Supplemental “CA Mode” Test Report

Report No.:	RFBEOO-WTW-P22050206-1
FCC ID:	MADG2021-49-02B
Test Model:	G2021-49-02B
Received Date:	Apr. 29, 2022
Test Date:	May 17 ~ Jun. 24, 2022
Issued Date:	Jul. 06, 2022
Applicant:	Microelectronics Technology Inc.
Address:	No. 1, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location (1):	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number (1):	788550 / TW0003
Test Location (2):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number (2):	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RFBEOO-WTW-P22050206-1	Original release.	Jul. 06, 2022

1 Certificate of Conformity

Product:	Dual Mid-Band RU
Brand:	MTI
Test Model:	G2021-49-02B
Sample Status:	Engineering sample
Applicant:	Microelectronics Technology Inc.
Test Date:	May 17 ~ Jun. 24, 2022
Standards:	FCC Part 27, Subpart L FCC Part 2

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.

Prepared by : _____ , **Date:** Jul. 06, 2022

Polly Chien / Specialist

Approved by : _____ , **Date:** Jul. 06, 2022

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)(2)	Equivalent Isotropically radiated power	PASS	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1049 27.53	Occupied Bandwidth	PASS	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -48.53 dB at 5221.87MHz.

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) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Test Site and Instruments

For Radiated Spurious Emissions Test:

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver Keysight	N9038A	MY55420137	Jul. 22, 2021	Jul. 21, 2022
Pre-Amplifier EMCI	EMC001340	980142	Jun. 02, 2022	Jun. 01, 2023
Loop Antenna Electro-Metrics	EM-6879	264	Mar. 18, 2022	Mar. 17, 2023
RF Cable	5D-FB	LOOPCAB-001	Jan. 06, 2022	Jan. 05, 2023
RF Cable	5D-FB	LOOPCAB-002	Jan. 06, 2022	Jan. 05, 2023
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Oct. 26, 2021	Oct. 25, 2022
RF Cable	8D	966-3-1	Mar. 15, 2022	Mar. 14, 2023
RF Cable	8D	966-3-2	Mar. 15, 2022	Mar. 14, 2023
RF Cable	8D	966-3-3	Mar. 15, 2022	Mar. 14, 2023
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 23, 2021	Sep. 22, 2022
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 14, 2021	Nov. 13, 2022
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 10, 2022	Jan. 09, 2023
RF Cable	EMC104-SM-SM-1500	180504	Apr. 25, 2022	Apr. 24, 2023
RF Cable	EMC104-SM-SM-2000	180601	Jun. 08, 2021	Jun. 07, 2022
			Jun. 06, 2022	Jun. 05, 2023
RF Cable	EMC104-SM-SM-6000	210201	May 10, 2022	May 09, 2023
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 10, 2022	Jan. 09, 2023
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 14, 2021	Nov. 13, 2022
RF Cable	EMC102-KM-KM-1200	160924	Jan. 10, 2022	Jan. 09, 2023
RF Cable	EMC-KM-KM-4000	200214	Mar. 08, 2022	Mar. 07, 2023
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	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.
2. The test was performed in Hsinchu 966 Chamber No. 3.
3. Tested Date: May 17 ~ Jun. 24, 2022

For other test:

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer Keysight	N9030B	MY60070562	Jan. 06, 2022	Jan. 05, 2023
Fixed Attenuator Woken	00800N1G03H-30	01	NA	NA

Note:

1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: May 31 ~ Jun. 17, 2022

3 General Information

3.1 General Description of EUT

Product	Dual Mid-Band RU			
Brand	MTI			
Test Model	G2021-49-02B			
Status of EUT	Engineering sample			
Power Supply Rating	-40.5Vdc to -58.5Vdc			
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM			
Modulation Technology	5G NR FDD			
Operating Frequency	Band n66	Channel Bandwidth: 5MHz	ANT0	2112.5MHz ~ 2197.5MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 10MHz	ANT0	2115.0MHz ~ 2195.0MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 15MHz	ANT0	2117.5MHz ~ 2192.5MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 20MHz	ANT0	2120.0MHz ~ 2190.0MHz
			ANT1	
			ANT2	
			ANT3	
	Band n70	Channel Bandwidth: 5MHz	ANT0	1997.5MHz ~ 2017.5MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 10MHz	ANT0	2000.0MHz ~ 2015.0MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 15MHz	ANT0	2002.5MHz ~ 2012.5MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 20MHz	ANT0	2005.0MHz ~ 2010.0MHz
			ANT1	
			ANT2	
			ANT3	
		Channel Bandwidth: 25MHz	ANT0	2007.5MHz
			ANT1	
			ANT2	
			ANT3	

Emission Designator	BW combination	ANT NO.	QPSK	16QAM	64QAM	256QAM
	Single Carrier: Band n66 20MHz(60W)_Ch 438000 (2190.0MHz) + Band n70 25MHz(20W)_Ch 401500 (2007.5MHz)	ANT0	42M7G7D	42M7D7W	42M6D7W	42M6D7W
		ANT1	42M7G7D	42M7D7W	42M6D7W	42M6D7W
		ANT2	42M7G7D	42M6D7W	42M6D7W	42M6D7W
		ANT3	42M7G7D	42M7D7W	42M6D7W	42M6D7W
	Single Carrier: Band n66 20MHz(40W)_Ch 438000 (2190.0MHz) + Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)	ANT0	42M7G7D	42M7D7W	42M6D7W	42M6D7W
		ANT1	42M7G7D	42M7D7W	42M6D7W	42M6D7W
		ANT2	42M7G7D	42M6D7W	42M6D7W	42M6D7W
		ANT3	42M7G7D	42M7D7W	42M6D7W	42M6D7W
	CA Contiguous: Band n66 20MHz(30W)+20MHz(30W)_(Ch 434000 (2170.0MHz)+Ch 438000 (2190.0MHz))+ Band n70 25MHz(20W)_Ch 401500 (2007.5MHz)	ANT0	62M6G7D	62M6D7W	62M4D7W	62M4D7W
		ANT1	62M6G7D	62M6D7W	62M5D7W	62M4D7W
		ANT2	62M6G7D	62M6D7W	62M4D7W	62M4D7W
		ANT3	62M6G7D	62M6D7W	62M4D7W	62M4D7W
	CA Contiguous: Band n66 20MHz(20W)+20MHz(20W)_(Ch 434000 (2170.0MHz)+Ch 438000 (2190.0MHz))+ Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)	ANT0	62M6G7D	62M6D7W	62M4D7W	62M4D7W
		ANT1	62M6G7D	62M6D7W	62M4D7W	62M4D7W
		ANT2	62M6G7D	62M6D7W	62M4D7W	62M4D7W
		ANT3	62M6G7D	62M6D7W	62M4D7W	62M4D7W
Antenna Type	Directional Cross-Polarized Sector antenna with Band n66 Gain = 14 dBi Band n70 Gain = 16 dBi					
Antenna Connector	4x4.3-10 Female					
Accessory Device	NA					
Data Cable Supplied	NA					

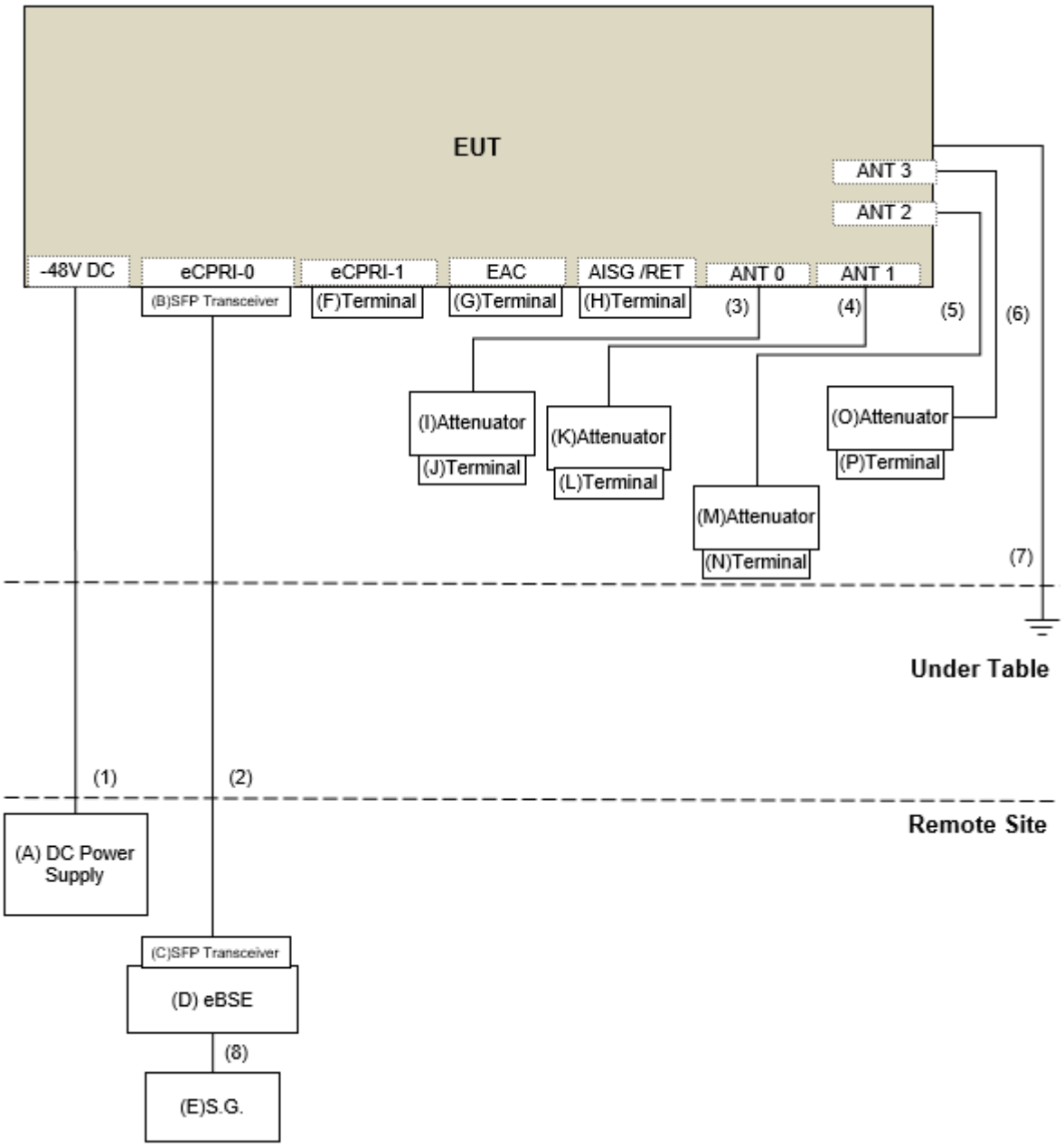
Note:

1. The EUT incorporates a MIMO function.

Band n66			
Channel Bandwidth	Modulation	TX & RX configuration	
5MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
10MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
15MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
20MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
Band n70			
Channel Bandwidth	Modulation	TX & RX configuration	
5MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
10MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
15MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
20MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX
25MHz	QPSK, 16QAM, 64QAM, 256QAM	4TX	4RX

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.
3. 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.
4. Based on the maximum RF power (conducted & EIRP) listed in this report, considerations pertaining to the maximum allowed EIRP (conducted power level), signal type and antenna gain should be considered for each installation.

3.2 Configuration of System under Test



3.2.1 Description of Support Units

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

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	DC Power Supply	NA	NA	NA	NA	Supplied by client
B	SFP Transceiver	NA	NA	NA	NA	Supplied by client
C	SFP Transceiver	NA	NA	NA	NA	Supplied by client
D	eBSE (Note 2)	NA	NA	NA	NA	Supplied by client
E	S.G	Agilent	E4438C	NA	NA	Provided by Lab
F	Terminal	NA	NA	NA	NA	Supplied by client
G	Terminal	NA	NA	NA	NA	Supplied by client
H	Terminal	NA	NA	NA	NA	Supplied by client
I	Attenuator	NA	NA	NA	NA	Supplied by client
J	Terminal	NA	NA	NA	NA	Supplied by client
K	Attenuator	NA	NA	NA	NA	Supplied by client
L	Terminal	NA	NA	NA	NA	Supplied by client
M	Attenuator	NA	NA	NA	NA	Supplied by client
N	Terminal	NA	NA	NA	NA	Supplied by client
O	Attenuator	NA	NA	NA	NA	Supplied by client
P	Terminal	NA	NA	NA	NA	Supplied by client

NOTE:

1. All power cords of the above support units are non-shielded (1.8 m).
2. eBSE: Based Station Emulator which is to transmit/receive the waveform

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	DC Power Cable	1	10	Yes	0	Supplied by client
2	Coaxial Cable	1	10	Yes	0	Supplied by client
3	RF Cable	1	1.5	Yes	0	Supplied by client
4	RF Cable	1	1.5	Yes	0	Supplied by client
5	RF Cable	1	1.5	Yes	0	Supplied by client
6	RF Cable	1	1.5	Yes	0	Supplied by client
7	GND Cable	1	3	No	0	Provided by Lab
8	RF Cable	1	3	No	0	Supplied by client

3.3 Test Mode Applicability and Tested Channel Detail

Test modes are presented in the report as below, detailed test mode.
EIRP & Radiated Emission

Test Mode	Description
1	Single Carrier: Band n66 5MHz(60W)_Ch 439500 (2197.5MHz) + Band n70 5MHz(20W)_Ch 399500 (1997.5MHz)
2	Single Carrier: Band n66 5MHz(40W)_Ch 439500 (2197.5MHz) + Band n70 5MHz(40W)_Ch 399500 (1997.5MHz)
3	Single Carrier: Band n66 20MHz(60W)_Ch 438000 (2190.0MHz) + Band n70 25MHz(20W)_Ch 401500 (2007.5MHz)
4	Single Carrier: Band n66 20MHz(40W)_Ch 438000 (2190.0MHz) + Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)
5	CA Contiguous: Band n66 20MHz(30W)+20MHz(30W)_(Ch 434000 (2170MHz) +Ch 438000 (2190.0MHz))+ Band n70 25MHz(20W)_Ch 401500 (2007.5MHz)
6	CA Contiguous: Band n66 20MHz(20W)+20MHz(20W)_ (Ch 434000 (2170MHz) +Ch 438000 (2190.0MHz))+ Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)
7	CA-Non-Contiguous: Band n66 5MHz(30W)+5MHz(30W)_(Ch 428500 (2142.5MHz) + Ch 439500 (2197.5MHz))+ Band n70 5MHz(10W)+5MHz(10W)_(Ch 399500 (1997.5MHz) + Ch 403500 (2017.5MHz))
8	CA-Non-Contiguous: Band n66 5MHz(20W)+5MHz(20W)_(Ch 428500 (2142.5MHz) + Ch 439500 (2197.5MHz))+ Band n70 5MHz(20W)+5MHz(20W)_(Ch 399500 (1997.5MHz) + Ch 403500 (2017.5MHz))

Channel Edge:

Test Mode	Description
6	CA Contiguous: Band n66 20MHz(20W)+20MHz(20W)_ (Ch 434000 (2170MHz) +Ch 438000 (2190.0MHz))+ Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)

Occupied Bandwidth:

Test Mode	Description
1	Single Carrier: Band n66 20MHz(60W)_Ch 438000 (2190.0MHz) + Band n70 25MHz(20W)_Ch 401500 (2007.5MHz)
2	Single Carrier: Band n66 20MHz(40W)_Ch 438000 (2190.0MHz) + Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)
3	CA Contiguous: Band n66 20MHz(30W)+20MHz(30W)_(Ch 434000 (2170.0MHz)+Ch 438000 (2190.0MHz))+ Band n70 25MHz(20W)_Ch 401500 (2007.5MHz)
4	CA Contiguous: Band n66 20MHz(20W)+20MHz(20W)_(Ch 434000 (2170.0MHz)+Ch 438000 (2190.0MHz))+ Band n70 25MHz(40W)_Ch 401500 (2007.5MHz)

Following test modes were selected for the final test:

Test Item	Test Mode
EIRP	1, 2, 3, 4, 5, 6, 7, 8
Channel Edge	6*
Occupied Bandwidth	1, 2, 3, 4
Radiated Emission	1, 2, 3, 4, 5, 6, 7, 8

*The mode 6 was the worst case and chosen for final test.

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
EIRP	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Band Edge	25deg. C, 63%RH	120Vac, 60Hz	James Yang
OBW	25deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Radiated Emission	20deg. C, 70%RH	120Vac, 60Hz	Ryan Du

3.4 General Description of Applied Standards

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 27, Subpart L

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

According to FCC 27.50(d)(2)that the power of each fixed or base station transmitting in the 1995-2000 MHz, the 2110-2155 MHz 2155-2180 MHz band, or 2180-2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(iii) Waiver 2000-2020MHz Please refer to attachment DA-13-2409A1.pdf

4.1.2 Test Procedures

EIRP Measurement:

Conducted Power Measurement:

a. A spectrum analyzer was used on the output port of the EUT and recorded output power from the spectrum analyzer.
b. The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

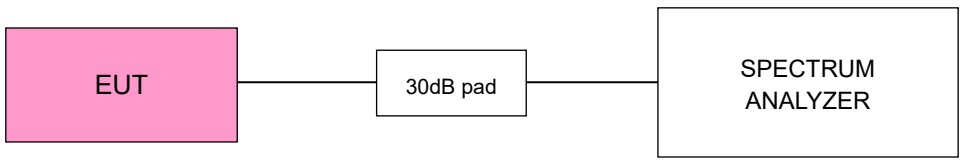
   EIRP = PMeas + GT
   ERP = PMeas + GT- 2.15

   Where ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as PMeas, e.g., dBm or dBW)

   PMeas : measured transmitter output power or PSD, in dBm or dBW
   GT : gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

4.1.3 Test Setup

Conducted Power Measurement:



4.1.4 Test Results (Mode 1)

Single Carrier

Band n66 5MHz(60W) + Band n70 5MHz(20W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	41.26	41.24	41.18	41.20	47.24	14	61.24	1330.67	1640.00	PASS
n70 399500	1997.5	36.57	36.64	36.55	36.58	42.61	16	58.61	725.39	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	47.23	47.16	47.22	47.23	53.23	14	67.23	5285.30	-	PASS
n70 399500	1997.5	42.46	42.44	42.48	42.45	48.48	16	64.48	2804.22	-	PASS

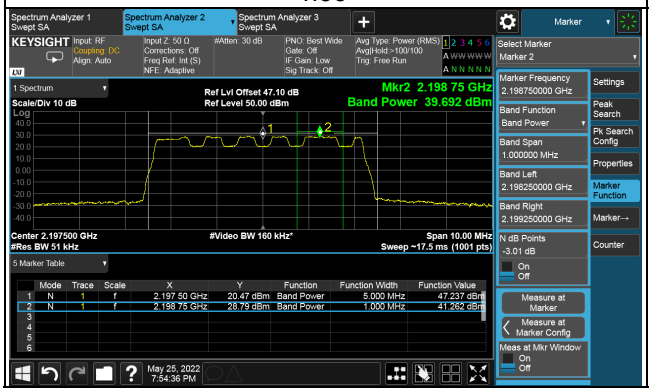
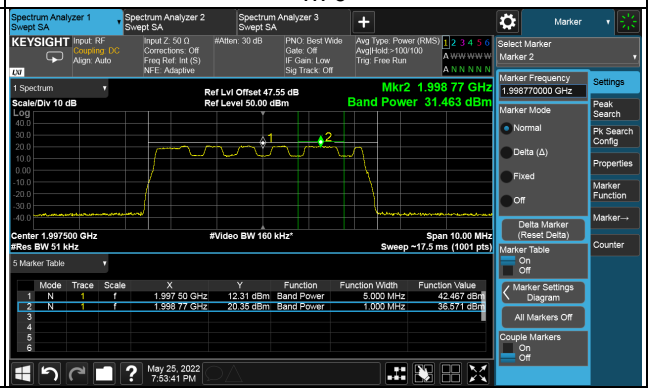
Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	41.18	41.20	41.16	41.21	47.21	14	61.21	1320.73	1640.00	PASS
n70 399500	1997.5	36.51	36.54	36.55	36.52	42.55	16	58.55	716.25	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	47.24	47.16	47.22	47.23	53.23	14	67.23	5288.36	-	PASS
n70 399500	1997.5	42.38	42.44	42.37	42.41	48.42	16	64.42	2767.38	-	PASS

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	40.65	40.59	40.63	40.55	46.63	14	60.63	1154.99	1640.00	PASS
n70 399500	1997.5	35.91	35.95	35.93	35.91	41.95	16	57.95	623.11	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	47.16	47.22	47.18	47.19	53.21	14	67.21	5257.94	-	PASS
n70 399500	1997.5	42.38	42.36	42.40	42.40	48.41	16	64.41	2757.80	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	40.61	40.57	40.63	40.61	46.63	14	60.63	1154.96	1640.00	PASS
n70 399500	1997.5	35.97	35.94	35.90	35.92	41.95	16	57.95	624.19	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	47.23	47.16	47.20	47.18	53.21	14	67.21	5264.02	-	PASS
n70 399500	1997.5	42.46	42.38	42.36	42.44	48.43	16	64.43	2773.83	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.1.5 Test Results (Mode 2)

Single Carrier

Band n66 5MHz(40W) +Band n70 5MHz(40W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	39.39	39.44	39.37	39.36	45.41	14	59.41	873.11	1640.00	PASS
n70 399500	1997.5	39.15	39.37	39.23	39.23	45.27	16	61.27	1338.54	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	45.18	45.21	45.07	45.11	51.16	14	65.16	3283.56	-	PASS
n70 399500	1997.5	44.98	45.03	44.89	44.89	50.97	16	66.97	4975.67	-	PASS

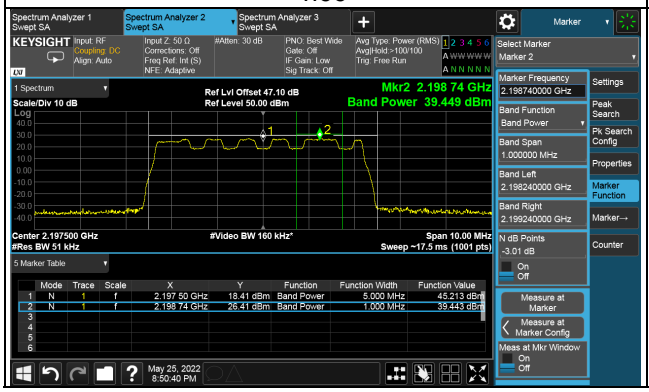
Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	39.33	39.37	39.32	39.33	45.36	14	59.36	862.61	1640.00	PASS
n70 399500	1997.5	39.43	39.26	39.30	39.29	45.34	16	61.34	1361.79	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	45.12	45.19	45.13	45.08	51.15	14	65.15	3273.99	-	PASS
n70 399500	1997.5	45.23	45.09	44.97	45.24	51.15	16	67.15	5193.39	-	PASS

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	38.45	38.37	38.43	38.41	44.44	14	58.44	697.54	1640.00	PASS
n70 399500	1997.5	38.42	38.46	38.36	38.39	44.43	16	60.43	1103.64	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	45.14	45.12	45.05	45.17	51.14	14	65.14	3266.50	-	PASS
n70 399500	1997.5	45.11	45.08	45.12	45.16	51.14	16	67.14	5173.92	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	38.41	38.36	38.35	38.41	44.40	14	58.40	692.34	1640.00	PASS
n70 399500	1997.5	38.40	38.36	38.32	38.38	44.39	16	60.39	1092.87	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 439500	2197.5	45.13	45.18	45.06	45.10	51.14	14	65.14	3264.62	-	PASS
n70 399500	1997.5	45.15	45.08	45.12	45.11	51.14	16	67.14	5170.91	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.1.6 Test Results (Mode 3)

Single Carrier

Band n66 20MHz(60W) +Band n70 25MHz(20W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	36.67	36.60	36.65	36.59	42.65	14	56.65	462.19	1640.00	PASS
n70 401500	2007.5	31.07	32.03	31.10	31.02	37.35	16	53.35	216.10	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	47.22	47.21	47.22	47.16	53.22	14	67.22	5276.15	-	PASS
n70 401500	2007.5	42.31	42.25	42.26	42.27	48.29	16	64.29	2687.30	-	PASS

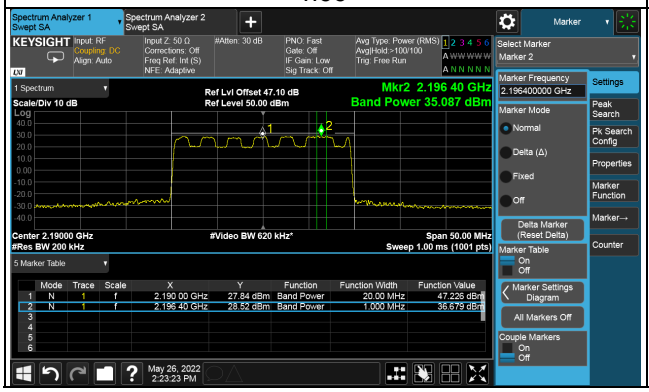
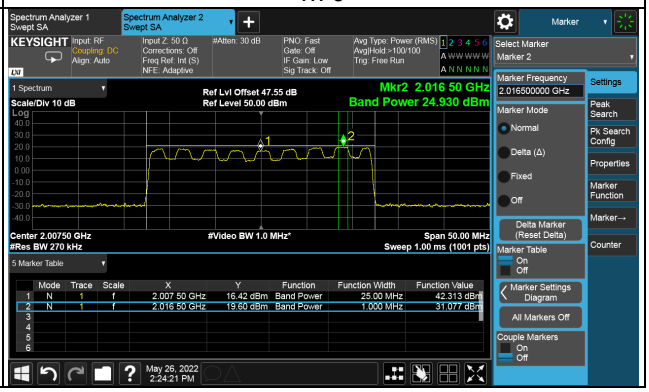
Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	36.62	36.59	36.55	36.62	42.62	14	56.62	458.74	1640.00	PASS
n70 401500	2007.5	31.07	31.05	31.09	31.03	37.08	16	53.08	203.27	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	47.18	47.23	47.22	47.21	53.23	14	67.23	5285.23	-	PASS
n70 401500	2007.5	42.31	42.23	42.26	42.22	48.28	16	64.28	2676.54	-	PASS

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	34.65	34.58	34.57	34.61	40.62	14	54.62	289.95	1640.00	PASS
n70 401500	2007.5	28.94	29.03	28.99	28.93	34.99	16	50.99	125.70	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	47.16	47.11	47.13	47.18	53.17	14	67.17	5206.77	-	PASS
n70 401500	2007.5	42.22	42.26	42.25	42.22	48.26	16	64.26	2665.71	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	34.65	34.57	34.60	34.52	40.61	14	54.61	288.79	1640.00	PASS
n70 401500	2007.5	28.92	28.90	28.94	28.91	34.94	16	50.94	124.11	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	47.15	47.20	47.16	47.22	53.20	14	67.20	5251.94	-	PASS
n70 401500	2007.5	42.28	42.20	42.28	42.23	48.27	16	64.27	2671.92	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.1.7 Test Results (Mode 4)

Single Carrier

Band n66 20MHz(40W) + Band n70 25MHz(40W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	34.72	34.68	34.70	34.62	40.70	14	54.70	295.17	1640.00	PASS
n70 401500	2007.5	33.83	33.74	33.80	33.75	39.80	16	55.80	380.26	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	45.23	45.13	45.25	45.19	51.22	14	65.22	3327.24	-	PASS
n70 401500	2007.5	45.16	45.24	45.18	45.22	51.22	16	67.22	5273.17	-	PASS

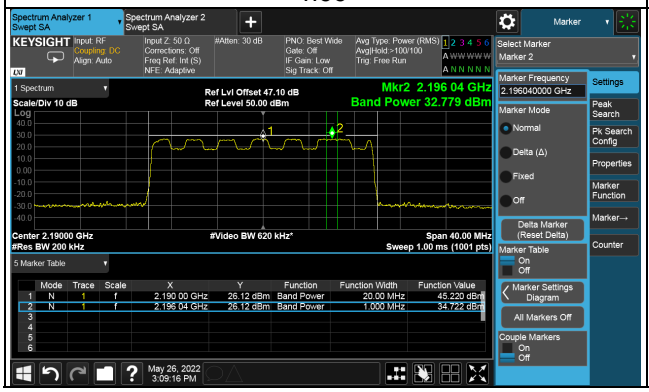
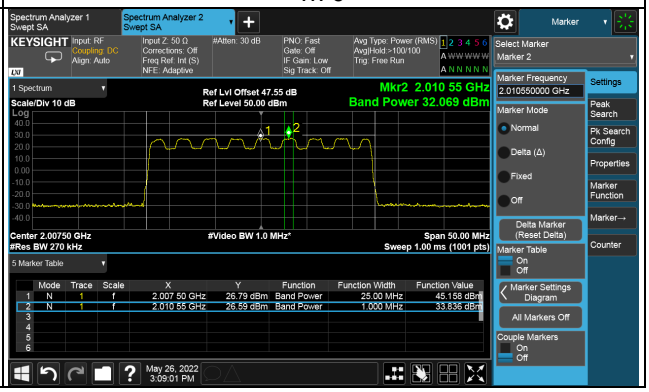
Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	34.72	34.66	34.68	34.70	40.71	14	54.71	295.85	1640.00	PASS
n70 401500	2007.5	33.83	33.78	33.70	33.79	39.80	16	55.80	379.83	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	45.22	45.17	45.16	45.22	51.21	14	65.21	3321.38	-	PASS
n70 401500	2007.5	45.15	45.23	45.20	45.16	51.21	16	67.21	5254.99	-	PASS

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	32.60	32.57	32.61	32.55	38.60	14	52.60	182.10	1640.00	PASS
n70 401500	2007.5	31.66	31.64	31.66	31.62	37.67	16	53.67	232.58	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	45.12	45.24	45.23	45.16	51.21	14	65.21	3317.71	-	PASS
n70 401500	2007.5	45.14	45.27	45.22	45.13	51.21	16	67.21	5261.37	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	32.60	32.63	32.54	32.58	38.61	14	52.61	182.31	1640.00	PASS
n70 401500	2007.5	31.66	31.62	31.64	31.59	37.65	16	53.65	231.64	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 438000	2190.0	45.20	45.17	45.22	45.23	51.23	14	65.23	3330.93	-	PASS
n70 401500	2007.5	45.18	45.20	45.24	45.18	51.22	16	67.22	5273.11	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.1.8 Test Results (Mode 5)

CA Contiguous

Band n66 20MHz(30W)+20MHz(30W) + Band n70 25MHz(20W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	34.18 34.29	34.27 34.22	34.22 34.23	34.15 34.16	40.26	14	54.26	266.59	1640.00	PASS
n70 401500	2007.5	31.06	31.01	31.08	31.05	37.07	16	53.07	202.80	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	44.53 44.59	44.46 44.42	44.50 44.48	44.45 44.56	53.53	14	67.53	5662.38	-	PASS
n70 401500	2007.5	42.33	42.31	42.33	42.34	48.35	16	64.35	2721.52	-	PASS

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	34.21 34.26	34.25 34.18	34.20 34.25	34.17 34.22	40.27	14	54.27	267.03	1640.00	PASS
n70 401500	2007.5	31.02	32.97	31.00	32.94	38.11	16	54.11	257.70	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	44.50 44.48	44.47 44.52	44.48 44.50	44.45 44.46	53.51	14	67.51	5640.86	-	PASS
n70 401500	2007.5	42.27	42.25	42.26	42.30	48.29	16	64.29	2685.74	-	PASS

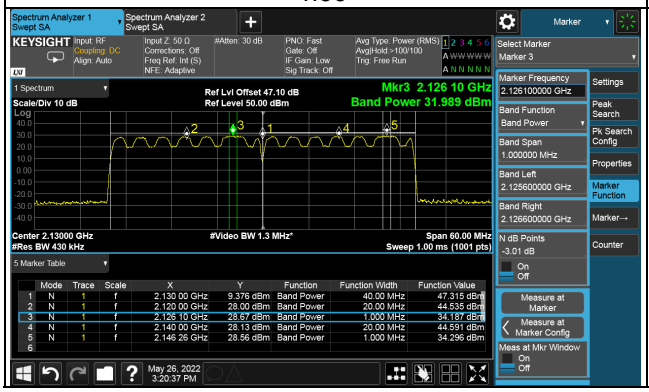
Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	32.17 32.20	32.23 32.17	32.15 32.12	32.16 32.22	38.22	14	52.22	166.75	1640.00	PASS
n70 401500	2007.5	28.84	28.90	28.85	28.87	34.89	16	50.89	122.62	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	44.47 44.45	44.45 44.39	44.38 44.38	44.40 44.42	53.45	14	67.45	5557.16	-	PASS
n70 401500	2007.5	42.27	42.22	42.26	42.23	48.27	16	64.27	2670.33	-	PASS

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	32.19	32.22	32.18	32.22	38.23	14	52.23	167.04	1640.00	PASS
		32.17	32.18	32.16	32.24						
n70 401500	2007.5	28.81	28.83	28.84	28.80	34.84	16	50.84	121.36	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	44.47	44.41	44.39	44.42	53.45	14	67.45	5563.51	-	PASS
		44.44	44.42	44.38	44.45						
n70 401500	2007.5	42.30	42.25	42.23	42.27	48.28	16	64.28	2681.13	-	PASS

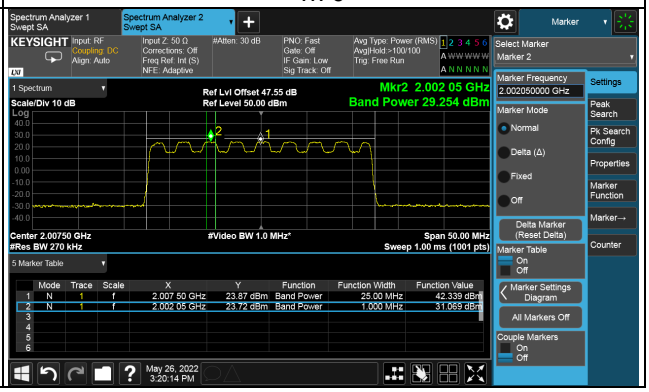
*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value

n66



n70



4.1.9 Test Results (Mode 6)

CA Contiguous

Band n66 20MHz(20W)+20MHz(20W) + Band n70 25MHz(40W)

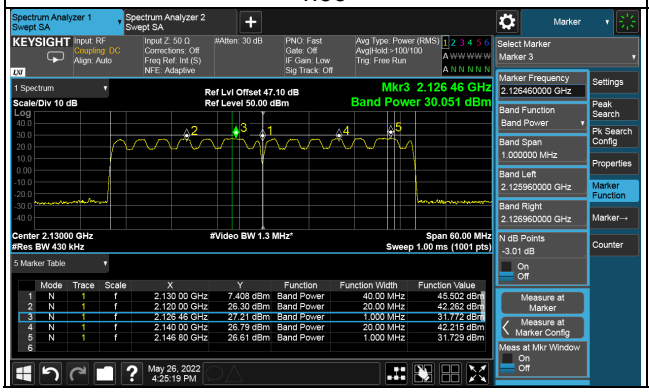
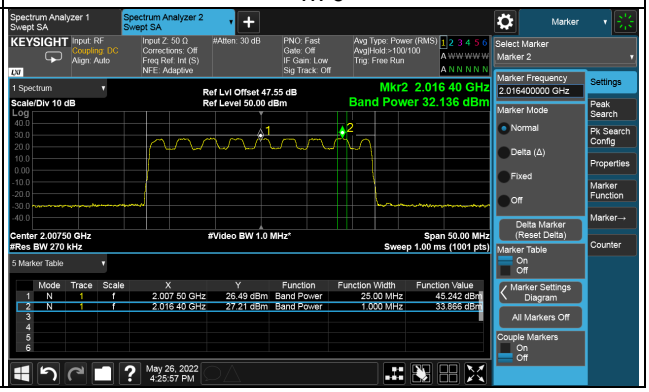
Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	31.77	31.70	31.74	31.72	37.78	14	51.78	150.60	1640.00	PASS
		31.72	31.75	31.71	31.77						
n70 401500	2007.5	33.86	33.80	33.84	33.82	39.85	16	55.85	384.65	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	42.26	42.22	42.27	42.21	51.27	14	65.27	3362.95	-	PASS
		42.21	42.24	42.22	42.26						
n70 401500	2007.5	45.24	45.23	45.18	45.22	51.24	16	67.24	5294.39	-	PASS

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	31.68	31.74	31.70	31.72	37.75	14	51.75	149.73	1640.00	PASS
		31.72	31.72	31.64	31.77						
n70 401500	2007.5	33.85	33.88	33.81	33.85	39.87	16	55.87	386.20	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	42.24	42.16	42.23	42.15	51.23	14	65.23	3336.02	-	PASS
		42.17	42.22	42.24	42.20						
n70 401500	2007.5	45.24	45.27	45.18	45.20	51.24	16	67.24	5300.59	-	PASS

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	29.77	29.71	29.79	29.74	35.79	14	49.79	95.24	1640.00	PASS
		29.72	29.77	29.75	29.73						
n70 401500	2007.5	31.77	31.77	31.78	31.72	37.78	16	53.78	238.82	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	42.19	42.13	42.25	42.25	51.22	14	65.22	3328.46	-	PASS
		42.22	42.16	42.11	42.22						
n70 401500	2007.5	45.19	45.25	45.21	45.23	51.24	16	67.24	5297.44	-	PASS

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	29.69	29.75	29.73	29.74	35.76	14	49.76	94.64	1640.00	PASS
		29.73	29.71	29.68	29.75						
n70 401500	2007.5	31.72	31.76	31.67	31.69	37.73	16	53.73	236.09	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 434000+438000	2170+ 2190.0	42.21	42.23	42.16	42.22	51.23	14	65.23	3337.89	-	PASS
		42.17	42.19	42.23	42.22						
n70 401500	2007.5	45.21	45.22	45.21	45.19	51.23	16	67.23	5282.16	-	PASS

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.1.10 Test Results (Mode 7)

CA-Non-Contiguous

Band n66 5MHz(30W)+5MHz(30W) + Band n70 5MHz(10W)+5MHz(10W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	38.98	38.90	38.81	38.83	44.91	14	58.91	777.35	1640.00	PASS
		38.93	38.92	38.80	38.56						
n70 399500+403500	1997.5+ 2017.5	34.12	34.17	34.12	34.18	40.19	16	56.19	415.73	1640.00	PASS
		34.15	34.13	34.17	34.12						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	44.48	44.59	44.36	44.43	53.43	14	67.43	5538.22	-	PASS
		44.40	44.27	44.20	44.48						
n70 399500+403500	1997.5+ 2017.5	39.76	39.77	39.71	39.74	48.77	16	64.77	2998.97	-	PASS
		39.77	39.74	39.72	39.70						

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	38.94	38.61	38.63	38.70	44.80	14	58.80	758.43	1640.00	PASS
		38.85	38.73	38.74	38.58						
n70 399500+403500	1997.5+ 2017.5	34.15	34.11	34.13	34.12	40.17	16	56.17	413.83	1640.00	PASS
		34.14	34.12	34.11	34.19						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	44.58	44.47	44.40	44.63	53.53	14	67.53	5666.53	-	PASS
		44.59	44.50	44.51	44.33						
n70 399500+403500	1997.5+ 2017.5	39.74	39.77	39.71	39.73	48.77	16	64.77	3000.69	-	PASS
		39.75	39.71	39.75	39.77						

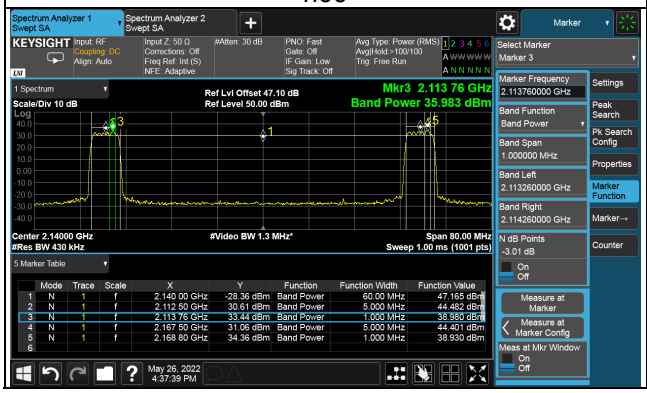
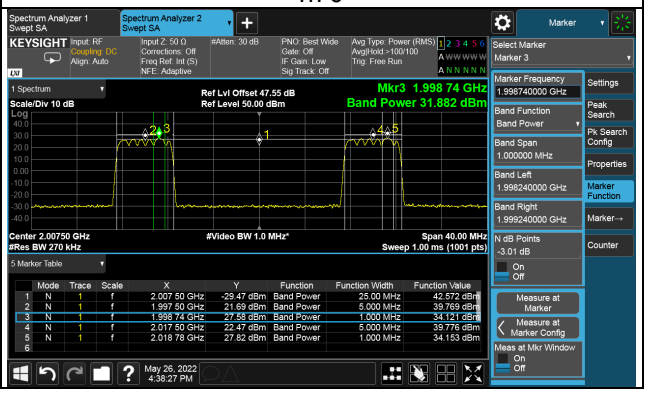
Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	38.08	38.12	38.16	38.09	44.16	14	58.16	655.12	1640.00	PASS
		38.11	38.18	38.17	38.11						
n70 399500+403500	1997.5+ 2017.5	33.30	33.22	33.26	33.31	39.32	16	55.32	340.46	1640.00	PASS
		33.26	33.25	33.34	33.21						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	44.50	44.43	44.39	44.47	53.49	14	67.49	5611.84	-	PASS
		44.51	44.48	44.46	44.44						
n70 399500+403500	1997.5+ 2017.5	39.72	39.77	39.72	39.76	48.77	16	64.77	2997.24	-	PASS
		39.71	39.74	39.76	39.71						

*EIRP = Conducted + Directional gain (14dBi or 16dBi)

*The antenna gain was declared by client.

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	38.04	38.12	38.16	38.11	44.16	14	58.16	654.73	1640.00	PASS
		38.14	38.14	38.09	38.12						
n70 399500+403500	1997.5+ 2017.5	33.25	33.21	33.27	33.22	39.27	16	55.27	336.18	1640.00	PASS
		33.27	33.22	33.25	33.21						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	44.43	44.40	44.46	44.42	53.46	14	67.46	5576.32	-	PASS
		44.41	44.46	44.41	44.47						
n70 399500+403500	1997.5+ 2017.5	39.70	39.75	39.72	39.75	48.77	16	64.77	2997.23	-	PASS
		39.74	39.75	39.71	39.77						

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.1.11 Test Results (Mode 8)

CA-Non-Contiguous

Band n66 5MHz(20W)+5MHz(20W) + Band n70 5MHz(20W)+5MHz(20W)

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	36.47	36.45	36.49	36.45	42.49	14	56.49	445.72	1640.00	PASS
		36.46	36.47	36.40	36.44						
n70 399500+403500	1997.5+ 2017.5	36.48	36.42	36.44	36.41	42.48	16	58.48	704.39	1640.00	PASS
		36.42	36.43	36.47	36.45						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	42.46	42.47	42.36	42.33	51.43	14	65.43	3492.36	-	PASS
		42.40	42.44	42.40	42.34						
n70 399500+403500	1997.5+ 2017.5	42.42	42.46	42.38	42.34	51.43	16	67.43	5539.64	-	PASS
		42.41	42.36	42.44	42.42						

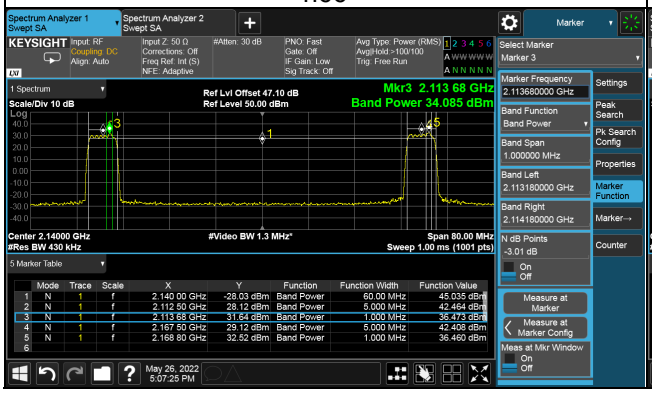
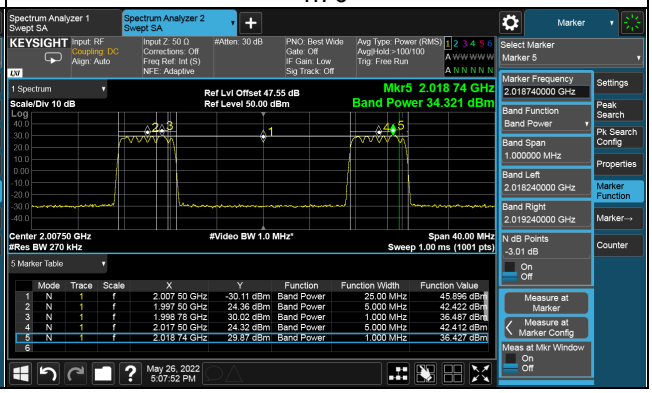
Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	36.44	36.42	36.45	36.41	42.47	14	56.47	443.16	1640.00	PASS
		36.40	36.42	36.44	36.47						
n70 399500+403500	1997.5+ 2017.5	36.41	36.42	36.42	36.45	42.45	16	58.45	699.14	1640.00	PASS
		36.40	36.42	36.41	36.44						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	42.42	42.47	42.40	42.36	51.44	14	65.44	3501.30	-	PASS
		42.42	42.40	42.45	42.37						
n70 399500+403500	1997.5+ 2017.5	42.41	42.36	42.44	42.30	51.42	16	67.42	5517.60	-	PASS
		42.44	42.46	42.35	42.33						

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	35.91	35.88	35.92	35.87	41.92	14	55.92	390.67	1640.00	PASS
		35.81	35.86	35.81	35.88						
n70 399500+403500	1997.5+ 2017.5	35.88	35.82	35.84	35.80	41.88	16	57.88	613.85	1640.00	PASS
		35.85	35.85	35.80	35.87						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	42.44	42.46	42.37	42.33	51.41	14	65.41	3478.28	-	PASS
		42.40	42.32	42.36	42.38						
n70 399500+403500	1997.5+ 2017.5	42.42	42.44	42.36	42.33	51.42	16	67.42	5517.46	-	PASS
		42.44	42.39	42.31	42.40						

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	35.85	35.80	35.84	35.82	41.87	14	55.87	386.20	1640.00	PASS
		35.82	35.88	35.80	35.79						
n70 399500+403500	1997.5+ 2017.5	35.78	35.83	35.88	35.79	41.87	16	57.87	612.44	1640.00	PASS
		35.85	35.82	35.80	35.84						
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	
		Ant. TX 0	Ant. TX 1	Ant. TX 2	Ant. TX 3	Total					
n66 428500+439500	2142.5+ 2197.5	42.36	42.44	42.37	42.40	51.42	14	65.42	3482.23	-	PASS
		42.39	42.33	42.45	42.36						
n70 399500+403500	1997.5+ 2017.5	42.38	42.41	42.44	42.38	51.43	16	67.43	5534.73	-	PASS
		42.41	42.42	42.40	42.36						

*EIRP = Conducted + Directional gain (14dBi or 16dBi)
*The antenna gain was declared by client.

Spectrum Plot of Worst Value	
n66	n70
	

4.2 Emission Bandwidth Measurement

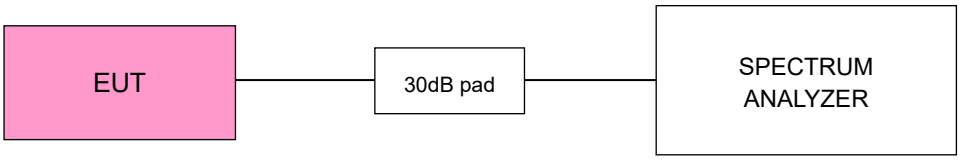
4.2.1 Limits of Emission Bandwidth Measurement

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

4.2.2 Test Procedure

All measurements were done at low, middle and high operational frequency range. EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.2.3 Test Setup



4.2.4 Test Results (Mode 1)

Single Carrier

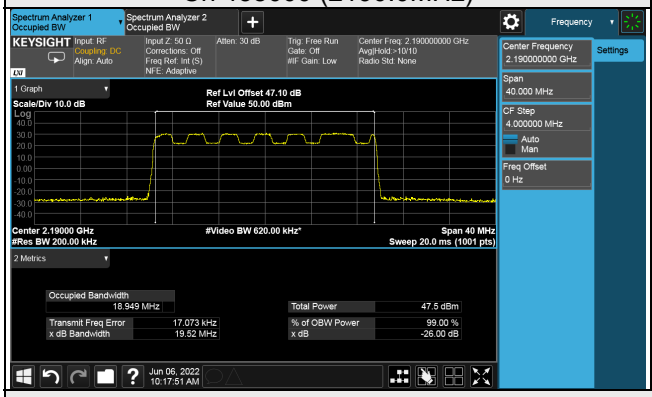
Band n66 20MHz (60W) + Band n70 25MHz (20W)

Channel Number	Freq. (MHz)	OCP 99 Bandwidth (MHz)															
		Ant. TX0				Ant. TX1				Ant. TX2				Ant. TX3			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
n66 438000	2190	18.95	18.94	18.90	18.89	18.95	18.94	18.90	18.89	18.94	18.94	18.90	18.89	18.94	18.94	18.90	18.90
n70 401000	2007.5	23.79	23.77	23.72	23.69	23.78	23.78	23.69	23.71	23.78	23.76	23.71	23.71	23.78	23.77	23.71	23.70
Total		42.74	42.72	42.62	42.58	42.73	42.72	42.59	42.60	42.72	42.71	42.61	42.59	42.72	42.71	42.61	42.60

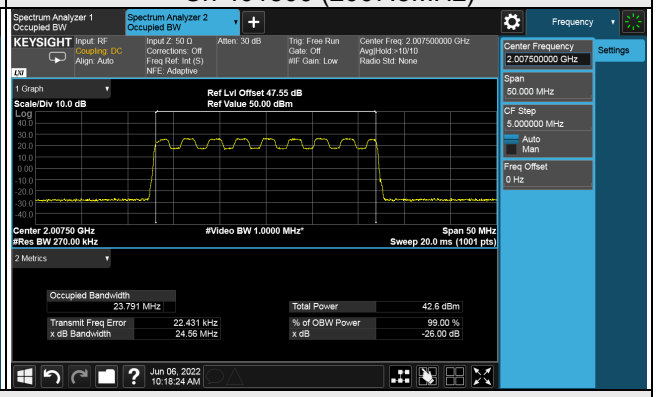
Ant. TX 0

QPSK

Ch 438000 (2190.0MHz)

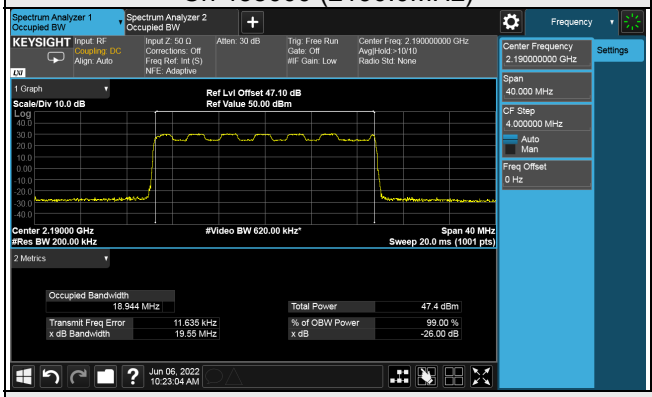


Ch 401500 (2007.5MHz)

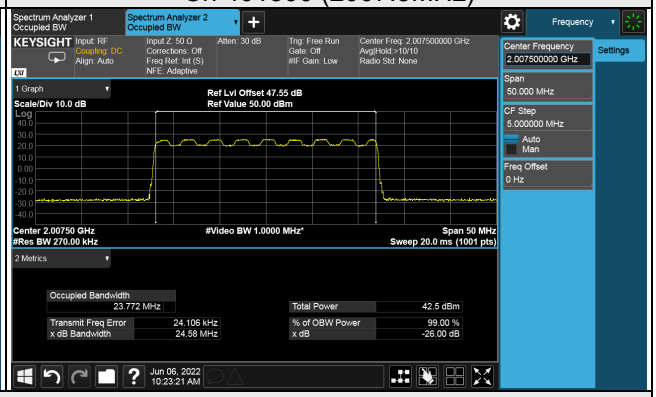


16QAM

Ch 438000 (2190.0MHz)

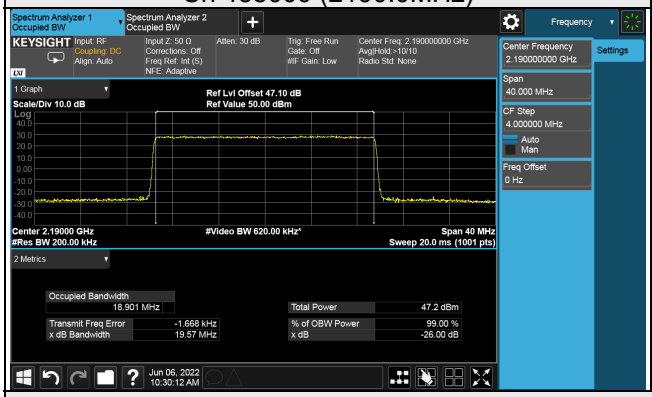


Ch 401500 (2007.5MHz)

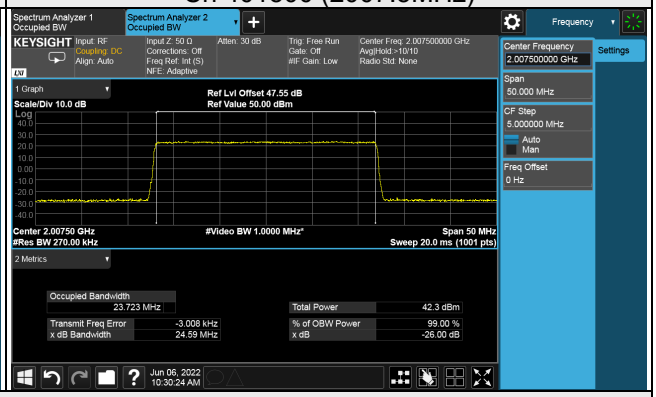


64QAM

Ch 438000 (2190.0MHz)

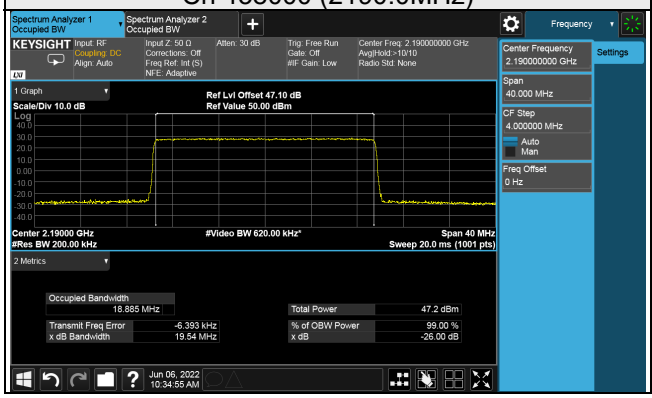


Ch 401500 (2007.5MHz)

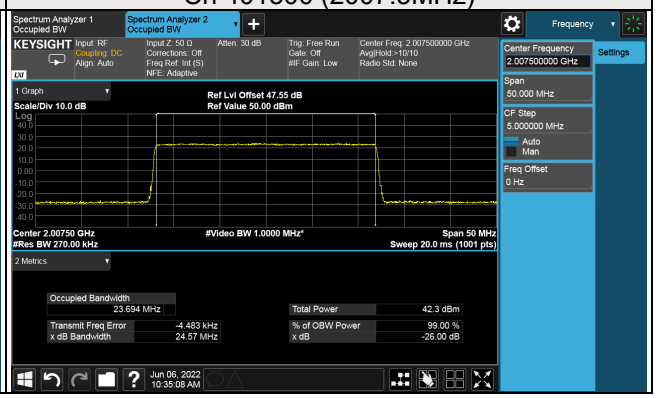


256QAM

Ch 438000 (2190.0MHz)



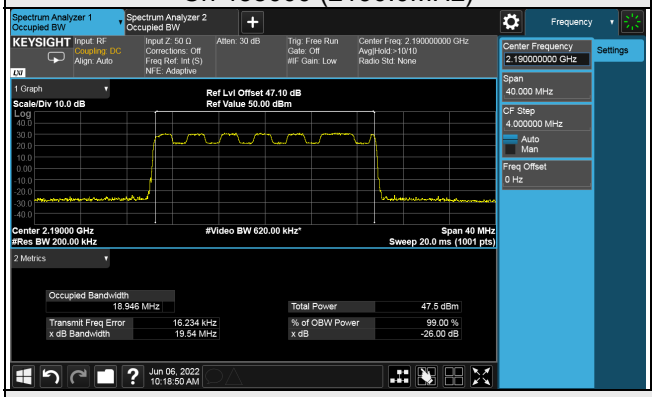
Ch 401500 (2007.5MHz)



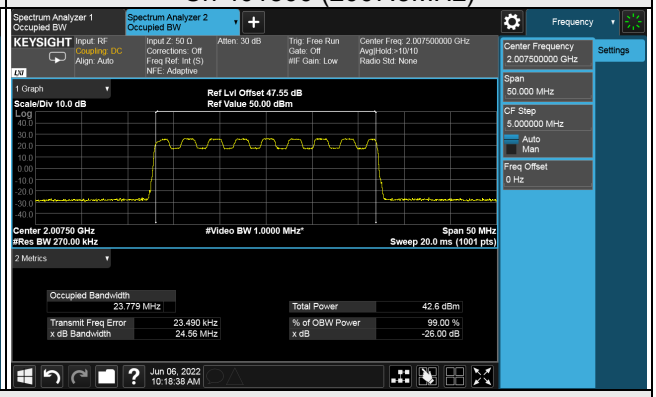
Ant. TX 1

QPSK

Ch 438000 (2190.0MHz)

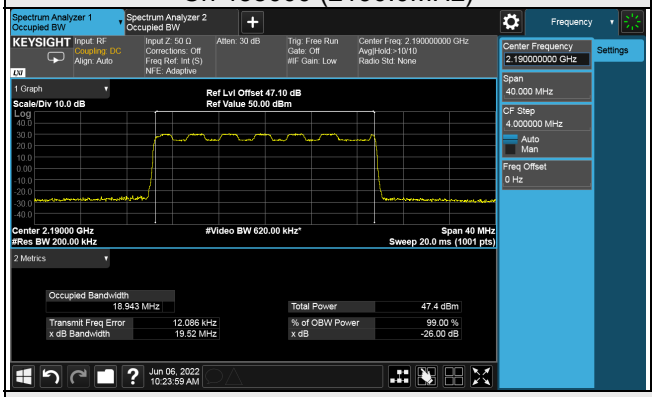


Ch 401500 (2007.5MHz)

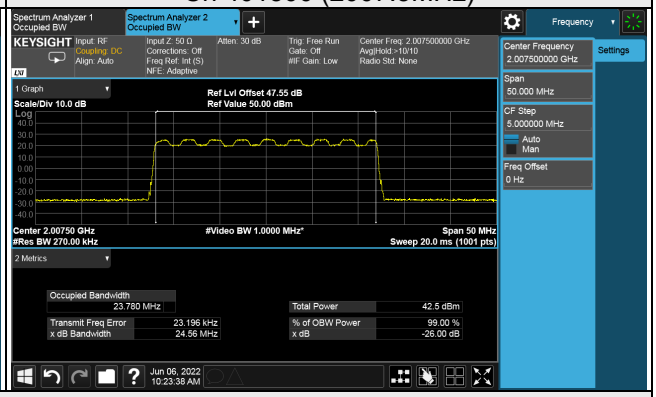


16QAM

Ch 438000 (2190.0MHz)

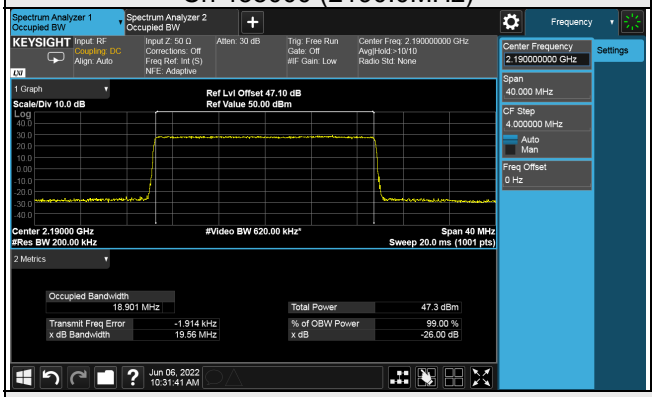


Ch 401500 (2007.5MHz)

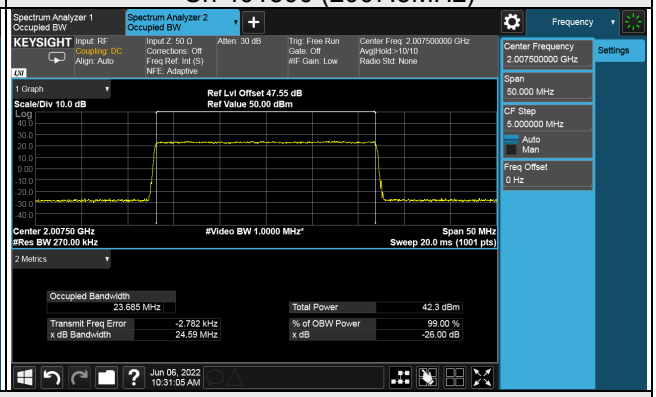


64QAM

Ch 438000 (2190.0MHz)

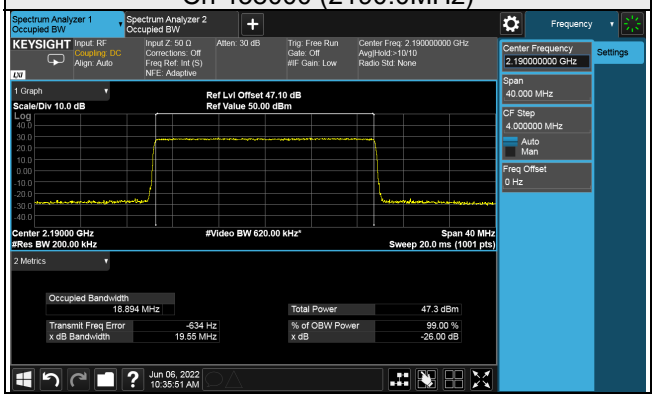


Ch 401500 (2007.5MHz)

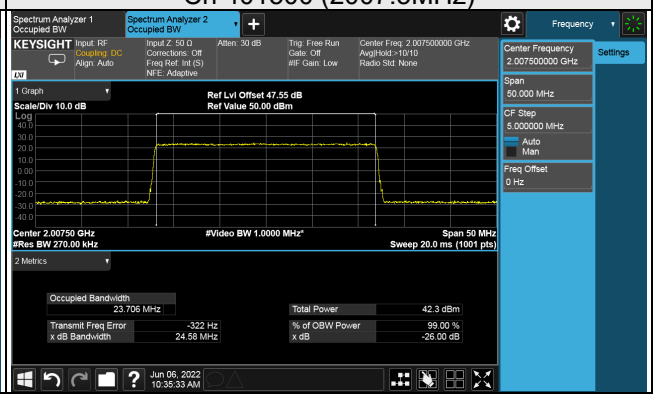


256QAM

Ch 438000 (2190.0MHz)



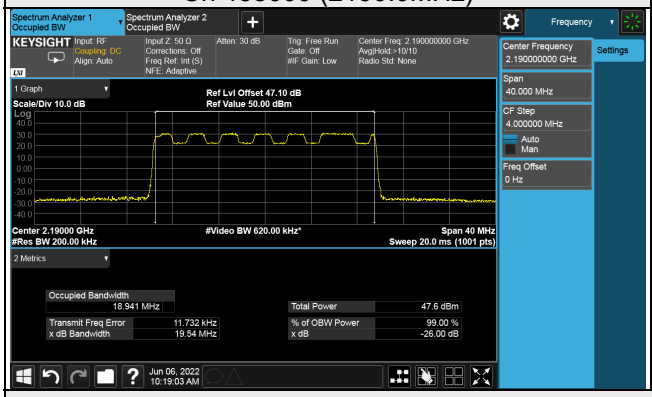
Ch 401500 (2007.5MHz)



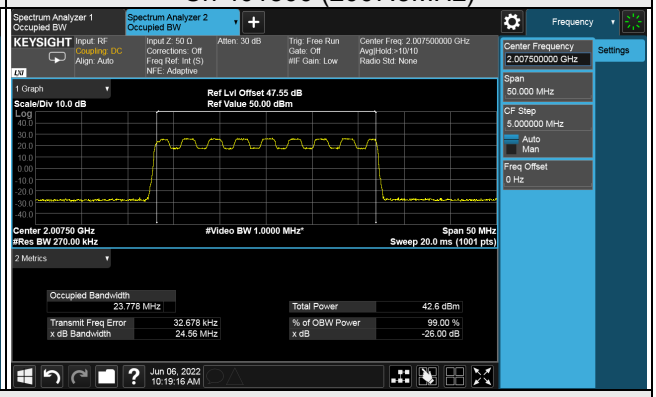
Ant. TX 2

QPSK

Ch 438000 (2190.0MHz)

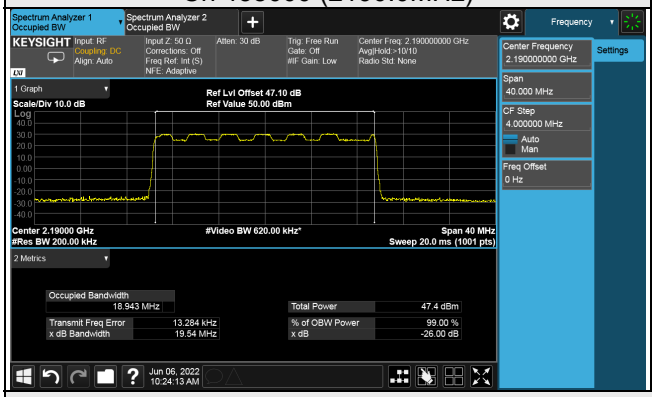


Ch 401500 (2007.5MHz)

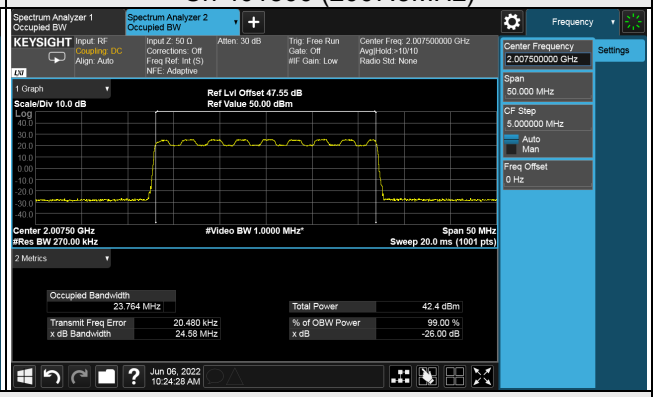


16QAM

Ch 438000 (2190.0MHz)

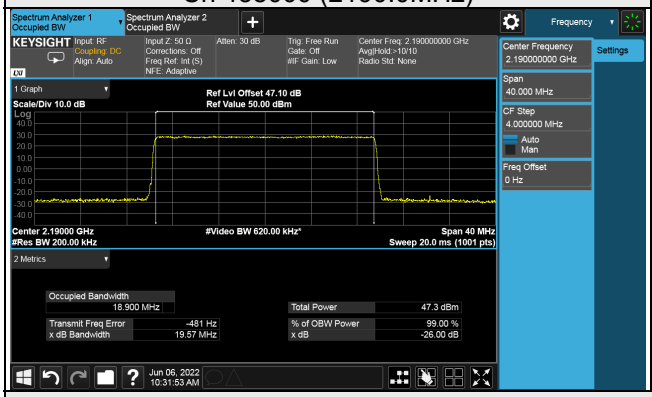


Ch 401500 (2007.5MHz)

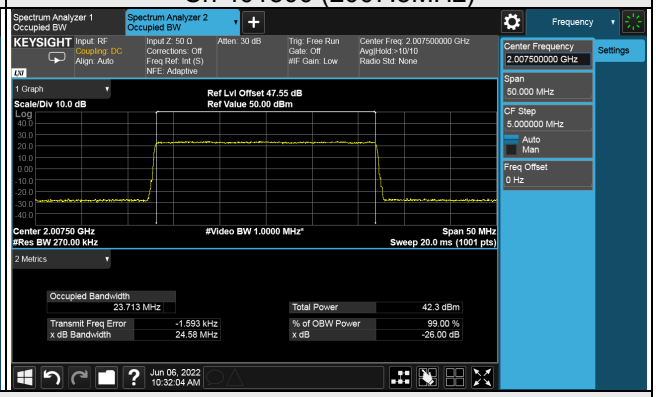


64QAM

Ch 438000 (2190.0MHz)

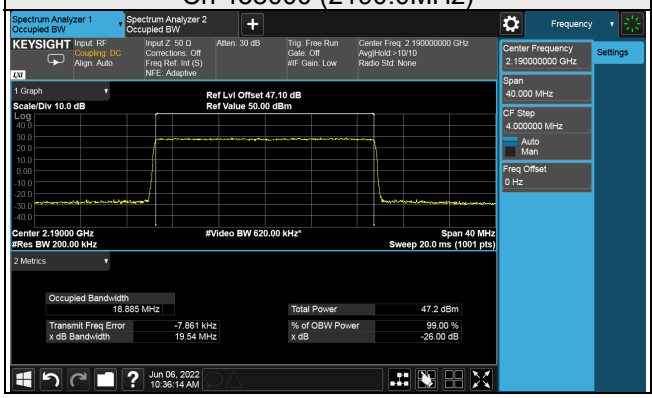


Ch 401500 (2007.5MHz)

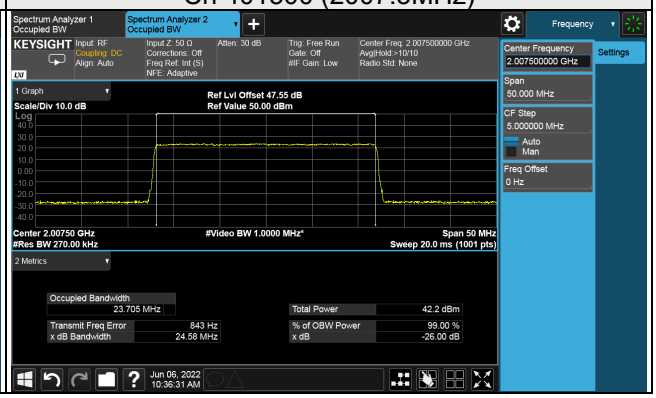


256QAM

Ch 438000 (2190.0MHz)



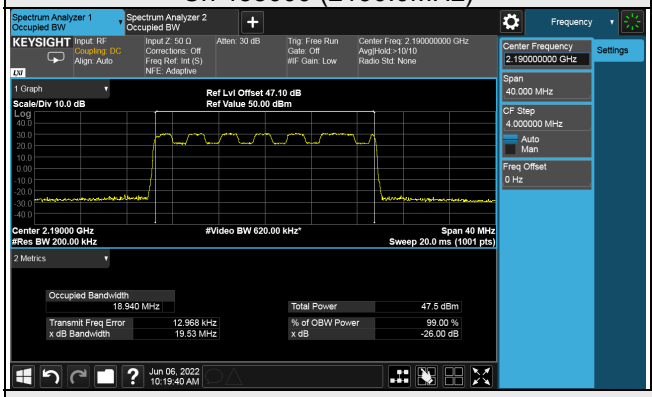
Ch 401500 (2007.5MHz)



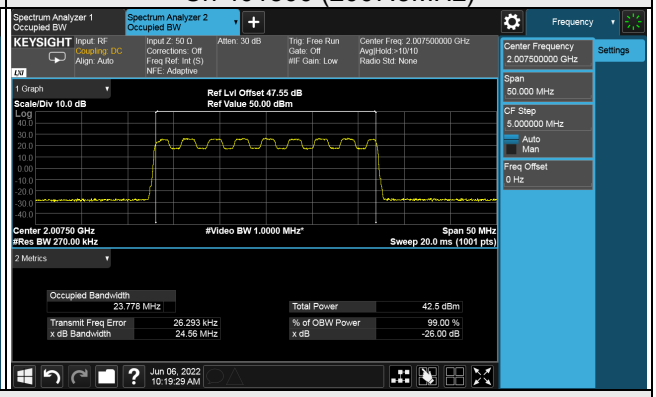
Ant. TX 3

QPSK

Ch 438000 (2190.0MHz)

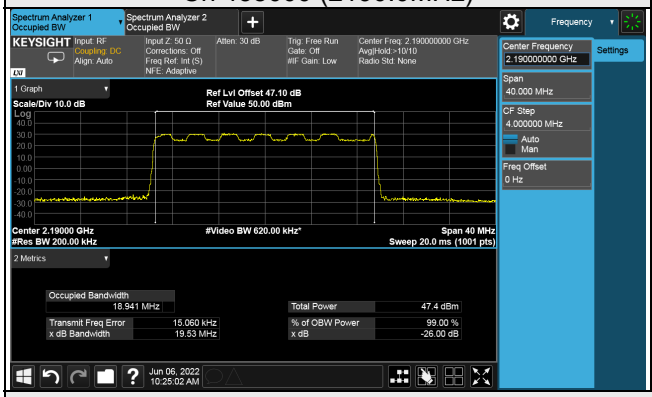


Ch 401500 (2007.5MHz)

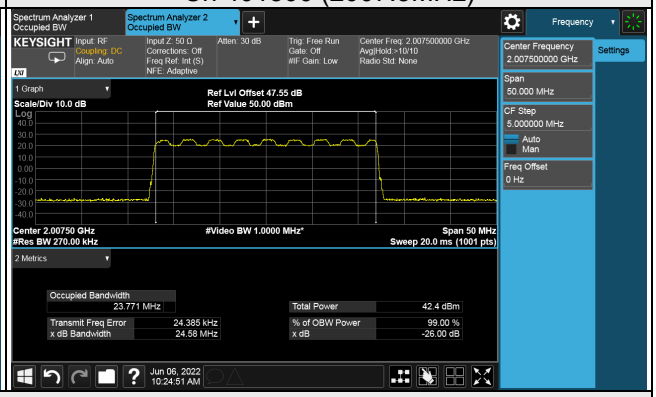


16QAM

Ch 438000 (2190.0MHz)

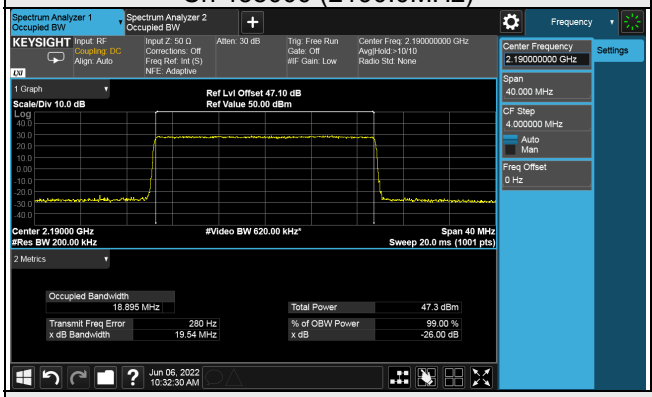


Ch 401500 (2007.5MHz)

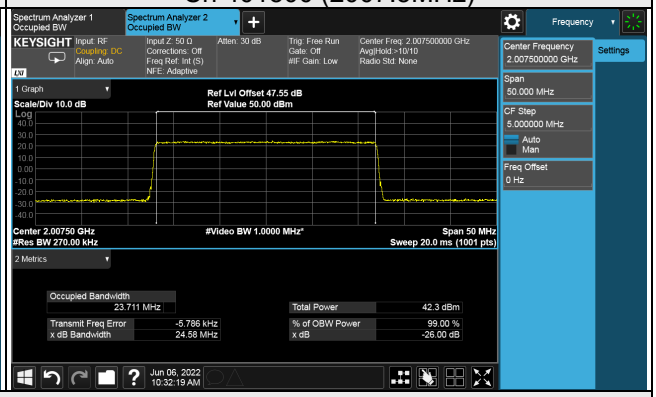


64QAM

Ch 438000 (2190.0MHz)

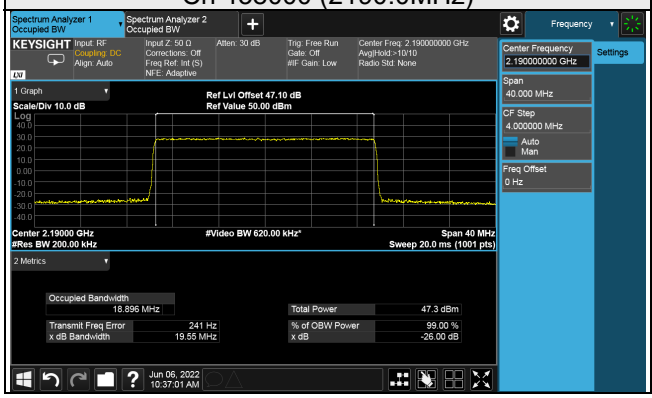


Ch 401500 (2007.5MHz)

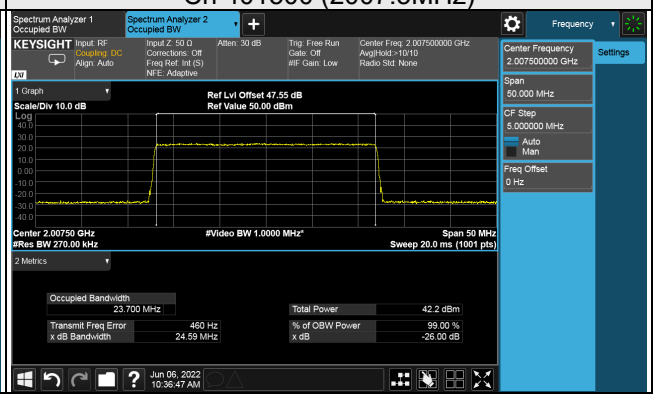


256QAM

Ch 438000 (2190.0MHz)



Ch 401500 (2007.5MHz)



4.2.5 Test Results (Mode 2)

Single Carrier

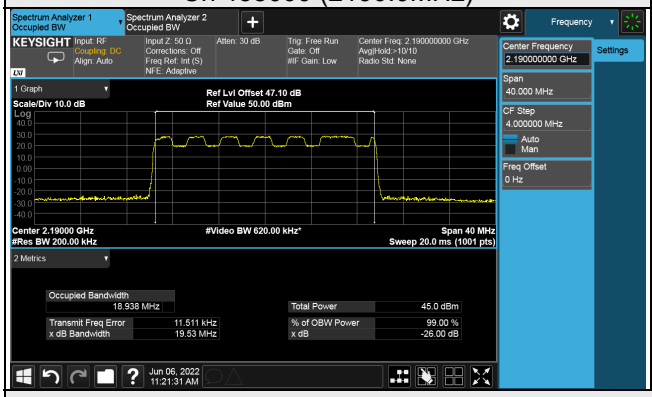
Band n66 20MHz(40W) + Band n70 25MHz(40W)

Channel Number	Freq. (MHz)	OCP 99 Bandwidth (MHz)															
		Ant. TX0				Ant. TX1				Ant. TX2				Ant. TX3			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
n66 438000	2190	18.94	18.95	18.89	18.89	18.95	18.95	18.90	18.88	18.95	18.94	18.89	18.89	18.95	18.94	18.90	18.90
n70 401000	2007.5	23.78	23.77	23.71	23.70	23.79	23.77	23.70	23.70	23.78	23.77	23.71	23.71	23.78	23.77	23.72	23.71
Total		42.72	42.72	42.60	42.59	42.73	42.71	42.59	42.59	42.73	42.72	42.60	42.60	42.73	42.71	42.62	42.61

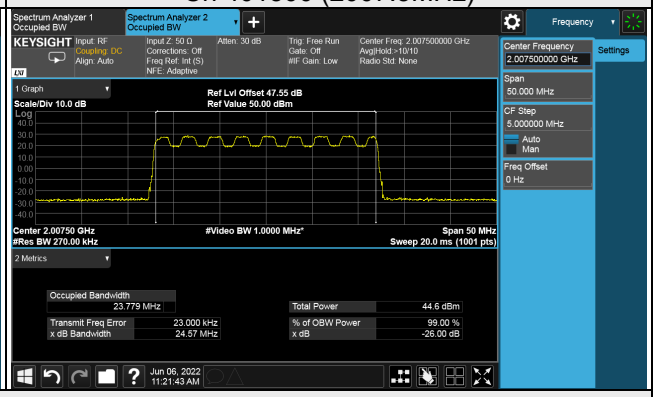
Ant. TX 0

QPSK

Ch 438000 (2190.0MHz)

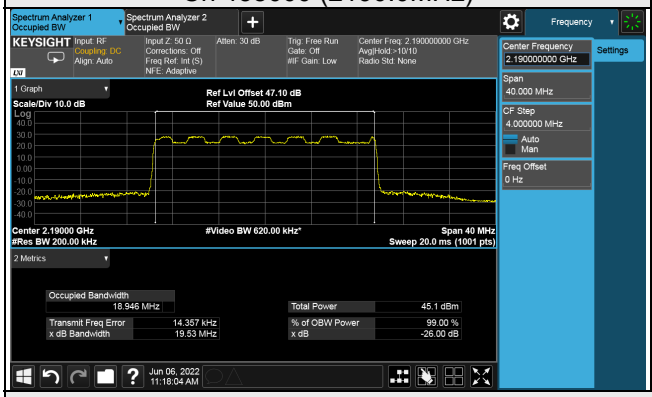


Ch 401500 (2007.5MHz)

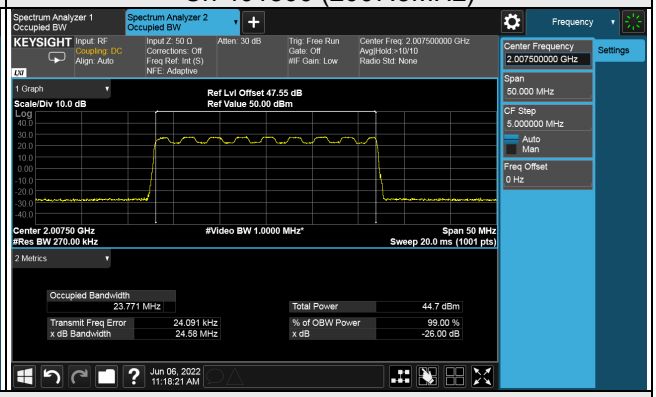


16QAM

Ch 438000 (2190.0MHz)

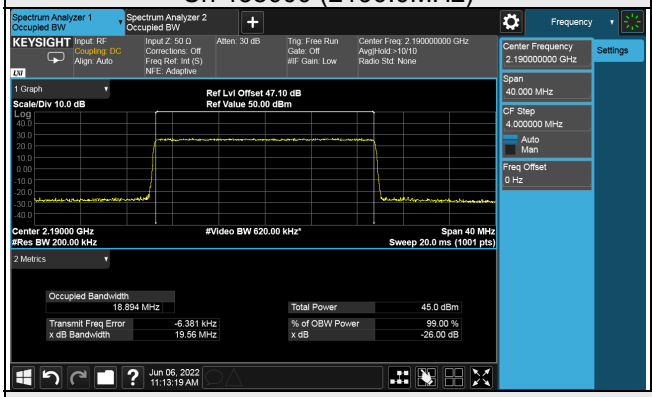


Ch 401500 (2007.5MHz)

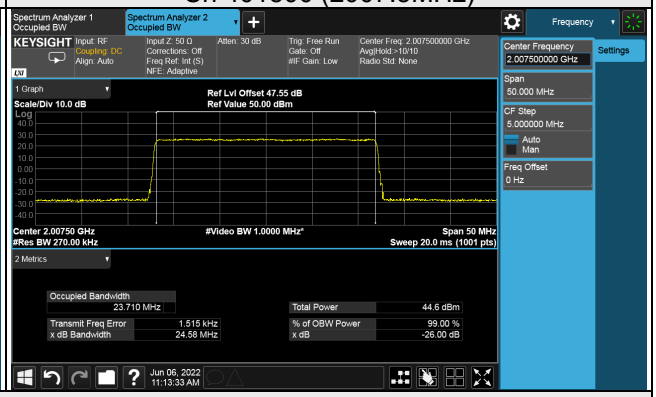


64QAM

Ch 438000 (2190.0MHz)

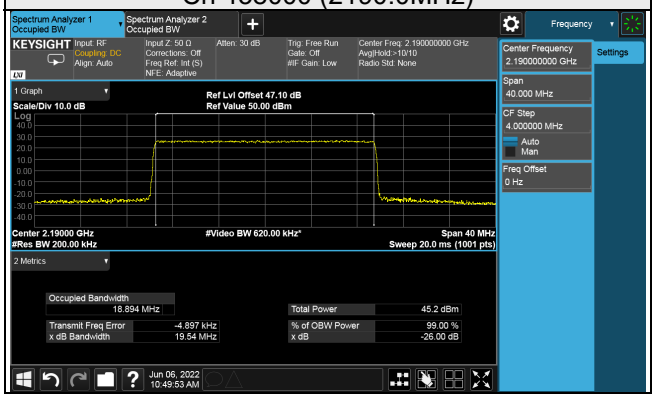


Ch 401500 (2007.5MHz)

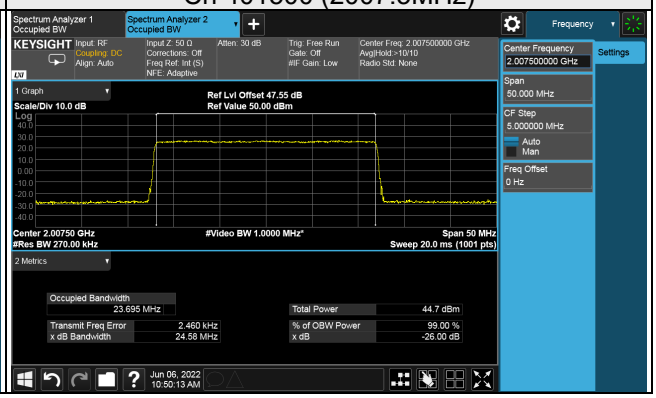


256QAM

Ch 438000 (2190.0MHz)



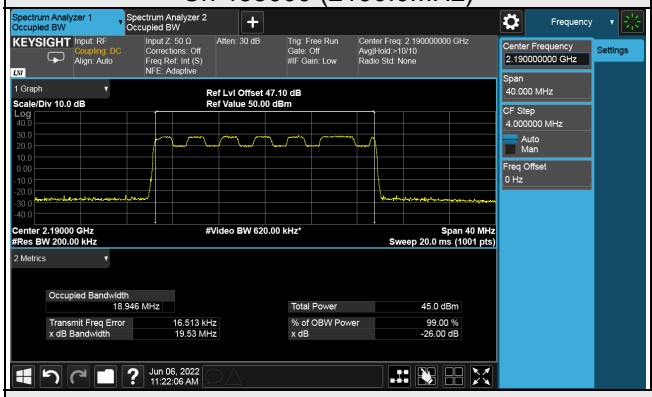
Ch 401500 (2007.5MHz)



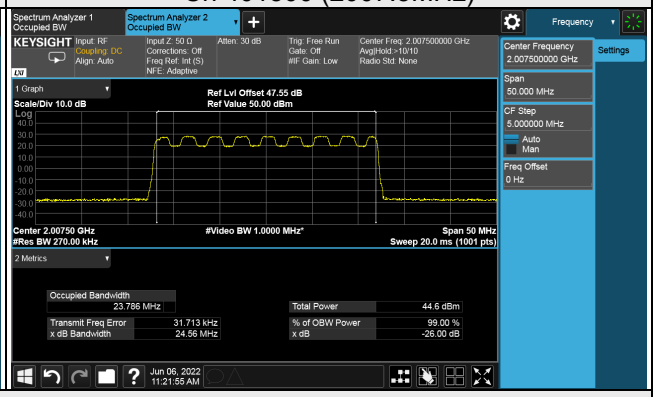
Ant. TX 1

QPSK

Ch 438000 (2190.0MHz)

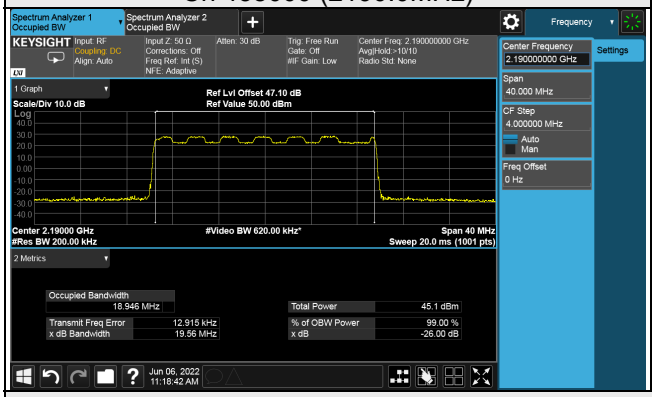


Ch 401500 (2007.5MHz)

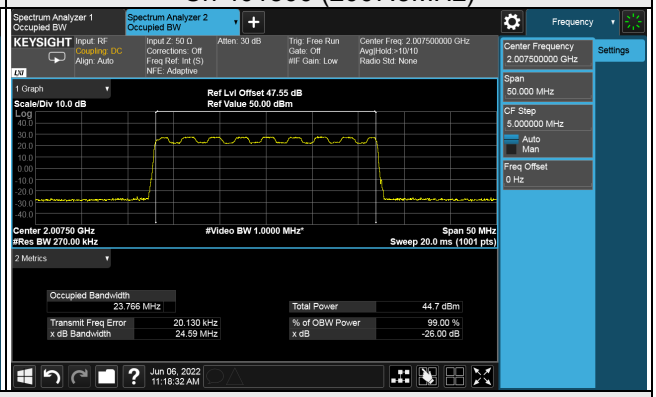


16QAM

Ch 438000 (2190.0MHz)

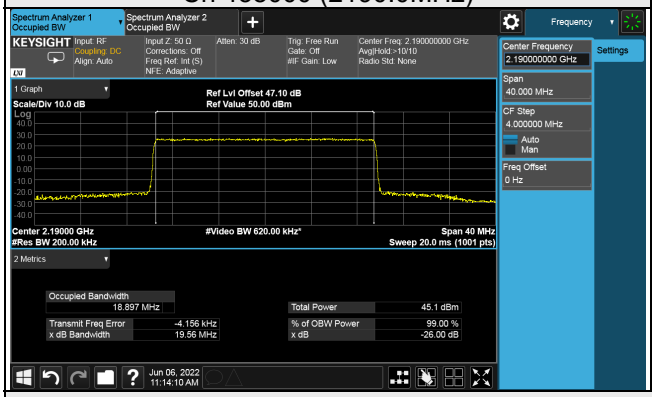


Ch 401500 (2007.5MHz)

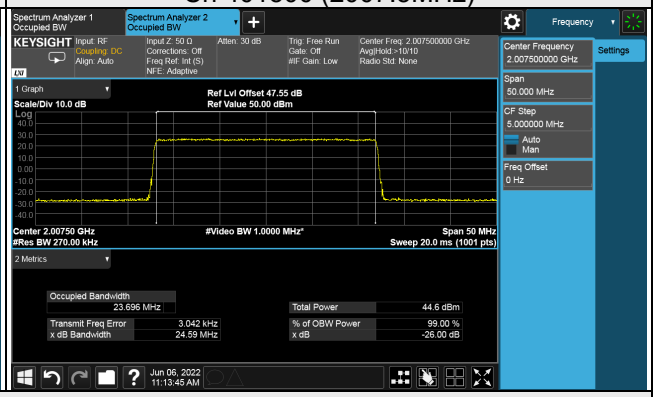


64QAM

Ch 438000 (2190.0MHz)

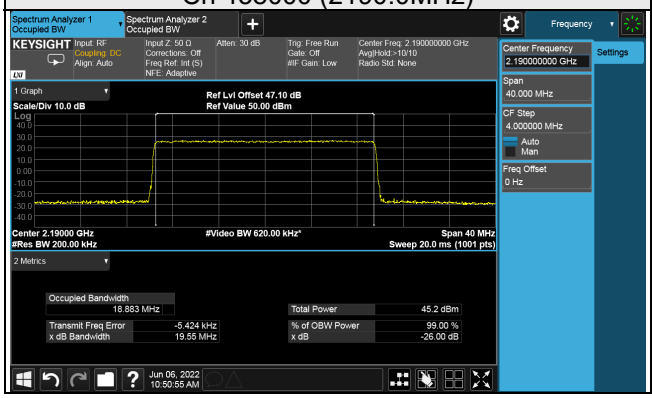


Ch 401500 (2007.5MHz)

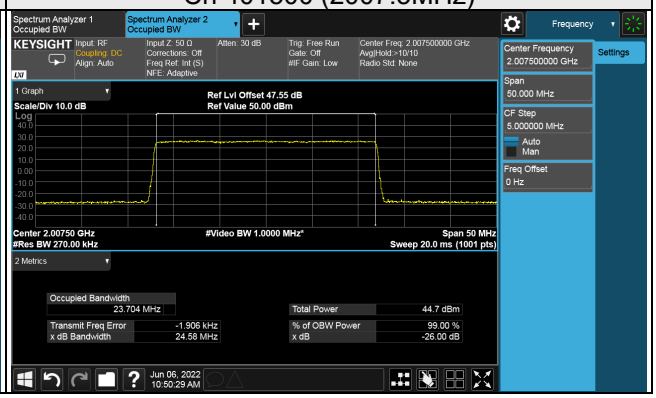


256QAM

Ch 438000 (2190.0MHz)



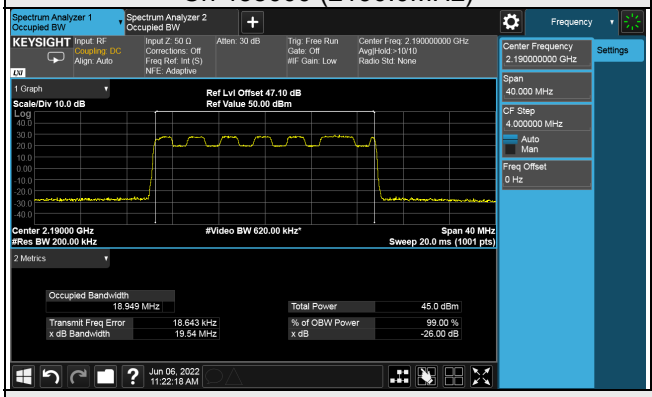
Ch 401500 (2007.5MHz)



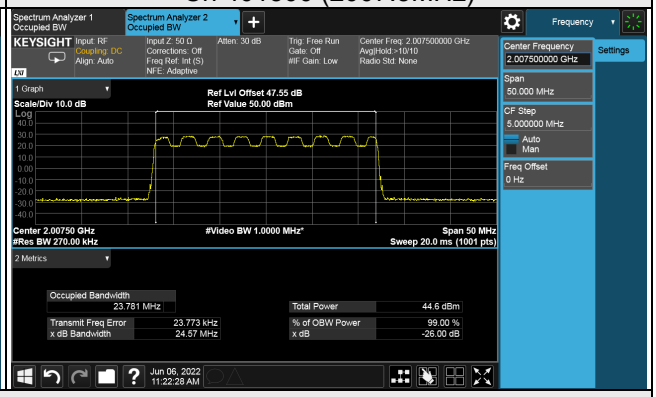
Ant. TX 2

QPSK

Ch 438000 (2190.0MHz)

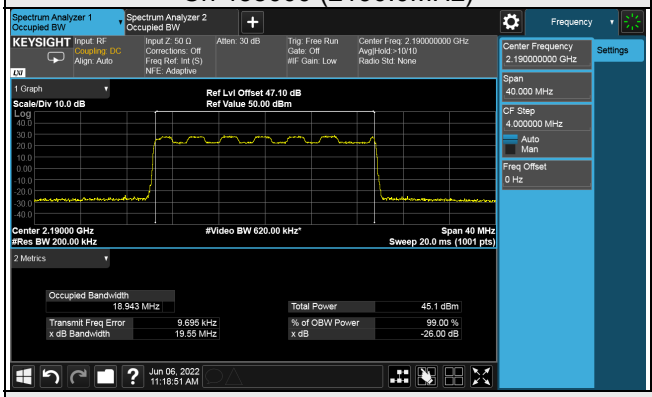


Ch 401500 (2007.5MHz)

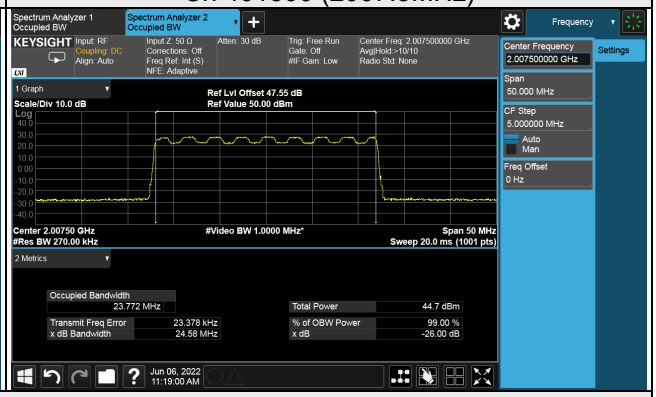


16QAM

Ch 438000 (2190.0MHz)

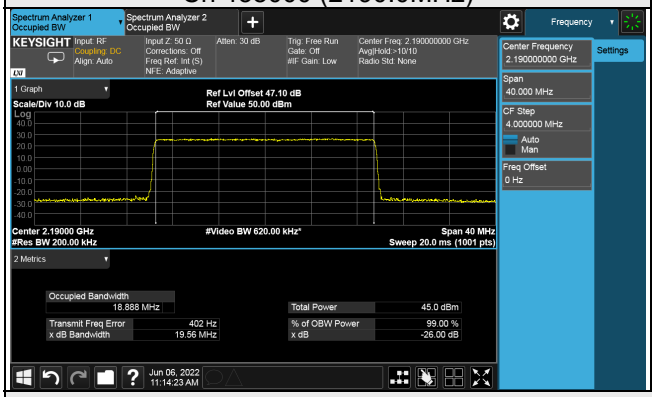


Ch 401500 (2007.5MHz)

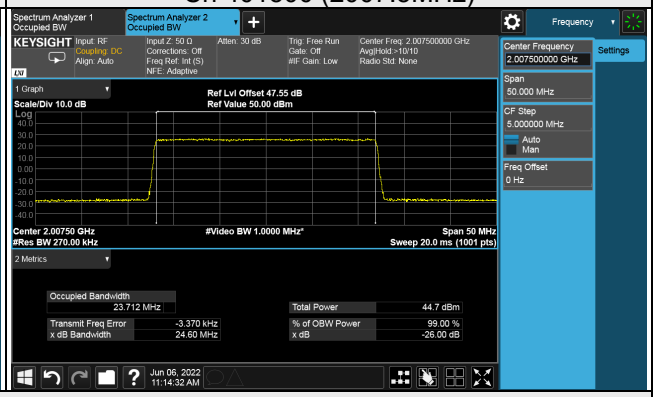


64QAM

Ch 438000 (2190.0MHz)

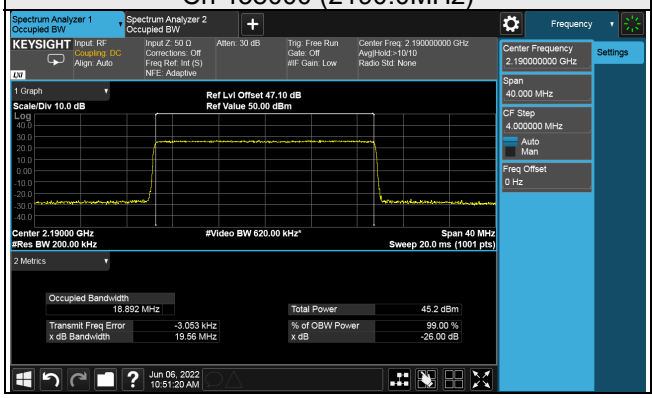


Ch 401500 (2007.5MHz)

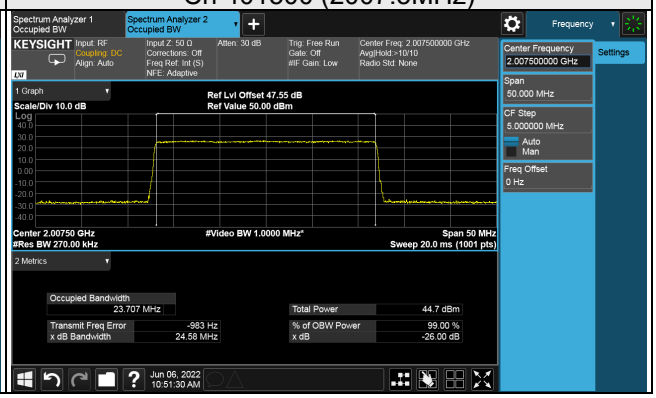


256QAM

Ch 438000 (2190.0MHz)



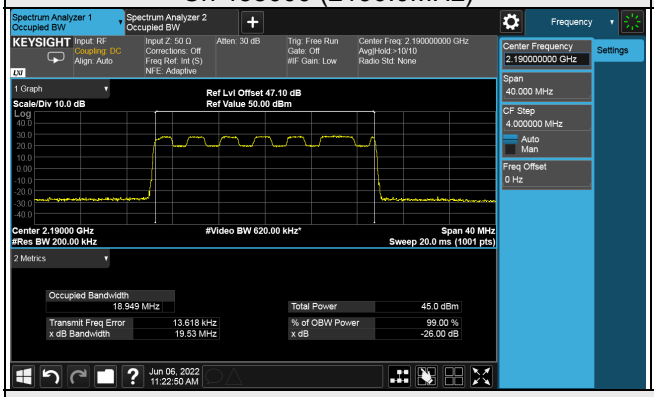
Ch 401500 (2007.5MHz)



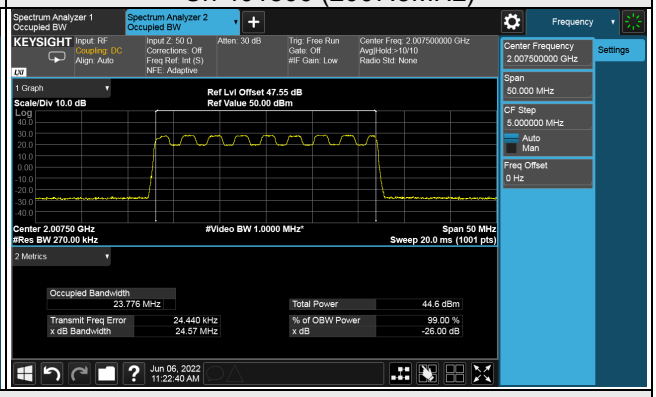
Ant. TX 3

QPSK

Ch 438000 (2190.0MHz)

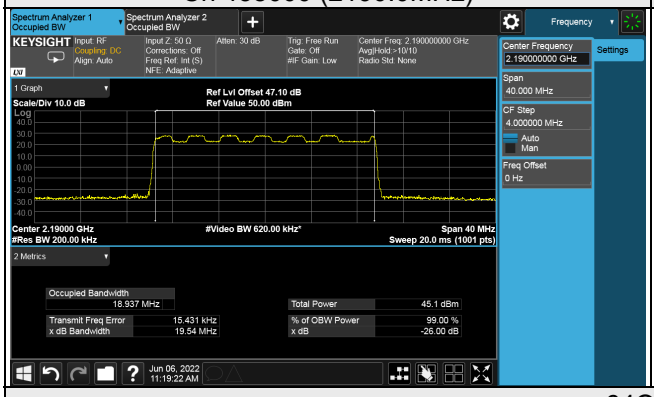


Ch 401500 (2007.5MHz)

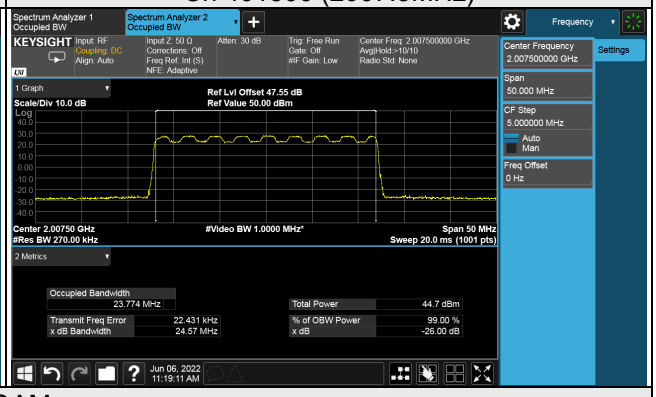


16QAM

Ch 438000 (2190.0MHz)

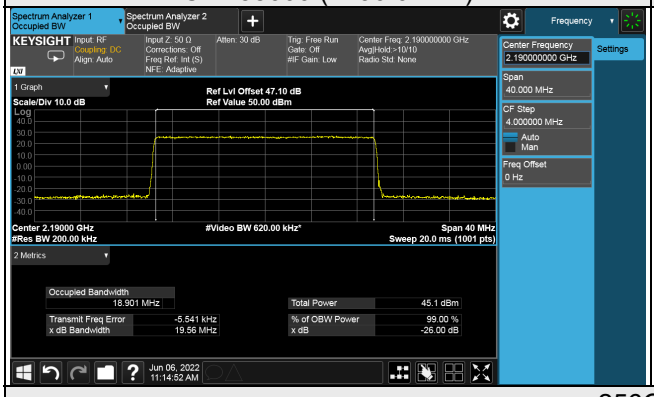


Ch 401500 (2007.5MHz)

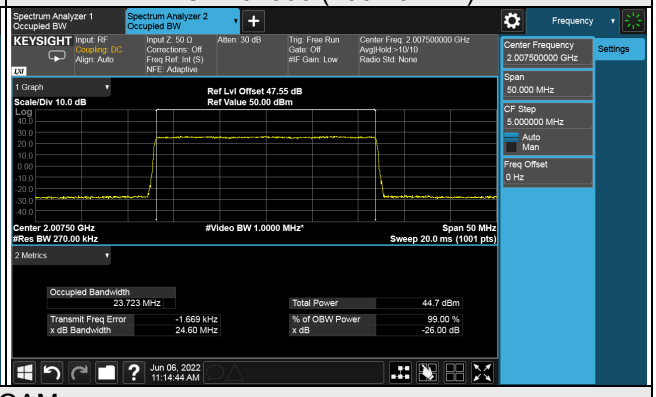


64QAM

Ch 438000 (2190.0MHz)

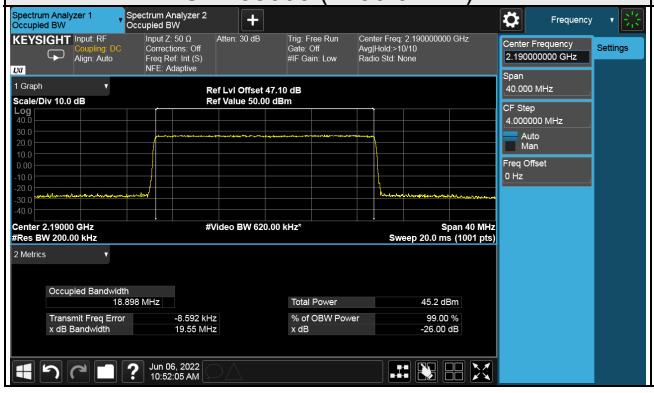


Ch 401500 (2007.5MHz)



256QAM

Ch 438000 (2190.0MHz)



Ch 401500 (2007.5MHz)