



Sverige



Accred. no. 10363
Testing
ISO/IEC 17025

Report On

FCC Testing of the Ericsson AIR 6449 B77D NR, KRD 901 206/2
(3700-3980 MHz) Base Station in accordance with FCC CFR 47 Part 2
and FCC CFR 47 Part 27

COMMERCIAL-IN-CONFIDENCE

FCC: TA8AKRD901206

PREPARED BY

A handwritten signature in black ink, appearing to read 'Maggie Whiting'.

Maggie Whiting
Key Account Manager

APPROVED BY

A handwritten signature in black ink, appearing to read 'Steve Scarfe'.

Steve Scarfe
Authorised Signatory

DATED

12 February 2021

Document 75950239 Report 02 Issue 4

February 2021



CONTENTS

Section	Page No
1	REPORT INFORMATION 2
1.1	Report Details 3
1.2	Brief Summary of Results 4
1.3	Configuration Description 5
1.4	Declaration of Build Status 6
1.5	Product Information 9
1.6	Test Setup 10
1.7	Test Conditions 11
1.8	Deviation From The Standard 11
1.9	Modification Record 11
1.10	Additional Information 13
2	TEST DETAILS 14
2.1	Maximum Peak Output Power and Peak to Average Ratio - Conducted 15
2.2	Occupied Bandwidth 35
2.3	Band Edge 53
2.4	Transmitter Spurious Emissions 65
2.5	Frequency Stability 142
3	TEST EQUIPMENT USED 143
3.2	Measurement Uncertainty 146
4	ACCREDITATION, DISCLAIMERS AND COPYRIGHT 147
4.1	Accreditation, Disclaimers and Copyright 148
ANNEX A	Module Lists A.2



SECTION 1

REPORT INFORMATION



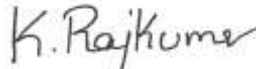
1.1 REPORT DETAILS

Manufacturer	Ericsson
Address	Torshamnsgatan 23 Kista SE-16480 Stockholm Sweden
Product Name & Product Number	AIR 6449 B77D KRD 901 206/2
Serial Number(s)	E23B987803
Software Version	CXP2030039%1 Revision R48A121
Hardware Version	R1B
Non-Tested Variants	KRD 901 206/21 KRD 901 206/1 KRD 901 206/11
Test Specification/Issue/Date	FCC CFR 47 Part 2: 2019 FCC CFR 47 Part 27: 2019
Test Plan	2_12022-HRB 105 601-249 Uen AIR 6449 B77D FCC Test Plan V8 (4W MHz).
Start of Test	12 November 2020
Finish of Test	10 February 2021
Name of Engineer(s)	Ashok Kumar, Raj Kumar
Related Document(s)	KDB 971168 D01 v03r01 KDB 662911 D01 v02r01

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate compliance with FCC Part 2 and FCC Part 27 The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

Ashok Kumar, Raj Kumar

This Report has been up issued to Issue 4 and should be read in place Issue 2. This Report has been up issued to Issue 4 to correct config A2 Occupied Bandwidth Tables.



1.2 BRIEF SUMMARY OF RESULTS

A brief summary of results for each configuration, in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 27 is shown below.

Section	Specification Clause		Test Description	Result
	FCC CFR 47 Part 2	FCC CFR 47 Part 27		
2.1	2.1046	27.50	Maximum Peak Output Power and Peak to Average Ratio - Conducted	Pass
2.2	2.1049	27.53	Occupied Bandwidth	Pass
2.3	2.1051	27.53 (I)	Band Edge	Pass
2.4	2.1051	27.53 (I)	Transmitter Spurious Emissions	Pass
2.5	2.1055	27.54	Frequency Stability	Pass
2.6	2.1053	27.53	Radiated Spurious Emissions	Pass*

* - Testing for Radiated Spurious Emissions to FCC Part 15B are recorded in TUV SUD Test Report reference 75950239 Report 01 and to FCC Part 27 in Report reference 75950239 Report 03.

1.3 CONFIGURATION DESCRIPTION

Configuration	RAT	No. Of carriers	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
				Bottom	Middle	Top
A1	NR	1	20 MHz- SCS 30kHz	3710.01	3840.00	3969.99
			40 MHz- SCS 30kHz	3720.00	3840.00	3960.00
			60 MHz- SCS 30kHz	3729.99	3840.00	3950.01
			80 MHz- SCS 30kHz	3740.01	3840.00	3939.99
			100 MHz- SCS 30kHz	3750.00	3840.00	3930.00
A2 – Type 1	NR	2	20 MHz- SCS 30kHz	3710.01+3890.01	3750+3930 (non-contiguous)	3969.99+3789.99
			40 MHz- SCS 30kHz	3720.00+3879.99	3760.02+3920.01 (non-contiguous)	3960.00+3800.01
			60 MHz- SCS 30kHz	3730.02+3870.00	3770.01+3909.99 (non-contiguous)	3949.98+3810.00
			80 MHz- SCS 30kHz	3740.01+3860.01	3780+3900 (non-contiguous)	3939.99+3819.99
			100 MHz- SCS 30kHz	3750.00+3849.99	3790,02+3890.01	3930.00+3830.01
A2 – Type 2 - Band Edge	NR	2	20 MHz- SCS 30kHz	3710.01+3729.99	-	3969.99+3950.01
			40 MHz- SCS 30kHz	3720.00+3759.99	-	3960.00+3920.01
			60 MHz- SCS 30kHz	3729.99+3789.99	-	3950.00+3890.01
			80 MHz- SCS 30kHz	3740.01+3819.99	-	3939.99+3860.01
			100 MHz- SCS 30kHz	3750.00+3849.99	-	3930.00+3830.01
A2 – Type 3 - OBW	NR	2	20 MHz- SCS 30kHz	3710.01+3729.99	3830.01+3849.99	3969.99+3950.01
			40 MHz- SCS 30kHz	3720.00+3759.99	3819.99+3860.01	3960.00+3920.01
			60 MHz- SCS 30kHz	3729.99+3789.99	3810+3870.00	3950.00+3890.01
			80 MHz- SCS 30kHz	3740.01+3819.99	3800.01+3879.99	3939.99+3860.01
			100 MHz- SCS 30kHz	3750.00+3849.99	3790,02+3890.01	3930.00+3830.01



1.4 DECLARATION OF BUILD STATUS

Equipment Description

Technical Description: <i>(Please provide a brief description of the intended use of the equipment)</i>	Antenna Integrated Radio Unit
Manufacturer:	Ericsson AB
Model:	AIR 6449 B77D
Part Number:	KRD 901 206/2* (with un-security software and RDNB board for testing purpose) KRD 901 206/21 (with security software and RDNB board for testing purpose) KRD 901 206/1 (with un-security software and antenna) KRD 901 206/11** (with security software and antenna) Note*: Tests have been performed on this unit. Note**: This will be the marketed, sold unit.
Hardware Version:	R1B
Software Version:	CXP 20300039/1 -R48A121
FCC ID (if applicable)	TA8AKRD901206
IC ID (if applicable)	N/A



Intentional Radiators

Technology	NR
Frequency Band (MHz)	3700 to 3980 MHz
Conducted Declared Output Power	Max output power: 320W Max output power limitation of 4W/MHz PSD
Antenna Gain (dBi)	25.65 dBi
Supported Bandwidth(s) (MHz)	20, 40, 60, 80, 100 MHz, SCS: 30 kHz
Modulation Scheme(s)	QPSK, 16QAM, 64QAM, 256QAM
ITU Emission Designator	(18M3W7D) (37M8W7D) (57M9W7D) (77M4W7D) (97M4W7D) (197MW7D) Max carrier aggregation of 2x100MHz
Bottom Frequency (MHz)	3700 MHz
Middle Frequency (MHz)	3840 MHz
Top Frequency (MHz)	3980 MHz
Duty Cycle	75%
Maximum number of NR carriers	2

Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	CPRI 25,78 GHz
Lowest frequency generated or used in the device or on which the device operates or tunes	-
Class A Digital Device (Use in commercial, industrial or business environment) ☐	
Class B Digital Device (Use in residential environment only) ☒	



DC Power Source

Nominal voltage:	-48	V
Extreme upper voltage:	-58,5	V
Extreme lower voltage:	-36	V
Max current:	70	A

Temperature

Minimum temperature:	-40.0	°C
Maximum temperature:	+55.0	°C

Antenna Characteristics

Antenna connector ☐			State impedance		Ohm
Temporary antenna connector ☒			State impedance	50	Ohm
Integral antenna ☒	Type:	AAS (Advanced antenna system)	Gain	25.65 dBi	dBi
External antenna ☐	Type:		Gain		dBi

For external antenna only:
 Standard Antenna Jack ☐ If yes, describe how user is prohibited from changing antenna (if not professionally installed):
 Equipment is only ever professionally installed ☐
 Non-standard Antenna Jack ☐

I hereby declare that the information supplied is correct and complete.

DocuSigned by:
 Name: *Andreas Helle*
 89034784428E4F2...
 Position held: Regulatory Engineer
 Date:

11 februari 2021 | 09:49:46 CET

No responsibility will be accepted by TÜV SÜD UK Limited as to the accuracy of the information declared in this document by the manufacturer.

1.5 PRODUCT INFORMATION

1.5.1 Technical Description

The Equipment Under Test (EUT) AIR 6449 B77D is an Ericsson AB Radio Unit working in the public mobile service (3700-3980 MHz) band which provides communication connections to (3700-3980 MHz) network. The AIR 6449 B77D operates from a -48V DC supply.

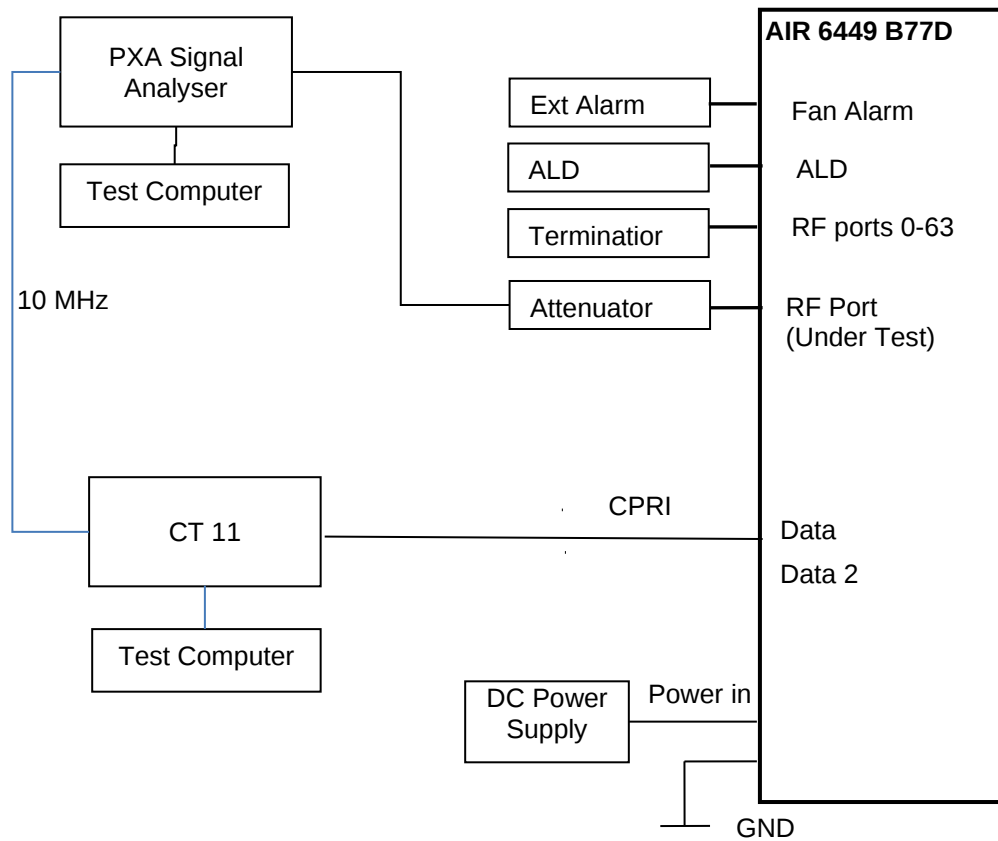
The Equipment Under Test (EUT) is shown in the photograph below. A full technical description can be found in the Manufacturer's documentation.



Equipment Under Test

1.6 TEST SETUP

Conducted Test Set Up





1.7 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated as described in the Test Method for each Test.

The EUT was powered from a -48V DC supply.

FCC Measurement Facility Registration Number
563983 Ericsson Test Laboratory, Kista

Under our group Swedac Accreditation, TÜV SÜD Sverige conducted the following tests at Kista, Sweden

Test Name	Name of Engineer(s)
Maximum Peak Output Power and Peak to Average Ratio - Conducted	Ashok Kumar
Occupied Bandwidth	Ashok Kumar
Band Edge	Ashok Kumar
Transmitter Spurious Emissions	Ashok Kumar
Frequency Stability	Raj Kumar

1.8 DEVIATION FROM THE STANDARD

The testing has been carried out in accordance with FCC Part 27:2019, however this version of the Rule Parts does not cover 3700-3980 MHz (Band 77D) and therefore we referred to the current version of FCC Part 27, which is available on the e-CFR website, in which Clause 27.5 (m) refers to the Band 77 frequency band covered by this testing. All testing has been carried out in accordance with FCC Part 27:2019 and the methods defined in ANSI C63.26.

No other deviations from the applicable test standard were made during testing

1.9 MODIFICATION RECORD

The testing was first performed using Test Plan 2_12022-HRB 105 601-249 Uen AIR 6449 B77D FCC Test Plan V4.0 for Band Edge, Transmitter Spurious Emissions, Radiated Spurious Emissions and Frequency Stability.

The Declared Output Power of the EUT was reduced following completion of the Band Edge, Transmitter Conducted Spurious Emissions, Frequency Stability and Transmitter Radiated Spurious Emissions. As the EUT had already passed these clauses from the specification it was not deemed necessary to repeat them, see justification of this below for each of the tests. To confirm this a spot check was performed for Band Edge and Conducted Spurious Emissions on the lower Declared Output Power on the previously highest result/worst case and were found to be reduced from the previous results.

The Declaration of Build Status has also been updated from the original in Document 75940239 Report 02 Issue 02 to reflect the change for the Maximum Declared Output Power and Declared Maximum Antenna Gain.



Customer Rationale

Band Edge:

Band Edge performance heavily depends on the Band-pass Passive Cavity filter. The test has been carried out at a higher power of 5.3W/MHz. However, the qualification requirement is 4W/MHz, which is a lower power level. Since there are no changes to the hardware and no active components involved in the reduced power case, by design, it meets the 4W/MHz as well.

TUV SUD Comment

The described theoretical behaviour was confirmed by measurement of the worst case test mode found during testing. Confirmation measurements are available on request.

Customer Rationale

Spurious Emission:

Spurious Emission levels are mainly defined by three issues in the design.

1. Intermodulation produced in the system. This would have been more obvious at the 5.3W/MHz than 4W/MHz
2. Emissions by oscillations and other impurities caused by the non-linearities of active components. This would have been more obvious at the 5.3W/MHz than 4W/MHz
3. System noise: This would be the lower or at same level in the 4W/MHz case

The test has been carried out at a higher power of 5.3W/MHz. However, the qualification requirement is 4W/MHz, which is a lower power level. Since there are no changes to the hardware and the active components are less stressed in the reduced power case, by design, it will meet the 4W/MHz as well.

TUV SUD Comment

The described theoretical behaviour was confirmed by measurement of the worst case test mode found during testing. Confirmation measurements are available on request.

Customer Rationale

Frequency Stability:

This test has been carried out at the higher power/PSD at 20MHz (lowest supported bandwidth) 5W/MHz. However, the qualification requirement is 4W/MHz, which is a lower power level. By design, this does not have any impact on the Frequency Stability of the system.

TUV SUD Comment

A reduction of output power would only show an improvement in EVM, however, this would not impact the Frequency Error measurement. In this instance, testing has been performed on the worst case power of 5.3 W/MHz and it was confirmed that the carrier remains within the frequency band of operation.

No other modifications were made to the EUT during testing.



1.10 ADDITIONAL INFORMATION

The AIR 6449 B77D was equipped with an RDNB-board to enable testing on each RF path/antenna port. The RDNB-board is replacing the AAS Antenna during the testing and only used in testing purpose. The RDNB-board has 64 identical ports, to expedite the testing that was required on performing all tests on all ports the Carrier Output Power was initially performed on all ports and then the ones with the highest output power were selected to perform the other tests for Bottom, Middle and Top channel in each bandwidth listed. The rationale for this can be seen in the TUV SUD Document FCC and ISSED Test Plan Rationale for Base Station Equipment.

Ericsson have provided the following details about the variants of the AIR 6449 B77D.

KRD 901 206/2* (with un-security software and RDNB board for testing purpose)

KRD 901 206/21 (with security software and RDNB board for testing purpose)

KRD 901 206/1 (with un-security software and antenna)

KRD 901 206/11** (with security software and antenna)

Note*: Tests have been performed on this unit.

Note**: This will be the marketed, sold unit.



SECTION 2

TEST DETAILS



2.1 MAXIMUM PEAK OUTPUT POWER AND PEAK TO AVERAGE RATIO - CONDUCTED

2.1.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.50
FCC CFR 47 Part 2, Clause 2.1046

2.1.2 Date of Test and Modification State

12 – 15 December 2020 and 06-10 February 2021 - Modification State 0

2.1.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.4 Environmental Conditions

Ambient Temperature	22.0 - 24.1°C
Relative Humidity	12.6 - 40.3%

2.1.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, clause 5.2.1 and summed in accordance with FCC KDB 662911 D01.

2.1.6 Test Results

Configuration A1

Maximum Output Power Per Port
20MHz Carrier Bandwidth 30.97 dBm



Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
0	64QAM	20.0 MHz 30 kHz SCS	9.12	30.69	18.08
1	64QAM	20.0 MHz 30 kHz SCS	9.14	30.51	17.89
2	64QAM	20.0 MHz 30 kHz SCS	9.10	30.41	17.79
3	64QAM	20.0 MHz 30 kHz SCS	9.19	30.58	17.97
4	64QAM	20.0 MHz 30 kHz SCS	9.13	30.66	18.04
5	64QAM	20.0 MHz 30 kHz SCS	8.96	30.51	17.90
6	64QAM	20.0 MHz 30 kHz SCS	9.14	30.52	17.91
7	64QAM	20.0 MHz 30 kHz SCS	9.16	30.69	18.07
8	64QAM	20.0 MHz 30 kHz SCS	9.02	30.61	18.00
9	64QAM	20.0 MHz 30 kHz SCS	9.24	30.44	17.83
10	64QAM	20.0 MHz 30 kHz SCS	9.12	30.51	17.89
11	64QAM	20.0 MHz 30 kHz SCS	9.04	30.82	18.21
12	64QAM	20.0 MHz 30 kHz SCS	9.20	30.52	17.91
13	64QAM	20.0 MHz 30 kHz SCS	9.07	30.45	17.83
14	64QAM	20.0 MHz 30 kHz SCS	9.23	30.71	18.10
15	64QAM	20.0 MHz 30 kHz SCS	9.14	30.80	18.19
16	64QAM	20.0 MHz 30 kHz SCS	9.02	30.74	18.13
17	64QAM	20.0 MHz 30 kHz SCS	9.33	30.53	17.92
18	64QAM	20.0 MHz 30 kHz SCS	9.09	30.88	18.26
19	64QAM	20.0 MHz 30 kHz SCS	9.26	30.54	17.92
20	64QAM	20.0 MHz 30 kHz SCS	8.96	30.67	18.05
21	64QAM	20.0 MHz 30 kHz SCS	9.25	30.51	17.89
22	64QAM	20.0 MHz 30 kHz SCS	9.06	30.59	17.98
23	64QAM	20.0 MHz 30 kHz SCS	9.18	30.58	17.97
24	64QAM	20.0 MHz 30 kHz SCS	9.13	30.64	18.03
25	64QAM	20.0 MHz 30 kHz SCS	9.30	30.32	17.71
26	64QAM	20.0 MHz 30 kHz SCS	9.06	30.58	17.97
27	64QAM	20.0 MHz 30 kHz SCS	9.02	30.75	18.14
28	64QAM	20.0 MHz 30 kHz SCS	8.98	30.79	18.18
29	64QAM	20.0 MHz 30 kHz SCS	9.27	30.71	18.10
30	64QAM	20.0 MHz 30 kHz SCS	9.00	30.59	17.98
31	64QAM	20.0 MHz 30 kHz SCS	9.23	30.67	18.06
32	64QAM	20.0 MHz 30 kHz SCS	9.24	30.42	17.80
33	64QAM	20.0 MHz 30 kHz SCS	9.08	30.46	17.84
34	64QAM	20.0 MHz 30 kHz SCS	9.16	30.58	17.96
35	64QAM	20.0 MHz 30 kHz SCS	9.24	30.56	17.95
36	64QAM	20.0 MHz 30 kHz SCS	9.38	30.47	17.85
37	64QAM	20.0 MHz 30 kHz SCS	9.35	30.41	17.80
38	64QAM	20.0 MHz 30 kHz SCS	9.10	30.38	17.77
39	64QAM	20.0 MHz 30 kHz SCS	9.18	30.43	17.81
40	64QAM	20.0 MHz 30 kHz SCS	9.16	30.49	17.87
41	64QAM	20.0 MHz 30 kHz SCS	9.13	30.59	17.97
42	64QAM	20.0 MHz 30 kHz SCS	9.05	30.41	17.79
43	64QAM	20.0 MHz 30 kHz SCS	9.23	30.57	17.95
44	64QAM	20.0 MHz 30 kHz SCS	9.10	30.88	18.27
45	64QAM	20.0 MHz 30 kHz SCS	9.14	30.60	17.99
46	64QAM	20.0 MHz 30 kHz SCS	9.11	30.74	18.13
47	64QAM	20.0 MHz 30 kHz SCS	9.12	30.54	17.92
48	64QAM	20.0 MHz 30 kHz SCS	9.28	30.49	17.88
49	64QAM	20.0 MHz 30 kHz SCS	9.11	30.72	18.11
50	64QAM	20.0 MHz 30 kHz SCS	9.16	30.35	17.74
51	64QAM	20.0 MHz 30 kHz SCS	9.10	30.70	18.09
52	64QAM	20.0 MHz 30 kHz SCS	9.29	30.56	17.94
53	64QAM	20.0 MHz 30 kHz SCS	9.04	30.51	17.89
54	64QAM	20.0 MHz 30 kHz SCS	9.09	30.50	17.88
55	64QAM	20.0 MHz 30 kHz SCS	9.00	30.57	17.95
56	64QAM	20.0 MHz 30 kHz SCS	9.12	30.58	17.96
57	64QAM	20.0 MHz 30 kHz SCS	9.03	30.51	17.90
58	64QAM	20.0 MHz 30 kHz SCS	9.30	30.45	17.83
59	64QAM	20.0 MHz 30 kHz SCS	8.90	30.61	17.99
60	64QAM	20.0 MHz 30 kHz SCS	9.22	30.60	17.99



Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
61	64QAM	20.0 MHz 30 kHz SCS	9.01	30.63	18.01
62	64QAM	20.0 MHz 30 kHz SCS	8.91	30.88	18.26
63	64QAM	20.0 MHz 30 kHz SCS	9.11	30.50	17.88
Summed on all 64 Ports			-	48.65	36.03

Remarks

All transmitter antenna port performance is presented. The plot results are presented only for the port with the highest output power. Plot data performance for all transmitter ports are on file and available on request.

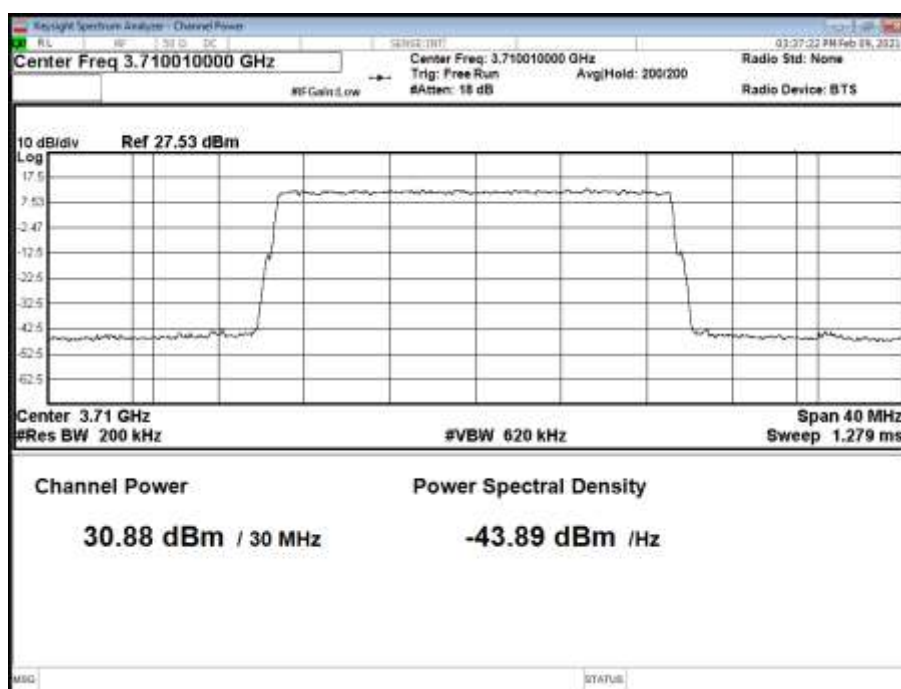
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

Maximum Total Power (EIRP) = Summed Power on all 64 Ports + Antenna Gain.

Summed PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
36.03	25.65	61.68	1640	62.15

Antenna 44 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B





Configuration A1

Maximum Output Power Per Port
 40MHz Carrier Bandwidth 33.98 dBm
 60MHz Carrier Bandwidth 35.74 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
44	64QAM	40.0 MHz 30 kHz SCS	9.14	33.97	18.19
44	64QAM	60.0 MHz 30 kHz SCS	9.14	35.47	17.85

The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

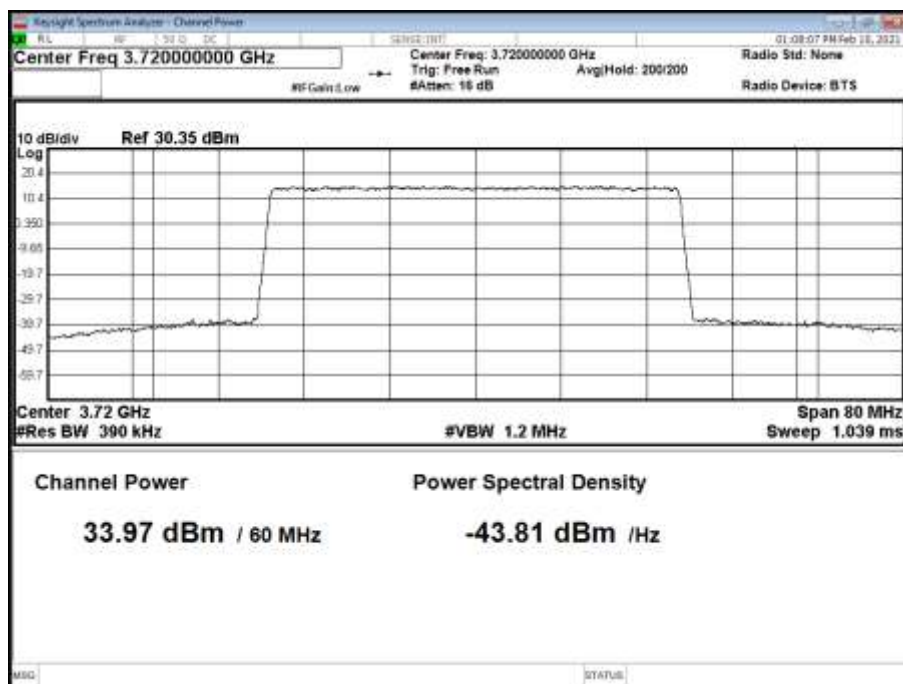
Calculations:

Maximum Total Power (EIRP) = Measured Total Power (port X) + Antenna Gain +10log(64)

Calculated PSD = Measured Total Power (port X) – (10*log(OBW/1MHz)) + Antenna Gain + 10log(64)

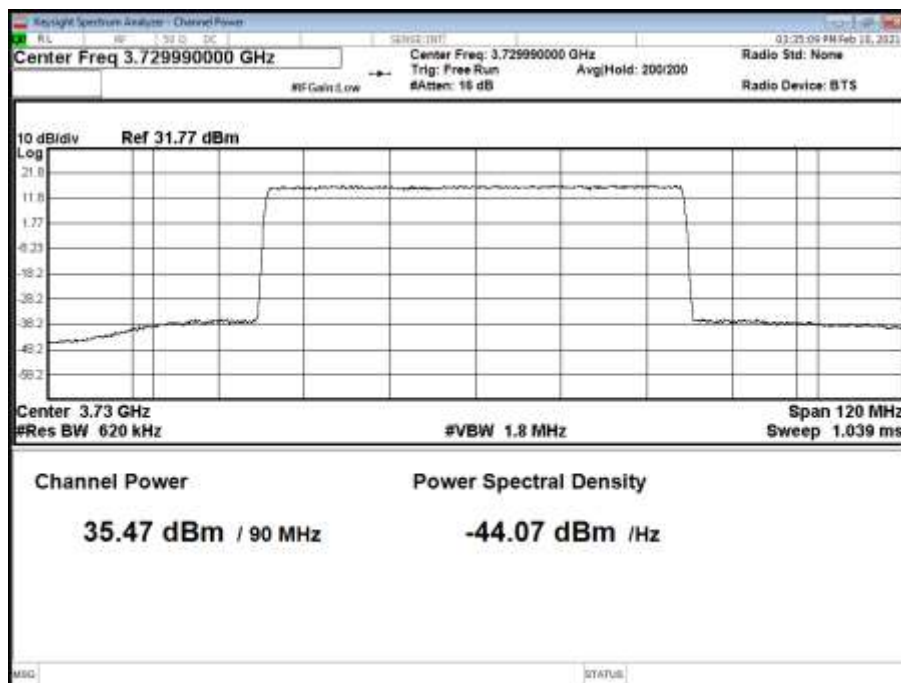
NR Carrier Bandwidth	Maximum Total output power per port (dBm)	Calculated Maximum PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
40.0 MHz	33.97	18.19	25.65	61.90	1640	62.15
60.0 MHz	35.47	17.85	25.65	61.56	1640	62.15

Antenna 44 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B





Antenna 44 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B



Configuration A1

Maximum Output Power Per Port
80MHz & 100 MHz Carrier Bandwidth 37.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
32	64QAM	80.0 MHz 30 kHz SCS	9.25	36.73	17.85
32	64QAM	100.0 MHz 30 kHz SCS	8.55	36.82	16.94

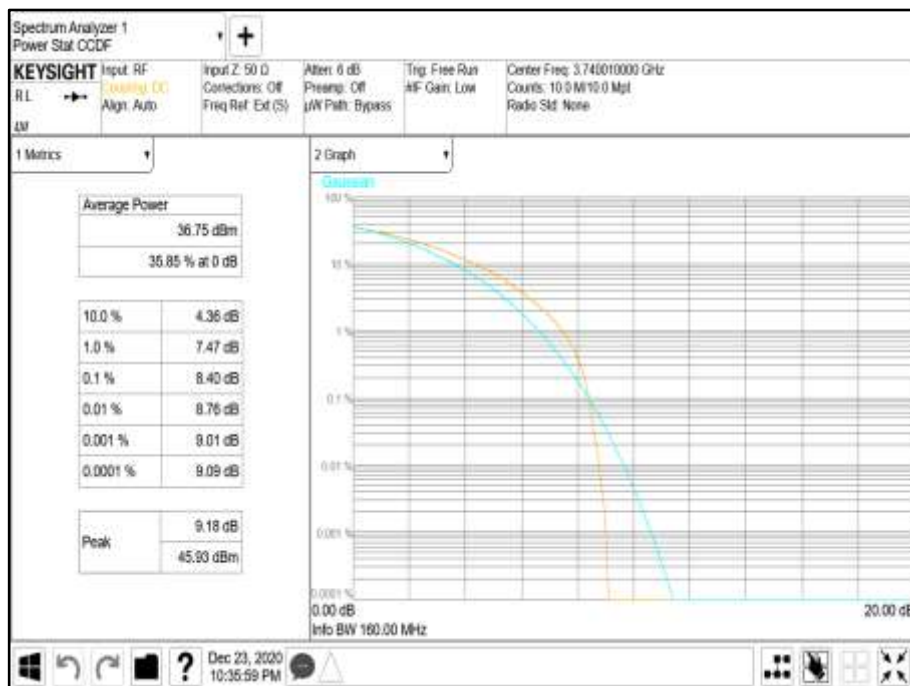
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

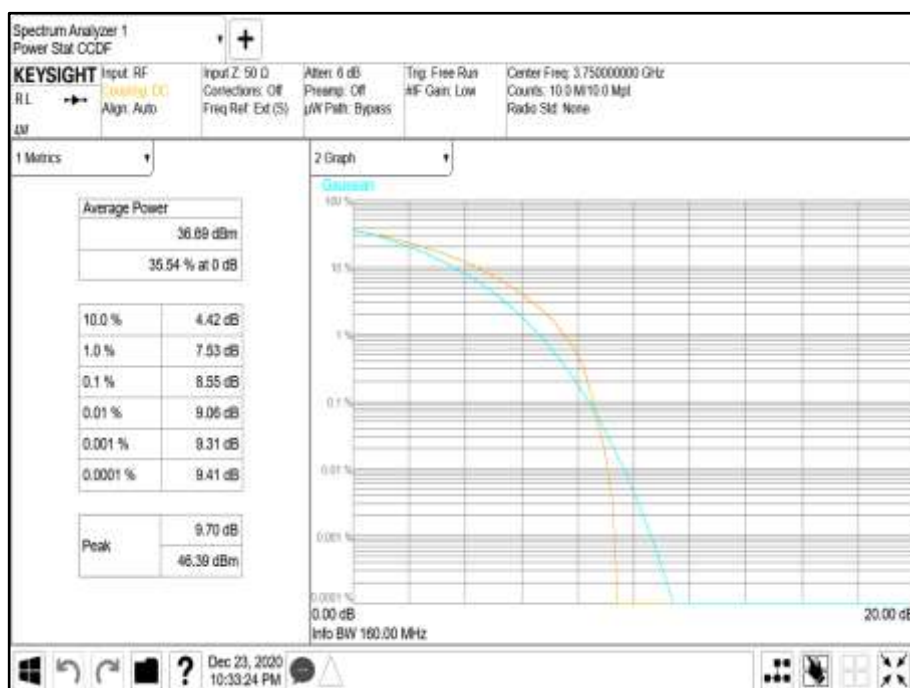
Maximum Total Power (EIRP) = Measured Total Power (port X) + Antenna Gain +10log(64)
Calculated PSD = Measured Total Power (port X) – (10*log(OBW/1MHz)) + Antenna Gain + 10log(64)

NR Carrier Bandwidth	Maximum Total output power per port (dBm)	Calculated Maximum PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
80.0 MHz	36.73	17.85	25.65	61.47	1640	62.15
100.0 MHz	36.82	16.94	25.65	60.65	1640	62.15

Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B



Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B





Configuration A1

Maximum Output Power Per Port
20MHz Carrier Bandwidth 30.97 dBm



Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power/ Calculated PSD		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
0	64QAM	20.0 MHz 30 kHz SCS	9.32	30.48	17.86
1	64QAM	20.0 MHz 30 kHz SCS	9.06	30.54	17.93
2	64QAM	20.0 MHz 30 kHz SCS	9.11	30.56	17.94
3	64QAM	20.0 MHz 30 kHz SCS	9.14	30.70	18.08
4	64QAM	20.0 MHz 30 kHz SCS	9.08	30.52	17.90
5	64QAM	20.0 MHz 30 kHz SCS	9.10	30.47	17.86
6	64QAM	20.0 MHz 30 kHz SCS	9.08	30.62	18.00
7	64QAM	20.0 MHz 30 kHz SCS	9.22	30.58	17.97
8	64QAM	20.0 MHz 30 kHz SCS	8.96	30.57	17.95
9	64QAM	20.0 MHz 30 kHz SCS	9.19	30.42	17.80
10	64QAM	20.0 MHz 30 kHz SCS	9.19	30.78	18.17
11	64QAM	20.0 MHz 30 kHz SCS	9.28	30.75	18.14
12	64QAM	20.0 MHz 30 kHz SCS	9.12	30.75	18.13
13	64QAM	20.0 MHz 30 kHz SCS	8.95	30.58	17.96
14	64QAM	20.0 MHz 30 kHz SCS	9.23	30.51	17.90
15	64QAM	20.0 MHz 30 kHz SCS	9.24	30.83	18.21
16	64QAM	20.0 MHz 30 kHz SCS	9.22	30.53	17.91
17	64QAM	20.0 MHz 30 kHz SCS	9.32	30.55	17.94
18	64QAM	20.0 MHz 30 kHz SCS	9.20	30.63	18.02
19	64QAM	20.0 MHz 30 kHz SCS	9.18	30.56	17.94
20	64QAM	20.0 MHz 30 kHz SCS	9.14	30.59	17.97
21	64QAM	20.0 MHz 30 kHz SCS	9.09	30.48	17.86
22	64QAM	20.0 MHz 30 kHz SCS	9.01	30.52	17.90
23	64QAM	20.0 MHz 30 kHz SCS	9.10	30.70	18.09
24	64QAM	20.0 MHz 30 kHz SCS	9.21	30.53	17.91
25	64QAM	20.0 MHz 30 kHz SCS	9.05	30.54	17.93
26	64QAM	20.0 MHz 30 kHz SCS	9.12	30.58	17.96
27	64QAM	20.0 MHz 30 kHz SCS	9.01	30.68	18.06
28	64QAM	20.0 MHz 30 kHz SCS	9.22	30.50	17.88
29	64QAM	20.0 MHz 30 kHz SCS	9.06	30.66	18.04
30	64QAM	20.0 MHz 30 kHz SCS	9.24	30.62	18.00
31	64QAM	20.0 MHz 30 kHz SCS	9.13	30.53	17.92
32	64QAM	20.0 MHz 30 kHz SCS	9.01	30.55	17.94
33	64QAM	20.0 MHz 30 kHz SCS	9.01	30.67	18.06
34	64QAM	20.0 MHz 30 kHz SCS	9.09	30.54	17.92
35	64QAM	20.0 MHz 30 kHz SCS	9.18	30.65	18.04
36	64QAM	20.0 MHz 30 kHz SCS	9.25	30.85	18.24
37	64QAM	20.0 MHz 30 kHz SCS	8.96	30.53	17.92
38	64QAM	20.0 MHz 30 kHz SCS	9.23	31.05	18.43
39	64QAM	20.0 MHz 30 kHz SCS	9.13	30.66	18.05
40	64QAM	20.0 MHz 30 kHz SCS	9.04	30.58	17.96
41	64QAM	20.0 MHz 30 kHz SCS	9.08	30.54	17.93
42	64QAM	20.0 MHz 30 kHz SCS	9.03	30.78	18.16
43	64QAM	20.0 MHz 30 kHz SCS	9.26	30.81	18.19
44	64QAM	20.0 MHz 30 kHz SCS	9.02	30.90	18.29
45	64QAM	20.0 MHz 30 kHz SCS	9.12	30.47	17.86
46	64QAM	20.0 MHz 30 kHz SCS	9.37	30.58	17.96
47	64QAM	20.0 MHz 30 kHz SCS	9.36	30.67	18.05
48	64QAM	20.0 MHz 30 kHz SCS	9.12	30.73	18.11
49	64QAM	20.0 MHz 30 kHz SCS	9.33	30.86	18.24
50	64QAM	20.0 MHz 30 kHz SCS	9.08	30.75	18.14
51	64QAM	20.0 MHz 30 kHz SCS	9.32	30.75	18.13
52	64QAM	20.0 MHz 30 kHz SCS	9.22	30.83	18.22
53	64QAM	20.0 MHz 30 kHz SCS	9.01	30.91	18.30
54	64QAM	20.0 MHz 30 kHz SCS	9.00	30.91	18.29
55	64QAM	20.0 MHz 30 kHz SCS	9.40	30.61	17.99
56	64QAM	20.0 MHz 30 kHz SCS	9.27	30.57	17.95
57	64QAM	20.0 MHz 30 kHz SCS	9.04	30.83	18.21
58	64QAM	20.0 MHz 30 kHz SCS	9.05	30.59	17.97
59	64QAM	20.0 MHz 30 kHz SCS	9.31	30.58	17.97
60	64QAM	20.0 MHz 30 kHz SCS	9.35	30.71	18.09
61	64QAM	20.0 MHz 30 kHz SCS	9.06	30.58	17.96



Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power/ Calculated PSD		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
62	64QAM	20.0 MHz 30 kHz SCS	9.13	30.89	18.28
63	64QAM	20.0 MHz 30 kHz SCS	9.09	30.46	17.85
Summed Power on all 64 Ports			-	48.71	36.09

Remarks

All transmitter antenna port performance is presented. The plot results are presented only for the port with the highest output power. Plot data performance for all transmitter ports are on file and available on request.

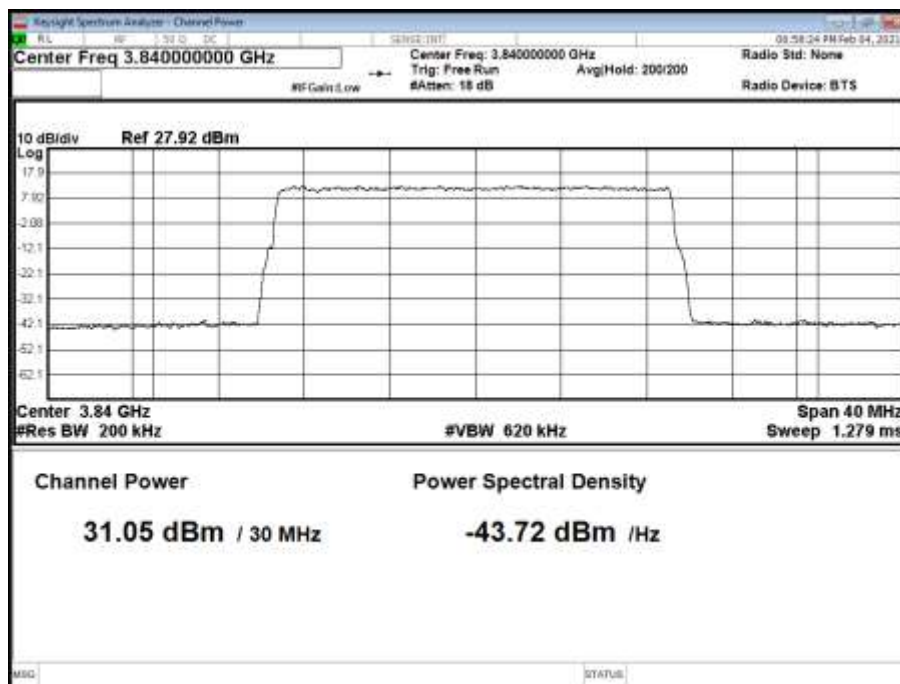
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

Maximum Total Power (EIRP) = Summed Power on all 64 Ports + Antenna Gain.

Summed PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
36.09	25.65	61.74	1640	62.15

Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M





Configuration A1

Maximum Output Power Per Port
 40MHz Carrier Bandwidth 33.98 dBm
 60MHz Carrier Bandwidth 35.74 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
38	64QAM	40.0 MHz 30 kHz SCS	9.12	34.01	18.23
38	64QAM	60.0 MHz 30 kHz SCS	9.11	35.65	18.03

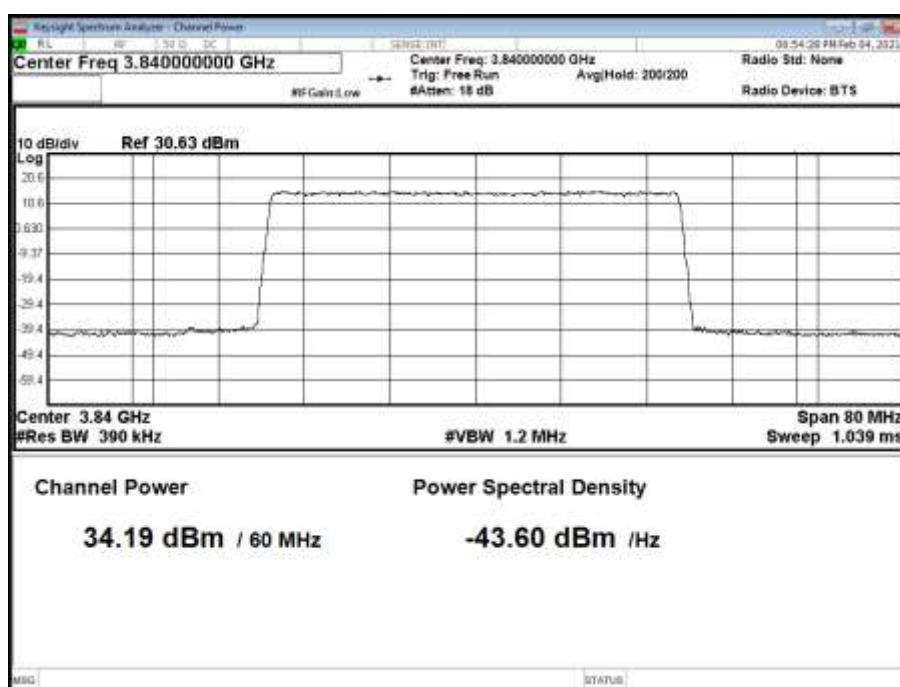
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

Maximum Total Power (EIRP) = Measured Total Power (port X) + Antenna Gain +10log(64)
 Calculated PSD = Measured Total Power (port X) – (10*log(OBW/1MHz)) + Antenna Gain + 10log(64)

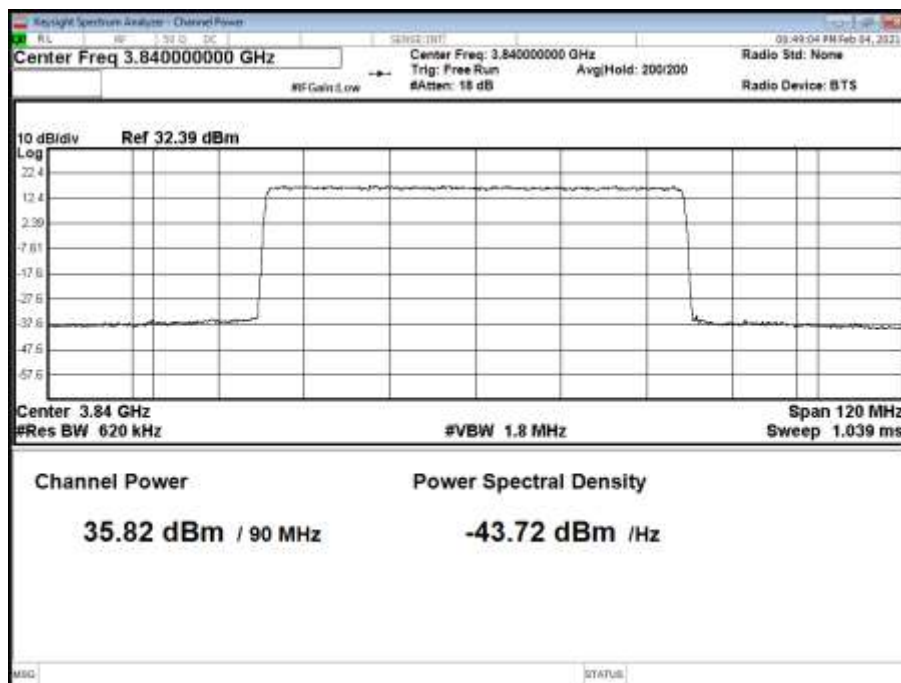
NR Carrier Bandwidth	Maximum Total output power per port (dBm)	Calculated Maximum PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
40.0 MHz	34.01	18.23	25.65	61.94	1640	62.15
60.0 MHz	35.65	18.03	25.65	61.74	1640	62.15

Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M





Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M



Configuration A1

Maximum Output Power Per Port
80MHz & 100 MHz Carrier Bandwidth 36.99 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
38	64QAM	80.0 MHz 30 kHz SCS	9.20	37.19	18.31
38	64QAM	100.0 MHz 30 kHz SCS	9.00	37.13	17.25

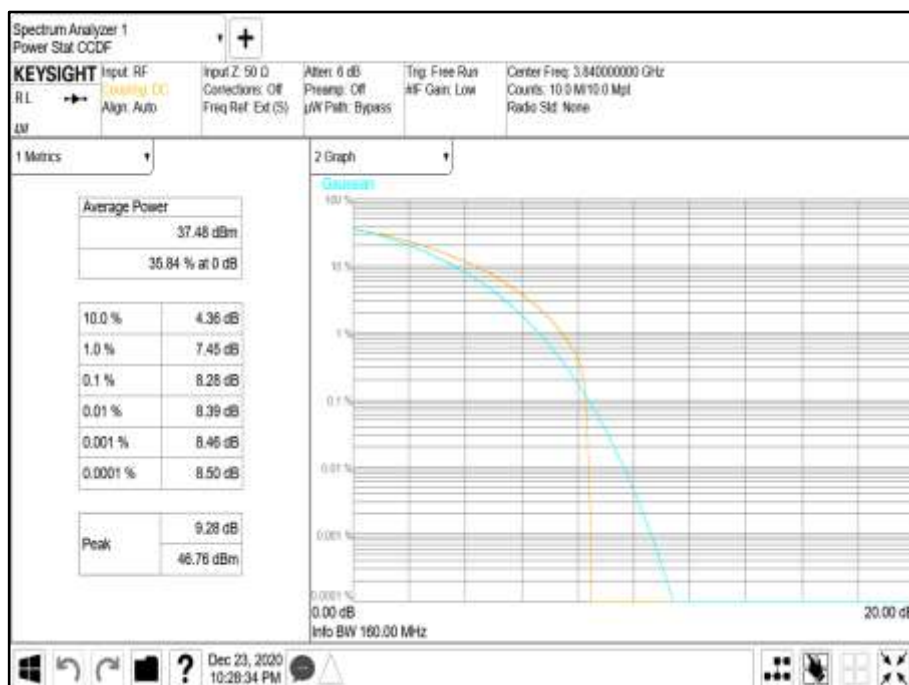
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

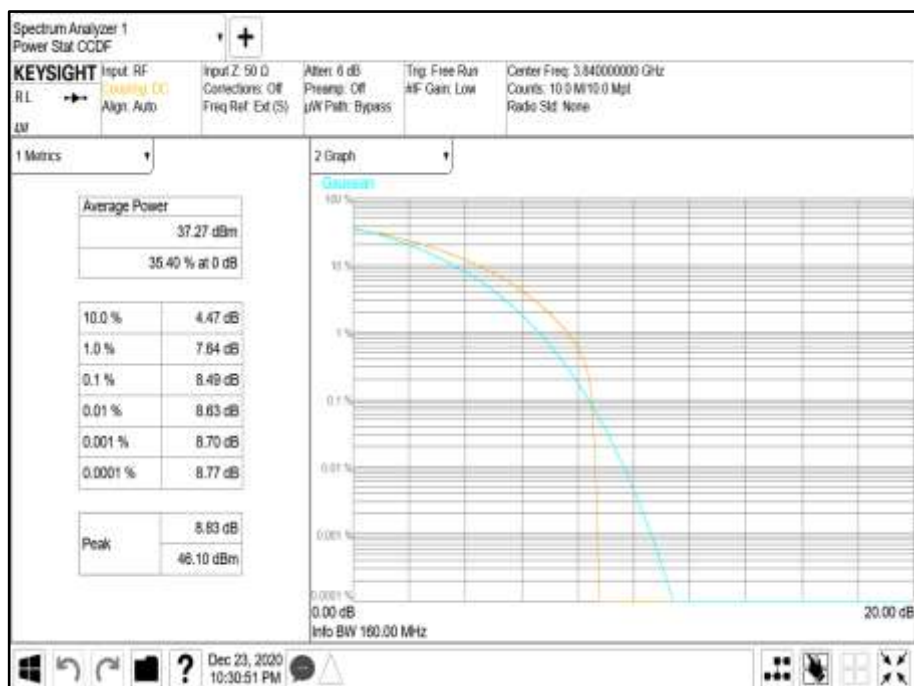
Maximum Total Power (EIRP) = Measured Total Power (port X) + Antenna Gain +10log(64)
Calculated PSD = Measured Total Power (port X) – (10*log(OBW/1MHz)) + Antenna Gain + 10log(64)

NR Carrier Bandwidth	Maximum Total output power per port (dBm)	Calculated Maximum PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
80.0 MHz	37.19	18.31	25.65	62.02	1640	62.15
100.0 MHz	37.13	17.25	25.65	60.96	1640	62.15

Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M



Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M





Configuration A1

Maximum Output Power Per Port
20MHz Carrier Bandwidth 30.97 dBm



Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
0	64QAM	20.0 MHz 30 kHz SCS	8.90	30.58	17.96
1	64QAM	20.0 MHz 30 kHz SCS	8.91	30.50	17.89
2	64QAM	20.0 MHz 30 kHz SCS	9.17	30.35	17.74
3	64QAM	20.0 MHz 30 kHz SCS	9.06	30.38	17.77
4	64QAM	20.0 MHz 30 kHz SCS	9.11	30.35	17.74
5	64QAM	20.0 MHz 30 kHz SCS	9.22	30.38	17.76
6	64QAM	20.0 MHz 30 kHz SCS	9.10	30.52	17.90
7	64QAM	20.0 MHz 30 kHz SCS	9.06	30.36	17.74
8	64QAM	20.0 MHz 30 kHz SCS	9.05	30.35	17.73
9	64QAM	20.0 MHz 30 kHz SCS	9.12	30.37	17.76
10	64QAM	20.0 MHz 30 kHz SCS	9.03	30.43	17.81
11	64QAM	20.0 MHz 30 kHz SCS	9.06	30.94	18.33
12	64QAM	20.0 MHz 30 kHz SCS	9.01	30.60	17.99
13	64QAM	20.0 MHz 30 kHz SCS	9.05	30.48	17.87
14	64QAM	20.0 MHz 30 kHz SCS	9.04	30.50	17.90
15	64QAM	20.0 MHz 30 kHz SCS	9.15	30.63	18.02
16	64QAM	20.0 MHz 30 kHz SCS	9.13	30.49	17.88
17	64QAM	20.0 MHz 30 kHz SCS	9.23	30.50	17.89
18	64QAM	20.0 MHz 30 kHz SCS	9.02	30.36	17.74
19	64QAM	20.0 MHz 30 kHz SCS	9.10	30.61	18.00
20	64QAM	20.0 MHz 30 kHz SCS	9.25	30.70	18.09
21	64QAM	20.0 MHz 30 kHz SCS	9.18	30.37	17.75
22	64QAM	20.0 MHz 30 kHz SCS	9.14	30.60	17.99
23	64QAM	20.0 MHz 30 kHz SCS	9.04	30.90	18.29
24	64QAM	20.0 MHz 30 kHz SCS	9.02	30.72	18.11
25	64QAM	20.0 MHz 30 kHz SCS	9.23	30.62	18.00
26	64QAM	20.0 MHz 30 kHz SCS	9.11	30.31	17.69
27	64QAM	20.0 MHz 30 kHz SCS	9.04	30.86	18.25
28	64QAM	20.0 MHz 30 kHz SCS	9.23	30.83	18.21
29	64QAM	20.0 MHz 30 kHz SCS	9.11	30.79	18.18
30	64QAM	20.0 MHz 30 kHz SCS	9.07	30.88	18.27
31	64QAM	20.0 MHz 30 kHz SCS	8.98	30.85	18.24
32	64QAM	20.0 MHz 30 kHz SCS	9.17	30.59	17.98
33	64QAM	20.0 MHz 30 kHz SCS	9.25	30.41	17.80
34	64QAM	20.0 MHz 30 kHz SCS	9.33	30.46	17.84
35	64QAM	20.0 MHz 30 kHz SCS	8.95	30.48	17.86
36	64QAM	20.0 MHz 30 kHz SCS	9.21	31.04	18.42
37	64QAM	20.0 MHz 30 kHz SCS	9.26	30.65	18.03
38	64QAM	20.0 MHz 30 kHz SCS	9.20	30.23	17.62
39	64QAM	20.0 MHz 30 kHz SCS	8.91	30.41	17.79
40	64QAM	20.0 MHz 30 kHz SCS	9.08	30.24	17.63
41	64QAM	20.0 MHz 30 kHz SCS	9.08	30.67	18.05
42	64QAM	20.0 MHz 30 kHz SCS	9.30	30.69	18.07
43	64QAM	20.0 MHz 30 kHz SCS	9.14	30.41	17.79
44	64QAM	20.0 MHz 30 kHz SCS	9.25	30.92	18.30
45	64QAM	20.0 MHz 30 kHz SCS	9.19	30.87	18.25
46	64QAM	20.0 MHz 30 kHz SCS	8.95	30.49	17.88
47	64QAM	20.0 MHz 30 kHz SCS	9.19	30.84	18.23
48	64QAM	20.0 MHz 30 kHz SCS	9.13	30.70	18.08
49	64QAM	20.0 MHz 30 kHz SCS	9.03	30.98	18.36
50	64QAM	20.0 MHz 30 kHz SCS	9.11	30.47	17.85
51	64QAM	20.0 MHz 30 kHz SCS	9.20	30.93	18.31
52	64QAM	20.0 MHz 30 kHz SCS	9.35	30.56	17.95
53	64QAM	20.0 MHz 30 kHz SCS	9.11	30.65	18.03
54	64QAM	20.0 MHz 30 kHz SCS	9.11	30.36	17.75
55	64QAM	20.0 MHz 30 kHz SCS	9.28	30.42	17.80
56	64QAM	20.0 MHz 30 kHz SCS	9.05	30.25	17.63
57	64QAM	20.0 MHz 30 kHz SCS	9.31	30.79	18.18
58	64QAM	20.0 MHz 30 kHz SCS	9.09	30.36	17.74
59	64QAM	20.0 MHz 30 kHz SCS	9.19	30.51	17.90
60	64QAM	20.0 MHz 30 kHz SCS	9.01	30.42	17.81



Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
61	64QAM	20.0 MHz 30 kHz SCS	9.09	30.55	17.93
62	64QAM	20.0 MHz 30 kHz SCS	8.85	30.73	18.11
63	64QAM	20.0 MHz 30 kHz SCS	9.35	30.50	17.88
Summed Power on all 64 Ports			-	48.64	36.03

Remarks

All transmitter antenna port performance is presented. The plot results are presented only for the port with the highest output power. Plot data performance for all transmitter ports are on file and available on request.

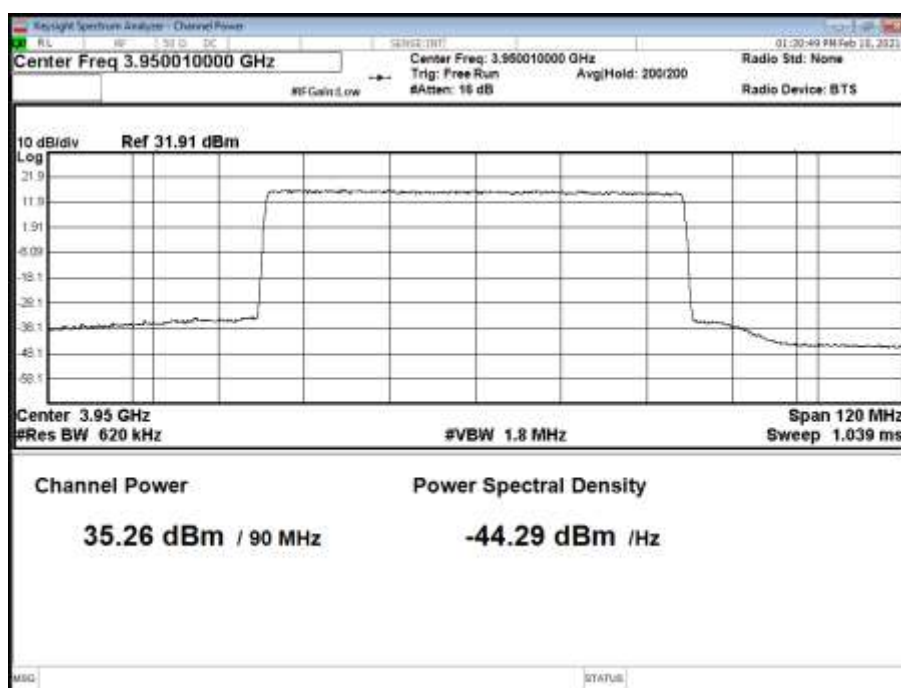
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

Maximum Total Power (EIRP) = Summed Power on all 64 Ports + Antenna Gain.

Summed PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
36.03	25.65	61.68	1640	62.15

Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T





Configuration A1

Maximum Output Power Per Port

40MHz Carrier Bandwidth 33.98 dBm

60MHz Carrier Bandwidth 35.74 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
36	64QAM	40.0 MHz 30 kHz SCS	9.24	33.98	18.20
36	64QAM	60.0 MHz 30 kHz SCS	9.15	35.26	17.64

The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and number of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

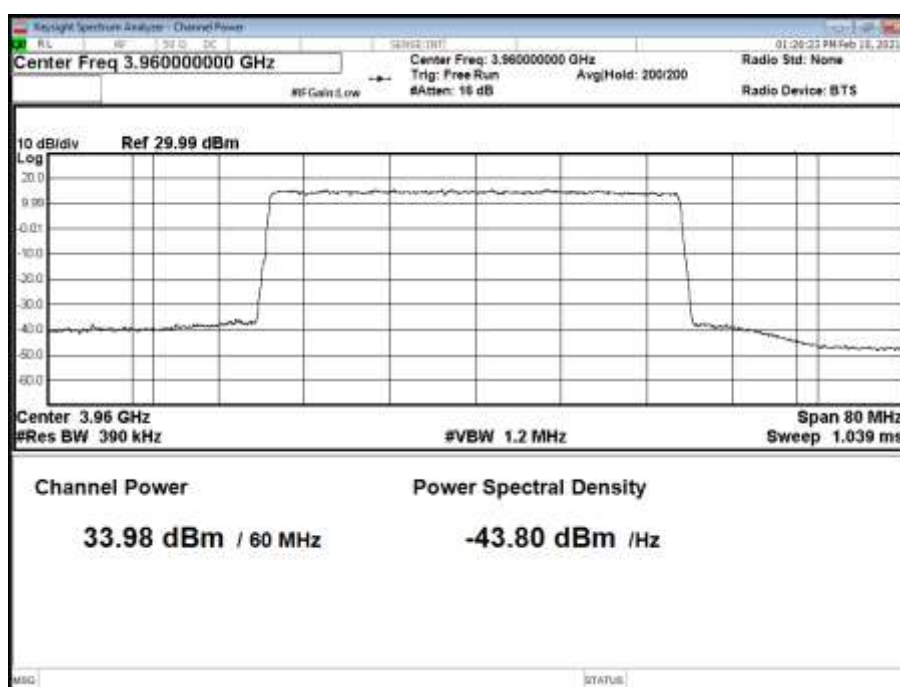
Calculations:

Maximum Total Power (EIRP) = Measured Total Power (port X) + Antenna Gain + 10log(64)

Calculated PSD = Measured Total Power (port X) – (10*log(OBW/1MHz)) + Antenna Gain + 10log(64)

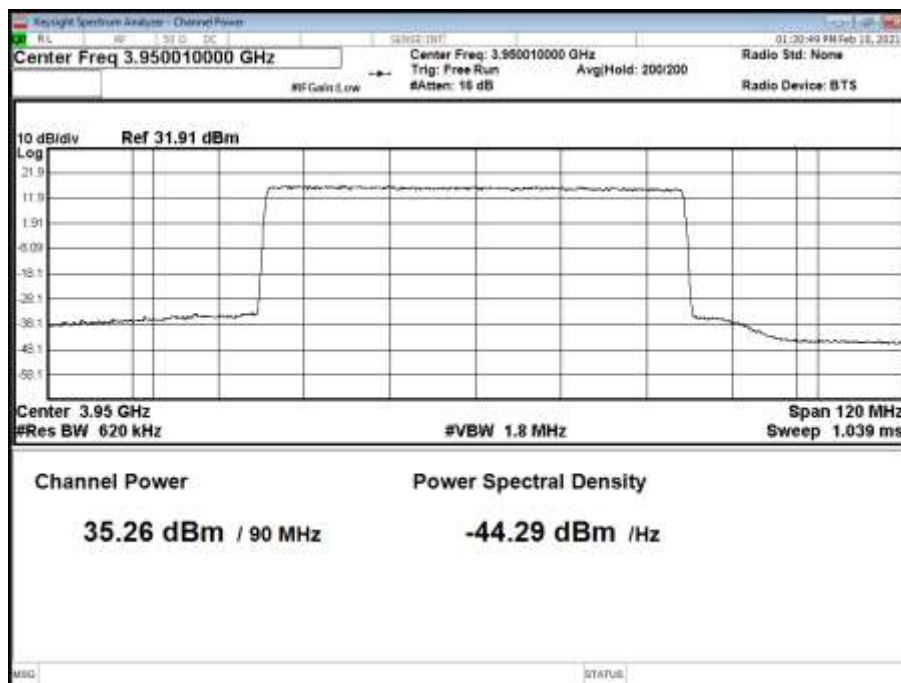
NR Carrier Bandwidth	Maximum Total output power per port (dBm)	Calculated Maximum PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
40.0 MHz	33.98	18.20	25.65	61.91	1640	62.15
60.0 MHz	35.26	17.64	25.65	61.35	1640	62.15

Antenna 36 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T





Antenna 36 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T



Configuration A1

Maximum Output Power Per Port
80MHz & 100 MHz Carrier Bandwidth 37.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / Calculated PSD		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
45	64QAM	80.0 MHz 30 kHz SCS	9.07	36.67	17.64
45	64QAM	100.0 MHz 30 kHz SCS	8.76	36.61	17.79

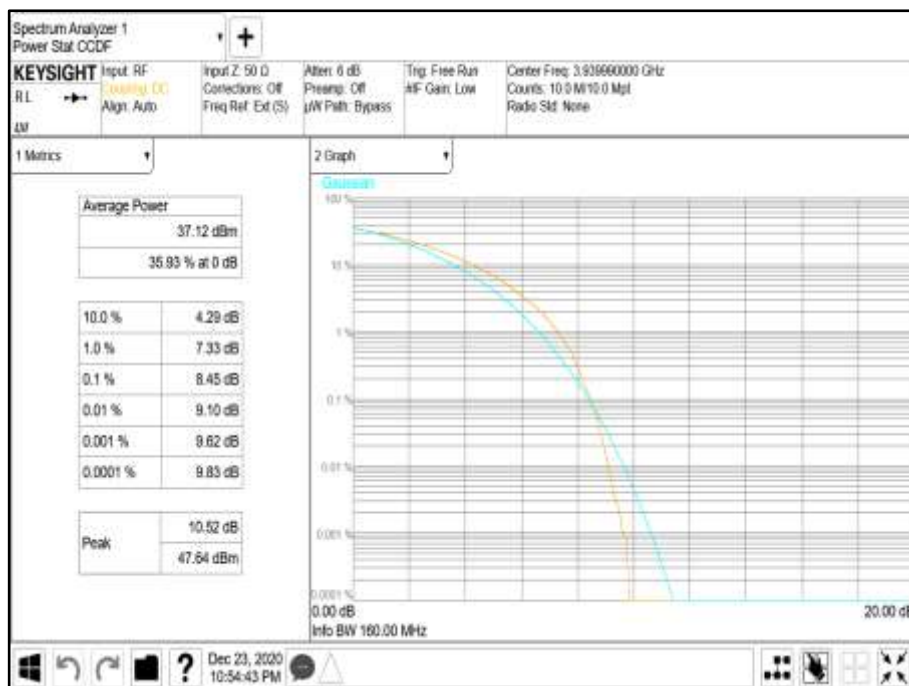
The PSD has been derived from subtracting the measured 99 % OBW from the Total Transmit Power. From the derived PSD, the declared antenna gain and of ports, (10log(N)) have been added. This represents the worst case result versus summing each of the PSD values for each port. The calculated PSD for each port is shown in the table above. See calculations below:

Calculations:

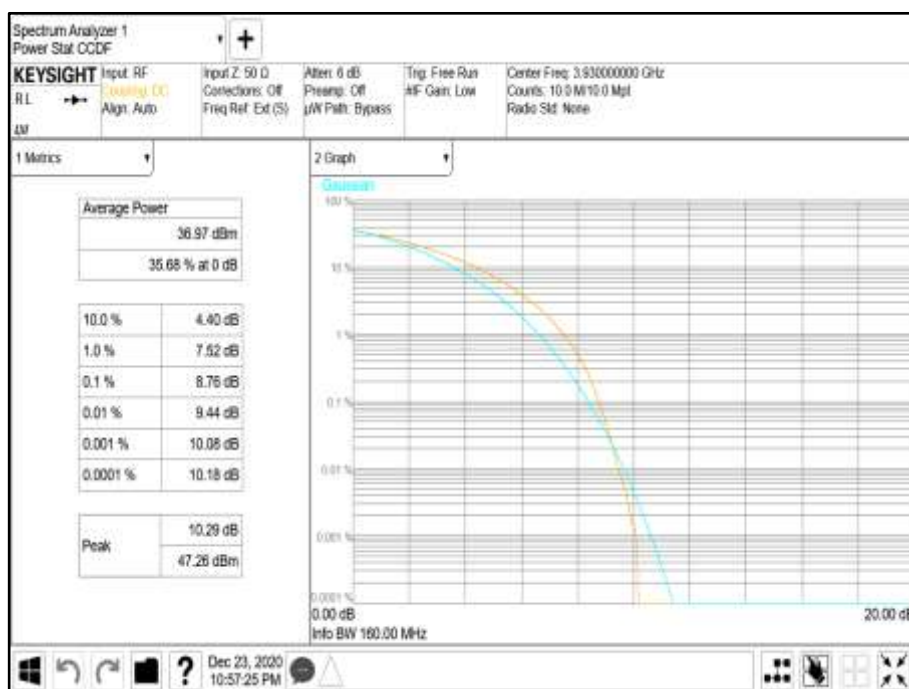
Maximum Total Power (EIRP) = Measured Total Power (port X) + Antenna Gain +10log(64)
Calculated PSD = Measured Total Power (port X) – (10*log(OBW/1MHz)) + Antenna Gain + 10log(64)

NR Carrier Bandwidth	Maximum Total output power per port (dBm)	Calculated Maximum PSD (dBm/MHz)	Maximum Antenna gain (dBi)	Maximum Total EIRP (dBm/MHz)	EIRP Limit (W/MHz)	EIRP Limit (dBm/MHz)
80.0 MHz	36.67	17.64	25.65	61.35	1640	62.15
100.0 MHz	36.61	17.79	25.65	61.50	1640	62.15

Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T



Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T





Configuration A2

Maximum Output Power Per Carrier Per Port
2 x 20MHz Carrier Bandwidth 30.97 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / PSD		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
44	64QAM	20.0 MHz 30 kHz SCS	-	33.65	18.86

Configuration A2

Maximum Output Power Per Carrier Per Port
2 x 40MHz, 60MHz, 80MHz & 100 MHz Carrier Bandwidth 34.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / PSD		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
32	64QAM	40.0 MHz 30 kHz SCS	-	36.48	18.48
32	64QAM	60.0 MHz 30 kHz SCS	-	36.25	16.57
32	64QAM	80.0 MHz 30 kHz SCS	-	36.44	15.38
32	64QAM	100.0 MHz 30 kHz SCS	-	36.53	14.36

Configuration A2

Maximum Output Power Per Carrier Per Port
2 x 20MHz Carrier Bandwidth 30.97 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / PSD		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
38	64QAM	20.0 MHz 30 kHz SCS	-	33.85	19.18

Configuration A2

Maximum Output Power Per Carrier Per Port
2 x 40MHz, 60MHz, 80MHz & 100 MHz Carrier Bandwidth 34.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / PSD		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
38	64QAM	40.0 MHz 30 kHz SCS	-	36.94	18.90
38	64QAM	60.0 MHz 30 kHz SCS	-	37.04	17.06
38	64QAM	80.0 MHz 30 kHz SCS	-	37.07	15.80
38	64QAM	100.0 MHz 30 kHz SCS	-	37.09	14.85



Configuration A2

Maximum Output Power Per Carrier Per Port
2 x 20MHz Carrier Bandwidth 30.97 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / PSD		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
36	64QAM	20.0 MHz 30 kHz SCS	-	33.58	18.93

Configuration A2

Maximum Output Power Per Carrier Per Port
2 x 40MHz, 60MHz, 80MHz & 100 MHz Carrier Bandwidth 34.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power / PSD		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
45	64QAM	40.0 MHz 30 kHz SCS	-	36.38	18.49
45	64QAM	60.0 MHz 30 kHz SCS	-	36.21	16.51
45	64QAM	80.0 MHz 30 kHz SCS	-	36.38	15.35
45	64QAM	100.0 MHz 30 kHz SCS	-	36.39	14.48

Limit	
Peak Power	≤ 1640 W/MHz or $\leq +62.15$ dBm
Peak to Average Ratio	13 dB



2.2 OCCUPIED BANDWIDTH

2.2.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.53
FCC CFR 47 Part 2, Clause 2.1049

2.2.2 Date of Test and Modification State

13-16 December 2020, 05 and 07 January 2021 and 06 February 2021- Modification State 0

2.2.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.4 Environmental Conditions

Ambient Temperature 22.8- 23.8°C
Relative Humidity 15.6 – 41.2

2.2.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 4.3.

Power bandwidth (99 %) measurement procedure
Subclause 5.4.4 of ANSI C63.26-2015 is applicable (wherein the recommendation is to use the 99 % power bandwidth function of a spectrum analyser).

2.2.6 Test Results

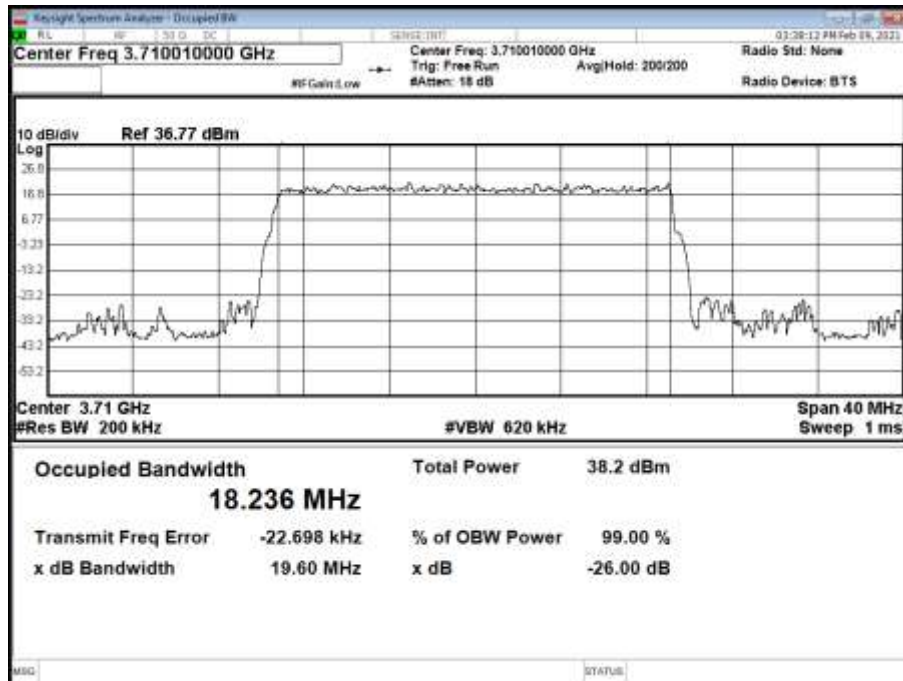
Configuration A1

Maximum Output Power Per Port
20MHz Carrier Bandwidth 30.97 dBm

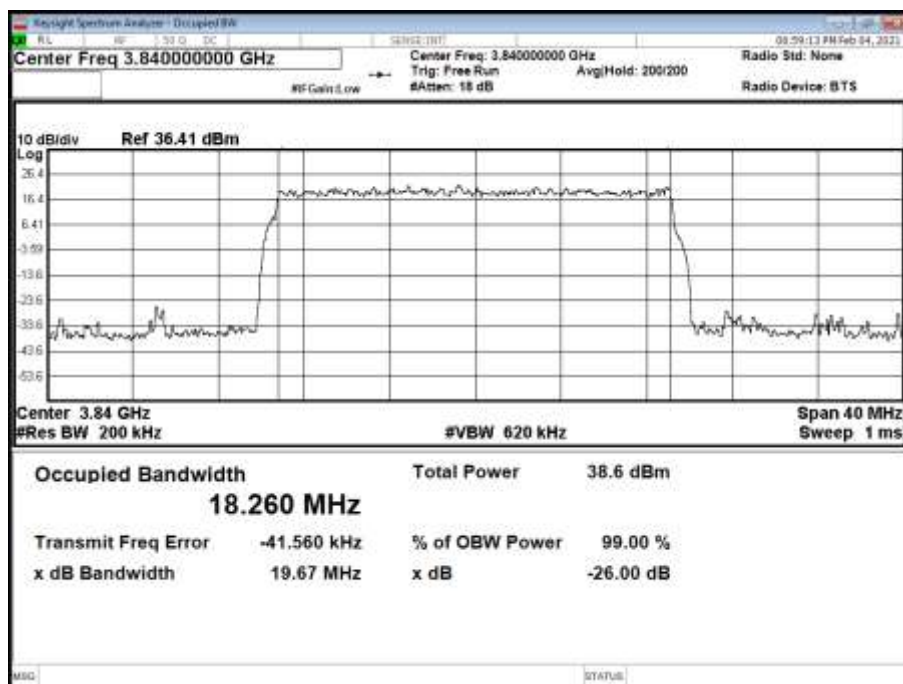
Antenna	NR Modulation	NR Carrier Bandwidth	Result (kHz)					
			Channel Position B		Channel Position M		Channel Position T	
			Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth
44, 38, 36	64QAM	20.0 MHz 30 kHz SCS	18,235.99	19,602.14	18,260.35	19,672.97	18,279.32	19,607.50



Antenna 44 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B

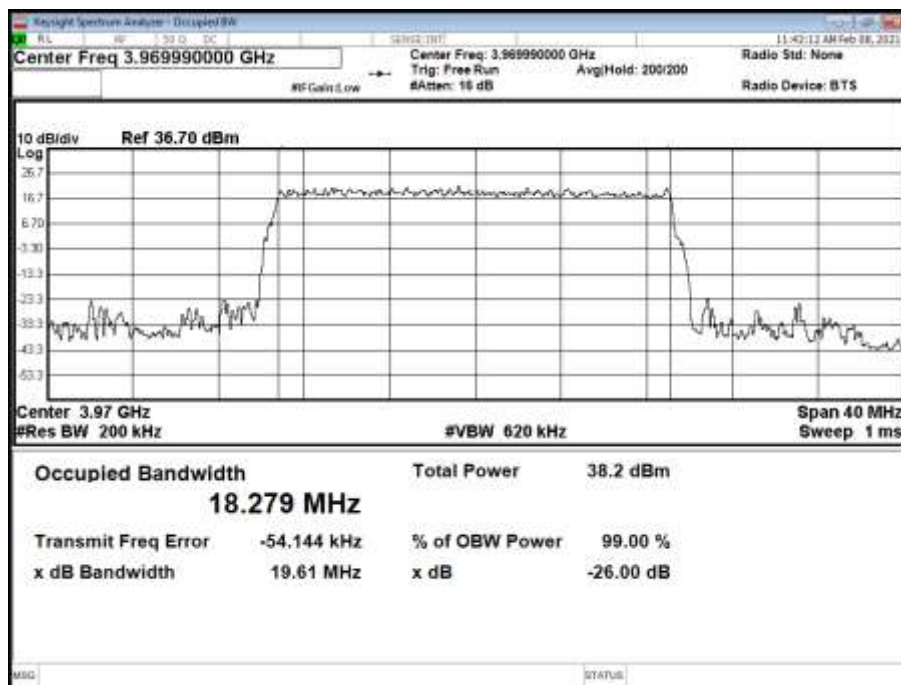


Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M





Antenna 36 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



Configuration A1

Maximum Output Power

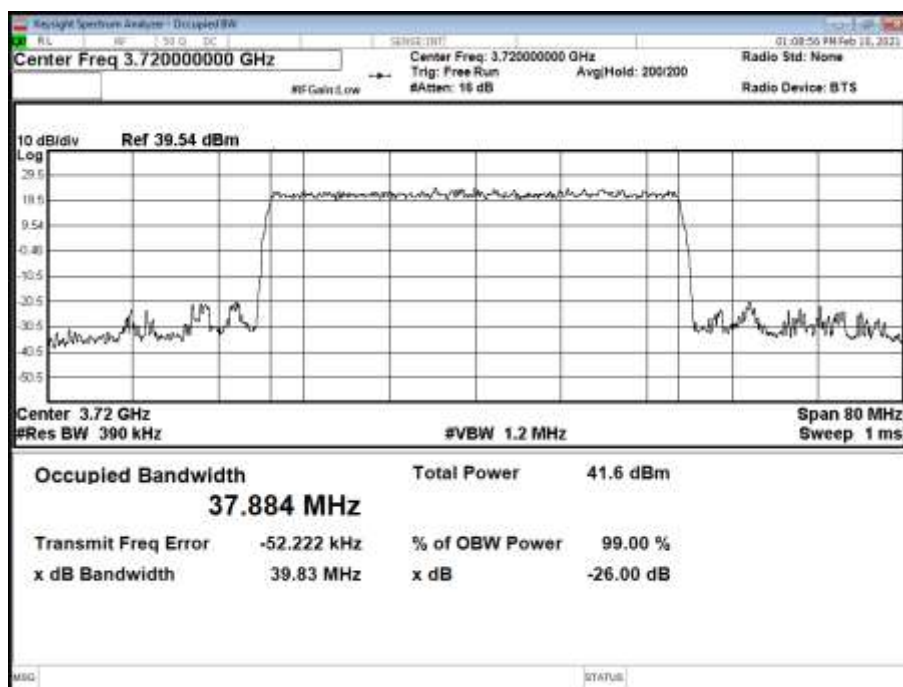
40MHz Carrier Bandwidth 33.98 dBm

60MHz Carrier Bandwidth 35.74 dBm

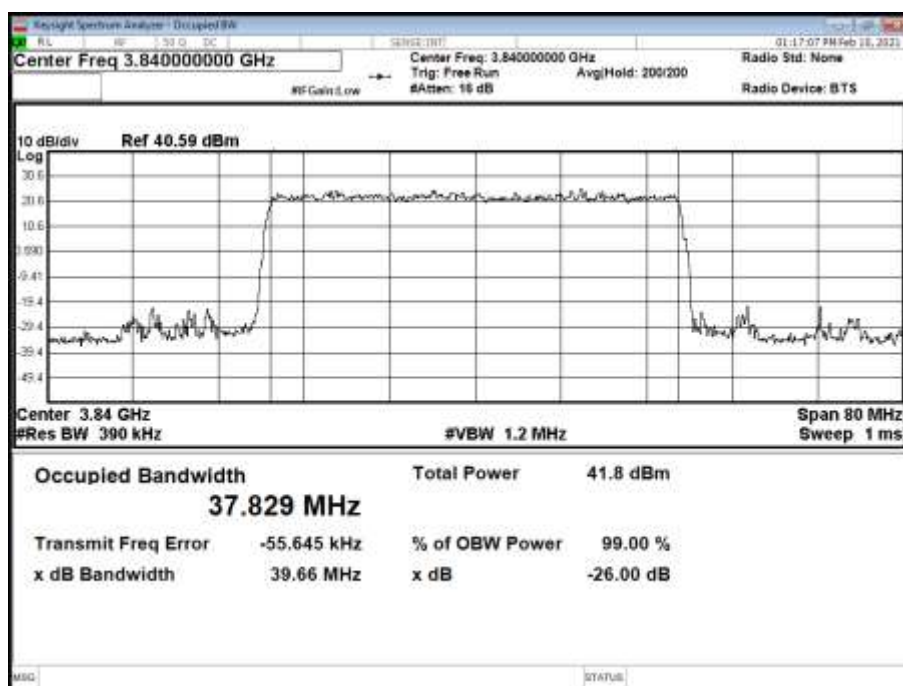
Antenna	NR Modulation	NR Carrier Bandwidth	Result (kHz)					
			Channel Position B		Channel Position M		Channel Position T	
			Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth
44, 38, 36	64QAM	40.0 MHz 30 kHz SCS	37,884.04	39,826.17	37,828.94	39,659.12	37,855.12	39,823.30
44, 38, 36	64QAM	60.0 MHz 30 kHz SCS	57,805.24	59,818.44	57,762.09	59,864.89	57,755.91	59,805.12



Antenna 44 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B

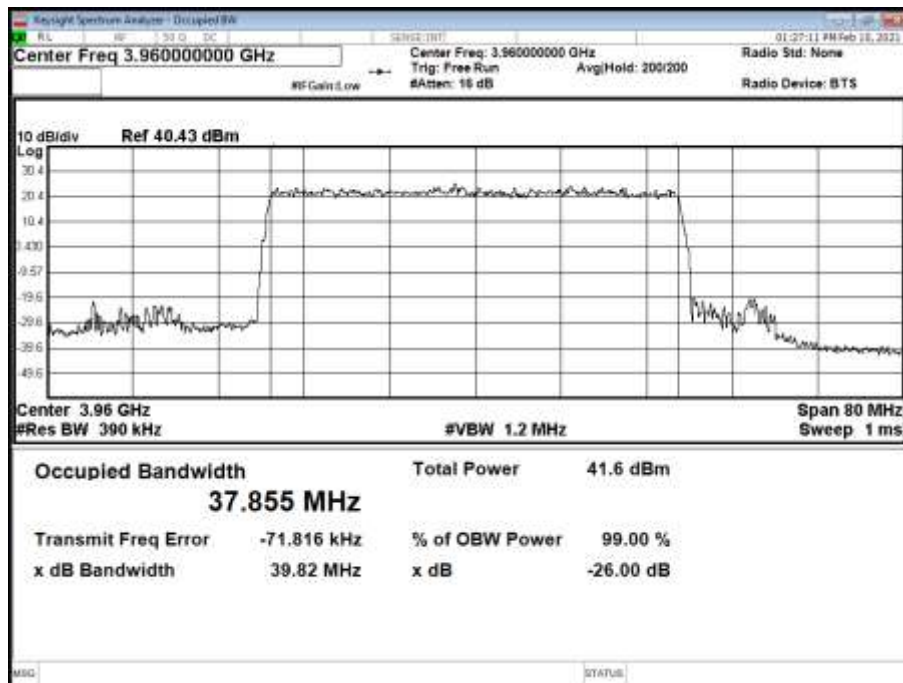


Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M

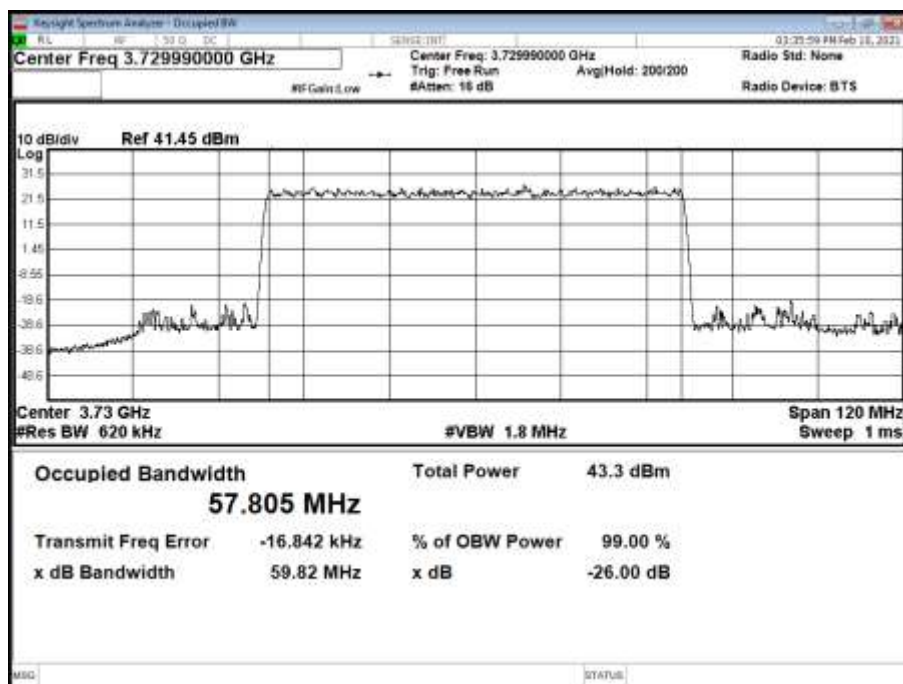




Antenna 36 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T

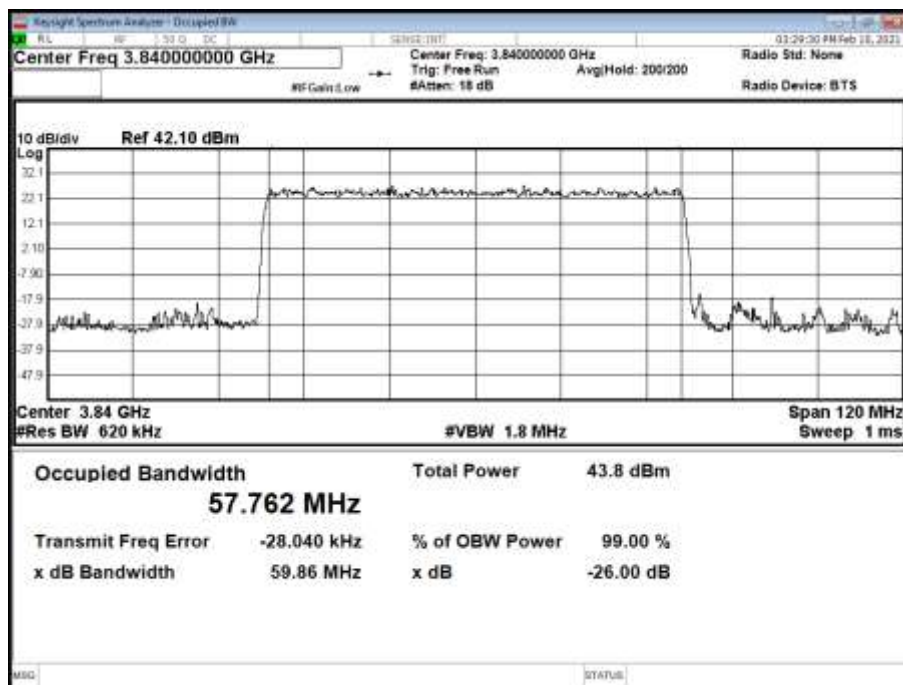


Antenna 44 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B





Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M



Antenna 36 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T





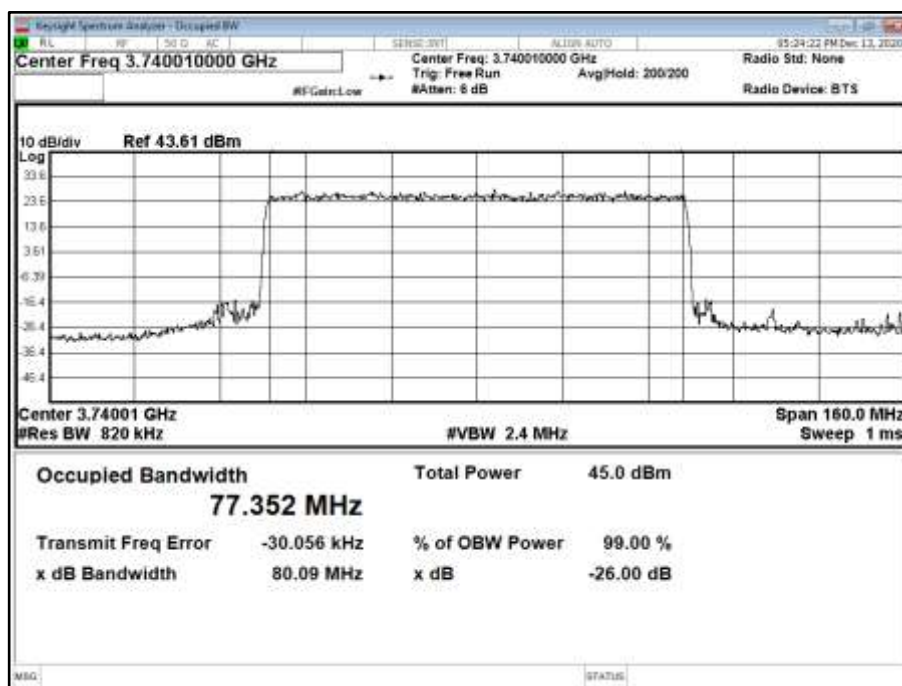
Configuration A1

Maximum Output Power

80MHz & 100 MHz Carrier Bandwidth 37.00 dBm

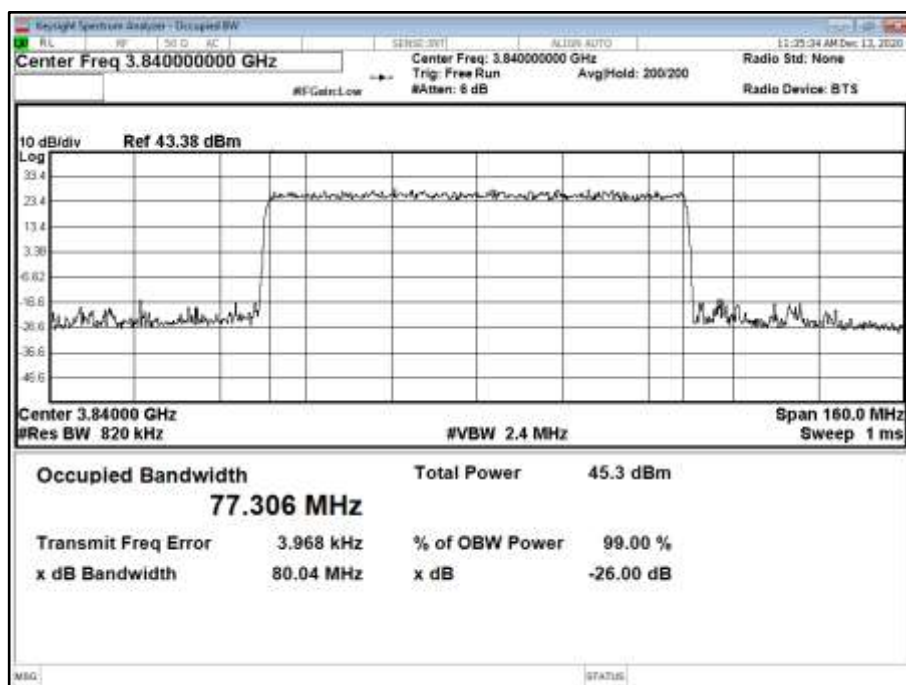
Antenna	NR Modulation	NR Carrier Bandwidth	Result (kHz)					
			Channel Position B		Channel Position M		Channel Position T	
			Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth
32, 38, 45	64QAM	80.0 MHz 30 kHz SCS	77352.22	80089.13	77305.61	80044.98	77231.21	79912.88
32, 38, 45	64QAM	100.0 MHz 30 kHz SCS	97352.00	101000.00	97352.00	100900.00	97282.00	100900.00

Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B

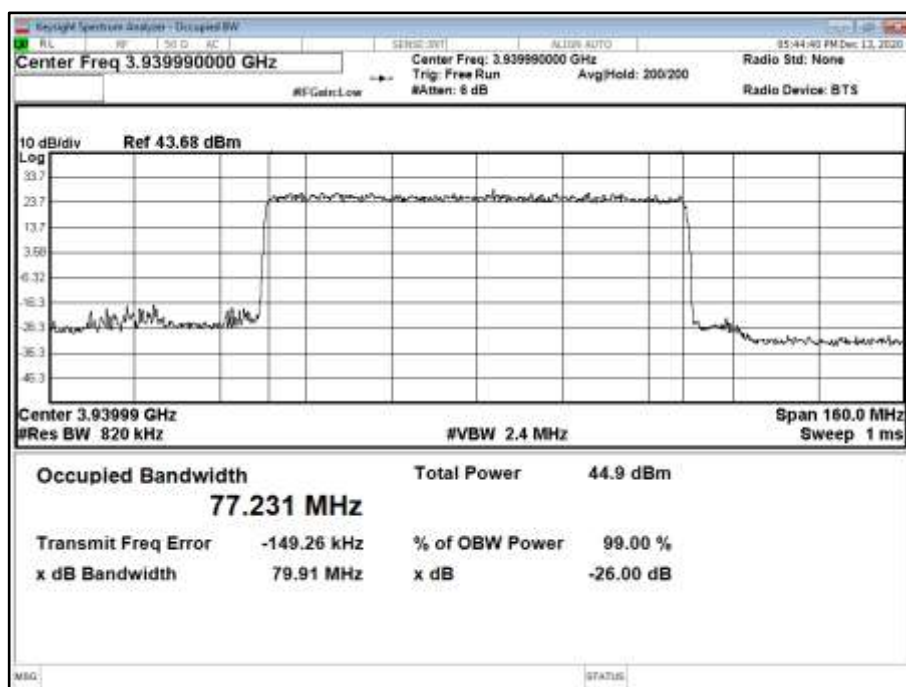




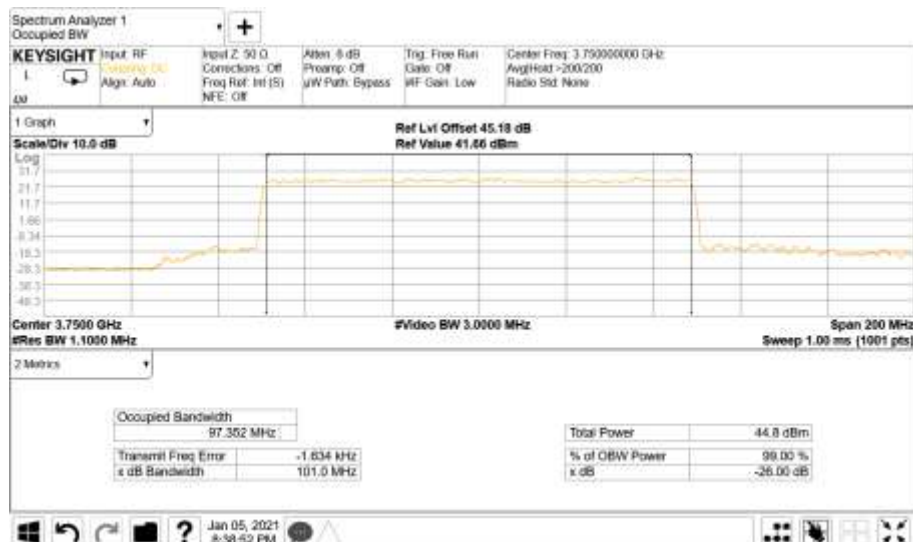
Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M



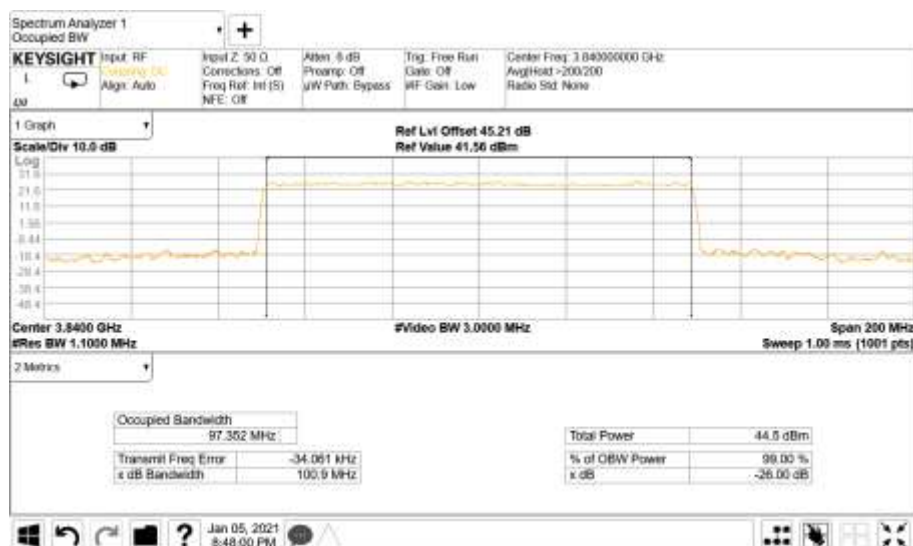
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T



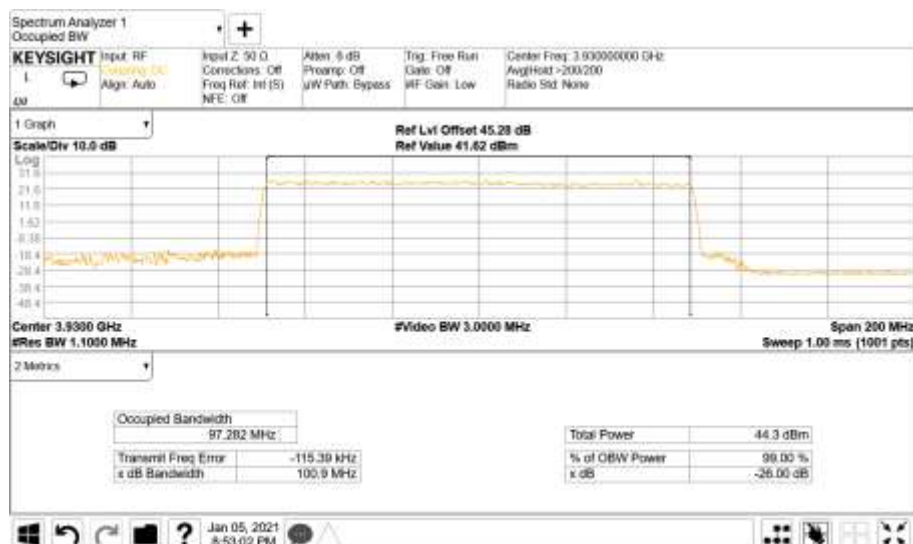
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B



Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M



Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T



Configuration A2

Maximum Output Power Per Carrier Per Port

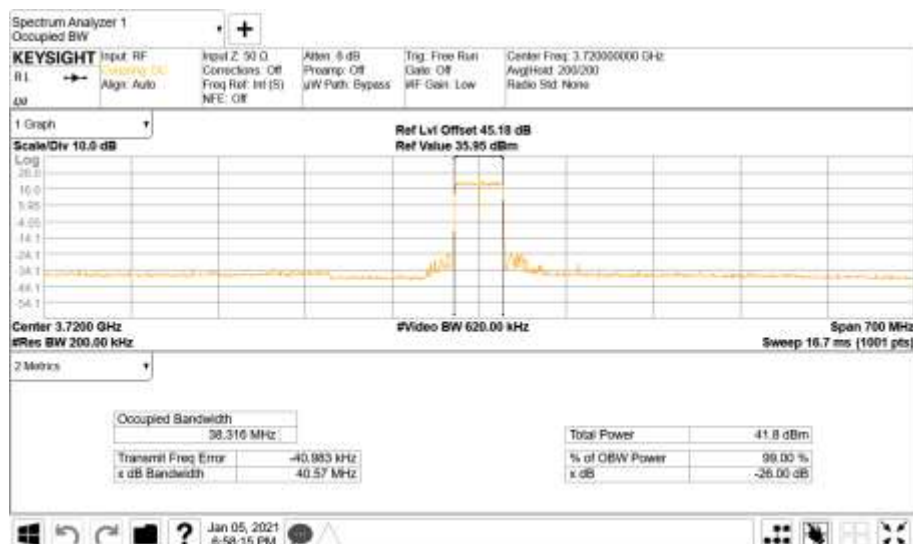
2 x 20MHz Carrier Bandwidth 32.2 dBm

2 x 40MHz, 60MHz, 80MHz & 100 MHz Carrier Bandwidth 34.0 dBm

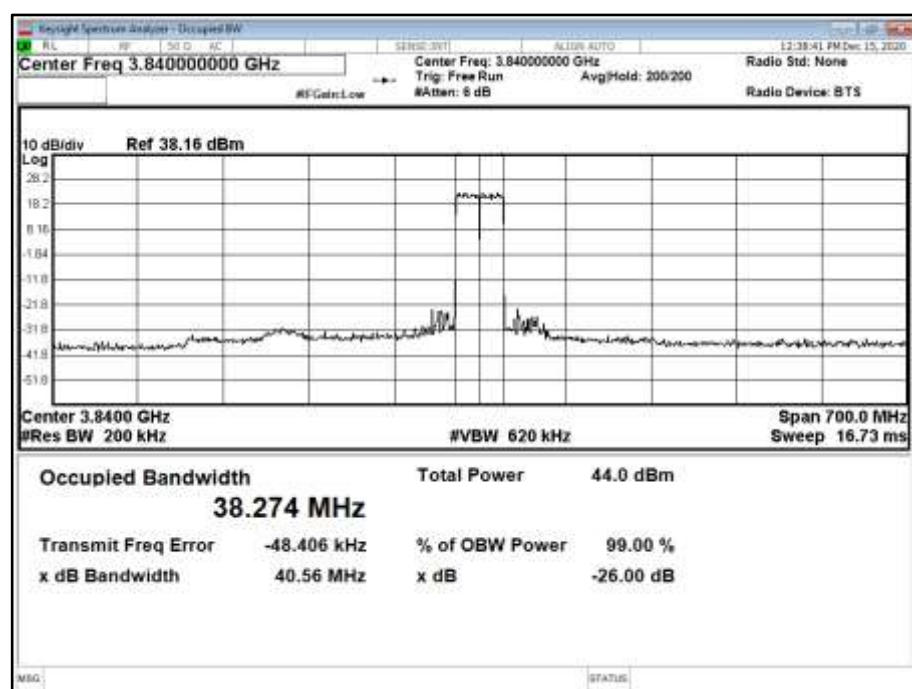
Antenna	NR Modulation	NR Carrier Bandwidth	Result (kHz)					
			Channel Position B		Channel Position M		Channel Position T	
			Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth
45.00	64QAM	20.0 MHz 30 kHz SCS	38316.00	40570.00	38274.02	40561.06	38279.57	40534.99
45.00	64QAM	40.0 MHz 30 kHz SCS	77864.97	80971.60	77820.11	80939.46	77944.78	80533.72
45.00	64QAM	60.0 MHz 30 kHz SCS	117512.07	120726.84	117549.94	120782.88	117342.48	120534.92
45.00	64QAM	80.0 MHz 30 kHz SCS	156619.18	160942.46	156590.79	160915.79	156705.25	160908.22
45.00	64QAM	100.0 MHz 30 kHz SCS	196363.25	201446.97	196595.88	201459.11	196512.73	201406.03



Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B

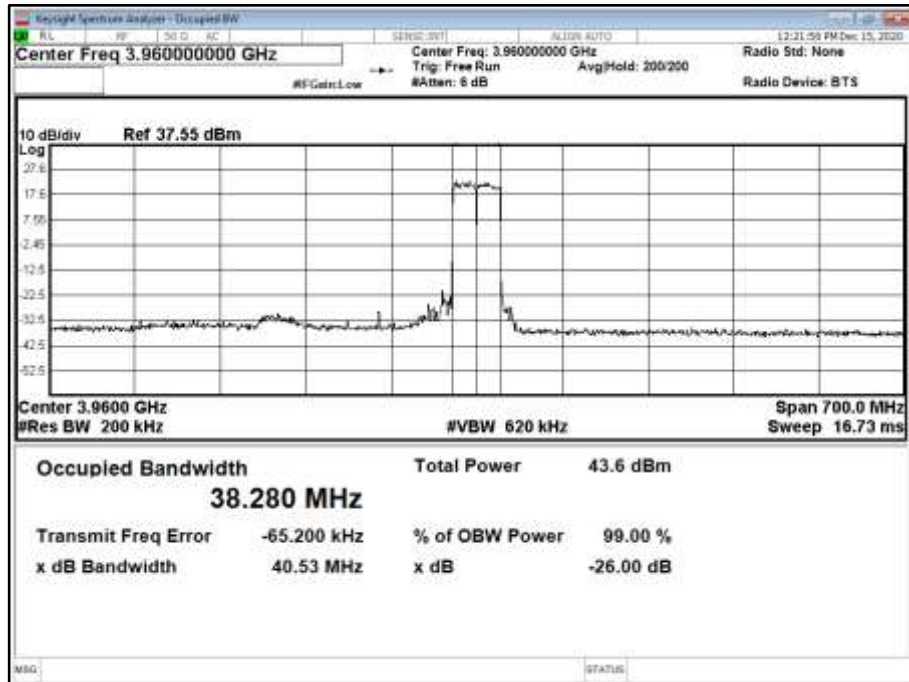


Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M

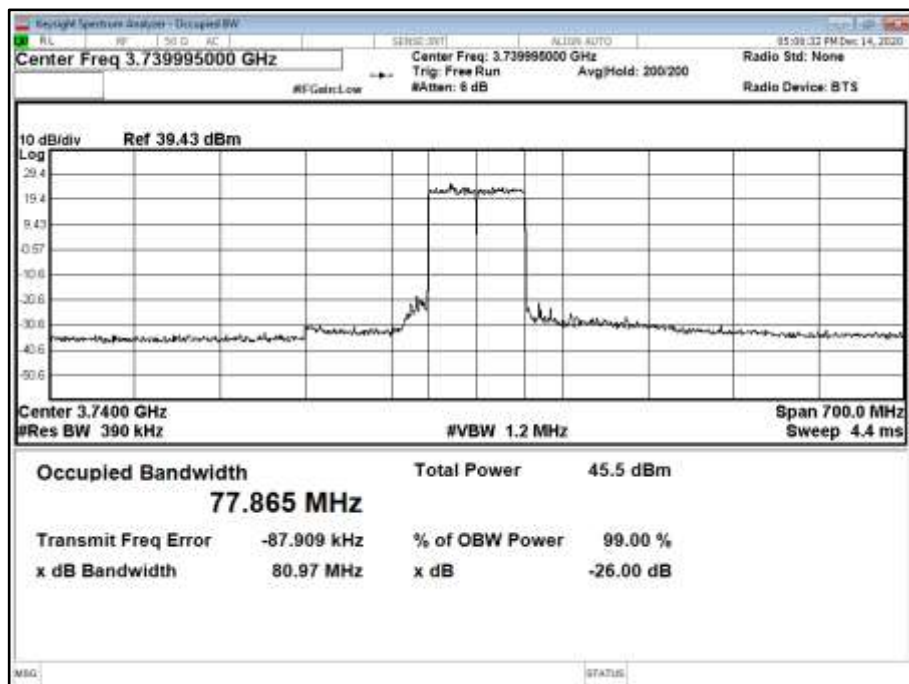




Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T

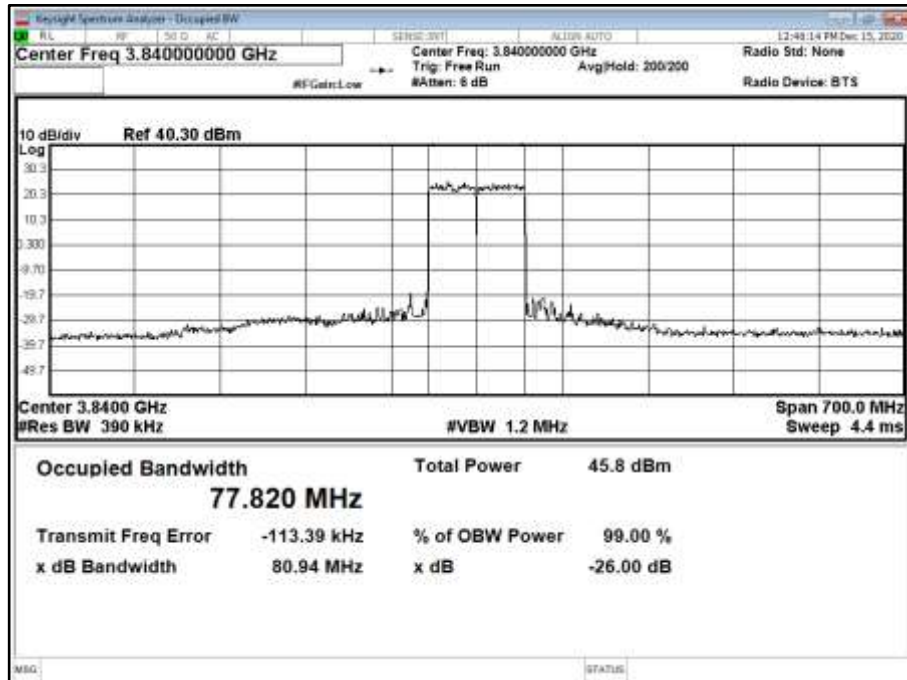


Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B

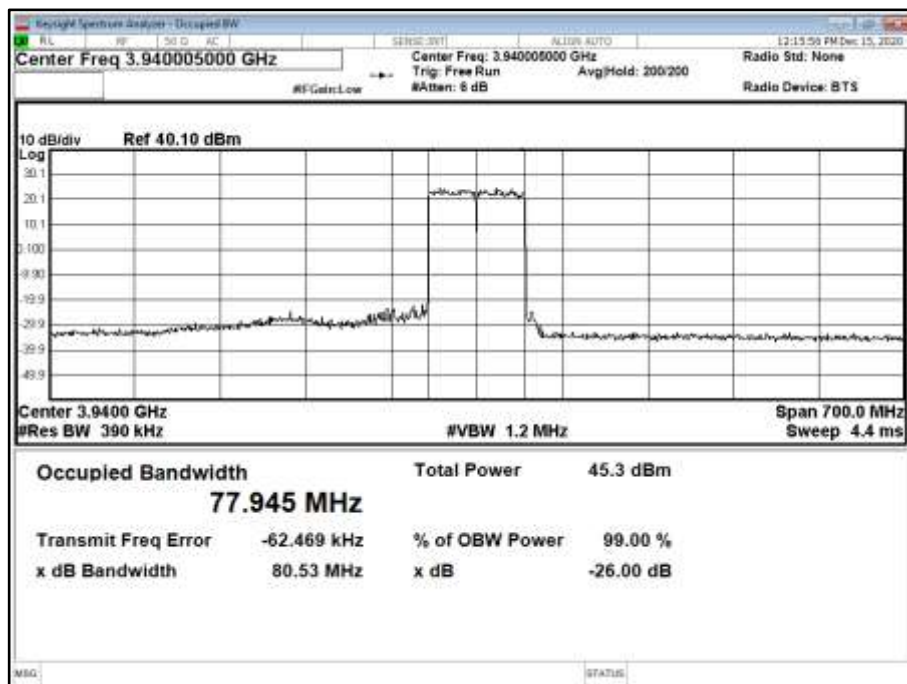




Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M

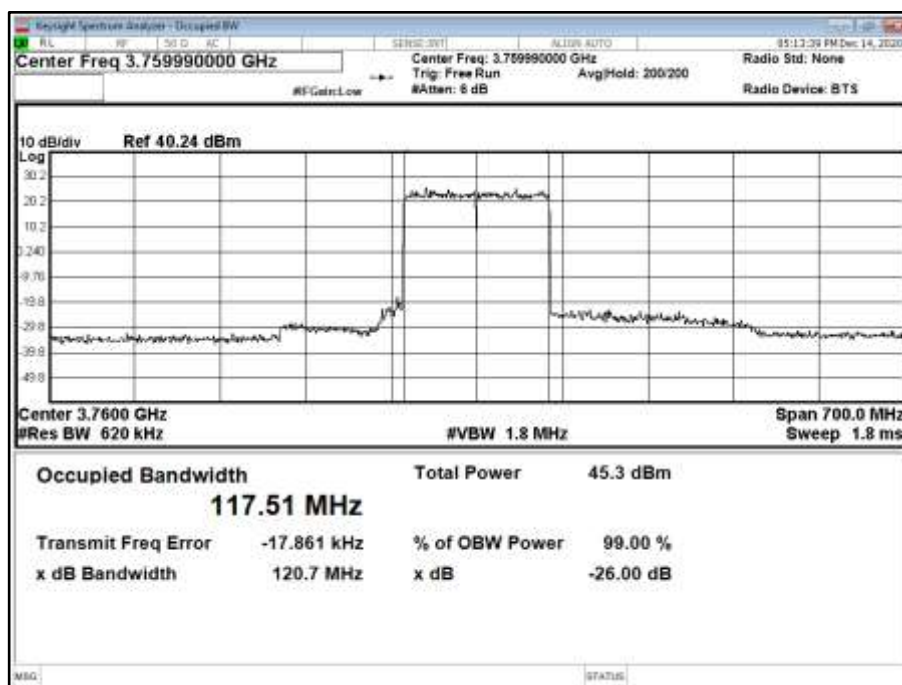


Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T

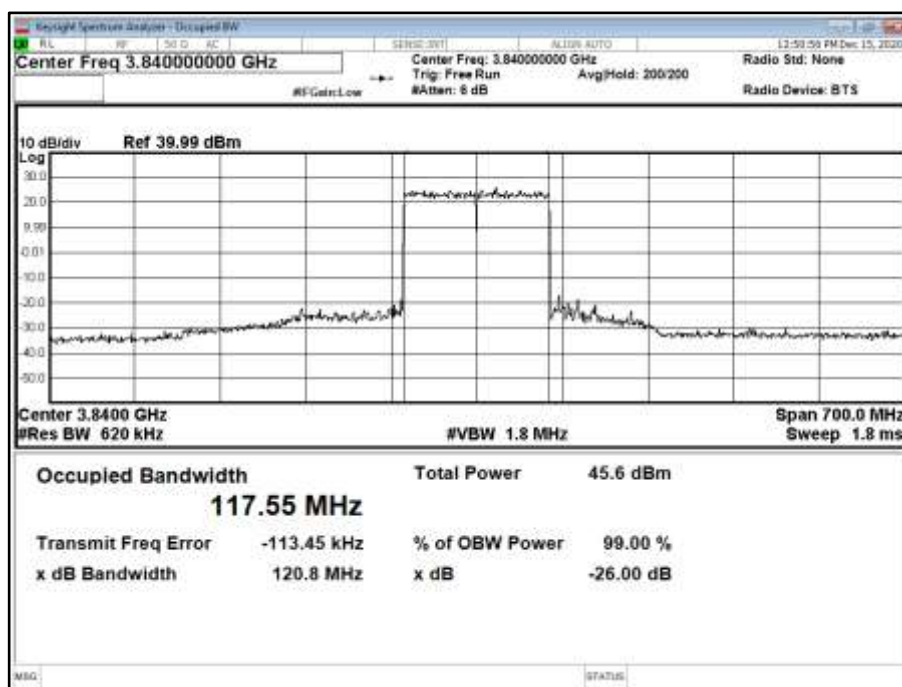




Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B

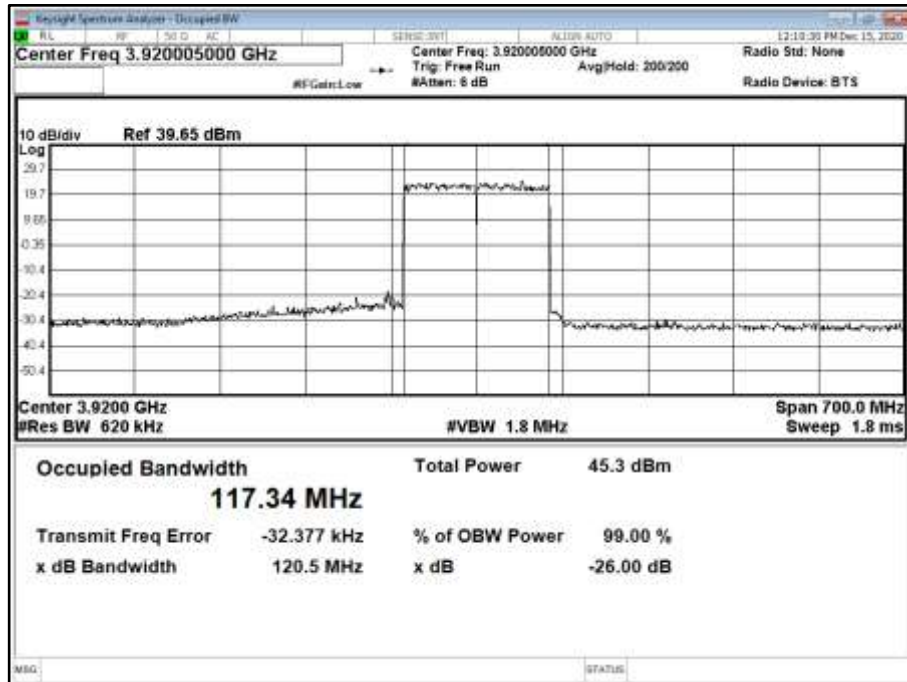


Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M

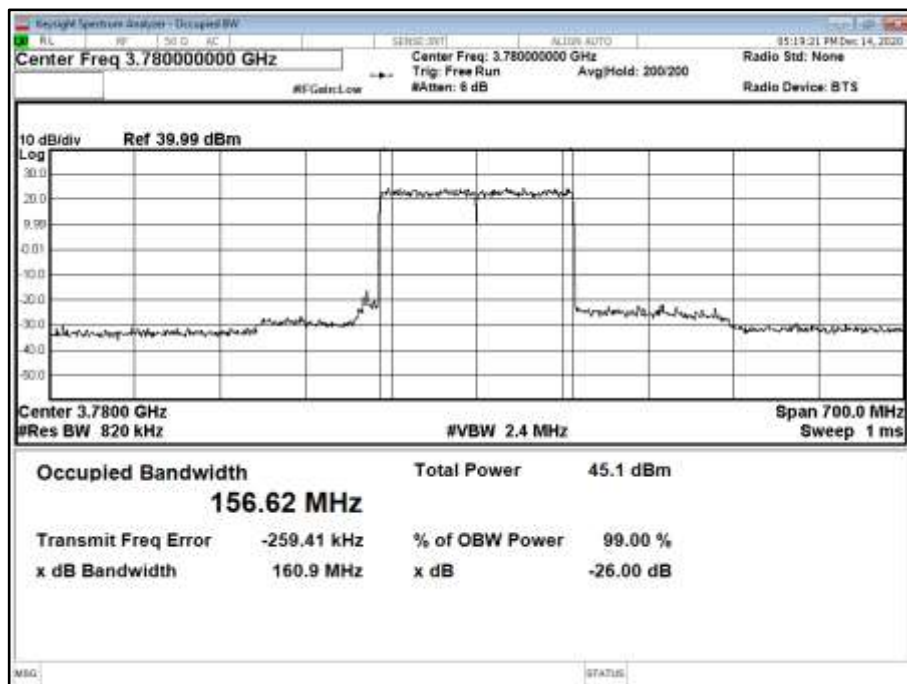




Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T

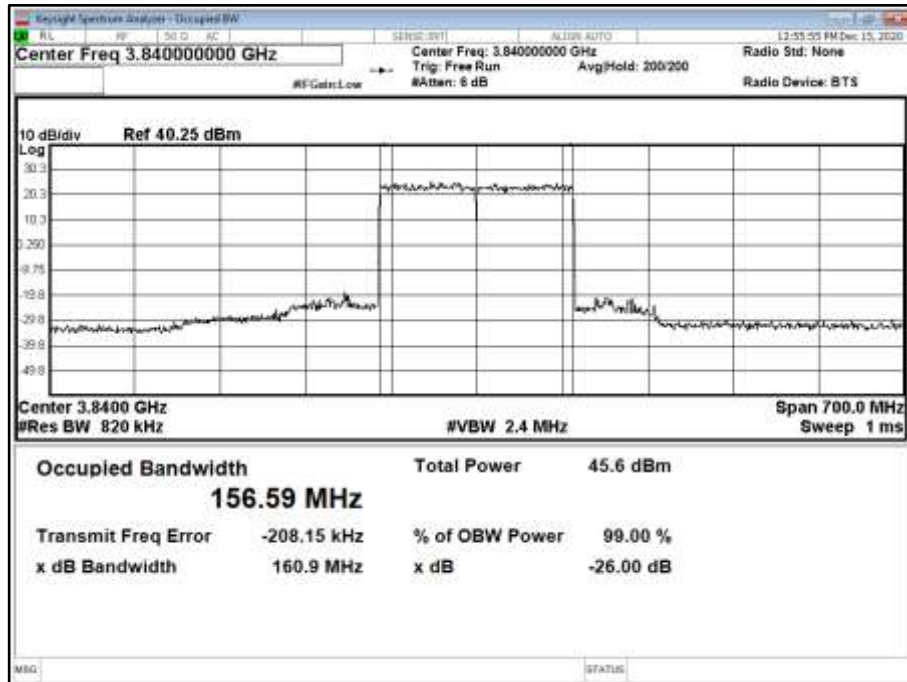


Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B

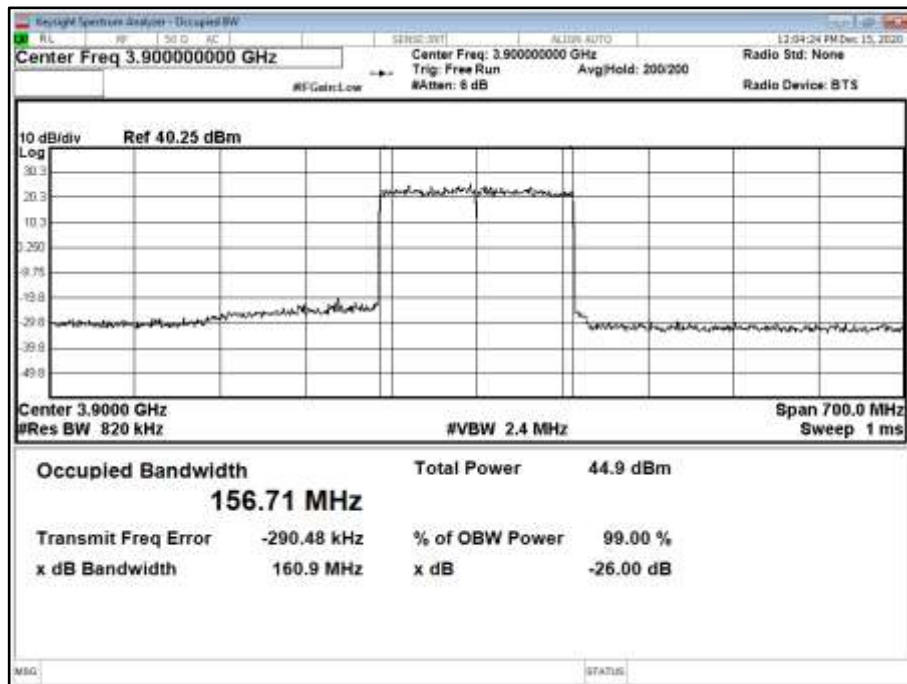




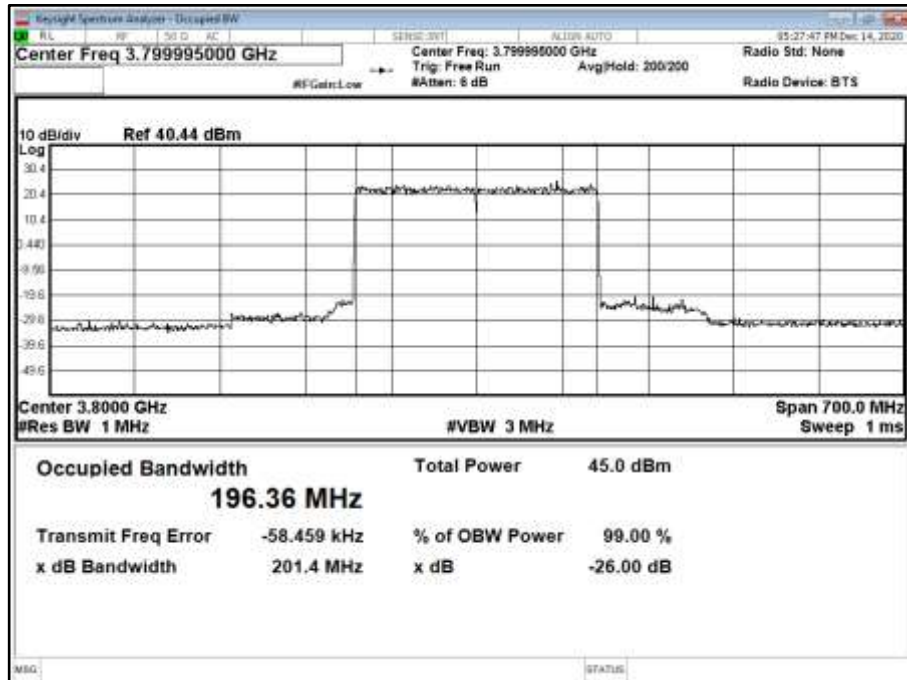
Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M



Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T



Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B

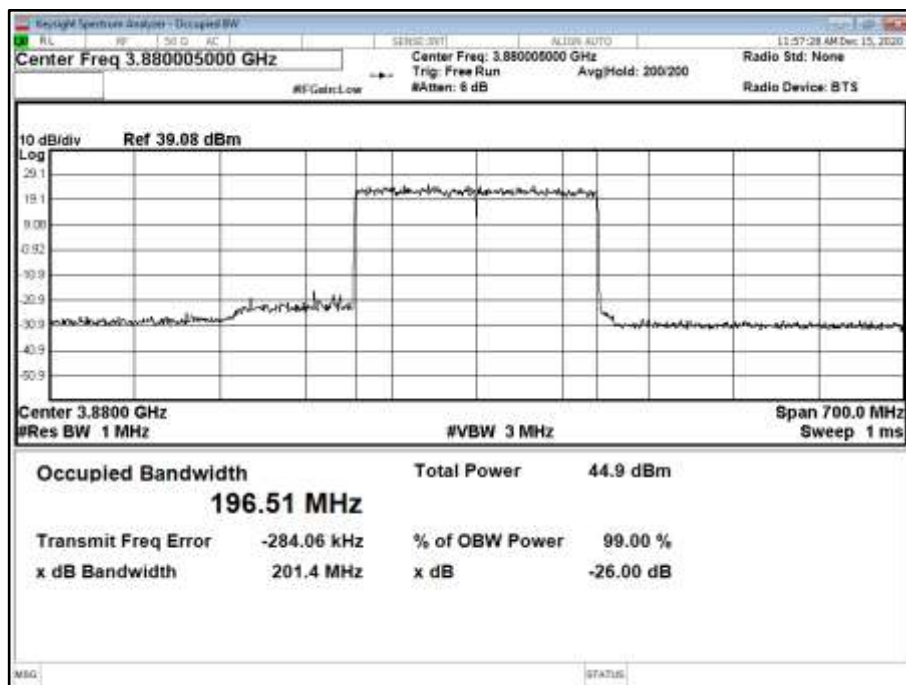


Antenna 38 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M





Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position T





2.3 BAND EDGE

2.3.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.53 (h)
FCC CFR 47 Part 2, Clause 2.1051

2.3.2 Date of Test and Modification State

13-16 December 2020 - Modification State 0

2.3.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.4 Environmental Conditions

Ambient Temperature 23.4 - 23.5°C
Relative Humidity 32.4 - 40.8%

2.3.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 6.0.

Band Edge measurements used an Integration Bandwidth of at least 1% of the measured 26dB Bandwidth.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by $10 * \log(N)$, where N is equal to the number of MIMO antenna ports.

For single port, the limit was calculated as being $-13 \text{ dBm} - 10 * \log(1) = -13 \text{ dBm}$.

For 64 port, the limit was calculated as being $-13 \text{ dBm} - 10 * \log(64) = -31.06 \text{ dBm}$.

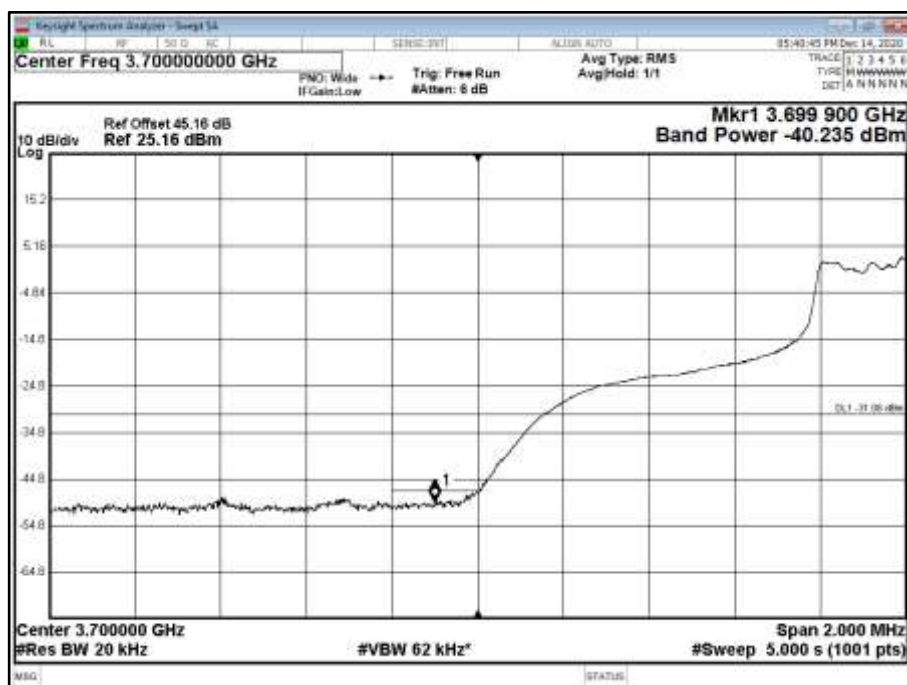
2.3.6 Test Results

Configuration A1

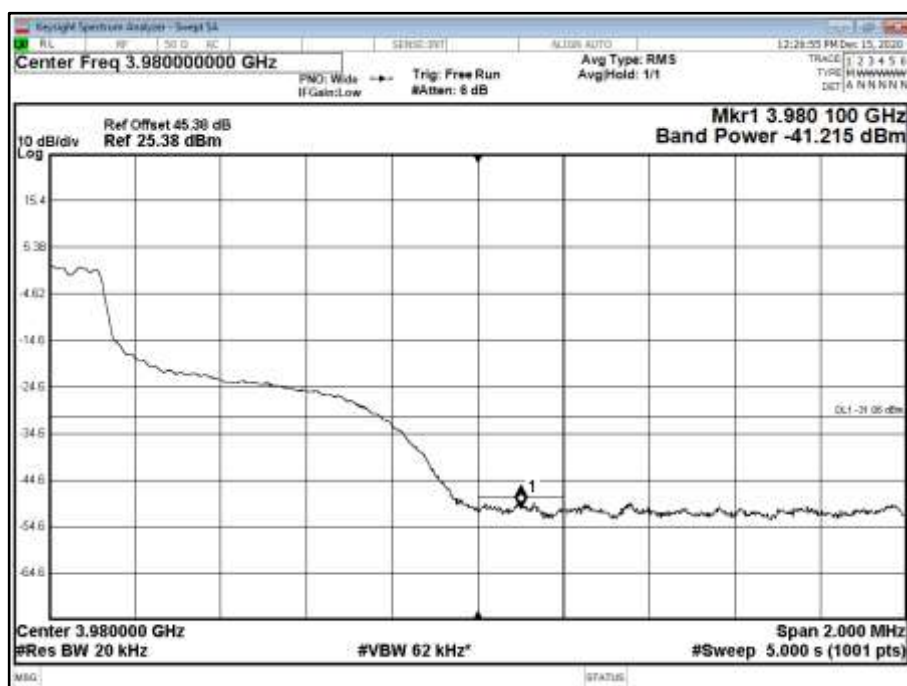
Maximum Output Power Per Port
20MHz Carrier Bandwidth 32.20 dBm
40MHz Carrier Bandwidth 35.20 dBm
60MHz, 80MHz & 100 MHz Carrier Bandwidth 37.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
32, 45	64QAM	20.0 MHz 30 kHz SCS	3,710.0	3,970.0
32, 45	64QAM	40.0 MHz 30 kHz SCS	3,720.0	3,960.0
32, 45	64QAM	60.0 MHz 30 kHz SCS	3,730.0	3,950.0
32, 45	64QAM	80.0 MHz 30 kHz SCS	3,740.0	3,940.0
32, 45	64QAM	100.0 MHz 30 kHz SCS	3,750.0	3,930.0

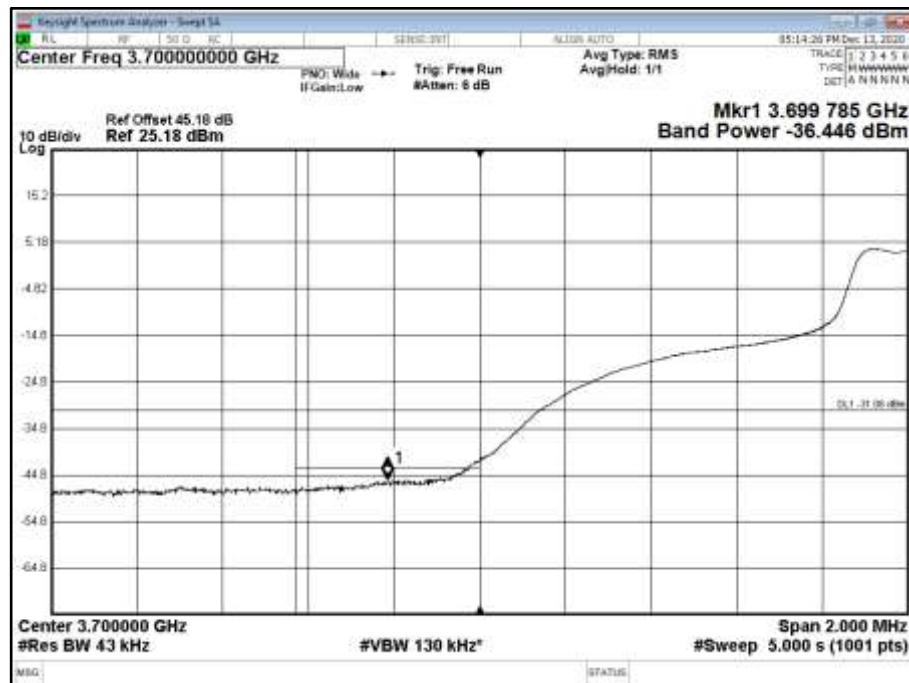
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



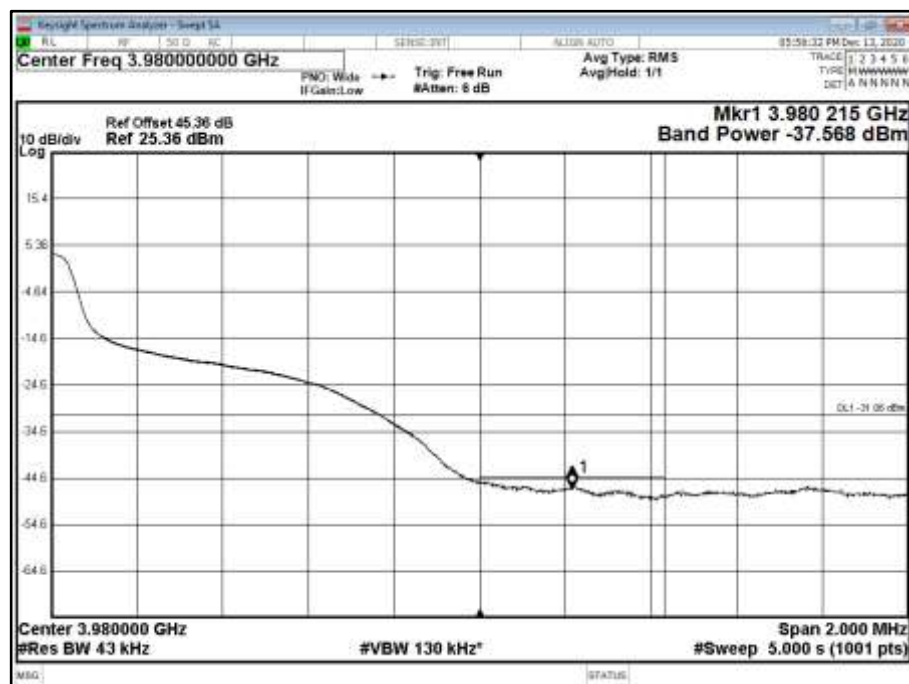
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



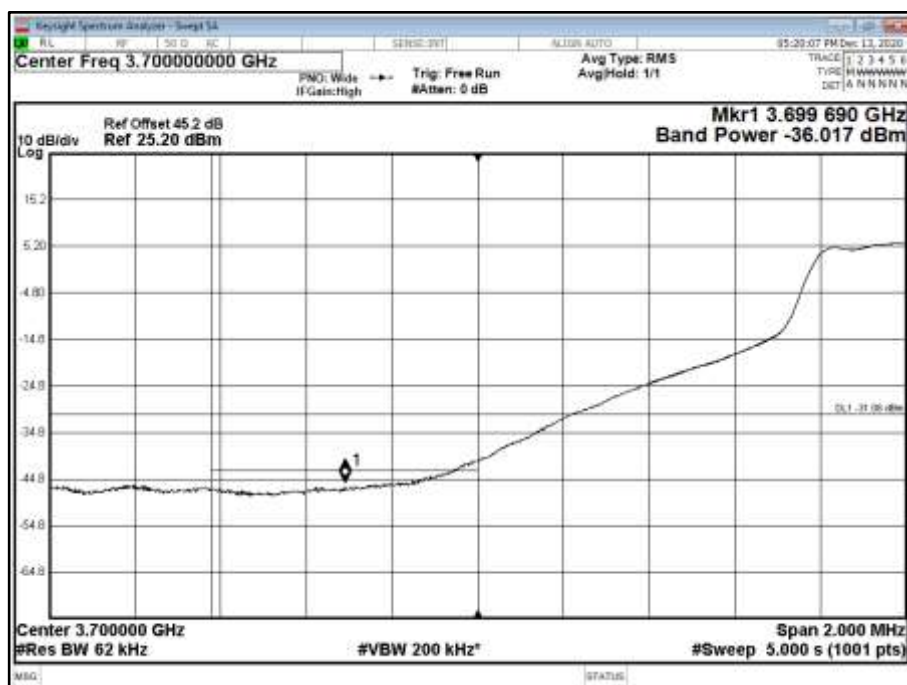
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B



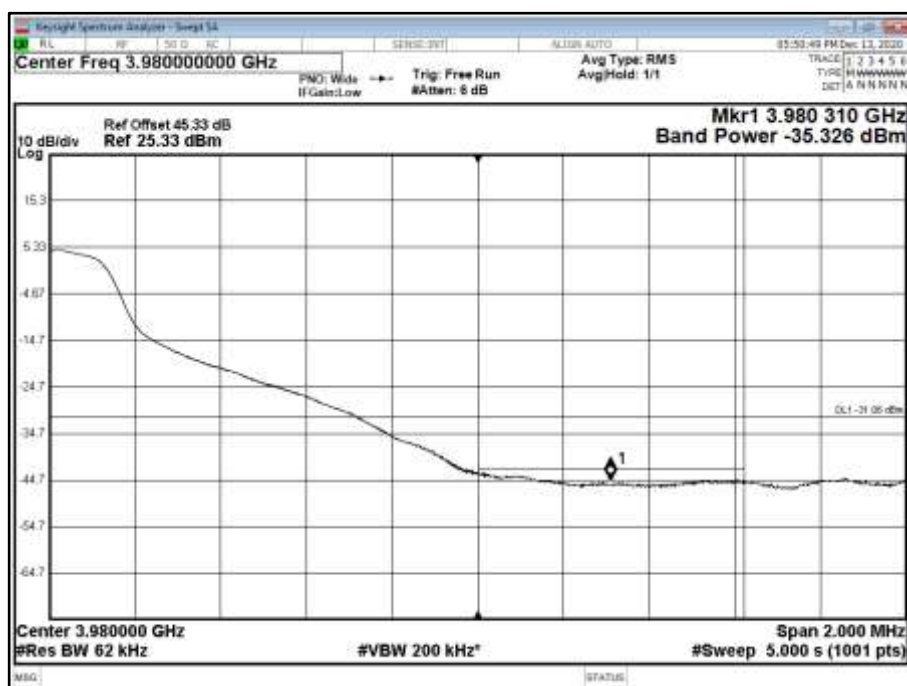
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T



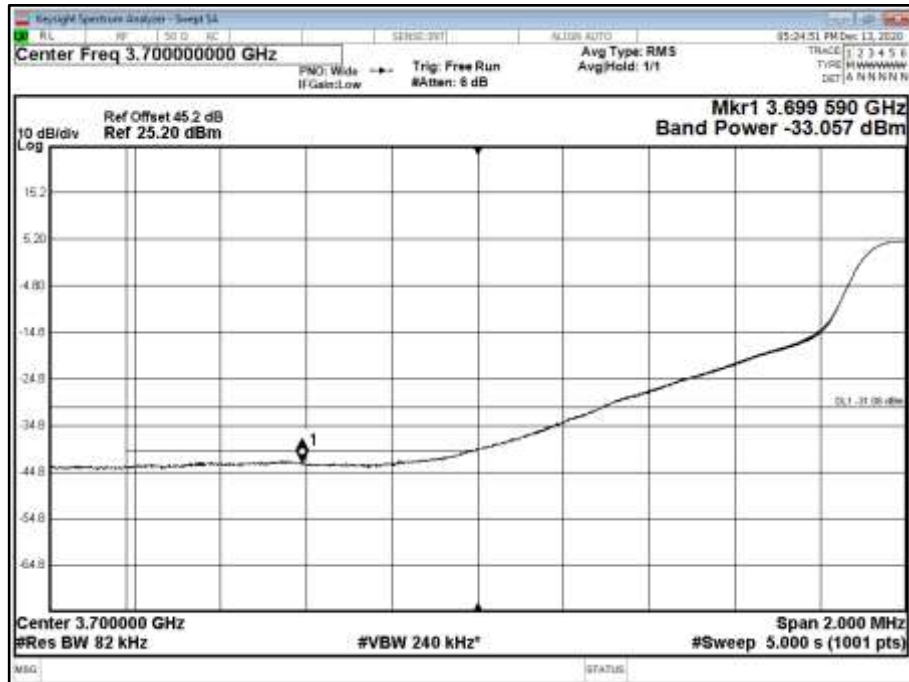
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B



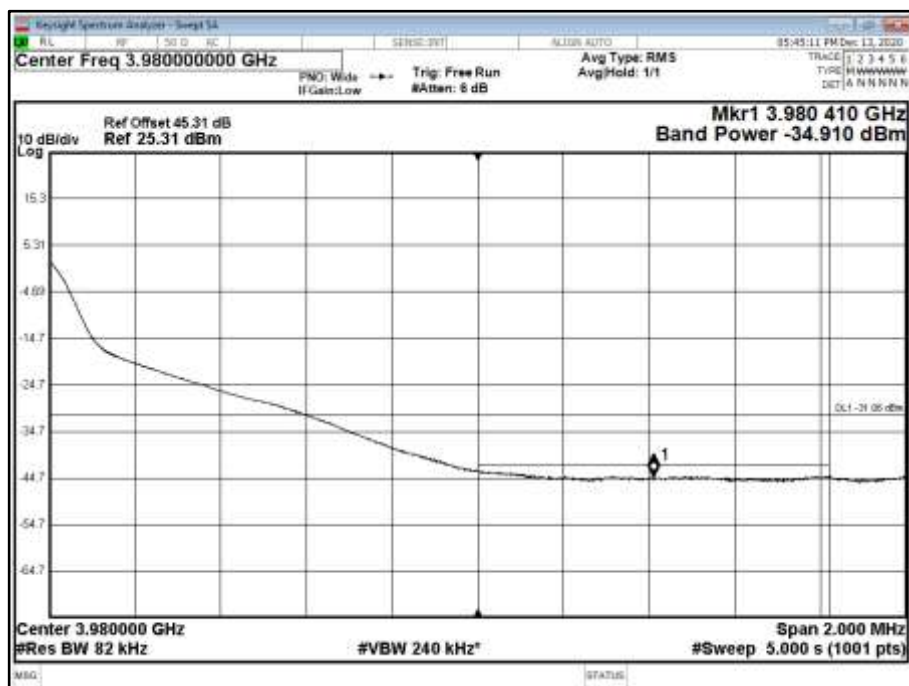
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T



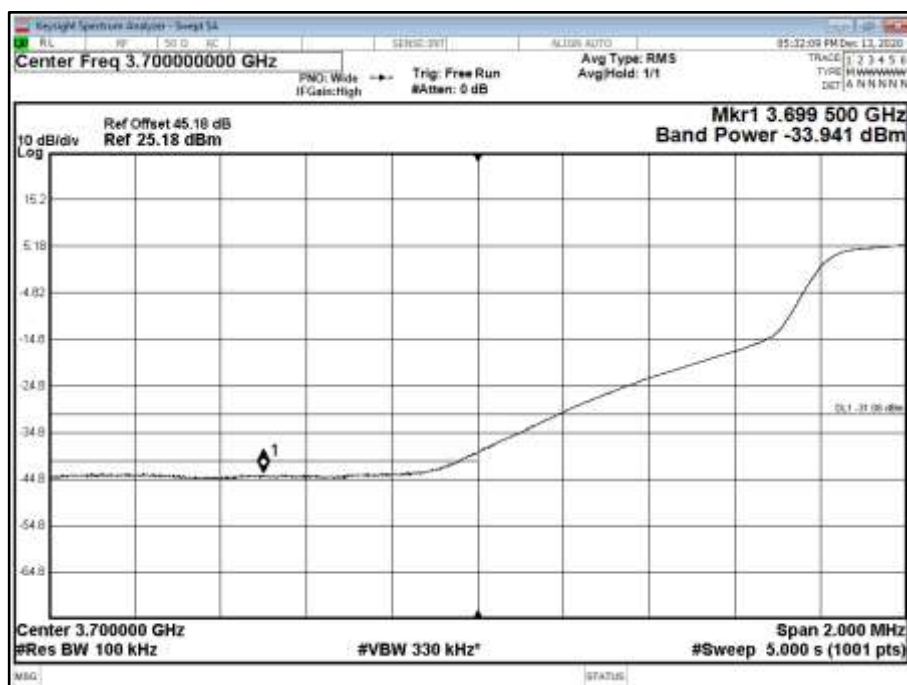
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B



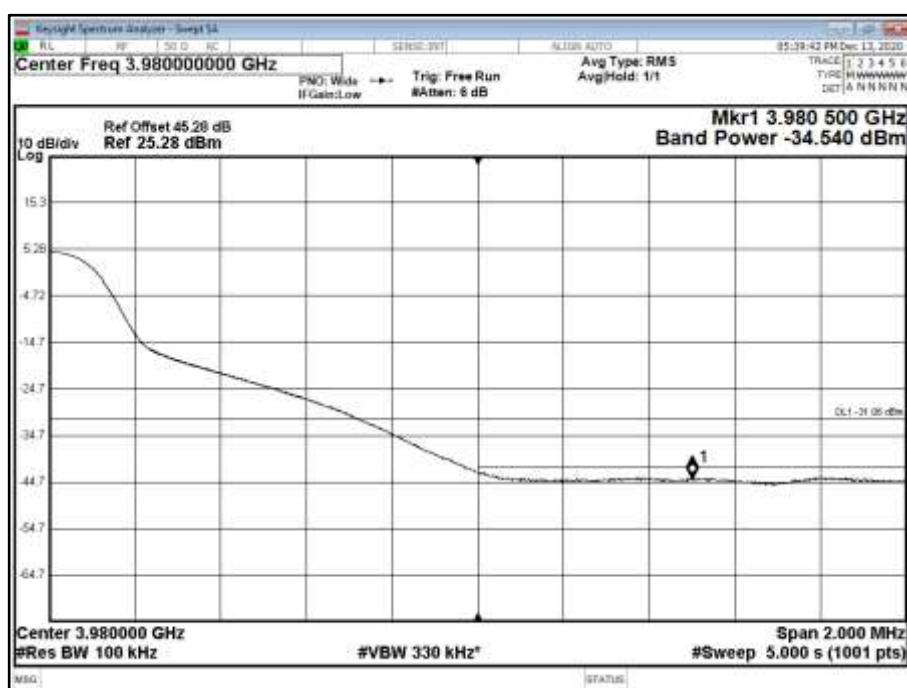
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T



Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B



Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T





Configuration A2

Maximum Output Power Per Carrier

2 x 20MHz Carrier Bandwidth 32.20 dBm

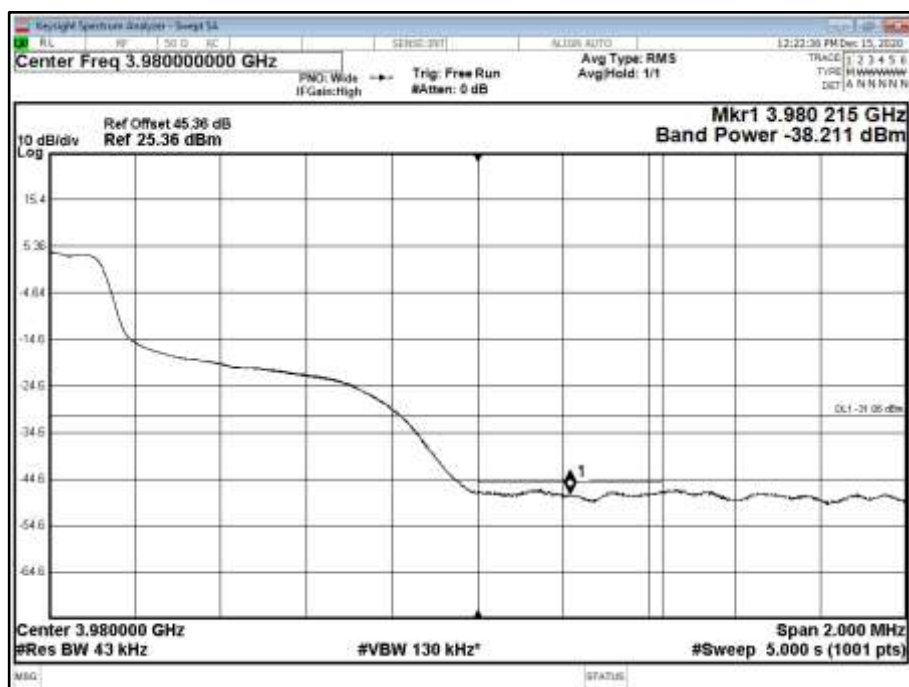
2 x 40MHz, 60MHz, 80MHz & 100 MHz Carrier Bandwidth 34.00 dBm

Antenna	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
32, 45	64QAM	20.0 MHz 30 kHz SCS	3710.01+3729.99	3969.99+3950.01
32, 45	64QAM	40.0 MHz 30 kHz SCS	3720+3759.99	3960+3920.01
32, 45	64QAM	60.0 MHz 30 kHz SCS	3729.99+3789.99	3950+3890.01
32, 45	64QAM	80.0 MHz 30 kHz SCS	3740.01+3819.99	3939.99+3860.01
32, 45	64QAM	100.0 MHz 30 kHz SCS	3750+3849.99	3930+3830.01

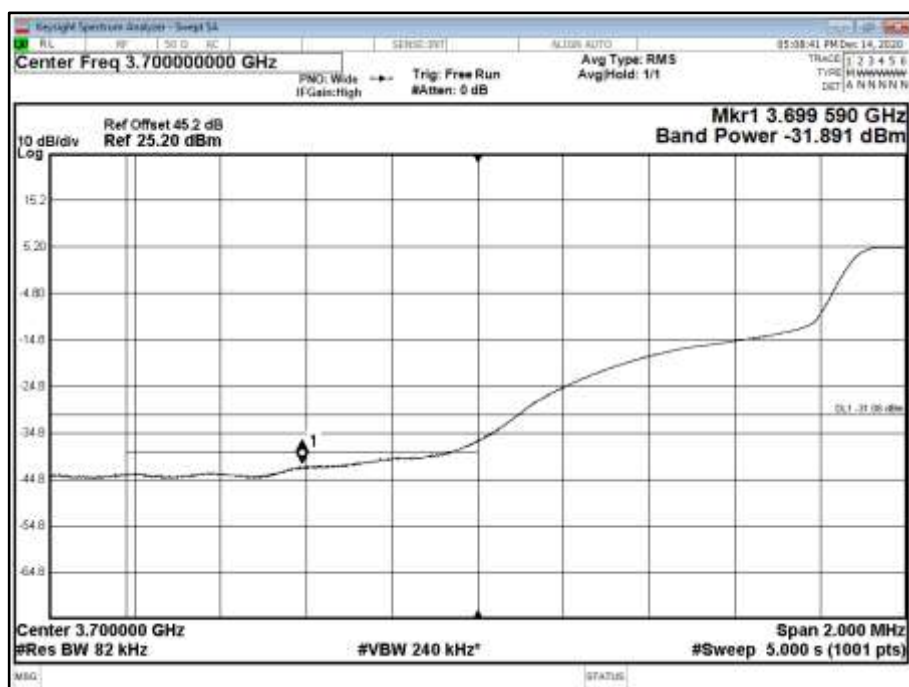
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B



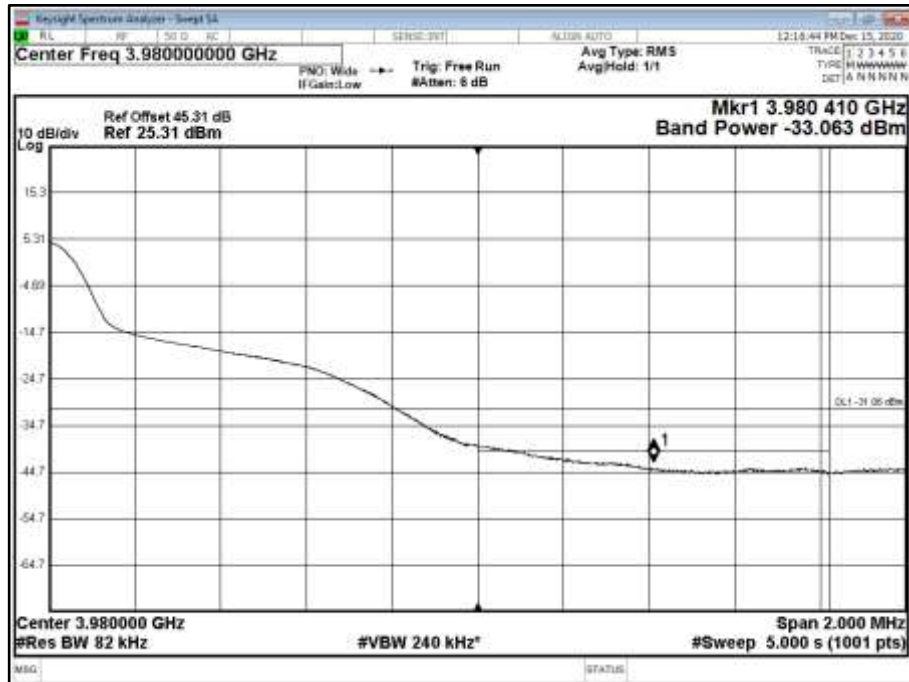
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T



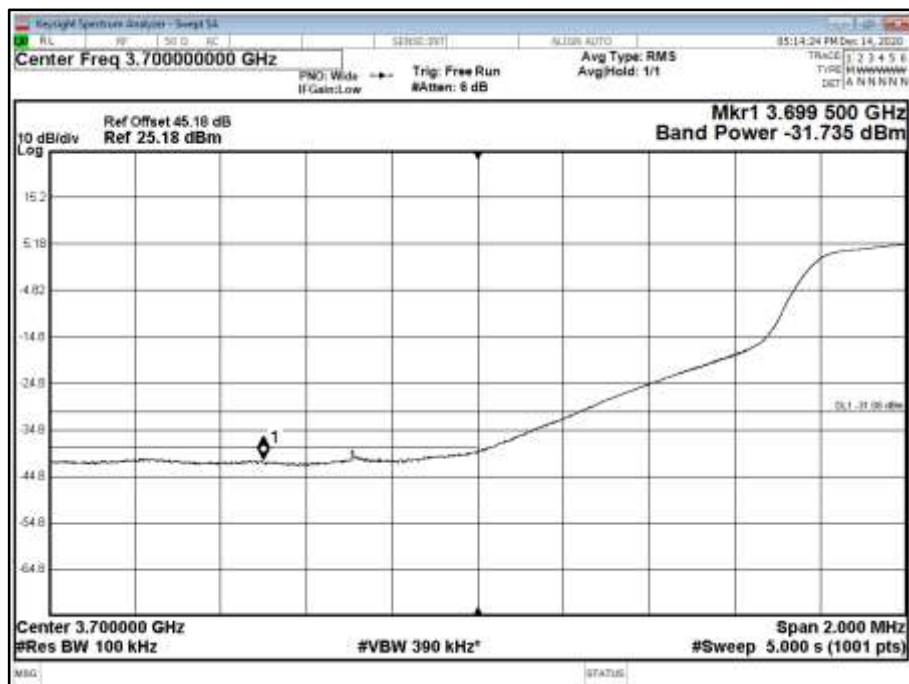
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B



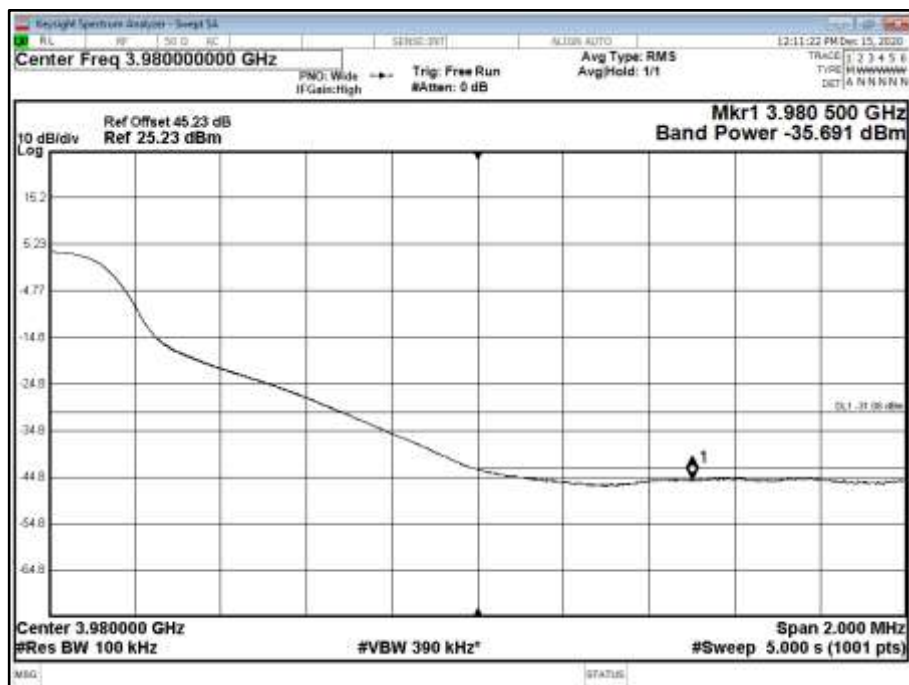
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T



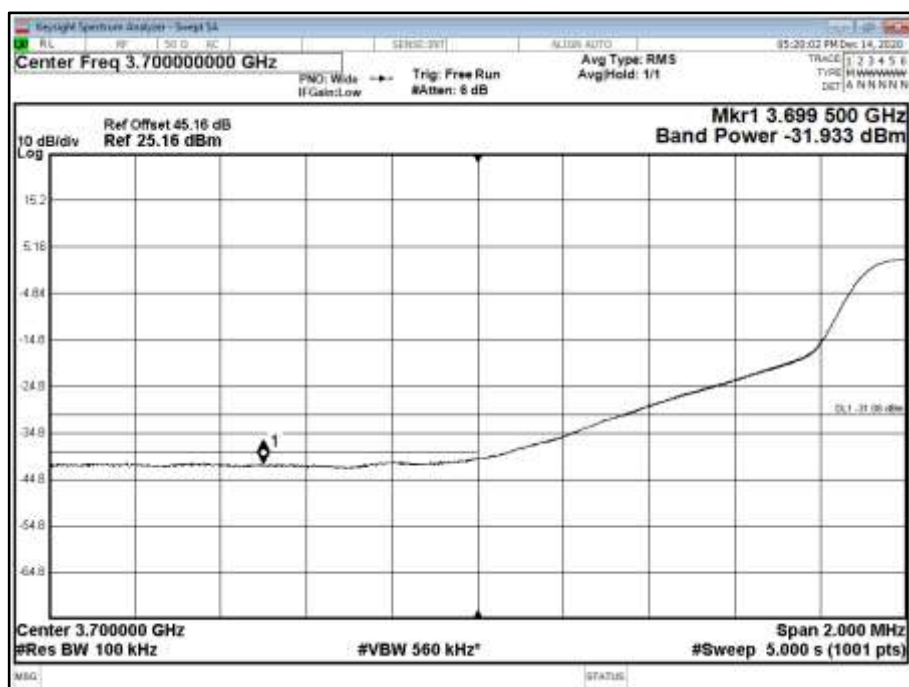
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B



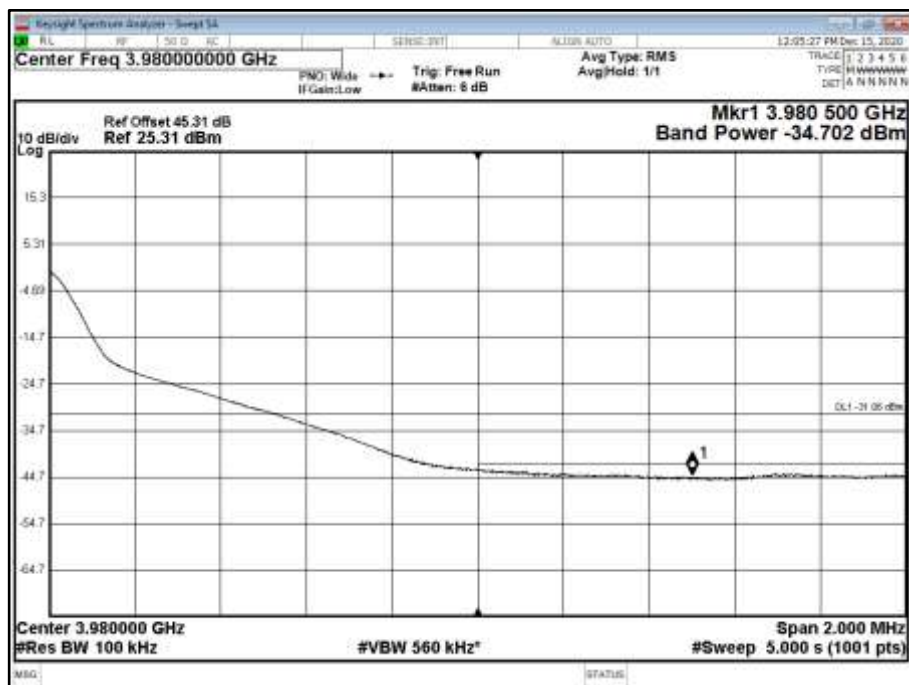
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T



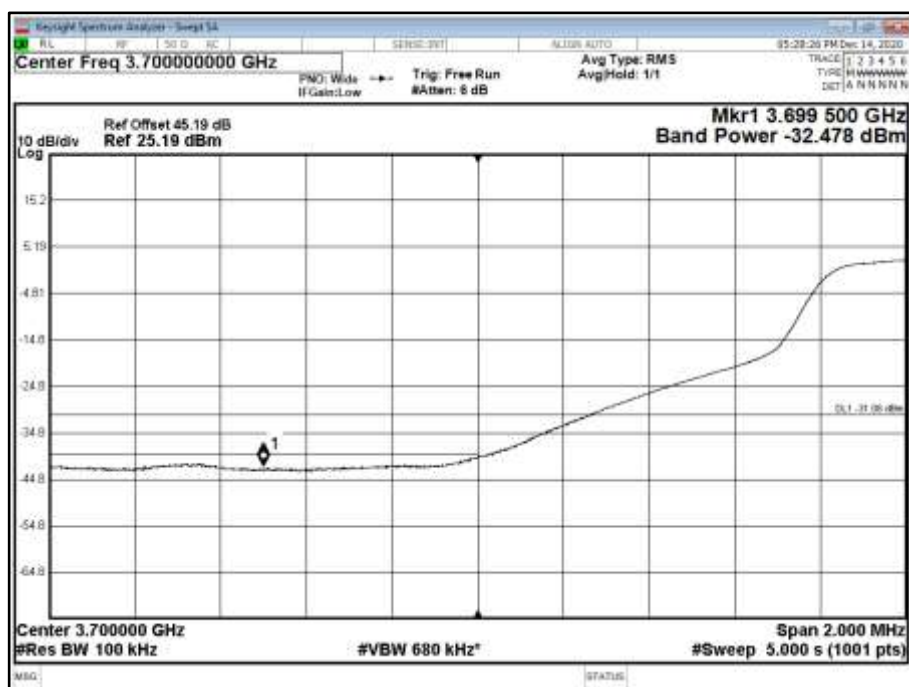
Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B



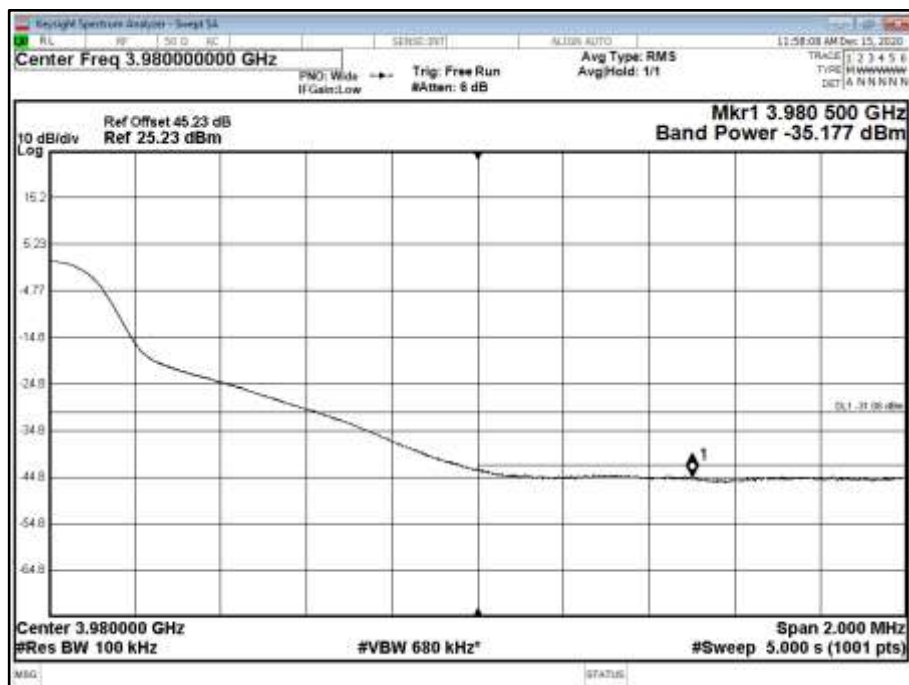
Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T



Antenna 32 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B



Antenna 45 - NR Modulation 64QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position T



Limit	-31.06 dBm
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2.4 TRANSMITTER SPURIOUS EMISSIONS

2.4.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.53 (h)
FCC CFR 47 Part 2, Clause 2.1051

2.4.2 Date of Test and Modification State

22-23 December 2020 - Modification State 0

2.4.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.4 Environmental Conditions

Ambient Temperature	22.7 - 23.1°C
Relative Humidity	39.8 - 40.2%

2.4.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 6.1.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by $10 * \log(N)$, where N is equal to the number of MIMO antenna ports.

For single port, the limit was calculated as being $-13 \text{ dBm} - 10 * \log(1) = -13 \text{ dBm}$.

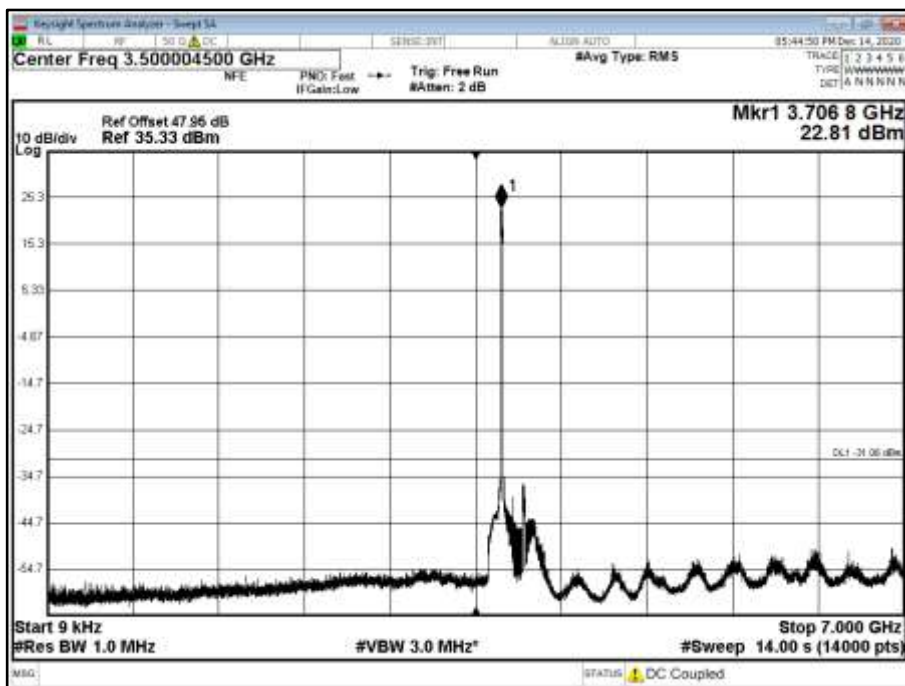
For 64 port, the limit was calculated as being $-13 \text{ dBm} - 10 * \log(64) = -31.06 \text{ dBm}$.

2.4.6 Test Results

Configuration A1

Maximum Output Power Per Port
20MHz Carrier Bandwidth 32.20 dBm
40MHz Carrier Bandwidth 35.20 dBm
60MHz, 80MHz & 100 MHz Carrier Bandwidth 37.00 dBm

Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position B - Band 1.00 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position B - Band 2 - Range 7GHz – 12GHz



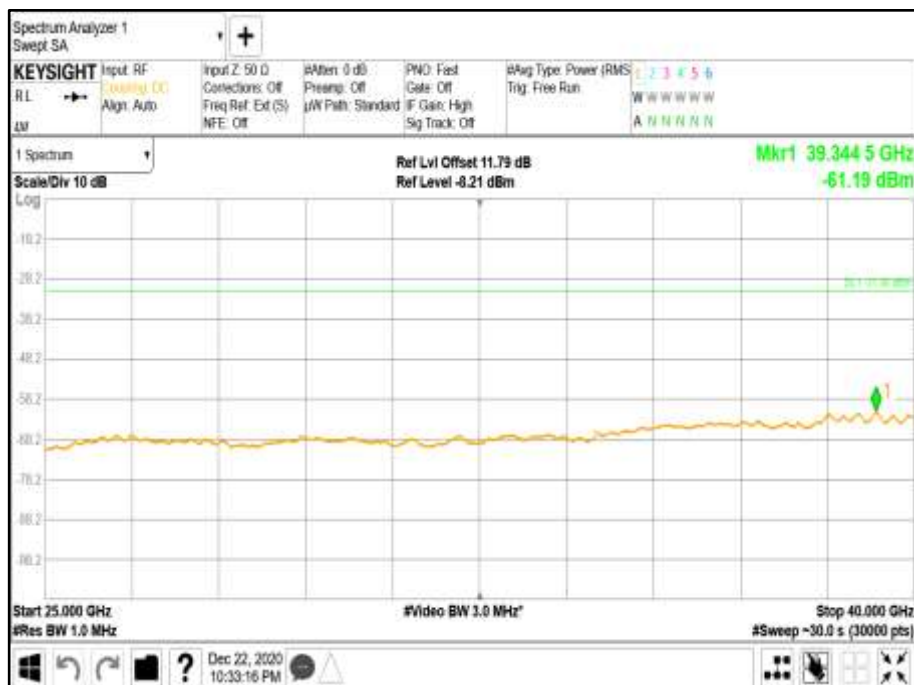
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position B - Band 3 - Range 12 GHz – 18GHz



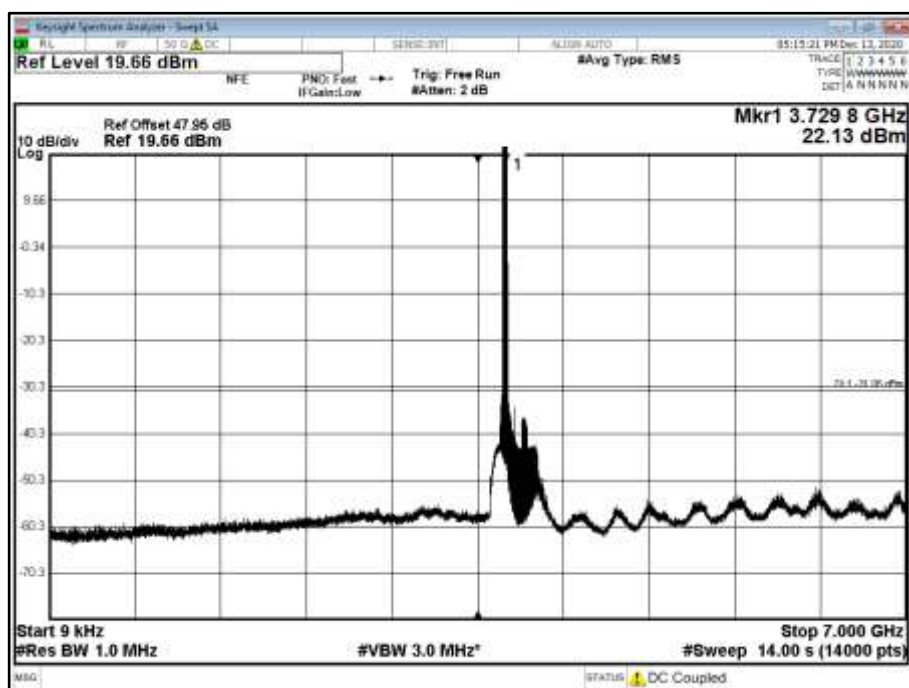
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position B - Band 4 - Range 18GHz – 25GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position B - Band 1.00 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 7GHz – 12GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz

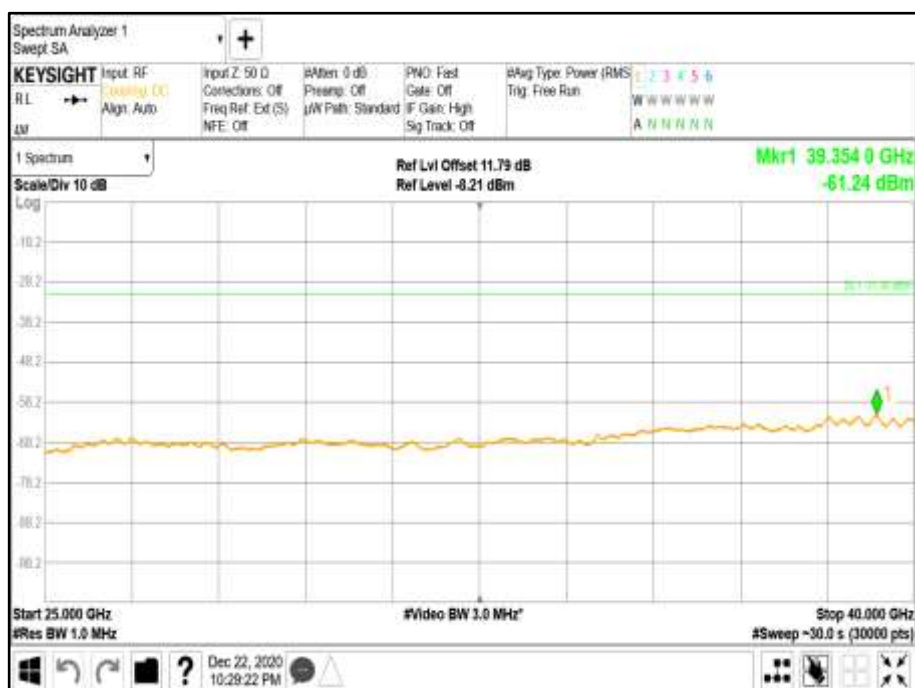




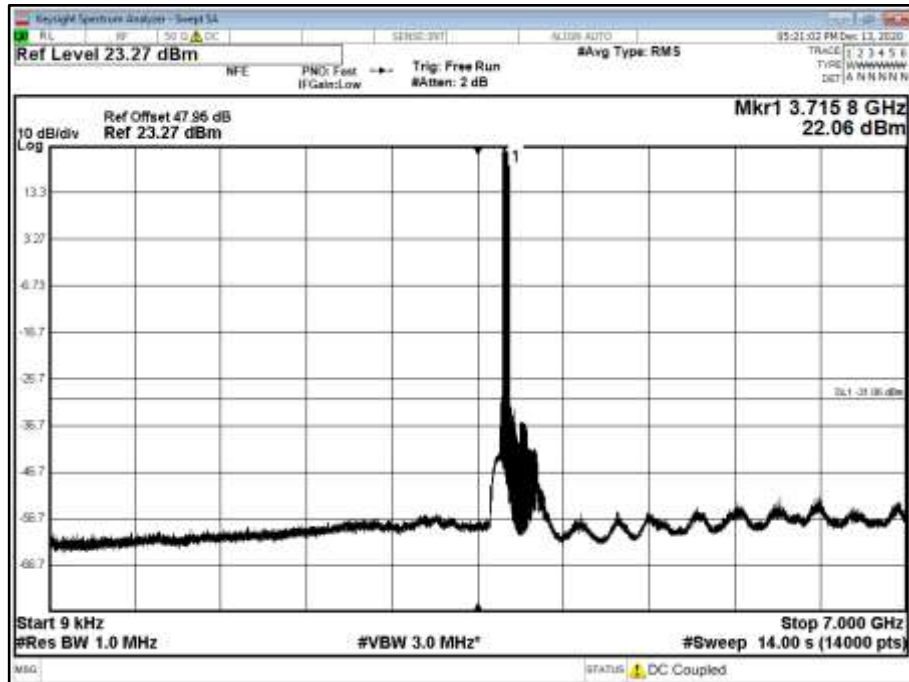
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position B - Band 4 - Range 18GHz – 25GHz



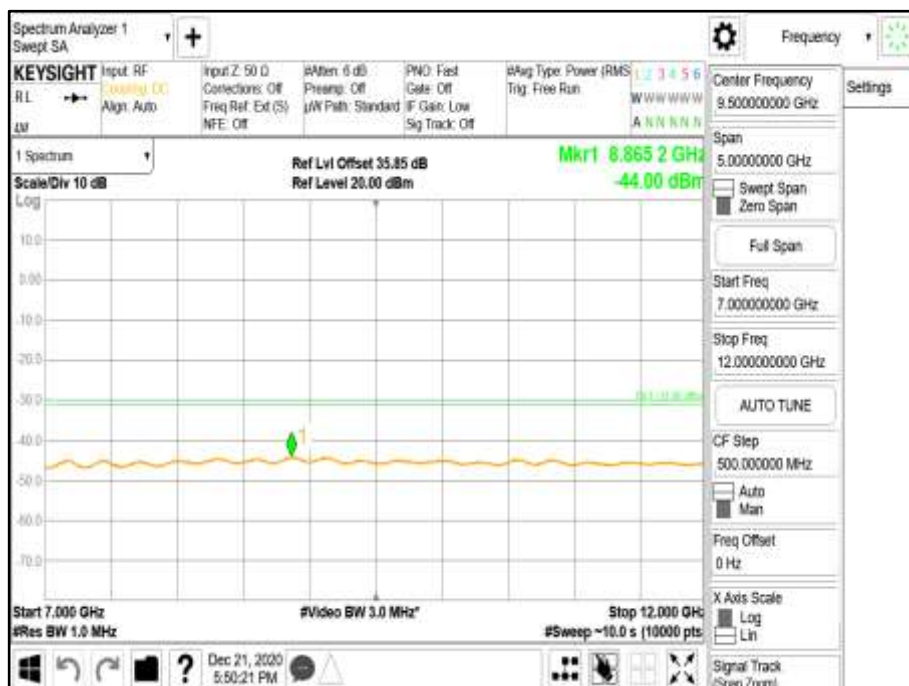
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position B - Band 1.00 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position B - Band 2 - Range 7GHz – 12GHz





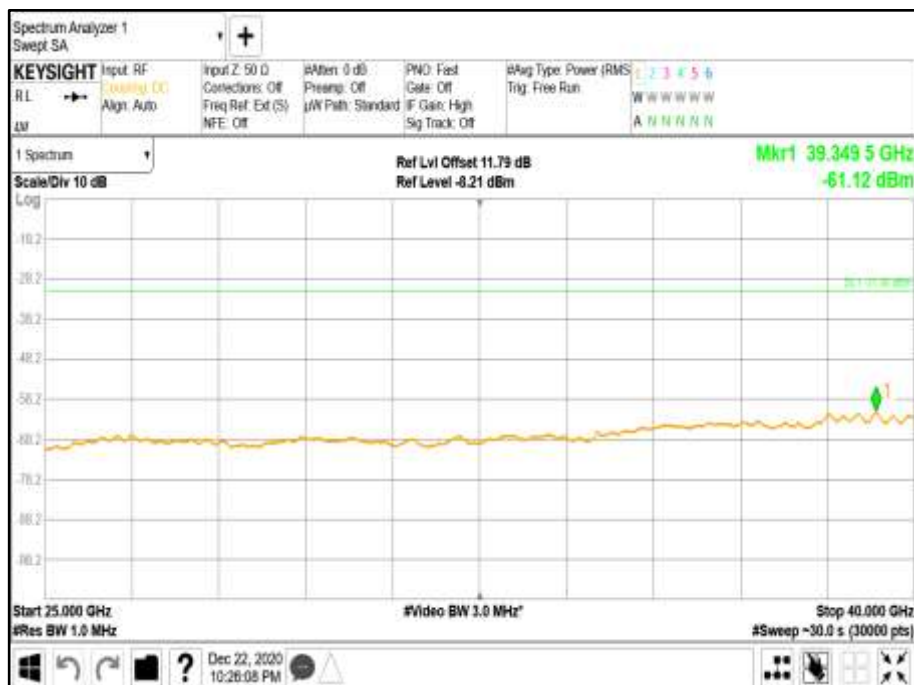
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position B - Band 3 - Range 12 GHz – 18GHz



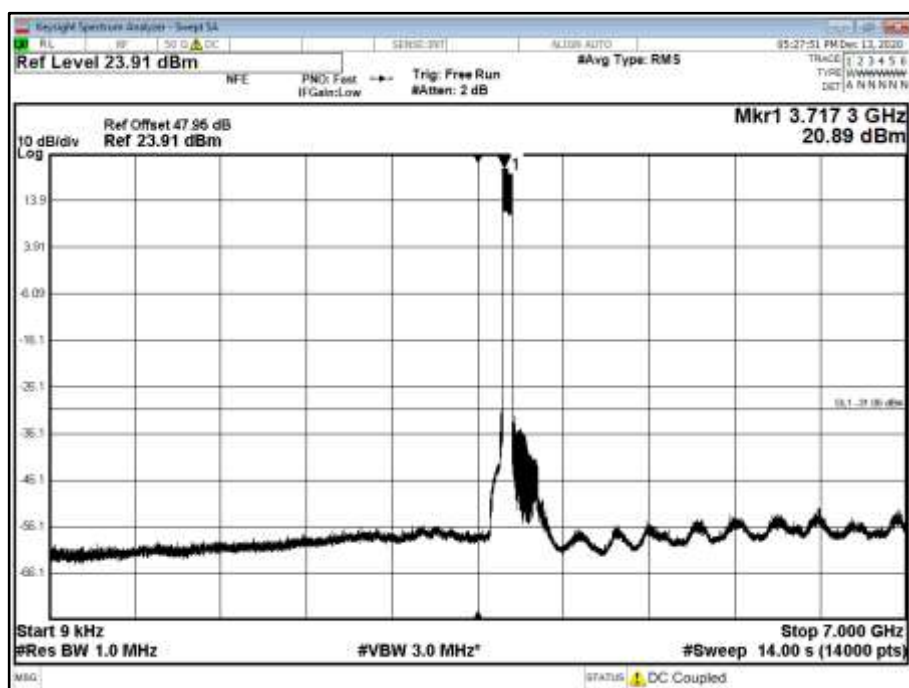
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position B - Band 4 - Range 18GHz – 25GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position B - Band 1.00 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 7GHz – 12GHz



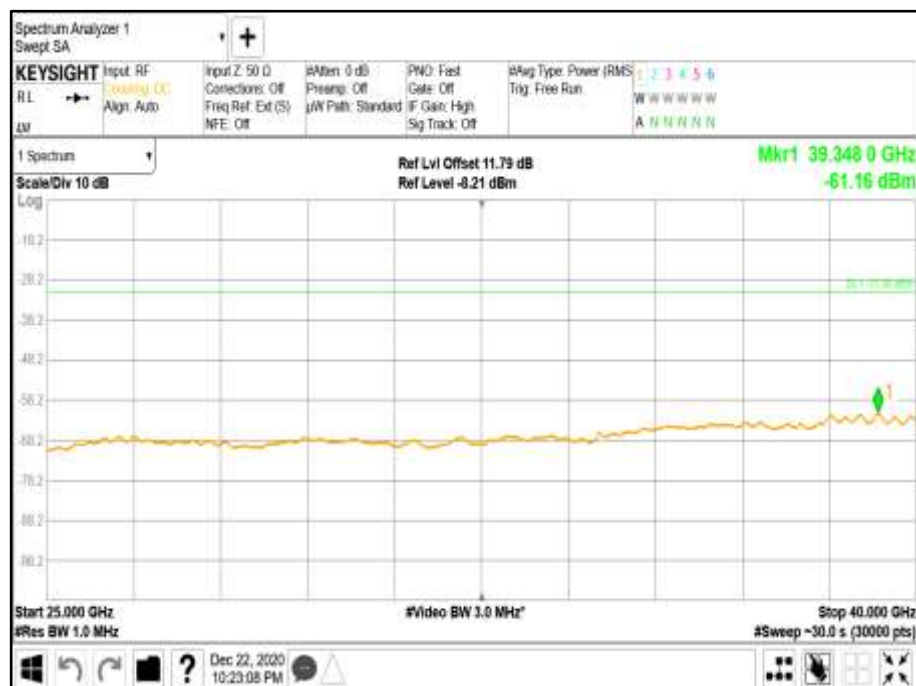
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz



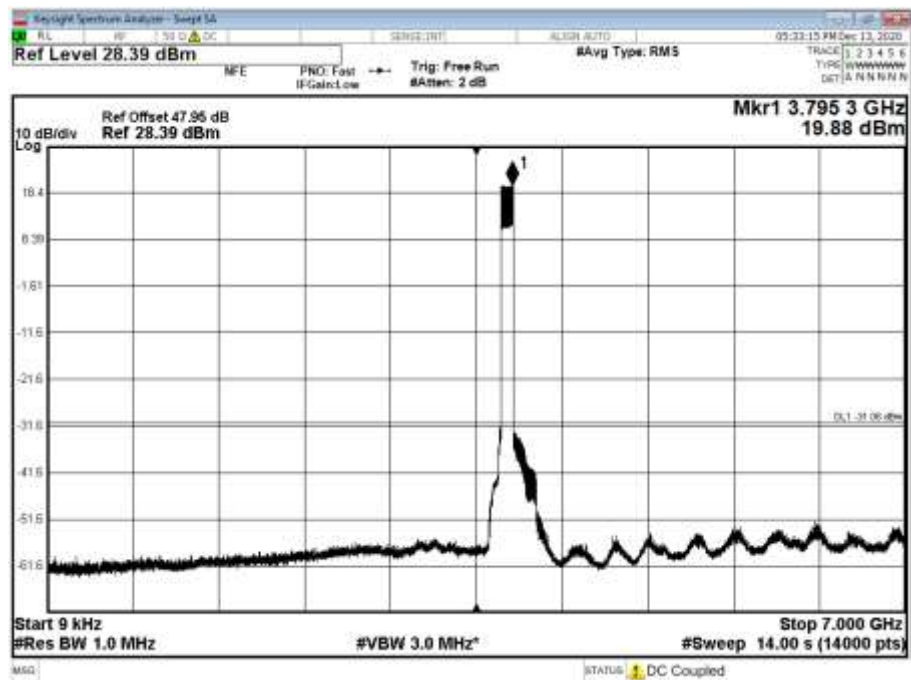
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B - Band 4 - Range 18GHz – 25GHz



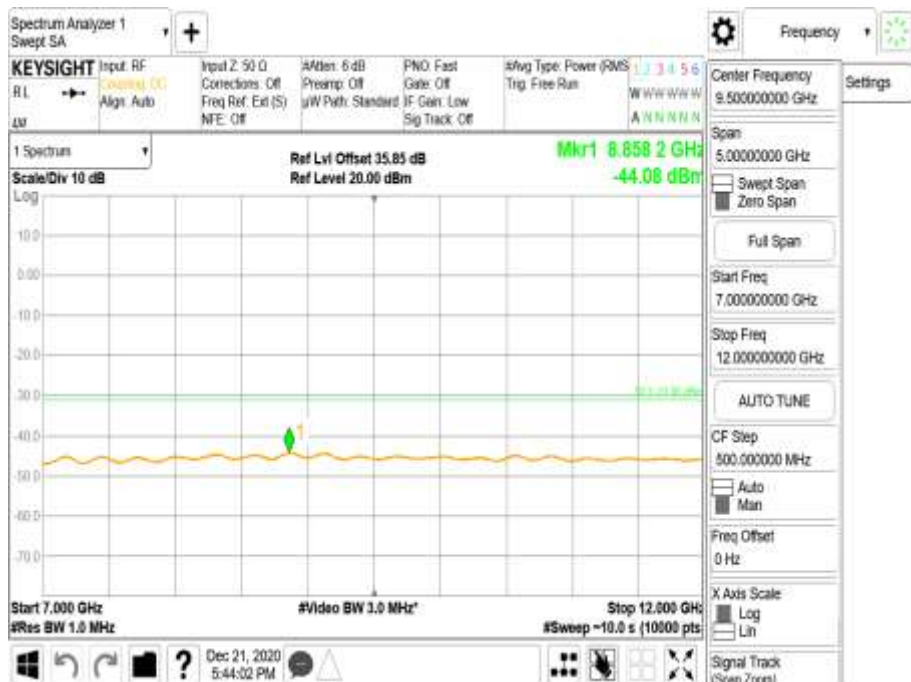
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 1 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 7GHz – 12GHz



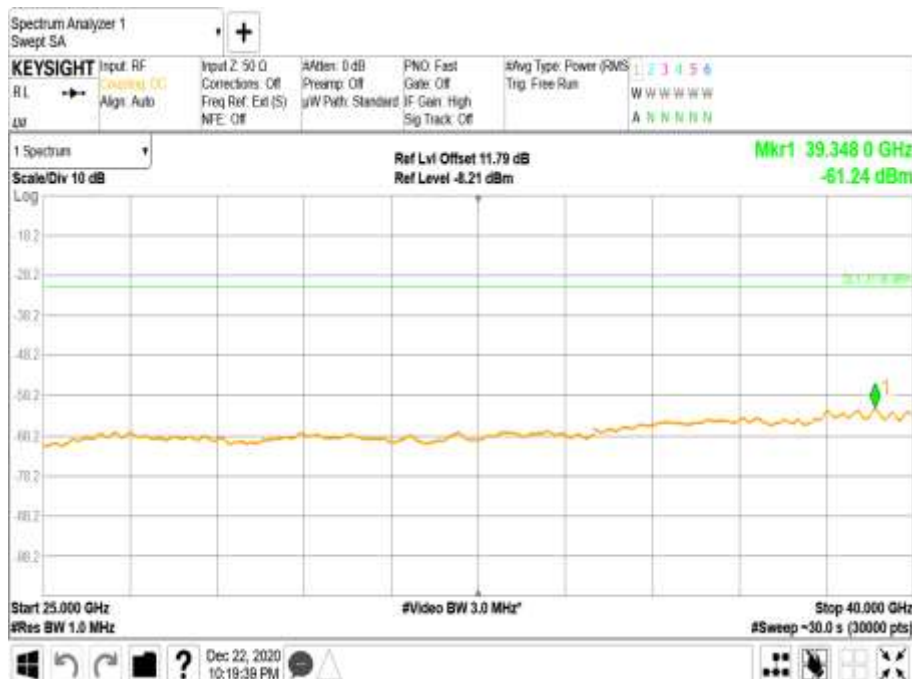
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz



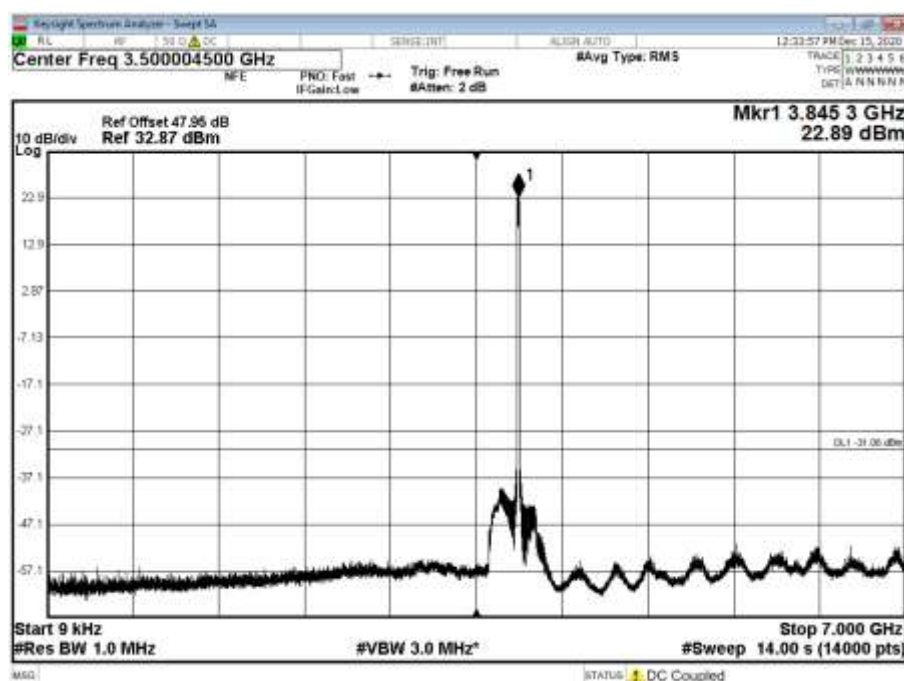
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 4 - Range 18GHz – 25GHz



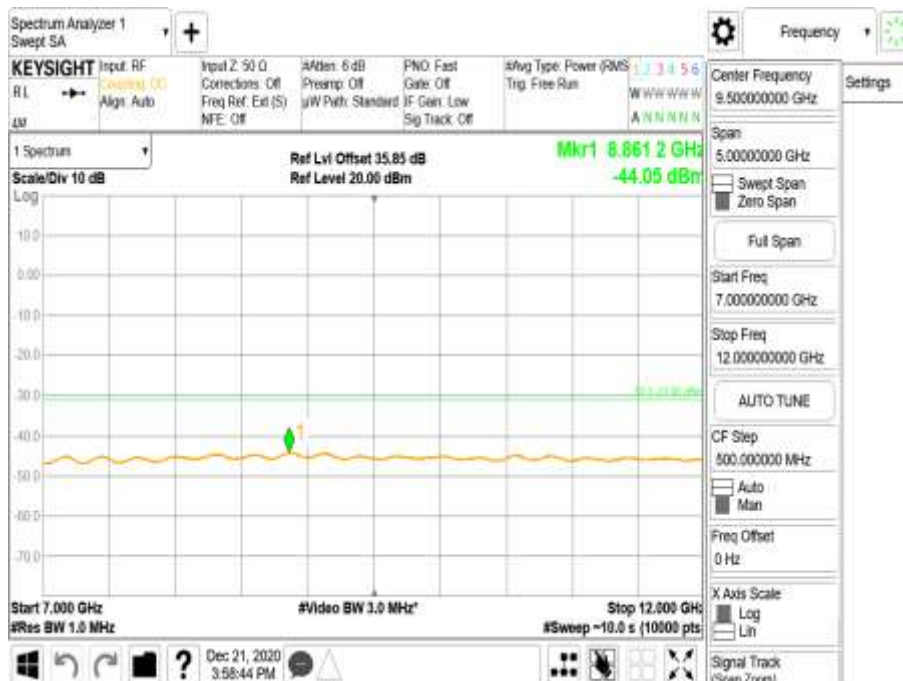
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 7GHz – 12GHz



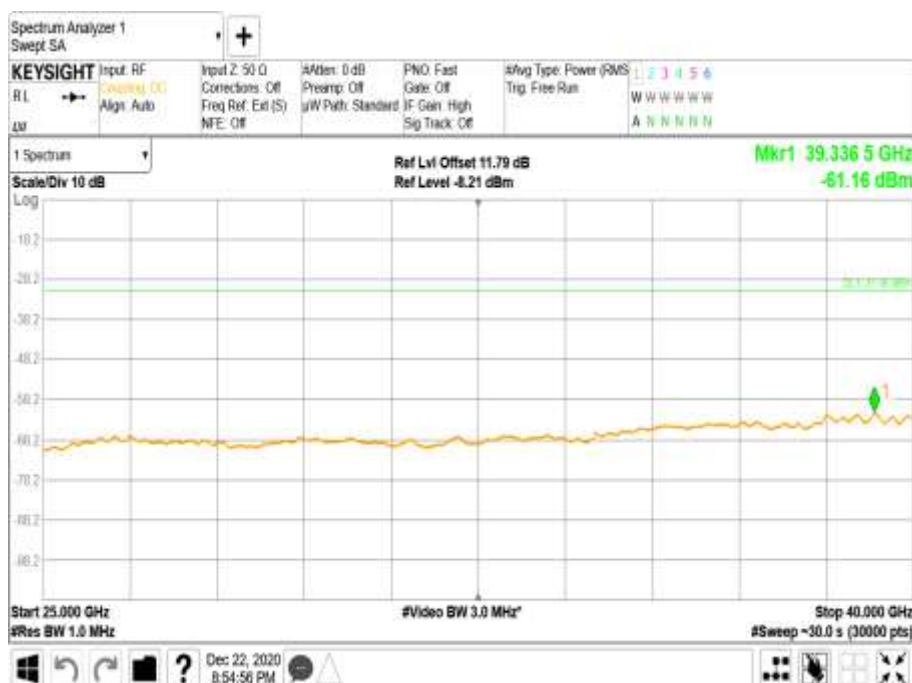
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



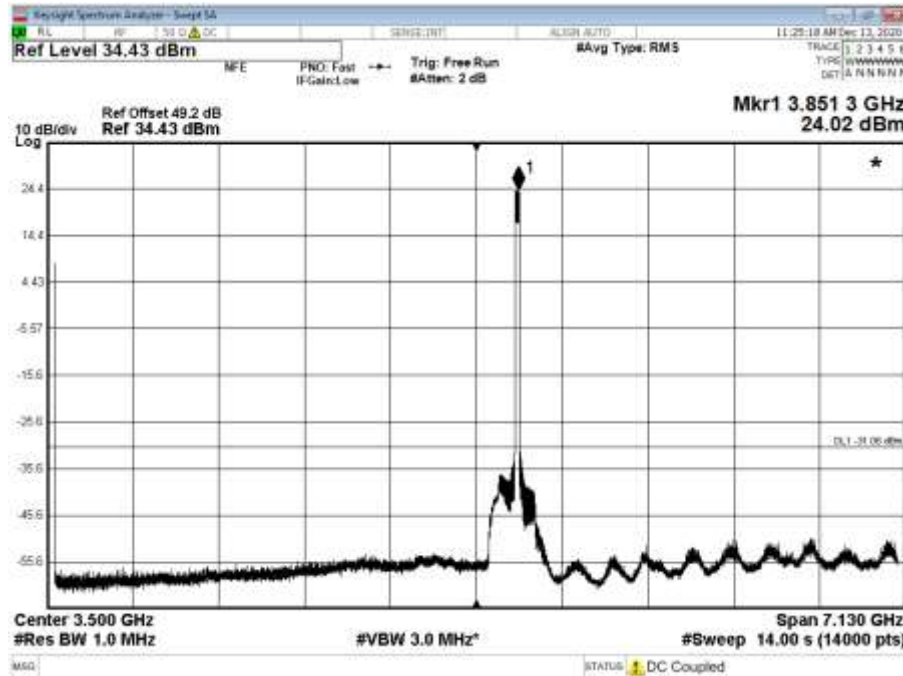
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position M - Band 2 - Range 7GHz – 12GHz



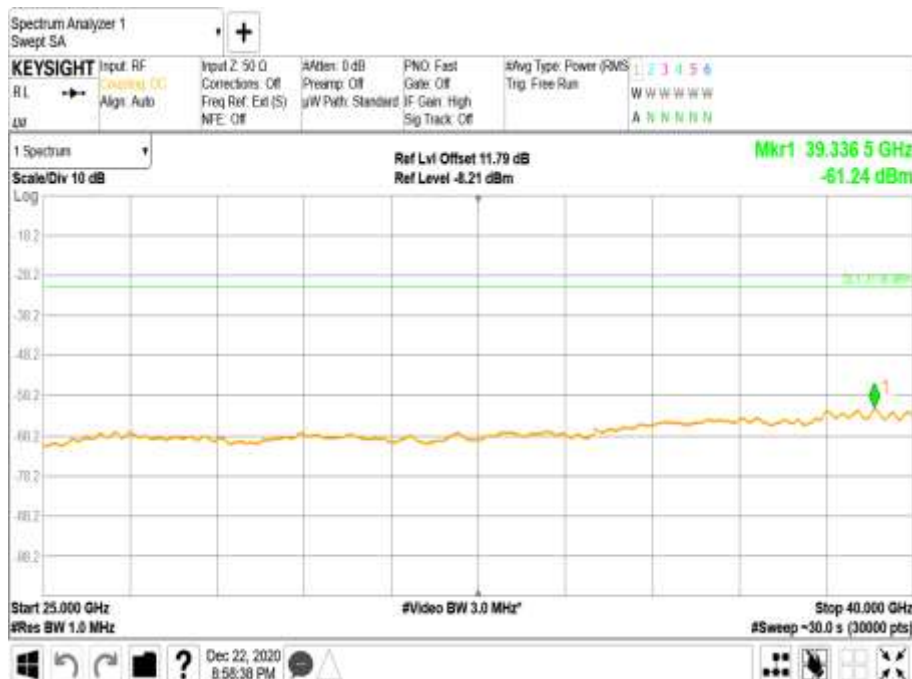
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



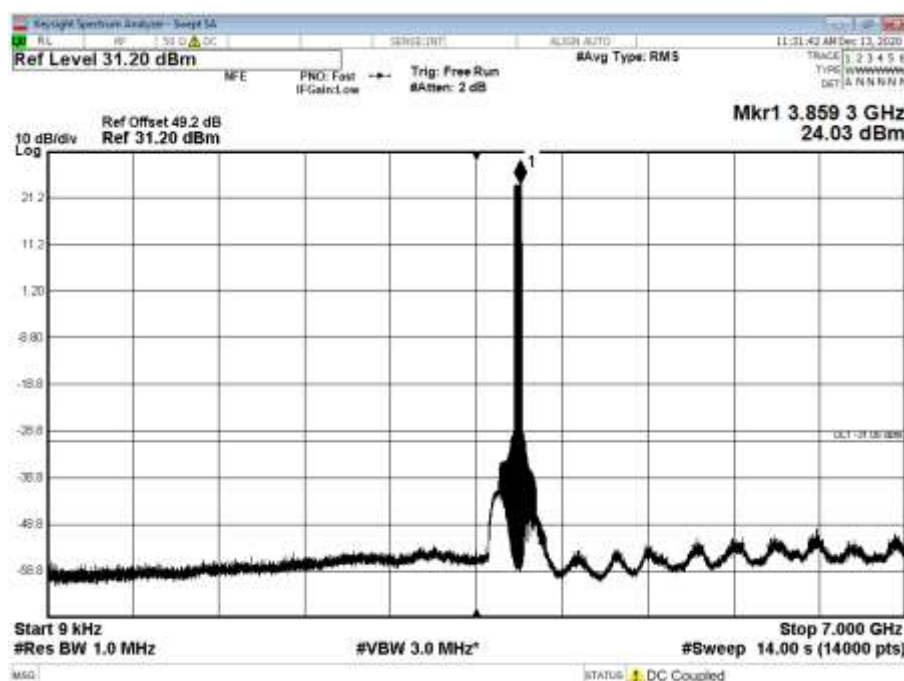
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



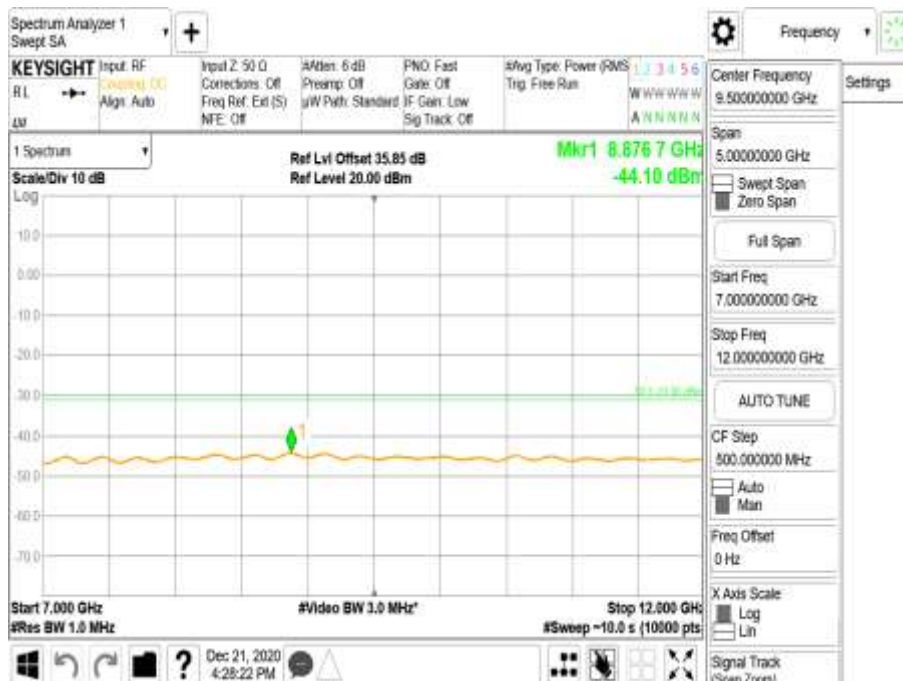
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 7GHz – 12GHz



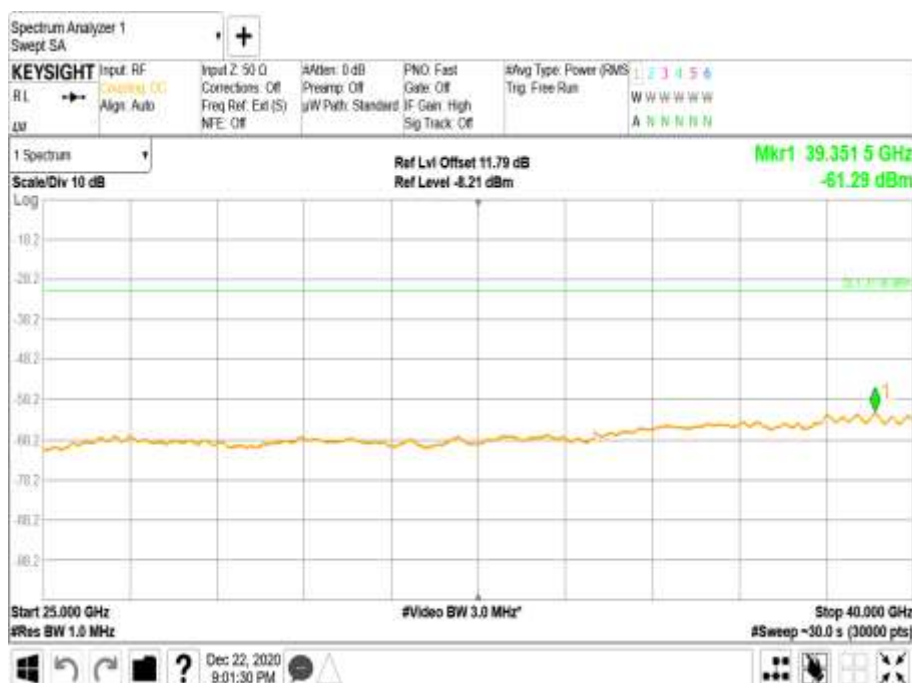
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



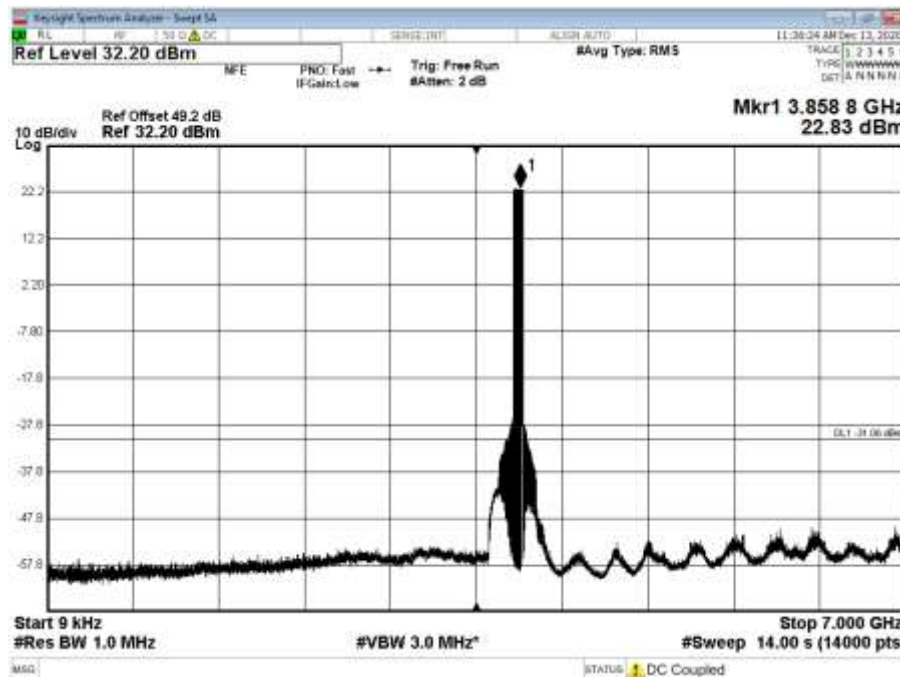
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



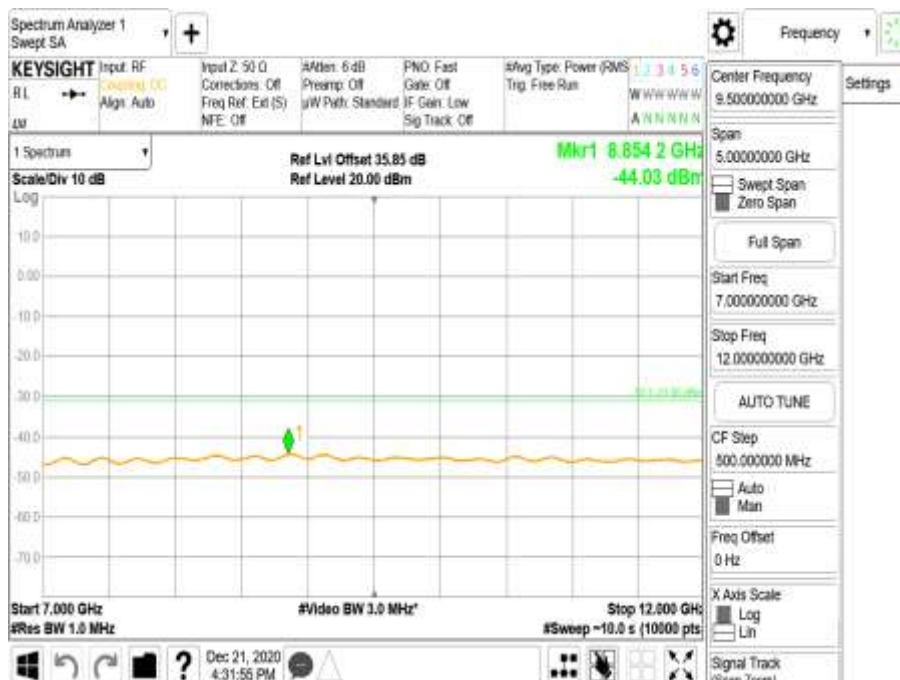
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position M - Band 2 - Range 7GHz – 12GHz



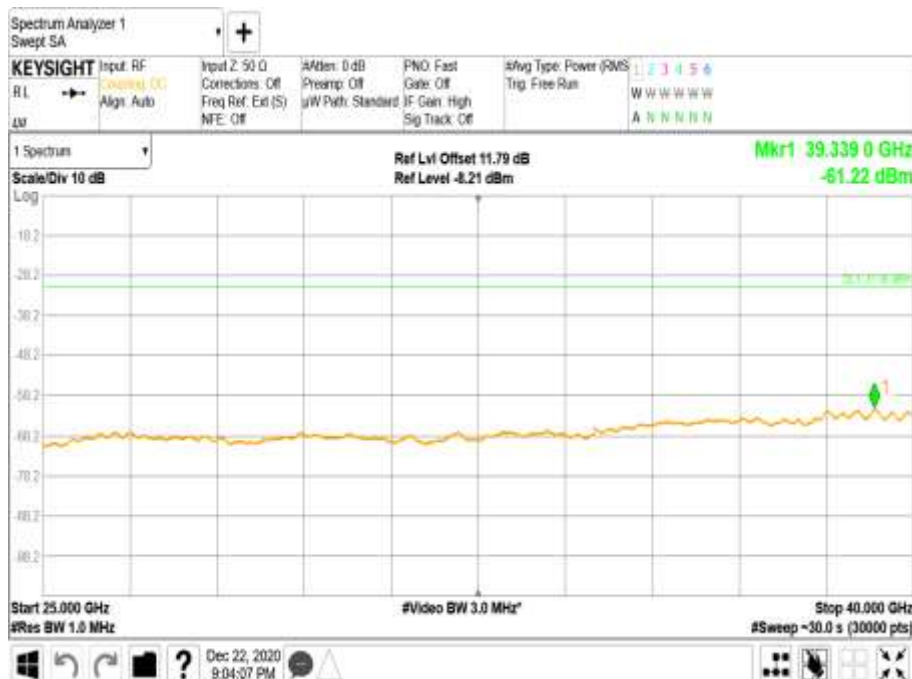
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



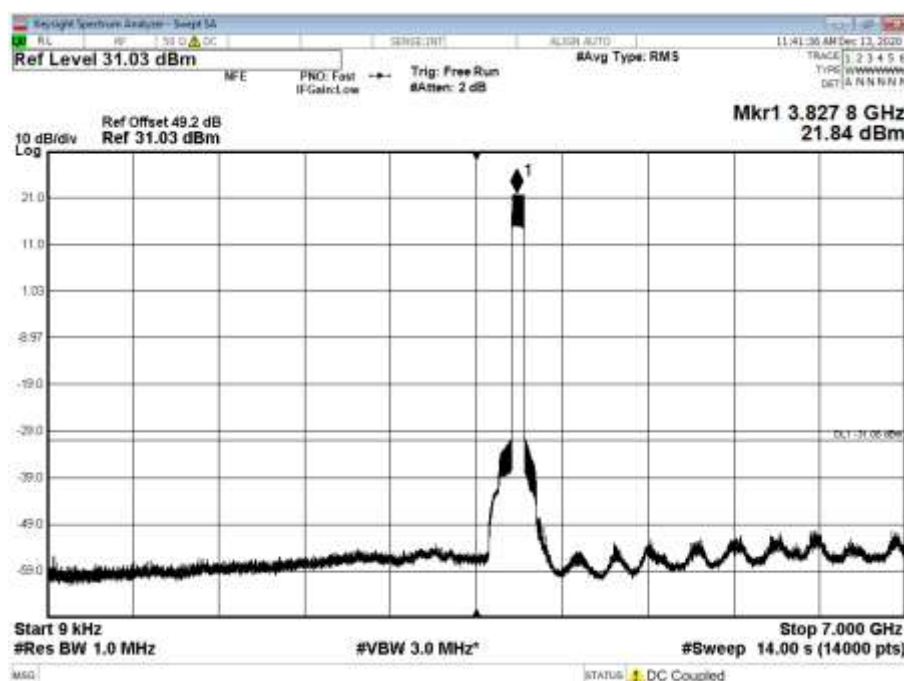
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



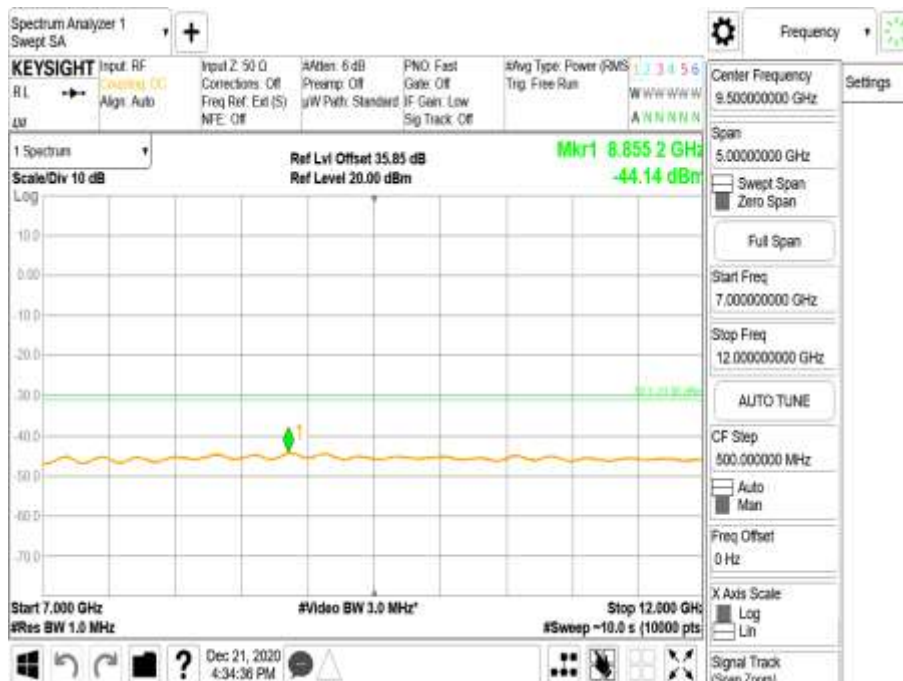
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



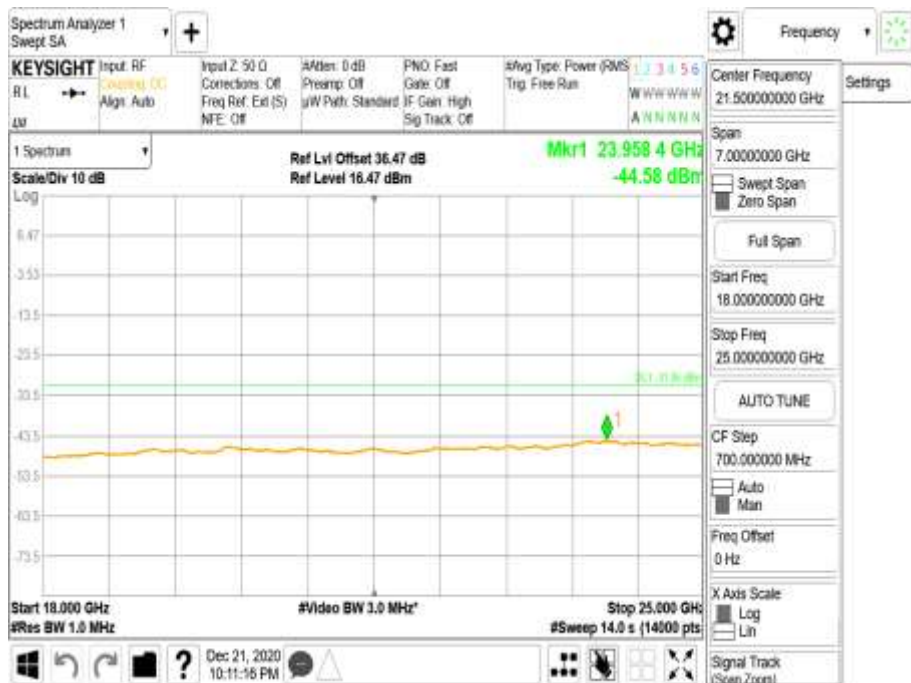
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 7GHz – 12GHz



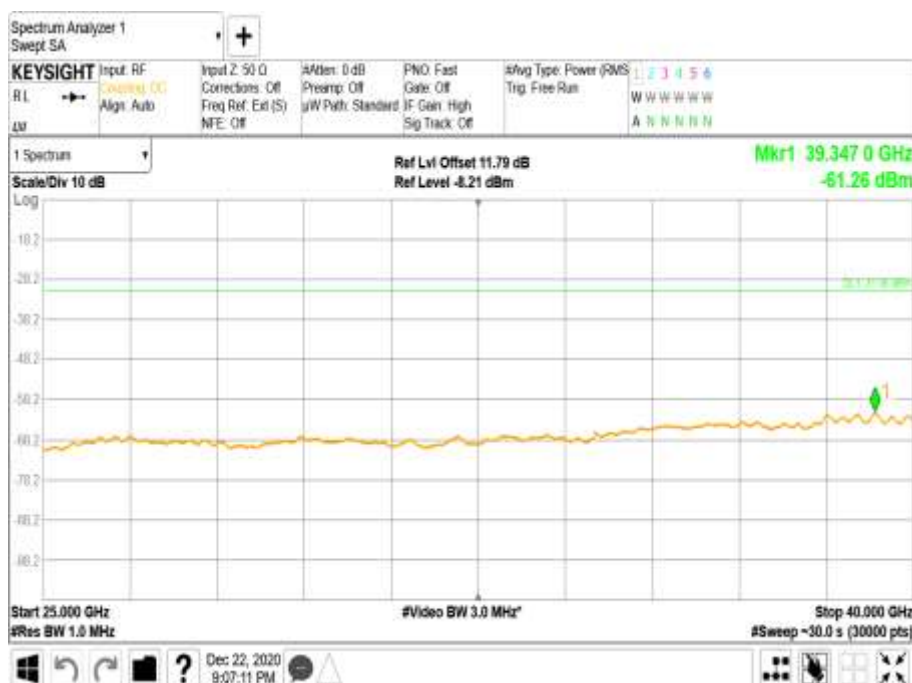
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



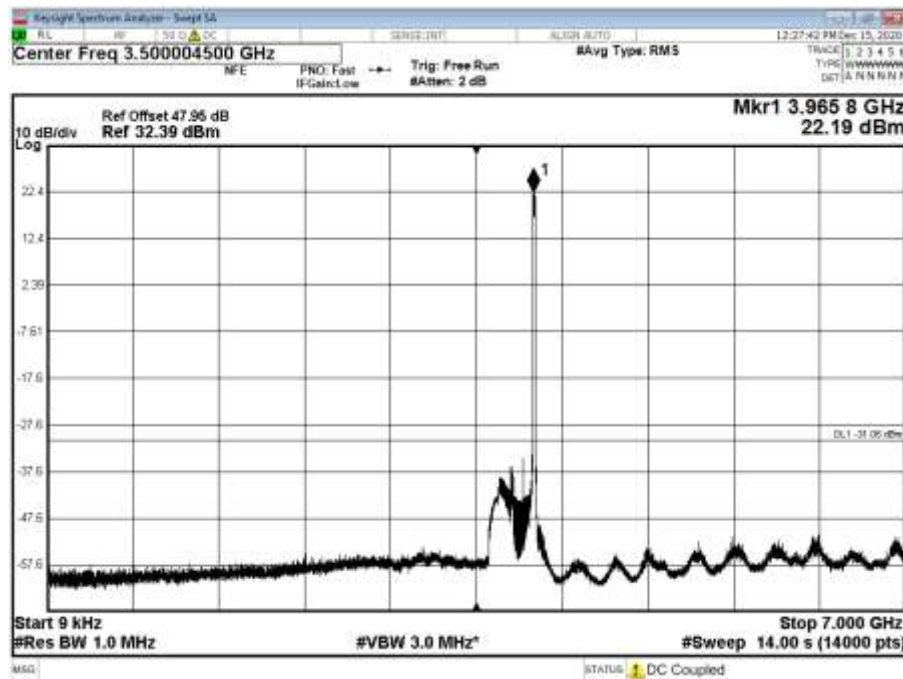
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



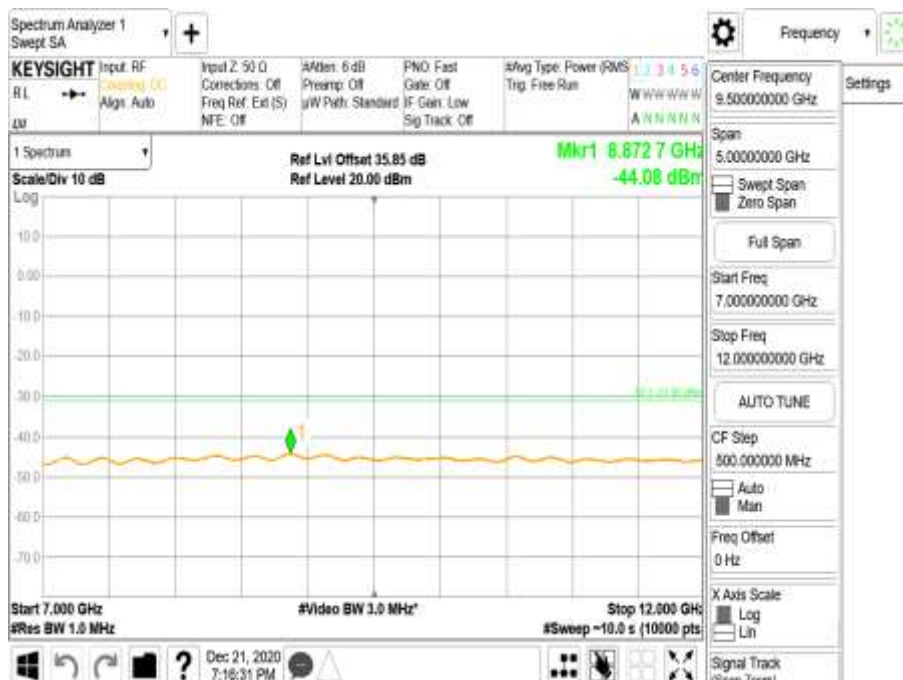
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position T - Band 2 - Range 7GHz - 12GHz



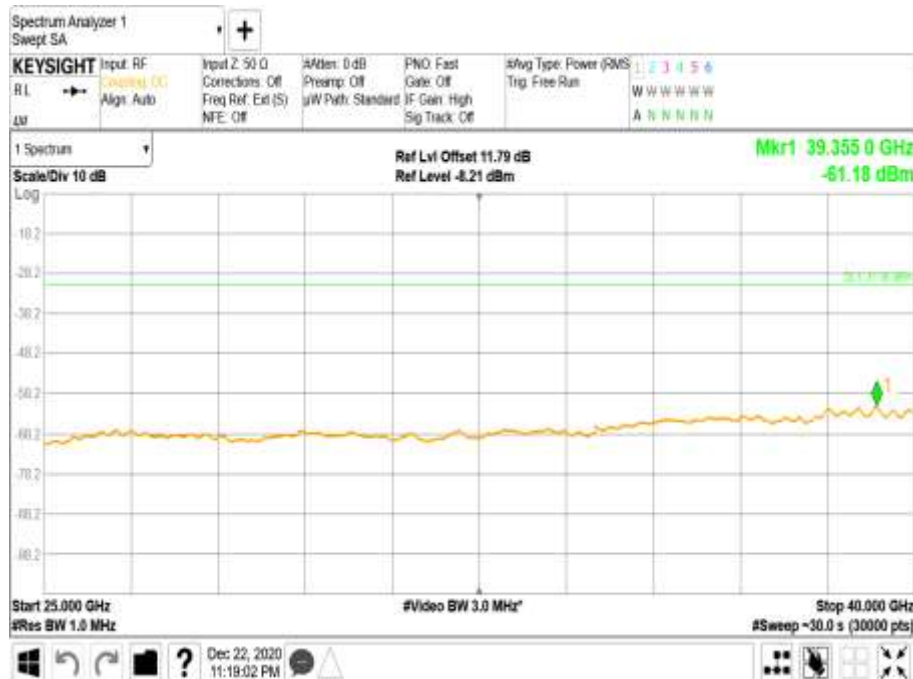
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



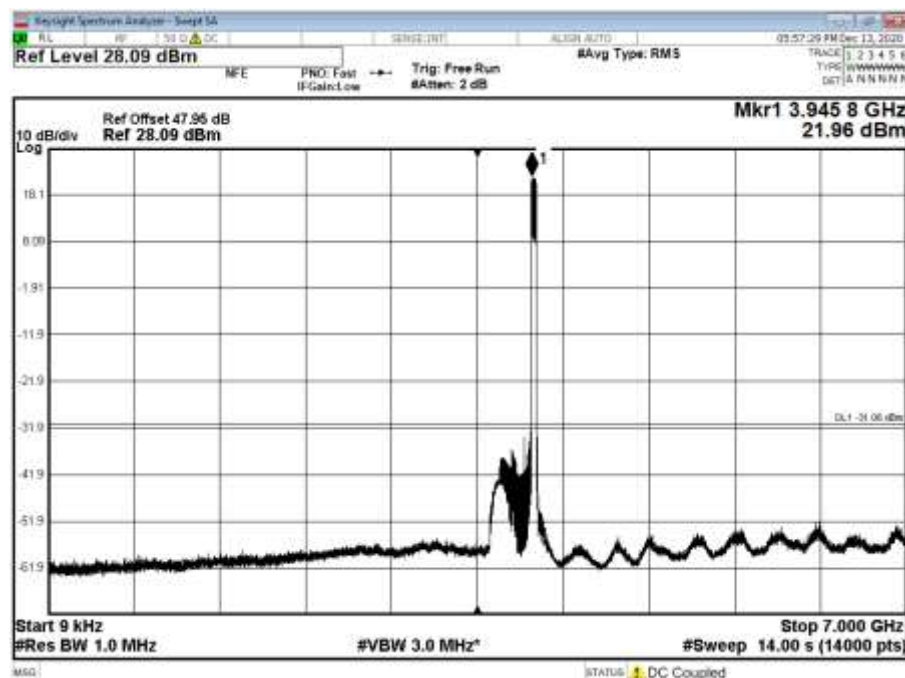
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



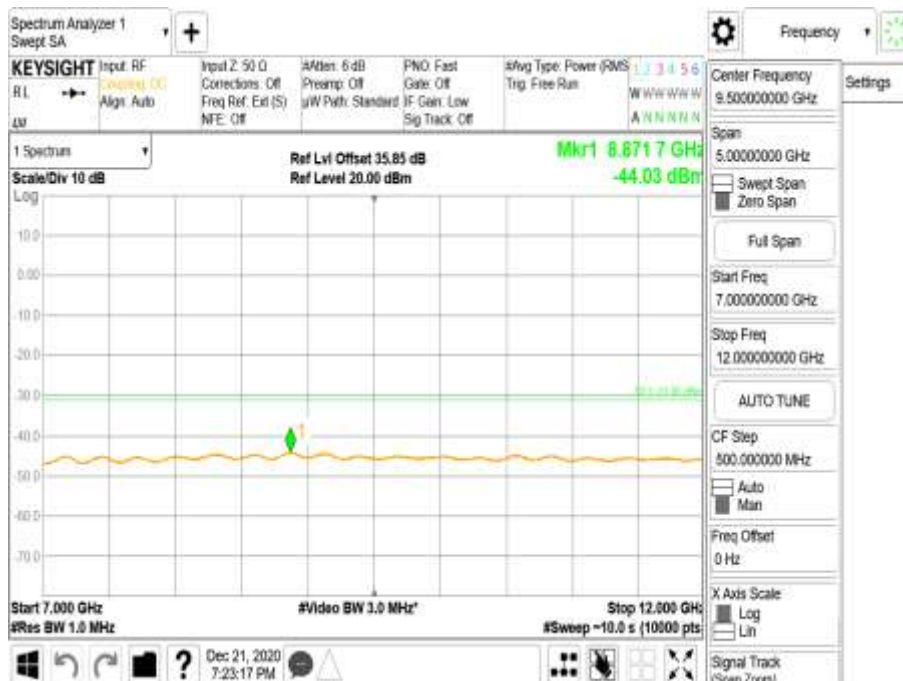
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position T - Band 5 - Range 25GHz – 40GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 7GHz – 12GHz



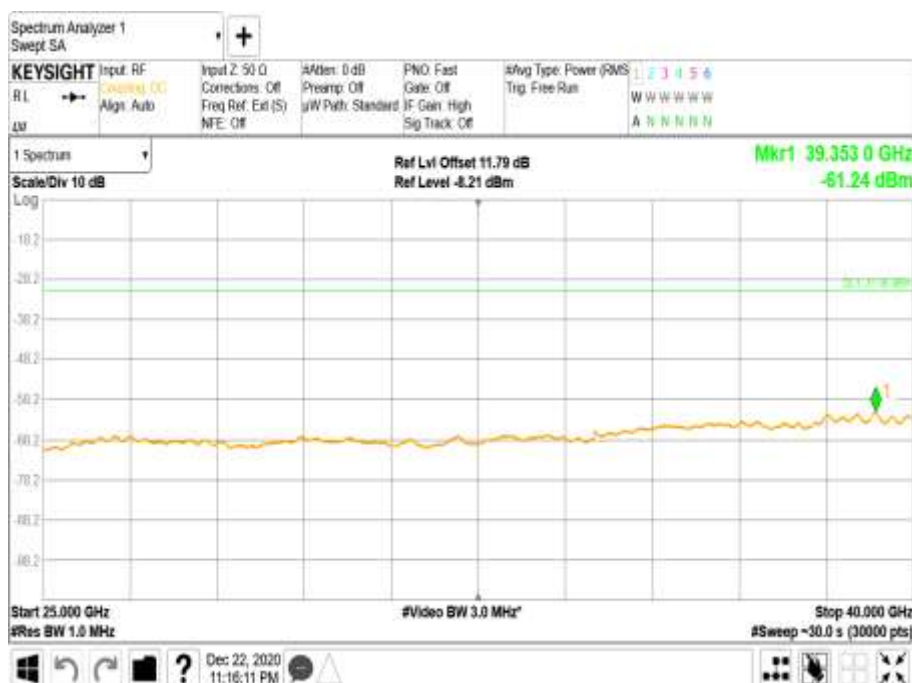
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



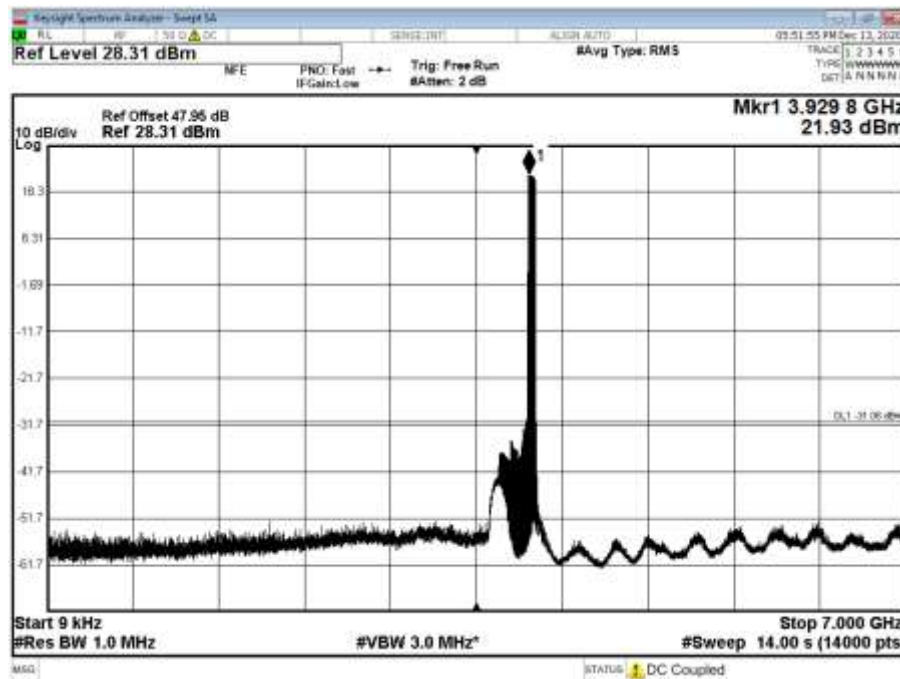
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



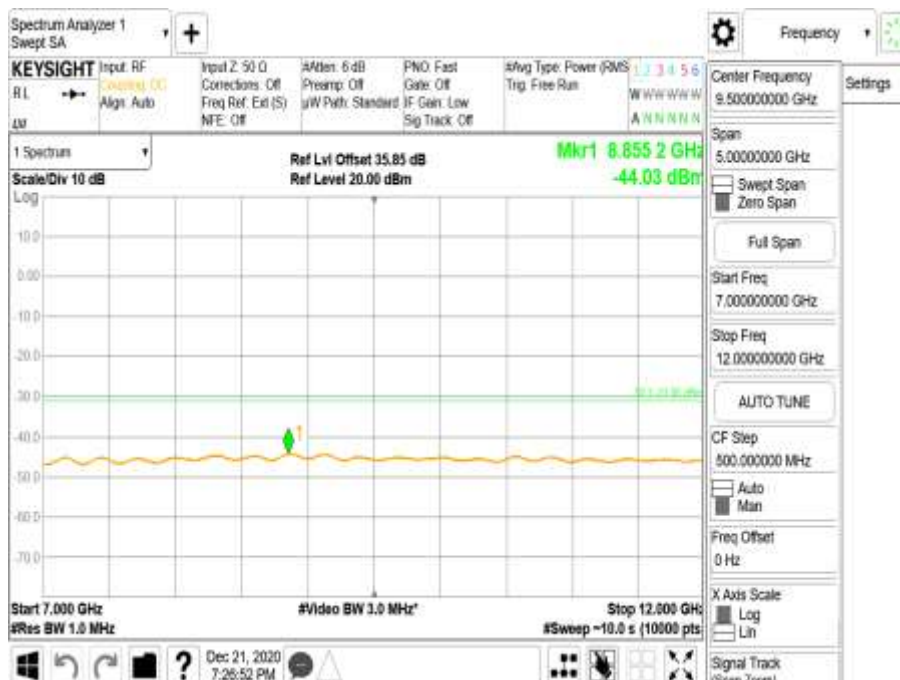
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position T - Band 2 - Range 7GHz – 12GHz





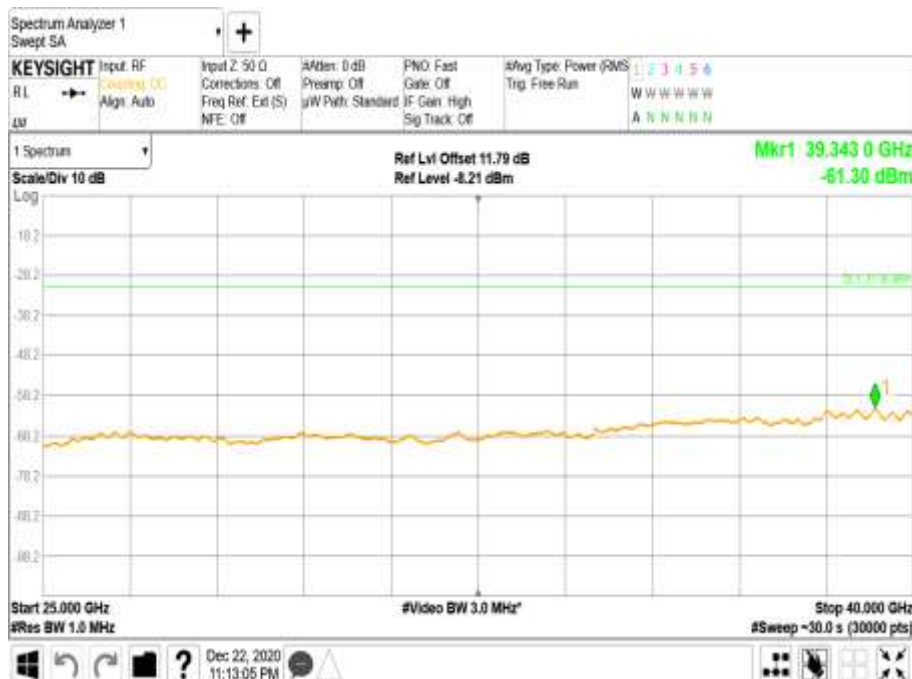
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position T - Band 3 - Range 12 GHz – 18GHz



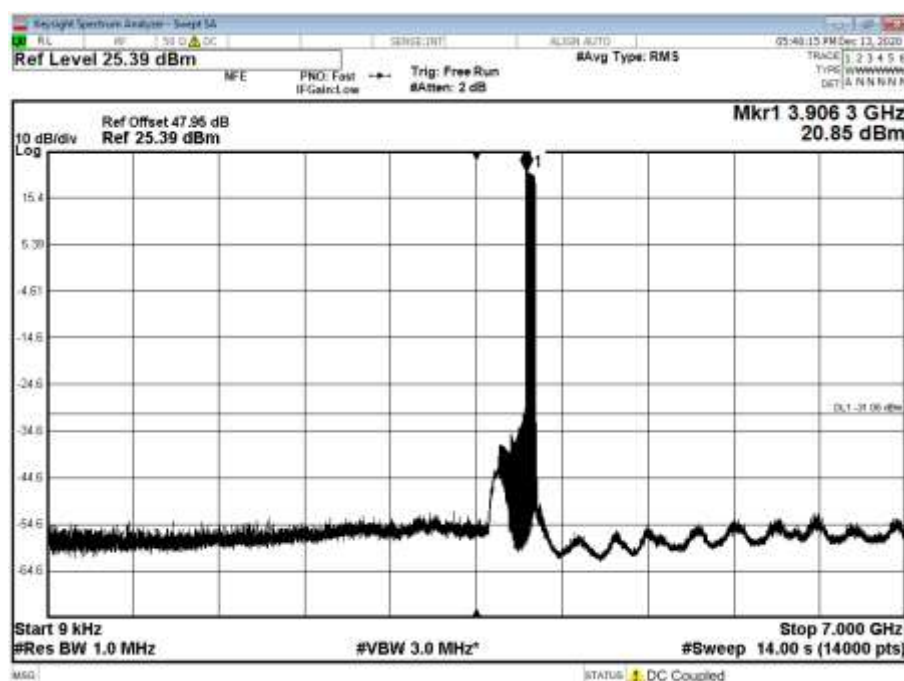
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position T - Band 4 - Range 18GHz – 25GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T - Band 1 - Range 0.009MHz - 7GHz





Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 7GHz – 12GHz



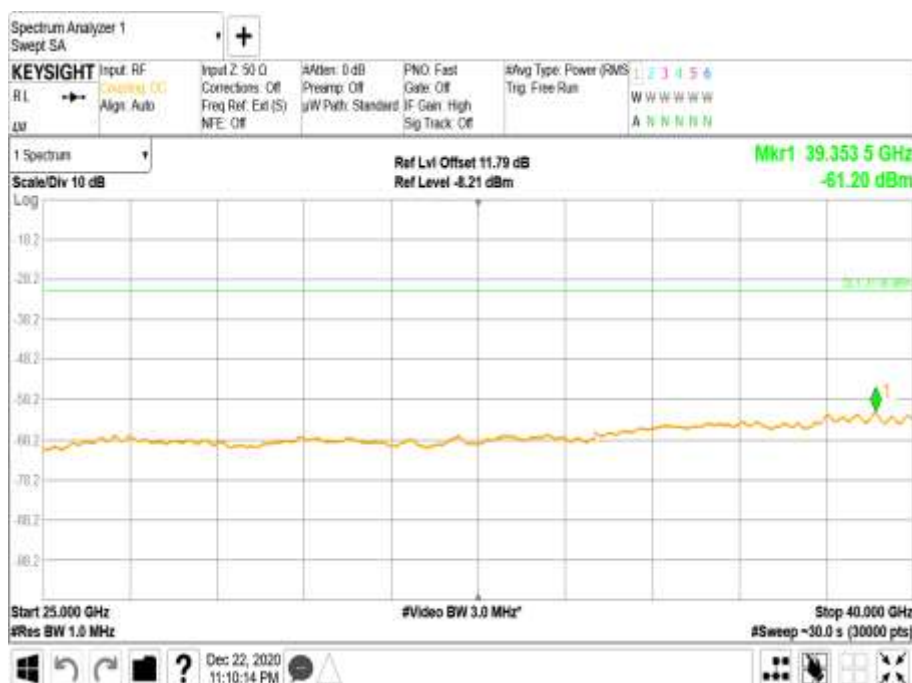
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



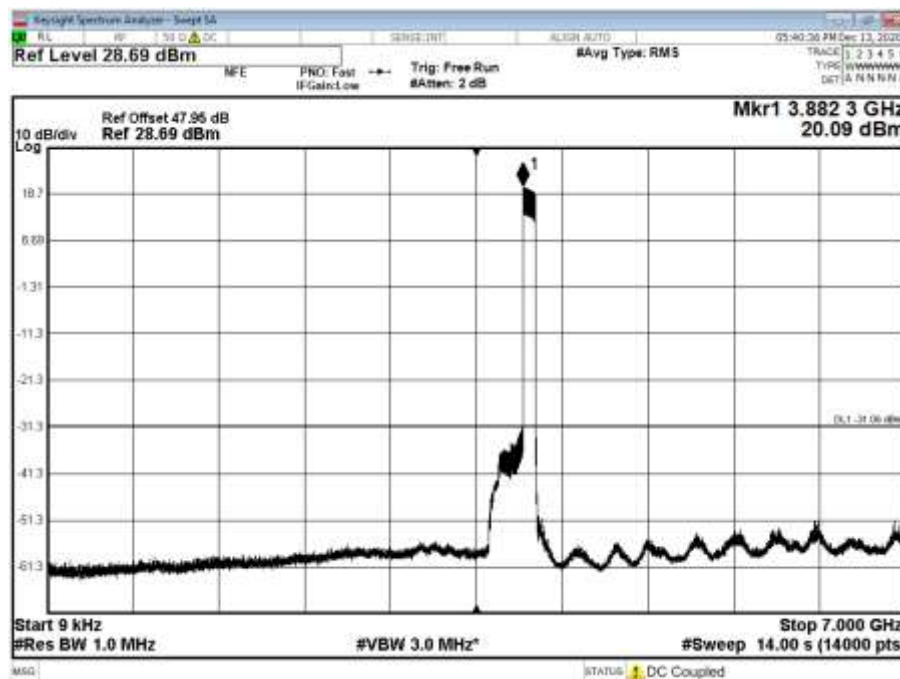
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



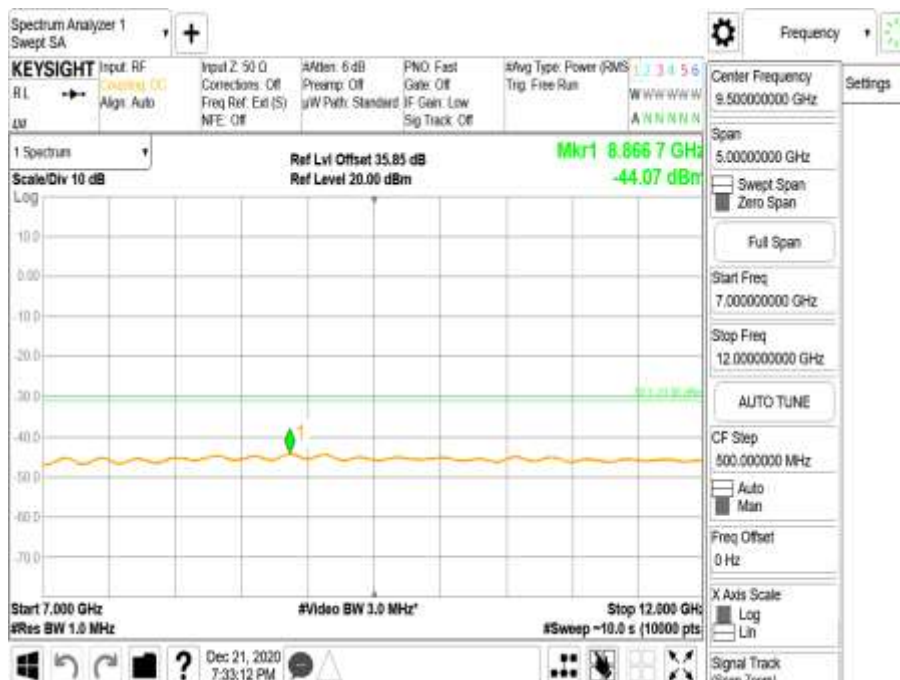
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position T - Band 2 - Range 7GHz – 12GHz



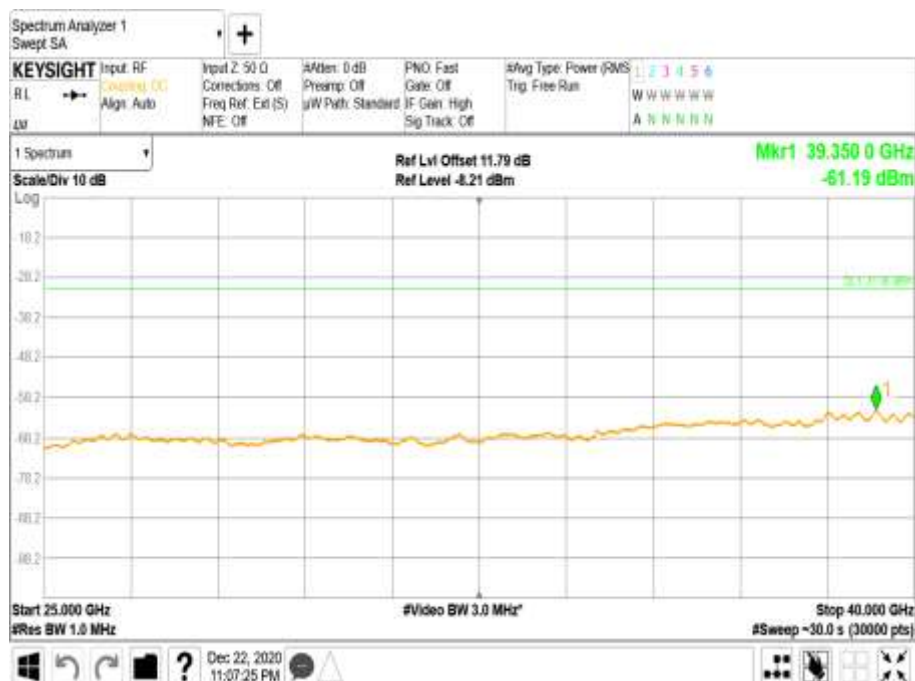
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position T - Band 5 - Range 25GHz – 40GHz



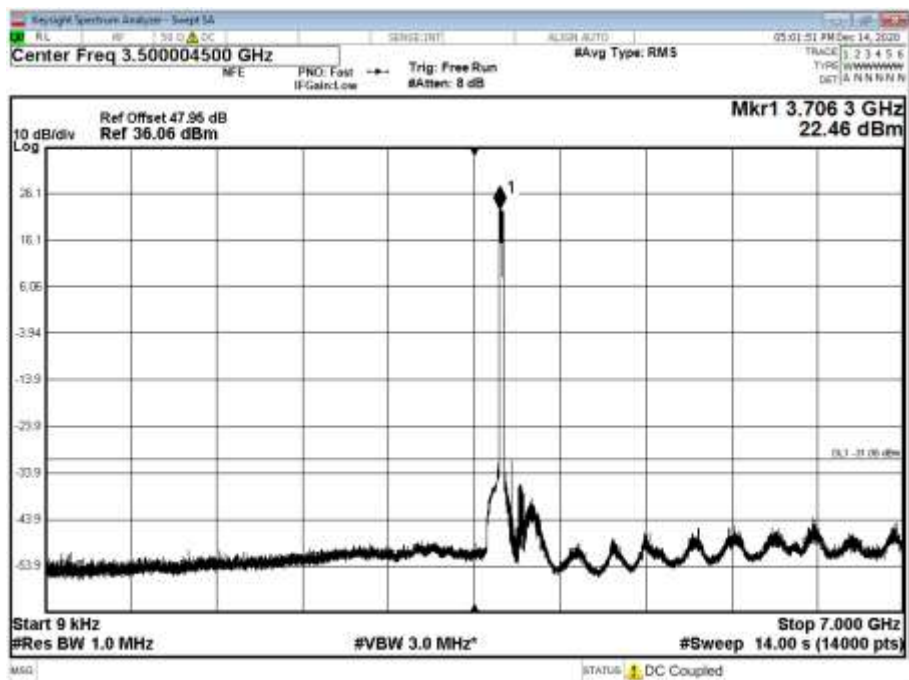
Configuration A2

Maximum Output Power Per Port

2 x 20MHz Carrier Bandwidth 32.20 dBm

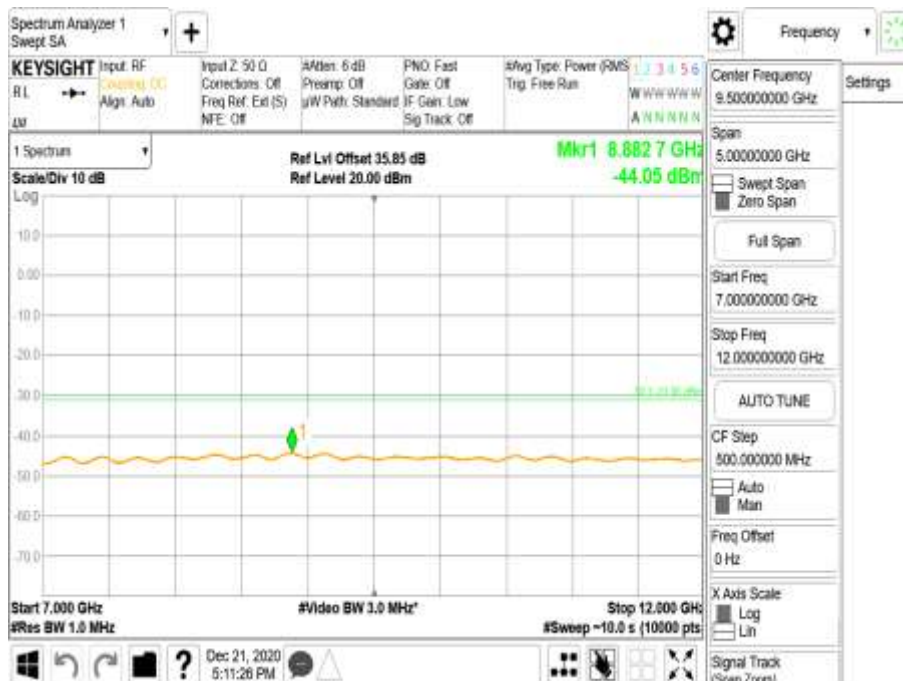
2 x 40MHz, 60MHz, 80MHz & 100 MHz Carrier Bandwidth 34.00 dBm

Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position B - Band 1 - Range 0.009MHz - 7GHz





Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 7GHz – 12GHz



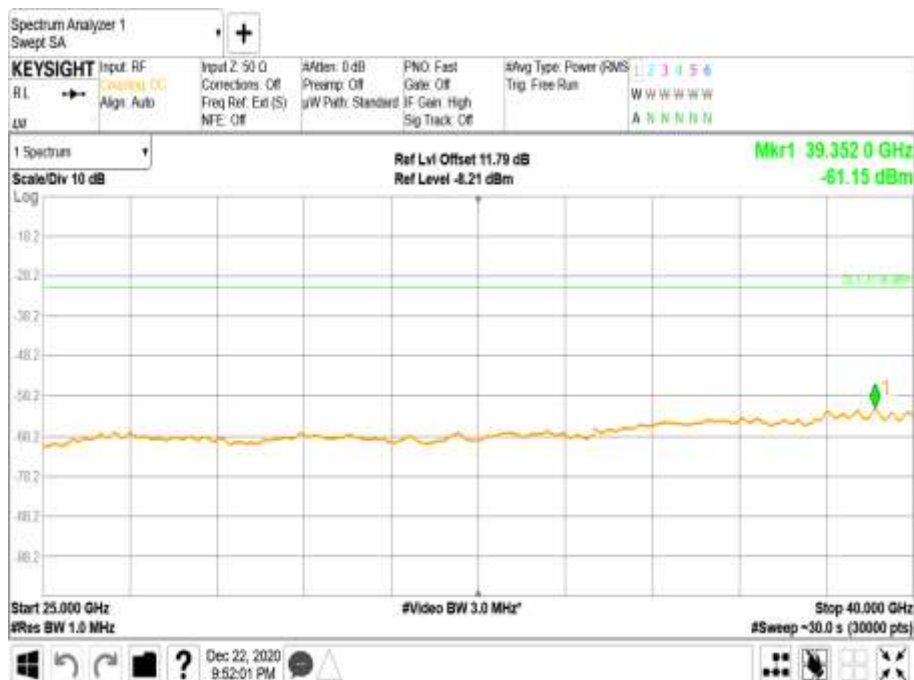
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz



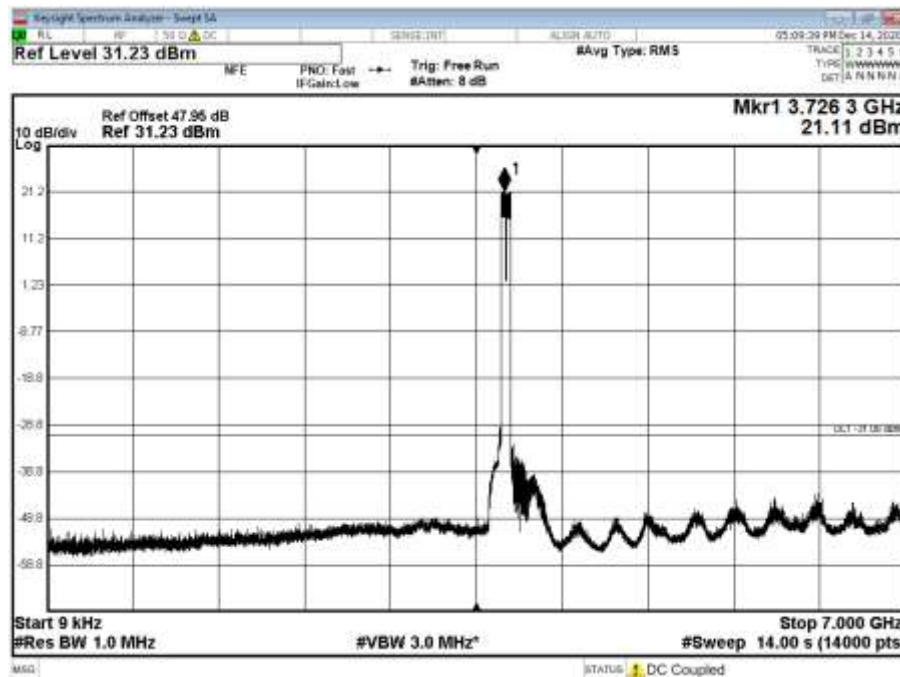
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B - Band 4 - Range 18GHz – 25GHz



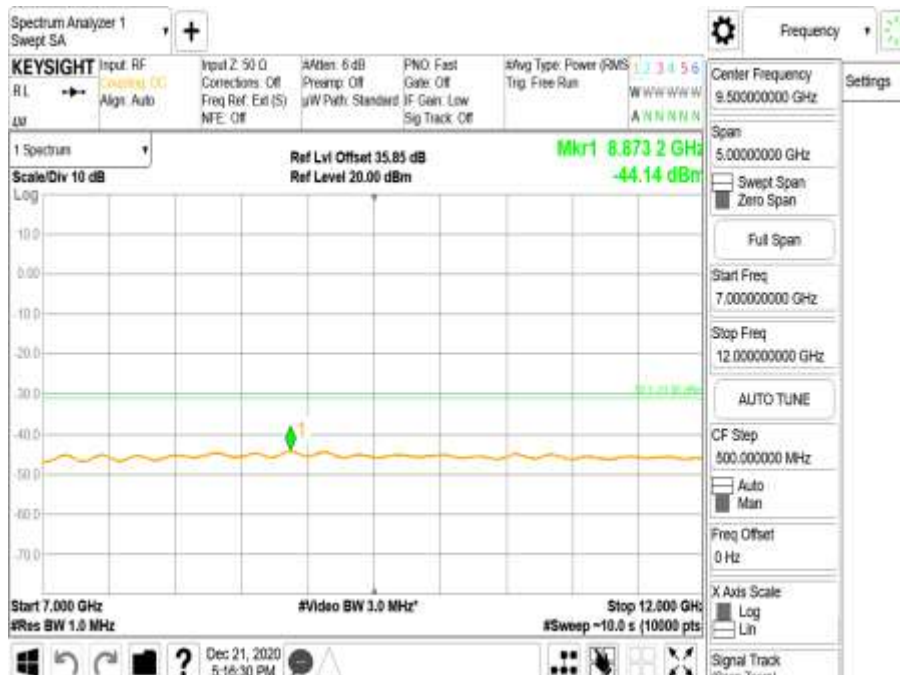
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position B - Band 1 - Range 0.009MHz - 7GHz

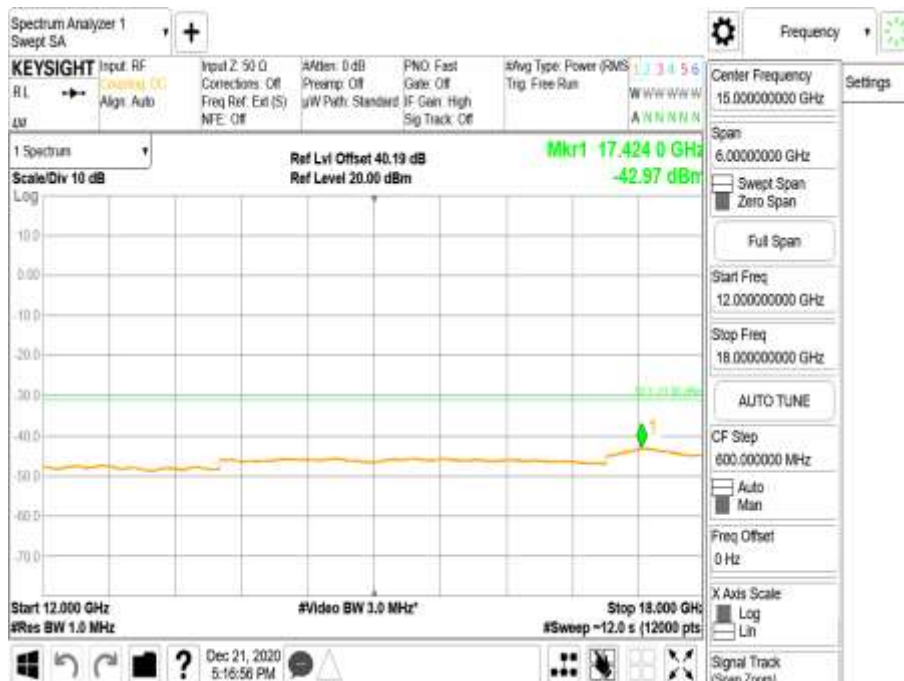


Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position B - Band 2 - Range 7GHz – 12GHz





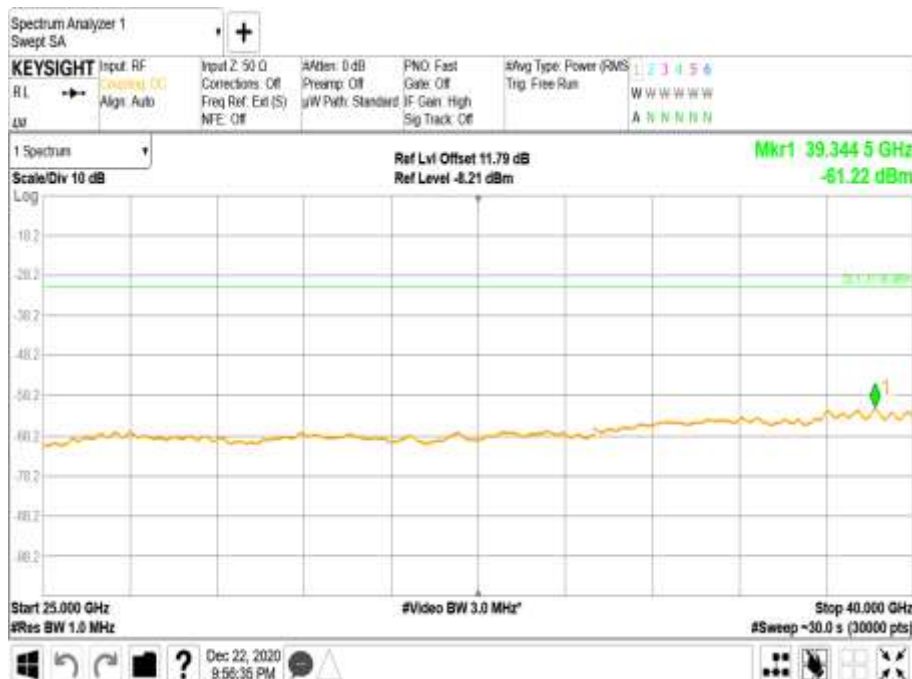
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz



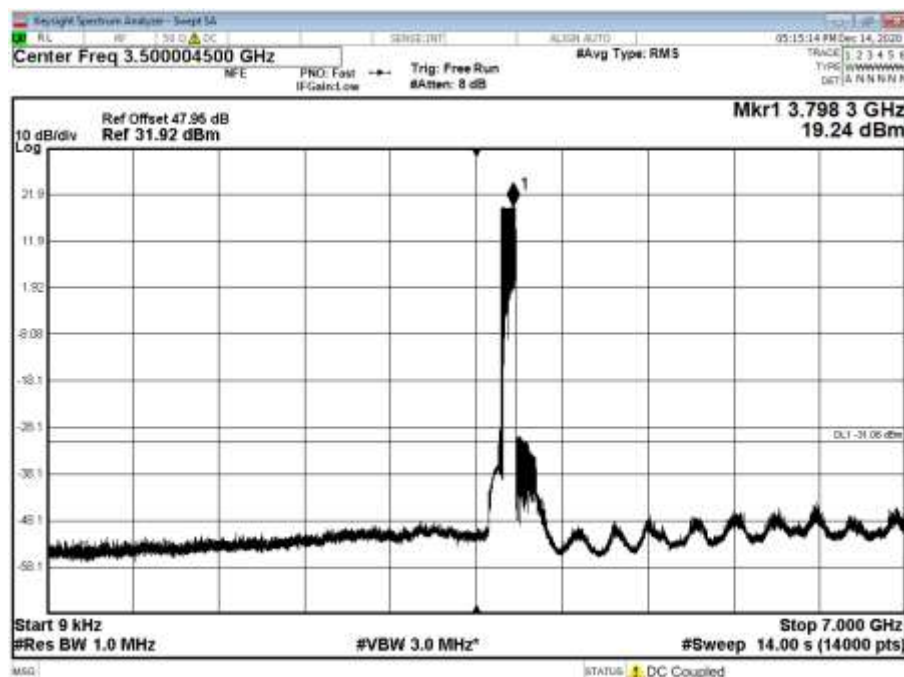
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position B - Band 4 - Range 18GHz – 25GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position B - Band 1 - Range 0.009MHz - 7GHz





Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 7GHz – 12GHz



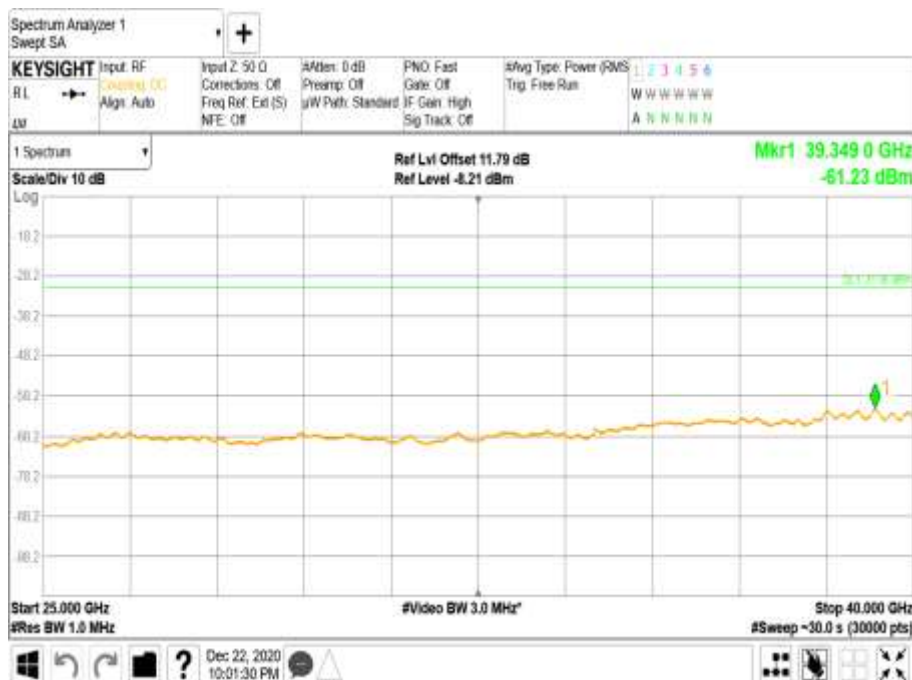
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz



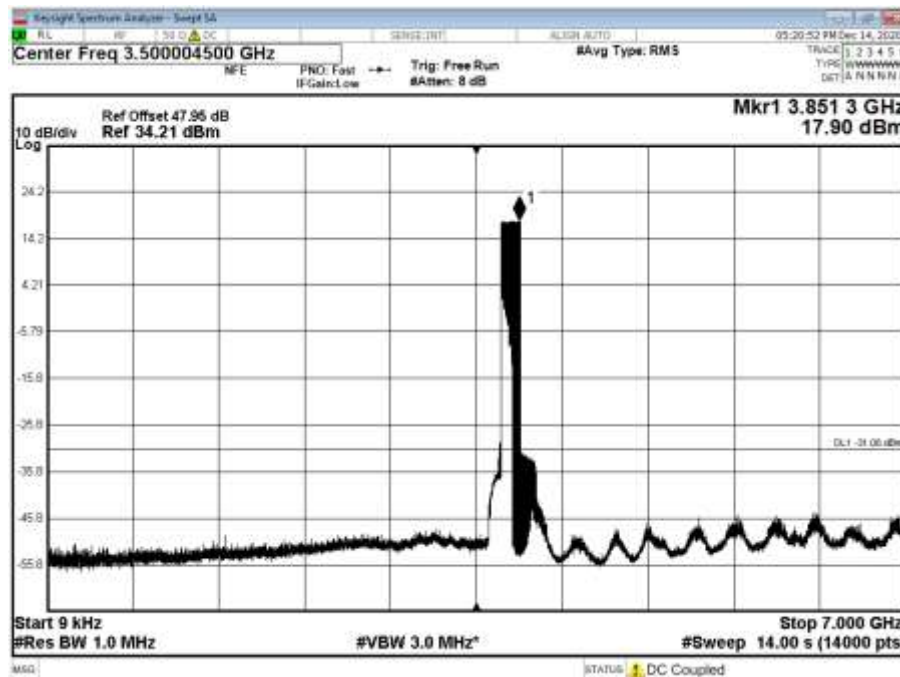
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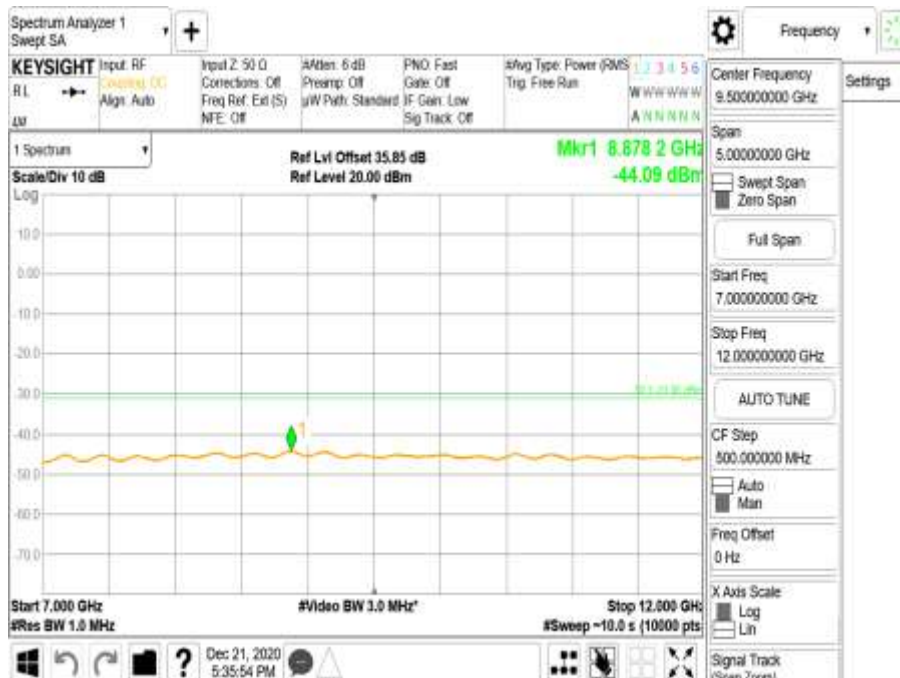
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position B - Band 1 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position B - Band 2 - Range 7GHz - 12GHz





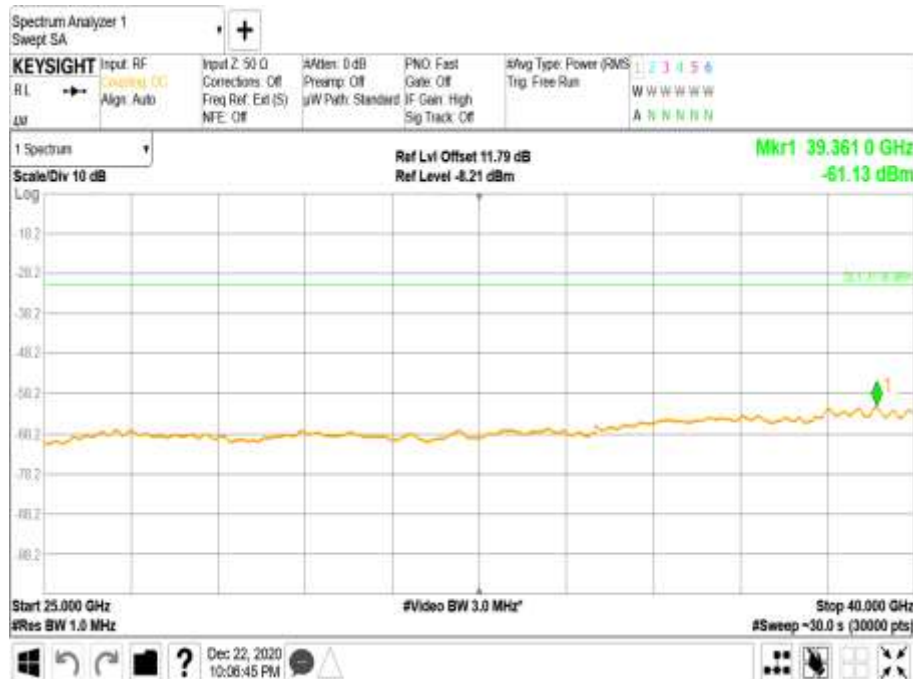
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B - Band 3 - Range 12 GHz – 18GHz



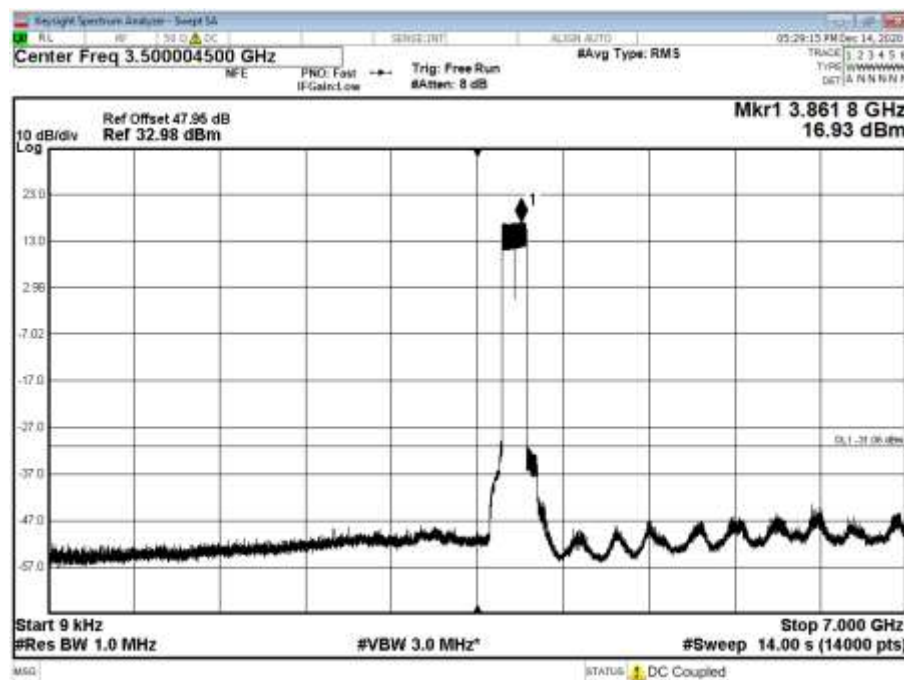
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position B - Band 4 - Range 18GHz – 25GHz



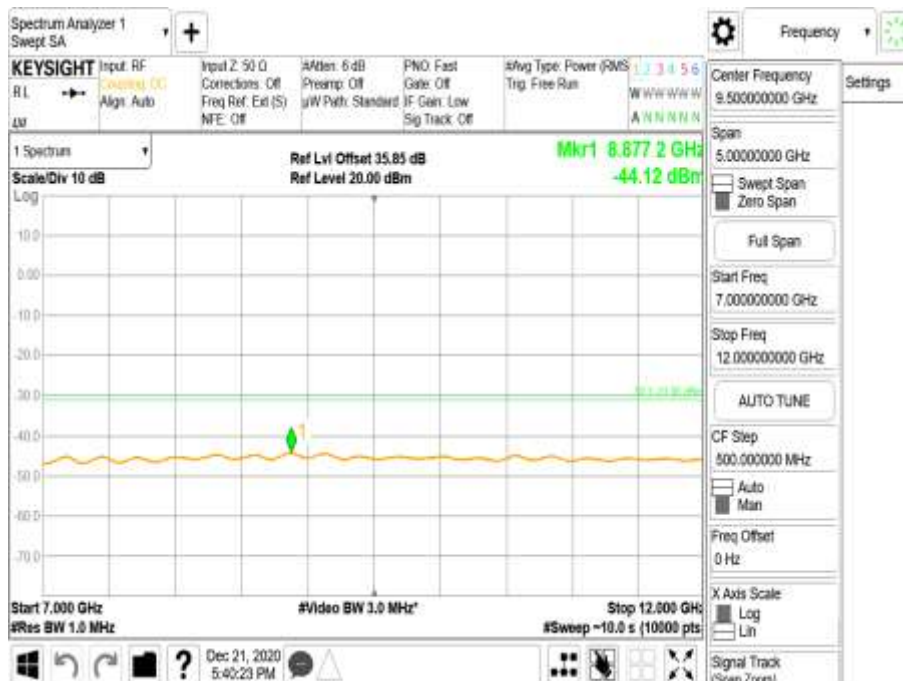
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position B - Band 1 - Range 0.009MHz - 7GHz



Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 2 - Range 7GHz – 12GHz



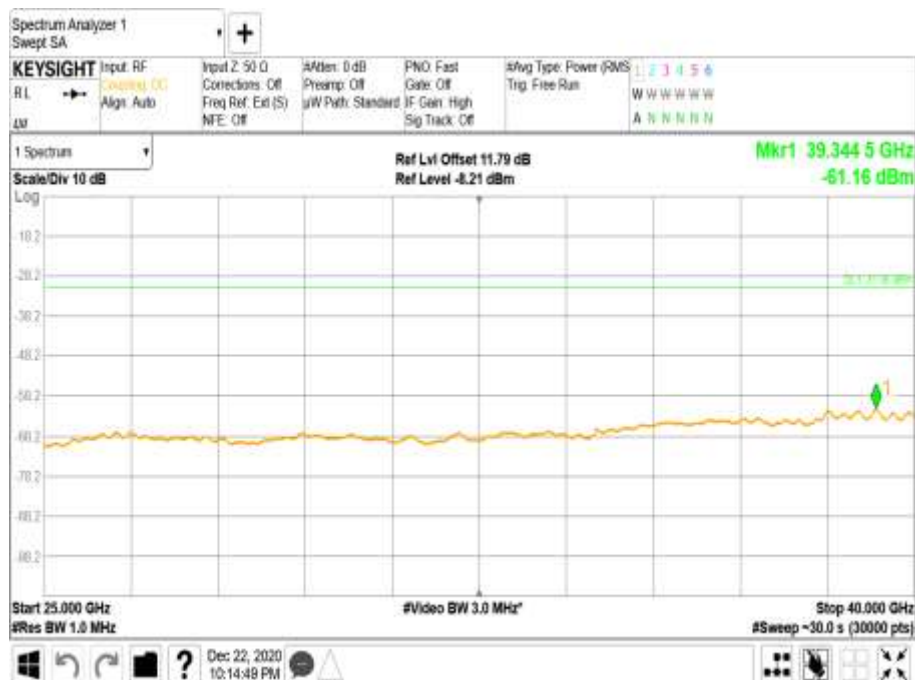
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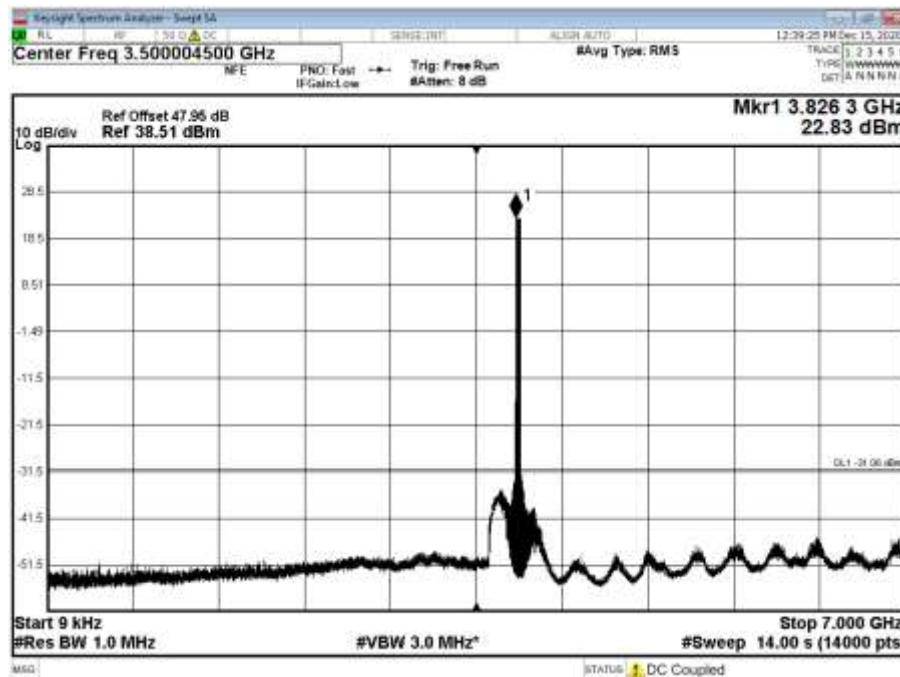
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 4 - Range 18GHz – 25GHz



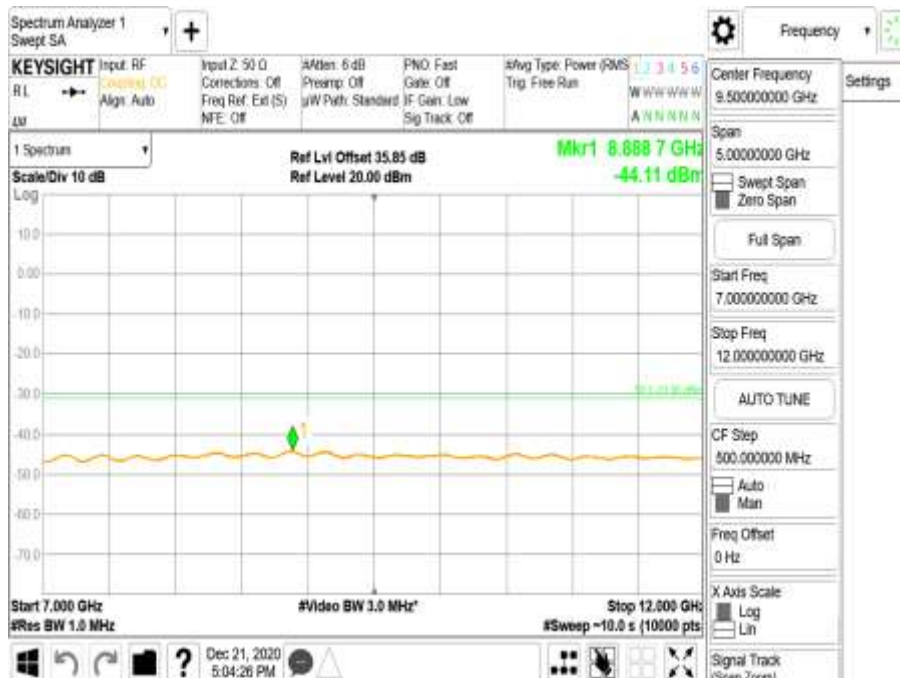
Antenna 32 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position B - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position M - Band 2 - Range 7GHz – 12GHz





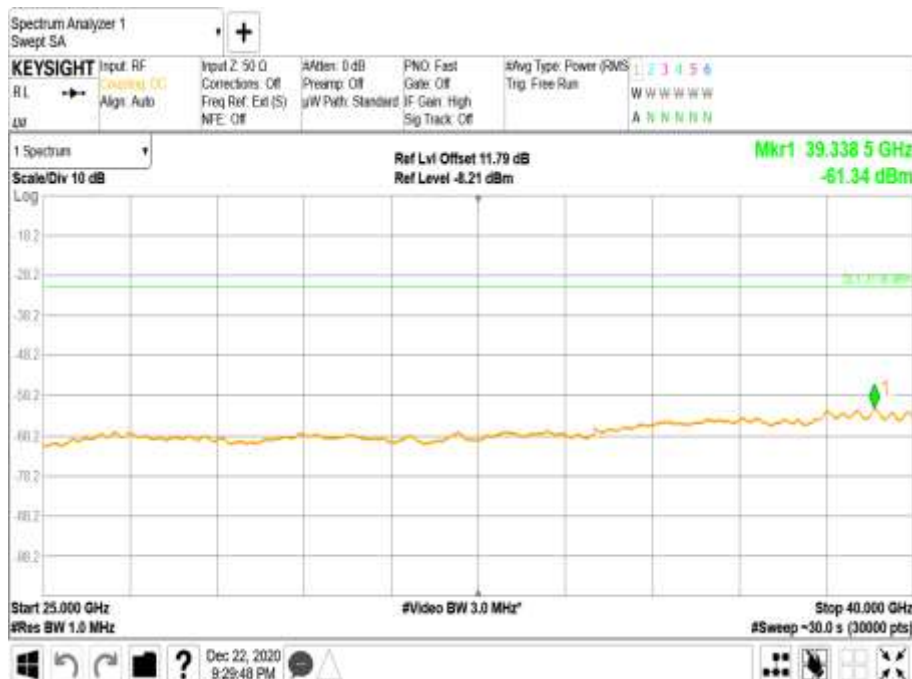
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Channel Position M - Band 3 - Range 12 GHz – 18GHz



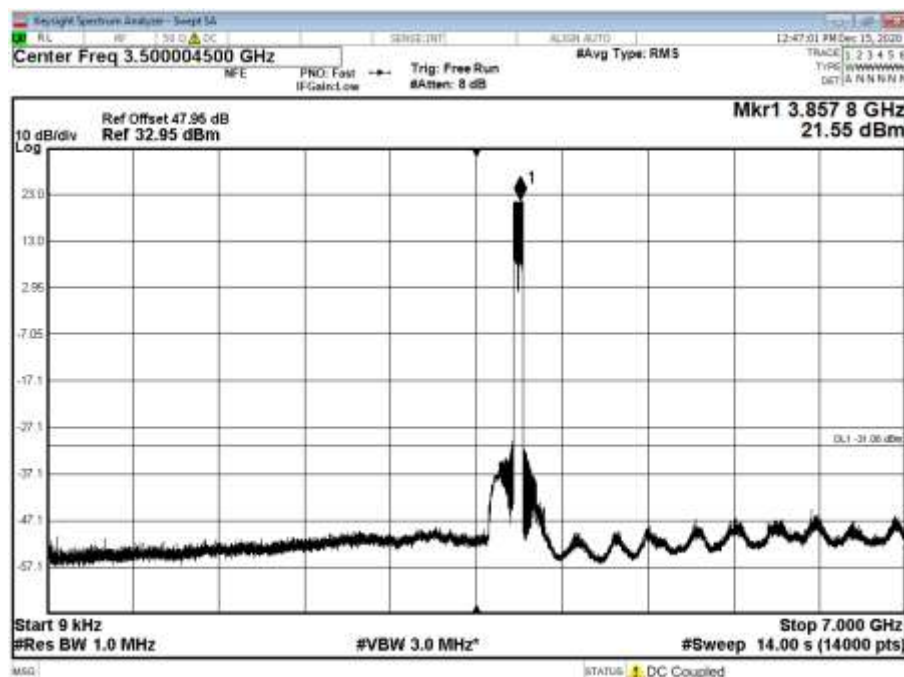
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position M - Band 4 - Range 18GHz – 25GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS -
Channel Position M - Band 5 - Range 25GHz – 40GHz

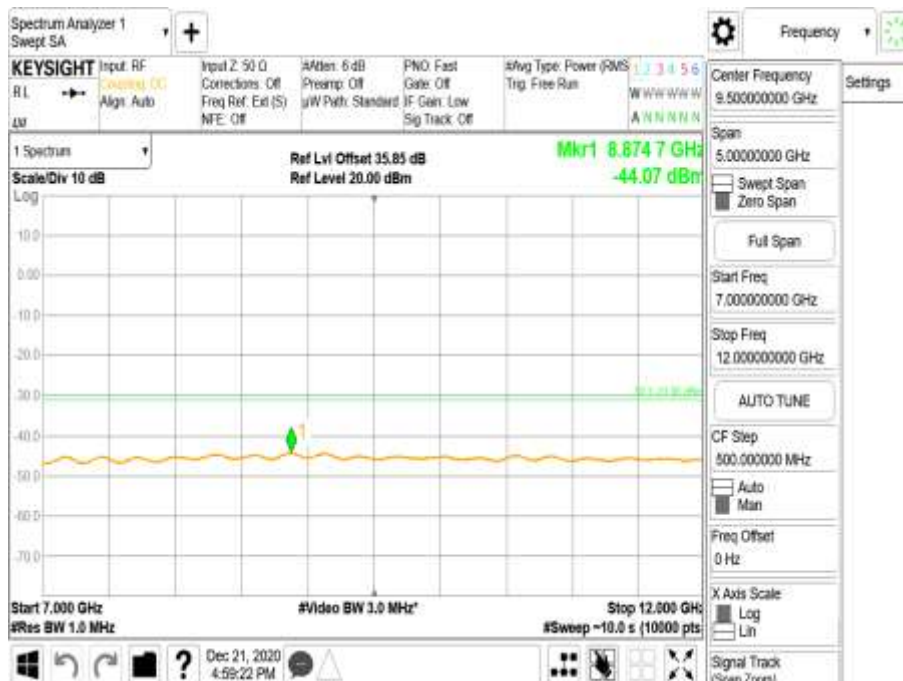


Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz





Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 7GHz – 12GHz



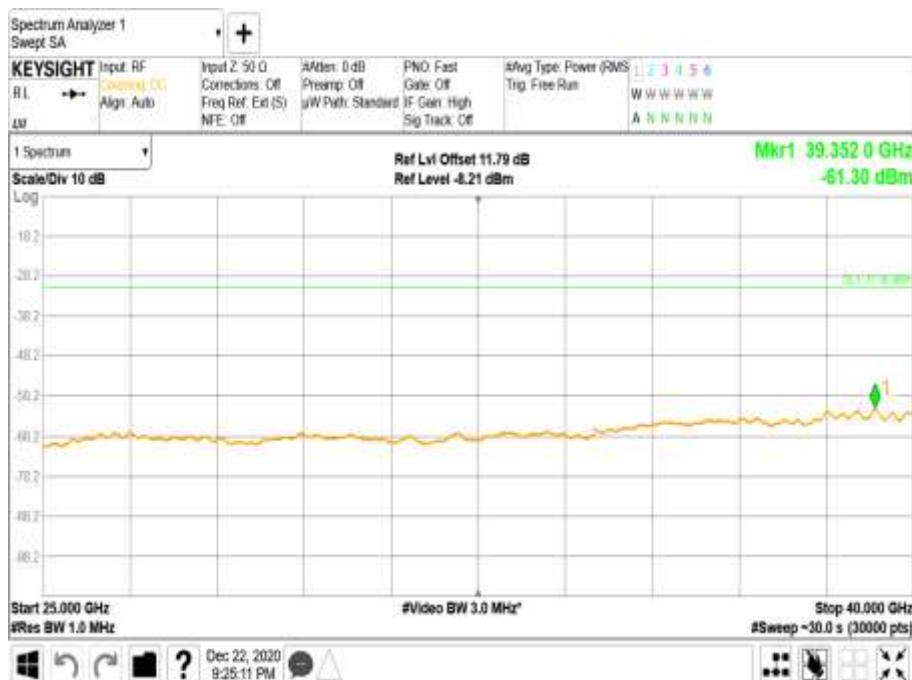
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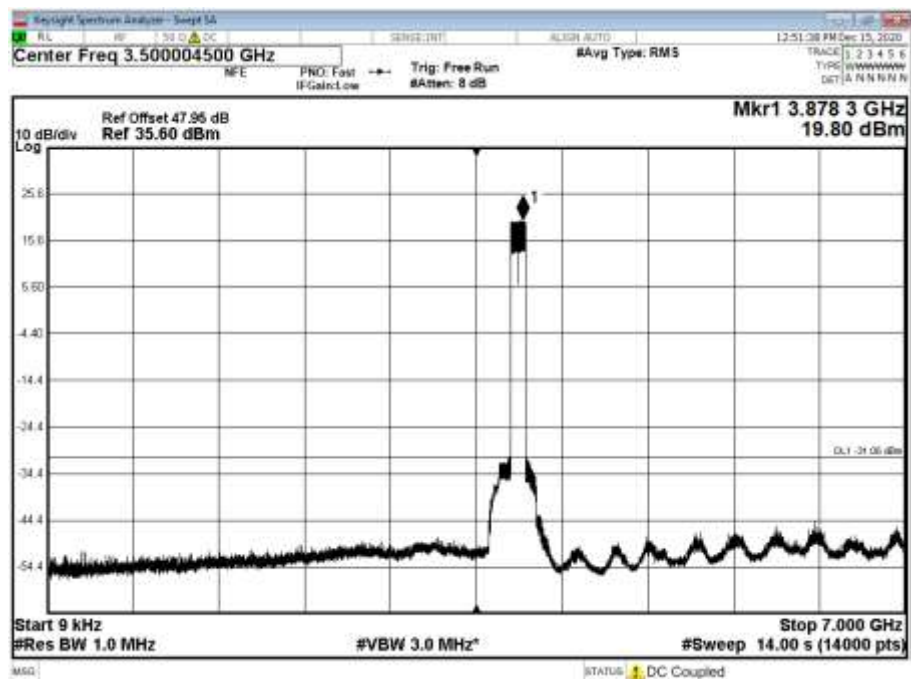
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Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS - Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position M - Band 2 - Range 7GHz – 12GHz





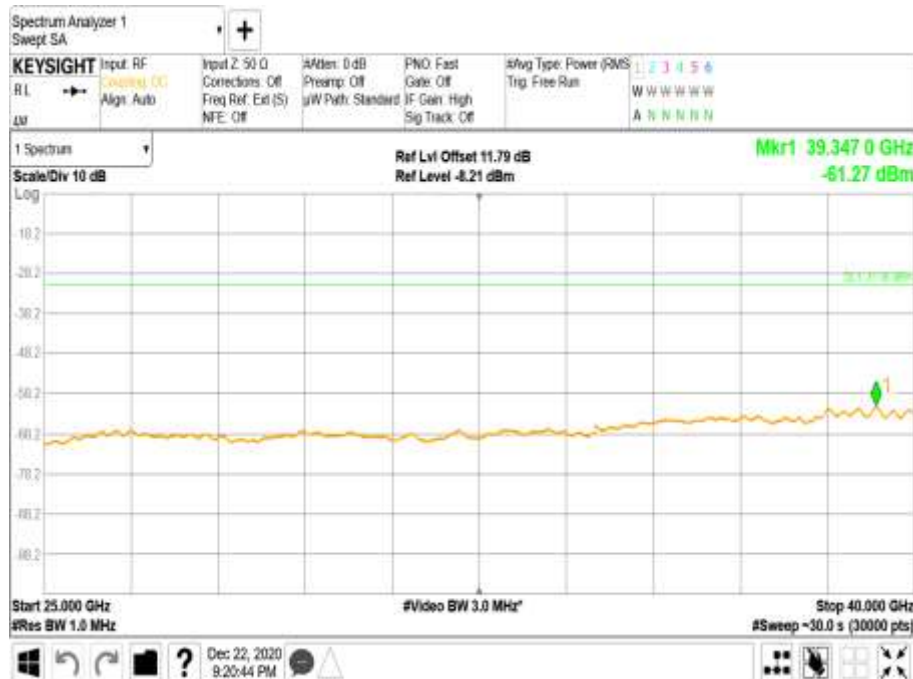
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



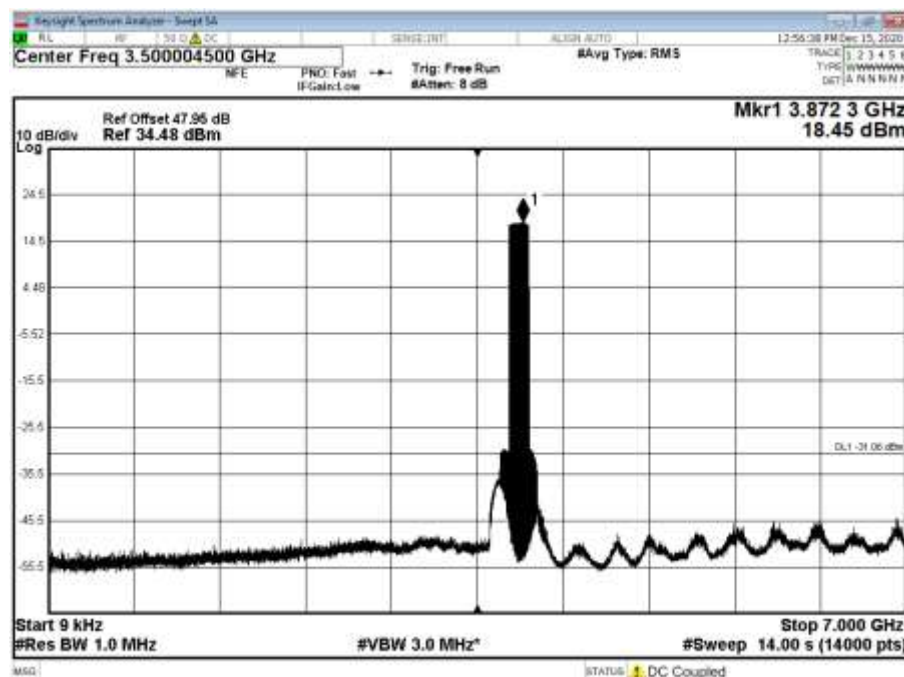
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position M - Band 5 - Range 25GHz – 40GHz

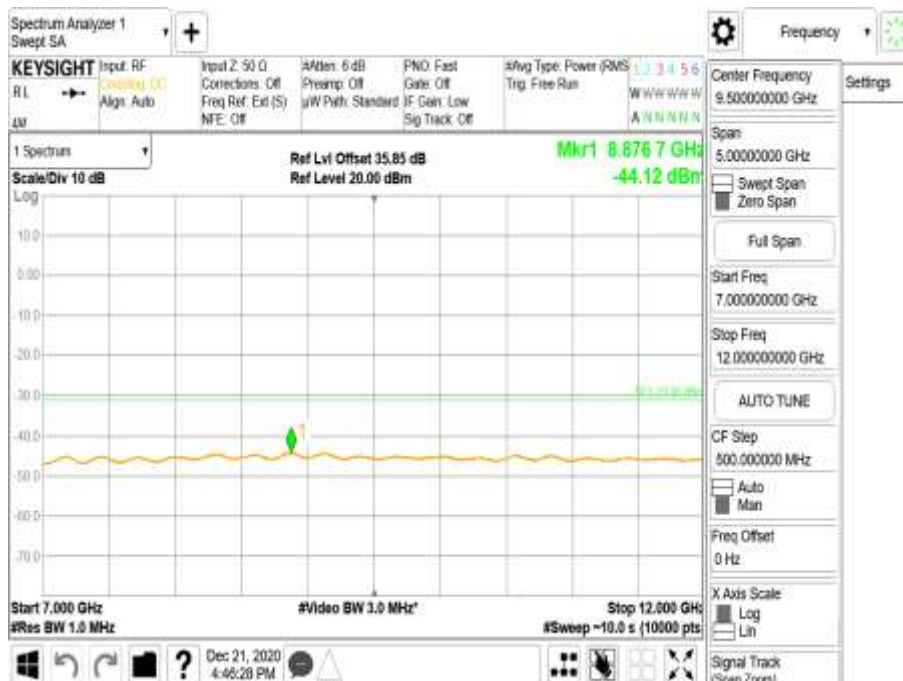


Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz





Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M - Band 2 - Range 7GHz – 12GHz



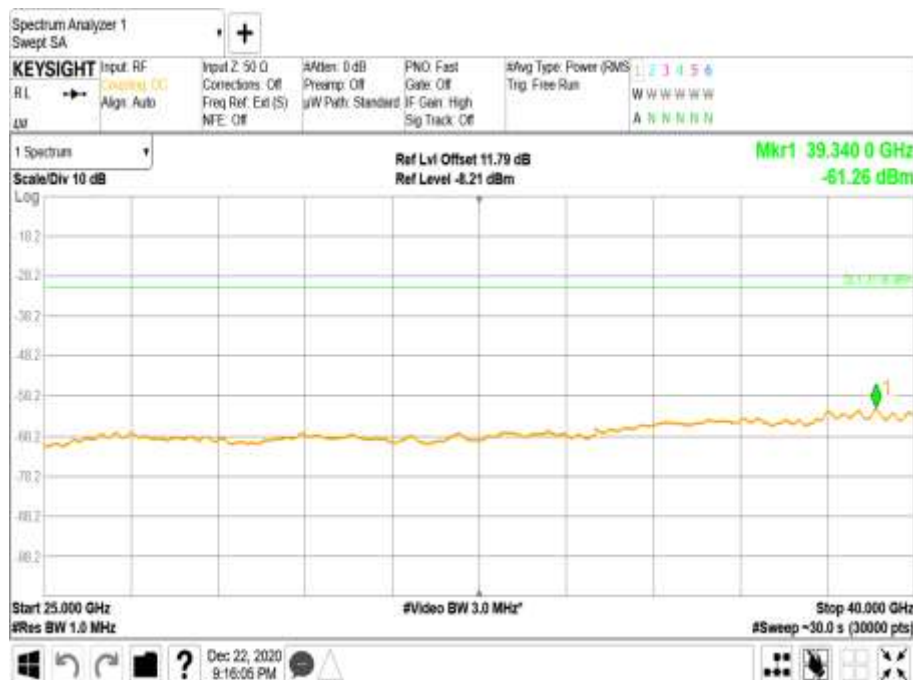
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



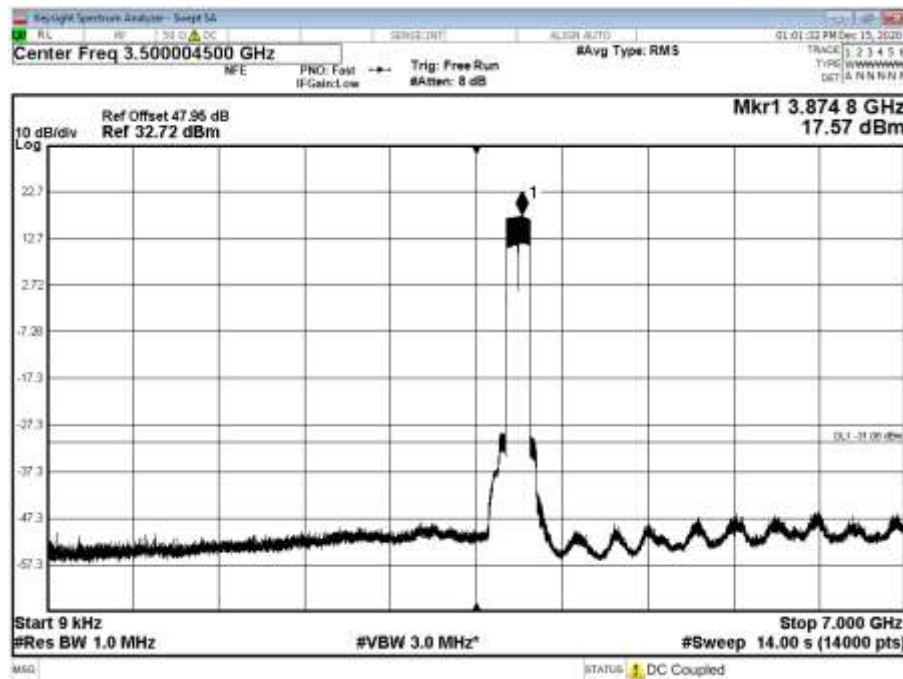
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



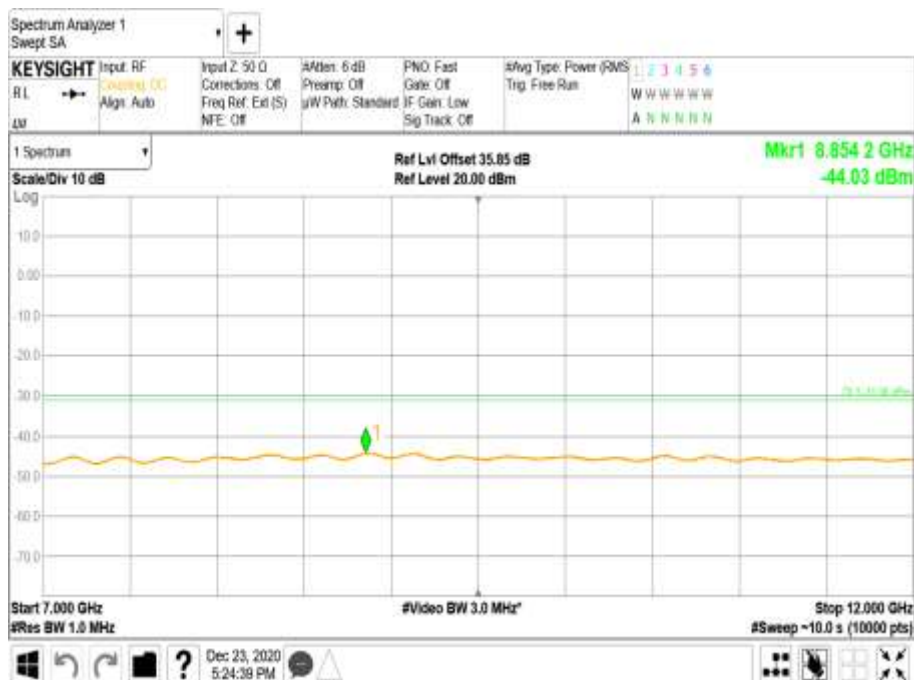
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position M - Band 5 - Range 25GHz – 40GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position M - Band 1 - Range 0.009MHz - 7GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS -
Channel Position M - Band 2 - Range 7GHz – 12GHz



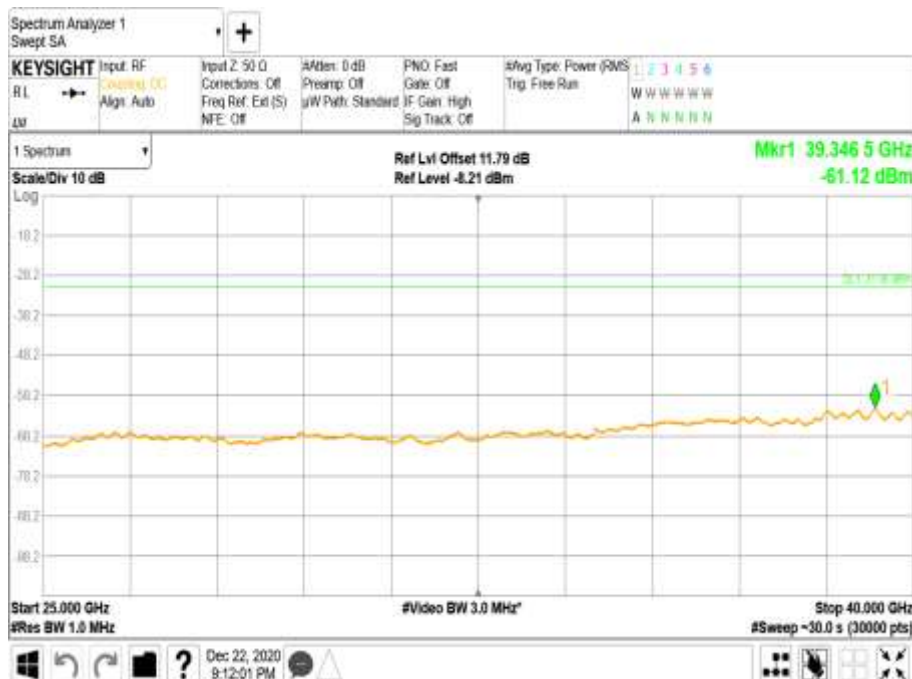
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 3 - Range 12 GHz – 18GHz



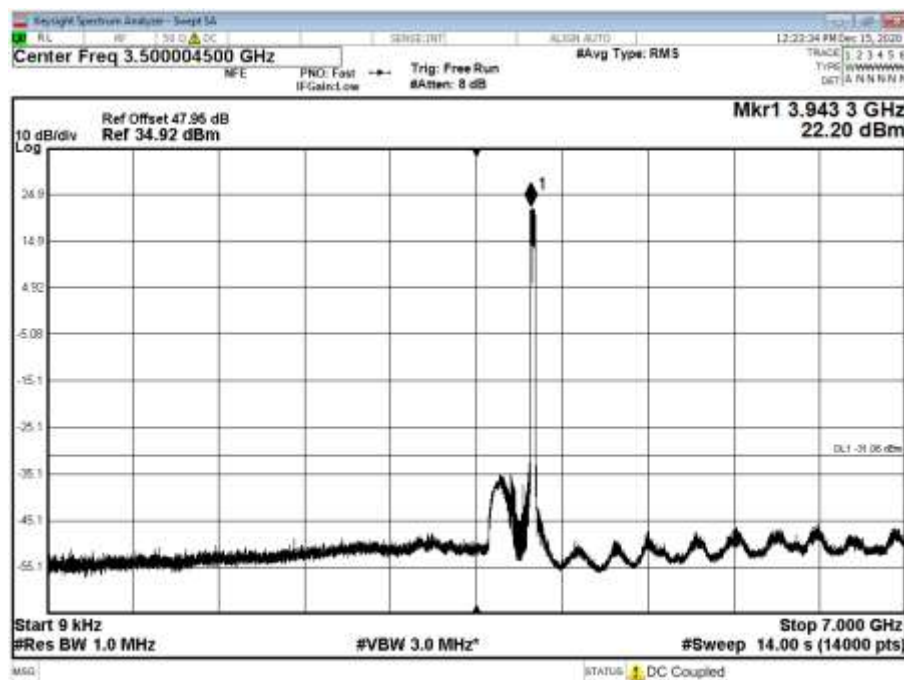
Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 4 - Range 18GHz – 25GHz



Antenna 38 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position M - Band 5 - Range 25GHz – 40GHz

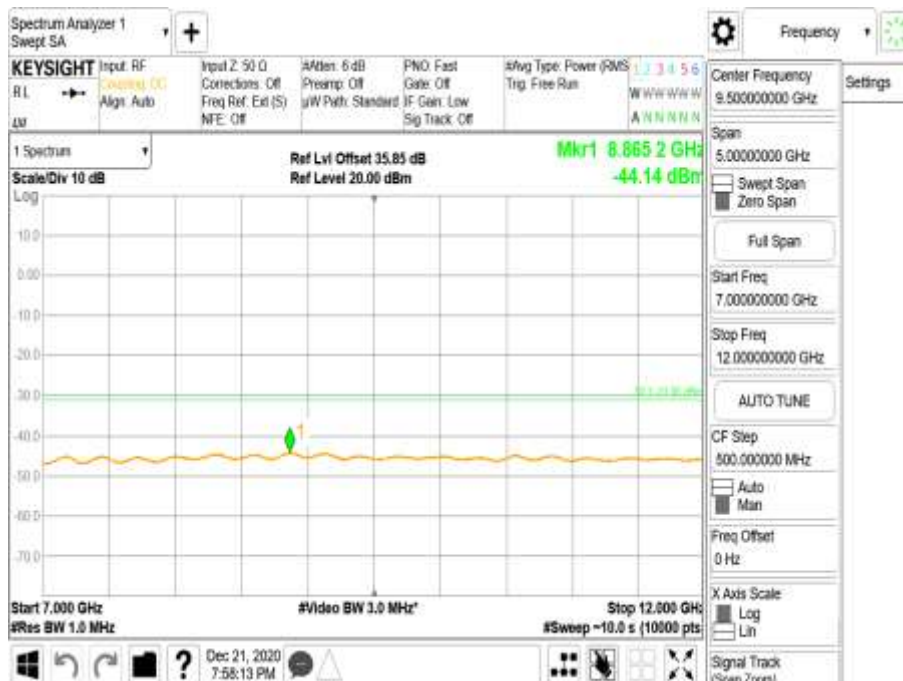


Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 1 - Range 0.009MHz - 7GHz





Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 7GHz – 12GHz



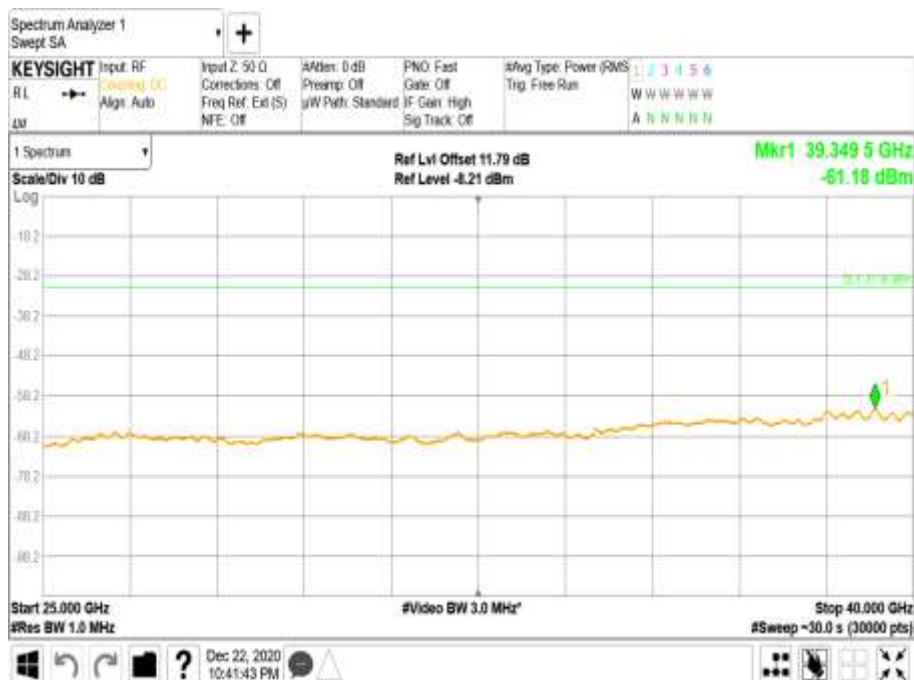
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



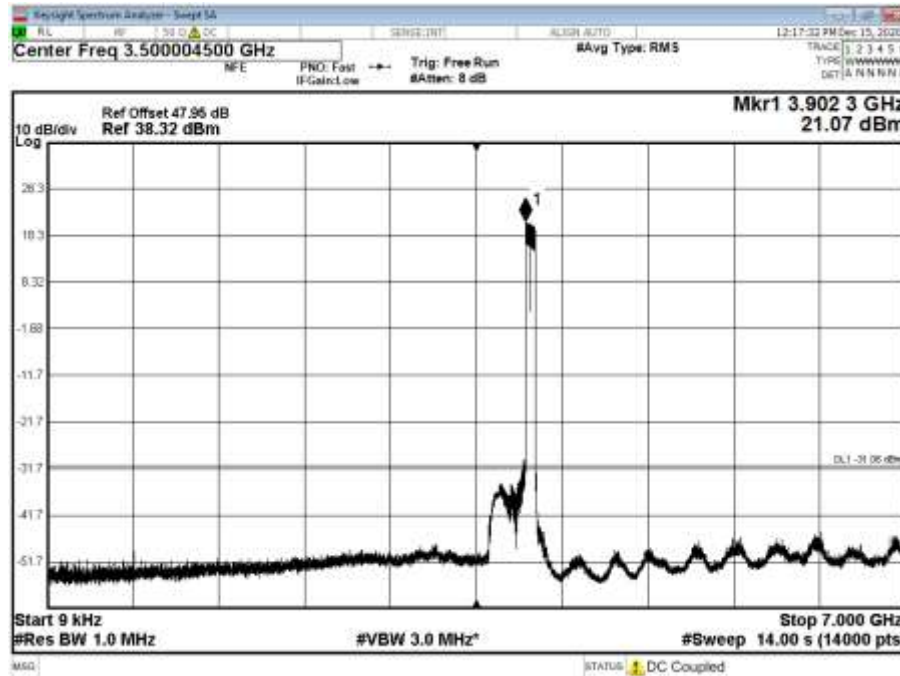
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



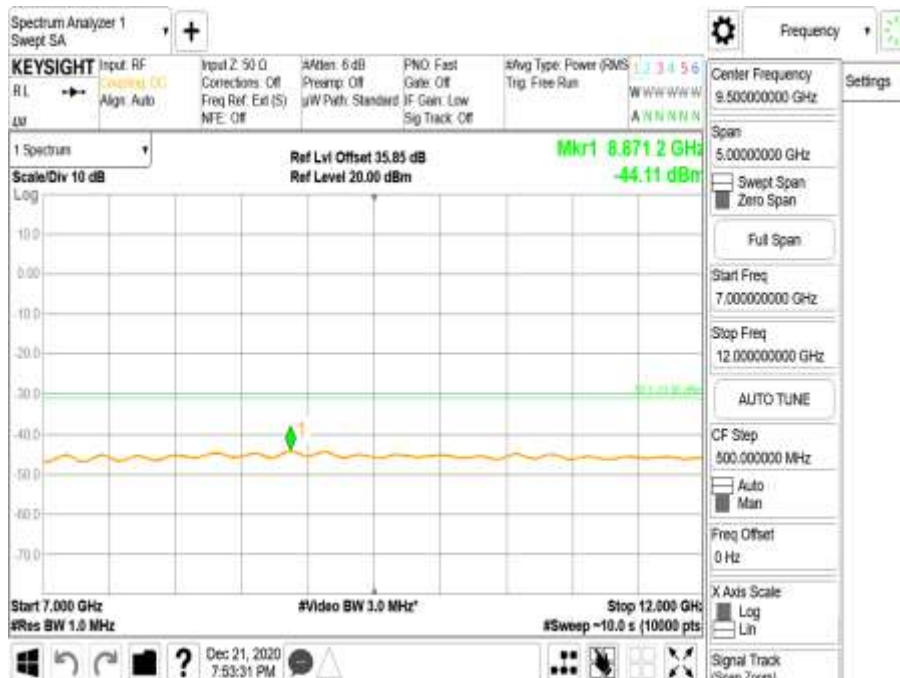
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 20.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz

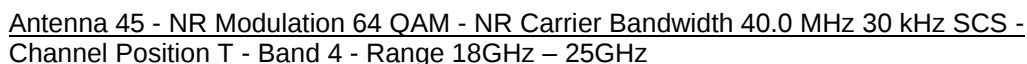


Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz

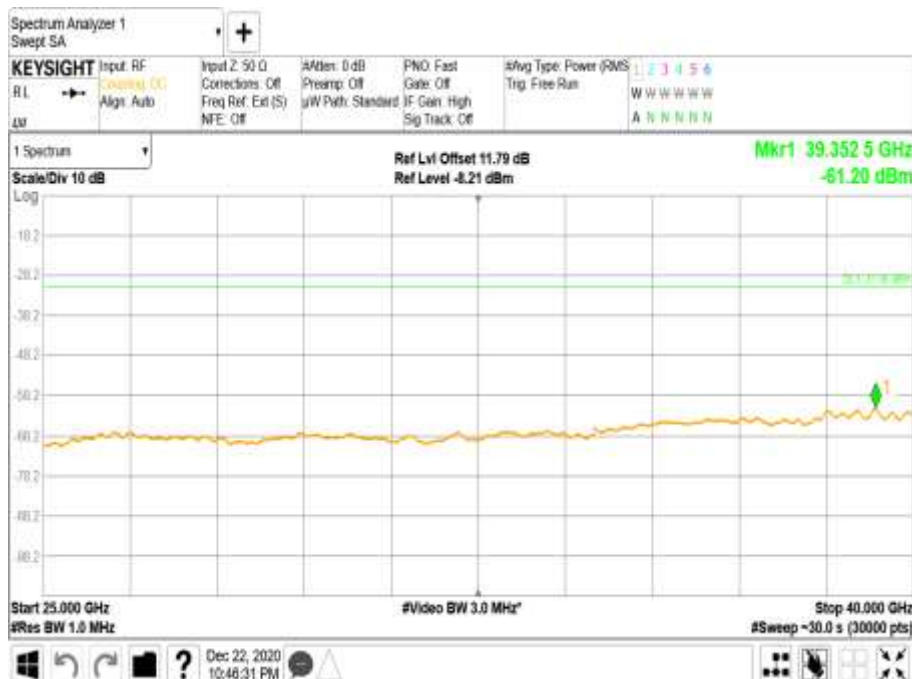


Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position T - Band 2 - Range 7GHz – 12GHz

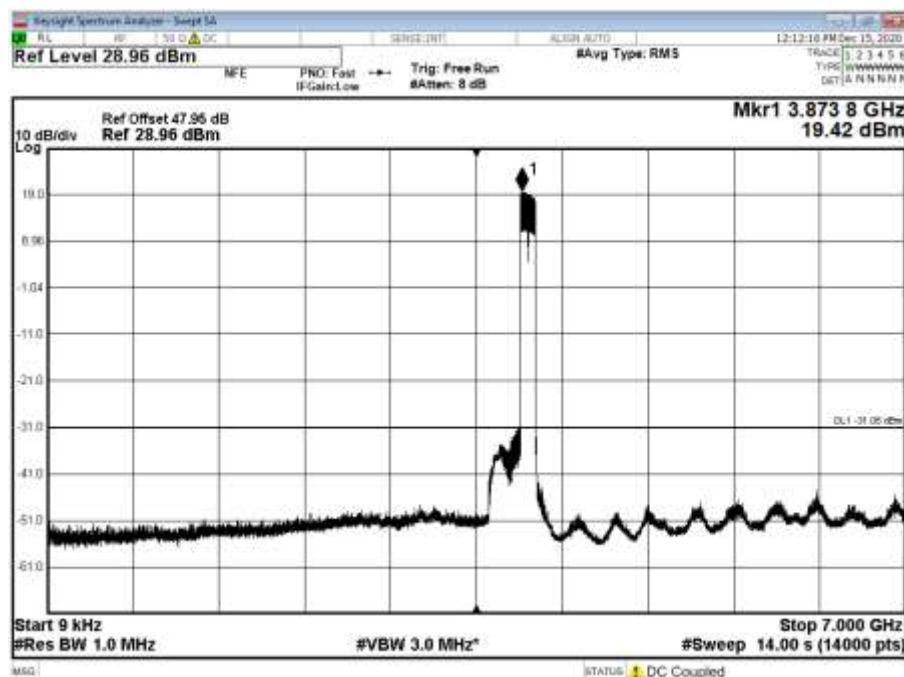




Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 40.0 MHz 30 kHz SCS -
Channel Position T - Band 5 - Range 25GHz – 40GHz

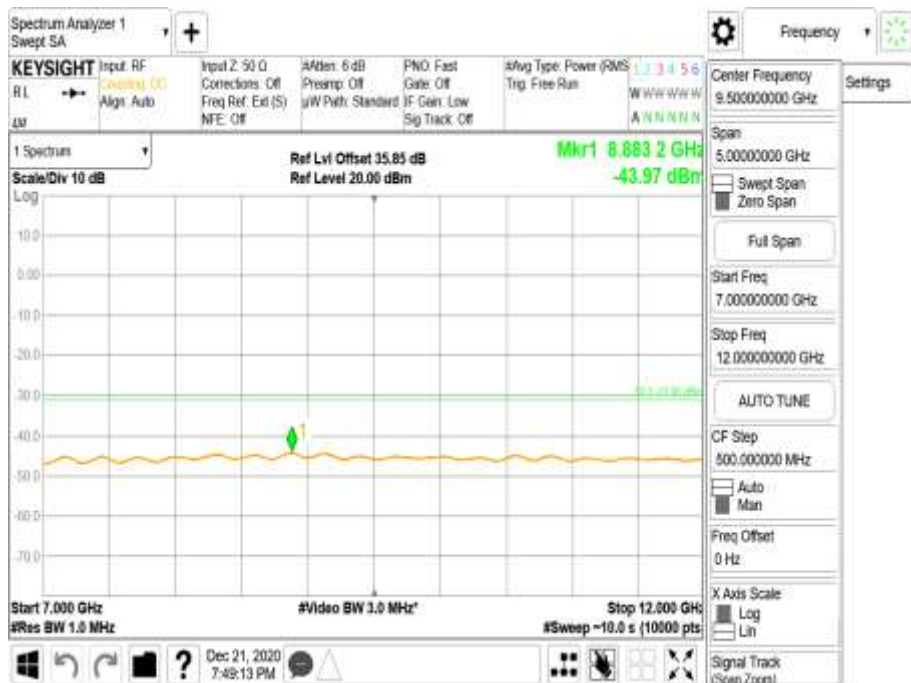


Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz





Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 7GHz – 12GHz



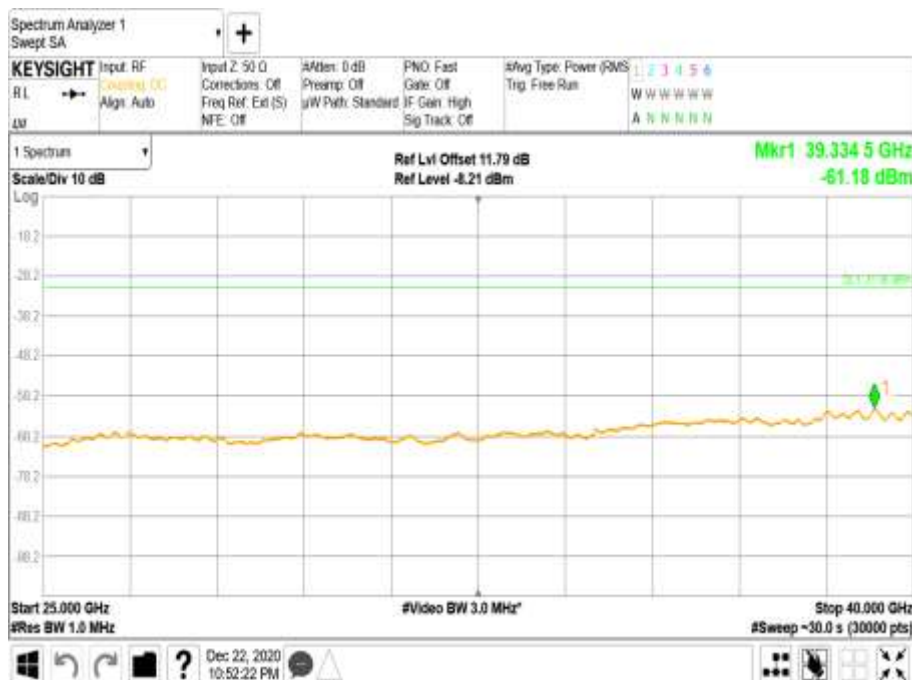
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



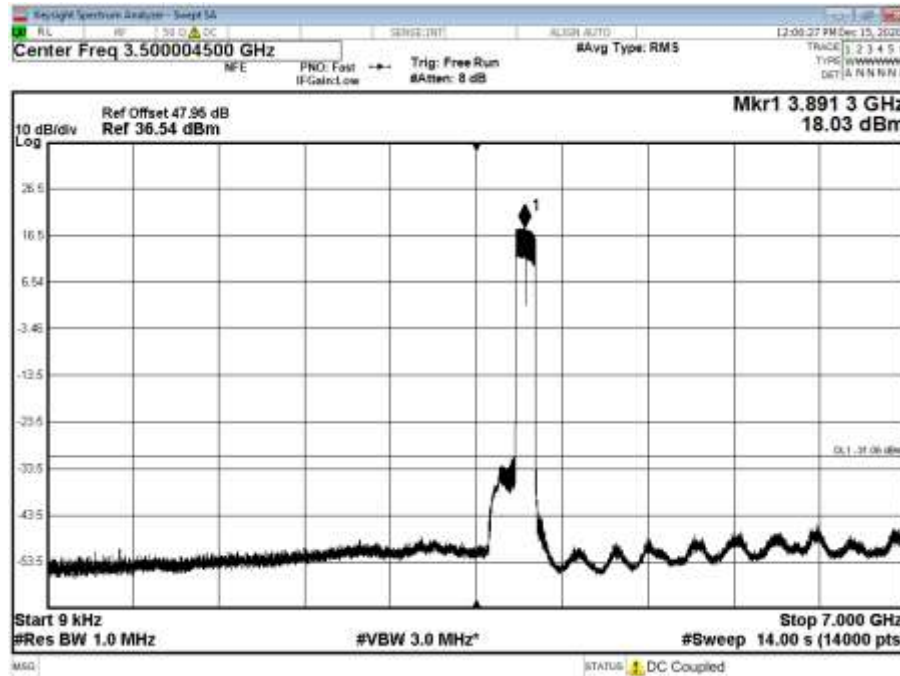
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



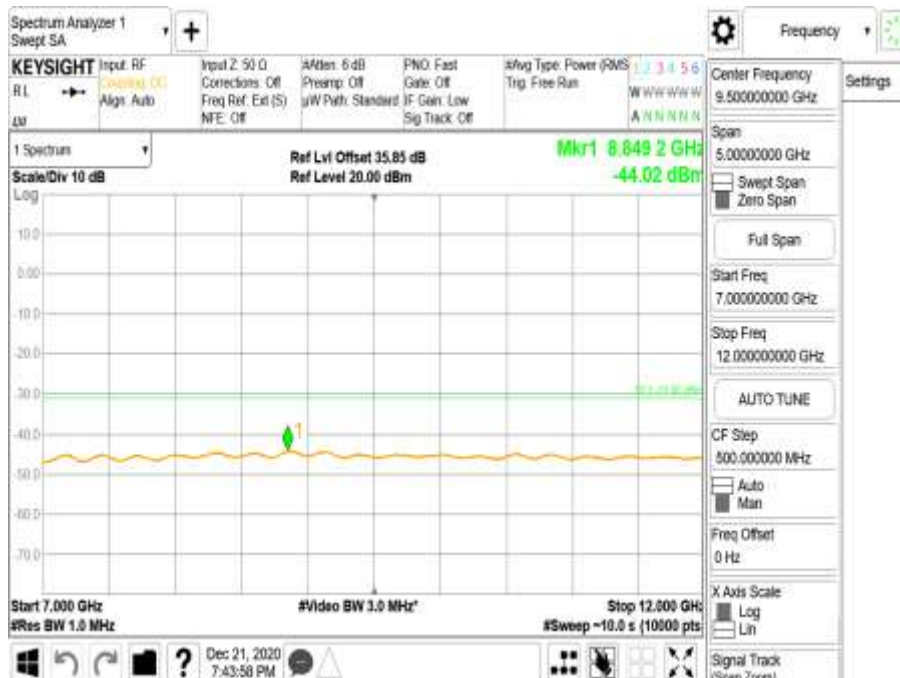
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 60.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz

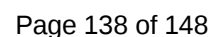
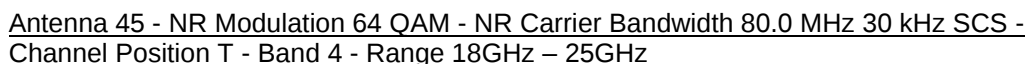


Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position T - Band 1 - Range 0.009MHz - 7GHz

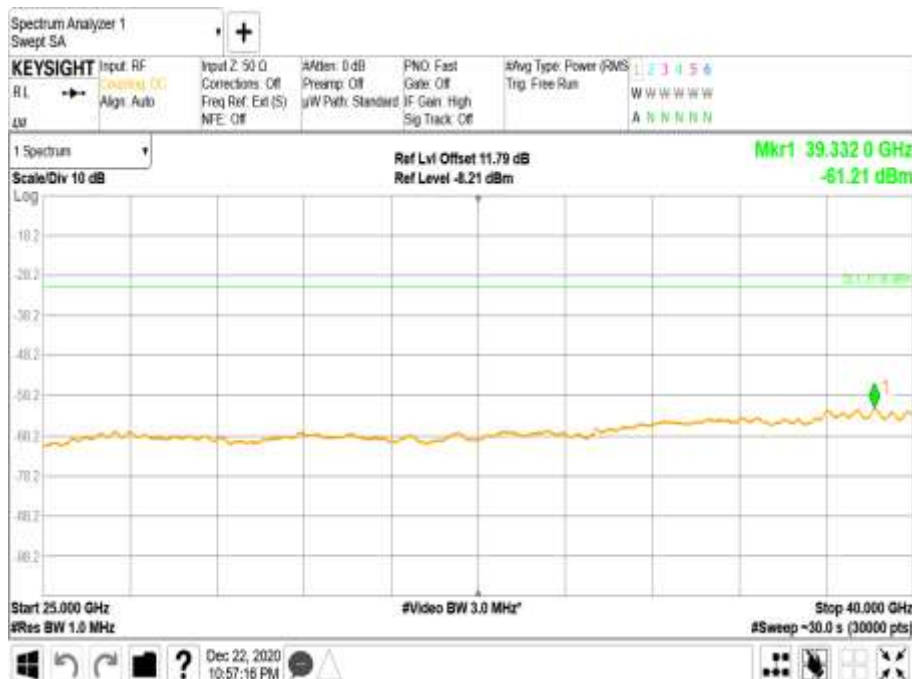


Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS -
Channel Position T - Band 2 - Range 7GHz – 12GHz

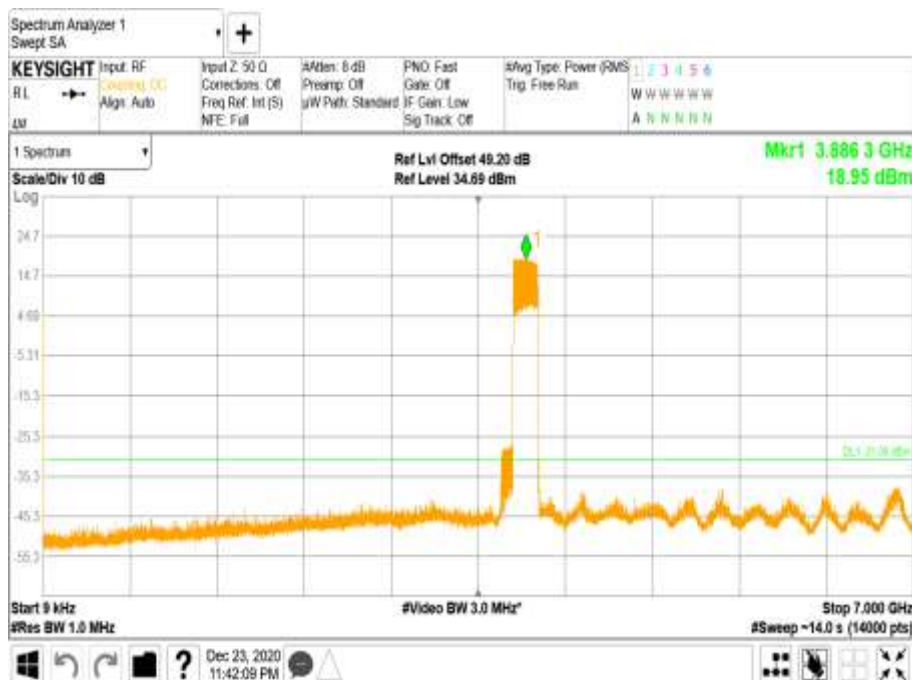




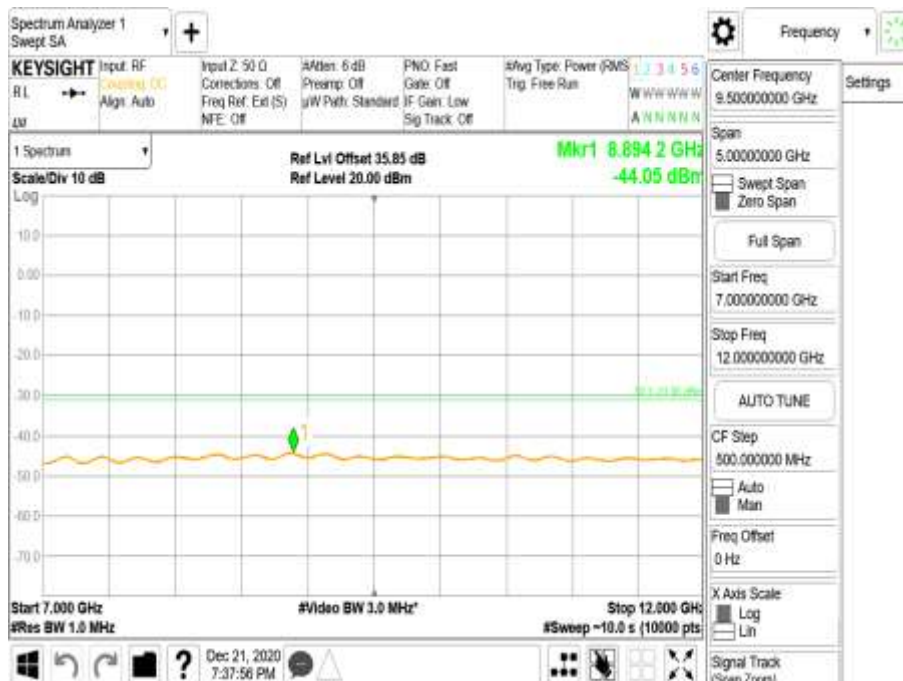
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 80.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 1 - Range 0.009MHz - 7GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 2 - Range 7GHz – 12GHz



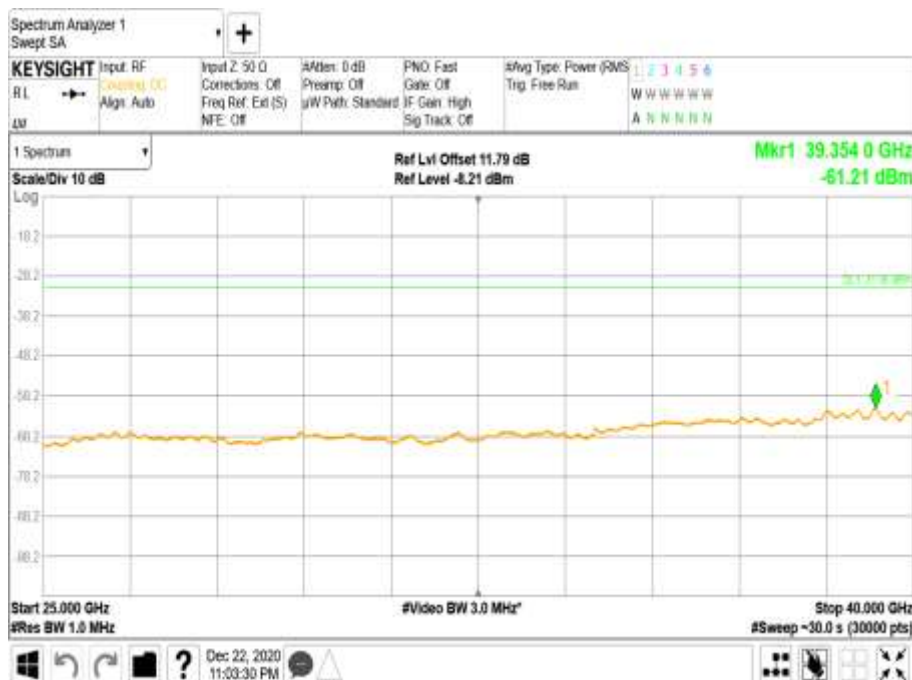
Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 3 - Range 12 GHz – 18GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 4 - Range 18GHz – 25GHz



Antenna 45 - NR Modulation 64 QAM - NR Carrier Bandwidth 100.0 MHz 30 kHz SCS - Channel Position T - Band 5 - Range 25GHz – 40GHz



Limit

-31.06dBm



2.5 FREQUENCY STABILITY

2.5.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.54
FCC CFR 47 Part 2, Clause 2.1055

2.5.2 Date of Test and Modification State

18 December 2020 - Modification State 0

2.5.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.4 Environmental Conditions

Ambient Temperature 22.7°C
Relative Humidity 39.8%

2.5.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 9.

2.5.6 Test Results

Configuration A1

Maximum Output Power Per Port
20MHz Carrier Bandwidth 32.20 dBm

Temperature	Voltage	Frequency Error (Hz)
		Channel Position M
-30°C	-48.0 V DC	3.49
-20°C	-48.0 V DC	2.17
-10°C	-48.0 V DC	1.93
0°C	-48.0 V DC	3.40
+10°C	-48.0 V DC	2.60
+20°C	-40.5 V DC	2.54
+20°C	-48.0 V DC	2.42
+20°C	-57.5 V DC	2.54
+30°C	-48.0 V DC	2.25
+40°C	-48.0 V DC	2.14
+50°C	-48.0 V DC	1.94

Limit	The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.
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SECTION 3

TEST EQUIPMENT USED



3.1.1 Test Equipment Used

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Maximum Peak Output Power and Peak to Average Ratio - Conducted					
PXA Signal Analyser	Keysight	N9030B	BAMS 1002020934	12	24-May-2021
Network Analyser	R&S	ZVA 67 10MHz-67GHz	BAMS 1002018642	12	01-Jan-2021
Electronic Calibration Module	R&S	ZN-Z156	BAMS 1002018641	12	01-Jan-2021
Power Supply	Keysight	N8737A	US19F8987R	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QM935	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QC181	N/A	O/P MON
Network Analyser	Agilent	N5230A	BAMS 1000369840	12	10-May-2021
Electronic Calibration Module	Agilent	N4690-60006	BAMS 1000783198	12	07-Feb-2021
Thermohygrometer	Rotronic	HP21	4989	12	08-Jun-2021
Occupied Bandwidth					
PXA Signal Analyser	Keysight	N9030A	BAMS 1001023709	12	04-Feb-2021
Network Analyser	R&S	ZVA 67 10MHz-67GHz	BAMS 1002018642	12	01-Jan-2021
Electronic Calibration Module	R&S	ZN-Z156	BAMS 1002018641	12	01-Jan-2021
Power Supply	Keysight	N8737A	US19F8987R	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QM935	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QC181	N/A	O/P MON
Network Analyser	Agilent	N5230A	BAMS 1000369840	12	10-May-2021
Electronic Calibration Module	Agilent	N4690-60006	BAMS 1000783198	12	07-Feb-2021
Thermohygrometer	Rotronic	HP21	4989	12	08-Jun-2021
Band Edge					
PXA Signal Analyser	Keysight	N9030B	BAMS 1002020934	12	24-May-2021
Network Analyser	R&S	ZVA 67 10MHz-67GHz	BAMS 1002018642	12	01-Jan-2021
Electronic Calibration Module	R&S	ZN-Z156	BAMS 1002018641	12	01-Jan-2021
Power Supply	Keysight	N8737A	US19F8987R	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QM935	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QC181	N/A	O/P MON
Network Analyser	Agilent	N5230A	BAMS 1000369840	12	10-May-2021
Electronic Calibration Module	Agilent	N4690-60006	BAMS 1000783198	12	07-Feb-2021
Thermohygrometer	Rotronic	HP21	4989	12	08-Jun-2021
Transmitter Spurious Emissions					
PXA Signal Analyser	Keysight	N9030B	BAMS 1002020934	12	24-May-2021
Network Analyser	R&S	ZVA 67 10MHz-67GHz	BAMS 1002018642	12	01-Jan-2021
Electronic Calibration Module	R&S	ZN-Z156	BAMS 1002018641	12	01-Jan-2021
Power Supply	Keysight	N8737A	US19F8987R	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QM935	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QC181	N/A	O/P MON
Network Analyser	Agilent	N5230A	BAMS 1000369840	12	10-May-2021
Electronic Calibration Module	Agilent	N4690-60006	BAMS 1000783198	12	07-Feb-2021
Thermohygrometer	Rotronic	HP21	4989	12	08-Jun-2021



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
HPF (6.5GHz to 18GHz)	Lorch	SHP7-7000-SR	TE566	12	01-Jul-2021
HPF (18GHz to 25GHz)	-	-	-	N/A	O/P MON
HPF (25GHz to 40GHz)	-	-	-	N/A	O/P MON
Cable 40GHz	Rosenberger	LU1-001-2000	5024	N/A	O/P MON
Frequency Stability					
PXA Signal Analyser	Keysight	N9030B	BAMS 1002020934	12	24-May-2021
Thermohygrometer	Rotronic	HP21	TE4410	12	15-Jul-2021
Thermometer	Fluke	51	TE0412	12	09-Nov-2021
Climatic Chamber	Vötsch	VC7060	5.85662E+13	-	O/P MON
Power Supply	Keysight	N8737A	US19F8987R	-	O/P MON
Digital Multimeter	Fluke	179	TE5265	12	03-Jul-2021
Attenuator	Weinschel	6834-20-11	QM935	N/A	O/P MON
Attenuator	Weinschel	6834-20-11	QC181	N/A	O/P MON

N/A – Not Applicable

O/P Mon – Output Monitored with Calibrated Equipment



3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	Frequency / Parameter		MU
Conducted Maximum Peak Output Power	30 MHz to 20 GHz Amplitude		± 0.9 dB
Conducted Emissions	30 MHz to 20 GHz Amplitude		± 2.5 dB
Frequency Stability	30 MHz to 2 GHz		± 5.0 Hz
Occupied Bandwidth	Up to 100 MHz Bandwidth	20 MHz Bandwidth	± 145902 Hz
		40 MHz Bandwidth	± 158348 Hz
		60 MHz Bandwidth	± 385280 Hz
		80 MHz Bandwidth	± 531685 Hz
		100 MHz Bandwidth	± 668231 Hz
Band Edge	30 MHz to 20 GHz Amplitude		± 0.9dB
Radiated Spurious Emissions	30 MHz to 1 GHz		± 5.8 dB
	1 GHz to 18GHz		± 7.4 dB
	18 GHz to 40 GHz		± 5.9dB

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2007, clause 4.4.3 and 4.5.1.



SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT



4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT



This report relates only to the actual item/items tested.

Our Swedac Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our Swedac Accreditation.

Results of tests not covered by our Swedac Accreditation Schedule are marked NSA (Not Swedac Accredited).

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ANNEX A

MODULE LIST



Configuration A			
Product	Product No	R-State	Serial No
RDNB AIR 6449 B77D	KRY 901 475	R1A	DN207DA60P
AIR 6449 B77D	KRD 901 206/2	R1B	E23B987803
CT 11	LPC 102 494/1	R2A	T01G487938
Software Version:	CXP2030039%1	Revision:	R48A121