FCC Test Report (PART 27)

Report No.:	RFBEOO-WTW-P22050206
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 Lin Kou Laboratories
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

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBEOO-WTW-P22050206	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, Subpart L & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)(2)	Equivalent Isotropically radiated power	PASS	Meet the requirement of limit.
2.1047	Modulation characteristics	PASS	Meet the requirement
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	PASS	Meet the requirement of limit.
2.1049 27.53	Occupied Bandwidth	PASS	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	PASS	Meet the requirement of limit.
27.50(d)(5)	Peak To Average Ratio	PASS	Meet the requirement of limit.
2.1051 27.53(h)	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -48.98dB at 5028.12MHz.

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) (±)
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
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Nov. 23, 2021	Nov. 22, 2022
True RMS Clamp Meter FLUKE	325	31130711WS	Jun. 02, 2021	Jun. 01, 2022
			Jun. 09, 2022	Jun. 08, 2023
DC power supply Chroma	62024P-80-60	62024PA00674	NA	NA
Software	ADT_RF Test Software V6.6.5.4	NA	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	

Max. EIRP Power	Band n66	ANT0	Channel Bandwidth: 5MHz	1467.99 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 10MHz	1050.92 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 15MHz	609.63 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 20MHz	478.84 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 20MHz+20MHz CA Contiguous	270.28 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 5MHz+5MHz CA-Non-Contiguous	722.88 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
	Band n70	ANT0	Channel Bandwidth: 5MHz	1485.85 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 10MHz	917.41 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 15MHz	520.68 W/MHz (16QAM)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 20MHz	481.20 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 25MHz	381.56 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 5MHz+20MHz CA Contiguous	401.39 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 20MHz+5MHz CA Contiguous	406.99 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		
		ANT0	Channel Bandwidth: 5MHz+5MHz CA-Non-Contiguous	787.68 W/MHz (QPSK)
		ANT1		
		ANT2		
		ANT3		

	Band	BW combination	ANT NO.	QPSK	16QAM	64QAM	256QAM
Emission Designator	Band n66	Channel Bandwidth: 5MHz	ANT0	4M48G7D	4M48D7W	4M47D7W	4M46D7W
			ANT1	4M48G7D	4M48D7W	4M46D7W	4M46D7W
			ANT2	4M48G7D	4M47D7W	4M46D7W	4M45D7W
			ANT3	4M48G7D	4M48D7W	4M47D7W	4M46D7W
		Channel Bandwidth: 10MHz	ANT0	9M14G7D	9M22D7W	9M27D7W	9M26D7W
			ANT1	9M14G7D	9M22D7W	9M27D7W	9M27D7W
			ANT2	9M14G7D	9M23D7W	9M27D7W	9M27D7W
			ANT3	9M14G7D	9M23D7W	9M27D7W	9M26D7W
		Channel Bandwidth: 15MHz	ANT0	14M1G7D	14M1D7W	14M1D7W	14M1D7W
			ANT1	14M1G7D	14M1D7W	14M1D7W	14M1D7W
			ANT2	14M1G7D	14M1D7W	14M1D7W	14M1D7W
			ANT3	14M1G7D	14M1D7W	14M1D7W	14M1D7W
		Channel Bandwidth: 20MHz	ANT0	19M0G7D	19M0D7W	18M9D7W	18M9D7W
			ANT1	19M0G7D	19M0D7W	18M9D7W	18M9D7W
			ANT2	19M0G7D	19M0D7W	18M9D7W	18M9D7W
			ANT3	19M0G7D	19M0D7W	18M9D7W	18M9D7W
		Channel Bandwidth: 20MHz+20MHz CA Contiguous	ANT0	38M8G7D	38M8D7W	38M7D7W	38M7D7W
			ANT1	38M8G7D	38M8D7W	38M7D7W	38M7D7W
			ANT2	38M8G7D	38M8D7W	38M7D7W	38M7D7W
			ANT3	38M8G7D	38M8D7W	38M7D7W	38M7D7W
		Channel Bandwidth: 5MHz+5MHz CA-Non-Contiguous	ANT0	8M96G7D	8M96D7W	8M92D7W	8M92D7W
			ANT1	8M96G7D	8M96D7W	8M93D7W	8M93D7W
			ANT2	8M96G7D	8M95D7W	8M93D7W	8M92D7W
			ANT3	8M96G7D	8M96D7W	8M93D7W	8M93D7W

	Band	BW combination	ANT NO.	QPSK	16QAM	64QAM	256QAM
Emission Designator	Band n70	Channel Bandwidth: 5MHz	ANT0	4M48G7D	4M48D7W	4M47D7W	4M46D7W
			ANT1	4M48G7D	4M48D7W	4M47D7W	4M46D7W
			ANT2	4M48G7D	4M48D7W	4M47D7W	4M46D7W
			ANT3	4M48G7D	4M48D7W	4M47D7W	4M46D7W
		Channel Bandwidth: 10MHz	ANT0	9M14G7D	9M23D7W	9M28D7W	9M26D7W
			ANT1	9M14G7D	9M22D7W	9M27D7W	9M26D7W
			ANT2	9M15G7D	9M14D7W	9M22D7W	9M26D7W
			ANT3	9M14G7D	9M22D7W	9M28D7W	9M27D7W
		Channel Bandwidth: 15MHz	ANT0	14M1G7D	14M1D7W	14M1D7W	14M1D7W
			ANT1	14M1G7D	14M1D7W	14M1D7W	14M1D7W
			ANT2	14M1G7D	14M1D7W	14M1D7W	14M1D7W
			ANT3	14M1G7D	14M1D7W	14M1D7W	14M1D7W
		Channel Bandwidth: 20MHz	ANT0	19M0G7D	19M0D7W	18M9D7W	18M9D7W
			ANT1	19M0G7D	19M0D7W	18M9D7W	18M9D7W
			ANT2	19M0G7D	19M0D7W	18M9D7W	18M9D7W
			ANT3	19M0G7D	19M0D7W	18M9D7W	18M9D7W
		Channel Bandwidth: 25MHz	ANT0	23M8G7D	23M8D7W	23M7D7W	23M7D7W
			ANT1	23M8G7D	23M8D7W	23M7D7W	23M7D7W
			ANT2	23M8G7D	23M8D7W	23M7D7W	23M7D7W
			ANT3	23M8G7D	23M8D7W	23M7D7W	23M7D7W
		Channel Bandwidth: 5MHz+20MHz CA Contiguous	ANT0	24M1G7D	24M1D7W	24M1D7W	24M1D7W
			ANT1	24M1G7D	24M1D7W	24M1D7W	24M1D7W
			ANT2	24M1G7D	24M1D7W	24M1D7W	24M1D7W
			ANT3	24M1G7D	24M1D7W	24M1D7W	24M1D7W
		Channel Bandwidth: 20MHz+5MHz CA Contiguous	ANT0	24M1G7D	24M1D7W	24M1D7W	24M1D7W
			ANT1	24M1G7D	24M1D7W	24M1D7W	24M1D7W
			ANT2	24M1G7D	24M1D7W	24M1D7W	24M1D7W
			ANT3	24M1G7D	24M1D7W	24M1D7W	24M1D7W
		Channel Bandwidth: 5MHz+5MHz CA-Non-Contiguous	ANT0	8M95G7D	8M94D7W	8M94D7W	8M93D7W
			ANT1	8M96G7D	8M95D7W	8M94D7W	8M92D7W
			ANT2	8M96G7D	8M95D7W	8M93D7W	8M91D7W
			ANT3	8M96G7D	8M96D7W	8M93D7W	8M92D7W
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						

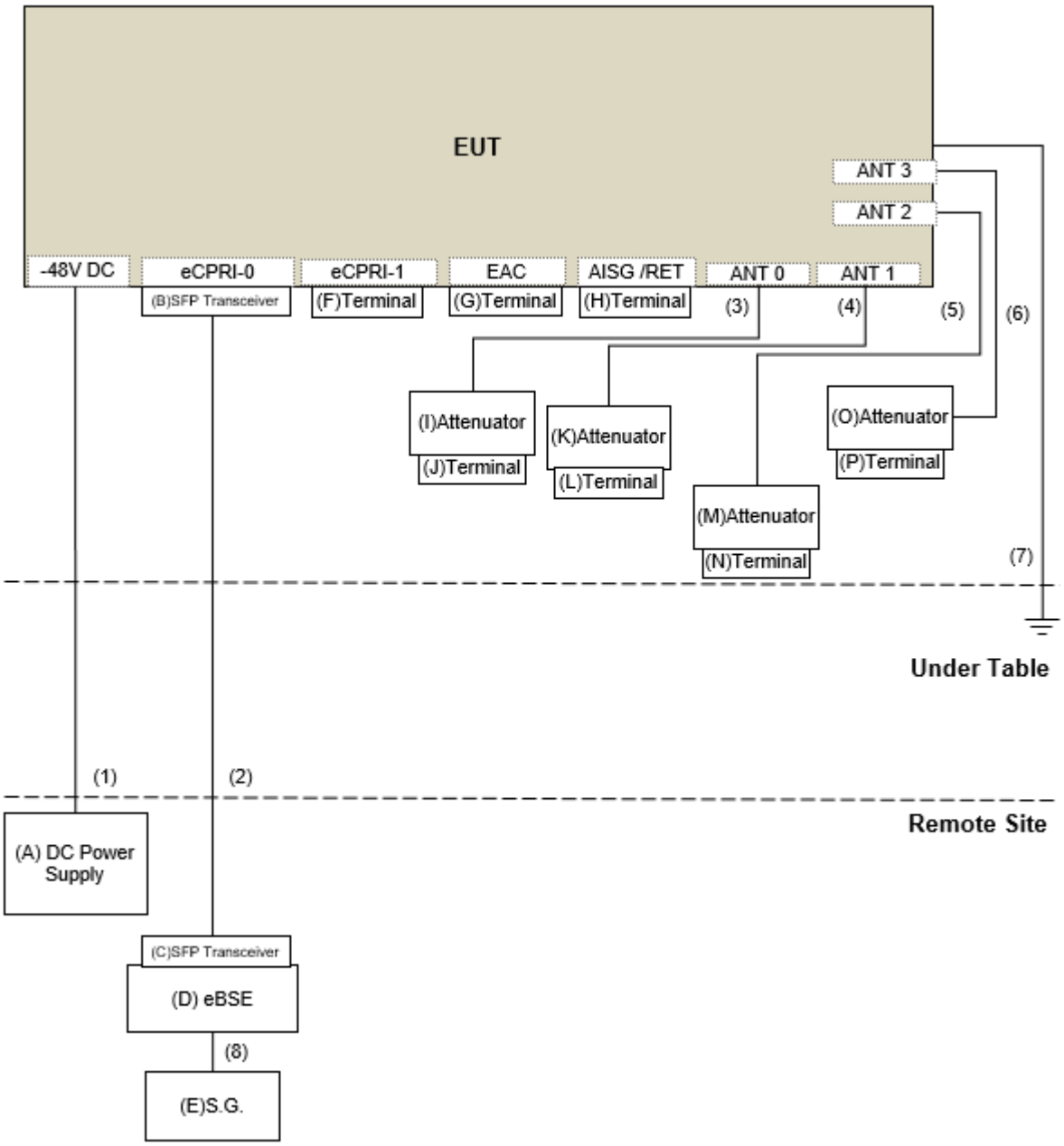
Note:

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

Band n66:

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

Test Item	Available Frequency (MHz)	Tested Channel	Channel Bandwidth	Modulation
Output Power	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 431000 (2155.0MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 423000 (2115.0MHz), Ch 431000 (2155.0MHz), Ch 439000 (2195.0MHz)	10MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 423500 (2117.5MHz), Ch 431000 (2155.0MHz), Ch 438500 (2192.5MHz)	15MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 424000 (2120.0MHz), Ch 431000 (2155.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 429000 (2145.0MHz)+ Ch 433000 (2165.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 425500 (2127.5MHz)+ Ch 436500 (2182.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK, 16QAM, 64QAM, 256QAM
Modulation Characteristics	2112.5 to 2197.5	Ch 431000 (2155.0MHz)	5MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 431000 (2155.0MHz)	10MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 431000 (2155.0MHz)	15MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 431000 (2155.0MHz)	20MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
Frequency Stability	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK
		Ch 423000 (2115.0MHz), Ch 439000 (2195.0MHz)	10MHz(60W) Single Carrier	QPSK
		Ch 423500 (2117.5MHz), Ch 438500 (2192.5MHz)	15MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK

Test Item	Available Frequency (MHz)	Tested Channel	Channel Bandwidth	Modulation
Emission Bandwidth	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 431000 (2155.0MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 423000 (2115.0MHz), Ch 431000 (2155.0MHz), Ch 439000 (2195.0MHz)	10MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 423500 (2117.5MHz), Ch 431000 (2155.0MHz), Ch 438500 (2192.5MHz)	15MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 424000 (2120.0MHz), Ch 431000 (2155.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 429000 (2145.0MHz)+ Ch 433000 (2165.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 425500 (2127.5MHz)+ Ch 436500 (2182.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK, 16QAM, 64QAM, 256QAM
Channel Edge	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK
		Ch 423000 (2115.0MHz), Ch 439000 (2195.0MHz)	10MHz(60W) Single Carrier	QPSK
		Ch 423500 (2117.5MHz), Ch 438500 (2192.5MHz)	15MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK
Peak To Average Ratio	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 431000 (2155.0MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 423000 (2115.0MHz), Ch 431000 (2155.0MHz), Ch 439000 (2195.0MHz)	10MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 423500 (2117.5MHz), Ch 431000 (2155.0MHz), Ch 438500 (2192.5MHz)	15MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 424000 (2120.0MHz), Ch 431000 (2155.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 429000 (2145.0MHz)+ Ch 433000 (2165.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 425500 (2127.5MHz)+ Ch 436500 (2182.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK, 16QAM, 64QAM, 256QAM

Test Item	Available Frequency (MHz)	Tested Channel	Channel Bandwidth	Modulation
Conducted Emission	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 431000 (2155.0MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK
		Ch 423000 (2115.0MHz), Ch 431000 (2155.0MHz), Ch 439000 (2195.0MHz)	10MHz(60W) Single Carrier	QPSK
		Ch 423500 (2117.5MHz), Ch 431000 (2155.0MHz), Ch 438500 (2192.5MHz)	15MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz), Ch 431000 (2155.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 429000 (2145.0MHz)+ Ch 433000 (2165.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 425500 (2127.5MHz)+ Ch 436500 (2182.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK
Radiated Emission Below 1GHz	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 431000 (2155.0MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz), Ch 431000 (2155.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 429000 (2145.0MHz)+ Ch 433000 (2165.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 425500 (2127.5MHz)+ Ch 436500 (2182.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK
Radiated Emission Above 1GHz	2112.5 to 2197.5	Ch 422500 (2112.5MHz), Ch 431000 (2155.0MHz), Ch 439500 (2197.5MHz)	5MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz), Ch 431000 (2155.0MHz), Ch 438000 (2190.0MHz)	20MHz(60W) Single Carrier	QPSK
		Ch 424000 (2120.0MHz)+ Ch 428000 (2140.0MHz), Ch 429000 (2145.0MHz)+ Ch 433000 (2165.0MHz), Ch 434000 (2170.0MHz)+ Ch 438000 (2190.0MHz)	20MHz(30W)+20MHz(30W) CA Contiguous	QPSK
		Ch 422500 (2112.5MHz)+ Ch 433500 (2167.5MHz), Ch 425500 (2127.5MHz)+ Ch 436500 (2182.5MHz), Ch 428500 (2142.5MHz)+ Ch 439500 (2197.5MHz)	5MHz(30W)+5MHz(30W) CA-Non-Contiguous	QPSK

NOTE:

1. All supported modulation types were evaluated. The Worst case of QPSK was selected. Therefore, the Frequency Stability, Conducted Emission and Radiated Emission were performed under QPSK mode only.

Band n70:

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

Test Item	Available Frequency (MHz)	Tested Channel	Channel Bandwidth	Modulation
Output Power	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 400000 (2000.0MHz), Ch 401500 (2007.5MHz), Ch 403000 (2015.0MHz)	10MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 400500 (2002.5MHz), Ch 401500 (2007.5MHz), Ch 402500 (2012.5MHz)	15MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401000 (2005.0MHz), Ch 401500 (2007.5MHz), Ch 402000 (2010.0MHz)	20MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 399500 (1997.5MHz)+ Ch 402000 (2010.0MHz)	5MHz(8W)+20MHz(32W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK, 16QAM, 64QAM, 256QAM
Modulation Characteristics	1997.5 to 2017.5	Ch 401500 (2007.5MHz)	5MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401500 (2007.5MHz)	10MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401500 (2007.5MHz)	15MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401500 (2007.5MHz)	20MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
Frequency Stability	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK
		Ch 400000 (2000.0MHz), Ch 403000 (2015.0MHz)	10MHz(40W) Single Carrier	QPSK
		Ch 400500 (2002.5MHz), Ch 402500 (2012.5MHz)	15MHz(40W) Single Carrier	QPSK
		Ch 401000 (2005.0MHz), Ch 402000 (2010.0MHz)	20MHz(40W) Single Carrier	QPSK
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK
		Ch 399500 (1997.5MHz)+ Ch 402000 (2010.0MHz)	5MHz(8W)+20MHz(32W) CA Contiguous	QPSK
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK

Test Item	Available Frequency (MHz)	Tested Channel	Channel Bandwidth	Modulation
Emission Bandwidth	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 400000 (2000.0MHz), Ch 401500 (2007.5MHz), Ch 403000 (2015.0MHz)	10MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 400500 (2002.5MHz), Ch 401500 (2007.5MHz), Ch 402500 (2012.5MHz)	15MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401000 (2005.0MHz), Ch 401500 (2007.5MHz), Ch 402000 (2010.0MHz)	20MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 399500 (1997.5MHz)+ Ch 402000 (2010.0MHz)	5MHz(8W)+20MHz(32W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK, 16QAM, 64QAM, 256QAM
Channel Edge	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK
		Ch 400000 (2000.0MHz), Ch 401500 (2007.5MHz), Ch 403000 (2015.0MHz)	10MHz(40W) Single Carrier	QPSK
		Ch 400500 (2002.5MHz), Ch 401500 (2007.5MHz), Ch 402500 (2012.5MHz)	15MHz(40W) Single Carrier	QPSK
		Ch 401000 (2005.0MHz), Ch 401500 (2007.5MHz), Ch 402000 (2010.0MHz)	20MHz(40W) Single Carrier	QPSK
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK
		Ch 399500 (1997.5MHz)+ Ch 402000 (2010.0MHz)	5MHz(8W)+20MHz(32W) CA Contiguous	QPSK
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	16QAM
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	16QAM
Peak To Average Ratio	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 400000 (2000.0MHz), Ch 401500 (2007.5MHz), Ch 403000 (2015.0MHz)	10MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 400500 (2002.5MHz), Ch 401500 (2007.5MHz), Ch 402500 (2012.5MHz)	15MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401000 (2005.0MHz), Ch 401500 (2007.5MHz), Ch 402000 (2010.0MHz)	20MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
	1997.5 to 2017.5	Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK, 16QAM, 64QAM, 256QAM
		Ch 399500 (1997.5MHz)+ Ch 402000 (2010.0MHz)	5MHz(8W)+20MHz(32W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK, 16QAM, 64QAM, 256QAM
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK, 16QAM, 64QAM, 256QAM

Test Item	Available Frequency (MHz)	Tested Channel	Channel Bandwidth	Modulation
Conducted Emission	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK
		Ch 400000 (2000.0MHz), Ch 401500 (2007.5MHz), Ch 403000 (2015.0MHz)	10MHz(40W) Single Carrier	QPSK
		Ch 400500 (2002.5MHz), Ch 401500 (2007.5MHz), Ch 402500 (2012.5MHz)	15MHz(40W) Single Carrier	QPSK
		Ch 401000 (2005.0MHz), Ch 401500 (2007.5MHz), Ch 402000 (2010.0MHz)	20MHz(40W) Single Carrier	QPSK
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK
		Ch 399500 (1997.5MHz)+ Ch 402000 (2010.0MHz)	5MHz(8W)+20MHz(32W) CA Contiguous	QPSK
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK
Radiated Emission Below 1GHz	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK
Radiated Emission Above 1GHz	1997.5 to 2017.5	Ch 399500 (1997.5MHz), Ch 401500 (2007.5MHz), Ch 403500 (2017.5MHz)	5MHz(40W) Single Carrier	QPSK
		Ch 401500 (2007.5MHz)	25MHz(40W) Single Carrier	QPSK
		Ch 401000 (2005.0MHz)+ Ch 403500 (2017.5MHz)	20MHz(32W)+5MHz(8W) CA Contiguous	QPSK
		Ch 399500 (1997.5MHz)+ Ch 403500 (2017.5MHz)	5MHz(20W)+5MHz(20W) CA-Non-Contiguous	QPSK

NOTE:

1. All supported modulation types were evaluated. The Worst case of QPSK was selected. Therefore, the Frequency Stability, Conducted Emission and Radiated Emission were performed under QPSK mode only.

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
Output Power	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Modulation characteristics	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Frequency Stability	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Emission Bandwidth	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Band Edge	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Peak To Average Ratio	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Conducted Emission	25deg. C, 63%RH	120Vac, 60Hz	James Yang
Radiated Emission	20deg. C, 70%RH	120Vac, 60Hz	Ryan Du

Note: Above input power with the AC/DC PSU used during testing.

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 and references:

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 27, Subpart L

ANSI/TIA/EIA-603-E 2016

ANSI C63.26-2015

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 / ERP 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:

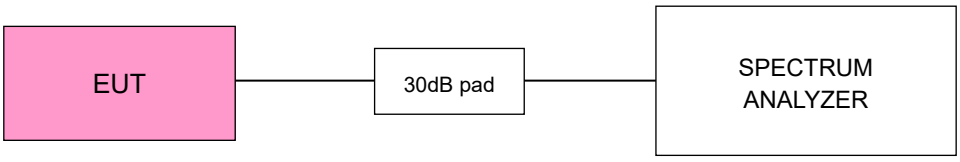
   EIRP = PMeas + GT
   ERP = PMeas + GT- 2.15

   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

Band n66
Single Carrier

5MHz

Channel Number	Freq. (MHz)	QPSK					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	PASS /FAIL
		Conducted Average Power (dBm/MHz)									
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	41.70	41.58	41.58	41.70	47.66	14	61.66	1465.55	1640.00	PASS
431000	2155	41.62	41.62	41.60	41.74	47.67	14	61.67	1467.99	1640.00	PASS
439500	2197.5	41.63	41.54	41.55	41.77	47.64	14	61.64	1460.19	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	47.25	47.22	47.20	47.28	53.26	14	67.26	5317.96	-	-
431000	2155	47.22	47.25	47.23	47.27	53.26	14	67.26	5324.93	-	-
439500	2197.5	47.23	47.21	47.22	47.26	53.25	14	67.25	5309.63	-	-

10MHz

Channel Number	Freq. (MHz)	QPSK					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	PASS /FAIL
		Conducted Average Power (dBm/MHz)									
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	40.14	40.11	40.08	40.18	46.15	14	60.15	1034.85	1640.00	PASS
431000	2155	40.21	40.18	40.16	40.23	46.22	14	60.22	1050.92	1640.00	PASS
439000	2195	40.18	40.16	40.13	40.15	46.18	14	60.18	1041.27	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	47.22	47.22	47.20	47.24	53.24	14	67.24	5295.87	-	-
431000	2155	47.25	47.19	47.15	47.23	53.23	14	67.23	5279.31	-	-
439000	2195	47.21	47.18	47.20	47.20	53.22	14	67.22	5270.01	-	-

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

15MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	37.84	37.81	37.82	37.85	43.85	14	57.85	609.63	1640.00	PASS
431000	2155	37.80	37.82	37.81	37.82	43.83	14	57.83	607.17	1640.00	PASS
438500	2192.5	37.81	37.82	37.80	37.83	43.84	14	57.84	607.52	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	47.25	47.22	47.20	47.21	53.24	14	67.24	5298.64	-	-
431000	2155	47.23	47.18	47.22	47.20	53.23	14	67.23	5282.19	-	-
438500	2192.5	47.21	47.24	47.19	47.22	53.24	14	67.24	5291.32	-	-

20MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	36.81	36.78	36.75	36.79	42.80	14	56.80	478.84	1640.00	PASS
431000	2155	36.75	36.80	36.77	36.77	42.79	14	56.79	477.87	1640.00	PASS
438000	2190	36.76	36.78	36.72	36.73	42.77	14	56.77	475.13	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	47.26	47.24	47.22	47.23	53.26	14	67.26	5318.79	-	-
431000	2155	47.21	47.23	47.18	47.22	53.23	14	67.23	5285.23	-	-
438000	2190	47.16	47.17	47.25	47.22	53.22	14	67.22	5273.22	-	-

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

5MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	41.52	41.55	41.53	41.52	47.55	14	61.55	1428.77	1640.00	PASS
431000	2155	41.57	41.56	41.60	41.57	47.60	14	61.60	1443.98	1640.00	PASS
439500	2197.5	41.55	41.52	41.52	41.53	47.55	14	61.55	1429.10	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	47.24	47.23	47.25	47.21	53.25	14	67.25	5312.67	-	-
431000	2155	47.26	47.25	47.21	47.20	53.25	14	67.25	5309.67	-	-
439500	2197.5	47.21	47.17	47.24	47.23	53.23	14	67.23	5288.33	-	-

10MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	39.05	39.13	39.08	39.05	45.10	14	59.10	812.36	1640.00	PASS
431000	2155	39.11	39.08	39.12	39.09	45.12	14	59.12	816.70	1640.00	PASS
439000	2195	39.07	39.07	39.14	39.13	45.12	14	59.12	817.19	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	47.24	47.22	47.18	47.19	53.23	14	67.23	5280.69	-	-
431000	2155	47.23	47.21	47.20	47.25	53.24	14	67.24	5300.47	-	-
439000	2195	47.22	47.25	47.23	47.17	53.24	14	67.24	5294.44	-	-

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

15MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	37.85	37.78	37.86	37.81	43.85	14	57.85	609.04	1640.00	PASS
431000	2155	37.79	37.85	37.80	37.82	43.84	14	57.84	607.53	1640.00	PASS
438500	2192.5	37.83	37.81	37.83	37.84	43.85	14	57.85	609.27	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	47.23	47.21	47.16	47.20	53.22	14	67.22	5273.12	-	-
431000	2155	47.22	47.23	47.23	47.15	53.23	14	67.23	5282.30	-	-
438500	2192.5	47.25	47.18	47.22	47.19	53.23	14	67.23	5285.29	-	-

20MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	36.54	36.55	36.58	36.51	42.57	14	56.57	453.52	1640.00	PASS
431000	2155	36.54	36.53	36.52	36.55	42.56	14	56.56	452.44	1640.00	PASS
438000	2190	36.57	36.52	36.51	36.53	42.55	14	56.55	452.18	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	47.18	47.22	47.19	47.18	53.21	14	67.21	5262.76	-	-
431000	2155	47.23	47.23	47.22	47.23	53.25	14	67.25	5306.52	-	-
438000	2190	47.22	47.18	47.24	47.17	53.22	14	67.22	5276.18	-	-

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

5MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	40.81	40.75	40.77	40.72	46.78	14	60.78	1197.70	1640.00	PASS
431000	2155	40.78	40.73	40.73	40.76	46.77	14	60.77	1194.17	1640.00	PASS
439500	2197.5	40.74	40.69	40.72	40.75	46.75	14	60.75	1187.32	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	47.21	47.23	47.22	47.23	53.24	14	67.24	5301.64	-	-
431000	2155	47.20	47.23	47.24	47.17	53.23	14	67.23	5285.29	-	-
439500	2197.5	47.21	47.25	47.20	47.22	53.24	14	67.24	5297.42	-	-

10MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	37.67	37.65	37.69	37.62	43.68	14	57.68	585.86	1640.00	PASS
431000	2155	37.66	37.63	37.61	37.66	43.66	14	57.66	583.53	1640.00	PASS
439000	2195	37.62	37.63	37.61	37.65	43.65	14	57.65	581.85	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	47.26	47.25	47.20	47.22	53.25	14	67.25	5311.48	-	-
431000	2155	47.21	47.22	47.28	47.23	53.26	14	67.26	5315.80	-	-
439000	2195	47.23	47.20	47.17	47.24	53.23	14	67.23	5285.29	-	-

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

15MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	36.11	36.16	36.11	36.14	42.15	14	56.15	412.06	1640.00	PASS
431000	2155	36.13	36.12	36.12	36.15	42.15	14	56.15	412.16	1640.00	PASS
438500	2192.5	36.12	36.16	36.12	36.12	42.15	14	56.15	412.16	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	47.25	47.16	47.18	47.25	53.23	14	67.23	5284.19	-	-
431000	2155	47.20	47.23	47.21	47.22	53.24	14	67.24	5291.29	-	-
438500	2192.5	47.19	47.22	47.24	47.17	53.23	14	67.23	5279.20	-	-

20MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	34.85	34.87	34.80	34.82	40.86	14	54.86	305.86	1640.00	PASS
431000	2155	34.80	34.81	34.83	34.88	40.85	14	54.85	305.54	1640.00	PASS
438000	2190	34.82	34.85	34.80	34.79	40.84	14	54.84	304.49	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	47.12	47.22	47.16	47.24	53.21	14	67.21	5255.46	-	-
431000	2155	47.19	47.15	47.22	47.20	53.21	14	67.21	5260.99	-	-
438000	2190	47.23	47.21	47.17	47.18	53.22	14	67.22	5270.07	-	-

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

5MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	40.82	40.83	40.80	40.85	46.85	14	60.85	1215.10	1640.00	PASS
431000	2155	40.82	40.77	40.87	40.81	46.84	14	60.84	1212.90	1640.00	PASS
439500	2197.5	40.84	40.82	40.85	40.80	46.85	14	60.85	1215.67	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500	2112.5	47.18	47.22	47.15	47.23	53.21	14	67.21	5266.20	-	-
431000	2155	47.23	47.20	47.24	47.18	53.23	14	67.23	5288.31	-	-
439500	2197.5	47.19	47.21	47.21	47.25	53.24	14	67.24	5291.34	-	-

10MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	37.78	37.72	37.74	37.75	43.77	14	57.77	598.23	1640.00	PASS
431000	2155	37.71	37.77	37.69	37.75	43.75	14	57.75	595.76	1640.00	PASS
439000	2195	37.74	37.75	37.71	37.70	43.75	14	57.75	595.07	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423000	2115	47.17	47.22	47.26	47.19	53.23	14	67.23	5285.34	-	-
431000	2155	47.24	47.24	47.18	47.23	53.24	14	67.24	5300.50	-	-
439000	2195	47.21	47.25	47.21	47.23	53.25	14	67.25	5303.51	-	-

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

15MHz

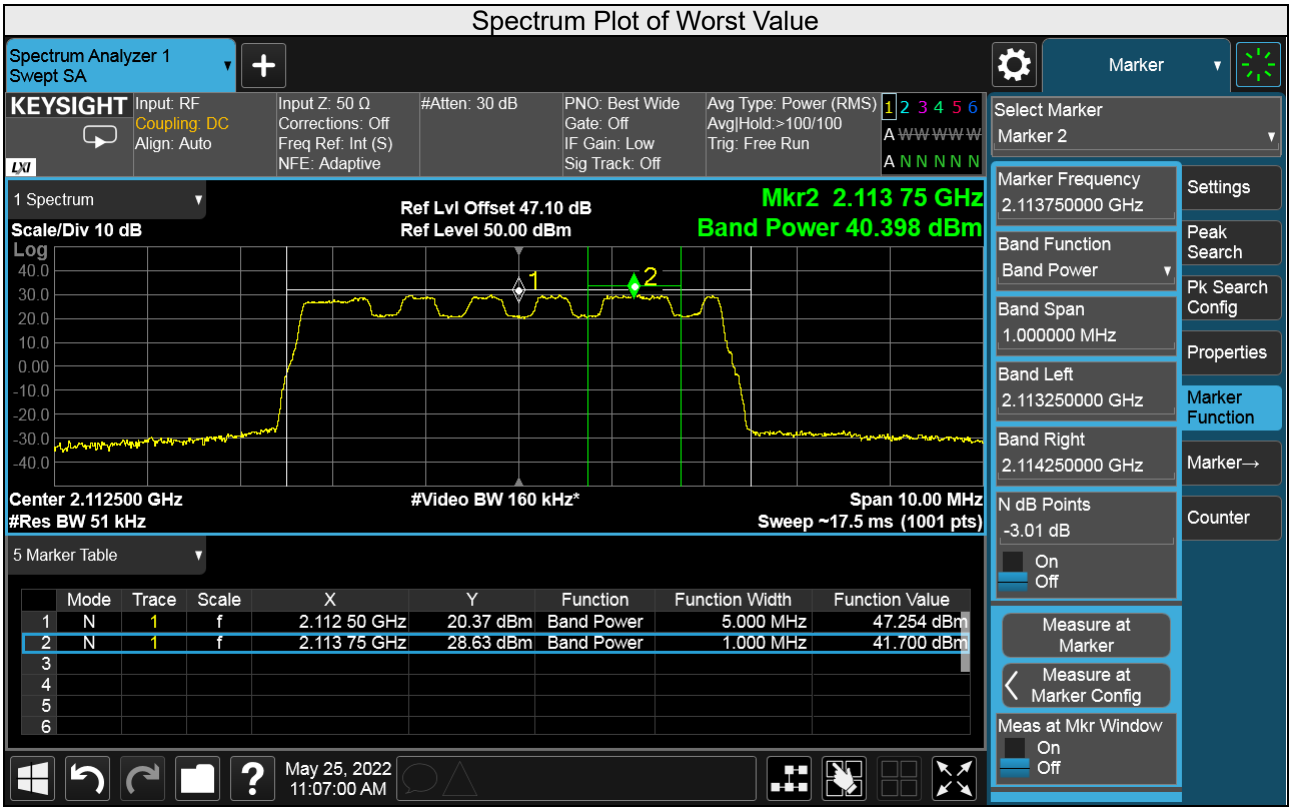
Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	36.06	36.09	36.13	36.10	42.12	14	56.12	408.90	1640.00	PASS
431000	2155	36.08	36.10	36.11	36.08	42.11	14	56.11	408.61	1640.00	PASS
438500	2192.5	36.13	36.07	36.08	36.08	42.11	14	56.11	408.38	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
423500	2117.5	47.16	47.24	47.18	47.19	53.21	14	67.21	5264.05	-	-
431000	2155	47.24	47.17	47.23	47.22	53.24	14	67.24	5291.37	-	-
438500	2192.5	47.21	47.25	47.17	47.19	53.23	14	67.23	5279.22	-	-

20MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm/MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	34.58	34.55	34.57	34.52	40.58	14	54.58	286.86	1640.00	PASS
431000	2155	34.55	34.56	34.49	34.56	40.56	14	54.56	285.80	1640.00	PASS
438000	2190	34.53	34.51	34.52	34.53	40.54	14	54.54	284.65	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000	2120	47.12	47.18	47.13	47.19	53.17	14	67.17	5217.91	-	-
431000	2155	47.18	47.23	47.21	47.20	53.23	14	67.23	5279.15	-	-
438000	2190	47.19	47.22	47.18	47.21	53.22	14	67.22	5273.06	-	-

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

Spectrum Plot of Worst Value



	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.112 50 GHz	20.37 dBm	Band Power	5.000 MHz	47.254 dBm
2	N	1	f	2.113 75 GHz	28.63 dBm	Band Power	1.000 MHz	41.700 dBm
3								
4								
5								
6								

CA Contiguous

20MHz+20MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	34.20	34.22	34.28	34.21	40.32	14	54.32	270.13	1640.00	PASS
		34.31	34.26	34.27	34.33						
429000+433000	2145+2165	34.25	34.18	34.21	34.22	40.29	14	54.29	268.58	1640.00	PASS
		34.33	34.22	34.27	34.26						
434000+438000	2170+2190	34.24	34.23	34.27	34.20	40.32	14	54.32	270.28	1640.00	PASS
		34.29	34.30	34.26	34.33						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	44.52	44.48	44.39	44.41	53.55	14	67.55	5687.70	-	-
		44.68	44.50	44.62	44.54						
429000+433000	2145+2165	44.46	44.40	44.36	44.41	53.52	14	67.52	5645.13	-	-
		44.61	44.56	44.51	44.57						
434000+438000	2170+2190	44.55	44.51	44.57	44.52	53.60	14	67.60	5759.15	-	-
		44.59	44.63	44.60	44.61						

20MHz+20MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	33.97	33.92	33.95	33.99	40.19	14	54.19	262.16	1640.00	PASS
		34.20	34.18	34.12	34.16						
429000+433000	2145+2165	34.08	34.05	34.10	34.07	40.19	14	54.19	262.47	1640.00	PASS
		34.16	34.22	34.19	34.11						
434000+438000	2170+2190	34.05	34.07	34.08	34.11	40.13	14	54.13	258.72	1640.00	PASS
		34.11	34.08	34.07	34.16						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	44.55	44.43	44.42	44.48	53.55	14	67.55	53.55	-	-
		44.61	44.59	44.53	44.51						
429000+433000	2145+2165	44.46	44.38	44.40	44.36	53.50	14	67.50	53.50	-	-
		44.57	44.57	44.53	44.51						
434000+438000	2170+2190	44.43	44.36	44.40	44.41	53.46	14	67.46	53.46	-	-
		44.52	44.45	44.39	44.50						

20MHz+20MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	32.18	32.23	32.19	32.20	38.33	14	52.33	170.93	1640.00	PASS
		32.35	32.29	32.26	32.33						
429000+433000	2145+2165	32.16	32.21	32.18	32.16	38.31	14	52.31	170.05	1640.00	PASS
		32.33	32.29	32.27	32.25						
434000+438000	2170+2190	32.13	32.16	32.21	32.22	38.33	14	52.33	170.93	1640.00	PASS
		32.36	32.26	32.33	32.28						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	44.53	44.43	44.50	44.51	53.56	14	67.56	5703.29	-	-
		44.63	44.58	44.51	44.55						
429000+433000	2145+2165	44.50	44.43	44.48	44.47	53.55	14	67.55	5691.89	-	-
		44.61	44.60	44.52	44.56						
434000+438000	2170+2190	44.46	44.41	44.51	44.46	53.54	14	67.54	5670.54	-	-
		44.58	44.53	44.52	44.57						

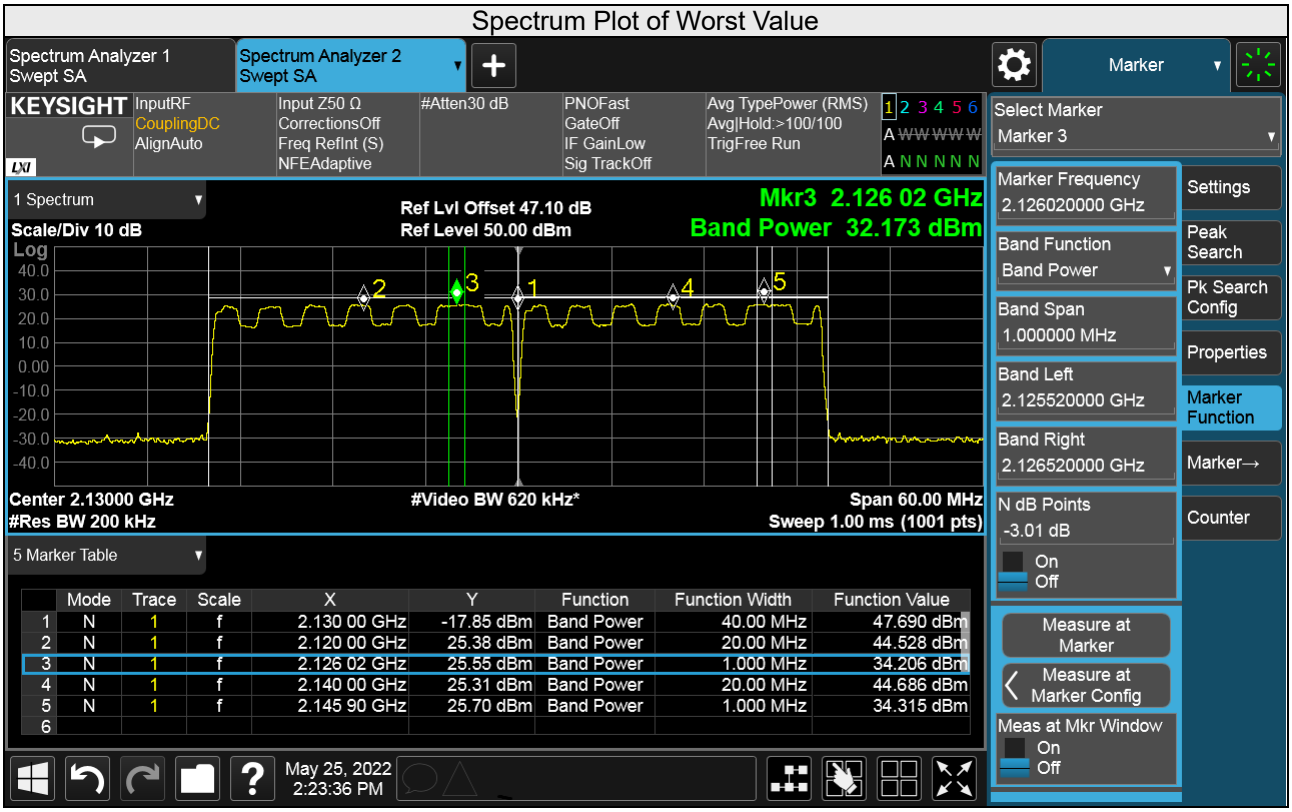
*EIRP = Conducted + Directional gain (14dBi)
*The antenna gain was declared by client.

20MHz+20MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	32.28	32.21	32.23	32.25	38.32	14	52.32	170.44	1640.00	PASS
		32.32	32.26	32.27	32.33						
429000+433000	2145+2165	32.21	32.18	32.26	32.22	38.35	14	52.35	171.82	1640.00	PASS
		32.30	32.31	32.37	32.34						
434000+438000	2170+2190	32.26	32.15	32.17	32.16	38.30	14	52.30	169.76	1640.00	PASS
		32.33	32.28	32.22	32.28						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
424000+428000	2120+2140	44.43	44.36	44.27	44.38	53.49	14	67.49	5613.61	-	-
		44.65	44.52	44.56	44.51						
429000+433000	2145+2165	44.33	44.27	44.25	44.23	53.44	14	67.44	5543.97	-	-
		44.57	44.58	44.46	44.55						
434000+438000	2170+2190	44.36	44.28	44.29	44.32	53.46	14	67.46	5568.68	-	-
		44.58	44.48	44.58	44.51						

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

Spectrum Plot of Worst Value



	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.130 00 GHz	-17.85 dBm	Band Power	40.00 MHz	47.690 dBm
2	N	1	f	2.120 00 GHz	25.38 dBm	Band Power	20.00 MHz	44.528 dBm
3	N	1	f	2.126 02 GHz	25.55 dBm	Band Power	1.000 MHz	34.206 dBm
4	N	1	f	2.140 00 GHz	25.31 dBm	Band Power	20.00 MHz	44.686 dBm
5	N	1	f	2.145 90 GHz	25.70 dBm	Band Power	1.000 MHz	34.315 dBm
6								

CA-Non-Contiguous

5MHz+5MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	38.48	38.41	38.40	38.45	44.59	14	58.59	722.47	1640.00	PASS
		38.62	38.55	38.56	38.54						
425500+436500	2127.5+2182.5	38.44	38.40	38.46	38.41	44.58	14	58.58	720.80	1640.00	PASS
		38.57	38.55	38.57	38.54						
428500+439500	2142.5+2197.5	38.45	38.43	38.44	38.47	44.59	14	58.59	722.88	1640.00	PASS
		38.59	38.55	38.60	38.54						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	44.12	44.18	44.23	44.19	53.39	14	67.39	5482.20	-	-
		44.55	44.50	44.56	44.51						
425500+436500	2127.5+2182.5	44.12	44.18	44.13	44.17	53.37	14	67.37	5462.39	-	-
		44.57	44.52	44.50	44.52						
428500+439500	2142.5+2197.5	44.18	44.16	44.20	44.18	53.37	14	67.37	5461.05	-	-
		44.54	44.48	44.56	44.41						

5MHz+5MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	38.46	38.41	38.43	38.39	44.45	14	58.45	699.14	1640.00	PASS
		38.36	38.31	38.33	38.40						
425500+436500	2127.5+2182.5	38.40	38.37	38.32	38.32	44.37	14	58.37	687.58	1640.00	PASS
		38.25	38.26	38.22	38.27						
428500+439500	2142.5+2197.5	38.37	38.26	38.30	38.22	44.31	14	58.31	677.79	1640.00	PASS
		38.32	38.27	38.25	38.21						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	44.28	44.21	44.26	44.28	53.44	14	67.44	5544.64	-	-
		44.67	44.50	44.51	44.53						
425500+436500	2127.5+2182.5	44.21	44.23	44.19	44.23	53.38	14	67.38	5474.01	-	-
		44.53	44.47	44.48	44.46						
428500+439500	2142.5+2197.5	44.23	44.16	44.20	44.23	53.26	14	67.26	5325.50	-	-
		44.28	44.30	44.21	44.25						

5MHz+5MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	37.56	37.49	37.52	37.53	43.91	14	57.91	618.14	1640.00	PASS
		37.96	37.82	37.90	37.88						
425500+436500	2127.5+2182.5	37.50	37.44	37.47	37.45	43.82	14	57.82	605.47	1640.00	PASS
		37.89	37.76	37.80	37.75						
428500+439500	2142.5+2197.5	37.47	37.44	37.41	37.48	43.86	14	57.86	611.39	1640.00	PASS
		37.88	37.83	37.85	37.81						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	44.20	44.18	44.21	44.25	53.44	14	67.44	5541.88	-	-
		44.68	44.58	44.53	44.58						
425500+436500	2127.5+2182.5	44.23	44.16	44.20	44.18	53.42	14	67.42	5514.47	-	-
		44.61	44.58	44.55	44.53						
428500+439500	2142.5+2197.5	44.23	44.21	44.17	44.20	53.41	14	67.41	5507.31	-	-
		44.59	44.53	44.55	44.52						

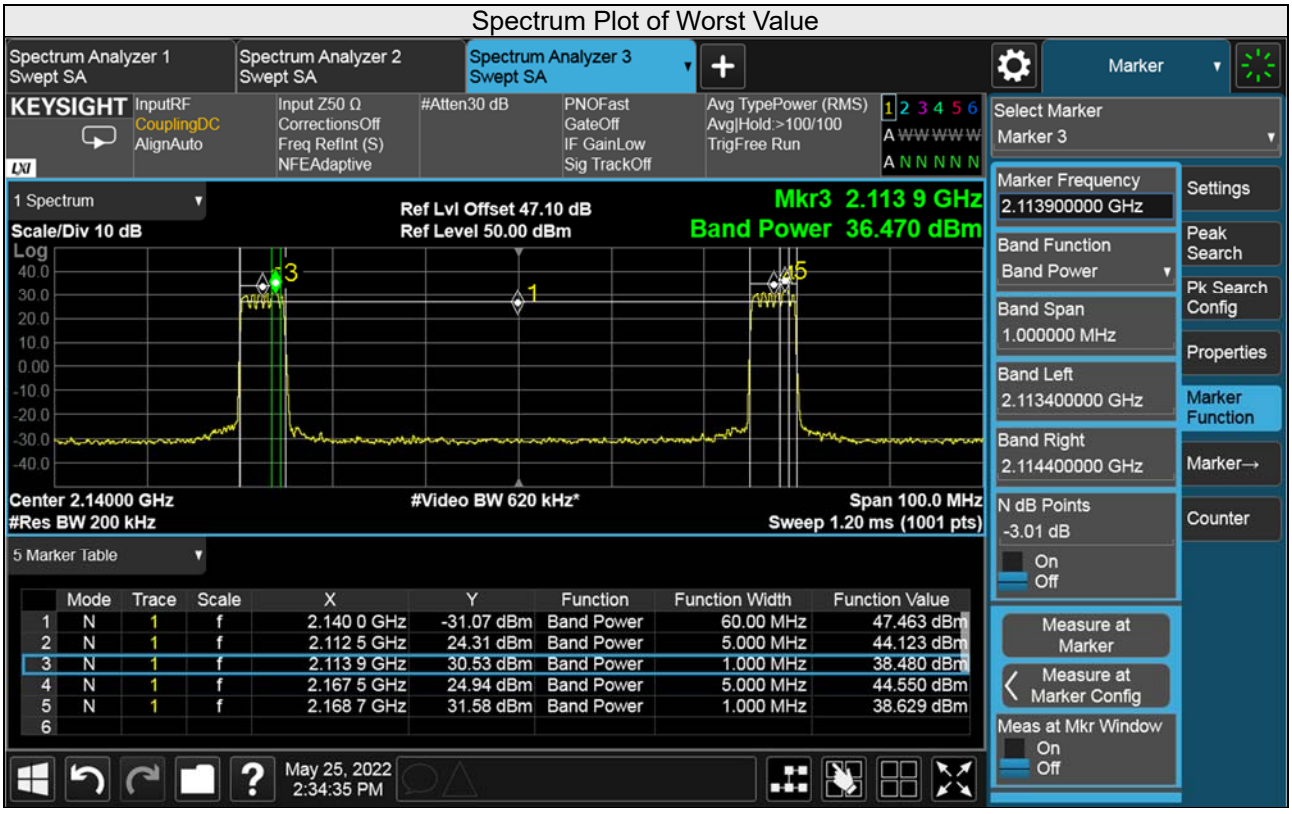
*EIRP = Conducted + Directional gain (14dBi)
*The antenna gain was declared by client.

5MHz+5MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	37.84	37.75	37.80	37.71	43.88	14	57.88	613.17	1640.00	PASS
		37.91	37.79	37.88	37.84						
425500+436500	2127.5+2182.5	37.77	37.72	37.75	37.80	43.85	14	57.85	609.63	1640.00	PASS
		37.85	37.86	37.81	37.77						
428500+439500	2142.5+2197.5	37.80	37.74	37.77	37.71	43.90	14	57.90	616.36	1640.00	PASS
		37.92	37.82	37.84	37.93						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
422500+433500	2112.5+2167.5	44.09	44.15	44.08	44.16	53.36	14	67.36	5444.57	-	-
		44.59	44.46	44.55	44.51						
425500+436500	2127.5+2182.5	44.18	44.23	44.27	44.22	53.38	14	67.38	5475.36	-	-
		44.51	44.52	44.43	44.45						
428500+439500	2142.5+2197.5	44.13	44.18	44.13	44.17	53.33	14	67.33	5408.66	-	-
		44.48	44.42	44.46	44.41						

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

Spectrum Plot of Worst Value



Band n70
Single Carrier

5MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	39.66	39.76	39.69	39.69	45.72	16	61.72	1485.85	1640.00	PASS
401500	2007.5	39.61	39.68	39.67	39.70	45.69	16	61.69	1474.26	1640.00	PASS
403500	2017.5	39.67	39.65	39.61	39.66	45.67	16	61.67	1468.30	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	45.19	45.23	45.14	45.20	51.21	16	67.21	5258.62	-	-
401500	2007.5	45.18	45.24	45.20	45.17	51.22	16	67.22	5270.09	-	-
403500	2017.5	45.12	45.22	45.20	45.23	51.21	16	67.21	5264.19	-	-

10MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	37.63	37.55	37.60	37.61	43.62	16	59.62	915.84	1640.00	PASS
401500	2007.5	37.61	37.67	37.54	37.57	43.62	16	59.62	915.88	1640.00	PASS
403000	2015	37.58	37.60	37.60	37.64	43.63	16	59.63	917.41	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	45.15	45.20	45.22	45.18	51.21	16	67.21	5257.96	-	-
401500	2007.5	45.19	45.25	45.24	45.13	51.22	16	67.22	5276.38	-	-
403000	2015	45.23	45.20	45.22	45.24	51.24	16	67.24	5300.45	-	-

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

15MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	35.02	35.10	35.08	35.11	41.10	16	57.10	512.65	1640.00	PASS
401500	2007.5	35.13	35.04	35.08	35.06	41.10	16	57.10	512.65	1640.00	PASS
402500	2012.5	35.10	35.08	35.07	35.07	41.10	16	57.10	512.93	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	45.16	45.22	45.13	45.25	51.21	16	67.21	5261.21	-	-
401500	2007.5	45.20	45.23	45.21	45.18	51.23	16	67.23	5279.15	-	-
402500	2012.5	45.22	45.16	45.15	45.22	51.21	16	67.21	5258.02	-	-

20MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	34.80	34.83	34.76	34.77	40.81	16	56.81	479.81	1640.00	PASS
401500	2007.5	34.76	34.80	34.84	34.75	40.81	16	56.81	479.54	1640.00	PASS
402000	2010	34.75	34.83	34.81	34.82	40.82	16	56.82	481.20	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	45.11	45.23	45.19	45.24	51.21	16	67.21	5264.29	-	-
401500	2007.5	45.20	45.18	45.21	45.20	51.22	16	67.22	5270.01	-	-
402000	2010	45.21	45.16	45.18	45.22	51.21	16	67.21	5264.01	-	-

25MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	33.81	33.80	33.76	33.81	39.82	16	55.82	381.56	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	45.13	45.20	45.16	45.18	51.19	16	67.19	5233.81	-	-

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

5MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	39.34	39.32	39.26	39.28	45.32	16	61.32	1355.41	1640.00	PASS
401500	2007.5	39.26	39.28	39.22	39.31	45.29	16	61.29	1345.31	1640.00	PASS
403500	2017.5	39.28	39.36	39.33	39.25	45.33	16	61.33	1357.00	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	45.21	45.12	45.18	45.22	51.20	16	67.20	5252.03	-	-
401500	2007.5	45.20	45.17	45.23	45.16	51.21	16	67.21	5261.00	-	-
403500	2017.5	45.21	45.18	45.20	45.18	51.21	16	67.21	5263.95	-	-

10MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	36.53	36.51	36.50	36.55	42.54	16	58.54	715.01	1640.00	PASS
401500	2007.5	36.50	36.54	36.49	36.48	42.52	16	58.52	711.73	1640.00	PASS
403000	2015	36.51	36.55	36.48	36.44	42.52	16	58.52	710.52	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	45.18	45.22	45.16	45.18	51.21	16	67.21	5254.91		-
401500	2007.5	45.21	45.17	45.23	45.16	51.21	16	67.21	5264.04		-
403000	2015	45.15	45.18	45.23	45.22	51.22	16	67.22	5267.10		-

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

15MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	35.11	35.19	35.16	35.12	41.17	16	57.17	520.68	1640.00	PASS
401500	2007.5	35.14	35.16	35.18	35.10	41.17	16	57.17	520.68	1640.00	PASS
402500	2012.5	35.13	35.18	35.11	35.16	41.17	16	57.17	520.68	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	45.14	45.19	45.17	45.23	51.20	16	67.20	5251.97	-	-
401500	2007.5	45.18	45.16	45.18	45.20	51.20	16	67.20	5248.83	-	-
402500	2012.5	45.17	45.21	45.24	45.14	51.21	16	67.21	5261.10	-	-

20MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	34.78	34.81	34.76	34.75	40.80	16	56.80	478.15	1640.00	PASS
401500	2007.5	34.76	34.78	34.81	34.78	40.80	16	56.80	478.98	1640.00	PASS
402000	2010	34.77	34.77	34.79	34.82	40.81	16	56.81	479.53	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	45.12	45.18	45.21	45.19	51.20	16	67.20	5242.92	-	-
401500	2007.5	45.17	45.20	45.16	45.22	51.21	16	67.21	5257.95	-	-
402000	2010	45.22	45.18	45.21	45.20	51.22	16	67.22	5276.09	-	-

25MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	33.80	33.79	33.76	33.78	39.80	16	55.80	380.46	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	45.16	45.20	45.23	45.16	51.21	16	67.21	5257.99	-	-

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

5MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	38.42	38.47	38.39	38.41	44.44	16	60.44	1107.44	1640.00	PASS
401500	2007.5	38.41	38.42	38.37	38.40	44.42	16	60.42	1101.70	1640.00	PASS
403500	2017.5	38.44	38.41	38.36	38.39	44.42	16	60.42	1101.72	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	45.15	45.20	45.16	45.18	51.19	16	67.19	5239.79	-	-
401500	2007.5	45.18	45.16	45.23	45.22	51.22	16	67.22	5270.11	-	-
403500	2017.5	45.18	45.21	45.18	45.16	51.20	16	67.20	5251.87	-	-

10MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	35.35	35.30	35.27	35.26	41.32	16	57.32	538.98	1640.00	PASS
401500	2007.5	35.34	35.22	35.28	35.31	41.31	16	57.31	538.06	1640.00	PASS
403000	2015	35.28	35.21	35.23	35.28	41.27	16	57.27	533.42	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	45.19	45.20	45.16	45.18	51.20	16	67.20	5251.85	-	-
401500	2007.5	45.19	45.16	45.18	45.21	51.21	16	67.21	5254.89	-	-
403000	2015	45.23	45.18	45.20	45.17	51.22	16	67.22	5267.03	-	-

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

15MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	33.63	33.61	33.54	33.57	39.61	16	55.61	363.77	1640.00	PASS
401500	2007.5	33.61	33.58	33.61	33.59	39.62	16	55.62	364.60	1640.00	PASS
402500	2012.5	33.56	33.60	33.54	33.58	39.59	16	55.59	362.30	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	45.18	45.23	45.18	45.19	51.22	16	67.22	5267.02	-	-
401500	2007.5	45.17	45.20	45.16	45.22	51.21	16	67.21	5257.95	-	-
402500	2012.5	45.21	45.20	45.23	45.14	51.22	16	67.22	5267.12	-	-

20MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	32.72	32.75	32.67	32.65	38.72	16	54.72	296.37	1640.00	PASS
401500	2007.5	32.73	32.71	32.63	32.70	38.71	16	54.71	296.02	1640.00	PASS
402000	2010	32.66	32.68	32.74	32.70	38.72	16	54.72	296.19	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	45.21	45.18	45.20	45.14	51.20	16	67.20	5251.92	-	-
401500	2007.5	45.20	45.25	45.22	45.13	51.22	16	67.22	5273.30	-	-
402000	2010	45.18	45.20	45.21	45.20	51.22	16	67.22	5270.01	-	-

25MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	31.68	31.62	31.63	31.59	37.65	16	53.65	231.78	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	45.13	45.10	45.18	45.16	51.16	16	67.16	5203.80	-	-

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

5MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	38.37	38.30	38.31	38.32	44.35	16	60.35	1082.85	1640.00	PASS
401500	2007.5	38.32	38.29	38.27	38.33	44.32	16	60.32	1077.25	1640.00	PASS
403500	2017.5	38.33	38.31	38.29	38.29	44.33	16	60.33	1077.86	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500	1997.5	45.15	45.18	45.23	45.16	51.20	16	67.20	5248.93	-	-
401500	2007.5	45.23	45.18	45.20	45.21	51.23	16	67.23	5279.15	-	-
403500	2017.5	45.20	45.17	45.18	45.21	51.21	16	67.21	5260.93	-	-

10MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	35.49	35.41	35.45	35.43	41.47	16	57.47	557.92	1640.00	PASS
401500	2007.5	35.46	35.39	35.41	35.44	41.45	16	57.45	555.35	1640.00	PASS
403000	2015	35.42	35.46	35.40	35.41	41.44	16	57.44	555.03	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400000	2000	45.18	45.16	45.20	45.23	51.21	16	67.21	5264.02	-	-
401500	2007.5	45.20	45.16	45.17	45.19	51.20	16	67.20	5248.83	-	-
403000	2015	45.23	45.18	45.22	45.16	51.22	16	67.22	5270.11	-	-

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

15MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	33.82	33.81	33.74	33.79	39.81	16	55.81	381.13	1640.00	PASS
401500	2007.5	33.77	33.75	33.77	33.83	39.80	16	55.80	380.25	1640.00	PASS
402500	2012.5	33.80	33.76	33.84	33.75	39.81	16	55.81	380.91	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
400500	2002.5	45.13	45.16	45.21	45.23	51.20	16	67.20	5252.04	-	-
401500	2007.5	45.20	45.19	45.16	45.18	51.20	16	67.20	5251.85	-	-
402500	2012.5	45.21	45.16	45.18	45.15	51.20	16	67.20	5242.83	-	-

20MHz

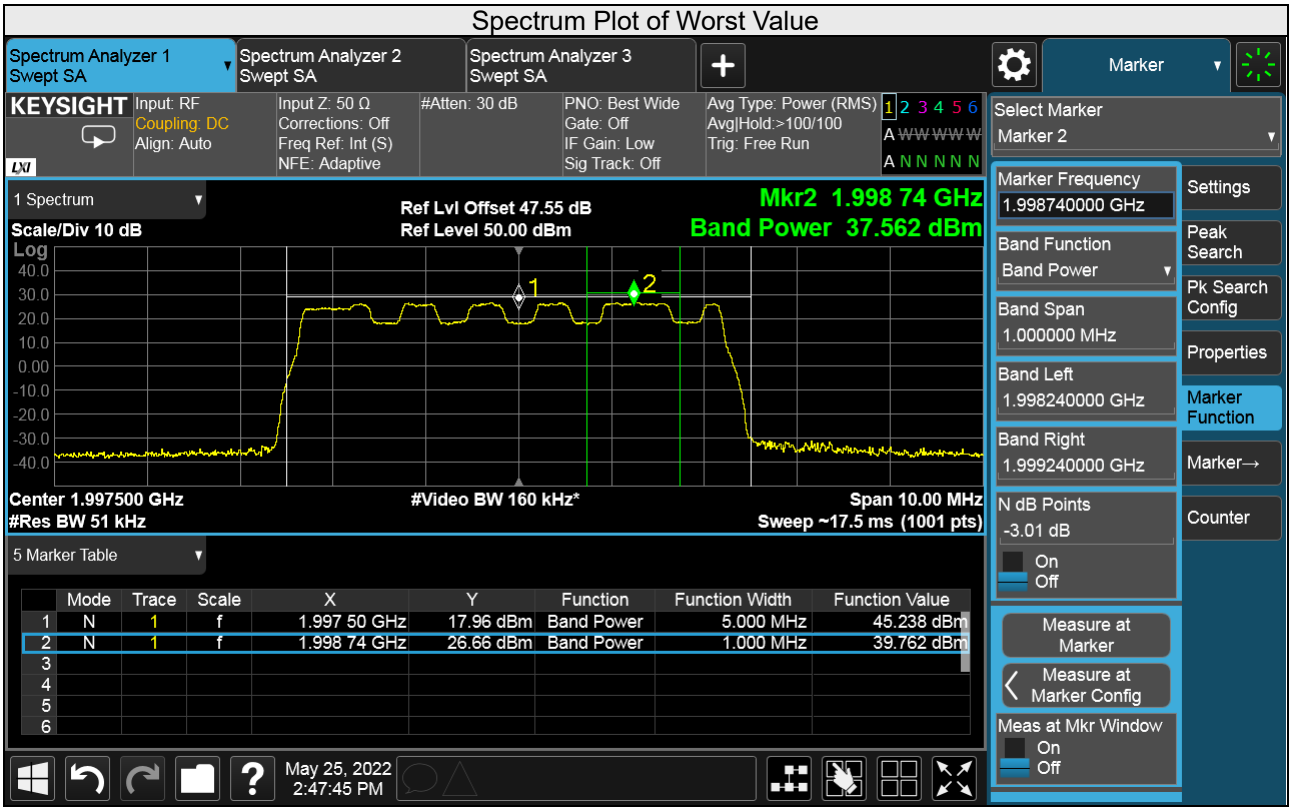
Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	32.78	32.74	32.77	32.71	38.77	16	54.77	299.96	1640.00	PASS
401500	2007.5	32.71	32.79	32.74	32.69	38.75	16	54.75	298.76	1640.00	PASS
402000	2010	32.75	32.74	32.73	32.73	38.76	16	54.76	299.10	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000	2005	45.20	45.12	45.21	45.18	51.20	16	67.20	5245.95	-	-
401500	2007.5	45.18	45.16	45.23	45.16	51.20	16	67.20	5251.94	-	-
402000	2010	45.17	45.21	45.23	45.16	51.21	16	67.21	5264.04	-	-

25MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	31.78	31.71	31.75	31.72	37.76	16	53.76	237.72	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power (dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401500	2007.5	45.19	45.16	45.20	45.18	51.20	16	67.20	5251.85	-	-

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

Spectrum Plot of Worst Value



CA Contiguous

5MHz+20MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	32.87 34.05	32.81 34.03	32.88 34.01	32.82 33.97	40.04	16	56.04	401.39	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	38.55 44.52	38.58 44.44	38.51 44.36	38.52 44.47	51.46	16	67.46	5572.35	-	-

5MHz+20MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	32.80 34.01	32.76 33.92	32.77 34.02	32.74 33.96	40.00	16	56.00	397.95	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	38.44 44.46	38.47 44.39	38.41 44.43	38.36 44.45	51.42	16	67.42	5525.77	-	-

5MHz+20MHz

Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	32.17 32.22	32.21 32.19	32.14 32.14	32.11 32.18	38.21	16	54.21	263.52	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	38.56 44.47	38.67 44.41	38.61 44.46	38.52 44.48	51.48	16	67.48	5592.95	-	-

5MHz+20MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	32.14 32.16	32.18 32.16	32.16 32.11	32.20 32.08	38.20	16	54.20	262.76	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+402000	1997.5+2010.0	38.47 44.42	38.36 44.25	38.33 44.38	38.40 44.33	51.35	16	67.35	5430.42	-	-

20MHz+5MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	34.13 32.88	34.06 32.85	34.09 32.88	34.02 32.82	40.10	16	56.10	406.99	1640.00	PASS
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	44.53 38.69	44.46 38.62	44.37 38.59	44.39 38.61	51.47	16	67.47	5585.40	-	-

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

20MHz+5MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	34.09	34.07	34.03	34.02	40.07	16	56.07	404.87	1640.00	PASS
		32.77	32.84	32.78	32.74						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	44.43	44.38	44.40	44.42	51.44	16	67.44	5547.21	-	-
		38.58	38.62	38.66	38.54						

20MHz+5MHz

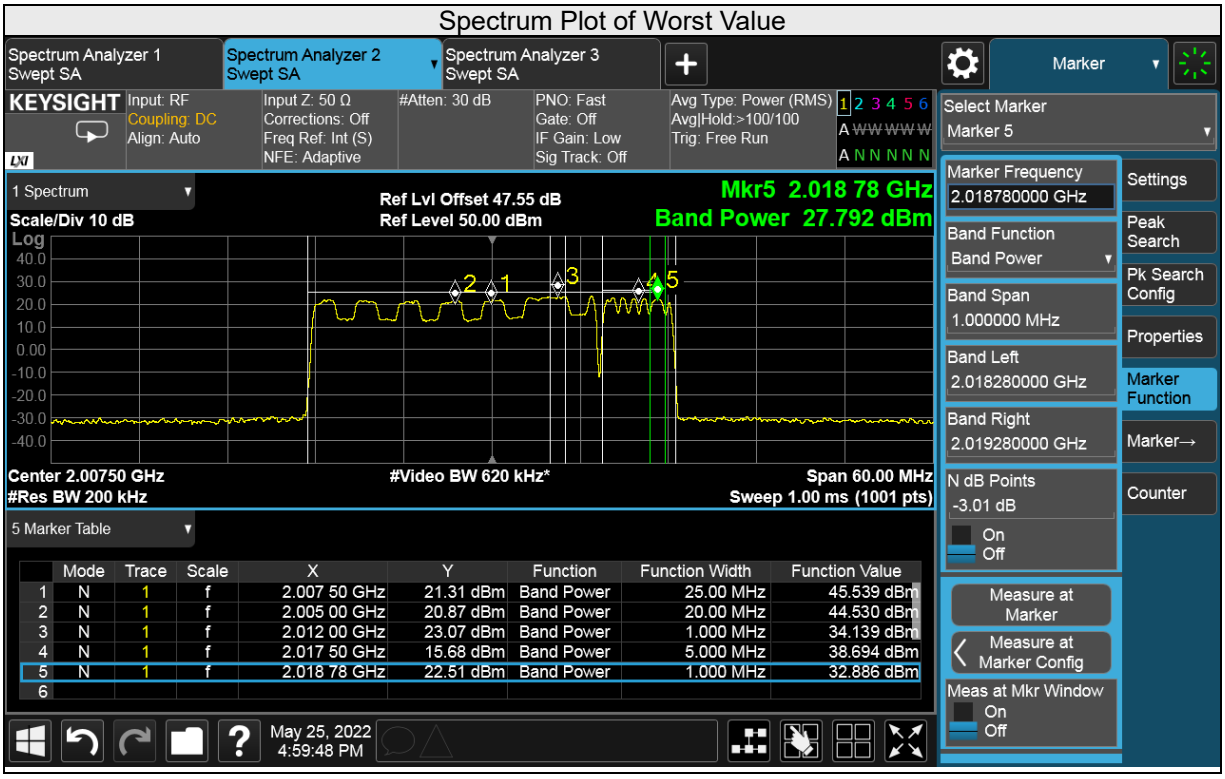
Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	32.25	32.23	32.16	32.12	38.21	16	54.21	263.84	1640.00	PASS
		32.11	32.06	32.10	32.09						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	44.43	44.36	44.38	44.40	51.42	16	67.42	5521.49	-	-
		38.61	38.52	38.57	38.54						

20MHz+5MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	32.22	32.16	32.13	32.18	38.19	16	54.19	262.62	1640.00	PASS
		32.05	32.07	32.06	32.09						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
401000+403500	2005.0+2017.5	44.33	44.38	44.45	44.37	51.42	16	67.42	5514.84	-	-
		38.61	38.57	38.57	38.54						

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

Spectrum Plot of Worst Value



	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.007 50 GHz	21.31 dBm	Band Power	25.00 MHz	45.539 dBm
2	N	1	f	2.005 00 GHz	20.87 dBm	Band Power	20.00 MHz	44.530 dBm
3	N	1	f	2.012 00 GHz	23.07 dBm	Band Power	1.000 MHz	34.139 dBm
4	N	1	f	2.017 50 GHz	15.68 dBm	Band Power	5.000 MHz	38.694 dBm
5	N	1	f	2.018 78 GHz	22.51 dBm	Band Power	1.000 MHz	32.886 dBm
6								

CA-Non-Contiguous

5MHz+5MHz

Channel Number	Freq. (MHz)	QPSK									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	36.92	36.87	36.92	36.95	42.96	16	58.96	787.68	1640.00	PASS
		36.97	36.94	36.87	36.91						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	42.85	42.90	42.90	42.94	52.07	16	68.07	6405.75	-	-
		43.19	43.16	43.14	43.20						

5MHz+5MHz

Channel Number	Freq. (MHz)	16QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	36.88	36.87	36.92	36.85	42.91	16	58.91	778.66	1640.00	PASS
		36.91	36.84	36.91	36.88						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	42.77	42.80	42.73	42.79	52.02	16	68.02	6333.01	-	-
		43.19	43.23	43.15	43.20						

5MHz+5MHz

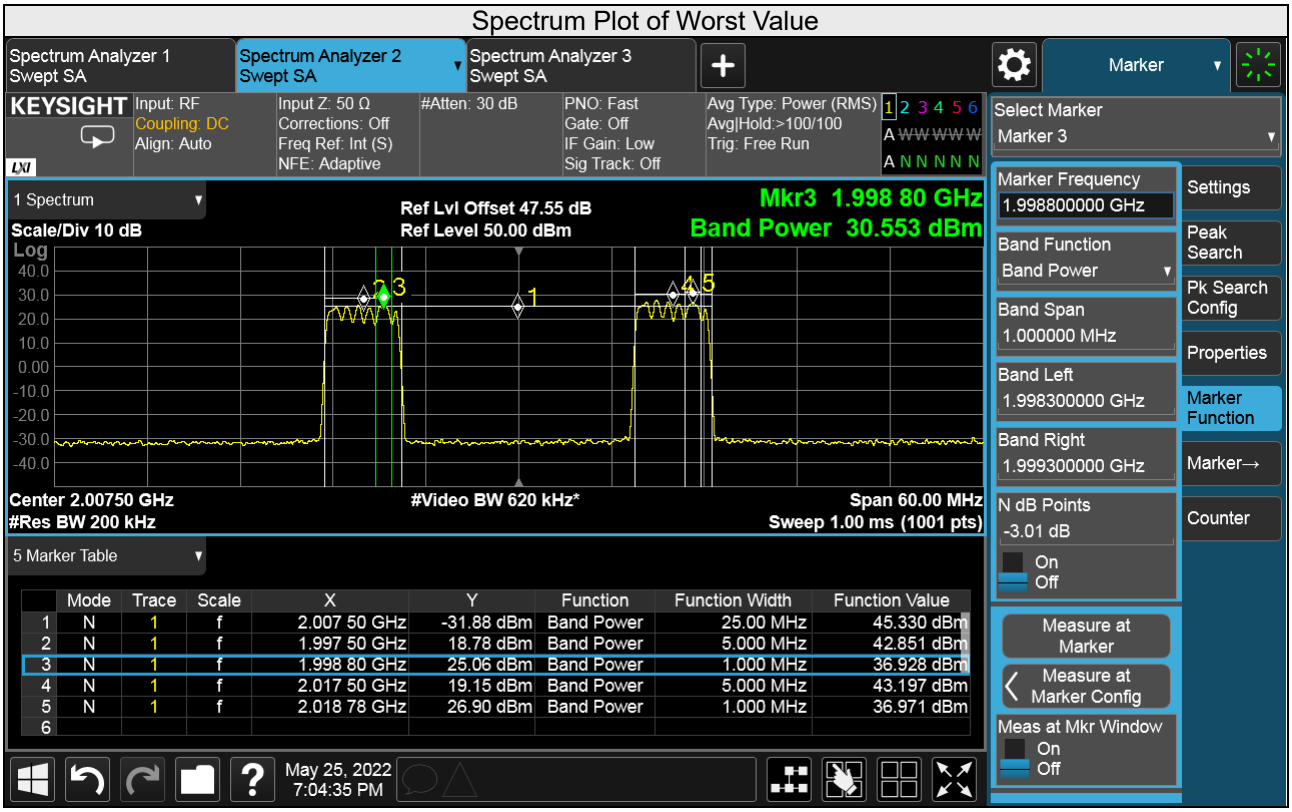
Channel Number	Freq. (MHz)	64QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	36.13	36.15	36.11	36.14	42.43	16	58.43	696.01	1640.00	PASS
		36.43	36.47	36.38	36.35						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	42.70	42.75	42.64	42.67	51.97	16	67.97	6259.19	-	-
		43.15	43.20	43.18	43.15						

5MHz+5MHz

Channel Number	Freq. (MHz)	256QAM									PASS /FAIL
		Conducted Average Power (dBm/MHz)					Directional Gain	EIRP (dBm /MHz)	EIRP (W/MHz)	Limit (W/MHz)	
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	36.15	36.12	36.11	36.10	42.38	16	58.38	688.42	1640.00	PASS
		36.40	36.36	36.35	36.33						
Channel Number	Freq. (MHz)	Conducted Average Power(dBm)					Directional Gain	EIRP (dBm)	EIRP (W)	Limit (W)	PASS /FAIL
		Ant.0	Ant.1	Ant.2	Ant.3	Total					
399500+400500	1997.5+2017.5	42.70	42.61	42.62	42.69	51.95	16	67.95	6239.33	-	-
		43.15	43.13	43.20	43.22						

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

Spectrum Plot of Worst Value



4.2 Modulation characteristics Measurement

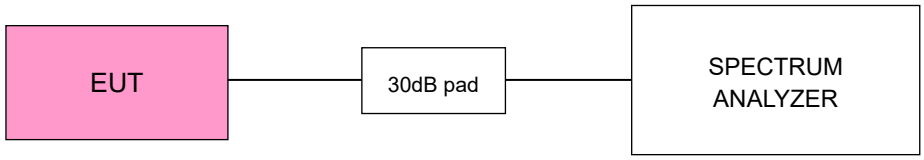
4.2.1 Limits of Modulation characteristics

N/A

4.2.2 Test Procedure

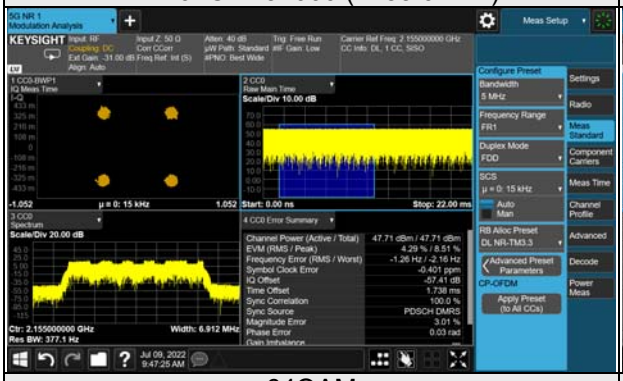
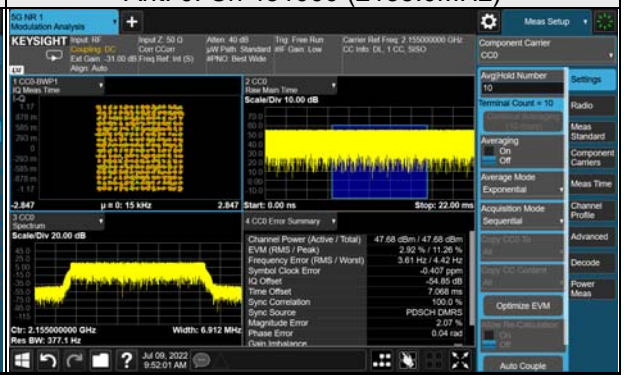
Connect the EUT to spectrum analyzer. The frequency band is set as EUT supported modulation and channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

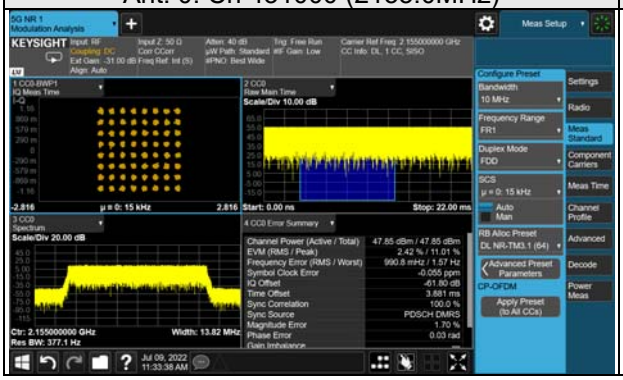
4.2.3 Test Setup



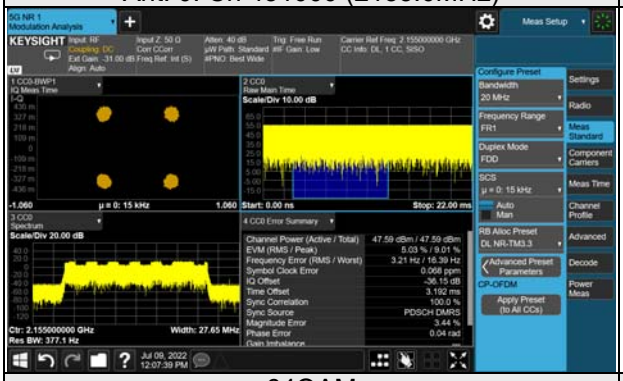
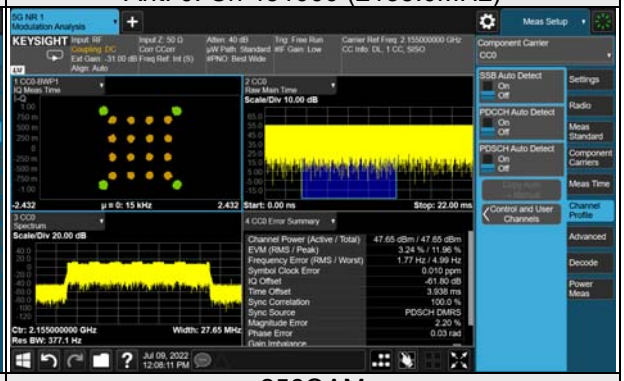
4.2.4 Test Results

Band n66

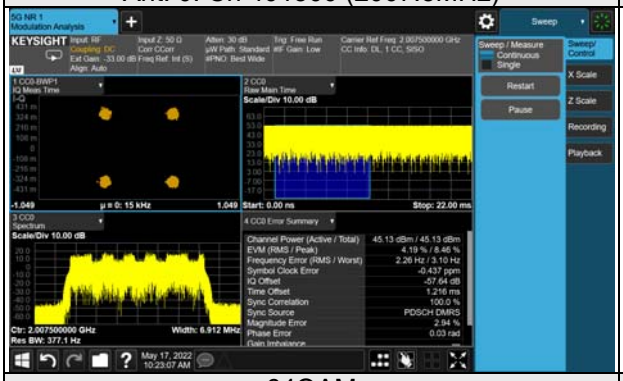
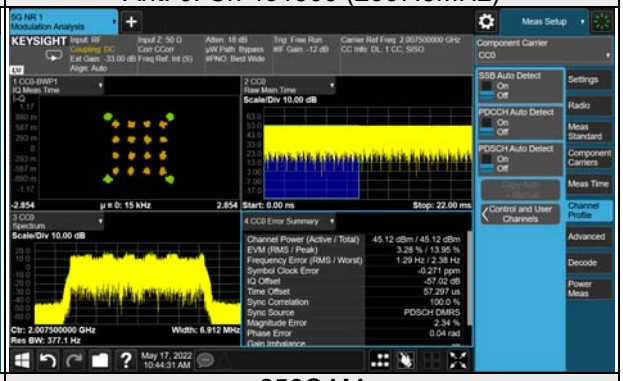
Spectrum Plot of Measurement Value	
5MHz	
QPSK	16QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	
64QAM	256QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	

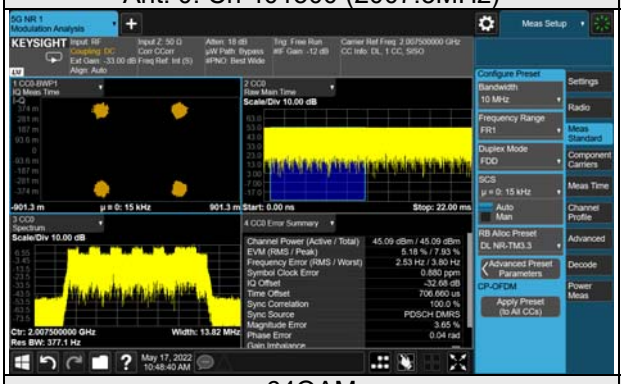
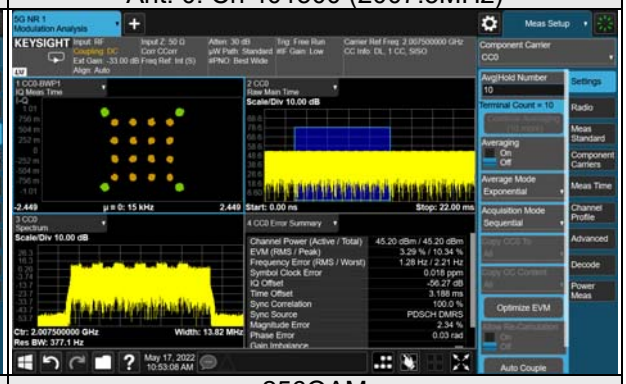
10MHz	
QPSK	16QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	
64QAM	256QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	

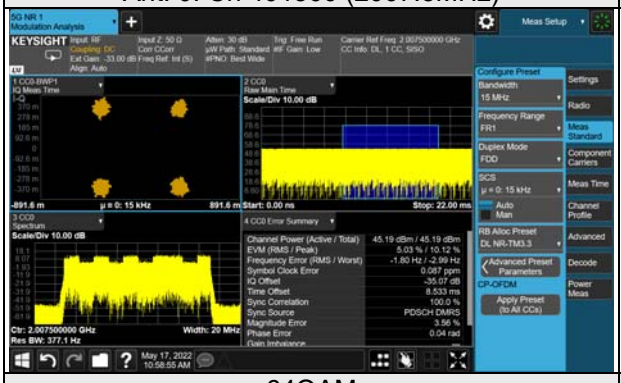
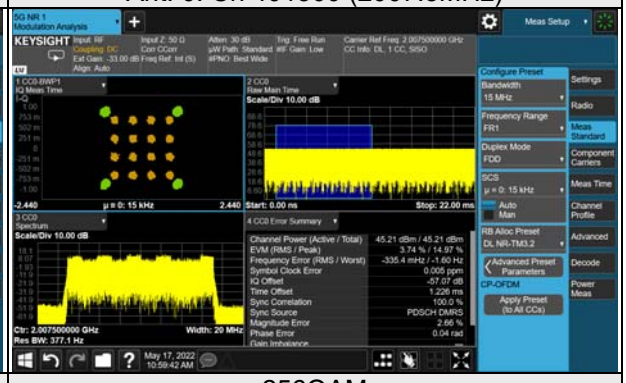
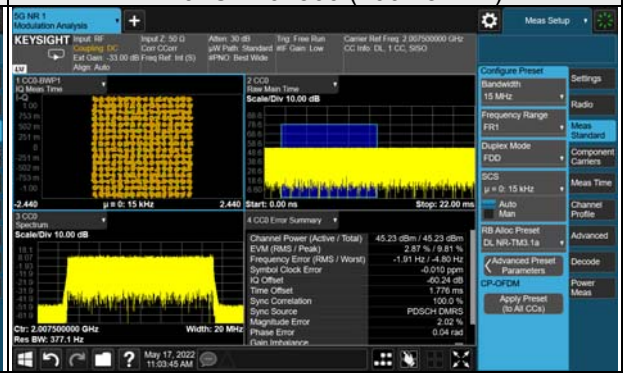
15MHz	
QPSK	16QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	
64QAM	256QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	

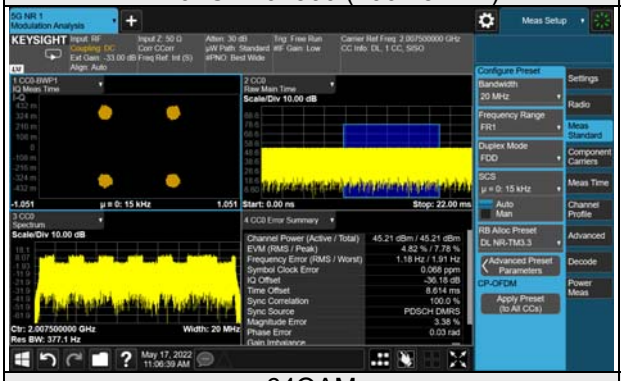
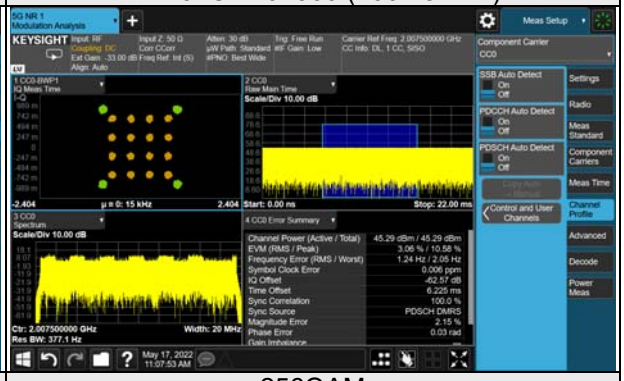
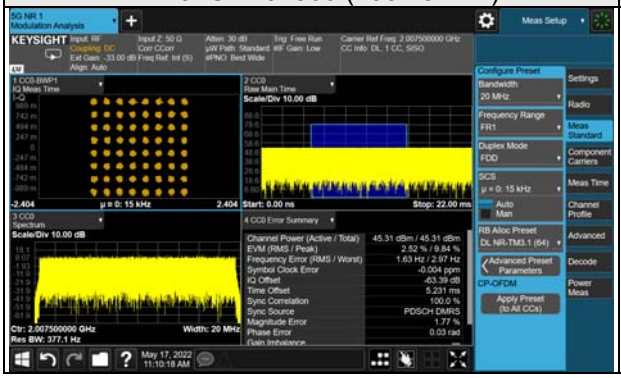
20MHz	
QPSK	16QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	
64QAM	256QAM
Ant. 0: Ch 431000 (2155.0MHz)	Ant. 0: Ch 431000 (2155.0MHz)
	

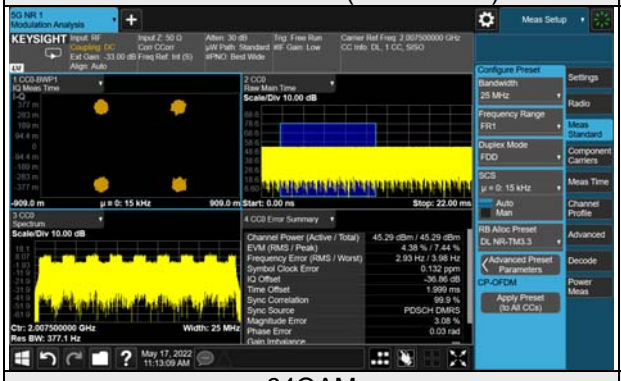
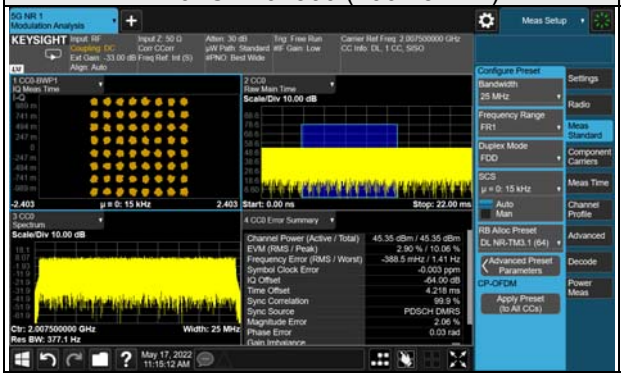
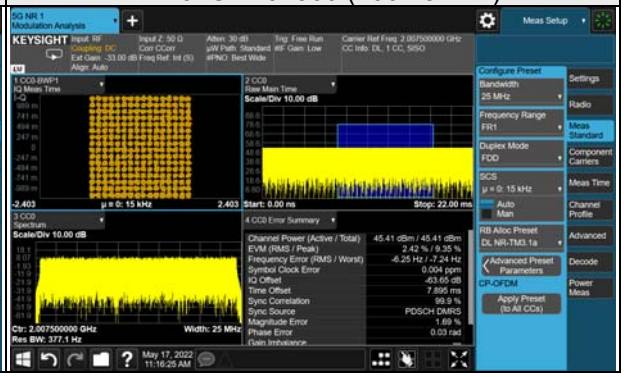
Band n70

Spectrum Plot of Measurement Value	
5MHz	
QPSK	16QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	
64QAM	256QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	

10MHz	
QPSK	16QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	
64QAM	256QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	

15MHz	
QPSK	16QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	
64QAM	256QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	

20MHz	
QPSK	16QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	
64QAM	256QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	

Spectrum Plot of Measurement Value	
25MHz	
QPSK	16QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	
64QAM	256QAM
Ant. 0: Ch 401500 (2007.5MHz)	Ant. 0: Ch 401500 (2007.5MHz)
	

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT -40℃ ~ 55℃.

4.3.2 Test Procedure

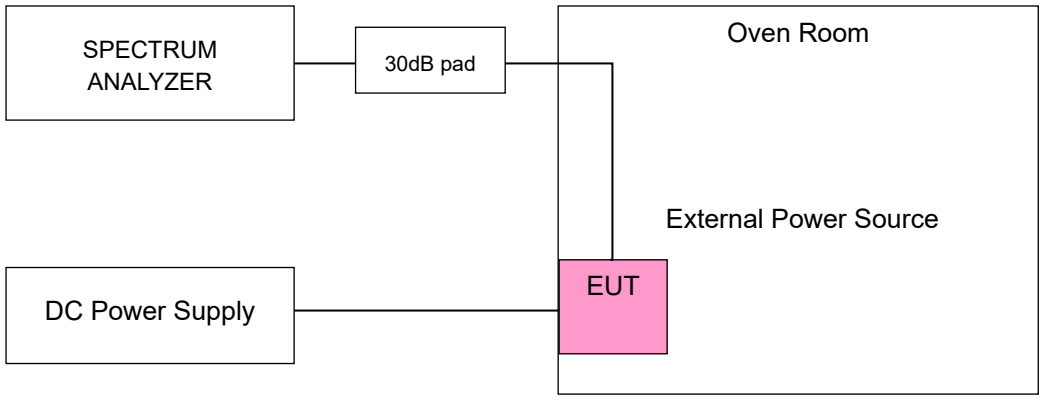
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ 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 from the spectrum analyzer.

4.3.3 Test Setup



4.3.4 Test Results

Band n66

SC Mode- Ant. TX 0

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2112.500027	0.013	2197.500025	0.011	2115.000021	0.010	2195.000029	0.013	PASS
-40.5	2112.500013	0.006	2197.500015	0.007	2115.000039	0.018	2195.000031	0.014	PASS
-58.5	2112.500040	0.019	2197.500018	0.008	2115.000029	0.014	2195.000038	0.017	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2112.500031	0.015	2197.500031	0.014	2115.000021	0.010	2195.000020	0.009	PASS
-30	2112.500029	0.014	2197.500035	0.016	2115.000032	0.015	2195.000011	0.005	PASS
-20	2112.500021	0.010	2197.500021	0.010	2115.000039	0.018	2195.000029	0.013	PASS
-10	2112.500039	0.018	2197.500025	0.011	2115.000035	0.017	2195.000037	0.017	PASS
0	2112.500036	0.017	2197.500012	0.005	2115.000027	0.013	2195.000035	0.016	PASS
10	2112.500021	0.010	2197.500032	0.015	2115.000035	0.017	2195.000016	0.007	PASS
20	2112.499969	-0.015	2197.499967	-0.015	2114.999985	-0.007	2194.999976	-0.011	PASS
30	2112.499983	-0.008	2197.499961	-0.018	2114.999972	-0.013	2194.999971	-0.013	PASS
40	2112.499971	-0.014	2197.499968	-0.015	2114.999960	-0.019	2194.999965	-0.016	PASS
50	2112.499987	-0.006	2197.499987	-0.006	2114.999975	-0.012	2194.999989	-0.005	PASS
55	2112.499982	-0.009	2197.499966	-0.015	2114.999975	-0.012	2194.999974	-0.012	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2117.500039	0.018	2192.500024	0.011	2120.000018	0.008	2190.000039	0.018	PASS
-40.5	2117.500010	0.005	2192.500023	0.010	2120.000022	0.010	2190.000034	0.016	PASS
-58.5	2117.500024	0.011	2192.500028	0.013	2120.000036	0.017	2190.000027	0.012	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2117.500023	0.011	2192.500023	0.010	2120.000010	0.005	2190.000015	0.007	PASS
-30	2117.500027	0.013	2192.500026	0.012	2120.000014	0.007	2190.000021	0.010	PASS
-20	2117.500036	0.017	2192.500038	0.017	2120.000010	0.005	2190.000022	0.010	PASS
-10	2117.500012	0.006	2192.500038	0.017	2120.000030	0.014	2190.000021	0.010	PASS
0	2117.500031	0.015	2192.500021	0.010	2120.000019	0.009	2190.000014	0.006	PASS
10	2117.500013	0.006	2192.500031	0.014	2120.000034	0.016	2190.000039	0.018	PASS
20	2117.499963	-0.017	2192.499965	-0.016	2119.999970	-0.014	2189.999977	-0.011	PASS
30	2117.499967	-0.016	2192.499960	-0.018	2119.999979	-0.010	2189.999960	-0.018	PASS
40	2117.499964	-0.017	2192.499975	-0.011	2119.999981	-0.009	2189.999973	-0.012	PASS
50	2117.499964	-0.017	2192.499975	-0.011	2119.999974	-0.012	2189.999980	-0.009	PASS
55	2117.499984	-0.008	2192.499982	-0.008	2119.999990	-0.005	2189.999978	-0.010	PASS

SC Mode- Ant. TX 1

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2112.500025	0.012	2197.500038	0.017	2115.000038	0.018	2195.000029	0.013	PASS
-40.5	2112.500033	0.016	2197.500027	0.012	2115.000011	0.005	2195.000036	0.016	PASS
-58.5	2112.500035	0.017	2197.500029	0.013	2115.000036	0.017	2195.000016	0.007	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2112.500032	0.015	2197.500026	0.012	2115.000013	0.006	2195.000025	0.011	PASS
-30	2112.500037	0.018	2197.500024	0.011	2115.000013	0.006	2195.000026	0.012	PASS
-20	2112.500016	0.008	2197.500030	0.014	2115.000011	0.005	2195.000018	0.008	PASS
-10	2112.500019	0.009	2197.500022	0.010	2115.000014	0.007	2195.000027	0.012	PASS
0	2112.500022	0.010	2197.500013	0.006	2115.000015	0.007	2195.000010	0.005	PASS
10	2112.500033	0.016	2197.500012	0.005	2115.000019	0.009	2195.000031	0.014	PASS
20	2112.499962	-0.018	2197.499971	-0.013	2114.999988	-0.006	2194.999983	-0.008	PASS
30	2112.499967	-0.016	2197.499966	-0.015	2114.999977	-0.011	2194.999986	-0.006	PASS
40	2112.499982	-0.009	2197.499978	-0.010	2114.999988	-0.006	2194.999978	-0.010	PASS
50	2112.499990	-0.005	2197.499962	-0.017	2114.999988	-0.006	2194.999973	-0.012	PASS
55	2112.499973	-0.013	2197.499961	-0.018	2114.999967	-0.016	2194.999966	-0.015	PASS

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2117.500015	0.007	2192.500023	0.010	2120.000027	0.013	2190.000025	0.011	PASS
-40.5	2117.500023	0.011	2192.500026	0.012	2120.000024	0.011	2190.000030	0.014	PASS
-58.5	2117.500013	0.006	2192.500023	0.010	2120.000036	0.017	2190.000038	0.017	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2117.500012	0.006	2192.500016	0.007	2120.000028	0.013	2190.000023	0.011	PASS
-30	2117.500026	0.012	2192.500037	0.017	2120.000035	0.017	2190.000033	0.015	PASS
-20	2117.500025	0.012	2192.500039	0.018	2120.000040	0.019	2190.000027	0.012	PASS
-10	2117.500021	0.010	2192.500039	0.018	2120.000011	0.005	2190.000013	0.006	PASS
0	2117.500027	0.013	2192.500018	0.008	2120.000013	0.006	2190.000035	0.016	PASS
10	2117.500013	0.006	2192.500010	0.005	2120.000032	0.015	2190.000011	0.005	PASS
20	2117.499961	-0.018	2192.499982	-0.008	2119.999964	-0.017	2189.999962	-0.017	PASS
30	2117.499976	-0.011	2192.499984	-0.007	2119.999970	-0.014	2189.999965	-0.016	PASS
40	2117.499972	-0.013	2192.499985	-0.007	2119.999978	-0.010	2189.999976	-0.011	PASS
50	2117.499986	-0.007	2192.499968	-0.015	2119.999961	-0.018	2189.999985	-0.007	PASS
55	2117.499967	-0.016	2192.499966	-0.016	2119.999970	-0.014	2189.999980	-0.009	PASS

SC Mode- Ant. TX 2

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2112.500014	0.007	2197.500014	0.006	2115.000013	0.006	2195.000030	0.014	PASS
-40.5	2112.500012	0.006	2197.500030	0.014	2115.000035	0.017	2195.000029	0.013	PASS
-58.5	2112.500037	0.018	2197.500040	0.018	2115.000039	0.018	2195.000025	0.011	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2112.500031	0.015	2197.500031	0.014	2115.000029	0.014	2195.000011	0.005	PASS
-30	2112.500033	0.016	2197.500012	0.005	2115.000014	0.007	2195.000019	0.009	PASS
-20	2112.500028	0.013	2197.500026	0.012	2115.000020	0.009	2195.000024	0.011	PASS
-10	2112.500013	0.006	2197.500010	0.005	2115.000026	0.012	2195.000037	0.017	PASS
0	2112.500019	0.009	2197.500012	0.005	2115.000036	0.017	2195.000017	0.008	PASS
10	2112.500021	0.010	2197.500025	0.011	2115.000036	0.017	2195.000040	0.018	PASS
20	2112.499990	-0.005	2197.499972	-0.013	2114.999962	-0.018	2194.999967	-0.015	PASS
30	2112.499976	-0.011	2197.499987	-0.006	2114.999985	-0.007	2194.999984	-0.007	PASS
40	2112.499976	-0.011	2197.499980	-0.009	2114.999976	-0.011	2194.999978	-0.010	PASS
50	2112.499988	-0.006	2197.499990	-0.005	2114.999990	-0.005	2194.999963	-0.017	PASS
55	2112.499964	-0.017	2197.499986	-0.006	2114.999990	-0.005	2194.999981	-0.009	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2117.500011	0.005	2192.500020	0.009	2120.000017	0.008	2190.000010	0.005	PASS
-40.5	2117.500030	0.014	2192.500029	0.013	2120.000018	0.008	2190.000031	0.014	PASS
-58.5	2117.500019	0.009	2192.500010	0.005	2120.000022	0.010	2190.000026	0.012	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2117.500023	0.011	2192.500027	0.012	2120.000029	0.014	2190.000028	0.013	PASS
-30	2117.500017	0.008	2192.500023	0.010	2120.000037	0.017	2190.000015	0.007	PASS
-20	2117.500025	0.012	2192.500019	0.009	2120.000020	0.009	2190.000030	0.014	PASS
-10	2117.500013	0.006	2192.500038	0.017	2120.000036	0.017	2190.000038	0.017	PASS
0	2117.500036	0.017	2192.500012	0.005	2120.000026	0.012	2190.000029	0.013	PASS
10	2117.500016	0.008	2192.500013	0.006	2120.000033	0.016	2190.000034	0.016	PASS
20	2117.499974	-0.012	2192.499989	-0.005	2119.999986	-0.007	2189.999987	-0.006	PASS
30	2117.499969	-0.015	2192.499978	-0.010	2119.999977	-0.011	2189.999989	-0.005	PASS
40	2117.499975	-0.012	2192.499963	-0.017	2119.999966	-0.016	2189.999971	-0.013	PASS
50	2117.499985	-0.007	2192.499987	-0.006	2119.999982	-0.008	2189.999969	-0.014	PASS
55	2117.499970	-0.014	2192.499974	-0.012	2119.999987	-0.006	2189.999982	-0.008	PASS

SC Mode- Ant. TX 3

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2112.500035	0.017	2197.500034	0.015	2115.000036	0.017	2195.000031	0.014	PASS
-40.5	2112.500012	0.006	2197.500014	0.006	2115.000035	0.017	2195.000033	0.015	PASS
-58.5	2112.500037	0.018	2197.500021	0.010	2115.000023	0.011	2195.000034	0.015	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz				10MHz				
	2112.5MHz		2197.5MHz		2115.0MHz		2195.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2112.500024	0.011	2197.500028	0.013	2115.000035	0.017	2195.000010	0.005	PASS
-30	2112.500021	0.010	2197.500028	0.013	2115.000019	0.009	2195.000013	0.006	PASS
-20	2112.500010	0.005	2197.500011	0.005	2115.000023	0.011	2195.000035	0.016	PASS
-10	2112.500038	0.018	2197.500033	0.015	2115.000033	0.016	2195.000037	0.017	PASS
0	2112.500015	0.007	2197.500018	0.008	2115.000036	0.017	2195.000024	0.011	PASS
10	2112.500024	0.011	2197.500032	0.015	2115.000032	0.015	2195.000015	0.007	PASS
20	2112.499981	-0.009	2197.499967	-0.015	2114.999974	-0.012	2194.999970	-0.014	PASS
30	2112.499968	-0.015	2197.499963	-0.017	2114.999960	-0.019	2194.999970	-0.014	PASS
40	2112.499964	-0.017	2197.499970	-0.014	2114.999964	-0.017	2194.999971	-0.013	PASS
50	2112.499961	-0.018	2197.499976	-0.011	2114.999963	-0.017	2194.999973	-0.012	PASS
55	2112.499989	-0.005	2197.499961	-0.018	2114.999974	-0.012	2194.999961	-0.018	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2117.500031	0.015	2192.500036	0.016	2120.000016	0.008	2190.000031	0.014	PASS
-40.5	2117.500038	0.018	2192.500013	0.006	2120.000022	0.010	2190.000016	0.007	PASS
-58.5	2117.500019	0.009	2192.500025	0.011	2120.000023	0.011	2190.000040	0.018	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2117.5MHz		2192.5MHz		2120.0MHz		2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2117.500035	0.017	2192.500022	0.010	2120.000017	0.008	2190.000040	0.018	PASS
-30	2117.500012	0.006	2192.500026	0.012	2120.000018	0.008	2190.000011	0.005	PASS
-20	2117.500035	0.017	2192.500033	0.015	2120.000040	0.019	2190.000024	0.011	PASS
-10	2117.500034	0.016	2192.500025	0.011	2120.000019	0.009	2190.000039	0.018	PASS
0	2117.500034	0.016	2192.500020	0.009	2120.000016	0.008	2190.000014	0.006	PASS
10	2117.500027	0.013	2192.500024	0.011	2120.000037	0.017	2190.000033	0.015	PASS
20	2117.499977	-0.011	2192.499983	-0.008	2119.999980	-0.009	2189.999977	-0.011	PASS
30	2117.499968	-0.015	2192.499960	-0.018	2119.999977	-0.011	2189.999976	-0.011	PASS
40	2117.499966	-0.016	2192.499976	-0.011	2119.999966	-0.016	2189.999978	-0.010	PASS
50	2117.499969	-0.015	2192.499989	-0.005	2119.999961	-0.018	2189.999976	-0.011	PASS
55	2117.499971	-0.014	2192.499972	-0.013	2119.999977	-0.011	2189.999962	-0.017	PASS

CA Contiguous

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	20MHz+20MHz								
	Ant. TX 0				Ant. TX 1				
	2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2130.000024	0.011	2180.000037	0.017	2130.000040	0.019	2180.000015	0.007	PASS
-40.5	2130.000028	0.013	2180.000017	0.008	2130.000019	0.009	2180.000028	0.013	PASS
-58.5	2130.000034	0.016	2180.000028	0.013	2130.000036	0.017	2180.000040	0.018	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	20MHz+20MHz								
	Ant. TX 0				Ant. TX 1				
	2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2130.000029	0.014	2180.000022	0.010	2130.000022	0.010	2180.000033	0.015	PASS
-30	2130.000032	0.015	2180.000022	0.010	2130.000037	0.017	2180.000023	0.011	PASS
-20	2130.000035	0.016	2180.000018	0.008	2130.000013	0.006	2180.000032	0.015	PASS
-10	2130.000036	0.017	2180.000028	0.013	2130.000032	0.015	2180.000027	0.012	PASS
0	2130.000011	0.005	2180.000033	0.015	2130.000032	0.015	2180.000027	0.012	PASS
10	2130.000023	0.011	2180.000032	0.015	2130.000013	0.006	2180.000033	0.015	PASS
20	2129.999963	-0.017	2179.999979	-0.010	2129.999960	-0.019	2179.999961	-0.018	PASS
30	2129.999962	-0.018	2179.999972	-0.013	2129.999976	-0.011	2179.999981	-0.009	PASS
40	2129.999964	-0.017	2179.999980	-0.009	2129.999968	-0.015	2179.999979	-0.010	PASS
50	2129.999976	-0.011	2179.999971	-0.013	2129.999979	-0.010	2179.999968	-0.015	PASS
55	2129.999960	-0.019	2179.999987	-0.006	2129.999973	-0.013	2179.999990	-0.005	PASS

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	20MHz+20MHz								
	Ant. TX 2				Ant. TX 3				
	2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2130.000026	0.012	2180.000013	0.006	2130.000023	0.011	2180.000037	0.017	PASS
-40.5	2130.000011	0.005	2180.000017	0.008	2130.000031	0.015	2180.000012	0.006	PASS
-58.5	2130.000020	0.009	2180.000012	0.006	2130.000025	0.012	2180.000024	0.011	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	20MHz+20MHz								
	Ant. TX 2				Ant. TX 3				
	2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		2120.0MHz+2140.0MHz		2170.0MHz+2190.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2130.000031	0.015	2180.000023	0.011	2130.000013	0.006	2180.000019	0.009	PASS
-30	2130.000010	0.005	2180.000040	0.018	2130.000028	0.013	2180.000012	0.006	PASS
-20	2130.000032	0.015	2180.000032	0.015	2130.000011	0.005	2180.000018	0.008	PASS
-10	2130.000015	0.007	2180.000033	0.015	2130.000028	0.013	2180.000023	0.011	PASS
0	2130.000024	0.011	2180.000016	0.007	2130.000021	0.010	2180.000023	0.011	PASS
10	2130.000026	0.012	2180.000017	0.008	2130.000029	0.014	2180.000023	0.011	PASS
20	2129.999977	-0.011	2179.999968	-0.015	2129.999982	-0.008	2179.999961	-0.018	PASS
30	2129.999990	-0.005	2179.999978	-0.010	2129.999970	-0.014	2179.999969	-0.014	PASS
40	2129.999977	-0.011	2179.999976	-0.011	2129.999988	-0.006	2179.999984	-0.007	PASS
50	2129.999965	-0.016	2179.999969	-0.014	2129.999968	-0.015	2179.999986	-0.006	PASS
55	2129.999965	-0.016	2179.999981	-0.009	2129.999960	-0.019	2179.999970	-0.014	PASS

CA-Non-Contiguous

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 0				Ant. TX 1				
	2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2145.000033	0.016	2165.000034	0.016	2145.000014	0.007	2165.000035	0.016	PASS
-40.5	2145.000038	0.018	2165.000023	0.011	2145.000025	0.012	2165.000021	0.010	PASS
-58.5	2145.000030	0.014	2165.000040	0.019	2145.000029	0.014	2165.000035	0.016	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 0				Ant. TX 1				
	2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2145.000034	0.016	2165.000010	0.005	2145.000021	0.010	2165.000021	0.010	PASS
-30	2145.000034	0.016	2165.000024	0.011	2145.000022	0.010	2165.000036	0.017	PASS
-20	2145.000014	0.007	2165.000029	0.014	2145.000030	0.014	2165.000038	0.018	PASS
-10	2145.000035	0.017	2165.000040	0.019	2145.000015	0.007	2165.000040	0.019	PASS
0	2145.000032	0.015	2165.000025	0.012	2145.000010	0.005	2165.000021	0.010	PASS
10	2145.000027	0.013	2165.000017	0.008	2145.000018	0.009	2165.000022	0.010	PASS
20	2144.999963	-0.018	2164.999985	-0.007	2144.999965	-0.017	2164.999968	-0.015	PASS
30	2144.999985	-0.007	2164.999976	-0.011	2144.999977	-0.011	2164.999985	-0.007	PASS
40	2144.999977	-0.011	2164.999961	-0.018	2144.999976	-0.011	2164.999972	-0.013	PASS
50	2144.999963	-0.018	2164.999974	-0.012	2144.999975	-0.012	2164.999978	-0.010	PASS
55	2144.999981	-0.009	2164.999970	-0.014	2144.999981	-0.009	2164.999963	-0.017	PASS

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 2				Ant. TX 3				
	2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2145.000013	0.006	2165.000030	0.014	2145.000011	0.005	2165.000036	0.017	PASS
-40.5	2145.000025	0.012	2165.000034	0.016	2145.000011	0.005	2165.000019	0.009	PASS
-58.5	2145.000012	0.006	2165.000017	0.008	2145.000014	0.007	2165.000019	0.009	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 2				Ant. TX 3				
	2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		2112.5MHz+2167.5MHz		2142.5MHz+2197.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2145.000018	0.009	2165.000023	0.011	2145.000016	0.008	2165.000013	0.006	PASS
-30	2145.000034	0.016	2165.000028	0.013	2145.000020	0.009	2165.000027	0.013	PASS
-20	2145.000031	0.015	2165.000040	0.019	2145.000034	0.016	2165.000036	0.017	PASS
-10	2145.000029	0.014	2165.000038	0.018	2145.000025	0.012	2165.000031	0.014	PASS
0	2145.000011	0.005	2165.000034	0.016	2145.000010	0.005	2165.000035	0.016	PASS
10	2145.000032	0.015	2165.000011	0.005	2145.000038	0.018	2165.000012	0.006	PASS
20	2144.999969	-0.015	2164.999986	-0.007	2144.999966	-0.016	2164.999966	-0.016	PASS
30	2144.999985	-0.007	2164.999965	-0.016	2144.999970	-0.014	2164.999971	-0.014	PASS
40	2144.999975	-0.012	2164.999976	-0.011	2144.999985	-0.007	2164.999967	-0.015	PASS
50	2144.999962	-0.018	2164.999983	-0.008	2144.999967	-0.016	2164.999986	-0.007	PASS
55	2144.999984	-0.008	2164.999979	-0.010	2144.999989	-0.005	2164.999980	-0.009	PASS

Band n70
SC Mode- Ant. TX 0

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	1997.500031	0.016	2017.500015	0.007	2000.000040	0.020	2015.000037	0.018	PASS
-40.5	1997.500029	0.015	2017.500030	0.015	2000.000019	0.010	2015.000039	0.019	PASS
-58.5	1997.500019	0.010	2017.500024	0.012	2000.000016	0.008	2015.000028	0.014	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	1997.500028	0.014	2017.500013	0.006	2000.000027	0.014	2015.000039	0.019	PASS
-30	1997.500035	0.018	2017.500039	0.019	2000.000039	0.020	2015.000037	0.018	PASS
-20	1997.500027	0.014	2017.500027	0.013	2000.000036	0.018	2015.000016	0.008	PASS
-10	1997.500037	0.019	2017.500028	0.014	2000.000026	0.013	2015.000028	0.014	PASS
0	1997.500033	0.017	2017.500023	0.011	2000.000034	0.017	2015.000013	0.006	PASS
10	1997.500036	0.018	2017.500038	0.019	2000.000028	0.014	2015.000030	0.015	PASS
20	1997.499976	-0.012	2017.499963	-0.018	1999.999970	-0.015	2014.999975	-0.012	PASS
30	1997.499978	-0.011	2017.499962	-0.019	1999.999987	-0.007	2014.999980	-0.010	PASS
40	1997.499969	-0.016	2017.499982	-0.009	1999.999962	-0.019	2014.999976	-0.012	PASS
50	1997.499971	-0.015	2017.499964	-0.018	1999.999984	-0.008	2014.999979	-0.010	PASS
55	1997.499974	-0.013	2017.499966	-0.017	1999.999978	-0.011	2014.999972	-0.014	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2002.500027	0.013	2012.500019	0.009	2005.000031	0.015	2010.000027	0.013	PASS
-40.5	2002.500016	0.008	2012.500024	0.012	2005.000018	0.009	2010.000017	0.008	PASS
-58.5	2002.500039	0.019	2012.500021	0.010	2005.000029	0.014	2010.000013	0.006	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2002.500029	0.014	2012.500019	0.009	2005.000028	0.014	2010.000017	0.008	PASS
-30	2002.500035	0.017	2012.500018	0.009	2005.000031	0.015	2010.000033	0.016	PASS
-20	2002.500014	0.007	2012.500039	0.019	2005.000017	0.008	2010.000026	0.013	PASS
-10	2002.500022	0.011	2012.500015	0.007	2005.000010	0.005	2010.000034	0.017	PASS
0	2002.500014	0.007	2012.500012	0.006	2005.000030	0.015	2010.000036	0.018	PASS
10	2002.500039	0.019	2012.500019	0.009	2005.000030	0.015	2010.000016	0.008	PASS
20	2002.499990	-0.005	2012.499986	-0.007	2004.999981	-0.009	2009.999987	-0.006	PASS
30	2002.499968	-0.016	2012.499960	-0.020	2004.999963	-0.018	2009.999963	-0.018	PASS
40	2002.499984	-0.008	2012.499980	-0.010	2004.999987	-0.006	2009.999982	-0.009	PASS
50	2002.499971	-0.014	2012.499963	-0.018	2004.999983	-0.008	2009.999986	-0.007	PASS
55	2002.499977	-0.011	2012.499989	-0.005	2004.999964	-0.018	2009.999961	-0.019	PASS

SC Mode- Ant. TX 1

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	1997.500036	0.018	2017.500032	0.016	2000.000036	0.018	2015.000031	0.015	PASS
-40.5	1997.500013	0.007	2017.500022	0.011	2000.000010	0.005	2015.000023	0.011	PASS
-58.5	1997.500028	0.014	2017.500028	0.014	2000.000026	0.013	2015.000033	0.016	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	1997.500011	0.006	2017.500025	0.012	2000.000027	0.014	2015.000021	0.010	PASS
-30	1997.500037	0.019	2017.500034	0.017	2000.000035	0.018	2015.000017	0.008	PASS
-20	1997.500022	0.011	2017.500020	0.010	2000.000039	0.020	2015.000014	0.007	PASS
-10	1997.500039	0.020	2017.500029	0.014	2000.000022	0.011	2015.000023	0.011	PASS
0	1997.500019	0.010	2017.500034	0.017	2000.000020	0.010	2015.000029	0.014	PASS
10	1997.500033	0.017	2017.500021	0.010	2000.000035	0.018	2015.000027	0.013	PASS
20	1997.499963	-0.019	2017.499976	-0.012	1999.999988	-0.006	2014.999987	-0.006	PASS
30	1997.499989	-0.006	2017.499963	-0.018	1999.999971	-0.015	2014.999984	-0.008	PASS
40	1997.499981	-0.010	2017.499989	-0.005	1999.999970	-0.015	2014.999987	-0.006	PASS
50	1997.499982	-0.009	2017.499973	-0.013	1999.999968	-0.016	2014.999982	-0.009	PASS
55	1997.499981	-0.010	2017.499989	-0.005	1999.999986	-0.007	2014.999968	-0.016	PASS

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2002.500028	0.014	2012.500010	0.005	2005.000027	0.013	2010.000031	0.015	PASS
-40.5	2002.500014	0.007	2012.500033	0.016	2005.000039	0.019	2010.000028	0.014	PASS
-58.5	2002.500019	0.009	2012.500015	0.007	2005.000019	0.009	2010.000013	0.006	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2002.500029	0.014	2012.500018	0.009	2005.000022	0.011	2010.000029	0.014	PASS
-30	2002.500025	0.012	2012.500037	0.018	2005.000030	0.015	2010.000030	0.015	PASS
-20	2002.500036	0.018	2012.500026	0.013	2005.000017	0.008	2010.000035	0.017	PASS
-10	2002.500023	0.011	2012.500014	0.007	2005.000023	0.011	2010.000027	0.013	PASS
0	2002.500015	0.007	2012.500032	0.016	2005.000010	0.005	2010.000027	0.013	PASS
10	2002.500011	0.005	2012.500030	0.015	2005.000040	0.020	2010.000021	0.010	PASS
20	2002.499984	-0.008	2012.499967	-0.016	2004.999979	-0.010	2009.999970	-0.015	PASS
30	2002.499961	-0.019	2012.499987	-0.006	2004.999978	-0.011	2009.999976	-0.012	PASS
40	2002.499960	-0.020	2012.499977	-0.011	2004.999990	-0.005	2009.999986	-0.007	PASS
50	2002.499967	-0.016	2012.499975	-0.012	2004.999967	-0.016	2009.999979	-0.010	PASS
55	2002.499962	-0.019	2012.499989	-0.005	2004.999977	-0.011	2009.999983	-0.008	PASS

SC Mode- Ant. TX 2

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	1997.500017	0.009	2017.500040	0.020	2000.000013	0.007	2015.000019	0.009	PASS
-40.5	1997.500028	0.014	2017.500027	0.013	2000.000038	0.019	2015.000033	0.016	PASS
-58.5	1997.500026	0.013	2017.500038	0.019	2000.000025	0.013	2015.000024	0.012	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	1997.500028	0.014	2017.500018	0.009	2000.000036	0.018	2015.000040	0.020	PASS
-30	1997.500011	0.006	2017.500031	0.015	2000.000030	0.015	2015.000028	0.014	PASS
-20	1997.500036	0.018	2017.500031	0.015	2000.000035	0.018	2015.000013	0.006	PASS
-10	1997.500024	0.012	2017.500016	0.008	2000.000019	0.010	2015.000026	0.013	PASS
0	1997.500024	0.012	2017.500011	0.005	2000.000038	0.019	2015.000013	0.006	PASS
10	1997.500019	0.010	2017.500022	0.011	2000.000027	0.014	2015.000036	0.018	PASS
20	1997.499977	-0.012	2017.499961	-0.019	1999.999978	-0.011	2014.999983	-0.008	PASS
30	1997.499974	-0.013	2017.499975	-0.012	1999.999980	-0.010	2014.999984	-0.008	PASS
40	1997.499986	-0.007	2017.499984	-0.008	1999.999984	-0.008	2014.999988	-0.006	PASS
50	1997.499971	-0.015	2017.499976	-0.012	1999.999981	-0.010	2014.999977	-0.011	PASS
55	1997.499965	-0.018	2017.499971	-0.014	1999.999977	-0.012	2014.999983	-0.008	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2002.500036	0.018	2012.500035	0.017	2005.000014	0.007	2010.000025	0.012	PASS
-40.5	2002.500015	0.007	2012.500036	0.018	2005.000010	0.005	2010.000017	0.008	PASS
-58.5	2002.500031	0.015	2012.500025	0.012	2005.000015	0.007	2010.000020	0.010	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2002.500031	0.015	2012.500024	0.012	2005.000039	0.019	2010.000036	0.018	PASS
-30	2002.500034	0.017	2012.500034	0.017	2005.000027	0.013	2010.000017	0.008	PASS
-20	2002.500010	0.005	2012.500019	0.009	2005.000024	0.012	2010.000040	0.020	PASS
-10	2002.500036	0.018	2012.500027	0.013	2005.000024	0.012	2010.000028	0.014	PASS
0	2002.500013	0.006	2012.500012	0.006	2005.000021	0.010	2010.000036	0.018	PASS
10	2002.500018	0.009	2012.500027	0.013	2005.000025	0.012	2010.000025	0.012	PASS
20	2002.499960	-0.020	2012.499987	-0.006	2004.999974	-0.013	2009.999986	-0.007	PASS
30	2002.499971	-0.014	2012.499983	-0.008	2004.999965	-0.017	2009.999971	-0.014	PASS
40	2002.499990	-0.005	2012.499971	-0.014	2004.999990	-0.005	2009.999973	-0.013	PASS
50	2002.499964	-0.018	2012.499962	-0.019	2004.999960	-0.020	2009.999960	-0.020	PASS
55	2002.499970	-0.015	2012.499961	-0.019	2004.999982	-0.009	2009.999976	-0.012	PASS

SC Mode- Ant. TX 3

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	1997.500025	0.013	2017.500037	0.018	2000.000011	0.006	2015.000034	0.017	PASS
-40.5	1997.500019	0.010	2017.500013	0.006	2000.000022	0.011	2015.000019	0.009	PASS
-58.5	1997.500018	0.009	2017.500020	0.010	2000.000015	0.008	2015.000020	0.010	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz				10MHz				
	1997.5MHz		2017.5MHz		2000.0MHz		2015.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	1997.500029	0.015	2017.500039	0.019	2000.000037	0.019	2015.000032	0.016	PASS
-30	1997.500025	0.013	2017.500024	0.012	2000.000015	0.008	2015.000024	0.012	PASS
-20	1997.500034	0.017	2017.500029	0.014	2000.000013	0.007	2015.000027	0.013	PASS
-10	1997.500017	0.009	2017.500031	0.015	2000.000027	0.014	2015.000030	0.015	PASS
0	1997.500014	0.007	2017.500021	0.010	2000.000027	0.014	2015.000022	0.011	PASS
10	1997.500015	0.008	2017.500022	0.011	2000.000014	0.007	2015.000039	0.019	PASS
20	1997.499975	-0.013	2017.499961	-0.019	1999.999963	-0.019	2014.999983	-0.008	PASS
30	1997.499978	-0.011	2017.499972	-0.014	1999.999982	-0.009	2014.999973	-0.013	PASS
40	1997.499983	-0.009	2017.499979	-0.010	1999.999973	-0.014	2014.999978	-0.011	PASS
50	1997.499965	-0.018	2017.499982	-0.009	1999.999967	-0.017	2014.999975	-0.012	PASS
55	1997.499983	-0.009	2017.499971	-0.014	1999.999970	-0.015	2014.999966	-0.017	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2002.500035	0.017	2012.500014	0.007	2005.000014	0.007	2010.000014	0.007	PASS
-40.5	2002.500030	0.015	2012.500024	0.012	2005.000013	0.006	2010.000033	0.016	PASS
-58.5	2002.500026	0.013	2012.500015	0.007	2005.000026	0.013	2010.000028	0.014	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	15MHz				20MHz				
	2002.5MHz		2012.5MHz		2005.0MHz		2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2002.500013	0.006	2012.500010	0.005	2005.000015	0.007	2010.000037	0.018	PASS
-30	2002.500011	0.005	2012.500037	0.018	2005.000030	0.015	2010.000039	0.019	PASS
-20	2002.500012	0.006	2012.500019	0.009	2005.000011	0.005	2010.000038	0.019	PASS
-10	2002.500034	0.017	2012.500023	0.011	2005.000026	0.013	2010.000027	0.013	PASS
0	2002.500023	0.011	2012.500025	0.012	2005.000032	0.016	2010.000015	0.007	PASS
10	2002.500035	0.017	2012.500028	0.014	2005.000011	0.005	2010.000019	0.009	PASS
20	2002.499970	-0.015	2012.499982	-0.009	2004.999986	-0.007	2009.999982	-0.009	PASS
30	2002.499974	-0.013	2012.499970	-0.015	2004.999961	-0.019	2009.999969	-0.015	PASS
40	2002.499971	-0.014	2012.499970	-0.015	2004.999972	-0.014	2009.999965	-0.017	PASS
50	2002.499978	-0.011	2012.499980	-0.010	2004.999963	-0.018	2009.999960	-0.020	PASS
55	2002.499968	-0.016	2012.499975	-0.012	2004.999968	-0.016	2009.999987	-0.006	PASS

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	25MHz								
	Ant. TX 0		Ant. TX 1		Ant. TX 2		Ant. TX 3		
	2007.5Mz		2007.5Mz		2007.5Mz		2007.5Mz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2007.500036	0.018	2007.500033	0.016	2007.500032	0.016	2007.500034	0.017	PASS
-40.5	2007.500034	0.017	2007.500025	0.012	2007.500022	0.011	2007.500016	0.008	PASS
-58.5	2007.500028	0.014	2007.500031	0.015	2007.500032	0.016	2007.500039	0.019	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	25MHz								
	Ant. TX 0		Ant. TX 1		Ant. TX 2		Ant. TX 3		
	2007.5Mz		2007.5Mz		2007.5Mz		2007.5Mz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2007.500037	0.018	2007.500020	0.010	2007.500031	0.015	2007.500040	0.020	PASS
-30	2007.500034	0.017	2007.500016	0.008	2007.500010	0.005	2007.500024	0.012	PASS
-20	2007.500014	0.007	2007.500031	0.015	2007.500021	0.010	2007.500036	0.018	PASS
-10	2007.500024	0.012	2007.500025	0.012	2007.500011	0.005	2007.500027	0.013	PASS
0	2007.500029	0.014	2007.500034	0.017	2007.500013	0.006	2007.500021	0.010	PASS
10	2007.500011	0.005	2007.500034	0.017	2007.500019	0.009	2007.500022	0.011	PASS
20	2007.499967	-0.016	2007.499983	-0.008	2007.499976	-0.012	2007.499963	-0.018	PASS
30	2007.499976	-0.012	2007.499970	-0.015	2007.499966	-0.017	2007.499980	-0.010	PASS
40	2007.499964	-0.018	2007.499990	-0.005	2007.499962	-0.019	2007.499966	-0.017	PASS
50	2007.499990	-0.005	2007.499978	-0.011	2007.499974	-0.013	2007.499987	-0.006	PASS
55	2007.499966	-0.017	2007.499971	-0.014	2007.499972	-0.014	2007.499986	-0.007	PASS

CA Contiguous

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz+20MHz								
	Ant. TX 0		Ant. TX 1		Ant. TX 2		Ant. TX 3		
	1997.5MHz+ 2010.0MHz		1997.5MHz+ 2010.0MHz		1997.5MHz+ 2010.0MHz		1997.5MHz+ 2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2007.500026	0.013	2007.500033	0.016	2007.500036	0.018	2007.500022	0.011	PASS
-40.5	2007.500036	0.018	2007.500018	0.009	2007.500031	0.015	2007.500019	0.009	PASS
-58.5	2007.500022	0.011	2007.500013	0.006	2007.500031	0.015	2007.500032	0.016	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz+20MHz								
	Ant. TX 0		Ant. TX 1		Ant. TX 2		Ant. TX 3		
	1997.5MHz+ 2010.0MHz		1997.5MHz+ 2010.0MHz		1997.5MHz+ 2010.0MHz		1997.5MHz+ 2010.0MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2007.500014	0.007	2007.500025	0.012	2007.500016	0.008	2007.500015	0.007	PASS
-30	2007.500016	0.008	2007.500027	0.013	2007.500038	0.019	2007.500012	0.006	PASS
-20	2007.500010	0.005	2007.500012	0.006	2007.500027	0.013	2007.500035	0.017	PASS
-10	2007.500022	0.011	2007.500022	0.011	2007.500029	0.014	2007.500016	0.008	PASS
0	2007.500036	0.018	2007.500038	0.019	2007.500015	0.007	2007.500034	0.017	PASS
10	2007.500010	0.005	2007.500038	0.019	2007.500038	0.019	2007.500023	0.011	PASS
20	2007.499976	-0.012	2007.499963	-0.018	2007.499960	-0.020	2007.499969	-0.015	PASS
30	2007.499990	-0.005	2007.499970	-0.015	2007.499973	-0.013	2007.499968	-0.016	PASS
40	2007.499971	-0.014	2007.499962	-0.019	2007.499983	-0.008	2007.499967	-0.016	PASS
50	2007.499977	-0.011	2007.499976	-0.012	2007.499983	-0.008	2007.499986	-0.007	PASS
55	2007.499983	-0.008	2007.499973	-0.013	2007.499970	-0.015	2007.499965	-0.017	PASS

FREQUENCY ERROR vs. VOLTAGE									
Voltage (Volts)	Test result (MHz)								PASS/ FAIL
	20MHz+5MHz								
	Ant. TX 0		Ant. TX 1		Ant. TX 2		Ant. TX 3		
	2005.0MHz+2017.5MHz		2005.0MHz+2017.5MHz		2005.0MHz+2017.5MHz		2005.0MHz+2017.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	2007.500037	0.018	2007.500022	0.011	2007.500039	0.019	2007.500035	0.017	PASS
-40.5	2007.500032	0.016	2007.500025	0.012	2007.500031	0.015	2007.500024	0.012	PASS
-58.5	2007.500026	0.013	2007.500014	0.007	2007.500015	0.007	2007.500013	0.006	PASS

FREQUENCY ERROR vs. Temperature									
Temp. (℃)	Test result (MHz)								PASS/ FAIL
	20MHz+5MHz								
	Ant. TX 0		Ant. TX 1		Ant. TX 2		Ant. TX 3		
	2005.0MHz+2017.5MHz		2005.0MHz+2017.5MHz		2005.0MHz+2017.5MHz		2005.0MHz+2017.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	2007.500019	0.009	2007.500026	0.013	2007.500033	0.016	2007.500025	0.012	PASS
-30	2007.500017	0.008	2007.500029	0.014	2007.500013	0.006	2007.500038	0.019	PASS
-20	2007.500025	0.012	2007.500032	0.016	2007.500021	0.010	2007.500034	0.017	PASS
-10	2007.500017	0.008	2007.500027	0.013	2007.500016	0.008	2007.500023	0.011	PASS
0	2007.500010	0.005	2007.500024	0.012	2007.500025	0.012	2007.500018	0.009	PASS
10	2007.500033	0.016	2007.500023	0.011	2007.500019	0.009	2007.500039	0.019	PASS
20	2007.499965	-0.017	2007.499960	-0.020	2007.499983	-0.008	2007.499990	-0.005	PASS
30	2007.499968	-0.016	2007.499969	-0.015	2007.499975	-0.012	2007.499987	-0.006	PASS
40	2007.499965	-0.017	2007.499963	-0.018	2007.499982	-0.009	2007.499979	-0.010	PASS
50	2007.499981	-0.009	2007.499986	-0.007	2007.499969	-0.015	2007.499978	-0.011	PASS
55	2007.499984	-0.008	2007.499987	-0.006	2007.499982	-0.009	2007.499967	-0.016	PASS

CA-Non-Contiguous

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 0				Ant. TX 1				
	1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	1997.500040	0.020	2017.500023	0.011	1997.500026	0.013	2017.500025	0.012	PASS
-40.5	1997.500035	0.018	2017.500040	0.020	1997.500011	0.006	2017.500018	0.009	PASS
-58.5	1997.500013	0.007	2017.500010	0.005	1997.500031	0.016	2017.500031	0.015	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 0				Ant. TX 1				
	1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	1997.500020	0.010	2017.500024	0.012	1997.500025	0.013	2017.500015	0.007	PASS
-30	1997.500025	0.013	2017.500019	0.009	1997.500040	0.020	2017.500039	0.019	PASS
-20	1997.500025	0.013	2017.500032	0.016	1997.500028	0.014	2017.500014	0.007	PASS
-10	1997.500039	0.020	2017.500014	0.007	1997.500019	0.010	2017.500034	0.017	PASS
0	1997.500024	0.012	2017.500031	0.015	1997.500039	0.020	2017.500020	0.010	PASS
10	1997.500013	0.007	2017.500036	0.018	1997.500031	0.016	2017.500040	0.020	PASS
20	1997.499965	-0.018	2017.499977	-0.011	1997.499988	-0.006	2017.499970	-0.015	PASS
30	1997.499981	-0.010	2017.499973	-0.013	1997.499960	-0.020	2017.499979	-0.010	PASS
40	1997.499972	-0.014	2017.499971	-0.014	1997.499984	-0.008	2017.499982	-0.009	PASS
50	1997.499981	-0.010	2017.499977	-0.011	1997.499964	-0.018	2017.499968	-0.016	PASS
55	1997.499988	-0.006	2017.499965	-0.017	1997.499979	-0.011	2017.499981	-0.009	PASS

FREQUENCY ERROR vs. VOLTAGE									PASS/ FAIL
Voltage (Volts)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 2				Ant. TX 3				
	1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-48	1997.500036	0.018	2017.500031	0.015	1997.500035	0.018	2017.500015	0.007	PASS
-40.5	1997.500023	0.012	2017.500015	0.007	1997.500040	0.020	2017.500034	0.017	PASS
-58.5	1997.500020	0.010	2017.500015	0.007	1997.500016	0.008	2017.500026	0.013	PASS

FREQUENCY ERROR vs. Temperature									PASS/ FAIL
Temp. (℃)	Test result (MHz)								
	5MHz+5MHz								
	Ant. TX 2				Ant. TX 3				
	1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		1997.5MHz+2010.0MHz		1997.5MHz+2017.5MHz		
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)	
-40	1997.500025	0.013	2017.500022	0.011	1997.500029	0.015	2017.500014	0.007	PASS
-30	1997.500027	0.014	2017.500014	0.007	1997.500013	0.007	2017.500024	0.012	PASS
-20	1997.500021	0.011	2017.500025	0.012	1997.500035	0.018	2017.500035	0.017	PASS
-10	1997.500011	0.006	2017.500019	0.009	1997.500038	0.019	2017.500024	0.012	PASS
0	1997.500017	0.009	2017.500019	0.009	1997.500011	0.006	2017.500018	0.009	PASS
10	1997.500037	0.019	2017.500033	0.016	1997.500027	0.014	2017.500040	0.020	PASS
20	1997.499969	-0.016	2017.499965	-0.017	1997.499981	-0.010	2017.499981	-0.009	PASS
30	1997.499966	-0.017	2017.499964	-0.018	1997.499973	-0.014	2017.499984	-0.008	PASS
40	1997.499972	-0.014	2017.499978	-0.011	1997.499979	-0.011	2017.499961	-0.019	PASS
50	1997.499972	-0.014	2017.499980	-0.010	1997.499965	-0.018	2017.499983	-0.008	PASS
55	1997.499983	-0.009	2017.499982	-0.009	1997.499963	-0.019	2017.499981	-0.009	PASS

4.4 Emission Bandwidth Measurement

4.4.1 Limits of Emission Bandwidth Measurement

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

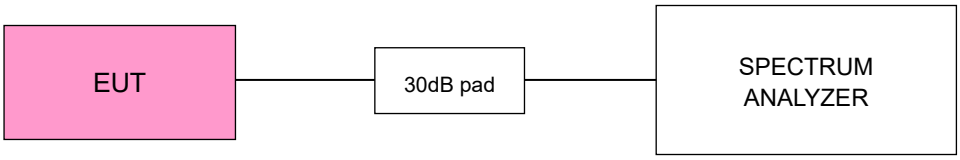
4.4.2 Test Procedure

-26dBc Bandwidth
That emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

Occupied Bandwidth
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.

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 51kHz and VBW = 160kHz (Channel Bandwidth: 5MHz), RBW = 100kHz and VBW = 300kHz (Channel Bandwidth: 10MHz), RBW = 150kHz and VBW = 470kHz (Channel Bandwidth: 15MHz), RBW = 200kHz and VBW = 620kHz (Channel Bandwidth: 20MHz). The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.4.3 Test Setup



4.4.4 Test Results (-26dBc Bandwidth)

Band n66
Single Carrier

5MHz

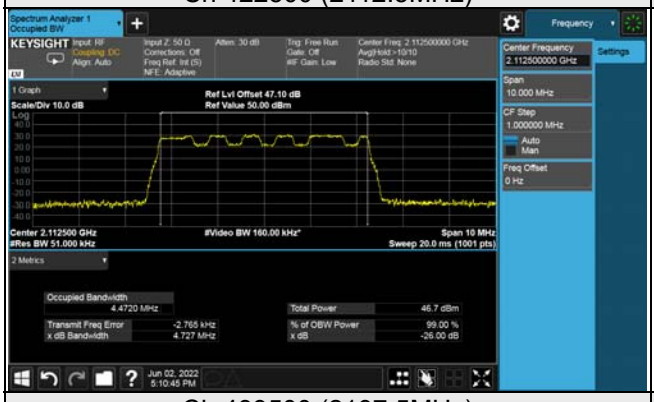
Channel Number	Freq. (MHz)	-26dB Bandwidth (MHz)															
		Ant. TX0				Ant. TX1				Ant. TX2				Ant. TX3			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
422500	2112.5	4.73	4.72	4.74	4.73	4.72	4.73	4.73	4.74	4.71	4.69	4.72	4.76	4.73	4.76	4.76	4.74
431000	2155	4.74	4.76	4.73	4.74	4.73	4.75	4.73	4.71	4.70	4.73	4.72	4.73	4.72	4.73	4.72	4.71
439500	2197.5	4.71	4.70	4.76	4.75	4.73	4.75	4.78	4.71	4.71	4.71	4.75	4.73	4.72	4.75	4.77	4.70

Ant. TX 0

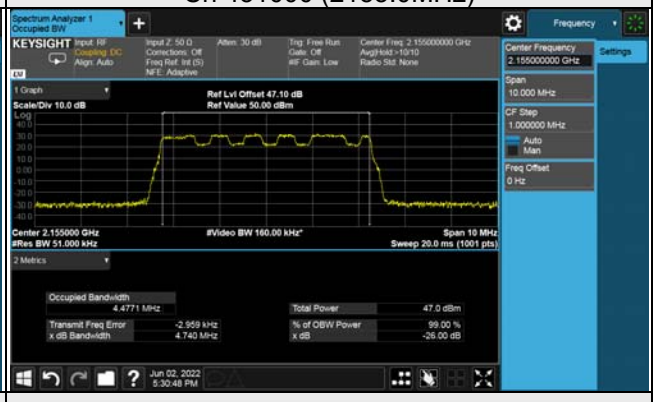
-26dBc Bandwidth

QPSK

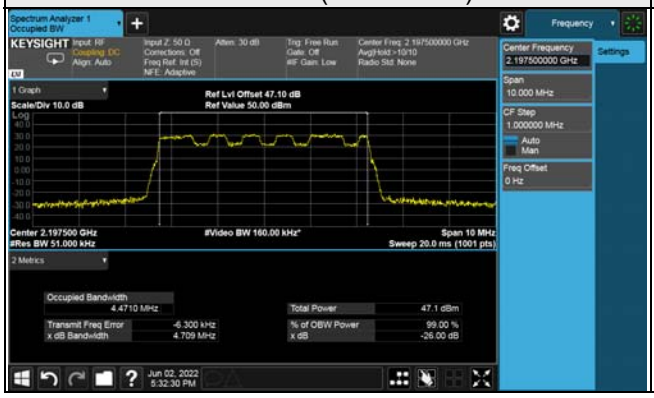
Ch 422500 (2112.5MHz)

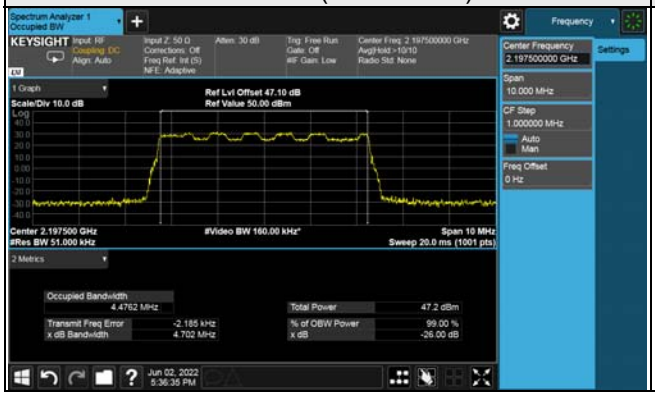


Ch 431000 (2155.0MHz)

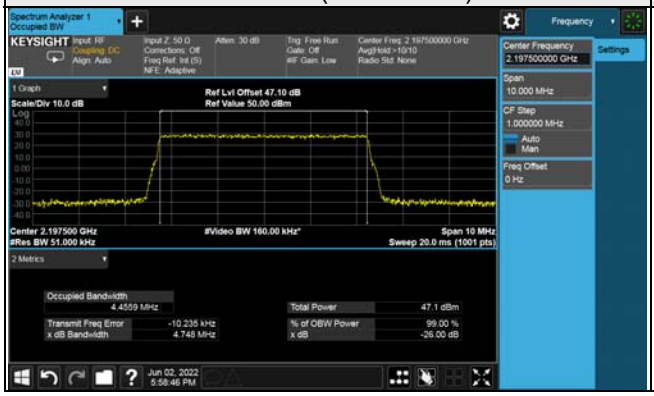


Ch 439500 (2197.5MHz)

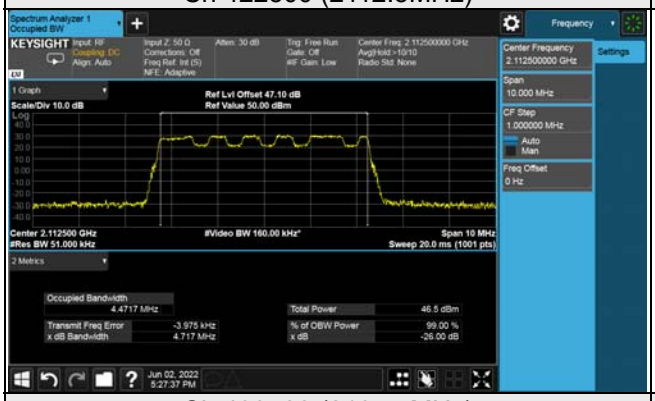
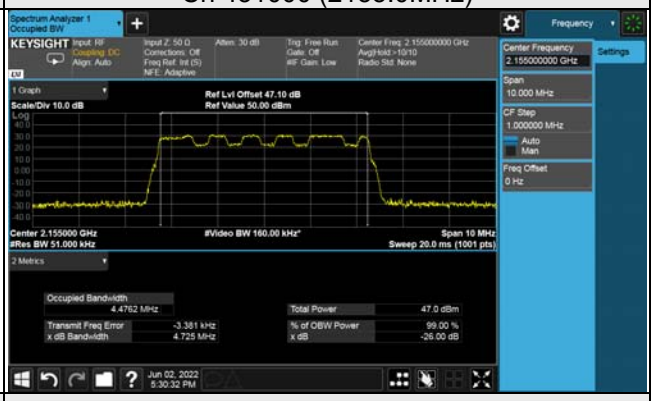


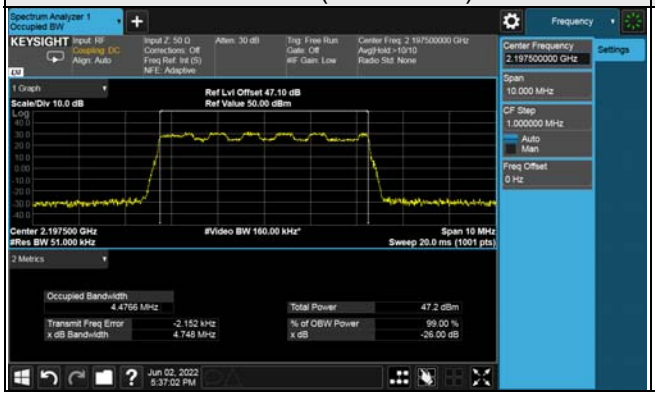
16QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

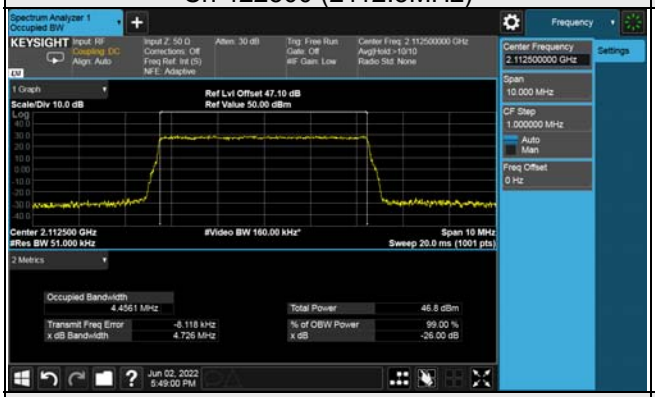
64QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

256QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

Ant. TX 1

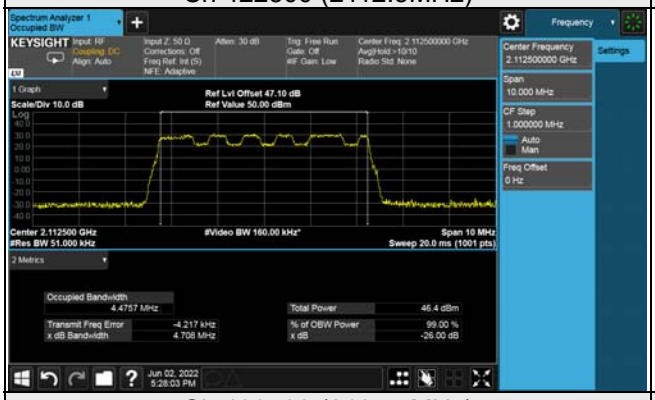
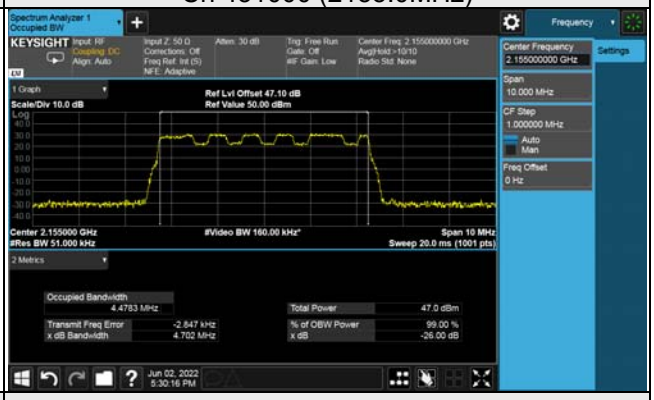
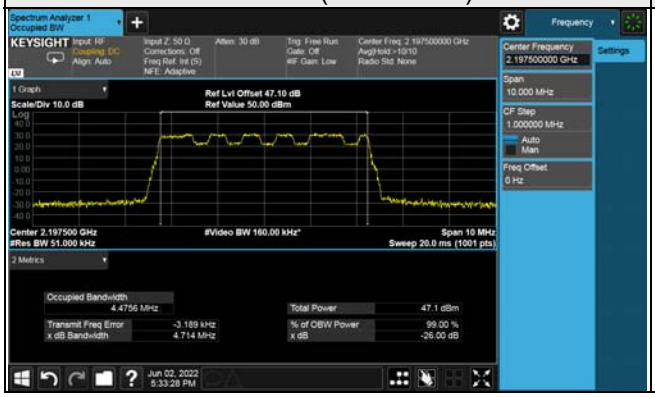
-26dBc Bandwidth	
QPSK	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

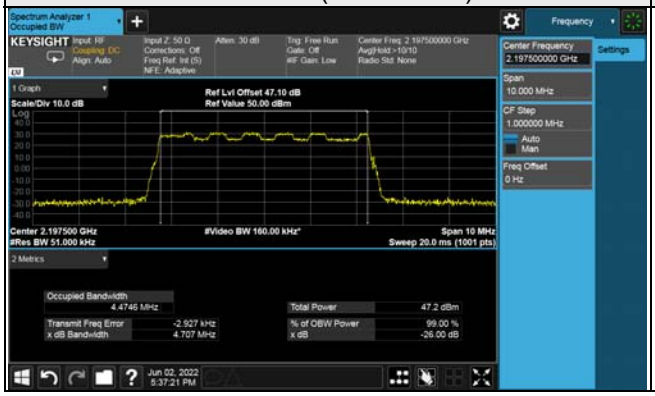
16QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

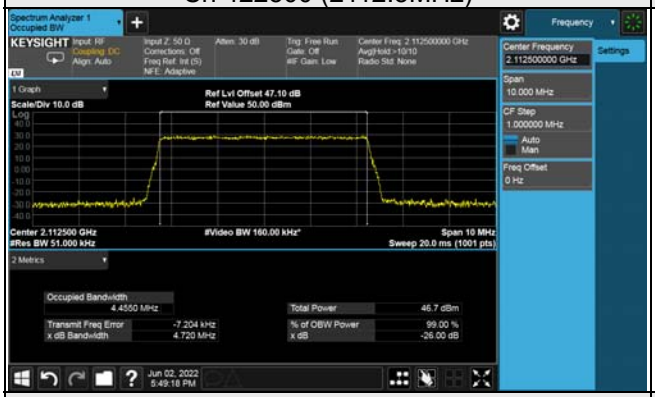
64QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

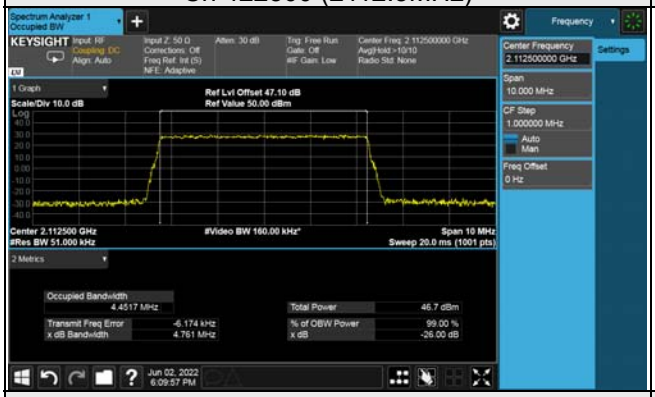
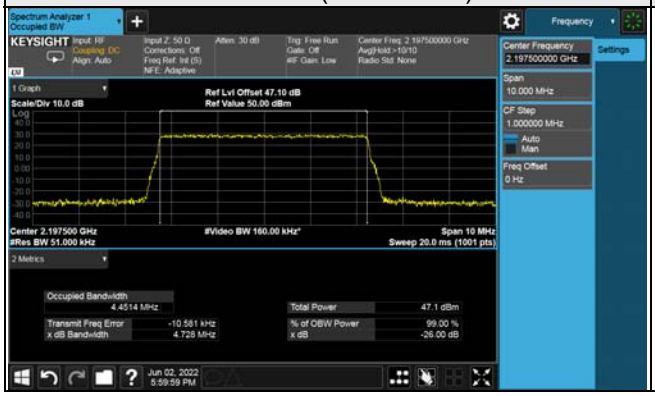
256QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

Ant. TX 2

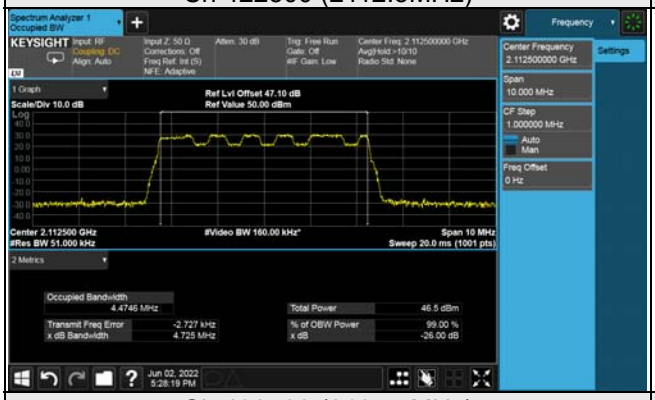
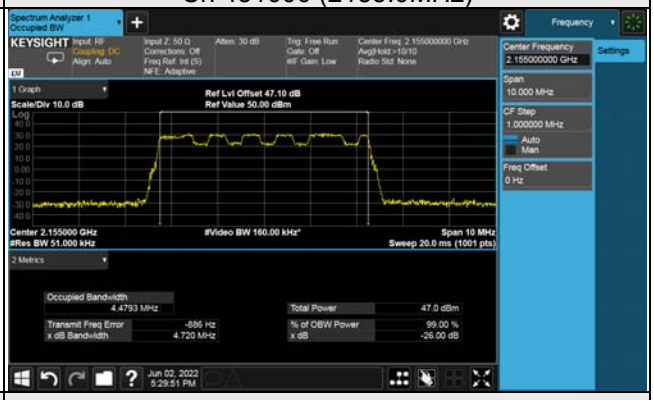
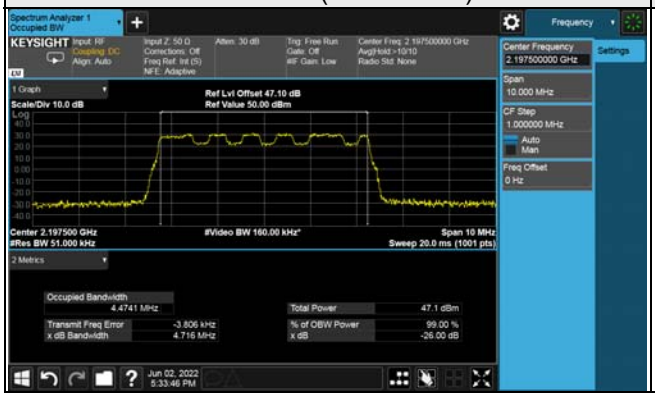
-26dBc Bandwidth	
QPSK	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

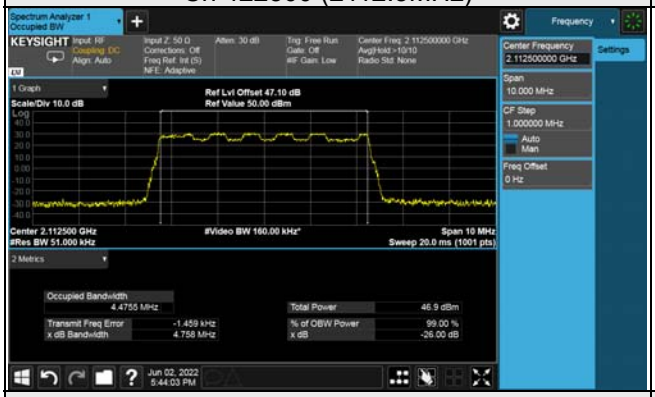
16QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

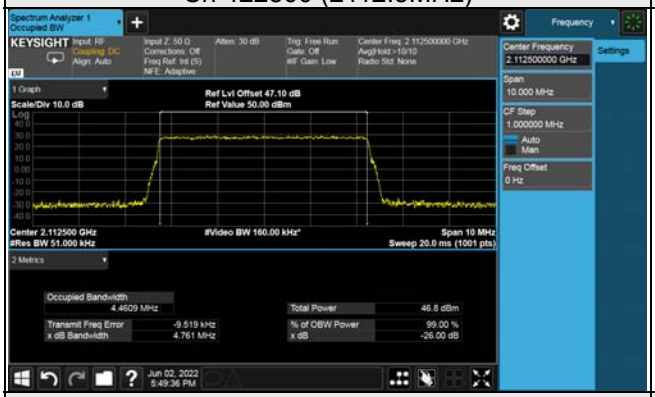
64QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

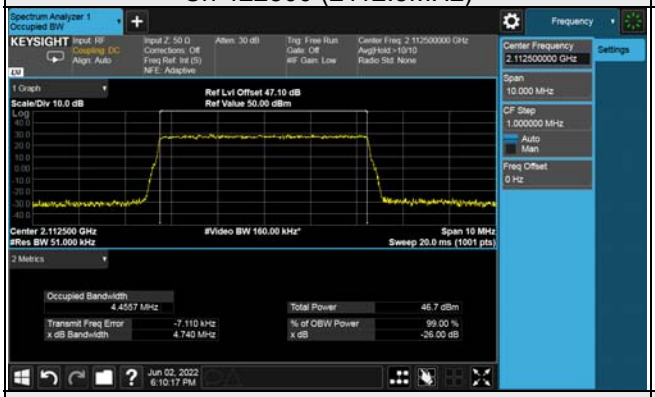
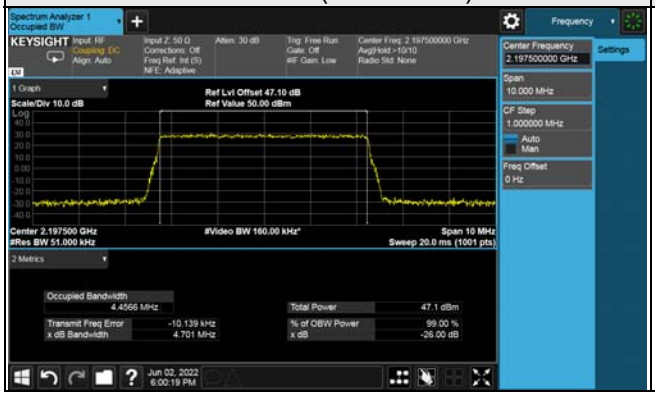
256QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

Ant. TX 3

-26dBc Bandwidth	
QPSK	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

16QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

64QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

256QAM	
Ch 422500 (2112.5MHz)	Ch 431000 (2155.0MHz)
	
Ch 439500 (2197.5MHz)	
	

10MHz

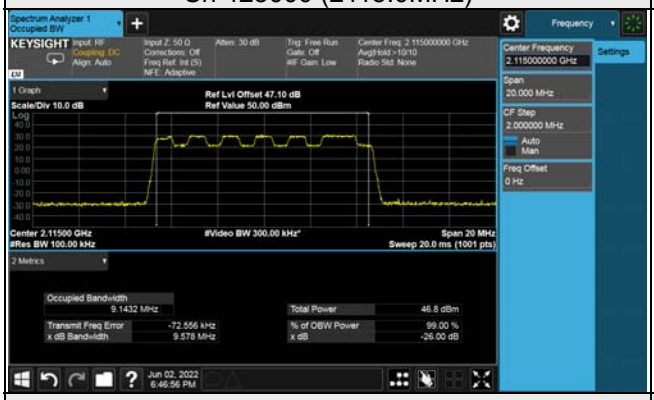
Channel Number	Freq. (MHz)	-26dB Bandwidth (MHz)															
		Ant. TX0				Ant. TX1				Ant. TX2				Ant. TX3			
		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM
423000	2115	9.58	9.59	9.64	9.61	9.57	9.59	9.62	9.61	9.58	9.58	9.61	9.61	9.58	9.60	9.61	9.62
431000	2155	9.58	9.59	9.62	9.61	9.57	9.57	9.62	9.62	9.58	9.58	9.62	9.62	9.56	9.57	9.61	9.62
439000	2195	9.56	9.57	9.60	9.61	9.56	9.57	9.61	9.59	9.56	9.58	9.61	9.61	9.57	9.58	9.61	9.61

Ant. TX 0

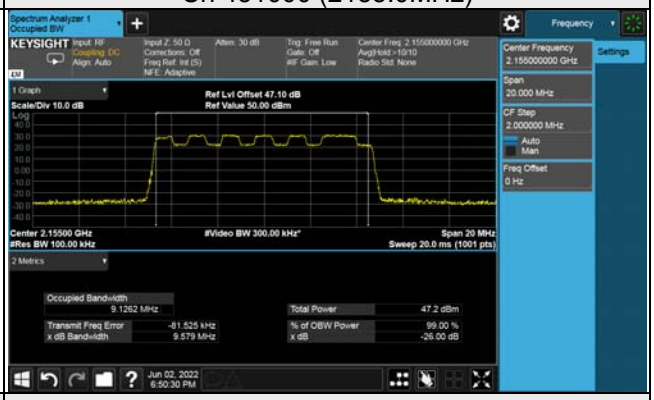
-26dBc Bandwidth

QPSK

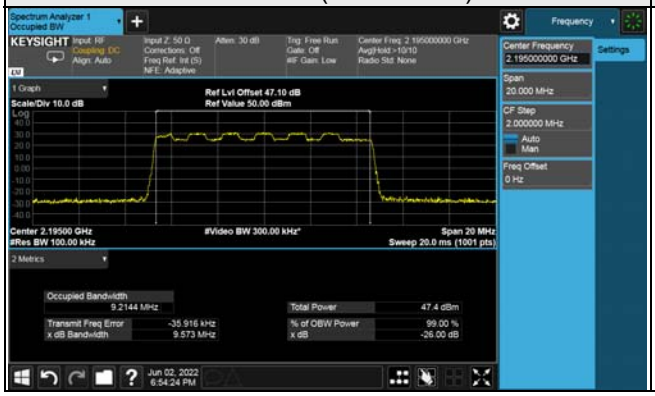
Ch 423000 (2115.0MHz)

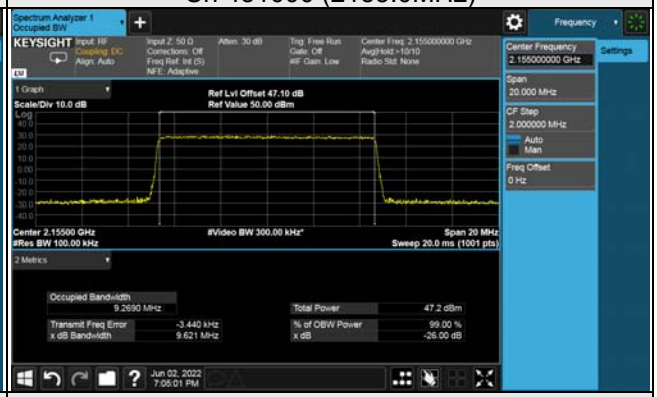


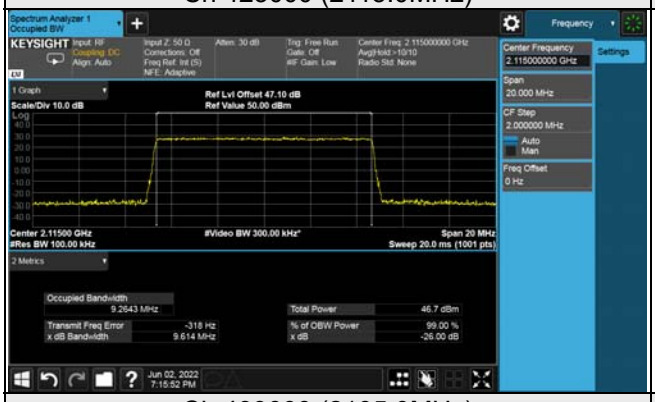
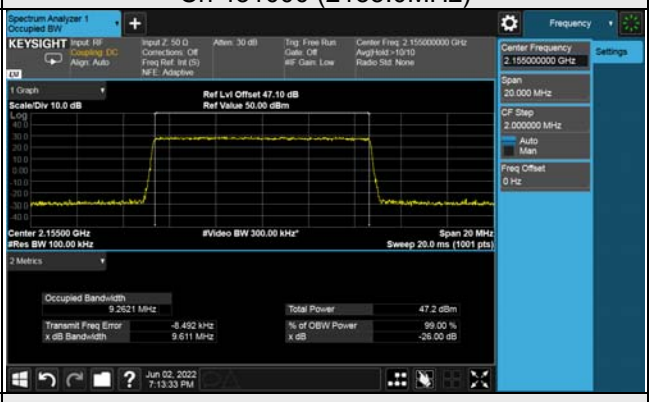
Ch 431000 (2155.0MHz)



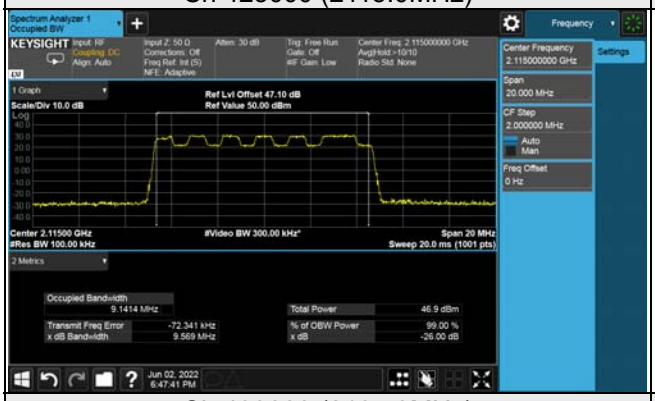
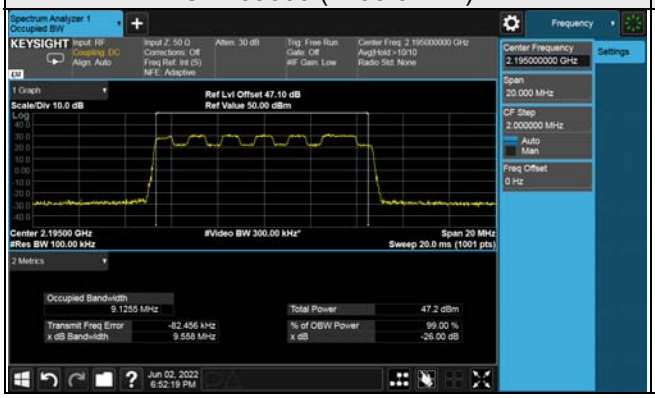
Ch 439000 (2195.0MHz)

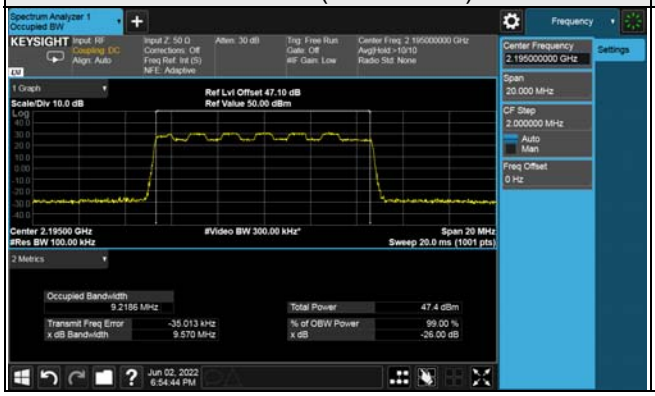
16QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

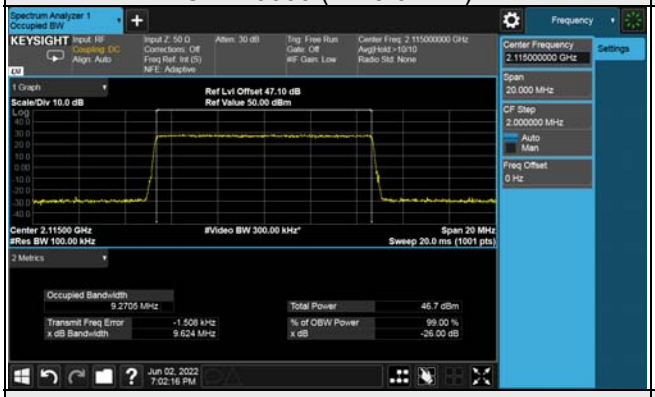
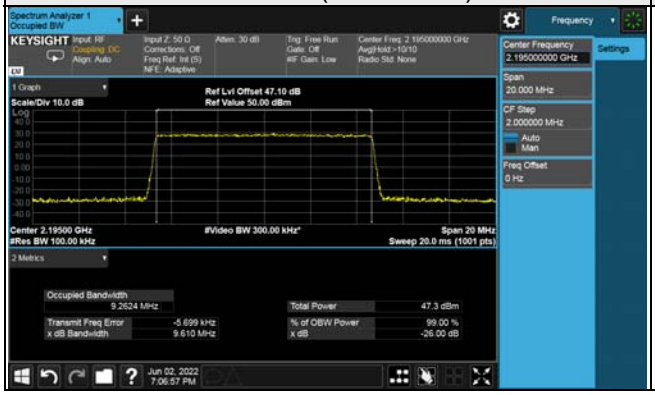
64QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

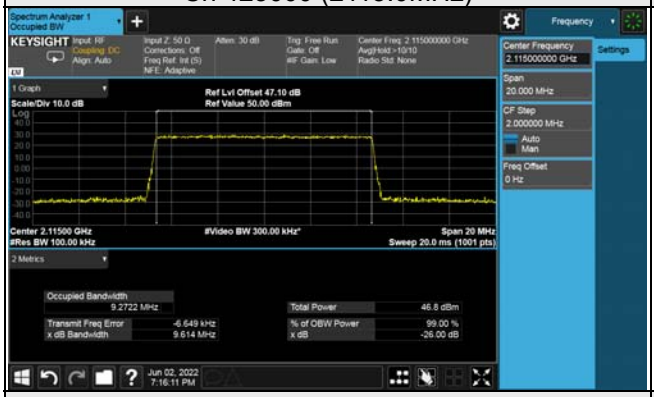
256QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

Ant. TX 1

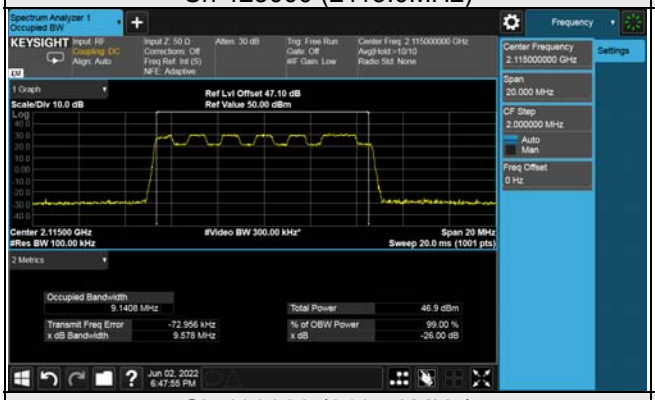
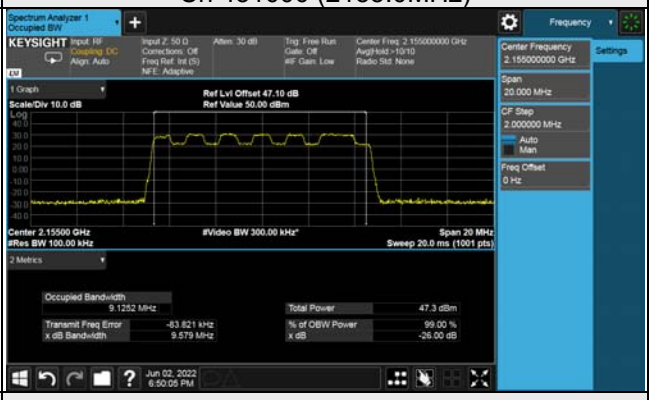
-26dBc Bandwidth	
QPSK	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

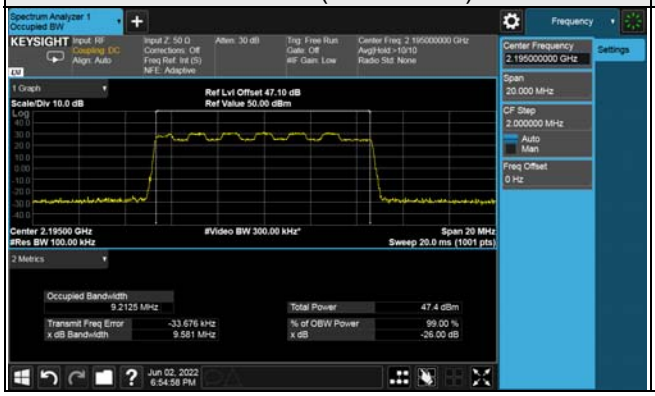
16QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

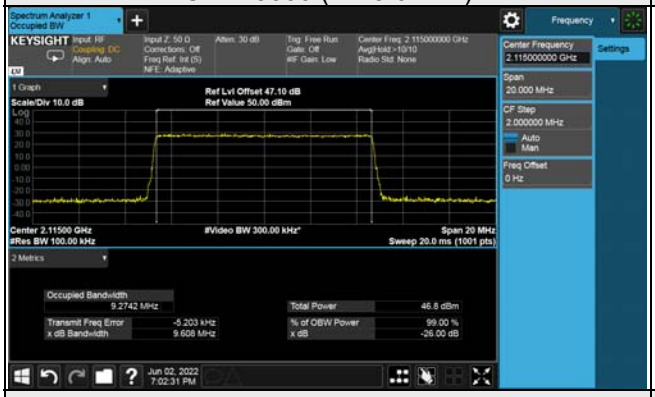
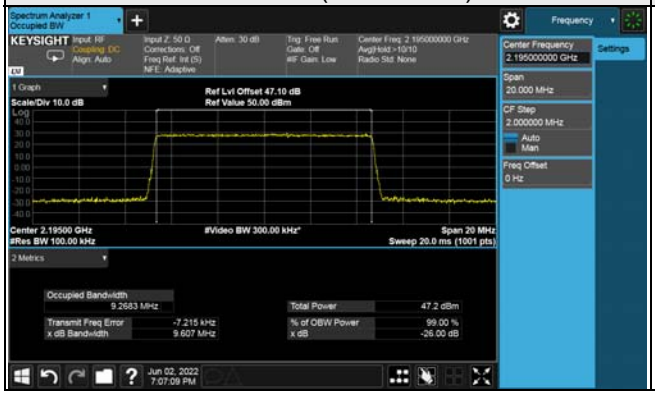
64QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

256QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

Ant. TX 2

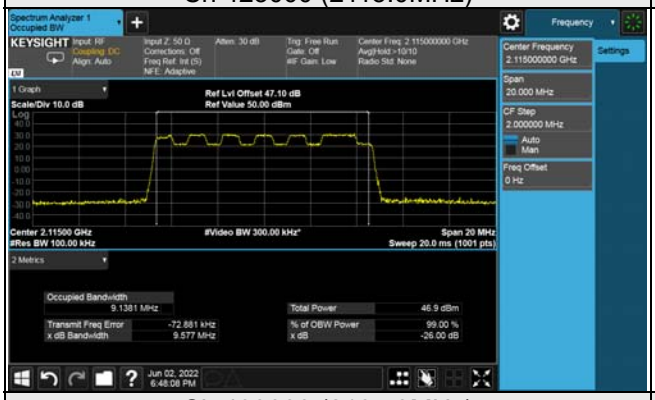
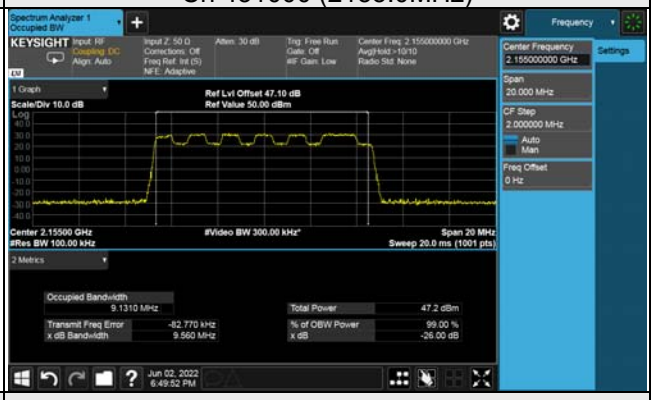
-26dBc Bandwidth	
QPSK	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

16QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

64QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

256QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

Ant. TX 3

-26dBc Bandwidth	
QPSK	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

16QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

64QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

256QAM	
Ch 423000 (2115.0MHz)	Ch 431000 (2155.0MHz)
	
Ch 439000 (2195.0MHz)	
	

15MHz

Channel Number	Freq. (MHz)	-26dB 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
423500	2117.5	14.58	14.57	14.58	14.58	14.59	14.59	14.58	14.57	14.59	14.58	14.57	14.58	14.57	14.58	14.59	14.58
431000	2155	14.57	14.57	14.59	14.58	14.58	14.57	14.57	14.57	14.57	14.57	14.58	14.57	14.58	14.58	14.57	14.58
438500	2192.5	14.57	14.57	14.59	14.57	14.56	14.57	14.59	14.58	14.56	14.58	14.58	14.58	14.56	14.57	14.57	14.59

Ant. TX 0

-26dBc Bandwidth

QPSK

Ch 423500 (2117.5MHz)

Ch 431000 (2155.0MHz)

Ch 438500 (2192.5MHz)