690.00	18.96	18.93	18.94	18.92	18.92	18.94
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334	3560.01	18.92	18.93	18.92	18.94	18.94	18.91
641666	3624.99	18.95	18.95	18.92	18.93	18.94	18.95
646000	3690.00	18.93	18.94	18.94	18.93	18.94	18.92

NR Band 48, Channel Bandwidth 40MHz

Channel	Frequency (MHz)	26dB Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
638000	3570.00	39.18	39.20	39.19	39.19	39.19	39.19
641666	3624.99	39.19	39.19	39.19	39.19	39.20	39.19
645332	3679.98	39.20	39.17	39.19	39.18	39.20	39.19
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
638000	3570.00	39.19	39.20	39.19	39.19	39.20	39.19
641666	3624.99	39.20	39.20	39.20	39.20	39.19	39.20
645332	3679.98	39.19	39.20	39.19	39.20	39.21	39.19

Spectrum Plot of Worst Value



Mode A3

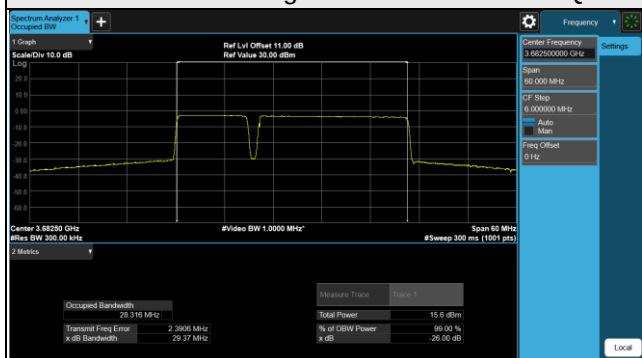
Occupied Bandwidth

NR Band 48, Channel Bandwidth 10MHz+20MHz Contiguous							
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000+638000	3555+3570	28.265	28.267	28.266	28.252	28.250	28.248
641000+642000	3615+3630	28.279	28.279	28.280	28.290	28.291	28.291
645000+646000	3675+3690	28.293	28.294	28.316	28.281	28.282	28.279
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000+638000	3555+3570	28.260	28.253	28.262	28.248	28.251	28.251
641000+642000	3615+3630	28.309	28.301	28.311	28.296	28.296	28.297
645000+646000	3675+3690	28.282	28.288	28.288	28.278	28.275	28.273

NR Band 48, Channel Bandwidth 20MHz+20MHz Contiguous							
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334+638668	3560.01+3580.02	38.024	38.025	38.027	38.024	38.022	38.024
641000+642334	3615+3635.01	38.059	38.056	38.059	38.073	38.077	38.076
664666+646000	3669.99+3690	38.064	38.590	38.063	38.046	38.040	38.041
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334+638668	3560.01+3580.02	38.012	38.018	38.010	38.013	38.019	38.024
641000+642334	3615+3635.01	38.113	38.113	38.107	38.083	38.090	38.085
664666+646000	3669.99+3690	38.044	38.054	38.054	38.022	38.025	38.032

Spectrum Plot of Worst Value

10MHz+20MHz Contiguous / Antenna 1 / 256QAM



20MHz+20MHz Contiguous / Antenna 1 / 64QAM



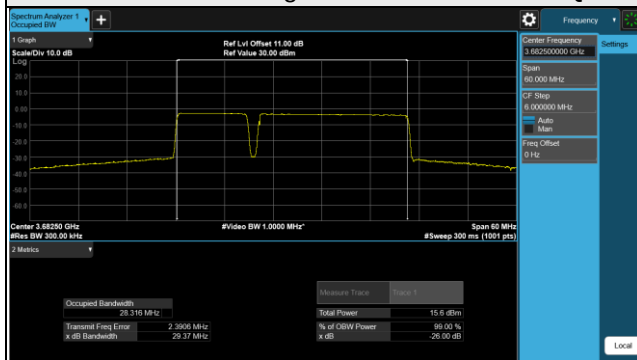
26dB Bandwidth

NR Band 48, Channel Bandwidth 10MHz+20MHz Contiguous							
Channel	Frequency (MHz)	26dB Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000+638000	3555+3570	29.30	29.32	29.31	29.29	29.30	29.31
641000+642000	3615+3630	29.32	29.34	29.32	29.33	29.34	29.34
645000+646000	3675+3690	29.35	29.36	29.37	29.36	29.36	29.37
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000+638000	3555+3570	29.36	29.37	29.33	29.31	29.32	29.32
641000+642000	3615+3630	29.37	29.36	29.36	29.32	29.32	29.32
645000+646000	3675+3690	29.34	29.34	29.34	29.35	29.37	29.36

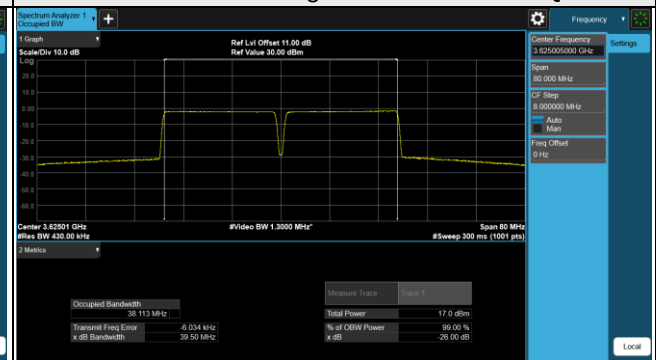
NR Band 48, Channel Bandwidth 20MHz+20MHz Contiguous							
Channel	Frequency (MHz)	26dB Bandwidth (MHz)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334+638668	3560.01+3580.02	39.42	39.44	39.42	39.43	39.43	39.43
641000+642334	3615+3635.01	39.45	39.44	39.45	39.45	39.46	39.45
664666+646000	3669.99+3690	39.42	39.42	39.43	39.44	39.44	39.43
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334+638668	3560.01+3580.02	39.44	39.45	39.45	39.41	39.42	39.42
641000+642334	3615+3635.01	39.50	39.50	39.49	39.46	39.44	39.45
664666+646000	3669.99+3690	39.44	39.47	39.47	39.43	39.43	39.43

Spectrum Plot of Worst Value

10MHz+20MHz Contiguous / Antenna 1 / 256QAM



20MHz+20MHz Contiguous / Antenna 3 / QPSK



Occupied Bandwidth

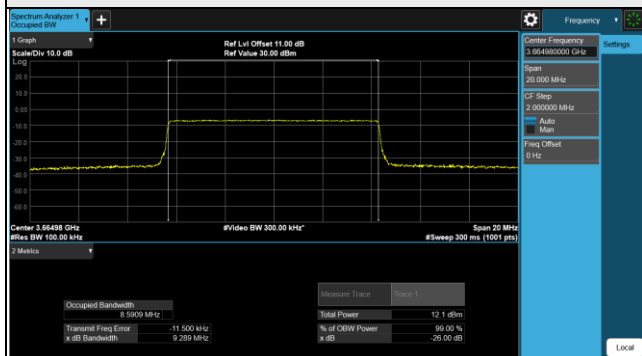
NR Band 48, Channel Bandwidth 10MHz+20MHz Non-Contiguous						
Bandwidth	Frequency	Modulation	Antenna	CC0	CC1	Total (MHz)
10M+20M	3555+3580.02	QPSK	1	8.58	18.21	26.79
			2	8.58	18.21	26.78
			3	8.59	18.21	26.80
			4	8.59	18.21	26.80
		64QAM	1	8.58	18.21	26.79
			2	8.58	18.21	26.79
			3	8.58	18.21	26.79
			4	8.59	18.22	26.80
		256QAM	1	8.58	18.21	26.79
			2	8.58	18.21	26.79
			3	8.59	18.21	26.80
			4	8.58	18.21	26.80
	3610.02+3635.04	QPSK	1	8.58	18.21	26.79
			2	8.58	18.22	26.80
			3	8.59	18.22	26.81
			4	8.59	18.22	26.81
		64QAM	1	8.59	18.21	26.80
			2	8.58	18.22	26.81
			3	8.59	18.23	26.82
			4	8.59	18.22	26.81
		256QAM	1	8.59	18.21	26.80
			2	8.58	18.22	26.80
			3	8.59	18.22	26.81
			4	8.58	18.22	26.80
	3664.98+3690	QPSK	1	8.59	18.23	26.81
			2	8.59	18.23	26.82
			3	8.59	18.23	26.82
			4	8.59	18.22	27.82
		64QAM	1	8.59	18.22	26.81
			2	8.59	18.22	26.81
			3	8.59	18.23	26.81
			4	8.59	18.23	26.82
		256QAM	1	8.58	18.22	26.80
			2	8.59	18.23	26.82
			3	8.59	18.23	26.82
			4	8.59	18.22	26.81

NR Band 48, Channel Bandwidth 20MHz+20MHz Non-Contiguous						
Bandwidth	Frequency	Modulation	Antenna	CC0	CC1	Total (MHz)
20M+20M	3560.01+3590.01	QPSK	1	18.20	18.20	36.40
			2	18.19	18.20	36.39
			3	18.20	18.21	36.41
			4	18.20	18.20	36.41
		64QAM	1	18.20	18.20	36.40
			2	18.20	18.21	36.41
			3	18.20	18.20	36.40
			4	18.20	18.21	36.40
		256QAM	1	18.20	18.20	36.40
			2	18.19	18.20	36.40
			3	18.20	18.21	36.41
			4	18.20	18.21	36.41
	3610.02+3640.02	QPSK	1	18.21	18.21	36.42
			2	18.21	18.21	36.42
			3	18.22	18.21	36.43
			4	18.21	18.21	36.42
		64QAM	1	18.21	18.21	36.42
			2	18.21	18.22	36.42
			3	18.21	18.21	36.42
			4	18.22	18.21	36.42
		256QAM	1	18.21	18.21	36.41
			2	18.21	18.21	36.42
			3	18.21	18.21	36.42
			4	18.22	18.21	36.43
	3660+3690	QPSK	1	18.21	18.22	36.42
			2	18.19	18.20	36.39
			3	18.21	18.21	36.42
			4	18.21	18.21	36.42
		64QAM	1	18.21	18.22	36.43
			2	18.21	18.21	36.42
			3	18.21	18.21	36.42
			4	18.20	18.21	36.41
		256QAM	1	18.21	18.21	36.42
			2	18.21	18.21	36.43
			3	18.21	18.21	36.42
			4	18.21	18.21	36.42

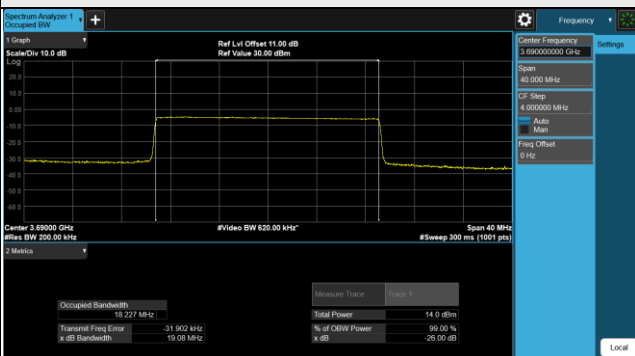
Spectrum Plot of Worst Value

10MHz+20MHz Non-Contiguous / Antenna 3 / 256QAM

3664.98 MHz

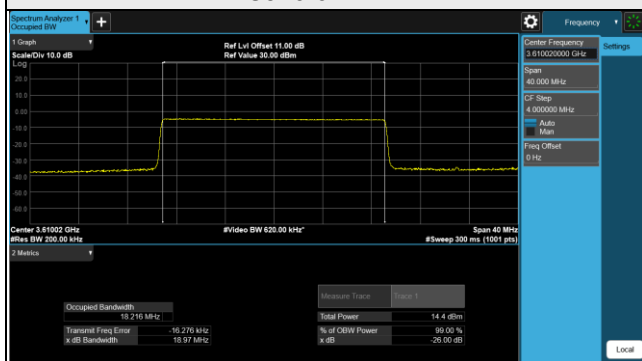


3690.00 MHz

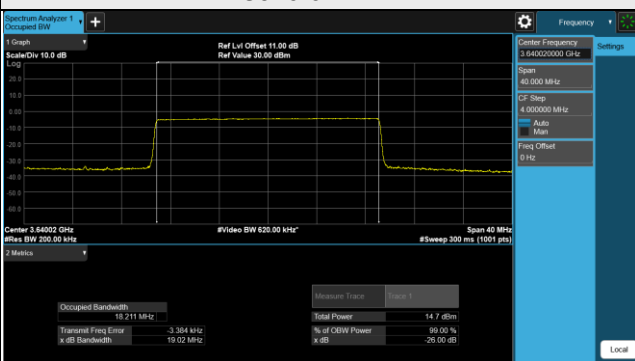


20MHz+20MHz Non-Contiguous / Antenna 3 / QPSK

3610.02 MHz



3640.02 MHz



26dB Bandwidth

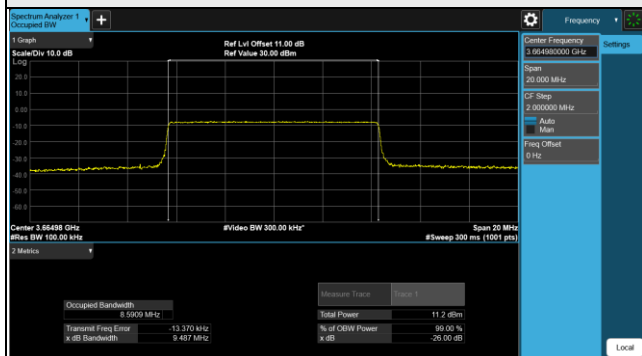
NR Band 48, Channel Bandwidth 10MHz+20MHz Non-Contiguous						
Bandwidth	Frequency	Modulation	Antenna	CC0	CC1	Total (MHz)
10M+20M	3555+3580.02	QPSK	1	9.21	18.99	28.20
			2	9.24	18.98	28.22
			3	9.30	19.04	28.34
			4	9.29	19.03	28.32
		64QAM	1	9.18	19.01	28.19
			2	9.22	19.02	28.24
			3	9.24	19.03	28.27
			4	9.28	19.04	28.32
		256QAM	1	9.26	19.00	28.26
			2	9.22	18.99	28.21
			3	9.27	19.05	28.32
			4	9.30	19.02	28.32
	3610.02+3635.04	QPSK	1	9.21	19.04	28.25
			2	9.22	18.22	27.44
			3	9.33	19.03	28.36
			4	9.29	19.03	28.32
		64QAM	1	9.24	19.02	28.26
			2	9.29	19.05	28.34
			3	9.32	19.01	28.33
			4	9.25	19.05	28.30
		256QAM	1	9.24	19.02	28.26
			2	9.20	19.07	28.27
			3	9.31	19.05	28.36
			4	9.35	19.02	28.37
	3664.98+3690	QPSK	1	9.37	19.06	28.43
			2	9.42	19.08	28.50
			3	9.34	19.06	28.40
			4	9.35	19.08	28.43
		64QAM	1	9.26	19.07	28.33
			2	9.49	19.06	28.55
			3	9.34	19.06	28.40
			4	9.31	19.06	28.37
		256QAM	1	9.27	19.08	28.35
			2	9.35	19.02	28.37
			3	9.29	19.08	28.37
			4	9.34	19.04	28.38

NR Band 48, Channel Bandwidth 20MHz+20MHz Non-Contiguous						
Bandwidth	Frequency	Modulation	Antenna	CC0	CC1	Total (MHz)
20M+20M	3560.01+3590.01	QPSK	1	18.95	18.99	37.94
			2	18.94	18.99	37.93
			3	18.99	18.97	37.96
			4	18.99	18.97	37.96
		64QAM	1	18.96	18.98	37.94
			2	18.95	18.97	37.92
			3	18.97	19.05	38.02
			4	18.97	18.98	37.95
		256QAM	1	18.96	18.96	37.92
			2	18.95	18.97	37.92
			3	18.97	19.00	37.97
			4	18.97	18.98	37.95
	3610.02+3640.02	QPSK	1	19.04	19.00	38.04
			2	18.99	18.97	37.96
			3	18.97	19.02	37.99
			4	18.97	18.98	37.95
		64QAM	1	18.99	19.00	37.99
			2	18.98	19.01	37.99
			3	18.97	19.00	37.97
			4	19.00	18.99	37.99
		256QAM	1	18.98	19.03	38.01
			2	19.00	19.03	38.03
			3	18.98	19.02	38.00
			4	18.97	19.02	37.99
	3660+3690	QPSK	1	19.00	18.98	37.98
			2	18.94	18.99	37.93
			3	18.99	18.95	37.94
			4	19.01	19.02	38.03
		64QAM	1	19.02	19.02	38.04
			2	19.02	19.01	38.03
			3	19.03	19.00	38.03
			4	19.02	18.98	38.00
		256QAM	1	18.99	19.02	38.01
			2	19.01	18.96	37.97
			3	19.01	18.97	37.98
			4	19.02	18.97	37.99

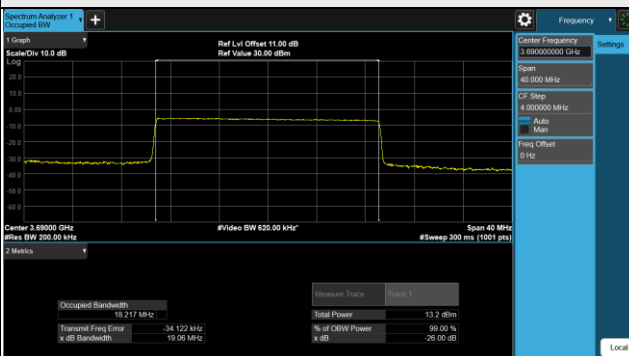
Spectrum Plot of Worst Value

10MHz+20MHz Non-Contiguous / Antenna 2 / 64QAM

3664.98 MHz



3690.00 MHz

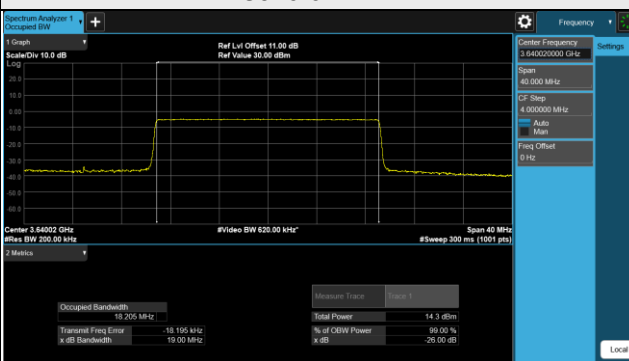


20MHz+20MHz Non-Contiguous / Antenna 1 / QPSK

3610.02 MHz



3640.02 MHz

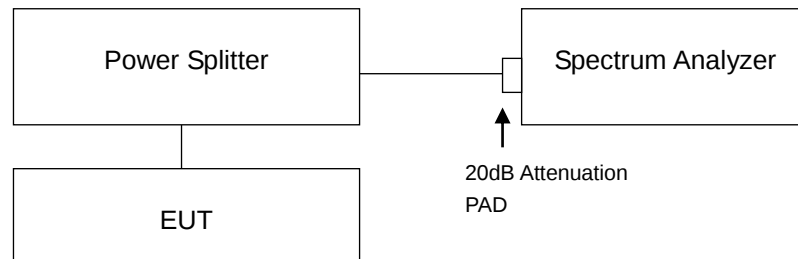


4.6 Peak to Average Ratio Measurement

4.6.1 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.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.6.4 Test Procedures

- 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%.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.6.7 Test Results

Mode A1

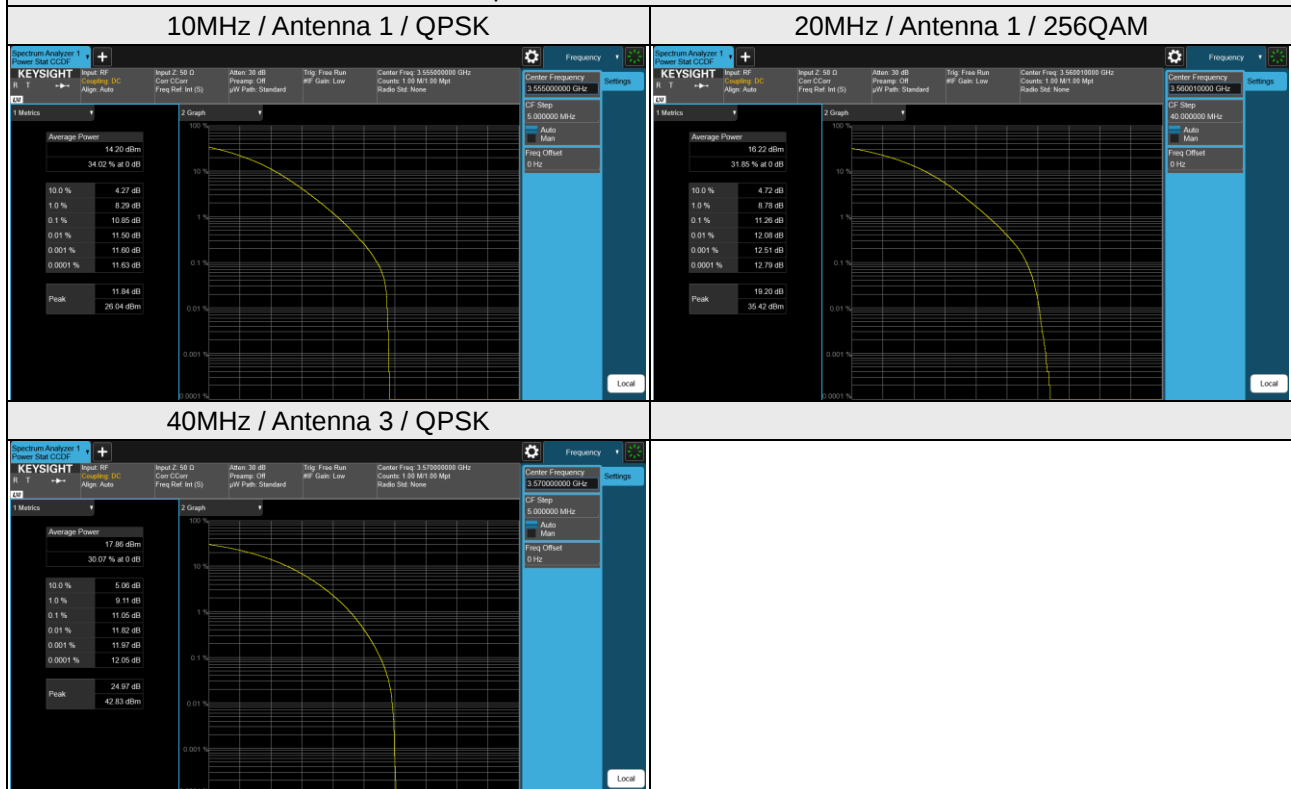
NR Band 48, Channel Bandwidth 10MHz							
Channel	Frequency (MHz)	Peak To Average Ratio (dB)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000	3555.00	10.85	10.55	10.67	10.62	9.98	9.28
641666	3624.99	9.33	8.80	9.18	10.04	9.35	9.89
646332	3694.98	9.49	9.50	9.96	9.38	8.78	9.27
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000	3555.00	10.19	9.85	10.28	10.77	10.38	10.66
641666	3624.99	9.30	9.93	9.27	9.89	10.23	9.81
646332	3694.98	9.48	9.31	9.37	9.62	9.16	9.31

NR Band 48, Channel Bandwidth 20MHz							
Channel	Frequency (MHz)	Peak To Average Ratio (dB)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334	3560.01	10.58	10.82	11.26	9.91	10.32	10.60
641666	3624.99	9.37	9.45	9.01	9.99	9.33	9.62
646000	3690.00	9.55	9.35	8.71	9.31	9.23	10.06
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334	3560.01	10.25	10.31	10.74	10.81	10.69	9.96
641666	3624.99	10.04	9.72	9.69	10.18	10.06	10.51
646000	3690.00	9.41	9.43	10.18	9.37	10.13	9.83

NR Band 48, Channel Bandwidth 40MHz

Channel	Frequency (MHz)	Peak To Average Ratio (dB)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
638000	3570.00	9.53	10.18	9.74	9.03	8.75	9.53
641666	3624.99	10.16	10.11	10.10	9.09	9.53	9.16
645332	3679.98	9.51	9.41	9.32	10.20	9.37	9.38
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
638000	3570.00	11.05	9.46	10.11	9.52	9.08	9.05
641666	3624.99	9.05	9.13	9.92	9.71	9.37	9.87
645332	3679.98	9.54	10.18	9.66	9.33	9.77	9.46

Spectrum Plot of Worst Value



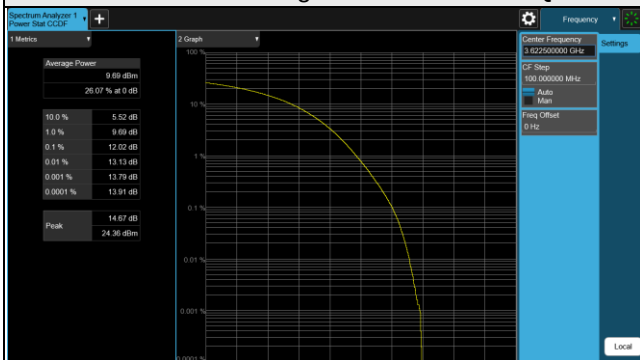
Mode A3

NR Band 48, Channel Bandwidth 10MHz+20MHz Contiguous							
Channel	Frequency (MHz)	Peak To Average Ratio (dB)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000+638000	3555+3570	11.05	10.12	10.33	10.01	10.46	9.37
641000+642000	3615+3630	9.37	10.87	10.52	12.02	9.18	9.13
645000+646000	3675+3690	10.11	8.88	9.64	8.54	9.01	10.48
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637000+638000	3555+3570	8.51	8.37	10.22	10.75	9.22	10.13
641000+642000	3615+3630	9.56	9.09	10.31	9.87	9.52	8.68
645000+646000	3675+3690	9.87	8.42	11.38	9.06	10.73	10.65

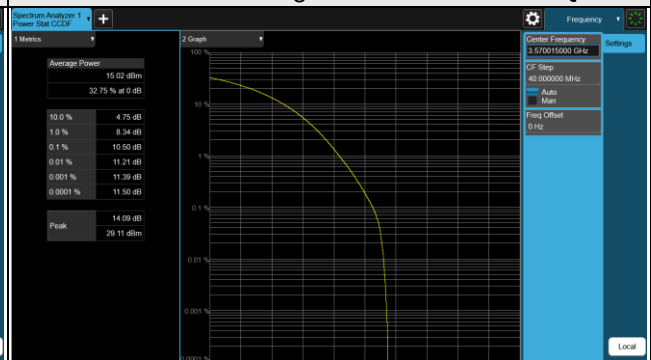
NR Band 48, Channel Bandwidth 20MHz+20MHz Contiguous							
Channel	Frequency (MHz)	Peak To Average Ratio (dB)					
		Antenna 1			Antenna 2		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334+638668	3560.01+3580.02	9.54	10.21	9.47	10.00	10.50	10.11
641000+642334	3615+3635.01	9.69	9.39	9.40	9.51	9.25	9.54
664666+646000	3669.99+3690	9.15	9.65	9.51	9.78	9.28	9.05
Channel	Frequency (MHz)	Antenna 3			Antenna 4		
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
		QPSK	64QAM	256QAM	QPSK	64QAM	256QAM
637334+638668	3560.01+3580.02	9.18	9.55	9.66	10.39	9.53	10.29
641000+642334	3615+3635.01	10.24	9.16	9.61	9.49	9.55	9.65
664666+646000	3669.99+3690	8.95	10.05	8.57	9.07	9.42	8.74

Spectrum Plot of Worst Value

10MHz+20MHz Contiguous / Antenna 2 / QPSK



20MHz+20MHz Contiguous / Antenna 2 / 64QAM



NR Band 48, Channel Bandwidth 10MHz+20MHz Non-Contiguous

Channel	Frequency (MHz)	Peak To Average Ratio (dB)											
		Antenna 1						Antenna 2					
		QPSK		64QAM		256QAM		QPSK		64QAM		256QAM	
		CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1
637000+646000	3555+3580.02	10.78	9.74	9.27	9.92	10.10	9.92	9.14	10.43	9.44	9.68	10.65	9.20
639668+644000	3610.02+3635.04	9.35	9.55	9.73	9.33	9.45	10.02	9.33	8.79	9.67	9.11	9.52	9.04
641168+642502	3664.98+3690	9.44	9.10	9.99	9.67	9.44	10.40	9.86	9.36	9.26	9.38	8.99	8.53
Channel	Frequency (MHz)	Antenna 3						Antenna 4					
		QPSK		64QAM		256QAM		QPSK		64QAM		256QAM	
		CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1
		CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1
637000+646000	3555+3580.02	9.55	9.26	9.38	8.52	9.43	8.70	9.50	9.51	10.90	9.15	8.79	8.94
639668+644000	3610.02+3635.04	9.86	8.99	9.38	8.95	8.91	9.37	9.21	9.13	9.64	9.77	9.61	9.34
641168+642502	3664.98+3690	9.12	8.88	8.55	9.67	9.35	9.51	8.71	9.25	9.22	8.76	9.12	8.89

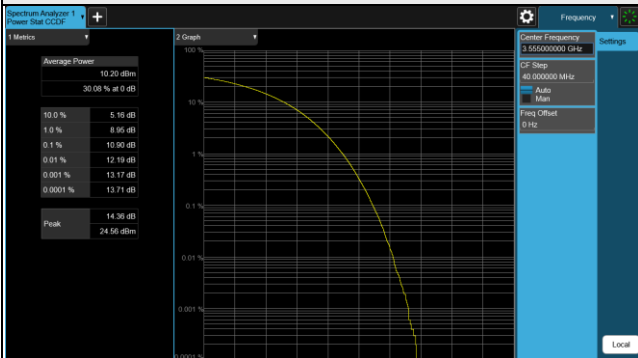
NR Band 48, Channel Bandwidth 20MHz+20MHz Non-Contiguous

Channel	Frequency (MHz)	Peak To Average Ratio (dB)											
		Antenna 1						Antenna 2					
		QPSK		64QAM		256QAM		QPSK		64QAM		256QAM	
		CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1
637334+646000	3560.01+3590.01	9.76	9.47	9.58	10.10	9.76	9.44	9.61	10.24	10.23	9.59	9.68	9.30
639668+643668	3610.02+3640.02	8.77	9.40	9.28	9.59	9.35	8.99	9.31	8.30	9.13	9.90	9.96	9.09
640834+642502	3660+3690	9.50	9.25	10.01	9.03	9.25	9.86	8.85	9.55	8.78	9.69	8.90	8.91
Channel	Frequency (MHz)	Antenna 3						Antenna 4					
		QPSK		64QAM		256QAM		QPSK		64QAM		256QAM	
		CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1
		CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1	CC0	CC1
637334+646000	3560.01+3590.01	9.28	9.37	9.53	9.54	9.69	9.64	9.57	8.87	9.99	9.03	9.91	9.20
639668+643668	3610.02+3640.02	9.76	9.34	9.51	9.82	9.96	9.47	9.34	9.29	9.57	9.84	9.70	8.95
640834+642502	3660+3690	9.22	9.03	9.15	9.37	8.92	8.61	9.73	8.99	9.10	9.66	9.66	9.25

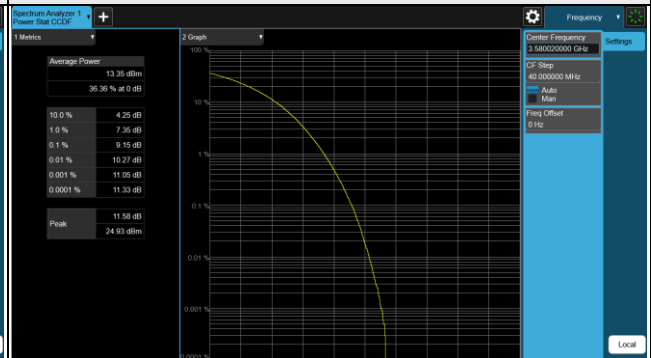
Spectrum Plot of Worst Value

10MHz+20MHz Non-Contiguous / Antenna 4 / 64QAM

3555 MHz

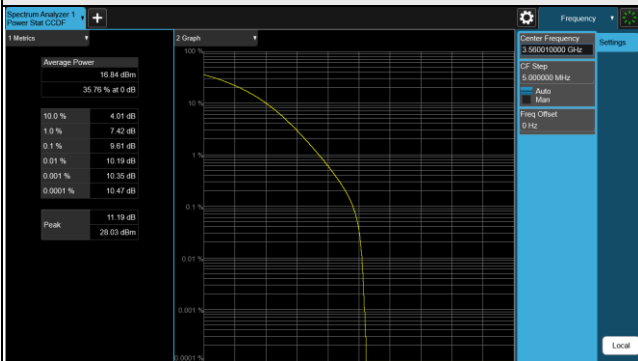


3580.02 MHz

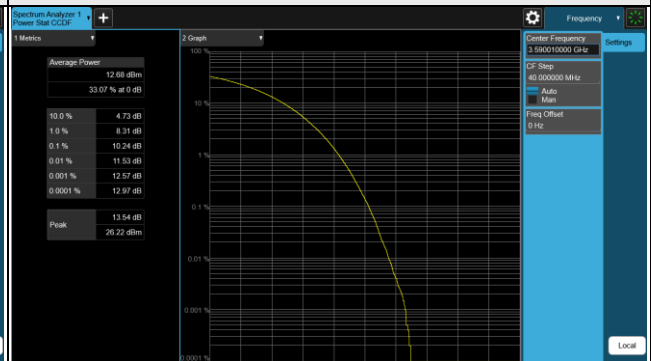


20MHz+20MHz Non-Contiguous / Antenna 2 / QPSK

3560.01 MHz



3590.01 MHz

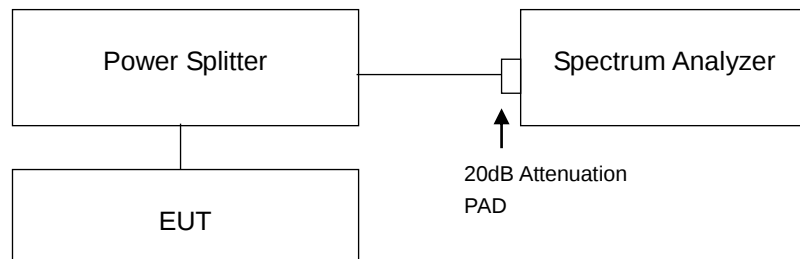


4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

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

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.7.4 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 are from 9 kHz to 40GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement. Detector = Average.
- Measuring frequency band edge, 20dB attenuation pad is connected with spectrum. 1% of the fundamental emission bandwidth is used for conducted emission measurement.

*Spectrum Ref Lvl offset 17.02dB = 1dB (Cable loss) + 10dB (Attenuator) + 6.02 (10log(4TX))

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Conditions

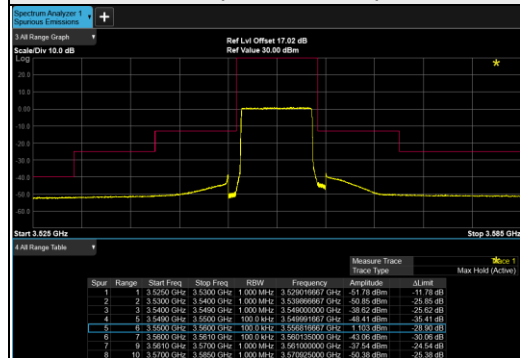
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

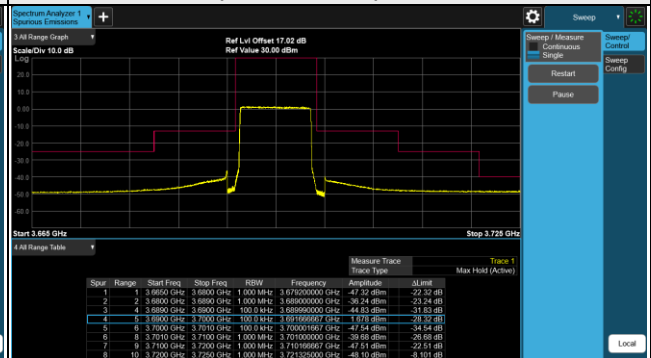
Mode A1
Antenna 1

NR Band 48, Channel Bandwidth 10MHz

Channel 637000 (3555.00MHz)



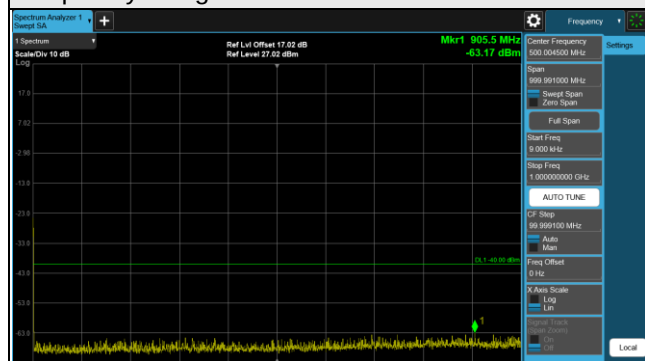
Channel 646332 (3694.98MHz)



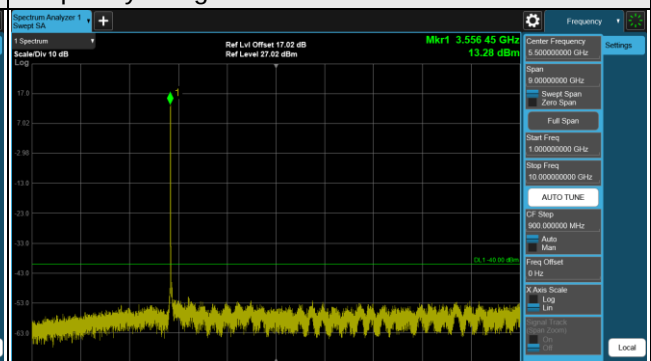
NR Band 48, Channel Bandwidth 10MHz

Channel 637000 (3555.00MHz)

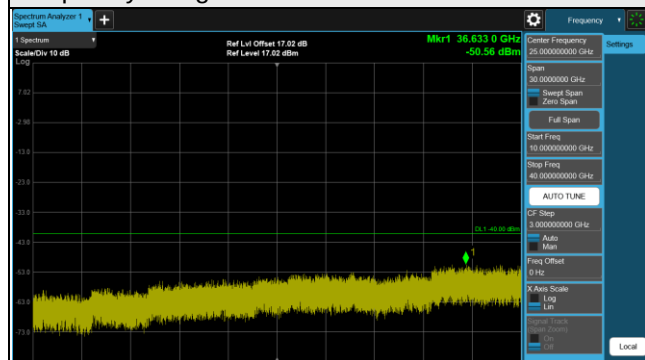
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz

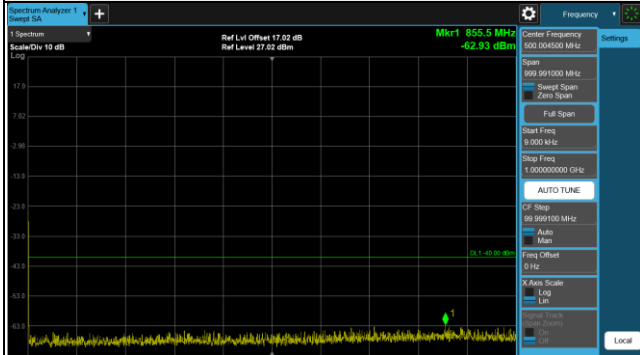


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

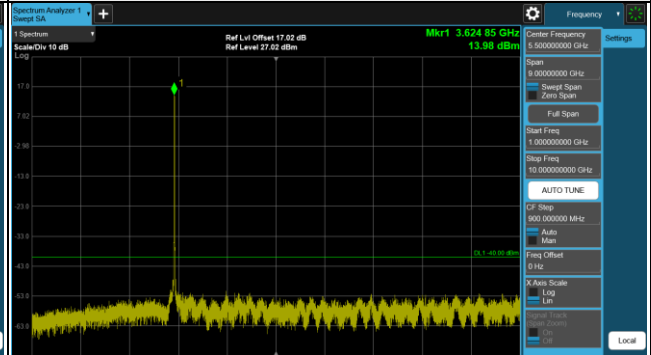
NR Band 48, Channel Bandwidth 10MHz

Channel 641666 (3624.99MHz)

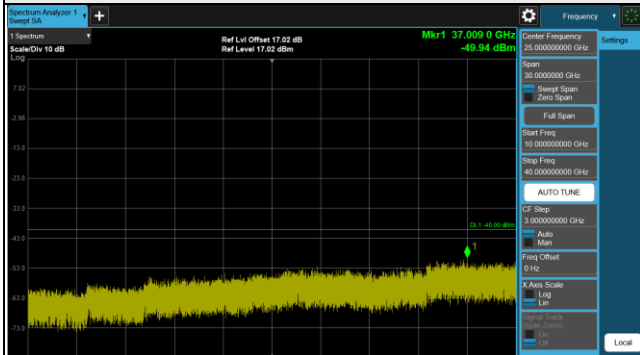
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz

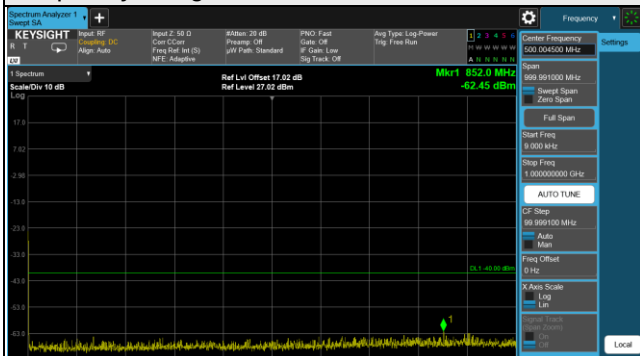


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

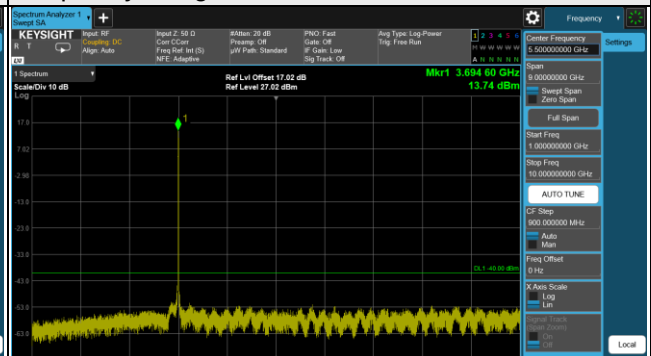
NR Band 48, Channel Bandwidth 10MHz

Channel 646332 (3694.98MHz)

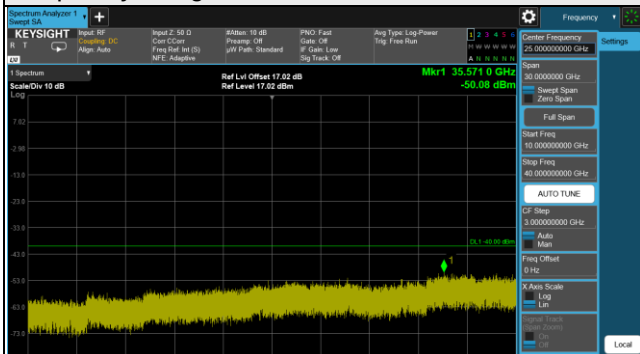
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



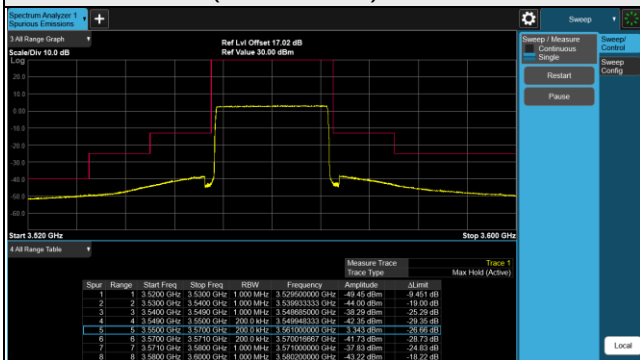
Frequency Range : 10GHz ~ 40GHz



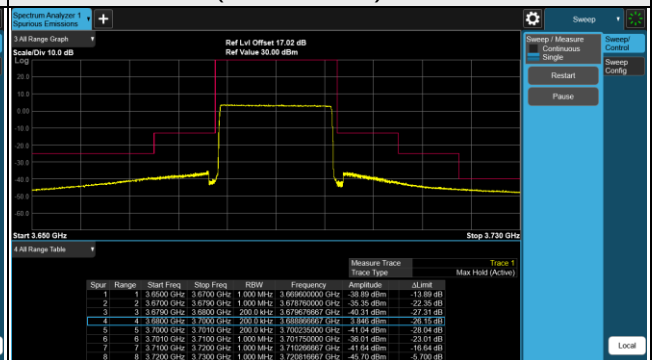
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

NR Band 48, Channel Bandwidth 20MHz

Channel 637334 (3560.01MHz)



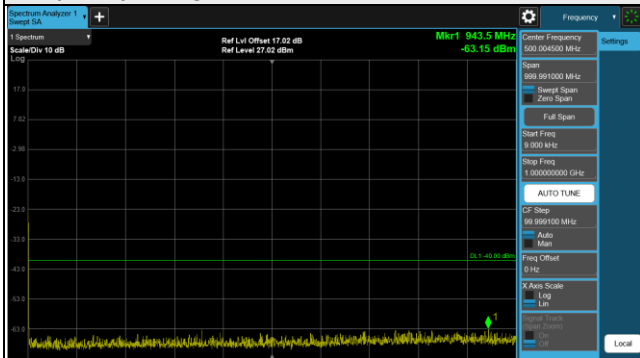
Channel 646000 (3690.00MHz)



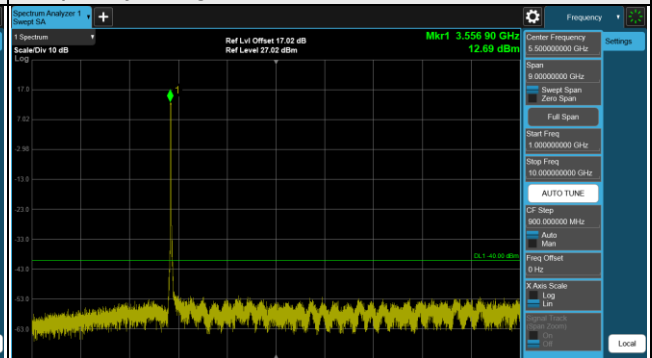
NR Band 48, Channel Bandwidth 20MHz

Channel 637334 (3560.01MHz)

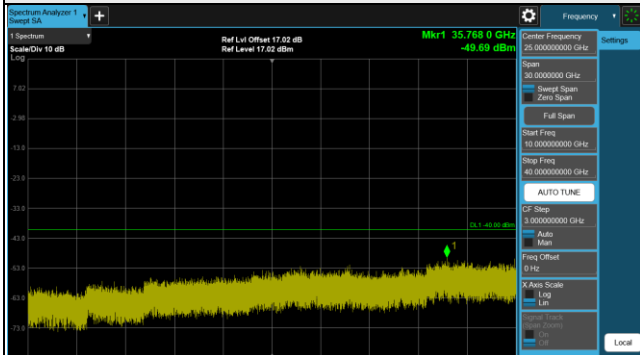
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz

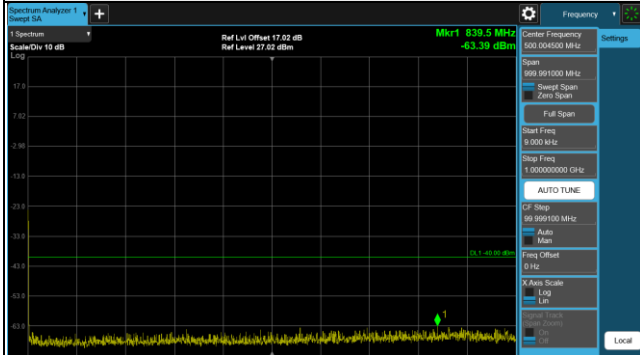


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

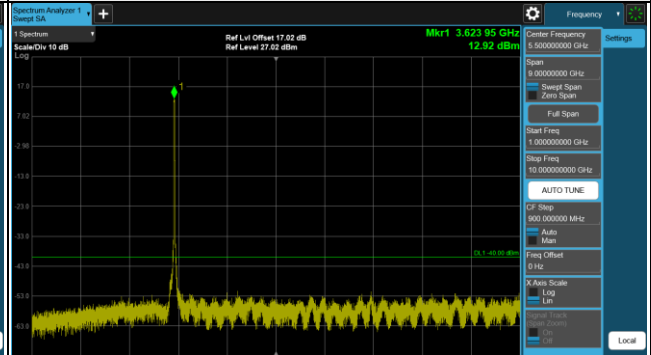
NR Band 48, Channel Bandwidth 20MHz

Channel 641666 (3624.99MHz)

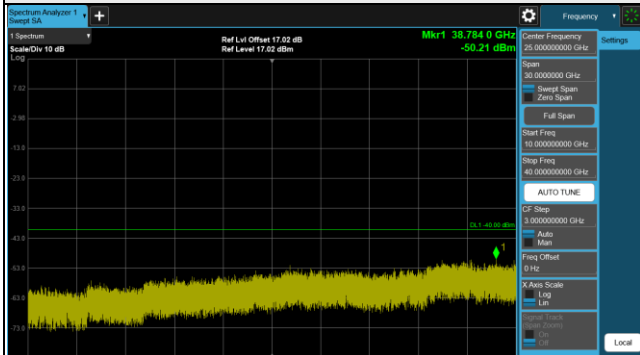
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz

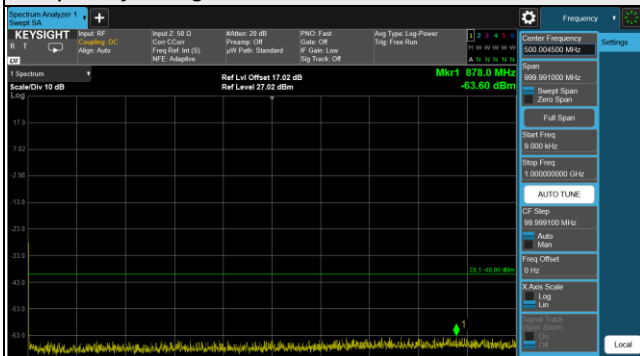


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

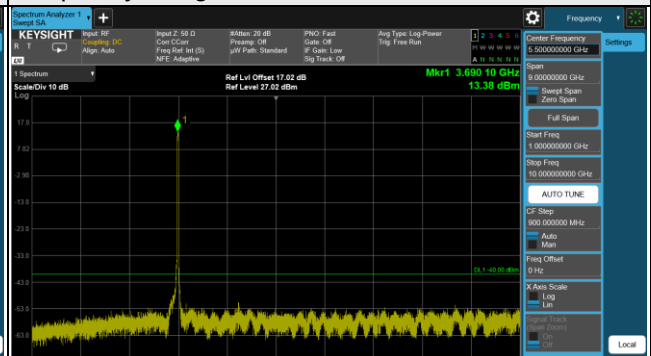
NR Band 48, Channel Bandwidth 20MHz

Channel 646000 (3690.00MHz)

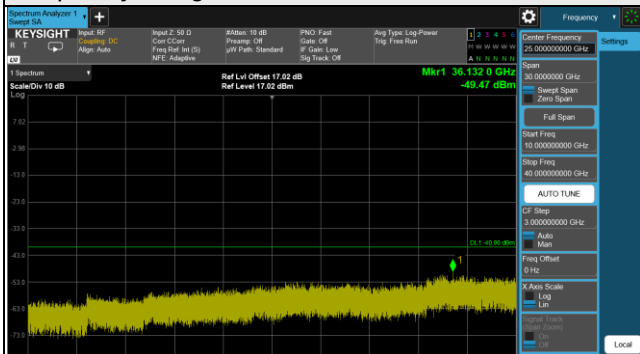
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz



Note: The signal at 9 kHz is IF signal from spectrum analyzer.

NR Band 48, Channel Bandwidth 40MHz

Channel 638000 (3570.00MHz)



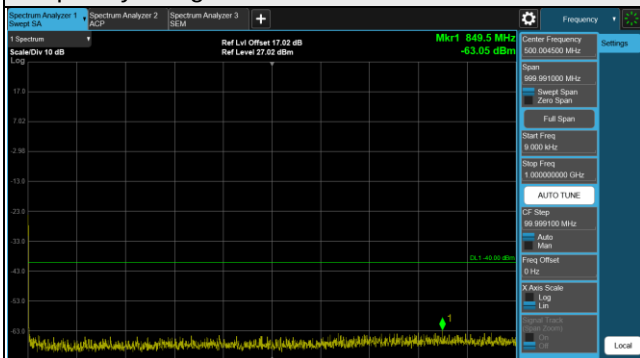
Channel 645332 (3679.98MHz)



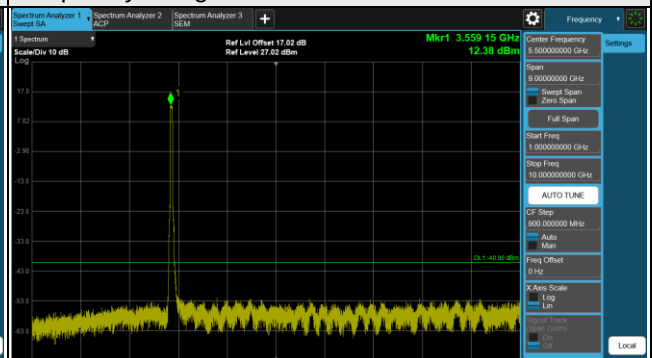
NR Band 48, Channel Bandwidth 40MHz

Channel 638000 (3570.00MHz)

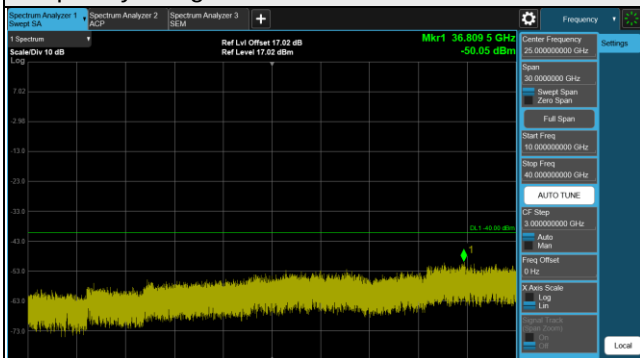
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz

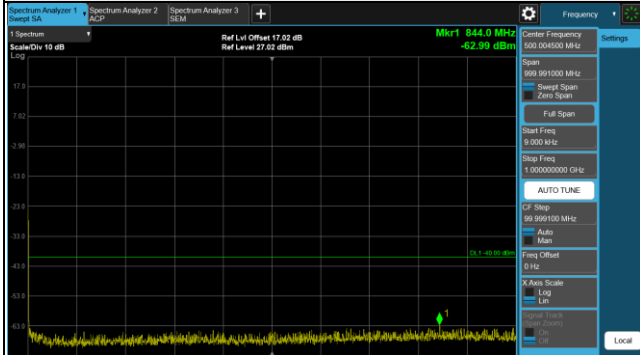


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

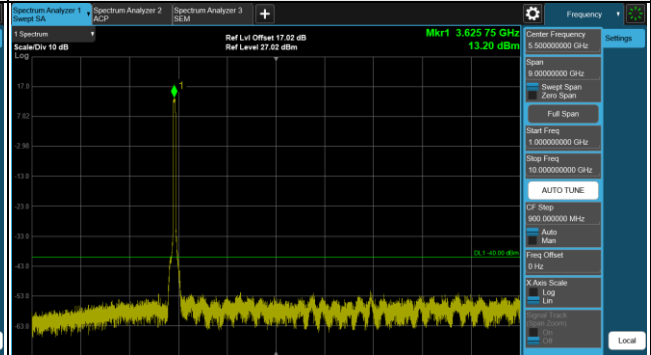
NR Band 48, Channel Bandwidth 40MHz

Channel 641666 (3624.99MHz)

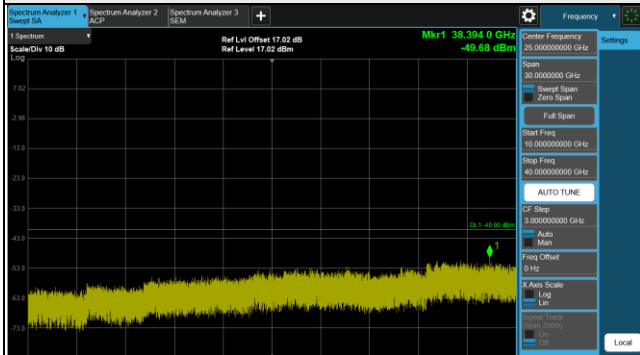
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz

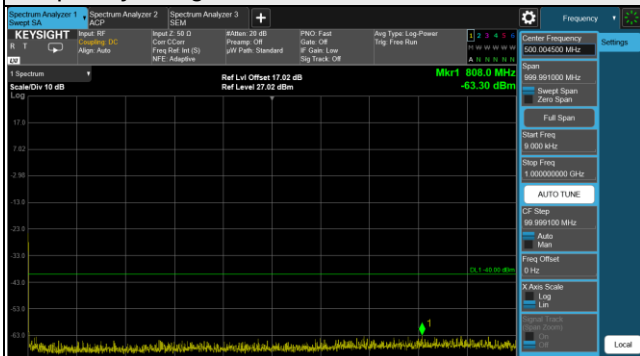


Note: The signal at 9 kHz is IF signal from spectrum analyzer.

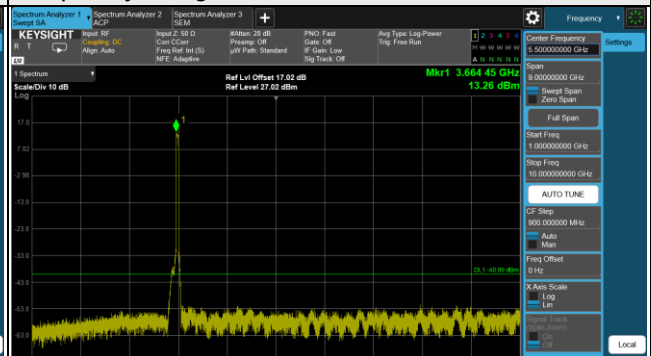
NR Band 48, Channel Bandwidth 40MHz

Channel 645332 (3679.98MHz)

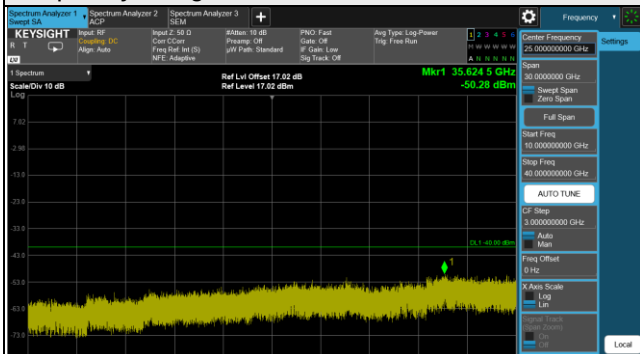
Frequency Range : 9kHz ~ 1GHz



Frequency Range : 1GHz ~ 10GHz



Frequency Range : 10GHz ~ 40GHz



Note: The signal at 9 kHz is IF signal from spectrum analyzer.