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TEST REPORT

FCC Test for RF4402D-D1A
Class II Permissive Change

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2212-FC003

DATE OF ISSUE
December 19, 2022

Tested by
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TEST REPORT

FCC Test for
RF4402D-D1A

REPORT NO.
HCT-RF-2212-FC003

DATE OF ISSUE
December 19, 2022

Additional Model
-

Applicant	**SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
EUT Type	RRU (RF4402d)
Model Name	RF4402D-D1A
FCC ID	A3LRF4402D-D1A
Date of Test	November 30, 2022 ~ December 16, 2022
FCC Rule Parts:	CFR 47 Part 2, Part 24, Part 27

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	December 19, 2022	Initial Release

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

CONTENTS

1. GENERAL INFORMATION

1.1. APPLICANT INFORMATION

Company Name	Samsung Electronics Co., Ltd.
Company Address	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

1.2. PRODUCT INFORMATION

EUT Type	RRU (RF4402d)
EUT Serial Number	S616916711
Power Supply	-48 VDC
Output Power	<table><tr><th>Band</th><th>Carrier</th><th>Bandwidth</th><th>Power</th></tr><tr><td>NR n66 + NR n66 + NR n66</td><td>3</td><td>5 MHz + 10 MHz + 20 MHz</td><td>30 W/path, Total: 120 W</td></tr><tr><td>DSS B66 + NR n66 + NR n66</td><td>3</td><td>10 MHz + 5 MHz + 20 MHz</td><td>30 W/path, Total: 120 W</td></tr><tr><td>DSS B66 + DSS B66 + DSS B66</td><td>3</td><td>10 MHz + 10 MHz + 15 MHz</td><td>30 W/path, Total: 120 W</td></tr><tr><td>LTE B2 + LTE B2 + NR n66 + NR n66 + DSS B66</td><td>5</td><td>5 MHz + 5 MHz + 20 MHz + 5 MHz + 10 MHz</td><td>40 W/path, Total: 160 W</td></tr><tr><td>LTE B2 + LTE B2 + NR n66 + NR n66 + NR n66</td><td>5</td><td>5 MHz + 10 MHz + 20 MHz + 5 MHz + 10 MHz</td><td>40 W/path, Total: 160 W</td></tr></table>
Frequency Range	Band 2 : 1 930 MHz ~ 1 990 MHz Band 66 : 2 110 MHz ~ 2 180 MHz

	Mode	Bandwidth	Emission Designator			
			QPSK (G7D)	Conducted (W)	16/64/256 QAM (W7D)	Conducted (W)
Emission Designator	NR n66 + NR n66 + NR n66 (Contiguous)	5 MHz + 10 MHz + 20 MHz	34M2G7D	130.71	34M2W7D	131.33
	DSS B66 + NR n66 + NR n66 (Contiguous)	10 MHz + 5 MHz + 20 MHz	34M1G7D	136.22	34M2W7D	135.77
	DSS B66 + DSS B66 + DSS B66 (Contiguous)	10 MHz + 10 MHz + 15 MHz	33M8G7D	134.37	34M0W7D	137.24
	NR n66 + NR n66 + NR n66 [1C+2C] (Non-Contiguous)	5 MHz + 10 MHz + 20 MHz	33M5G7D	127.99	33M6W7D	128.01
	NR n66 + NR n66 + NR n66 [2C+1C] (Non-Contiguous)	5 MHz + 10 MHz + 20 MHz	33M4G7D	130.49	33M4W7D	130.38
	DSS B66 + NR n66 + NR n66 [1C+2C] (Non-Contiguous)	10 MHz + 5 MHz + 20 MHz	33M3G7D	128.22	33M3W7D	127.79
	DSS B66 + NR n66 + NR n66 [2C+1C] (Non-Contiguous)	10 MHz + 5 MHz + 20 MHz	33M3G7D	127.76	33M4W7D	128.72
	DSS B66 + DSS B66 + DSS B66 [1C+2C] (Non-Contiguous)	10 MHz + 10 MHz + 15 MHz	33M2G7D	133.05	33M2W7D	132.48
	DSS B66 + DSS B66 + DSS B66 [2C+1C] (Non-Contiguous)	10 MHz + 10 MHz + 15 MHz	33M2G7D	131.75	33M1W7D	131.83
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM					
SCS (Sub-carrier Spacing)	LTE: 15 kHz, 5G NR: 15 kHz, DSS: 15 kHz					

1.3. TEST INFORMATION

FCC Rule Parts	CFR 47 Part 2, Part 24, Part 27
Measurement standards	ANSI C63.26-2015, KDB 662911 D01 v02r01, KDB 971168 D01 v03r01
Place of Test	HCT CO., LTD. 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

2. FACILITIES AND ACCREDITATIONS

2.1. FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.
The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.
Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

2.2. EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.
Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.
All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

3. TEST SPECIFICATIONS

3.1. STANDARDS

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 2, Part 24, Part 27

Description	Reference	Results
RF Output Power	§ 2.1046, § 24.232, § 27.50(d)(2)	Compliant Note
PAPR	§ 24.232(d), § 27.50(d)(5)	Compliant Note
Occupied Bandwidth	§ 2.1049	Compliant Note
Out-of-band Unwanted Emissions	§ 2.1051, § 24.238, § 27.53(h)	Compliant Note
Spurious Unwanted Emissions		Compliant Note
Radiated Emissions	§ 2.1053, § 24.238, § 27.53(h)	Compliant Note
Frequency Stability	§ 2.1055, § 24.235, § 27.54	Compliant Note

Note: This report only covers Multi-carrier configurations of 5G NR and Multi-RAT of LTE, 5G NR and DSS combination. Single carrier of LTE, 5G NR and DSS operating modes has already been certified and the proposed change does not affect those operations. Multi-carrier of 5G NR and Multi-RAT configurations of LTE, 5G NR and DSS operations are supported and addressed all operations in this report.

3.2. ADDITIONAL DESCRIPTIONS ABOUT TEST

- The EUT was operated in a manner representative of the typical usage of the equipment.
- During all testing, system components were manipulated within the confines of typical usage to maximize each emission.
- All LTE and 5G NR modulation types (QPSK, 16QAM, 64QAM, 256QAM) within the DSS operating mode and each LTE and 5G NR modulation type (QPSK, 16QAM, 64QAM, 256QAM) has been tested.
- The dummy loads were connected to the RF output ports for radiated spurious emission testing.
- All mode of operation, supporting bandwidth and frequencies were investigated. The test plots shown in the following sections represent the worst case emissions.
- The measurement has performed for each LTE, 5G NR, and DSS carrier in the mode of full Resource Block size as the worst case to transmit maximum output power condition.
- Among the multi-carrier combination, only the worst case combination has tested in this test report to cover all multi-carrier combinations addressed in the technical documents.
- In multi-carrier mode addressed in this report, worst LTE:5G NR ratios are applied based on the test results of single carrier DSS mode.
- The device was operating at 100% duty cycle
- The tests results in plots are already including the actual value of loss for the attenuator and cable combination. Please check correction factors below table.

ANT0

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
500	33.973	4 000	37.473
600	34.163	5 000	37.760
700	34.329	6 000	38.023
800	34.502	7 000	39.106
900	34.546	8 000	39.410
1 000	34.779	9 000	40.121
1 100	34.786	10 000	34.587
1 200	34.989	11 000	35.311
1 300	35.050	12 000	35.655
1 400	35.227	13 000	35.150
1 500	35.400	14 000	35.429
1 600	35.554	15 000	35.757
1 700	35.557	16 000	36.066
1 800	35.708	17 000	36.139
1 900	35.761	18 000	36.326
2 000	35.978	19 000	36.677
2 100	36.122	20 000	36.583
2 200	36.290	21 000	37.125
2 300	36.612	22 000	38.819
2 400	36.514	23 000	37.419
2 500	36.643	24 000	37.487
2 600	36.616	25 000	36.664
2 700	36.652	26 000	43.036
2 800	36.762	26 500	39.630
2 900	36.755	-	-
3 000	36.988	-	-

ANT1

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
500	32.790	4 000	36.712
600	32.951	5 000	37.226
700	33.133	6 000	37.554
800	33.360	7 000	38.677
900	33.383	8 000	39.044
1 000	33.663	9 000	40.026
1 100	33.672	10 000	33.249
1 200	33.854	11 000	34.037
1 300	33.914	12 000	34.755
1 400	34.122	13 000	34.495
1 500	34.334	14 000	34.780
1 600	34.459	15 000	35.025
1 700	34.419	16 000	35.436
1 800	34.617	17 000	35.262
1 900	34.704	18 000	35.540
2 000	34.832	19 000	35.780
2 100	34.989	20 000	35.454
2 200	35.141	21 000	36.116
2 300	35.452	22 000	36.171
2 400	35.384	23 000	36.425
2 500	35.527	24 000	37.940
2 600	35.489	25 000	36.545
2 700	35.600	26 000	39.898
2 800	35.646	26 500	39.026
2 900	35.626	-	-
3 000	35.946	-	-

ANT2

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
500	33.512	4 000	37.370
600	33.713	5 000	37.820
700	33.784	6 000	38.257
800	33.866	7 000	39.568
900	33.911	8 000	39.934
1 000	34.123	9 000	41.265
1 100	34.094	10 000	33.168
1 200	34.267	11 000	33.832
1 300	34.350	12 000	34.401
1 400	34.471	13 000	34.957
1 500	34.651	14 000	35.290
1 600	34.809	15 000	35.673
1 700	34.788	16 000	35.916
1 800	34.906	17 000	35.813
1 900	34.933	18 000	36.216
2 000	35.243	19 000	36.655
2 100	35.367	20 000	36.188
2 200	35.828	21 000	36.912
2 300	35.904	22 000	37.226
2 400	35.946	23 000	37.478
2 500	35.990	24 000	37.223
2 600	35.864	25 000	43.299
2 700	35.968	26 000	38.652
2 800	36.142	26 500	45.115
2 900	36.061	-	-
3 000	36.347	-	-

ANT3

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
500	33.471	4 000	37.709
600	33.680	5 000	38.267
700	33.846	6 000	38.389
800	34.010	7 000	39.556
900	34.169	8 000	39.966
1 000	34.379	9 000	40.848
1 100	34.404	10 000	33.004
1 200	34.631	11 000	33.859
1 300	34.725	12 000	34.417
1 400	34.869	13 000	34.350
1 500	35.079	14 000	34.569
1 600	35.233	15 000	34.889
1 700	35.259	16 000	35.179
1 800	35.435	17 000	35.096
1 900	35.493	18 000	35.294
2 000	35.678	19 000	35.515
2 100	35.784	20 000	35.152
2 200	35.886	21 000	35.695
2 300	36.137	22 000	35.466
2 400	36.207	23 000	35.451
2 500	36.381	24 000	36.717
2 600	36.350	25 000	43.955
2 700	36.399	26 000	40.334
2 800	36.469	26 500	49.386
2 900	36.511	-	-
3 000	36.832	-	-

3.3. MAXIMUM MEASUREMENTUNCERTAINTY

Description	Condition	Uncertainty
Radiated Disturbance	9 kHz ~ 30 MHz	4.40 dB
	30 MHz ~ 1 GHz	5.74 dB
	1 GHz ~ 18 GHz	5.51 dB
	18 GHz ~ 40 GHz	5.92 dB

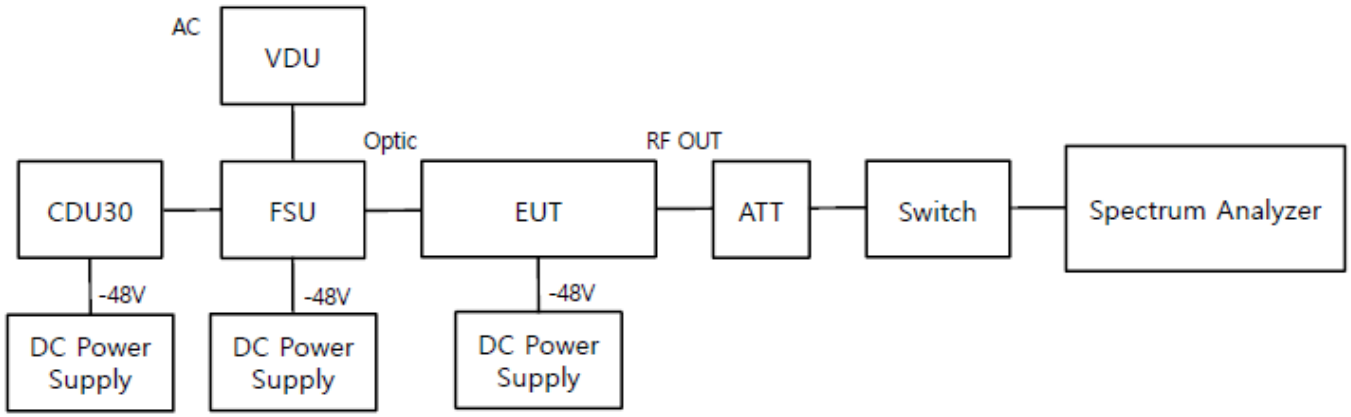
Coverage factor k = 2, Confidence levels of 95 %

3.4. STANDARDS ENVIRONMENTAL TEST CONDITIONS

Temperature:	+15 °C to +35 °C
Relative humidity:	30 % to 60 %
Air pressure	860 mbar to 1 060 mbar

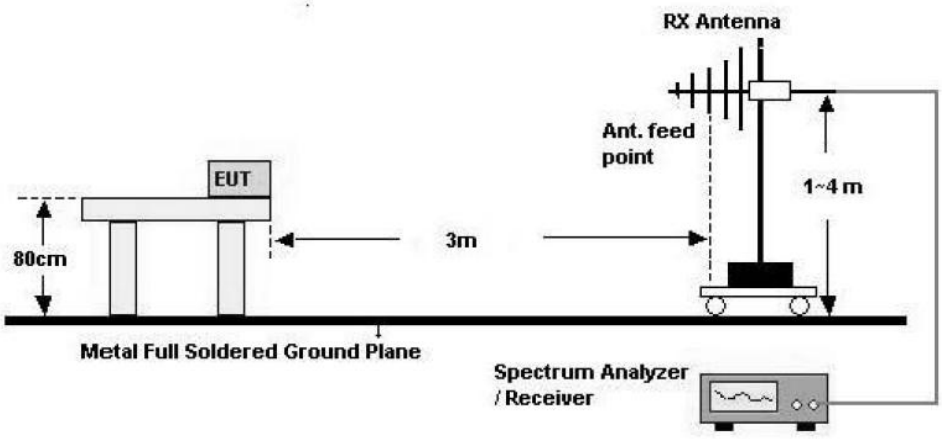
3.5. TEST DIAGRAMS

Conducted Test

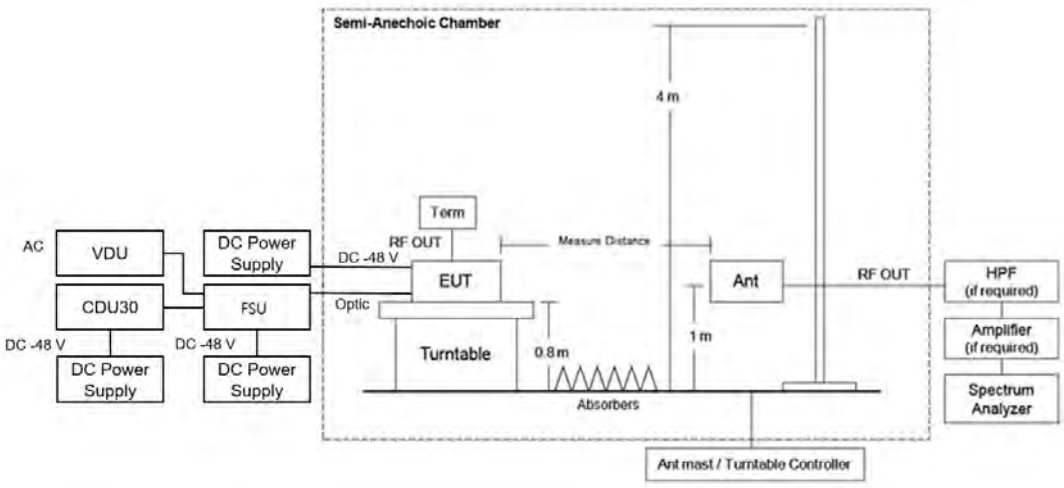


Radiated Test

30 MHz ~ 1 GHz

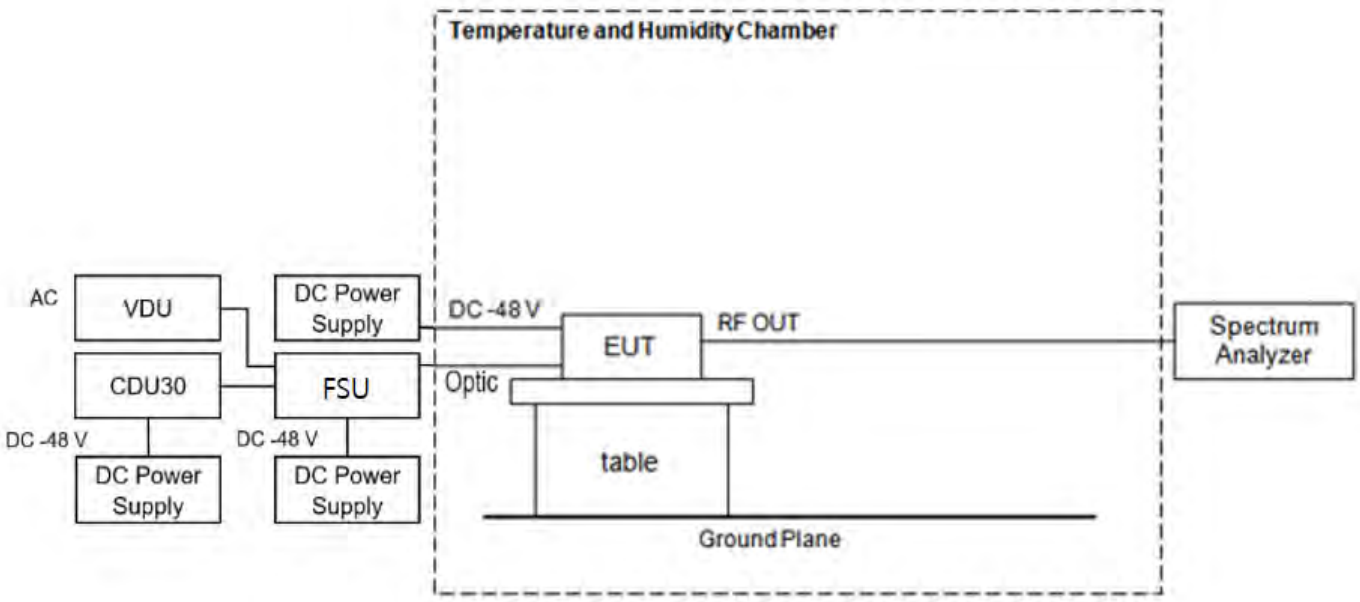


Above 1 GHz



※ EUT position is adopted by placement of floor-standing refer to section 5.5.2.3.2 of ANSI C63.26-2015

Frequency Stability



Note: All modulations(QPSK, 16QAM, 64QAM, 256QAM) were investigated and the worst case configuration channel results are reported.

4. TEST EQUIPMENTS

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
PXA Signal Analyzer	N9030A	Keysight	MY55410714	2023-02-14	Annual
PXA Signal Analyzer	N9030B	Keysight	MY55480110	2023-07-13	Annual
RF Switch System	TMX0132C	TNM System	TM21100002	N/A	N/A
*30 dB Attenuator	TWAN-300-18G	Teleworld	N/A	2023-08-22	Annual
*50Ω Termination	908A	H.P.	N/A	N/A	N/A
*30 dB Attenuator	WA93-30-33	Weinschel, Inc.	0184	2023-11-21	Annual
DC Power Supply	PCR4000M	KIKUSUI	VM002269	2023-09-30	Annual
DC Power Supply	6647A	Agilent	MY41003340	2023-07-06	Annual
Temperature and Humidity Chamber	NY-THR18750	NANGYEAL	NY-200912201A	2023-02-10	Annual
Amp & Filter Bank Switch Controller	FBSM-01B	TNM system	TM20090002	N/A	N/A
Controller(Antenna mast & Turn Table)	CO3000	Innco systems	CO3000/1251/48920320/P	N/A	N/A
Antenna Position Tower	MA4640/800-XP-ET	Innco systems	N/A	N/A	N/A
Turn Table	DS2000-S	Innco systems	N/A	N/A	N/A
Turn Table	Turn Table	Ets	N/A	N/A	N/A
Loop Antenna	FMZB 1513	Schwarzbeck	1513-333	2024-03-17	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	01039	2023-07-14	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	02296	2024-05-18	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170342	2024-09-29	Biennial
Spectrum Analyzer	FSP40	Rohde & Schwarz	100843	2023-11-08	Annual
HPF(3 ~ 18 GHz) + LNA(0.1 ~ 18 GHz)	FBSR-04C	TNM system	N/A	2023-08-23	Annual
Low Noise Amplifier	LLAU1183540Q	LTC Microwave	100	2023-08-23	Annual
High Pass Filter	WHKX12-2805-3000-18000-40SS	Wainwright Instruments	45	2023-08-23	Annual
Power Amplifier	CBL18265035	CERNEX	22966	2023-12-01	Annual
Power Amplifier	CBL26405040	CERNEX	25956	2023-03-11	Annual

*This equipment has been used to each port, but we only listed one equipment for simplicity.

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date, or will be tested after the calibration is completed.

5. TEST RESULT

5.1. RF OUTPUT POWER and PSD

Test Requirements:

§ 2.1046 Measurements required: RF power output.

(a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in § 2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

(b) For single sideband, independent sideband, and single channel, controlled carrier radiotelephone transmitters the procedure specified in paragraph (a) of this section shall be employed and, in addition, the transmitter shall be modulated during the test as specified and applicable in § 2.1046 (b) (1-5). In all tests, the input level of the modulating signal shall be such as to develop rated peak envelope power or carrier power, as appropriate, for the transmitter.

(c) For measurements conducted pursuant to paragraphs (a) and (b) of this section, all calculations and methods used by the applicant for determining carrier power or peak envelope power, as appropriate, on the basis of measured power in the radio frequency load attached to the transmitter output terminals shall be shown. Under the test conditions specified, no components of the emission spectrum shall exceed the limits specified in the applicable rule parts as necessary for meeting occupied bandwidth or emission limitations.

§ 24.232 Power and antenna height limits.

(a) (1) Base stations with an emission bandwidth of 1 MHz or less are limited to 1640 watts equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) below.

(2) Base stations with an emission bandwidth greater than 1 MHz are limited to 1640 watts/MHz equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) below.

(3) Base station antenna heights may exceed 300 meters HAAT with a corresponding reduction in power; see Tables 1 and 2 of this section.

(4) The service area boundary limit and microwave protection criteria specified in § § 24.236 and 24.237 apply.

Table 1—Reduced Power for Base Station Antenna Heights Over 300 Meters, With Emission Bandwidth of 1 MHz or Less

HAAT in meters	Maximum EIRP watts
≤300	1640
≤500	1070
≤1000	490
≤1500	270
≤2000	160

Table 2—Reduced Power for Base Station Antenna Heights Over 300 Meters, With Emission Bandwidth Greater Than 1 MHz

HAAT in meters	Maximum EIRP watts/MHz
≤300	1640
≤500	1070
≤1000	490
≤1500	270
≤2000	160

(b) (1) Base stations that are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census, with an emission bandwidth of 1 MHz or less are limited to 3280 watts equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT.

(2) Base stations that are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census, with an emission bandwidth greater than 1 MHz are limited to 3280 watts/MHz equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT.

(3) Base station antenna heights may exceed 300 meters HAAT with a corresponding reduction in power; see Tables 3 and 4 of this section.

(4) The service area boundary limit and microwave protection criteria specified in § § 24.236 and 24.237 apply.

(5) Operation under this paragraph (b) at power limits greater than permitted under paragraph (a) of this section must be coordinated in advance with all broadband PCS licensees authorized to operate on adjacent frequency blocks within 120 kilometers (75 miles) of the base station and is limited to base stations located more than 120 kilometers (75 miles) from the Canadian border and more than 75 kilometers (45 miles) from the Mexican border.

Table 3—Reduced Power for Base Station Antenna Heights Over 300 Meters, With Emission Bandwidth of 1 MHz or Less

HAAT in meters	Maximum EIRP watts
≤300	3280
≤500	2140
≤1000	980
≤1500	540
≤2000	320

Table 4—Reduced Power for Base Station Antenna Heights Over 300 Meters, With Emission Bandwidth Greater Than 1 MHz

HAAT in meters	Maximum EIRP watts/MHz
≤300	3280
≤500	2140
≤1000	980
≤1500	540
≤2000	320

(c) Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

(d) Power measurements for transmissions by stations authorized under this section may be made either in accrdance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(e) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

§ 27.50 Power limits and duty cycle.

(d) (2) 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:

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

(5) Equipment employed must be authorized in accordance with the provisions of § 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Test Procedures:

The measurement is performed in accordance with Section 5.2.4.4.1 of ANSI C63.26.

The EUT is considered to transmit continuously if it can be configured to transmit at a burst duty cycle of greater than or equal to 98% throughout the duration of the measurement. If this condition can be achieved, then the following procedure can be used to measure the average output power of the EUT.

a) Set span to 2 × to 3 × the OBW.

b) Set RBW = 1% to 5% of the OBW.

c) Set VBW ≥ 3 × RBW.

d) Set number of measurement points in sweep ≥ 2 × span / RBW.

e) Sweep time:

1) Set = auto-couple, or

2) Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. Transmission period is the on and off time of the transmitter.

f) Detector = power averaging (rms).

g) If the EUT can be configured to transmit continuously, then set the trigger to free run.

h) If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints (i.e., configured such that measurement data is collected only during active full-power transmissions).

i) Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over multiple symbols, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.

j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

The measurement is performed in accordance with Section 5.2.4.5 of ANSI C63.26.

Some regulatory requirements specify the RF output power limits in terms of maximum or average PSD, (i.e., the output power or unwanted emissions power limits are defined within a specified reference bandwidth).

When average PSD limits are specified, the same fundamental measurement condition applies as previously discussed (i.e., averaging is to be performed only over durations of active transmissions at maximum output power level). Thus, when performing this measurement, the EUT must either be configured to transmit continuously at full power while the compliance measurement is performed, or else the measurement instrumentation must be configured to acquire data only over durations when the EUT is actively transmitting at full power. In circumstances where neither of these conditions can be realized, then alternative procedures are provided for both constant duty cycle and non-constant duty cycle transmissions.

The PSD is measured following the same procedures described in 5.2.4.4 for measuring the total average power, but with the RBW set to the reference bandwidth specified by the applicable regulatory requirement, and by using the marker function to identify the maximum PSD instead of summing the power across the OBW. If the fundamental measurement condition cannot be realized, then one of the alternative procedures in 5.2.4.4.2 or 5.2.4.4.3 should be selected, based on whether the transmitter duty cycle is constant (variations ≤ ±2%) or non-constant (variations > ±2%), respectively.

Note:

1. The measured Conducted output power is in the tolerance declared by the manufacturer.
2. The results of the Conducted output power and PSD test shown above the frequency measured values are very small and similar trend for each port, so we attached only the worst case plot.

Test Results:

Tabular Data of RF Contiguous output power

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	2 127.50	45.30	33.92
		Middle	2 145.00	45.26	33.60
		High	2 162.50	45.35	34.28
	16QAM	Low	2 127.50	45.39	34.62
		Middle	2 145.00	45.12	32.52
		High	2 162.50	45.34	34.17
	64QAM	Low	2 127.50	45.30	33.89
		Middle	2 145.00	45.29	33.79
		High	2 162.50	45.34	34.21
	256QAM	Low	2 127.50	45.29	33.78
		Middle	2 145.00	45.30	33.88
		High	2 162.50	45.27	33.69
1	QPSK	Low	2 127.50	45.24	33.41
		Middle	2 145.00	45.38	34.47
		High	2 162.50	45.52	35.62
	16QAM	Low	2 127.50	45.27	33.68
		Middle	2 145.00	45.28	33.71
		High	2 162.50	45.30	33.87
	64QAM	Low	2 127.50	45.19	33.04
		Middle	2 145.00	45.39	34.59
		High	2 162.50	45.50	35.49
	256QAM	Low	2 127.50	45.13	32.61
		Middle	2 145.00	45.44	35.00
		High	2 162.50	45.45	35.05

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	2 127.50	44.86	30.61
		Middle	2 145.00	44.79	30.16
		High	2 162.50	44.88	30.78
	16QAM	Low	2 127.50	44.86	30.64
		Middle	2 145.00	44.78	30.10
		High	2 162.50	44.89	30.85
	64QAM	Low	2 127.50	44.86	30.61
		Middle	2 145.00	44.85	30.55
		High	2 162.50	44.89	30.86
	256QAM	Low	2 127.50	44.87	30.72
		Middle	2 145.00	44.90	30.92
		High	2 162.50	44.93	31.10
3	QPSK	Low	2 127.50	45.00	31.64
		Middle	2 145.00	44.93	31.15
		High	2 162.50	44.78	30.04
	16QAM	Low	2 127.50	45.04	31.88
		Middle	2 145.00	44.93	31.13
		High	2 162.50	44.88	30.77
	64QAM	Low	2 127.50	44.98	31.46
		Middle	2 145.00	44.95	31.29
		High	2 162.50	44.78	30.04
	256QAM	Low	2 127.50	45.02	31.74
		Middle	2 145.00	44.99	31.54
		High	2 162.50	44.83	30.38

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 127.50	129.58	130.82	129.01	128.84
2 145.00	129.38	127.45	130.22	131.33
2 162.50	130.71	129.66	130.60	130.22

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	2 127.50	45.28	33.71
		Middle	2 145.00	45.47	35.28
		High	2 162.50	45.33	34.13
	16QAM	Low	2 127.50	45.32	34.06
		Middle	2 145.00	45.40	34.69
		High	2 162.50	45.39	34.59
	64QAM	Low	2 127.50	45.34	34.21
		Middle	2 145.00	45.40	34.63
		High	2 162.50	45.30	33.86
	256QAM	Low	2 127.50	45.27	33.63
		Middle	2 145.00	45.40	34.69
		High	2 162.50	45.19	33.06
1	QPSK	Low	2 127.50	45.14	32.69
		Middle	2 145.00	45.51	35.54
		High	2 162.50	45.29	33.78
	16QAM	Low	2 127.50	45.25	33.53
		Middle	2 145.00	45.45	35.06
		High	2 162.50	45.42	34.84
	64QAM	Low	2 127.50	45.13	32.55
		Middle	2 145.00	45.52	35.63
		High	2 162.50	45.26	33.59
	256QAM	Low	2 127.50	45.14	32.67
		Middle	2 145.00	45.51	35.55
		High	2 162.50	45.30	33.86

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	2 127.50	45.07	32.11
		Middle	2 145.00	45.16	32.82
		High	2 162.50	45.14	32.67
	16QAM	Low	2 127.50	45.07	32.11
		Middle	2 145.00	45.00	31.63
		High	2 162.50	45.23	33.33
	64QAM	Low	2 127.50	45.06	32.06
		Middle	2 145.00	45.14	32.64
		High	2 162.50	45.15	32.76
	256QAM	Low	2 127.50	45.10	32.32
		Middle	2 145.00	45.16	32.79
		High	2 162.50	45.16	32.83
3	QPSK	Low	2 127.50	45.27	33.61
		Middle	2 145.00	45.13	32.58
		High	2 162.50	44.95	31.29
	16QAM	Low	2 127.50	45.14	32.68
		Middle	2 145.00	45.12	32.53
		High	2 162.50	45.09	32.27
	64QAM	Low	2 127.50	45.29	33.77
		Middle	2 145.00	45.17	32.87
		High	2 162.50	44.98	31.50
	256QAM	Low	2 127.50	45.26	33.60
		Middle	2 145.00	45.14	32.66
		High	2 162.50	44.93	31.10

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 127.50	132.13	132.37	132.59	132.22
2 145.00	136.22	133.91	135.77	135.69
2 162.50	131.87	135.04	131.71	130.85

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	2 127.50	45.54	35.85
		Middle	2 145.00	45.41	34.77
		High	2 162.50	45.28	33.74
	16QAM	Low	2 127.50	45.55	35.91
		Middle	2 145.00	45.57	36.07
		High	2 162.50	45.30	33.85
	64QAM	Low	2 127.50	45.51	35.55
		Middle	2 145.00	45.45	35.06
		High	2 162.50	45.23	33.34
	256QAM	Low	2 127.50	45.54	35.79
		Middle	2 145.00	45.40	34.65
		High	2 162.50	45.22	33.26
1	QPSK	Low	2 127.50	45.15	32.76
		Middle	2 145.00	45.12	32.52
		High	2 162.50	45.43	34.95
	16QAM	Low	2 127.50	45.42	34.83
		Middle	2 145.00	45.21	33.18
		High	2 162.50	45.56	35.97
	64QAM	Low	2 127.50	45.19	33.04
		Middle	2 145.00	45.12	32.51
		High	2 162.50	45.34	34.19
	256QAM	Low	2 127.50	45.16	32.81
		Middle	2 145.00	45.16	32.82
		High	2 162.50	45.27	33.66

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	2 127.50	45.09	32.31
		Middle	2 145.00	45.05	31.95
		High	2 162.50	45.18	32.92
	16QAM	Low	2 127.50	45.14	32.64
		Middle	2 145.00	45.28	33.74
		High	2 162.50	45.19	33.08
	64QAM	Low	2 127.50	45.10	32.40
		Middle	2 145.00	45.15	32.70
		High	2 162.50	45.15	32.76
	256QAM	Low	2 127.50	45.13	32.61
		Middle	2 145.00	45.02	31.75
		High	2 162.50	45.15	32.73
3	QPSK	Low	2 127.50	45.24	33.45
		Middle	2 145.00	45.05	31.97
		High	2 162.50	45.10	32.36
	16QAM	Low	2 127.50	45.20	33.11
		Middle	2 145.00	45.35	34.25
		High	2 162.50	45.15	32.70
	64QAM	Low	2 127.50	45.26	33.60
		Middle	2 145.00	45.04	31.94
		High	2 162.50	45.13	32.62
	256QAM	Low	2 127.50	45.24	33.41
		Middle	2 145.00	45.06	32.06
		High	2 162.50	45.07	32.11

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 127.50	134.37	136.49	134.59	134.62
2 145.00	131.20	137.24	132.21	131.28
2 162.50	133.97	135.59	132.92	131.76

Tabular Data of RF Non-Contiguous output power

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod	NR n66 5M		NR n66 10M + NR n66 20M		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	2 112.50	37.11	2 165.00	44.59	45.31	33.93
	16QAM	2 112.50	37.03	2 165.00	44.47	45.19	33.03
	64QAM	2 112.50	37.01	2 165.00	44.59	45.29	33.77
	256QAM	2 112.50	37.13	2 165.00	44.63	45.34	34.18
1	QPSK	2 112.50	36.93	2 165.00	44.49	45.19	33.02
	16QAM	2 112.50	36.68	2 165.00	44.31	45.00	31.62
	64QAM	2 112.50	36.80	2 165.00	44.41	45.10	32.39
	256QAM	2 112.50	36.76	2 165.00	44.43	45.11	32.46
2	QPSK	2 112.50	36.75	2 165.00	44.16	44.89	30.81
	16QAM	2 112.50	36.68	2 165.00	44.15	44.86	30.64
	64QAM	2 112.50	36.71	2 165.00	44.12	44.85	30.54
	256QAM	2 112.50	36.81	2 165.00	44.21	44.93	31.14
3	QPSK	2 112.50	36.57	2 165.00	44.10	44.81	30.24
	16QAM	2 112.50	36.67	2 165.00	44.22	44.92	31.08
	64QAM	2 112.50	36.57	2 165.00	44.10	44.81	30.25
	256QAM	2 112.50	36.62	2 165.00	44.09	44.80	30.23

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 112.50 + 2 165.00	127.99	126.37	126.95	128.01

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod	NR n66 20M + NR n66 5M		NR n66 10M		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	2 122.50	43.73	2 175.00	40.16	45.31	33.97
	16QAM	2 122.50	43.71	2 175.00	40.22	45.32	34.05
	64QAM	2 122.50	43.68	2 175.00	40.16	45.28	33.74
	256QAM	2 122.50	43.76	2 175.00	40.19	45.34	34.22
1	QPSK	2 122.50	43.46	2 175.00	40.12	45.12	32.47
	16QAM	2 122.50	43.50	2 175.00	40.20	45.16	32.84
	64QAM	2 122.50	43.49	2 175.00	40.09	45.13	32.56
	256QAM	2 122.50	43.45	2 175.00	40.15	45.12	32.50
2	QPSK	2 122.50	43.36	2 175.00	40.01	45.01	31.72
	16QAM	2 122.50	43.30	2 175.00	39.90	44.93	31.13
	64QAM	2 122.50	43.30	2 175.00	39.95	44.95	31.27
	256QAM	2 122.50	43.32	2 175.00	39.98	44.97	31.41
3	QPSK	2 122.50	43.48	2 175.00	40.02	45.10	32.33
	16QAM	2 122.50	43.41	2 175.00	39.96	45.03	31.83
	64QAM	2 122.50	43.46	2 175.00	39.98	45.07	32.14
	256QAM	2 122.50	43.50	2 175.00	39.95	45.09	32.25

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 122.50 + 2 175.00	130.49	129.85	129.71	130.38

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod	DSS B66 10M		NR n66 5M + NR n66 20M		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	2 115.00	39.85	2 167.50	43.73	45.22	33.24
	16QAM	2 115.00	39.85	2 167.50	43.88	45.33	34.11
	64QAM	2 115.00	39.87	2 167.50	43.78	45.26	33.58
	256QAM	2 115.00	39.83	2 167.50	43.79	45.26	33.56
1	QPSK	2 115.00	39.77	2 167.50	43.70	45.17	32.91
	16QAM	2 115.00	39.33	2 167.50	43.28	44.75	29.84
	64QAM	2 115.00	39.68	2 167.50	43.65	45.11	32.47
	256QAM	2 115.00	39.67	2 167.50	43.63	45.10	32.33
2	QPSK	2 115.00	39.87	2 167.50	43.49	45.06	32.04
	16QAM	2 115.00	39.65	2 167.50	43.37	44.90	30.93
	64QAM	2 115.00	39.80	2 167.50	43.48	45.03	31.82
	256QAM	2 115.00	39.78	2 167.50	43.47	45.01	31.73
3	QPSK	2 115.00	39.39	2 167.50	43.29	44.77	30.02
	16QAM	2 115.00	39.48	2 167.50	43.38	44.87	30.66
	64QAM	2 115.00	39.41	2 167.50	43.26	44.76	29.92
	256QAM	2 115.00	39.41	2 167.50	43.26	44.76	29.91

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 115.00 + 2 167.50	128.22	125.55	127.79	127.53

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod	NR n66 20M + NR n66 5M		DSS B66 10M		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	2 122.50	43.65	2 175.00	39.92	45.19	33.01
	16QAM	2 122.50	43.46	2 175.00	39.89	45.04	31.95
	64QAM	2 122.50	43.61	2 175.00	39.93	45.16	32.78
	256QAM	2 122.50	43.59	2 175.00	39.94	45.15	32.70
1	QPSK	2 122.50	43.63	2 175.00	40.08	45.22	33.26
	16QAM	2 122.50	43.40	2 175.00	39.80	44.98	31.45
	64QAM	2 122.50	43.66	2 175.00	40.12	45.25	33.51
	256QAM	2 122.50	43.69	2 175.00	40.16	45.28	33.76
2	QPSK	2 122.50	43.15	2 175.00	39.52	44.71	29.60
	16QAM	2 122.50	43.30	2 175.00	39.70	44.87	30.71
	64QAM	2 122.50	43.20	2 175.00	39.61	44.78	30.04
	256QAM	2 122.50	43.25	2 175.00	39.67	44.83	30.39
3	QPSK	2 122.50	43.48	2 175.00	39.76	45.02	31.75
	16QAM	2 122.50	43.55	2 175.00	39.92	45.11	32.46
	64QAM	2 122.50	43.44	2 175.00	39.73	44.98	31.47
	256QAM	2 122.50	43.42	2 175.00	39.72	44.97	31.38

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 122.50 + 2 175.00	127.61	126.57	127.80	128.23

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod	DSS B66 10M		DSS B66 10M + DSS B66 15M		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	2 115.00	39.92	2 167.50	43.96	45.40	34.70
	16QAM	2 115.00	39.95	2 167.50	43.90	45.37	34.40
	64QAM	2 115.00	39.80	2 167.50	43.78	45.24	33.42
	256QAM	2 115.00	39.63	2 167.50	43.68	45.13	32.55
1	QPSK	2 115.00	39.90	2 167.50	43.84	45.31	33.99
	16QAM	2 115.00	39.80	2 167.50	43.87	45.31	33.96
	64QAM	2 115.00	39.62	2 167.50	43.64	45.09	32.29
	256QAM	2 115.00	39.54	2 167.50	43.45	44.93	31.13
2	QPSK	2 115.00	39.82	2 167.50	43.63	45.14	32.66
	16QAM	2 115.00	39.75	2 167.50	43.49	45.02	31.77
	64QAM	2 115.00	39.75	2 167.50	43.59	45.09	32.28
	256QAM	2 115.00	39.74	2 167.50	43.51	45.03	31.85
3	QPSK	2 115.00	39.54	2 167.50	43.56	45.01	31.71
	16QAM	2 115.00	39.58	2 167.50	43.67	45.10	32.34
	64QAM	2 115.00	39.56	2 167.50	43.55	45.01	31.67
	256QAM	2 115.00	39.57	2 167.50	43.57	45.03	31.82

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 115.00 + 2 167.50	133.05	132.48	129.67	127.35

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C]

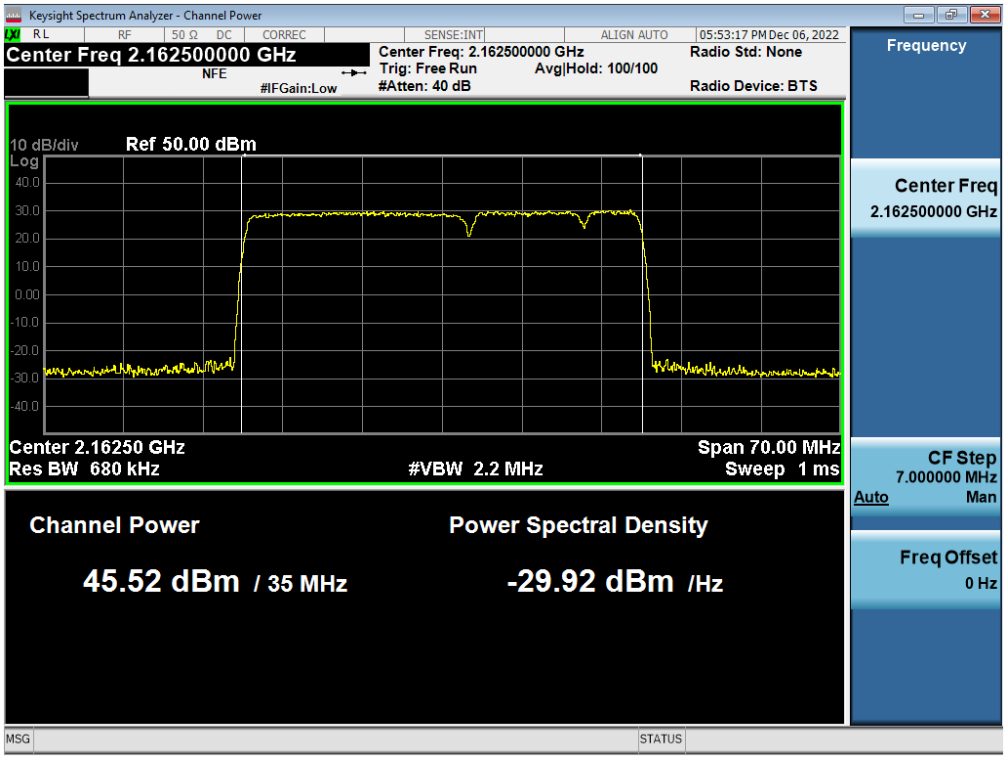
Ant.	Mod	DSS B66 15M + DSS B66 10M		DSS B66 10M		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	2 122.50	43.78	2 175.00	40.07	45.32	34.06
	16QAM	2 122.50	43.76	2 175.00	40.09	45.31	33.97
	64QAM	2 122.50	43.78	2 175.00	39.95	45.28	33.76
	256QAM	2 122.50	43.77	2 175.00	40.04	45.30	33.89
1	QPSK	2 122.50	43.76	2 175.00	40.12	45.32	34.04
	16QAM	2 122.50	43.62	2 175.00	40.09	45.22	33.25
	64QAM	2 122.50	43.69	2 175.00	39.92	45.21	33.21
	256QAM	2 122.50	43.49	2 175.00	39.76	45.03	31.83
2	QPSK	2 122.50	43.58	2 175.00	39.93	45.14	32.67
	16QAM	2 122.50	43.59	2 175.00	39.91	45.14	32.65
	64QAM	2 122.50	43.63	2 175.00	39.88	45.16	32.78
	256QAM	2 122.50	43.59	2 175.00	39.94	45.15	32.71
3	QPSK	2 122.50	43.35	2 175.00	39.69	44.91	30.96
	16QAM	2 122.50	43.48	2 175.00	39.85	45.05	31.97
	64QAM	2 122.50	43.41	2 175.00	39.83	44.99	31.54
	256QAM	2 122.50	43.37	2 175.00	39.76	44.94	31.19

Sum Data of Port 0, Port 1, Port 2 and Port 3

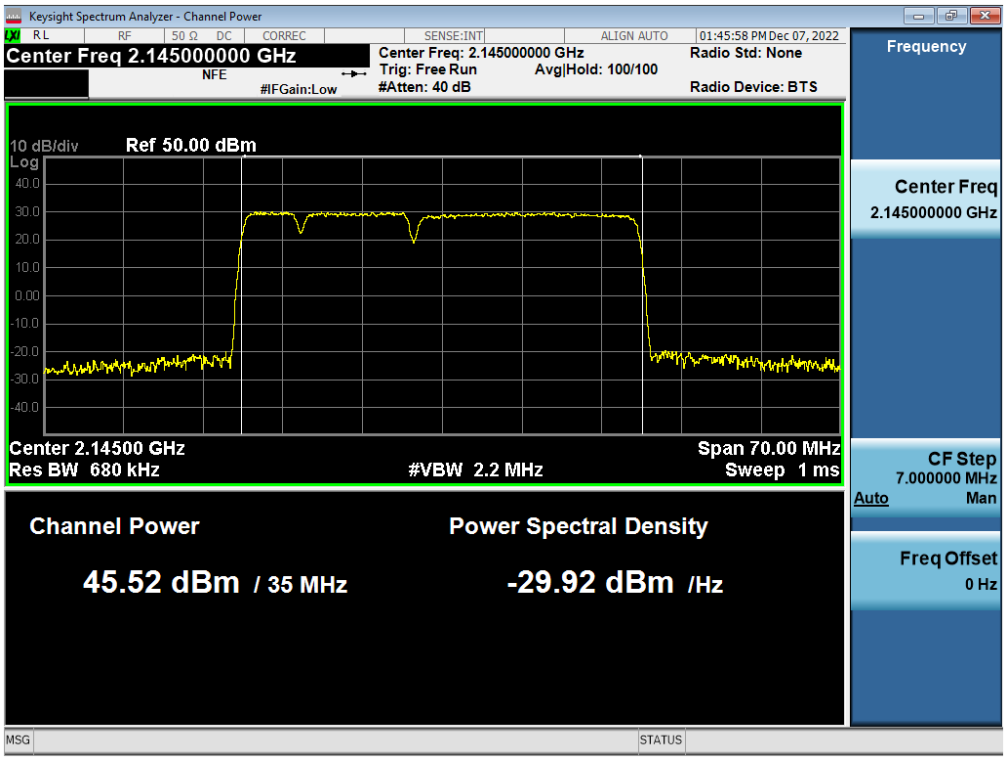
Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
2 122.50 + 2 175.00	131.75	131.83	131.29	129.61

Plot Data of RF Output Power

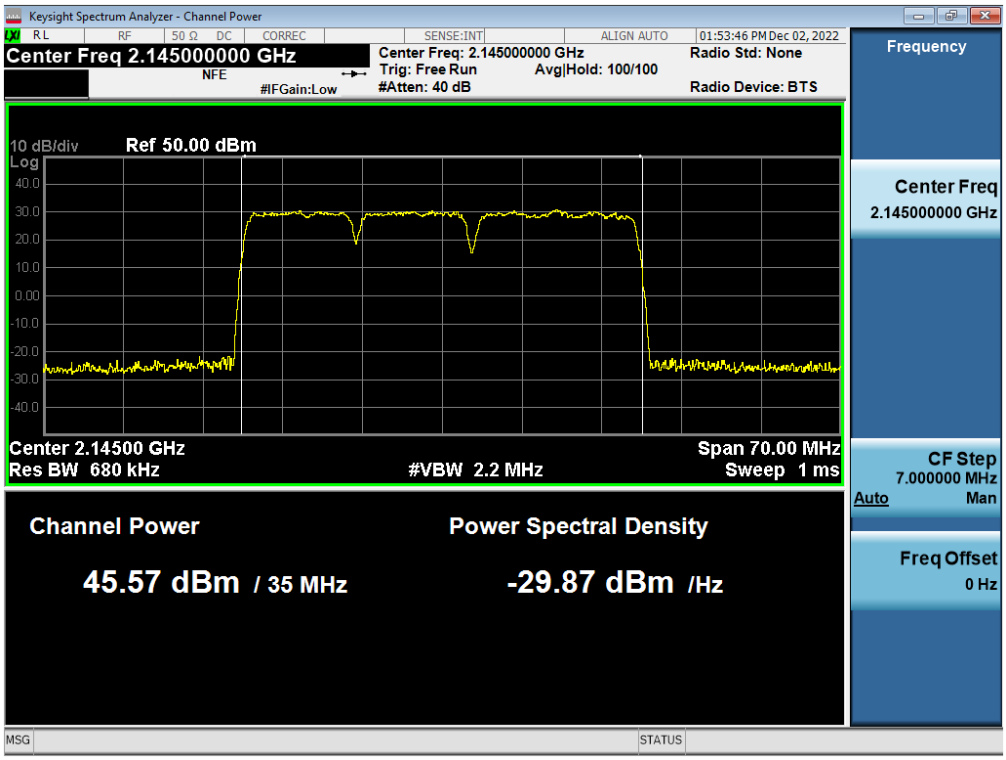
Antenna 1 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / QPSK / High



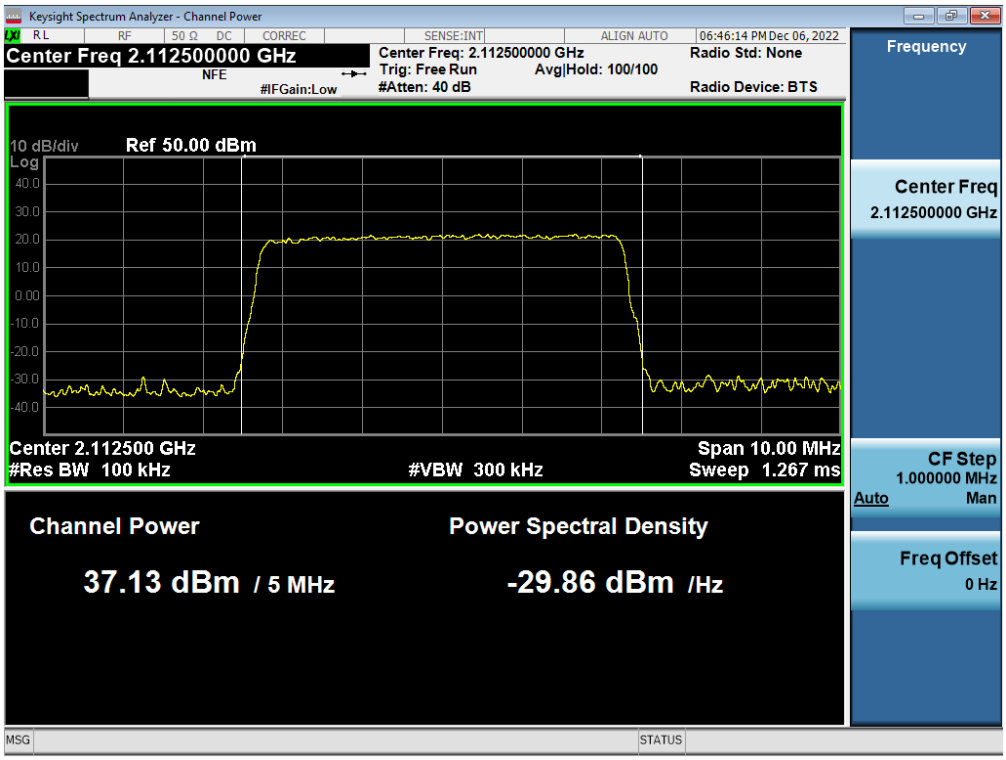
Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



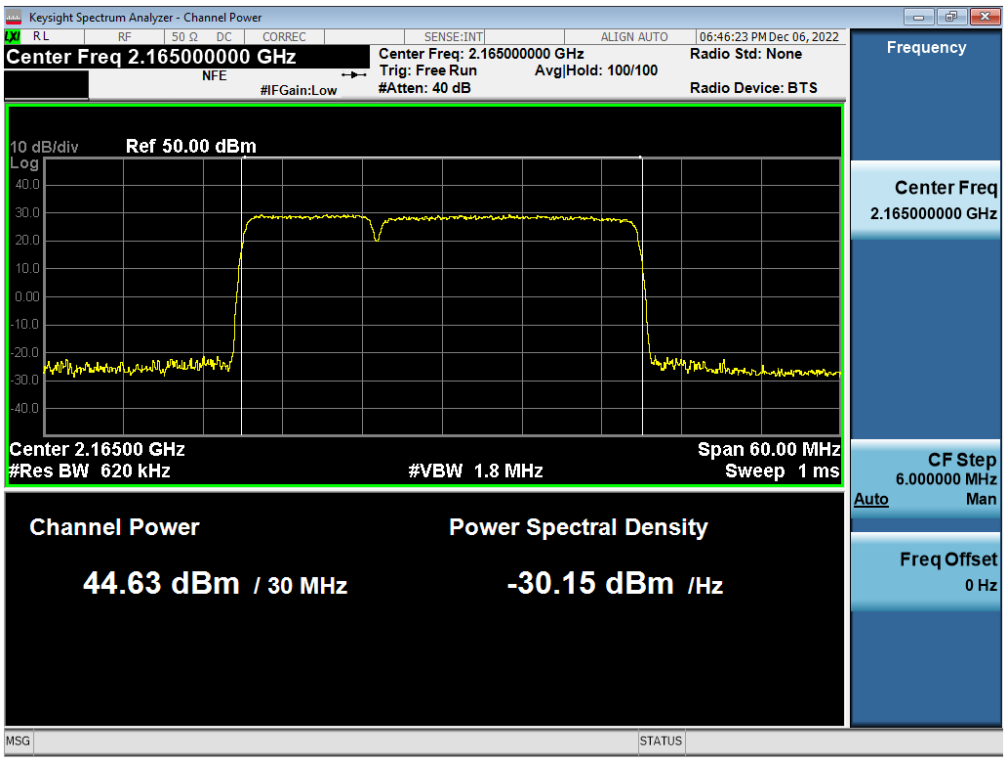
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle



Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M / Non-Contiguous / 256QAM / Low

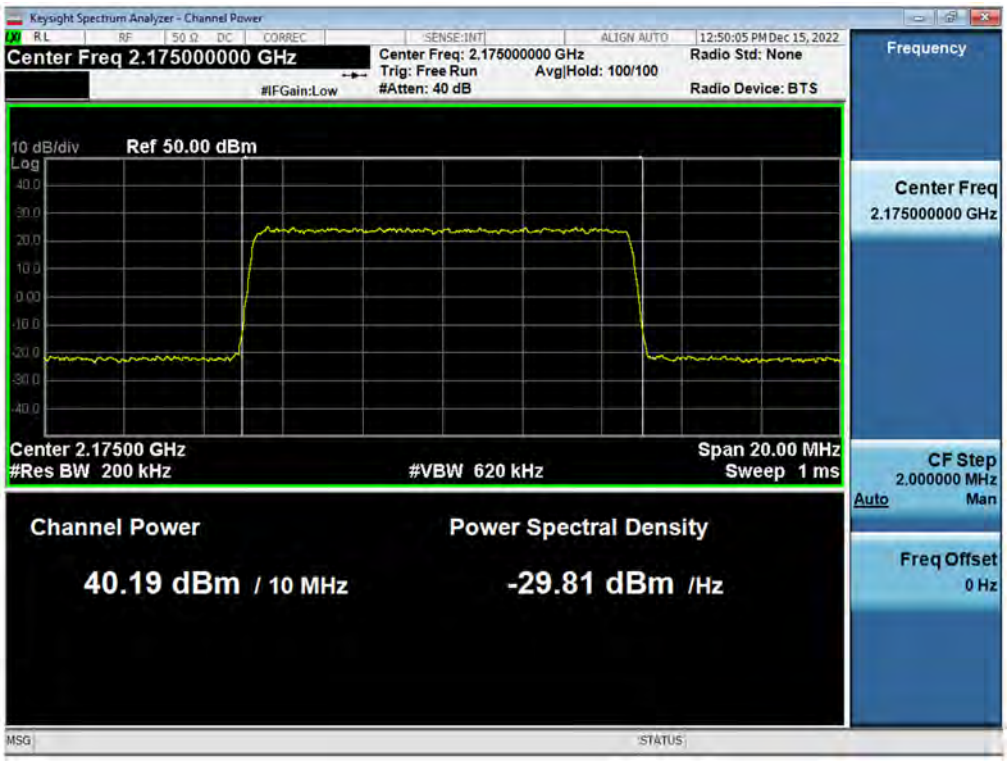


Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 10M + NR n66 20M / Non-Contiguous / 256QAM / High

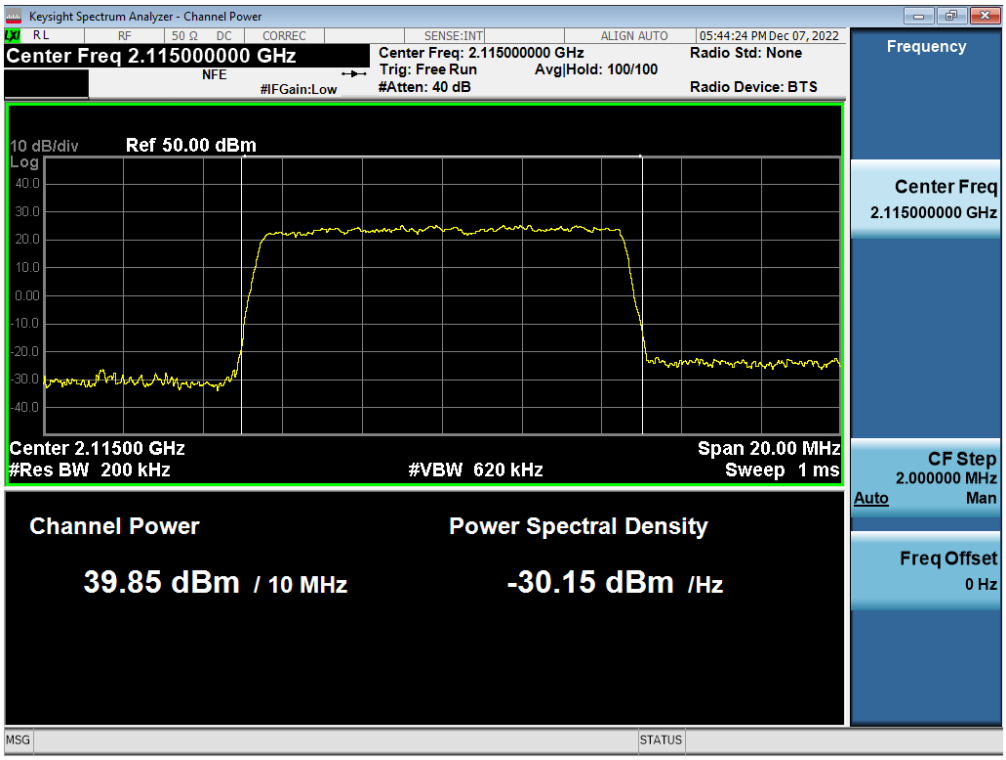


Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / 256QAM / Low

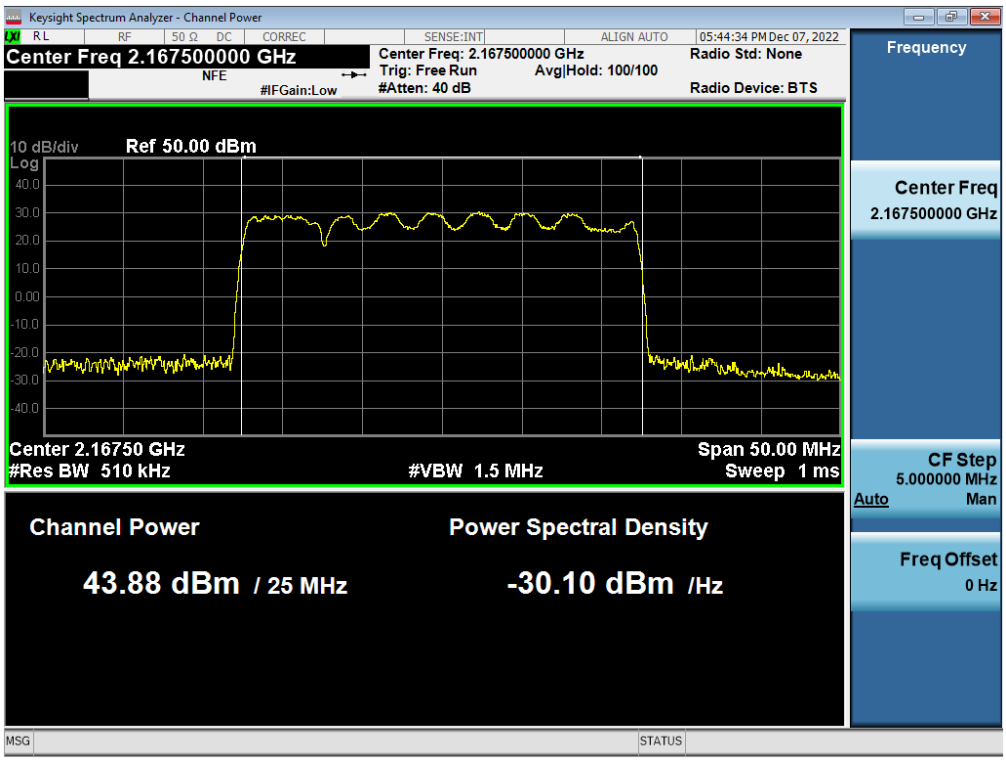
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 10M / Non-Contiguous / 256QAM / High



Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / 16QAM / Low

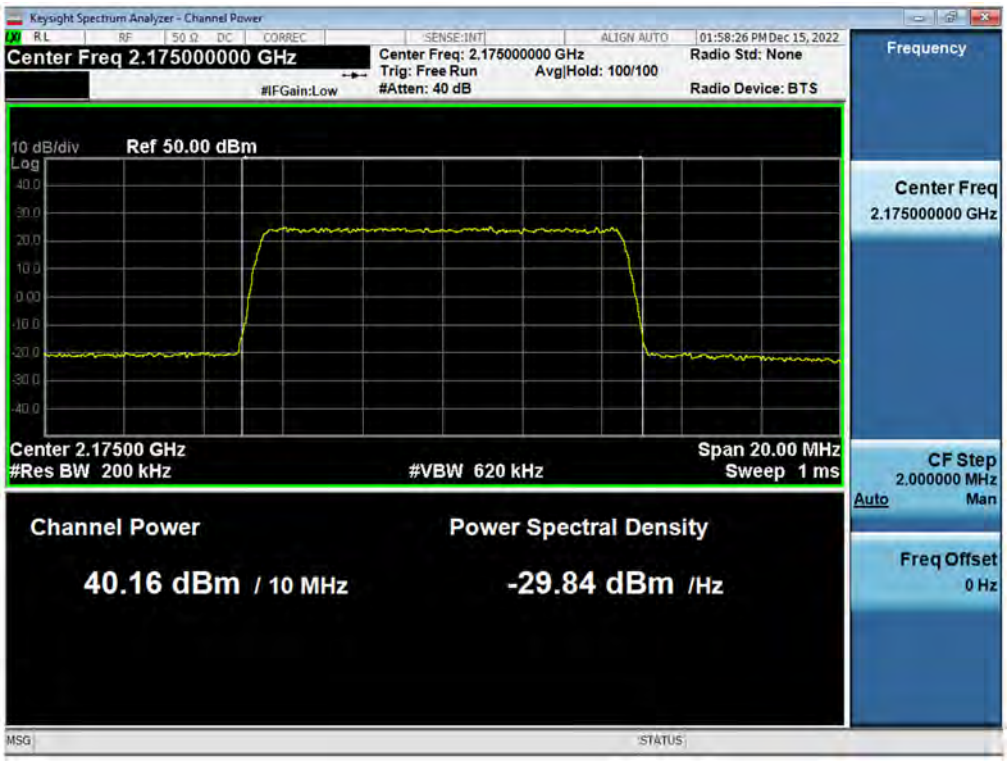


Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M + NR n66 20M / Non-Contiguous / 16QAM / High

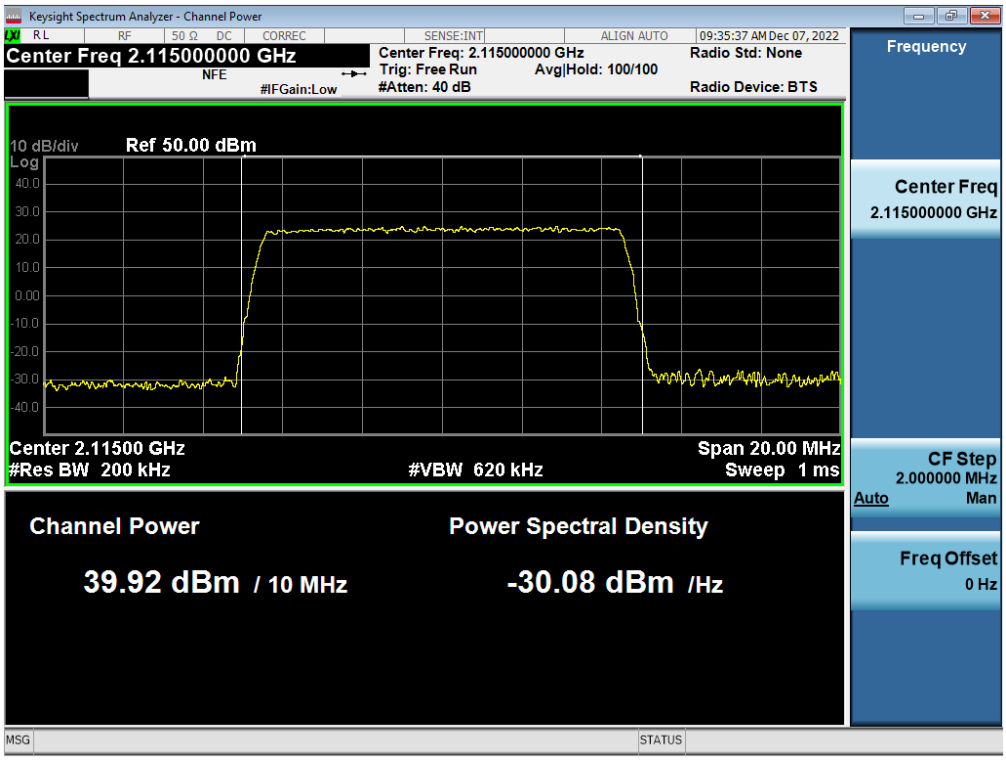


Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / DSS B66 20M + NR n66 5M / Non-Contiguous / 256QAM / Low

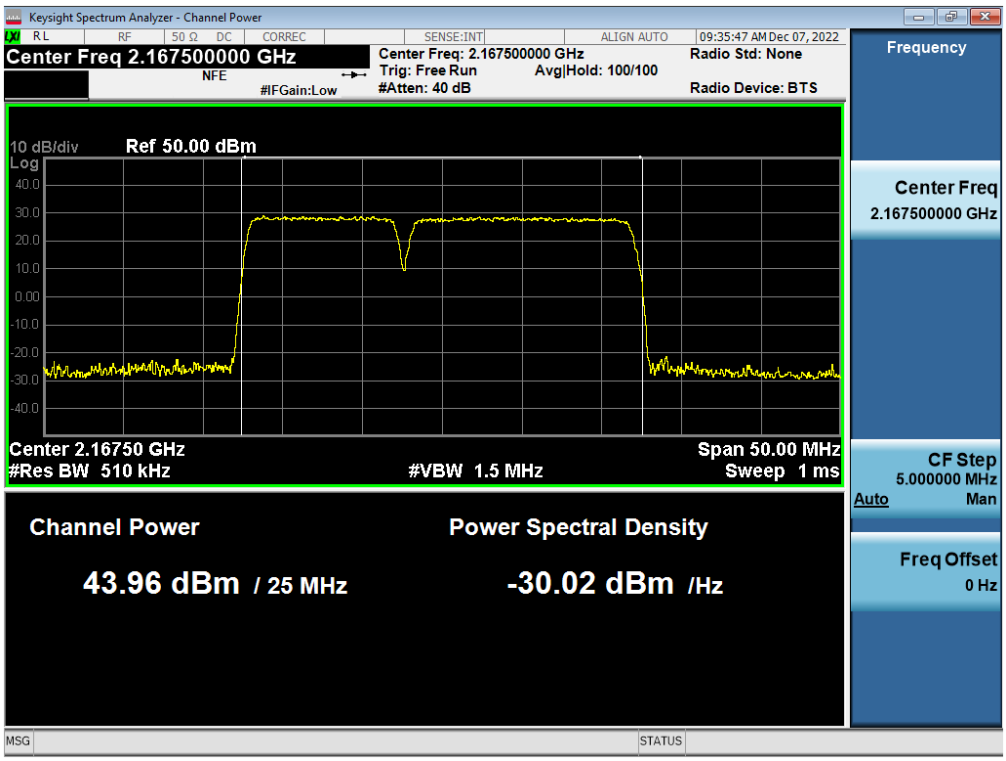
Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 10M / Non-Contiguous / 256QAM / High



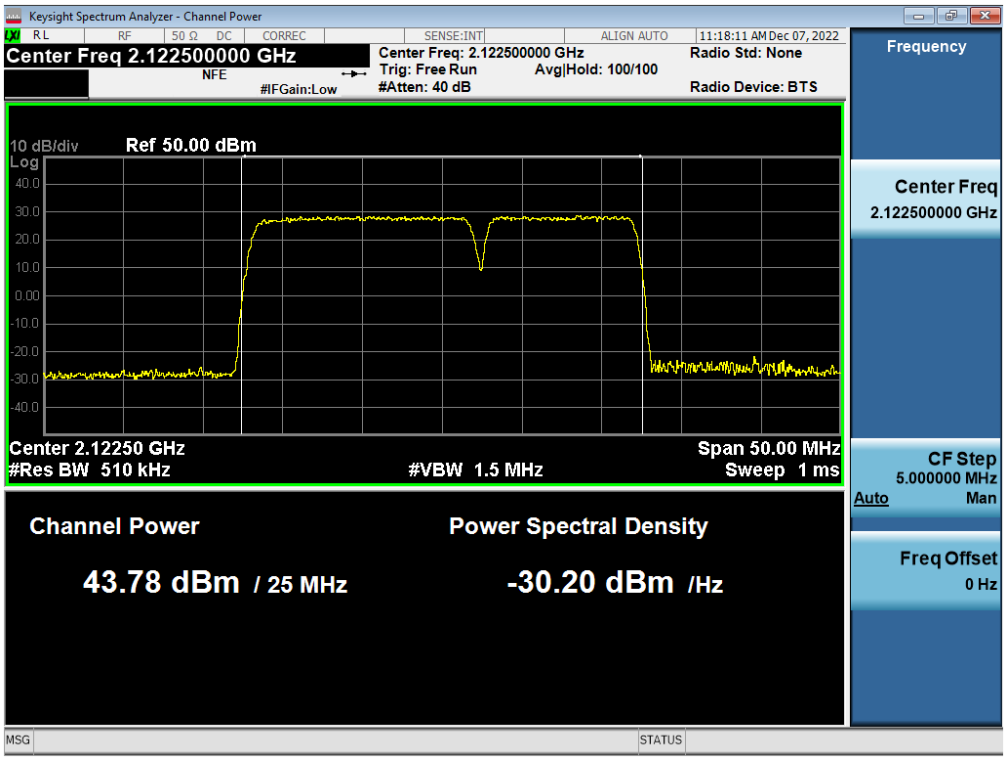
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / QPSK / Low



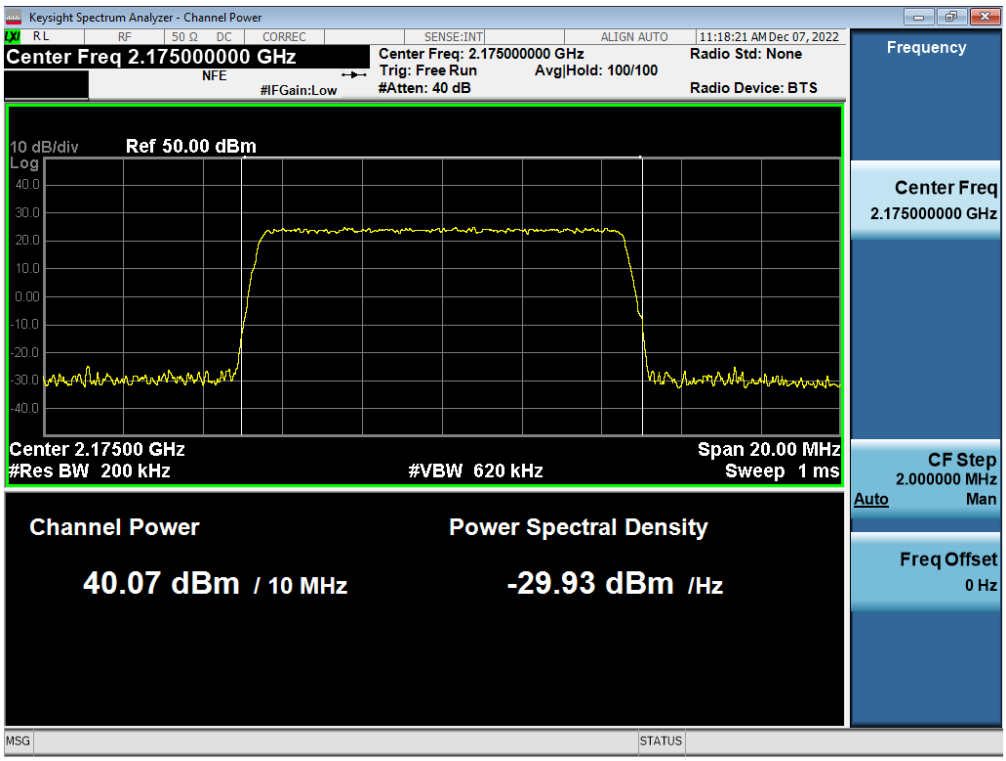
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M + DSS B66 15M / Non-Contiguous / QPSK / High



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 15M + DSS B66 10M / Non-Contiguous / QPSK / Low



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M / Non-Contiguous / QPSK / High



Tabular Data of Contiguous PSD

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	Low	2 127.50	31.61	1.45
		Middle	2 145.00	31.33	1.36
		High	2 162.50	31.40	1.38
	16QAM	Low	2 127.50	32.73	1.88
		Middle	2 145.00	32.55	1.80
		High	2 162.50	32.82	1.91
	64QAM	Low	2 127.50	31.90	1.55
		Middle	2 145.00	31.54	1.42
		High	2 162.50	31.37	1.37
	256QAM	Low	2 127.50	31.53	1.42
		Middle	2 145.00	31.73	1.49
		High	2 162.50	31.45	1.40
1	QPSK	Low	2 127.50	31.42	1.39
		Middle	2 145.00	31.36	1.37
		High	2 162.50	31.64	1.46
	16QAM	Low	2 127.50	32.62	1.83
		Middle	2 145.00	32.63	1.83
		High	2 162.50	32.68	1.86
	64QAM	Low	2 127.50	31.79	1.51
		Middle	2 145.00	31.57	1.44
		High	2 162.50	31.48	1.41
	256QAM	Low	2 127.50	31.41	1.38
		Middle	2 145.00	31.66	1.47
		High	2 162.50	31.53	1.42

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
2	QPSK	Low	2 127.50	31.31	1.35
		Middle	2 145.00	30.97	1.25
		High	2 162.50	31.14	1.30
	16QAM	Low	2 127.50	32.15	1.64
		Middle	2 145.00	32.22	1.67
		High	2 162.50	32.35	1.72
	64QAM	Low	2 127.50	31.61	1.45
		Middle	2 145.00	31.03	1.27
		High	2 162.50	30.89	1.23
	256QAM	Low	2 127.50	31.22	1.32
		Middle	2 145.00	31.16	1.31
		High	2 162.50	30.92	1.24
3	QPSK	Low	2 127.50	31.09	1.29
		Middle	2 145.00	31.01	1.26
		High	2 162.50	31.22	1.32
	16QAM	Low	2 127.50	32.60	1.82
		Middle	2 145.00	32.10	1.62
		High	2 162.50	32.21	1.66
	64QAM	Low	2 127.50	31.20	1.32
		Middle	2 145.00	31.14	1.30
		High	2 162.50	31.24	1.33
	256QAM	Low	2 127.50	31.40	1.38
		Middle	2 145.00	31.07	1.28
		High	2 162.50	31.32	1.36

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 127.50	5.47	7.17	5.82	5.51
2 145.00	5.23	6.92	5.43	5.54
2 162.50	5.46	7.15	5.34	5.41

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	Low	2 127.50	31.55	1.43
		Middle	2 145.00	31.78	1.51
		High	2 162.50	31.88	1.54
	16QAM	Low	2 127.50	32.64	1.84
		Middle	2 145.00	32.98	1.99
		High	2 162.50	32.69	1.86
	64QAM	Low	2 127.50	31.93	1.56
		Middle	2 145.00	31.76	1.50
		High	2 162.50	31.41	1.38
	256QAM	Low	2 127.50	31.63	1.45
		Middle	2 145.00	31.62	1.45
		High	2 162.50	31.37	1.37
1	QPSK	Low	2 127.50	31.49	1.41
		Middle	2 145.00	31.79	1.51
		High	2 162.50	31.57	1.43
	16QAM	Low	2 127.50	32.50	1.78
		Middle	2 145.00	32.74	1.88
		High	2 162.50	32.81	1.91
	64QAM	Low	2 127.50	31.48	1.40
		Middle	2 145.00	31.70	1.48
		High	2 162.50	31.77	1.50
	256QAM	Low	2 127.50	31.55	1.43
		Middle	2 145.00	31.61	1.45
		High	2 162.50	31.50	1.41

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
2	QPSK	Low	2 127.50	31.46	1.40
		Middle	2 145.00	31.23	1.33
		High	2 162.50	31.55	1.43
	16QAM	Low	2 127.50	32.33	1.71
		Middle	2 145.00	32.55	1.80
		High	2 162.50	32.73	1.88
	64QAM	Low	2 127.50	31.57	1.43
		Middle	2 145.00	31.53	1.42
		High	2 162.50	31.27	1.34
	256QAM	Low	2 127.50	31.66	1.47
		Middle	2 145.00	31.24	1.33
		High	2 162.50	31.62	1.45
3	QPSK	Low	2 127.50	31.46	1.40
		Middle	2 145.00	31.47	1.40
		High	2 162.50	31.57	1.44
	16QAM	Low	2 127.50	32.35	1.72
		Middle	2 145.00	32.54	1.79
		High	2 162.50	32.86	1.93
	64QAM	Low	2 127.50	31.54	1.43
		Middle	2 145.00	31.43	1.39
		High	2 162.50	31.33	1.36
	256QAM	Low	2 127.50	31.45	1.40
		Middle	2 145.00	31.49	1.41
		High	2 162.50	31.27	1.34

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 127.50	5.64	7.04	5.83	5.74
2 145.00	5.75	7.46	5.79	5.64
2 162.50	5.84	7.58	5.59	5.58

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	Low	2 127.50	31.88	1.54
		Middle	2 145.00	31.69	1.48
		High	2 162.50	31.43	1.39
	16QAM	Low	2 127.50	32.13	1.63
		Middle	2 145.00	32.50	1.78
		High	2 162.50	31.89	1.54
	64QAM	Low	2 127.50	31.71	1.48
		Middle	2 145.00	31.57	1.44
		High	2 162.50	31.29	1.35
	256QAM	Low	2 127.50	31.84	1.53
		Middle	2 145.00	31.56	1.43
		High	2 162.50	31.65	1.46
1	QPSK	Low	2 127.50	31.36	1.37
		Middle	2 145.00	31.36	1.37
		High	2 162.50	31.58	1.44
	16QAM	Low	2 127.50	32.14	1.64
		Middle	2 145.00	32.09	1.62
		High	2 162.50	32.09	1.62
	64QAM	Low	2 127.50	31.59	1.44
		Middle	2 145.00	31.46	1.40
		High	2 162.50	31.57	1.43
	256QAM	Low	2 127.50	31.38	1.38
		Middle	2 145.00	31.36	1.37
		High	2 162.50	31.43	1.39

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
2	QPSK	Low	2 127.50	31.37	1.37
		Middle	2 145.00	31.22	1.32
		High	2 162.50	31.40	1.38
	16QAM	Low	2 127.50	31.92	1.56
		Middle	2 145.00	32.18	1.65
		High	2 162.50	31.97	1.57
	64QAM	Low	2 127.50	31.50	1.41
		Middle	2 145.00	31.44	1.39
		High	2 162.50	31.32	1.36
	256QAM	Low	2 127.50	31.42	1.39
		Middle	2 145.00	31.26	1.34
		High	2 162.50	31.29	1.35
3	QPSK	Low	2 127.50	31.83	1.52
		Middle	2 145.00	31.33	1.36
		High	2 162.50	31.20	1.32
	16QAM	Low	2 127.50	31.69	1.48
		Middle	2 145.00	31.90	1.55
		High	2 162.50	31.83	1.52
	64QAM	Low	2 127.50	31.53	1.42
		Middle	2 145.00	31.18	1.31
		High	2 162.50	31.30	1.35
	256QAM	Low	2 127.50	31.41	1.38
		Middle	2 145.00	31.35	1.36
		High	2 162.50	31.23	1.33

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 127.50	5.81	6.30	5.76	5.67
2 145.00	5.53	6.60	5.54	5.50
2 162.50	5.52	6.26	5.49	5.52

Tabular Data of Non-Contiguous PSD

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	2 112.50 + 2 165.00	31.87	1.54
	16QAM	2 112.50 + 2 165.00	32.30	1.70
	64QAM	2 112.50 + 2 165.00	32.10	1.62
	256QAM	2 112.50 + 2 165.00	32.19	1.66
1	QPSK	2 112.50 + 2 165.00	31.66	1.46
	16QAM	2 112.50 + 2 165.00	32.29	1.69
	64QAM	2 112.50 + 2 165.00	31.63	1.46
	256QAM	2 112.50 + 2 165.00	31.51	1.42
2	QPSK	2 112.50 + 2 165.00	31.32	1.35
	16QAM	2 112.50 + 2 165.00	32.08	1.62
	64QAM	2 112.50 + 2 165.00	31.68	1.47
	256QAM	2 112.50 + 2 165.00	31.59	1.44
3	QPSK	2 112.50 + 2 165.00	31.22	1.32
	16QAM	2 112.50 + 2 165.00	32.58	1.81
	64QAM	2 112.50 + 2 165.00	31.45	1.40
	256QAM	2 112.50 + 2 165.00	31.36	1.37

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 112.50 + 2 165.00	5.68	6.82	5.95	5.88

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	2 122.50 + 2 175.00	31.58	1.44
	16QAM	2 122.50 + 2 175.00	32.64	1.83
	64QAM	2 122.50 + 2 175.00	31.56	1.43
	256QAM	2 122.50 + 2 175.00	31.58	1.44
1	QPSK	2 122.50 + 2 175.00	31.53	1.42
	16QAM	2 122.50 + 2 175.00	32.68	1.86
	64QAM	2 122.50 + 2 175.00	31.38	1.37
	256QAM	2 122.50 + 2 175.00	31.51	1.41
2	QPSK	2 122.50 + 2 175.00	31.37	1.37
	16QAM	2 122.50 + 2 175.00	32.17	1.65
	64QAM	2 122.50 + 2 175.00	31.53	1.42
	256QAM	2 122.50 + 2 175.00	31.31	1.35
3	QPSK	2 122.50 + 2 175.00	31.29	1.35
	16QAM	2 122.50 + 2 175.00	31.88	1.54
	64QAM	2 122.50 + 2 175.00	31.37	1.37
	256QAM	2 122.50 + 2 175.00	31.53	1.42

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 122.50 + 2 175.00	5.58	6.88	5.60	5.63

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	2 115.00 + 2 167.50	31.56	1.43
	16QAM	2 115.00 + 2 167.50	32.93	1.96
	64QAM	2 115.00 + 2 167.50	31.53	1.42
	256QAM	2 115.00 + 2 167.50	31.56	1.43
1	QPSK	2 115.00 + 2 167.50	31.42	1.39
	16QAM	2 115.00 + 2 167.50	32.11	1.62
	64QAM	2 115.00 + 2 167.50	31.50	1.41
	256QAM	2 115.00 + 2 167.50	31.27	1.34
2	QPSK	2 115.00 + 2 167.50	31.45	1.40
	16QAM	2 115.00 + 2 167.50	32.19	1.66
	64QAM	2 115.00 + 2 167.50	31.45	1.40
	256QAM	2 115.00 + 2 167.50	31.40	1.38
3	QPSK	2 115.00 + 2 167.50	30.98	1.25
	16QAM	2 115.00 + 2 167.50	32.21	1.66
	64QAM	2 115.00 + 2 167.50	31.03	1.27
	256QAM	2 115.00 + 2 167.50	31.15	1.30

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 115.00 + 2 167.50	5.47	6.91	5.50	5.45

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	2 122.50 + 2 175.00	31.56	1.43
	16QAM	2 122.50 + 2 175.00	32.54	1.79
	64QAM	2 122.50 + 2 175.00	31.40	1.38
	256QAM	2 122.50 + 2 175.00	31.38	1.37
1	QPSK	2 122.50 + 2 175.00	31.65	1.46
	16QAM	2 122.50 + 2 175.00	32.65	1.84
	64QAM	2 122.50 + 2 175.00	32.04	1.60
	256QAM	2 122.50 + 2 175.00	31.79	1.51
2	QPSK	2 122.50 + 2 175.00	31.13	1.30
	16QAM	2 122.50 + 2 175.00	32.28	1.69
	64QAM	2 122.50 + 2 175.00	31.06	1.27
	256QAM	2 122.50 + 2 175.00	31.23	1.33
3	QPSK	2 122.50 + 2 175.00	31.29	1.35
	16QAM	2 122.50 + 2 175.00	32.44	1.76
	64QAM	2 122.50 + 2 175.00	31.28	1.34
	256QAM	2 122.50 + 2 175.00	31.23	1.33

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 122.50 + 2 175.00	5.54	7.08	5.60	5.54

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	2 115.00 + 2 167.50	31.60	1.44
	16QAM	2 115.00 + 2 167.50	32.09	1.62
	64QAM	2 115.00 + 2 167.50	31.56	1.43
	256QAM	2 115.00 + 2 167.50	31.29	1.35
1	QPSK	2 115.00 + 2 167.50	31.34	1.36
	16QAM	2 115.00 + 2 167.50	32.04	1.60
	64QAM	2 115.00 + 2 167.50	31.44	1.39
	256QAM	2 115.00 + 2 167.50	31.08	1.28
2	QPSK	2 115.00 + 2 167.50	31.75	1.50
	16QAM	2 115.00 + 2 167.50	31.58	1.44
	64QAM	2 115.00 + 2 167.50	31.63	1.46
	256QAM	2 115.00 + 2 167.50	31.44	1.39
3	QPSK	2 115.00 + 2 167.50	31.30	1.35
	16QAM	2 115.00 + 2 167.50	31.51	1.42
	64QAM	2 115.00 + 2 167.50	31.23	1.33
	256QAM	2 115.00 + 2 167.50	31.24	1.33

Sum Data of Port 0, Port 1, Port 2 and Port 3

Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 115.00 + 2 167.50	5.65	6.07	5.61	5.35

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C]

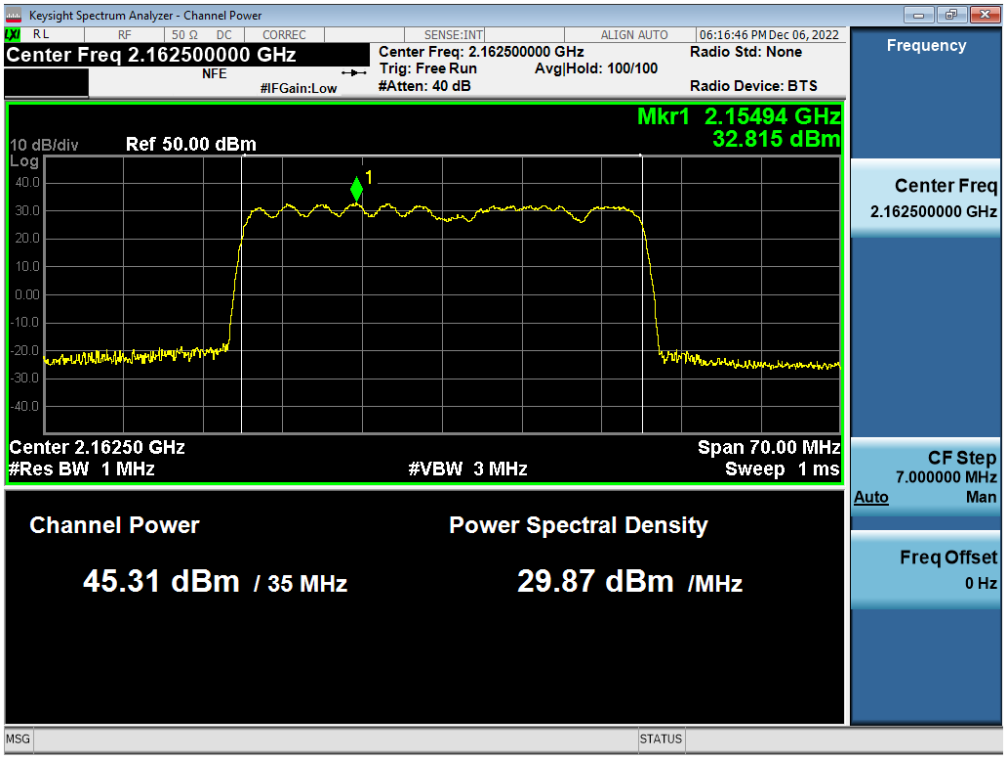
Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Calculated (W/MHz)
0	QPSK	2 122.50 + 2 175.00	31.48	1.41
	16QAM	2 122.50 + 2 175.00	32.11	1.62
	64QAM	2 122.50 + 2 175.00	31.47	1.40
	256QAM	2 122.50 + 2 175.00	31.86	1.53
1	QPSK	2 122.50 + 2 175.00	31.59	1.44
	16QAM	2 122.50 + 2 175.00	32.16	1.64
	64QAM	2 122.50 + 2 175.00	31.46	1.40
	256QAM	2 122.50 + 2 175.00	31.46	1.40
2	QPSK	2 122.50 + 2 175.00	31.47	1.40
	16QAM	2 122.50 + 2 175.00	31.87	1.54
	64QAM	2 122.50 + 2 175.00	31.44	1.39
	256QAM	2 122.50 + 2 175.00	31.55	1.43
3	QPSK	2 122.50 + 2 175.00	31.23	1.33
	16QAM	2 122.50 + 2 175.00	31.80	1.51
	64QAM	2 122.50 + 2 175.00	31.28	1.34
	256QAM	2 122.50 + 2 175.00	31.35	1.37

Sum Data of Port 0, Port 1, Port 2 and Port 3

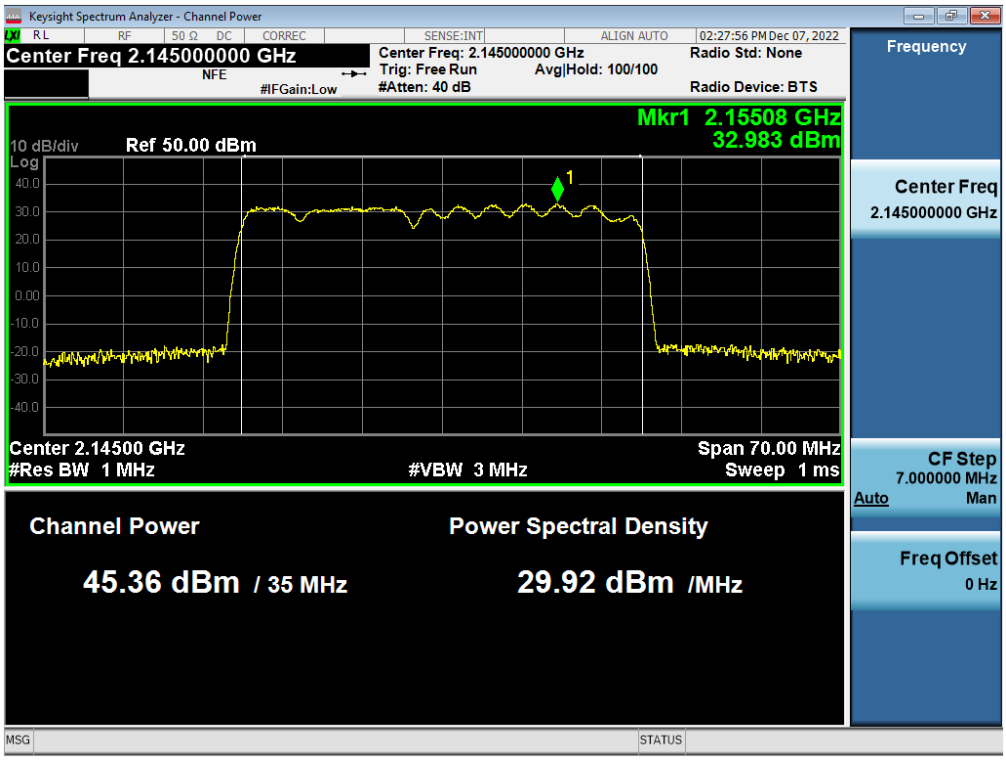
Frequency (MHz)	PSD (Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W/MHz			
2 122.50 + 2 175.00	5.58	6.32	5.54	5.73

Plot Data of PSD

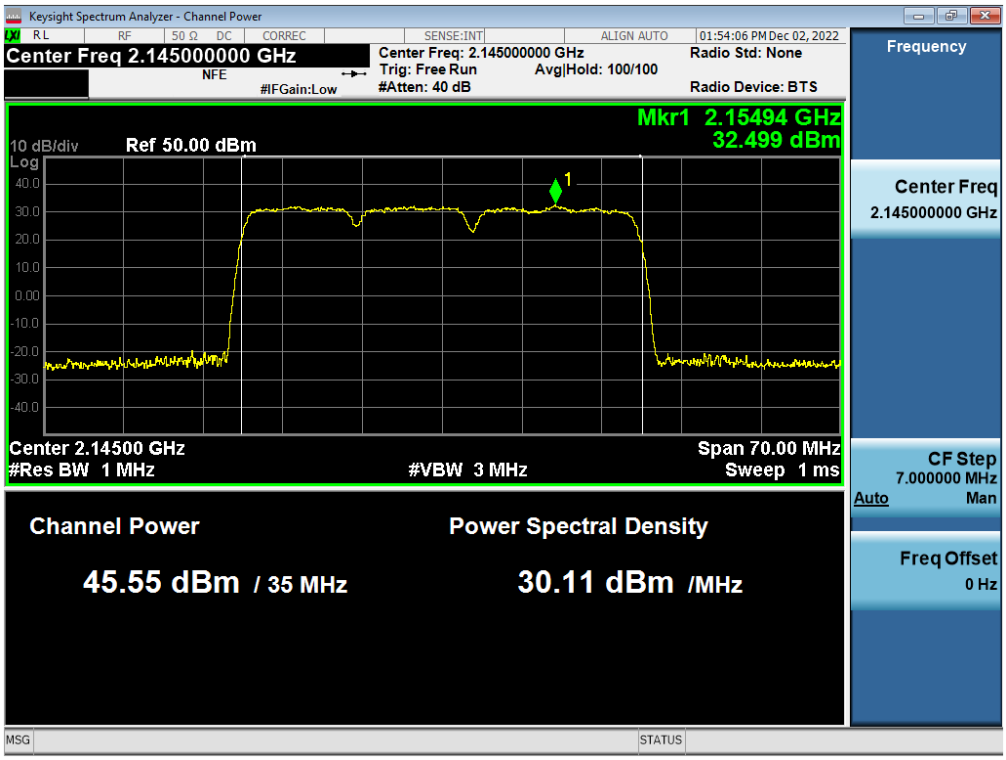
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / High



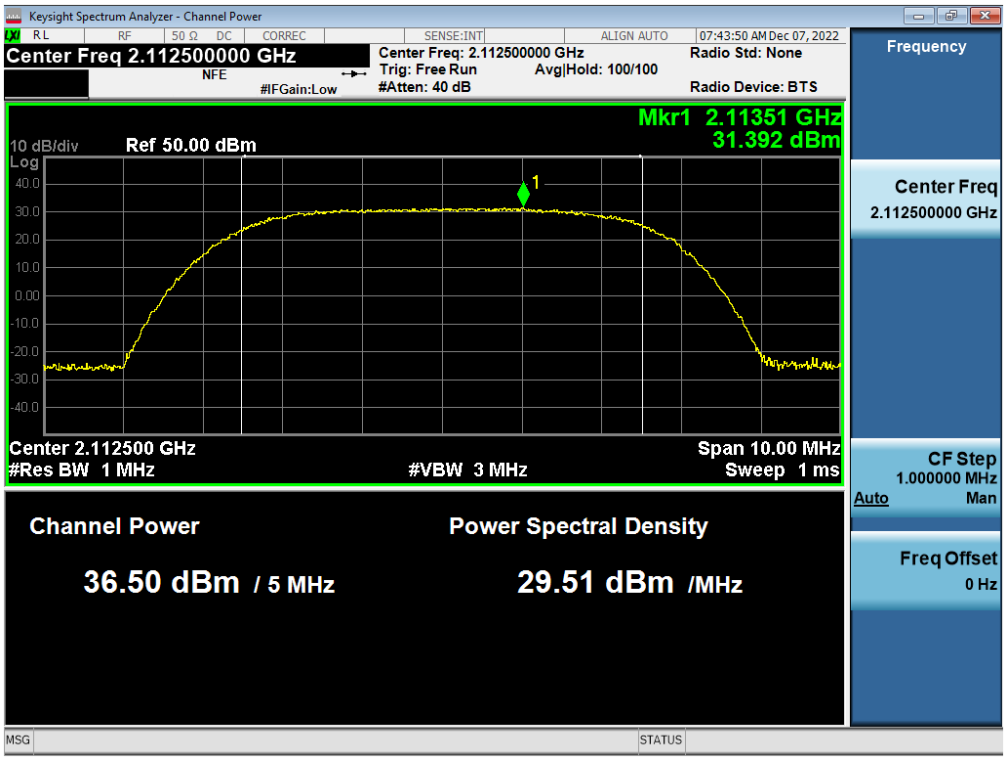
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle



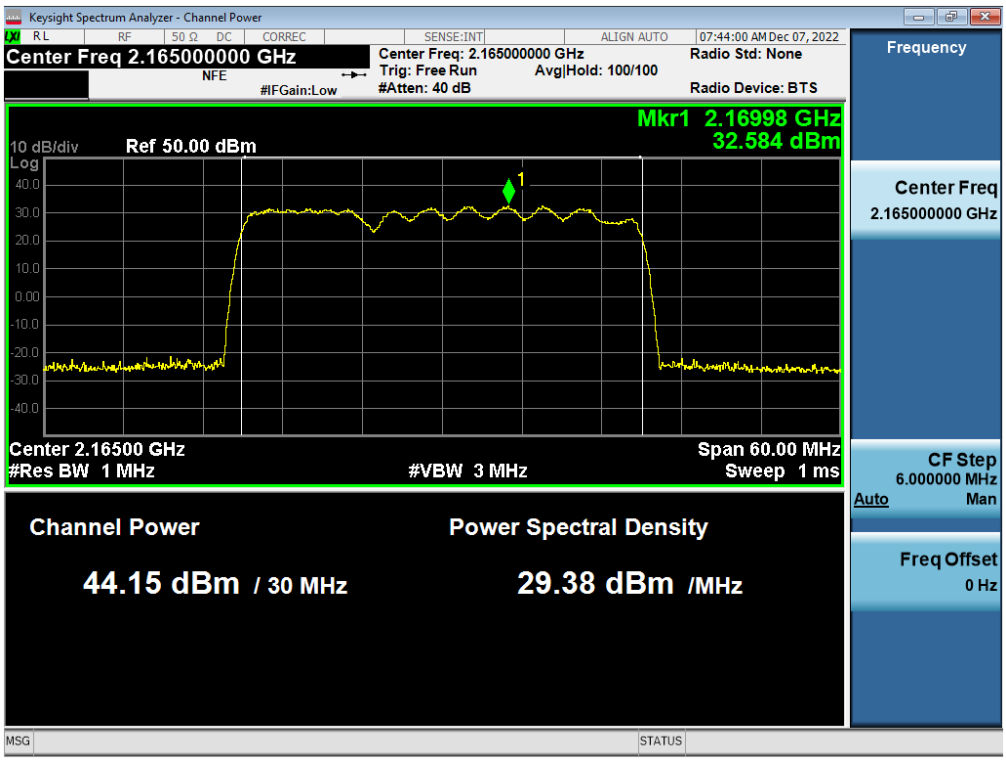
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle



Antenna 3 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M / Non-Contiguous / 16QAM / Low



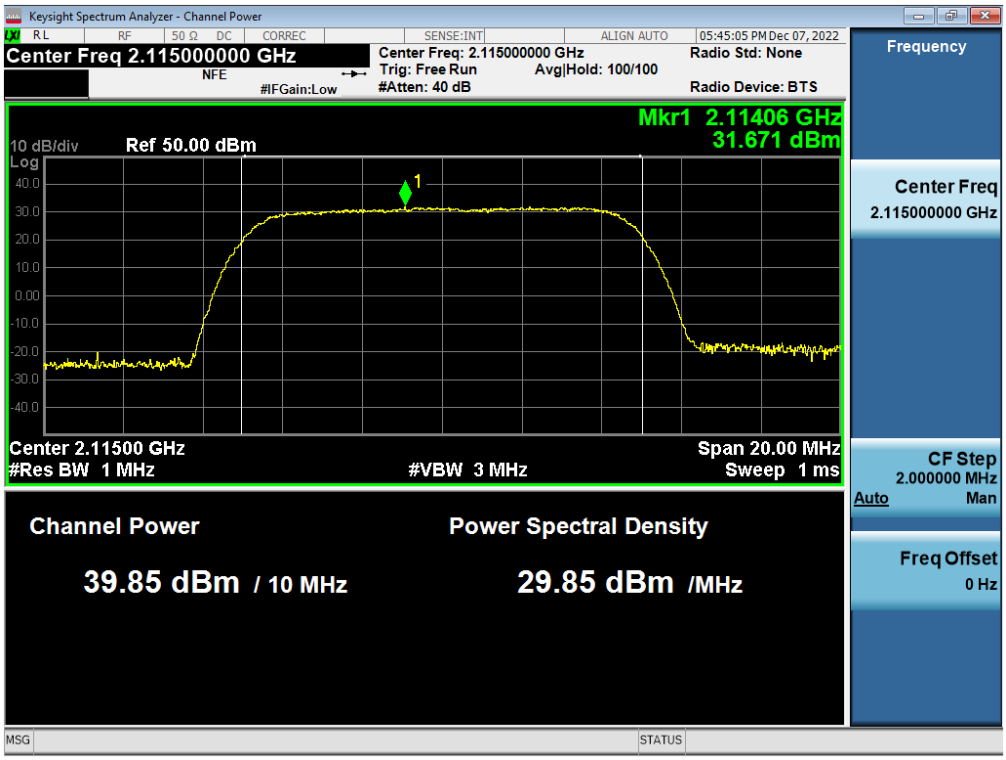
Antenna 3 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 10M + NR n66 20M / Non-Contiguous / 16QAM / High



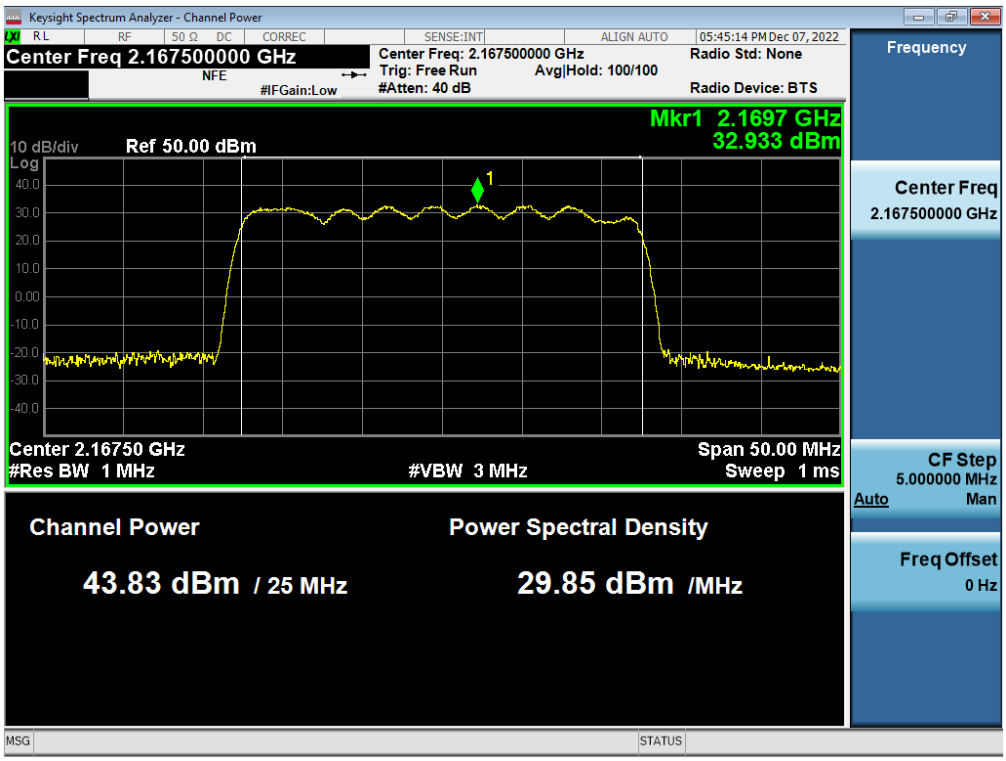
Antenna 1 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / 16QAM / Low

Antenna 1 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 10M / Non-Contiguous / 16QAM / High

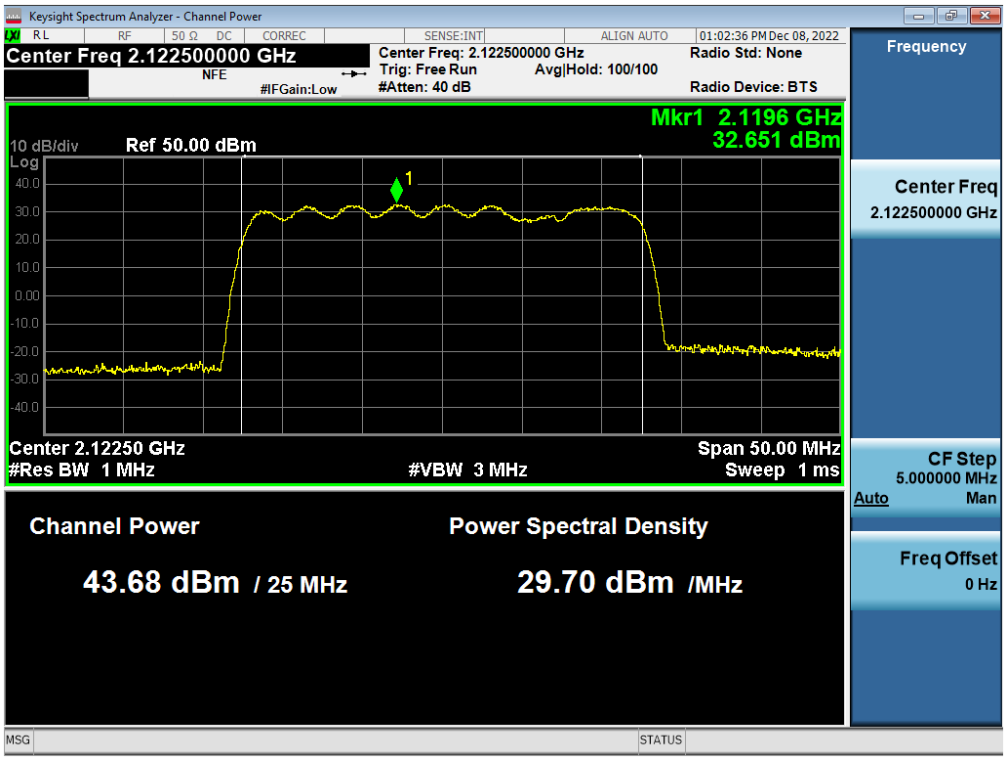
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / 16QAM / Low



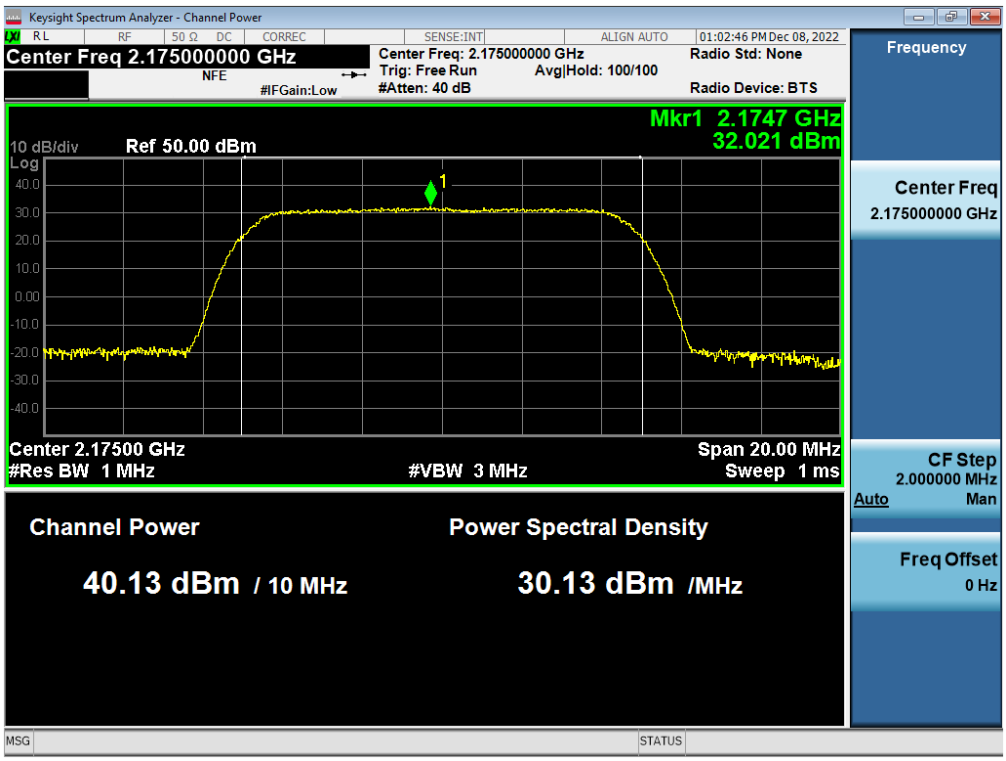
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M + NR n66 20M / Non-Contiguous / 16QAM / High



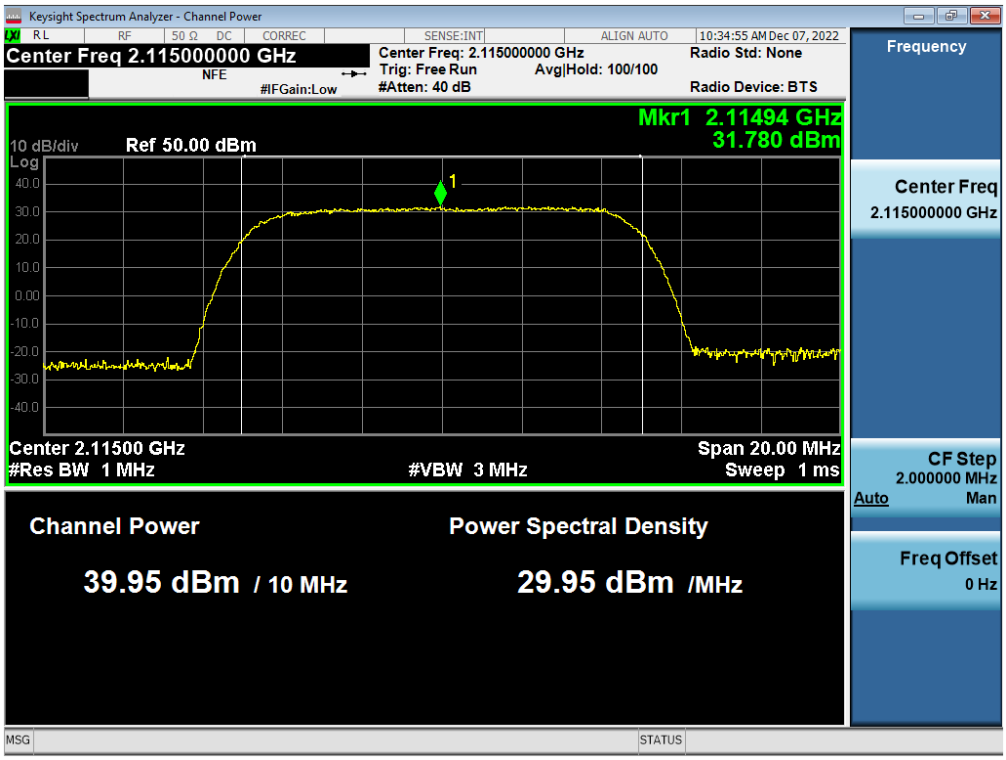
Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / 16QAM / Low



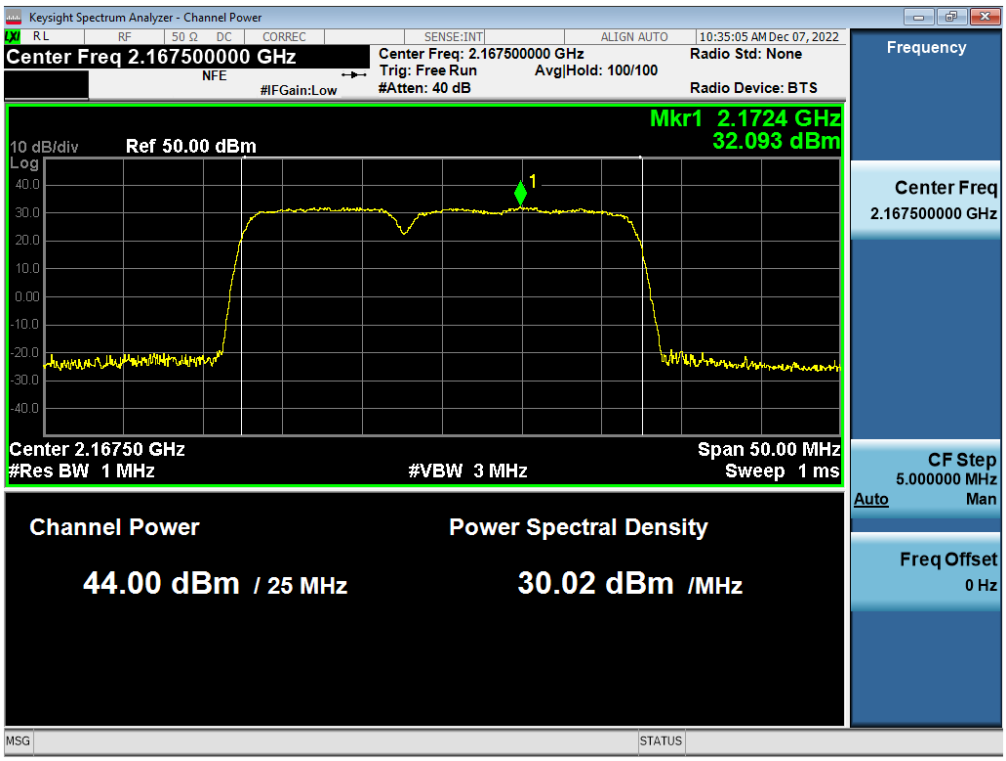
Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M / Non-Contiguous / 16QAM / High



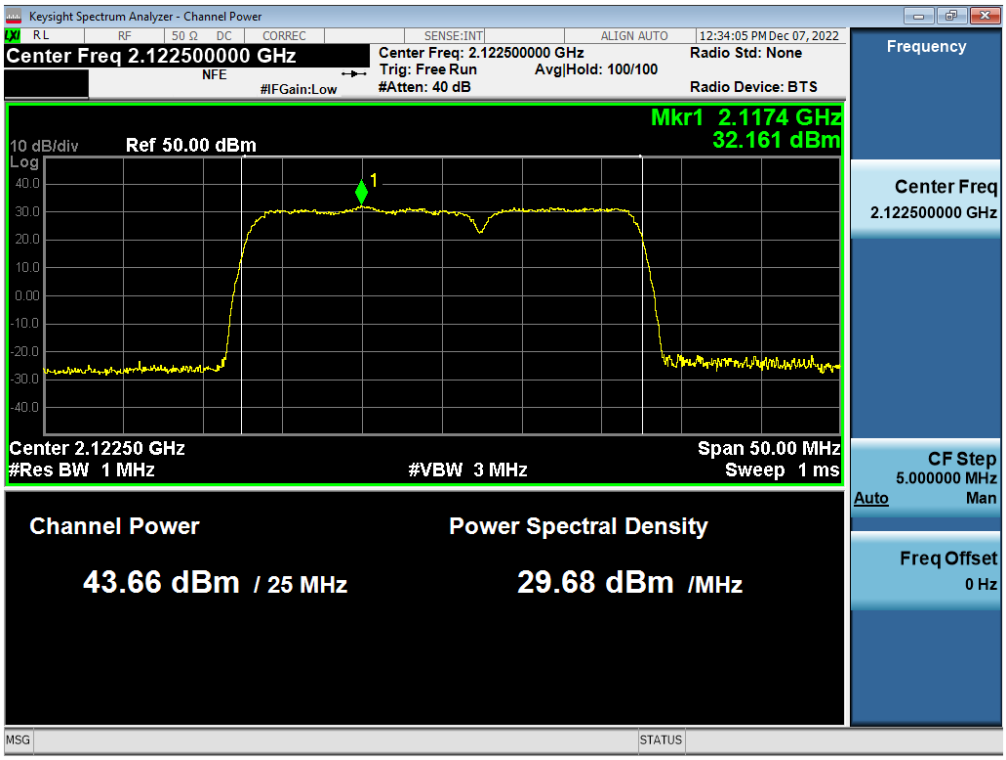
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / 16QAM / Low



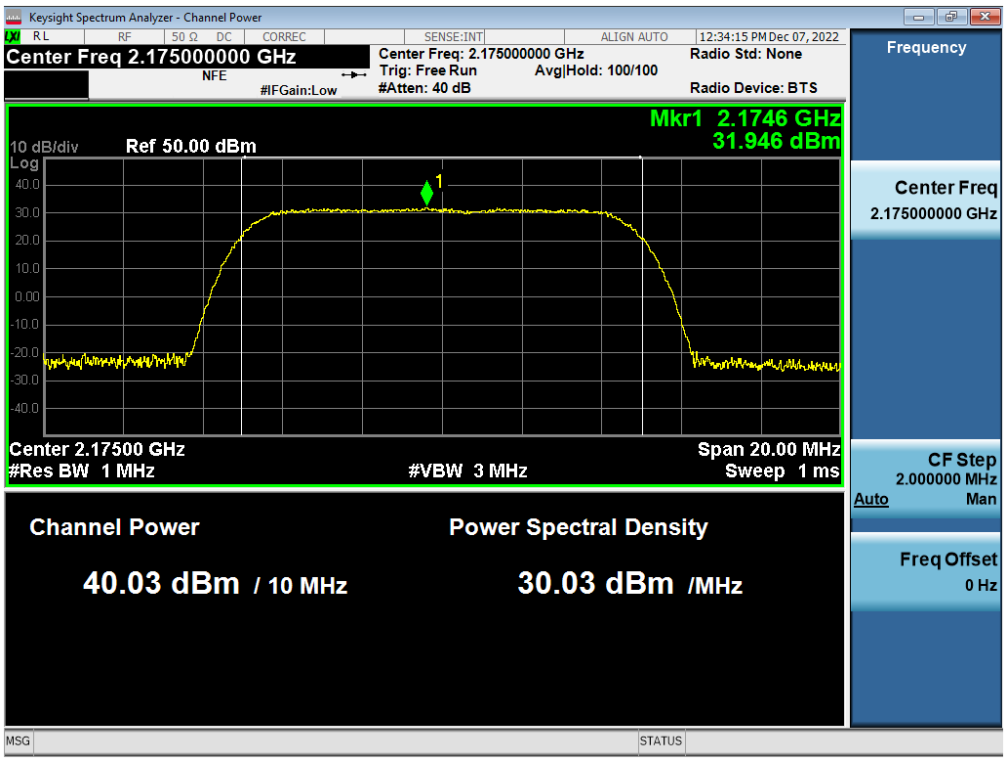
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M + DSS B66 15M / Non-Contiguous / 16QAM / High



Antenna 1 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 15M + DSS B66 10M / Non-Contiguous / 16QAM / Low



Antenna 1 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M / Non-Contiguous / 16QAM / High



5.2. PAPR

Test Requirements:

§ 24.232 Power and antenna height limits.

(d) Power measurements for transmissions by stations authorized under this section may be made either in accrdance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

§ 27.50 Power limits and duty cycle.

(d) (5) Equipment employed must be authorized in accordance with the provisions of § 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Test Procedures:

The measurement is performed in accordance with Section 5.2.3.4 of ANSI C63.26.

The following guidelines are offered for performing a CCDF measurement..

a) Set resolution/measurement bandwidth ≥ OBW or specified reference bandwidth.

b) Set the number of counts to a value that stabilizes the measured CCDF curve.

c) Set the measurement interval as follows:

   1) For continuous transmissions, set to the greater of [10 × (number of points in sweep) × (transmission symbol period)] or 1 ms.

   2) For burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize. Set the measurement interval to a time that is less than or equal to the burst duration.

   3) If there are several carriers in a single antenna port, the peak power shall be determined for each individual carrier (by disabling the other carriers while measuring the required carrier) and the total peak power calculated from the sum of the individual carrier peak powers.

d) Record the maximum PAPR level associated with a probability of 0.1%.

e) The peak power level is calculated form the sum of the PAPR value from step d) to the measured average power.

Note: The results of PAPR test shown above the frequency measured values are very small and similar trend for each port, so we are attached only the worst case plot.

Test Results:

Tabular data of Contiguous PAPR

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	2 127.50	8.03
		Middle	2 145.00	8.02
		High	2 162.50	7.98
	16QAM	Low	2 127.50	8.06
		Middle	2 145.00	8.03
		High	2 162.50	8.00
	64QAM	Low	2 127.50	8.02
		Middle	2 145.00	8.02
		High	2 162.50	8.00
	256QAM	Low	2 127.50	8.04
		Middle	2 145.00	8.00
		High	2 162.50	8.00
1	QPSK	Low	2 127.50	8.03
		Middle	2 145.00	8.03
		High	2 162.50	7.97
	16QAM	Low	2 127.50	8.04
		Middle	2 145.00	8.01
		High	2 162.50	7.99
	64QAM	Low	2 127.50	8.05
		Middle	2 145.00	8.01
		High	2 162.50	7.99
	256QAM	Low	2 127.50	8.02
		Middle	2 145.00	8.03
		High	2 162.50	8.02

2	QPSK	Low	2 127.50	8.06
		Middle	2 145.00	8.01
		High	2 162.50	8.02
	16QAM	Low	2 127.50	8.05
		Middle	2 145.00	8.03
		High	2 162.50	8.00
	64QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.03
		High	2 162.50	8.01
	256QAM	Low	2 127.50	8.09
		Middle	2 145.00	8.02
		High	2 162.50	8.01
3	QPSK	Low	2 127.50	8.05
		Middle	2 145.00	8.02
		High	2 162.50	8.00
	16QAM	Low	2 127.50	8.06
		Middle	2 145.00	8.03
		High	2 162.50	8.00
	64QAM	Low	2 127.50	8.03
		Middle	2 145.00	8.03
		High	2 162.50	8.01
	256QAM	Low	2 127.50	8.03
		Middle	2 145.00	8.02
		High	2 162.50	8.01

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	2 127.50	8.05
		Middle	2 145.00	8.04
		High	2 162.50	8.02
	16QAM	Low	2 127.50	8.05
		Middle	2 145.00	8.02
		High	2 162.50	8.03
	64QAM	Low	2 127.50	8.05
		Middle	2 145.00	8.06
		High	2 162.50	8.01
	256QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.04
		High	2 162.50	8.02
1	QPSK	Low	2 127.50	8.07
		Middle	2 145.00	8.07
		High	2 162.50	7.98
	16QAM	Low	2 127.50	8.06
		Middle	2 145.00	8.03
		High	2 162.50	8.04
	64QAM	Low	2 127.50	8.10
		Middle	2 145.00	8.06
		High	2 162.50	8.01
	256QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.07
		High	2 162.50	8.01

2	QPSK	Low	2 127.50	8.09
		Middle	2 145.00	8.06
		High	2 162.50	8.06
	16QAM	Low	2 127.50	8.04
		Middle	2 145.00	8.04
		High	2 162.50	8.04
	64QAM	Low	2 127.50	8.05
		Middle	2 145.00	8.06
		High	2 162.50	8.04
	256QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.07
		High	2 162.50	8.03
3	QPSK	Low	2 127.50	8.10
		Middle	2 145.00	8.05
		High	2 162.50	8.02
	16QAM	Low	2 127.50	8.09
		Middle	2 145.00	8.04
		High	2 162.50	8.03
	64QAM	Low	2 127.50	8.10
		Middle	2 145.00	8.03
		High	2 162.50	8.04
	256QAM	Low	2 127.50	8.11
		Middle	2 145.00	8.06
		High	2 162.50	8.05

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier]

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	2 127.50	8.07
		Middle	2 145.00	8.13
		High	2 162.50	8.02
	16QAM	Low	2 127.50	8.04
		Middle	2 145.00	8.02
		High	2 162.50	8.04
	64QAM	Low	2 127.50	8.06
		Middle	2 145.00	8.13
		High	2 162.50	8.03
	256QAM	Low	2 127.50	8.07
		Middle	2 145.00	8.12
		High	2 162.50	8.04
1	QPSK	Low	2 127.50	8.14
		Middle	2 145.00	8.19
		High	2 162.50	8.05
	16QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.12
		High	2 162.50	8.03
	64QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.22
		High	2 162.50	8.05
	256QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.20
		High	2 162.50	8.06

2	QPSK	Low	2 127.50	8.12
		Middle	2 145.00	8.12
		High	2 162.50	8.06
	16QAM	Low	2 127.50	8.07
		Middle	2 145.00	8.08
		High	2 162.50	8.05
	64QAM	Low	2 127.50	8.09
		Middle	2 145.00	8.09
		High	2 162.50	8.06
	256QAM	Low	2 127.50	8.08
		Middle	2 145.00	8.12
		High	2 162.50	8.05
3	QPSK	Low	2 127.50	8.07
		Middle	2 145.00	8.04
		High	2 162.50	8.02
	16QAM	Low	2 127.50	8.05
		Middle	2 145.00	8.06
		High	2 162.50	8.02
	64QAM	Low	2 127.50	8.06
		Middle	2 145.00	8.06
		High	2 162.50	8.05
	256QAM	Low	2 127.50	8.07
		Middle	2 145.00	8.08
		High	2 162.50	8.04

Tabular data of Non-Contiguous PAPR

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Modulation	NR n66 5M		NR n66 10M + NR n66 20M	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	2 112.50	8.34	2 165.00	7.99
	16QAM	2 112.50	8.29	2 165.00	7.93
	64QAM	2 112.50	8.32	2 165.00	7.96
	256QAM	2 112.50	8.35	2 165.00	7.95
1	QPSK	2 112.50	8.37	2 165.00	7.98
	16QAM	2 112.50	8.31	2 165.00	7.99
	64QAM	2 112.50	8.34	2 165.00	7.96
	256QAM	2 112.50	8.33	2 165.00	8.00
2	QPSK	2 112.50	8.30	2 165.00	7.98
	16QAM	2 112.50	8.34	2 165.00	8.00
	64QAM	2 112.50	8.29	2 165.00	7.98
	256QAM	2 112.50	8.29	2 165.00	8.01
3	QPSK	2 112.50	8.30	2 165.00	7.96
	16QAM	2 112.50	8.32	2 165.00	7.98
	64QAM	2 112.50	8.40	2 165.00	7.94
	256QAM	2 112.50	8.32	2 165.00	7.97

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Modulation	NR n66 20M + NR n66 5M		NR n66 10M	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	2 122.50	8.07	2 175.00	8.29
	16QAM	2 122.50	8.10	2 175.00	8.29
	64QAM	2 122.50	8.09	2 175.00	8.30
	256QAM	2 122.50	8.09	2 175.00	8.33
1	QPSK	2 122.50	8.12	2 175.00	8.26
	16QAM	2 122.50	8.10	2 175.00	8.30
	64QAM	2 122.50	8.11	2 175.00	8.38
	256QAM	2 122.50	8.08	2 175.00	8.26
2	QPSK	2 122.50	8.11	2 175.00	8.36
	16QAM	2 122.50	8.15	2 175.00	8.29
	64QAM	2 122.50	8.08	2 175.00	8.26
	256QAM	2 122.50	8.13	2 175.00	8.27
3	QPSK	2 122.50	8.09	2 175.00	8.40
	16QAM	2 122.50	8.12	2 175.00	8.26
	64QAM	2 122.50	8.11	2 175.00	8.37
	256QAM	2 122.50	8.11	2 175.00	8.34

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Modulation	DSS B66 10M		NR n66 5M + NR n66 20M	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	2 115.00	8.24	2 167.50	8.06
	16QAM	2 115.00	8.26	2 167.50	8.09
	64QAM	2 115.00	8.25	2 167.50	8.07
	256QAM	2 115.00	8.30	2 167.50	8.08
1	QPSK	2 115.00	8.24	2 167.50	8.15
	16QAM	2 115.00	8.17	2 167.50	7.91
	64QAM	2 115.00	8.22	2 167.50	8.12
	256QAM	2 115.00	8.21	2 167.50	8.14
2	QPSK	2 115.00	8.32	2 167.50	8.08
	16QAM	2 115.00	8.18	2 167.50	8.10
	64QAM	2 115.00	8.29	2 167.50	8.06
	256QAM	2 115.00	8.26	2 167.50	8.10
3	QPSK	2 115.00	8.26	2 167.50	8.05
	16QAM	2 115.00	8.24	2 167.50	8.07
	64QAM	2 115.00	8.27	2 167.50	8.05
	256QAM	2 115.00	8.28	2 167.50	8.08

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Modulation	NR n66 20M + NR n66 5M		DSS B66 10M	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	2 122.50	8.00	2 175.00	8.27
	16QAM	2 122.50	8.05	2 175.00	8.26
	64QAM	2 122.50	8.02	2 175.00	8.26
	256QAM	2 122.50	8.02	2 175.00	8.28
1	QPSK	2 122.50	8.07	2 175.00	8.29
	16QAM	2 122.50	8.07	2 175.00	8.22
	64QAM	2 122.50	8.05	2 175.00	8.25
	256QAM	2 122.50	8.07	2 175.00	8.26
2	QPSK	2 122.50	8.09	2 175.00	8.29
	16QAM	2 122.50	8.07	2 175.00	8.23
	64QAM	2 122.50	8.06	2 175.00	8.27
	256QAM	2 122.50	8.08	2 175.00	8.27
3	QPSK	2 122.50	8.05	2 175.00	8.27
	16QAM	2 122.50	8.09	2 175.00	8.26
	64QAM	2 122.50	8.09	2 175.00	8.29
	256QAM	2 122.50	8.08	2 175.00	8.23

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][1C+2C]

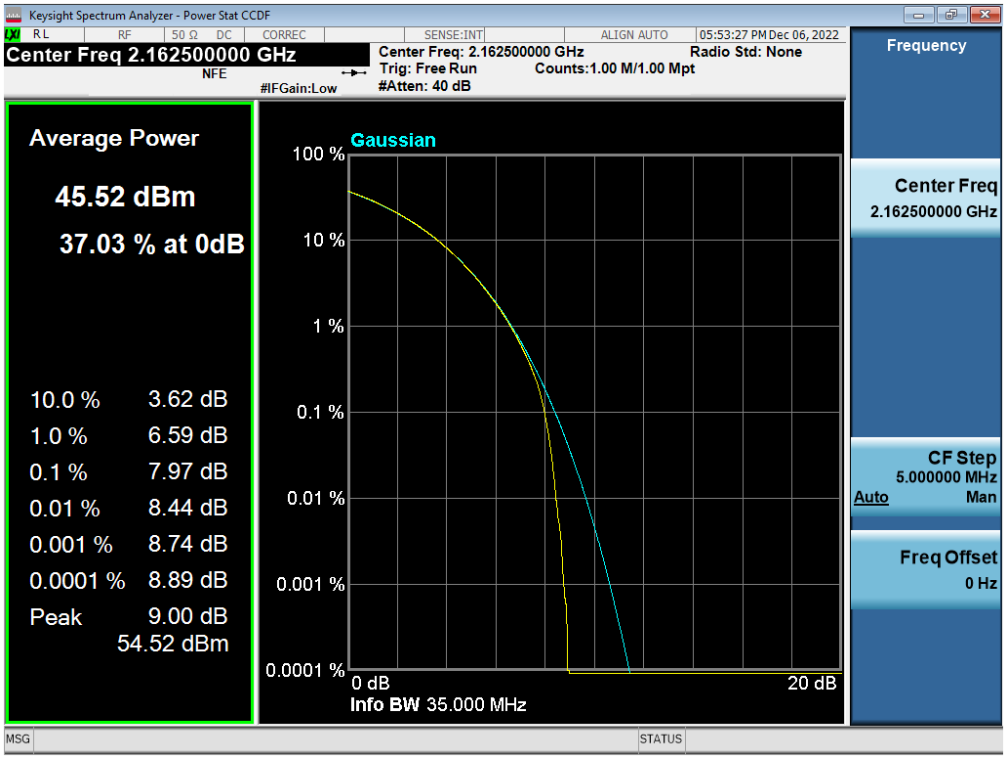
Ant.	Modulation	DSS B66 10M		DSS B66 10M + DSS B66 15M	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	2 115.00	8.30	2 167.50	8.11
	16QAM	2 115.00	8.31	2 167.50	8.12
	64QAM	2 115.00	8.29	2 167.50	8.11
	256QAM	2 115.00	8.28	2 167.50	8.09
1	QPSK	2 115.00	8.30	2 167.50	8.10
	16QAM	2 115.00	8.26	2 167.50	8.08
	64QAM	2 115.00	8.34	2 167.50	8.13
	256QAM	2 115.00	8.32	2 167.50	8.11
2	QPSK	2 115.00	8.34	2 167.50	8.18
	16QAM	2 115.00	8.30	2 167.50	8.15
	64QAM	2 115.00	8.33	2 167.50	8.20
	256QAM	2 115.00	8.28	2 167.50	8.14
3	QPSK	2 115.00	8.32	2 167.50	8.15
	16QAM	2 115.00	8.26	2 167.50	8.10
	64QAM	2 115.00	8.30	2 167.50	8.15
	256QAM	2 115.00	8.31	2 167.50	8.14

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C]

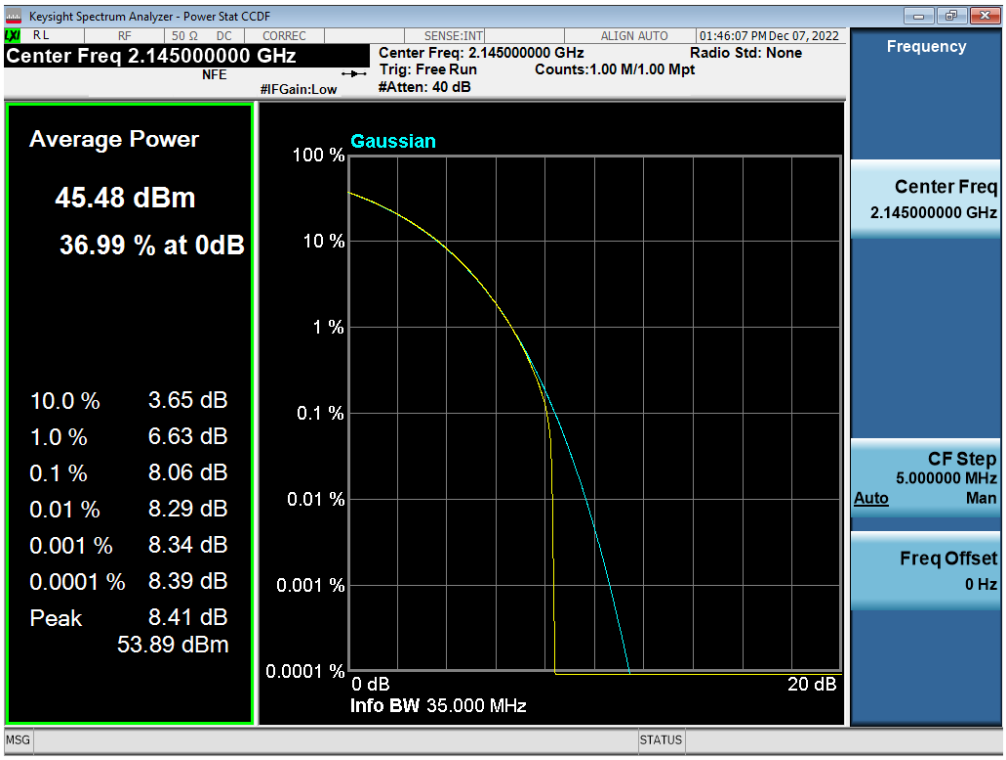
Ant.	Modulation	DSS B66 15M + DSS B66 10M		DSS B66 10M	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	2 122.50	8.13	2 175.00	8.32
	16QAM	2 122.50	8.09	2 175.00	8.22
	64QAM	2 122.50	8.13	2 175.00	8.32
	256QAM	2 122.50	8.12	2 175.00	8.31
1	QPSK	2 122.50	8.13	2 175.00	8.27
	16QAM	2 122.50	8.10	2 175.00	8.24
	64QAM	2 122.50	8.15	2 175.00	8.29
	256QAM	2 122.50	8.17	2 175.00	8.28
2	QPSK	2 122.50	8.15	2 175.00	8.28
	16QAM	2 122.50	8.10	2 175.00	8.23
	64QAM	2 122.50	8.16	2 175.00	8.28
	256QAM	2 122.50	8.16	2 175.00	8.29
3	QPSK	2 122.50	8.16	2 175.00	8.33
	16QAM	2 122.50	8.08	2 175.00	8.27
	64QAM	2 122.50	8.15	2 175.00	8.30
	256QAM	2 122.50	8.14	2 175.00	8.30

Plot Data of PAPR

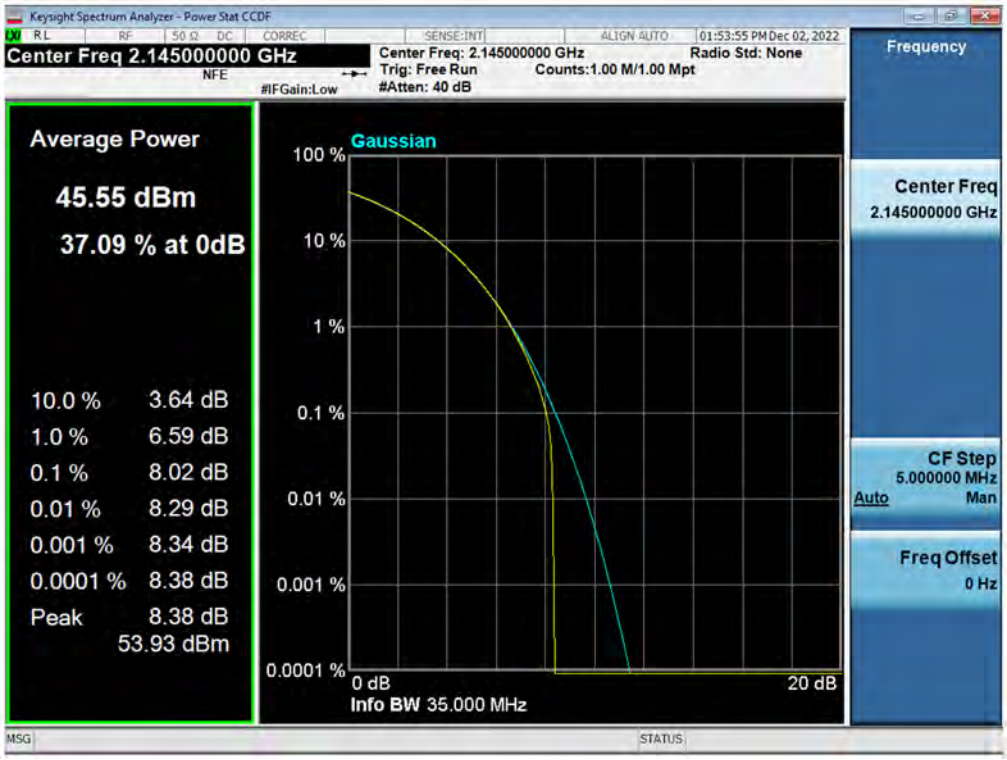
Antenna 1 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / QPSK / High



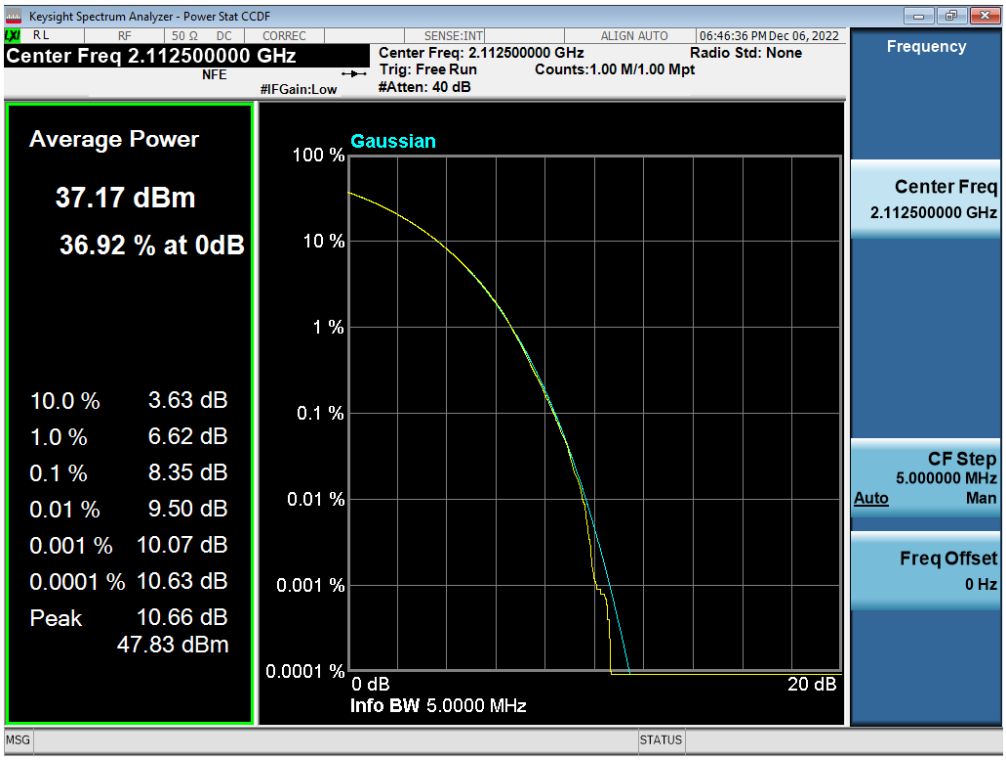
Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



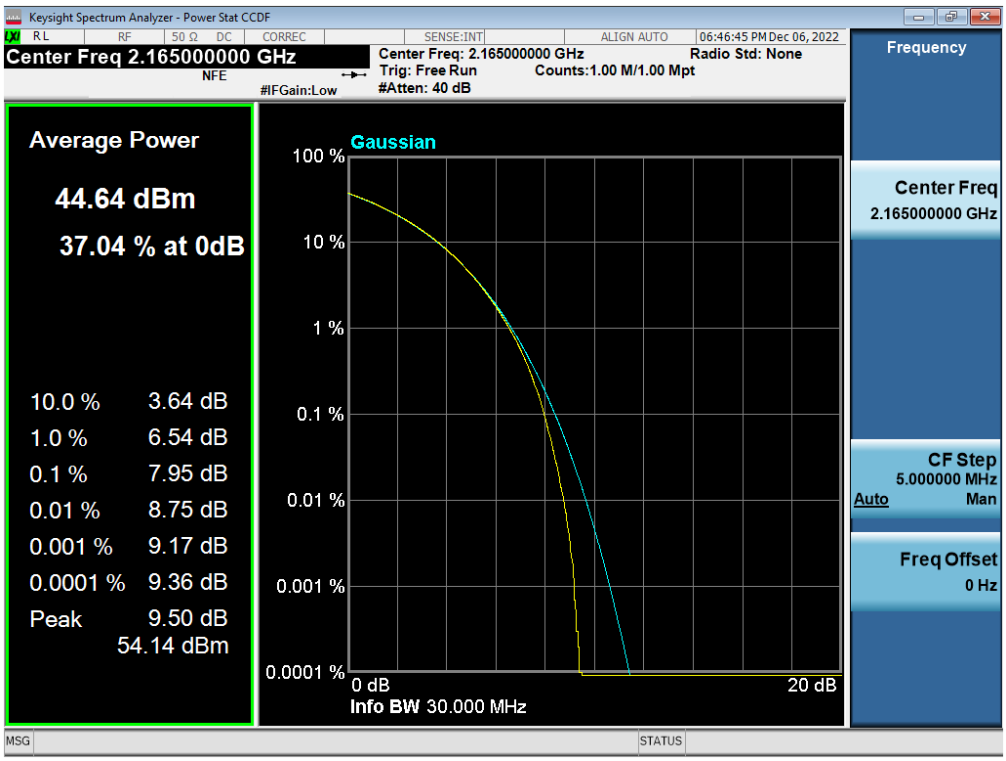
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle



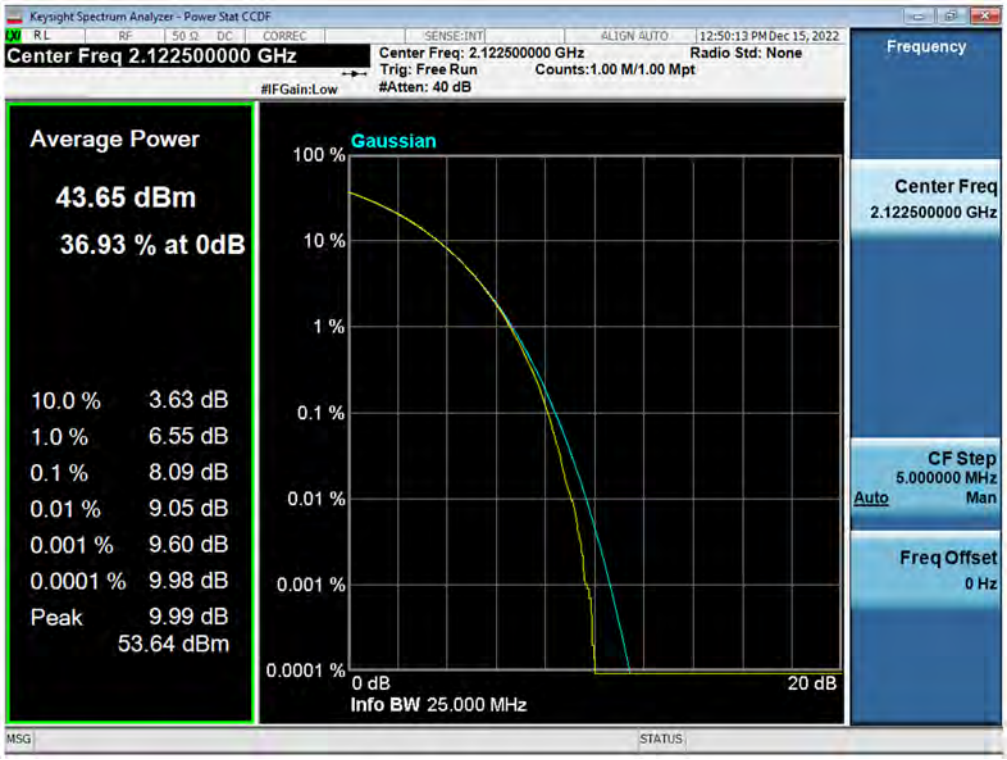
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M / Non-Contiguous / 256QAM / Low



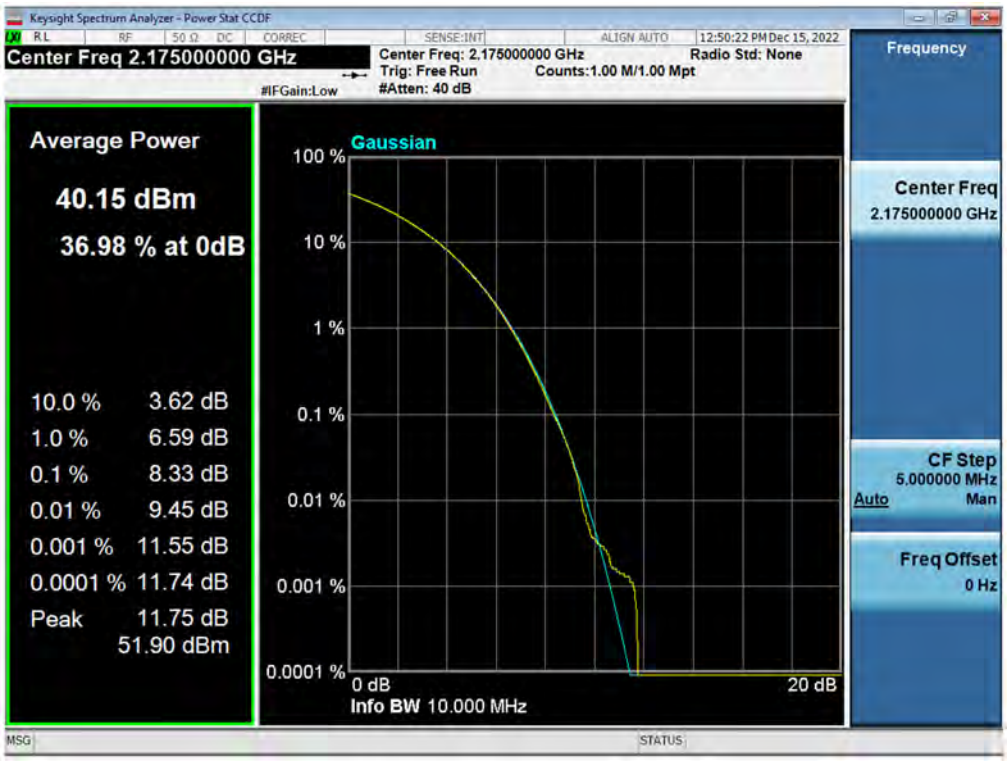
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 10M + NR n66 20M / Non-Contiguous / 256QAM / High



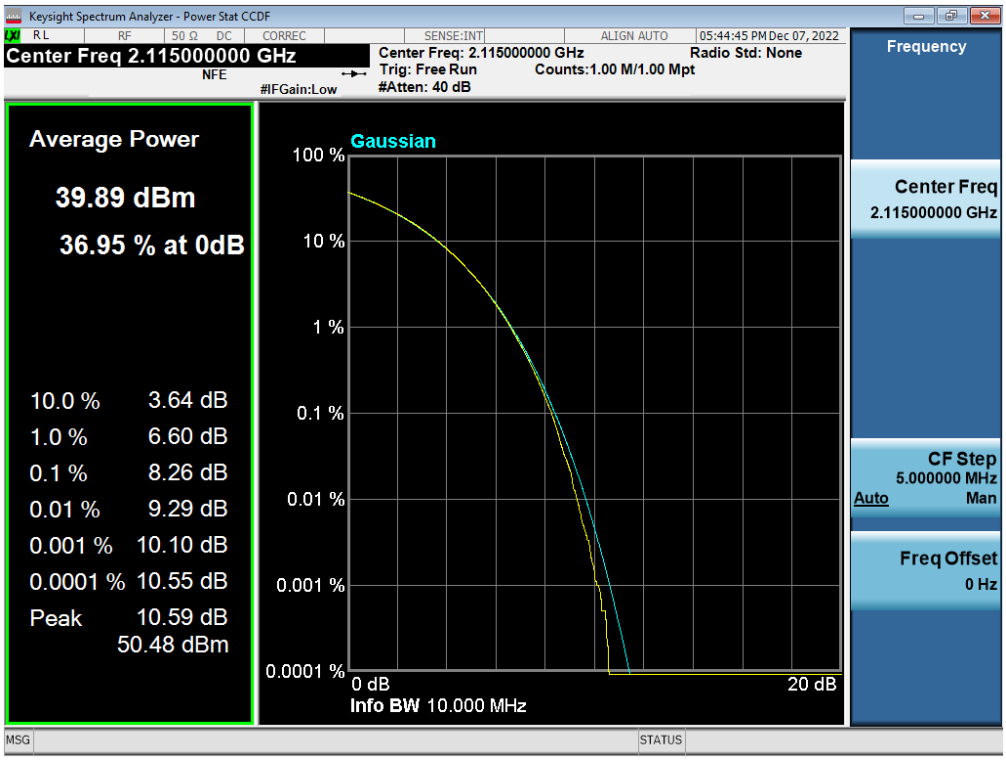
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / 256QAM / Low



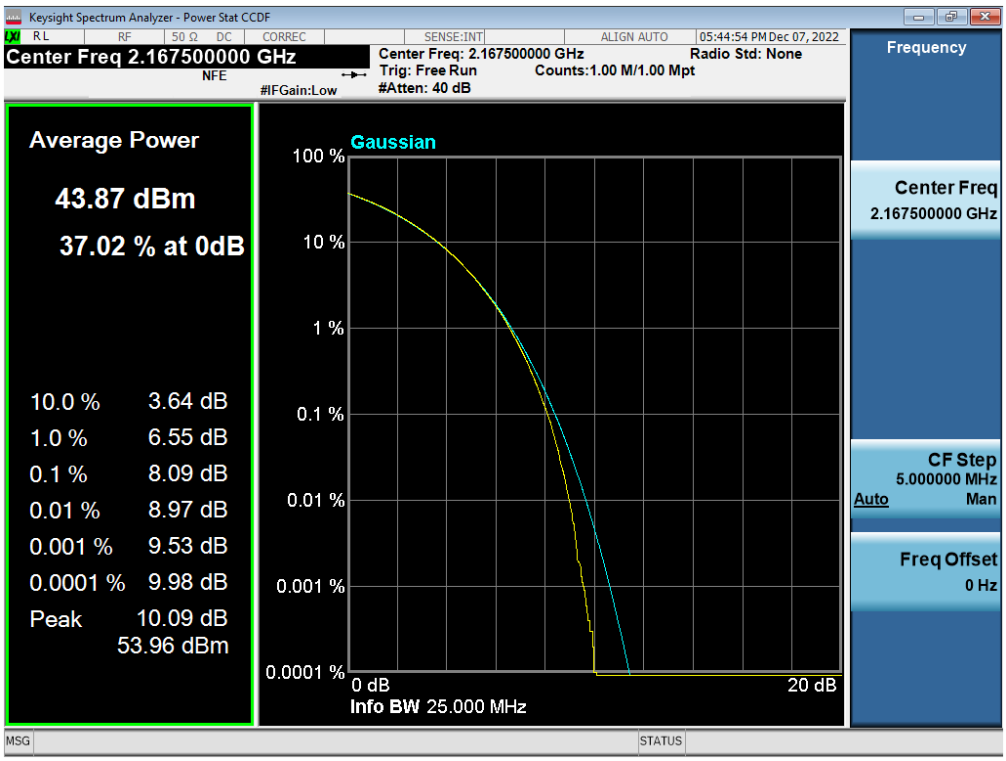
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 10M / Non-Contiguous / 256QAM / High



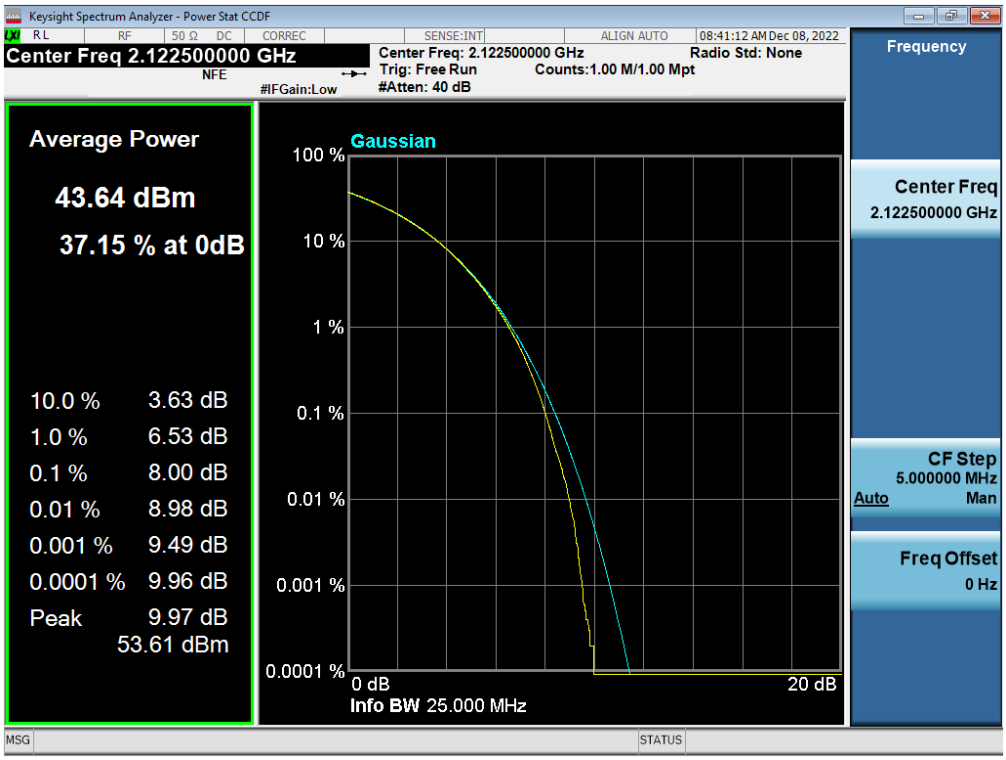
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / 16QAM / Low



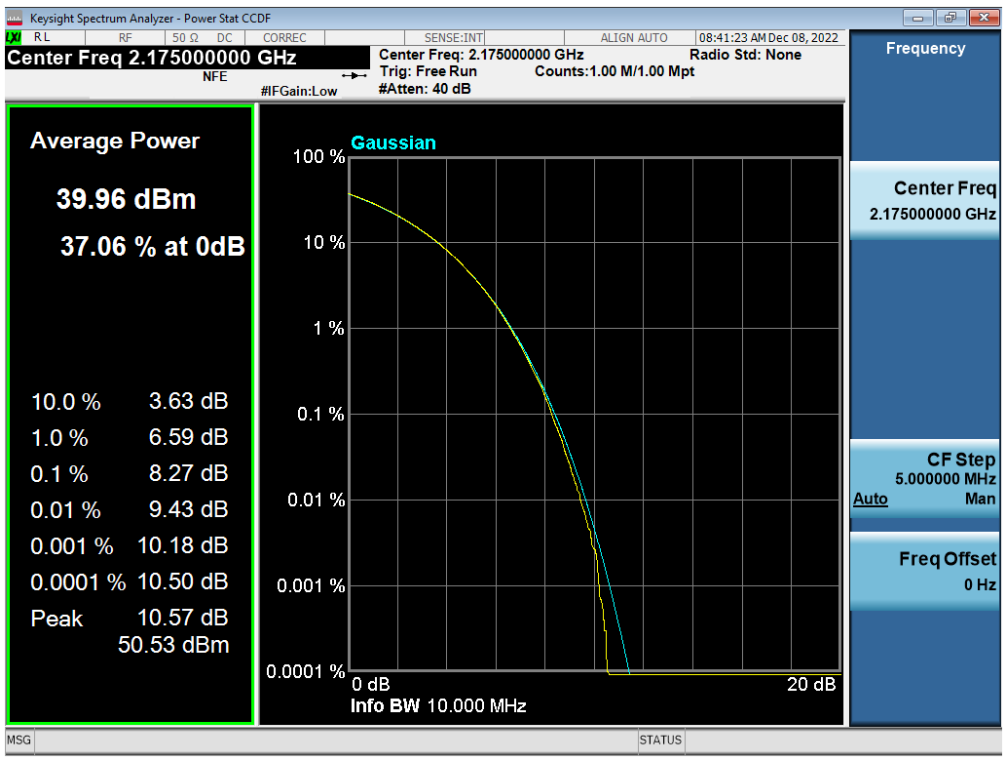
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M + NR n66 20M / Non-Contiguous / 16QAM / High



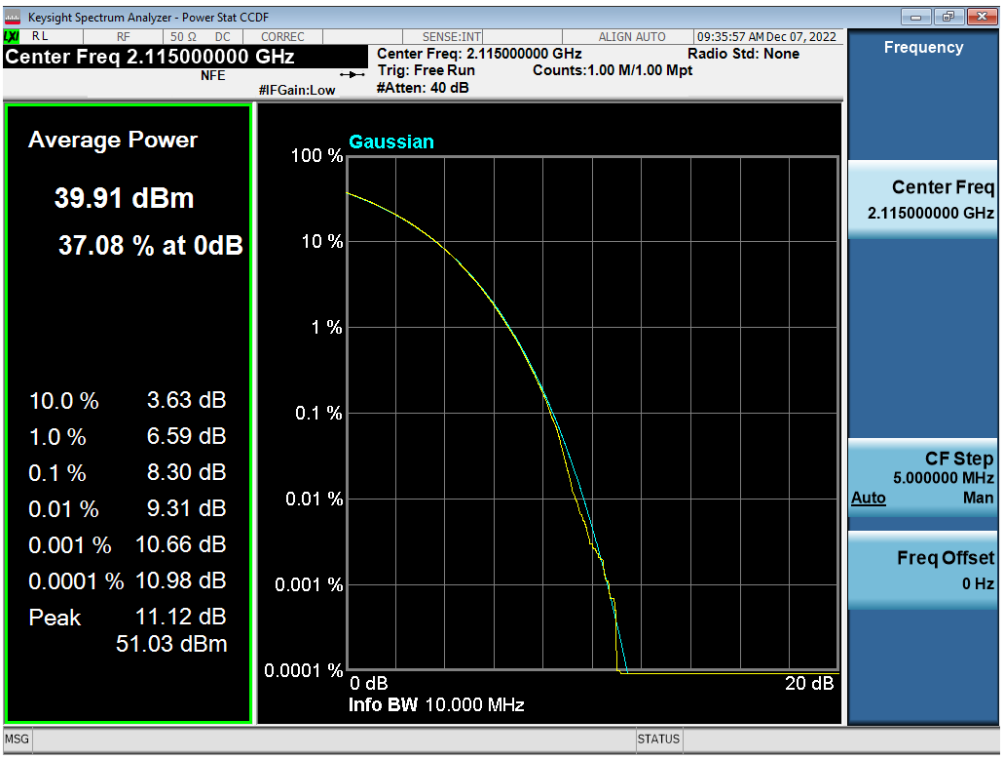
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / QPSK / Low



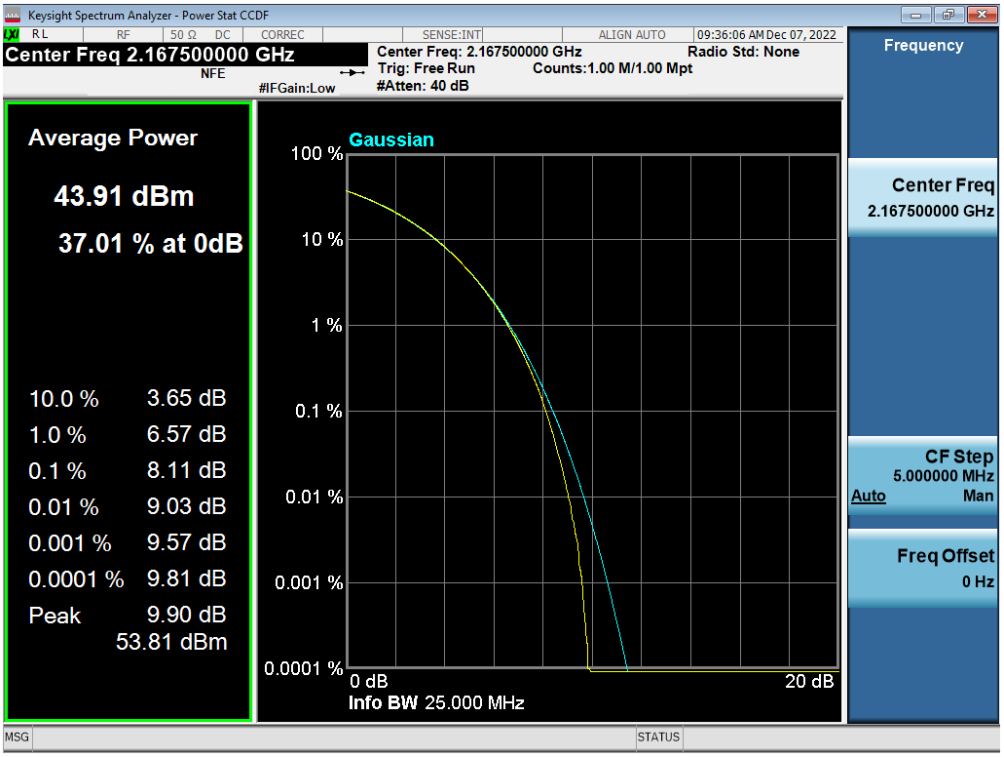
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M / Non-Contiguous / QPSK / High



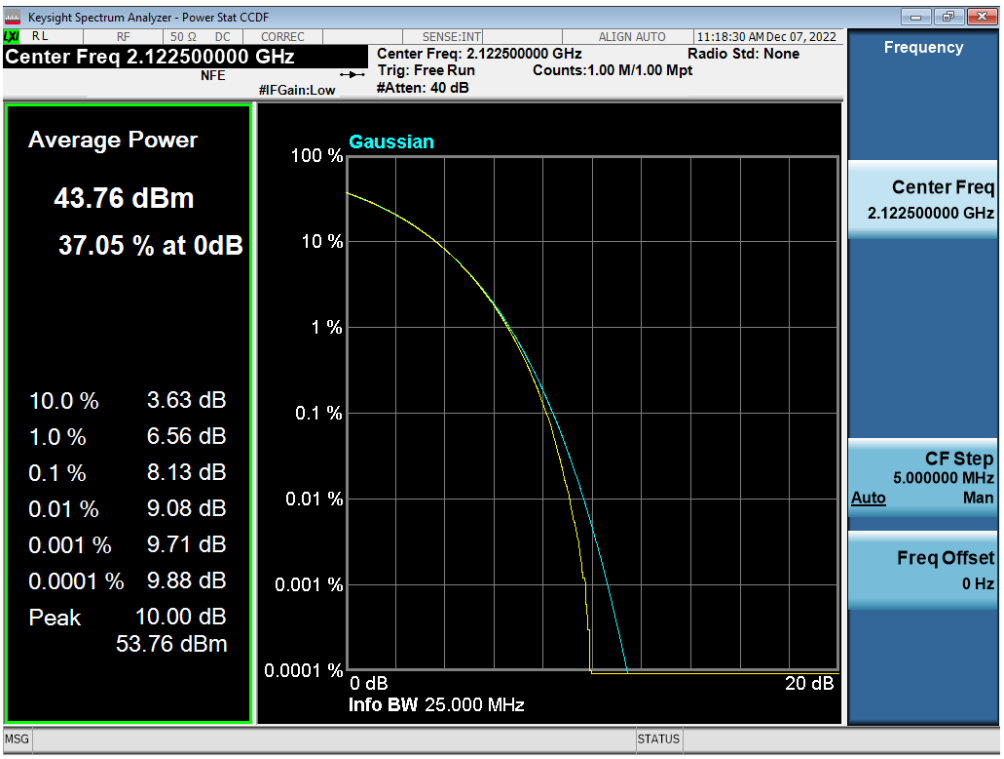
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / QPSK / Low



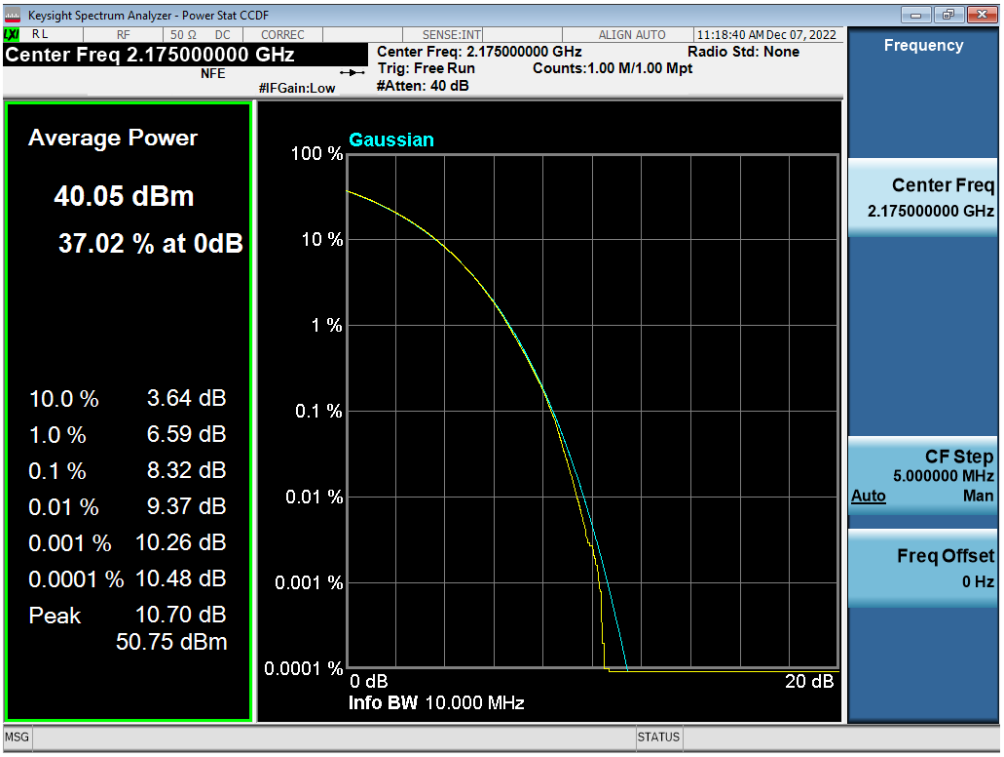
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M + DSS B66 15M / Non-Contiguous / QPSK / High



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 15M + DSS B66 10M / Non-Contiguous / QPSK / Low



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M / Non-Contiguous / QPSK / High



5.3. OCCUPIED BANDWIDTH

Test Requirements:

§ 2.1049 Measurements required: Occupied bandwidth.

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the specified conditions of § 2.1049 (a) through (i) as applicable.

Test Procedures:

The measurement is performed in accordance with Section 5.4.3 and 5.4.4 of ANSI C63.26.

5.4.3 Occupied bandwidth—Relative measurement procedure

The OBW is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). The typical ratio for transmitters is −26 dB, corresponding to the 26 dB BW; however, other ratios can be specified. In this subclause, the ratio is designated by "−X dB."

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.

b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.

c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.

d) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target "−X dB" requirement, i.e., if the requirement calls for measuring the −26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.

e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.

f) Determine the reference value by either of the following:
   1) Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the Highest level of the displayed trace (this is the reference value).
   2) Set the EUT to transmit an unmodulated carrier. Set the spectrum analyzer marker to the level of the carrier.

g) Determine the "−X dB amplitude" as equal to (Reference Value − X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.

h) If the reference value was determined using an unmodulated carrier, turn the EUT modulation on, then either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise the trace from step f) shall be used for step i).

i) Place two markers, one at the lowest and the other at the Highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "−X dB amplitude" determined in step f). If a marker is below this "−X dB amplitude" value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. The spectral envelope can cross the "−X dB amplitude" at multiple points. The lowest or Highest frequency

shall be selected as the frequencies that are the farthest away from the center frequency at which the spectral envelope crosses the "−X dB amplitude."

j) The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

5.4.4 Occupied bandwidth—Power bandwidth (99%) measurement procedure

The OBW is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

The following procedure shall be used for measuring (99%) power bandwidth:

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of 1.5 × OBW is sufficient).

b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.

c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.

d) Set the detection mode to peak, and the trace mode to max-hold.

e) If the instrument does not have a 99% OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5% of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5% of the total is reached and record that frequency as the upper OBW frequency. The 99% power OBW can be determined by computing the difference these two frequencies.

f) The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

Note: The results of the Occupied Bandwidth test shown above the frequency measured values are very small and similar trend for each port, so we are attached only the worst case plot.

Test Results:

Tabular Data of Contiguous Occupied Bandwidth

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	2 127.50	33.948
		Middle	2 145.00	34.094
		High	2 162.50	33.974
	16QAM	Low	2 127.50	34.107
		Middle	2 145.00	34.191
		High	2 162.50	34.107
	64QAM	Low	2 127.50	33.935
		Middle	2 145.00	34.057
		High	2 162.50	34.058
	256QAM	Low	2 127.50	34.028
		Middle	2 145.00	34.056
		High	2 162.50	34.109
1	QPSK	Low	2 127.50	33.937
		Middle	2 145.00	34.004
		High	2 162.50	34.062
	16QAM	Low	2 127.50	34.175
		Middle	2 145.00	34.152
		High	2 162.50	34.148
	64QAM	Low	2 127.50	33.952
		Middle	2 145.00	34.087
		High	2 162.50	34.082
	256QAM	Low	2 127.50	33.989
		Middle	2 145.00	34.149
		High	2 162.50	34.067

2	QPSK	Low	2 127.50	34.010
		Middle	2 145.00	34.171
		High	2 162.50	34.077
	16QAM	Low	2 127.50	34.177
		Middle	2 145.00	34.149
		High	2 162.50	34.028
	64QAM	Low	2 127.50	33.985
		Middle	2 145.00	34.059
		High	2 162.50	34.082
	256QAM	Low	2 127.50	33.941
		Middle	2 145.00	34.175
		High	2 162.50	34.016
3	QPSK	Low	2 127.50	33.955
		Middle	2 145.00	34.080
		High	2 162.50	34.051
	16QAM	Low	2 127.50	34.116
		Middle	2 145.00	34.142
		High	2 162.50	34.114
	64QAM	Low	2 127.50	34.048
		Middle	2 145.00	33.966
		High	2 162.50	34.082
	256QAM	Low	2 127.50	33.975
		Middle	2 145.00	34.069
		High	2 162.50	34.071

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	2 127.50	34.019
		Middle	2 145.00	34.036
		High	2 162.50	34.037
	16QAM	Low	2 127.50	34.014
		Middle	2 145.00	34.122
		High	2 162.50	34.076
	64QAM	Low	2 127.50	33.964
		Middle	2 145.00	34.081
		High	2 162.50	34.100
	256QAM	Low	2 127.50	34.048
		Middle	2 145.00	34.006
		High	2 162.50	34.048
1	QPSK	Low	2 127.50	33.936
		Middle	2 145.00	34.091
		High	2 162.50	34.062
	16QAM	Low	2 127.50	34.050
		Middle	2 145.00	34.160
		High	2 162.50	34.099
	64QAM	Low	2 127.50	34.024
		Middle	2 145.00	34.021
		High	2 162.50	34.094
	256QAM	Low	2 127.50	33.945
		Middle	2 145.00	34.086
		High	2 162.50	34.024

2	QPSK	Low	2 127.50	34.010
		Middle	2 145.00	34.053
		High	2 162.50	34.043
	16QAM	Low	2 127.50	34.082
		Middle	2 145.00	34.147
		High	2 162.50	34.115
	64QAM	Low	2 127.50	33.950
		Middle	2 145.00	33.977
		High	2 162.50	34.131
	256QAM	Low	2 127.50	33.924
		Middle	2 145.00	34.083
		High	2 162.50	34.018
3	QPSK	Low	2 127.50	33.914
		Middle	2 145.00	34.022
		High	2 162.50	34.057
	16QAM	Low	2 127.50	34.057
		Middle	2 145.00	34.135
		High	2 162.50	34.099
	64QAM	Low	2 127.50	33.967
		Middle	2 145.00	34.025
		High	2 162.50	34.083
	256QAM	Low	2 127.50	33.915
		Middle	2 145.00	34.088
		High	2 162.50	34.026

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	2 127.50	33.677
		Middle	2 145.00	33.689
		High	2 162.50	33.728
	16QAM	Low	2 127.50	33.757
		Middle	2 145.00	33.907
		High	2 162.50	33.781
	64QAM	Low	2 127.50	33.721
		Middle	2 145.00	33.838
		High	2 162.50	33.795
	256QAM	Low	2 127.50	33.736
		Middle	2 145.00	33.872
		High	2 162.50	33.858
1	QPSK	Low	2 127.50	33.744
		Middle	2 145.00	33.700
		High	2 162.50	33.769
	16QAM	Low	2 127.50	33.888
		Middle	2 145.00	33.916
		High	2 162.50	33.663
	64QAM	Low	2 127.50	33.672
		Middle	2 145.00	33.889
		High	2 162.50	33.662
	256QAM	Low	2 127.50	33.747
		Middle	2 145.00	33.773
		High	2 162.50	33.724

2	QPSK	Low	2 127.50	33.511
		Middle	2 145.00	33.829
		High	2 162.50	33.830
	16QAM	Low	2 127.50	33.662
		Middle	2 145.00	33.954
		High	2 162.50	33.806
	64QAM	Low	2 127.50	33.689
		Middle	2 145.00	33.663
		High	2 162.50	33.630
	256QAM	Low	2 127.50	33.655
		Middle	2 145.00	33.808
		High	2 162.50	33.790
3	QPSK	Low	2 127.50	33.704
		Middle	2 145.00	33.639
		High	2 162.50	33.784
	16QAM	Low	2 127.50	33.893
		Middle	2 145.00	33.855
		High	2 162.50	33.756
	64QAM	Low	2 127.50	33.684
		Middle	2 145.00	33.777
		High	2 162.50	33.766
	256QAM	Low	2 127.50	33.710
		Middle	2 145.00	33.774
		High	2 162.50	33.677

Tabular Data of Non-Contiguous Occupied Bandwidth

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant	Mod	NR n66 5M		NR n66 10M + NR n66 20M		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	2 112.50	4.4755	2 165.00	29.068	33.544
	16QAM	2 112.50	4.4824	2 165.00	29.070	33.552
	64QAM	2 112.50	4.4842	2 165.00	28.982	33.466
	256QAM	2 112.50	4.4730	2 165.00	28.993	33.466
1	QPSK	2 112.50	4.4729	2 165.00	29.012	33.485
	16QAM	2 112.50	4.4938	2 165.00	29.112	33.606
	64QAM	2 112.50	4.4784	2 165.00	29.029	33.508
	256QAM	2 112.50	4.4716	2 165.00	28.973	33.444
2	QPSK	2 112.50	4.4706	2 165.00	28.977	33.447
	16QAM	2 112.50	4.4844	2 165.00	29.133	33.617
	64QAM	2 112.50	4.4705	2 165.00	28.984	33.455
	256QAM	2 112.50	4.4753	2 165.00	29.004	33.479
3	QPSK	2 112.50	4.4845	2 165.00	29.021	33.505
	16QAM	2 112.50	4.4898	2 165.00	29.123	33.613
	64QAM	2 112.50	4.4753	2 165.00	29.013	33.489
	256QAM	2 112.50	4.4728	2 165.00	29.062	33.535

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant	Mod	NR n66 20M + NR n66 5M		NR n66 10M		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	2 122.50	24.0867	2 175.00	9.3081	33.3948
	16QAM	2 122.50	24.1718	2 175.00	9.2451	33.4169
	64QAM	2 122.50	24.0190	2 175.00	9.3253	33.3442
	256QAM	2 122.50	24.0507	2 175.00	9.3135	33.3642
1	QPSK	2 122.50	24.0733	2 175.00	9.3238	33.3971
	16QAM	2 122.50	24.0617	2 175.00	9.2440	33.3057
	64QAM	2 122.50	24.0688	2 175.00	9.3200	33.3888
	256QAM	2 122.50	24.0583	2 175.00	9.3014	33.3597
2	QPSK	2 122.50	24.0484	2 175.00	9.3207	33.3670
	16QAM	2 122.50	24.0895	2 175.00	9.2481	33.3376
	64QAM	2 122.50	24.0892	2 175.00	9.3047	33.3939
	256QAM	2 122.50	24.0798	2 175.00	9.3117	33.3916
3	QPSK	2 122.50	24.0952	2 175.00	9.3189	33.4142
	16QAM	2 122.50	24.0894	2 175.00	9.2525	33.3419
	64QAM	2 122.50	24.0723	2 175.00	9.3186	33.3910
	256QAM	2 122.50	24.0736	2 175.00	9.3331	33.4067

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant	Mod	DSS B66 10M		NR n66 5M + NR n66 20M		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	2 115.00	9.1928	2 167.50	24.139	33.331
	16QAM	2 115.00	9.0685	2 167.50	24.231	33.300
	64QAM	2 115.00	9.1971	2 167.50	24.131	33.329
	256QAM	2 115.00	9.1995	2 167.50	24.129	33.328
1	QPSK	2 115.00	9.1424	2 167.50	24.066	33.209
	16QAM	2 115.00	9.1049	2 167.50	24.197	33.302
	64QAM	2 115.00	9.1673	2 167.50	24.147	33.314
	256QAM	2 115.00	9.2480	2 167.50	24.074	33.322
2	QPSK	2 115.00	9.1512	2 167.50	24.102	33.253
	16QAM	2 115.00	9.0320	2 167.50	24.198	33.230
	64QAM	2 115.00	9.0180	2 167.50	24.167	33.185
	256QAM	2 115.00	9.1904	2 167.50	24.105	33.296
3	QPSK	2 115.00	9.1761	2 167.50	24.157	33.334
	16QAM	2 115.00	9.0405	2 167.50	24.197	33.237
	64QAM	2 115.00	9.1543	2 167.50	24.090	33.244
	256QAM	2 115.00	9.1840	2 167.50	24.149	33.333

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant	Mod	NR n66 20M + NR n66 5M		DSS B66 10M		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	2 122.50	24.033	2 175.00	9.1536	33.186
	16QAM	2 122.50	24.086	2 175.00	9.1384	33.224
	64QAM	2 122.50	24.072	2 175.00	9.2817	33.354
	256QAM	2 122.50	24.025	2 175.00	9.2334	33.258
1	QPSK	2 122.50	24.089	2 175.00	9.2124	33.302
	16QAM	2 122.50	24.134	2 175.00	9.0413	33.175
	64QAM	2 122.50	24.075	2 175.00	9.2268	33.301
	256QAM	2 122.50	24.057	2 175.00	9.1992	33.256
2	QPSK	2 122.50	24.056	2 175.00	9.2282	33.285
	16QAM	2 122.50	24.100	2 175.00	9.1538	33.254
	64QAM	2 122.50	24.052	2 175.00	9.2256	33.278
	256QAM	2 122.50	24.081	2 175.00	9.1192	33.200
3	QPSK	2 122.50	24.082	2 175.00	9.2271	33.309
	16QAM	2 122.50	24.093	2 175.00	9.0803	33.173
	64QAM	2 122.50	24.089	2 175.00	9.2553	33.344
	256QAM	2 122.50	24.100	2 175.00	9.2048	33.305

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C]

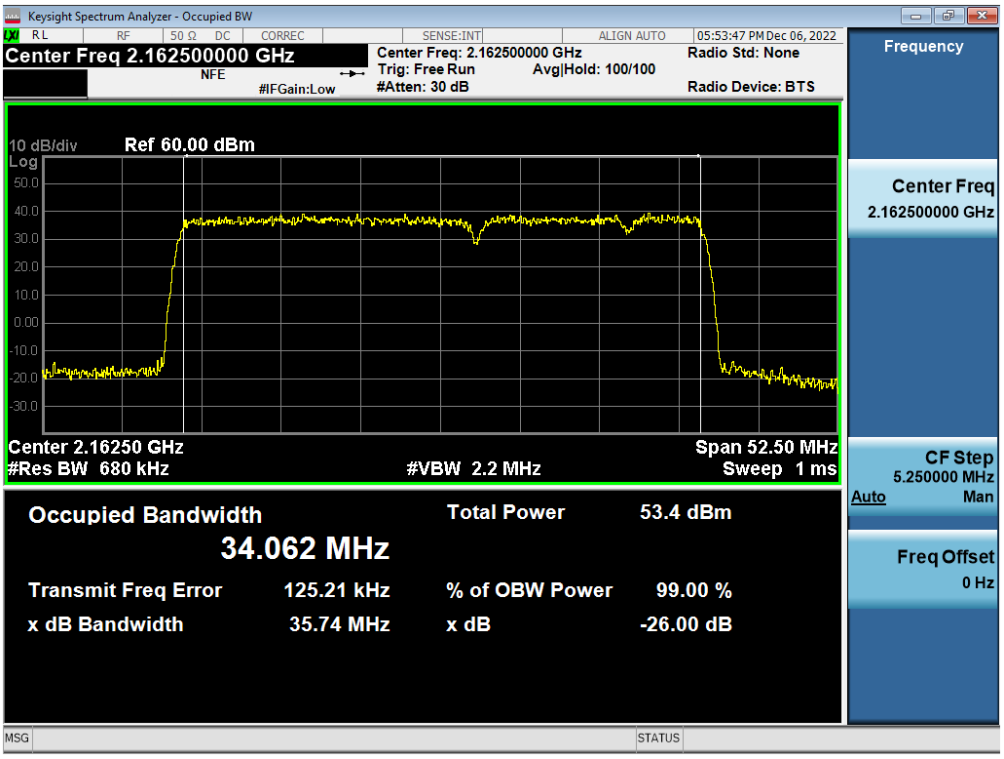
Ant	Mod	DSS B66 10M		DSS B66 10M + DSS B66 15M		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	2 115.00	9.1711	2 167.50	23.980	33.151
	16QAM	2 115.00	9.0335	2 167.50	24.013	33.047
	64QAM	2 115.00	9.1347	2 167.50	23.904	33.038
	256QAM	2 115.00	9.2614	2 167.50	23.929	33.190
1	QPSK	2 115.00	9.1838	2 167.50	23.922	33.105
	16QAM	2 115.00	9.0604	2 167.50	23.969	33.030
	64QAM	2 115.00	9.1942	2 167.50	23.909	33.104
	256QAM	2 115.00	9.2337	2 167.50	23.809	33.043
2	QPSK	2 115.00	9.1648	2 167.50	23.916	33.081
	16QAM	2 115.00	9.0430	2 167.50	24.038	33.081
	64QAM	2 115.00	9.2047	2 167.50	23.857	33.062
	256QAM	2 115.00	9.2271	2 167.50	23.964	33.191
3	QPSK	2 115.00	8.9877	2 167.50	23.946	32.934
	16QAM	2 115.00	9.1061	2 167.50	23.990	33.096
	64QAM	2 115.00	9.1239	2 167.50	23.842	32.966
	256QAM	2 115.00	9.1869	2 167.50	23.955	33.142

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][2C+1C]

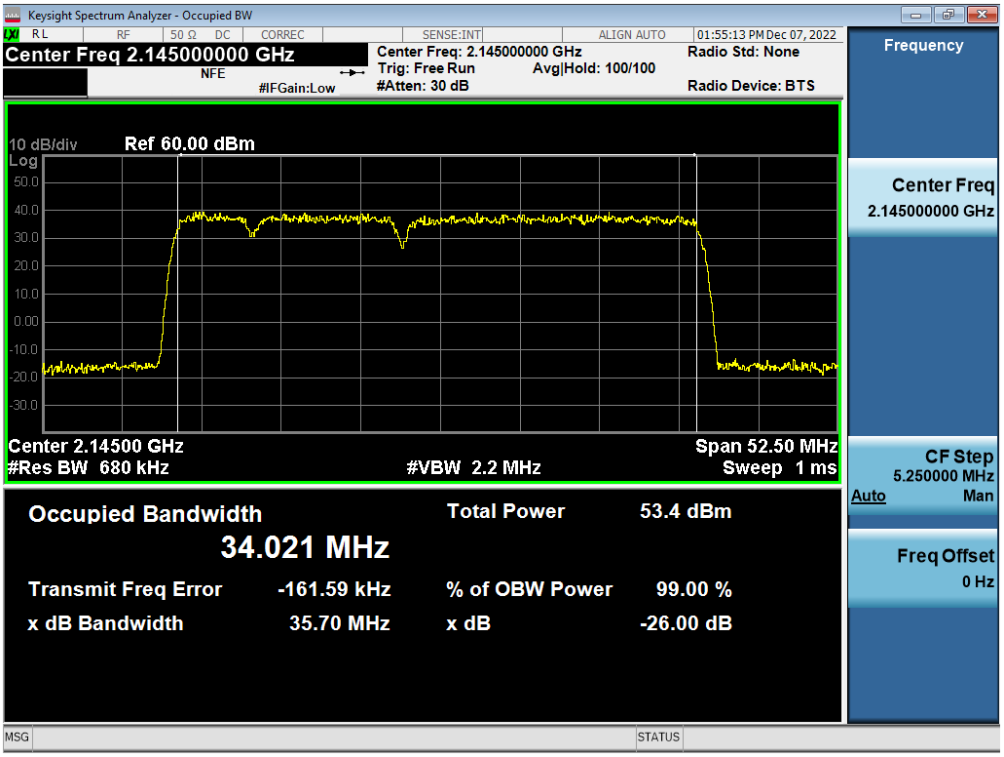
Ant	Mod	DSS B66 15M + DSS B66 10M		DSS B66 10M		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	2 122.50	23.967	2 175.00	9.1949	33.162
	16QAM	2 122.50	23.797	2 175.00	9.1480	32.945
	64QAM	2 122.50	23.803	2 175.00	9.2601	33.063
	256QAM	2 122.50	23.859	2 175.00	9.1927	33.052
1	QPSK	2 122.50	23.820	2 175.00	9.1627	32.982
	16QAM	2 122.50	23.760	2 175.00	9.1487	32.909
	64QAM	2 122.50	23.824	2 175.00	9.2316	33.056
	256QAM	2 122.50	23.822	2 175.00	9.2359	33.058
2	QPSK	2 122.50	23.705	2 175.00	9.2158	32.921
	16QAM	2 122.50	23.869	2 175.00	9.1712	33.040
	64QAM	2 122.50	23.780	2 175.00	9.1891	32.969
	256QAM	2 122.50	23.823	2 175.00	9.2069	33.030
3	QPSK	2 122.50	23.813	2 175.00	9.2391	33.052
	16QAM	2 122.50	23.671	2 175.00	9.0884	32.759
	64QAM	2 122.50	23.866	2 175.00	9.2167	33.083
	256QAM	2 122.50	23.885	2 175.00	9.2034	33.089

Plot Data of Occupied bandwidth

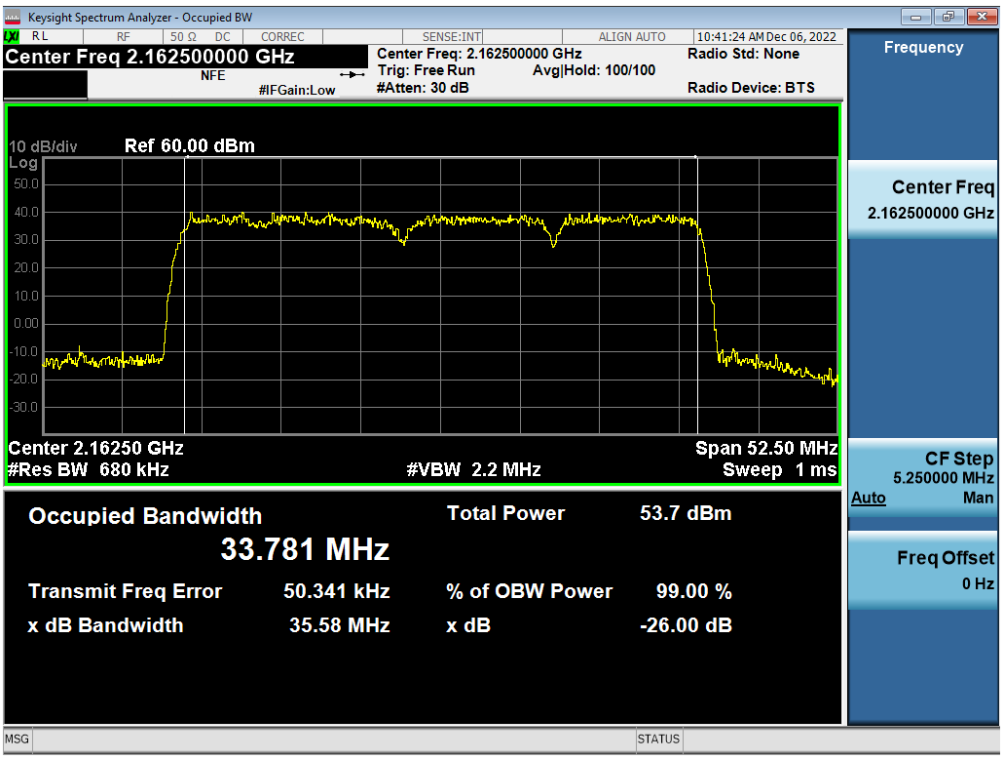
Antenna 1 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / QPSK / High



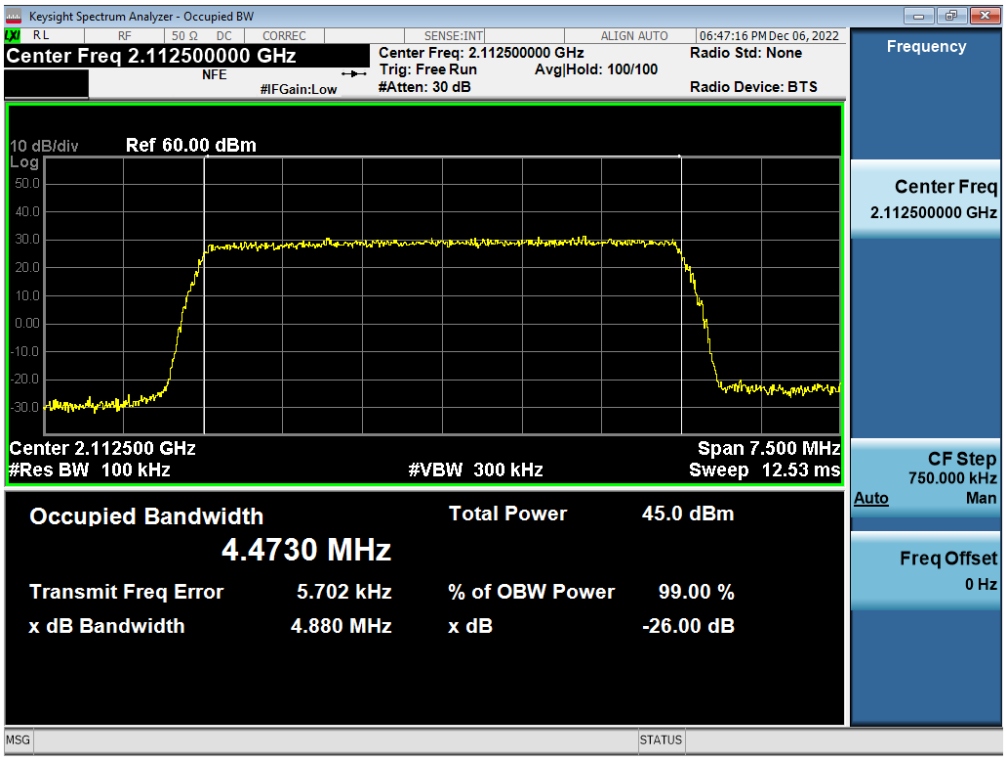
Antenna 1 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



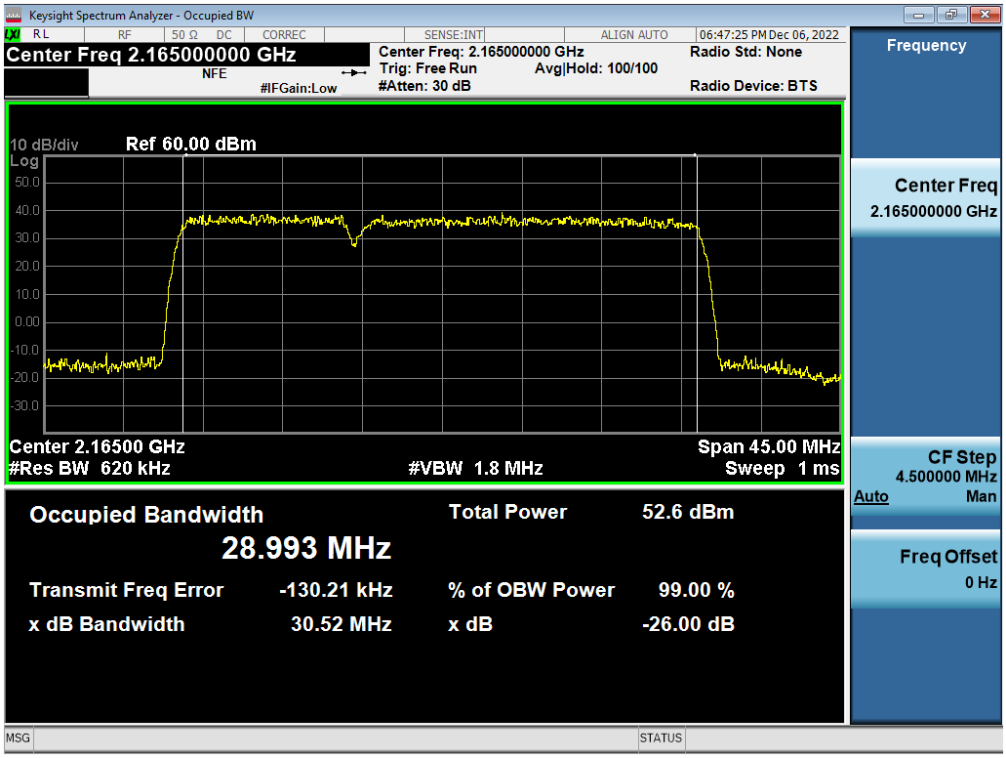
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 16QAM / High



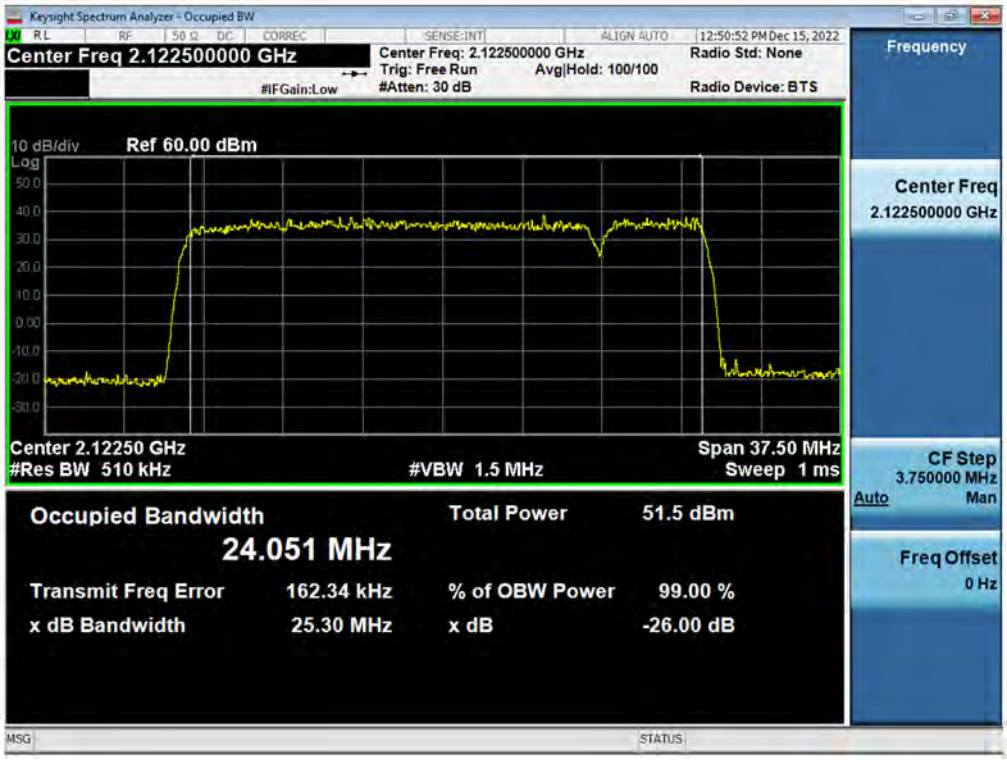
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M / Non-Contiguous / 256QAM / Low



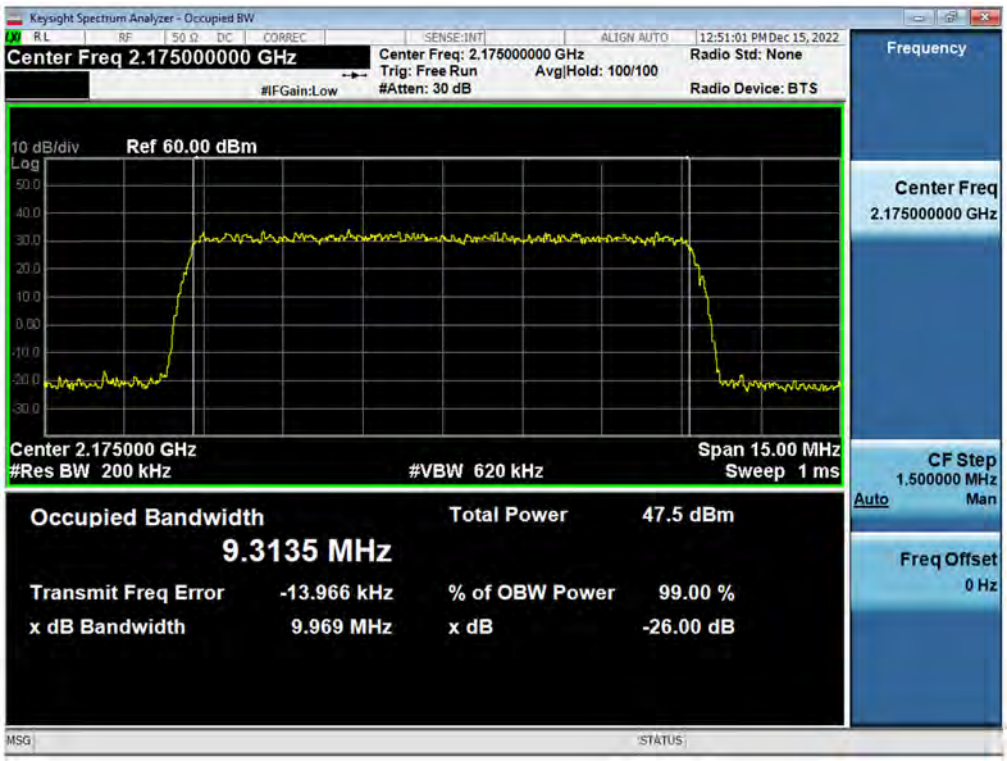
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 10M + NR n66 20M / Non-Contiguous / 256QAM / High



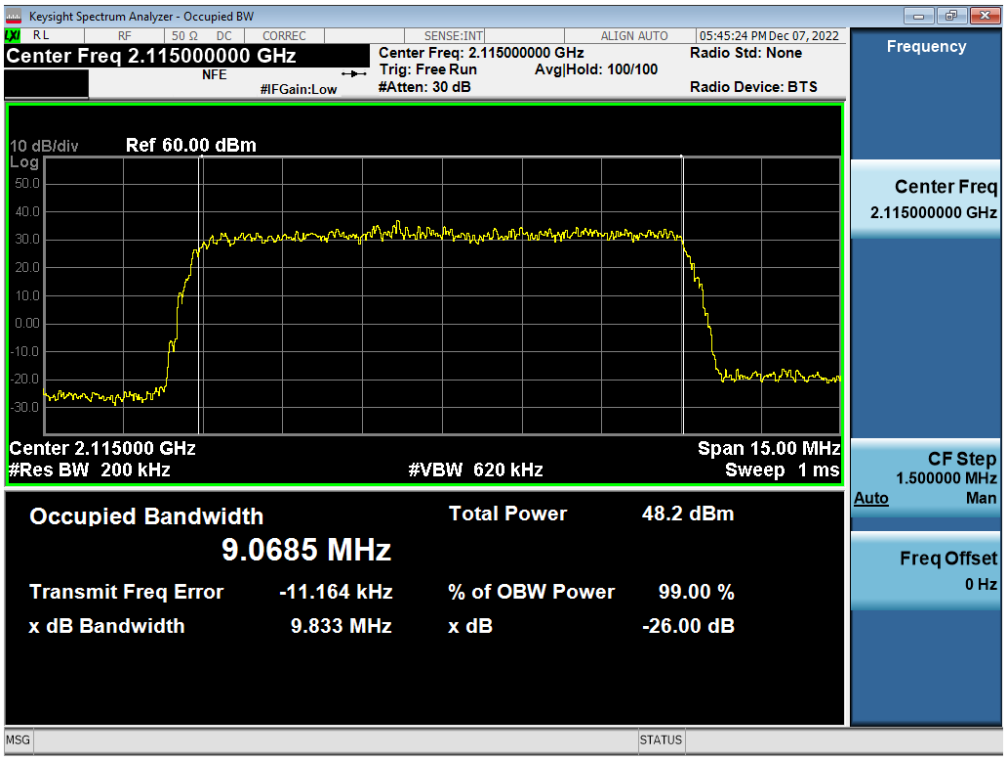
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / 256QAM / Low



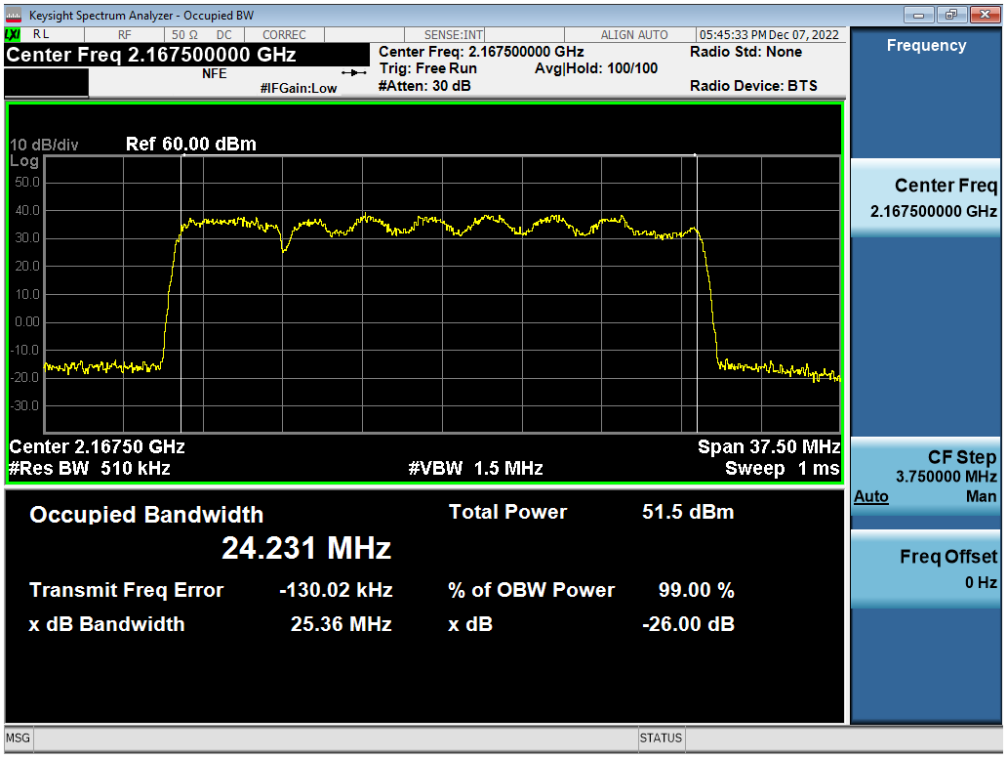
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 10M / Non-Contiguous / 256QAM / High



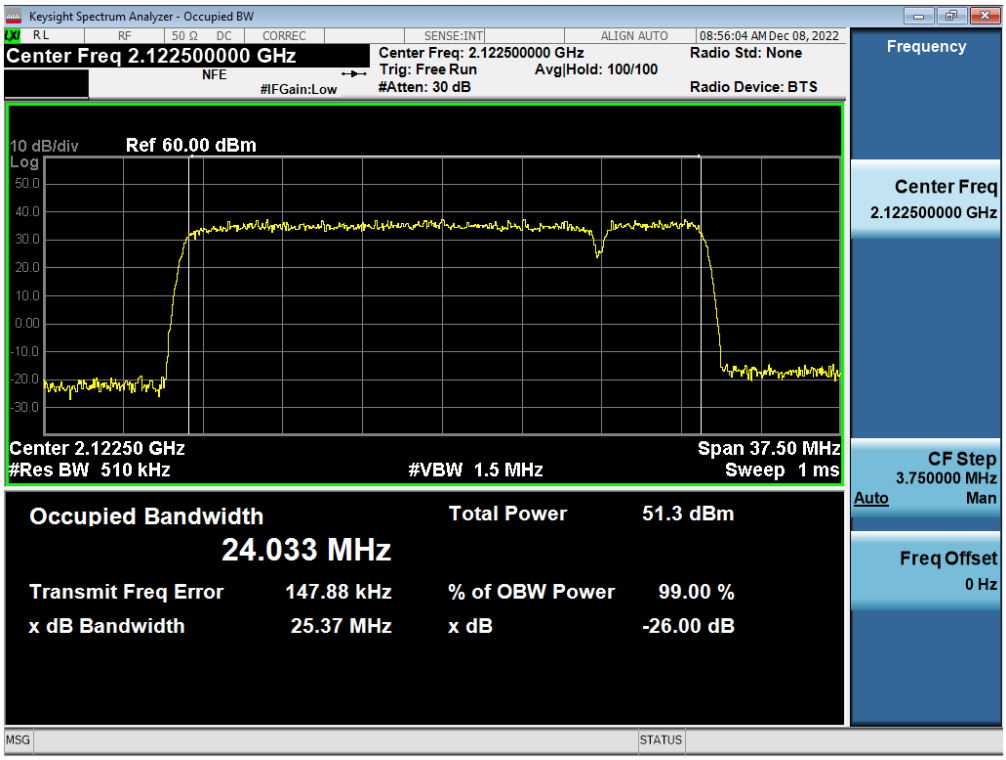
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / 16QAM / Low



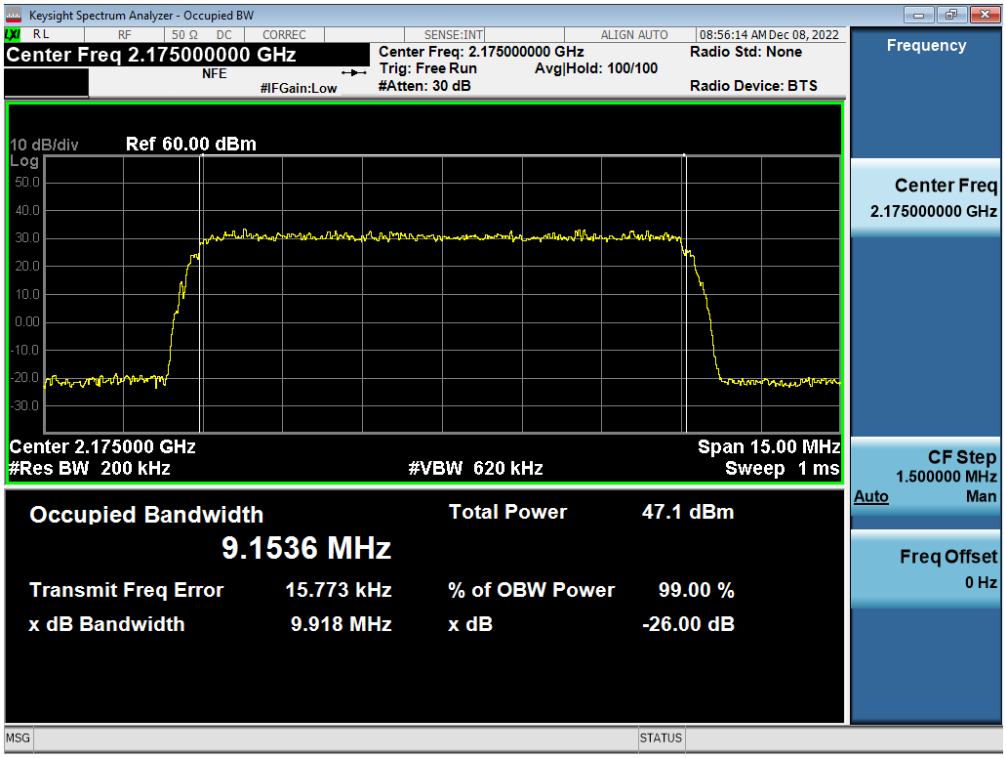
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / NR n66 5M + NR n66 20M / Non-Contiguous / 16QAM / High



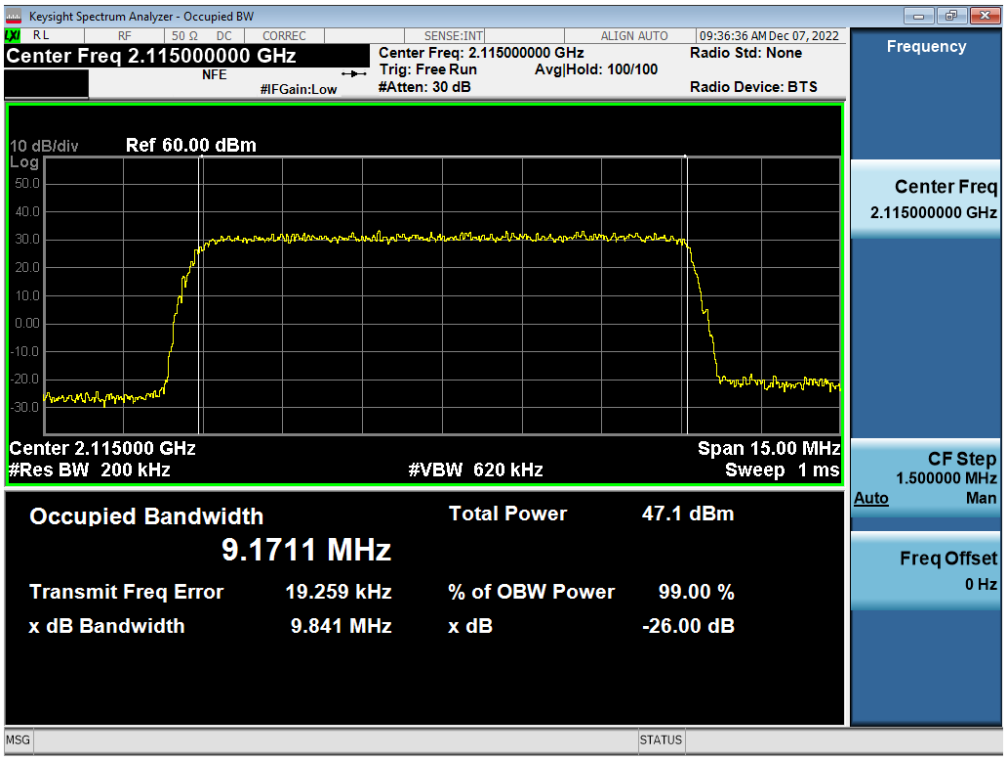
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / NR n66 20M + NR n66 5M / Non-Contiguous / QPSK / Low



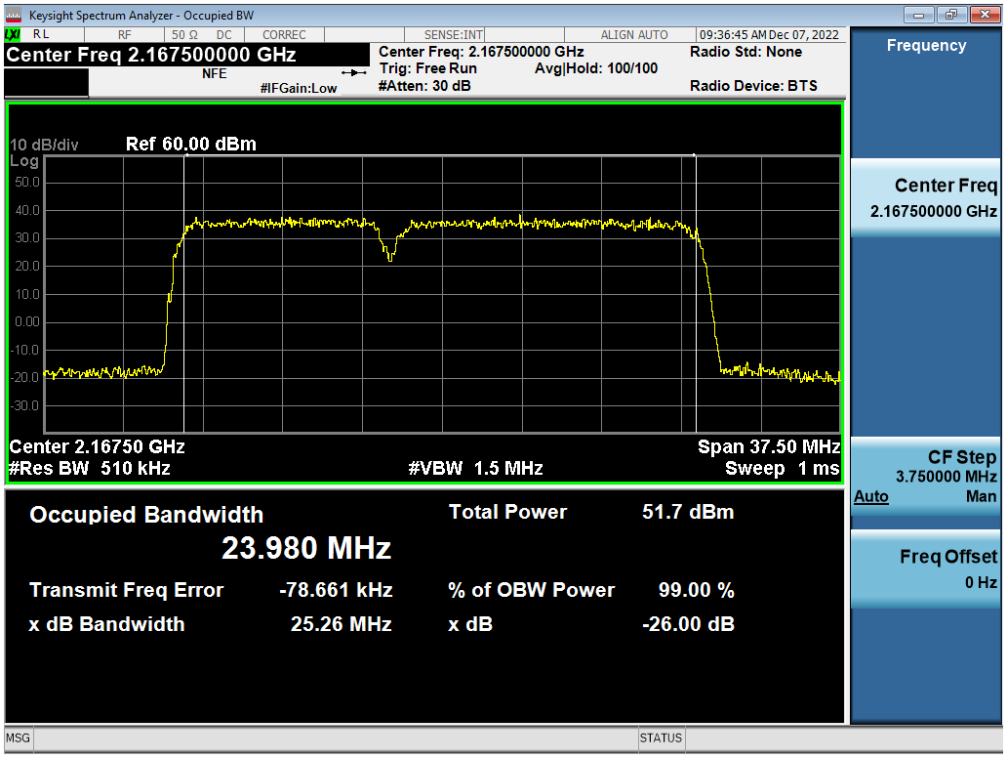
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M / Non-Contiguous / QPSK / High



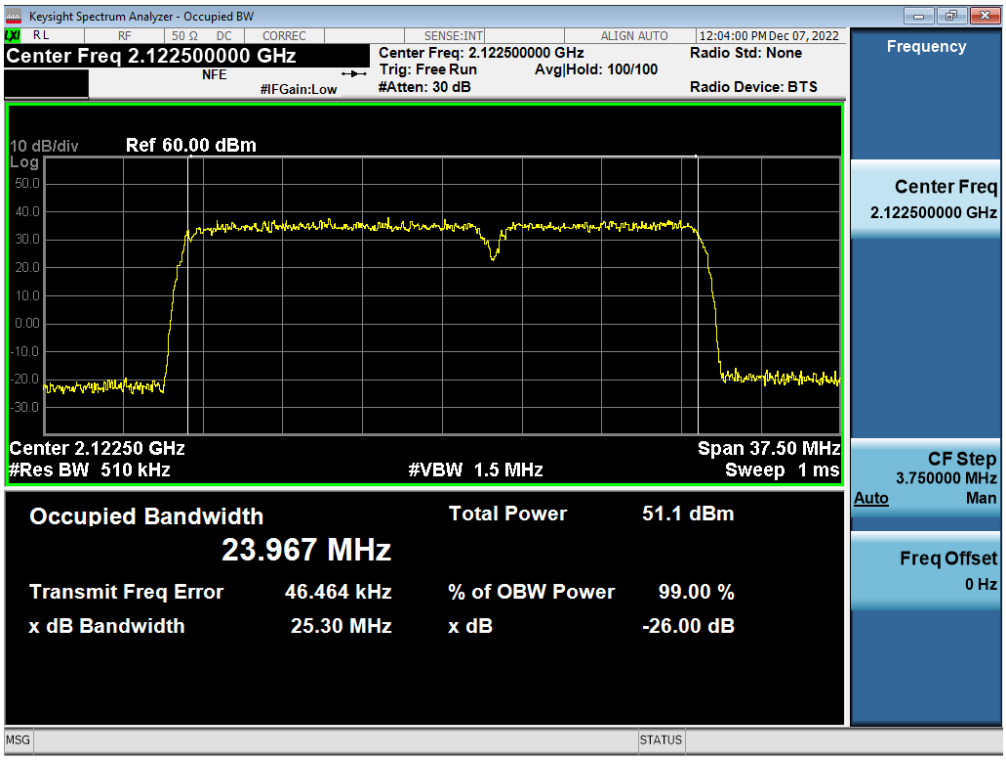
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M / Non-Contiguous / QPSK / Low



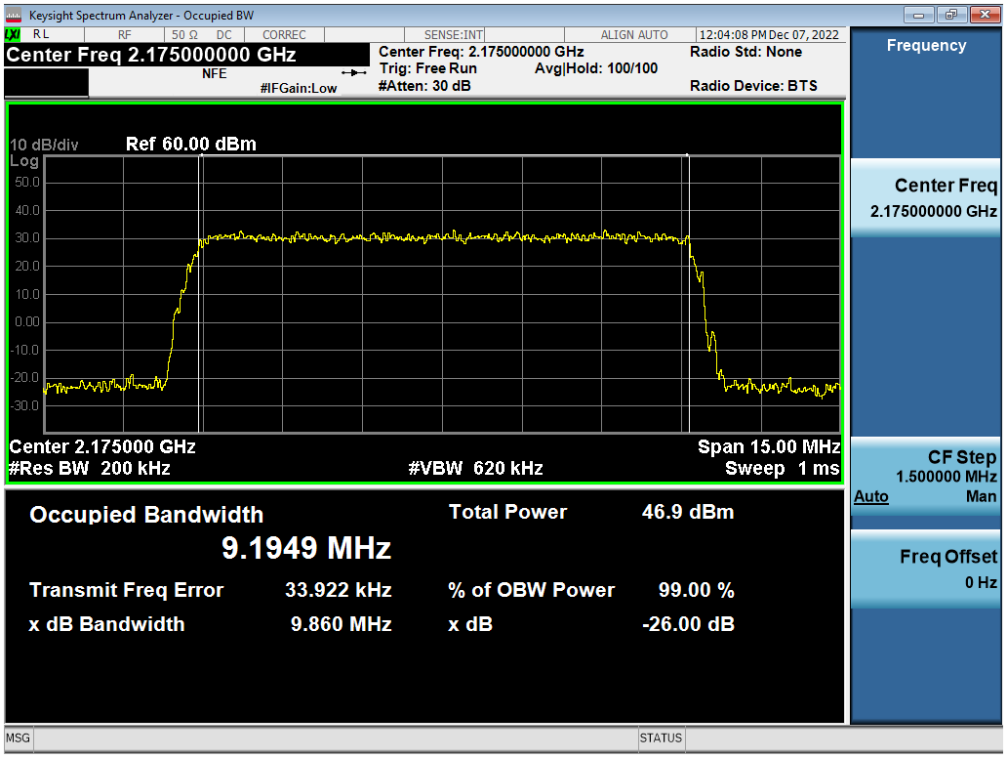
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / DSS B66 10M + DSS B66 15M / Non-Contiguous / QPSK / High



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 10M + DSS B66 10M / Non-Contiguous / QPSK / Low



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / DSS B66 15M / Non-Contiguous / QPSK / High



5.4. OUT-OF-BAND UNWANTED EMISSIONS

Test Requirements:

§ 2.1051 Measurements required: Spurious emissions at antenna terminals.

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The 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 26 dB below the transmitter power.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than

§ 27.53 Emission limits.

(h) AWS emission limits

(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.

(3) Measurement procedure.

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's

frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The 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 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

Test Procedures:

The measurement is performed in accordance with Section 5.7.3 of ANSI C63.26.

5.7.3 Out-of-band unwanted emissions measurements

a) Set the spectrum analyzer center frequency to the block, band, or channel edge frequency.

b) Set the span wide enough to capture the fundamental emission closest to the authorized block or band edge, and to include all modulation products that spill into the immediately adjacent frequency band. In some cases, it may be possible to set the center frequency and span so as to encompass the fundamental emission and the unwanted out-of-band (band-edge) emissions on either side of the authorized block, band, or channel. This can be accomplished with a single (slow) sweep, if adequate overload protection and sufficient dynamic range can be maintained.

c) Set the number of points in sweep ≥ 2 × span / RBW.

d) Sweep time should be auto for peak detection. For rms detection the sweep time should be set as follows:

1) If the device can be configured to transmit continuously (duty cycle ≥ 98%), set the (sweep time) > (number of points in sweep) × (symbol period) (e.g., by a factor of 10 × symbol period × number of points). Increasing the sweep time (i.e., slowing the sweep speed) will allow for averaging over multiple symbols

2) If the device cannot be configured to transmit continuously (duty cycle < 98%) and a freerunning sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time > (number of points in sweep) × (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by [10 log (1/duty cycle)]. This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation ≤ ±2%).

3) If the device cannot be configured to transmit continuously (duty cycle < 98%) and a freerunning sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time > (number of points in sweep) × (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by [10 log (1/duty cycle)]. This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation ≤ ±2%).

4) If the device cannot be configured to transmit continuously and a free-running sweep must be used, and if the transmissions exhibit a non-constant duty cycle (duty cycle variations > ±2%), set the sweep time so that the averaging is performed over the on-period by setting the sweep time > (symbol period) × (number of points), while also maintaining the sweep time < (transmitter on-time). The trace mode shall be set to max hold, since not every display point will be averaged only over just the on-time. Thus, multiple sweeps (e.g., 100) in maximum hold are

necessary to ensure that the maximum power is measured.

e) The test report shall include the plots of the measuring instrument display and the measured data.

f) See Annex I for example emission mask plots.

Note:

3. Due to MIMO operations, a correction has been added to the limit according to KDB 662911 D01 v02r01.
   - 4Tx MIMO correction: 10 log(N_{ANT}) = 10 log(4) = 6.02 dB // -13 dBm – 10*log (4) = -19.02 dBm
4. The results of the Out-of-band Unwanted Emissions test shown above the frequency measured values are very small and similar trend for each port, so we are attached only the worst case plot.

Test Results:
Tabular Data of Contiguous Out-of-band Unwanted Emissions

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.98	-33.11
		High	2 180.03	-31.69
	16QAM	Low	2 109.97	-33.78
		High	2 180.03	-30.11
	64QAM	Low	2 109.97	-34.68
		High	2 180.03	-31.50
	256QAM	Low	2 109.97	-33.82
		High	2 180.03	-31.47
1	QPSK	Low	2 109.97	-33.61
		High	2 180.03	-31.86
	16QAM	Low	2 109.97	-34.26
		High	2 180.03	-31.43
	64QAM	Low	2 109.98	-33.85
		High	2 180.03	-31.84
	256QAM	Low	2 109.98	-34.97
		High	2 180.03	-31.87
2	QPSK	Low	2 109.98	-35.86
		High	2 180.03	-33.26
	16QAM	Low	2 109.98	-36.58
		High	2 180.03	-32.07
	64QAM	Low	2 109.98	-36.70
		High	2 180.03	-32.30
	256QAM	Low	2 109.98	-36.35
		High	2 180.03	-32.60
3	QPSK	Low	2 109.97	-35.23
		High	2 180.03	-32.48
	16QAM	Low	2 109.98	-34.79
		High	2 180.03	-32.02
	64QAM	Low	2 109.98	-35.14
		High	2 180.03	-32.41
	256QAM	Low	2 109.98	-36.00
		High	2 180.03	-32.50

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.98	-30.87
		High	2 180.03	-28.39
	16QAM	Low	2 109.98	-29.07
		High	2 180.03	-30.63
	64QAM	Low	2 109.98	-32.64
		High	2 180.03	-27.76
	256QAM	Low	2 109.98	-32.87
		High	2 180.03	-27.94
1	QPSK	Low	2 109.98	-34.03
		High	2 180.03	-29.10
	16QAM	Low	2 109.97	-34.71
		High	2 180.03	-30.26
	64QAM	Low	2 109.98	-34.83
		High	2 180.03	-29.96
	256QAM	Low	2 109.98	-34.25
		High	2 180.03	-30.62
2	QPSK	Low	2 109.98	-32.76
		High	2 180.03	-31.68
	16QAM	Low	2 109.98	-36.49
		High	2 180.03	-32.11
	64QAM	Low	2 109.98	-35.41
		High	2 180.03	-31.86
	256QAM	Low	2 109.98	-34.06
		High	2 180.03	-31.89
3	QPSK	Low	2 109.98	-35.20
		High	2 180.03	-32.88
	16QAM	Low	2 109.98	-33.59
		High	2 180.03	-31.39
	64QAM	Low	2 109.98	-35.67
		High	2 180.03	-31.61
	256QAM	Low	2 109.98	-34.91
		High	2 180.03	-31.81

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.95	-33.03
		High	2 180.05	-27.55
	16QAM	Low	2 109.95	-32.59
		High	2 180.05	-28.65
	64QAM	Low	2 109.95	-32.98
		High	2 180.05	-29.61
	256QAM	Low	2 109.95	-31.45
		High	2 180.05	-28.58
1	QPSK	Low	2 109.95	-32.19
		High	2 180.05	-27.60
	16QAM	Low	2 109.95	-32.57
		High	2 180.05	-29.43
	64QAM	Low	2 109.95	-35.64
		High	2 180.05	-29.14
	256QAM	Low	2 109.95	-33.48
		High	2 180.05	-28.08
2	QPSK	Low	2 109.95	-34.26
		High	2 180.05	-29.69
	16QAM	Low	2 109.95	-34.43
		High	2 180.05	-31.70
	64QAM	Low	2 109.95	-34.43
		High	2 180.05	-29.90
	256QAM	Low	2 109.95	-34.33
		High	2 180.05	-30.03
3	QPSK	Low	2 109.95	-34.66
		High	2 180.05	-31.64
	16QAM	Low	2 109.95	-34.97
		High	2 180.05	-29.87
	64QAM	Low	2 109.95	-35.27
		High	2 180.05	-31.01
	256QAM	Low	2 109.95	-34.44
		High	2 180.05	-29.62

Tabular Data of Non-Contiguous Out-of-band Unwanted Emissions

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.98	-31.35
		High	2 180.20	-26.31
	16QAM	Low	2 109.97	-33.16
		High	2 180.10	-28.29
	64QAM	Low	2 109.98	-31.67
		High	2 180.10	-25.71
	256QAM	Low	2 109.98	-32.50
		High	2 180.10	-25.79
1	QPSK	Low	2 109.98	-33.74
		High	2 180.10	-29.25
	16QAM	Low	2 109.98	-32.63
		High	2 180.16	-26.87
	64QAM	Low	2 109.98	-33.78
		High	2 180.10	-29.72
	256QAM	Low	2 109.98	-34.08
		High	2 180.10	-29.74
2	QPSK	Low	2 109.98	-33.70
		High	2 180.10	-30.78
	16QAM	Low	2 109.98	-34.56
		High	2 180.10	-28.35
	64QAM	Low	2 109.98	-35.10
		High	2 180.10	-29.38
	256QAM	Low	2 109.97	-34.44
		High	2 180.10	-29.58
3	QPSK	Low	2 109.98	-32.83
		High	2 180.10	-27.07
	16QAM	Low	2 109.98	-33.08
		High	2 180.10	-30.69
	64QAM	Low	2 109.98	-33.58
		High	2 180.10	-28.61
	256QAM	Low	2 109.97	-34.85
		High	2 180.10	-28.13

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2109.90	-29.70
		High	2180.05	-26.55
	16QAM	Low	2109.90	-28.82
		High	2180.05	-27.69
	64QAM	Low	2109.90	-27.91
		High	2180.05	-26.42
	256QAM	Low	2109.90	-27.92
		High	2180.05	-27.49
1	QPSK	Low	2109.90	-29.24
		High	2180.05	-26.30
	16QAM	Low	2109.90	-29.18
		High	2180.05	-25.84
	64QAM	Low	2109.90	-28.72
		High	2180.05	-26.63
	256QAM	Low	2109.90	-29.22
		High	2180.05	-27.22
2	QPSK	Low	2109.90	-30.08
		High	2180.05	-27.25
	16QAM	Low	2109.90	-29.12
		High	2180.05	-26.79
	64QAM	Low	2109.90	-29.44
		High	2180.05	-26.96
	256QAM	Low	2109.90	-30.74
		High	2180.05	-26.64
3	QPSK	Low	2109.90	-28.68
		High	2180.05	-26.38
	16QAM	Low	2109.90	-29.54
		High	2180.05	-26.81
	64QAM	Low	2109.90	-29.58
		High	2180.05	-25.98
	256QAM	Low	2109.90	-28.22
		High	2180.05	-26.26

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.95	-30.29
		High	2 180.10	-20.93
	16QAM	Low	2 109.95	-29.48
		High	2 180.10	-24.67
	64QAM	Low	2 109.95	-30.24
		High	2 180.14	-20.94
	256QAM	Low	2 109.95	-31.29
		High	2 180.10	-22.79
1	QPSK	Low	2 109.95	-32.23
		High	2 180.10	-27.16
	16QAM	Low	2 109.95	-31.59
		High	2 180.10	-20.95
	64QAM	Low	2 109.95	-32.13
		High	2 180.10	-28.23
	256QAM	Low	2 109.95	-32.46
		High	2 180.10	-26.54
2	QPSK	Low	2 109.95	-33.92
		High	2 180.10	-25.96
	16QAM	Low	2 109.95	-32.64
		High	2 180.10	-26.27
	64QAM	Low	2 109.95	-32.92
		High	2 180.10	-25.74
	256QAM	Low	2 109.95	-33.28
		High	2 180.10	-25.91
3	QPSK	Low	2 109.95	-31.08
		High	2 180.10	-26.82
	16QAM	Low	2 109.95	-30.99
		High	2 180.10	-25.33
	64QAM	Low	2 109.95	-31.18
		High	2 180.10	-26.44
	256QAM	Low	2 109.95	-31.62
		High	2 180.10	-26.69

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.90	-27.86
		High	2 180.05	-27.01
	16QAM	Low	2 109.90	-27.63
		High	2 180.05	-25.61
	64QAM	Low	2 109.90	-28.01
		High	2 180.05	-28.29
	256QAM	Low	2 109.90	-26.99
		High	2 180.05	-27.39
1	QPSK	Low	2 109.90	-25.31
		High	2 180.05	-28.93
	16QAM	Low	2 109.90	-28.15
		High	2 180.05	-28.17
	64QAM	Low	2 109.90	-26.26
		High	2 180.05	-27.58
	256QAM	Low	2 109.90	-26.72
		High	2 180.05	-27.78
2	QPSK	Low	2 109.90	-30.46
		High	2 180.05	-24.82
	16QAM	Low	2 109.90	-31.46
		High	2 180.05	-28.46
	64QAM	Low	2 109.90	-30.78
		High	2 180.05	-25.96
	256QAM	Low	2 109.90	-28.72
		High	2 180.05	-25.85
3	QPSK	Low	2 109.88	-21.29
		High	2 180.05	-28.59
	16QAM	Low	2 109.90	-29.23
		High	2 180.05	-28.57
	64QAM	Low	2 109.90	-20.84
		High	2 180.05	-27.43
	256QAM	Low	2 109.90	-25.85
		High	2 180.05	-28.58

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][1C+2C]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.95	-32.25
		High	2 180.08	-27.20
	16QAM	Low	2 109.95	-33.82
		High	2 180.08	-25.29
	64QAM	Low	2 109.95	-32.60
		High	2 180.08	-26.04
	256QAM	Low	2 109.95	-32.77
		High	2 180.08	-26.45
1	QPSK	Low	2 109.95	-33.67
		High	2 180.08	-25.15
	16QAM	Low	2 109.95	-32.87
		High	2 180.08	-25.80
	64QAM	Low	2 109.95	-32.78
		High	2 180.34	-26.09
	256QAM	Low	2 109.95	-31.48
		High	2 180.08	-25.95
2	QPSK	Low	2 109.95	-33.77
		High	2 180.08	-28.16
	16QAM	Low	2 109.95	-34.71
		High	2 180.08	-27.84
	64QAM	Low	2 109.95	-32.64
		High	2 180.08	-27.83
	256QAM	Low	2 109.95	-32.93
		High	2 180.08	-26.31
3	QPSK	Low	2 109.95	-32.66
		High	2 180.08	-28.43
	16QAM	Low	2 109.95	-33.03
		High	2 180.08	-27.20
	64QAM	Low	2 109.95	-32.02
		High	2 180.08	-26.75
	256QAM	Low	2 109.95	-31.29
		High	2 180.08	-28.35

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	2 109.93	-29.44
		High	2 180.05	-28.70
	16QAM	Low	2 109.93	-31.06
		High	2 180.05	-27.07
	64QAM	Low	2 109.93	-31.42
		High	2 180.05	-28.96
	256QAM	Low	2 109.93	-31.68
		High	2 180.05	-29.62
1	QPSK	Low	2 109.93	-30.47
		High	2 180.05	-28.17
	16QAM	Low	2 109.93	-32.66
		High	2 180.05	-29.16
	64QAM	Low	2 109.93	-31.79
		High	2 180.05	-29.10
	256QAM	Low	2 109.93	-31.41
		High	2 180.05	-28.96
2	QPSK	Low	2 109.93	-33.46
		High	2 180.05	-27.95
	16QAM	Low	2 109.93	-35.70
		High	2 180.05	-27.63
	64QAM	Low	2 109.93	-33.86
		High	2 180.05	-28.46
	256QAM	Low	2 109.93	-33.25
		High	2 180.05	-28.80
3	QPSK	Low	2 109.93	-31.97
		High	2 180.05	-29.23
	16QAM	Low	2 109.93	-32.78
		High	2 180.05	-28.80
	64QAM	Low	2 109.93	-31.46
		High	2 180.05	-28.48
	256QAM	Low	2 109.93	-30.88
		High	2 180.05	-28.65

Tabular Data of Out-of-band Unwanted Emissions_Inter Band

LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + DSS B66 10M 1 Carrier [5 Carrier]
(PCS: 10 W/path, AWS: 30 W/path)

Ant.	Mod.	Channel	B2		B66	
			Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	1 929.98	-28.19	2 109.90	-30.47
		High	1 990.03	-27.89	2 180.05	-26.86
	16QAM	Low	1 929.98	-28.54	2 109.90	-30.55
		High	1 990.03	-29.37	2 180.05	-27.90
	64QAM	Low	1 929.98	-27.61	2 109.90	-31.40
		High	1 990.03	-27.65	2 180.05	-28.18
	256QAM	Low	1 929.96	-28.70	2 109.90	-31.52
		High	1 990.04	-29.14	2 180.05	-27.01
1	QPSK	Low	1 929.98	-28.49	2 109.90	-32.73
		High	1 990.03	-28.31	2 180.05	-27.21
	16QAM	Low	1 929.97	-27.79	2 109.90	-31.49
		High	1 990.03	-28.22	2 180.05	-29.29
	64QAM	Low	1 929.96	-28.44	2 109.90	-32.28
		High	1 990.03	-29.08	2 180.05	-27.12
	256QAM	Low	1 929.96	-29.03	2 109.90	-32.25
		High	1 990.04	-27.99	2 180.05	-27.80
2	QPSK	Low	1 929.97	-27.75	2 109.90	-34.16
		High	1 990.03	-28.66	2 180.05	-26.89
	16QAM	Low	1 929.96	-30.63	2 109.90	-30.49
		High	1 990.03	-30.83	2 180.05	-27.75
	64QAM	Low	1 929.98	-28.10	2 109.90	-32.09
		High	1 990.03	-28.30	2 180.05	-28.51
	256QAM	Low	1 929.98	-27.91	2 109.90	-32.89
		High	1 990.03	-29.29	2 180.05	-26.79
3	QPSK	Low	1 929.97	-27.84	2 109.90	-31.34
		High	1 990.03	-28.87	2 180.05	-27.44
	16QAM	Low	1 929.97	-29.25	2 109.90	-31.65
		High	1 990.03	-30.60	2 180.05	-27.66
	64QAM	Low	1 929.97	-27.81	2 109.90	-31.23
		High	1 990.03	-28.91	2 180.05	-26.27
	256QAM	Low	1 929.98	-26.93	2 109.90	-32.49
		High	1 990.04	-28.30	2 180.05	-28.53

LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + DSS B66 10M 1 Carrier [5 Carrier]
(PCS: 20 W/path, AWS: 20 W/path)

Ant.	Mod.	Channel	B2		B66	
			Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	1 929.98	-28.38	2 109.90	-32.81
		High	1 990.03	-27.97	2 180.05	-30.88
	16QAM	Low	1 929.98	-29.38	2 109.90	-29.95
		High	1 990.03	-28.58	2 180.05	-27.51
	64QAM	Low	1 929.98	-28.18	2 109.90	-31.96
		High	1 990.03	-29.80	2 180.05	-29.90
	256QAM	Low	1 929.97	-28.32	2 109.90	-30.27
		High	1 990.03	-28.09	2 180.05	-29.95
1	QPSK	Low	1 929.98	-26.73	2 109.90	-32.55
		High	1 990.03	-28.73	2 180.05	-32.03
	16QAM	Low	1 929.98	-27.63	2 109.90	-30.28
		High	1 990.03	-29.90	2 180.05	-26.62
	64QAM	Low	1 929.98	-28.22	2 109.90	-32.06
		High	1 990.05	-28.43	2 180.05	-30.87
	256QAM	Low	1 929.98	-29.56	2 109.90	-33.98
		High	1 990.03	-27.56	2 180.05	-31.81
2	QPSK	Low	1 929.98	-28.51	2 109.90	-33.60
		High	1 990.03	-27.14	2 180.05	-32.23
	16QAM	Low	1 929.98	-31.07	2 109.90	-32.92
		High	1 990.03	-28.44	2 180.05	-27.49
	64QAM	Low	1 929.98	-29.79	2 109.90	-33.35
		High	1 990.03	-29.02	2 180.05	-32.76
	256QAM	Low	1 929.96	-29.54	2 109.90	-32.53
		High	1 990.03	-28.83	2 180.05	-30.82
3	QPSK	Low	1 929.97	-28.20	2 109.90	-33.05
		High	1 990.03	-28.03	2 180.05	-30.76
	16QAM	Low	1 929.97	-29.92	2 109.90	-30.01
		High	1 990.03	-30.05	2 180.05	-30.02
	64QAM	Low	1 929.98	-28.80	2 109.90	-31.99
		High	1 990.03	-27.82	2 180.05	-29.97
	256QAM	Low	1 929.97	-27.42	2 109.90	-32.81
		High	1 990.03	-26.78	2 180.05	-30.26

LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier]
(PCS: 10 W/path, AWS: 30 W/path)

Ant.	Mod.	Channel	B2		B66	
			Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	1 929.98	-32.63	2 109.90	-30.92
		High	1 990.05	-28.42	2 180.05	-30.16
	16QAM	Low	1 929.98	-32.49	2 109.90	-29.88
		High	1 990.05	-29.22	2 180.05	-25.97
	64QAM	Low	1 929.98	-33.19	2 109.90	-30.91
		High	1 990.05	-28.17	2 180.05	-27.94
	256QAM	Low	1 929.98	-31.98	2 109.90	-30.20
		High	1 990.05	-30.16	2 180.05	-29.10
1	QPSK	Low	1 929.98	-31.77	2 109.90	-31.51
		High	1 990.05	-27.90	2 180.05	-29.81
	16QAM	Low	1 929.97	-33.48	2 109.90	-33.68
		High	1 990.05	-29.66	2 180.05	-26.39
	64QAM	Low	1 929.98	-32.00	2 109.90	-30.86
		High	1 990.05	-28.62	2 180.05	-29.65
	256QAM	Low	1 929.97	-31.24	2 109.90	-30.94
		High	1 990.05	-28.47	2 180.05	-29.83
2	QPSK	Low	1 929.98	-33.35	2 109.90	-32.77
		High	1 990.05	-27.39	2 180.05	-29.31
	16QAM	Low	1 929.97	-32.12	2 109.90	-32.86
		High	1 990.05	-30.93	2 180.05	-27.94
	64QAM	Low	1 929.98	-33.01	2 109.90	-32.64
		High	1 990.05	-30.85	2 180.05	-29.00
	256QAM	Low	1 929.98	-32.16	2 109.90	-33.00
		High	1 990.05	-29.45	2 180.05	-28.99
3	QPSK	Low	1 929.97	-32.62	2 109.90	-30.56
		High	1 990.05	-30.18	2 180.05	-29.84
	16QAM	Low	1 929.98	-33.49	2 109.90	-31.86
		High	1 990.05	-28.30	2 180.05	-26.19
	64QAM	Low	1 929.98	-31.84	2 109.90	-30.74
		High	1 990.05	-28.19	2 180.05	-29.60
	256QAM	Low	1 929.97	-32.85	2 109.90	-30.30
		High	1 990.05	-29.33	2 180.05	-30.59

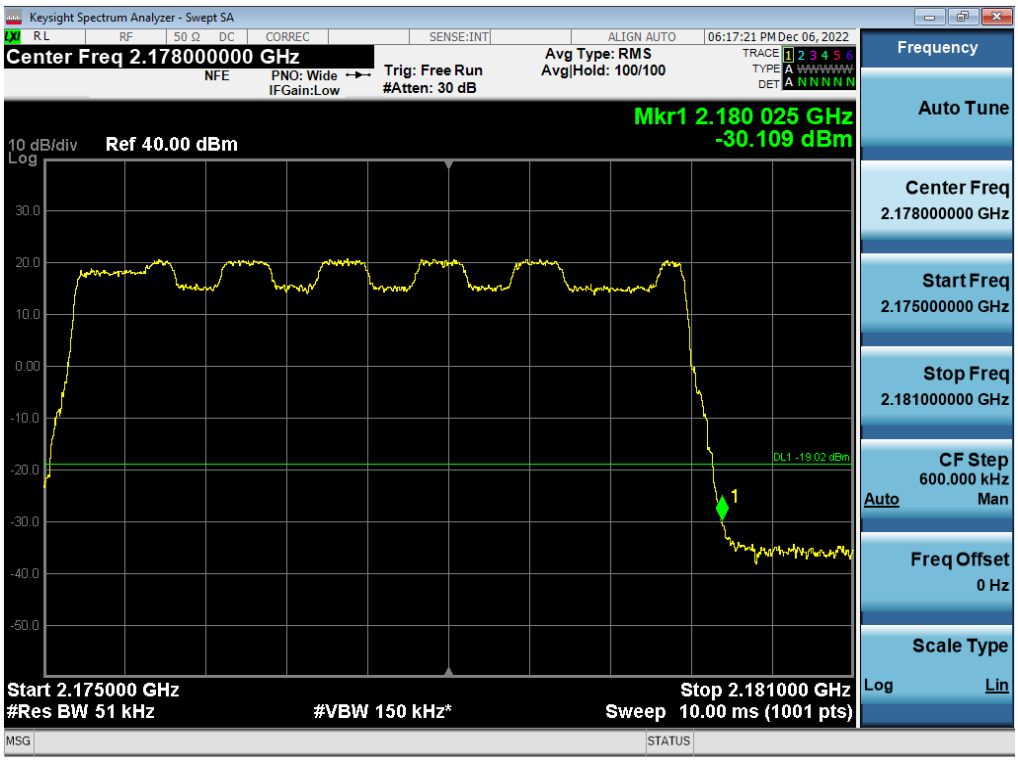
LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] (PCS: 20 W/path, AWS: 20 W/path)

Ant.	Mod.	Channel	B2		B66	
			Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	1 929.98	-31.72	2 109.90	-29.57
		High	1 990.05	-24.46	2 180.05	-30.29
	16QAM	Low	1 929.98	-32.15	2 109.90	-27.77
		High	1 990.05	-26.92	2 180.05	-29.70
	64QAM	Low	1 929.98	-32.28	2 109.90	-32.38
		High	1 990.05	-25.40	2 180.05	-29.38
	256QAM	Low	1 929.98	-31.52	2 109.90	-32.69
		High	1 990.05	-26.52	2 180.05	-29.36
1	QPSK	Low	1 929.98	-31.66	2 109.90	-32.62
		High	1 990.05	-25.84	2 180.05	-30.54
	16QAM	Low	1 929.98	-33.40	2 109.90	-30.69
		High	1 990.05	-25.15	2 180.05	-30.84
	64QAM	Low	1 929.98	-31.21	2 109.90	-31.91
		High	1 990.05	-25.94	2 180.05	-29.36
	256QAM	Low	1 929.98	-31.54	2 109.90	-32.20
		High	1 990.05	-25.13	2 180.05	-29.94
2	QPSK	Low	1 929.97	-32.09	2 109.90	-32.79
		High	1 990.05	-25.83	2 180.05	-30.88
	16QAM	Low	1 929.98	-34.14	2 109.90	-32.05
		High	1 990.05	-27.94	2 180.05	-31.38
	64QAM	Low	1 929.98	-32.36	2 109.90	-32.57
		High	1 990.05	-26.03	2 180.05	-30.44
	256QAM	Low	1 929.98	-31.60	2 109.90	-31.86
		High	1 990.05	-24.38	2 180.05	-31.63
3	QPSK	Low	1 929.98	-31.54	2 109.90	-31.13
		High	1 990.05	-26.99	2 180.05	-30.33
	16QAM	Low	1 929.98	-33.26	2 109.90	-31.46
		High	1 990.05	-27.26	2 180.05	-31.16
	64QAM	Low	1 929.97	-32.04	2 109.90	-30.96
		High	1 990.05	-26.88	2 180.05	-30.82
	256QAM	Low	1 929.98	-32.16	2 109.90	-31.88
		High	1 990.05	-26.63	2 180.05	-30.39

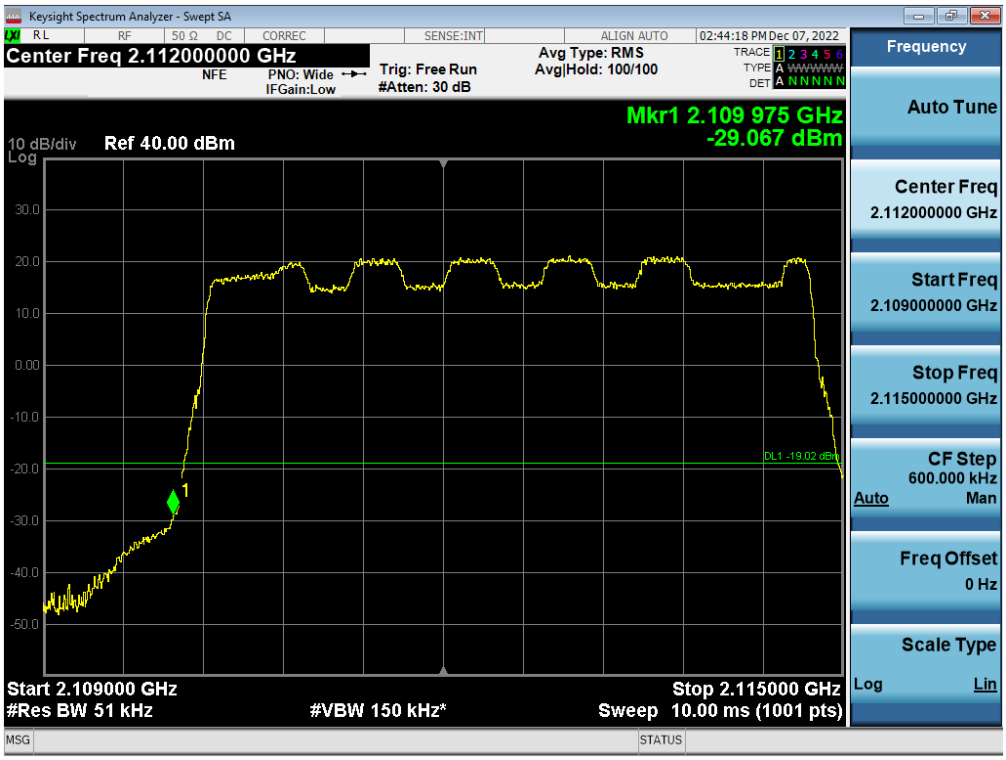
Plot Data of Out-of-band Unwanted Emissions

Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / QPSK / Low

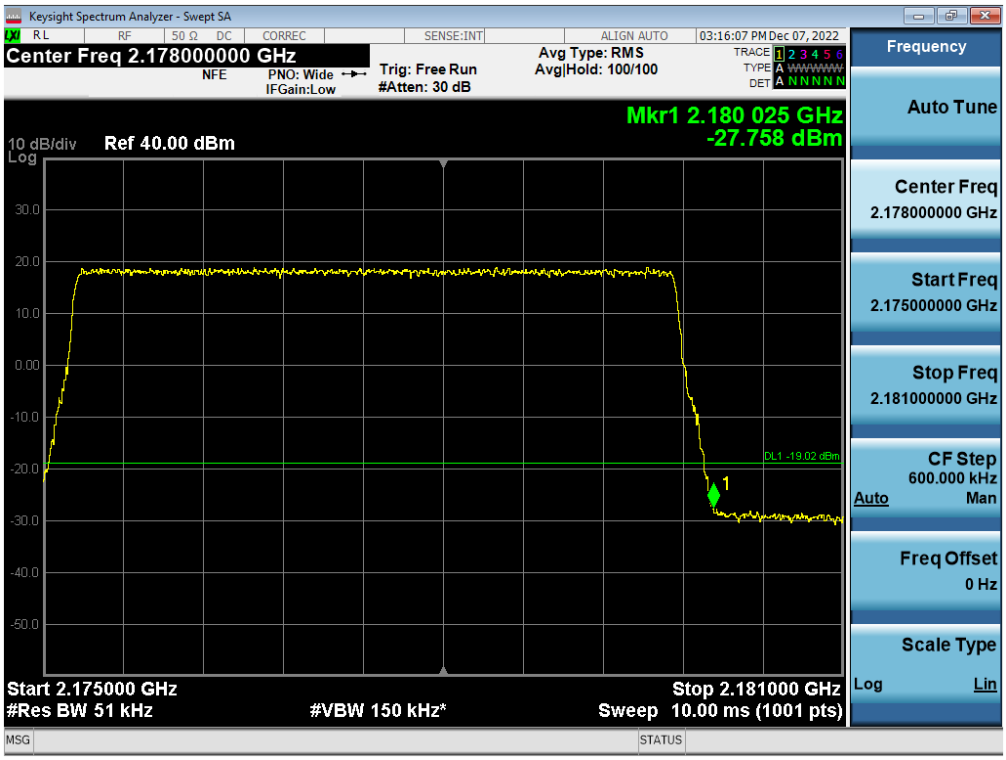
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / High



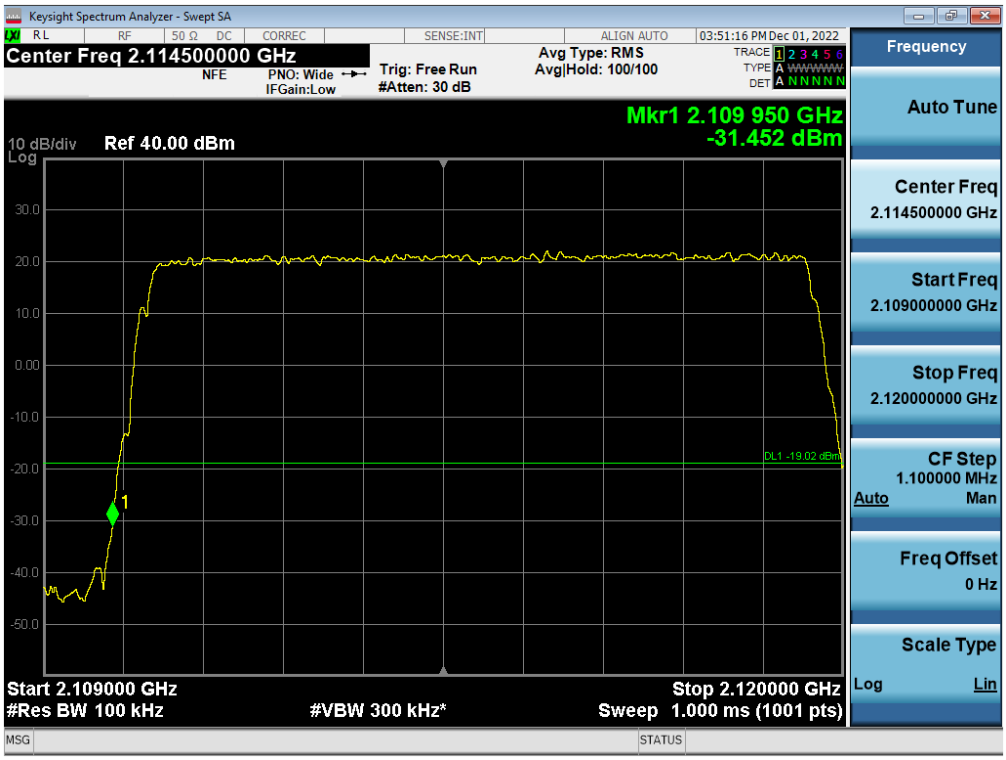
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Low



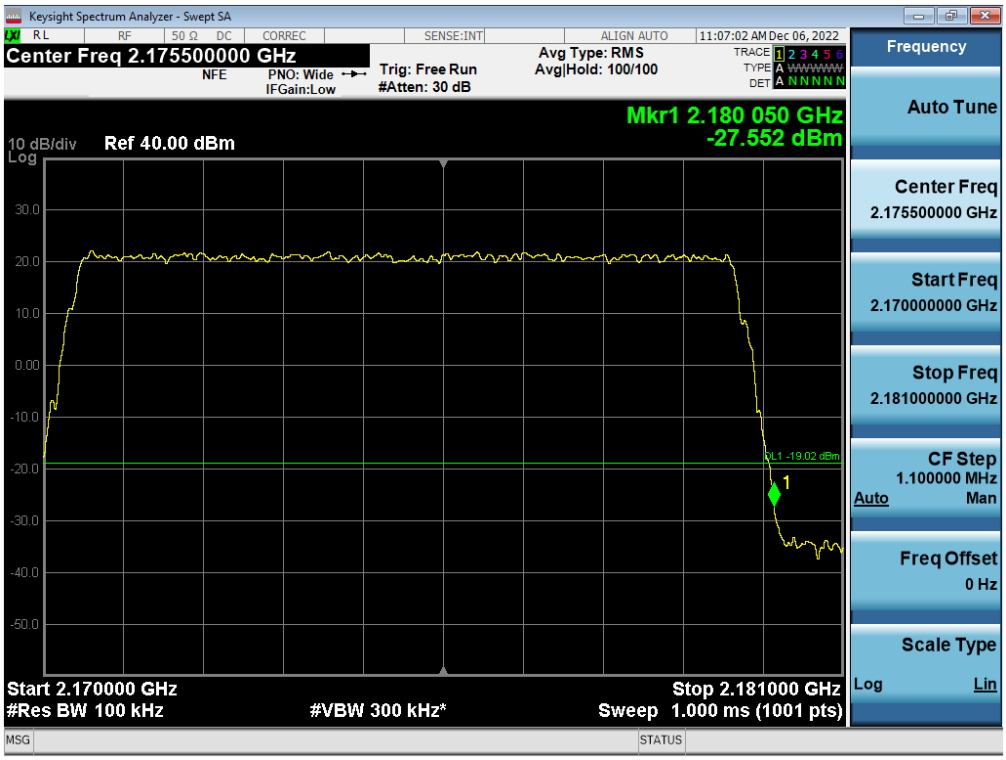
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / High



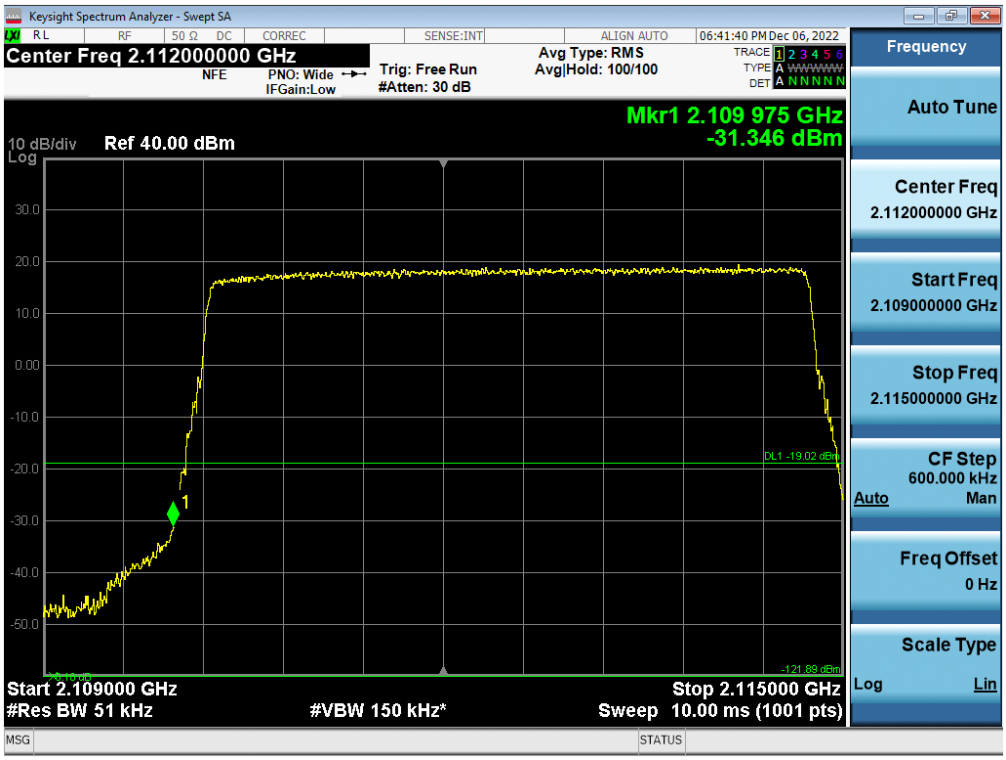
Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 256QAM / Low



Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / QPSK / High

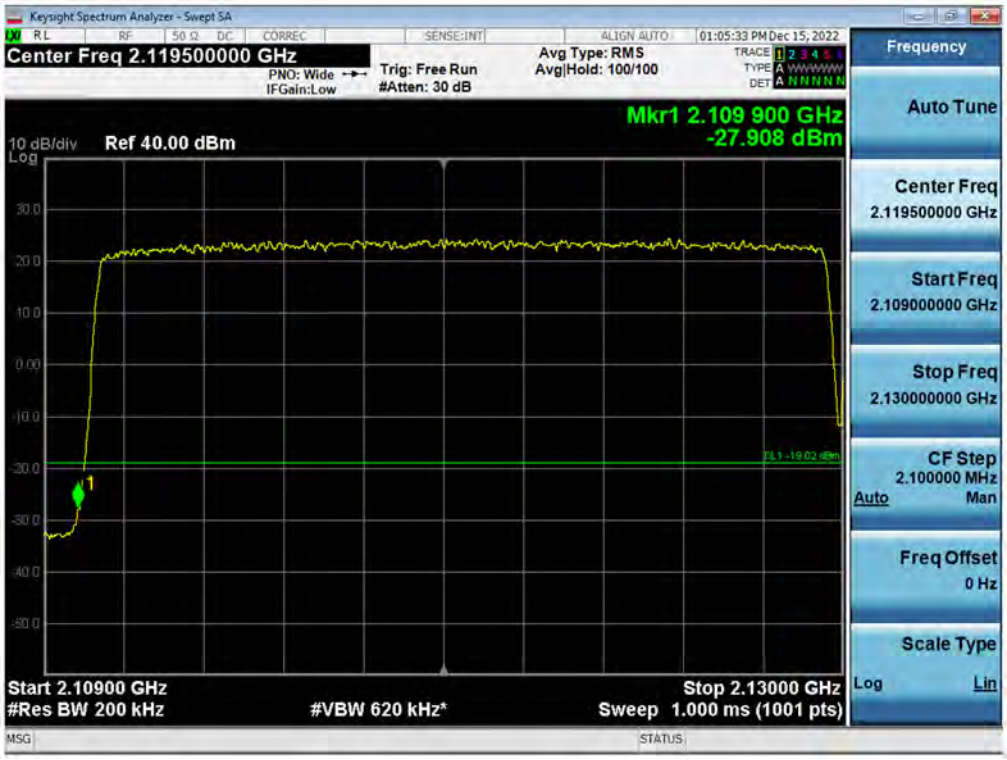


Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK / Low



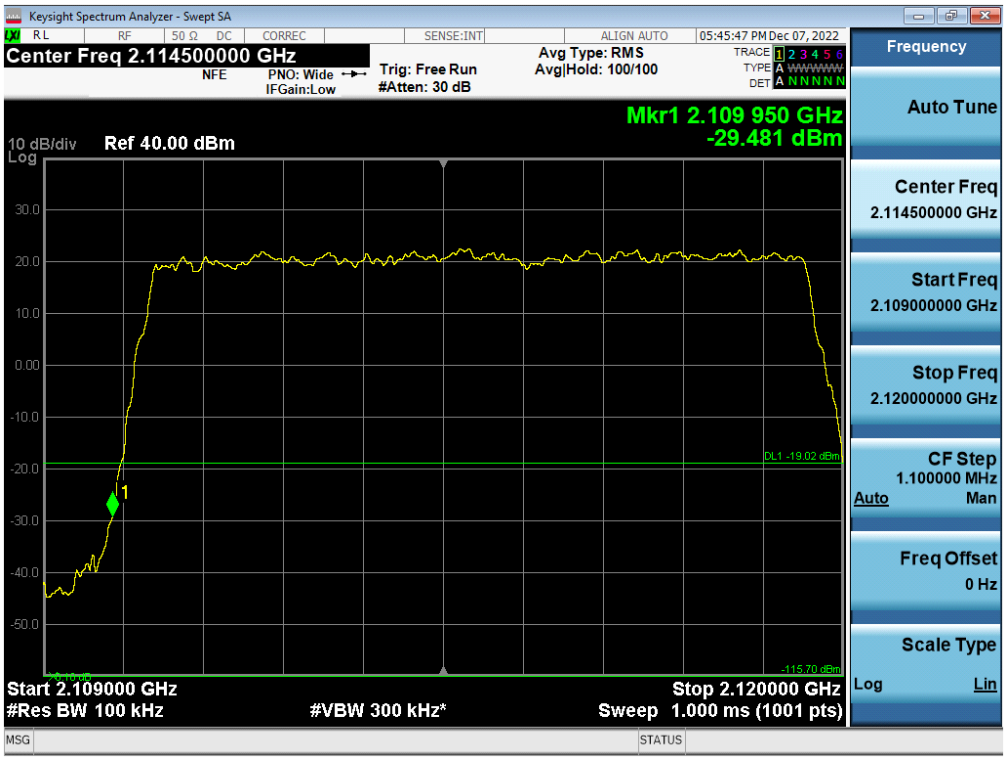
Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / 64QAM / High

Antenna 0 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / Non-Contiguous / 64QAM / Low



Antenna 1 / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / Non-Contiguous / 16QAM / High

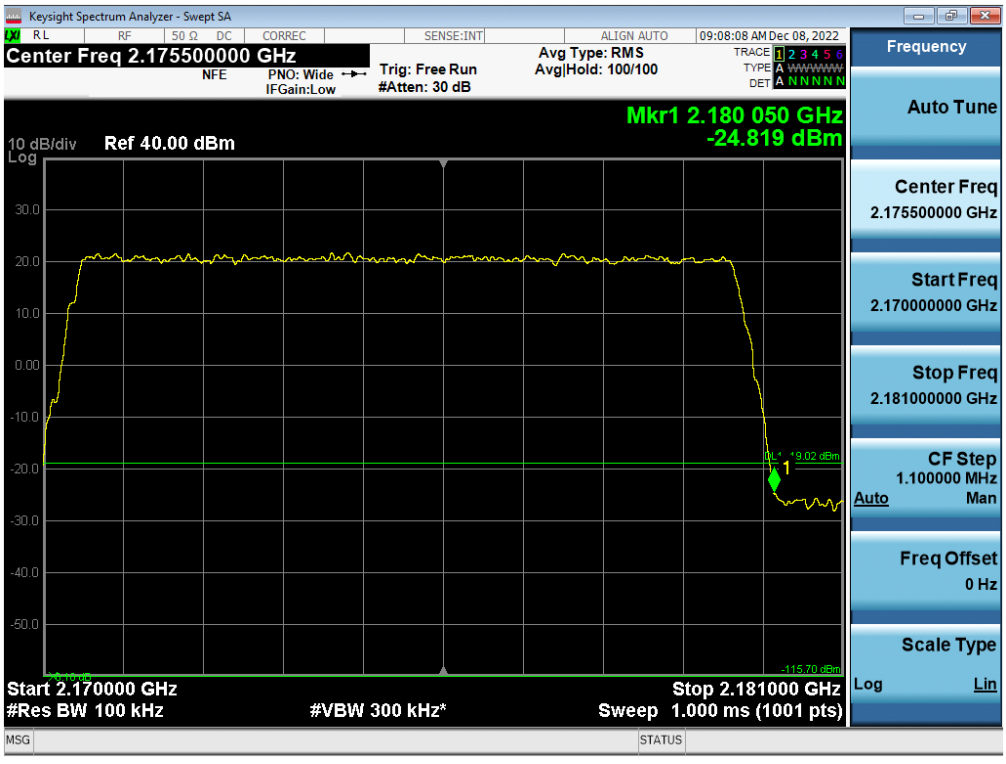
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / 16QAM / Low



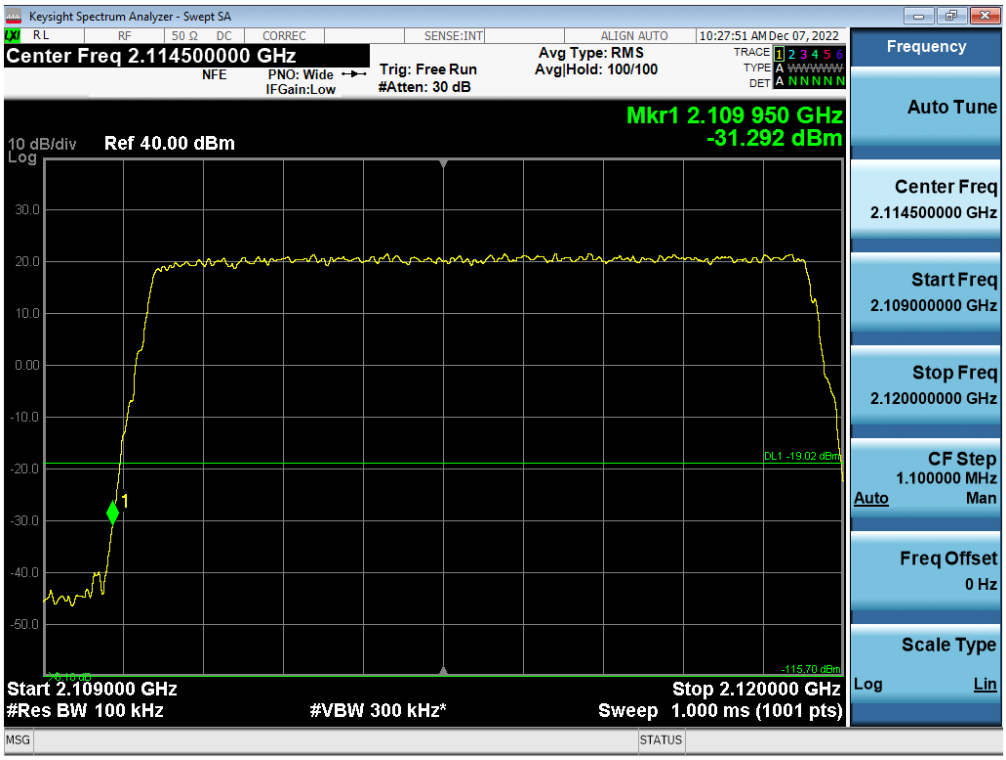
Antenna 0 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK / High

Antenna 3 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / Non-Contiguous / 64QAM / Low

Antenna 2 / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C] / Non-Contiguous / QPSK / High



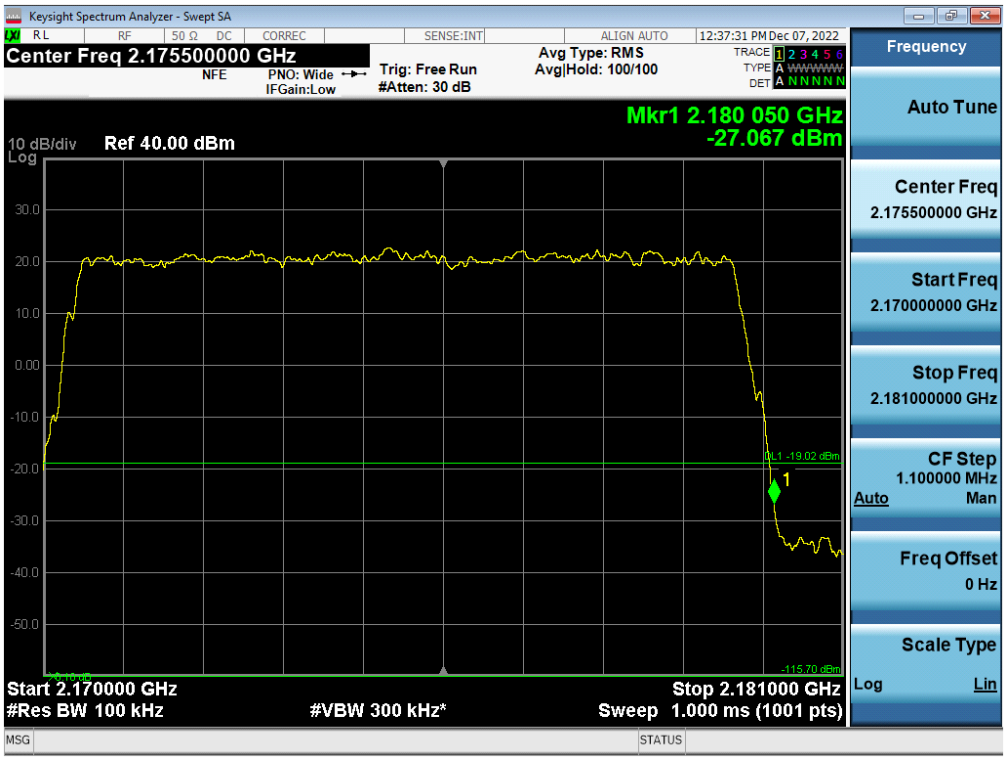
Antenna 3 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / 256QAM / Low



Antenna 1 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier + DSS B66 15M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK / High

Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / Non-Contiguous / QPSK / Low

Antenna 0 / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C] / Non-Contiguous / 16QAM / High



Antenna 3 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / 256QAM / Low

Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / 64QAM / High

Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / QPSK / Low

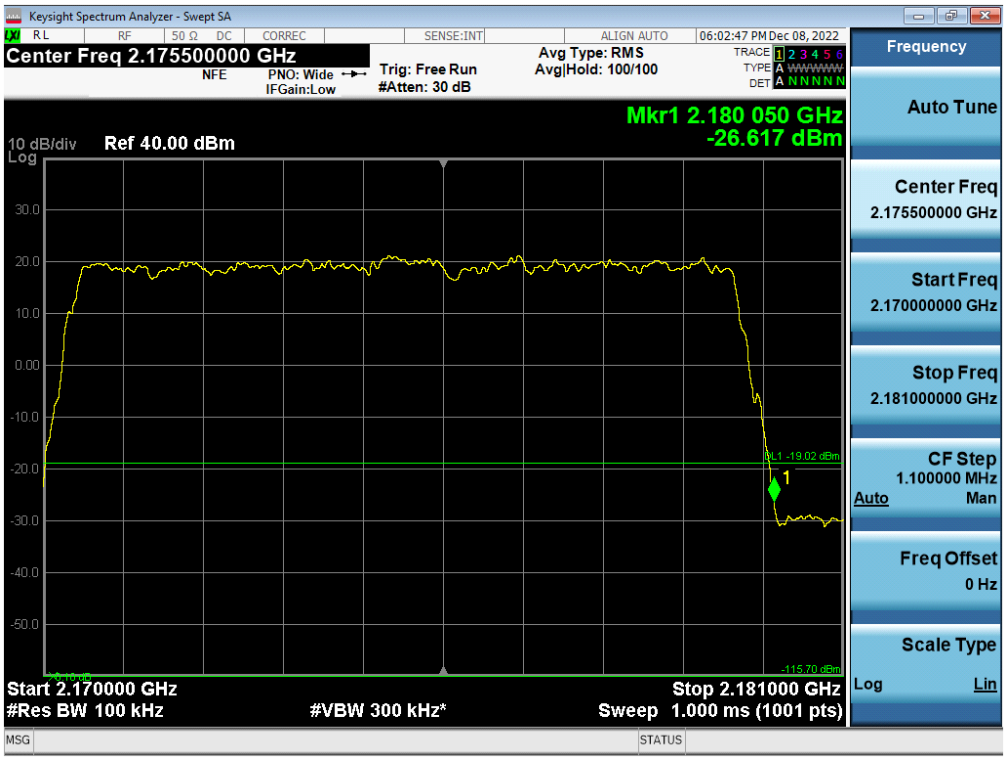
Antenna 3 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / 64QAM / High

Antenna 1 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / QPSK / Low

Antenna 3 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 256QAM / High

Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 16QAM / Low

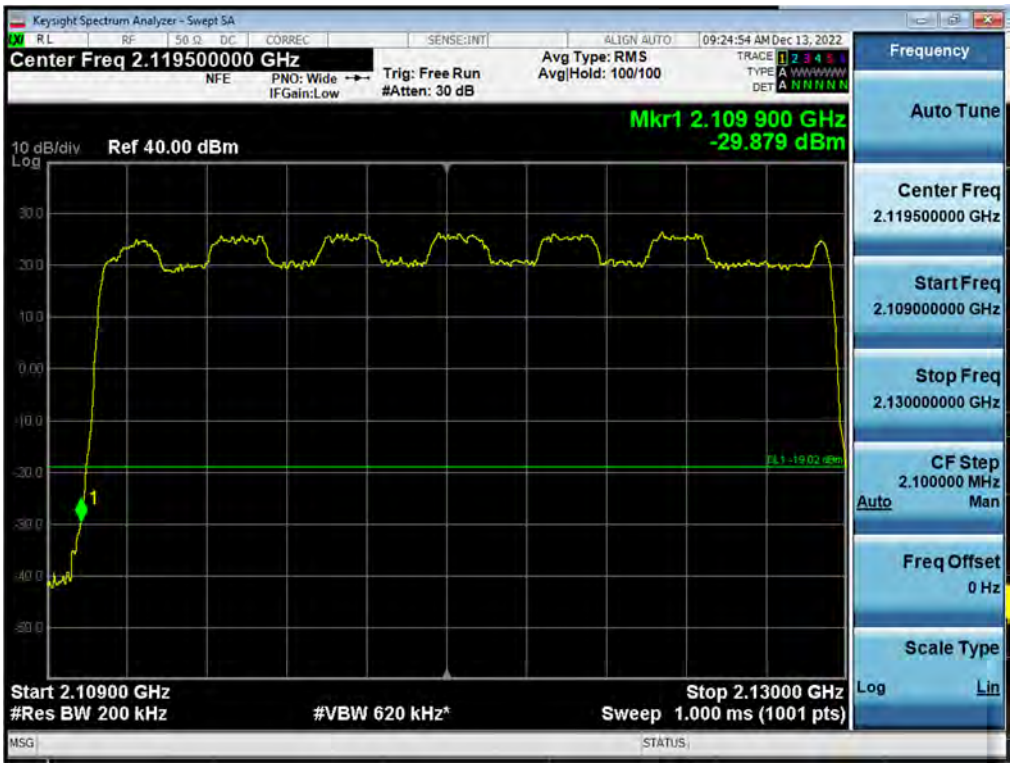
Antenna 1 / LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 16QAM / High



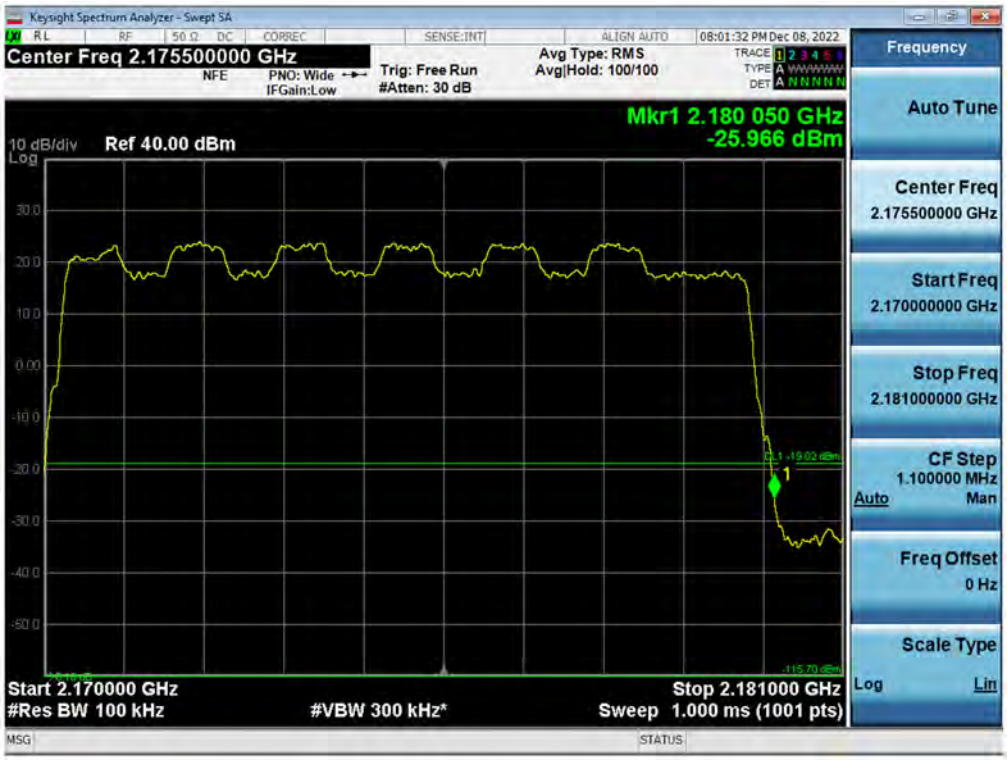
Antenna 1 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / 256QAM / Low

Antenna 2 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / QPSK / High

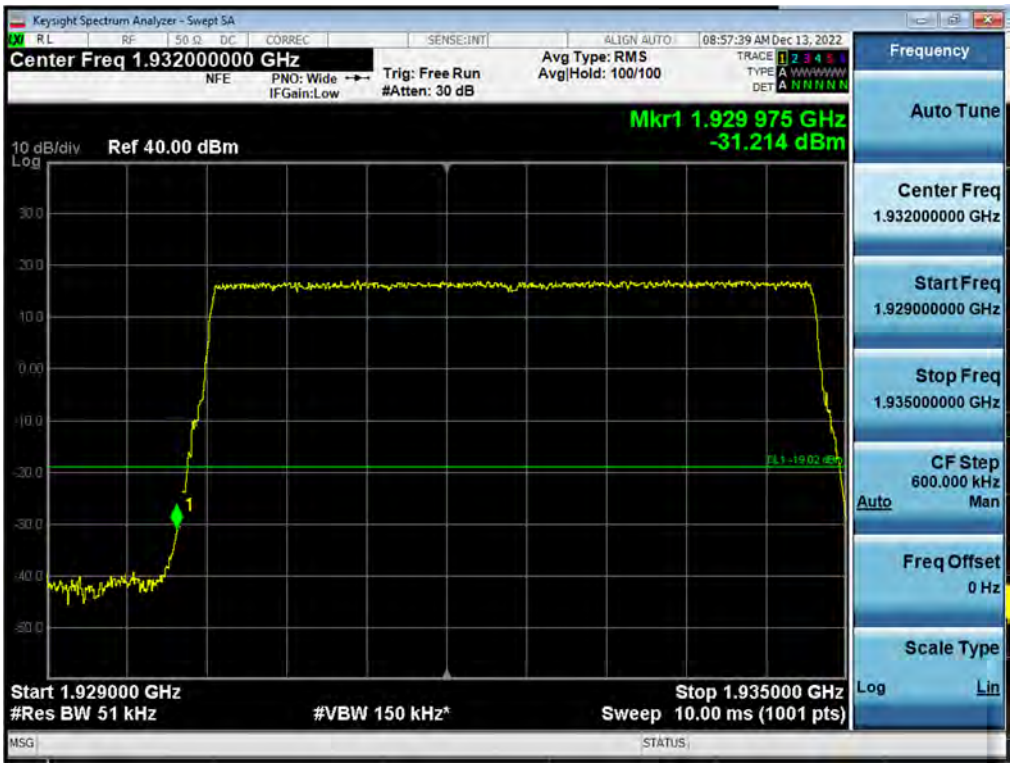
Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / 16QAM / Low



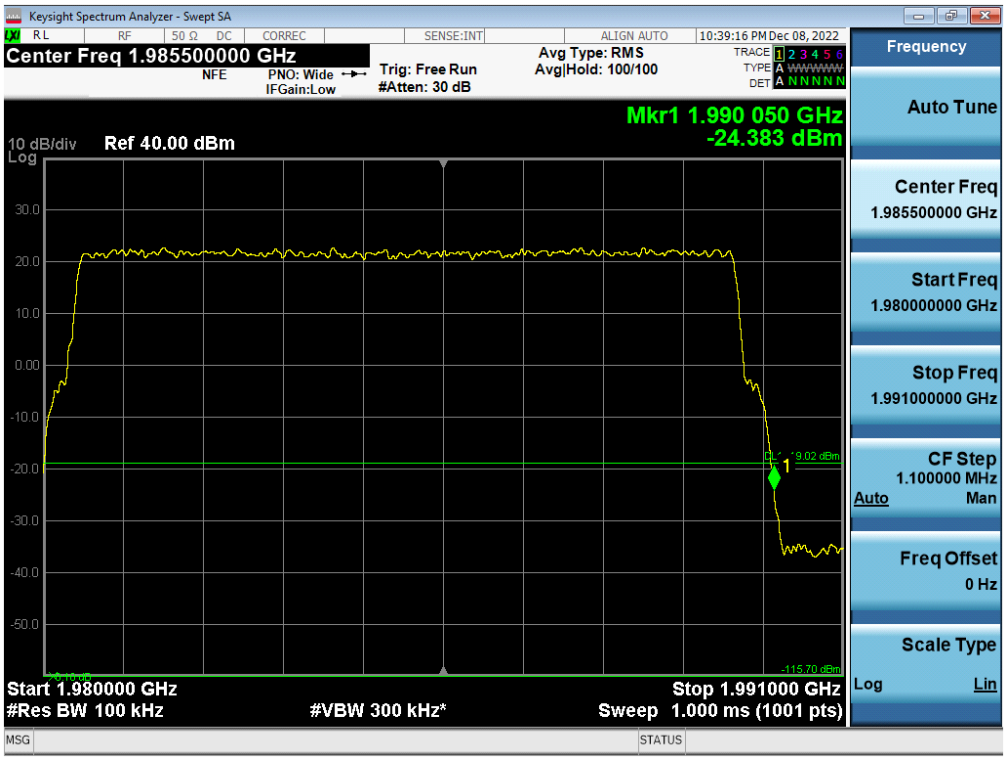
Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 10 W/path, AWS: 30 W/path) / 16QAM / High



Antenna 1 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 64QAM / Low

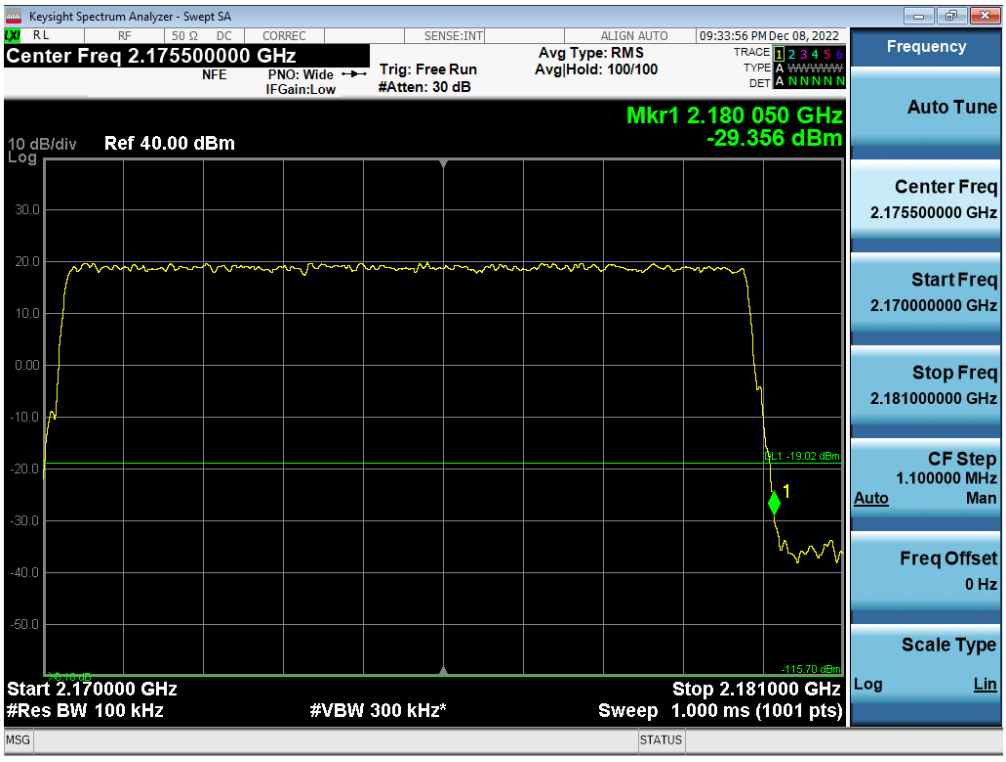


Antenna 2 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B2 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 256QAM / High



Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 16QAM / Low

Antenna 0 / LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] / B66 / Inter Band (PCS: 20 W/path, AWS: 20 W/path) / 256QAM / High



5.5. SPURIOUS UNWANTED EMISSIONS

Test Requirements:

§ 2.1051 Measurements required: Spurious emissions at antenna terminals.

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 24.238 Emission limitations for Broadband PCS equipment.

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The 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 26 dB below the transmitter power.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than

§ 27.53 Emission limits.

(h) AWS emission limits

(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.

(3) Measurement procedure.

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's

frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The 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 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

Test Procedures:

The measurement is performed in accordance with Section 5.7.4 of ANSI C63.26.

5.7.4 Spurious unwanted emission measurements

a) Set the spectrum analyzer start frequency to the lowest frequency generated by the EUT, without going below 9 kHz, and the stop frequency to the lower frequency covered by the measurements previously performed in 5.7.3. As an alternative, the stop frequency can be set to the value specified in 5.1.1, depending on the EUT operating range, if the resulting plot can clearly demonstrate compliance for all frequencies not addressed by the out-of-band emissions measurements performed as per 5.7.3.

b) When using an average power (rms) detector, ensure that the number of points in the sweep $\geq 2 \times$ (span / RBW). This may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the spectrum analyzer capabilities. This requirement does not apply to peak-detected power measurements. When average power is specified by the applicable regulation, a peak-detector can be utilized for preliminary measurements to accommodate wider frequency spans. Any emissions found in the preliminary measurement to exceed the applicable limit(s) shall be further examined using a power averaging (rms) detector with the minimum number of measurement points as defined above.

c) The sweep time should be set to auto-couple for performing peak-detector measurements. For measurements that use a power averaging (rms) detector, the sweep time shall be set as described for out-of-band emissions measurements in item d) of 5.7.3.

d) Identify and measure the Highest spurious emission levels in each frequency range. It is not necessary to re-measure the out-of-band emissions as a part of this test. Record the frequencies and amplitudes corresponding to the measured emissions and capture the data plots.

e) Repeat step b) through step d) for the upper spurious emission frequency range if not already captured by a wide span measurement performed as per the alternative provided in step a). The upper frequency for this measurement is defined in 5.1.1 as a function of the EUT operating range.

f) Compare the results with the corresponding limit in the applicable regulation.

g) The test report shall include the data plots of the measuring instrument display and the measured data.

Note:

1. In 9 kHz to 30 MHz band, RBW narrower than reference bandwidth is used. So following correction factor is applied.
   - 10 log [(reference bandwidth)/(resolution bandwidth)]

   : 9 kHz to 150 kHz applied 1 kHz RBW, 10 log (1 MHz / 1 kHz) = 30 dB

   : 150 kHz to 30 MHz applied 10 kHz RBW, 10 log (1 MHz / 10 kHz) = 20 dB

   : From Edge to Edge±100 MHz applied 100 kHz RBW, 10 log (1 MHz / 100 kHz) = 10 dB
2. Due to MIMO operations, a correction has been added to the limit according to KDB 662911 D01 v02r01.
   - 4Tx MIMO correction: 10 log(N_{ANT}) = 10 log(4) = 6.02 dB // -13 dBm – 10*log (4) = -19.02 dBm
3. The results of the Spurious Unwanted Emissions shown above the frequency measured values are very small and similar trend for each port, so we are attached only the worst case plot.

Test Results:
Tabular Data of Contiguous Spurious Unwanted Emissions

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]
Test Result for Output Port 0

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-28.912	-27.607	-44.112	-29.958	-26.345	-36.317	-32.151
	Middle	-26.153	-27.087	-44.047	-29.223	-24.885	-34.215	-32.005
	High	-29.172	-26.342	-43.907	-31.130	-23.302	-35.148	-32.982
16QAM	Low	-28.901	-26.866	-44.696	-29.035	-26.207	-36.273	-32.530
	Middle	-33.597	-28.050	-43.778	-28.855	-25.605	-36.720	-31.942
	High	-26.260	-27.221	-43.599	-31.048	-21.930	-34.760	-30.966
64QAM	Low	-26.581	-28.098	-43.549	-30.626	-27.111	-34.765	-30.871
	Middle	-28.300	-27.226	-42.539	-28.823	-26.017	-35.334	-32.004
	High	-28.484	-26.883	-43.861	-30.334	-23.837	-35.119	-31.991
256QAM	Low	-29.000	-26.331	-43.966	-30.587	-27.008	-35.832	-32.776
	Middle	-28.313	-27.173	-43.665	-29.165	-25.773	-35.385	-30.975
	High	-27.715	-26.458	-44.453	-30.322	-25.575	-34.709	-32.420

Test Result for Output Port 1

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-31.440	-27.158	-45.240	-31.449	-27.852	-35.657	-35.111
	Middle	-32.848	-28.184	-43.472	-27.939	-24.430	-35.028	-35.301
	High	-31.850	-27.876	-45.132	-31.397	-24.159	-33.308	-36.610
16QAM	Low	-31.237	-27.939	-45.041	-31.838	-27.979	-35.089	-34.820
	Middle	-35.071	-28.990	-45.026	-31.931	-27.476	-34.527	-37.767
	High	-32.158	-27.515	-45.185	-32.510	-25.702	-32.875	-35.068
64QAM	Low	-30.394	-28.433	-44.555	-31.169	-27.284	-35.667	-36.077
	Middle	-31.509	-28.198	-43.881	-26.329	-26.595	-34.608	-35.721
	High	-29.511	-29.039	-44.426	-32.643	-24.178	-32.817	-35.624
256QAM	Low	-31.438	-28.544	-44.620	-31.760	-27.177	-35.786	-36.184
	Middle	-31.436	-28.894	-44.656	-30.535	-24.259	-36.216	-34.238
	High	-35.109	-28.263	-44.285	-32.554	-24.342	-33.404	-36.283

Test Result for Output Port 2

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-29.450	-27.502	-45.032	-32.660	-29.205	-35.160	-26.411
	Middle	-29.885	-27.031	-45.081	-31.716	-27.940	-34.716	-26.428
	High	-31.443	-26.807	-45.039	-31.767	-25.918	-34.251	-26.995
16QAM	Low	-30.449	-27.348	-44.972	-31.275	-28.076	-35.086	-26.500
	Middle	-29.570	-27.397	-44.120	-32.416	-28.550	-35.721	-28.131
	High	-30.489	-27.670	-44.881	-32.460	-26.940	-34.333	-26.937
64QAM	Low	-30.535	-26.691	-44.511	-31.364	-29.892	-34.616	-26.168
	Middle	-30.584	-28.285	-44.702	-31.953	-28.396	-34.636	-25.625
	High	-31.423	-27.596	-43.960	-32.491	-26.504	-34.353	-26.672
256QAM	Low	-30.932	-26.477	-44.763	-31.247	-28.942	-34.671	-27.197
	Middle	-30.197	-27.875	-45.540	-32.853	-28.415	-34.451	-24.496
	High	-32.970	-27.128	-43.664	-31.865	-26.370	-35.100	-25.971

Test Result for Output Port 3

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-33.450	-27.946	-43.676	-31.621	-28.705	-34.783	-30.651
	Middle	-31.483	-26.595	-44.655	-31.916	-27.793	-34.376	-31.164
	High	-33.863	-27.550	-44.001	-31.521	-25.741	-34.957	-32.472
16QAM	Low	-32.423	-27.595	-43.987	-31.716	-28.999	-35.283	-30.596
	Middle	-32.013	-27.527	-43.174	-31.052	-28.945	-35.332	-32.251
	High	-33.404	-27.823	-43.082	-31.371	-27.181	-35.134	-29.508
64QAM	Low	-28.779	-27.810	-44.375	-32.098	-28.266	-35.393	-30.787
	Middle	-31.977	-26.279	-43.807	-31.963	-28.248	-34.970	-30.917
	High	-34.448	-27.094	-44.679	-31.094	-26.462	-34.603	-32.557
256QAM	Low	-31.210	-27.119	-44.329	-31.400	-27.787	-35.663	-30.528
	Middle	-32.609	-27.217	-45.092	-30.484	-27.323	-35.009	-30.913
	High	-31.827	-27.713	-44.881	-30.529	-26.640	-34.953	-31.246

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier]
Test Result for Output Port 0

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-27.993	-25.974	-44.606	-26.457	-22.668	-36.019	-32.973
	Middle	-26.561	-26.026	-43.802	-27.327	-22.791	-36.182	-33.153
	High	-27.868	-26.674	-43.978	-29.438	-22.393	-35.488	-32.404
16QAM	Low	-26.484	-27.520	-44.671	-27.662	-25.280	-35.243	-32.468
	Middle	-27.359	-27.059	-44.177	-23.573	-20.771	-35.438	-33.031
	High	-26.792	-27.409	-44.174	-29.596	-23.782	-33.674	-32.713
64QAM	Low	-30.341	-27.141	-44.063	-27.816	-23.167	-35.951	-30.243
	Middle	-28.672	-26.874	-42.658	-27.495	-22.743	-36.117	-32.334
	High	-27.936	-26.965	-43.409	-29.655	-22.122	-35.637	-32.878
256QAM	Low	-27.792	-27.405	-43.632	-28.236	-23.376	-35.752	-31.209
	Middle	-26.760	-27.012	-42.607	-27.542	-22.547	-35.653	-32.542
	High	-26.278	-26.954	-43.396	-28.235	-21.898	-35.675	-32.007

Test Result for Output Port 1

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-32.523	-28.514	-45.448	-31.503	-25.718	-36.217	-35.822
	Middle	-32.397	-28.108	-45.340	-31.336	-24.701	-34.873	-35.727
	High	-32.350	-28.208	-43.949	-30.115	-23.525	-34.002	-36.720
16QAM	Low	-28.947	-27.738	-44.309	-30.342	-26.686	-36.075	-35.567
	Middle	-29.964	-28.444	-44.297	-29.727	-21.352	-33.981	-36.079
	High	-28.468	-27.900	-44.555	-28.718	-21.184	-32.586	-36.653
64QAM	Low	-31.839	-27.974	-45.335	-32.156	-26.016	-35.351	-34.968
	Middle	-32.484	-27.360	-43.981	-30.340	-24.908	-34.883	-35.324
	High	-32.156	-28.671	-44.876	-30.174	-23.888	-34.355	-35.837
256QAM	Low	-30.893	-27.201	-45.085	-30.878	-25.927	-35.144	-35.908
	Middle	-31.191	-27.593	-44.982	-29.860	-26.703	-34.494	-36.405
	High	-33.283	-27.712	-44.406	-29.717	-23.942	-33.626	-36.238

Test Result for Output Port 2

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-30.413	-27.531	-43.981	-30.633	-27.651	-34.893	-25.875
	Middle	-30.285	-26.286	-44.723	-31.908	-28.071	-35.694	-25.335
	High	-31.197	-27.867	-44.986	-32.563	-25.007	-33.227	-25.877
16QAM	Low	-30.733	-27.814	-44.318	-30.873	-27.946	-34.856	-24.914
	Middle	-30.929	-26.586	-43.925	-29.680	-23.379	-34.847	-27.756
	High	-34.005	-27.204	-44.170	-31.999	-23.002	-34.214	-25.431
64QAM	Low	-28.676	-27.360	-44.674	-30.594	-24.192	-35.150	-27.274
	Middle	-29.512	-27.233	-43.770	-31.515	-28.241	-35.530	-27.273
	High	-28.244	-27.906	-43.959	-31.777	-25.083	-33.637	-25.936
256QAM	Low	-30.858	-26.562	-44.270	-29.338	-24.830	-35.660	-25.141
	Middle	-30.394	-26.543	-44.559	-32.104	-27.782	-33.850	-26.317
	High	-27.731	-27.548	-43.468	-32.047	-25.776	-34.754	-26.731

Test Result for Output Port 3

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-28.959	-28.078	-44.516	-31.146	-25.111	-35.283	-31.938
	Middle	-29.817	-28.107	-42.852	-26.132	-22.487	-35.421	-32.126
	High	-31.686	-27.816	-44.571	-31.205	-26.653	-33.759	-28.251
16QAM	Low	-30.213	-28.372	-42.754	-29.326	-22.373	-35.276	-30.259
	Middle	-31.831	-28.068	-43.719	-27.632	-24.673	-34.546	-30.574
	High	-31.250	-27.606	-42.893	-31.691	-24.899	-33.458	-31.178
64QAM	Low	-30.083	-27.754	-44.144	-31.115	-25.894	-36.365	-31.360
	Middle	-30.403	-27.026	-43.875	-28.285	-22.438	-35.383	-30.771
	High	-31.478	-28.097	-43.276	-31.679	-26.106	-33.380	-31.251
256QAM	Low	-31.483	-26.619	-44.222	-32.159	-25.800	-35.066	-31.101
	Middle	-27.997	-27.191	-44.334	-27.017	-22.582	-35.256	-31.188
	High	-31.736	-27.731	-43.620	-31.865	-26.087	-35.155	-31.713

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier]
Test Result for Output Port 0

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-25.149	-27.238	-43.088	-30.638	-26.475	-36.361	-33.051
	Middle	-27.396	-26.402	-43.904	-30.935	-24.808	-35.614	-32.203
	High	-28.422	-26.498	-44.469	-30.091	-23.123	-35.377	-31.596
16QAM	Low	-24.329	-27.078	-43.676	-31.073	-27.151	-35.594	-32.900
	Middle	-27.990	-26.891	-44.664	-31.668	-25.898	-35.932	-32.197
	High	-27.891	-27.367	-44.210	-30.533	-24.639	-34.179	-30.974
64QAM	Low	-28.217	-27.165	-42.865	-30.726	-26.059	-35.059	-30.582
	Middle	-26.746	-26.040	-43.198	-30.392	-25.912	-36.054	-31.621
	High	-26.556	-26.419	-43.413	-29.523	-21.750	-34.737	-32.545
256QAM	Low	-25.539	-27.247	-43.525	-30.957	-27.236	-35.795	-31.867
	Middle	-28.900	-26.893	-44.518	-31.008	-26.473	-35.461	-32.625
	High	-29.975	-27.700	-43.443	-29.024	-21.301	-34.421	-31.332

Test Result for Output Port 1

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-28.997	-28.262	-45.230	-32.536	-24.961	-35.842	-36.202
	Middle	-31.269	-27.680	-45.098	-31.310	-27.403	-34.595	-37.382
	High	-30.585	-28.432	-44.668	-32.302	-25.212	-34.072	-36.482
16QAM	Low	-29.401	-28.231	-44.798	-31.867	-28.262	-34.939	-36.599
	Middle	-30.038	-27.465	-44.947	-25.739	-22.171	-36.654	-35.462
	High	-29.541	-28.081	-45.746	-31.652	-24.853	-33.101	-36.000
64QAM	Low	-29.034	-28.411	-44.326	-32.082	-27.826	-36.370	-35.566
	Middle	-29.802	-27.638	-44.383	-31.692	-27.294	-34.224	-35.886
	High	-32.279	-28.506	-44.602	-31.012	-26.339	-32.513	-36.372
256QAM	Low	-29.868	-28.527	-45.625	-32.304	-29.347	-36.193	-37.271
	Middle	-30.329	-27.610	-44.435	-32.037	-26.148	-34.735	-36.625
	High	-32.406	-27.497	-45.294	-30.641	-25.484	-32.319	-37.492

Test Result for Output Port 2

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-29.601	-26.881	-43.447	-32.463	-28.289	-35.675	-26.164
	Middle	-30.586	-27.386	-45.190	-32.175	-27.297	-34.666	-25.095
	High	-28.862	-26.649	-44.721	-31.621	-27.068	-35.638	-26.517
16QAM	Low	-31.423	-27.704	-45.120	-32.288	-28.041	-34.924	-26.603
	Middle	-29.893	-27.791	-45.221	-32.017	-28.293	-35.066	-25.400
	High	-30.079	-27.067	-43.213	-31.176	-26.632	-34.076	-26.080
64QAM	Low	-29.991	-26.792	-45.299	-32.675	-28.730	-35.237	-25.559
	Middle	-30.188	-26.885	-44.323	-31.018	-27.338	-35.325	-26.997
	High	-32.937	-26.074	-44.791	-32.039	-26.080	-34.844	-27.380
256QAM	Low	-28.839	-26.978	-45.156	-32.277	-28.121	-34.989	-26.944
	Middle	-32.771	-27.056	-45.075	-30.993	-27.696	-35.041	-26.843
	High	-32.607	-26.726	-44.767	-31.576	-27.281	-34.676	-26.916

Test Result for Output Port 3

Mod.	Channel	Measured Level (dBm)						
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	Low	-31.827	-28.472	-44.191	-32.097	-28.143	-35.827	-29.710
	Middle	-32.086	-27.737	-44.373	-30.448	-26.321	-35.231	-29.745
	High	-34.699	-27.491	-43.955	-31.333	-25.581	-34.217	-28.967
16QAM	Low	-31.942	-26.923	-44.931	-31.749	-29.576	-35.341	-30.998
	Middle	-29.654	-26.811	-43.216	-30.952	-26.453	-35.340	-30.558
	High	-34.073	-26.615	-43.862	-31.250	-26.750	-33.705	-32.303
64QAM	Low	-30.870	-28.092	-44.464	-31.614	-27.201	-35.808	-30.919
	Middle	-31.437	-27.442	-44.446	-31.848	-25.428	-35.398	-30.975
	High	-33.913	-27.483	-44.422	-30.695	-25.932	-34.645	-31.667
256QAM	Low	-30.451	-27.117	-44.635	-31.270	-28.634	-35.793	-28.849
	Middle	-32.804	-27.400	-43.889	-30.662	-26.005	-34.436	-30.944
	High	-34.313	-27.271	-43.698	-31.284	-26.025	-34.518	-30.149

Tabular Data of Non-Contiguous Spurious Unwanted Emissions

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Test Result for Output Port 0

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.489	-27.965	-44.025	-29.395	-20.226	-33.236	-32.411
16QAM	-29.576	-27.363	-44.627	-31.649	-23.427	-32.724	-30.292
64QAM	-29.843	-26.695	-44.204	-29.761	-21.362	-33.176	-30.797
256QAM	-29.540	-25.740	-43.701	-30.405	-22.433	-32.854	-31.640

Test Result for Output Port 1

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-32.649	-27.854	-44.894	-31.870	-23.015	-33.367	-36.176
16QAM	-30.524	-28.081	-44.966	-31.850	-25.202	-32.783	-35.918
64QAM	-33.063	-28.095	-42.655	-31.823	-25.001	-33.262	-36.004
256QAM	-31.648	-28.013	-44.477	-32.009	-25.426	-32.440	-36.523

Test Result for Output Port 2

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.766	-26.850	-44.418	-32.276	-25.401	-32.350	-26.344
16QAM	-29.656	-26.640	-44.668	-31.286	-25.203	-32.060	-27.649
64QAM	-28.897	-27.464	-44.462	-32.501	-25.555	-32.364	-27.462
256QAM	-32.736	-27.345	-43.704	-32.195	-25.037	-32.359	-26.605

Test Result for Output Port 3

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-28.533	-27.644	-43.673	-30.730	-25.400	-32.169	-30.006
16QAM	-31.520	-27.935	-43.054	-31.231	-24.853	-31.977	-31.496
64QAM	-30.738	-27.574	-43.752	-31.355	-24.873	-32.510	-30.584
256QAM	-31.859	-26.918	-44.133	-31.593	-24.329	-32.448	-29.715

NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Test Result for Output Port 0

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-26.416	-26.520	-43.050	-29.178	-22.381	-32.734	-33.095
16QAM	-27.826	-27.264	-42.527	-28.492	-22.080	-33.141	-32.456
64QAM	-27.520	-27.589	-42.115	-30.305	-24.175	-33.016	-32.527
256QAM	-26.364	-27.597	-43.555	-31.040	-23.682	-33.094	-32.051

Test Result for Output Port 1

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.982	-28.680	-40.990	-32.297	-24.716	-33.173	-36.914
16QAM	-31.634	-28.645	-41.747	-30.888	-23.437	-33.063	-35.734
64QAM	-28.600	-28.288	-41.347	-32.551	-25.314	-33.526	-36.137
256QAM	-30.304	-27.960	-42.073	-32.383	-24.111	-33.306	-36.248

Test Result for Output Port 2

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.226	-27.375	-43.259	-31.669	-25.230	-32.094	-26.450
16QAM	-29.038	-27.642	-41.682	-31.815	-25.664	-32.053	-27.425
64QAM	-28.985	-27.483	-41.107	-31.974	-25.747	-32.268	-27.403
256QAM	-29.331	-27.276	-40.802	-32.173	-25.612	-31.897	-27.156

Test Result for Output Port 3

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-28.054	-27.535	-41.524	-30.801	-25.430	-32.447	-31.169
16QAM	-35.285	-27.743	-41.959	-31.776	-25.614	-32.565	-31.335
64QAM	-32.052	-26.460	-42.926	-32.362	-25.117	-32.318	-32.090
256QAM	-32.790	-26.537	-42.829	-31.299	-24.206	-32.584	-31.147

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C]

Test Result for Output Port 0

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-26.921	-27.872	-44.813	-28.802	-21.307	-33.407	-31.836
16QAM	-29.691	-26.795	-44.327	-29.969	-22.036	-32.775	-33.381
64QAM	-27.539	-25.888	-44.527	-31.594	-22.426	-32.814	-32.171
256QAM	-29.351	-27.180	-41.917	-30.649	-22.654	-33.338	-31.486

Test Result for Output Port 1

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.399	-28.604	-43.706	-30.180	-23.569	-33.576	-36.023
16QAM	-32.316	-28.329	-44.235	-22.006	-23.777	-32.908	-34.316
64QAM	-32.280	-27.855	-43.352	-31.465	-24.283	-33.402	-35.894
256QAM	-31.750	-27.307	-43.885	-31.880	-24.409	-33.400	-35.061

Test Result for Output Port 2

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-28.180	-26.688	-44.127	-30.810	-24.010	-32.400	-25.843
16QAM	-27.985	-27.000	-43.050	-31.662	-23.434	-31.505	-24.893
64QAM	-28.403	-26.852	-43.807	-31.964	-23.902	-32.117	-25.432
256QAM	-30.402	-25.185	-43.070	-32.242	-25.566	-31.672	-27.251

Test Result for Output Port 3

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.242	-28.030	-43.184	-31.659	-23.379	-32.567	-30.752
16QAM	-32.137	-27.525	-44.210	-31.291	-21.579	-32.478	-30.251
64QAM	-35.025	-28.259	-43.559	-31.194	-23.466	-32.528	-30.955
256QAM	-30.482	-27.955	-43.819	-30.638	-23.255	-32.173	-32.454

DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][2C+1C]

Test Result for Output Port 0

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-27.008	-26.724	-44.138	-30.677	-24.692	-33.142	-31.670
16QAM	-25.900	-26.829	-43.645	-28.232	-22.830	-32.985	-31.430
64QAM	-27.857	-26.420	-42.754	-31.097	-24.927	-32.759	-31.141
256QAM	-28.584	-27.268	-43.836	-31.387	-23.988	-32.816	-31.680

Test Result for Output Port 1

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.621	-28.744	-43.727	-31.636	-25.482	-33.536	-35.901
16QAM	-30.881	-28.219	-42.297	-29.594	-25.220	-33.186	-35.941
64QAM	-32.894	-27.951	-42.944	-32.499	-26.440	-32.032	-36.582
256QAM	-29.665	-28.476	-43.337	-31.981	-26.333	-32.965	-34.467

Test Result for Output Port 2

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-28.605	-27.350	-43.352	-31.272	-22.310	-31.707	-26.035
16QAM	-30.780	-27.207	-43.869	-32.646	-25.336	-32.174	-27.112
64QAM	-30.308	-27.188	-43.343	-30.973	-23.931	-31.997	-26.719
256QAM	-29.290	-27.504	-43.135	-30.468	-23.276	-32.150	-27.217

Test Result for Output Port 3

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-32.722	-26.631	-44.061	-31.921	-25.197	-32.194	-30.525
16QAM	-31.572	-27.817	-43.617	-31.381	-24.479	-32.891	-29.749
64QAM	-32.205	-26.944	-43.996	-31.682	-25.274	-32.083	-30.040
256QAM	-32.669	-27.202	-43.512	-30.613	-24.981	-32.173	-31.132

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][1C+2C]

Test Result for Output Port 0

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-25.984	-27.445	-43.794	-30.645	-22.864	-32.098	-32.142
16QAM	-27.664	-27.715	-43.435	-31.101	-22.456	-33.145	-32.214
64QAM	-26.328	-27.467	-42.851	-30.621	-23.158	-32.847	-32.264
256QAM	-25.435	-26.121	-43.931	-31.085	-23.706	-33.290	-32.063

Test Result for Output Port 1

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.103	-27.696	-44.931	-32.024	-25.570	-33.195	-34.536
16QAM	-32.059	-28.006	-43.518	-31.116	-23.715	-33.166	-35.685
64QAM	-29.713	-27.842	-44.634	-33.300	-26.691	-32.412	-36.325
256QAM	-33.959	-28.178	-44.663	-32.524	-26.835	-32.966	-35.797

Test Result for Output Port 2

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-33.386	-27.298	-43.313	-31.764	-25.482	-31.251	-24.550
16QAM	-30.294	-28.044	-43.371	-32.221	-24.050	-32.365	-26.429
64QAM	-30.724	-27.508	-43.390	-32.078	-25.416	-32.040	-27.905
256QAM	-28.063	-28.185	-43.725	-31.621	-25.420	-32.324	-26.060

Test Result for Output Port 3

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.146	-27.826	-44.160	-31.320	-24.520	-32.697	-30.102
16QAM	-30.105	-27.738	-44.442	-30.611	-24.651	-32.397	-30.249
64QAM	-31.120	-28.102	-44.600	-31.444	-25.370	-31.866	-30.072
256QAM	-35.162	-28.230	-44.173	-32.051	-25.639	-32.549	-30.678

DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier][2C+1C]

Test Result for Output Port 0

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-27.827	-27.776	-44.137	-30.059	-24.755	-33.119	-30.967
16QAM	-27.833	-26.890	-44.475	-30.848	-23.601	-33.632	-32.561
64QAM	-26.519	-26.656	-44.187	-31.512	-25.273	-32.659	-31.944
256QAM	-25.372	-27.029	-43.450	-30.706	-24.714	-32.973	-30.891

Test Result for Output Port 1

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.922	-27.792	-45.449	-32.009	-27.182	-33.326	-35.805
16QAM	-32.318	-26.782	-43.163	-32.030	-24.344	-33.378	-36.492
64QAM	-30.957	-28.277	-44.705	-32.264	-26.838	-32.553	-36.830
256QAM	-29.810	-28.478	-43.461	-32.233	-26.427	-33.272	-35.968

Test Result for Output Port 2

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.090	-26.513	-41.926	-32.518	-26.009	-31.826	-27.410
16QAM	-30.996	-26.502	-42.405	-32.216	-24.802	-32.270	-27.390
64QAM	-29.788	-27.709	-43.825	-32.299	-23.675	-32.432	-26.911
256QAM	-29.064	-27.037	-41.893	-31.992	-25.022	-31.442	-26.649

Test Result for Output Port 3

Mod.	Measured Level (dBm)						
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.025	-28.004	-44.476	-31.212	-25.450	-32.479	-29.730
16QAM	-30.358	-28.051	-43.244	-32.327	-25.036	-32.526	-29.831
64QAM	-27.699	-27.822	-44.769	-31.580	-25.550	-32.430	-28.242
256QAM	-32.532	-27.527	-43.799	-32.336	-25.513	-32.537	-30.403

Tabular Data of Spurious Unwanted Emissions_Inter Band

LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier+ DSS B66 10M 1 Carrier [5 Carrier]
(PCS: 10 W/path, AWS: 30 W/path)
Test Result for Output Port 0

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-27.831	-27.789	-33.991	-27.939	-27.461	-22.132	-25.011	-30.701
16QAM	-29.203	-27.035	-34.835	-27.453	-27.460	-22.735	-24.827	-31.493
64QAM	-29.691	-27.150	-33.683	-27.963	-27.552	-22.344	-23.992	-31.576
256QAM	-27.741	-27.189	-35.140	-27.803	-27.889	-23.130	-23.788	-31.888

Test Result for Output Port 1

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.543	-28.056	-36.180	-27.613	-27.246	-25.835	-23.461	-35.767
16QAM	-31.746	-28.579	-34.622	-28.104	-27.072	-25.259	-24.278	-34.795
64QAM	-32.463	-28.258	-35.636	-26.732	-27.596	-25.457	-24.658	-35.569
256QAM	-30.813	-27.694	-35.425	-27.456	-27.416	-25.076	-23.776	-35.990

Test Result for Output Port 2

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.502	-26.850	-34.902	-28.361	-27.208	-25.625	-23.435	-27.170
16QAM	-29.412	-27.416	-35.662	-29.111	-27.937	-25.576	-23.500	-25.996
64QAM	-28.760	-27.405	-34.989	-28.943	-28.095	-26.036	-24.258	-26.397
256QAM	-29.047	-25.923	-35.407	-25.306	-28.266	-26.326	-24.369	-25.223

Test Result for Output Port 3

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-33.957	-27.474	-34.627	-27.558	-27.224	-25.447	-24.594	-32.022
16QAM	-32.754	-27.776	-34.962	-27.596	-26.849	-25.760	-23.969	-31.408
64QAM	-31.312	-27.684	-33.812	-28.277	-25.564	-26.245	-24.722	-31.887
256QAM	-33.263	-27.934	-34.690	-28.206	-26.217	-25.818	-23.984	-30.457

LTE B2 5M 1 Carrier + LTE B2 5M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + DSS B66 10M 1 Carrier [5 Carrier] (PCS: 20 W/path, AWS: 20 W/path)

Test Result for Output Port 0

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-28.390	-27.541	-34.984	-24.792	-27.436	-23.223	-25.196	-31.214
16QAM	-27.508	-26.901	-34.266	-25.081	-24.525	-23.438	-25.366	-30.938
64QAM	-30.090	-27.262	-34.531	-23.095	-27.315	-22.820	-25.046	-33.077
256QAM	-28.954	-27.678	-35.197	-23.260	-27.698	-22.805	-24.818	-32.800

Test Result for Output Port 1

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.361	-28.354	-36.110	-23.597	-27.322	-25.745	-25.267	-36.516
16QAM	-32.032	-27.492	-34.925	-22.571	-27.594	-25.436	-25.409	-35.461
64QAM	-30.932	-28.358	-36.114	-24.635	-27.189	-25.584	-24.855	-36.672
256QAM	-33.396	-28.638	-34.053	-24.176	-27.528	-25.489	-25.176	-37.610

Test Result for Output Port 2

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.235	-27.872	-35.836	-26.249	-27.788	-26.292	-24.339	-26.845
16QAM	-31.294	-26.989	-34.686	-25.070	-27.393	-26.190	-24.631	-27.046
64QAM	-32.417	-27.429	-35.553	-26.362	-27.607	-26.239	-23.925	-28.703
256QAM	-30.231	-27.918	-34.992	-25.441	-28.138	-25.884	-24.204	-27.771

Test Result for Output Port 3

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-33.215	-27.326	-34.003	-24.779	-26.806	-26.201	-24.590	-30.704
16QAM	-32.574	-27.809	-34.415	-23.323	-26.387	-25.584	-22.555	-31.407
64QAM	-34.205	-28.028	-34.350	-24.131	-26.404	-25.867	-24.245	-30.258
256QAM	-32.324	-28.372	-35.054	-22.806	-25.844	-25.486	-24.631	-30.751

LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier]
(PCS: 10 W/path, AWS: 30 W/path)
Test Result for Output Port 0

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.353	-26.431	-34.242	-29.090	-27.503	-24.332	-24.580	-30.180
16QAM	-29.839	-25.723	-34.138	-29.033	-26.906	-24.254	-25.555	-30.702
64QAM	-27.017	-27.857	-35.493	-28.053	-26.821	-24.291	-24.249	-30.083
256QAM	-28.146	-27.456	-34.409	-29.019	-27.641	-24.328	-25.501	-30.485

Test Result for Output Port 1

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.833	-27.446	-35.069	-28.251	-27.759	-26.357	-25.443	-34.813
16QAM	-28.516	-28.347	-34.896	-29.040	-28.045	-25.743	-25.685	-35.666
64QAM	-30.196	-28.309	-35.484	-28.739	-27.661	-25.862	-25.136	-36.261
256QAM	-30.717	-27.601	-34.540	-28.944	-27.518	-25.885	-24.434	-36.000

Test Result for Output Port 2

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.579	-27.817	-34.995	-28.638	-28.096	-26.366	-24.213	-26.352
16QAM	-33.279	-26.797	-35.053	-29.469	-27.536	-26.416	-24.267	-27.580
64QAM	-29.976	-27.580	-35.003	-28.763	-26.983	-26.037	-23.890	-26.603
256QAM	-29.317	-26.861	-34.641	-29.339	-28.379	-26.494	-24.268	-27.302

Test Result for Output Port 3

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.518	-27.877	-34.530	-27.393	-26.536	-25.111	-24.532	-31.759
16QAM	-32.617	-26.649	-34.238	-28.737	-26.154	-25.345	-24.802	-31.099
64QAM	-31.854	-26.661	-35.091	-29.269	-26.561	-25.343	-24.061	-31.301
256QAM	-34.272	-27.180	-35.132	-27.277	-26.506	-25.734	-24.634	-31.306

LTE B2 5M 1 Carrier + LTE B2 10M 1 Carrier + NR n66 20M 1 Carrier + NR n66 5M 1 Carrier + NR n66 10M 1 Carrier [5 Carrier] (PCS: 20 W/path, AWS: 20 W/path)

Test Result for Output Port 0

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-29.135	-26.658	-34.152	-24.759	-27.329	-24.781	-24.951	-31.606
16QAM	-28.027	-26.732	-34.510	-25.593	-27.891	-24.337	-24.778	-32.719
64QAM	-28.740	-26.925	-34.965	-25.745	-26.745	-24.280	-25.140	-30.502
256QAM	-27.586	-26.724	-34.514	-25.755	-27.767	-24.145	-24.340	-31.089

Test Result for Output Port 1

Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-31.475	-28.234	-35.081	-25.917	-26.795	-25.689	-24.638	-36.667
16QAM	-34.431	-27.643	-35.635	-26.032	-27.619	-26.012	-24.617	-35.882
64QAM	-33.922	-28.145	-35.162	-24.981	-27.941	-25.728	-24.963	-35.904
256QAM	-31.454	-28.361	-35.751	-25.210	-27.024	-25.935	-25.525	-36.051

Test Result for Output Port 2

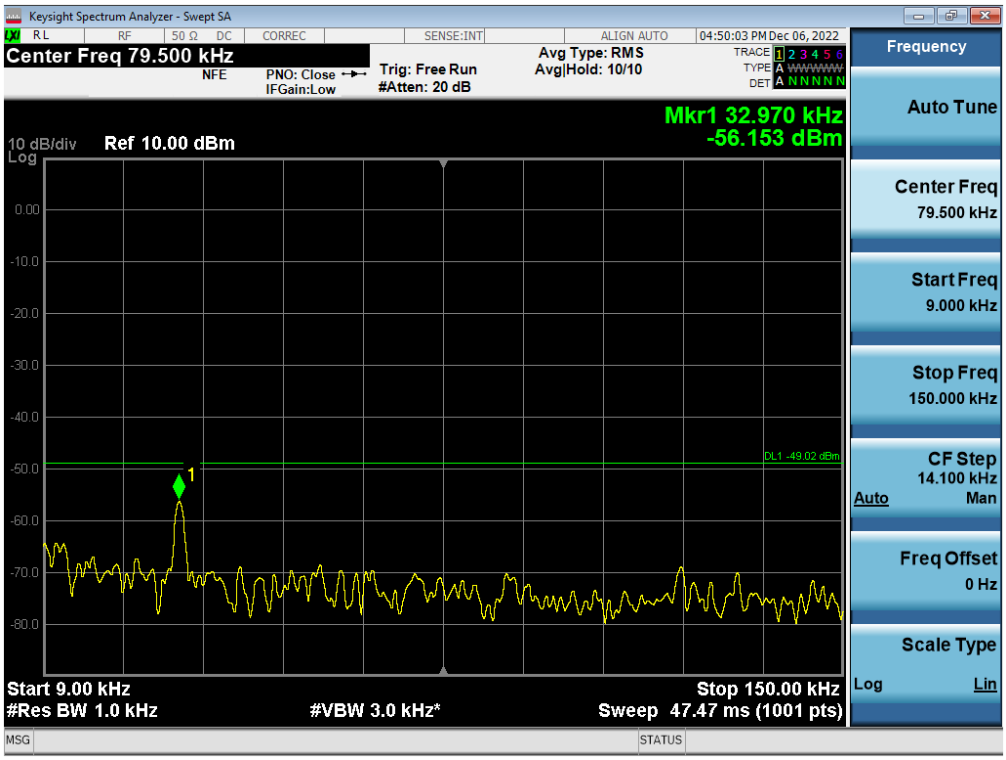
Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-30.588	-27.865	-35.329	-25.698	-28.458	-26.178	-24.743	-25.199
16QAM	-32.512	-27.146	-35.155	-25.058	-26.741	-25.788	-23.905	-26.880
64QAM	-30.951	-25.819	-35.186	-26.245	-27.434	-25.298	-24.643	-26.283
256QAM	-32.407	-27.645	-34.835	-21.442	-27.284	-25.617	-23.784	-26.857

Test Result for Output Port 3

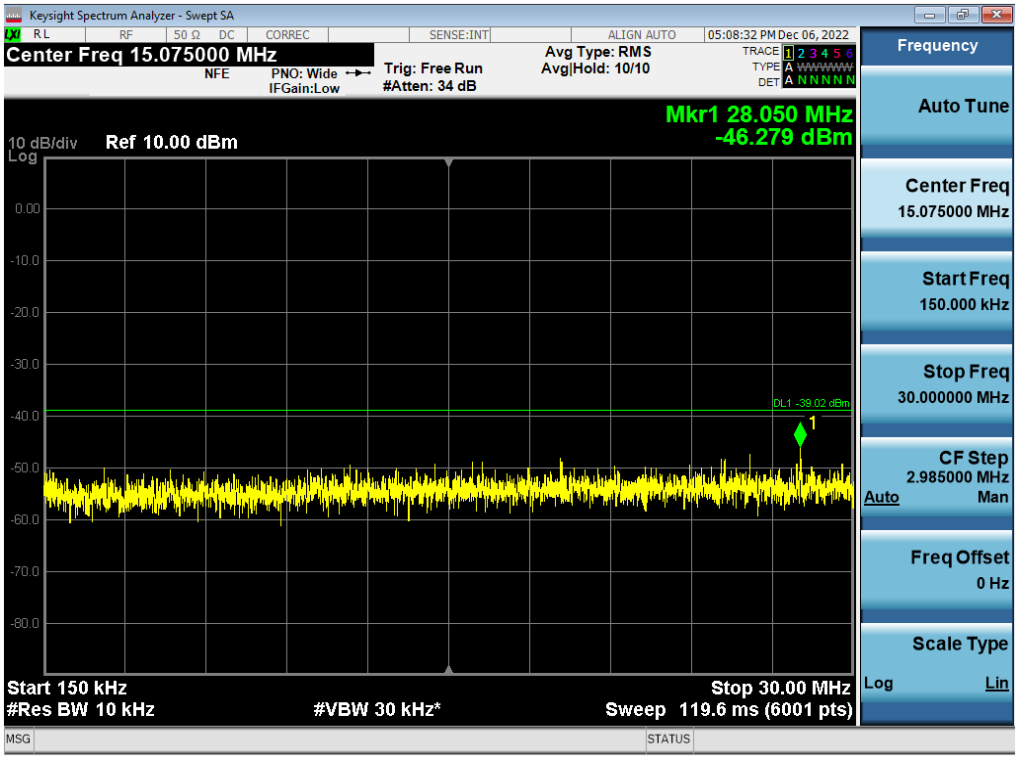
Mod.	Measured Level (dBm)							
	9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ PCS Low Edge – 100 MHz	PCS Low Edge – 100 MHz ~ PCS Low Edge	PCS High Edge ~ AWS Low Edge	AWS High Edge ~ AWS High Edge + 100 MHz	AWS High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz
QPSK	-32.453	-26.526	-35.450	-24.881	-26.596	-25.924	-24.325	-29.423
16QAM	-31.481	-27.716	-34.818	-23.612	-26.512	-25.732	-24.767	-30.244
64QAM	-33.190	-26.827	-34.466	-24.637	-26.221	-25.563	-24.630	-30.102
256QAM	-35.187	-27.586	-34.826	-23.955	-26.492	-25.303	-24.411	-31.104

Plot Data of Spurious Unwanted Emissions

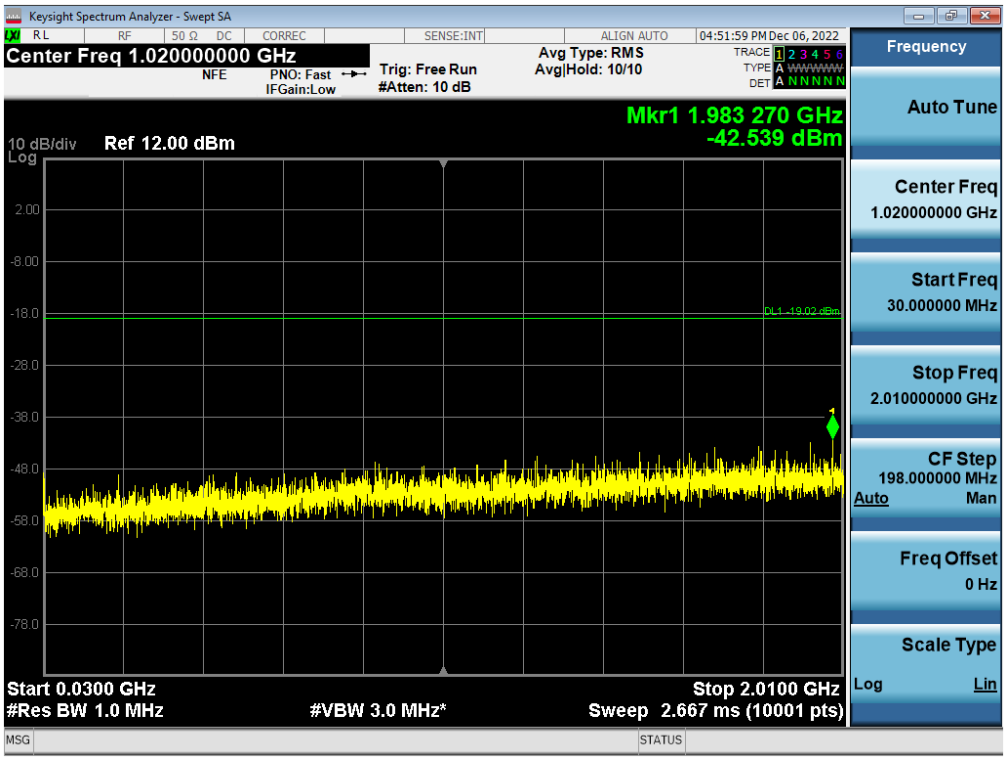
Antenna 0 / 9 kHz ~ 150 kHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / QPSK / Middle



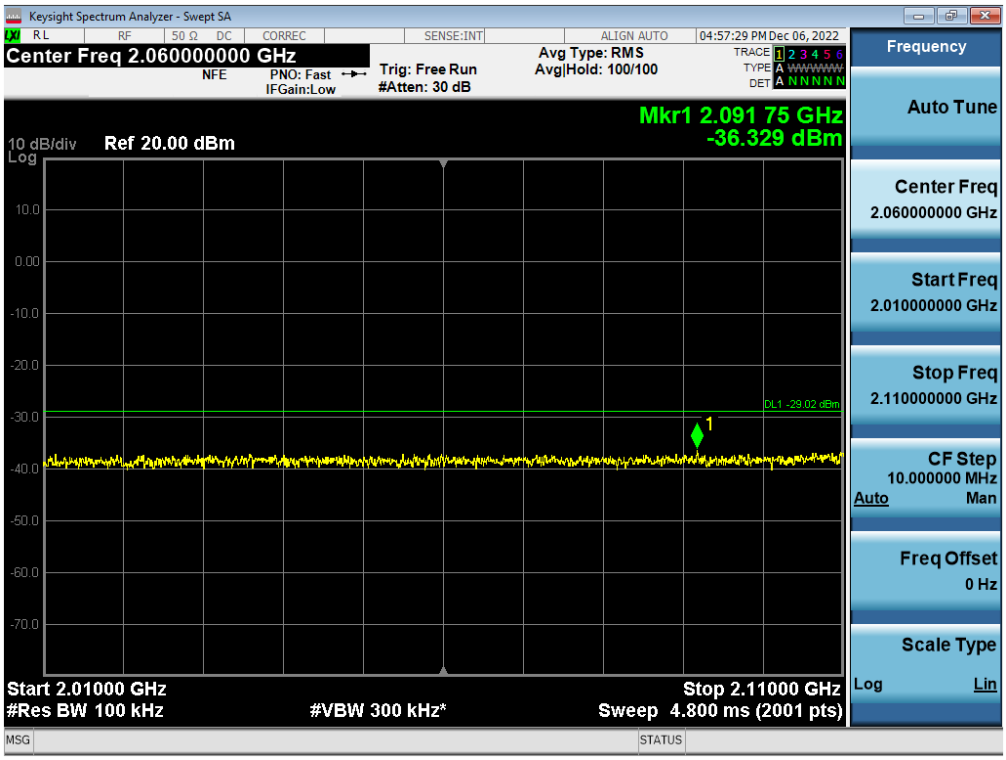
Antenna 3 / 150 kHz ~ 30 MHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



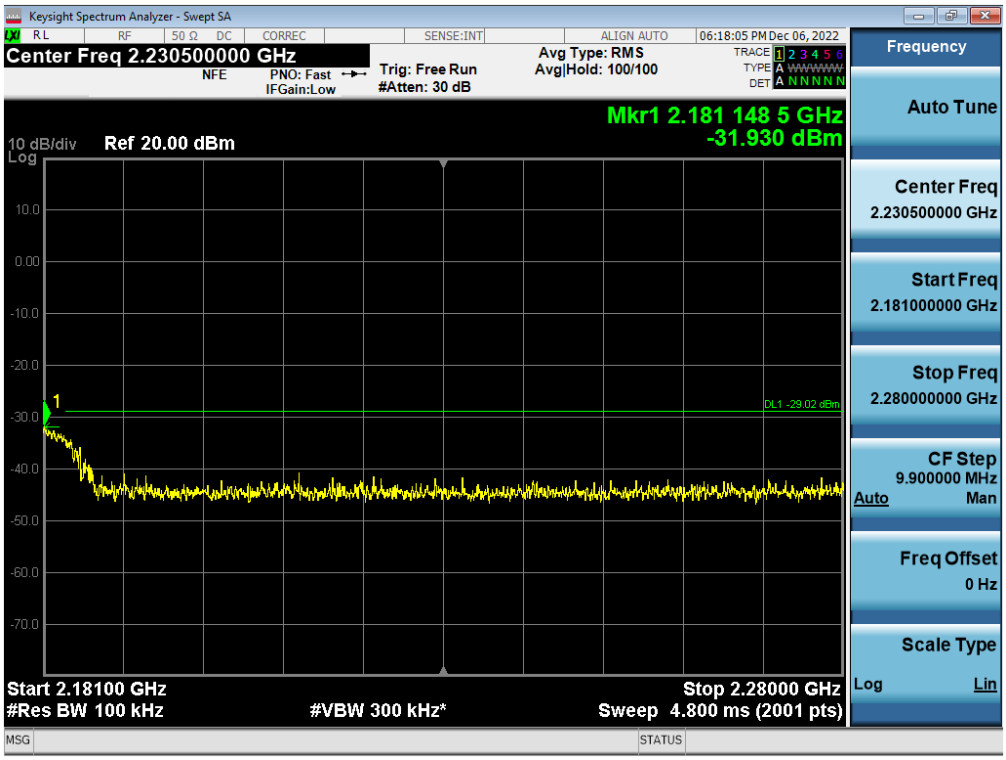
Antenna 0 / 30 MHz ~ Low Edge – 100 MHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



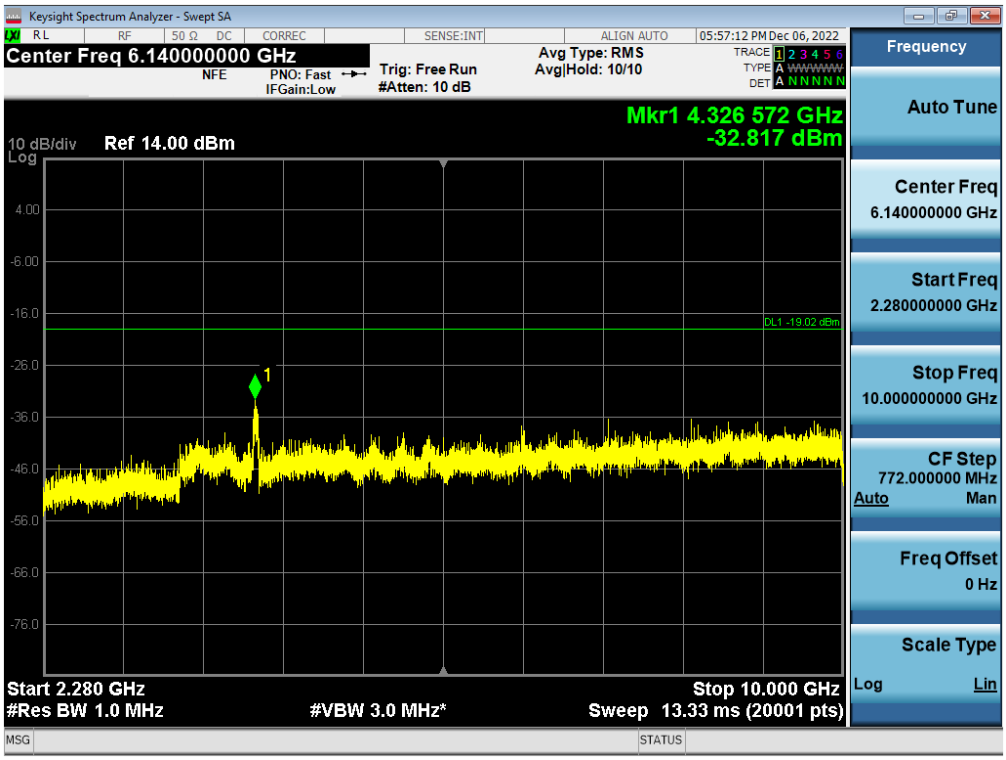
Antenna 1 / Low Edge – 100 MHz ~ Low Edge / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



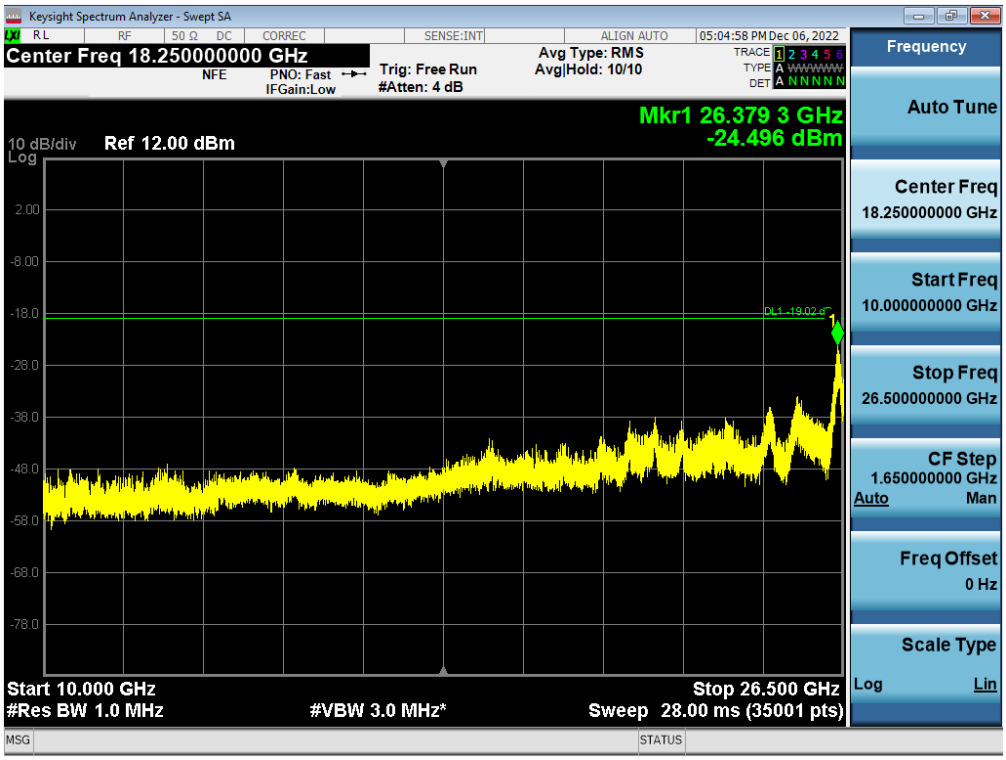
Antenna 0 / High Edge ~ High Edge + 100 MHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / High



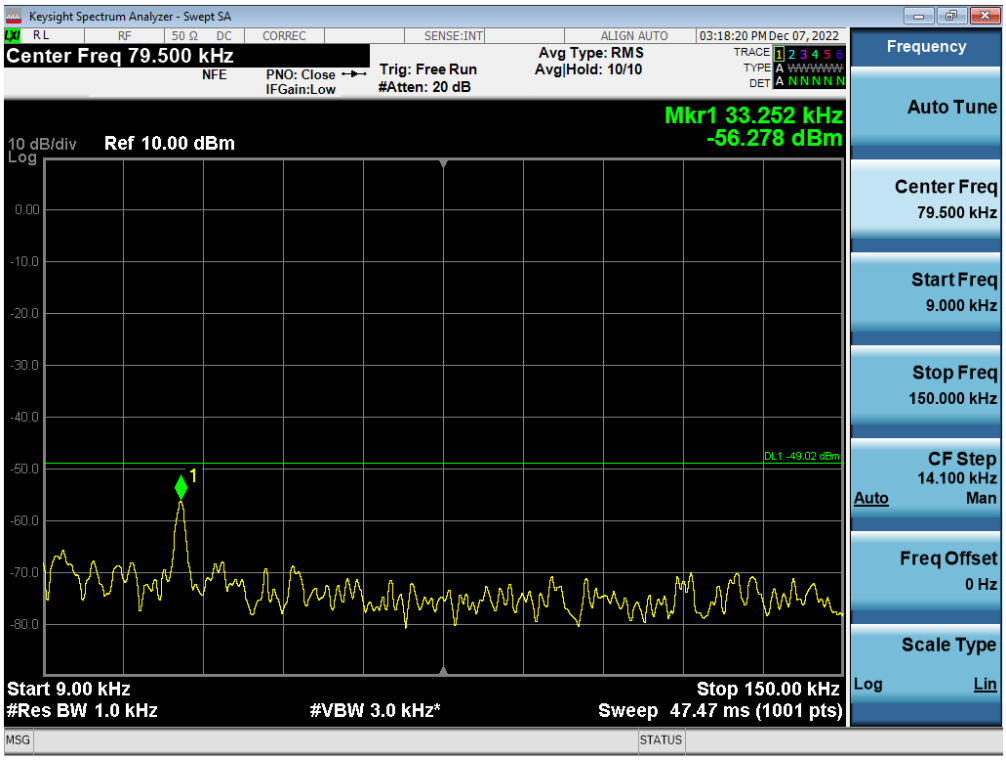
Antenna 1 / High Edge + 100 MHz ~ 10 GHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 64QAM / High



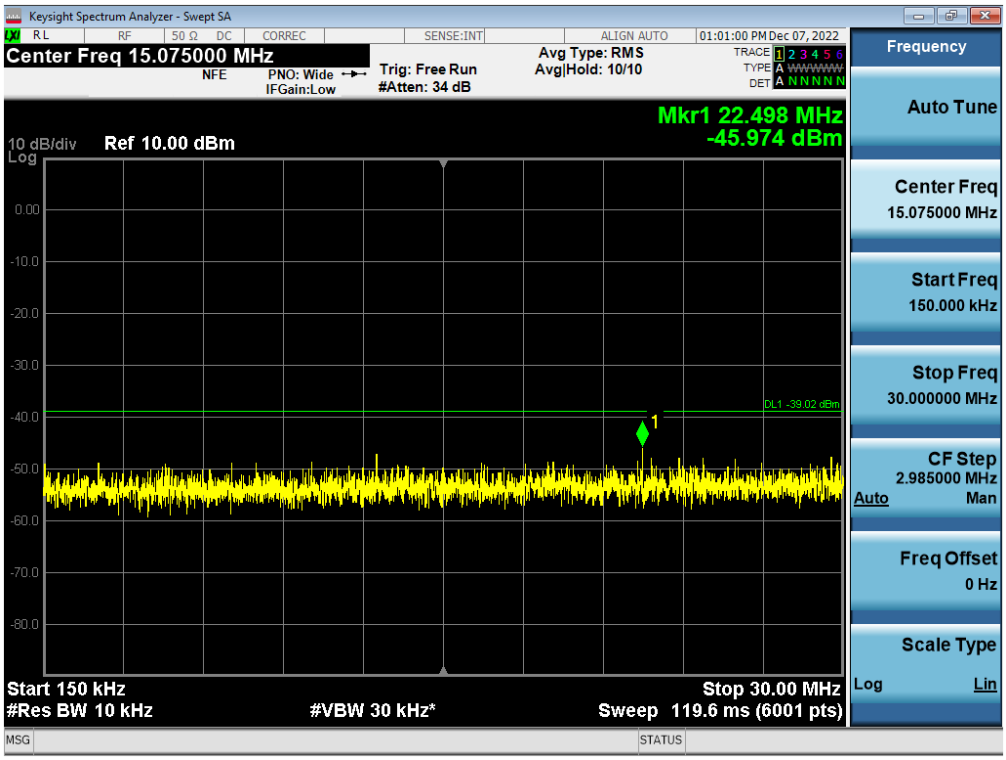
Antenna 2 / 10 GHz ~ 26.5 GHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 256QAM / Middle



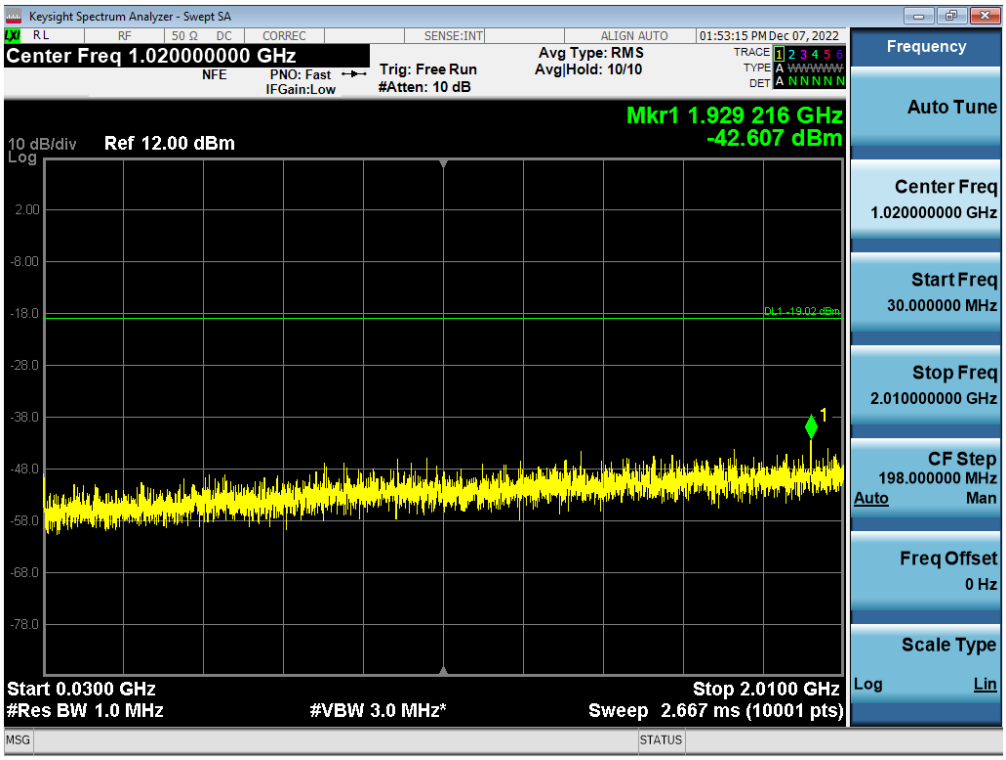
Antenna 0 / 9 kHz ~ 150 kHz / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 256QAM / High



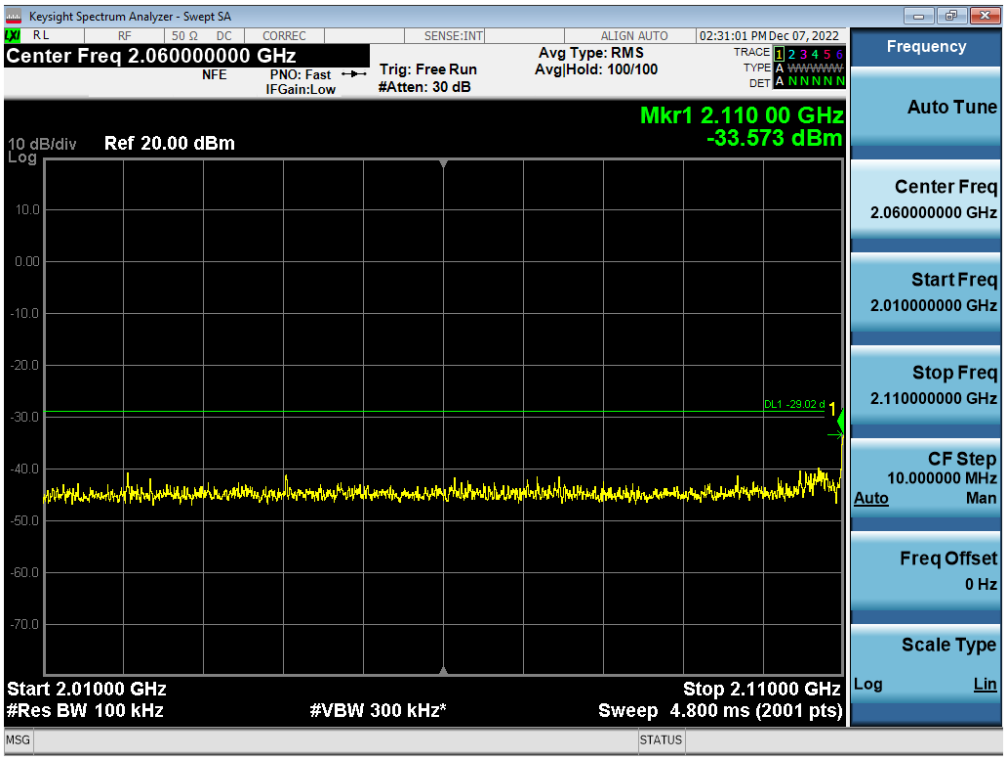
Antenna 0 / 150 kHz ~ 30 MHz / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / QPSK / Low



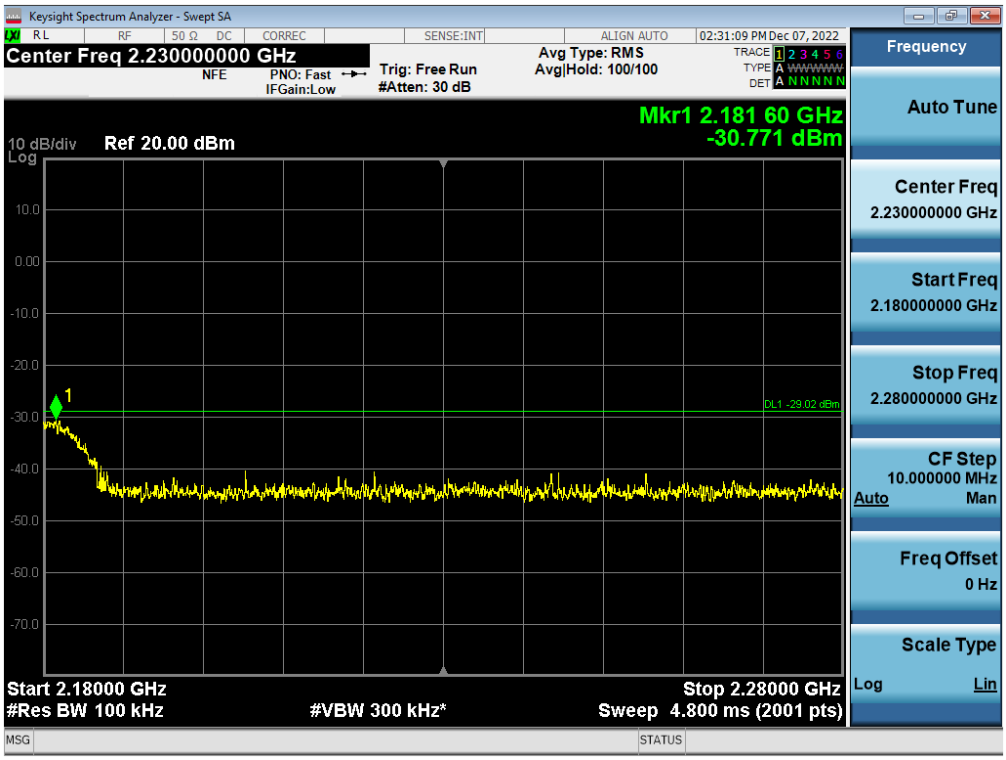
Antenna 0 / 30 MHz ~ Low Edge – 100 MHz / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 256QAM / Middle



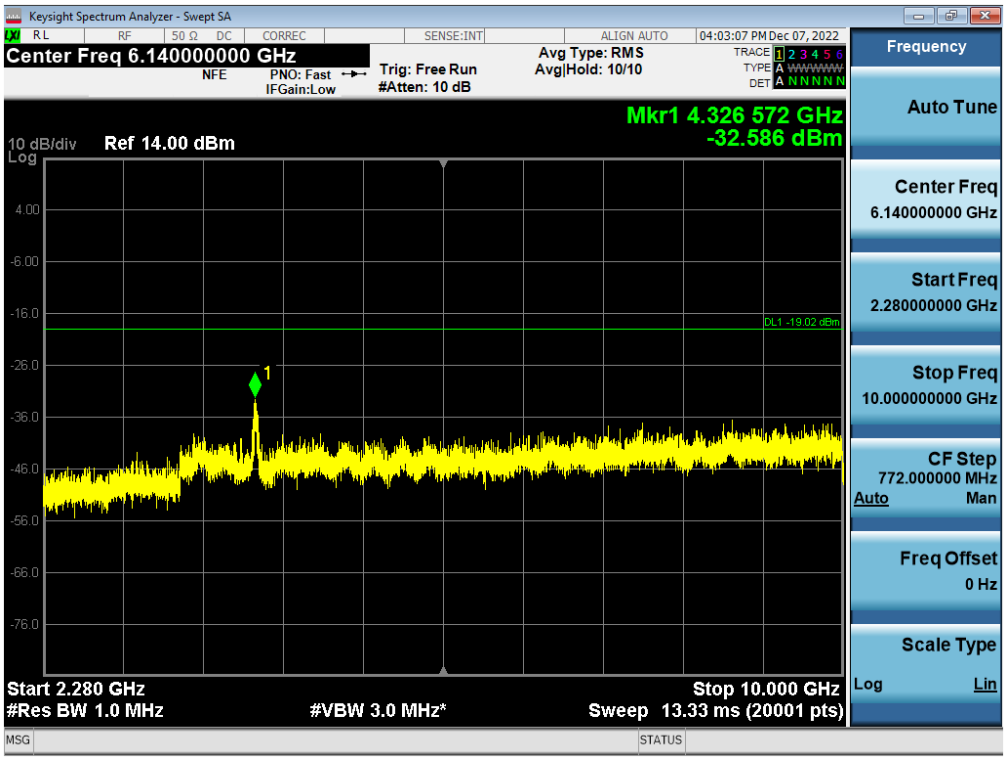
Antenna 0 / Low Edge – 100 MHz ~ Low Edge / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle



Antenna 0 / High Edge ~ High Edge + 100 MHz / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle

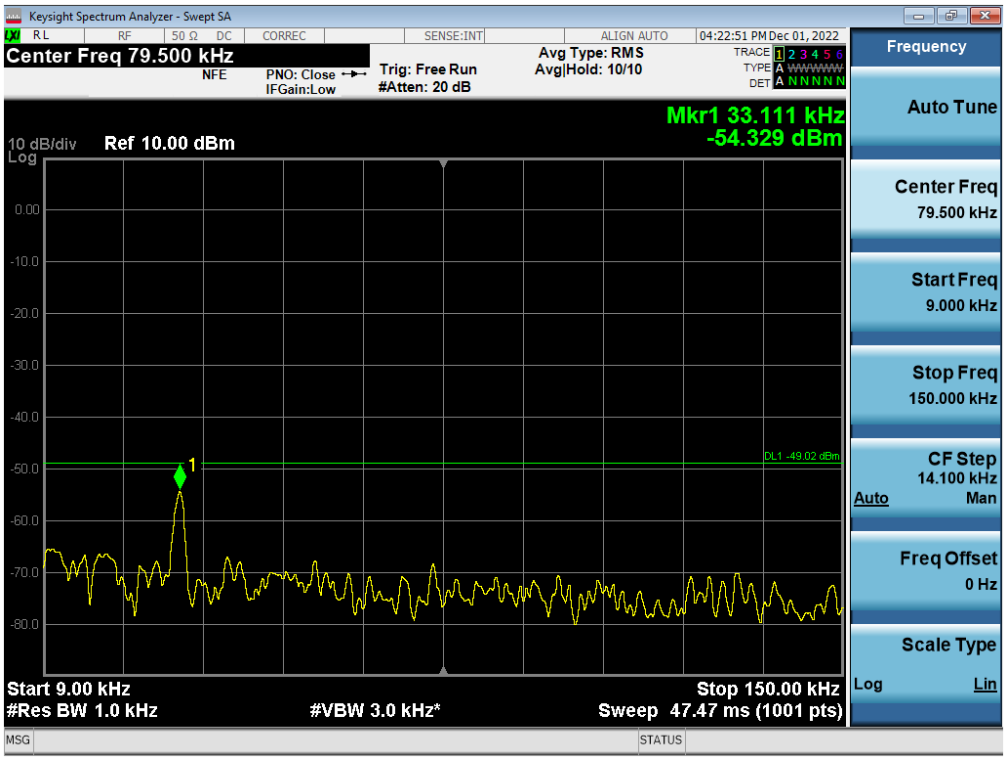


Antenna 1 / High Edge + 100 MHz ~ 10 GHz / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / High

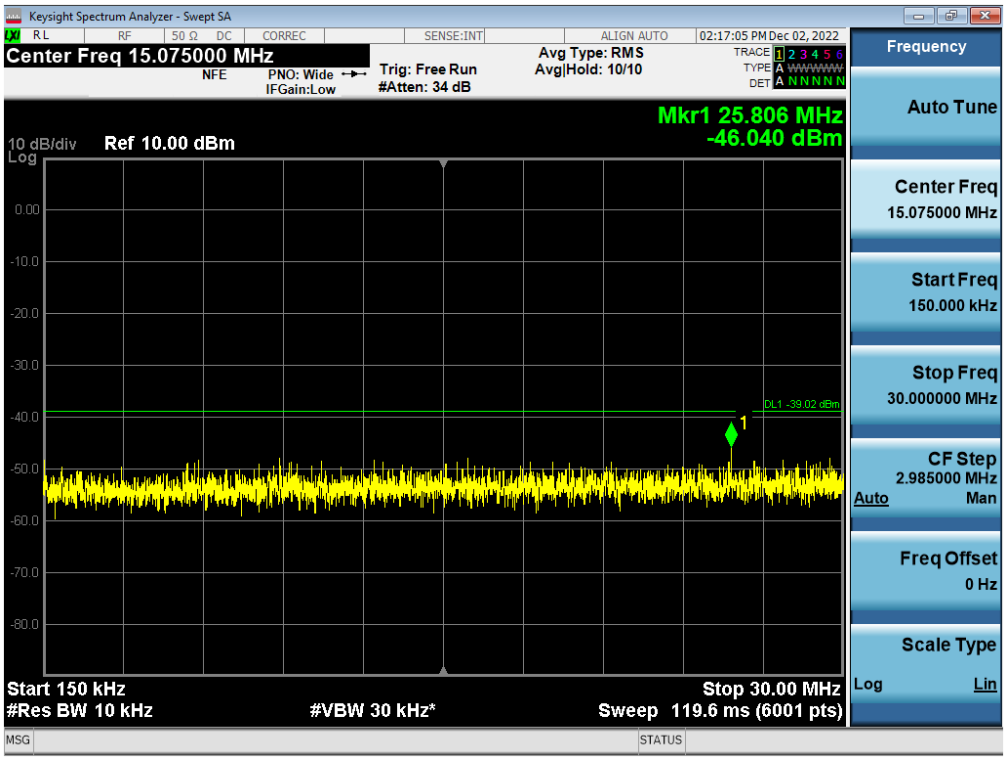


Antenna 2 / 10 GHz ~ 26.5 GHz / DSS B66 10M 1 Carrier + NR n66 5M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Low

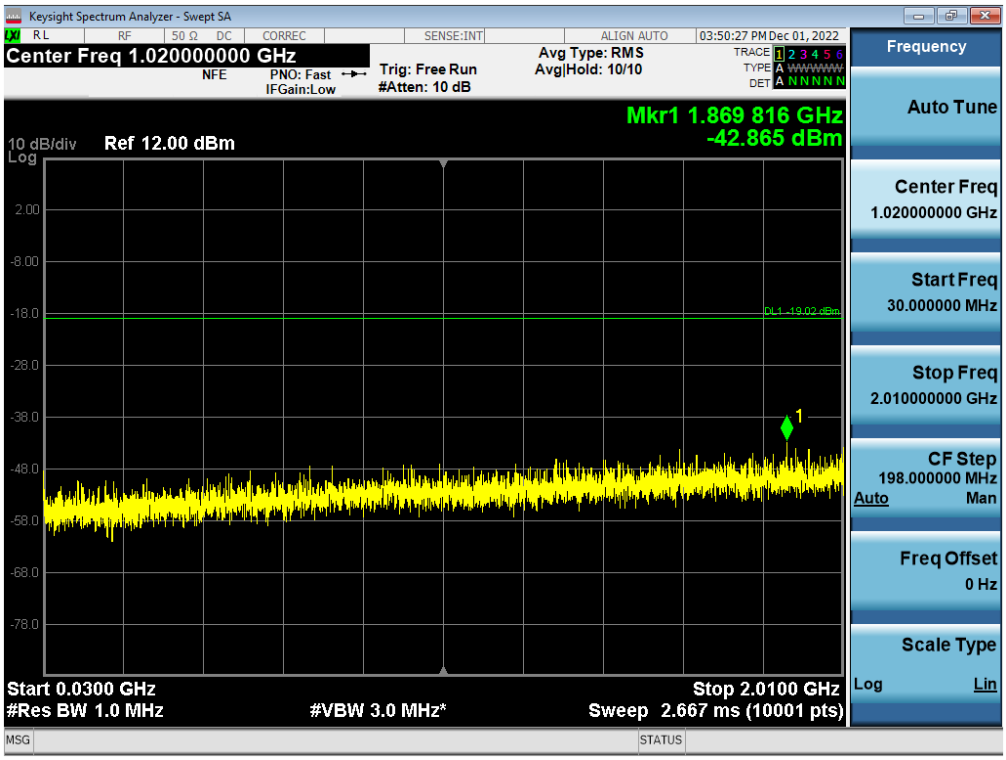
Antenna 0 / 9 kHz ~ 150 kHz / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Low



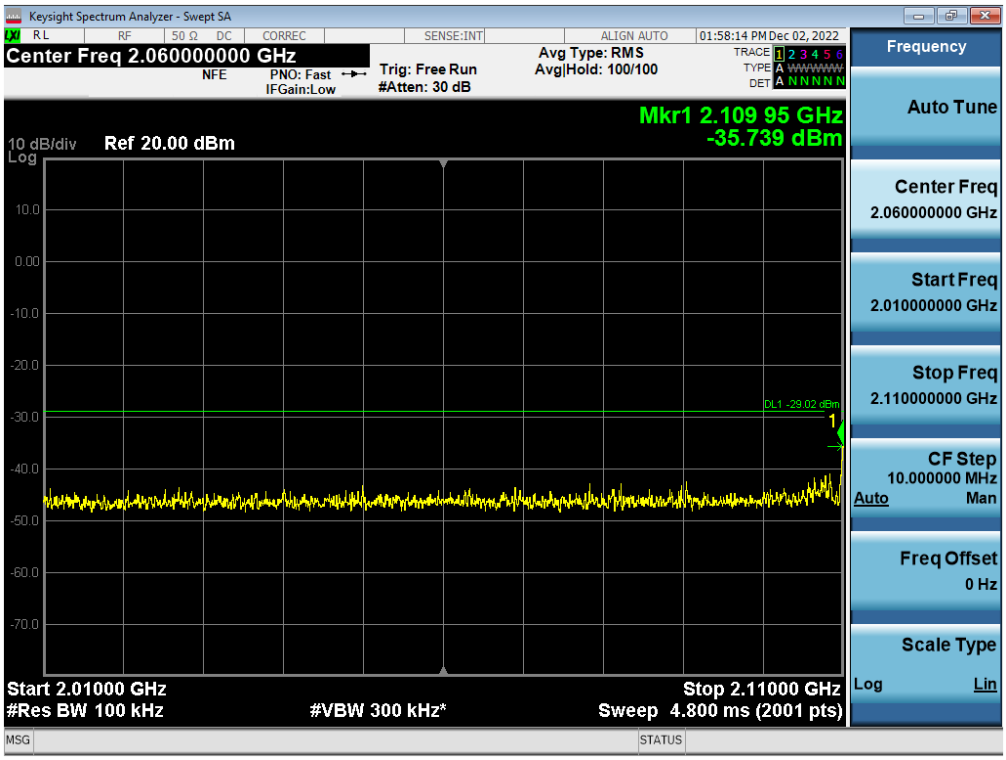
Antenna 0 / 150 kHz ~ 30 MHz / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Middle



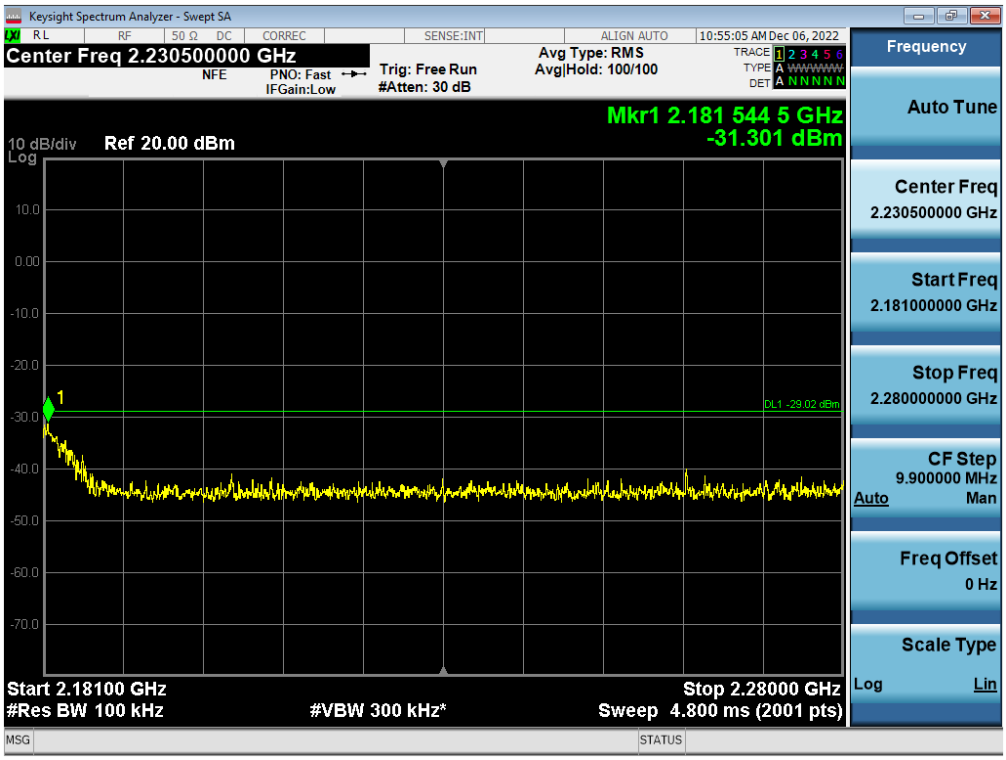
Antenna 0 / 30 MHz ~ Low Edge – 100 MHz / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 64QAM / Low



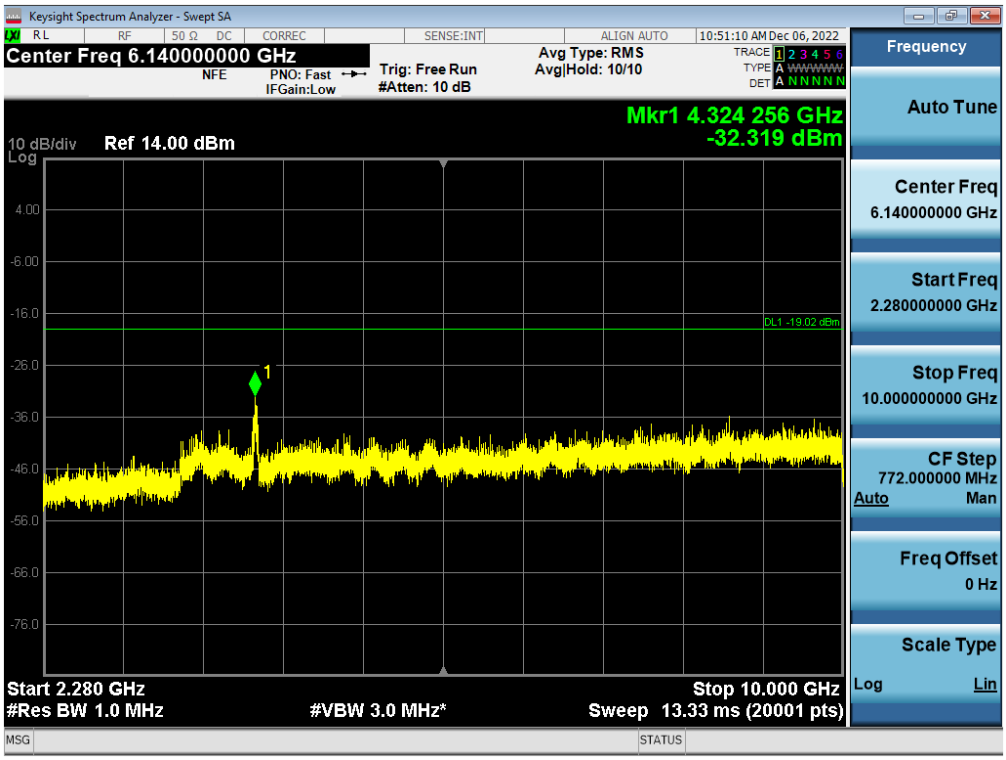
Antenna 1 / Low Edge – 100 MHz ~ Low Edge / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 16QAM / Middle



Antenna 0 / High Edge ~ High Edge + 100 MHz / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 256QAM / High

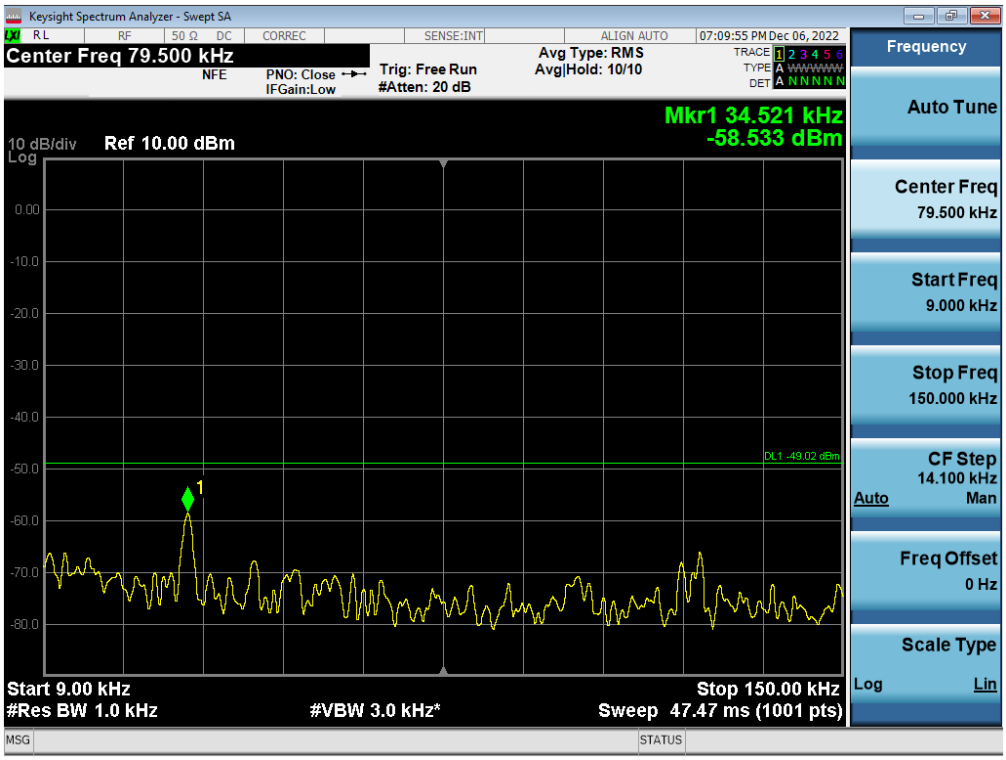


Antenna 1 / High Edge + 100 MHz ~ 10 GHz / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / 256QAM / High

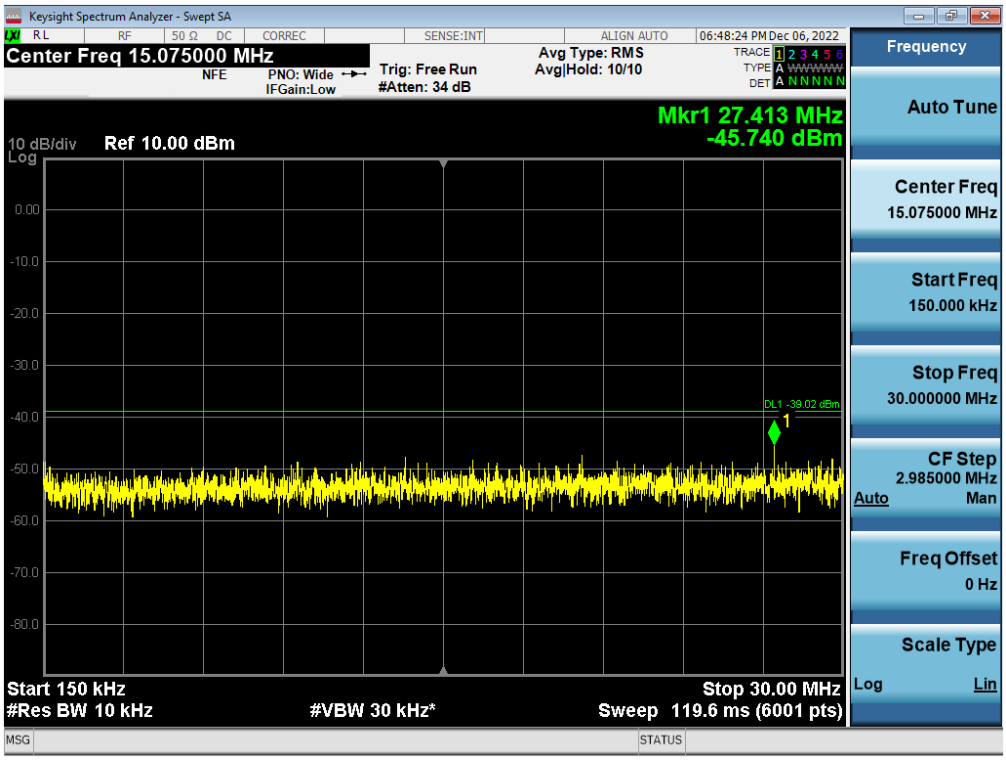


Antenna 2 / 10 GHz ~ 26.5 GHz / DSS B66 10M 1 Carrier + DSS B66 10M 1 Carrier+ DSS B66 15M 1 Carrier [3 Carrier] / Contiguous / QPSK / Middle

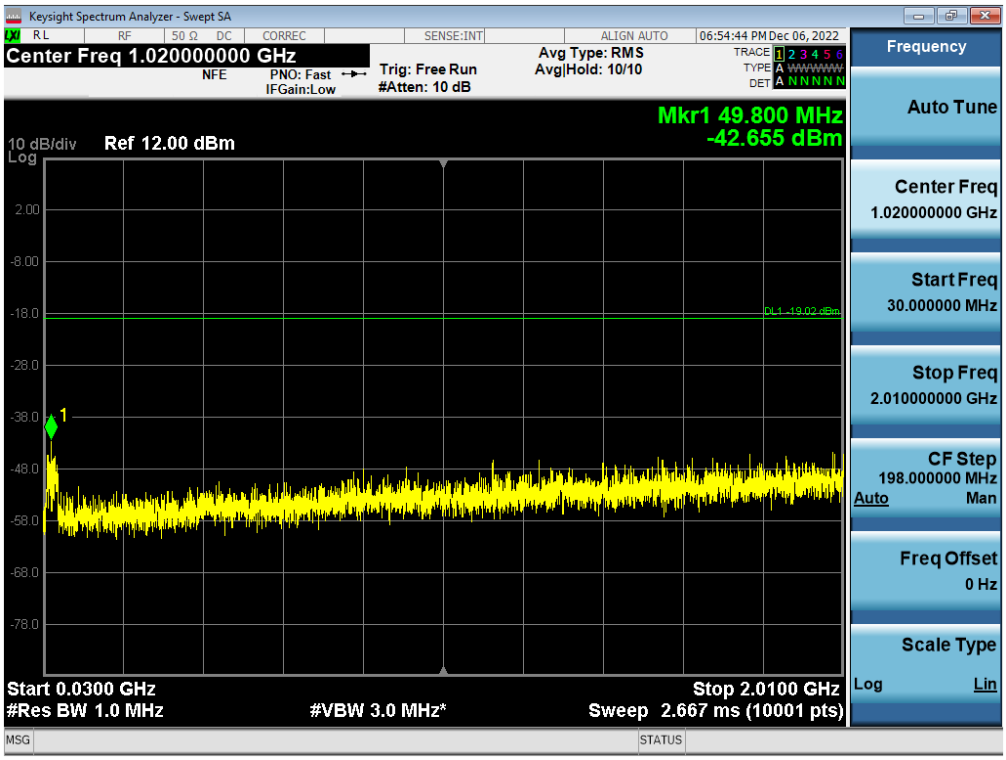
Antenna 3 / 9 kHz ~ 150 kHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK



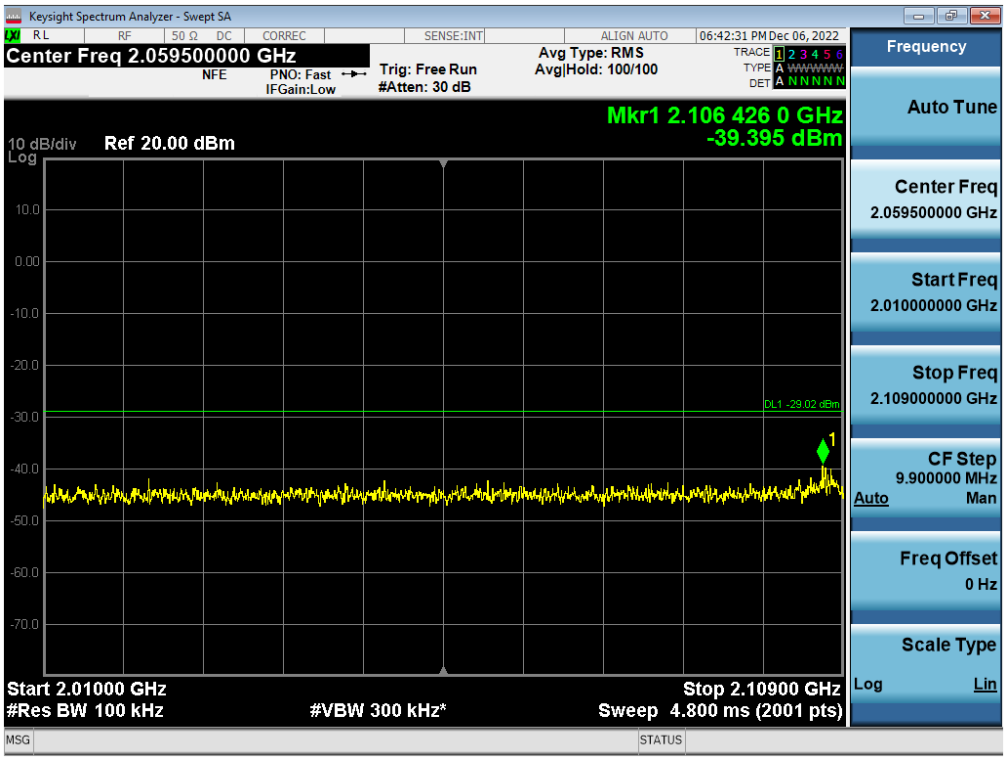
Antenna 0 / 150 kHz ~ 30 MHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / 256QAM



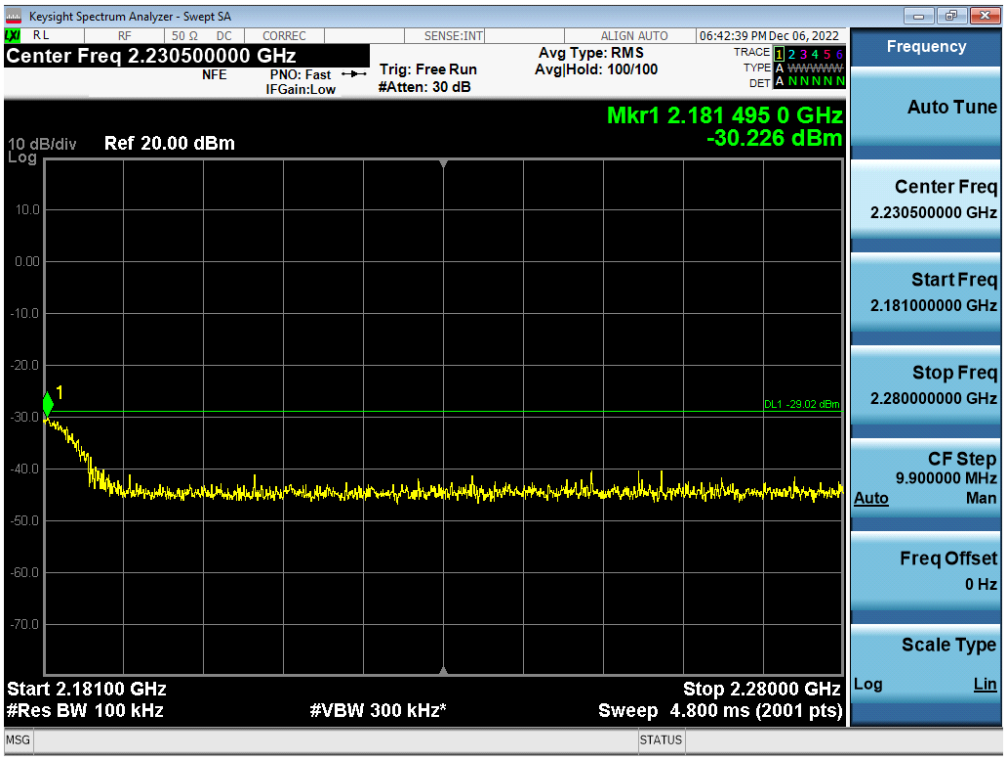
Antenna 1 / 30 MHz ~ Low Edge – 100 MHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / 64QAM



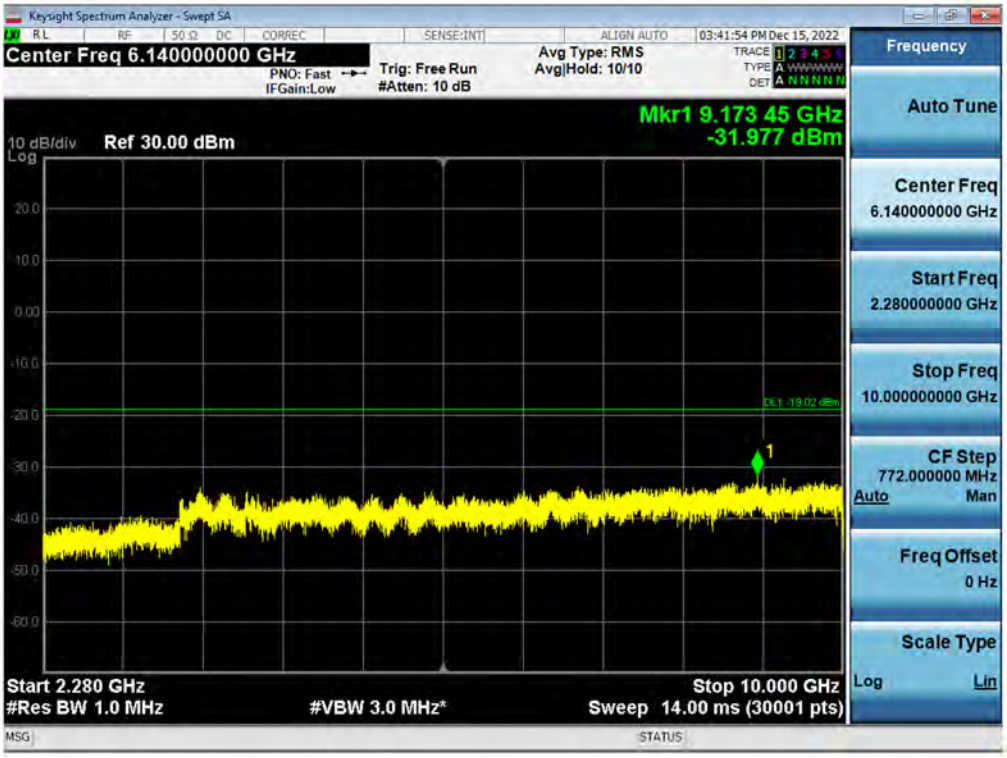
Antenna 0 / Low Edge – 100 MHz ~ Low Edge / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK



Antenna 0 / High Edge ~ High Edge + 100 MHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK



Antenna 3 / High Edge + 100 MHz ~ 10 GHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / 16QAM



Antenna 2 / 10 GHz ~ 26.5 GHz / NR n66 5M 1 Carrier + NR n66 10M 1 Carrier + NR n66 20M 1 Carrier [3 Carrier][1C+2C] / Non-Contiguous / QPSK