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TEST REPORT

FCC Test for RT4429-77A
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-RF-2207-FC025

DATE OF ISSUE
July 27, 2022

Tested by
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TEST REPORT

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Additional Model
-

Applicant	**SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
EUT Type	RRU(RT4429)
Model Name	RT4429-77A
FCC ID	A3LRRT4429-77A
Date of Test	June 27, 2022 ~ July 27, 2022
FCC Rule Parts:	CFR 47 Part 2, 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	July 27, 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(RT4429)
EUT Serial Number	SC78390030
Power Supply	-48 VDC
Output Power	
Frequency Range	3.7 GHz Service : 3 700 MHz ~ 3 980 MHz

Band	Carrier	Bandwidth	Power
3.7 GHz Service 5G NR	1	20 MHz	0.25 W/path, Total: 1.00 W
3.7 GHz Service 5G NR	1	40 MHz	0.25 W/path, Total: 1.00 W
3.7 GHz Service 5G NR	1	60 MHz	0.25 W/path, Total: 1.00 W
3.7 GHz Service 5G NR	1	80 MHz	0.25 W/path, Total: 1.00 W
3.7 GHz Service 5G NR	1	100 MHz	0.25 W/path, Total: 1.00 W
3.7 GHz Service(5G NR + 5G NR)	2	20 MHz + 20 MHz	0.25 W/path, Total: 1.00 W
3.7 GHz Service(5G NR + 5G NR)	2	100 MHz + 100 MHz	0.25 W/path, Total: 1.00 W

Emission Designator	Mode	Bandwidth	Emission Designator			
			QPSK (G7D)	Conducted (W)	16/64/256 QAM (W7D)	Conducted (W)
	3.7 GHz Service 5G NR	20 MHz	18M3G7D	1.13	18M4W7D	1.18
	3.7 GHz Service 5G NR	40 MHz	38M0G7D	1.08	38M1W7D	1.11
	3.7 GHz Service 5G NR	60 MHz	58M0G7D	1.06	58M2W7D	1.08
	3.7 GHz Service 5G NR	80 MHz	77M8G7D	1.02	78M0W7D	1.05
	3.7 GHz Service 5G NR	100 MHz	97M7G7D	1.07	97M7W7D	1.08
	3.7 GHz Service (5G NR + 5G NR) (Contiguous)	20 MHz + 20 MHz	38M2G7D	1.13	38M3W7D	1.18
	3.7 GHz Service (5G NR + 5G NR) (Contiguous)	100 MHz + 100 MHz	197MG7D	1.04	197MW7D	1.06
	3.7 GHz Service (5G NR + 5G NR) (3 700 MHz - 3 900 MHz) (Non-Contiguous)	20 MHz + 20 MHz	36M5G7D	1.03	36M7W7D	1.10
	3.7 GHz Service (5G NR + 5G NR) (3 780 MHz - 3 980 MHz) (Non-Contiguous)	20 MHz + 20 MHz	36M6G7D	1.08	36M7W7D	1.14
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM					
Antenna Specification	Antenna type: Integrated antenna(Peak Gain: 5.5 dBi; Co-polarized, Correlated) Directional Gain: 11.5 dBi					

1.3. TEST INFORMATION

FCC Rule Parts	CFR 47 Part 2, 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 27

Description	Reference	Results
RF Output Power	§ 2.1046, § 27.50(j)(2)	Compliant
PAPR	§ 27.50(j)(4)	Compliant
Occupied Bandwidth	§ 2.1049	Compliant
Out-of-band Unwanted Emissions	§ 2.1051, § 27.53(l)(1)	Compliant
Spurious Unwanted Emissions		Compliant
Radiated Emissions	§ 2.1053, § 27.53(l)(1)	Compliant
Frequency Stability	§ 2.1055, § 27.54	Compliant

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 NR modulation types (QPSK, 16QAM, 64QAM, 256QAM) have been tested.
- 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 perfored for NR Carrier in the mode of full resource Block size as worst case to transmitt maximum output power condition.
- Among the multi-carrier combination, only worst-case combination has tested in this test report to cover all multi-carrier combination addressed in technical documents.
- The dummy loads were connected to the RF output ports for radiated spurious emission testing.
- 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.

Correction factor table			
Frequency (MHz)	Factor (dB)	Frequency (MHz)	Factor (dB)
400	20.730	11 000	25.885
600	21.020	12 000	26.132
800	21.210	13 000	26.208
1 000	21.380	14 000	26.525
1 200	21.510	15 000	26.638
1 400	21.660	16 000	27.034
1 600	21.800	17 000	27.231
1 800	21.920	18 000	27.628
2 000	22.040	19 000	27.822
2 200	22.190	20 000	28.243
2 400	22.360	21 000	28.558
2 600	22.370	22 000	28.485
2 800	22.480	23 000	28.338
3 000	22.600	24 000	28.722
3 100	22.680	25 000	29.074
3 200	22.760	26 000	29.580
3 300	22.810	27 000	29.178
3 400	22.850	28 000	29.303
3 500	22.880	29 000	29.753
3 600	22.960	30 000	29.548
3 700	23.030	31 000	31.461
3 800	23.050	32 000	31.146
3 900	23.130	33 000	30.648
4 000	23.200	34 000	29.663
5 000	23.500	35 000	29.915
6 000	24.080	36 000	30.390
7 000	24.470	37 000	30.138
8 000	24.700	38 000	30.427
9 000	25.050	39 000	30.740
10 000	25.492	40 000	29.675

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

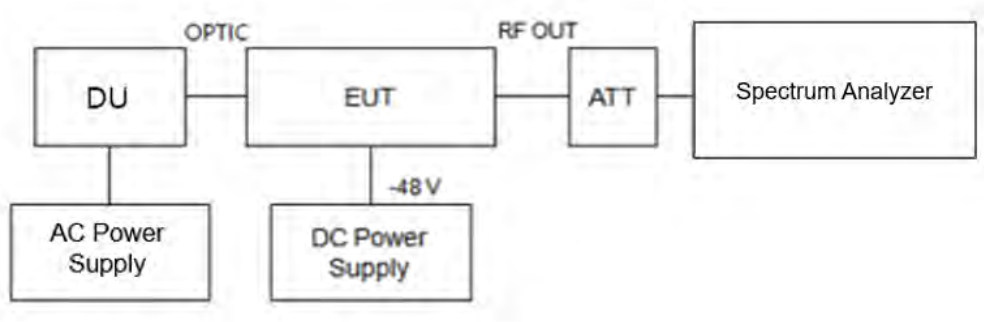
Coverage factor $k = 2$, Confidence levels of 95 %

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

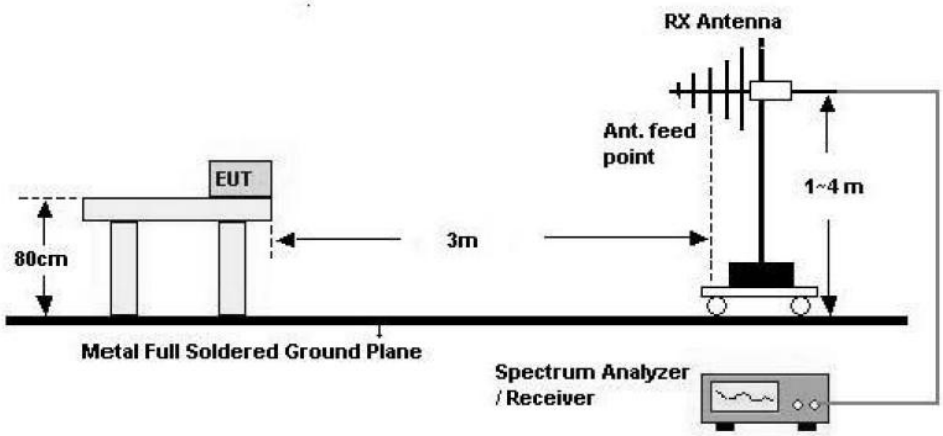
3.5. TEST DIAGRAMS

Conducted Test

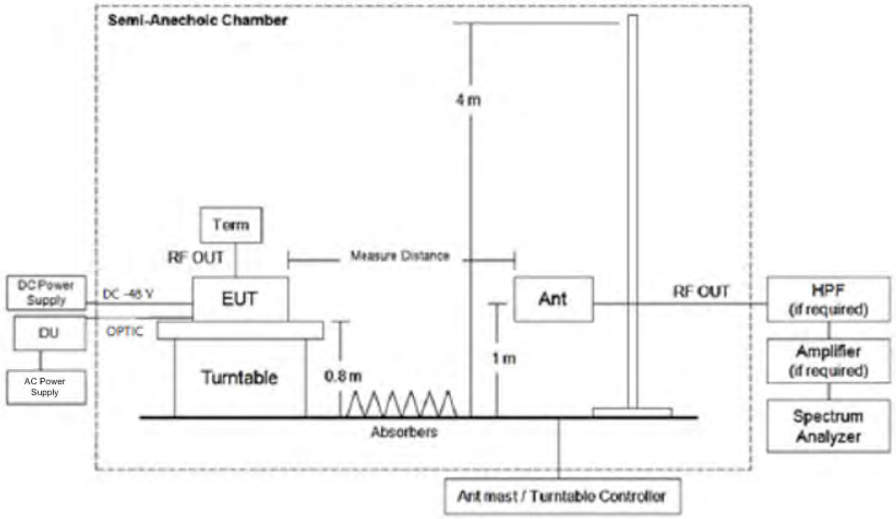


Radiated Test

30 MHz ~ 1 GHz

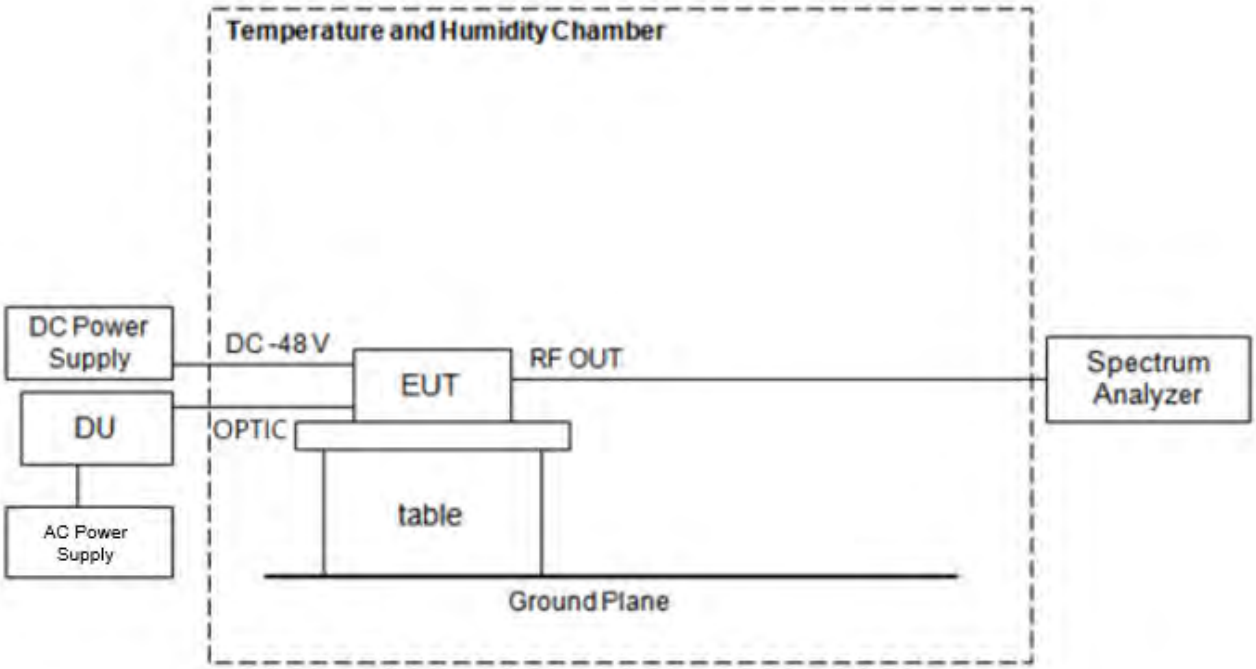


Above 1 GHz



※ 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
20 dB Attenuator	FAS-23-20	MCLI	103756	2023-01-03	Annual
*30 dB Attenuator	67-30-33	API Weinschel, Inc.	CL4336	2023-05-03	Annual
*50Ω Termination	908A	H.P.	N/A	N/A	N/A
DC Power Supply	PWR800L	KIKUSUI	LJ003448	2023-05-30	Annual
Temperature and Humidity Chamber	NY-THR18750	NANGYEUL CO., LTD.	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	2022-10-13	Biennial
Spectrum Analyzer	FSP40	Rohde & Schwarz	100843	2022-11-08	Annual
LNA(0.1 ~ 18 GHz)	FBSR-04C	TNM system	N/A	2022-09-16	Annual
Low Noise Amplifier	LLAU1183540Q	LTC Microwave	100	2022-09-16	Annual
High Pass Filter	WHNX6.0/26.5G-6SS	Wainwright Instruments	1	2023-02-17	Annual
Power Amplifier	CBL18265035	CERNEX	22966	2022-12-02	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.

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.

§ 27.50 Power limits and duty cycle.

(j) The following power requirements apply to stations transmitting in the 3700-3980 MHz band:

(1) The power of each fixed or base station transmitting in the 3700-3980 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3700-3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(4) Equipment employed must be authorized in accordance with the provisions of § 27.51. 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 (j)(5) 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 $\leq \pm 2$ %) or non-constant (variations $> \pm 2$ %), respectively.

Note: 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 are attached only the worst case plot.

Test Results:
Tabular Data of RF output power

3.7 GHz Service 5G NR 20 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 710.00	23.76	0.24
		Middle	3 840.00	24.44	0.28
		High	3 970.00	24.63	0.29
	16QAM	Low	3 710.00	23.96	0.25
		Middle	3 840.00	24.70	0.29
		High	3 970.00	24.76	0.30
	64QAM	Low	3 710.00	23.85	0.24
		Middle	3 840.00	24.55	0.28
		High	3 970.00	24.52	0.28
	256QAM	Low	3 710.00	23.95	0.25
		Middle	3 840.00	24.55	0.28
		High	3 970.00	24.49	0.28
1	QPSK	Low	3 710.00	23.73	0.24
		Middle	3 840.00	24.36	0.27
		High	3 970.00	24.32	0.27
	16QAM	Low	3 710.00	24.00	0.25
		Middle	3 840.00	24.58	0.29
		High	3 970.00	24.53	0.28
	64QAM	Low	3 710.00	23.81	0.24
		Middle	3 840.00	24.38	0.27
		High	3 970.00	24.15	0.26
	256QAM	Low	3 710.00	23.89	0.25
		Middle	3 840.00	24.43	0.28
		High	3 970.00	24.20	0.26

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 710.00	23.77	0.24
		Middle	3 840.00	24.47	0.28
		High	3 970.00	24.40	0.28
	16QAM	Low	3 710.00	24.12	0.26
		Middle	3 840.00	24.74	0.30
		High	3 970.00	24.65	0.29
	64QAM	Low	3 710.00	23.95	0.25
		Middle	3 840.00	24.56	0.29
		High	3 970.00	24.26	0.27
	256QAM	Low	3 710.00	24.12	0.26
		Middle	3 840.00	24.58	0.29
		High	3 970.00	24.33	0.27
3	QPSK	Low	3 710.00	23.93	0.25
		Middle	3 840.00	24.40	0.28
		High	3 970.00	24.61	0.29
	16QAM	Low	3 710.00	24.15	0.26
		Middle	3 840.00	24.69	0.29
		High	3 970.00	24.79	0.30
	64QAM	Low	3 710.00	24.03	0.25
		Middle	3 840.00	24.50	0.28
		High	3 970.00	24.44	0.28
	256QAM	Low	3 710.00	24.09	0.26
		Middle	3 840.00	24.52	0.28
		High	3 970.00	24.50	0.28

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 710.00	0.96	1.02	0.98	1.01
3 840.00	1.11	1.17	1.13	1.13
3 970.00	1.13	1.18	1.09	1.10

3.7 GHz Service 5G NR 40 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 720.00	23.75	0.24
		Middle	3 840.00	24.21	0.26
		High	3 960.00	24.41	0.28
	16QAM	Low	3 720.00	23.66	0.23
		Middle	3 840.00	24.09	0.26
		High	3 960.00	24.27	0.27
	64QAM	Low	3 720.00	23.86	0.24
		Middle	3 840.00	24.25	0.27
		High	3 960.00	24.48	0.28
	256QAM	Low	3 720.00	23.79	0.24
		Middle	3 840.00	24.18	0.26
		High	3 960.00	24.51	0.28
1	QPSK	Low	3 720.00	23.66	0.23
		Middle	3 840.00	24.06	0.25
		High	3 960.00	24.20	0.26
	16QAM	Low	3 720.00	23.48	0.22
		Middle	3 840.00	23.94	0.25
		High	3 960.00	24.10	0.26
	64QAM	Low	3 720.00	23.71	0.23
		Middle	3 840.00	24.13	0.26
		High	3 960.00	24.34	0.27
	256QAM	Low	3 720.00	23.77	0.24
		Middle	3 840.00	24.05	0.25
		High	3 960.00	24.29	0.27

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 720.00	23.80	0.24
		Middle	3 840.00	24.21	0.26
		High	3 960.00	24.34	0.27
	16QAM	Low	3 720.00	23.73	0.24
		Middle	3 840.00	24.06	0.25
		High	3 960.00	24.23	0.26
	64QAM	Low	3 720.00	23.88	0.24
		Middle	3 840.00	24.22	0.26
		High	3 960.00	24.46	0.28
	256QAM	Low	3 720.00	23.93	0.25
		Middle	3 840.00	24.19	0.26
		High	3 960.00	24.43	0.28
3	QPSK	Low	3 720.00	23.81	0.24
		Middle	3 840.00	24.14	0.26
		High	3 960.00	24.38	0.27
	16QAM	Low	3 720.00	23.69	0.23
		Middle	3 840.00	24.01	0.25
		High	3 960.00	24.28	0.27
	64QAM	Low	3 720.00	23.92	0.25
		Middle	3 840.00	24.14	0.26
		High	3 960.00	24.49	0.28
	256QAM	Low	3 720.00	23.83	0.24
		Middle	3 840.00	24.16	0.26
		High	3 960.00	24.50	0.28

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 720.00	0.95	0.92	0.97	0.97
3 840.00	1.04	1.01	1.05	1.04
3 960.00	1.08	1.06	1.11	1.11

3.7 GHz Service 5G NR 60 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 730.00	23.69	0.23
		Middle	3 840.00	24.14	0.26
		High	3 950.00	24.16	0.26
	16QAM	Low	3 730.00	23.65	0.23
		Middle	3 840.00	24.19	0.26
		High	3 950.00	24.26	0.27
	64QAM	Low	3 730.00	23.75	0.24
		Middle	3 840.00	24.16	0.26
		High	3 950.00	24.23	0.26
	256QAM	Low	3 730.00	23.76	0.24
		Middle	3 840.00	24.16	0.26
		High	3 950.00	24.23	0.26
1	QPSK	Low	3 730.00	23.42	0.22
		Middle	3 840.00	23.92	0.25
		High	3 950.00	24.00	0.25
	16QAM	Low	3 730.00	23.53	0.23
		Middle	3 840.00	24.05	0.25
		High	3 950.00	24.16	0.26
	64QAM	Low	3 730.00	23.57	0.23
		Middle	3 840.00	23.98	0.25
		High	3 950.00	24.08	0.26
	256QAM	Low	3 730.00	23.63	0.23
		Middle	3 840.00	23.99	0.25
		High	3 950.00	24.02	0.25

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 730.00	23.69	0.23
		Middle	3 840.00	24.13	0.26
		High	3 950.00	24.08	0.26
	16QAM	Low	3 730.00	23.66	0.23
		Middle	3 840.00	24.20	0.26
		High	3 950.00	24.17	0.26
	64QAM	Low	3 730.00	23.79	0.24
		Middle	3 840.00	24.18	0.26
		High	3 950.00	24.16	0.26
	256QAM	Low	3 730.00	23.80	0.24
		Middle	3 840.00	24.17	0.26
		High	3 950.00	24.07	0.26
3	QPSK	Low	3 730.00	23.88	0.24
		Middle	3 840.00	24.49	0.28
		High	3 950.00	24.59	0.29
	16QAM	Low	3 730.00	23.99	0.25
		Middle	3 840.00	24.58	0.29
		High	3 950.00	24.67	0.29
	64QAM	Low	3 730.00	23.91	0.25
		Middle	3 840.00	24.52	0.28
		High	3 950.00	24.65	0.29
	256QAM	Low	3 730.00	23.94	0.25
		Middle	3 840.00	24.50	0.28
		High	3 950.00	24.60	0.29

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 730.00	0.93	0.94	0.95	0.96
3 840.00	1.05	1.07	1.06	1.05
3 950.00	1.06	1.08	1.07	1.06

3.7 GHz Service 5G NR 80 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 740.00	23.64	0.23
		Middle	3 840.00	23.95	0.25
		High	3 940.00	23.93	0.25
	16QAM	Low	3 740.00	23.74	0.24
		Middle	3 840.00	23.76	0.24
		High	3 940.00	24.25	0.27
	64QAM	Low	3 740.00	23.70	0.23
		Middle	3 840.00	23.95	0.25
		High	3 940.00	24.21	0.26
	256QAM	Low	3 740.00	23.75	0.24
		Middle	3 840.00	23.73	0.24
		High	3 940.00	24.20	0.26
1	QPSK	Low	3 740.00	23.50	0.22
		Middle	3 840.00	23.80	0.24
		High	3 940.00	23.96	0.25
	16QAM	Low	3 740.00	23.61	0.23
		Middle	3 840.00	23.86	0.24
		High	3 940.00	24.08	0.26
	64QAM	Low	3 740.00	23.57	0.23
		Middle	3 840.00	23.82	0.24
		High	3 940.00	24.02	0.25
	256QAM	Low	3 740.00	23.60	0.23
		Middle	3 840.00	23.82	0.24
		High	3 940.00	24.07	0.26

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 740.00	23.62	0.23
		Middle	3 840.00	23.88	0.24
		High	3 940.00	24.18	0.26
	16QAM	Low	3 740.00	23.75	0.24
		Middle	3 840.00	23.90	0.25
		High	3 940.00	24.20	0.26
	64QAM	Low	3 740.00	23.69	0.23
		Middle	3 840.00	23.91	0.25
		High	3 940.00	24.21	0.26
	256QAM	Low	3 740.00	23.74	0.24
		Middle	3 840.00	23.89	0.25
		High	3 940.00	24.23	0.26
3	QPSK	Low	3 740.00	23.87	0.24
		Middle	3 840.00	24.28	0.27
		High	3 940.00	24.21	0.26
	16QAM	Low	3 740.00	23.95	0.25
		Middle	3 840.00	24.26	0.27
		High	3 940.00	24.27	0.27
	64QAM	Low	3 740.00	23.88	0.24
		Middle	3 840.00	24.25	0.27
		High	3 940.00	24.28	0.27
	256QAM	Low	3 740.00	23.91	0.25
		Middle	3 840.00	24.27	0.27
		High	3 940.00	24.28	0.27

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 740.00	0.93	0.95	0.94	0.95
3 840.00	1.00	0.99	1.00	0.99
3 940.00	1.02	1.05	1.05	1.05

3.7 GHz Service 5G NR 100 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 750.00	23.66	0.23
		Middle	3 840.00	23.98	0.25
		High	3 930.00	24.19	0.26
	16QAM	Low	3 750.00	23.63	0.23
		Middle	3 840.00	23.99	0.25
		High	3 930.00	24.19	0.26
	64QAM	Low	3 750.00	23.73	0.24
		Middle	3 840.00	24.04	0.25
		High	3 930.00	24.19	0.26
	256QAM	Low	3 750.00	23.71	0.24
		Middle	3 840.00	24.02	0.25
		High	3 930.00	24.16	0.26
1	QPSK	Low	3 750.00	23.35	0.22
		Middle	3 840.00	23.72	0.24
		High	3 930.00	24.02	0.25
	16QAM	Low	3 750.00	23.43	0.22
		Middle	3 840.00	23.79	0.24
		High	3 930.00	24.02	0.25
	64QAM	Low	3 750.00	23.50	0.22
		Middle	3 840.00	23.82	0.24
		High	3 930.00	24.07	0.26
	256QAM	Low	3 750.00	23.48	0.22
		Middle	3 840.00	23.77	0.24
		High	3 930.00	24.03	0.25

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 750.00	23.53	0.23
		Middle	3 840.00	23.84	0.24
		High	3 930.00	24.12	0.26
	16QAM	Low	3 750.00	23.57	0.23
		Middle	3 840.00	23.91	0.25
		High	3 930.00	24.14	0.26
	64QAM	Low	3 750.00	23.63	0.23
		Middle	3 840.00	23.93	0.25
		High	3 930.00	24.16	0.26
	256QAM	Low	3 750.00	23.61	0.23
		Middle	3 840.00	23.93	0.25
		High	3 930.00	24.15	0.26
3	QPSK	Low	3 750.00	23.69	0.23
		Middle	3 840.00	24.13	0.26
		High	3 930.00	24.69	0.29
	16QAM	Low	3 750.00	23.80	0.24
		Middle	3 840.00	24.16	0.26
		High	3 930.00	24.73	0.30
	64QAM	Low	3 750.00	23.79	0.24
		Middle	3 840.00	24.24	0.27
		High	3 930.00	24.76	0.30
	256QAM	Low	3 750.00	23.78	0.24
		Middle	3 840.00	24.23	0.26
		High	3 930.00	24.69	0.29

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 750.00	0.91	0.92	0.93	0.93
3 840.00	0.99	1.00	1.01	1.00
3 930.00	1.07	1.07	1.08	1.07

Tabular Data of RF Contiguous output power

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 720.00	23.91	0.25
		Middle	3 840.00	24.31	0.27
		High	3 960.00	24.55	0.29
	16QAM	Low	3 720.00	24.12	0.26
		Middle	3 840.00	24.58	0.29
		High	3 960.00	24.81	0.30
	64QAM	Low	3 720.00	23.95	0.25
		Middle	3 840.00	24.38	0.27
		High	3 960.00	24.64	0.29
	256QAM	Low	3 720.00	23.96	0.25
		Middle	3 840.00	24.36	0.27
		High	3 960.00	24.45	0.28
1	QPSK	Low	3 720.00	23.76	0.24
		Middle	3 840.00	24.13	0.26
		High	3 960.00	24.29	0.27
	16QAM	Low	3 720.00	23.98	0.25
		Middle	3 840.00	24.38	0.27
		High	3 960.00	24.56	0.29
	64QAM	Low	3 720.00	23.78	0.24
		Middle	3 840.00	24.18	0.26
		High	3 960.00	24.38	0.27
	256QAM	Low	3 720.00	23.80	0.24
		Middle	3 840.00	24.21	0.26
		High	3 960.00	24.41	0.28

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 720.00	23.82	0.24
		Middle	3 840.00	24.26	0.27
		High	3 960.00	24.46	0.28
	16QAM	Low	3 720.00	24.12	0.26
		Middle	3 840.00	24.54	0.28
		High	3 960.00	24.74	0.30
	64QAM	Low	3 720.00	23.88	0.24
		Middle	3 840.00	24.32	0.27
		High	3 960.00	24.52	0.28
	256QAM	Low	3 720.00	23.93	0.25
		Middle	3 840.00	24.35	0.27
		High	3 960.00	24.57	0.29
3	QPSK	Low	3 720.00	24.04	0.25
		Middle	3 840.00	24.65	0.29
		High	3 960.00	24.66	0.29
	16QAM	Low	3 720.00	24.32	0.27
		Middle	3 840.00	24.73	0.30
		High	3 960.00	24.73	0.30
	64QAM	Low	3 720.00	24.10	0.26
		Middle	3 840.00	24.72	0.30
		High	3 960.00	24.69	0.29
	256QAM	Low	3 720.00	24.10	0.26
		Middle	3 840.00	24.72	0.30
		High	3 960.00	24.70	0.30

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 720.00	0.98	1.04	0.99	0.99
3 840.00	1.09	1.14	1.10	1.11
3 960.00	1.13	1.18	1.14	1.14

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
0	QPSK	Low	3 800.00	23.86	0.24
		Middle	3 840.00	23.99	0.25
		High	3 880.00	24.09	0.26
	16QAM	Low	3 800.00	23.85	0.24
		Middle	3 840.00	23.99	0.25
		High	3 880.00	24.13	0.26
	64QAM	Low	3 800.00	23.89	0.25
		Middle	3 840.00	24.02	0.25
		High	3 880.00	24.14	0.26
	256QAM	Low	3 800.00	23.86	0.24
		Middle	3 840.00	23.99	0.25
		High	3 880.00	24.14	0.26
1	QPSK	Low	3 800.00	23.67	0.23
		Middle	3 840.00	23.81	0.24
		High	3 880.00	23.96	0.25
	16QAM	Low	3 800.00	23.68	0.23
		Middle	3 840.00	23.87	0.24
		High	3 880.00	24.00	0.25
	64QAM	Low	3 800.00	23.74	0.24
		Middle	3 840.00	23.88	0.24
		High	3 880.00	24.03	0.25
	256QAM	Low	3 800.00	23.70	0.23
		Middle	3 840.00	23.85	0.24
		High	3 880.00	23.97	0.25

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm)	Calculated (W)
2	QPSK	Low	3 800.00	23.75	0.24
		Middle	3 840.00	23.92	0.25
		High	3 880.00	24.04	0.25
	16QAM	Low	3 800.00	23.79	0.24
		Middle	3 840.00	23.97	0.25
		High	3 880.00	24.09	0.26
	64QAM	Low	3 800.00	23.81	0.24
		Middle	3 840.00	23.99	0.25
		High	3 880.00	24.12	0.26
	256QAM	Low	3 800.00	23.80	0.24
		Middle	3 840.00	23.96	0.25
		High	3 880.00	24.12	0.26
3	QPSK	Low	3 800.00	24.05	0.25
		Middle	3 840.00	24.27	0.27
		High	3 880.00	24.47	0.28
	16QAM	Low	3 800.00	24.09	0.26
		Middle	3 840.00	24.34	0.27
		High	3 880.00	24.53	0.28
	64QAM	Low	3 800.00	24.08	0.26
		Middle	3 840.00	24.38	0.27
		High	3 880.00	24.56	0.29
	256QAM	Low	3 800.00	24.06	0.25
		Middle	3 840.00	24.35	0.27
		High	3 880.00	24.54	0.28

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 800.00	0.97	0.97	0.98	0.97
3 840.00	1.00	1.02	1.02	1.01
3 880.00	1.04	1.05	1.06	1.05

Tabular Data of RF Non-Contiguous output power

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

Ant.	Mod	5G NR 20 MHz		5G NR 20 MHz		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	3 710.00	20.65	3 890.00	21.67	24.20	0.26
	16QAM	3 710.00	20.86	3 890.00	21.90	24.42	0.28
	64QAM	3 710.00	20.63	3 890.00	21.69	24.20	0.26
	256QAM	3 710.00	20.68	3 890.00	21.69	24.22	0.26
1	QPSK	3 710.00	20.51	3 890.00	21.58	24.09	0.26
	16QAM	3 710.00	20.85	3 890.00	21.88	24.40	0.28
	64QAM	3 710.00	20.59	3 890.00	21.67	24.17	0.26
	256QAM	3 710.00	20.62	3 890.00	21.67	24.19	0.26
2	QPSK	3 710.00	20.92	3 890.00	21.36	24.16	0.26
	16QAM	3 710.00	21.24	3 890.00	21.58	24.42	0.28
	64QAM	3 710.00	21.06	3 890.00	21.49	24.29	0.27
	256QAM	3 710.00	21.04	3 890.00	21.43	24.25	0.27
3	QPSK	3 710.00	20.20	3 890.00	21.63	23.98	0.25
	16QAM	3 710.00	20.54	3 890.00	21.88	24.27	0.27
	64QAM	3 710.00	20.32	3 890.00	21.80	24.13	0.26
	256QAM	3 710.00	20.32	3 890.00	21.79	24.13	0.26

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

Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 710.00 + 3 890.00	1.03	1.10	1.06	1.06

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

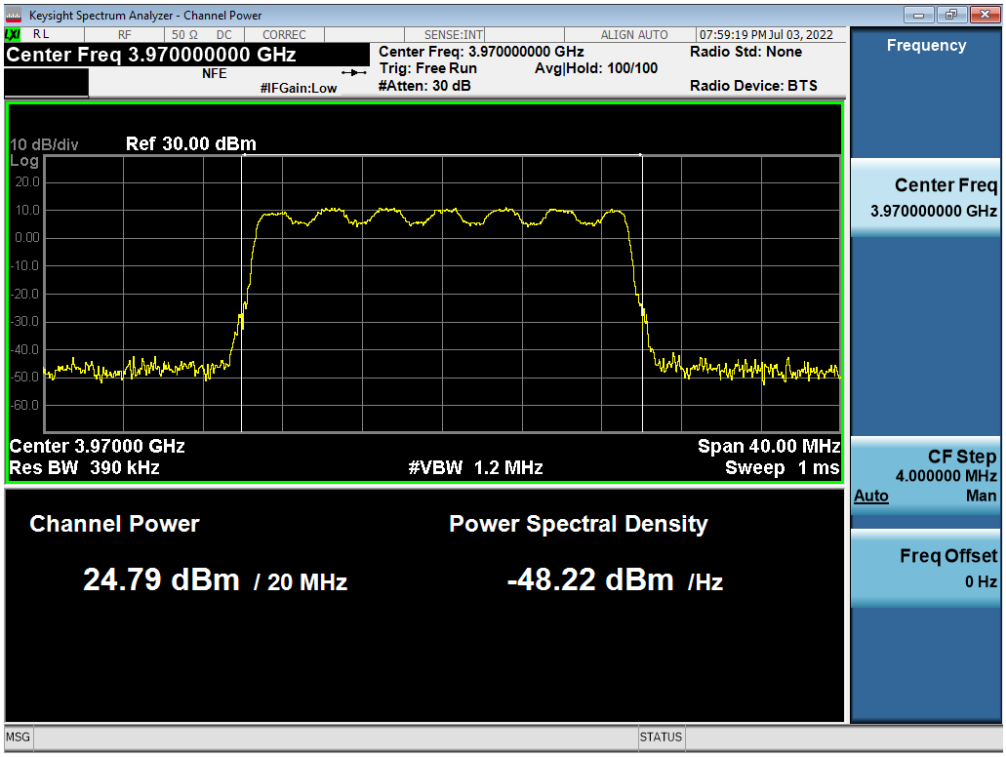
Ant.	Mod	5G NR 20 MHz		5G NR 20 MHz		Summation Value (dBm)	Calculated (W)
		Frequency (MHz)	Measured Value (dBm)	Frequency (MHz)	Measured Value (dBm)		
0	QPSK	3 790.00	21.42	3 970.00	21.42	24.43	0.28
	16QAM	3 790.00	21.64	3 970.00	21.64	24.65	0.29
	64QAM	3 790.00	21.42	3 970.00	21.46	24.45	0.28
	256QAM	3 790.00	21.48	3 970.00	21.51	24.51	0.28
1	QPSK	3 790.00	21.28	3 970.00	21.00	24.15	0.26
	16QAM	3 790.00	21.54	3 970.00	21.23	24.40	0.28
	64QAM	3 790.00	21.36	3 970.00	21.06	24.22	0.26
	256QAM	3 790.00	21.39	3 970.00	21.12	24.27	0.27
2	QPSK	3 790.00	21.39	3 970.00	21.00	24.21	0.26
	16QAM	3 790.00	21.62	3 970.00	21.23	24.44	0.28
	64QAM	3 790.00	21.54	3 970.00	21.08	24.32	0.27
	256QAM	3 790.00	21.52	3 970.00	21.12	24.34	0.27
3	QPSK	3 790.00	21.03	3 970.00	21.85	24.47	0.28
	16QAM	3 790.00	21.18	3 970.00	21.95	24.59	0.29
	64QAM	3 790.00	21.13	3 970.00	21.94	24.57	0.29
	256QAM	3 790.00	21.19	3 970.00	21.97	24.61	0.29

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

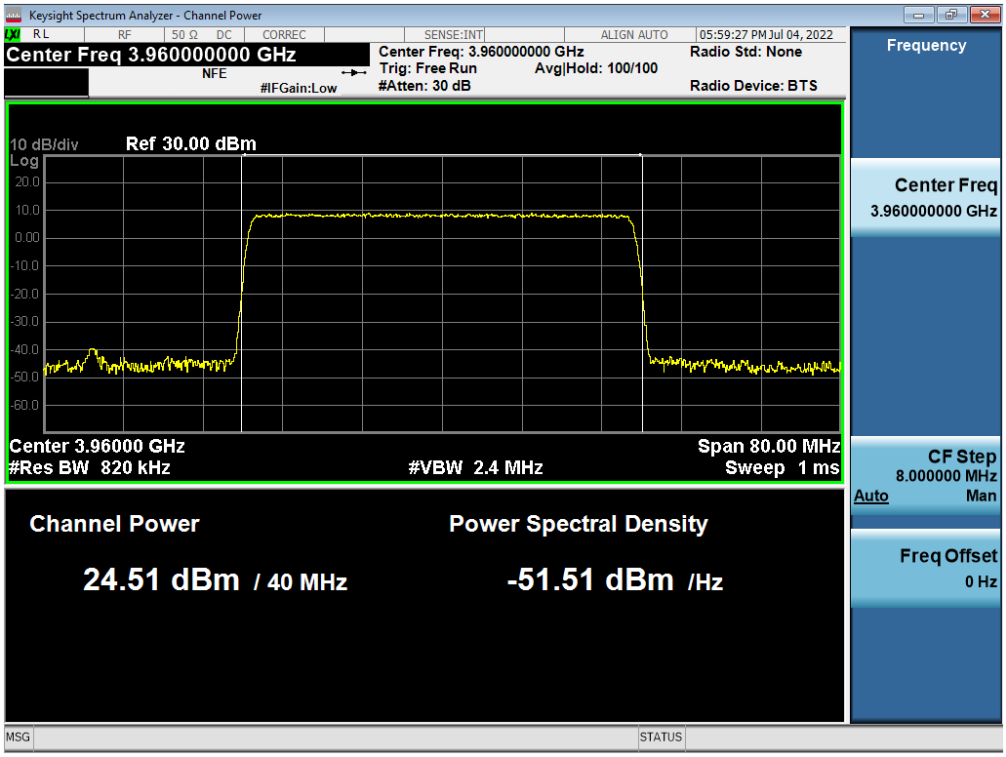
Frequency (MHz)	Output Power(Conducted)			
	QPSK	16QAM	64QAM	256QAM
	W			
3 790.00 + 3 970.00	1.08	1.14	1.10	1.11

Plot Data of RF Output Power

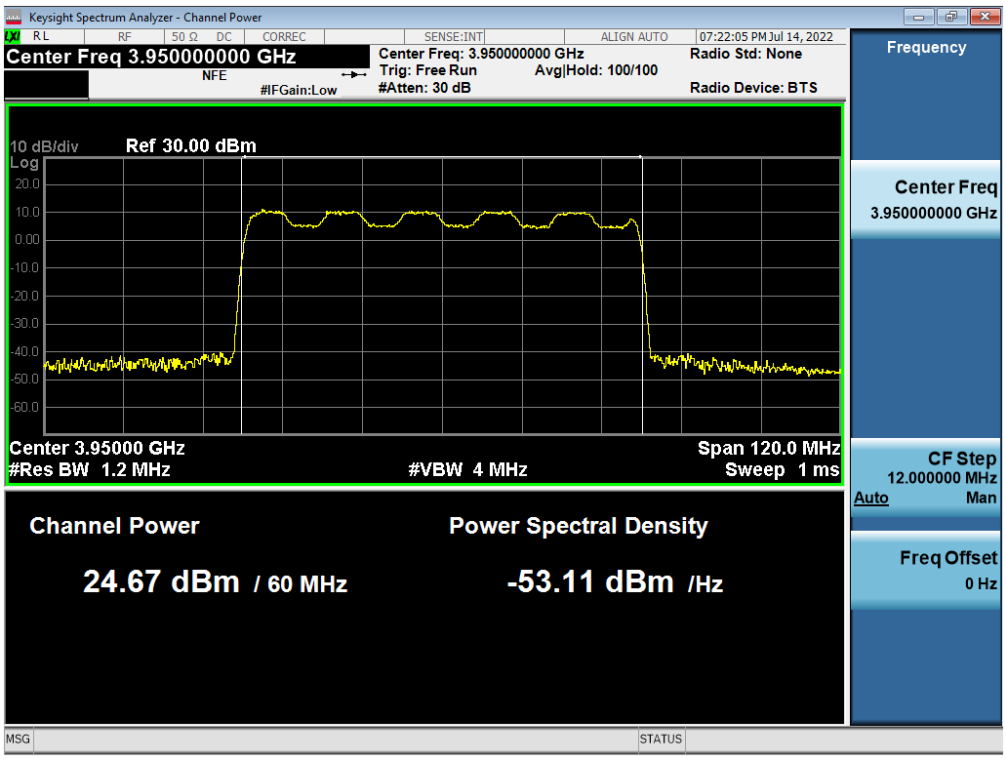
Antenna 3 / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / High



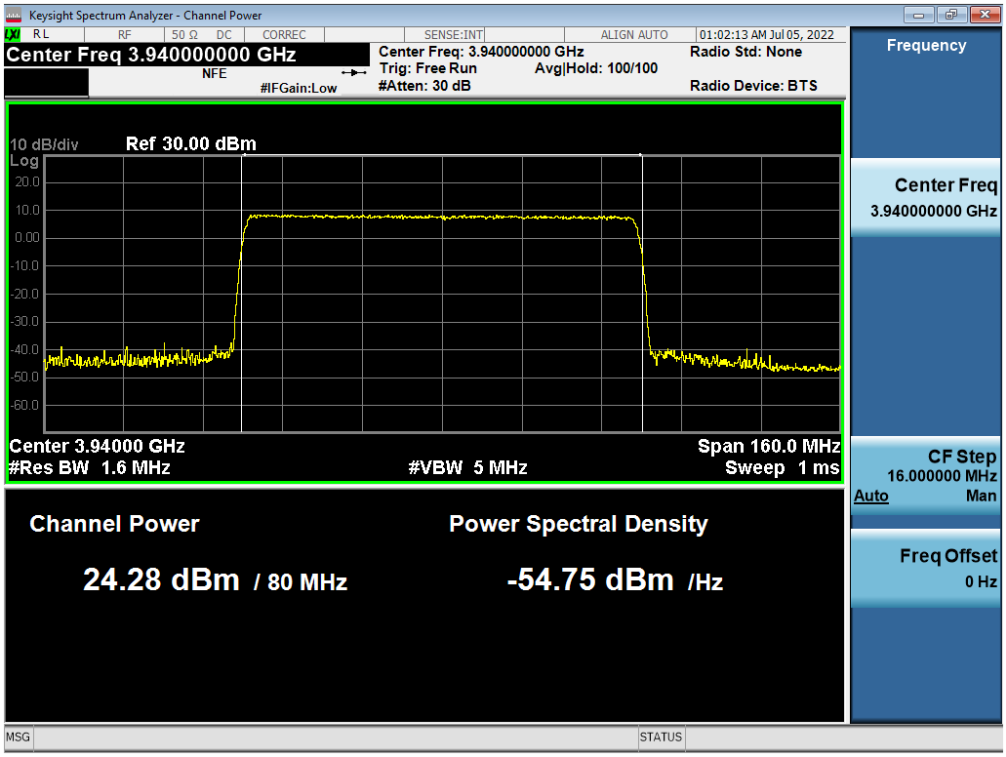
Antenna 0 / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 256QAM / High



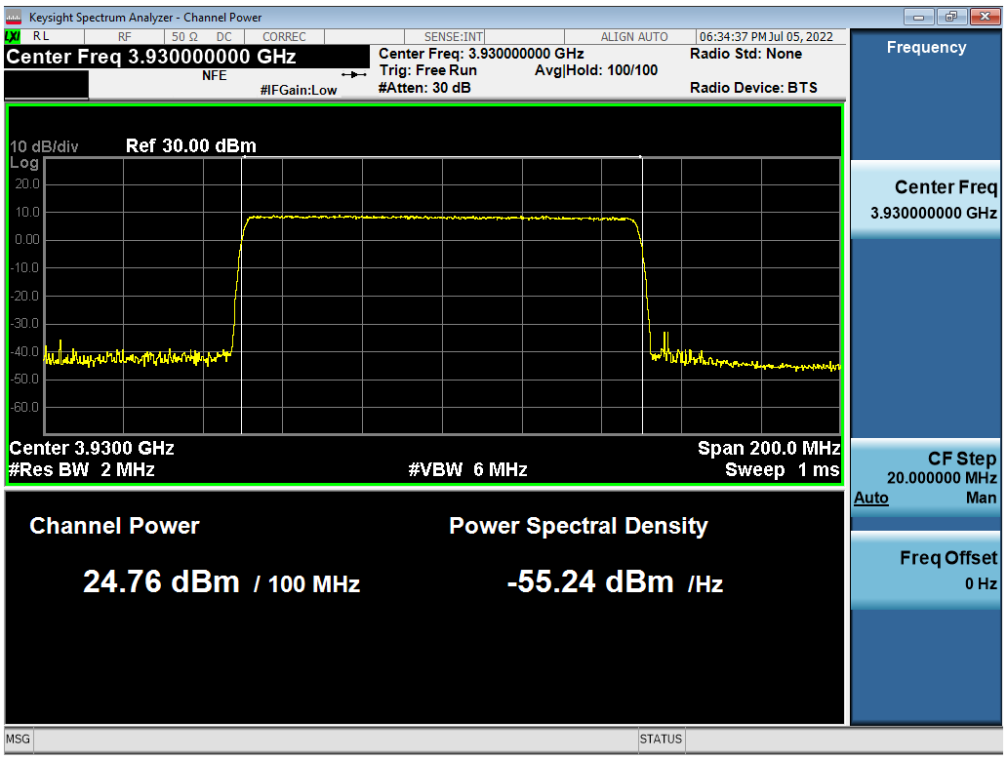
Antenna 3 / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 16QAM / High



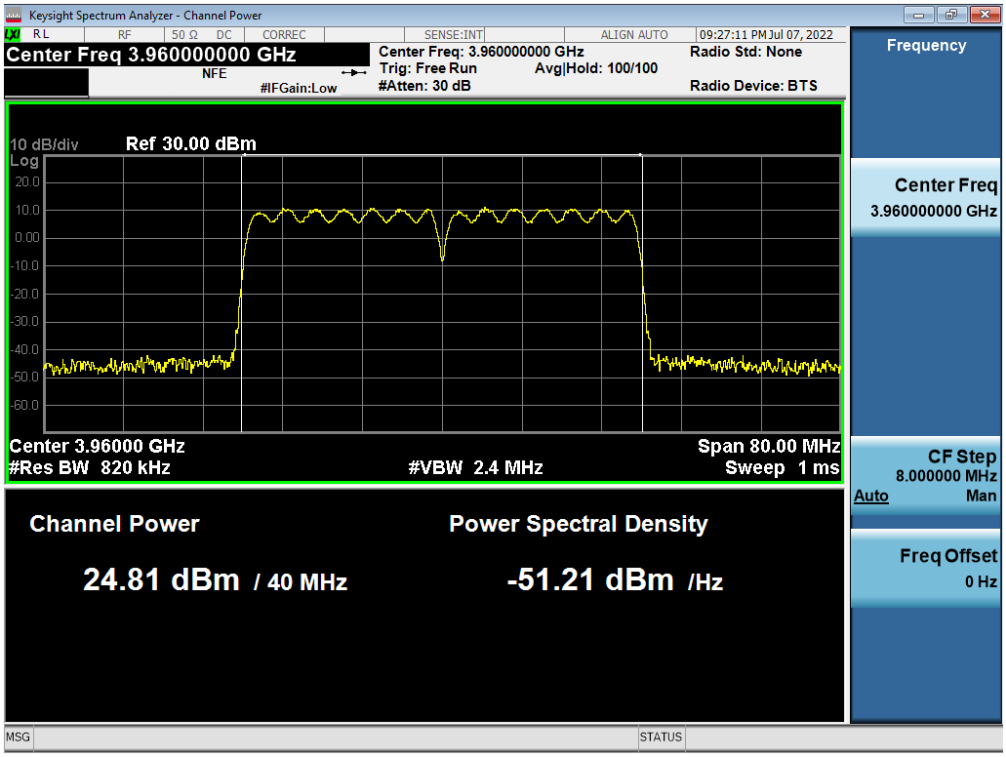
Antenna 3 / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 64QAM / High



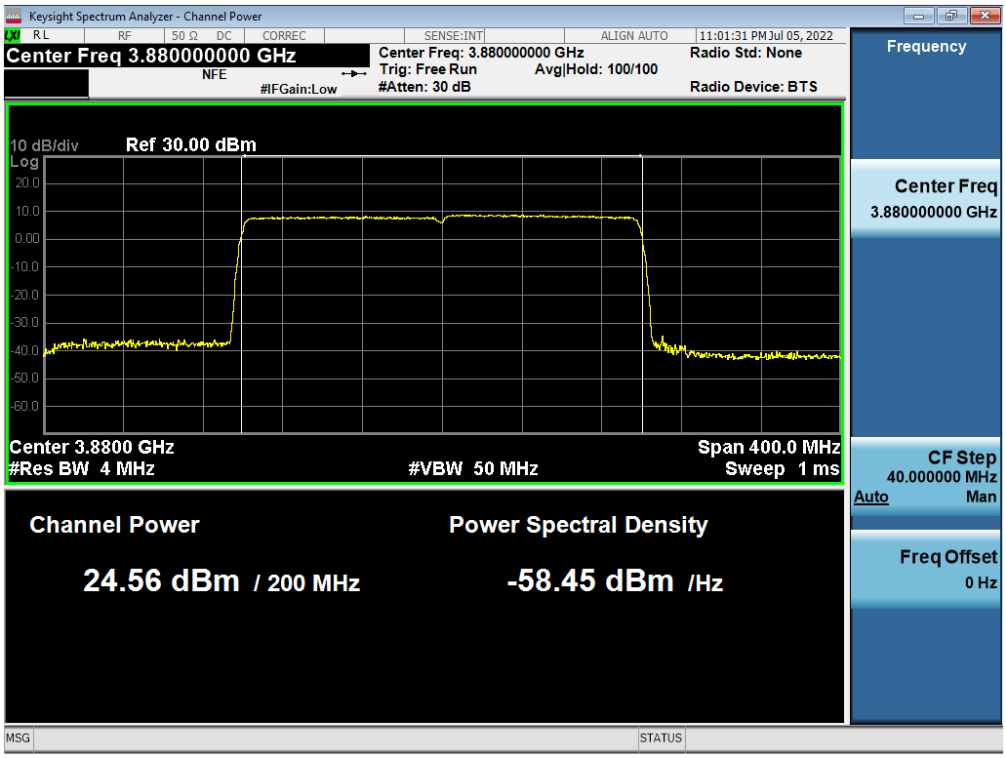
Antenna 3 / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 64QAM / High



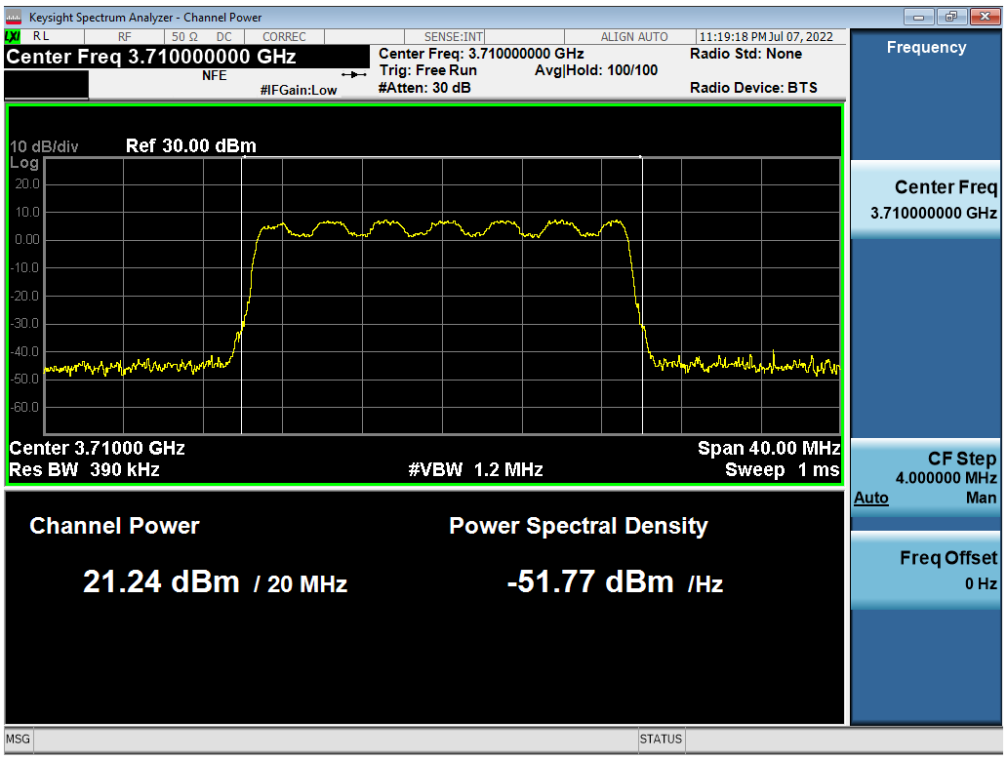
Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



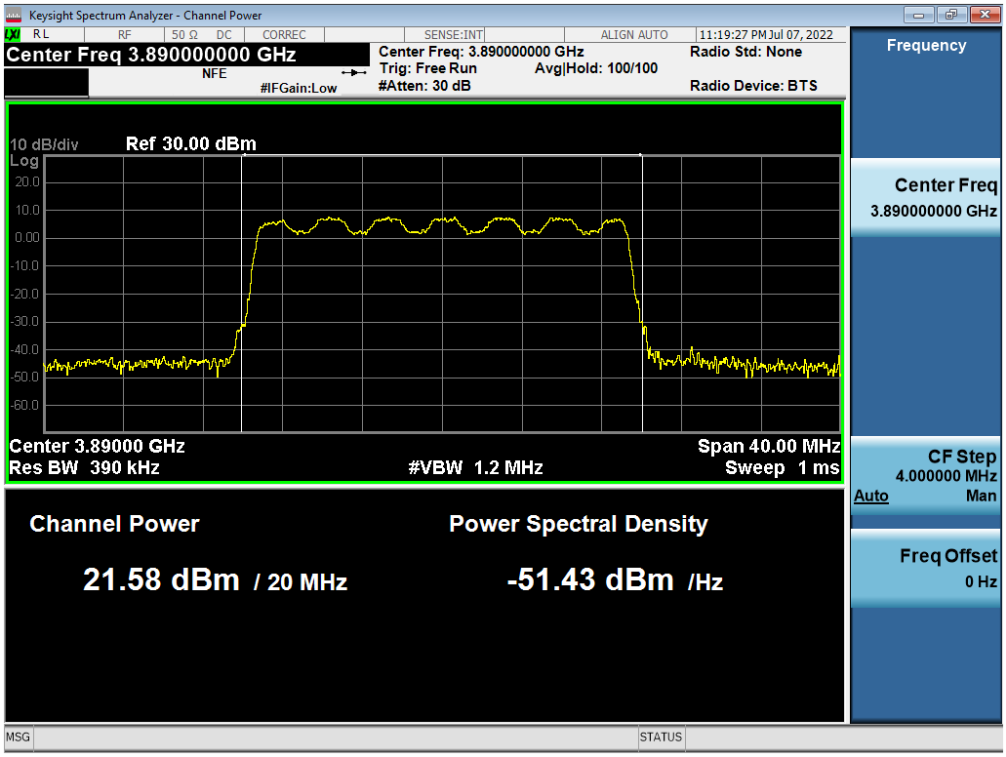
Antenna 3 / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / High



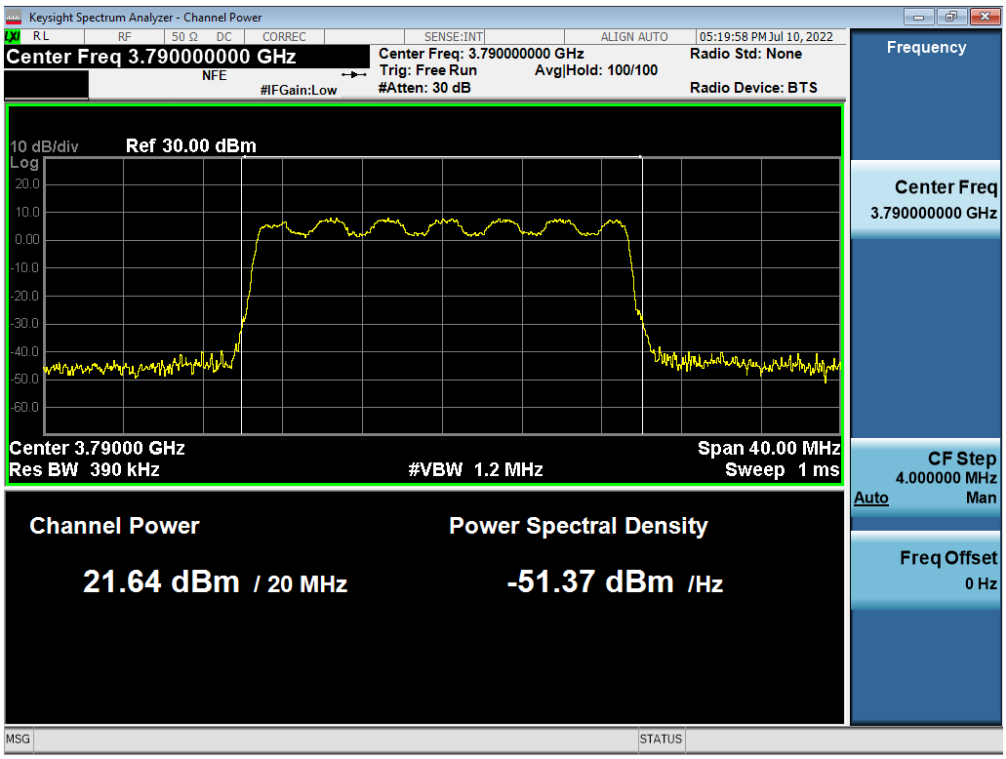
Antenna 2 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



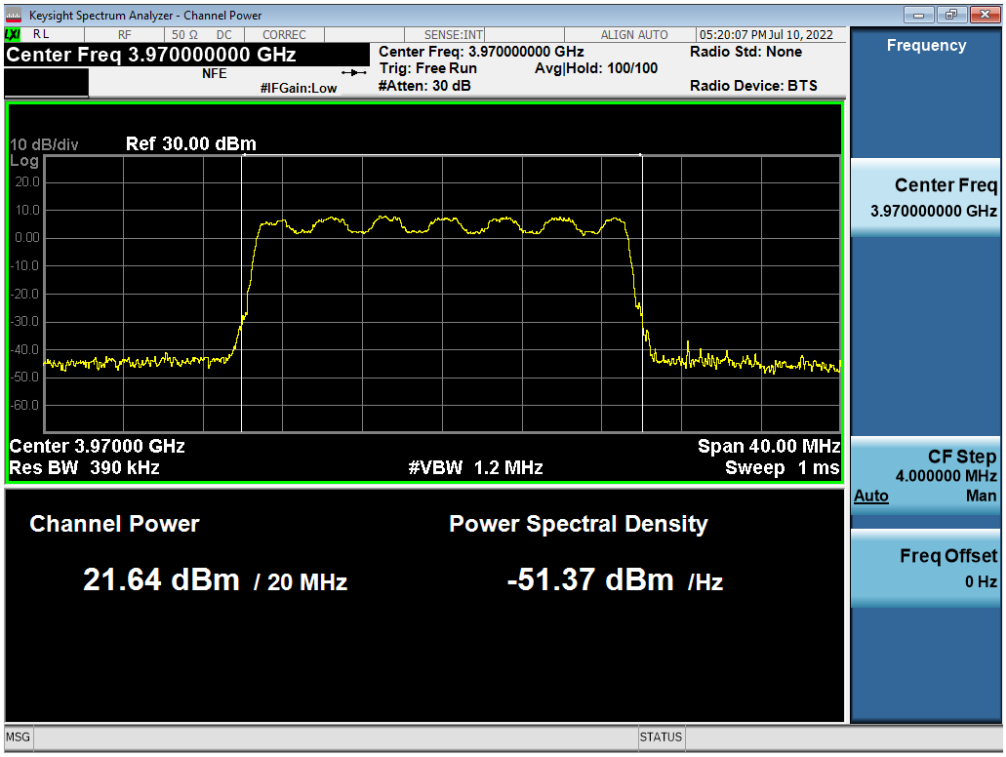
Antenna 2 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / High



Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / High



Tabular Data of PSD

3.7 GHz Service 5G NR 20 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 710.00	12.44	11.50	23.94	0.25	1640
		Middle	3 840.00	13.06	11.50	24.56	0.29	
		High	3 970.00	13.10	11.50	24.60	0.29	
	16QAM	Low	3 710.00	14.15	11.50	25.65	0.37	
		Middle	3 840.00	14.44	11.50	25.94	0.39	
		High	3 970.00	14.70	11.50	26.20	0.42	
	64QAM	Low	3 710.00	12.35	11.50	23.85	0.24	
		Middle	3 840.00	13.26	11.50	24.76	0.30	
		High	3 970.00	13.22	11.50	24.72	0.30	
	256QAM	Low	3 710.00	12.54	11.50	24.04	0.25	
		Middle	3 840.00	13.02	11.50	24.52	0.28	
		High	3 970.00	13.36	11.50	24.86	0.31	
1	QPSK	Low	3 710.00	12.35	11.50	23.85	0.24	
		Middle	3 840.00	13.02	11.50	24.52	0.28	
		High	3 970.00	12.68	11.50	24.18	0.26	
	16QAM	Low	3 710.00	13.80	11.50	25.30	0.34	
		Middle	3 840.00	14.44	11.50	25.94	0.39	
		High	3 970.00	14.61	11.50	26.11	0.41	
	64QAM	Low	3 710.00	12.34	11.50	23.84	0.24	
		Middle	3 840.00	13.07	11.50	24.57	0.29	
		High	3 970.00	12.55	11.50	24.05	0.25	
	256QAM	Low	3 710.00	12.55	11.50	24.05	0.25	
		Middle	3 840.00	12.75	11.50	24.25	0.27	
		High	3 970.00	12.61	11.50	24.11	0.26	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 710.00	12.40	11.50	23.90	0.25	1640
		Middle	3 840.00	13.08	11.50	24.58	0.29	
		High	3 970.00	12.90	11.50	24.40	0.28	
	16QAM	Low	3 710.00	13.87	11.50	25.37	0.34	
		Middle	3 840.00	14.73	11.50	26.23	0.42	
		High	3 970.00	14.54	11.50	26.04	0.40	
	64QAM	Low	3 710.00	12.53	11.50	24.03	0.25	
		Middle	3 840.00	13.02	11.50	24.52	0.28	
		High	3 970.00	12.57	11.50	24.07	0.26	
	256QAM	Low	3 710.00	12.46	11.50	23.96	0.25	
		Middle	3 840.00	13.05	11.50	24.55	0.29	
		High	3 970.00	12.87	11.50	24.37	0.27	
3	QPSK	Low	3 710.00	12.37	11.50	23.87	0.24	
		Middle	3 840.00	12.92	11.50	24.42	0.28	
		High	3 970.00	13.17	11.50	24.67	0.29	
	16QAM	Low	3 710.00	13.91	11.50	25.41	0.35	
		Middle	3 840.00	14.55	11.50	26.05	0.40	
		High	3 970.00	14.80	11.50	26.30	0.43	
	64QAM	Low	3 710.00	12.65	11.50	24.15	0.26	
		Middle	3 840.00	12.83	11.50	24.33	0.27	
		High	3 970.00	13.02	11.50	24.52	0.28	
	256QAM	Low	3 710.00	12.62	11.50	24.12	0.26	
		Middle	3 840.00	12.97	11.50	24.47	0.28	
		High	3 970.00	13.09	11.50	24.59	0.29	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 710.00	0.98	1.40	1.00	1.02	1640
3 840.00	1.13	1.61	1.14	1.11	
3 970.00	1.12	1.65	1.09	1.13	

3.7 GHz Service 5G NR 40 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 720.00	9.05	11.50	20.55	0.11	1640
		Middle	3 840.00	9.47	11.50	20.97	0.12	
		High	3 960.00	9.78	11.50	21.28	0.13	
	16QAM	Low	3 720.00	10.73	11.50	22.23	0.17	
		Middle	3 840.00	11.28	11.50	22.78	0.19	
		High	3 960.00	11.60	11.50	23.10	0.20	
	64QAM	Low	3 720.00	9.25	11.50	20.75	0.12	
		Middle	3 840.00	9.55	11.50	21.05	0.13	
		High	3 960.00	9.72	11.50	21.22	0.13	
	256QAM	Low	3 720.00	9.21	11.50	20.71	0.12	
		Middle	3 840.00	9.42	11.50	20.92	0.12	
		High	3 960.00	9.84	11.50	21.34	0.14	
1	QPSK	Low	3 720.00	9.00	11.50	20.50	0.11	
		Middle	3 840.00	9.52	11.50	21.02	0.13	
		High	3 960.00	9.48	11.50	20.98	0.13	
	16QAM	Low	3 720.00	10.72	11.50	22.22	0.17	
		Middle	3 840.00	11.12	11.50	22.62	0.18	
		High	3 960.00	11.48	11.50	22.98	0.20	
	64QAM	Low	3 720.00	8.95	11.50	20.45	0.11	
		Middle	3 840.00	9.41	11.50	20.91	0.12	
		High	3 960.00	9.76	11.50	21.26	0.13	
	256QAM	Low	3 720.00	9.08	11.50	20.58	0.11	
		Middle	3 840.00	9.41	11.50	20.91	0.12	
		High	3 960.00	9.76	11.50	21.26	0.13	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 720.00	9.02	11.50	20.52	0.11	1640
		Middle	3 840.00	9.63	11.50	21.13	0.13	
		High	3 960.00	9.53	11.50	21.03	0.13	
	16QAM	Low	3 720.00	10.89	11.50	22.39	0.17	
		Middle	3 840.00	11.32	11.50	22.82	0.19	
		High	3 960.00	11.40	11.50	22.90	0.20	
	64QAM	Low	3 720.00	9.12	11.50	20.62	0.12	
		Middle	3 840.00	9.50	11.50	21.00	0.13	
		High	3 960.00	9.84	11.50	21.34	0.14	
	256QAM	Low	3 720.00	9.08	11.50	20.58	0.11	
		Middle	3 840.00	9.51	11.50	21.01	0.13	
		High	3 960.00	9.72	11.50	21.22	0.13	
3	QPSK	Low	3 720.00	8.97	11.50	20.47	0.11	
		Middle	3 840.00	9.56	11.50	21.06	0.13	
		High	3 960.00	9.58	11.50	21.08	0.13	
	16QAM	Low	3 720.00	10.94	11.50	22.44	0.18	
		Middle	3 840.00	11.20	11.50	22.70	0.19	
		High	3 960.00	11.56	11.50	23.06	0.20	
	64QAM	Low	3 720.00	9.04	11.50	20.54	0.11	
		Middle	3 840.00	9.30	11.50	20.80	0.12	
		High	3 960.00	9.81	11.50	21.31	0.14	
	256QAM	Low	3 720.00	9.25	11.50	20.75	0.12	
		Middle	3 840.00	9.71	11.50	21.21	0.13	
		High	3 960.00	9.92	11.50	21.42	0.14	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 720.00	0.45	0.68	0.46	0.47	1640
3 840.00	0.51	0.75	0.50	0.51	
3 960.00	0.51	0.80	0.54	0.54	

3.7 GHz Service 5G NR 60 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 730.00	7.14	11.50	18.64	0.07	1640
		Middle	3 840.00	7.56	11.50	19.06	0.08	
		High	3 950.00	7.64	11.50	19.14	0.08	
	16QAM	Low	3 730.00	8.75	11.50	20.25	0.11	
		Middle	3 840.00	9.16	11.50	20.66	0.12	
		High	3 950.00	9.38	11.50	20.88	0.12	
	64QAM	Low	3 730.00	7.39	11.50	18.89	0.08	
		Middle	3 840.00	7.55	11.50	19.05	0.08	
		High	3 950.00	7.97	11.50	19.47	0.09	
	256QAM	Low	3 730.00	7.20	11.50	18.70	0.07	
		Middle	3 840.00	7.71	11.50	19.21	0.08	
		High	3 950.00	7.84	11.50	19.34	0.09	
1	QPSK	Low	3 730.00	6.94	11.50	18.44	0.07	
		Middle	3 840.00	7.60	11.50	19.10	0.08	
		High	3 950.00	7.68	11.50	19.18	0.08	
	16QAM	Low	3 730.00	8.78	11.50	20.28	0.11	
		Middle	3 840.00	9.30	11.50	20.80	0.12	
		High	3 950.00	9.25	11.50	20.75	0.12	
	64QAM	Low	3 730.00	6.94	11.50	18.44	0.07	
		Middle	3 840.00	7.77	11.50	19.27	0.08	
		High	3 950.00	7.63	11.50	19.13	0.08	
	256QAM	Low	3 730.00	7.21	11.50	18.71	0.07	
		Middle	3 840.00	7.41	11.50	18.91	0.08	
		High	3 950.00	7.67	11.50	19.17	0.08	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 730.00	7.15	11.50	18.65	0.07	1640
		Middle	3 840.00	7.45	11.50	18.95	0.08	
		High	3 950.00	7.60	11.50	19.10	0.08	
	16QAM	Low	3 730.00	8.90	11.50	20.40	0.11	
		Middle	3 840.00	9.32	11.50	20.82	0.12	
		High	3 950.00	9.19	11.50	20.69	0.12	
	64QAM	Low	3 730.00	7.24	11.50	18.74	0.07	
		Middle	3 840.00	7.75	11.50	19.25	0.08	
		High	3 950.00	7.50	11.50	19.00	0.08	
	256QAM	Low	3 730.00	7.21	11.50	18.71	0.07	
		Middle	3 840.00	7.61	11.50	19.11	0.08	
		High	3 950.00	7.41	11.50	18.91	0.08	
3	QPSK	Low	3 730.00	7.37	11.50	18.87	0.08	
		Middle	3 840.00	7.91	11.50	19.41	0.09	
		High	3 950.00	8.00	11.50	19.50	0.09	
	16QAM	Low	3 730.00	9.08	11.50	20.58	0.11	
		Middle	3 840.00	9.68	11.50	21.18	0.13	
		High	3 950.00	10.35	11.50	21.85	0.15	
	64QAM	Low	3 730.00	7.65	11.50	19.15	0.08	
		Middle	3 840.00	7.85	11.50	19.35	0.09	
		High	3 950.00	8.56	11.50	20.06	0.10	
	256QAM	Low	3 730.00	7.44	11.50	18.94	0.08	
		Middle	3 840.00	7.92	11.50	19.42	0.09	
		High	3 950.00	8.19	11.50	19.69	0.09	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 730.00	0.29	0.44	0.30	0.30	1640
3 840.00	0.33	0.49	0.33	0.33	
3 950.00	0.34	0.51	0.35	0.34	

3.7 GHz Service 5G NR 80 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 740.00	6.06	11.50	17.56	0.06	1640
		Middle	3 840.00	6.25	11.50	17.75	0.06	
		High	3 940.00	6.14	11.50	17.64	0.06	
	16QAM	Low	3 740.00	7.95	11.50	19.45	0.09	
		Middle	3 840.00	7.73	11.50	19.23	0.08	
		High	3 940.00	8.49	11.50	19.99	0.10	
	64QAM	Low	3 740.00	5.89	11.50	17.39	0.05	
		Middle	3 840.00	6.15	11.50	17.65	0.06	
		High	3 940.00	6.64	11.50	18.14	0.07	
	256QAM	Low	3 740.00	6.28	11.50	17.78	0.06	
		Middle	3 840.00	6.00	11.50	17.50	0.06	
		High	3 940.00	6.61	11.50	18.11	0.06	
1	QPSK	Low	3 740.00	5.78	11.50	17.28	0.05	
		Middle	3 840.00	6.14	11.50	17.64	0.06	
		High	3 940.00	6.49	11.50	17.99	0.06	
	16QAM	Low	3 740.00	7.63	11.50	19.13	0.08	
		Middle	3 840.00	7.95	11.50	19.45	0.09	
		High	3 940.00	8.07	11.50	19.57	0.09	
	64QAM	Low	3 740.00	5.69	11.50	17.19	0.05	
		Middle	3 840.00	6.00	11.50	17.50	0.06	
		High	3 940.00	6.22	11.50	17.72	0.06	
	256QAM	Low	3 740.00	5.80	11.50	17.30	0.05	
		Middle	3 840.00	6.05	11.50	17.55	0.06	
		High	3 940.00	6.29	11.50	17.79	0.06	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 740.00	5.91	11.50	17.41	0.06	1640
		Middle	3 840.00	6.07	11.50	17.57	0.06	
		High	3 940.00	6.48	11.50	17.98	0.06	
	16QAM	Low	3 740.00	7.92	11.50	19.42	0.09	
		Middle	3 840.00	7.87	11.50	19.37	0.09	
		High	3 940.00	8.30	11.50	19.80	0.10	
	64QAM	Low	3 740.00	5.87	11.50	17.37	0.05	
		Middle	3 840.00	5.99	11.50	17.49	0.06	
		High	3 940.00	6.61	11.50	18.11	0.06	
	256QAM	Low	3 740.00	5.89	11.50	17.39	0.05	
		Middle	3 840.00	6.13	11.50	17.63	0.06	
		High	3 940.00	6.45	11.50	17.95	0.06	
3	QPSK	Low	3 740.00	5.98	11.50	17.48	0.06	
		Middle	3 840.00	6.41	11.50	17.91	0.06	
		High	3 940.00	6.47	11.50	17.97	0.06	
	16QAM	Low	3 740.00	7.84	11.50	19.34	0.09	
		Middle	3 840.00	8.20	11.50	19.70	0.09	
		High	3 940.00	8.35	11.50	19.85	0.10	
	64QAM	Low	3 740.00	6.01	11.50	17.51	0.06	
		Middle	3 840.00	6.51	11.50	18.01	0.06	
		High	3 940.00	6.64	11.50	18.14	0.07	
	256QAM	Low	3 740.00	6.12	11.50	17.62	0.06	
		Middle	3 840.00	6.43	11.50	17.93	0.06	
		High	3 940.00	6.71	11.50	18.21	0.07	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 740.00	0.22	0.34	0.22	0.23	1640
3 840.00	0.24	0.35	0.23	0.23	
3 940.00	0.25	0.38	0.25	0.25	

3.7 GHz Service 5G NR 100 MHz 1 Carrier

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 750.00	4.85	11.50	16.35	0.04	1640
		Middle	3 840.00	5.07	11.50	16.57	0.05	
		High	3 930.00	5.64	11.50	17.14	0.05	
	16QAM	Low	3 750.00	6.88	11.50	18.38	0.07	
		Middle	3 840.00	6.99	11.50	18.49	0.07	
		High	3 930.00	7.32	11.50	18.82	0.08	
	64QAM	Low	3 750.00	5.04	11.50	16.54	0.05	
		Middle	3 840.00	5.22	11.50	16.72	0.05	
		High	3 930.00	5.67	11.50	17.17	0.05	
	256QAM	Low	3 750.00	4.98	11.50	16.48	0.04	
		Middle	3 840.00	5.31	11.50	16.81	0.05	
		High	3 930.00	5.53	11.50	17.03	0.05	
1	QPSK	Low	3 750.00	4.65	11.50	16.15	0.04	
		Middle	3 840.00	4.93	11.50	16.43	0.04	
		High	3 930.00	5.27	11.50	16.77	0.05	
	16QAM	Low	3 750.00	6.78	11.50	18.28	0.07	
		Middle	3 840.00	7.04	11.50	18.54	0.07	
		High	3 930.00	7.08	11.50	18.58	0.07	
	64QAM	Low	3 750.00	4.82	11.50	16.32	0.04	
		Middle	3 840.00	4.95	11.50	16.45	0.04	
		High	3 930.00	5.40	11.50	16.90	0.05	
	256QAM	Low	3 750.00	4.86	11.50	16.36	0.04	
		Middle	3 840.00	5.21	11.50	16.71	0.05	
		High	3 930.00	5.61	11.50	17.11	0.05	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 750.00	4.80	11.50	16.30	0.04	1640
		Middle	3 840.00	5.13	11.50	16.63	0.05	
		High	3 930.00	5.56	11.50	17.06	0.05	
	16QAM	Low	3 750.00	6.67	11.50	18.17	0.07	
		Middle	3 840.00	7.09	11.50	18.59	0.07	
		High	3 930.00	7.27	11.50	18.77	0.08	
	64QAM	Low	3 750.00	4.94	11.50	16.44	0.04	
		Middle	3 840.00	5.23	11.50	16.73	0.05	
		High	3 930.00	5.57	11.50	17.07	0.05	
	256QAM	Low	3 750.00	4.89	11.50	16.39	0.04	
		Middle	3 840.00	5.17	11.50	16.67	0.05	
		High	3 930.00	5.75	11.50	17.25	0.05	
3	QPSK	Low	3 750.00	4.87	11.50	16.37	0.04	
		Middle	3 840.00	5.27	11.50	16.77	0.05	
		High	3 930.00	5.90	11.50	17.40	0.05	
	16QAM	Low	3 750.00	6.78	11.50	18.28	0.07	
		Middle	3 840.00	7.29	11.50	18.79	0.08	
		High	3 930.00	8.01	11.50	19.51	0.09	
	64QAM	Low	3 750.00	5.28	11.50	16.78	0.05	
		Middle	3 840.00	5.45	11.50	16.95	0.05	
		High	3 930.00	6.12	11.50	17.62	0.06	
	256QAM	Low	3 750.00	5.27	11.50	16.77	0.05	
		Middle	3 840.00	5.63	11.50	17.13	0.05	
		High	3 930.00	6.02	11.50	17.52	0.06	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 750.00	0.17	0.27	0.18	0.18	1640
3 840.00	0.18	0.29	0.19	0.19	
3 930.00	0.21	0.31	0.21	0.21	

Tabular Data of Contiguous PSD

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 720.00	9.38	11.50	20.88	0.12	1640
		Middle	3 840.00	9.77	11.50	21.27	0.13	
		High	3 960.00	10.10	11.50	21.60	0.14	
	16QAM	Low	3 720.00	11.28	11.50	22.78	0.19	
		Middle	3 840.00	11.35	11.50	22.85	0.19	
		High	3 960.00	11.69	11.50	23.19	0.21	
	64QAM	Low	3 720.00	9.41	11.50	20.91	0.12	
		Middle	3 840.00	9.63	11.50	21.13	0.13	
		High	3 960.00	10.18	11.50	21.68	0.15	
	256QAM	Low	3 720.00	9.71	11.50	21.21	0.13	
		Middle	3 840.00	10.28	11.50	21.78	0.15	
		High	3 960.00	9.84	11.50	21.34	0.14	
1	QPSK	Low	3 720.00	9.14	11.50	20.64	0.12	
		Middle	3 840.00	9.79	11.50	21.29	0.13	
		High	3 960.00	9.89	11.50	21.39	0.14	
	16QAM	Low	3 720.00	10.75	11.50	22.25	0.17	
		Middle	3 840.00	11.12	11.50	22.62	0.18	
		High	3 960.00	11.33	11.50	22.83	0.19	
	64QAM	Low	3 720.00	9.47	11.50	20.97	0.12	
		Middle	3 840.00	9.67	11.50	21.17	0.13	
		High	3 960.00	9.77	11.50	21.27	0.13	
	256QAM	Low	3 720.00	9.30	11.50	20.80	0.12	
		Middle	3 840.00	9.59	11.50	21.09	0.13	
		High	3 960.00	10.24	11.50	21.74	0.15	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 720.00	9.52	11.50	21.02	0.13	1640
		Middle	3 840.00	9.95	11.50	21.45	0.14	
		High	3 960.00	10.00	11.50	21.50	0.14	
	16QAM	Low	3 720.00	11.11	11.50	22.61	0.18	
		Middle	3 840.00	11.38	11.50	22.88	0.19	
		High	3 960.00	11.56	11.50	23.06	0.20	
	64QAM	Low	3 720.00	9.34	11.50	20.84	0.12	
		Middle	3 840.00	9.82	11.50	21.32	0.14	
		High	3 960.00	10.02	11.50	21.52	0.14	
	256QAM	Low	3 720.00	9.45	11.50	20.95	0.12	
		Middle	3 840.00	9.95	11.50	21.45	0.14	
		High	3 960.00	9.96	11.50	21.46	0.14	
3	QPSK	Low	3 720.00	9.53	11.50	21.03	0.13	
		Middle	3 840.00	10.22	11.50	21.72	0.15	
		High	3 960.00	10.22	11.50	21.72	0.15	
	16QAM	Low	3 720.00	11.30	11.50	22.80	0.19	
		Middle	3 840.00	11.58	11.50	23.08	0.20	
		High	3 960.00	11.58	11.50	23.08	0.20	
	64QAM	Low	3 720.00	9.56	11.50	21.06	0.13	
		Middle	3 840.00	10.26	11.50	21.76	0.15	
		High	3 960.00	10.31	11.50	21.81	0.15	
	256QAM	Low	3 720.00	9.71	11.50	21.21	0.13	
		Middle	3 840.00	10.26	11.50	21.76	0.15	
		High	3 960.00	10.49	11.50	21.99	0.16	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 720.00	0.49	0.73	0.50	0.51	1640
3 840.00	0.56	0.77	0.55	0.57	
3 960.00	0.57	0.81	0.57	0.58	

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier]

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	Low	3 800.00	2.09	11.50	13.59	0.02	1640
		Middle	3 840.00	2.22	11.50	13.72	0.02	
		High	3 880.00	2.64	11.50	14.14	0.03	
	16QAM	Low	3 800.00	3.85	11.50	15.35	0.03	
		Middle	3 840.00	4.20	11.50	15.70	0.04	
		High	3 880.00	4.57	11.50	16.07	0.04	
	64QAM	Low	3 800.00	2.32	11.50	13.82	0.02	
		Middle	3 840.00	2.34	11.50	13.84	0.02	
		High	3 880.00	2.55	11.50	14.05	0.03	
	256QAM	Low	3 800.00	2.37	11.50	13.87	0.02	
		Middle	3 840.00	2.32	11.50	13.82	0.02	
		High	3 880.00	2.39	11.50	13.89	0.02	
1	QPSK	Low	3 800.00	2.26	11.50	13.76	0.02	
		Middle	3 840.00	2.35	11.50	13.85	0.02	
		High	3 880.00	2.18	11.50	13.68	0.02	
	16QAM	Low	3 800.00	4.04	11.50	15.54	0.04	
		Middle	3 840.00	4.28	11.50	15.78	0.04	
		High	3 880.00	3.96	11.50	15.46	0.04	
	64QAM	Low	3 800.00	2.24	11.50	13.74	0.02	
		Middle	3 840.00	2.53	11.50	14.03	0.03	
		High	3 880.00	2.22	11.50	13.72	0.02	
	256QAM	Low	3 800.00	2.18	11.50	13.68	0.02	
		Middle	3 840.00	2.11	11.50	13.61	0.02	
		High	3 880.00	2.28	11.50	13.78	0.02	

Ant.	Mod	Ch	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
2	QPSK	Low	3 800.00	1.94	11.50	13.44	0.02	1640
		Middle	3 840.00	2.07	11.50	13.57	0.02	
		High	3 880.00	2.34	11.50	13.84	0.02	
	16QAM	Low	3 800.00	3.93	11.50	15.43	0.03	
		Middle	3 840.00	4.08	11.50	15.58	0.04	
		High	3 880.00	4.24	11.50	15.74	0.04	
	64QAM	Low	3 800.00	2.24	11.50	13.74	0.02	
		Middle	3 840.00	2.16	11.50	13.66	0.02	
		High	3 880.00	2.33	11.50	13.83	0.02	
	256QAM	Low	3 800.00	2.35	11.50	13.85	0.02	
		Middle	3 840.00	2.25	11.50	13.75	0.02	
		High	3 880.00	2.27	11.50	13.77	0.02	
3	QPSK	Low	3 800.00	2.40	11.50	13.90	0.02	
		Middle	3 840.00	2.60	11.50	14.10	0.03	
		High	3 880.00	3.16	11.50	14.66	0.03	
	16QAM	Low	3 800.00	4.57	11.50	16.07	0.04	
		Middle	3 840.00	4.58	11.50	16.08	0.04	
		High	3 880.00	4.90	11.50	16.40	0.04	
	64QAM	Low	3 800.00	2.53	11.50	14.03	0.03	
		Middle	3 840.00	2.92	11.50	14.42	0.03	
		High	3 880.00	3.53	11.50	15.03	0.03	
	256QAM	Low	3 800.00	2.49	11.50	13.99	0.03	
		Middle	3 840.00	2.78	11.50	14.28	0.03	
		High	3 880.00	3.07	11.50	14.57	0.03	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 800.00	0.09	0.15	0.10	0.10	1640
3 840.00	0.10	0.15	0.10	0.10	
3 880.00	0.10	0.16	0.10	0.10	

Tabular Data of Non-Contiguous PSD

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	3 710.00 + 3 890.00	10.14	11.50	21.64	0.15	1640
	16QAM	3 710.00 + 3 890.00	11.53	11.50	23.03	0.20	
	64QAM	3 710.00 + 3 890.00	10.12	11.50	21.62	0.15	
	256QAM	3 710.00 + 3 890.00	10.14	11.50	21.64	0.15	
1	QPSK	3 710.00 + 3 890.00	10.07	11.50	21.57	0.14	
	16QAM	3 710.00 + 3 890.00	11.52	11.50	23.02	0.20	
	64QAM	3 710.00 + 3 890.00	10.14	11.50	21.64	0.15	
	256QAM	3 710.00 + 3 890.00	10.15	11.50	21.65	0.15	
2	QPSK	3 710.00 + 3 890.00	9.80	11.50	21.30	0.13	
	16QAM	3 710.00 + 3 890.00	11.45	11.50	22.95	0.20	
	64QAM	3 710.00 + 3 890.00	9.80	11.50	21.30	0.13	
	256QAM	3 710.00 + 3 890.00	9.96	11.50	21.46	0.14	
3	QPSK	3 710.00 + 3 890.00	10.04	11.50	21.54	0.14	
	16QAM	3 710.00 + 3 890.00	11.79	11.50	23.29	0.21	
	64QAM	3 710.00 + 3 890.00	10.16	11.50	21.66	0.15	
	256QAM	3 710.00 + 3 890.00	10.22	11.50	21.72	0.15	

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

Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 710.00 + 3 890.00	0.57	0.81	0.57	0.58	1640

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

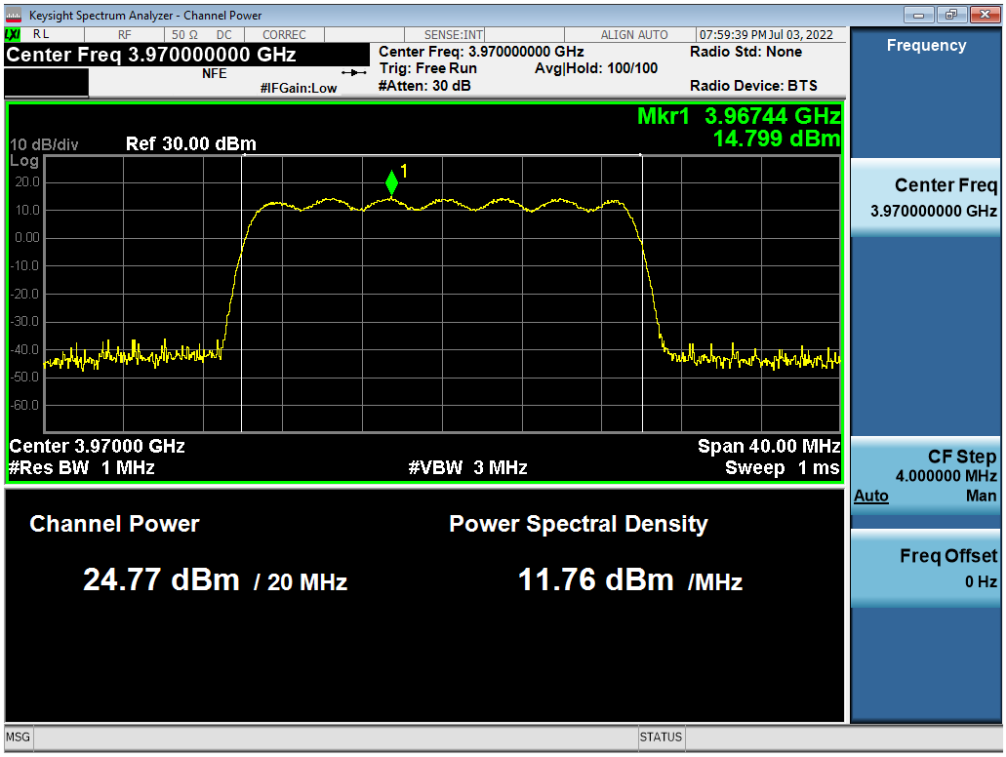
Ant.	Mod	Frequency (MHz)	Measured Value (dBm/MHz)	Ant. Gain (dBi)	E.I.R.P. (dBm/MHz)	Calculated (W/MHz)	Limit (W/MHz)
0	QPSK	3 790.00 + 3 970.00	9.89	11.50	21.39	0.14	1640
	16QAM	3 790.00 + 3 970.00	11.59	11.50	23.09	0.20	
	64QAM	3 790.00 + 3 970.00	10.07	11.50	21.57	0.14	
	256QAM	3 790.00 + 3 970.00	10.28	11.50	21.78	0.15	
1	QPSK	3 790.00 + 3 970.00	9.78	11.50	21.28	0.13	
	16QAM	3 790.00 + 3 970.00	11.32	11.50	22.82	0.19	
	64QAM	3 790.00 + 3 970.00	9.76	11.50	21.26	0.13	
	256QAM	3 790.00 + 3 970.00	10.09	11.50	21.59	0.14	
2	QPSK	3 790.00 + 3 970.00	9.79	11.50	21.29	0.13	
	16QAM	3 790.00 + 3 970.00	11.26	11.50	22.76	0.19	
	64QAM	3 790.00 + 3 970.00	9.91	11.50	21.41	0.14	
	256QAM	3 790.00 + 3 970.00	10.01	11.50	21.51	0.14	
3	QPSK	3 790.00 + 3 970.00	10.35	11.50	21.85	0.15	
	16QAM	3 790.00 + 3 970.00	11.81	11.50	23.31	0.21	
	64QAM	3 790.00 + 3 970.00	10.74	11.50	22.24	0.17	
	256QAM	3 790.00 + 3 970.00	10.40	11.50	21.90	0.16	

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

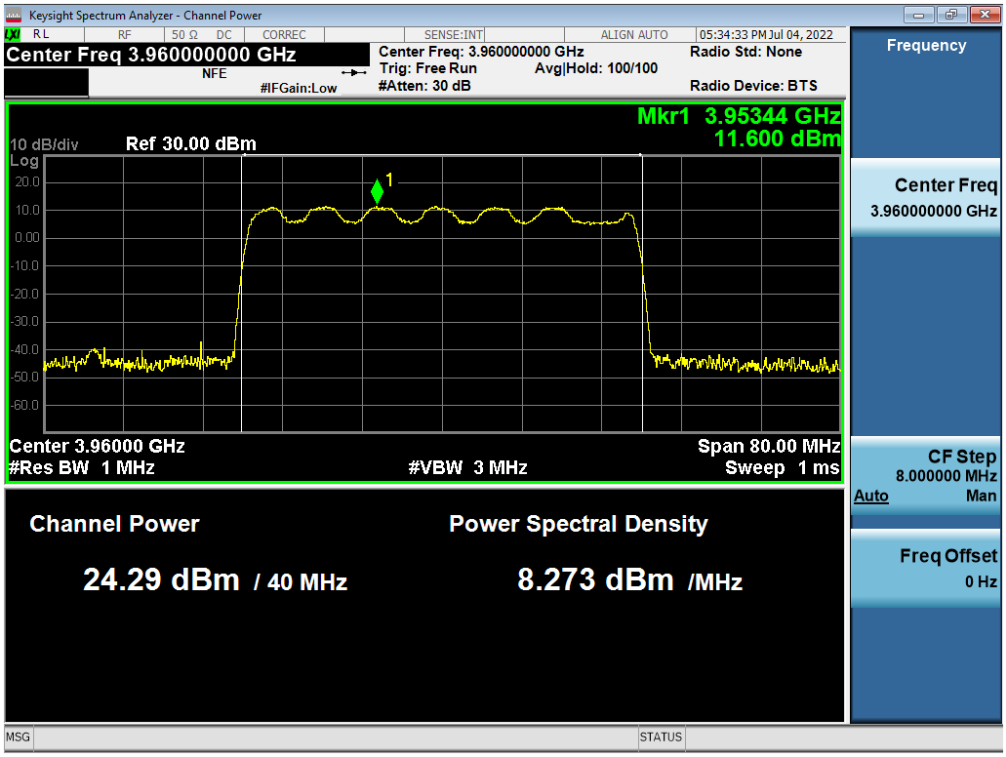
Frequency (MHz)	PSD				Limit
	QPSK	16QAM	64QAM	256QAM	
	W/MHz				
3 790.00 + 3 970.00	0.56	0.80	0.58	0.59	1640

Plot Data of PSD

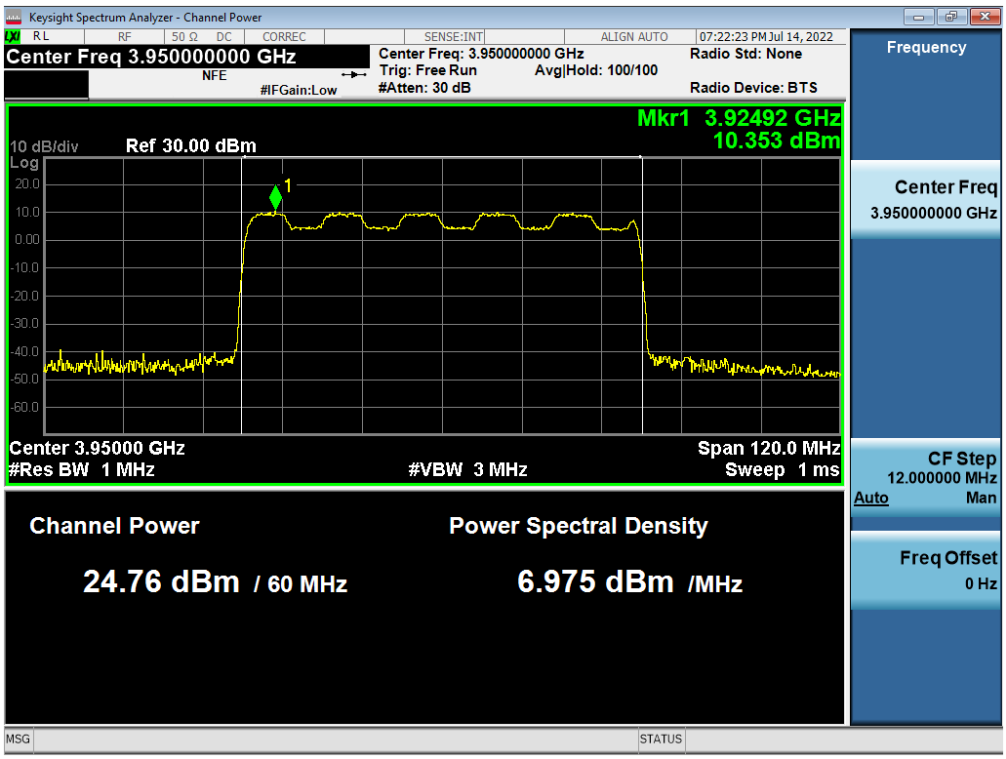
Antenna 3 / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / High



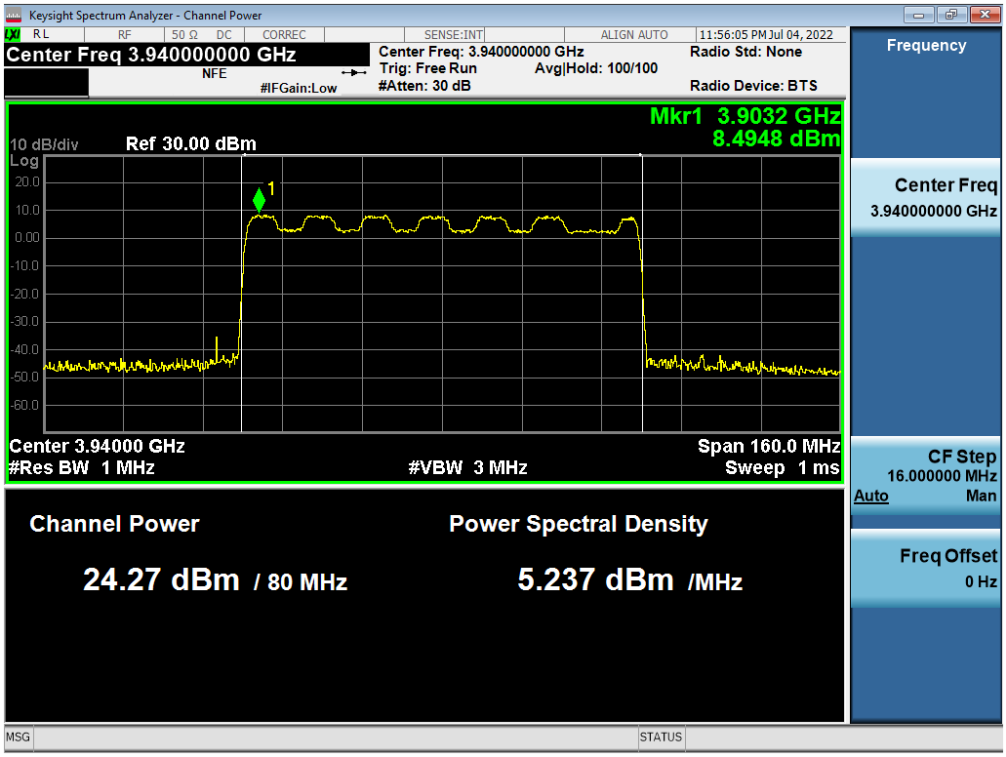
Antenna 0 / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 16QAM / High



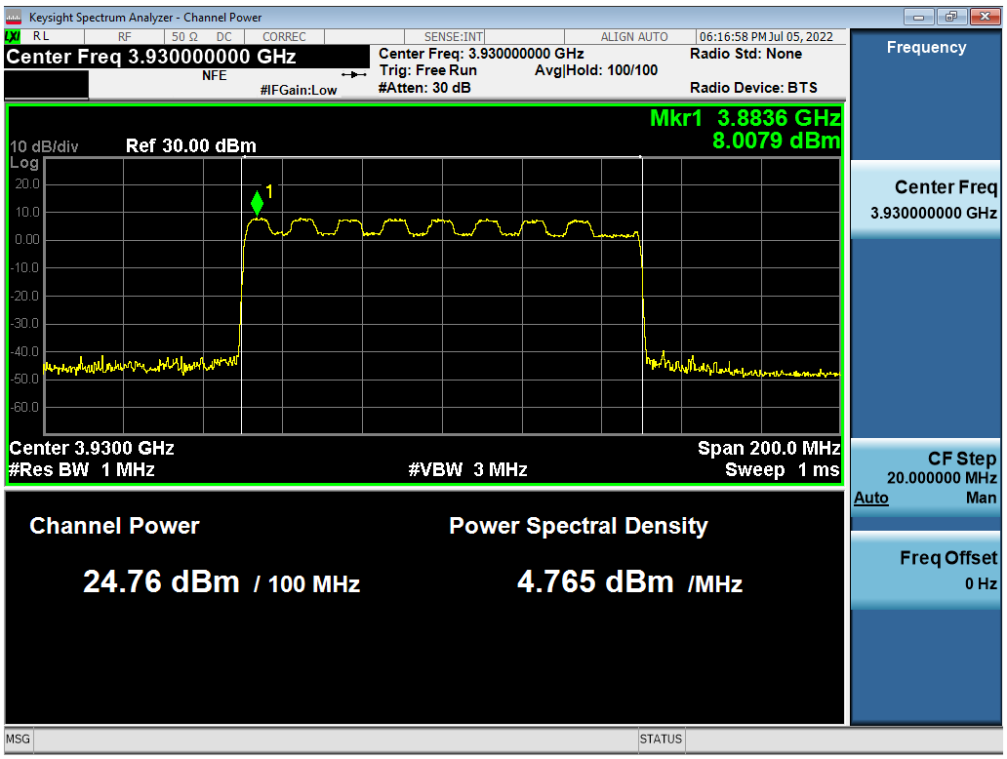
Antenna 3 / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 16QAM / High



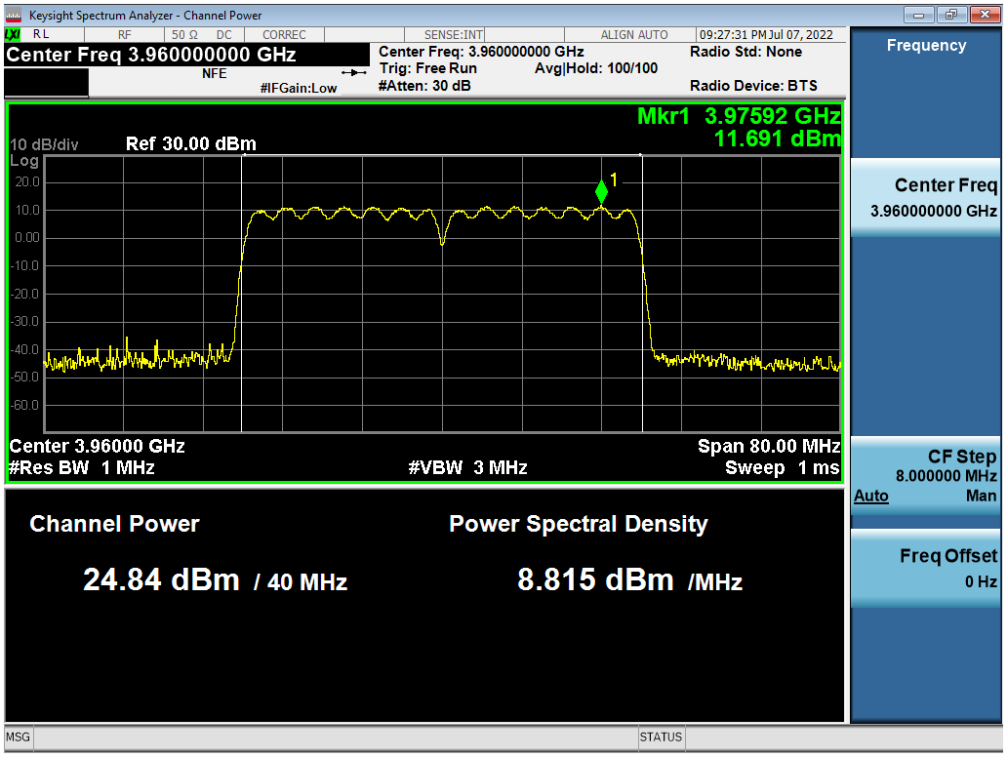
Antenna 0 / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 16QAM / High



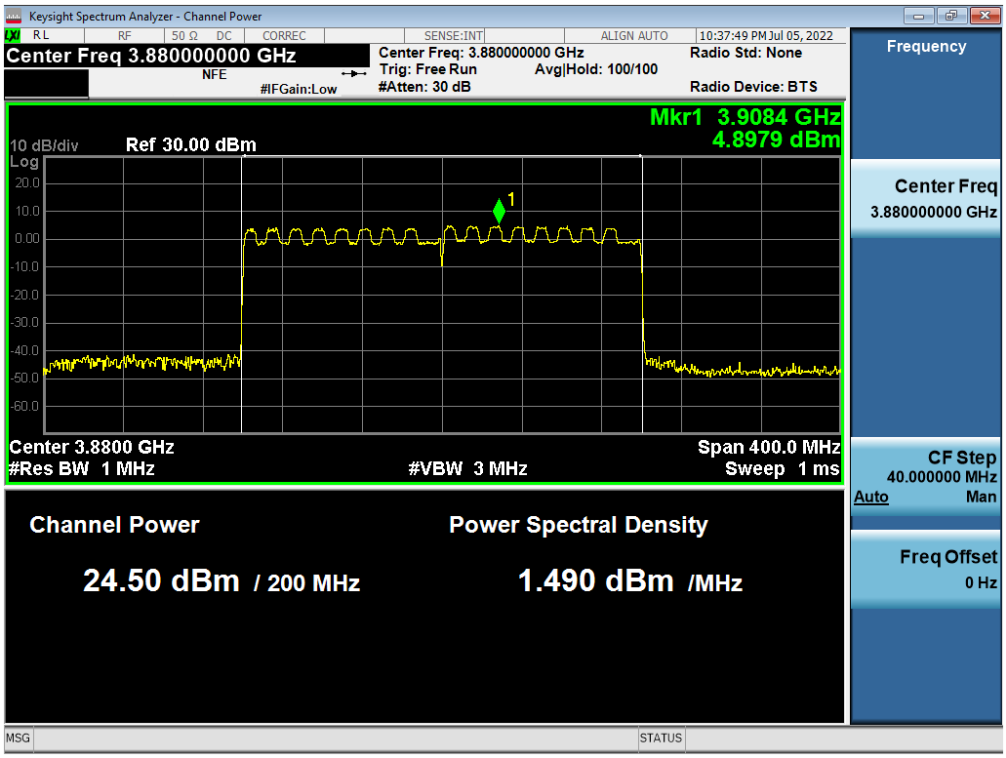
Antenna 3 / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 16QAM / High



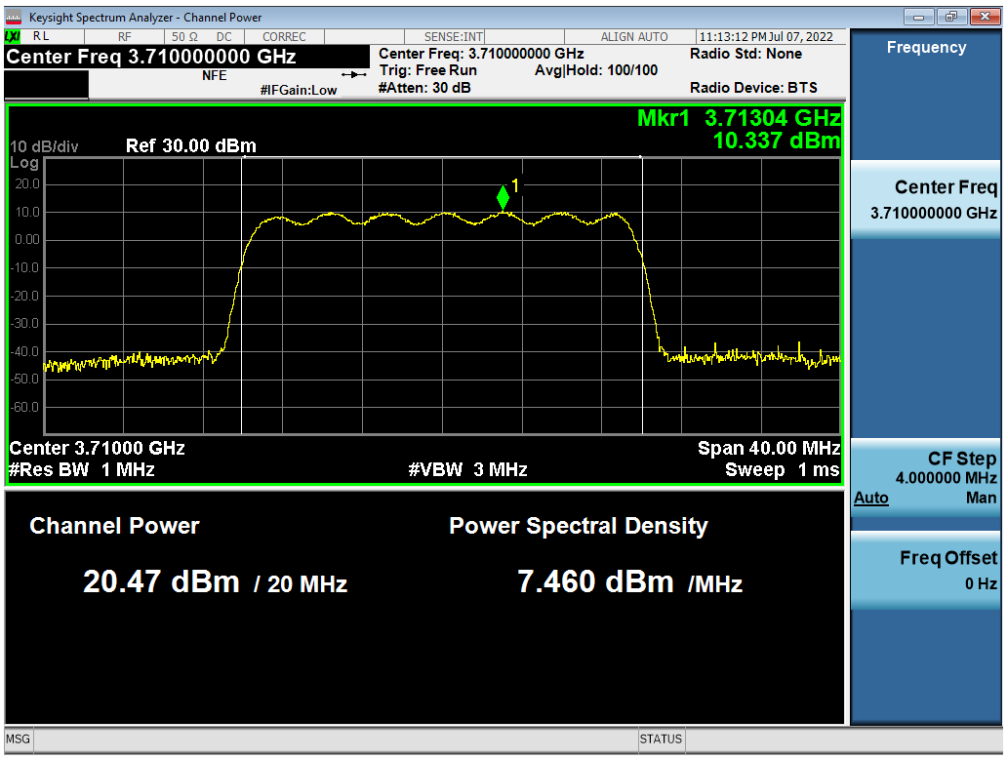
Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



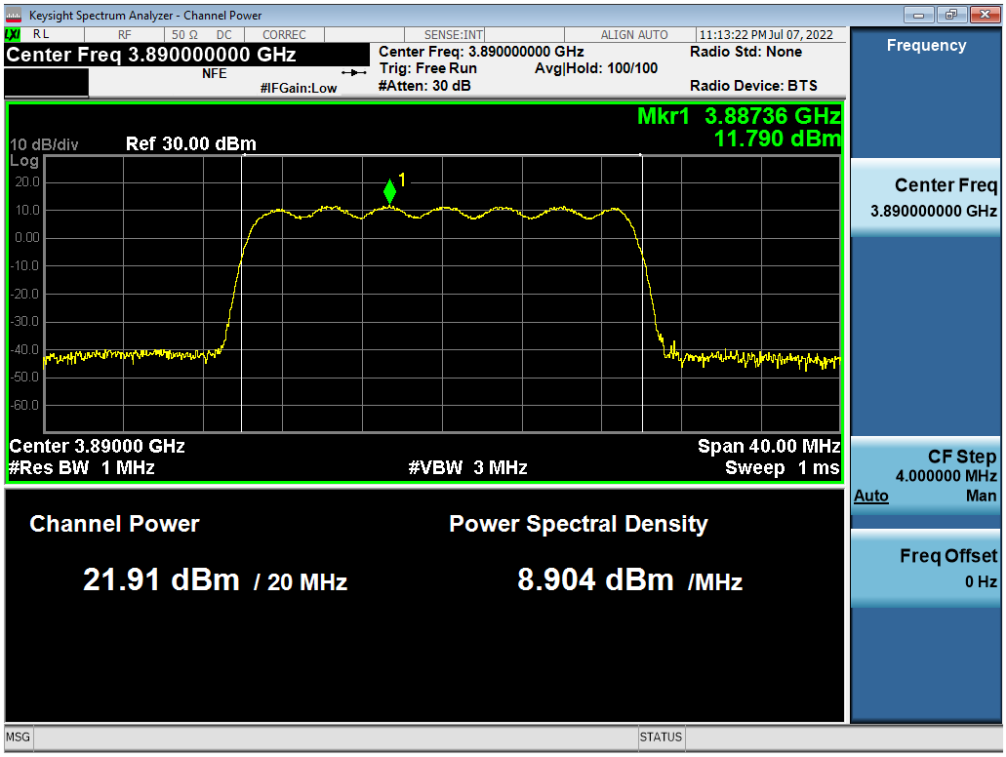
Antenna 3 / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



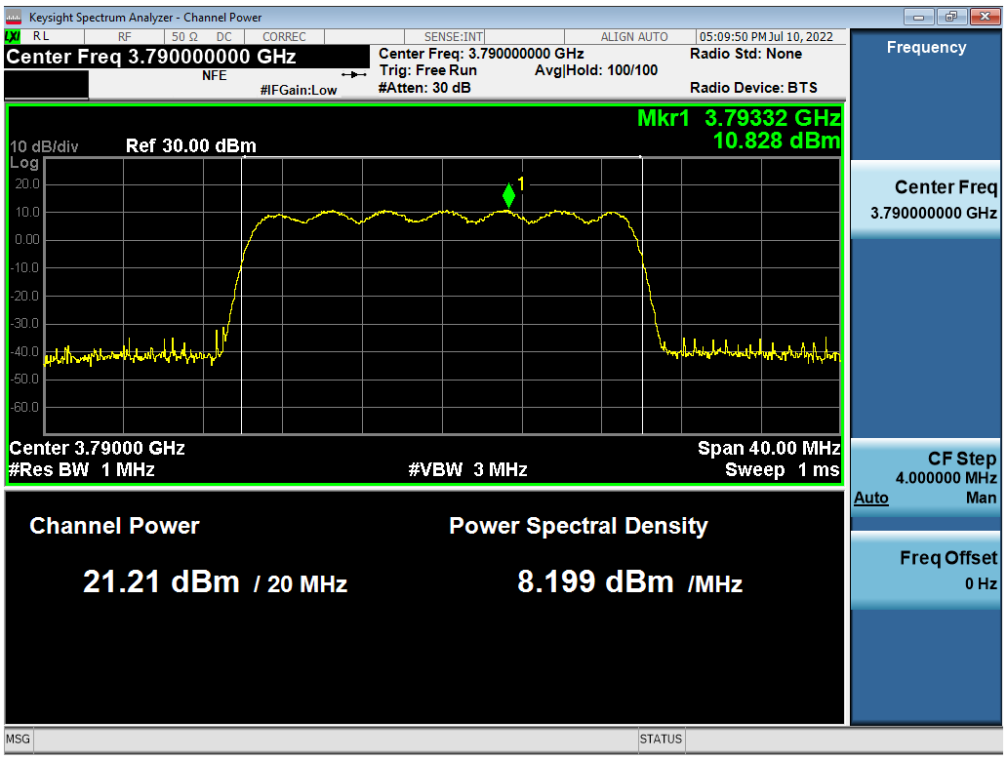
Antenna 3 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



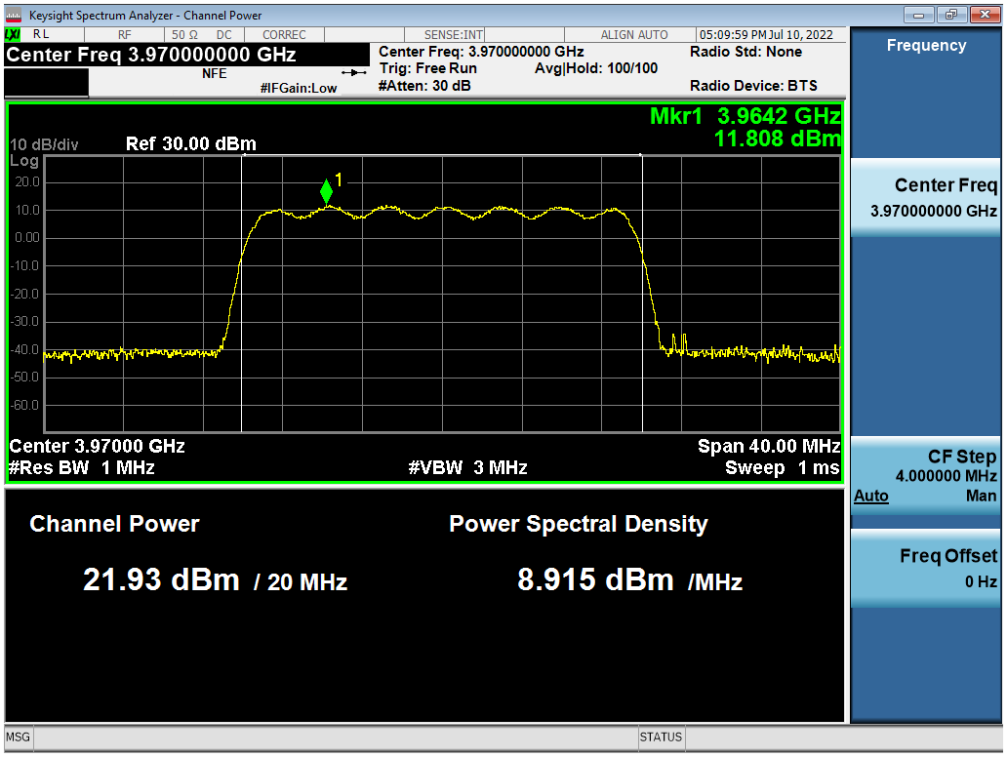
Antenna 3 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / High



Antenna 3 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



Antenna 3 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / High



5.2. PAPR

Test Requirements:

§ 27.50 Power limits and duty cycle.

(j) The following power requirements apply to stations transmitting in the 3700-3980 MHz band:

(4) Equipment employed must be authorized in accordance with the provisions of § 27.51. 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 (j)(5) 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.

Tabular data of PAPR

3.7 GHz Service 5G NR 20 MHz 1 Carrier

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 710.00	8.48
		Middle	3 840.00	8.47
		High	3 970.00	8.41
	16QAM	Low	3 710.00	8.48
		Middle	3 840.00	8.55
		High	3 970.00	8.51
	64QAM	Low	3 710.00	8.44
		Middle	3 840.00	8.40
		High	3 970.00	8.37
	256QAM	Low	3 710.00	8.48
		Middle	3 840.00	8.40
		High	3 970.00	8.44
1	QPSK	Low	3 710.00	8.49
		Middle	3 840.00	8.49
		High	3 970.00	8.49
	16QAM	Low	3 710.00	8.50
		Middle	3 840.00	8.46
		High	3 970.00	8.45
	64QAM	Low	3 710.00	8.43
		Middle	3 840.00	8.42
		High	3 970.00	8.40
	256QAM	Low	3 710.00	8.47
		Middle	3 840.00	8.41
		High	3 970.00	8.45

2	QPSK	Low	3 710.00	8.44
		Middle	3 840.00	8.50
		High	3 970.00	8.46
	16QAM	Low	3 710.00	8.46
		Middle	3 840.00	8.50
		High	3 970.00	8.46
	64QAM	Low	3 710.00	8.41
		Middle	3 840.00	8.43
		High	3 970.00	8.40
	256QAM	Low	3 710.00	8.43
		Middle	3 840.00	8.41
		High	3 970.00	8.45
3	QPSK	Low	3 710.00	8.48
		Middle	3 840.00	8.49
		High	3 970.00	8.52
	16QAM	Low	3 710.00	8.51
		Middle	3 840.00	8.45
		High	3 970.00	8.51
	64QAM	Low	3 710.00	8.40
		Middle	3 840.00	8.46
		High	3 970.00	8.43
	256QAM	Low	3 710.00	8.44
		Middle	3 840.00	8.45
		High	3 970.00	8.41

3.7 GHz Service 5G NR 40 MHz 1 Carrier

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 720.00	8.40
		Middle	3 840.00	8.39
		High	3 960.00	8.38
	16QAM	Low	3 720.00	8.43
		Middle	3 840.00	8.44
		High	3 960.00	8.46
	64QAM	Low	3 720.00	8.49
		Middle	3 840.00	8.49
		High	3 960.00	8.48
	256QAM	Low	3 720.00	8.37
		Middle	3 840.00	8.47
		High	3 960.00	8.40
1	QPSK	Low	3 720.00	8.39
		Middle	3 840.00	8.41
		High	3 960.00	8.41
	16QAM	Low	3 720.00	8.45
		Middle	3 840.00	8.45
		High	3 960.00	8.54
	64QAM	Low	3 720.00	8.50
		Middle	3 840.00	8.51
		High	3 960.00	8.50
	256QAM	Low	3 720.00	8.43
		Middle	3 840.00	8.44
		High	3 960.00	8.46

2	QPSK	Low	3 720.00	8.38
		Middle	3 840.00	8.40
		High	3 960.00	8.40
	16QAM	Low	3 720.00	8.41
		Middle	3 840.00	8.45
		High	3 960.00	8.47
	64QAM	Low	3 720.00	8.45
		Middle	3 840.00	8.50
		High	3 960.00	8.53
	256QAM	Low	3 720.00	8.46
		Middle	3 840.00	8.47
		High	3 960.00	8.43
3	QPSK	Low	3 720.00	8.41
		Middle	3 840.00	8.39
		High	3 960.00	8.41
	16QAM	Low	3 720.00	8.49
		Middle	3 840.00	8.51
		High	3 960.00	8.47
	64QAM	Low	3 720.00	8.52
		Middle	3 840.00	8.49
		High	3 960.00	8.52
	256QAM	Low	3 720.00	8.47
		Middle	3 840.00	8.46
		High	3 960.00	8.49

3.7 GHz Service 5G NR 60 MHz 1 Carrier

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 730.00	8.39
		Middle	3 840.00	8.41
		High	3 950.00	8.38
	16QAM	Low	3 730.00	8.40
		Middle	3 840.00	8.41
		High	3 950.00	8.35
	64QAM	Low	3 730.00	8.45
		Middle	3 840.00	8.42
		High	3 950.00	8.43
	256QAM	Low	3 730.00	8.43
		Middle	3 840.00	8.46
		High	3 950.00	8.48
1	QPSK	Low	3 730.00	8.38
		Middle	3 840.00	8.41
		High	3 950.00	8.40
	16QAM	Low	3 730.00	8.41
		Middle	3 840.00	8.40
		High	3 950.00	8.37
	64QAM	Low	3 730.00	8.46
		Middle	3 840.00	8.46
		High	3 950.00	8.46
	256QAM	Low	3 730.00	8.47
		Middle	3 840.00	8.40
		High	3 950.00	8.45

2	QPSK	Low	3 730.00	8.42
		Middle	3 840.00	8.37
		High	3 950.00	8.42
	16QAM	Low	3 730.00	8.40
		Middle	3 840.00	8.38
		High	3 950.00	8.41
	64QAM	Low	3 730.00	8.45
		Middle	3 840.00	8.45
		High	3 950.00	8.44
	256QAM	Low	3 730.00	8.40
		Middle	3 840.00	8.42
		High	3 950.00	8.44
3	QPSK	Low	3 730.00	8.42
		Middle	3 840.00	8.43
		High	3 950.00	8.44
	16QAM	Low	3 730.00	8.41
		Middle	3 840.00	8.44
		High	3 950.00	8.44
	64QAM	Low	3 730.00	8.48
		Middle	3 840.00	8.44
		High	3 950.00	8.54
	256QAM	Low	3 730.00	8.47
		Middle	3 840.00	8.39
		High	3 950.00	8.44

3.7 GHz Service 5G NR 80 MHz 1 Carrier

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 740.00	8.42
		Middle	3 840.00	8.46
		High	3 940.00	8.39
	16QAM	Low	3 740.00	8.43
		Middle	3 840.00	8.43
		High	3 940.00	8.41
	64QAM	Low	3 740.00	8.46
		Middle	3 840.00	8.47
		High	3 940.00	8.46
	256QAM	Low	3 740.00	8.45
		Middle	3 840.00	8.46
		High	3 940.00	8.45
1	QPSK	Low	3 740.00	8.44
		Middle	3 840.00	8.44
		High	3 940.00	8.45
	16QAM	Low	3 740.00	8.45
		Middle	3 840.00	8.43
		High	3 940.00	8.42
	64QAM	Low	3 740.00	8.42
		Middle	3 840.00	8.47
		High	3 940.00	8.47
	256QAM	Low	3 740.00	8.43
		Middle	3 840.00	8.47
		High	3 940.00	8.45

2	QPSK	Low	3 740.00	8.43
		Middle	3 840.00	8.38
		High	3 940.00	8.43
	16QAM	Low	3 740.00	8.43
		Middle	3 840.00	8.44
		High	3 940.00	8.44
	64QAM	Low	3 740.00	8.44
		Middle	3 840.00	8.45
		High	3 940.00	8.46
	256QAM	Low	3 740.00	8.46
		Middle	3 840.00	8.44
		High	3 940.00	8.43
3	QPSK	Low	3 740.00	8.41
		Middle	3 840.00	8.42
		High	3 940.00	8.47
	16QAM	Low	3 740.00	8.41
		Middle	3 840.00	8.43
		High	3 940.00	8.45
	64QAM	Low	3 740.00	8.46
		Middle	3 840.00	8.47
		High	3 940.00	8.45
	256QAM	Low	3 740.00	8.41
		Middle	3 840.00	8.44
		High	3 940.00	8.46

3.7 GHz Service 5G NR 100 MHz 1 Carrier

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 750.00	8.47
		Middle	3 840.00	8.42
		High	3 930.00	8.42
	16QAM	Low	3 750.00	8.43
		Middle	3 840.00	8.42
		High	3 930.00	8.43
	64QAM	Low	3 750.00	8.44
		Middle	3 840.00	8.47
		High	3 930.00	8.48
	256QAM	Low	3 750.00	8.44
		Middle	3 840.00	8.44
		High	3 930.00	8.46
1	QPSK	Low	3 750.00	8.45
		Middle	3 840.00	8.42
		High	3 930.00	8.44
	16QAM	Low	3 750.00	8.47
		Middle	3 840.00	8.41
		High	3 930.00	8.45
	64QAM	Low	3 750.00	8.40
		Middle	3 840.00	8.41
		High	3 930.00	8.44
	256QAM	Low	3 750.00	8.43
		Middle	3 840.00	8.43
		High	3 930.00	8.45

2	QPSK	Low	3 750.00	8.43
		Middle	3 840.00	8.48
		High	3 930.00	8.43
	16QAM	Low	3 750.00	8.44
		Middle	3 840.00	8.46
		High	3 930.00	8.44
	64QAM	Low	3 750.00	8.41
		Middle	3 840.00	8.42
		High	3 930.00	8.44
	256QAM	Low	3 750.00	8.45
		Middle	3 840.00	8.42
		High	3 930.00	8.43
3	QPSK	Low	3 750.00	8.44
		Middle	3 840.00	8.45
		High	3 930.00	8.46
	16QAM	Low	3 750.00	8.46
		Middle	3 840.00	8.41
		High	3 930.00	8.46
	64QAM	Low	3 750.00	8.45
		Middle	3 840.00	8.43
		High	3 930.00	8.43
	256QAM	Low	3 750.00	8.41
		Middle	3 840.00	8.48
		High	3 930.00	8.44

Tabular data of Contiguous PAPR

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier]

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 720.00	8.48
		Middle	3 840.00	8.50
		High	3 960.00	8.46
	16QAM	Low	3 720.00	8.46
		Middle	3 840.00	8.51
		High	3 960.00	8.47
	64QAM	Low	3 720.00	8.44
		Middle	3 840.00	8.45
		High	3 960.00	8.43
	256QAM	Low	3 720.00	8.48
		Middle	3 840.00	8.46
		High	3 960.00	8.37
1	QPSK	Low	3 720.00	8.47
		Middle	3 840.00	8.48
		High	3 960.00	8.46
	16QAM	Low	3 720.00	8.54
		Middle	3 840.00	8.43
		High	3 960.00	8.41
	64QAM	Low	3 720.00	8.45
		Middle	3 840.00	8.41
		High	3 960.00	8.44
	256QAM	Low	3 720.00	8.47
		Middle	3 840.00	8.45
		High	3 960.00	8.52

2	QPSK	Low	3 720.00	8.44
		Middle	3 840.00	8.44
		High	3 960.00	8.46
	16QAM	Low	3 720.00	8.51
		Middle	3 840.00	8.46
		High	3 960.00	8.49
	64QAM	Low	3 720.00	8.41
		Middle	3 840.00	8.43
		High	3 960.00	8.49
	256QAM	Low	3 720.00	8.44
		Middle	3 840.00	8.47
		High	3 960.00	8.45
3	QPSK	Low	3 720.00	8.45
		Middle	3 840.00	8.50
		High	3 960.00	8.47
	16QAM	Low	3 720.00	8.42
		Middle	3 840.00	8.51
		High	3 960.00	8.46
	64QAM	Low	3 720.00	8.47
		Middle	3 840.00	8.44
		High	3 960.00	8.47
	256QAM	Low	3 720.00	8.43
		Middle	3 840.00	8.46
		High	3 960.00	8.48

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier]

Ant.	Modulation	Channel	Frequency (MHz)	0.1 % PAPR (dB)
0	QPSK	Low	3 800.00	8.42
		Middle	3 840.00	8.41
		High	3 880.00	8.47
	16QAM	Low	3 800.00	8.43
		Middle	3 840.00	8.43
		High	3 880.00	8.44
	64QAM	Low	3 800.00	8.44
		Middle	3 840.00	8.45
		High	3 880.00	8.44
	256QAM	Low	3 800.00	8.47
		Middle	3 840.00	8.41
		High	3 880.00	8.43
1	QPSK	Low	3 800.00	8.44
		Middle	3 840.00	8.43
		High	3 880.00	8.46
	16QAM	Low	3 800.00	8.43
		Middle	3 840.00	8.44
		High	3 880.00	8.44
	64QAM	Low	3 800.00	8.43
		Middle	3 840.00	8.44
		High	3 880.00	8.44
	256QAM	Low	3 800.00	8.47
		Middle	3 840.00	8.44
		High	3 880.00	8.44

2	QPSK	Low	3 800.00	8.44
		Middle	3 840.00	8.45
		High	3 880.00	8.43
	16QAM	Low	3 800.00	8.44
		Middle	3 840.00	8.48
		High	3 880.00	8.45
	64QAM	Low	3 800.00	8.43
		Middle	3 840.00	8.43
		High	3 880.00	8.45
	256QAM	Low	3 800.00	8.43
		Middle	3 840.00	8.45
		High	3 880.00	8.43
3	QPSK	Low	3 800.00	8.46
		Middle	3 840.00	8.43
		High	3 880.00	8.48
	16QAM	Low	3 800.00	8.42
		Middle	3 840.00	8.45
		High	3 880.00	8.45
	64QAM	Low	3 800.00	8.47
		Middle	3 840.00	8.49
		High	3 880.00	8.47
	256QAM	Low	3 800.00	8.44
		Middle	3 840.00	8.46
		High	3 880.00	8.44

Tabular data of Non-Contiguous PAPR

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

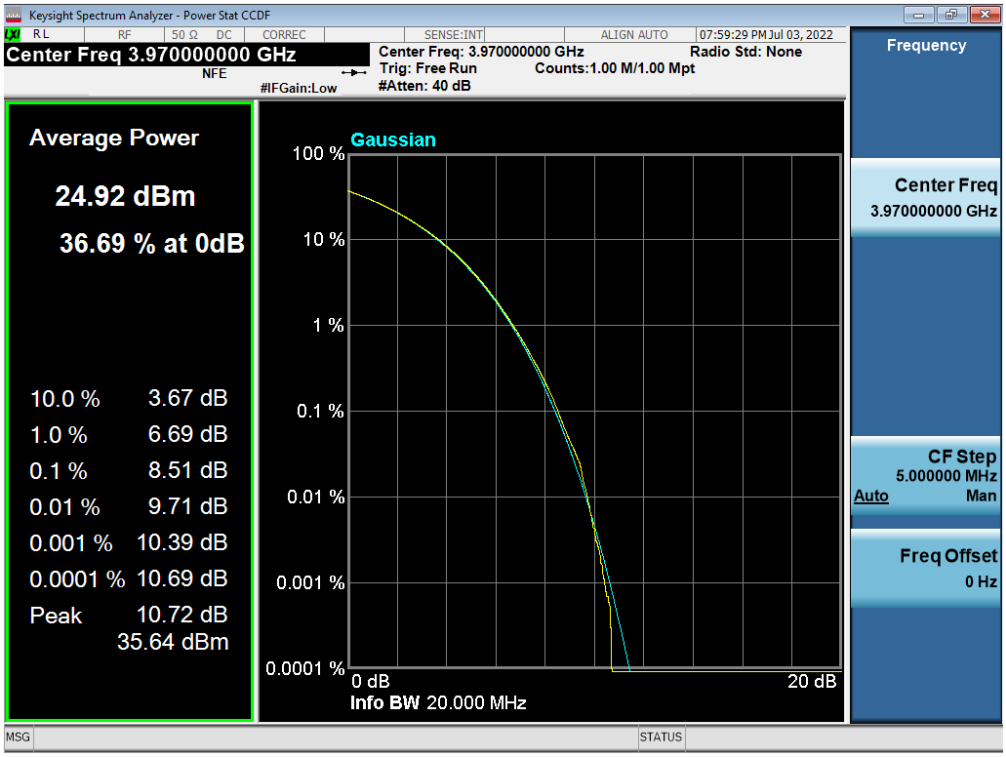
Ant.	Modulation	5G NR 20 MHz		5G NR 20 MHz	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	3 710.00	8.50	3 890.00	8.44
	16QAM	3 710.00	8.47	3 890.00	8.42
	64QAM	3 710.00	8.40	3 890.00	8.48
	256QAM	3 710.00	8.47	3 890.00	8.47
1	QPSK	3 710.00	8.48	3 890.00	8.45
	16QAM	3 710.00	8.51	3 890.00	8.43
	64QAM	3 710.00	8.41	3 890.00	8.47
	256QAM	3 710.00	8.42	3 890.00	8.43
2	QPSK	3 710.00	8.50	3 890.00	8.44
	16QAM	3 710.00	8.49	3 890.00	8.48
	64QAM	3 710.00	8.42	3 890.00	8.46
	256QAM	3 710.00	8.47	3 890.00	8.49
3	QPSK	3 710.00	8.46	3 890.00	8.47
	16QAM	3 710.00	8.52	3 890.00	8.38
	64QAM	3 710.00	8.40	3 890.00	8.44
	256QAM	3 710.00	8.43	3 890.00	8.50

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

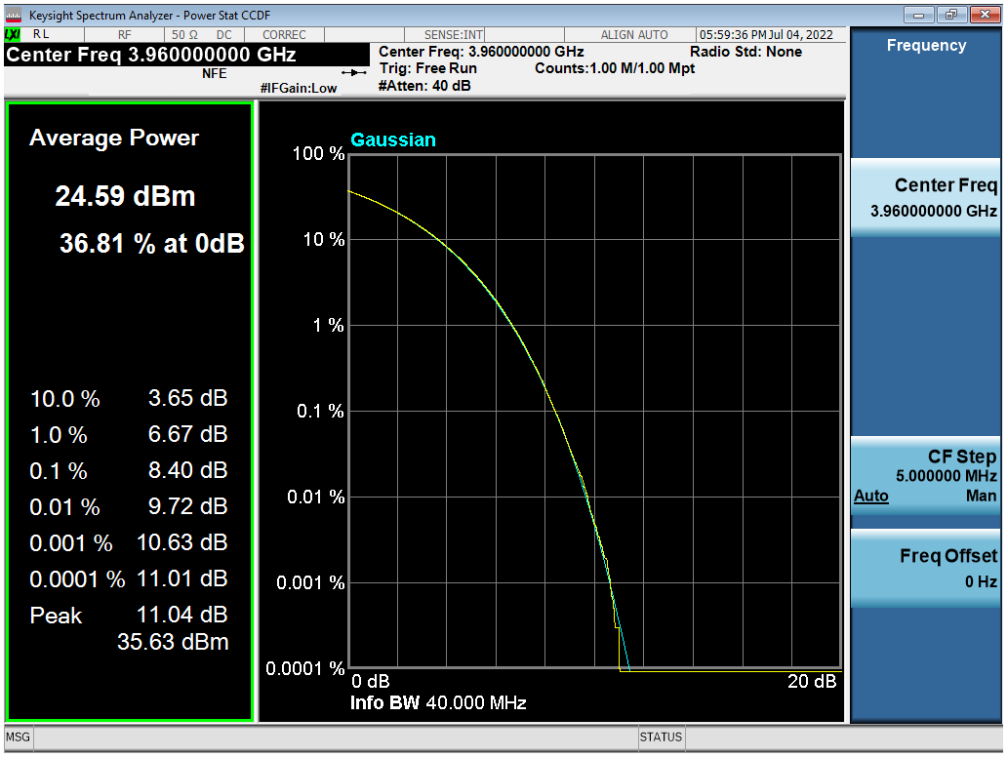
Ant.	Modulation	5G NR 20 MHz		5G NR 20 MHz	
		Frequency (MHz)	Measured Value (dB)	Frequency (MHz)	Measured Value (dB)
0	QPSK	3 790.00	8.41	3 970.00	8.48
	16QAM	3 790.00	8.46	3 970.00	8.46
	64QAM	3 790.00	8.41	3 970.00	8.50
	256QAM	3 790.00	8.41	3 970.00	8.45
1	QPSK	3 790.00	8.44	3 970.00	8.47
	16QAM	3 790.00	8.47	3 970.00	8.43
	64QAM	3 790.00	8.39	3 970.00	8.49
	256QAM	3 790.00	8.43	3 970.00	8.50
2	QPSK	3 790.00	8.46	3 970.00	8.49
	16QAM	3 790.00	8.46	3 970.00	8.48
	64QAM	3 790.00	8.43	3 970.00	8.49
	256QAM	3 790.00	8.44	3 970.00	8.54
3	QPSK	3 790.00	8.50	3 970.00	8.47
	16QAM	3 790.00	8.48	3 970.00	8.44
	64QAM	3 790.00	8.39	3 970.00	8.49
	256QAM	3 790.00	8.46	3 970.00	8.49

Plot Data of PAPR

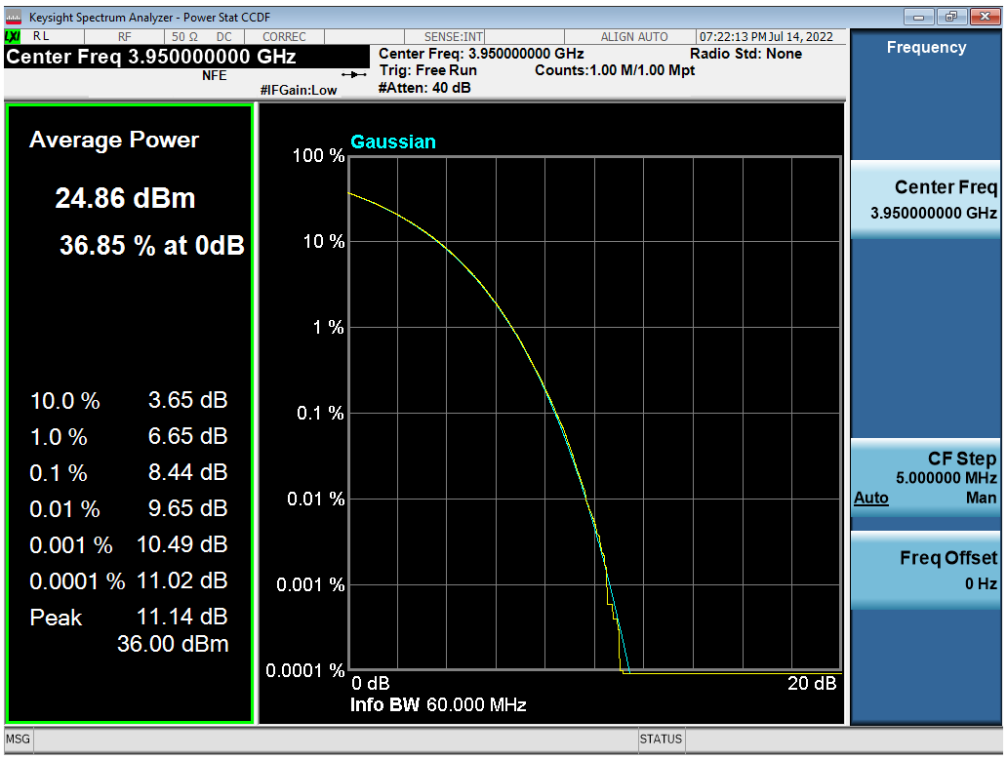
Antenna 3 / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / High



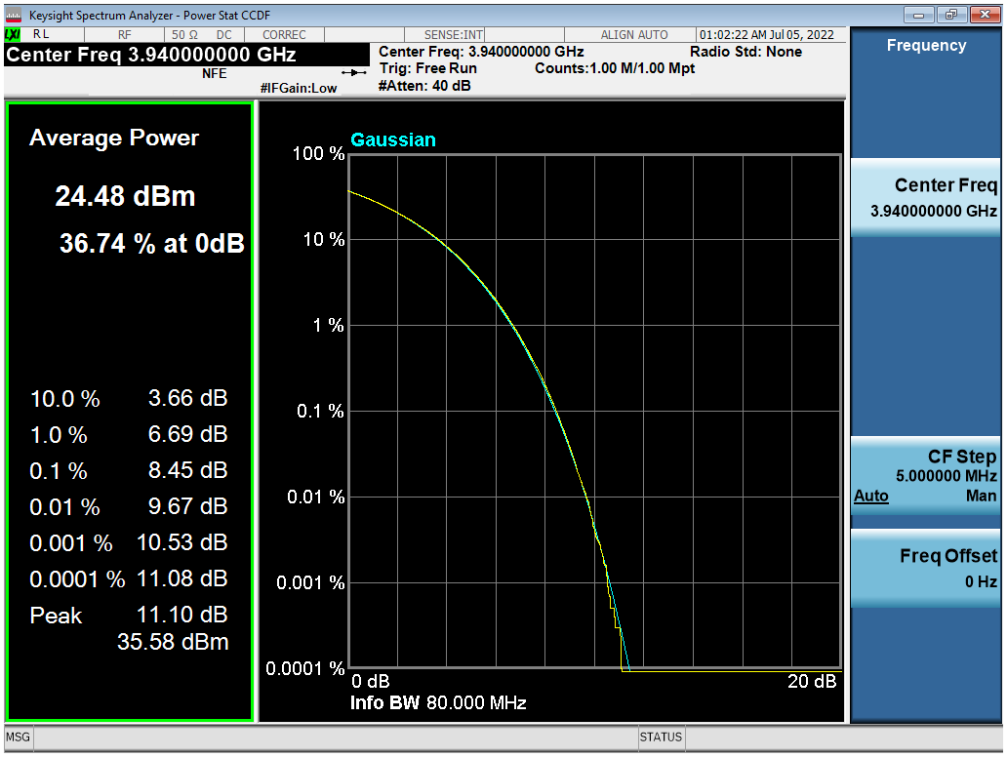
Antenna 0 / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 256QAM / High



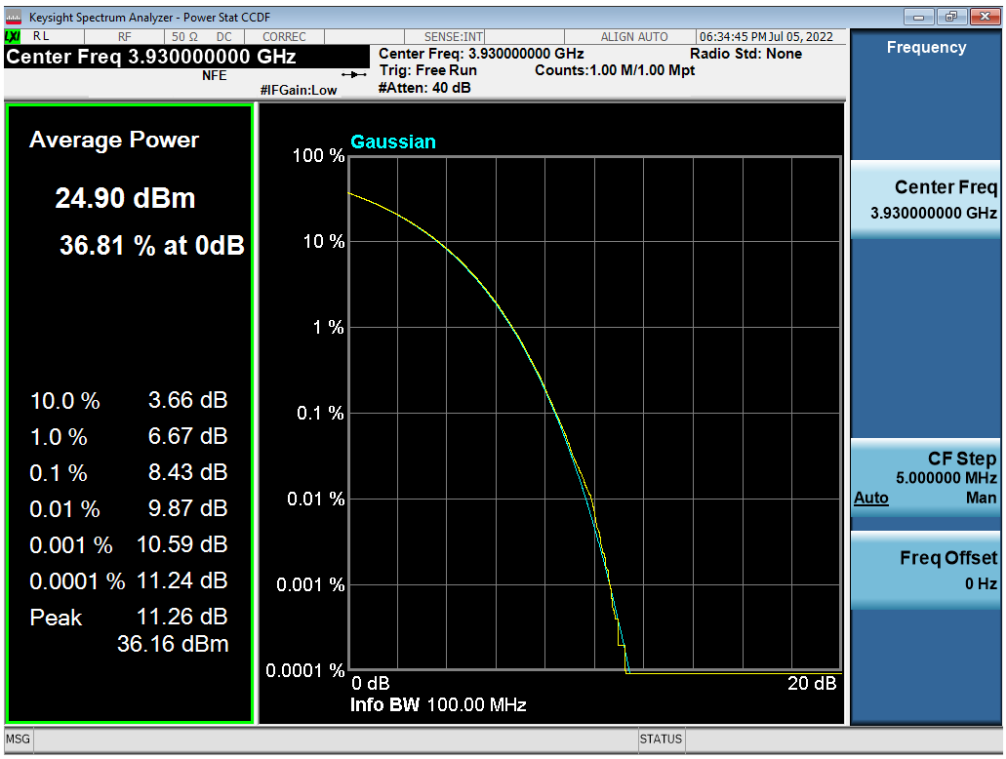
Antenna 3 / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 16QAM / High



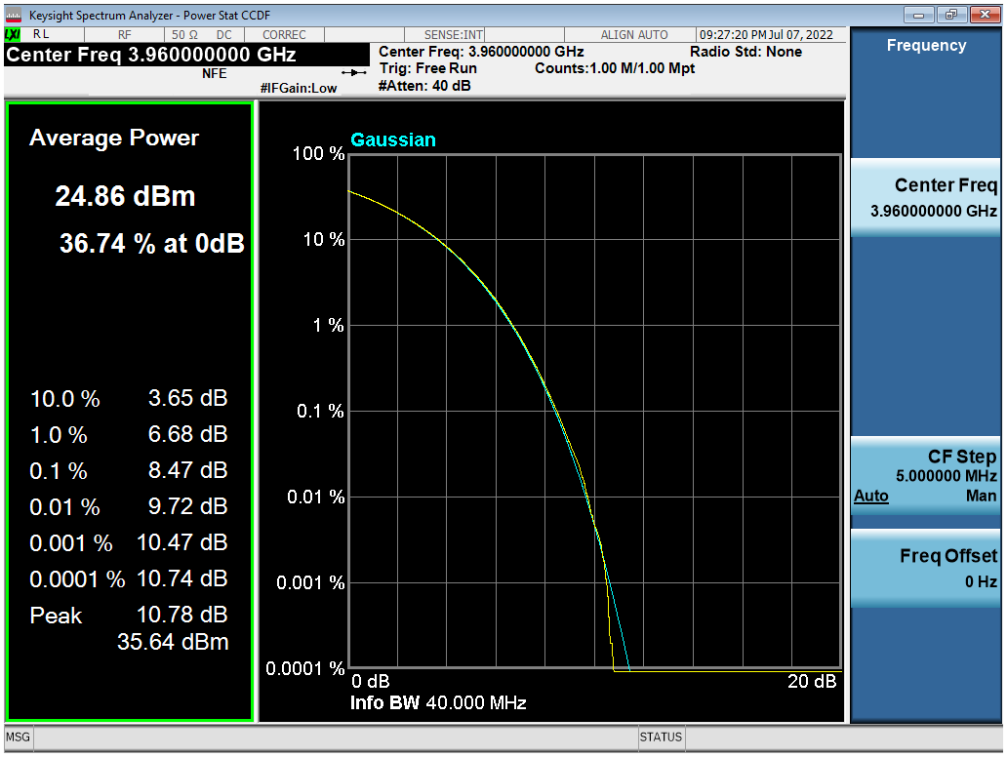
Antenna 3 / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 64QAM / High



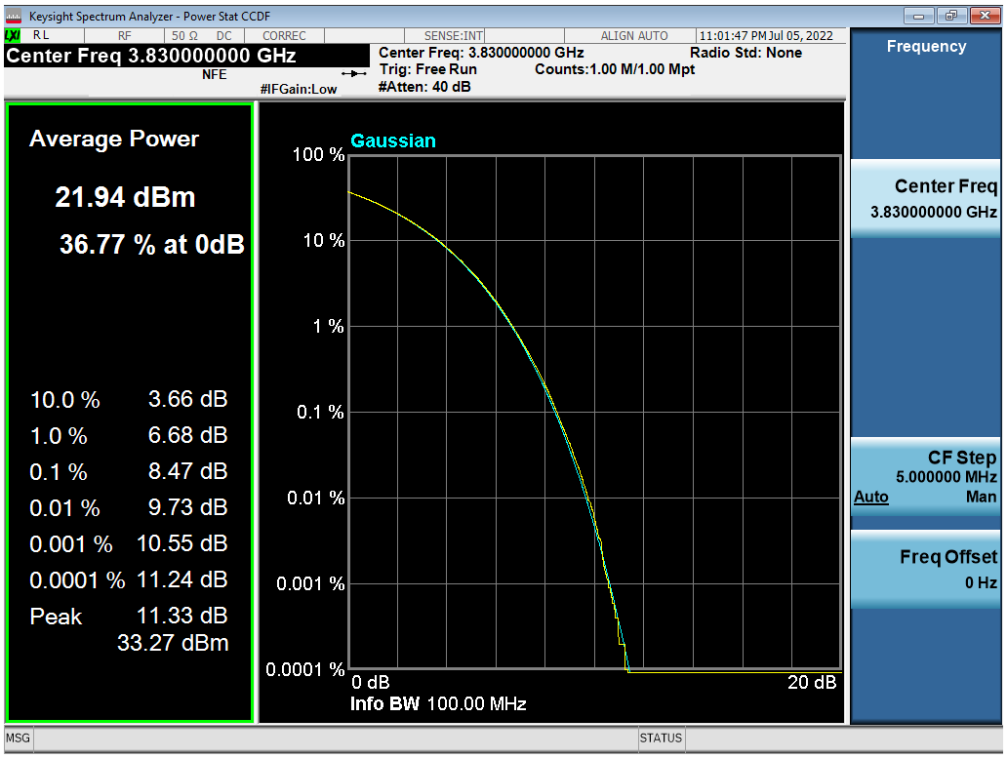
Antenna 3 / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 64QAM / High



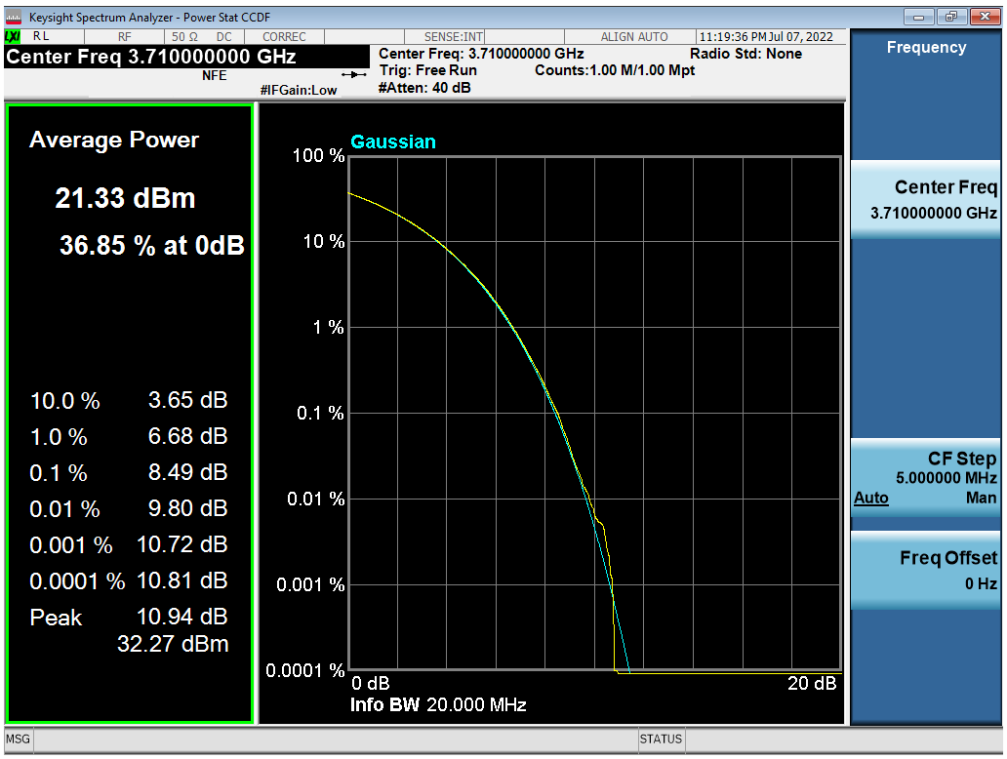
Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



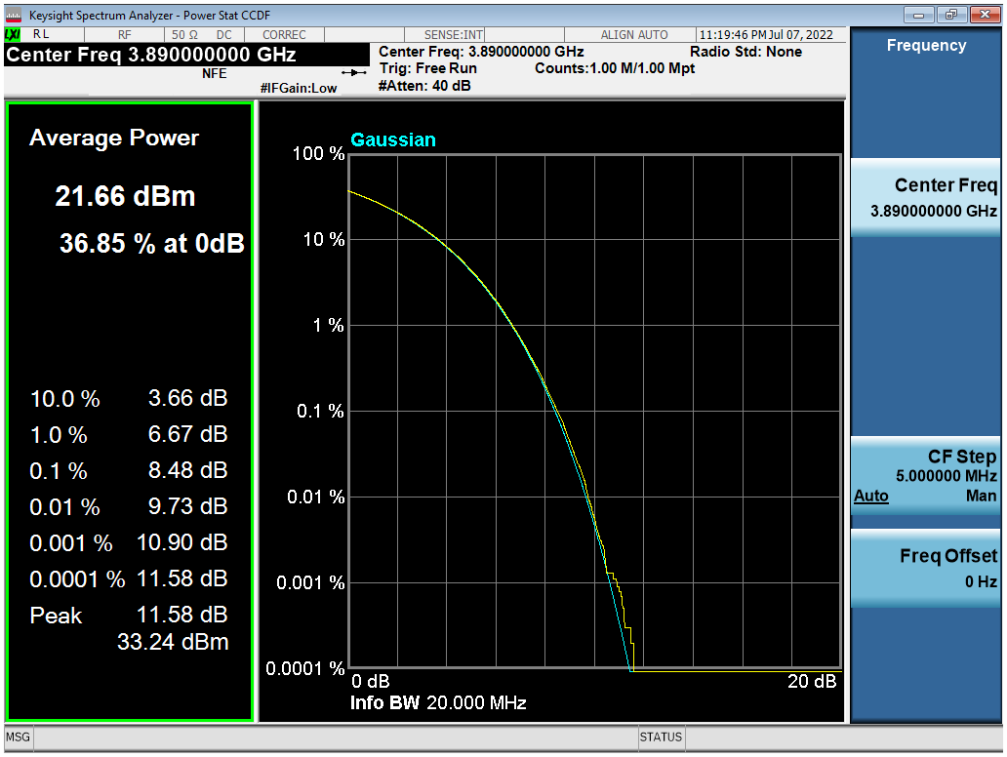
Antenna 3 / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / High



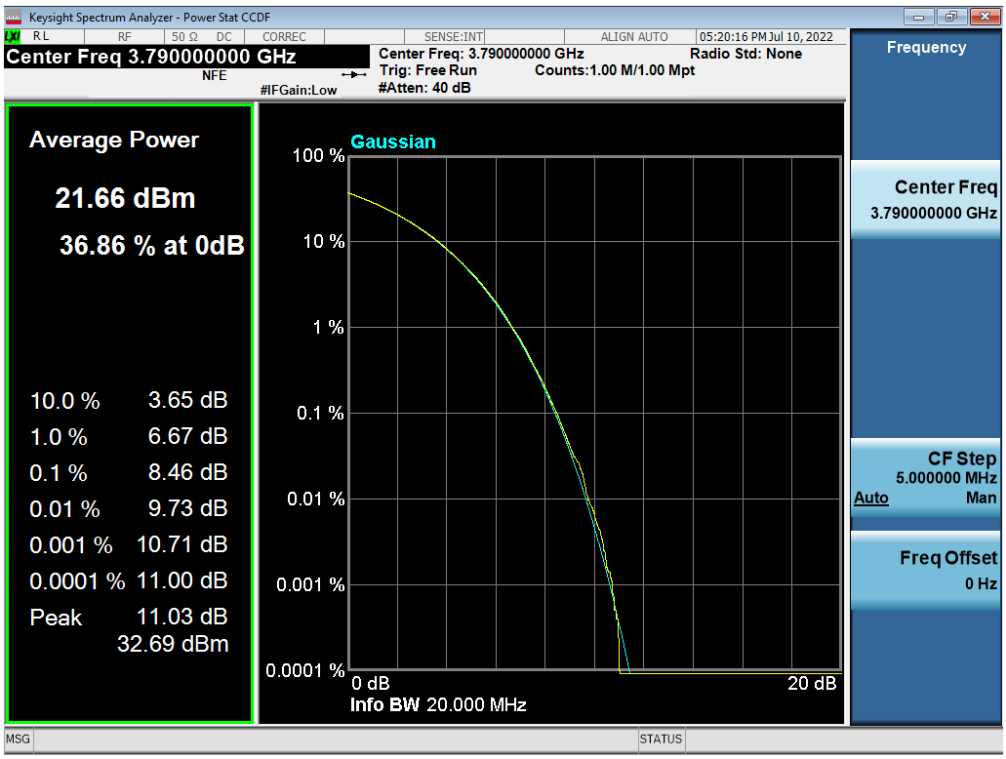
Antenna 2 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



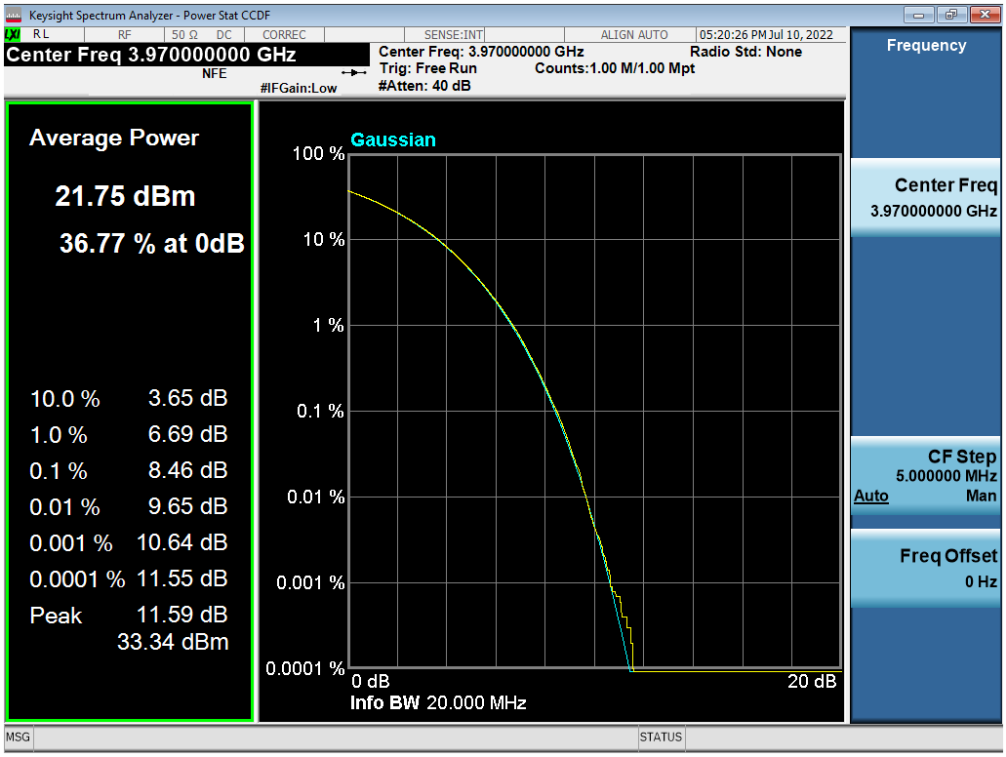
Antenna 2 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / High



Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / 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 Occupied Bandwidth

3.7 GHz Service 5G NR 20 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 710.00	18.284
		Middle	3 840.00	18.292
		High	3 970.00	18.322
	16QAM	Low	3 710.00	18.304
		Middle	3 840.00	18.325
		High	3 970.00	18.307
	64QAM	Low	3 710.00	18.300
		Middle	3 840.00	18.269
		High	3 970.00	18.256
	256QAM	Low	3 710.00	18.305
		Middle	3 840.00	18.288
		High	3 970.00	18.282
1	QPSK	Low	3 710.00	18.244
		Middle	3 840.00	18.246
		High	3 970.00	18.263
	16QAM	Low	3 710.00	18.360
		Middle	3 840.00	18.357
		High	3 970.00	18.340
	64QAM	Low	3 710.00	18.278
		Middle	3 840.00	18.274
		High	3 970.00	18.291
	256QAM	Low	3 710.00	18.254
		Middle	3 840.00	18.303
		High	3 970.00	18.252

2	QPSK	Low	3 710.00	18.286
		Middle	3 840.00	18.301
		High	3 970.00	18.277
	16QAM	Low	3 710.00	18.351
		Middle	3 840.00	18.315
		High	3 970.00	18.327
	64QAM	Low	3 710.00	18.264
		Middle	3 840.00	18.297
		High	3 970.00	18.254
	256QAM	Low	3 710.00	18.295
		Middle	3 840.00	18.291
		High	3 970.00	18.271
3	QPSK	Low	3 710.00	18.270
		Middle	3 840.00	18.316
		High	3 970.00	18.249
	16QAM	Low	3 710.00	18.343
		Middle	3 840.00	18.328
		High	3 970.00	18.355
	64QAM	Low	3 710.00	18.284
		Middle	3 840.00	18.287
		High	3 970.00	18.257
	256QAM	Low	3 710.00	18.269
		Middle	3 840.00	18.316
		High	3 970.00	18.299

3.7 GHz Service 5G NR 40 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 720.00	37.966
		Middle	3 840.00	37.892
		High	3 960.00	37.874
	16QAM	Low	3 720.00	38.012
		Middle	3 840.00	38.079
		High	3 960.00	38.074
	64QAM	Low	3 720.00	37.913
		Middle	3 840.00	37.960
		High	3 960.00	37.978
	256QAM	Low	3 720.00	37.926
		Middle	3 840.00	37.951
		High	3 960.00	37.877
1	QPSK	Low	3 720.00	37.960
		Middle	3 840.00	37.980
		High	3 960.00	37.926
	16QAM	Low	3 720.00	38.045
		Middle	3 840.00	38.050
		High	3 960.00	38.064
	64QAM	Low	3 720.00	37.931
		Middle	3 840.00	37.947
		High	3 960.00	37.965
	256QAM	Low	3 720.00	37.931
		Middle	3 840.00	37.986
		High	3 960.00	37.918

2	QPSK	Low	3 720.00	37.936
		Middle	3 840.00	37.893
		High	3 960.00	37.902
	16QAM	Low	3 720.00	38.033
		Middle	3 840.00	38.131
		High	3 960.00	38.065
	64QAM	Low	3 720.00	37.955
		Middle	3 840.00	38.001
		High	3 960.00	37.893
	256QAM	Low	3 720.00	37.921
		Middle	3 840.00	37.981
		High	3 960.00	37.866
3	QPSK	Low	3 720.00	37.958
		Middle	3 840.00	37.938
		High	3 960.00	37.947
	16QAM	Low	3 720.00	38.075
		Middle	3 840.00	38.094
		High	3 960.00	38.073
	64QAM	Low	3 720.00	37.974
		Middle	3 840.00	37.915
		High	3 960.00	37.922
	256QAM	Low	3 720.00	37.963
		Middle	3 840.00	37.941
		High	3 960.00	37.903

3.7 GHz Service 5G NR 60 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 730.00	57.925
		Middle	3 840.00	57.995
		High	3 950.00	57.938
	16QAM	Low	3 730.00	58.038
		Middle	3 840.00	58.084
		High	3 950.00	58.074
	64QAM	Low	3 730.00	58.012
		Middle	3 840.00	57.904
		High	3 950.00	57.852
	256QAM	Low	3 730.00	57.971
		Middle	3 840.00	57.926
		High	3 950.00	57.934
1	QPSK	Low	3 730.00	57.889
		Middle	3 840.00	57.906
		High	3 950.00	57.946
	16QAM	Low	3 730.00	58.012
		Middle	3 840.00	58.191
		High	3 950.00	58.006
	64QAM	Low	3 730.00	57.912
		Middle	3 840.00	57.979
		High	3 950.00	57.943
	256QAM	Low	3 730.00	57.837
		Middle	3 840.00	57.966
		High	3 950.00	57.942

2	QPSK	Low	3 730.00	58.009
		Middle	3 840.00	57.895
		High	3 950.00	57.915
	16QAM	Low	3 730.00	58.091
		Middle	3 840.00	58.098
		High	3 950.00	58.072
	64QAM	Low	3 730.00	57.986
		Middle	3 840.00	57.972
		High	3 950.00	57.945
	256QAM	Low	3 730.00	58.020
		Middle	3 840.00	57.980
		High	3 950.00	57.953
3	QPSK	Low	3 730.00	57.860
		Middle	3 840.00	57.923
		High	3 950.00	57.888
	16QAM	Low	3 730.00	58.138
		Middle	3 840.00	58.036
		High	3 950.00	58.043
	64QAM	Low	3 730.00	57.856
		Middle	3 840.00	58.095
		High	3 950.00	57.928
	256QAM	Low	3 730.00	57.915
		Middle	3 840.00	57.945
		High	3 950.00	57.966

3.7 GHz Service 5G NR 80 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 740.00	77.627
		Middle	3 840.00	77.674
		High	3 940.00	77.503
	16QAM	Low	3 740.00	77.877
		Middle	3 840.00	77.887
		High	3 940.00	77.828
	64QAM	Low	3 740.00	77.636
		Middle	3 840.00	77.627
		High	3 940.00	77.613
	256QAM	Low	3 740.00	77.482
		Middle	3 840.00	77.508
		High	3 940.00	77.565
1	QPSK	Low	3 740.00	77.607
		Middle	3 840.00	77.501
		High	3 940.00	77.552
	16QAM	Low	3 740.00	78.024
		Middle	3 840.00	77.863
		High	3 940.00	77.868
	64QAM	Low	3 740.00	77.671
		Middle	3 840.00	77.584
		High	3 940.00	77.545
	256QAM	Low	3 740.00	77.475
		Middle	3 840.00	77.573
		High	3 940.00	77.552

2	QPSK	Low	3 740.00	77.602
		Middle	3 840.00	77.556
		High	3 940.00	77.611
	16QAM	Low	3 740.00	77.851
		Middle	3 840.00	77.859
		High	3 940.00	77.925
	64QAM	Low	3 740.00	77.655
		Middle	3 840.00	77.461
		High	3 940.00	77.540
	256QAM	Low	3 740.00	77.529
		Middle	3 840.00	77.618
		High	3 940.00	77.494
3	QPSK	Low	3 740.00	77.536
		Middle	3 840.00	77.544
		High	3 940.00	77.615
	16QAM	Low	3 740.00	77.865
		Middle	3 840.00	77.916
		High	3 940.00	77.950
	64QAM	Low	3 740.00	77.644
		Middle	3 840.00	77.571
		High	3 940.00	77.611
	256QAM	Low	3 740.00	77.481
		Middle	3 840.00	77.558
		High	3 940.00	77.515

3.7 GHz Service 5G NR 100 MHz 1 Carrier

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 750.00	97.482
		Middle	3 840.00	97.558
		High	3 930.00	97.616
	16QAM	Low	3 750.00	97.421
		Middle	3 840.00	97.671
		High	3 930.00	97.472
	64QAM	Low	3 750.00	97.391
		Middle	3 840.00	97.550
		High	3 930.00	97.567
	256QAM	Low	3 750.00	97.554
		Middle	3 840.00	97.740
		High	3 930.00	97.696
1	QPSK	Low	3 750.00	97.720
		Middle	3 840.00	97.722
		High	3 930.00	97.527
	16QAM	Low	3 750.00	97.603
		Middle	3 840.00	97.510
		High	3 930.00	97.475
	64QAM	Low	3 750.00	97.534
		Middle	3 840.00	97.615
		High	3 930.00	97.587
	256QAM	Low	3 750.00	97.693
		Middle	3 840.00	97.577
		High	3 930.00	97.537

2	QPSK	Low	3 750.00	97.655
		Middle	3 840.00	97.602
		High	3 930.00	97.507
	16QAM	Low	3 750.00	97.374
		Middle	3 840.00	97.537
		High	3 930.00	97.688
	64QAM	Low	3 750.00	97.498
		Middle	3 840.00	97.579
		High	3 930.00	97.611
	256QAM	Low	3 750.00	97.699
		Middle	3 840.00	97.587
		High	3 930.00	97.509
3	QPSK	Low	3 750.00	97.578
		Middle	3 840.00	97.496
		High	3 930.00	97.553
	16QAM	Low	3 750.00	97.669
		Middle	3 840.00	97.434
		High	3 930.00	97.714
	64QAM	Low	3 750.00	97.698
		Middle	3 840.00	97.646
		High	3 930.00	97.628
	256QAM	Low	3 750.00	97.611
		Middle	3 840.00	97.580
		High	3 930.00	97.662

Tabular Data of Contiguous Occupied Bandwidth

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 720.00	38.132
		Middle	3 840.00	38.159
		High	3 960.00	38.173
	16QAM	Low	3 720.00	38.311
		Middle	3 840.00	38.250
		High	3 960.00	38.270
	64QAM	Low	3 720.00	38.166
		Middle	3 840.00	38.224
		High	3 960.00	38.266
	256QAM	Low	3 720.00	38.221
		Middle	3 840.00	38.147
		High	3 960.00	38.220
1	QPSK	Low	3 720.00	38.160
		Middle	3 840.00	38.154
		High	3 960.00	38.198
	16QAM	Low	3 720.00	38.276
		Middle	3 840.00	38.269
		High	3 960.00	38.302
	64QAM	Low	3 720.00	38.203
		Middle	3 840.00	38.188
		High	3 960.00	38.184
	256QAM	Low	3 720.00	38.167
		Middle	3 840.00	38.132
		High	3 960.00	38.231

2	QPSK	Low	3 720.00	38.124
		Middle	3 840.00	38.151
		High	3 960.00	38.134
	16QAM	Low	3 720.00	38.281
		Middle	3 840.00	38.283
		High	3 960.00	38.324
	64QAM	Low	3 720.00	38.268
		Middle	3 840.00	38.129
		High	3 960.00	38.148
	256QAM	Low	3 720.00	38.161
		Middle	3 840.00	38.139
		High	3 960.00	38.186
3	QPSK	Low	3 720.00	38.207
		Middle	3 840.00	38.128
		High	3 960.00	38.221
	16QAM	Low	3 720.00	38.262
		Middle	3 840.00	38.230
		High	3 960.00	38.274
	64QAM	Low	3 720.00	38.191
		Middle	3 840.00	38.171
		High	3 960.00	38.193
	256QAM	Low	3 720.00	38.117
		Middle	3 840.00	38.147
		High	3 960.00	38.231

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier]

Ant	Mod	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
0	QPSK	Low	3 800.00	196.76
		Middle	3 840.00	196.80
		High	3 880.00	196.67
	16QAM	Low	3 800.00	197.01
		Middle	3 840.00	196.40
		High	3 880.00	196.50
	64QAM	Low	3 800.00	197.01
		Middle	3 840.00	196.83
		High	3 880.00	196.69
	256QAM	Low	3 800.00	196.91
		Middle	3 840.00	196.71
		High	3 880.00	196.58
1	QPSK	Low	3 800.00	196.58
		Middle	3 840.00	196.44
		High	3 880.00	196.73
	16QAM	Low	3 800.00	196.64
		Middle	3 840.00	196.71
		High	3 880.00	196.50
	64QAM	Low	3 800.00	196.66
		Middle	3 840.00	196.63
		High	3 880.00	196.59
	256QAM	Low	3 800.00	196.52
		Middle	3 840.00	196.89
		High	3 880.00	196.66

2	QPSK	Low	3 800.00	196.64
		Middle	3 840.00	196.60
		High	3 880.00	196.85
	16QAM	Low	3 800.00	196.42
		Middle	3 840.00	196.66
		High	3 880.00	196.44
	64QAM	Low	3 800.00	196.69
		Middle	3 840.00	196.66
		High	3 880.00	196.70
	256QAM	Low	3 800.00	196.68
		Middle	3 840.00	196.95
		High	3 880.00	196.68
3	QPSK	Low	3 800.00	196.72
		Middle	3 840.00	196.80
		High	3 880.00	196.57
	16QAM	Low	3 800.00	196.92
		Middle	3 840.00	196.75
		High	3 880.00	196.43
	64QAM	Low	3 800.00	196.78
		Middle	3 840.00	196.65
		High	3 880.00	196.70
	256QAM	Low	3 800.00	196.91
		Middle	3 840.00	196.63
		High	3 880.00	196.59

Tabular Data of Non-Contiguous Occupied Bandwidth

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

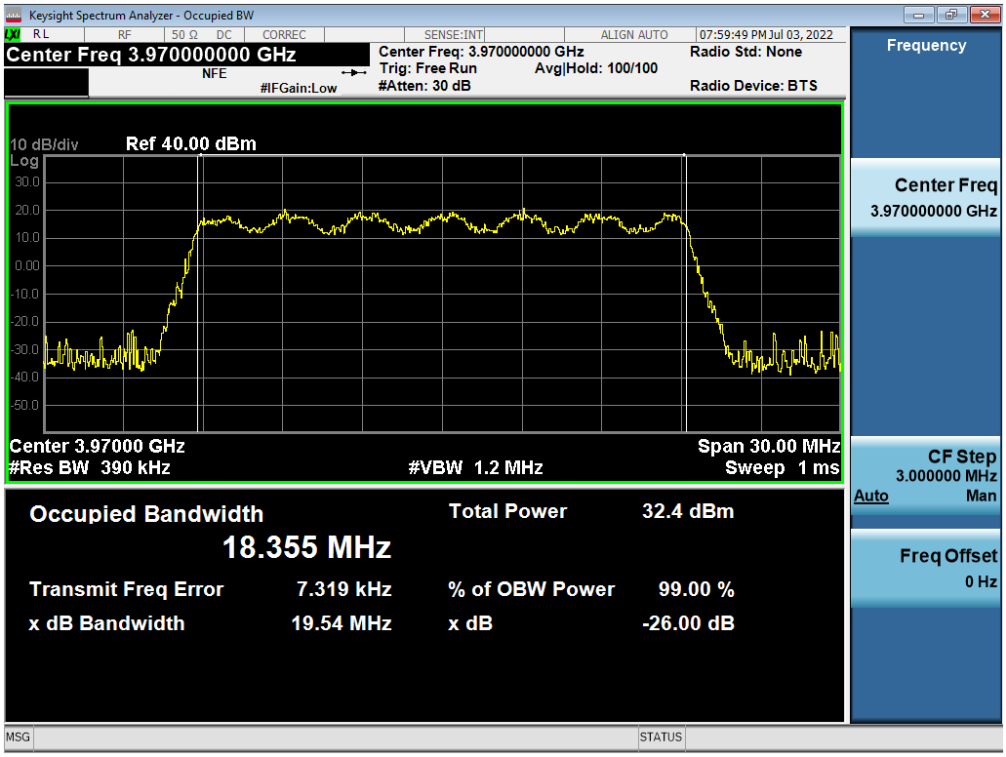
Ant	Mod	5G NR 20 MHz		5G NR 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 710.00	18.248	3 890.00	18.279	36.528
	16QAM	3 710.00	18.319	3 890.00	18.310	36.629
	64QAM	3 710.00	18.291	3 890.00	18.298	36.589
	256QAM	3 710.00	18.308	3 890.00	18.267	36.575
1	QPSK	3 710.00	18.266	3 890.00	18.268	36.534
	16QAM	3 710.00	18.332	3 890.00	18.301	36.633
	64QAM	3 710.00	18.283	3 890.00	18.271	36.554
	256QAM	3 710.00	18.276	3 890.00	18.311	36.587
2	QPSK	3 710.00	18.281	3 890.00	18.258	36.539
	16QAM	3 710.00	18.333	3 890.00	18.297	36.630
	64QAM	3 710.00	18.312	3 890.00	18.308	36.620
	256QAM	3 710.00	18.263	3 890.00	18.236	36.499
3	QPSK	3 710.00	18.248	3 890.00	18.261	36.509
	16QAM	3 710.00	18.344	3 890.00	18.310	36.654
	64QAM	3 710.00	18.281	3 890.00	18.248	36.529
	256QAM	3 710.00	18.226	3 890.00	18.284	36.510

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

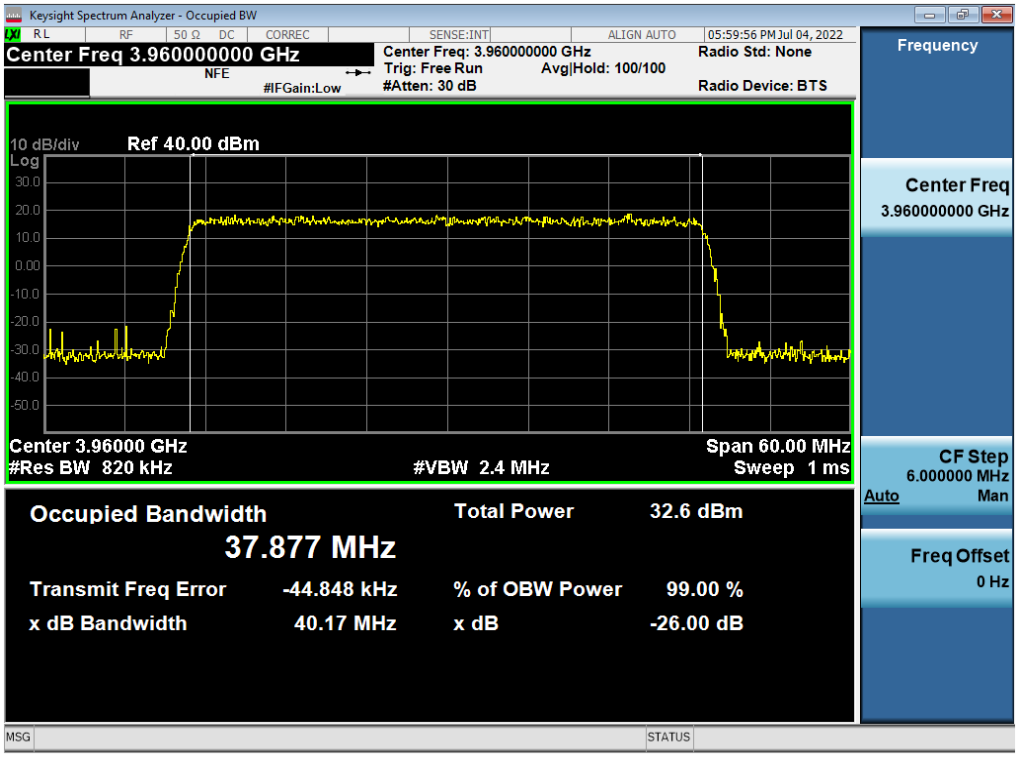
Ant	Mod	5G NR 20 MHz		5G NR 20 MHz		Total OBW (MHz)
		Frequency (MHz)	Measured Value (MHz)	Frequency (MHz)	Measured Value (MHz)	
0	QPSK	3 790.00	18.269	3 970.00	18.266	36.535
	16QAM	3 790.00	18.343	3 970.00	18.347	36.690
	64QAM	3 790.00	18.276	3 970.00	18.225	36.501
	256QAM	3 790.00	18.264	3 970.00	18.252	36.516
1	QPSK	3 790.00	18.292	3 970.00	18.290	36.583
	16QAM	3 790.00	18.346	3 970.00	18.295	36.641
	64QAM	3 790.00	18.263	3 970.00	18.265	36.528
	256QAM	3 790.00	18.309	3 970.00	18.305	36.614
2	QPSK	3 790.00	18.291	3 970.00	18.259	36.549
	16QAM	3 790.00	18.331	3 970.00	18.328	36.659
	64QAM	3 790.00	18.275	3 970.00	18.290	36.565
	256QAM	3 790.00	18.253	3 970.00	18.231	36.484
3	QPSK	3 790.00	18.286	3 970.00	18.251	36.537
	16QAM	3 790.00	18.328	3 970.00	18.325	36.653
	64QAM	3 790.00	18.248	3 970.00	18.247	36.495
	256QAM	3 790.00	18.286	3 970.00	18.286	36.571

Plot Data of Occupied bandwidth

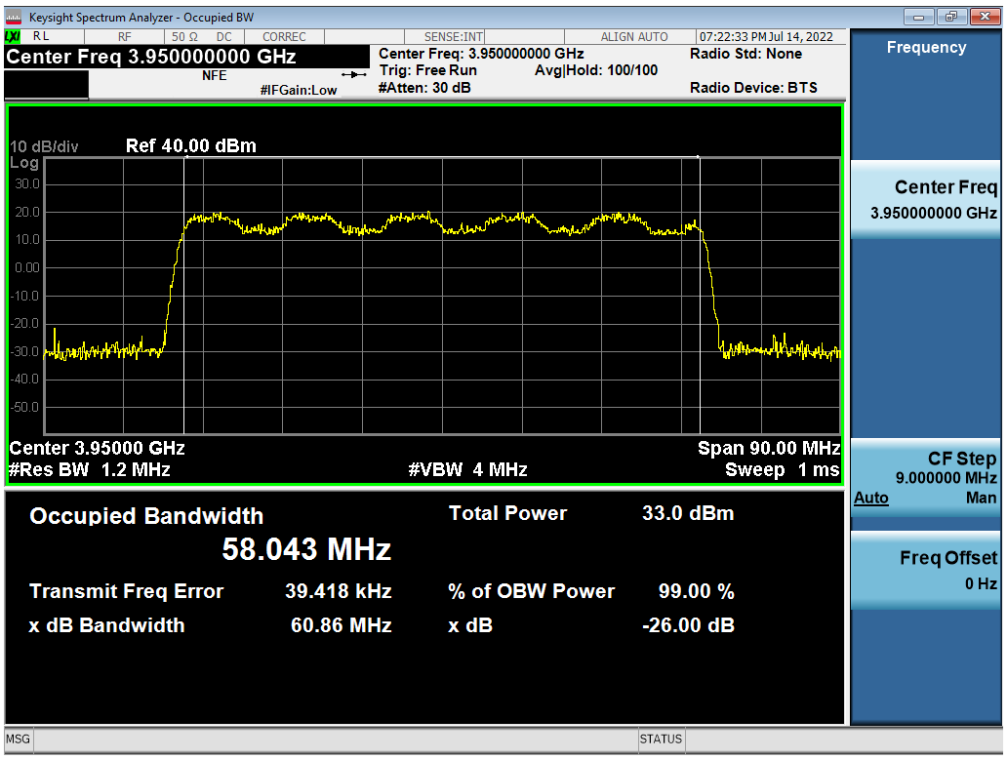
Antenna 3 / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / High



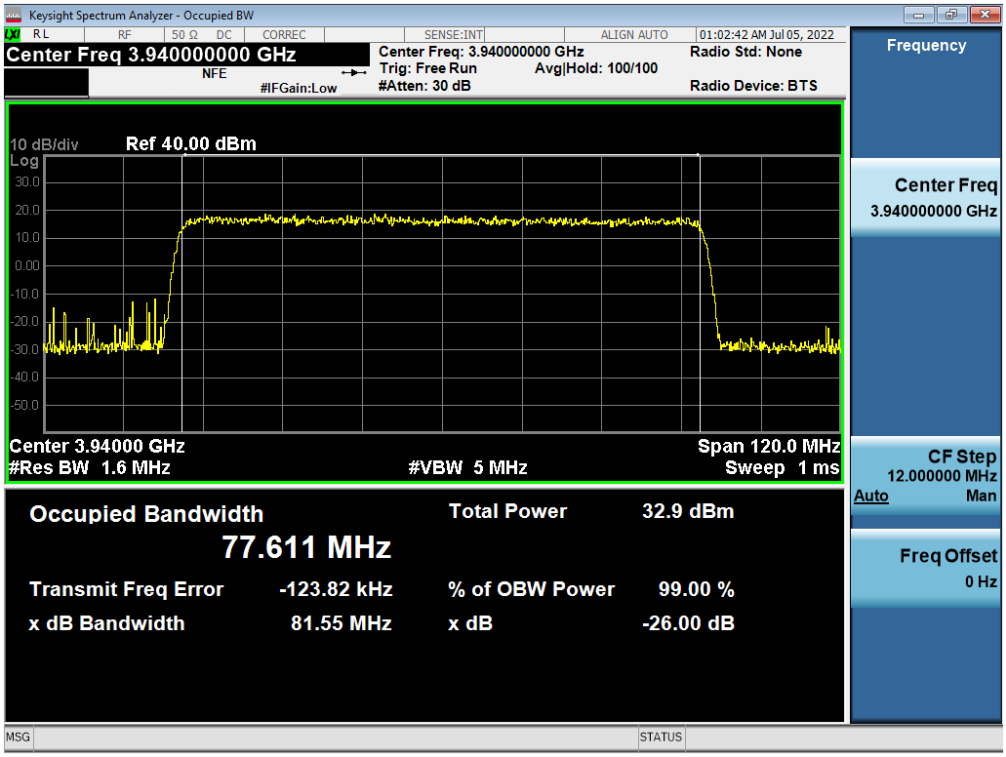
Antenna 0 / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 256QAM / High



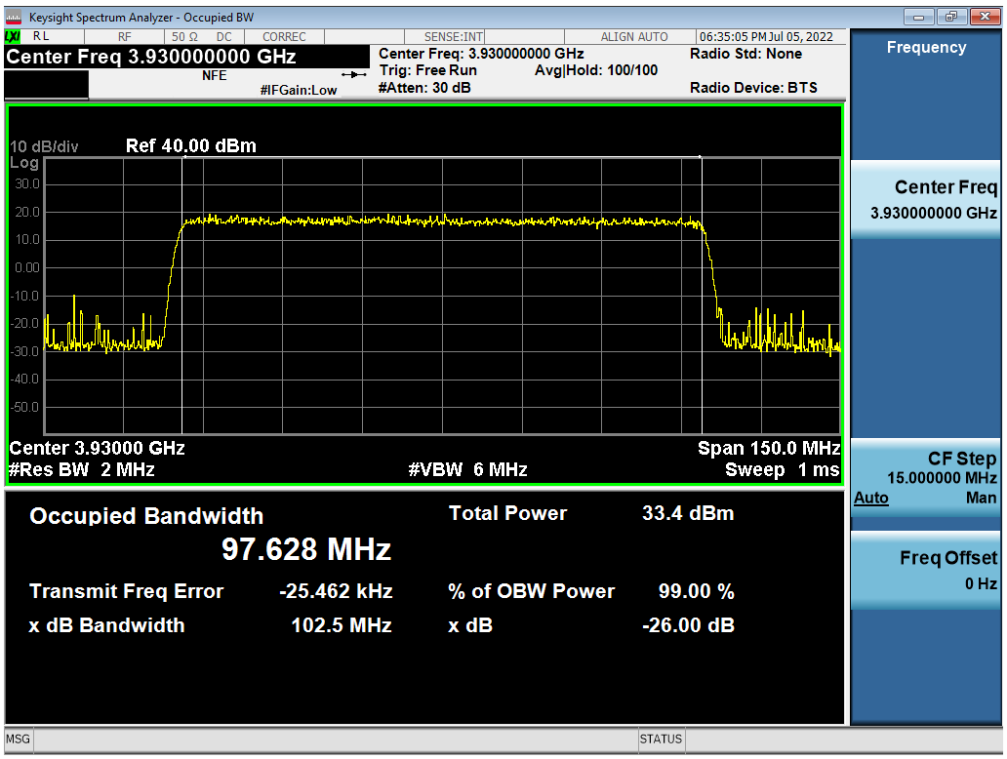
Antenna 3 / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 16QAM / High



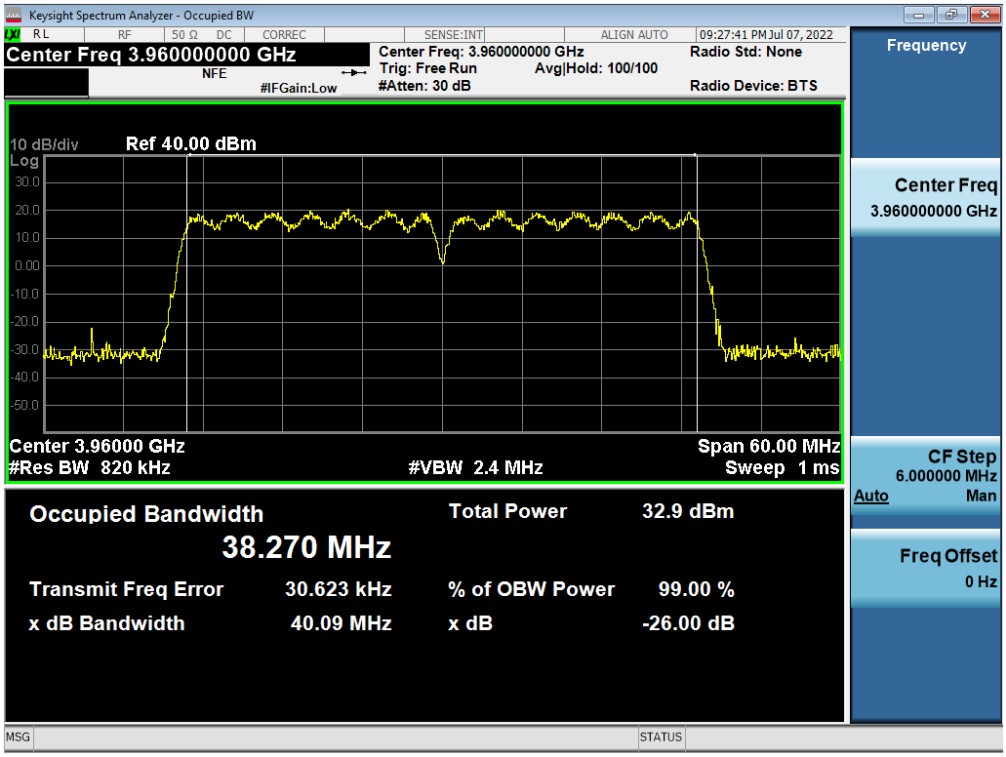
Antenna 3 / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 64QAM / High



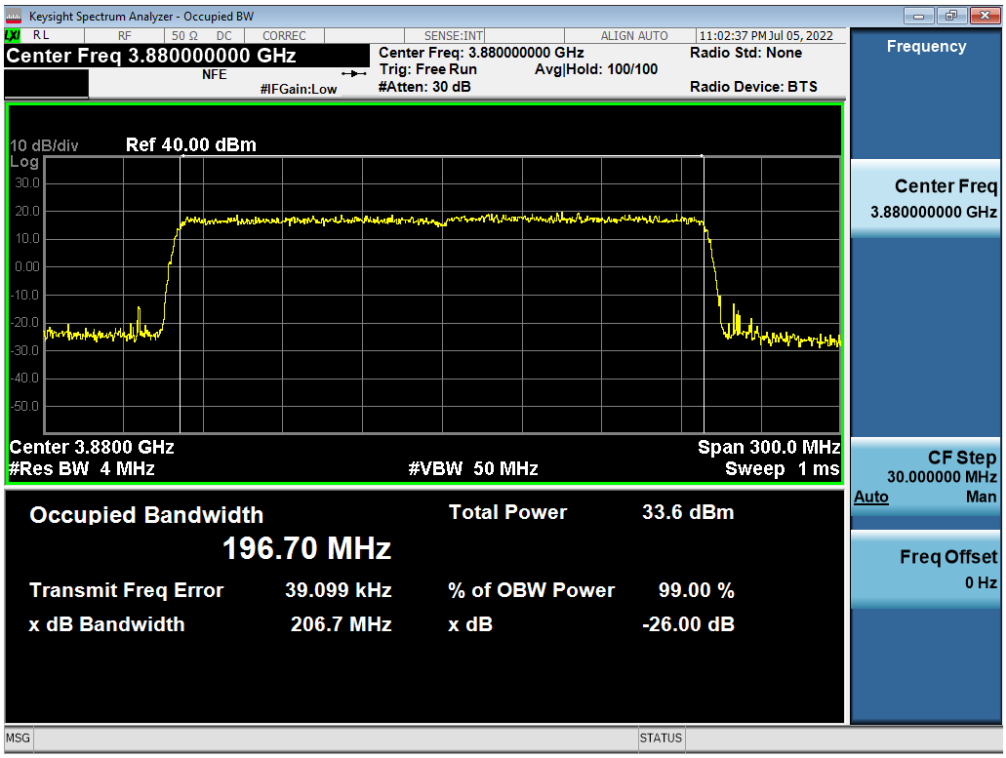
Antenna 3 / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 64QAM / High



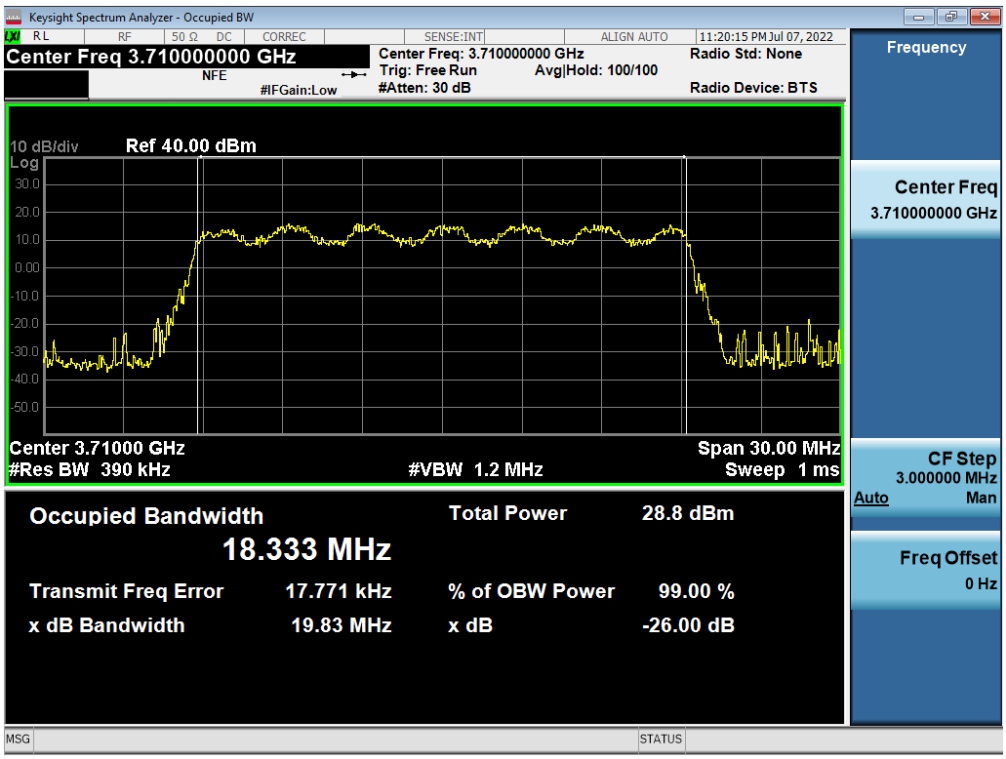
Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



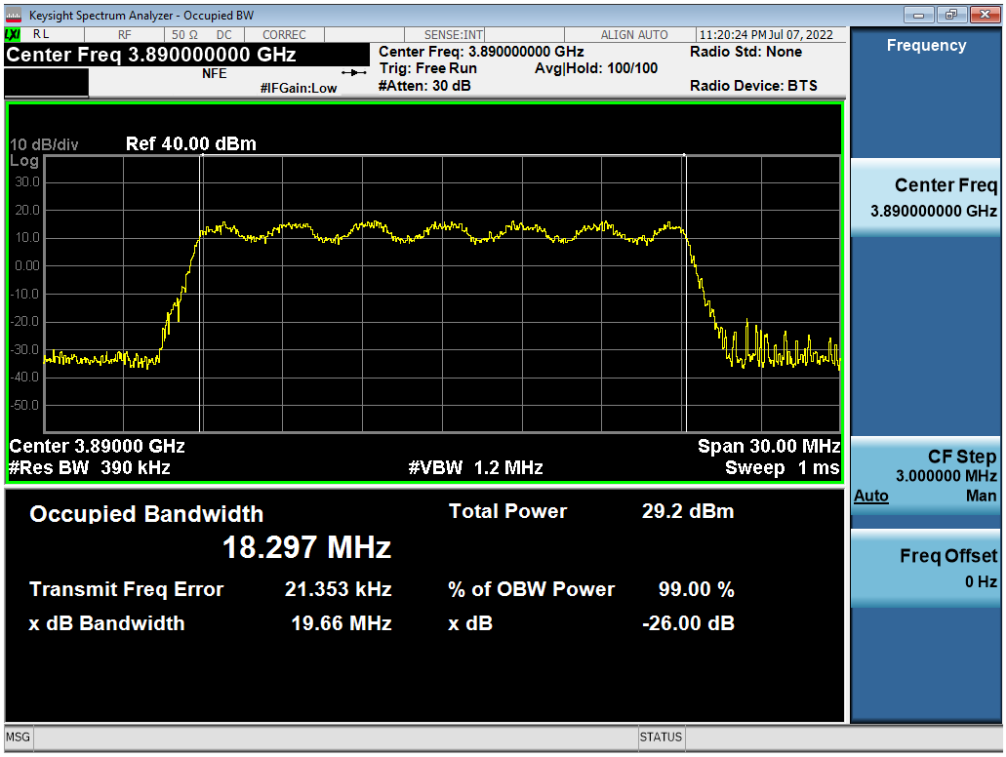
Antenna 3 / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / High



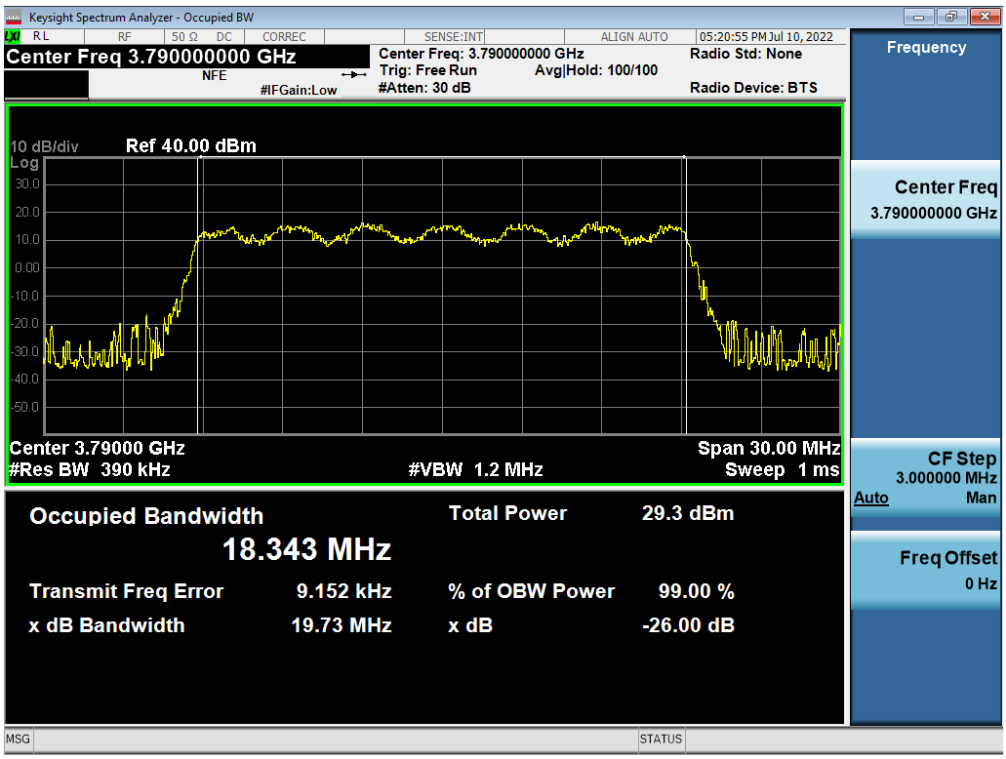
Antenna 2 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



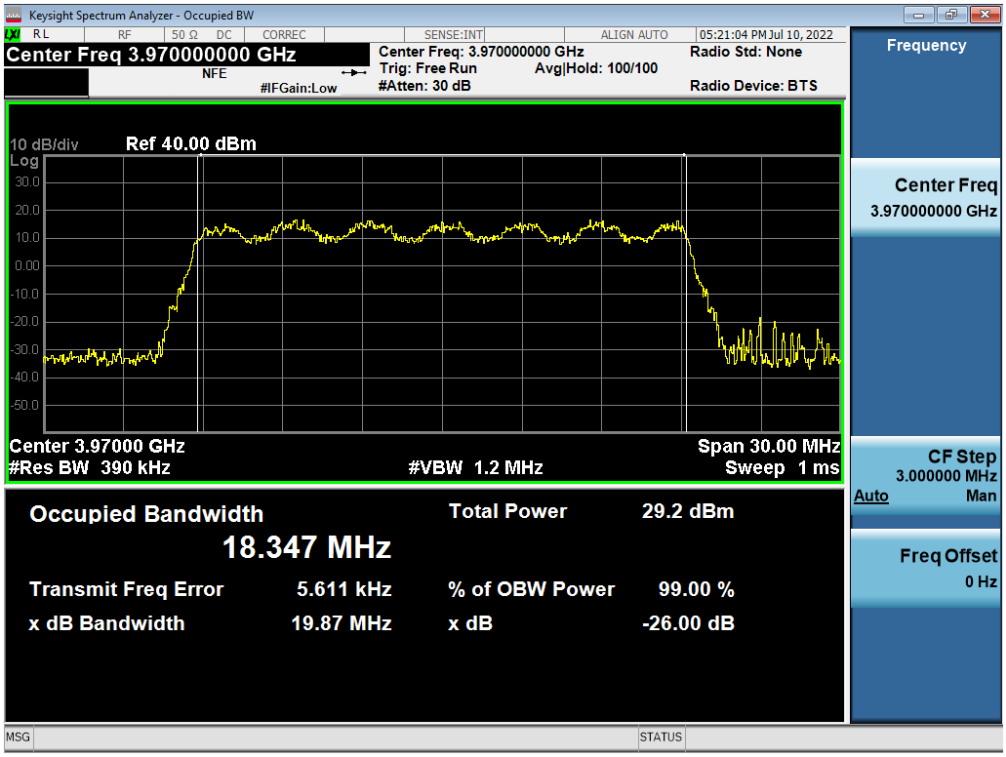
Antenna 2 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / High



Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / Low



Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / 5G NR 20 MHz 1 Carrier / 16QAM / 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.

§ 27.53 Emission limits.

(l) 3.7 GHz Service. The following emission limits apply to station transmitting in the 3700-3980 MHz band:

(1) For base station operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(1) 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.

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:

1. 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
2. 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 Out-of-band Unwanted Emissions

3.7 GHz Service 5G NR 20 MHz 1 Carrier

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3699.90	-34.24
		High	3980.16	-34.34
	16QAM	Low	3699.84	-36.69
		High	3980.10	-33.95
	64QAM	Low	3699.90	-35.36
		High	3980.18	-34.10
	256QAM	Low	3699.90	-34.15
		High	3980.10	-34.84
1	QPSK	Low	3699.90	-35.49
		High	3980.24	-35.24
	16QAM	Low	3699.90	-31.94
		High	3980.10	-33.45
	64QAM	Low	3699.88	-34.27
		High	3980.10	-34.02
	256QAM	Low	3699.90	-33.92
		High	3980.20	-36.98
2	QPSK	Low	3699.80	-34.63
		High	3980.10	-34.13
	16QAM	Low	3699.88	-34.36
		High	3980.10	-35.14
	64QAM	Low	3699.82	-35.00
		High	3980.14	-32.73
	256QAM	Low	3699.90	-35.84
		High	3980.10	-35.67
3	QPSK	Low	3699.90	-32.70
		High	3980.10	-33.77
	16QAM	Low	3699.90	-32.76
		High	3980.10	-33.19
	64QAM	Low	3699.78	-38.63
		High	3980.16	-33.75
	256QAM	Low	3699.82	-34.56
		High	3980.14	-34.14

3.7 GHz Service 5G NR 40 MHz 1 Carrier

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.80	-34.94
		High	3 980.30	-37.07
	16QAM	Low	3 699.80	-39.41
		High	3 980.20	-34.57
	64QAM	Low	3 699.70	-38.42
		High	3 980.20	-36.26
	256QAM	Low	3 699.70	-37.18
		High	3 980.20	-37.43
1	QPSK	Low	3 699.25	-38.28
		High	3 980.43	-38.01
	16QAM	Low	3 699.80	-36.29
		High	3 980.26	-35.62
	64QAM	Low	3 699.80	-35.51
		High	3 980.20	-33.87
	256QAM	Low	3 699.74	-37.90
		High	3 980.30	-37.40
2	QPSK	Low	3 699.74	-36.68
		High	3 980.26	-36.44
	16QAM	Low	3 699.04	-38.71
		High	3 980.20	-35.25
	64QAM	Low	3 699.80	-37.24
		High	3 980.20	-36.17
	256QAM	Low	3 699.57	-38.65
		High	3 980.20	-35.66
3	QPSK	Low	3 699.78	-35.99
		High	3 980.39	-37.34
	16QAM	Low	3 699.80	-38.93
		High	3 980.67	-38.44
	64QAM	Low	3 699.70	-37.78
		High	3 980.30	-35.87
	256QAM	Low	3 699.57	-37.03
		High	3 980.26	-36.96

3.7 GHz Service 5G NR 60 MHz 1 Carrier

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.66	-35.18
		High	3 980.36	-33.96
	16QAM	Low	3 699.37	-39.75
		High	3 980.39	-35.43
	64QAM	Low	3 699.52	-36.32
		High	3 980.79	-36.24
	256QAM	Low	3 699.50	-35.09
		High	3 980.33	-33.48
1	QPSK	Low	3 699.23	-37.44
		High	3 980.53	-34.83
	16QAM	Low	3 699.49	-39.31
		High	3 980.33	-34.17
	64QAM	Low	3 699.66	-34.01
		High	3 980.30	-33.82
	256QAM	Low	3 699.70	-35.77
		High	3 980.48	-34.08
2	QPSK	Low	3 699.63	-35.34
		High	3 980.36	-33.60
	16QAM	Low	3 699.37	-39.20
		High	3 980.30	-33.43
	64QAM	Low	3 699.46	-38.04
		High	3 980.56	-35.52
	256QAM	Low	3 699.70	-37.48
		High	3 980.30	-35.93
3	QPSK	Low	3 699.69	-34.04
		High	3 980.33	-30.70
	16QAM	Low	3 699.70	-39.28
		High	3 980.57	-36.47
	64QAM	Low	3 699.70	-34.32
		High	3 980.65	-34.35
	256QAM	Low	3 699.70	-32.35
		High	3 980.41	-34.14

3.7 GHz Service 5G NR 80 MHz 1 Carrier

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.60	-35.43
		High	3 980.92	-36.97
	16QAM	Low	3 699.57	-34.50
		High	3 980.40	-35.95
	64QAM	Low	3 699.57	-35.52
		High	3 980.40	-37.75
	256QAM	Low	3 699.60	-36.64
		High	3 980.68	-36.97
1	QPSK	Low	3 699.32	-37.25
		High	3 980.51	-36.06
	16QAM	Low	3 699.60	-35.55
		High	3 980.60	-36.34
	64QAM	Low	3 699.00	-37.59
		High	3 981.00	-37.60
	256QAM	Low	3 699.41	-37.09
		High	3 980.60	-36.92
2	QPSK	Low	3 699.57	-34.55
		High	3 980.51	-36.08
	16QAM	Low	3 699.41	-37.75
		High	3 980.76	-36.10
	64QAM	Low	3 699.41	-37.08
		High	3 980.40	-36.64
	256QAM	Low	3 699.41	-36.86
		High	3 980.84	-37.03
3	QPSK	Low	3 699.57	-34.25
		High	3 980.40	-35.83
	16QAM	Low	3 699.60	-37.29
		High	3 980.40	-33.17
	64QAM	Low	3 699.60	-34.84
		High	3 980.43	-35.06
	256QAM	Low	3 699.49	-35.69
		High	3 980.84	-37.65

3.7 GHz Service 5G NR 100 MHz 1 Carrier

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.50	-30.21
		High	3 980.50	-29.86
	16QAM	Low	3 699.50	-29.91
		High	3 980.50	-30.14
	64QAM	Low	3 699.50	-28.27
		High	3 980.50	-30.19
	256QAM	Low	3 699.50	-27.60
		High	3 980.52	-28.58
1	QPSK	Low	3 699.50	-27.39
		High	3 980.50	-29.36
	16QAM	Low	3 699.50	-29.26
		High	3 980.50	-30.55
	64QAM	Low	3 699.50	-28.83
		High	3 980.50	-30.56
	256QAM	Low	3 699.50	-29.42
		High	3 980.50	-28.97
2	QPSK	Low	3 699.50	-28.42
		High	3 980.50	-30.42
	16QAM	Low	3 699.50	-28.33
		High	3 980.50	-30.74
	64QAM	Low	3 699.50	-28.99
		High	3 980.50	-28.88
	256QAM	Low	3 699.50	-27.99
		High	3 980.50	-30.09
3	QPSK	Low	3 699.50	-28.54
		High	3 980.50	-29.14
	16QAM	Low	3 699.50	-27.79
		High	3 980.50	-28.77
	64QAM	Low	3 699.50	-28.49
		High	3 980.50	-29.59
	256QAM	Low	3 699.50	-29.15
		High	3 980.55	-30.13

Tabular Data of Contiguous Out-of-band Unwanted Emissions

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.85	-38.22
		High	3 980.28	-38.60
	16QAM	Low	3 699.90	-38.90
		High	3 980.15	-33.12
	64QAM	Low	3 699.81	-35.79
		High	3 980.10	-36.40
	256QAM	Low	3 699.87	-38.82
		High	3 980.10	-35.21
1	QPSK	Low	3 699.90	-36.93
		High	3 980.25	-38.71
	16QAM	Low	3 699.71	-40.14
		High	3 980.10	-35.51
	64QAM	Low	3 699.90	-38.02
		High	3 980.10	-38.06
	256QAM	Low	3 699.89	-36.98
		High	3 980.21	-38.07
2	QPSK	Low	3 699.90	-37.87
		High	3 980.18	-37.16
	16QAM	Low	3 699.90	-36.89
		High	3 980.21	-34.55
	64QAM	Low	3 699.90	-38.37
		High	3 980.15	-35.18
	256QAM	Low	3 699.84	-37.47
		High	3 980.10	-37.52
3	QPSK	Low	3 699.90	-36.47
		High	3 980.10	-36.31
	16QAM	Low	3 699.80	-37.99
		High	3 980.11	-33.60
	64QAM	Low	3 699.78	-34.86
		High	3 980.10	-36.93
	256QAM	Low	3 699.90	-35.19
		High	3 980.19	-35.85

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier]

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.50	-31.06
		High	3 980.55	-32.63
	16QAM	Low	3 699.50	-30.56
		High	3 980.50	-30.63
	64QAM	Low	3 699.50	-32.92
		High	3 980.57	-32.80
	256QAM	Low	3 699.50	-32.14
		High	3 980.50	-31.96
1	QPSK	Low	3 699.50	-33.31
		High	3 980.50	-31.88
	16QAM	Low	3 699.50	-30.48
		High	3 980.50	-28.93
	64QAM	Low	3 699.35	-30.85
		High	3 980.55	-32.60
	256QAM	Low	3 699.50	-32.53
		High	3 980.50	-31.11
2	QPSK	Low	3 699.50	-31.13
		High	3 980.50	-30.57
	16QAM	Low	3 699.50	-30.66
		High	3 980.50	-28.60
	64QAM	Low	3 699.50	-32.24
		High	3 980.50	-31.55
	256QAM	Low	3 699.50	-30.64
		High	3 980.50	-33.41
3	QPSK	Low	3 699.50	-31.49
		High	3 980.50	-33.84
	16QAM	Low	3 699.50	-31.23
		High	3 980.50	-29.93
	64QAM	Low	3 699.48	-30.54
		High	3 980.50	-31.43
	256QAM	Low	3 699.50	-32.54
		High	3 980.50	-32.65

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

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

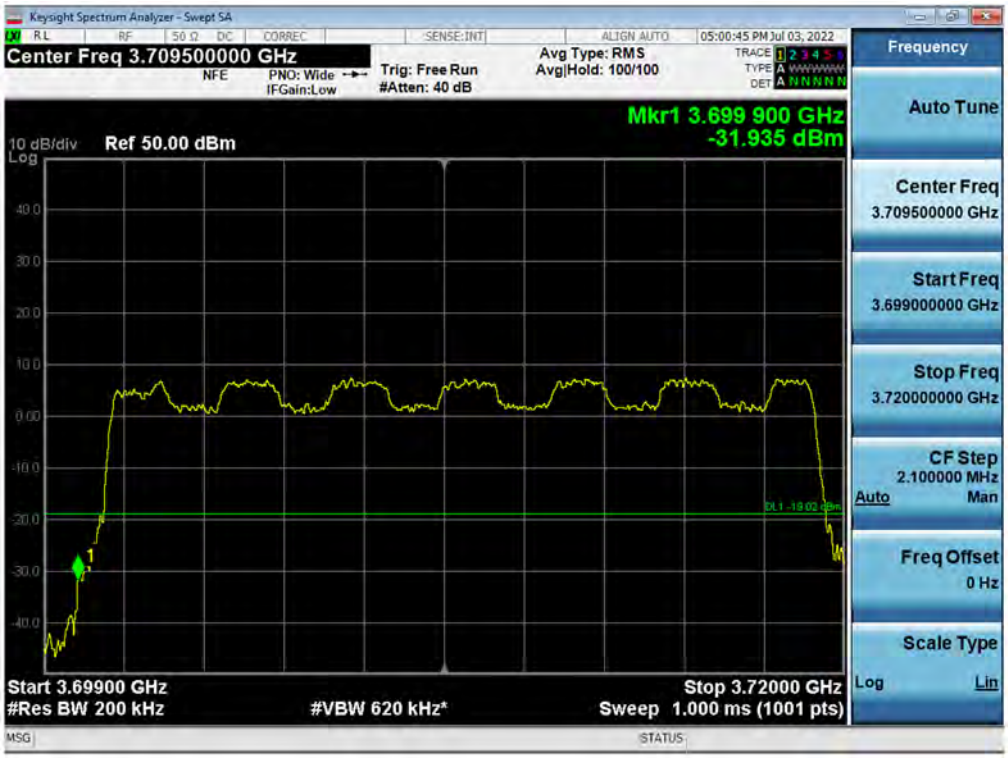
Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	Low	3 699.81	-38.79
	16QAM	Low	3 699.77	-37.66
	64QAM	Low	3 699.83	-37.02
	256QAM	Low	3 699.87	-36.30
1	QPSK	Low	3 699.90	-36.96
	16QAM	Low	3 699.90	-39.88
	64QAM	Low	3 699.85	-34.47
	256QAM	Low	3 699.90	-35.09
2	QPSK	Low	3 699.68	-38.14
	16QAM	Low	3 699.87	-34.54
	64QAM	Low	3 699.90	-36.62
	256QAM	Low	3 699.80	-36.62
3	QPSK	Low	3 699.82	-36.40
	16QAM	Low	3 699.86	-40.71
	64QAM	Low	3 699.73	-39.55
	256QAM	Low	3 699.90	-36.37

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

Ant.	Mod.	Channel	Frequency (MHz)	Measured Value (dBm)
0	QPSK	High	3 980.12	-36.05
	16QAM	High	3 980.16	-34.40
	64QAM	High	3 980.18	-37.07
	256QAM	High	3 980.10	-35.54
1	QPSK	High	3 980.13	-39.57
	16QAM	High	3 980.10	-35.17
	64QAM	High	3 980.27	-37.37
	256QAM	High	3 980.13	-36.02
2	QPSK	High	3 980.10	-36.17
	16QAM	High	3 980.33	-37.32
	64QAM	High	3 980.10	-35.06
	256QAM	High	3 980.10	-38.60
3	QPSK	High	3 980.11	-34.13
	16QAM	High	3 980.31	-36.58
	64QAM	High	3 980.10	-34.32
	256QAM	High	3 980.14	-36.55

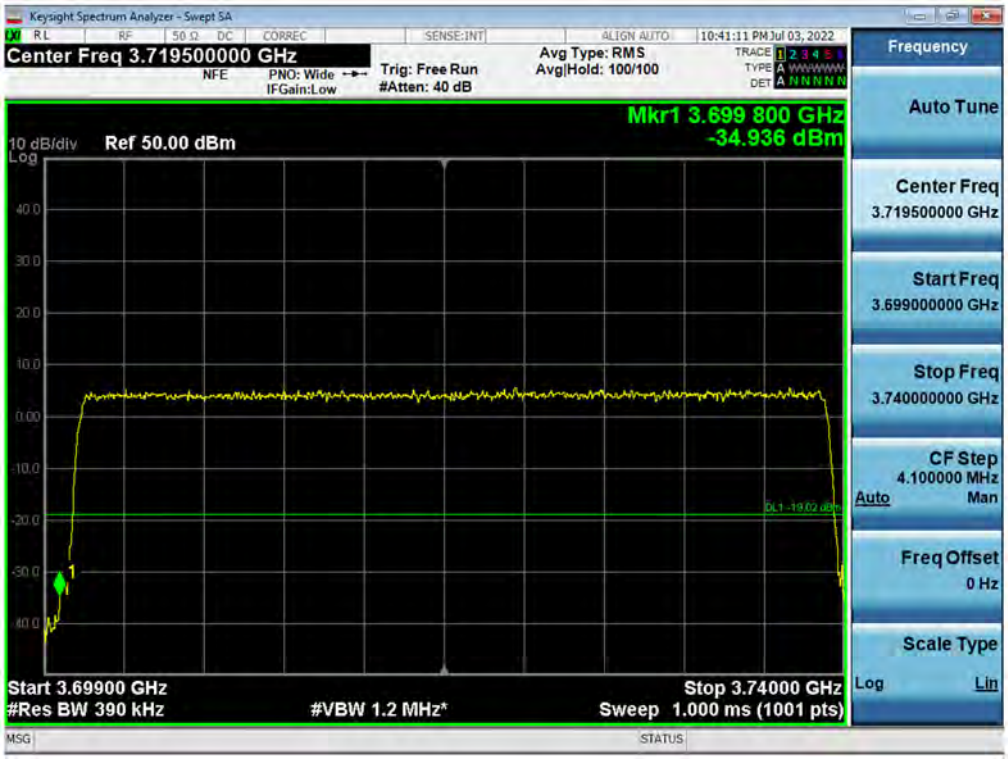
Plot Data of Out-of-band Unwanted Emissions

Antenna 1 / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / Low

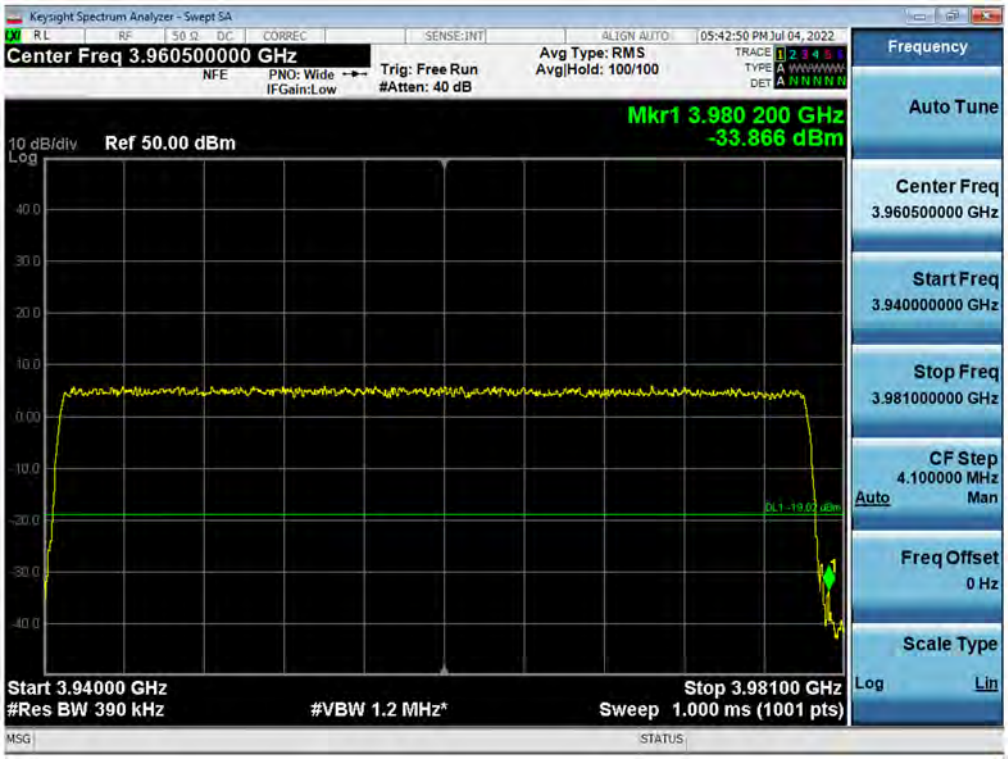


Antenna 2 / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 64QAM / High

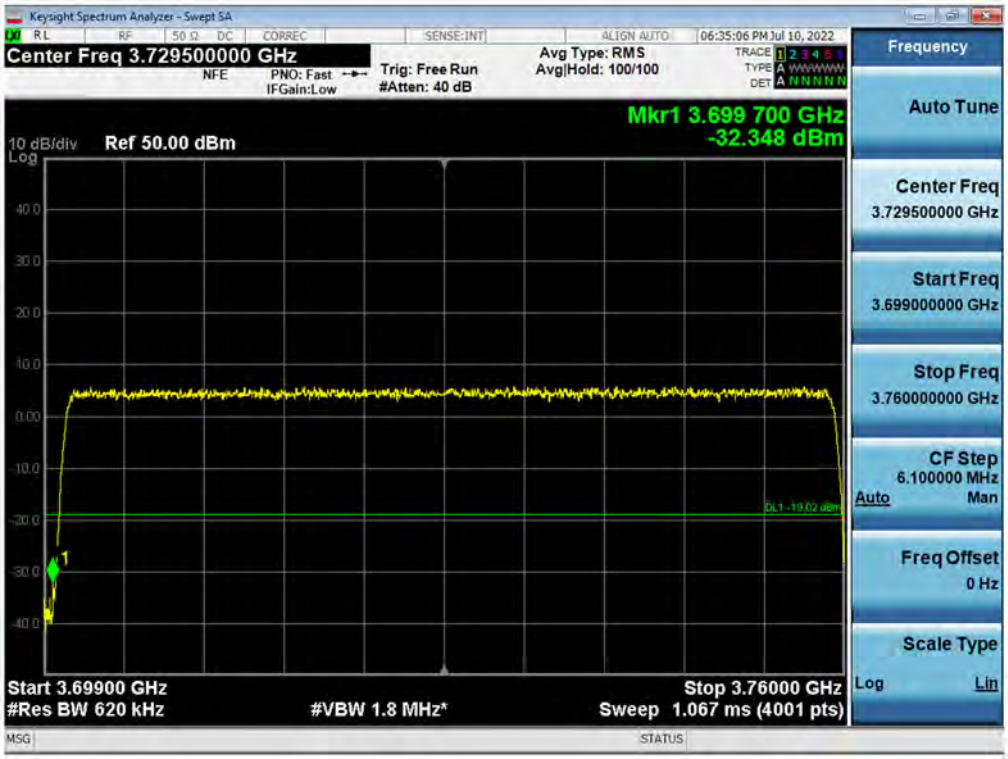
Antenna 0 / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / QPSK / Low



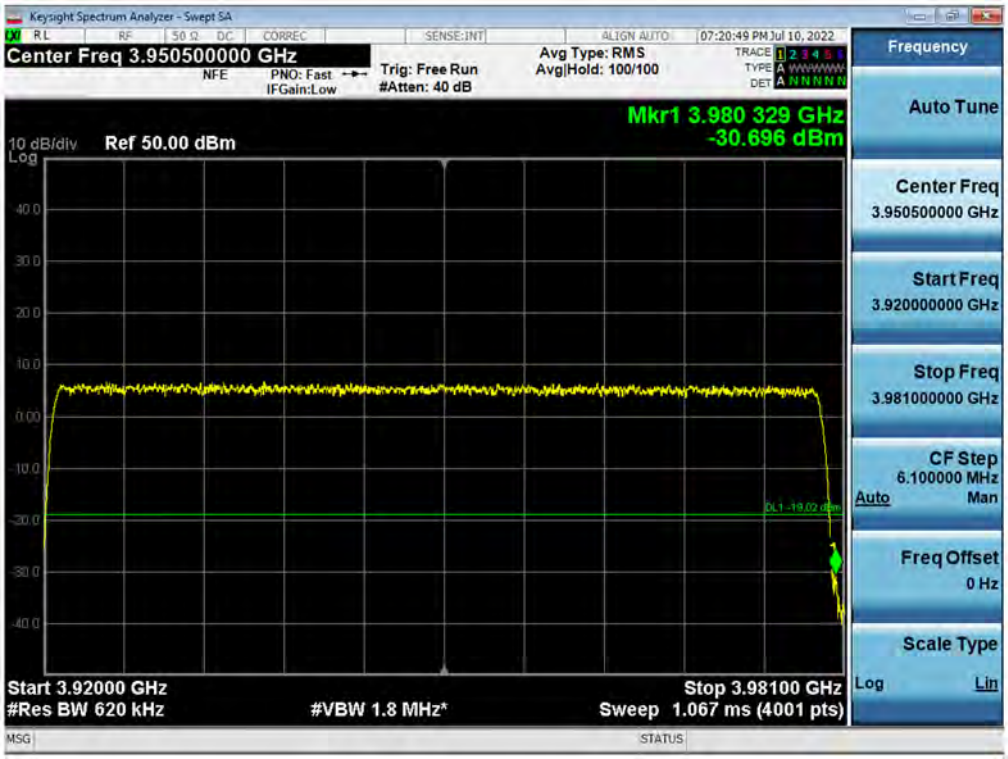
Antenna 1 / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / High



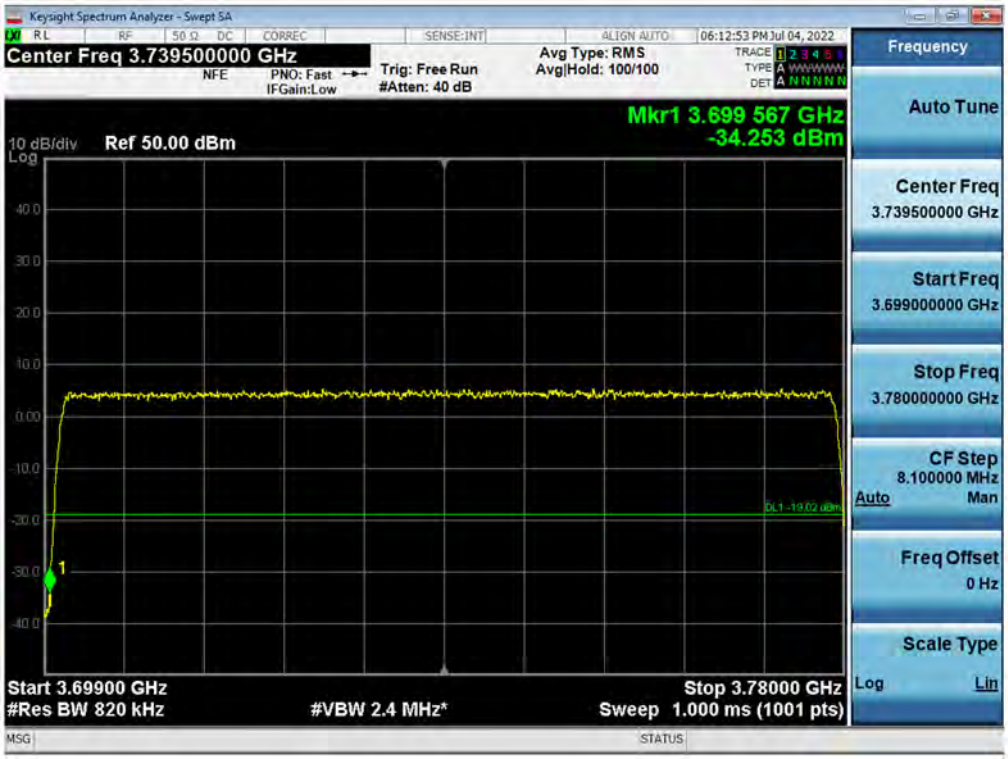
Antenna 3 / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 256QAM / Low



Antenna 3 / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / High

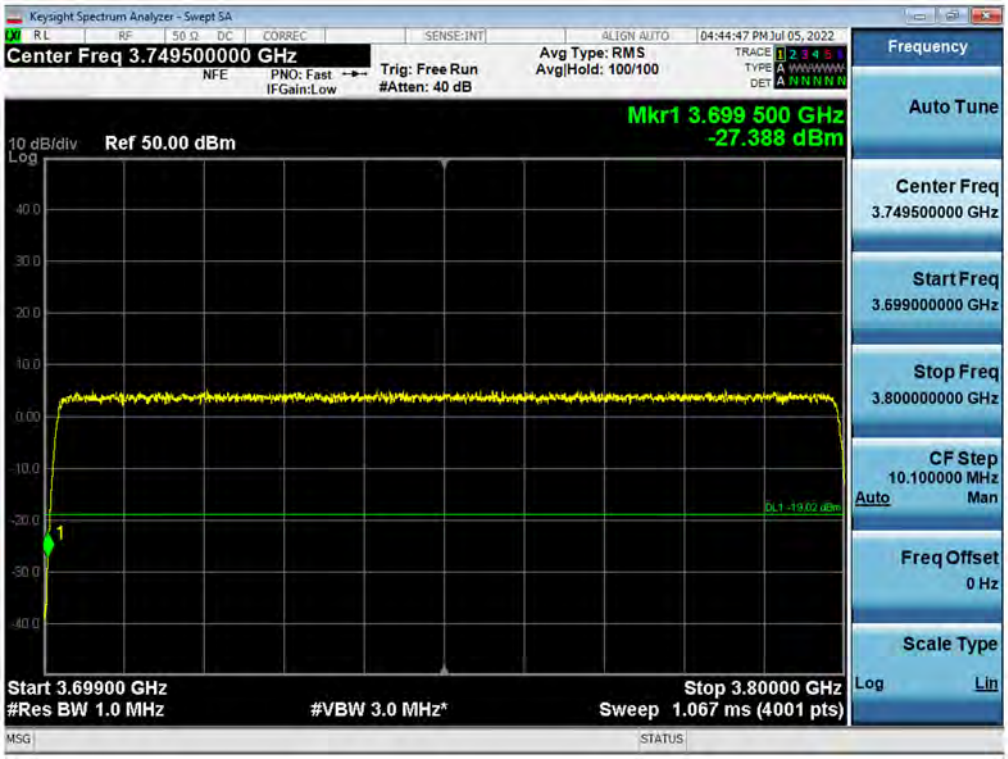


Antenna 3 / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / QPSK / Low

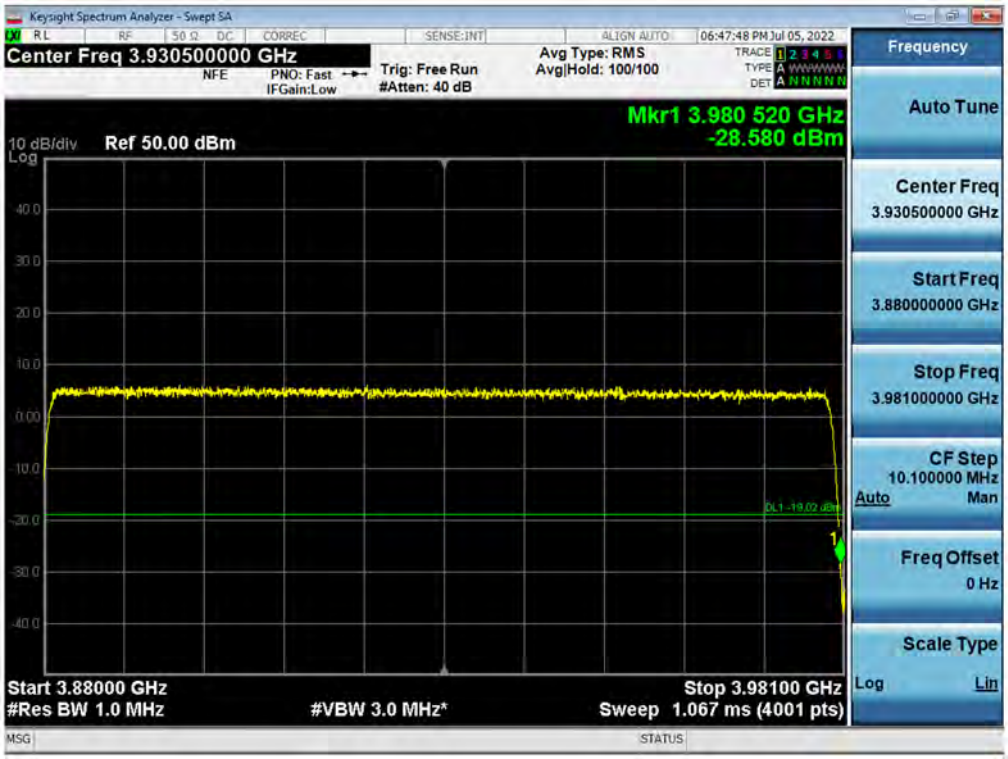


Antenna 3 / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 16QAM / High

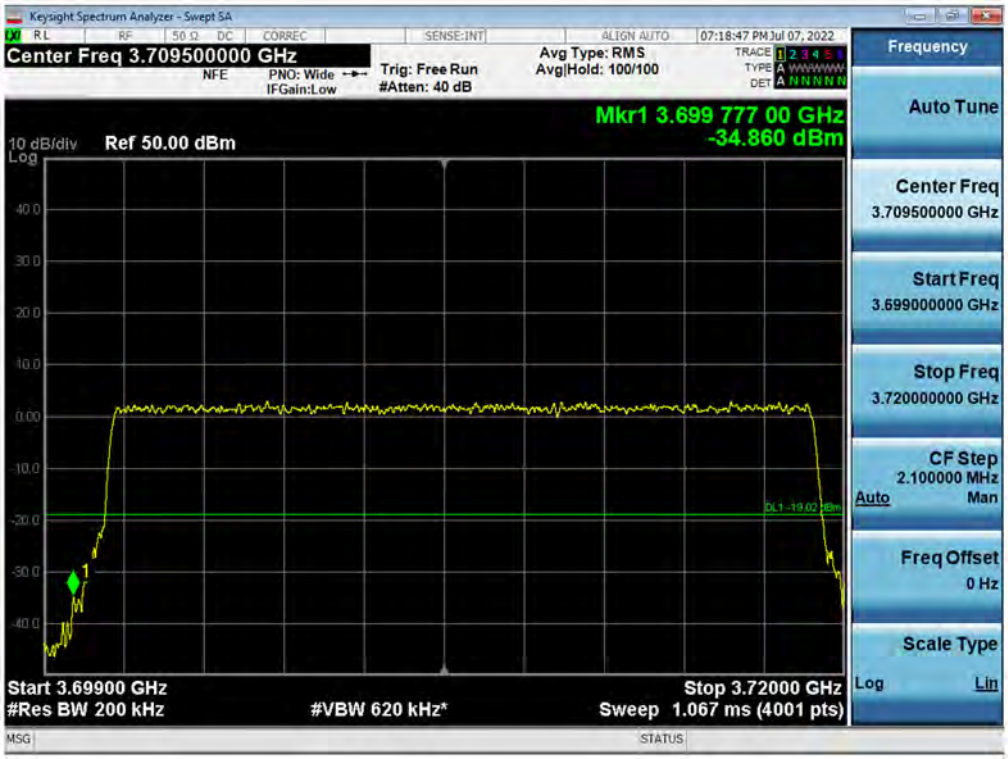
Antenna 1 / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / QPSK / Low



Antenna 0 / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 256QAM / High

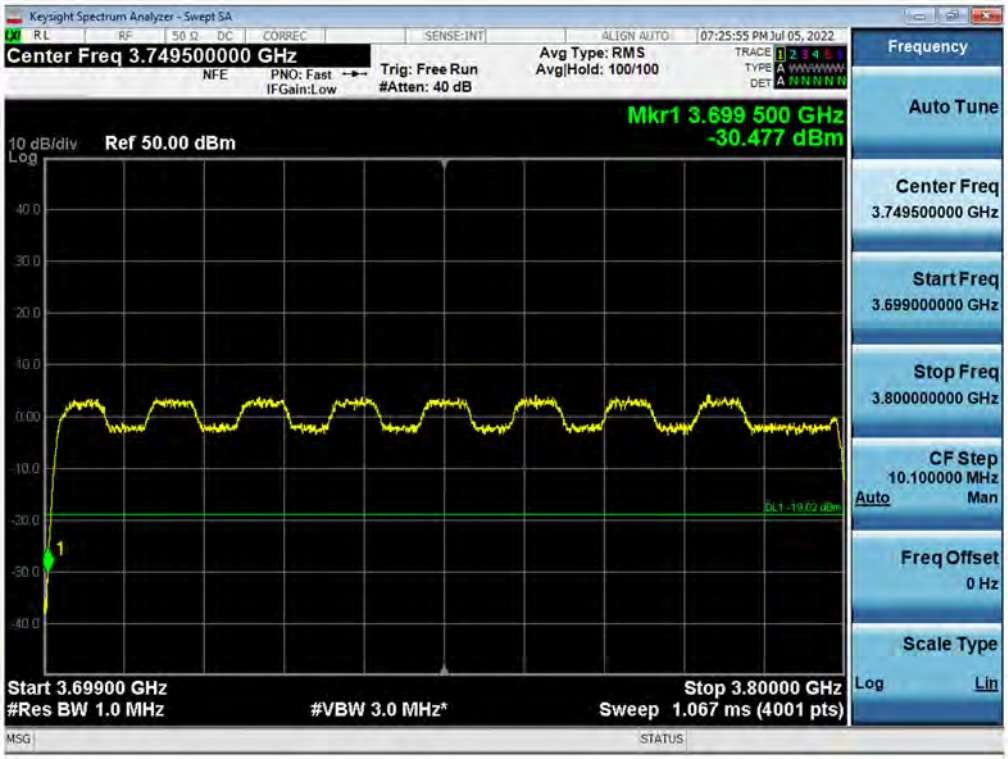


Antenna 3 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / Low

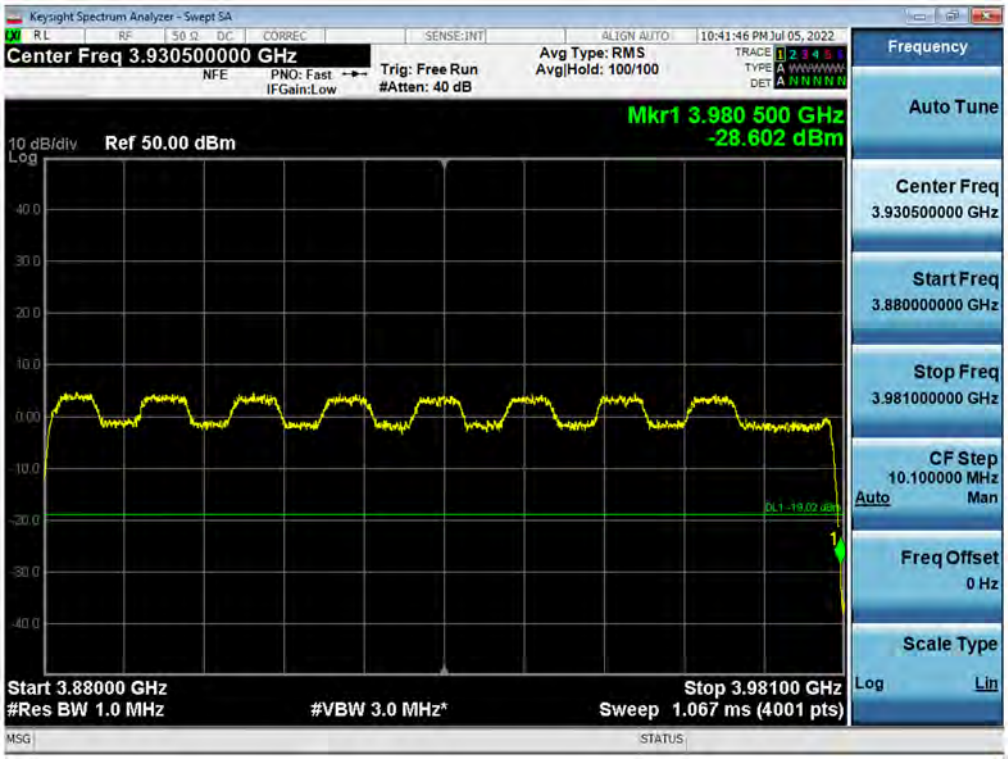


Antenna 0 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High

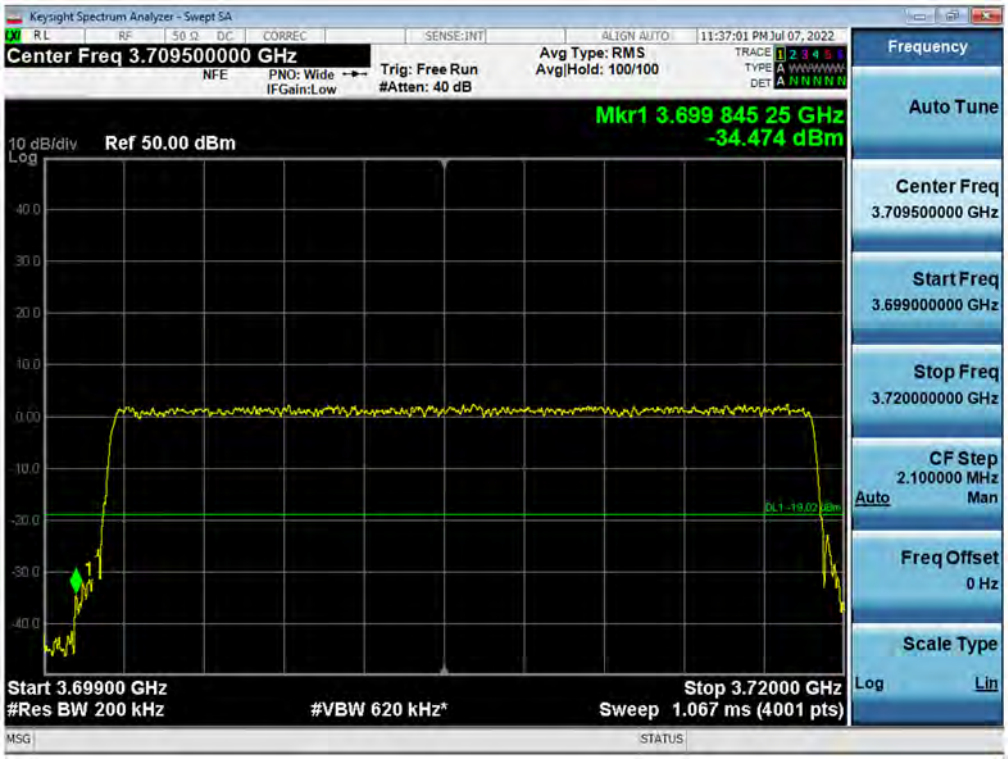
Antenna 1 / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / Low



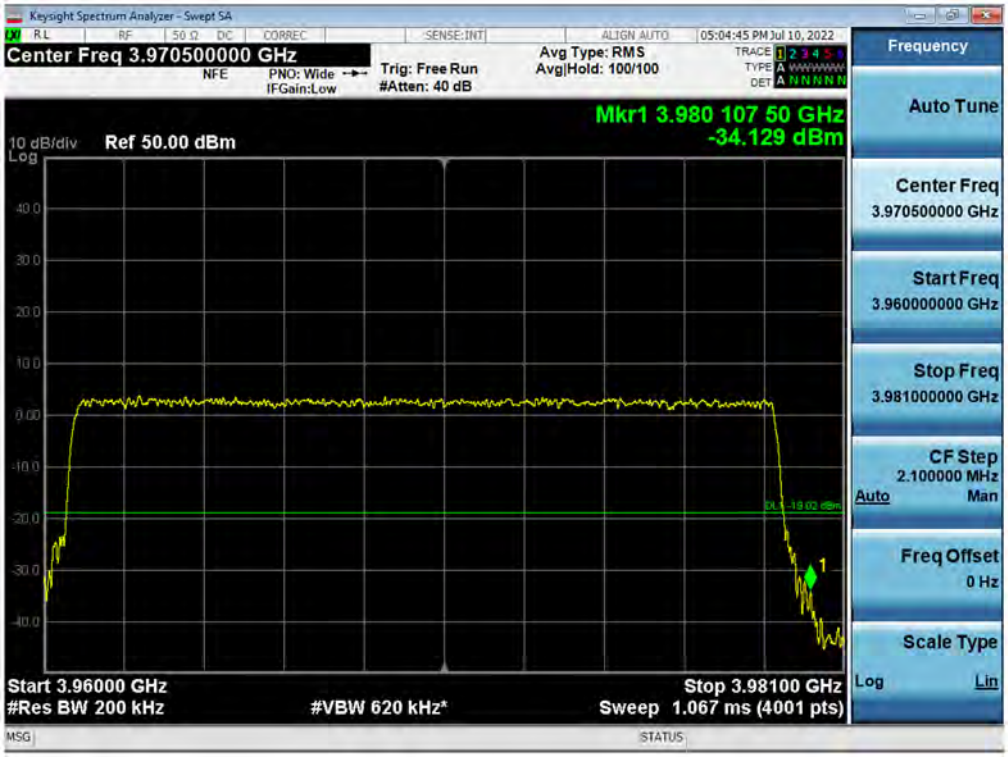
Antenna 2 / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



Antenna 1 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 64QAM / Low



Antenna 3 / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz) / Non-Contiguous / QPKS / 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.

§ 27.53 Emission limits.

(l) 3.7 GHz Service. The following emission limits apply to station transmitting in the 3700-3980 MHz band:

(1) For base station operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(1) 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.

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 ≥ 2 × (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 kHz / 1 MHz) = - 30 dB
   : 150 kHz to 30 MHz applied 10 kHz RBW, 10 log (10 kHz / 1 MHz) = - 20 dB
   : Edge freq. to edge ±100 MHz applied 100 kHz RBW, 10 log (100 kHz / 1MHz) = - 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 Spurious Unwanted Emissions

3.7 GHz Service 5G NR 20 MHz 1 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	26.5 GHz ~ 40 GHz
QPSK	Low	-42.704	-50.109	-44.401	-41.584	-42.689	-43.612	-35.073	-40.331
	Middle	-42.597	-53.069	-44.777	-43.351	-42.545	-32.489	-33.770	-39.850
	High	-39.588	-53.118	-45.038	-42.602	-38.212	-32.647	-33.864	-38.952
16QAM	Low	-45.540	-52.846	-43.990	-40.931	-43.003	-42.692	-34.666	-39.478
	Middle	-45.224	-51.684	-43.748	-42.865	-41.760	-32.136	-34.319	-39.735
	High	-46.640	-52.697	-45.074	-43.230	-40.523	-33.335	-34.327	-39.354
64QAM	Low	-43.752	-52.408	-44.620	-41.725	-42.180	-42.906	-34.271	-39.519
	Middle	-45.538	-52.569	-44.314	-41.395	-41.853	-32.764	-35.128	-38.993
	High	-43.819	-52.836	-44.852	-43.723	-40.287	-33.500	-35.372	-39.759
256QAM	Low	-43.573	-52.768	-45.307	-41.864	-42.137	-42.950	-34.554	-39.631
	Middle	-39.438	-53.290	-44.217	-42.915	-42.515	-32.472	-34.546	-39.139
	High	-40.340	-52.730	-44.165	-43.865	-40.158	-32.744	-34.799	-39.758

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	26.5 GHz ~ 40 GHz
QPSK	Low	-46.489	-53.042	-44.037	-41.759	-43.676	-43.358	-35.498	-39.627
	Middle	-42.415	-52.950	-43.902	-43.510	-41.924	-32.364	-34.180	-39.432
	High	-42.831	-53.321	-44.247	-43.055	-39.696	-32.457	-34.619	-39.843
16QAM	Low	-41.407	-53.602	-44.588	-40.965	-43.222	-43.030	-34.832	-39.842
	Middle	-47.140	-53.318	-44.918	-43.125	-42.549	-33.379	-34.040	-38.989
	High	-42.744	-52.466	-44.233	-42.954	-40.102	-32.578	-33.918	-38.090
64QAM	Low	-43.872	-52.879	-43.394	-42.617	-42.550	-43.480	-33.937	-38.959
	Middle	-45.618	-52.921	-43.287	-41.995	-41.838	-32.599	-32.918	-39.124
	High	-40.283	-53.178	-43.855	-44.037	-40.676	-32.688	-35.501	-38.706
256QAM	Low	-39.880	-51.711	-44.533	-42.000	-42.472	-43.982	-34.325	-39.578
	Middle	-45.076	-53.078	-45.080	-42.764	-41.682	-33.051	-34.313	-39.599
	High	-43.524	-52.451	-44.763	-43.341	-40.273	-33.007	-34.538	-39.622

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	26.5 GHz ~ 40 GHz
QPSK	Low	-42.547	-52.626	-44.212	-42.360	-42.735	-42.815	-35.403	-39.696
	Middle	-41.669	-51.891	-44.472	-42.789	-42.019	-32.557	-33.622	-39.645
	High	-41.136	-52.560	-44.158	-42.346	-39.232	-33.364	-33.915	-38.608
16QAM	Low	-42.018	-52.764	-44.834	-42.552	-43.001	-44.007	-34.782	-39.772
	Middle	-40.322	-52.184	-43.798	-42.779	-41.654	-33.072	-34.312	-39.760
	High	-42.171	-52.804	-45.085	-42.674	-39.414	-33.348	-33.907	-38.985
64QAM	Low	-45.932	-51.794	-44.656	-42.719	-42.334	-42.623	-33.200	-39.735
	Middle	-39.042	-51.953	-45.525	-42.459	-43.100	-33.224	-33.712	-39.166
	High	-43.475	-52.560	-44.711	-42.710	-39.505	-33.479	-35.014	-38.483
256QAM	Low	-41.007	-51.805	-45.050	-42.024	-42.451	-43.740	-34.391	-38.823
	Middle	-46.668	-52.952	-44.686	-41.770	-41.617	-33.240	-33.661	-39.208
	High	-44.956	-53.348	-44.866	-42.954	-40.239	-33.720	-34.064	-39.769

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	26.5 GHz ~ 40 GHz
QPSK	Low	-44.237	-52.141	-44.662	-40.771	-42.640	-30.762	-34.743	-39.269
	Middle	-45.152	-53.630	-45.138	-43.448	-42.590	-31.247	-35.183	-39.422
	High	-42.522	-53.621	-45.404	-43.274	-40.086	-34.009	-34.740	-40.207
16QAM	Low	-44.844	-52.552	-44.160	-40.074	-42.858	-30.854	-34.404	-38.805
	Middle	-44.772	-53.111	-45.552	-42.871	-42.995	-32.124	-34.592	-39.033
	High	-45.569	-53.120	-44.894	-43.674	-39.930	-34.282	-34.687	-39.595
64QAM	Low	-41.988	-53.481	-42.794	-41.358	-42.571	-32.507	-34.045	-39.725
	Middle	-46.237	-53.388	-45.375	-42.326	-43.029	-33.027	-34.852	-39.984
	High	-46.111	-54.005	-44.534	-43.742	-41.300	-32.747	-34.256	-39.245
256QAM	Low	-39.640	-52.540	-42.949	-42.338	-42.833	-31.857	-35.042	-39.770
	Middle	-39.478	-52.850	-45.429	-42.356	-42.826	-33.153	-34.990	-39.390
	High	-46.844	-53.260	-45.428	-43.411	-39.555	-33.752	-34.751	-40.381

3.7 GHz Service 5G NR 40 MHz 1 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	26.5 GHz ~ 40 GHz
QPSK	Low	-41.425	-51.953	-45.180	-41.508	-43.072	-33.421	-34.722	-39.875
	Middle	-43.028	-52.580	-44.184	-43.841	-43.054	-32.967	-34.619	-39.732
	High	-43.091	-52.502	-44.503	-43.941	-41.161	-32.953	-34.597	-39.252
16QAM	Low	-40.362	-52.884	-45.021	-41.646	-41.735	-33.568	-33.925	-39.548
	Middle	-43.766	-52.614	-45.084	-43.337	-43.044	-32.975	-33.677	-39.474
	High	-44.990	-52.405	-43.878	-44.017	-41.159	-33.419	-34.707	-40.168
64QAM	Low	-39.887	-52.832	-44.305	-40.497	-43.235	-33.577	-33.539	-39.892
	Middle	-43.873	-52.650	-44.822	-43.197	-42.569	-33.710	-34.727	-40.100
	High	-45.537	-51.683	-42.928	-43.106	-40.148	-33.427	-33.032	-39.331
256QAM	Low	-41.697	-52.394	-44.487	-42.026	-42.433	-33.412	-34.151	-40.012
	Middle	-39.784	-52.930	-43.982	-43.959	-43.661	-32.685	-34.551	-38.786
	High	-45.257	-52.998	-44.438	-43.960	-40.756	-34.042	-35.242	-39.159

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	26.5 GHz ~ 40 GHz
QPSK	Low	-41.582	-52.763	-45.140	-41.801	-42.391	-33.371	-34.513	-39.993
	Middle	-41.744	-52.926	-44.852	-44.232	-42.584	-33.539	-34.501	-39.512
	High	-44.490	-52.894	-44.597	-43.185	-40.059	-33.267	-34.579	-39.691
16QAM	Low	-44.781	-52.532	-44.602	-42.740	-42.883	-33.654	-34.905	-39.134
	Middle	-44.609	-52.980	-44.614	-44.298	-42.527	-32.842	-35.195	-37.871
	High	-42.799	-52.103	-44.809	-43.999	-41.253	-33.426	-34.988	-39.989
64QAM	Low	-43.525	-53.228	-45.498	-42.680	-41.807	-32.673	-35.470	-39.348
	Middle	-40.139	-52.593	-43.863	-43.718	-43.302	-33.934	-34.786	-38.529
	High	-45.191	-52.926	-44.897	-44.568	-41.208	-33.585	-34.499	-39.436
256QAM	Low	-43.503	-52.441	-44.003	-42.674	-41.101	-33.014	-35.263	-38.623
	Middle	-39.826	-53.492	-44.777	-44.572	-43.372	-33.720	-35.346	-40.034
	High	-45.520	-52.862	-44.505	-43.654	-41.596	-33.356	-34.936	-39.941

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	26.5 GHz ~ 40 GHz
QPSK	Low	-40.658	-52.451	-43.685	-42.407	-42.067	-33.789	-35.064	-39.912
	Middle	-44.044	-51.969	-44.820	-43.051	-42.940	-33.386	-33.658	-40.134
	High	-41.858	-52.841	-44.416	-43.833	-40.023	-32.800	-35.114	-39.644
16QAM	Low	-40.086	-52.925	-45.087	-42.804	-43.357	-33.013	-34.365	-39.012
	Middle	-46.569	-52.580	-44.781	-43.534	-43.326	-32.648	-34.407	-39.703
	High	-41.773	-53.299	-44.897	-44.055	-40.432	-33.615	-35.201	-38.845
64QAM	Low	-41.859	-52.737	-45.044	-42.264	-43.571	-32.818	-33.816	-39.215
	Middle	-41.958	-53.298	-44.217	-42.997	-43.740	-33.730	-35.615	-40.302
	High	-44.832	-53.350	-45.207	-43.512	-39.620	-33.033	-34.204	-39.722
256QAM	Low	-40.734	-53.579	-44.214	-43.133	-42.465	-32.455	-34.860	-40.371
	Middle	-39.627	-52.562	-43.699	-42.357	-43.600	-32.822	-35.413	-39.296
	High	-43.727	-53.424	-44.941	-42.518	-39.865	-33.568	-33.801	-39.719

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	26.5 GHz ~ 40 GHz
QPSK	Low	-42.926	-52.894	-44.733	-40.856	-43.676	-33.186	-35.414	-39.733
	Middle	-42.588	-52.283	-45.037	-43.929	-43.227	-33.703	-35.659	-40.351
	High	-43.632	-52.763	-45.683	-44.340	-41.752	-33.525	-34.247	-39.716
16QAM	Low	-40.810	-52.554	-45.484	-41.336	-42.321	-32.702	-34.529	-39.414
	Middle	-43.437	-54.060	-44.265	-44.297	-43.852	-33.721	-34.964	-40.383
	High	-47.351	-52.611	-44.370	-44.074	-41.897	-33.662	-34.474	-39.875
64QAM	Low	-42.544	-53.044	-43.643	-41.795	-42.797	-31.894	-34.588	-39.696
	Middle	-42.063	-53.923	-45.757	-44.512	-44.426	-34.045	-34.307	-40.137
	High	-43.148	-53.399	-43.578	-42.905	-40.165	-33.390	-34.257	-39.483
256QAM	Low	-40.176	-53.159	-44.512	-42.533	-42.439	-33.132	-34.422	-39.280
	Middle	-40.255	-53.806	-44.854	-44.296	-43.174	-34.035	-35.495	-39.852
	High	-43.965	-53.941	-45.033	-44.740	-41.521	-33.859	-35.655	-39.555

3.7 GHz Service 5G NR 60 MHz 1 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	26.5 GHz ~ 40 GHz
QPSK	Low	-39.837	-53.403	-44.098	-41.305	-42.718	-33.004	-35.324	-39.982
	Middle	-41.292	-51.553	-44.532	-42.816	-41.273	-32.950	-34.695	-39.532
	High	-41.280	-52.944	-44.921	-43.166	-40.445	-33.605	-34.525	-39.718
16QAM	Low	-45.870	-53.787	-43.705	-43.501	-45.496	-43.200	-36.012	-40.808
	Middle	-45.574	-52.702	-44.901	-43.321	-42.548	-43.121	-35.172	-39.886
	High	-46.027	-52.439	-44.045	-43.863	-39.771	-38.735	-34.177	-39.203
64QAM	Low	-43.268	-52.965	-43.737	-42.423	-42.947	-33.466	-34.536	-39.295
	Middle	-42.102	-53.308	-45.345	-42.897	-41.974	-33.490	-35.047	-39.356
	High	-43.005	-53.678	-44.902	-42.758	-40.629	-33.361	-34.568	-38.649
256QAM	Low	-43.904	-52.063	-44.754	-43.205	-43.241	-32.195	-34.445	-39.605
	Middle	-44.559	-52.677	-44.621	-41.392	-42.336	-32.742	-34.775	-39.147
	High	-45.126	-52.704	-44.838	-43.242	-41.192	-32.902	-35.125	-38.932

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	26.5 GHz ~ 40 GHz
QPSK	Low	-42.749	-52.793	-44.297	-42.066	-42.938	-33.145	-34.374	-37.911
	Middle	-42.770	-52.729	-45.527	-42.484	-42.539	-32.631	-34.001	-39.325
	High	-40.391	-52.741	-45.391	-43.816	-39.842	-33.129	-34.042	-39.923
16QAM	Low	-43.895	-54.057	-45.604	-43.976	-45.227	-44.247	-35.395	-40.885
	Middle	-43.489	-52.088	-45.609	-43.316	-40.788	-43.597	-34.906	-39.964
	High	-46.910	-53.055	-44.168	-44.056	-40.609	-42.850	-34.829	-39.347
64QAM	Low	-45.214	-52.222	-44.625	-42.788	-42.492	-32.125	-34.524	-40.238
	Middle	-42.569	-51.914	-44.620	-43.490	-42.586	-32.927	-34.415	-39.662
	High	-43.424	-52.712	-44.353	-43.811	-40.920	-32.506	-34.412	-38.656
256QAM	Low	-44.036	-53.276	-44.401	-42.138	-43.205	-32.062	-33.915	-39.044
	Middle	-43.916	-52.994	-45.044	-42.976	-42.203	-33.636	-34.882	-38.737
	High	-42.608	-52.887	-44.945	-43.058	-40.229	-32.488	-34.369	-39.442

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	26.5 GHz ~ 40 GHz
QPSK	Low	-42.940	-52.763	-43.801	-42.271	-42.338	-33.378	-35.199	-39.898
	Middle	-44.729	-53.377	-44.984	-42.001	-42.486	-32.644	-34.165	-39.141
	High	-42.958	-52.998	-44.180	-43.215	-39.162	-33.219	-34.021	-39.698
16QAM	Low	-42.383	-52.913	-44.563	-42.355	-43.276	-43.862	-34.617	-40.151
	Middle	-46.278	-53.004	-44.407	-43.629	-43.161	-42.630	-35.076	-38.997
	High	-45.119	-52.990	-44.493	-43.275	-39.935	-42.138	-34.357	-37.996
64QAM	Low	-43.780	-52.886	-44.558	-42.809	-42.841	-32.219	-34.487	-38.287
	Middle	-45.330	-52.600	-44.810	-42.324	-42.492	-33.049	-34.106	-38.546
	High	-42.618	-52.228	-43.402	-43.464	-39.721	-33.124	-34.585	-38.437
256QAM	Low	-42.068	-52.377	-44.470	-41.977	-42.465	-33.427	-34.763	-39.687
	Middle	-44.570	-52.405	-45.568	-43.041	-42.592	-33.882	-34.976	-38.028
	High	-40.862	-53.214	-43.701	-42.999	-39.530	-32.388	-34.642	-39.164

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	26.5 GHz ~ 40 GHz
QPSK	Low	-44.726	-52.029	-45.094	-40.634	-42.743	-33.199	-35.090	-39.172
	Middle	-44.776	-53.621	-45.676	-43.167	-42.946	-33.783	-35.104	-39.069
	High	-43.983	-53.019	-45.055	-42.503	-40.514	-32.685	-33.474	-39.658
16QAM	Low	-44.347	-52.106	-43.927	-41.293	-43.319	-34.733	-34.250	-38.701
	Middle	-42.633	-53.421	-45.007	-43.329	-42.303	-38.521	-34.492	-38.936
	High	-43.846	-52.369	-44.455	-44.607	-40.721	-41.314	-34.672	-38.598
64QAM	Low	-42.032	-52.287	-44.269	-41.417	-42.569	-33.029	-34.554	-39.838
	Middle	-44.358	-52.978	-44.543	-42.419	-42.779	-33.064	-34.333	-38.595
	High	-41.486	-52.887	-44.429	-43.564	-40.494	-33.788	-35.041	-39.907
256QAM	Low	-44.033	-53.024	-44.447	-41.968	-42.706	-33.142	-35.327	-39.496
	Middle	-40.797	-52.024	-44.368	-43.410	-42.718	-33.521	-33.551	-39.190
	High	-42.369	-53.584	-43.928	-42.964	-41.438	-31.923	-34.898	-39.849

3.7 GHz Service 5G NR 80 MHz 1 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	26.5 GHz ~ 40 GHz
QPSK	Low	-44.190	-52.917	-43.830	-42.225	-43.164	-33.591	-35.275	-38.754
	Middle	-43.108	-53.495	-45.086	-43.191	-42.422	-32.561	-33.932	-39.491
	High	-41.410	-53.249	-44.489	-44.228	-40.787	-32.754	-35.894	-38.793
16QAM	Low	-41.744	-53.046	-44.890	-42.763	-43.200	-32.857	-35.047	-39.601
	Middle	-45.215	-52.502	-44.263	-42.994	-42.671	-32.637	-33.833	-39.657
	High	-45.142	-52.573	-43.992	-43.833	-39.658	-33.225	-34.813	-39.775
64QAM	Low	-45.777	-53.113	-45.075	-42.277	-43.104	-34.144	-34.778	-38.860
	Middle	-44.104	-53.510	-44.587	-43.735	-41.257	-32.981	-34.001	-39.451
	High	-42.451	-53.634	-44.510	-44.107	-40.271	-33.642	-34.464	-38.653
256QAM	Low	-42.838	-53.381	-45.076	-41.880	-42.912	-33.624	-33.376	-39.438
	Middle	-40.983	-52.406	-44.048	-43.147	-42.322	-33.100	-34.241	-39.337
	High	-44.799	-52.310	-45.208	-43.712	-41.109	-33.018	-34.672	-38.049

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	26.5 GHz ~ 40 GHz
QPSK	Low	-46.031	-52.924	-45.062	-42.325	-42.679	-32.926	-35.173	-39.072
	Middle	-46.424	-53.042	-45.133	-40.287	-41.171	-32.544	-33.385	-39.878
	High	-43.306	-52.435	-44.602	-43.910	-39.795	-33.508	-33.740	-39.803
16QAM	Low	-46.173	-52.019	-44.904	-42.135	-42.399	-33.754	-34.143	-39.684
	Middle	-44.484	-52.981	-44.368	-43.238	-42.773	-33.534	-33.469	-39.013
	High	-45.028	-52.355	-44.841	-43.639	-40.765	-33.402	-34.653	-40.077
64QAM	Low	-45.605	-52.812	-44.540	-41.704	-42.544	-34.051	-34.876	-39.162
	Middle	-41.776	-52.989	-44.665	-41.137	-43.426	-33.227	-33.914	-39.915
	High	-46.273	-52.089	-44.276	-43.641	-40.731	-33.796	-34.732	-39.688
256QAM	Low	-42.588	-53.348	-44.673	-43.022	-42.800	-32.991	-34.942	-39.218
	Middle	-44.322	-52.859	-44.190	-43.035	-42.526	-33.648	-34.572	-39.963
	High	-45.638	-52.661	-44.031	-44.423	-41.181	-32.059	-34.930	-39.593

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	26.5 GHz ~ 40 GHz
QPSK	Low	-45.350	-52.761	-44.981	-42.637	-42.658	-33.633	-34.339	-39.171
	Middle	-45.886	-53.576	-44.264	-42.520	-41.549	-32.923	-34.211	-40.337
	High	-46.725	-52.990	-44.848	-44.042	-40.069	-33.526	-33.672	-40.015
16QAM	Low	-46.325	-52.909	-45.441	-42.514	-42.906	-33.225	-34.180	-39.102
	Middle	-42.145	-53.328	-44.726	-43.459	-41.716	-33.047	-34.912	-38.732
	High	-42.823	-52.284	-44.178	-43.516	-39.760	-33.206	-34.893	-39.040
64QAM	Low	-45.113	-52.874	-45.015	-43.141	-42.266	-32.934	-34.765	-39.795
	Middle	-43.975	-52.305	-44.136	-43.540	-41.026	-33.291	-34.926	-38.653
	High	-44.723	-53.444	-44.535	-43.484	-40.279	-33.518	-34.312	-39.862
256QAM	Low	-45.361	-53.857	-43.727	-42.671	-43.362	-32.826	-33.655	-39.295
	Middle	-45.943	-53.349	-44.565	-42.701	-43.608	-33.420	-34.506	-40.026
	High	-44.018	-53.209	-43.842	-44.097	-40.889	-33.638	-34.726	-38.455

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	26.5 GHz ~ 40 GHz
QPSK	Low	-43.233	-52.031	-43.434	-41.733	-41.589	-33.276	-34.439	-38.674
	Middle	-42.581	-52.421	-44.353	-43.244	-42.723	-32.855	-35.116	-39.482
	High	-45.038	-53.586	-45.252	-43.884	-38.235	-33.310	-34.578	-39.476
16QAM	Low	-45.705	-52.694	-45.026	-42.182	-42.762	-33.344	-34.635	-39.130
	Middle	-41.369	-52.051	-44.385	-42.750	-41.806	-32.956	-32.995	-39.672
	High	-44.729	-52.634	-44.786	-43.868	-40.236	-33.644	-34.974	-39.138
64QAM	Low	-45.995	-53.210	-44.094	-40.199	-41.860	-32.732	-34.179	-39.725
	Middle	-46.181	-52.339	-45.273	-42.683	-42.574	-32.615	-34.432	-39.485
	High	-44.972	-53.312	-45.609	-44.782	-40.314	-34.462	-34.357	-40.039
256QAM	Low	-43.576	-53.204	-44.611	-41.848	-43.025	-33.171	-32.927	-38.502
	Middle	-41.846	-52.130	-43.587	-43.812	-43.454	-33.970	-35.459	-38.535
	High	-48.340	-53.221	-44.777	-43.931	-41.814	-34.487	-34.652	-39.043

3.7 GHz Service 5G NR 100 MHz 1 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	26.5 GHz ~ 40 GHz
QPSK	Low	-41.268	-53.264	-44.516	-41.614	-42.872	-33.798	-34.944	-39.669
	Middle	-38.034	-47.948	-44.707	-42.452	-42.467	-32.988	-34.550	-37.856
	High	-40.412	-50.209	-44.386	-44.329	-40.943	-33.115	-34.588	-39.633
16QAM	Low	-40.082	-52.810	-45.220	-42.656	-43.001	-33.376	-33.698	-39.382
	Middle	-43.152	-50.783	-44.521	-42.636	-42.213	-33.249	-34.770	-38.647
	High	-40.248	-52.084	-44.817	-43.895	-41.138	-33.213	-34.261	-40.156
64QAM	Low	-40.292	-53.946	-44.697	-41.752	-41.984	-33.698	-34.933	-37.967
	Middle	-41.485	-52.836	-45.324	-43.283	-42.023	-33.309	-35.048	-39.856
	High	-39.892	-52.616	-44.513	-43.478	-40.061	-33.784	-34.731	-38.596
256QAM	Low	-42.567	-52.245	-45.141	-42.976	-42.910	-33.463	-34.992	-39.295
	Middle	-42.434	-52.229	-44.578	-42.490	-42.678	-32.255	-34.493	-39.463
	High	-39.969	-51.055	-42.745	-44.197	-41.393	-33.330	-35.179	-39.383

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	26.5 GHz ~ 40 GHz
QPSK	Low	-41.067	-53.447	-44.581	-42.391	-42.678	-33.765	-34.208	-39.795
	Middle	-42.294	-52.122	-44.451	-43.034	-42.194	-32.994	-34.802	-38.467
	High	-41.265	-51.525	-43.359	-43.676	-40.912	-33.299	-34.828	-39.752
16QAM	Low	-43.494	-52.571	-44.249	-43.210	-43.030	-33.231	-34.864	-38.726
	Middle	-43.951	-52.156	-45.265	-42.914	-41.193	-33.222	-34.890	-39.125
	High	-40.507	-51.953	-44.775	-43.184	-41.250	-33.040	-34.053	-37.433
64QAM	Low	-44.594	-52.087	-44.943	-42.571	-43.080	-32.906	-34.811	-40.309
	Middle	-42.080	-52.657	-43.303	-42.626	-42.865	-33.344	-34.739	-38.896
	High	-42.208	-51.279	-45.011	-43.644	-39.811	-33.282	-34.848	-39.730
256QAM	Low	-41.653	-52.583	-44.494	-41.962	-41.997	-33.562	-33.728	-39.806
	Middle	-40.100	-50.998	-44.920	-43.462	-42.652	-33.270	-34.524	-39.038
	High	-43.424	-51.981	-44.199	-43.274	-40.595	-32.812	-34.183	-39.816

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	26.5 GHz ~ 40 GHz
QPSK	Low	-40.386	-52.817	-44.705	-42.109	-43.338	-33.539	-35.314	-40.229
	Middle	-39.458	-52.207	-45.343	-42.919	-42.128	-34.324	-34.000	-39.378
	High	-43.791	-52.661	-45.193	-43.636	-39.722	-32.751	-34.755	-36.731
16QAM	Low	-39.051	-52.599	-44.992	-41.661	-43.105	-33.176	-34.972	-40.142
	Middle	-42.036	-52.527	-44.393	-43.153	-42.465	-33.424	-34.075	-39.888
	High	-42.538	-52.949	-43.925	-43.398	-40.132	-33.357	-34.996	-38.978
64QAM	Low	-44.053	-53.568	-44.764	-42.717	-42.571	-33.843	-34.558	-39.381
	Middle	-44.145	-52.459	-44.926	-43.054	-42.555	-32.667	-34.207	-38.677
	High	-40.591	-52.657	-45.520	-43.087	-37.304	-33.411	-34.397	-39.829
256QAM	Low	-43.255	-53.152	-45.277	-42.182	-43.223	-33.551	-34.915	-39.274
	Middle	-42.794	-51.815	-44.681	-42.724	-42.928	-33.921	-34.175	-39.409
	High	-40.360	-52.241	-43.906	-43.384	-40.211	-33.333	-33.796	-38.706

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	26.5 GHz ~ 40 GHz
QPSK	Low	-44.573	-53.004	-44.491	-42.907	-43.415	-32.144	-34.622	-40.155
	Middle	-42.045	-51.152	-43.999	-42.792	-41.929	-33.864	-34.101	-39.316
	High	-41.413	-53.266	-45.488	-43.725	-39.777	-33.738	-35.227	-38.883
16QAM	Low	-42.806	-53.448	-44.469	-41.943	-43.517	-32.985	-33.417	-39.351
	Middle	-41.547	-53.164	-45.317	-43.003	-42.175	-32.510	-34.335	-39.657
	High	-41.849	-52.540	-44.395	-44.386	-40.140	-33.440	-34.120	-39.499
64QAM	Low	-45.322	-52.880	-45.048	-41.753	-42.519	-33.135	-33.866	-39.562
	Middle	-40.791	-51.617	-44.649	-42.822	-41.479	-33.362	-35.545	-39.191
	High	-39.609	-52.035	-44.770	-43.739	-40.350	-33.473	-34.763	-39.436
256QAM	Low	-42.662	-53.107	-44.922	-42.304	-43.517	-32.886	-34.089	-39.903
	Middle	-40.523	-52.237	-45.162	-42.441	-41.981	-32.945	-34.629	-38.307
	High	-42.108	-52.387	-44.855	-43.801	-40.142	-33.973	-34.315	-39.457

Tabular Data of RF Contiguous

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 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	26.5 GHz ~ 40 GHz
QPSK	Low	-41.285	-49.470	-44.113	-40.644	-42.498	-33.220	-34.128	-38.551
	Middle	-42.112	-50.159	-43.870	-43.777	-42.019	-32.622	-35.274	-38.967
	High	-46.833	-52.684	-45.078	-43.341	-40.078	-33.397	-34.299	-39.732
16QAM	Low	-42.777	-49.679	-44.452	-41.988	-43.122	-33.851	-33.855	-39.996
	Middle	-42.942	-53.546	-44.440	-43.719	-43.254	-33.413	-34.517	-39.093
	High	-39.966	-52.760	-44.600	-44.228	-40.833	-32.653	-34.068	-39.741
64QAM	Low	-41.664	-51.654	-45.681	-42.009	-41.800	-33.889	-34.342	-39.390
	Middle	-40.694	-51.687	-44.702	-42.398	-42.808	-32.798	-33.699	-39.443
	High	-44.330	-51.618	-44.575	-43.992	-41.052	-33.605	-33.760	-39.393
256QAM	Low	-40.186	-51.762	-45.719	-41.521	-42.584	-33.161	-34.207	-39.337
	Middle	-44.912	-53.432	-45.672	-43.237	-42.005	-33.497	-34.463	-39.410
	High	-44.349	-52.726	-44.587	-43.089	-41.449	-32.963	-34.994	-38.904

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	26.5 GHz ~ 40 GHz
QPSK	Low	-40.626	-50.216	-44.445	-42.497	-42.579	-32.770	-34.020	-39.714
	Middle	-43.049	-51.289	-43.688	-43.519	-42.623	-32.886	-34.632	-39.551
	High	-44.400	-53.185	-43.725	-43.568	-40.037	-32.581	-35.111	-39.699
16QAM	Low	-41.160	-52.458	-44.890	-43.405	-43.884	-32.974	-33.783	-39.555
	Middle	-43.356	-52.400	-44.967	-43.697	-42.890	-34.202	-34.477	-38.496
	High	-43.582	-53.272	-45.315	-42.624	-40.987	-33.635	-33.943	-40.128
64QAM	Low	-43.175	-49.318	-44.243	-42.070	-43.662	-33.384	-34.115	-39.826
	Middle	-43.739	-52.530	-45.487	-44.084	-42.918	-33.706	-35.248	-39.047
	High	-40.620	-52.131	-44.673	-42.819	-40.872	-33.676	-35.278	-39.459
256QAM	Low	-40.896	-51.671	-45.310	-42.879	-43.744	-33.467	-35.236	-38.549
	Middle	-45.217	-53.402	-45.409	-43.765	-43.160	-33.859	-34.915	-38.825
	High	-45.076	-52.656	-44.666	-43.293	-40.267	-32.843	-34.206	-39.200

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	26.5 GHz ~ 40 GHz
QPSK	Low	-40.617	-50.107	-43.072	-42.321	-43.268	-33.500	-34.572	-37.537
	Middle	-45.066	-52.994	-44.736	-43.248	-42.703	-33.864	-34.613	-39.962
	High	-46.054	-51.921	-44.580	-44.098	-38.630	-33.289	-33.307	-39.676
16QAM	Low	-42.354	-51.585	-44.248	-42.328	-42.702	-33.308	-33.978	-39.519
	Middle	-41.840	-52.429	-44.298	-44.288	-42.913	-33.631	-34.551	-39.894
	High	-46.071	-53.136	-43.418	-43.045	-39.230	-33.250	-34.651	-39.531
64QAM	Low	-42.176	-52.276	-44.862	-43.981	-43.097	-32.881	-34.137	-39.215
	Middle	-42.722	-52.885	-45.707	-42.914	-42.920	-32.940	-34.183	-39.878
	High	-42.888	-52.310	-44.169	-43.736	-40.027	-32.975	-34.662	-39.350
256QAM	Low	-45.062	-50.879	-44.017	-42.819	-42.790	-33.065	-35.186	-39.450
	Middle	-45.225	-53.184	-43.982	-43.385	-42.357	-33.163	-35.201	-39.618
	High	-43.711	-51.605	-44.100	-43.264	-39.544	-33.079	-34.608	-38.697

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	26.5 GHz ~ 40 GHz
QPSK	Low	-39.535	-49.810	-44.609	-40.540	-43.493	-33.233	-34.470	-40.239
	Middle	-43.906	-50.831	-44.879	-43.581	-42.609	-32.312	-34.890	-39.418
	High	-46.063	-53.183	-45.708	-43.657	-41.451	-34.083	-33.642	-39.144
16QAM	Low	-44.422	-50.372	-45.154	-40.763	-42.839	-32.865	-34.992	-38.856
	Middle	-44.190	-52.606	-46.101	-43.688	-42.355	-33.824	-34.476	-39.225
	High	-47.808	-53.531	-44.899	-43.476	-41.038	-33.061	-35.782	-39.882
64QAM	Low	-44.591	-52.491	-45.306	-42.114	-43.134	-32.333	-34.816	-39.946
	Middle	-44.317	-53.253	-44.248	-43.984	-42.034	-32.335	-34.454	-39.410
	High	-43.776	-52.756	-45.496	-42.923	-41.279	-34.546	-34.797	-38.979
256QAM	Low	-41.409	-52.094	-45.052	-41.124	-43.295	-31.326	-35.283	-39.236
	Middle	-43.545	-53.173	-44.454	-42.921	-41.612	-34.040	-33.868	-39.232
	High	-43.247	-52.214	-44.060	-44.326	-40.783	-33.777	-34.860	-39.143

3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 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	26.5 GHz ~ 40 GHz
QPSK	Low	-43.482	-53.146	-44.683	-42.281	-41.627	-32.096	-34.724	-38.493
	Middle	-40.880	-53.026	-45.113	-42.375	-40.857	-32.714	-34.352	-38.876
	High	-41.119	-50.775	-44.716	-41.683	-40.810	-33.667	-33.669	-39.471
16QAM	Low	-44.095	-53.409	-44.807	-41.928	-41.700	-32.792	-34.362	-39.629
	Middle	-44.578	-52.688	-45.083	-41.867	-41.469	-32.582	-34.743	-40.266
	High	-42.094	-51.761	-43.627	-41.639	-40.676	-33.211	-34.608	-40.046
64QAM	Low	-38.049	-51.336	-44.802	-42.162	-41.201	-33.269	-32.659	-39.347
	Middle	-42.694	-51.701	-44.949	-41.780	-41.145	-33.740	-34.924	-39.811
	High	-44.119	-51.768	-44.328	-41.302	-40.842	-33.268	-35.584	-39.653
256QAM	Low	-45.124	-53.122	-44.877	-42.799	-41.882	-33.060	-34.176	-38.640
	Middle	-41.520	-51.954	-45.170	-41.412	-41.336	-33.531	-34.722	-39.267
	High	-44.926	-53.155	-44.431	-41.805	-40.823	-32.767	-34.565	-39.533

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	26.5 GHz ~ 40 GHz
QPSK	Low	-44.832	-52.384	-45.571	-42.355	-42.372	-33.395	-35.071	-38.878
	Middle	-39.371	-51.002	-45.354	-41.637	-41.541	-33.036	-33.564	-37.450
	High	-40.219	-51.722	-45.547	-41.997	-40.908	-32.852	-33.955	-39.106
16QAM	Low	-40.500	-52.109	-44.443	-42.343	-41.262	-33.207	-34.871	-39.203
	Middle	-40.516	-53.349	-45.680	-41.384	-41.436	-33.149	-34.544	-39.046
	High	-42.261	-52.580	-43.116	-41.119	-41.401	-31.774	-33.606	-39.775
64QAM	Low	-43.037	-52.161	-44.275	-42.046	-41.887	-34.190	-34.367	-38.975
	Middle	-42.177	-53.251	-44.739	-41.889	-41.249	-34.001	-34.860	-39.652
	High	-42.196	-50.990	-45.066	-40.987	-40.749	-33.938	-35.585	-39.614
256QAM	Low	-39.406	-53.377	-44.644	-42.138	-41.931	-32.967	-34.804	-39.876
	Middle	-41.984	-52.661	-44.460	-41.994	-41.623	-32.416	-35.526	-39.487
	High	-43.553	-52.494	-43.661	-41.935	-41.578	-34.122	-34.906	-40.118

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	26.5 GHz ~ 40 GHz
QPSK	Low	-45.423	-52.859	-43.619	-40.711	-40.206	-33.481	-34.714	-40.026
	Middle	-39.502	-52.409	-44.025	-41.752	-41.442	-33.654	-33.718	-39.961
	High	-41.223	-51.672	-44.810	-41.067	-41.055	-33.131	-34.366	-39.215
16QAM	Low	-45.108	-51.627	-44.337	-42.127	-41.688	-33.021	-34.721	-39.762
	Middle	-43.978	-51.962	-45.081	-41.351	-40.525	-32.793	-35.381	-38.690
	High	-41.303	-52.745	-45.181	-41.127	-40.730	-33.509	-35.047	-38.664
64QAM	Low	-39.257	-52.818	-44.433	-42.818	-42.187	-32.025	-35.681	-39.988
	Middle	-44.091	-52.991	-45.136	-41.387	-42.118	-33.056	-35.009	-39.428
	High	-40.336	-51.056	-44.123	-41.457	-40.841	-33.377	-35.000	-39.723
256QAM	Low	-40.869	-52.861	-45.228	-42.438	-41.566	-33.240	-35.324	-39.729
	Middle	-42.233	-51.962	-43.594	-41.608	-41.666	-32.020	-35.217	-39.771
	High	-41.755	-52.739	-44.824	-41.503	-40.519	-33.163	-35.097	-39.834

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	26.5 GHz ~ 40 GHz
QPSK	Low	-39.294	-52.328	-44.738	-41.488	-42.336	-32.824	-34.857	-38.860
	Middle	-42.577	-51.444	-45.122	-41.940	-40.687	-33.135	-35.707	-38.902
	High	-43.390	-52.457	-44.871	-40.807	-41.623	-33.035	-34.197	-39.477
16QAM	Low	-44.071	-53.166	-44.598	-41.294	-41.352	-33.308	-34.742	-37.920
	Middle	-38.561	-52.758	-45.436	-40.968	-42.070	-33.750	-34.133	-39.517
	High	-43.386	-53.599	-44.855	-40.895	-41.126	-32.886	-34.943	-39.356
64QAM	Low	-44.371	-53.588	-44.127	-42.280	-42.368	-33.530	-34.943	-38.786
	Middle	-41.075	-52.929	-44.155	-41.628	-40.978	-32.711	-35.022	-38.516
	High	-44.441	-53.496	-44.969	-40.373	-40.066	-33.120	-34.918	-38.898
256QAM	Low	-44.365	-53.252	-45.240	-42.140	-40.996	-33.038	-34.538	-39.267
	Middle	-46.269	-53.117	-44.266	-40.530	-41.917	-33.536	-33.985	-39.586
	High	-44.660	-52.885	-45.098	-40.941	-40.408	-33.167	-33.859	-39.107

Tabular Data of RF Non-Contiguous

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz)

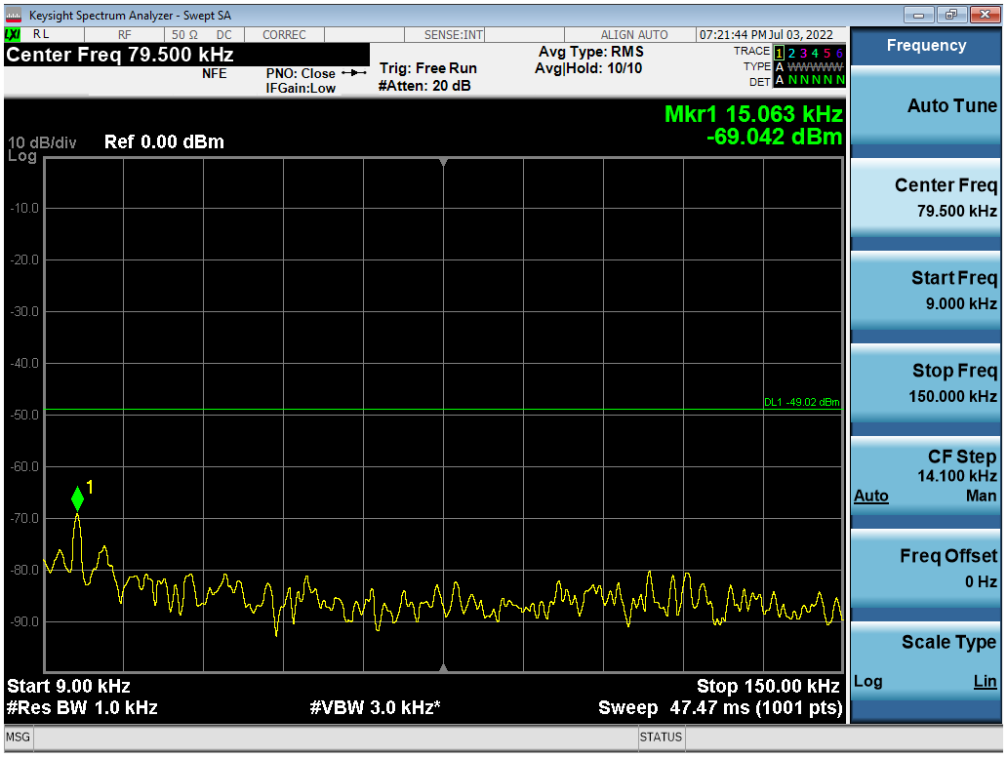
Port	Mod	Measured Level (dBm)							
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz	26.5 GHz ~ 40 GHz
0	QPSK	-43.654	-52.957	-44.941	-39.094	-42.043	-33.423	-35.266	-38.989
	16QAM	-40.350	-52.633	-44.751	-39.919	-42.677	-33.586	-35.039	-39.375
	64QAM	-39.402	-53.414	-43.850	-39.407	-42.018	-33.765	-34.994	-39.235
	256QAM	-40.991	-52.059	-45.088	-37.890	-42.615	-33.029	-34.062	-39.936
1	QPSK	-43.770	-52.269	-46.023	-38.799	-43.334	-34.244	-34.029	-39.732
	16QAM	-45.599	-53.199	-44.365	-40.193	-42.251	-32.957	-34.322	-39.060
	64QAM	-41.776	-52.346	-45.521	-41.335	-42.999	-33.898	-34.880	-39.978
	256QAM	-42.049	-52.354	-44.229	-41.689	-42.605	-34.070	-35.496	-39.734
2	QPSK	-45.177	-53.241	-45.030	-38.928	-43.235	-33.309	-35.241	-40.141
	16QAM	-44.765	-52.942	-44.627	-38.089	-42.934	-32.838	-34.733	-39.317
	64QAM	-41.665	-53.427	-45.063	-39.304	-42.693	-31.720	-33.615	-39.901
	256QAM	-42.518	-53.210	-45.188	-38.626	-42.459	-33.144	-34.568	-39.560
3	QPSK	-42.247	-53.017	-45.385	-41.043	-43.045	-33.561	-34.597	-39.475
	16QAM	-45.601	-52.978	-43.441	-40.018	-44.064	-33.303	-35.009	-39.608
	64QAM	-44.130	-52.874	-44.848	-39.765	-42.494	-32.637	-35.768	-39.171
	256QAM	-44.824	-51.325	-44.815	-39.320	-43.020	-33.730	-34.521	-39.196

3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 780 MHz - 3 980 MHz)

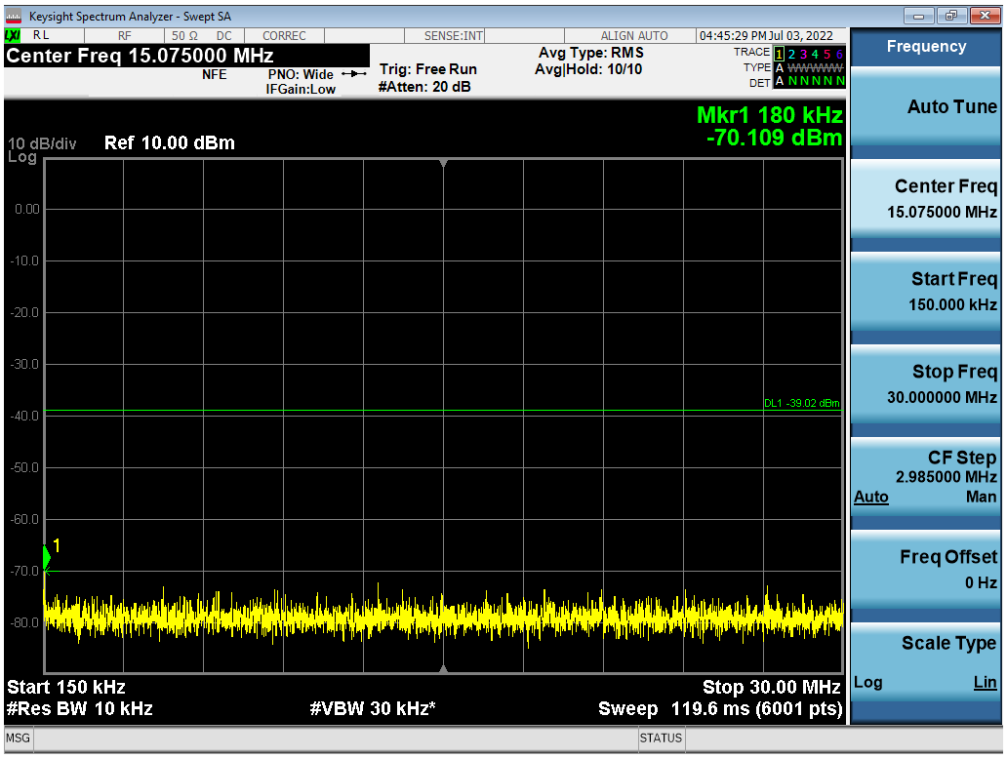
Port	Mod	Measured Level (dBm)							
		9 kHz ~ 150 kHz	150 kHz ~ 30 MHz	30 MHz ~ Low Edge – 100 MHz	Low Edge – 100 MHz ~ Low Edge	High Edge ~ High Edge + 100 MHz	High Edge + 100 MHz ~ 10 GHz	10 GHz ~ 26.5 GHz	26.5 GHz ~ 40 GHz
0	QPSK	-42.483	-51.763	-43.888	-42.214	-37.728	-33.171	-34.830	-39.412
	16QAM	-42.489	-52.710	-44.491	-43.359	-37.098	-33.631	-34.841	-39.592
	64QAM	-42.865	-52.862	-44.011	-43.049	-38.414	-33.422	-33.961	-39.467
	256QAM	-42.974	-52.185	-44.364	-43.553	-35.679	-33.127	-34.865	-38.712
1	QPSK	-40.964	-53.044	-44.316	-42.980	-39.089	-33.821	-34.164	-39.294
	16QAM	-42.137	-53.676	-44.560	-42.871	-39.130	-33.250	-35.330	-40.035
	64QAM	-45.307	-52.273	-45.003	-43.413	-39.486	-32.918	-34.300	-39.271
	256QAM	-45.931	-53.326	-43.945	-43.277	-37.704	-33.377	-34.800	-39.202
2	QPSK	-43.205	-52.619	-44.975	-43.453	-36.777	-33.772	-35.226	-40.341
	16QAM	-45.788	-53.316	-45.116	-42.583	-36.992	-33.431	-34.551	-39.602
	64QAM	-42.311	-53.189	-44.979	-43.119	-37.064	-32.920	-34.805	-39.459
	256QAM	-45.048	-52.817	-44.970	-43.541	-35.985	-32.982	-34.885	-39.476
3	QPSK	-43.381	-52.725	-45.005	-43.315	-36.359	-32.956	-34.637	-39.922
	16QAM	-45.453	-52.734	-45.040	-42.886	-37.265	-33.567	-33.852	-39.610
	64QAM	-42.875	-52.162	-44.492	-42.230	-38.959	-33.426	-34.816	-38.904
	256QAM	-41.281	-52.084	-44.040	-41.755	-37.919	-33.646	-34.396	-38.867

Plot Data of Spurious Unwanted Emissions

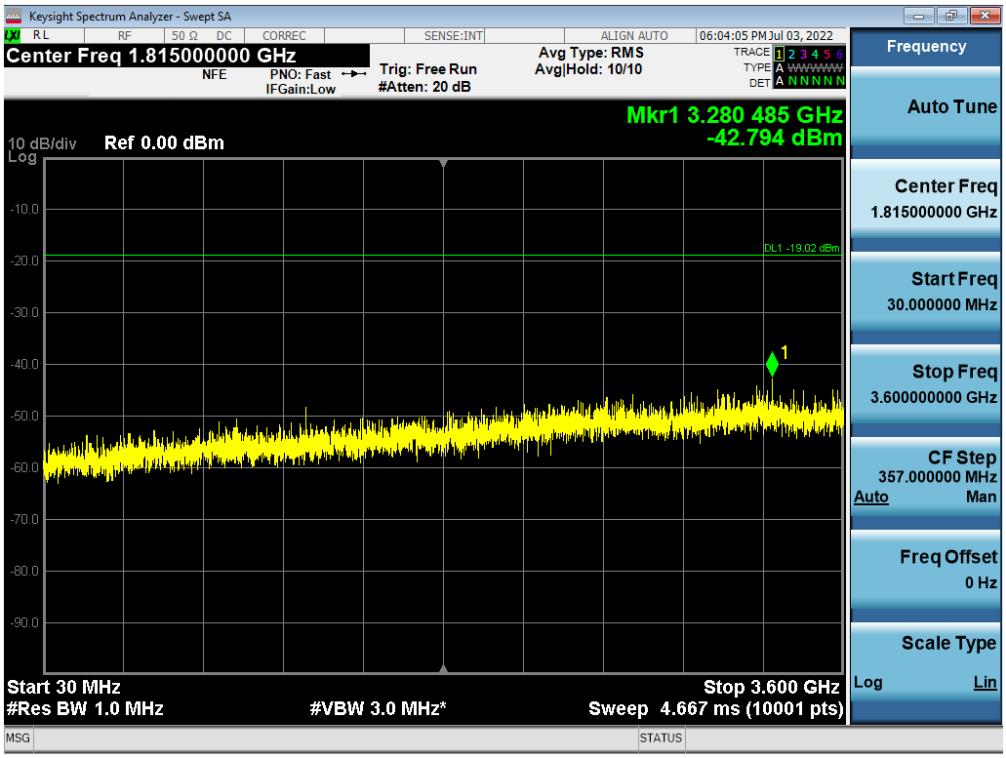
Antenna 2 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 64QAM / Middle



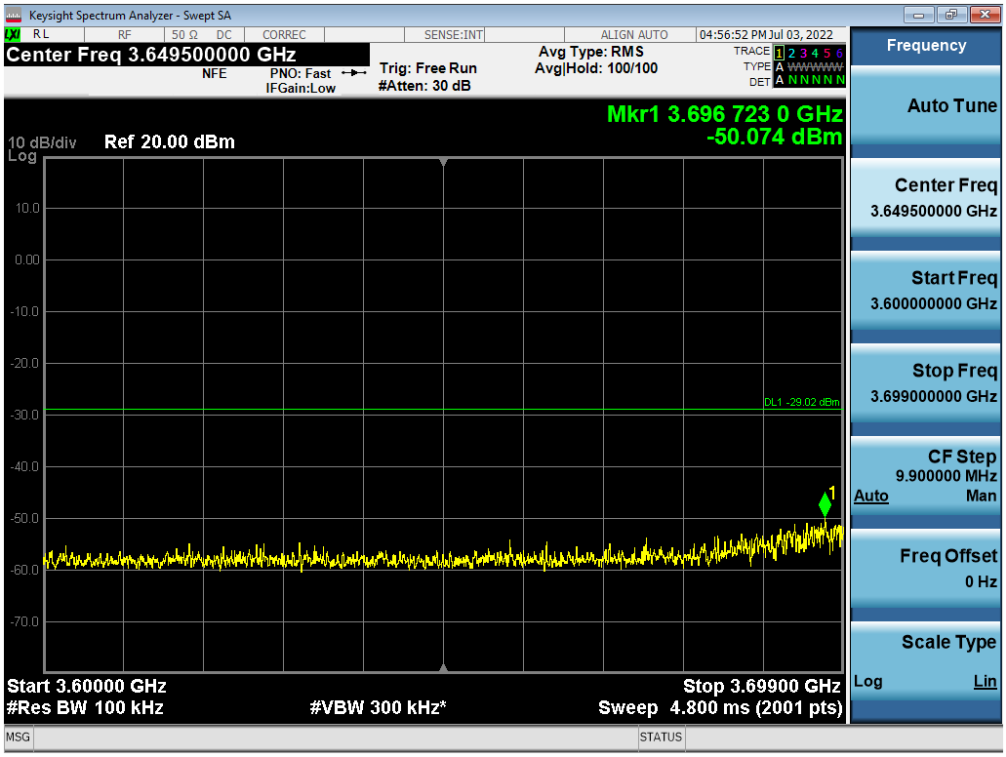
Antenna 0 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / QPSK / Low



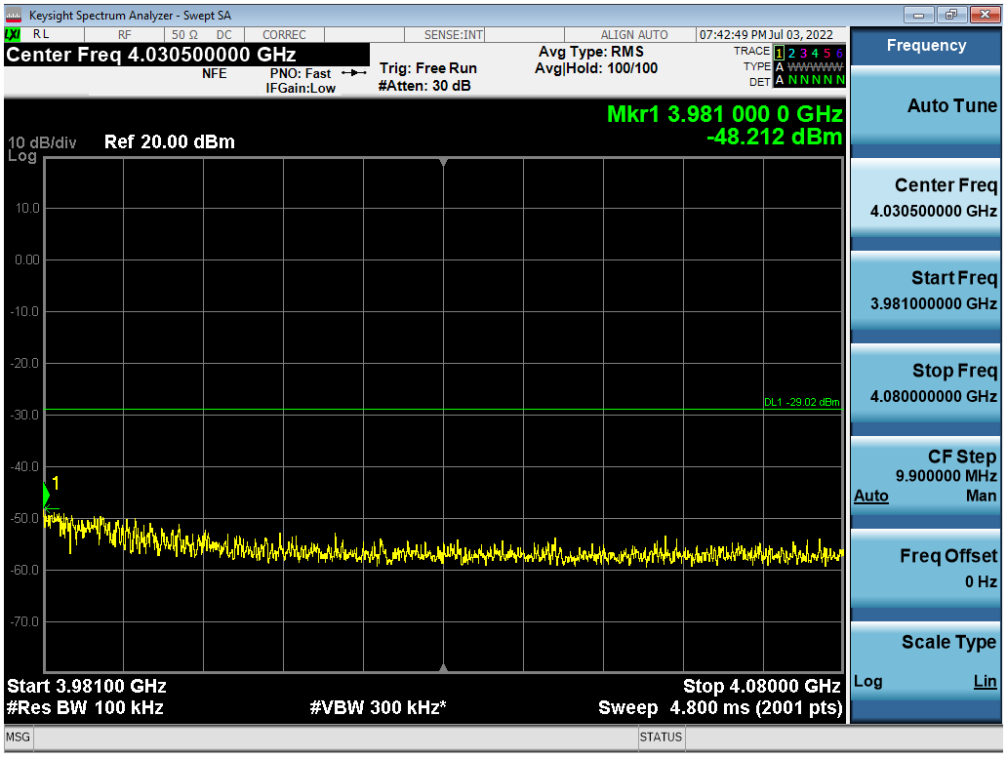
Antenna 3 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 64QAM / Low



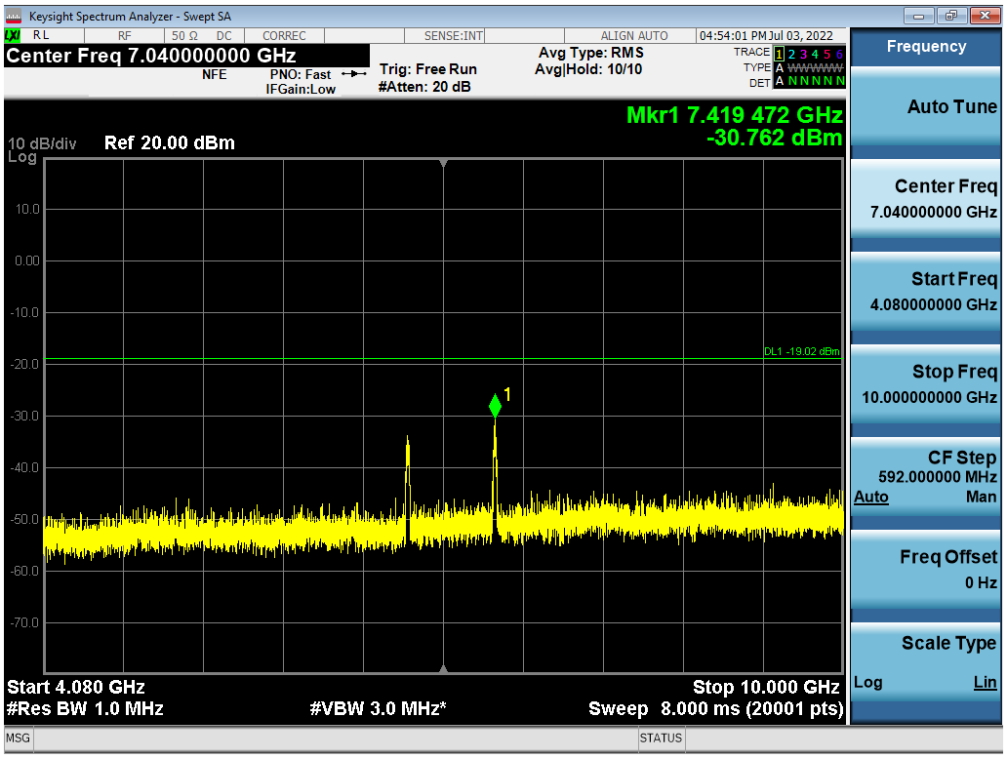
Antenna 3 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / Low



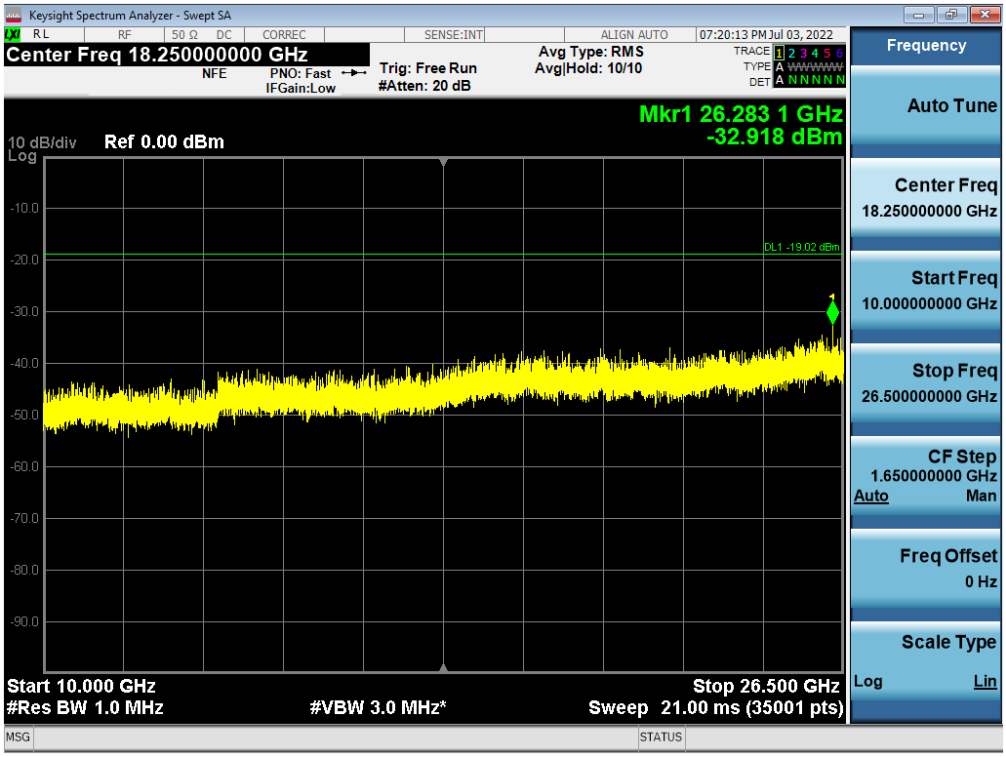
Antenna 0 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / QPSK / High



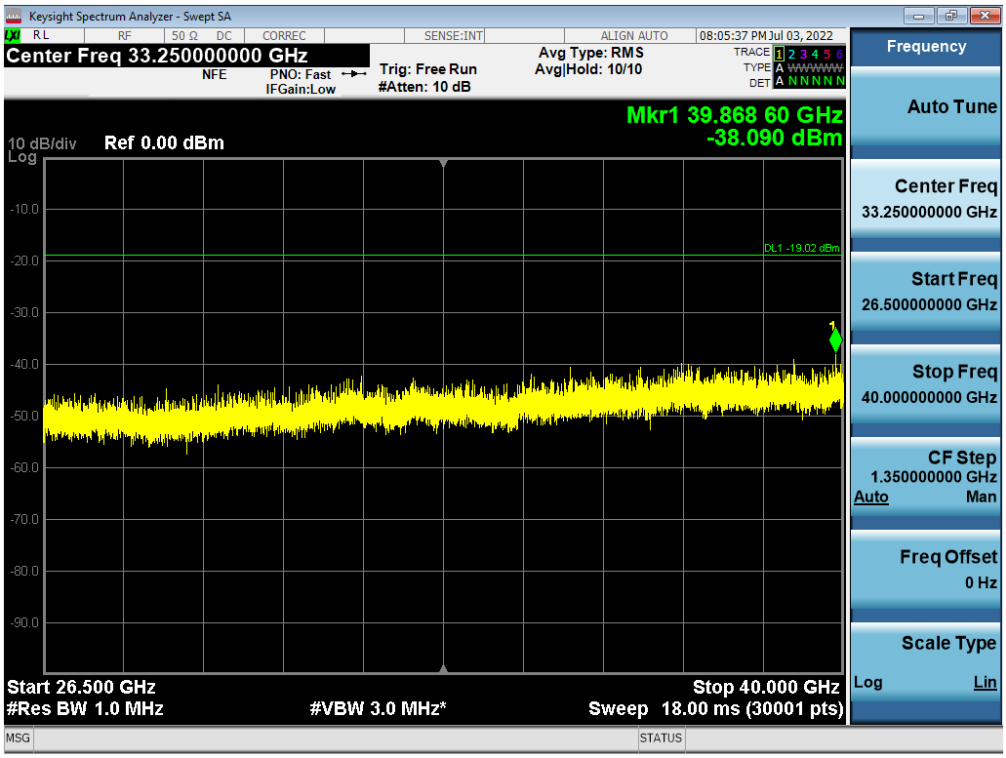
Antenna 3 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / QPSK / Low



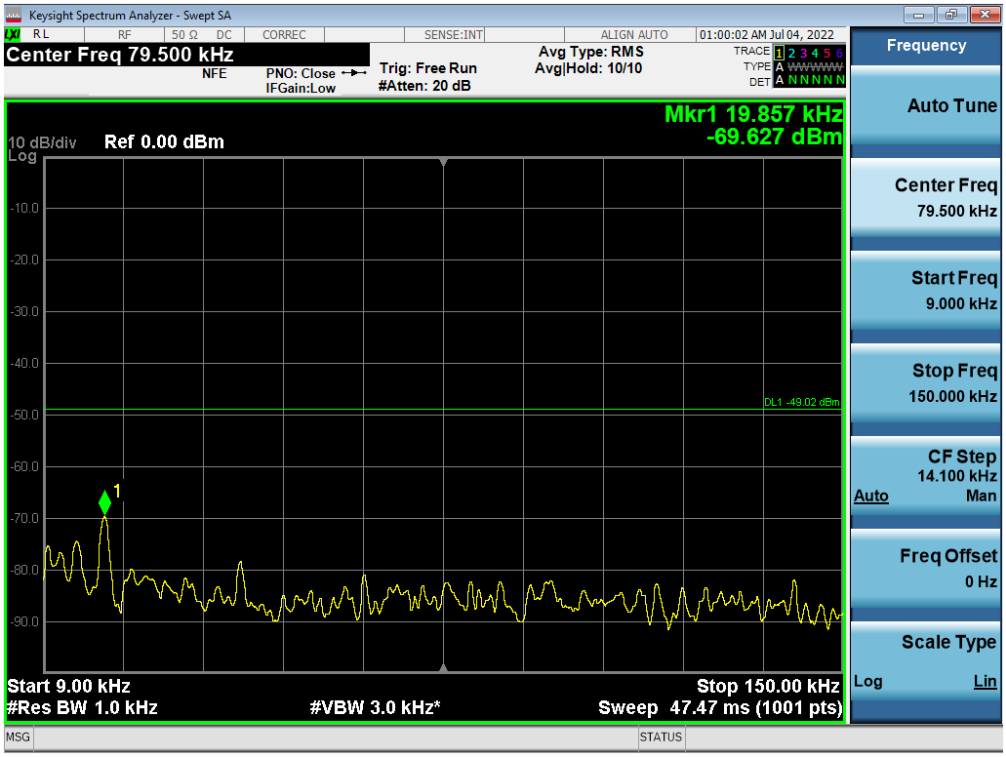
Antenna 1 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 64QAM / Middle



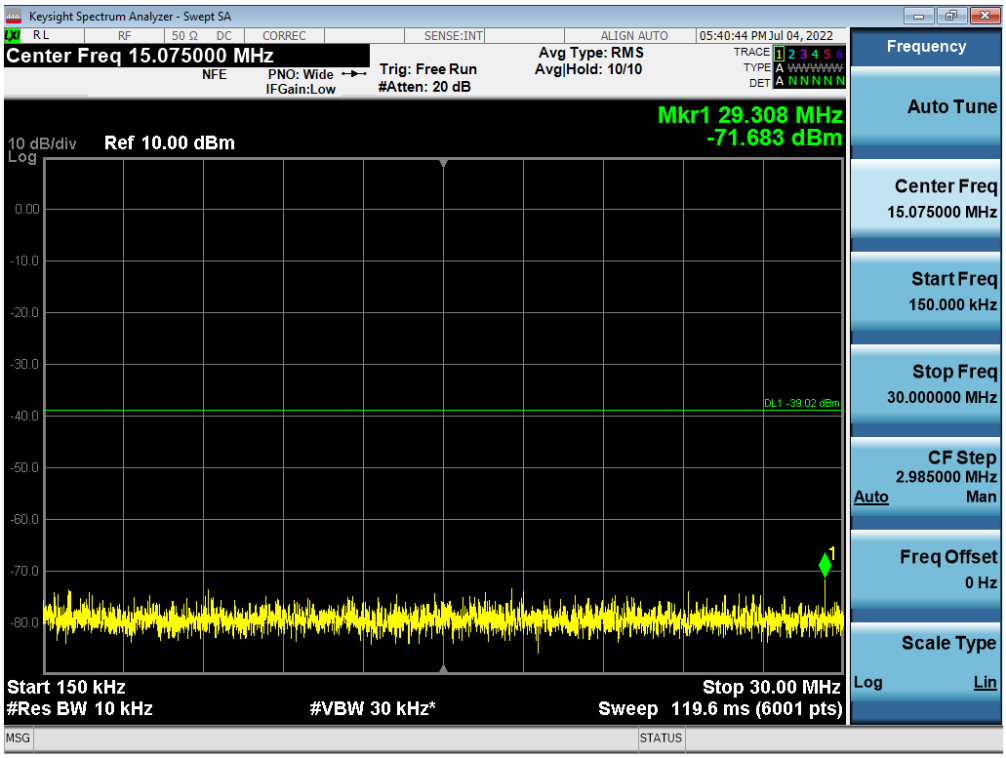
Antenna 1 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR 20 MHz 1 Carrier / 16QAM / High



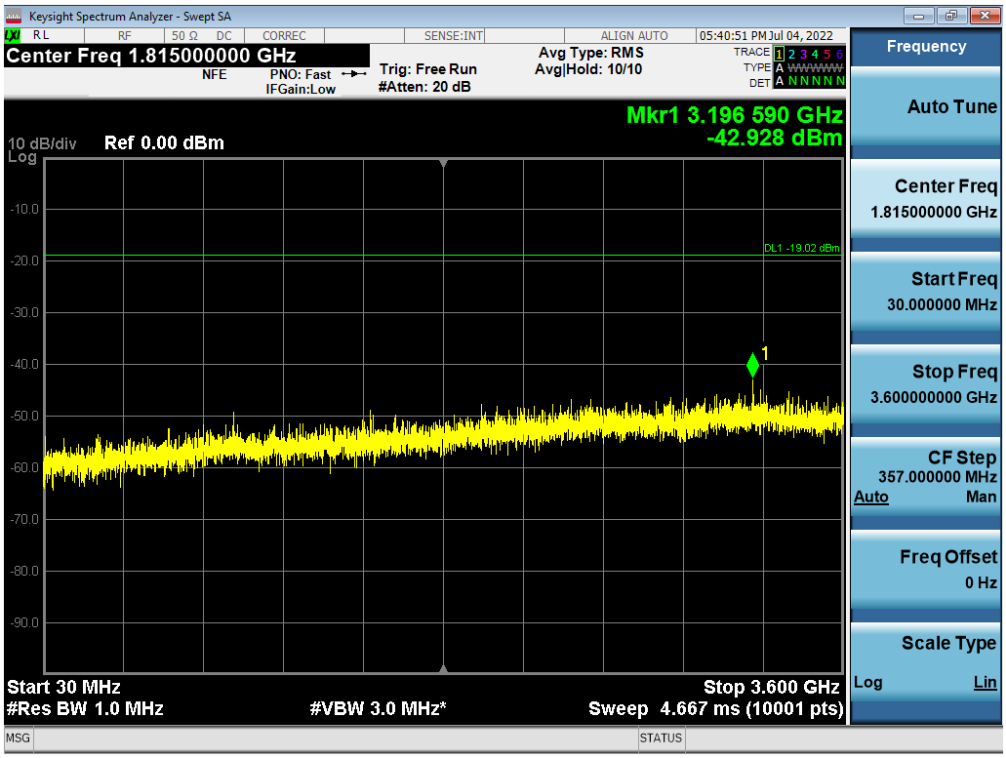
Antenna 2 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 256QAM / Middle



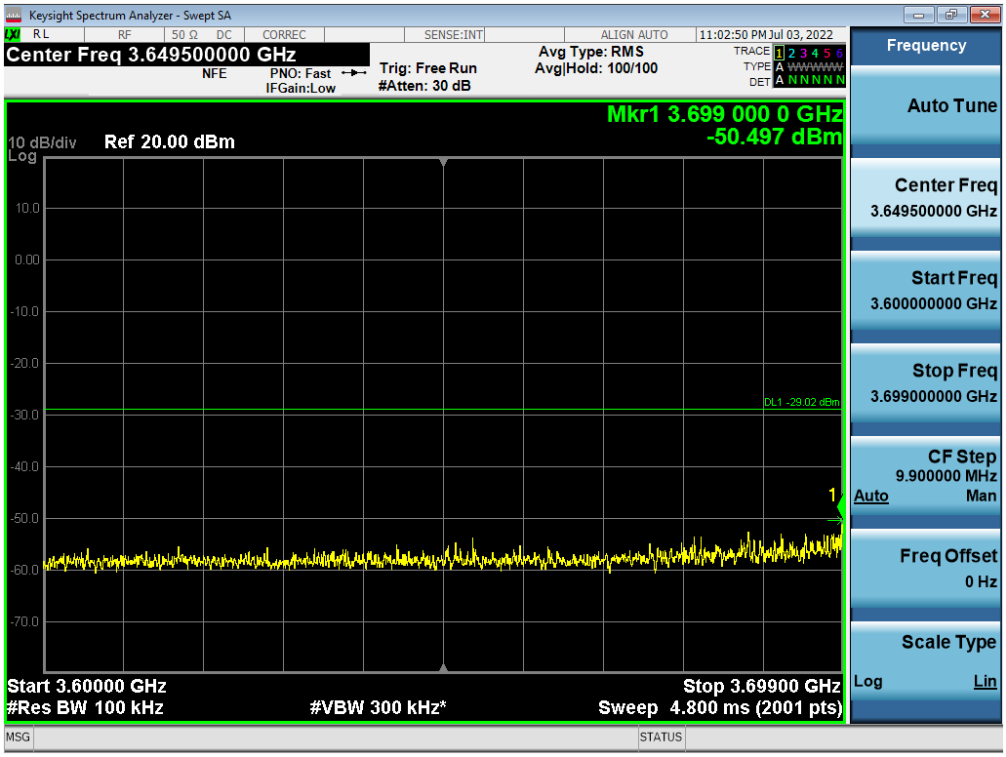
Antenna 0 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / High



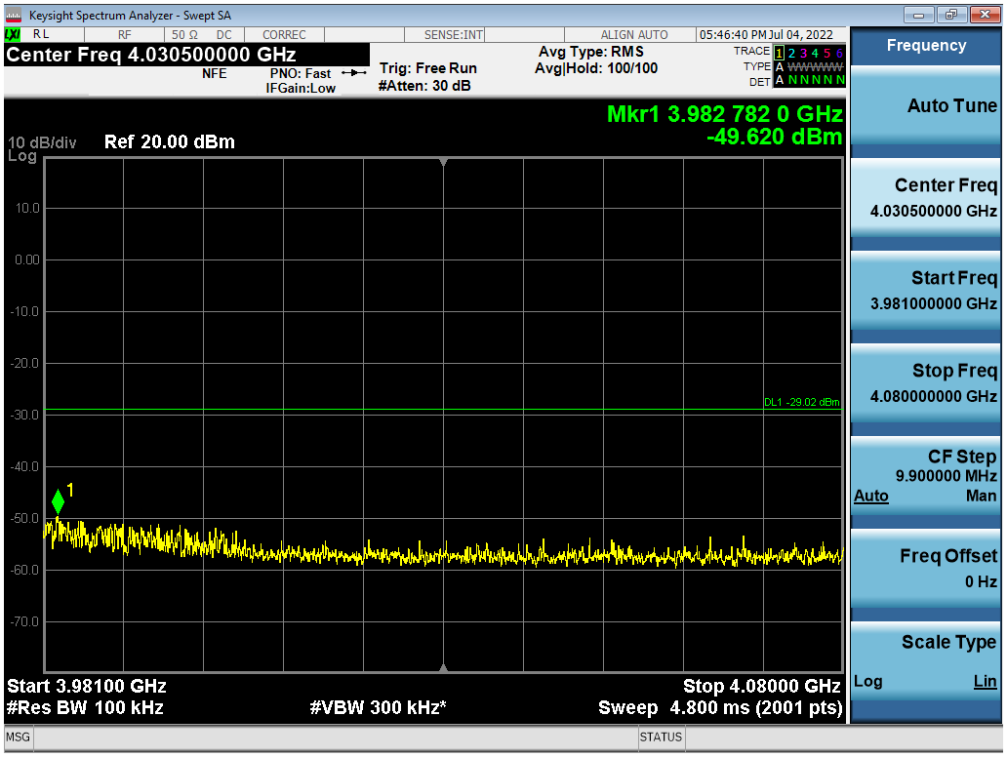
Antenna 0 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / High



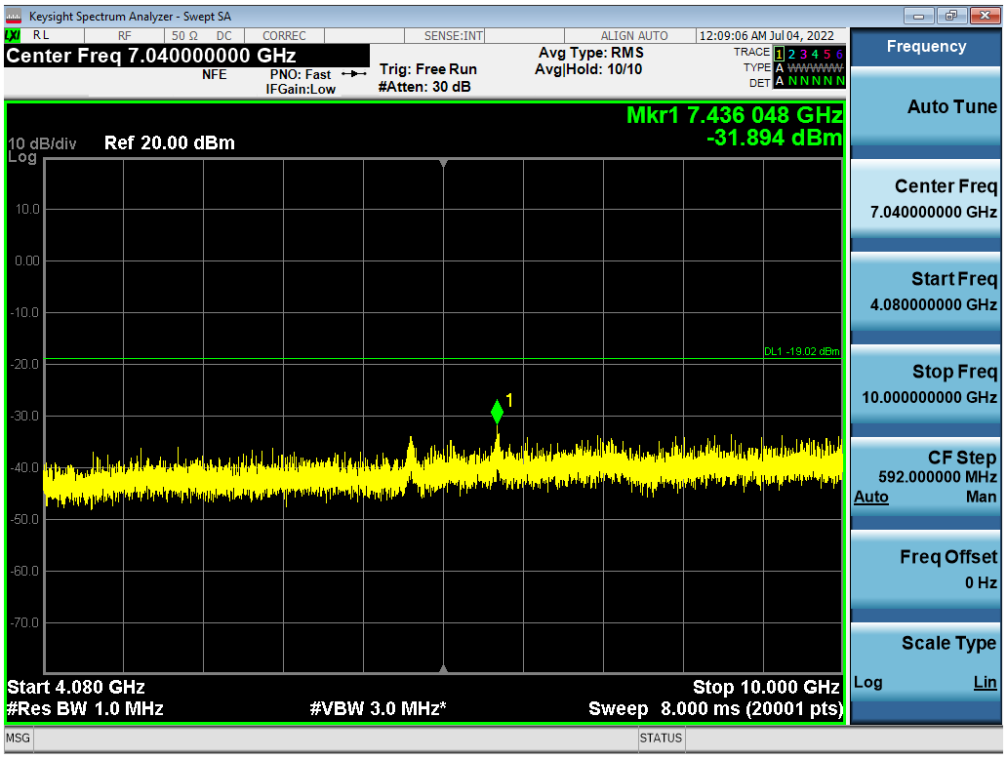
Antenna 0 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / Low



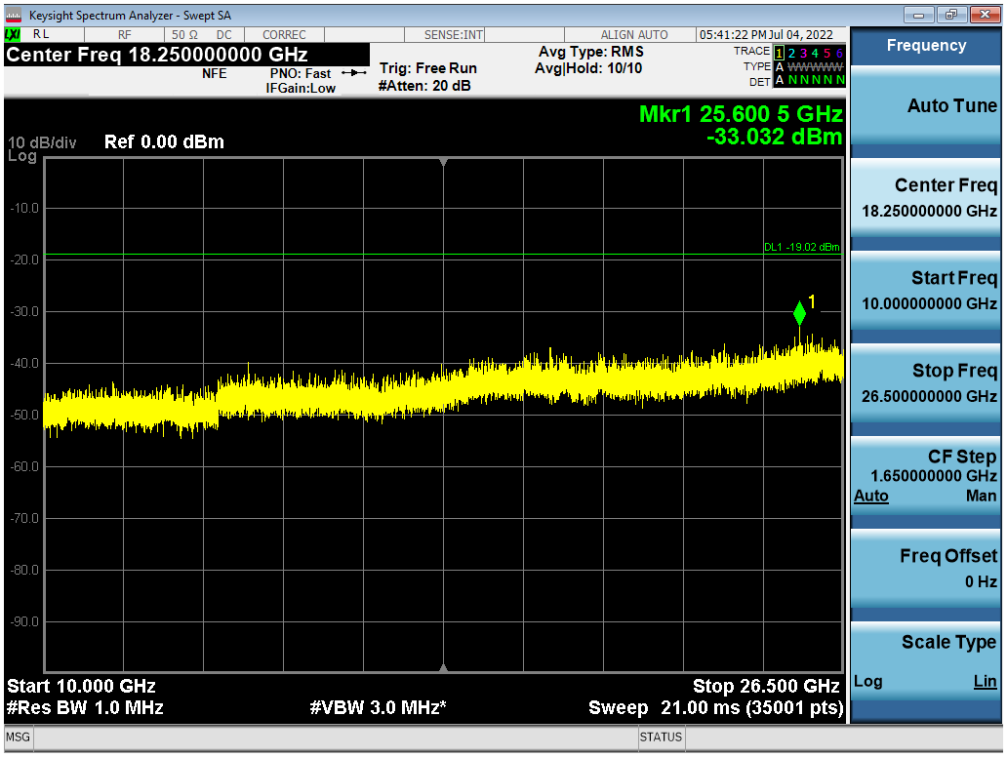
Antenna 2 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / High



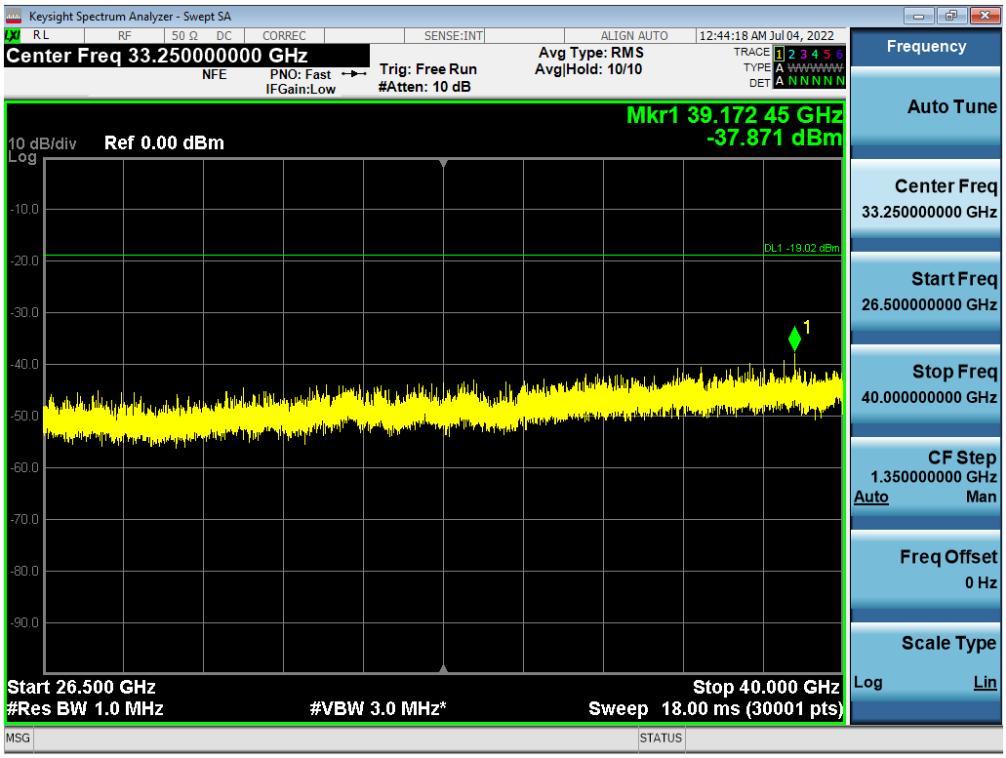
Antenna 3 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / Low



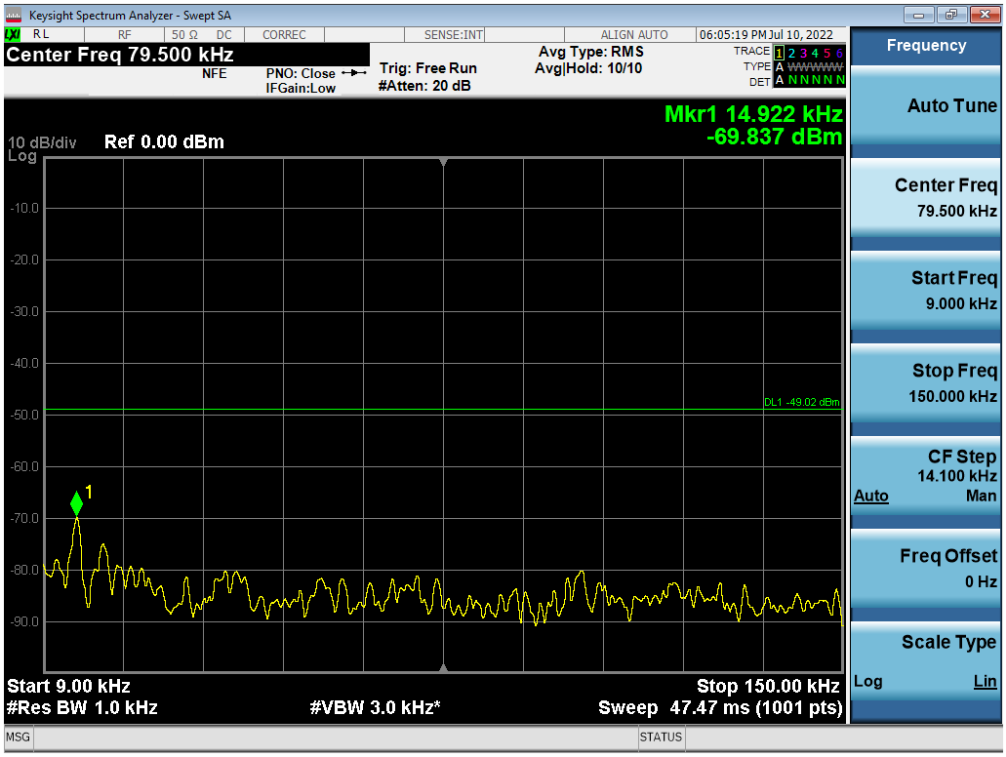
Antenna 0 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 64QAM / High



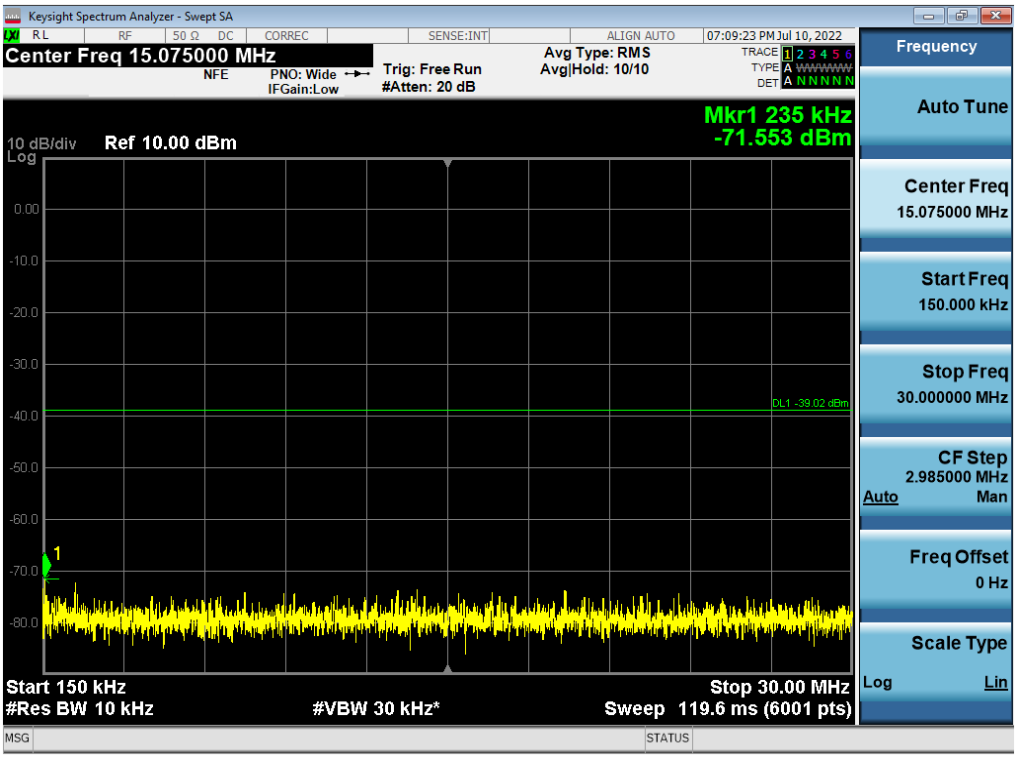
Antenna 1 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR 40 MHz 1 Carrier / 16QAM / Middle



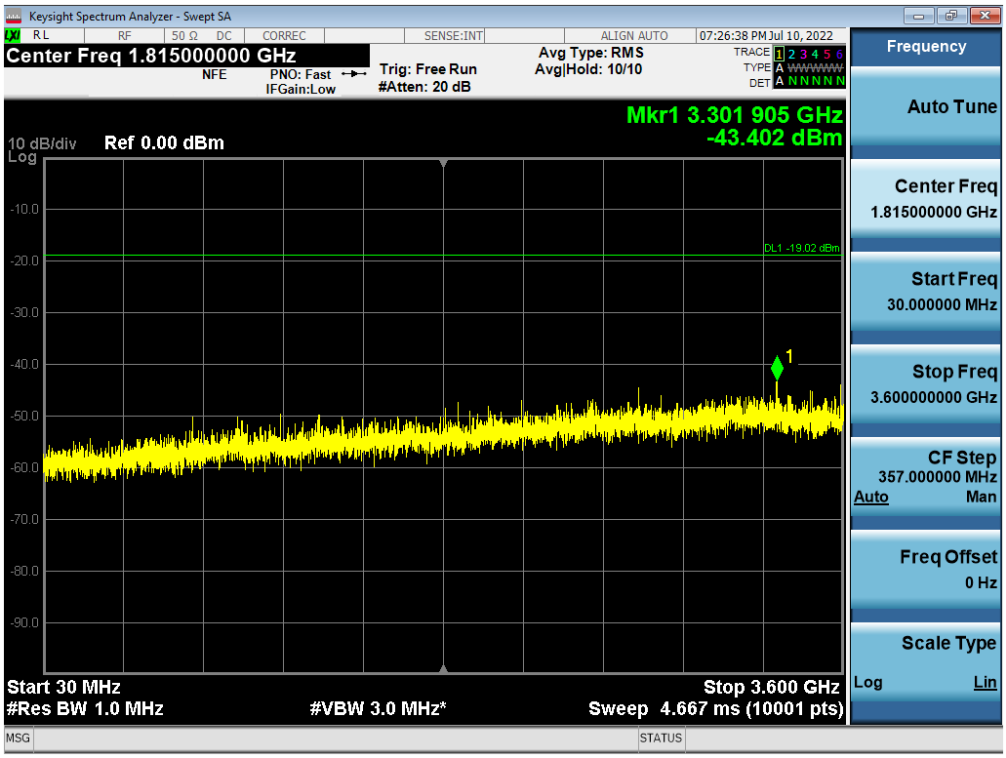
Antenna 0 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / Low



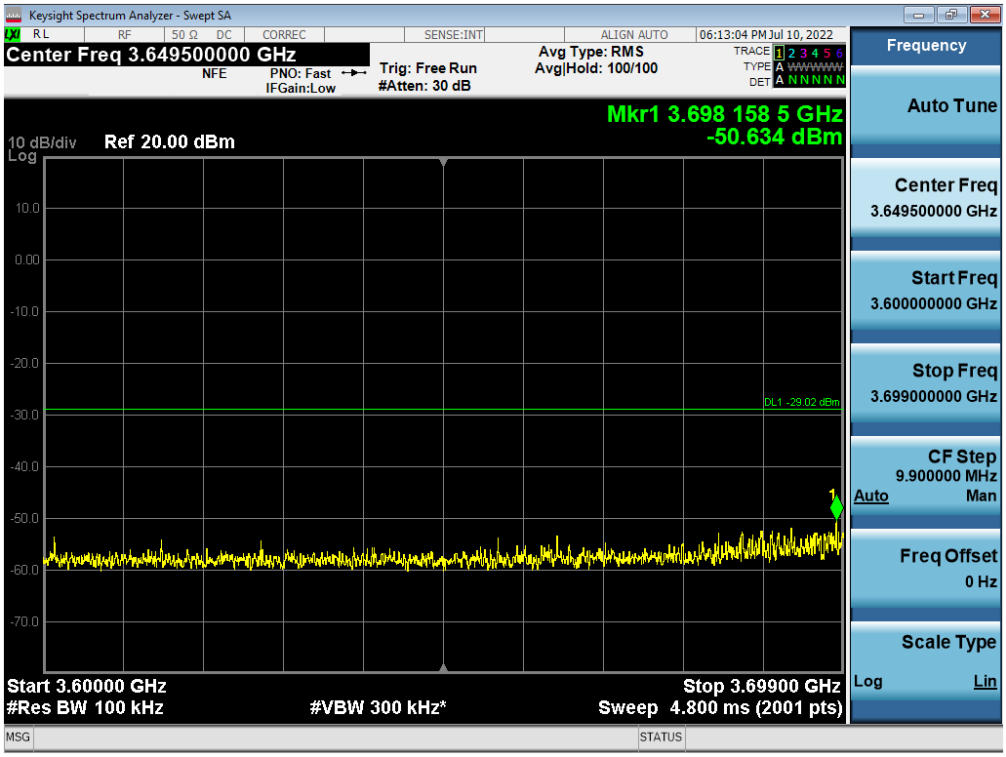
Antenna 0 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / Middle



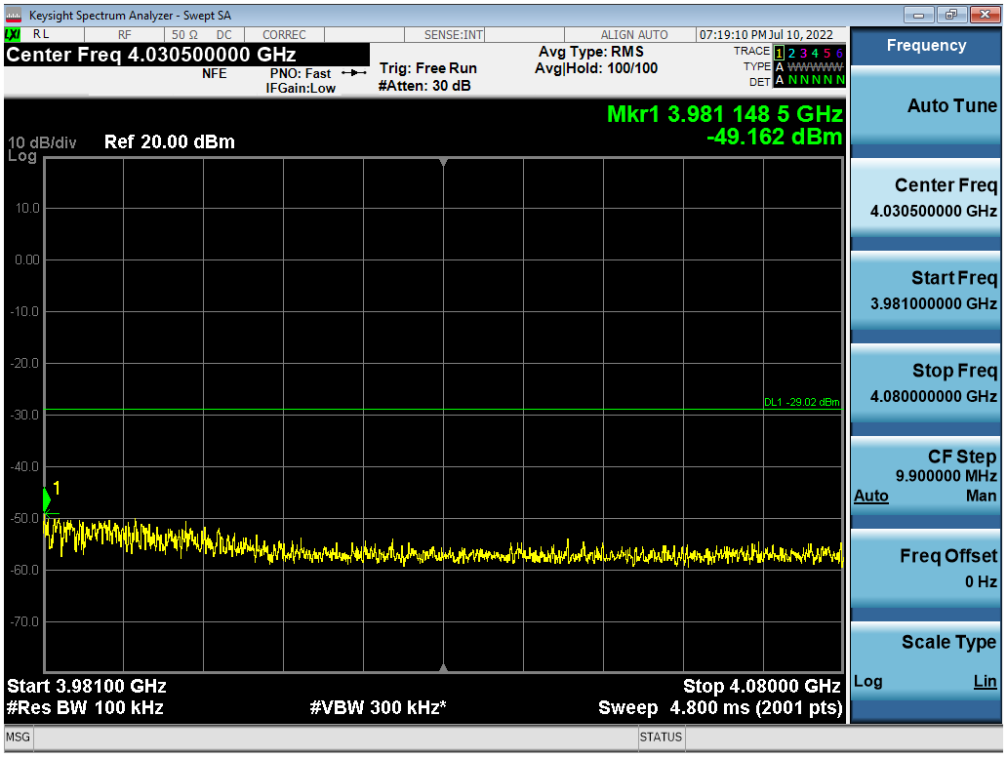
Antenna 2 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 64QAM / High



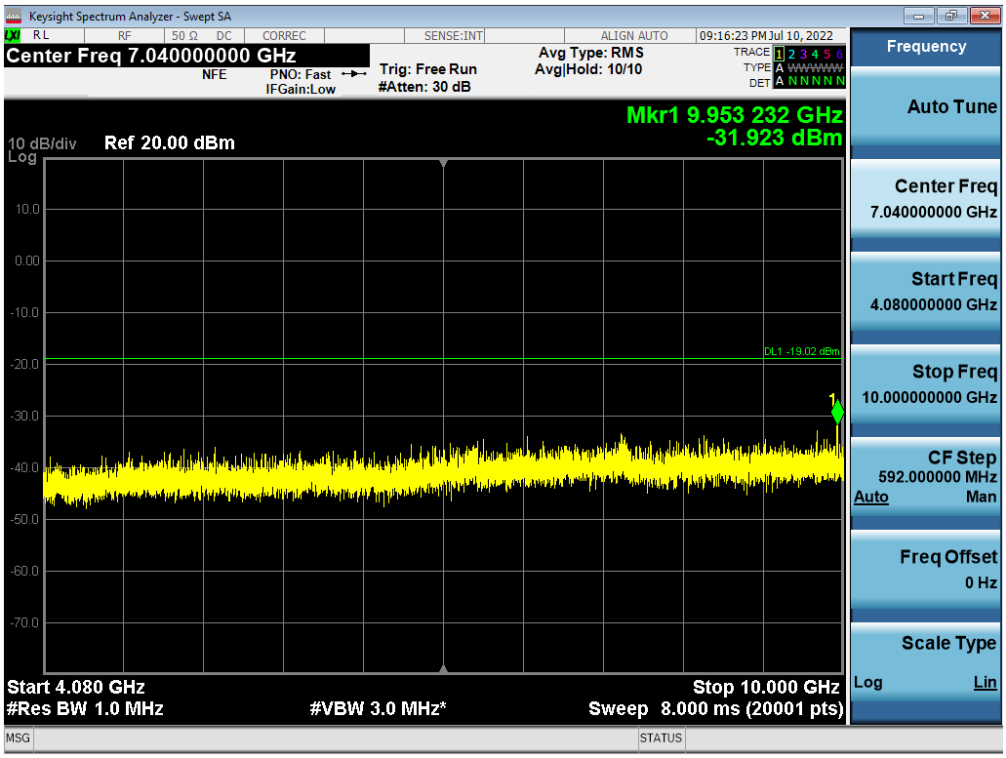
Antenna 3 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / Low



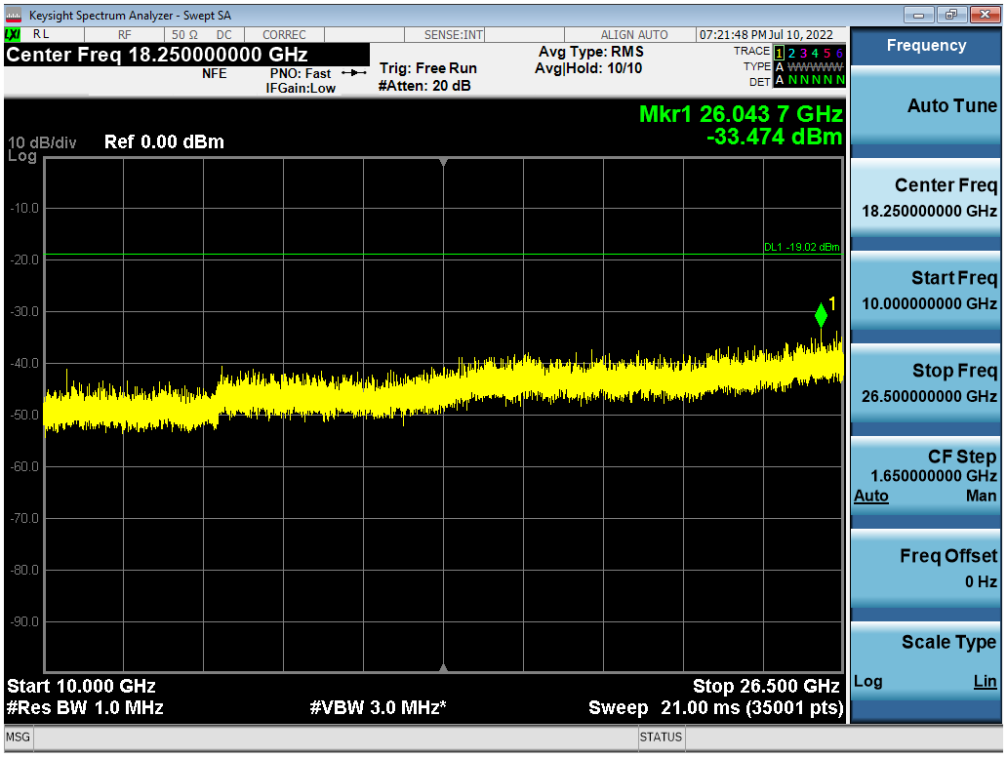
Antenna 2 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / High



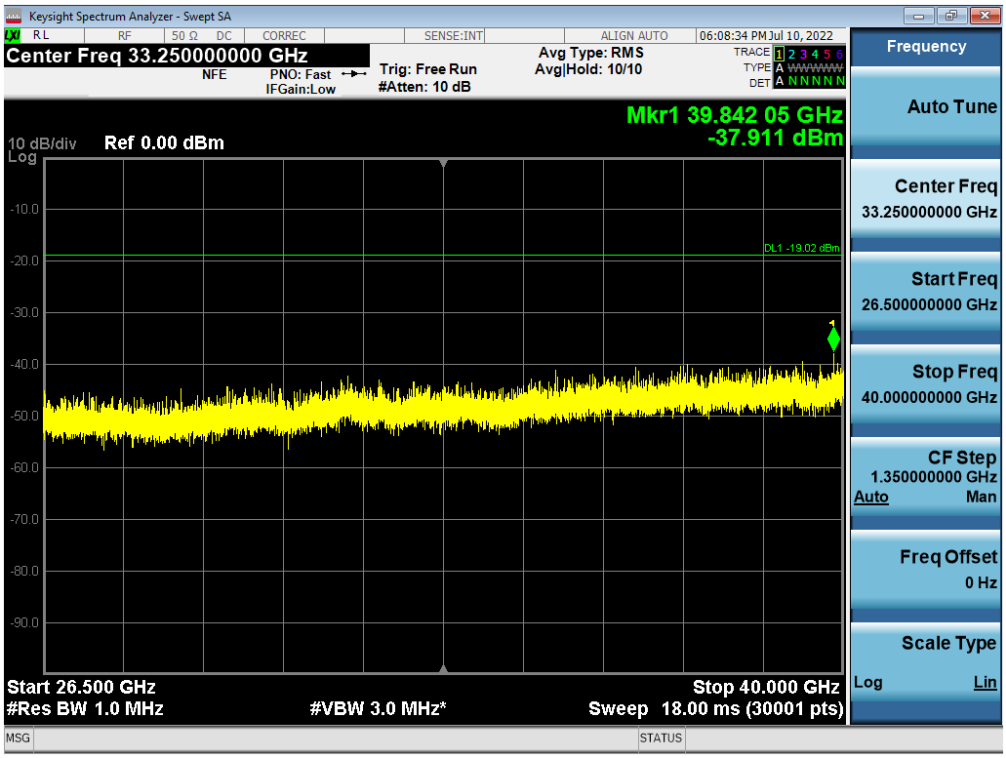
Antenna 3 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / 256QAM / High



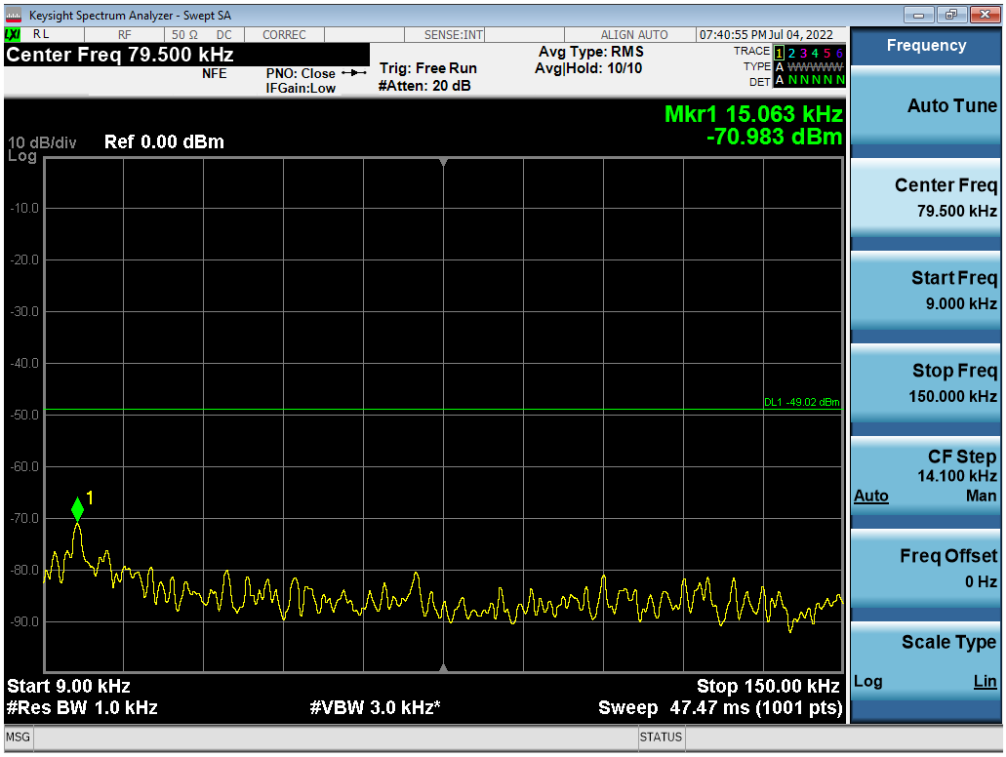
Antenna 3 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / High



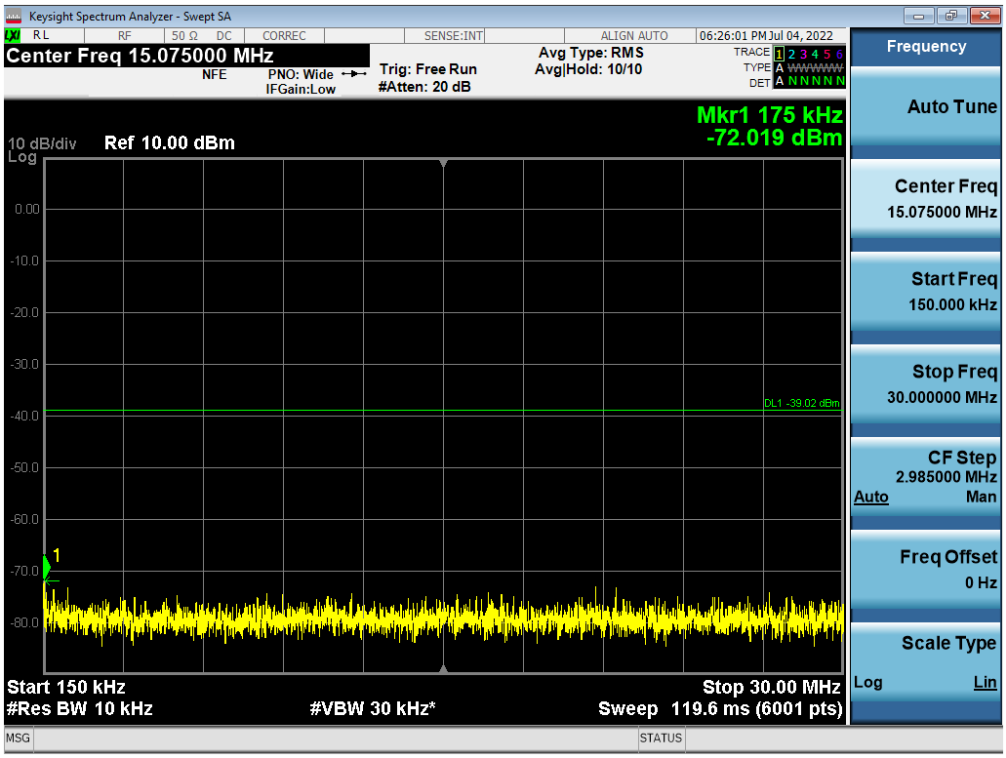
Antenna 1 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR 60 MHz 1 Carrier / QPSK / Low



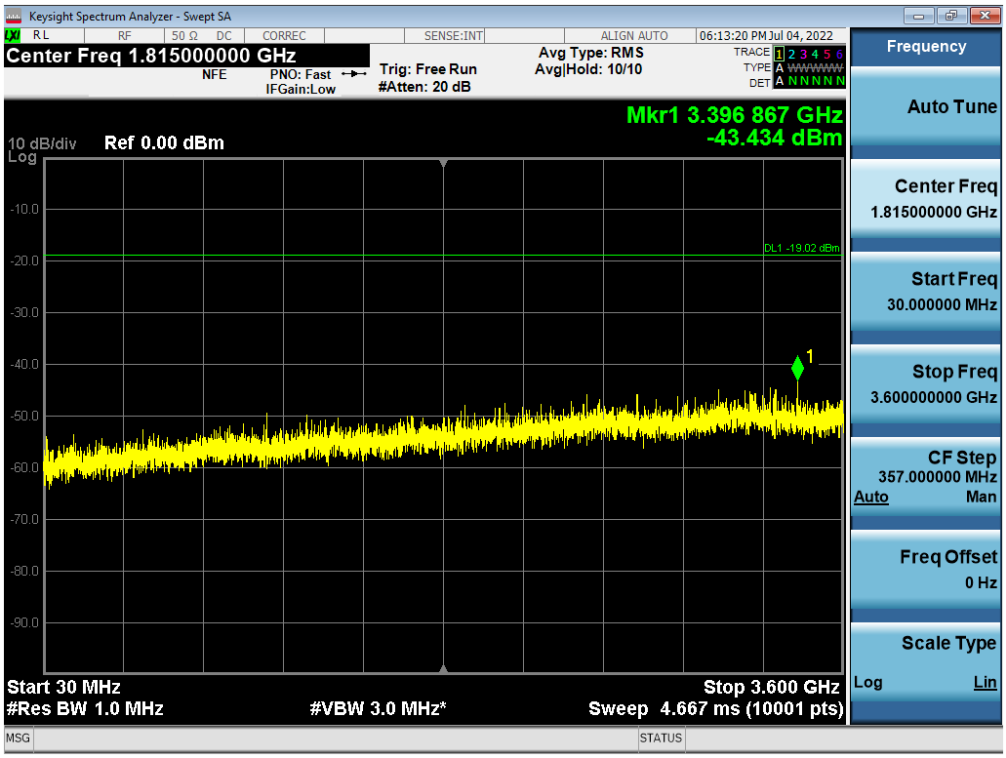
Antenna 0 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 256QAM / Middle



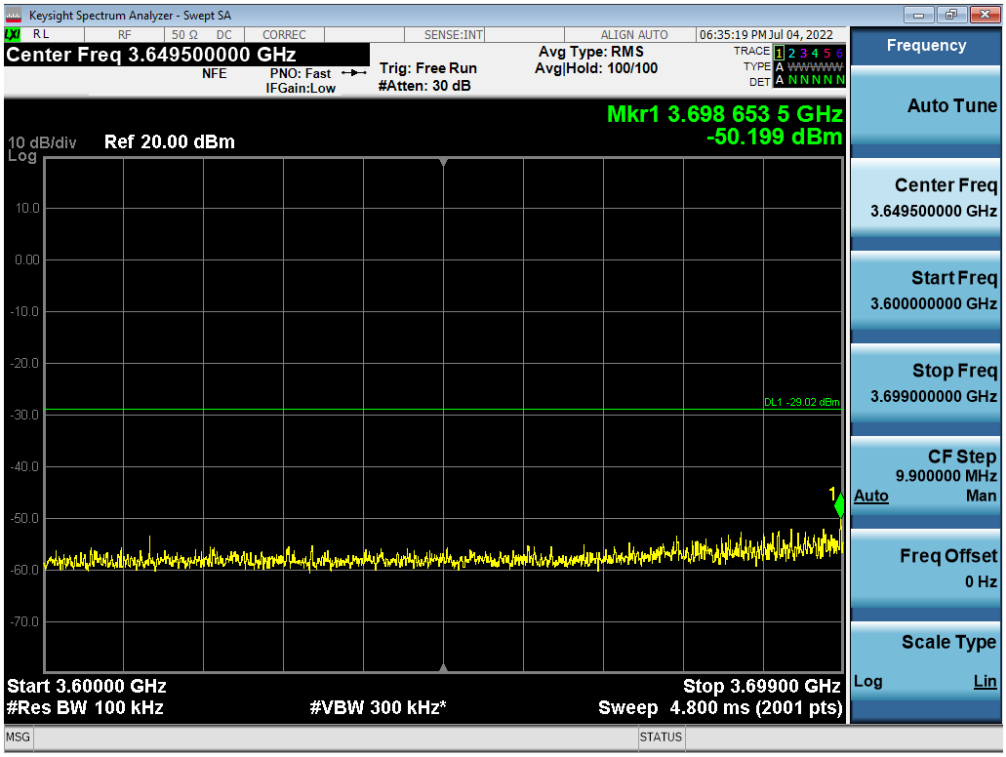
Antenna 1 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 16QAM / Low



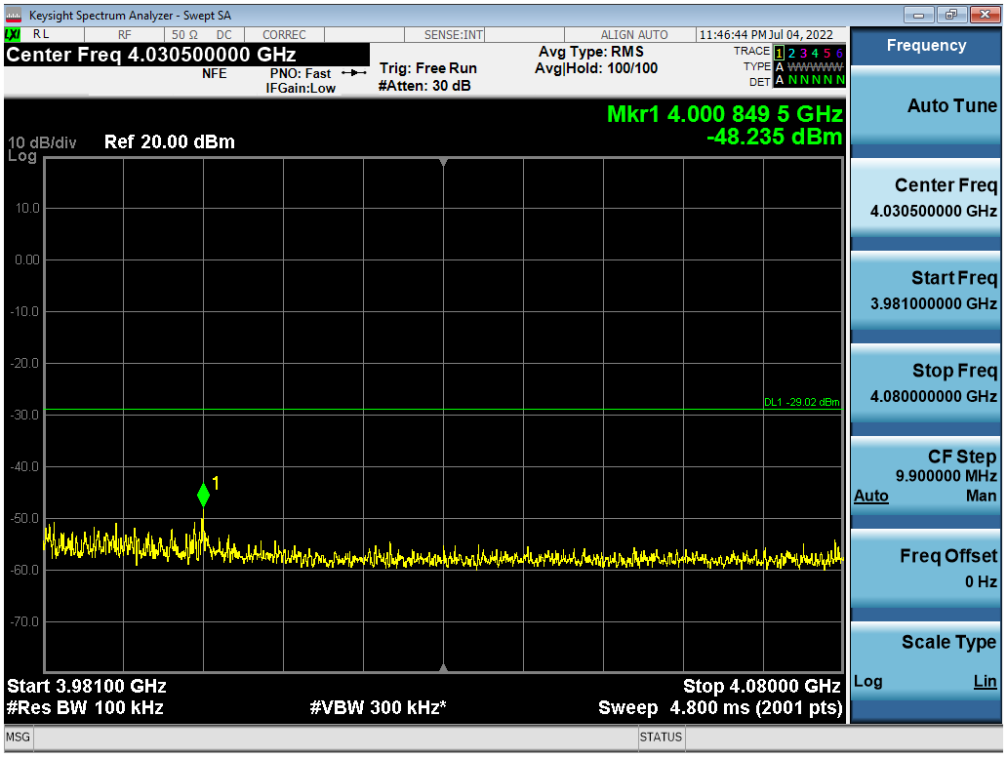
Antenna 3 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / QPSK / Low



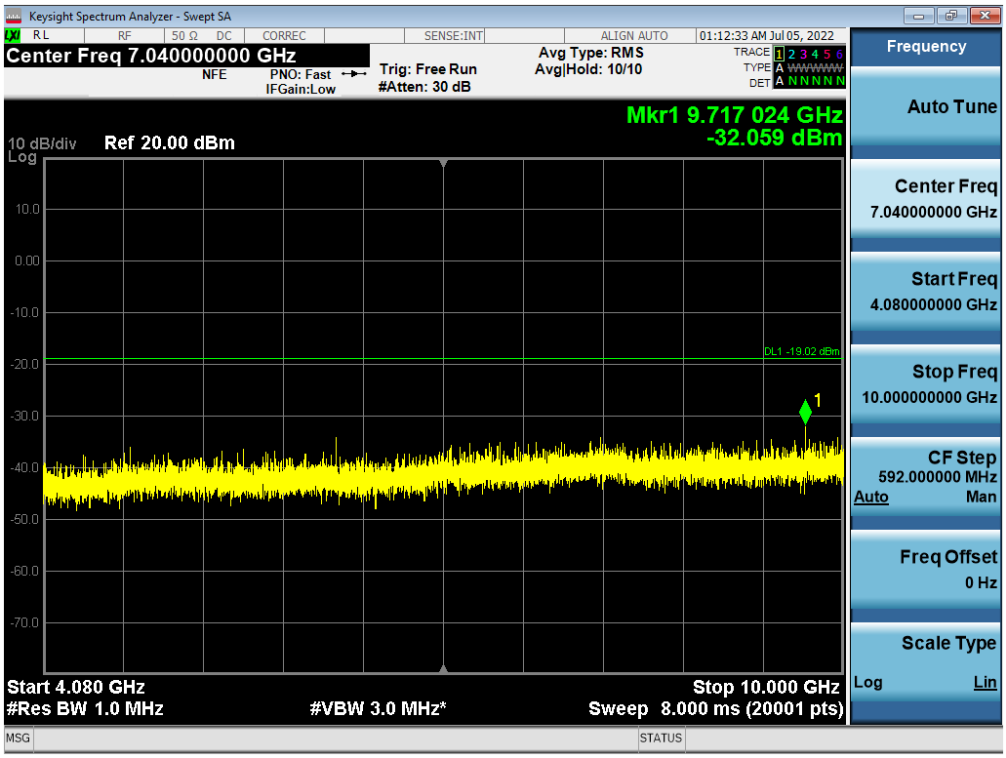
Antenna 3 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 64QAM / Low



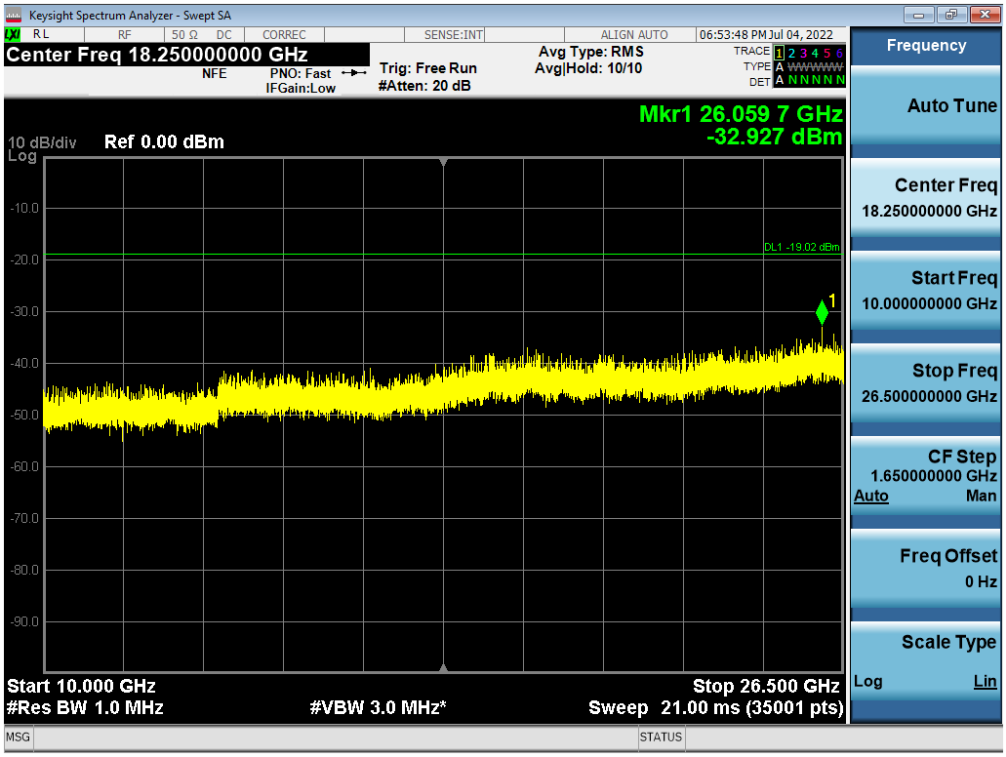
Antenna 3 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / QPSK / High



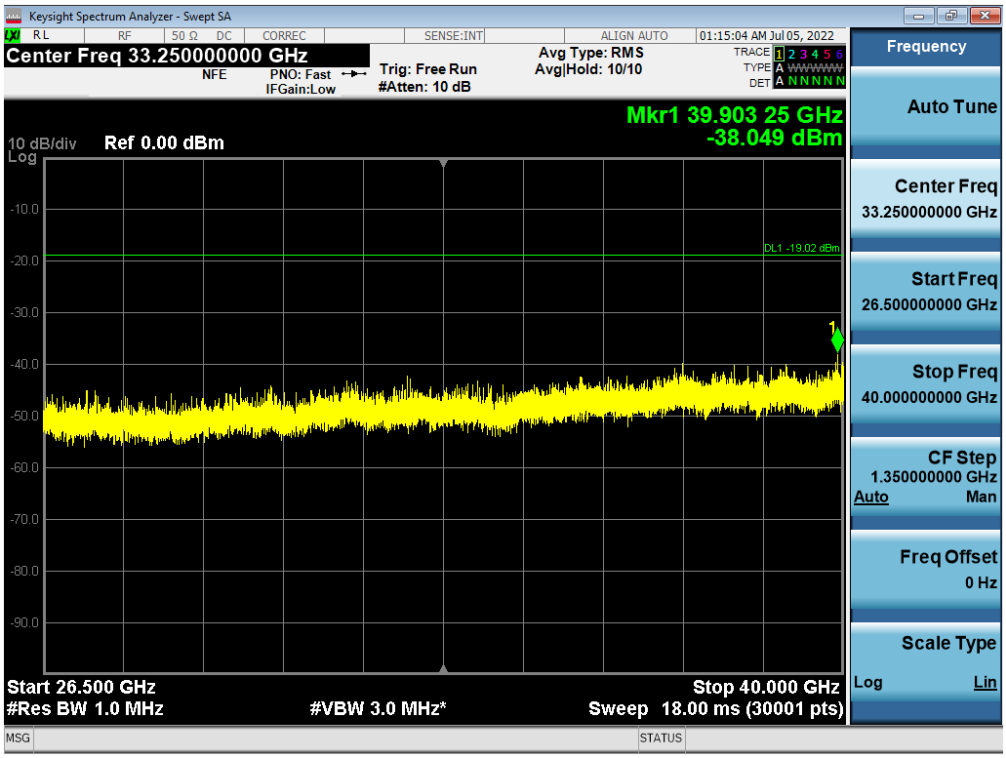
Antenna 1 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 256QAM / High



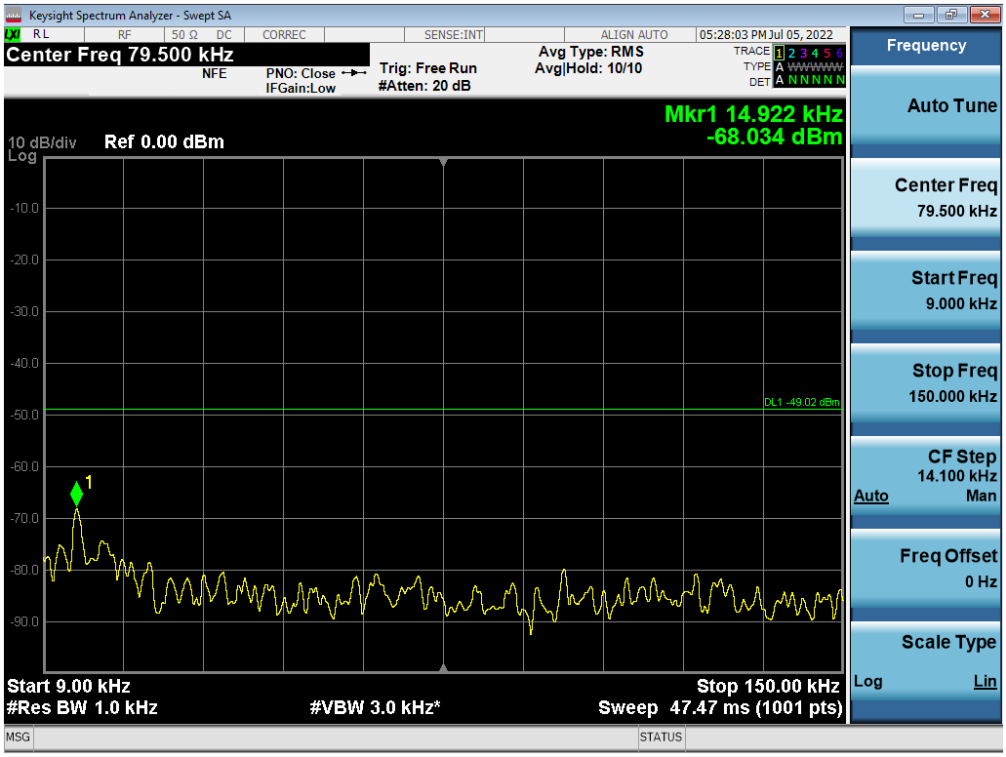
Antenna 3 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 256QAM / Low



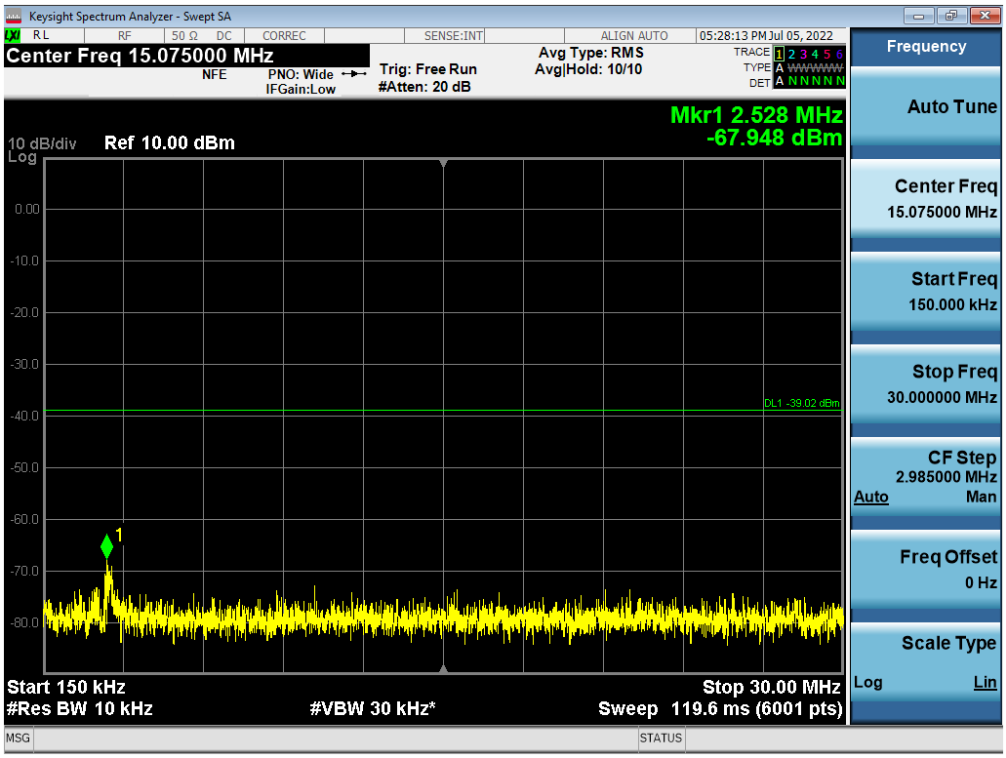
Antenna 0 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR 80 MHz 1 Carrier / 256QAM / High



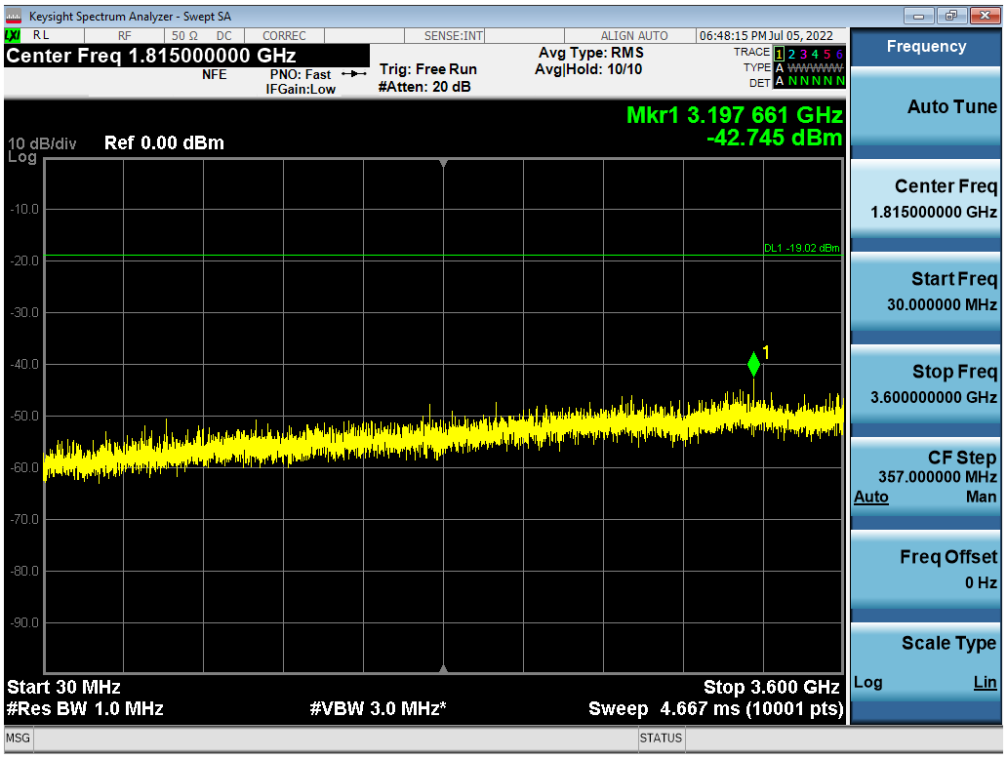
Antenna 0 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / QPSK / Middle



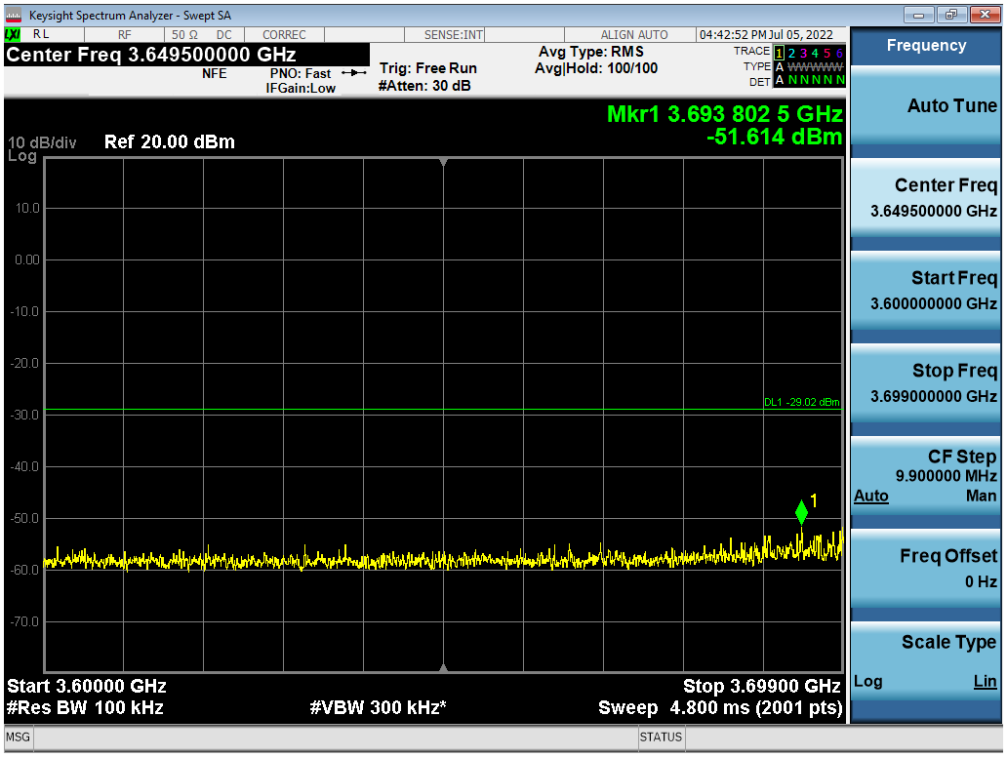
Antenna 0 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / QPSK / Middle



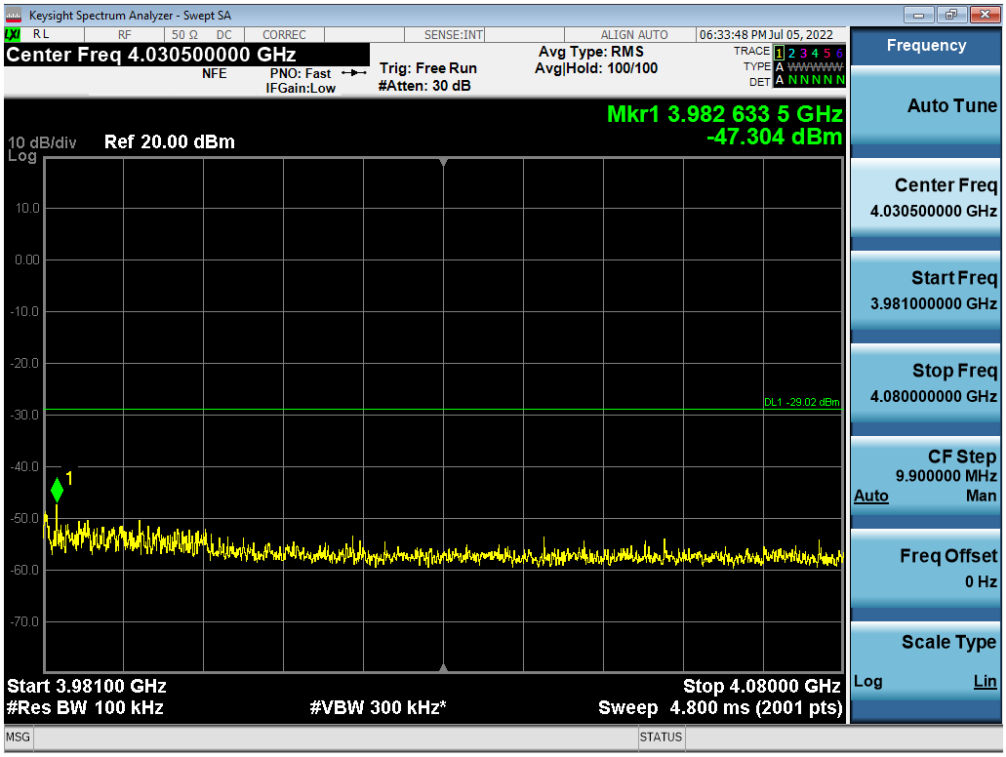
Antenna 0 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 256QAM / High



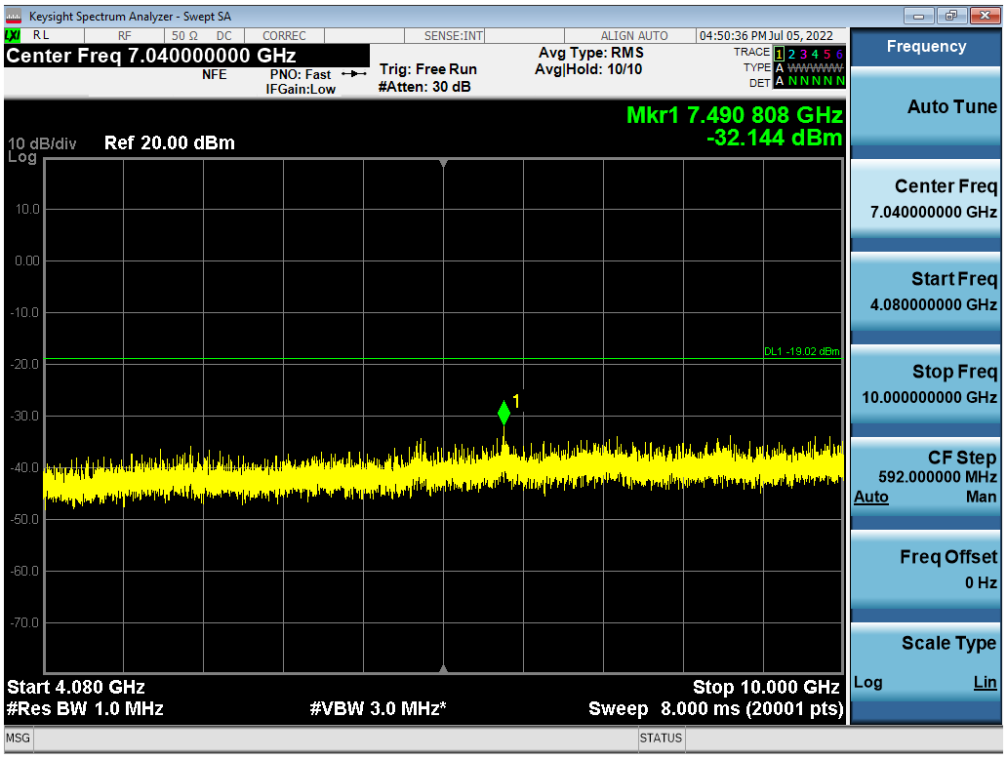
Antenna 0 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / QPSK / Low



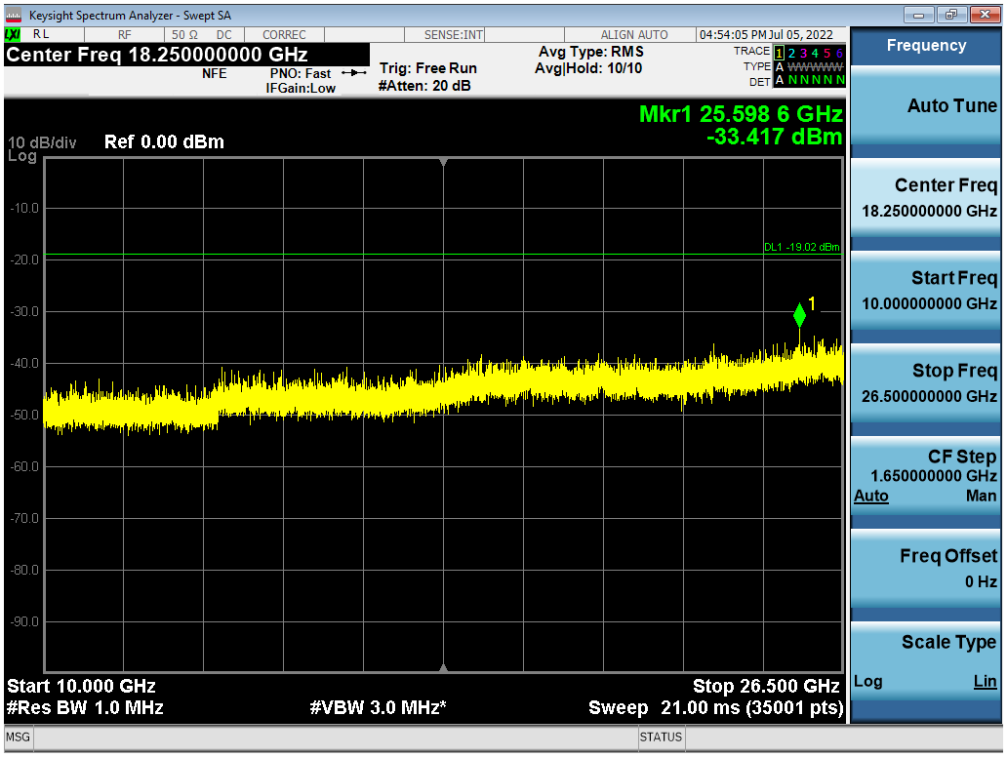
Antenna 2 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 64QAM / High



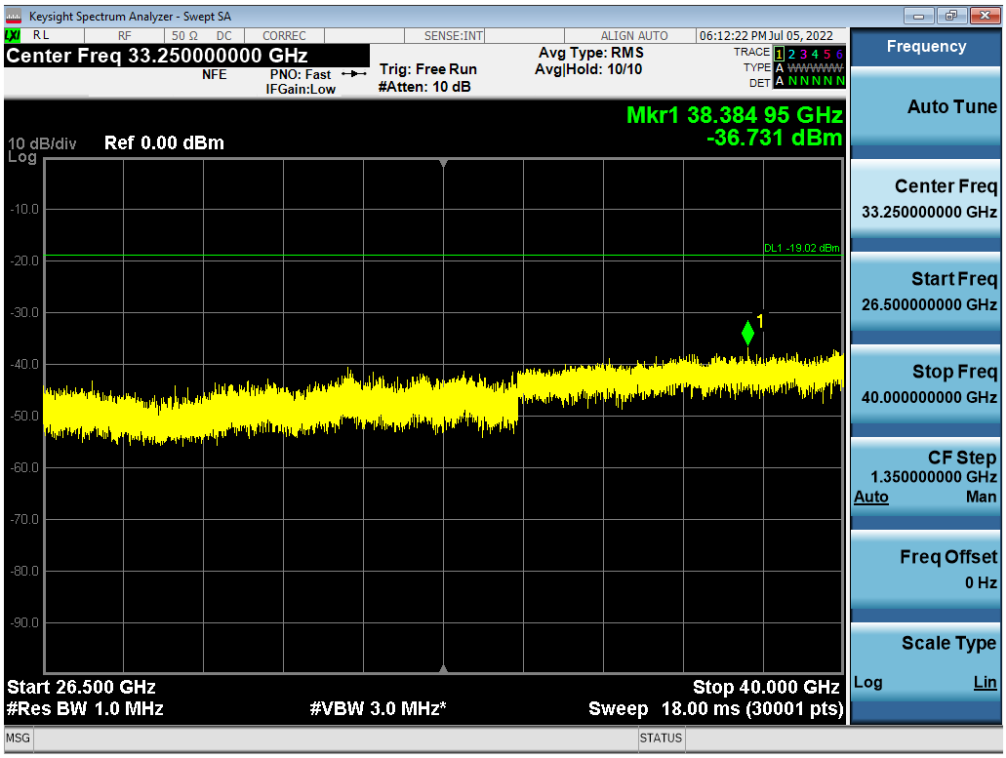
Antenna 3 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / QPSK / Low



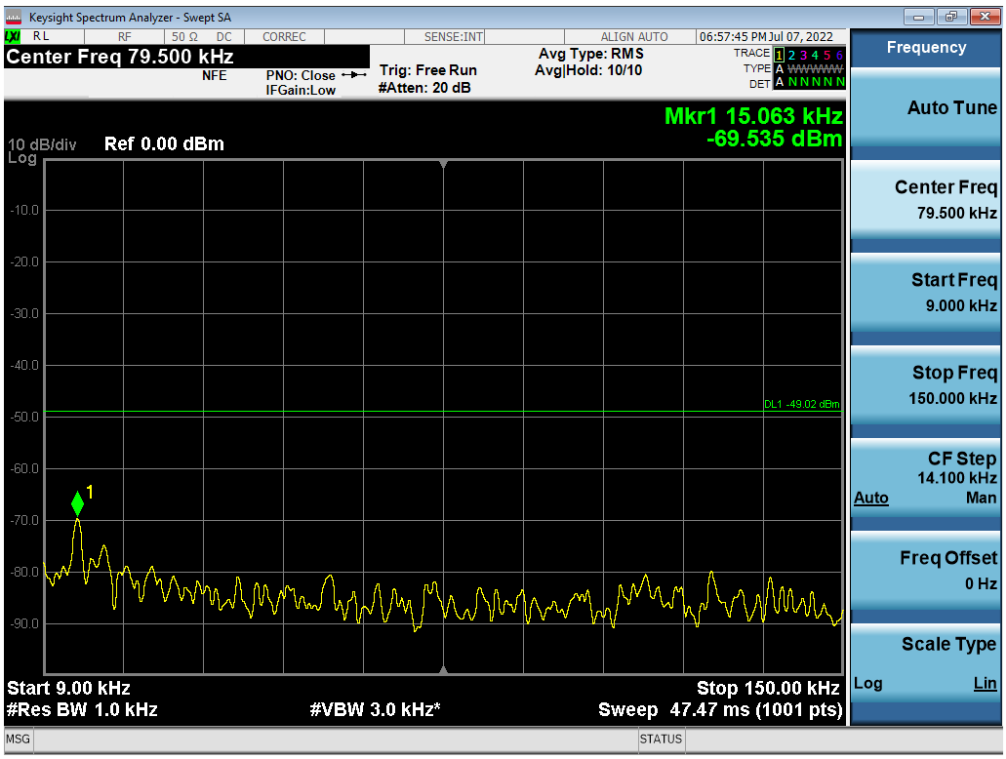
Antenna 3 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / 16QAM / Low



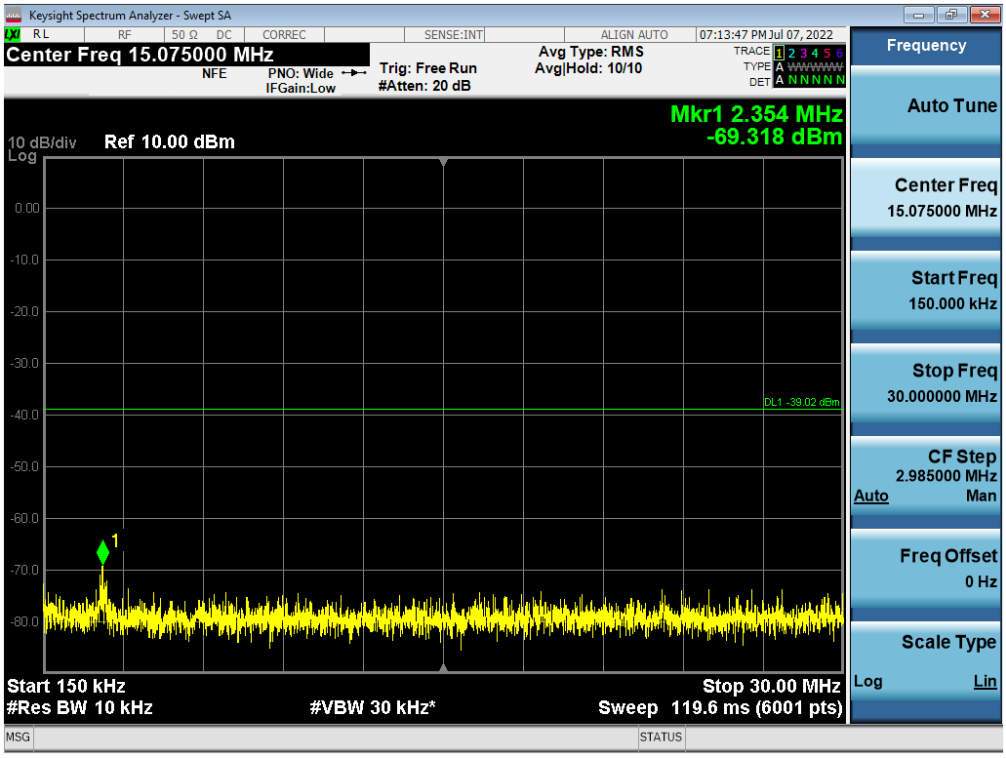
Antenna 2 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR 100 MHz 1 Carrier / QPSK / High



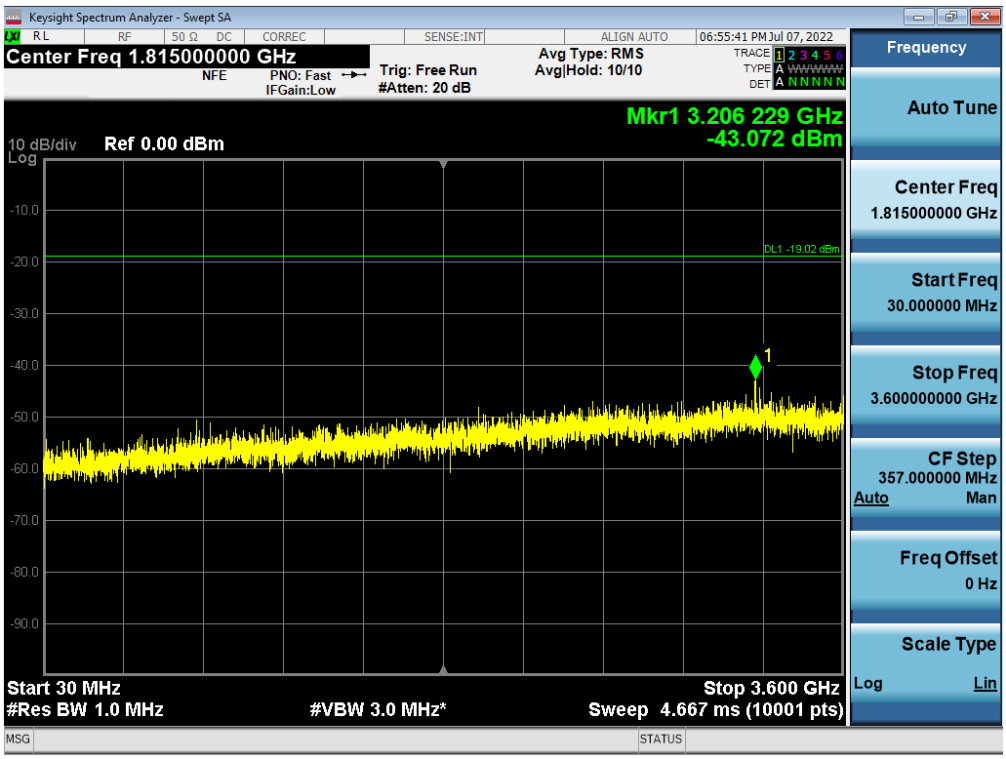
Antenna 3 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / Low



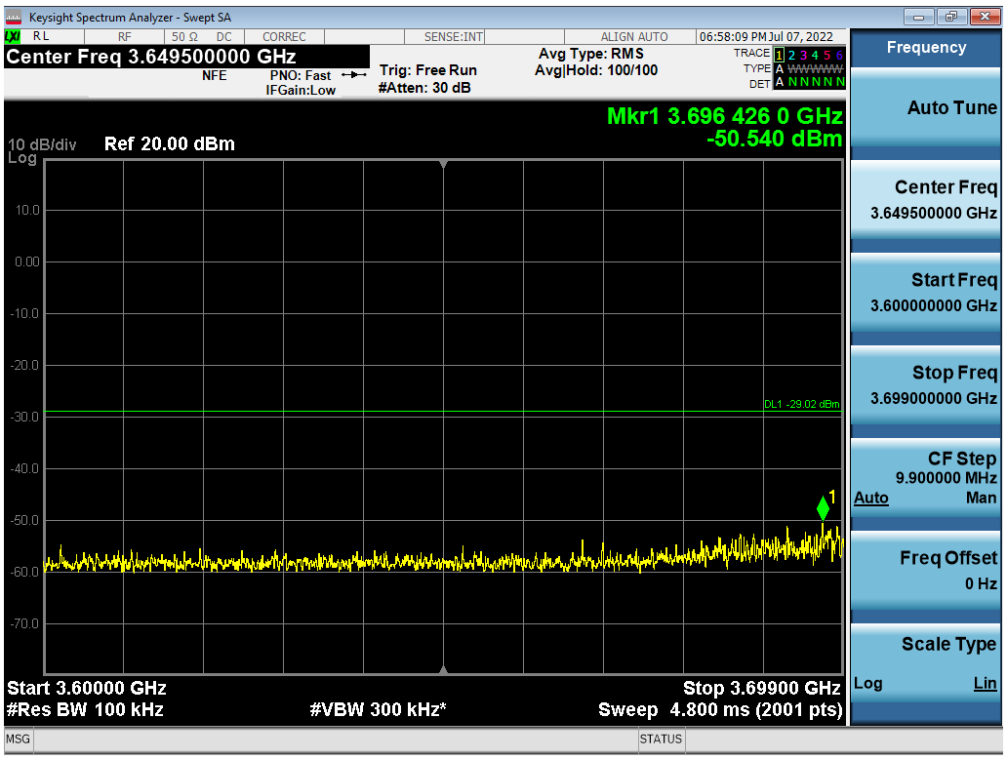
Antenna 1 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / Low



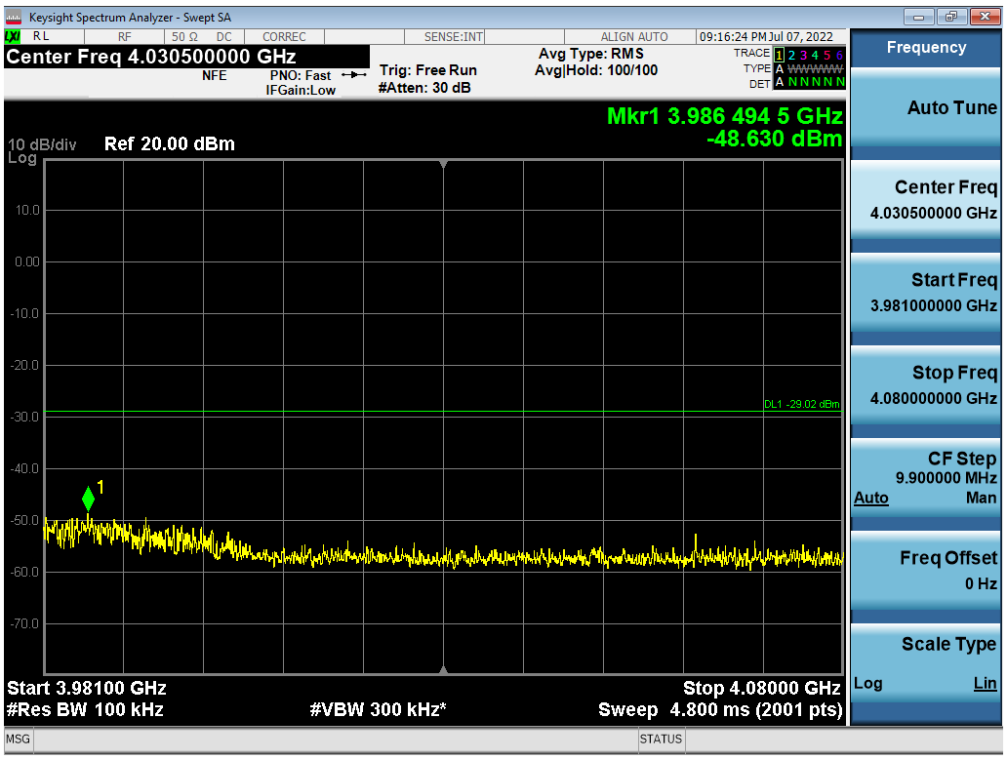
Antenna 2 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / Low



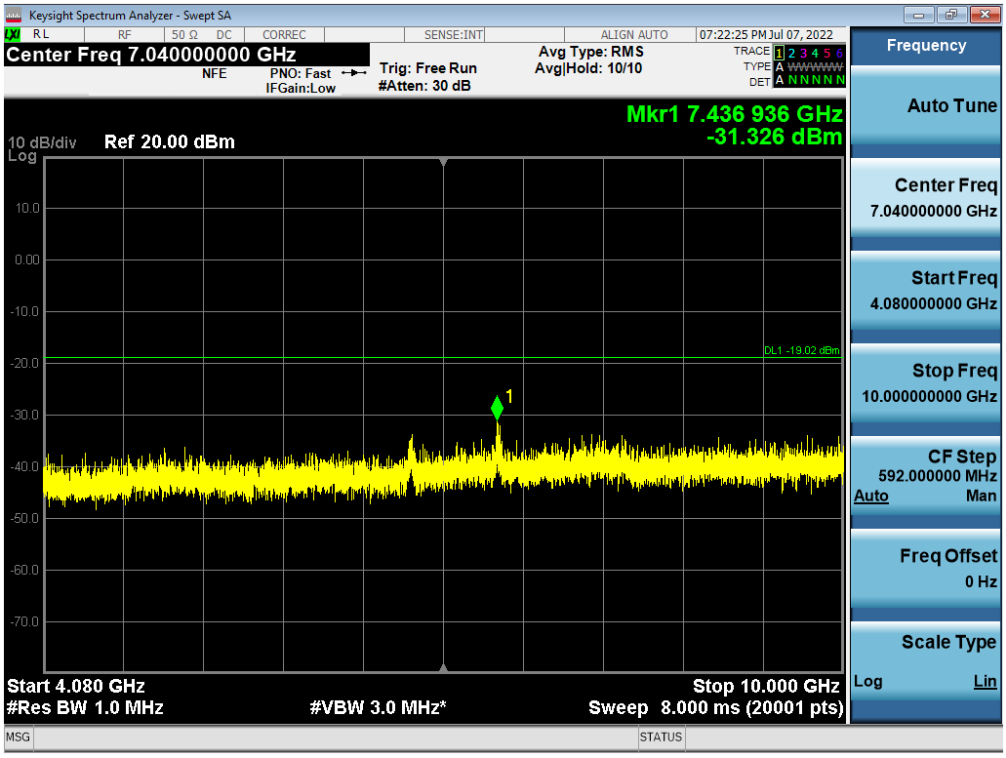
Antenna 3 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / Low



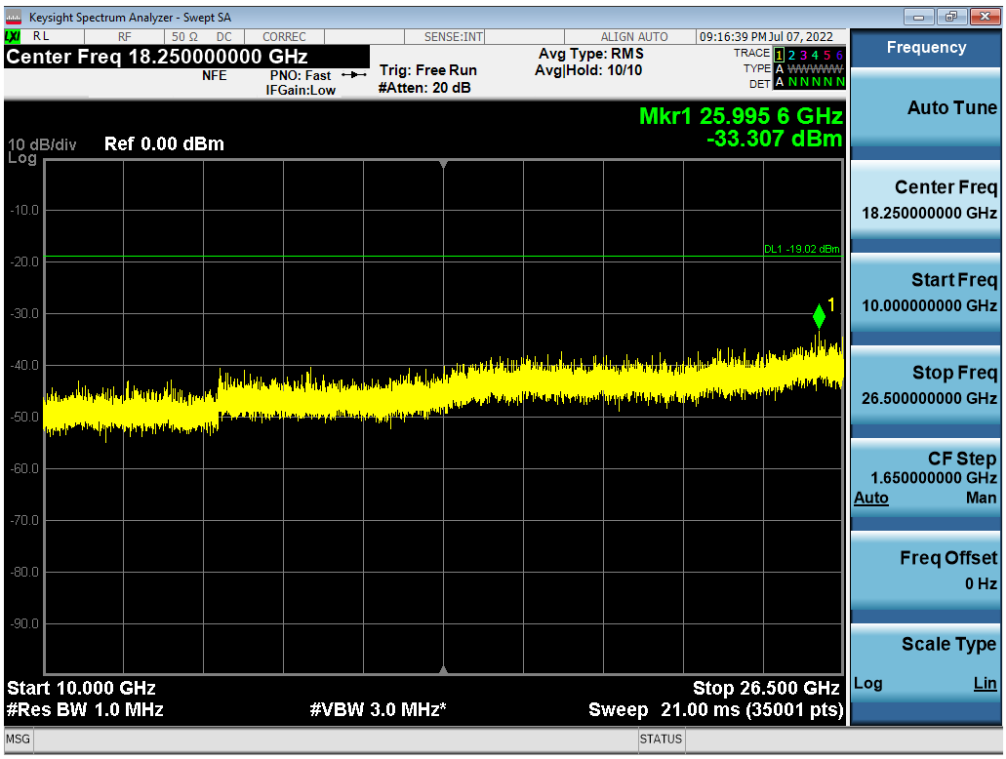
Antenna 2 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / High



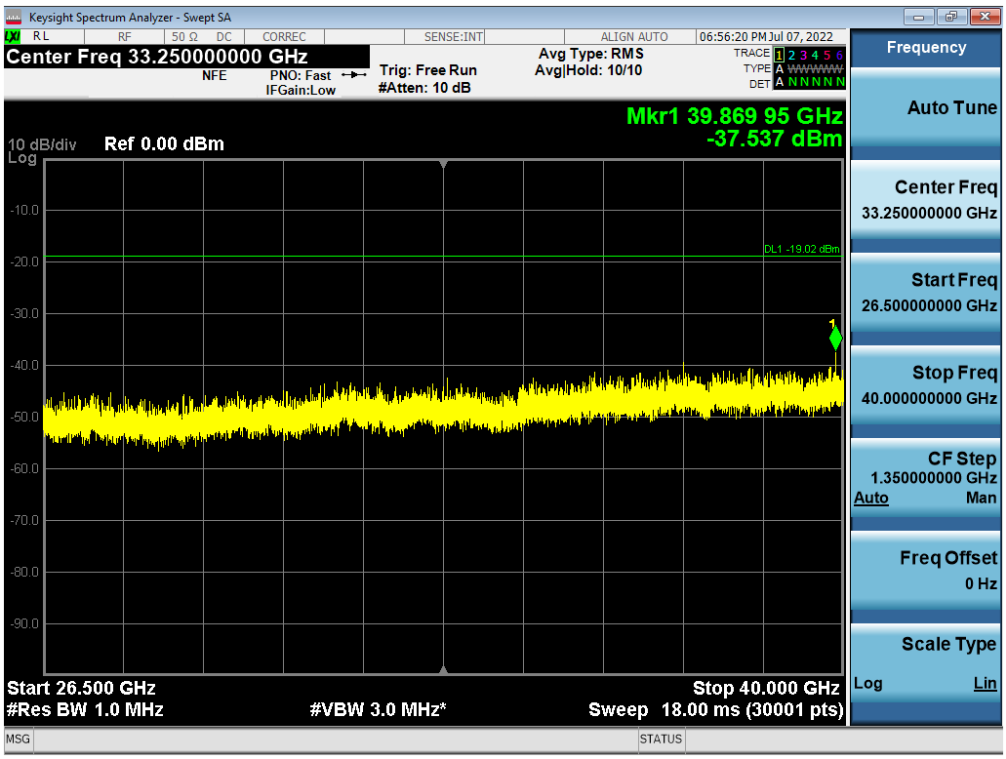
Antenna 3 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / 256QAM / Low



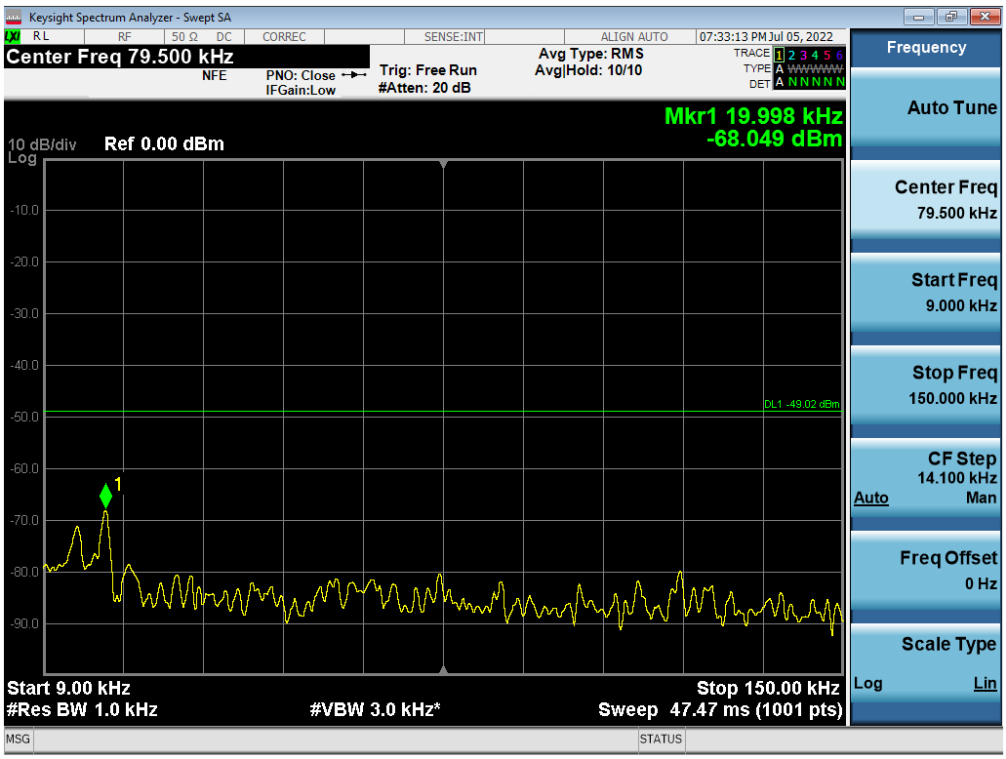
Antenna 2 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / High



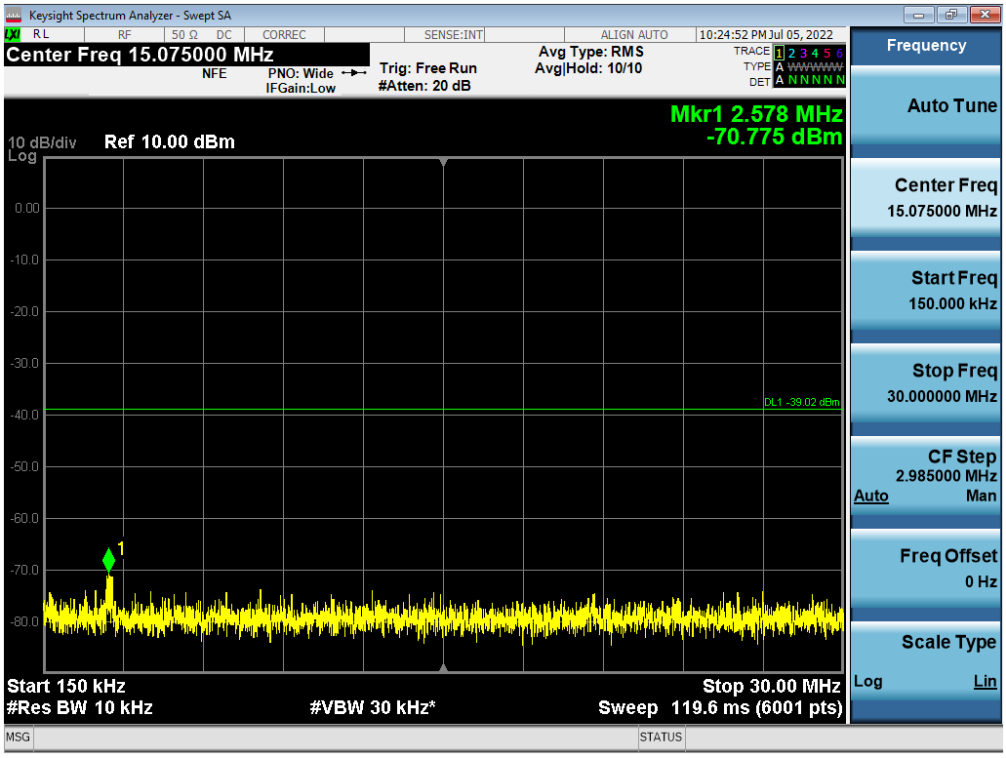
Antenna 2 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / Low



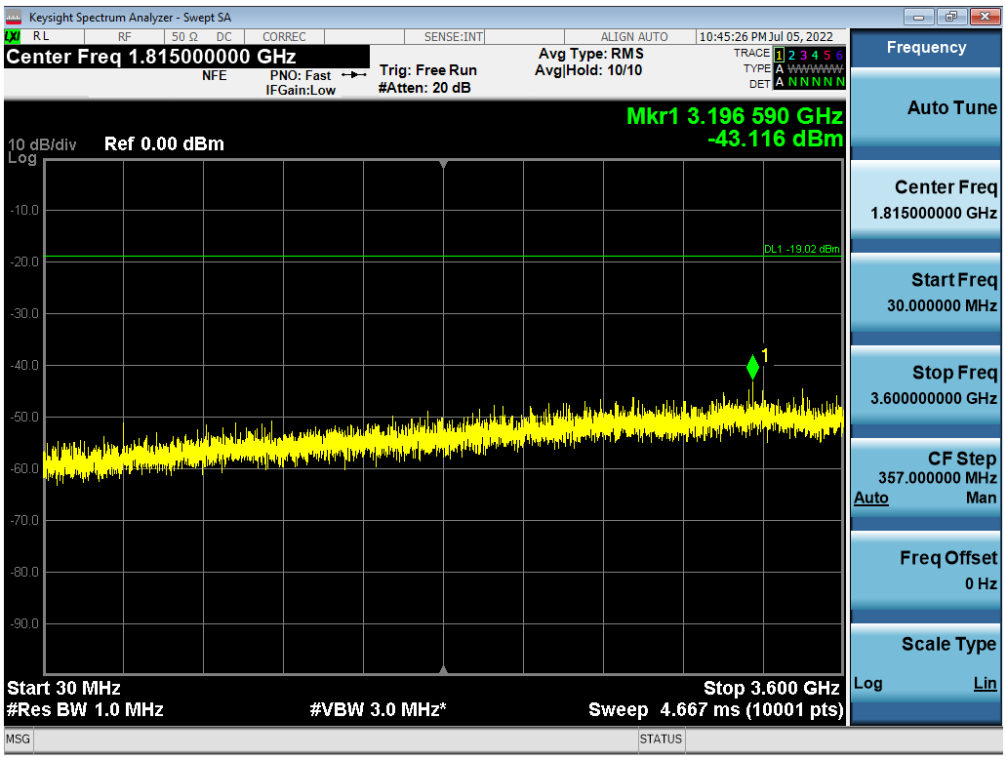
Antenna 0 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / Low



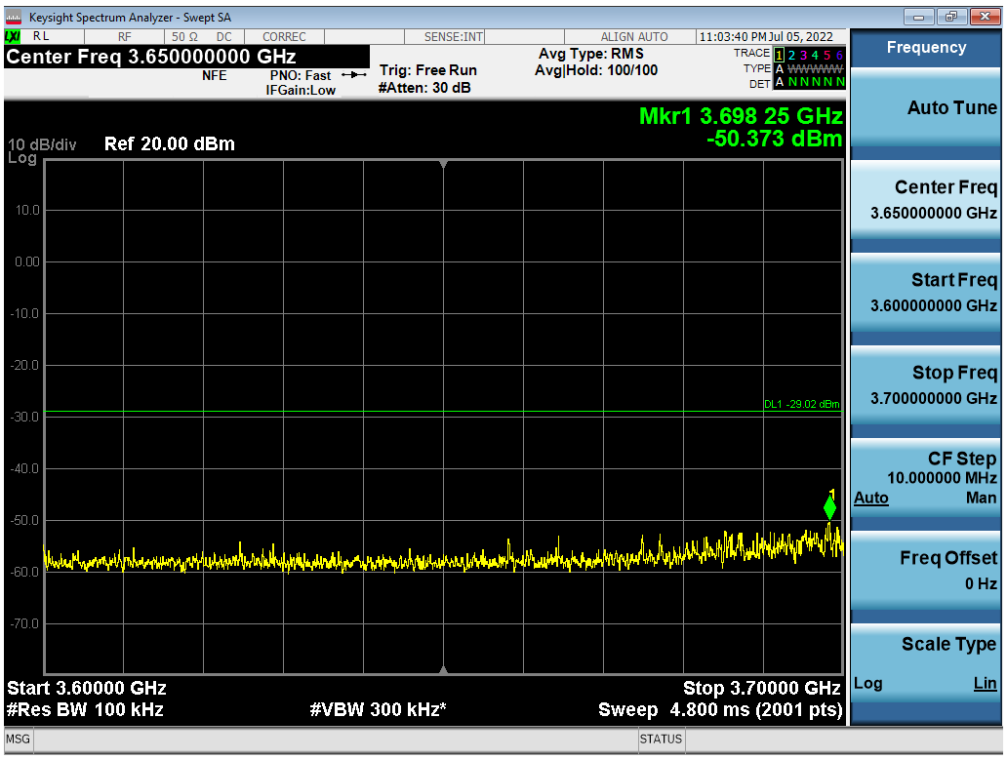
Antenna 0 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / High



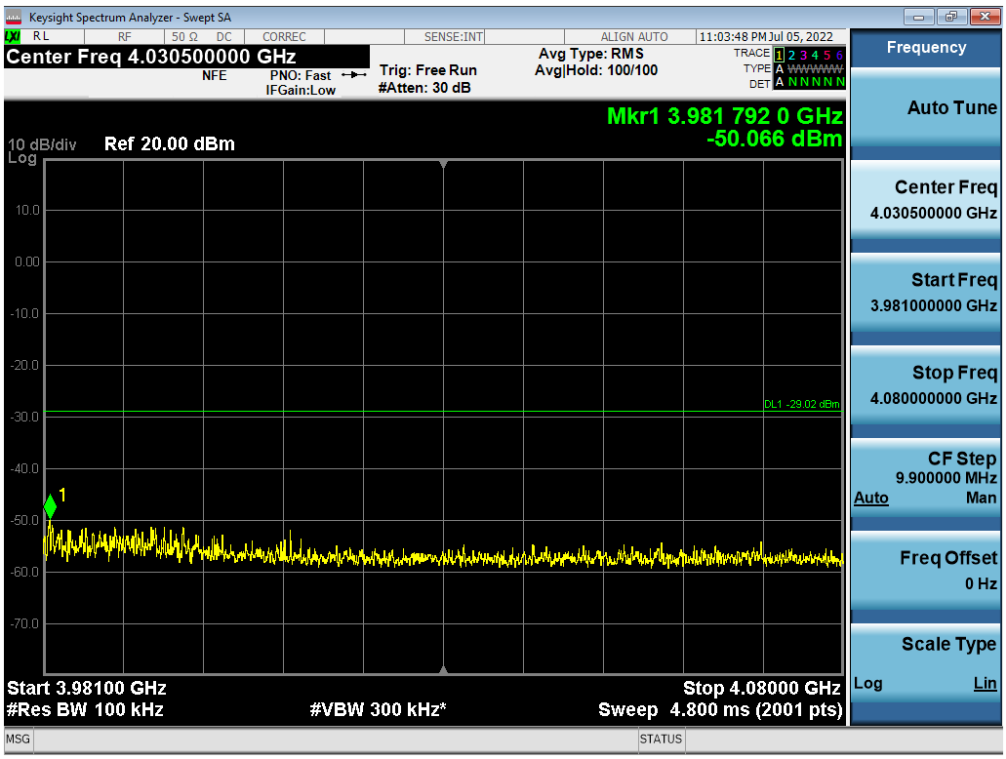
Antenna 1 / 30 MHz ~ Low Edge - 100 MHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



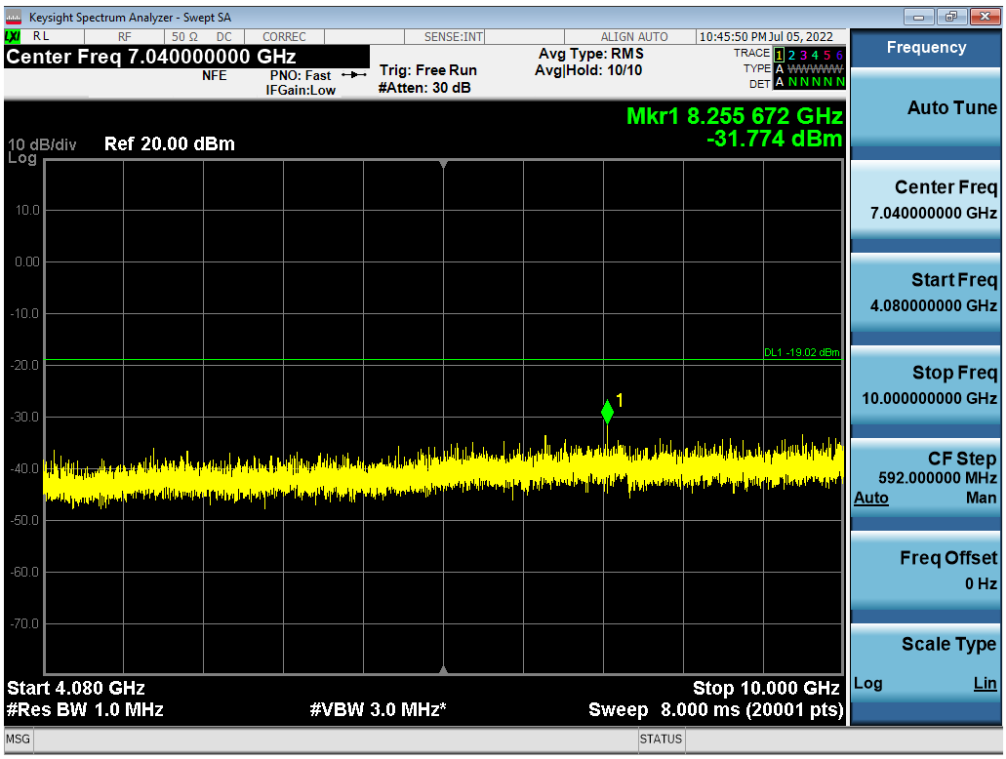
Antenna 3 / Low Edge - 100 MHz ~ Low Edge / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / High



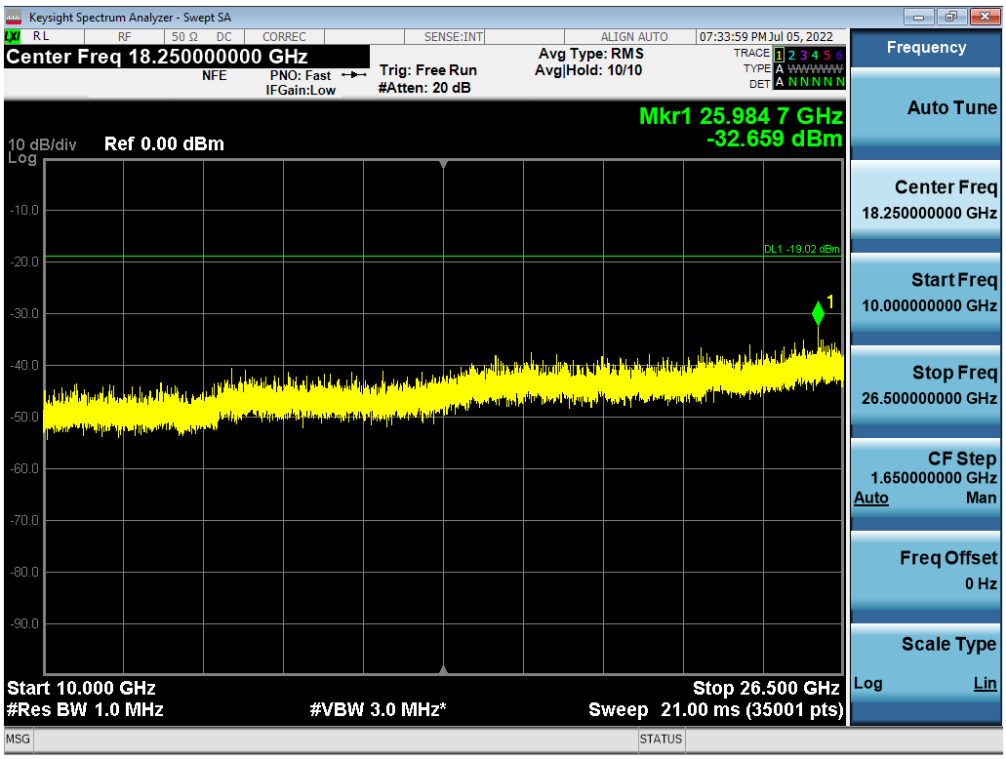
Antenna 3 / High Edge ~ High Edge + 100 MHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / High



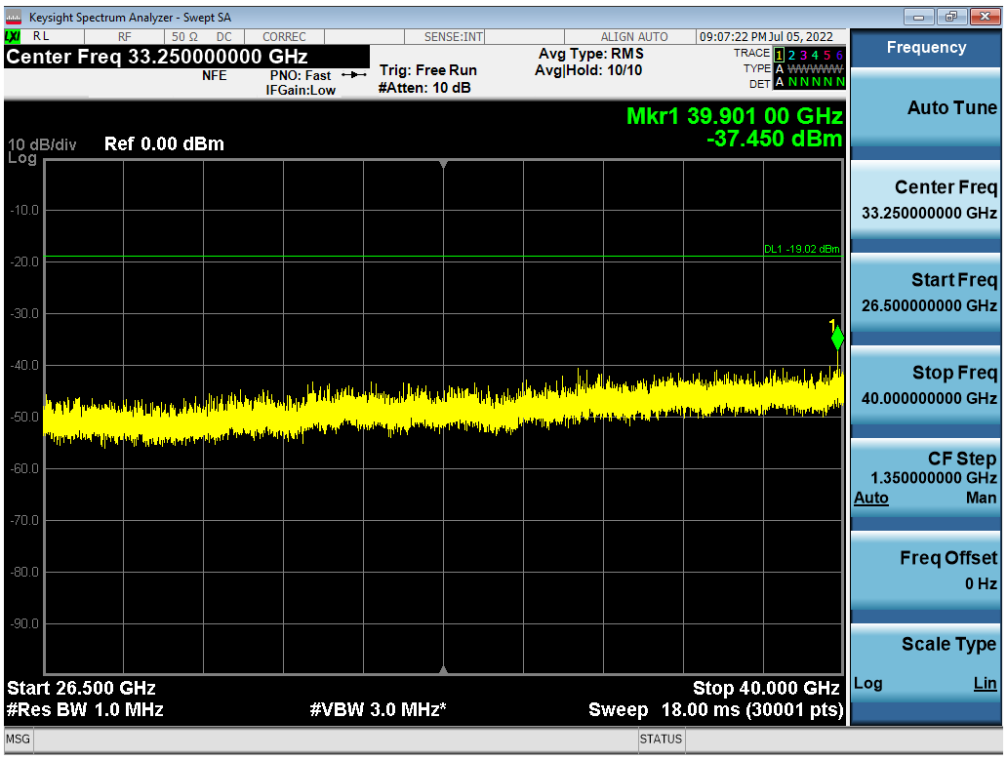
Antenna 1 / High Edge + 100 MHz ~ 10 GHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 16QAM / High



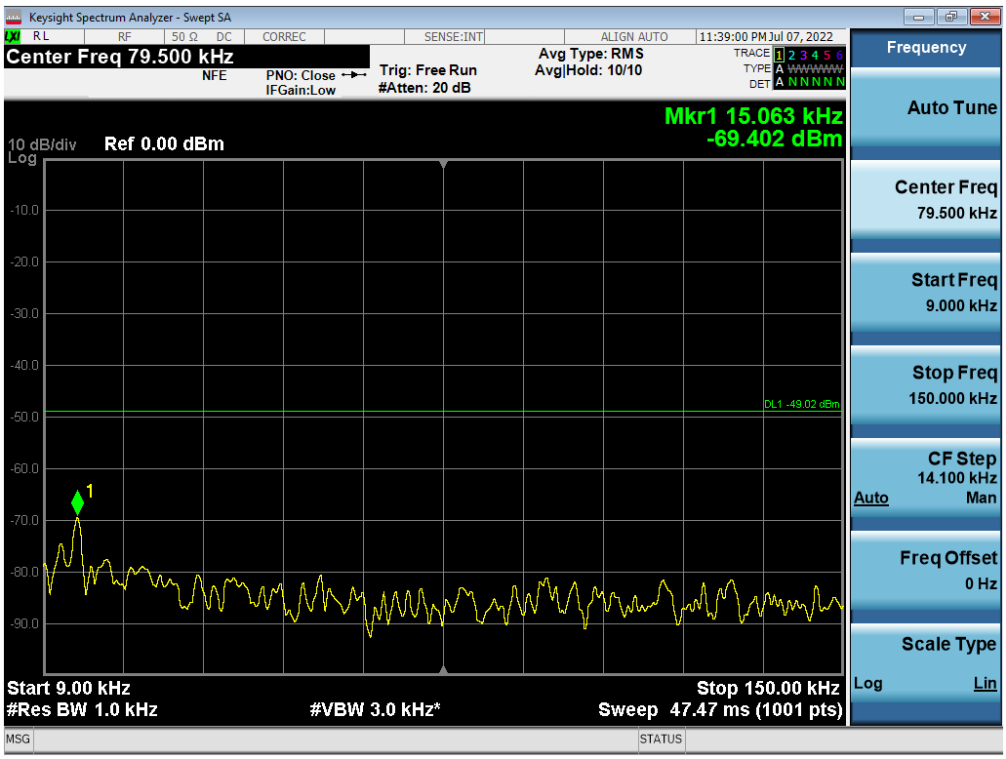
Antenna 0 / 10 GHz ~ 26.5 GHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / 64QAM / Low



Antenna 1 / 26.5 GHz ~ 40 GHz / 3.7 GHz Service 5G NR(100 MHz 1 Carrier + 100 MHz 1 Carrier) [2 Carrier] / Contiguous / QPSK / Middle



Antenna 0 / 9 kHz ~ 150 kHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 64QAM



Antenna 3 / 150 kHz ~ 30 MHz / 3.7 GHz Service 5G NR(20 MHz 1 Carrier + 20 MHz 1 Carrier) [2 Carrier] (3 700 MHz - 3 900 MHz) / Non-Contiguous / 256QAM