Sverige

Accred. no. 10363
Testing
ISO/IEC 17025

Report On

FCC Testing of the Ericsson KRD 901 141/2 NR AIR 6449 B41 (2496-2690 MHz) Base Station in accordance with FCC CFR 47 Part 2 and FCC CFR 47 Part 27

COMMERCIAL-IN-CONFIDENCE

FCC: TA8AKRD901141

PREPARED BY	APPROVED BY	DATED
Maggie Whiting Key Account Manager	Steve Scarfe Authorised Signatory	02 October 2020

Document 75949867 Report 01 Issue 1 **October 2020**

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Section **Page No**

SECTION 1

REPORT INFORMATION

1.1 REPORT DETAILS

Manufacturer	Ericsson
Address	Torshamnsgatan 23 Kista SE-16480 Stockholm Sweden
Product Name & Product Number	AIR 6449 B41 KRD 901 141/2
Non-Tested Variants	KRD 901 141/21 KRD 901 141/1 KRD 901 141/11
Serial Number(s)	C82A592336
Software Version	CXP 2030039/1 R41A108
Hardware Version	R1D
Test Specification/Issue/Date	FCC CFR 47 Part 2:2019 FCC CFR 47 Part 27:2019
Test Plan	2_12022-HRB 105 601-244 Uen AIR 6449 B41 FCC Test Plan V2.0
Start of Test	20 August 2020
Finish of Test	17 September 2020
Name of Engineer(s)	Ashok Kumar and Hector Trujillo
Related Document(s)	KDB 971168 D01 v02r02 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 CFR 47 Part 27. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

Ashok Kumar and Hector Trujillo

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 (h)	Band Edge	Pass
2.4	2.1051	27.53 (h)	Transmitter Spurious Emissions	Pass

Measurement Uncertainty Decision Statement

Determination of conformity with the specification limits is based on the results of the compliance measurement and does not take into account measurement instrumentation uncertainty as defined in ANSI C63.26:2015 Clause 1.3.

1.3 CONFIGURATION DESCRIPTION

Configuration	RAT	No. Of carriers	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
				Bottom	Middle	Top
1	LTE	1	15 MHz	2503.50	2593.00	2682.50
2	LTE	2	15 MHz	2503.50+2518.50	2503.50+2682.50	2667.50+2682.50
3	LTE	4	15 MHz	2503.50+2518.50+2533.50+2548.50	2503.50+2518.50+2682.50+2667.50	2367.50+2652.50+2667.50+2682.50
4	NR	1	10 MHz- SCS 30kHz	2501.01	2593.02	2685.00
			30 MHz- SCS 30kHz	2511.00	2593.02	2675.01
			50 MHz- SCS 30kHz	2521.02	2593.02	2665.02
			70 MHz- SCS 30kHz	2531.01	2593.02	2655.00
			90 MHz- SCS 30kHz	2541.00	2593.02	2645.01
5	NR	2	10 MHz- SCS 30kHz	2501.01+2511.00	2501.01+2685.00	2675.01+2685.00
			30 MHz- SCS 30kHz	2511.00+2541.00	2511.00+2675.01	2645.01+2675.01
			50 MHz- SCS 30kHz	2521.02+2571.00	2521.02+2665.02	2615.01+2665.02
			70 MHz- SCS 30kHz	2531.01+2601.00	2531.01+2655.00	2585.00+2655.00
			90 MHz- SCS 30kHz	2541.00+2631.01	2541.00+2645.01	2555.00+2645.01
6	LTE + NR	2	LTE 10 MHz + NR 15 MHz – SCS 30kHz	-	2503.5 + 2685.0	-
7	LTE + NR	5	LTE 10 MHz + NR 15 MHz – SCS 30kHz	-	2503.5+2518.5+2533.5+2548.5+2685	-

1.4 DECLARATION OF BUILD STATUS

Equipment Description

Technical Description: *(Please provide a brief description of the intended use of the equipment)*	Antenna Integrated Radio Unit
Manufacturer:	Ericsson AB
Model:	AIR 6449 B41
Part Number:	KRD 901 141/2* (with un-security software and RDNB board for testing purpose) KRD 901 141/21 (with security software and RDNB board for testing purpose) KRD 901 141/1 (with un-security software and antenna) KRD 901 141/11** (with security software and antenna) Note*: Tests have been performed on this unit. Note**: This will be the marketed, sold unit.
Hardware Version:	R1D
Software Version:	CXP 2030039/1
FCC ID (if applicable)	TA8AKRD901141
IC ID (if applicable)	-

Intentional Radiators

Technology	NR	LTE
Frequency Band (MHz)	2496 to 2690 MHz	2496 to 2690 MHz
Conducted Declared Output Power (dBm)	36 dBm/MHz, max 55 dBm	36 dBm/MHz, max 55 dBm
Antenna Gain (dBi)	23,8 dBi	23,8 dBi
Supported Bandwidth(s) (MHz)	10, 20, 30, 40, 50, 60, 70, 80, 90, 100 MHz, SCS: 30 kHz	10, 15, 20 MHz
Modulation Scheme(s)	QPSK, 16QAM, 64QAM, 256QAM	QPSK, 16QAM, 64QAM, 256QAM
ITU Emission Designator	8M60W7D 18M3W7D 27M9W7D 37M9W7D 47M4W7D 57M9W7D 67M5W7D 77M4W7D 87M4W7D 97M3W7D 176MW7D	8M95W7D 13M4W7D 17M9W7D 57M7W7D
Bottom Frequency (MHz)	2496 MHz	2496 MHz
Middle Frequency (MHz)	2593,02 MHz	2593 MHz
Top Frequency (MHz)	2690 MHz	2690 MHz

Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	CPRI 10,3 Gbit/s

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:	-54,5	V
Extreme upper voltage:	-58,5	V
Extreme lower voltage:	-36	V
Max current:	50	A

Temperature

Minimum temperature:	-40	°C
Maximum temperature:	+55	°C

Antenna Characteristics

Antenna connector ☐			State Impedance		Ohm
Temporary antenna connector ☒			State Impedance	50	Ohm
Integral antenna ☒	Type:	AAS (Advanced antenna system)	Gain	23,8	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 professional installed): Equipment is only ever professionally installed ☐ Non-standard Antenna Jack ☐					

Ancillaries (if applicable)

Manufacturer:	-	Part Number:	-
Model:	-	Country of Origin:	-

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

DocuSigned by:
Niklas Roos
E6AF2579DB9E471...

Name: Niklas Roos

Position held: Regulatory Engineer

Date: 2020-10-02

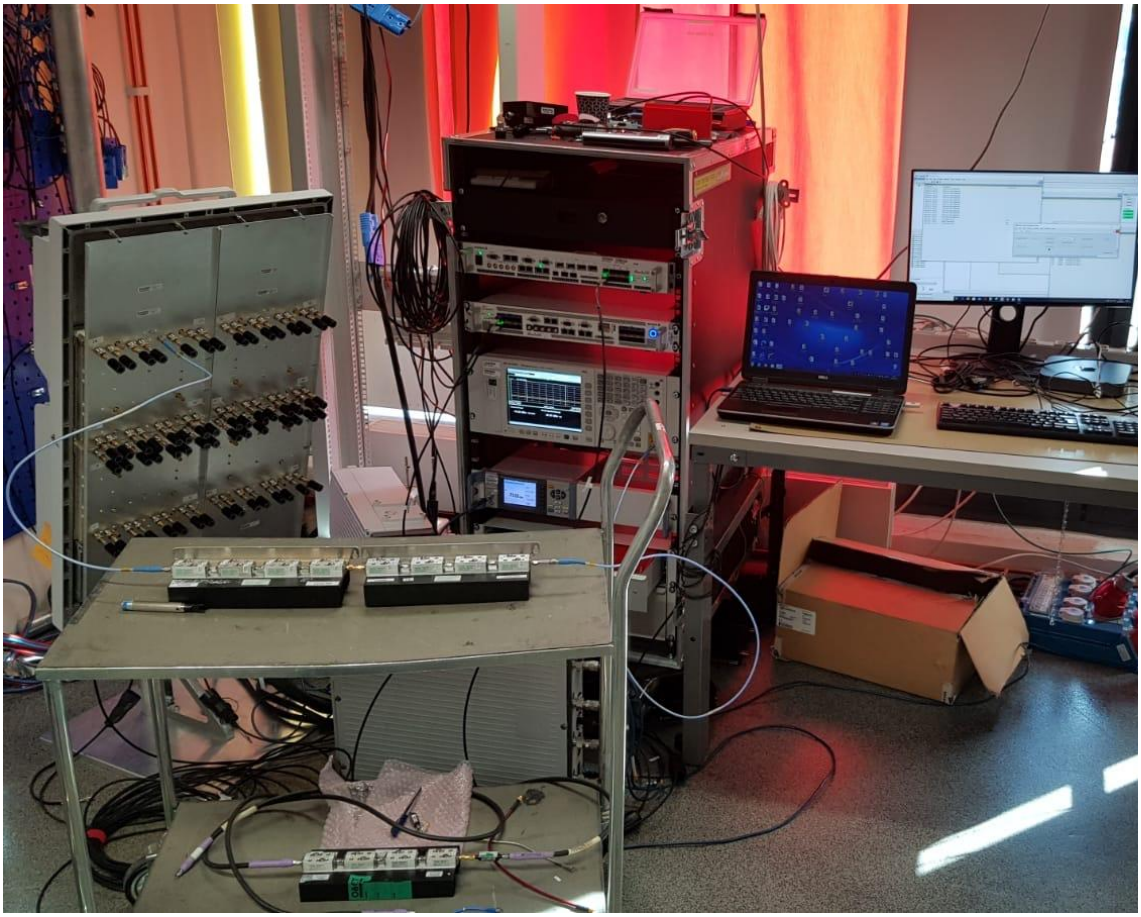
No responsibility will be accepted by TÜV SÜD UK Limited as to the accuracy of the information declared in this document by the manufacturer.

1.5 PRODUCT INFORMATION

1.5.1 Technical Description

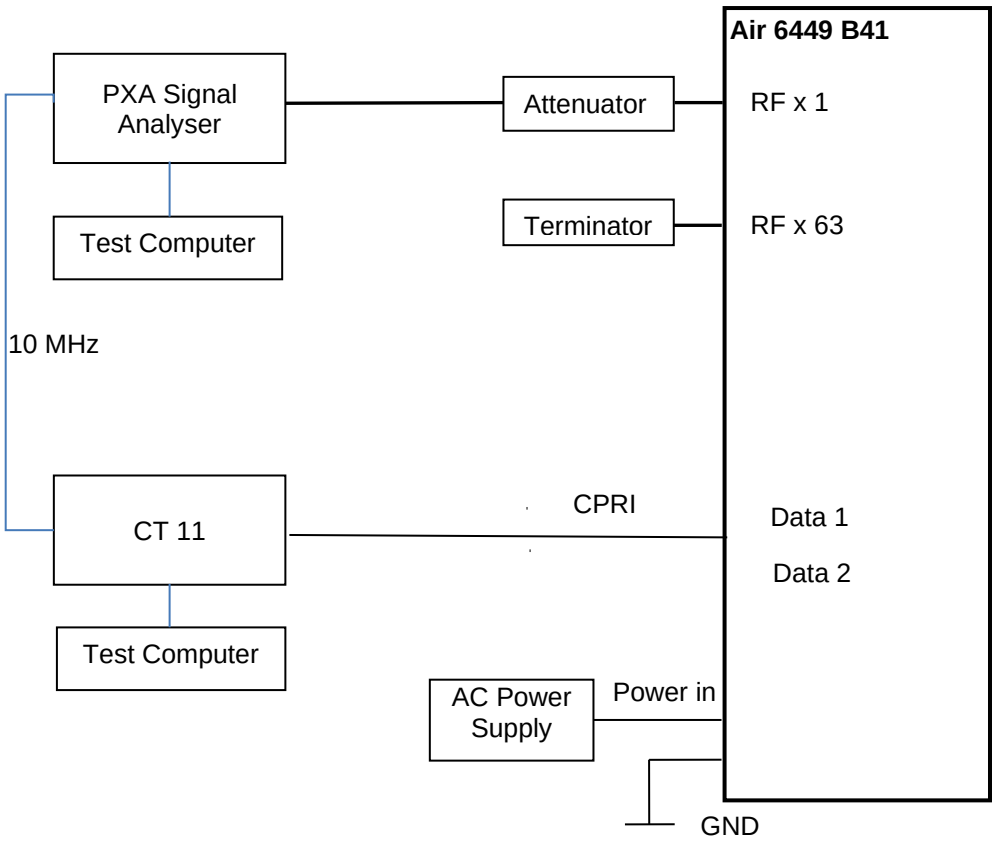
The Equipment Under Test (EUT) AIR 6449 B41 is an Ericsson AB Antenna Integrated Radio Unit working in the public mobile service 2496-2690 MHz band which provides communication connections to 2496-2690 MHz network. The AIR 6449 B41 operates from a -54.5V DC supply.

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



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 54.5V DC supply.

FCC Measurement Facility Registration Number
563983 Delta Test Laboratory, Vasteras

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 & Hector Trujillo
Occupied Bandwidth	Ashok Kumar & Hector Trujillo
Band Edge	Ashok Kumar & Hector Trujillo
Transmitter Spurious Emissions	Ashok Kumar & Hector Trujillo
Frequency Stability	Ashok Kumar & Hector Trujillo

1.8 DEVIATION FROM THE STANDARD

No deviations from the applicable test standards or test plan were made during testing.

1.9 MODIFICATION RECORD

No modifications were made to the EUT during testing.

1.10 ADDITIONAL INFORMATION

The AIR 6449 B41 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 Ericsson test plan AIR 6449 B41 FCC Test Plan 2/12022-HRB 105 601-237 rev.A.

Ericsson have provided the folowwing details about the variants of the AIR 6449 B41.
KRD 901 141/2* (with un-security software and RDNB board for testing purpose)
KRD 901 141/21 (with security software and RDNB board for testing purpose)
KRD 901 141/1 (with un-security software and antenna)
KRD 901 141/11** (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

24 & 30 August and 03 & 14 September 2020 - 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	21.0 - 23.5°C
Relative Humidity	39.0 - 53.3%

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.

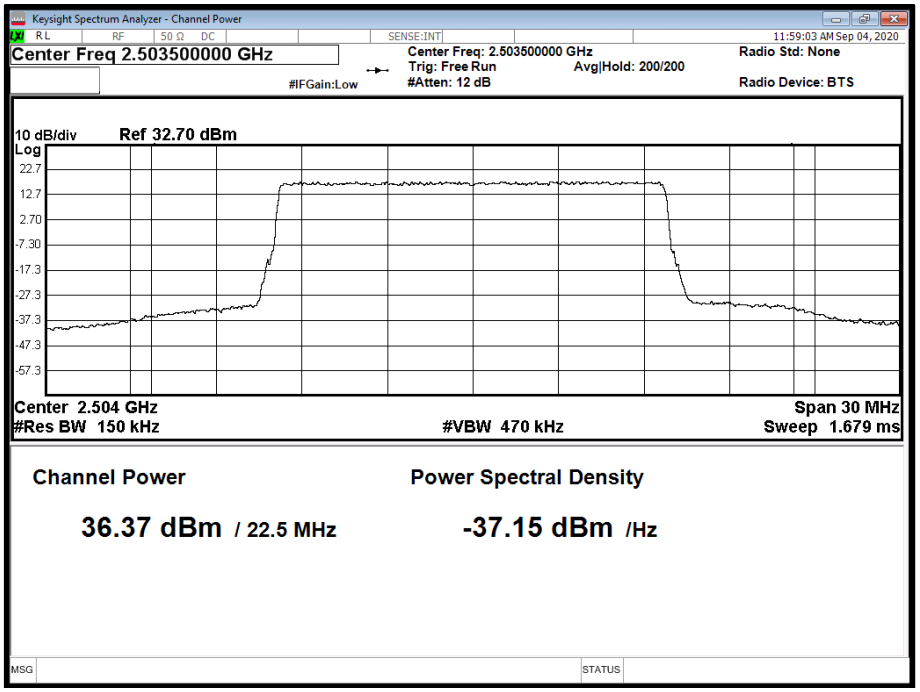
2.1.6 Test Results

Configuration 1

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
50	64QAM	15.0 MHz	8.54	36.37	25.46
Total			-	6.37	-4.54

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



Configuration 1

Maximum Output Power 36.0 dBm/MHz, max 55dBm

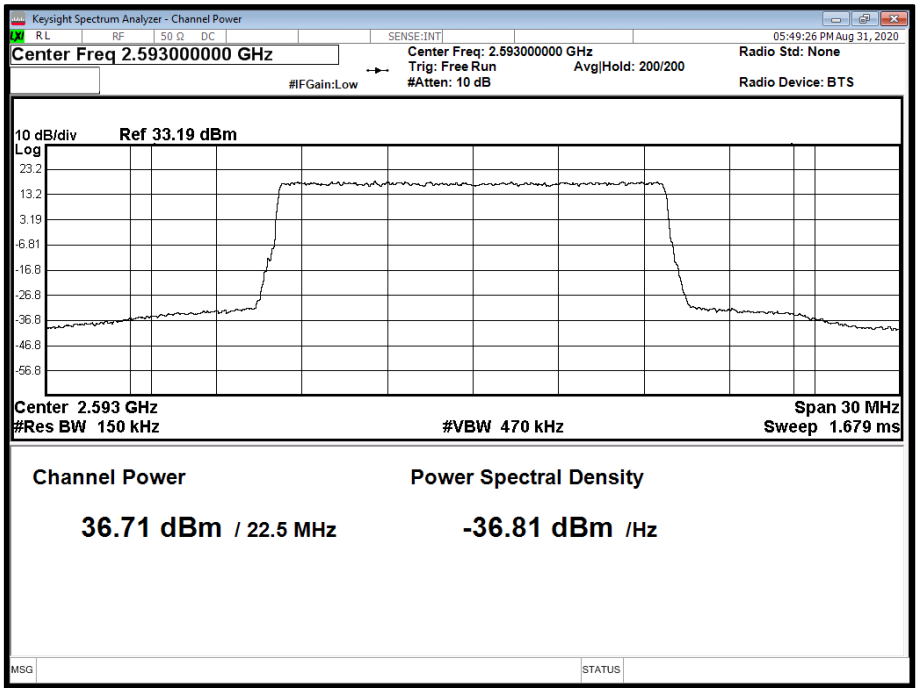
Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
0	64QAM	15.0 MHz	8.94	36.32	25.66
1	64QAM	15.0 MHz	8.84	36.11	25.35
2	64QAM	15.0 MHz	9.11	36.35	25.72
3	64QAM	15.0 MHz	9.05	36.28	25.55
4	64QAM	15.0 MHz	9.53	36.40	25.41
5	64QAM	15.0 MHz	9.16	36.05	25.57
6	64QAM	15.0 MHz	9.47	36.56	25.60
7	64QAM	15.0 MHz	9.02	36.60	25.55
8	64QAM	15.0 MHz	8.68	36.47	25.59
9	64QAM	15.0 MHz	8.92	36.09	25.68
10	64QAM	15.0 MHz	8.62	36.33	25.43
11	64QAM	15.0 MHz	9.01	36.31	25.52
12	64QAM	15.0 MHz	9.39	36.69	25.69
13	64QAM	15.0 MHz	8.76	36.60	25.51
14	64QAM	15.0 MHz	9.25	36.66	25.64
15	64QAM	15.0 MHz	8.73	36.41	25.39
16	64QAM	15.0 MHz	8.87	36.65	25.88
17	64QAM	15.0 MHz	8.72	36.34	25.45
18	64QAM	15.0 MHz	9.10	36.70	25.87
19	64QAM	15.0 MHz	9.54	36.37	25.52
20	64QAM	15.0 MHz	9.01	36.48	25.47
21	64QAM	15.0 MHz	9.10	36.53	25.52
22	64QAM	15.0 MHz	9.32	36.34	25.58
23	64QAM	15.0 MHz	9.08	36.02	25.28
24	64QAM	15.0 MHz	8.84	36.27	25.65
25	64QAM	15.0 MHz	8.94	36.37	25.47
26	64QAM	15.0 MHz	9.06	36.18	25.38
27	64QAM	15.0 MHz	8.93	36.31	25.46
28	64QAM	15.0 MHz	9.16	36.39	25.78
29	64QAM	15.0 MHz	9.06	36.40	25.49
30	64QAM	15.0 MHz	9.16	36.48	25.74
31	64QAM	15.0 MHz	8.75	36.28	25.59
32	64QAM	15.0 MHz	9.03	36.49	25.70
33	64QAM	15.0 MHz	9.43	36.31	25.44
34	64QAM	15.0 MHz	9.41	36.65	25.80
35	64QAM	15.0 MHz	9.24	36.46	25.68
36	64QAM	15.0 MHz	9.56	36.41	25.54
37	64QAM	15.0 MHz	8.73	36.25	25.55
38	64QAM	15.0 MHz	8.68	36.32	25.65
39	64QAM	15.0 MHz	9.18	36.33	25.69
40	64QAM	15.0 MHz	9.15	36.60	25.57
41	64QAM	15.0 MHz	8.90	36.21	25.55
42	64QAM	15.0 MHz	9.29	36.14	25.43
43	64QAM	15.0 MHz	8.80	36.33	25.60
44	64QAM	15.0 MHz	9.18	36.37	25.73
45	64QAM	15.0 MHz	9.26	36.11	25.50
46	64QAM	15.0 MHz	8.52	36.53	25.72
47	64QAM	15.0 MHz	9.04	36.22	25.52
48	64QAM	15.0 MHz	9.37	36.67	25.74

Antenna	LTE Modulation	LTE Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power	Antenna	LTE Modulation
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
49	64QAM	15.0 MHz	8.96	36.37	25.53
50	64QAM	15.0 MHz	9.18	36.71	25.79
51	64QAM	15.0 MHz	9.28	36.58	25.74
52	64QAM	15.0 MHz	9.07	36.33	25.45
53	64QAM	15.0 MHz	9.19	36.29	25.77
54	64QAM	15.0 MHz	9.26	36.50	25.64
55	64QAM	15.0 MHz	8.86	36.34	25.55
56	64QAM	15.0 MHz	9.15	36.43	25.59
57	64QAM	15.0 MHz	9.27	36.33	25.58
58	64QAM	15.0 MHz	9.19	36.22	25.66
59	64QAM	15.0 MHz	8.75	36.53	25.60
60	64QAM	15.0 MHz	8.98	36.33	25.49
61	64QAM	15.0 MHz	9.04	36.23	25.52
62	64QAM	15.0 MHz	9.23	36.59	25.80
63	64QAM	15.0 MHz	8.76	36.54	25.46
Total			-	54.46	43.65

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.

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M

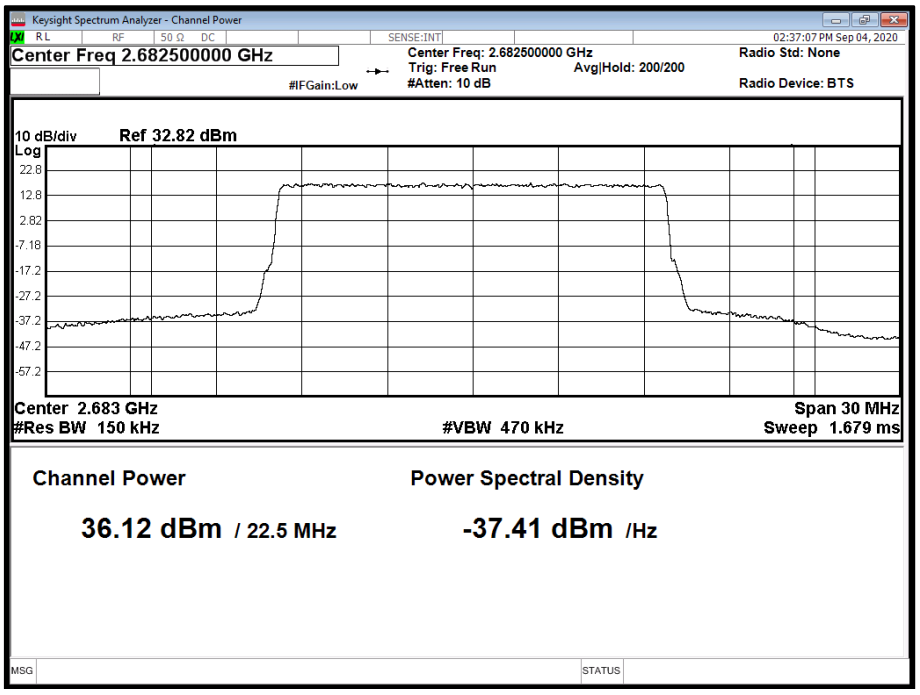


Configuration 1

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
50	64QAM	15.0 MHz	9.41	36.12	25.47
Total			-	6.12	-4.53

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T

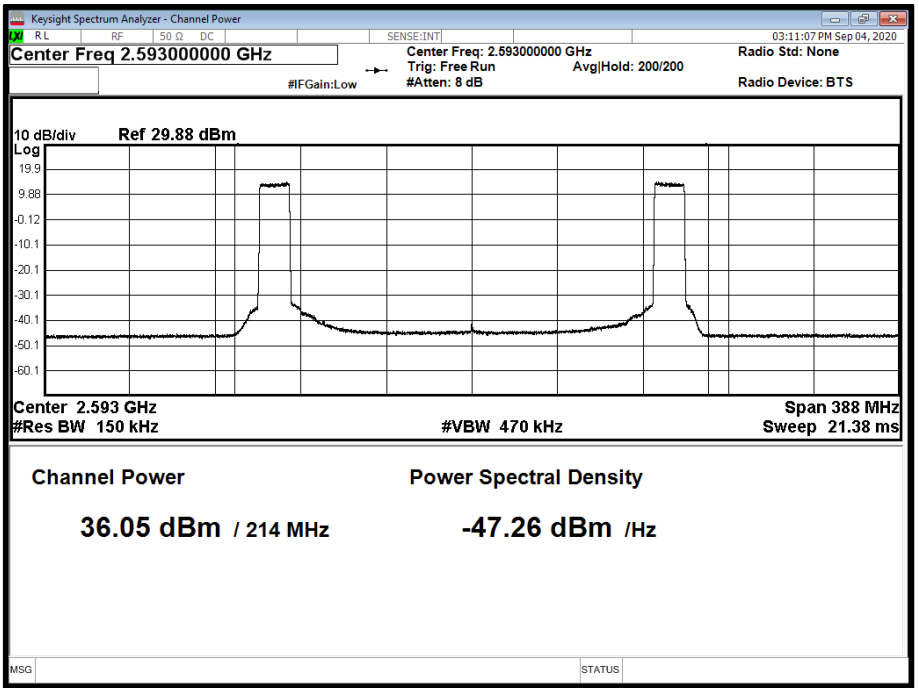


Configuration 2

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
50	64QAM	15.0 MHz	-	36.05	22.17
Total			-	6.05	-7.83

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M

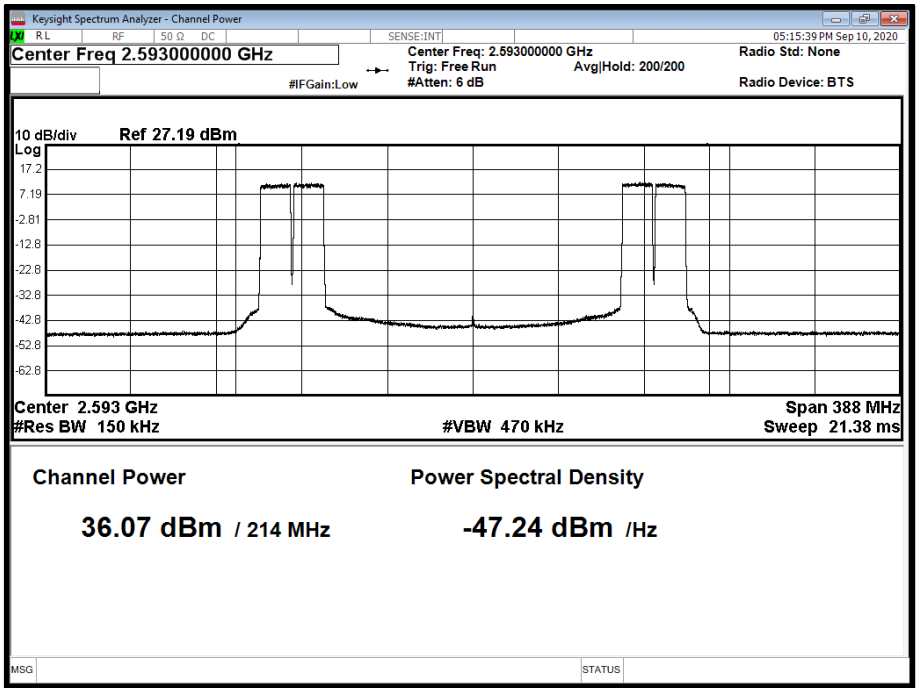


Configuration 3

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
50	64QAM	15.0 MHz	-	36.07	19.50
Total			-	6.07	-10.50

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M

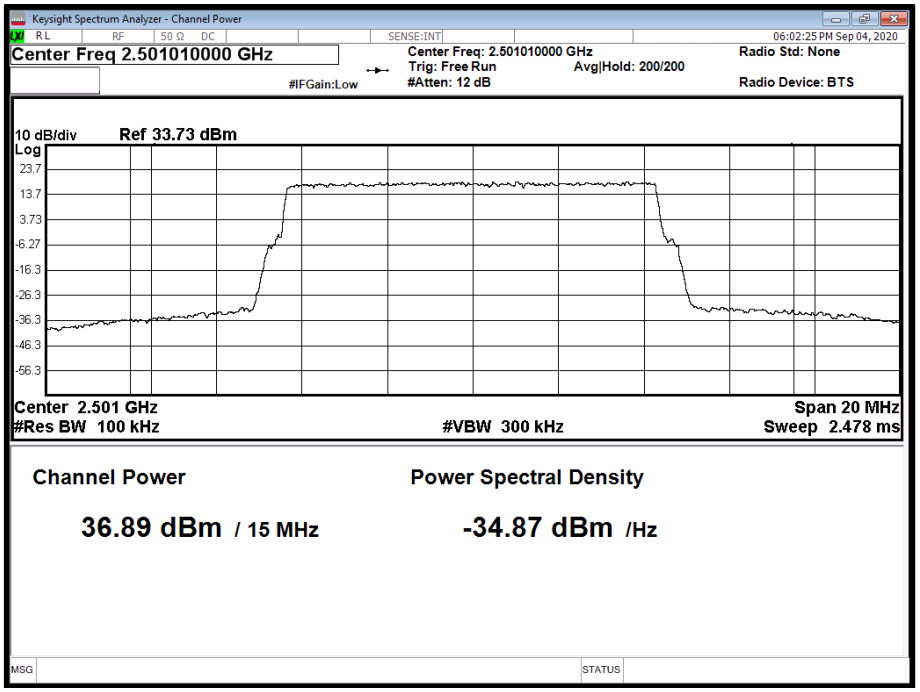


Configuration 4

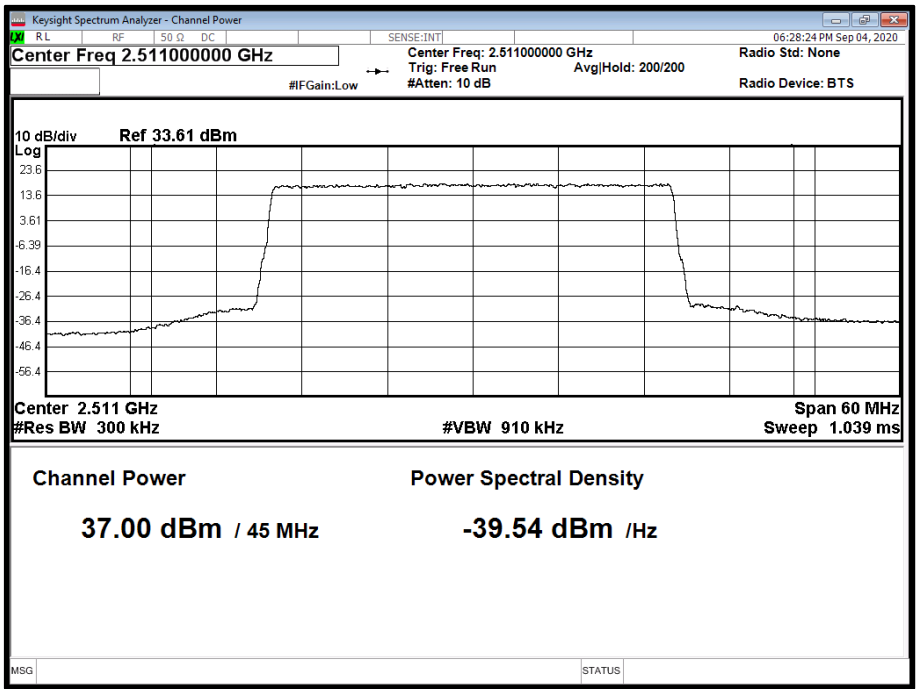
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
28	64QAM	10.0 MHz	8.70	36.89	27.93
28	64QAM	30.0 MHz	8.91	37.00	23.05
28	64QAM	50.0 MHz	8.83	36.88	20.86
28	64QAM	70.0 MHz	8.78	36.97	19.34
28	64QAM	90.0 MHz	8.98	36.59	18.09
Total			-	43.86	30.39

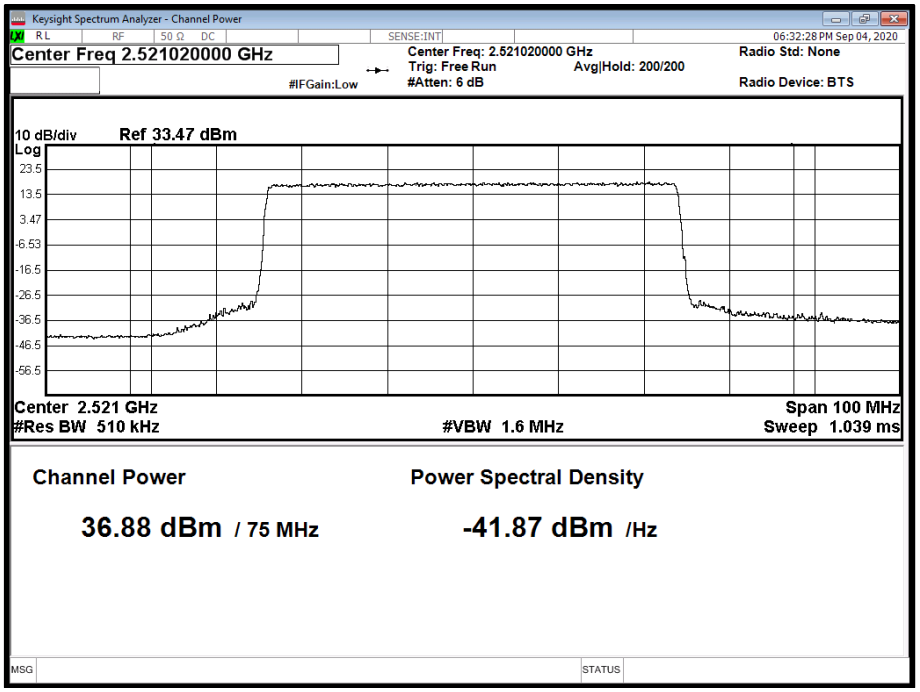
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position B



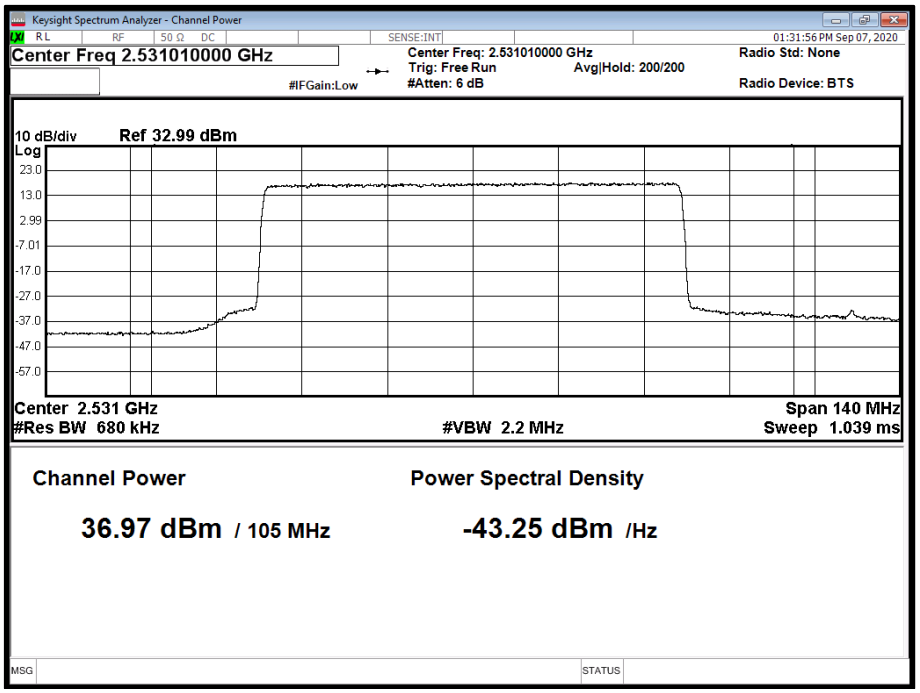
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position B



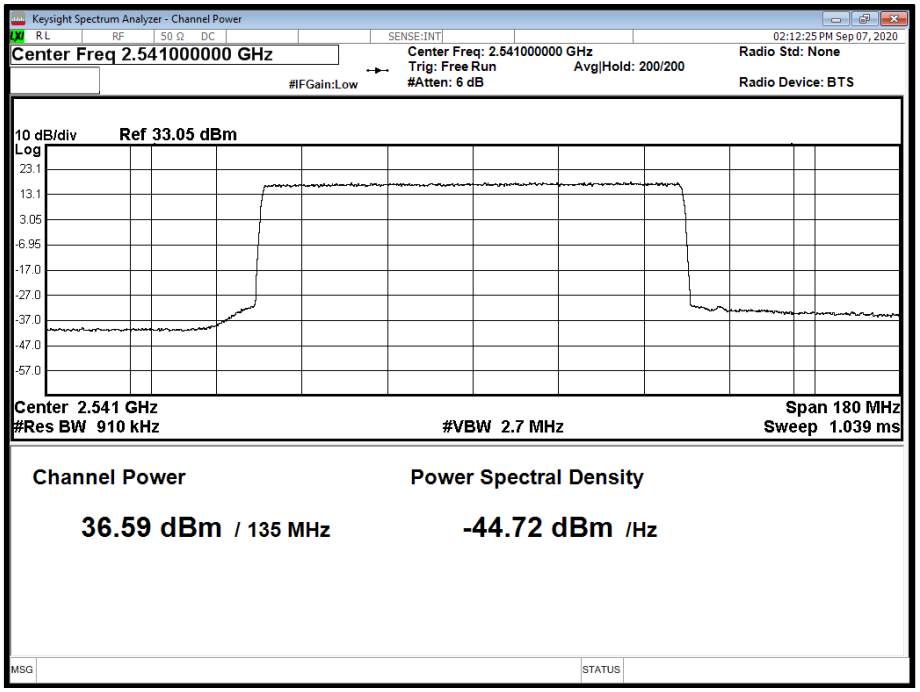
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position B



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position B



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position B



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.

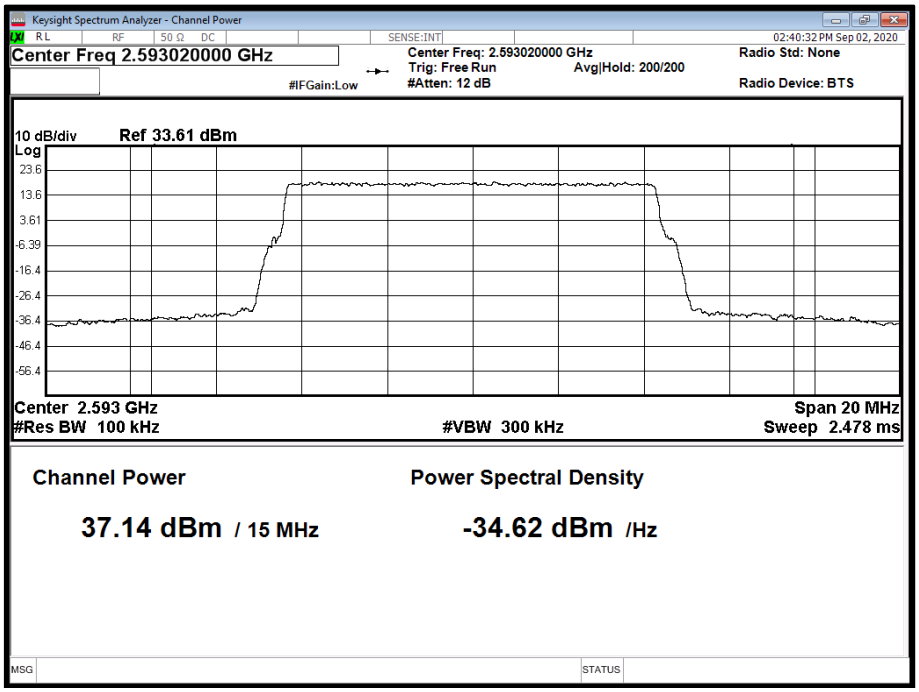
Configuration 4

Maximum Output Power 36.0 dBm/MHz, max 55dBm

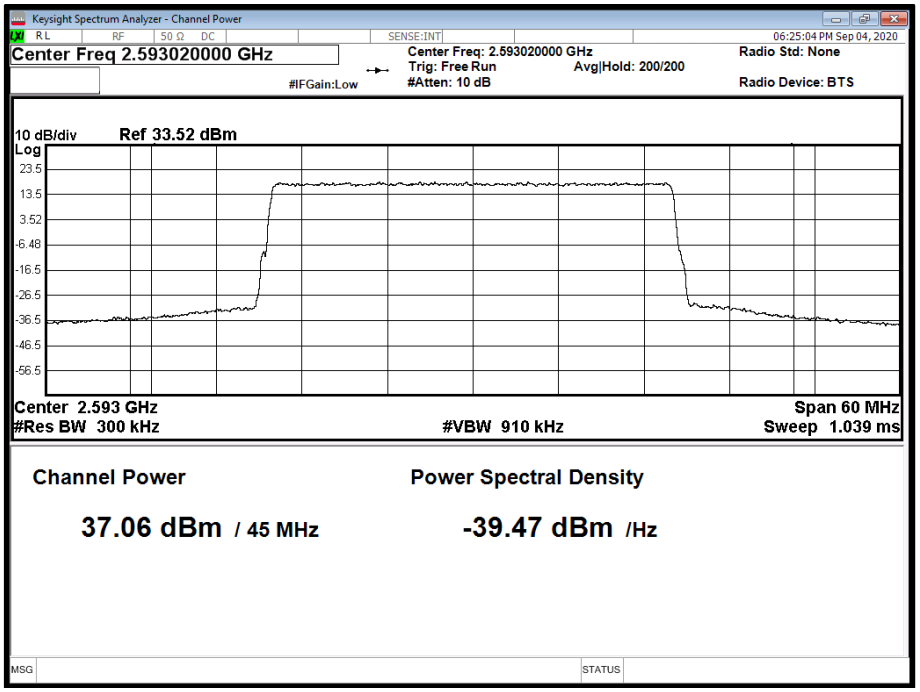
Antenna Port	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
0	64QAM	10.0 MHz	8.47	36.81	27.96
1	64QAM	10.0 MHz	8.76	36.66	27.87
2	64QAM	10.0 MHz	8.62	36.89	28.15
3	64QAM	10.0 MHz	8.86	36.71	27.74
4	64QAM	10.0 MHz	8.63	36.80	28.04
5	64QAM	10.0 MHz	8.52	36.55	27.89
6	64QAM	10.0 MHz	8.76	37.03	28.05
7	64QAM	10.0 MHz	8.81	36.87	27.89
8	64QAM	10.0 MHz	8.95	36.78	28.10
9	64QAM	10.0 MHz	8.79	36.87	28.00
10	64QAM	10.0 MHz	8.67	36.62	27.83
11	64QAM	10.0 MHz	8.61	36.73	27.91
12	64QAM	10.0 MHz	8.70	36.94	28.12
13	64QAM	10.0 MHz	8.96	36.66	27.78
14	64QAM	10.0 MHz	8.78	36.93	28.00
15	64QAM	10.0 MHz	8.75	36.61	27.65
16	64QAM	10.0 MHz	8.68	36.87	27.95
17	64QAM	10.0 MHz	8.74	36.91	27.97
18	64QAM	10.0 MHz	8.45	37.03	28.04
19	64QAM	10.0 MHz	8.71	36.68	27.84
20	64QAM	10.0 MHz	8.67	36.65	27.91
21	64QAM	10.0 MHz	8.60	36.63	27.91
22	64QAM	10.0 MHz	8.67	36.92	28.06
23	64QAM	10.0 MHz	8.76	36.57	27.62
24	64QAM	10.0 MHz	8.69	36.89	27.94
25	64QAM	10.0 MHz	8.70	36.68	27.96
26	64QAM	10.0 MHz	8.62	36.72	27.78
27	64QAM	10.0 MHz	8.64	36.49	27.89
28	64QAM	10.0 MHz	8.60	37.14	28.12
29	64QAM	10.0 MHz	8.75	36.71	27.78
30	64QAM	10.0 MHz	8.56	36.97	28.00
31	64QAM	10.0 MHz	8.69	36.65	27.89
32	64QAM	10.0 MHz	8.96	36.99	28.02
33	64QAM	10.0 MHz	8.57	36.64	27.76
34	64QAM	10.0 MHz	8.52	36.90	28.22
35	64QAM	10.0 MHz	8.63	36.58	27.82
36	64QAM	10.0 MHz	8.61	36.71	27.89
37	64QAM	10.0 MHz	8.88	36.78	27.90
38	64QAM	10.0 MHz	8.49	36.91	28.03
39	64QAM	10.0 MHz	8.74	36.44	27.71
40	64QAM	10.0 MHz	8.73	36.74	27.88
41	64QAM	10.0 MHz	8.67	36.81	27.87
42	64QAM	10.0 MHz	8.62	36.74	27.90
43	64QAM	10.0 MHz	8.63	36.89	27.92
44	64QAM	10.0 MHz	8.67	36.88	28.08
45	64QAM	10.0 MHz	8.53	36.74	27.76
46	64QAM	10.0 MHz	8.61	36.89	28.00

Antenna Port	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power	Antenna Port	NR Modulation
			Channel Position M		
			PAR (dB)	dBm	dBm/MHz
47	64QAM	10.0 MHz	8.57	36.67	27.95
48	64QAM	10.0 MHz	8.67	36.88	27.96
59	64QAM	10.0 MHz	8.70	36.65	27.79
50	64QAM	10.0 MHz	8.77	36.88	27.95
51	64QAM	10.0 MHz	8.65	36.95	27.85
52	64QAM	10.0 MHz	8.67	36.62	27.77
53	64QAM	10.0 MHz	8.55	36.81	27.94
54	64QAM	10.0 MHz	8.61	36.85	28.06
55	64QAM	10.0 MHz	8.61	36.60	27.76
56	64QAM	10.0 MHz	8.82	36.81	27.85
57	64QAM	10.0 MHz	8.61	36.90	27.78
58	64QAM	10.0 MHz	8.65	36.92	27.99
59	64QAM	10.0 MHz	8.71	36.86	27.89
60	64QAM	10.0 MHz	8.69	36.81	27.86
61	64QAM	10.0 MHz	8.58	36.64	27.81
62	64QAM	10.0 MHz	8.61	37.03	28.03
63	64QAM	10.0 MHz	8.52	36.76	27.96
28	64QAM	30.0 MHz	8.67	37.06	23.05
28	64QAM	50.0 MHz	8.57	37.05	20.75
28	64QAM	70.0 MHz	8.75	37.02	19.16
28	64QAM	90.0 MHz	8.99	36.84	18.07
Total			-	54.85	45.98

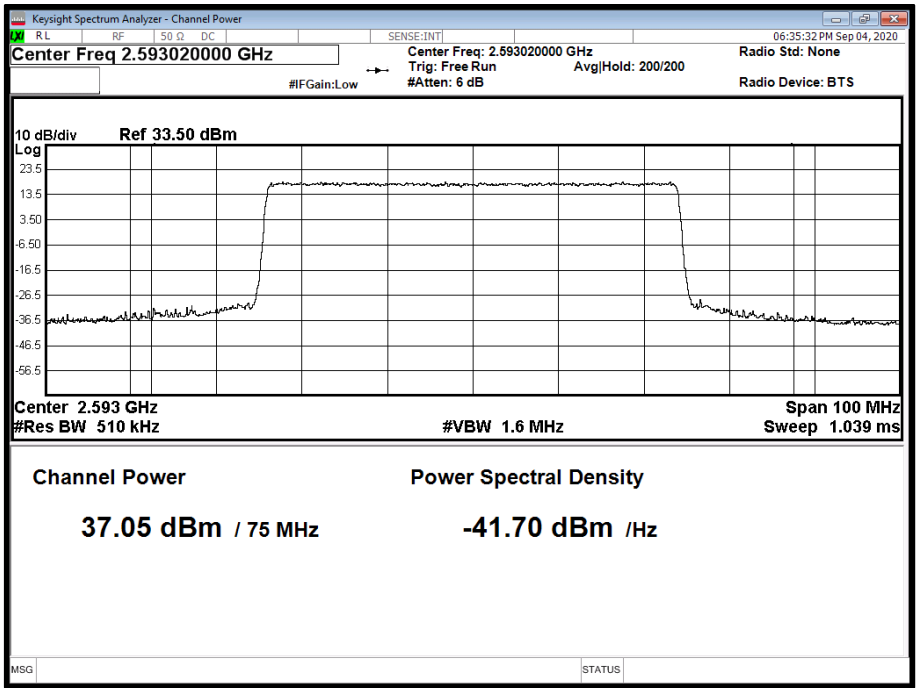
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position M



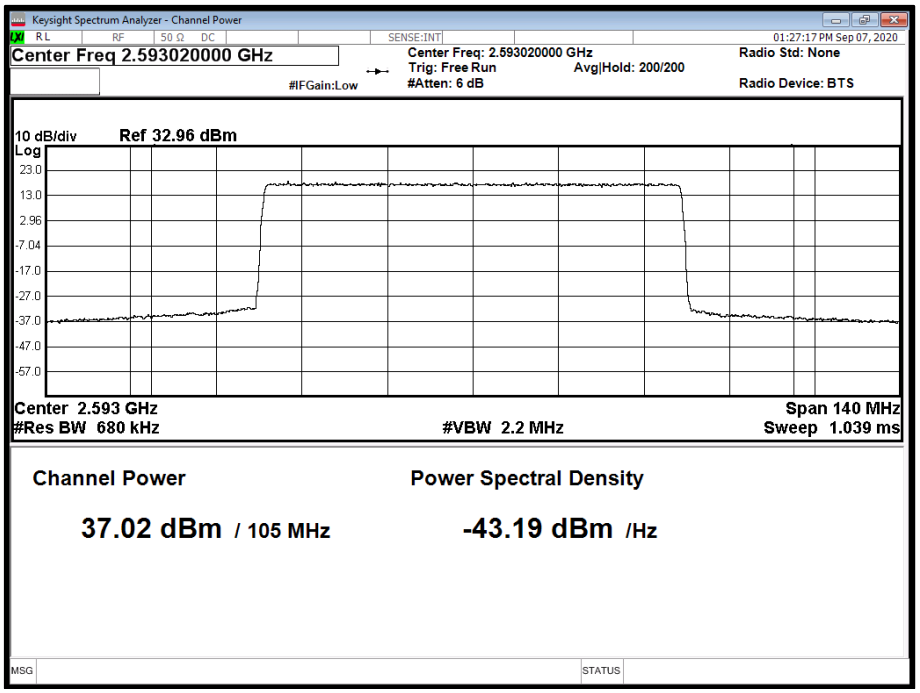
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position M



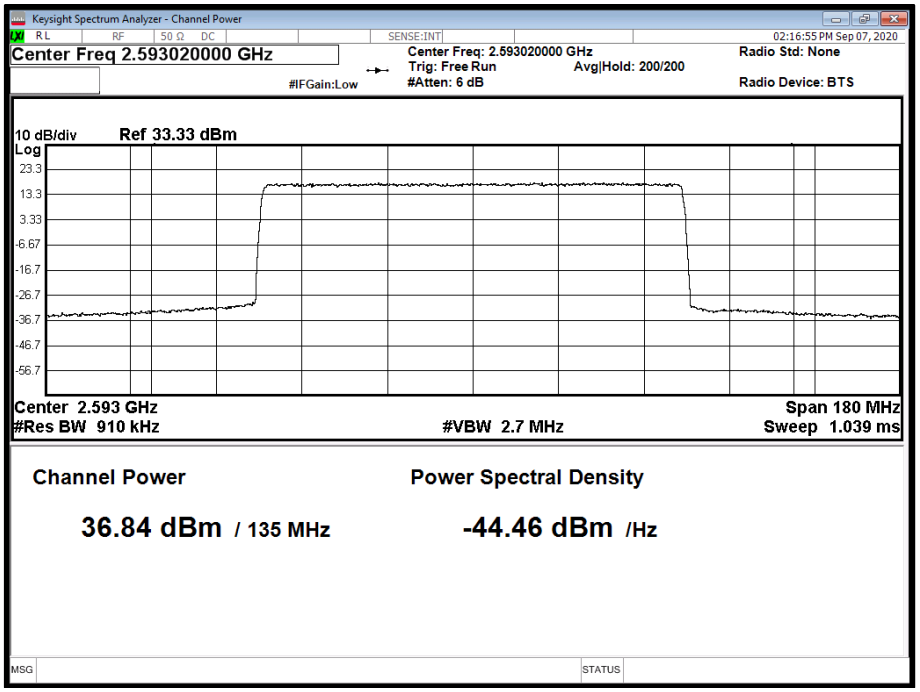
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position M

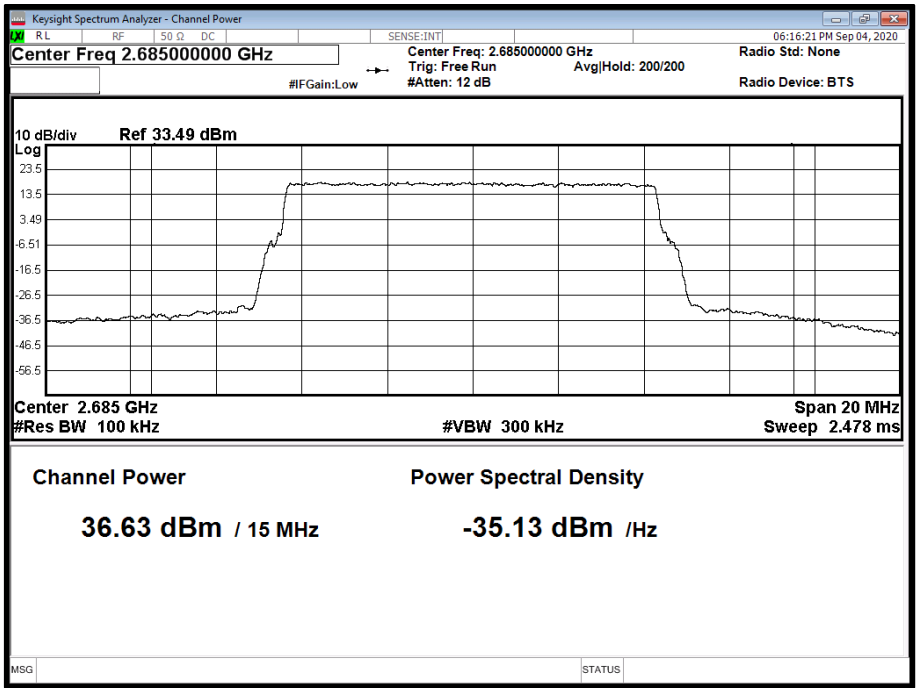


Configuration 4

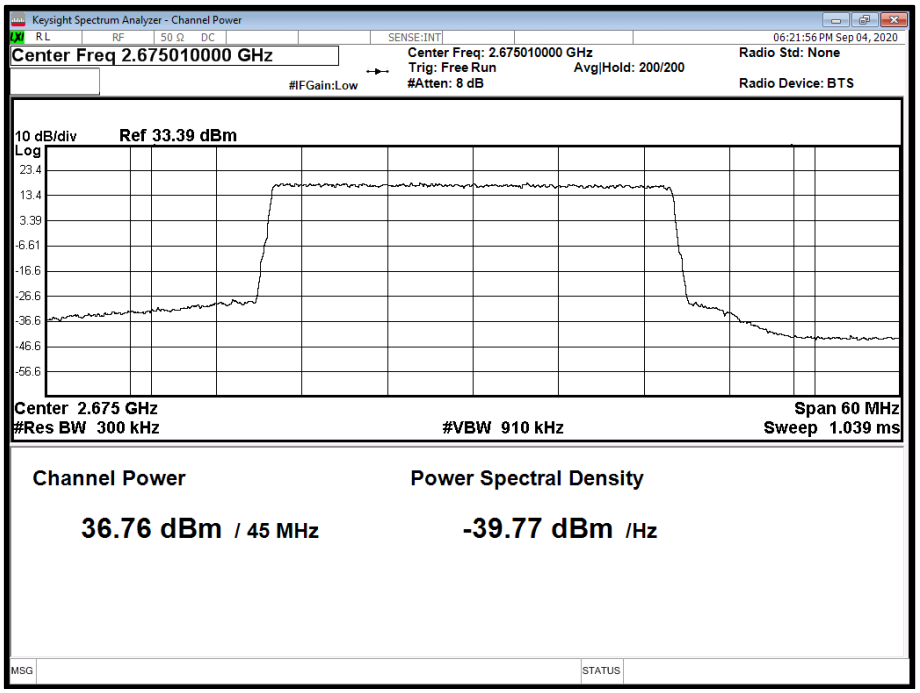
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position T		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
28	64QAM	10.0 MHz	8.60	36.63	27.75
28	64QAM	30.0 MHz	8.83	36.76	22.94
28	64QAM	50.0 MHz	9.04	36.94	20.75
28	64QAM	70.0 MHz	8.93	36.86	19.28
28	64QAM	90.0 MHz	8.89	36.82	18.19
Total			-	43.79	30.26

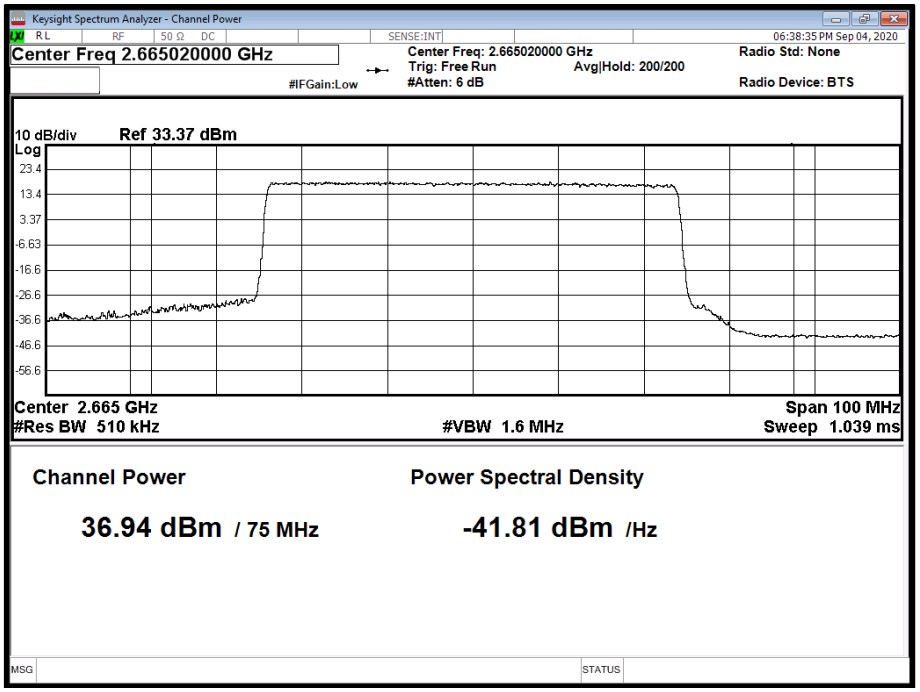
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position T



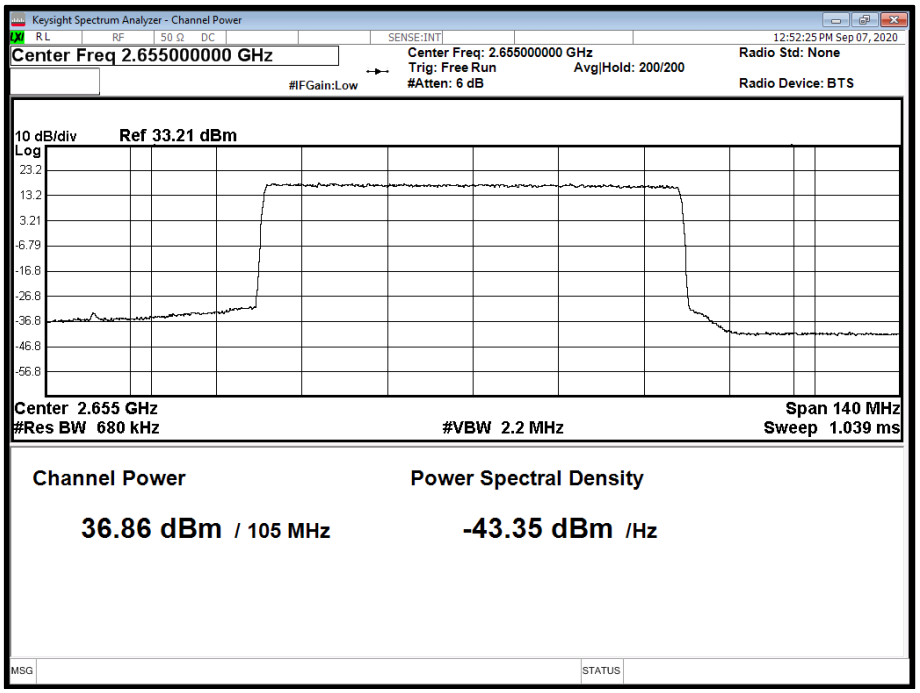
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position T



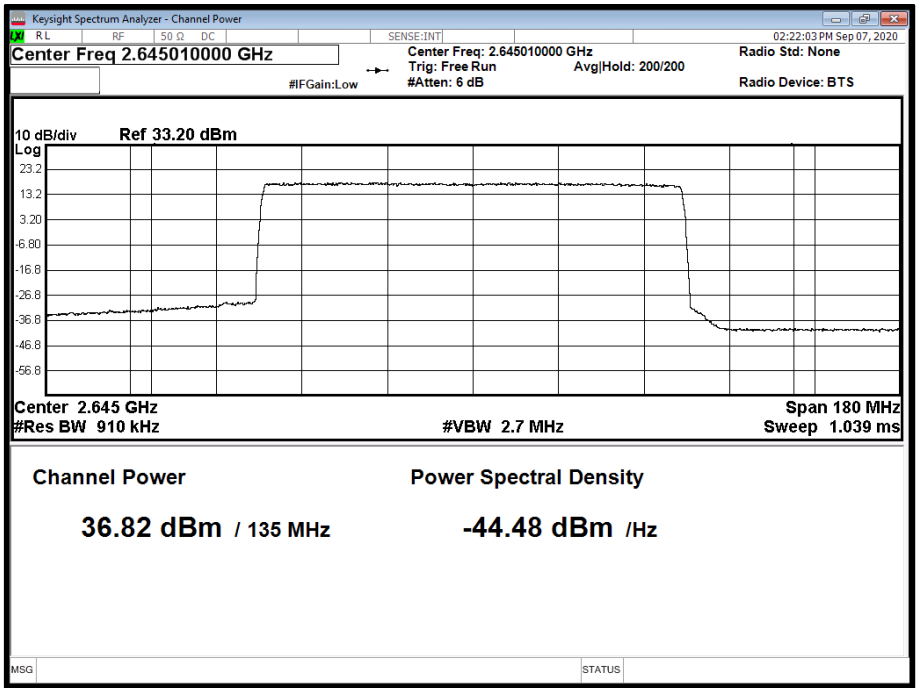
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position T



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position T



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position T

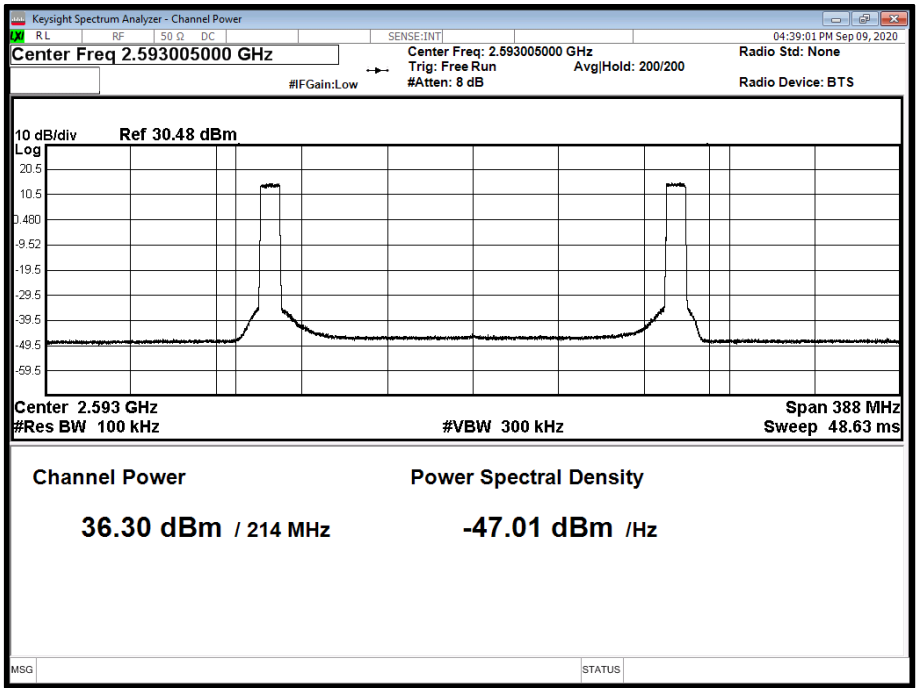


Configuration 5

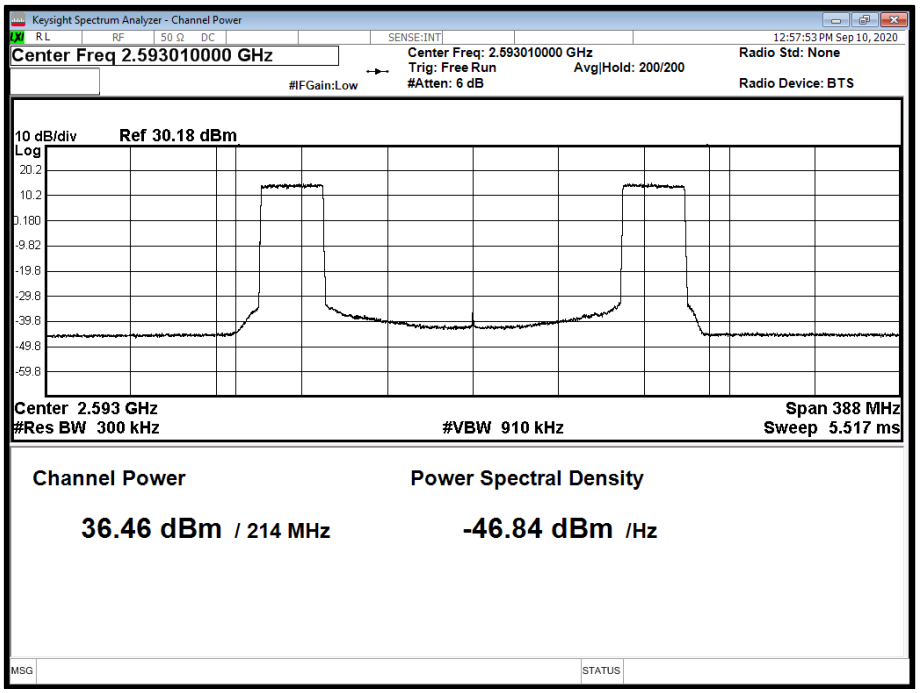
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	NR Modulation	NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
28	64QAM	10.0 MHz	-	36.30	24.52
28	64QAM	30.0 MHz	-	36.46	20.07
28	64QAM	50.0 MHz	-	36.47	17.52
28	64QAM	70.0 MHz	-	36.59	15.99
28	64QAM	90.0 MHz	-	36.67	15.00
Total			-	43.49	27.10

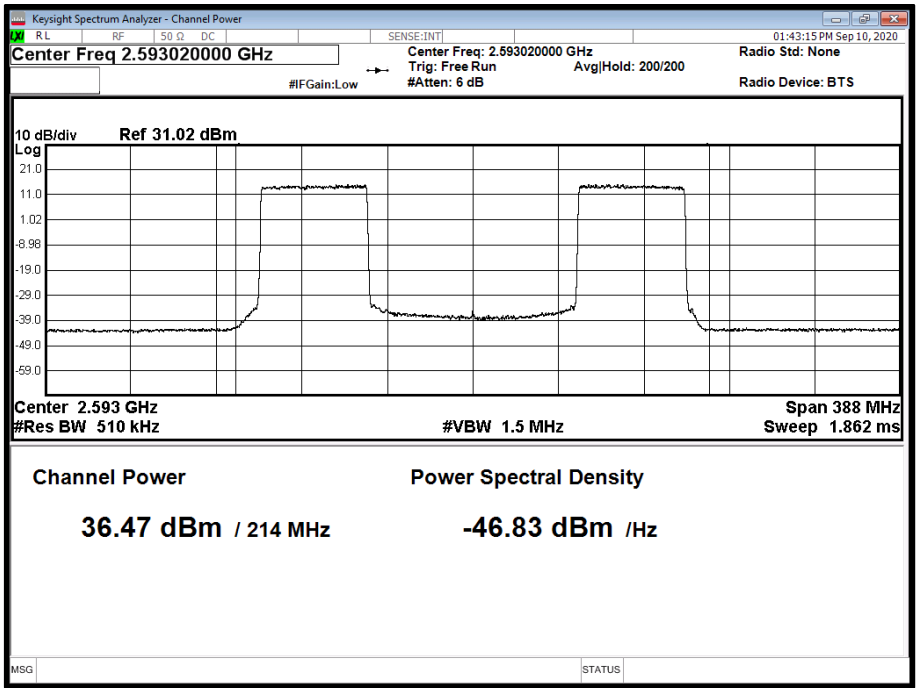
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position M



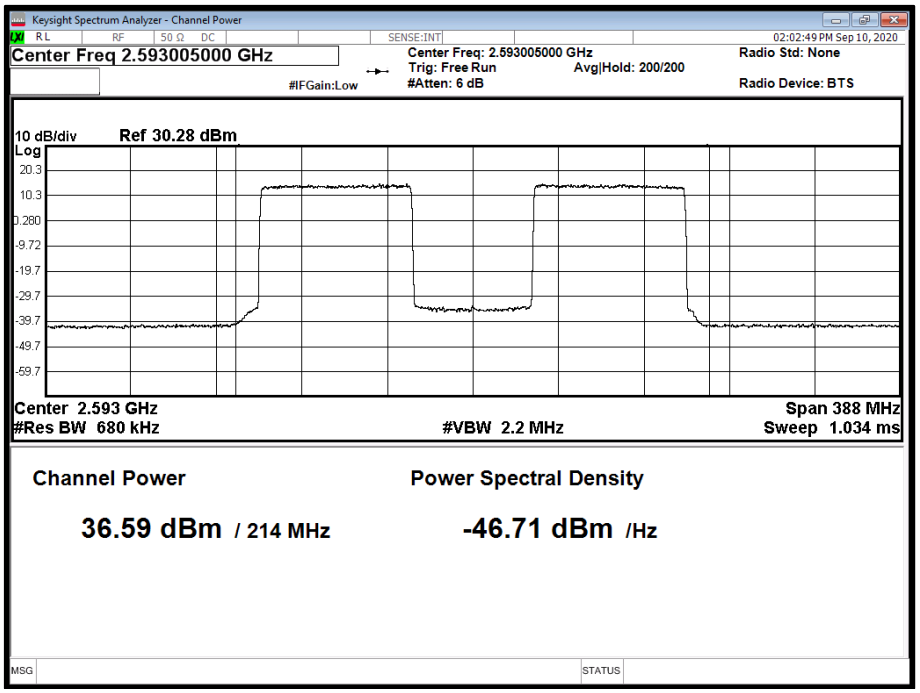
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position M



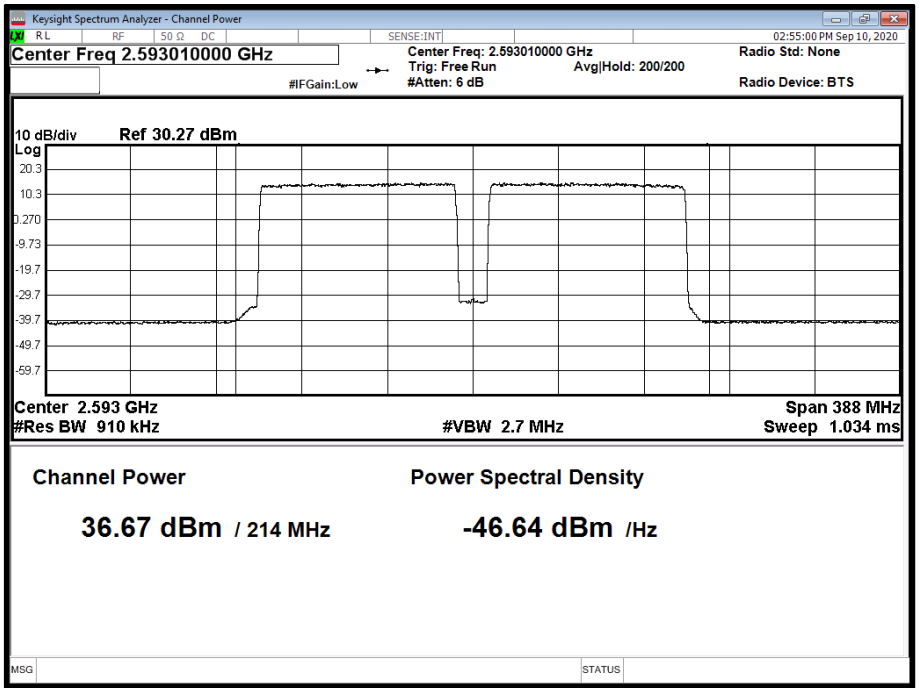
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position M

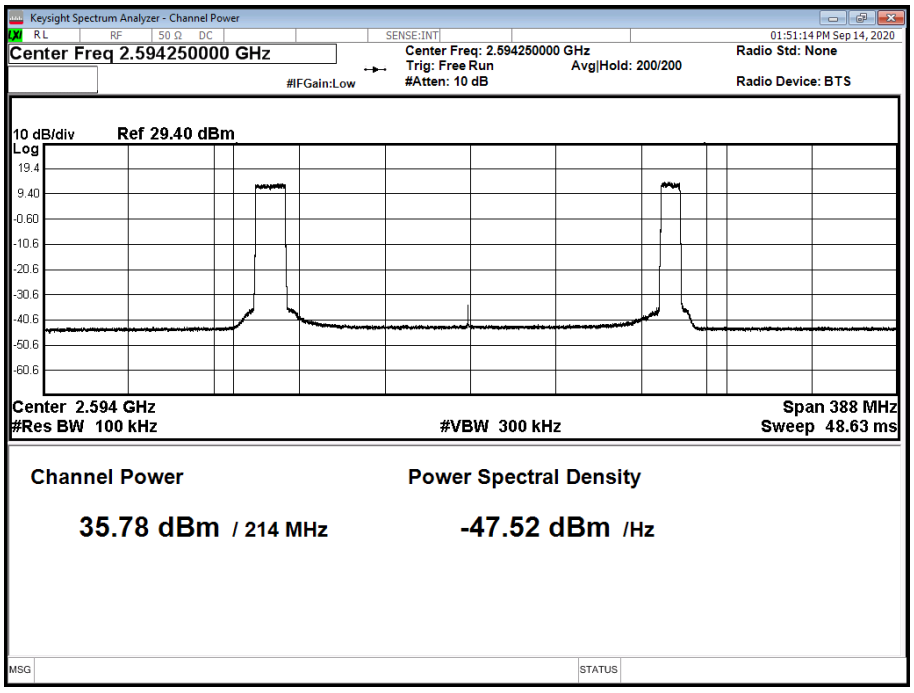


Configuration 6

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE + NR Modulation	LTE + NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
28	64QAM	LTE 15.0 MHz + NR 10.0 MHz	-	35.78	21.39
Total			-	5.83	-8.61

Antenna Port 28 - NR Modulation 64QAM / 64QAM - NR Carrier Bandwidth LTE 15.0 MHz + NR 10.0 MHz - Channel Position M

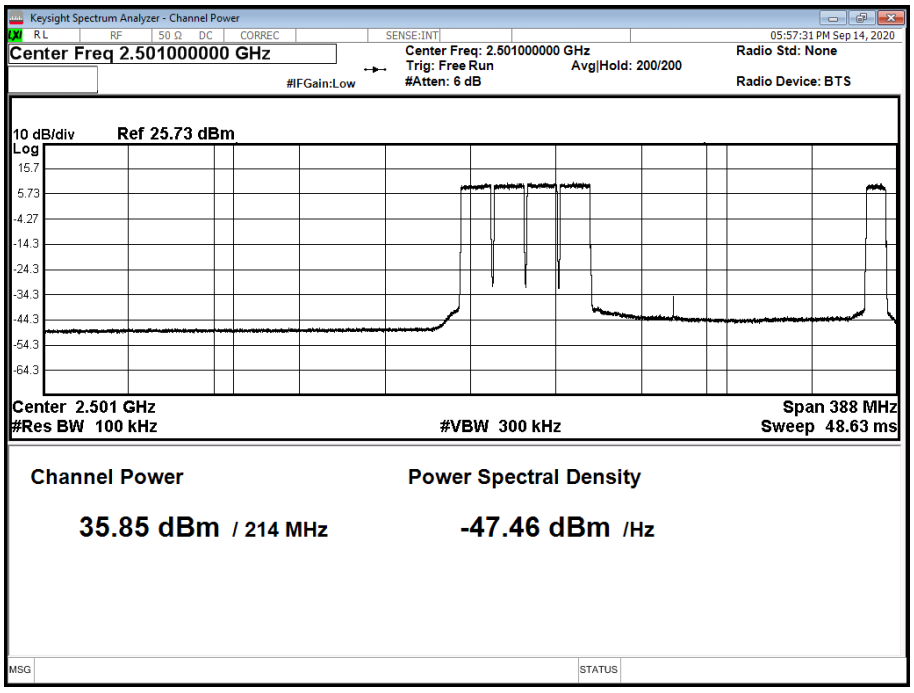


Configuration 7

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE / NR Modulation	LTE / NR Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power Channel Position M_{RFBW}		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
28	64QAM	LTE 15.0 MHz + LTE 15.0 MHz +LTE 15.0 MHz +LTE 15.0 MHz +NR 10.0 MHz	35.85	35.85	17.75
Total			-	5.85	-12.25

Antenna Port 28 - NR Modulation 64QAM / 64QAM - NR Carrier Bandwidth LTE 15.0 MHz + LTE 15.0 MHz +LTE 15.0 MHz +LTE 15.0 MHz +NR 10.0 MHz - Channel Position M



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

2.1 OCCUPIED BANDWIDTH

2.1.1 Specification Reference

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

2.1.2 Date of Test and Modification State

24, 29 & 30 August 2020 - 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	21.9 - 22.8°C
Relative Humidity	40.2 - 43.7%

2.1.5 Test Method

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

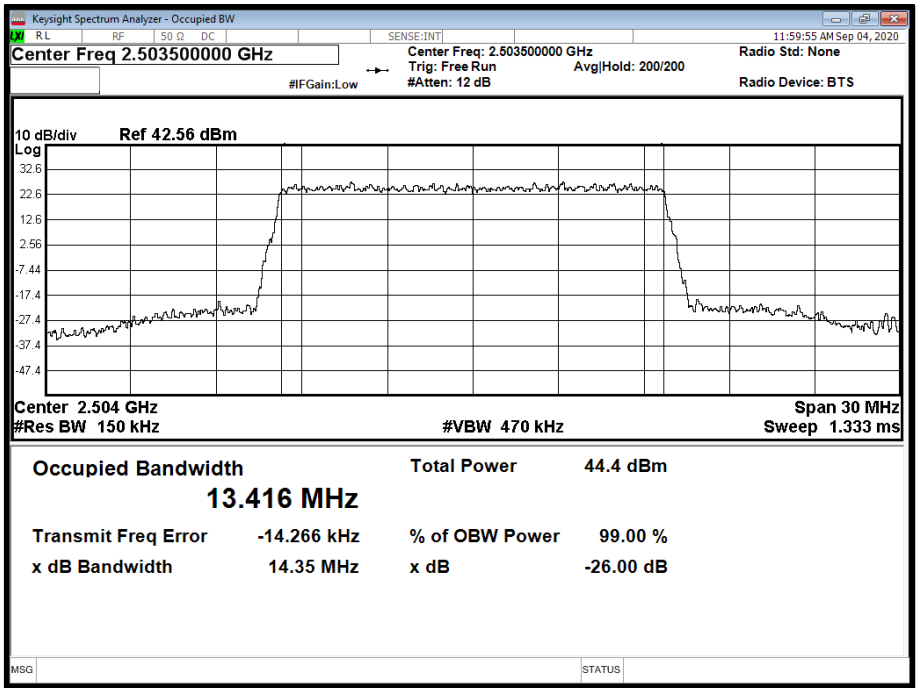
2.1.6 Test Results

Configuration 1

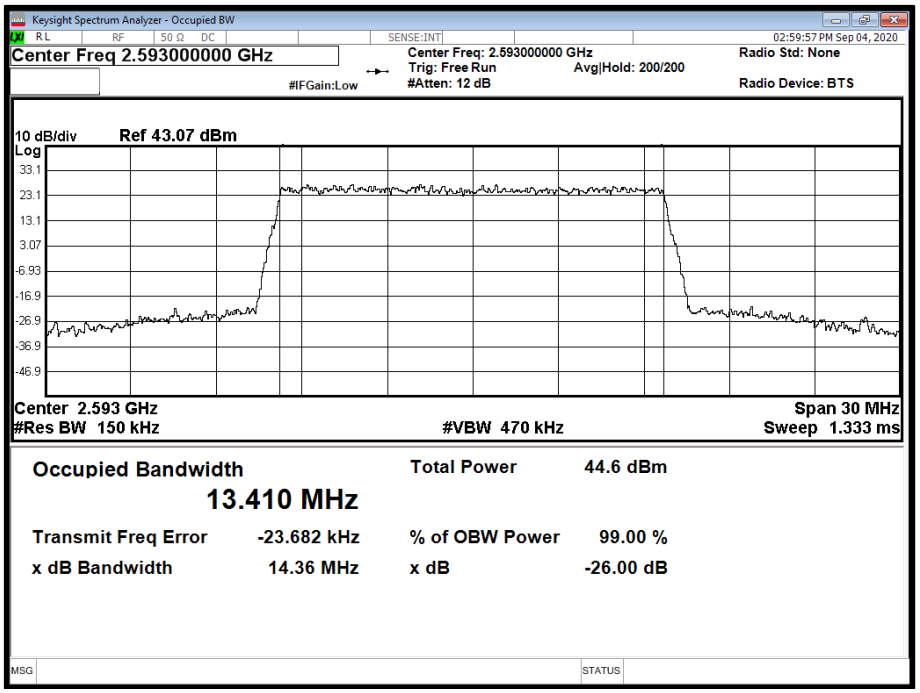
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE 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
50	64QAM	15.0 MHz	13.42	14.34	13.41	14.35	13.41	14.23

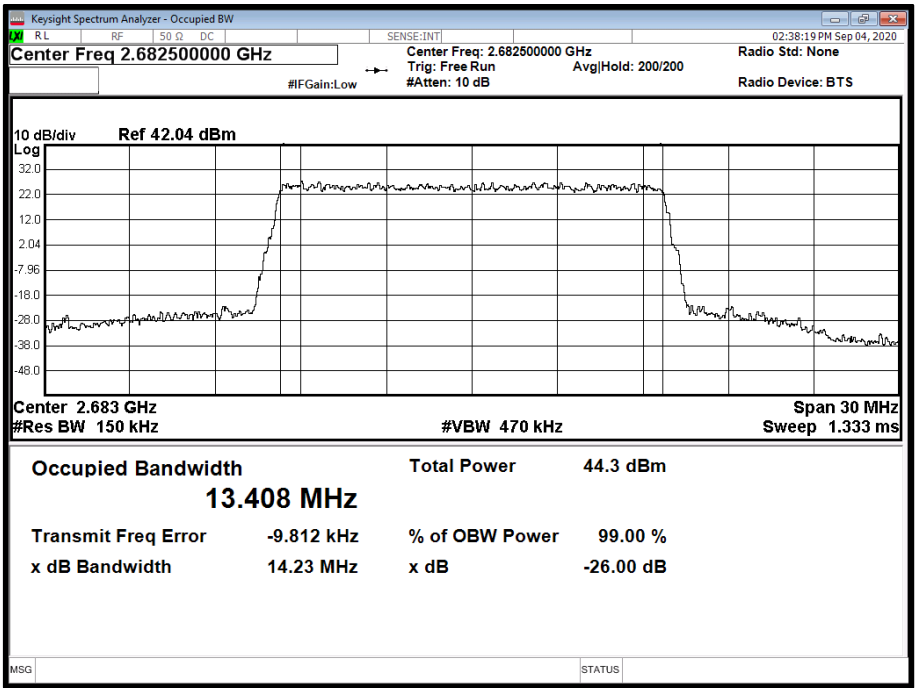
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T

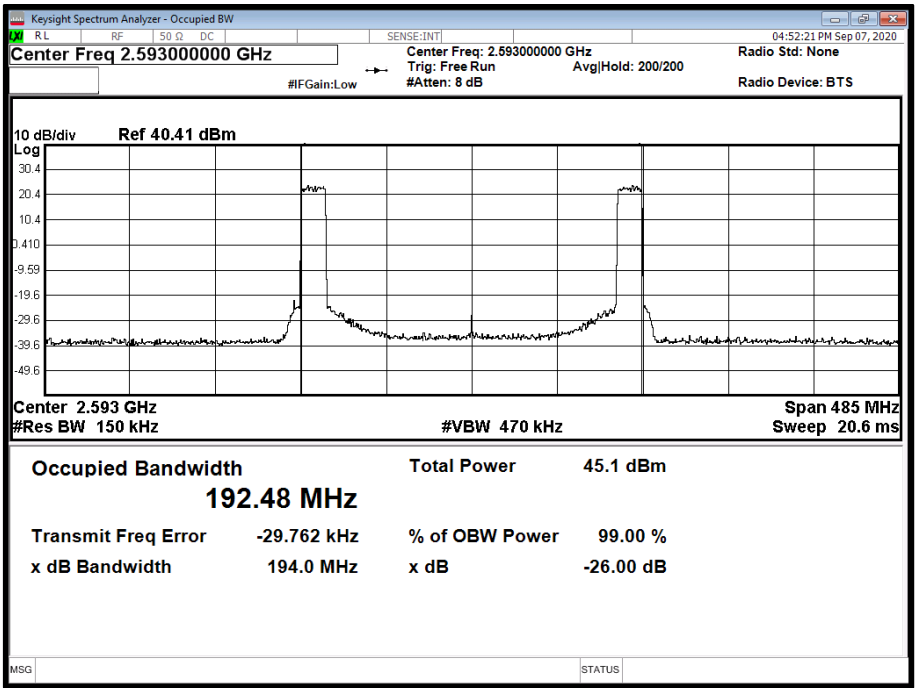


Configuration 2

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna	LTE Modulation	LTE 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
50	64QAM	15.0 MHz	-	-	192.48	192.48	-	-

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M

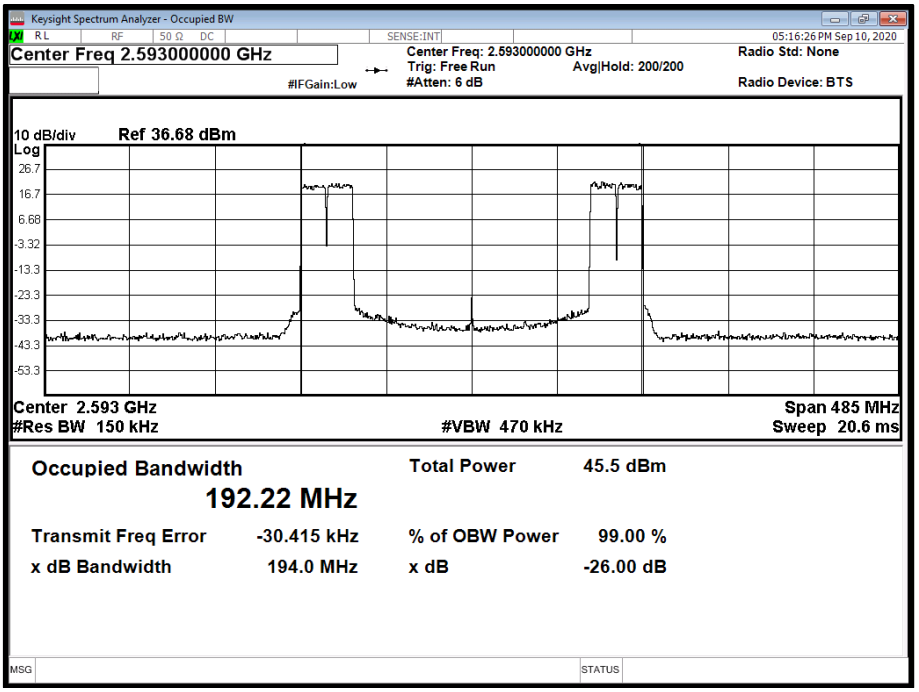


Configuration 3

Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE 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
50	64QAM	15.0 MHz			192.22	192.20		

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M

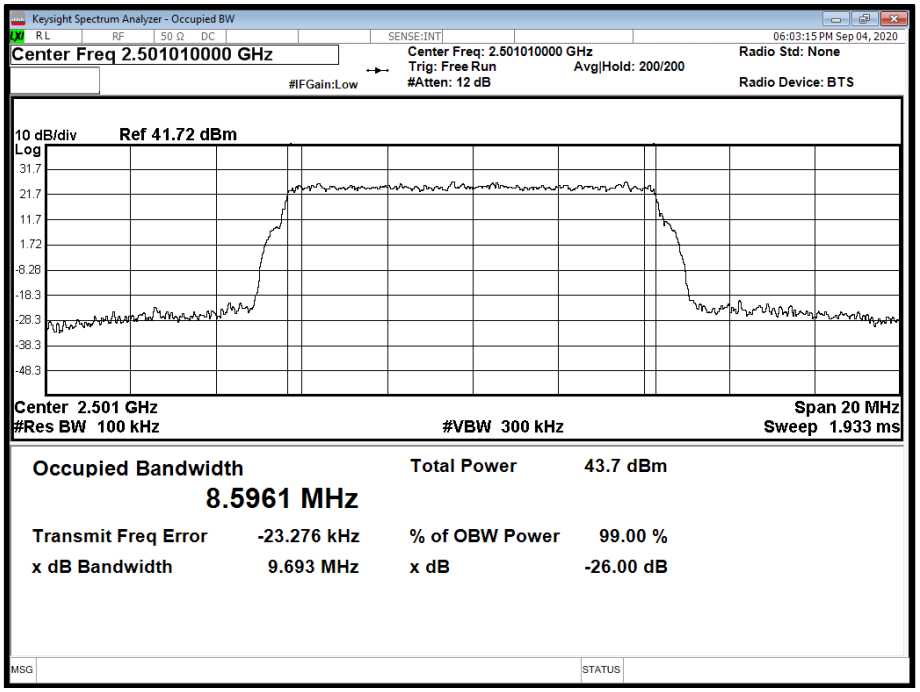


Configuration 4

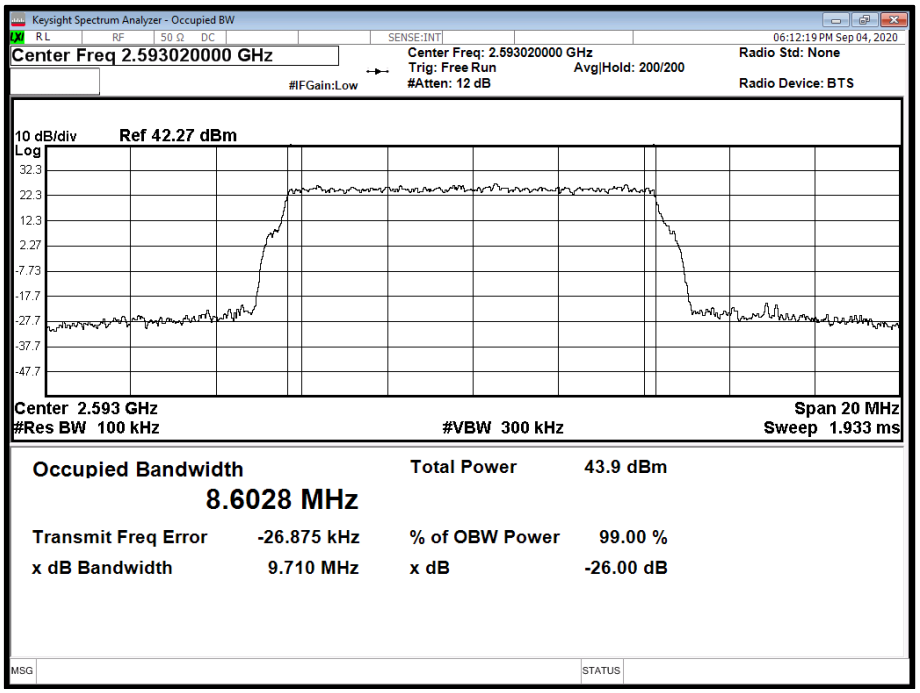
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	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
28	64QAM	10.0 MHz	8.59	9.69	8.60	9.70	8.60	9.70
28	64QAM	30.0 MHz	27.83	29.54	27.86	29.46	27.85	29.50
28	64QAM	50.0 MHz	47.44	49.58	47.42	49.49	47.39	49.36
28	64QAM	70.0 MHz	67.43	69.75	67.45	69.96	67.42	69.99
28	64QAM	90.0 MHz	87.23	90.30	87.26	90.27	87.38	90.32

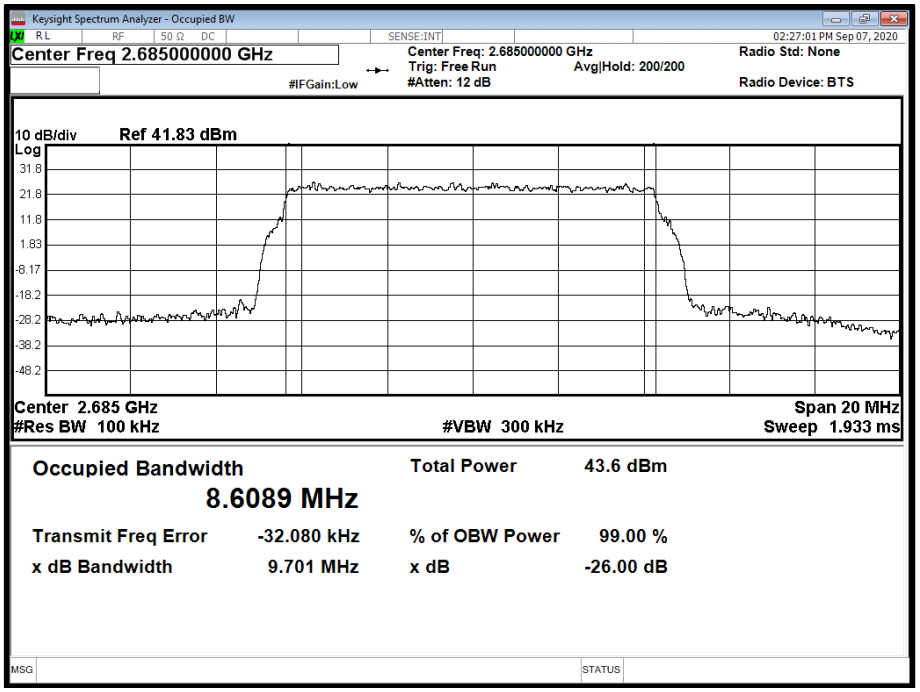
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position B



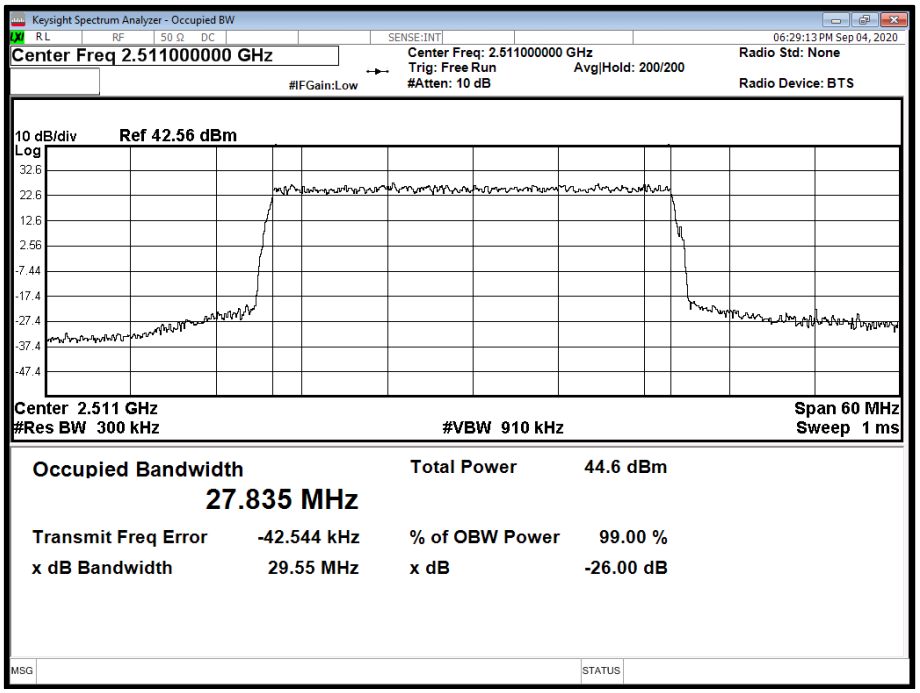
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position M



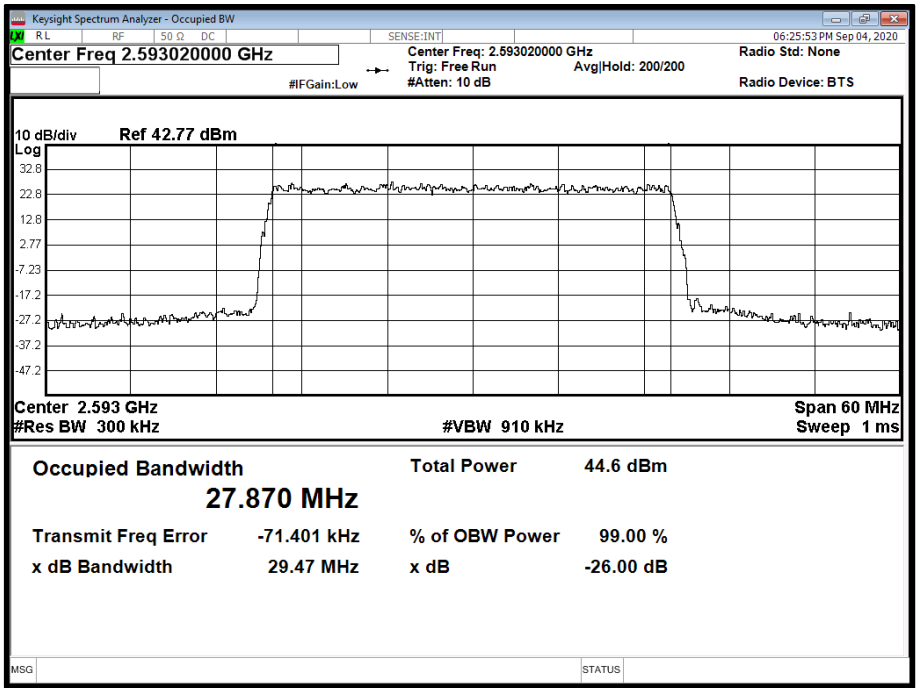
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position T



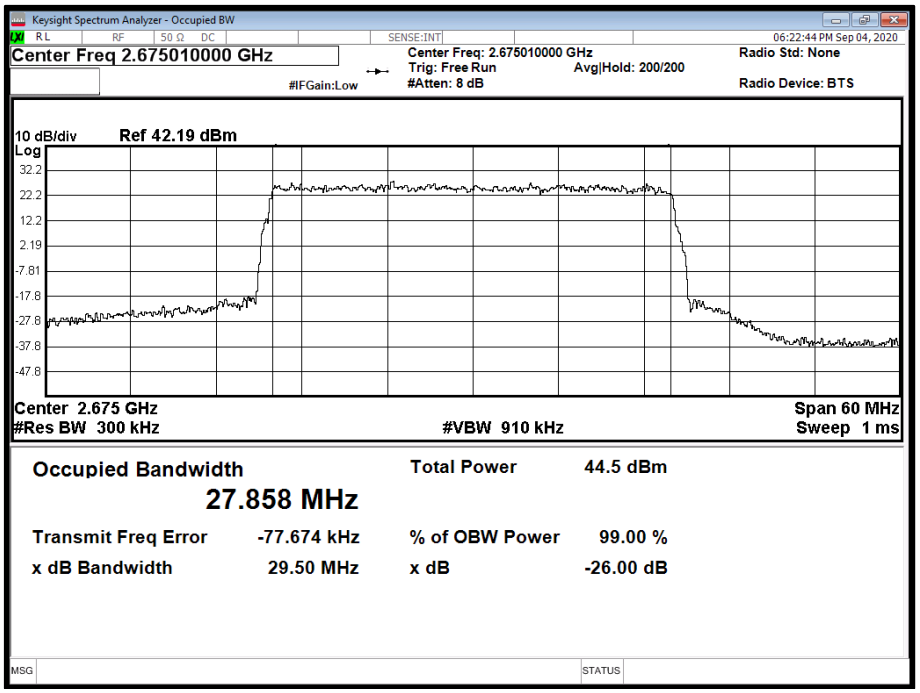
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position B



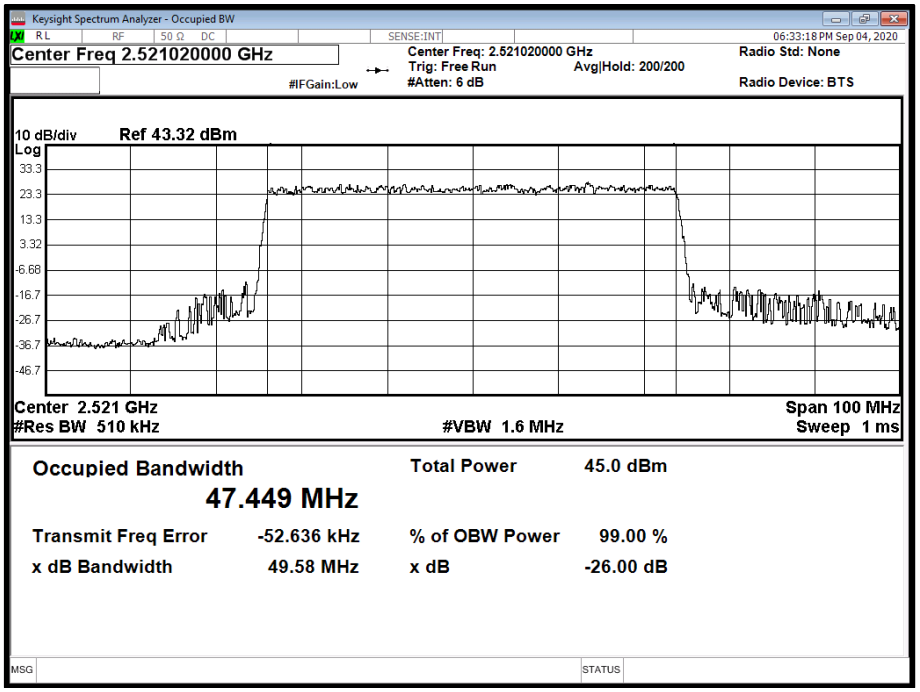
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position M



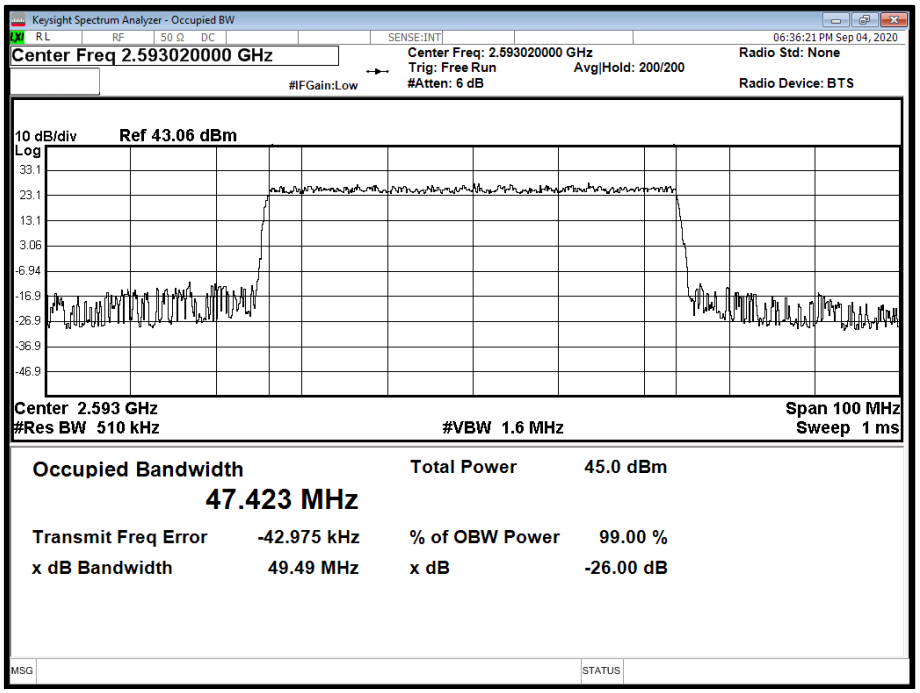
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position T



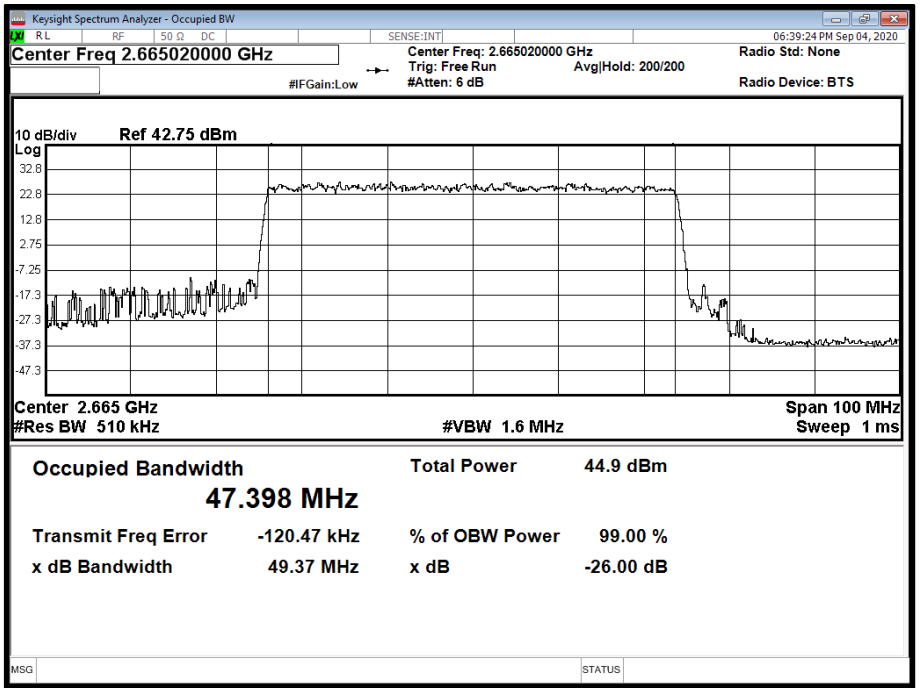
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position B



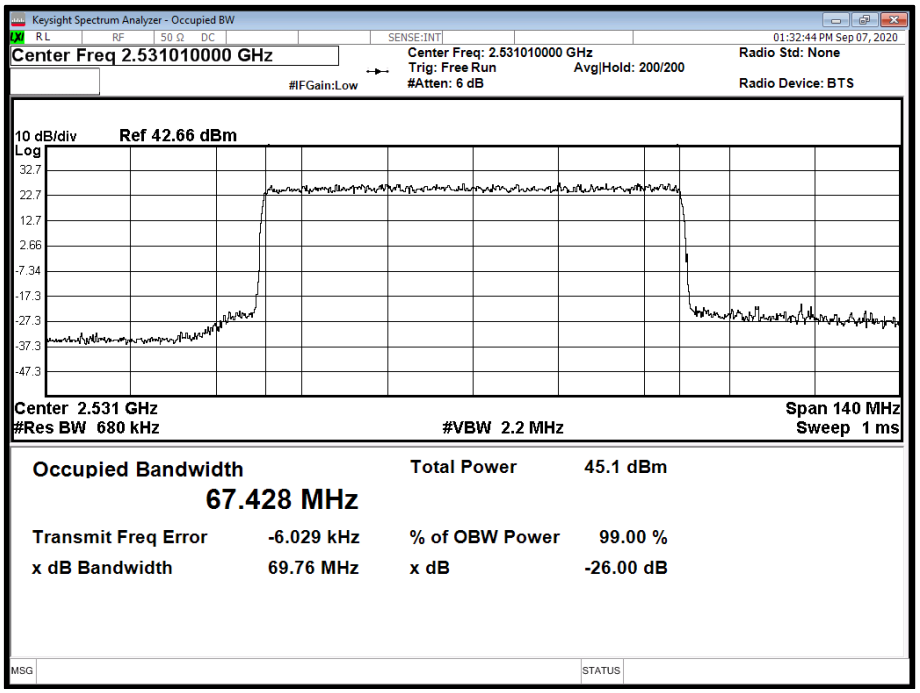
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position M



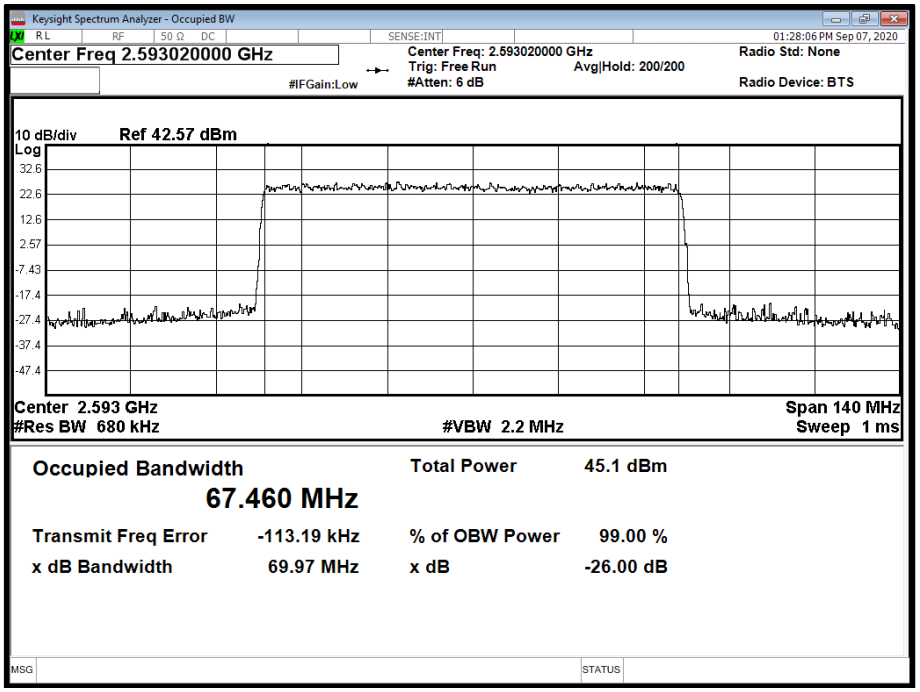
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position T



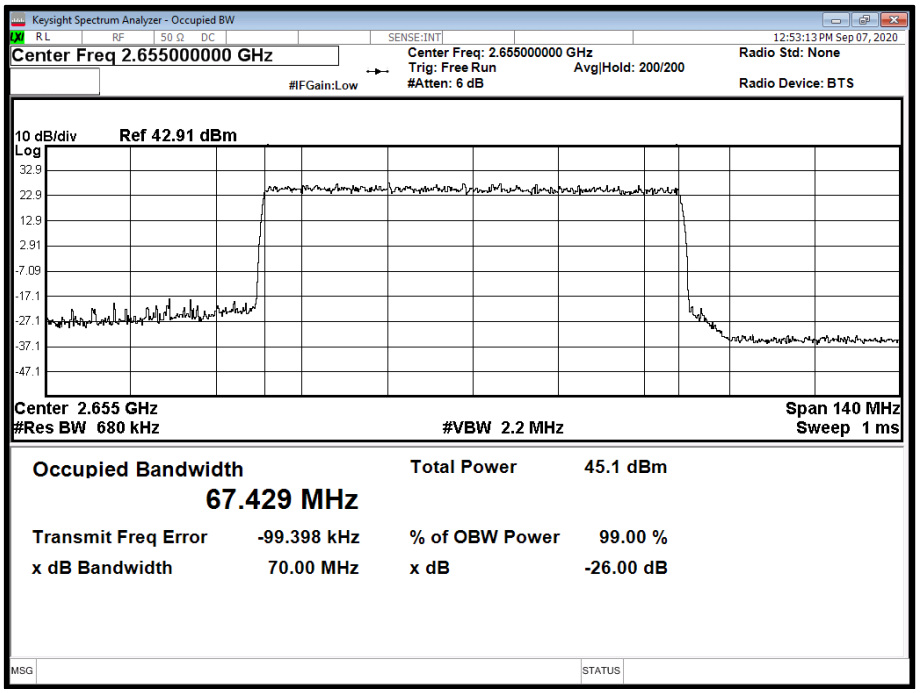
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position B



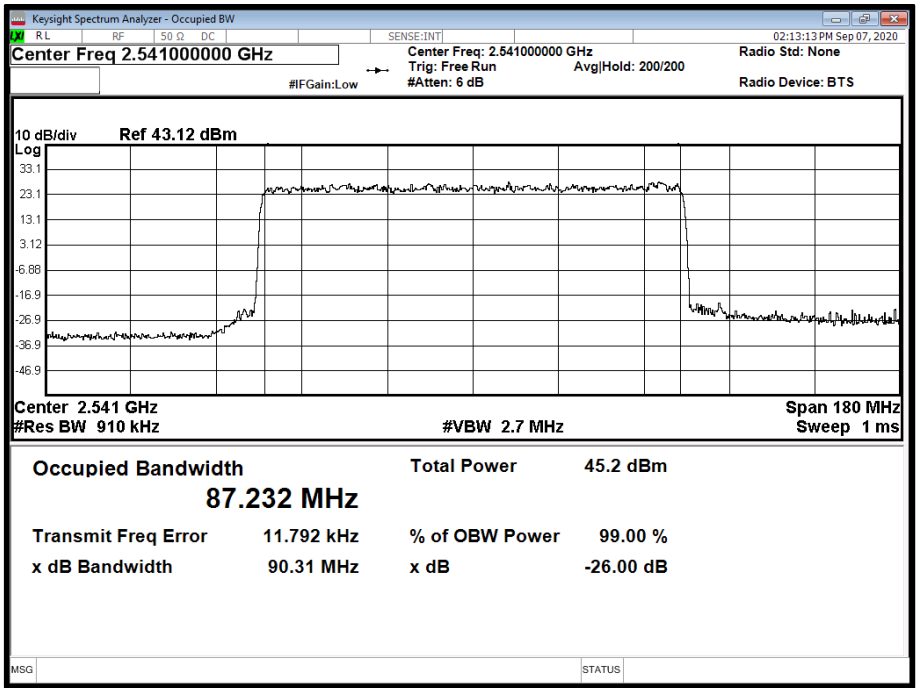
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position M



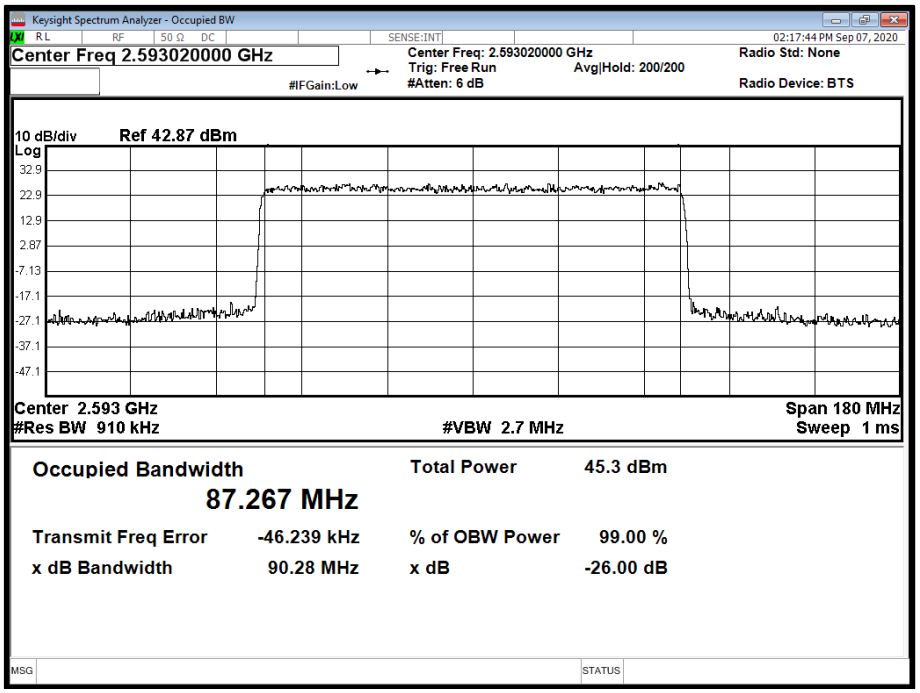
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position T



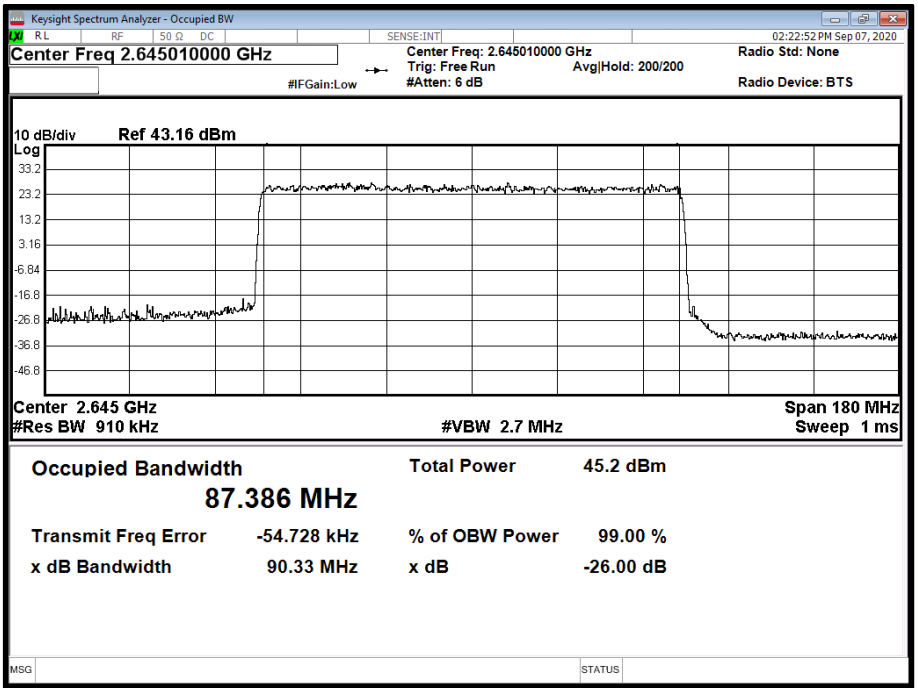
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position B



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position T

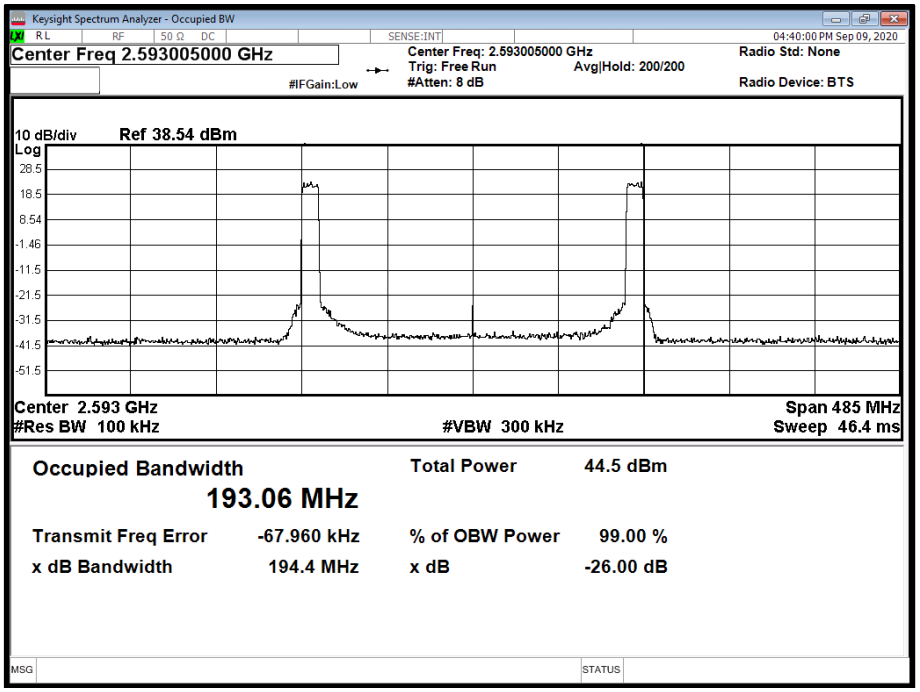


Configuration 5

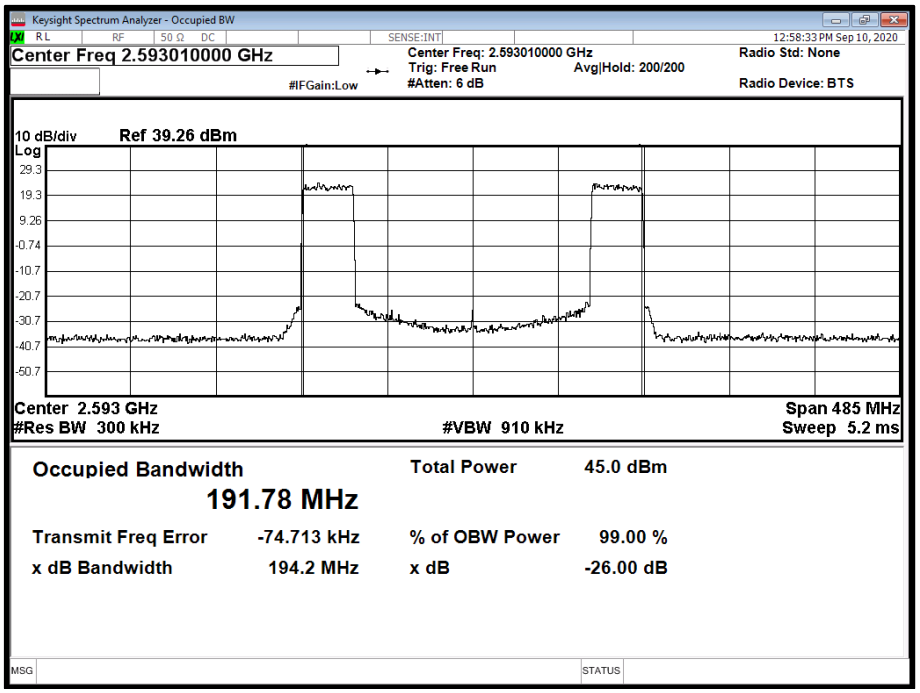
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	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
28	64QAM	10.0 MHz	-	-	193.06	194.37	-	-
28	64QAM	30.0 MHz	-	-	191.78	194.17	-	-
28	64QAM	50.0 MHz	-	-	190.80	194.40	-	-
28	64QAM	70.0 MHz	-	-	190.50	194.43	-	-
28	64QAM	90.0 MHz	-	-	190.14	194.47	-	-

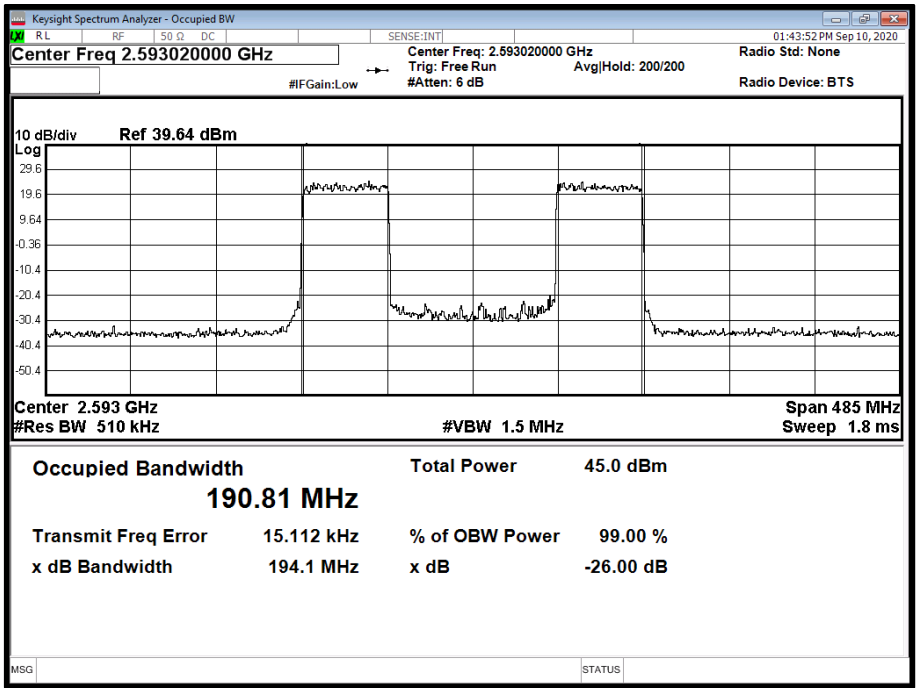
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position M



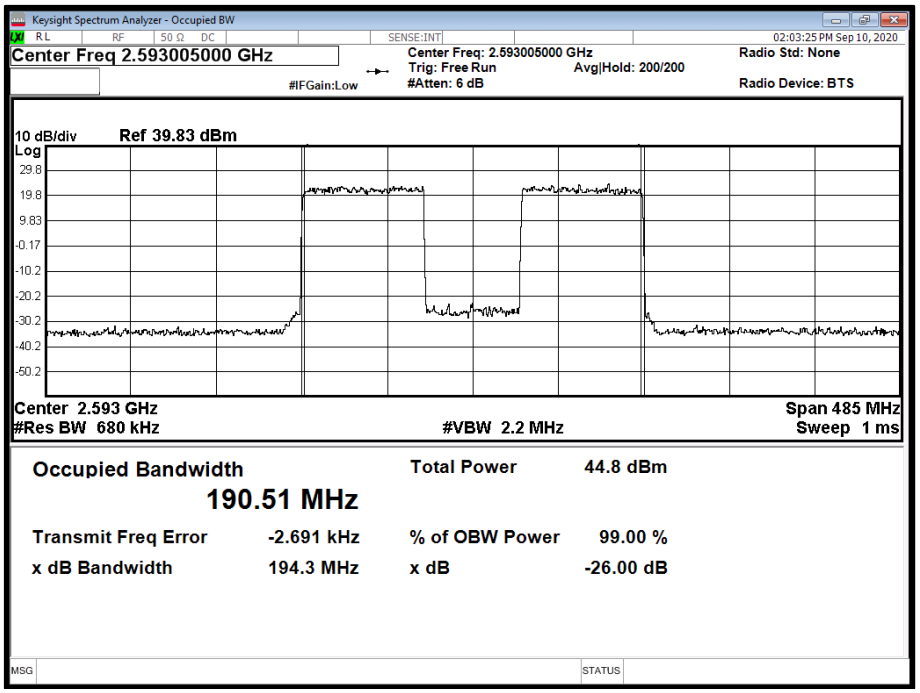
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position M



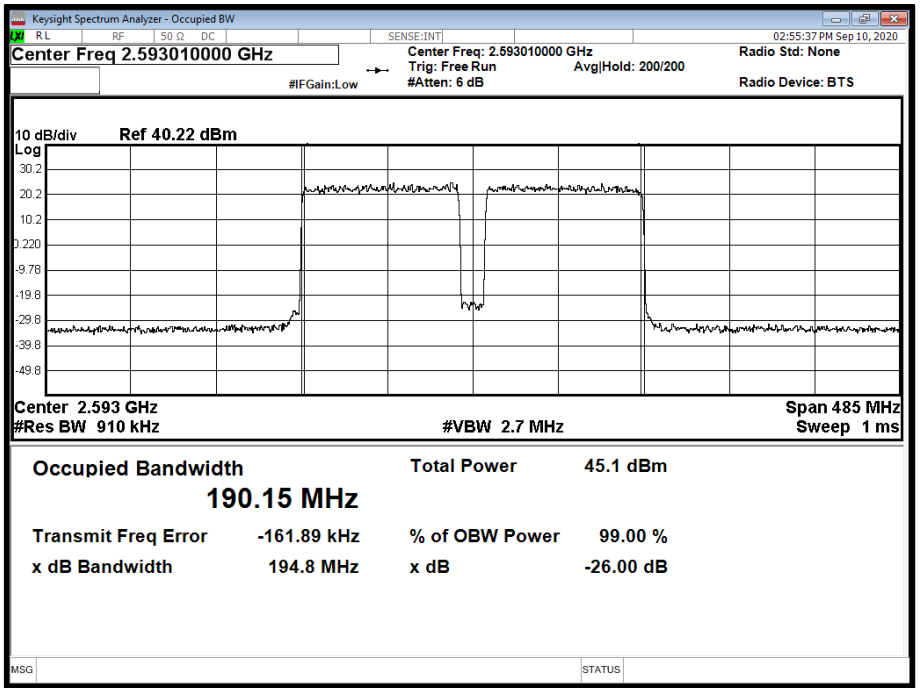
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position M



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position M



Limit	
Peak Power	≤ 1640 W or ≤+62.15 dBm
Peak to Average Ratio	13 dB

The radio unit was tested with maximum output power and without an antenna. ERP/EIRP compliance is addressed at the time of licensing, as required by the responsible FCC Bureau(s). Licensees are required to take into account maximum allowed antenna gain used in combination with the above power settings to prevent the radiated output power exceeding the limits.

2.2 BAND EDGE

2.2.1 Specification Reference

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

2.2.2 Date of Test and Modification State

27 & 30 August and 03, 04, 17, 15 & 23 September 2020 - 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	21.9 - 23.5°C
Relative Humidity	40.2 - 53.3%

2.2.5 Test Method

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

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 dBm - 10 * Log (1) = -13 dBm.

For 64 port, the limit was calculated as being -13 dBm - 10 * Log (64) = -31.06 dBm.

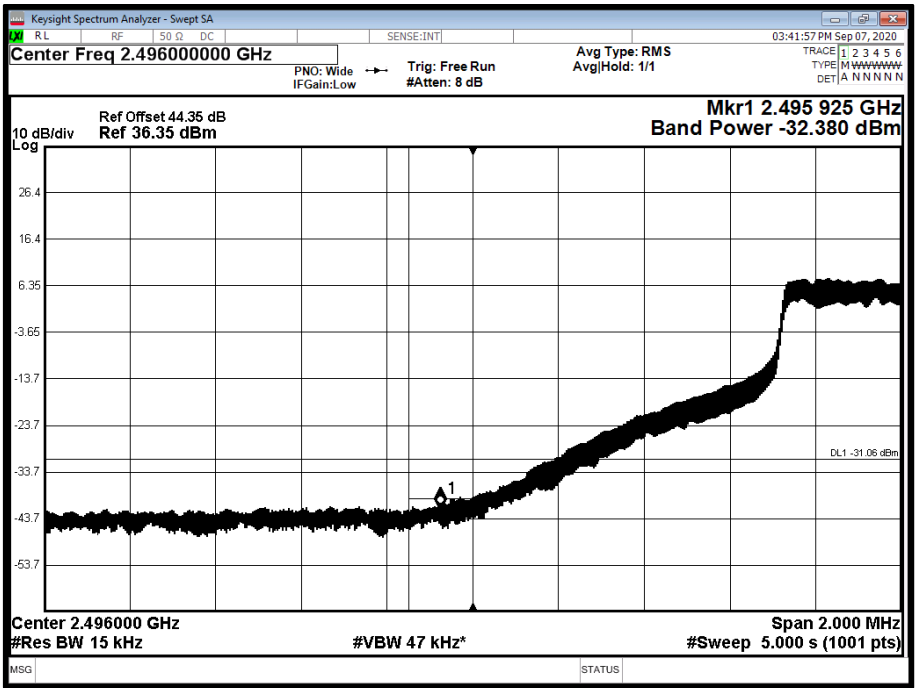
2.2.6 Test Results

Configuration 1

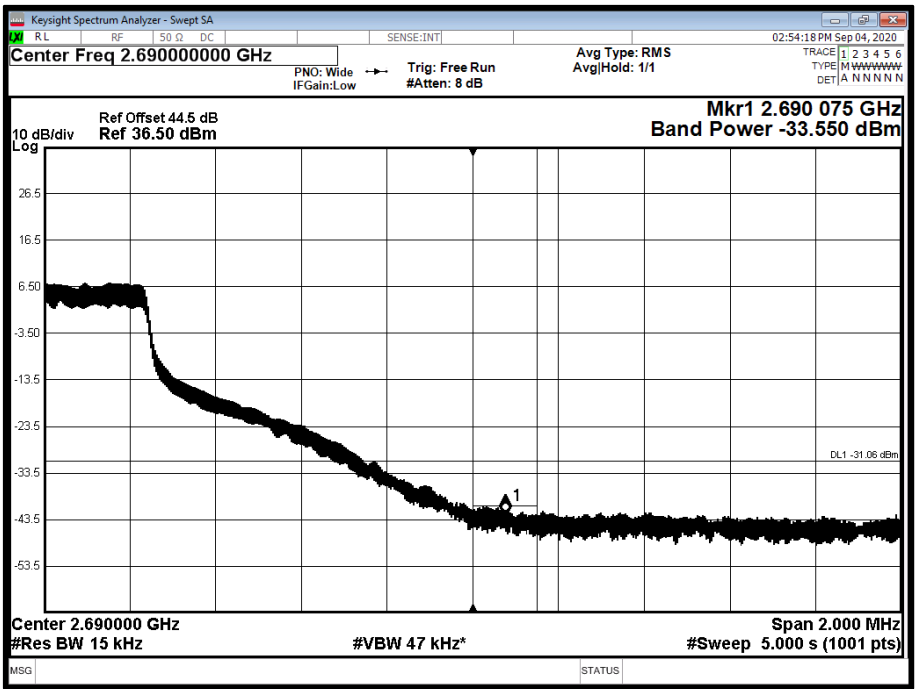
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
50	64QAM	15.0 MHz	2503.5	2682.5

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T

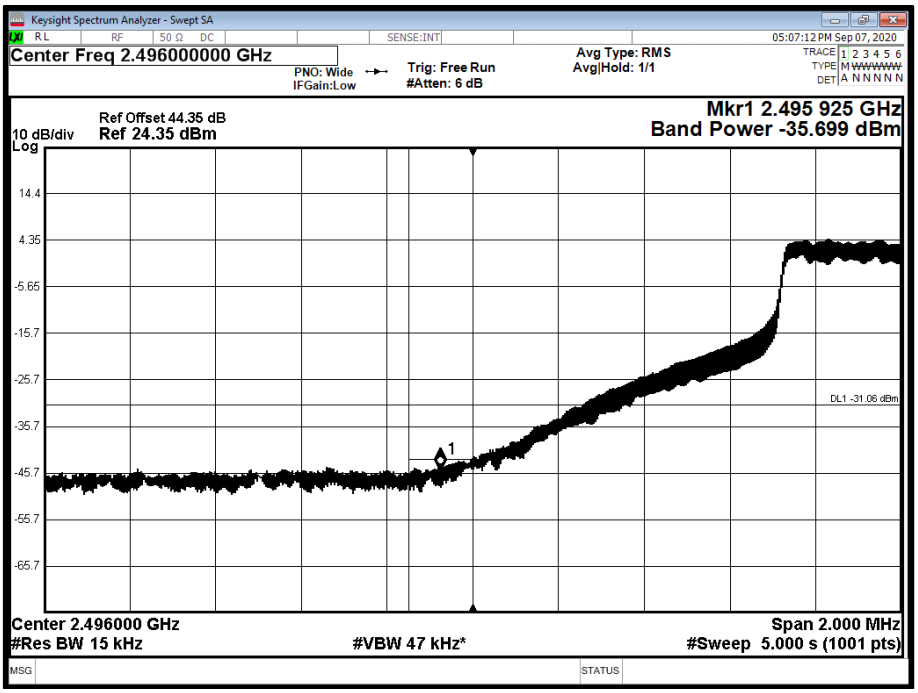


Configuration 2

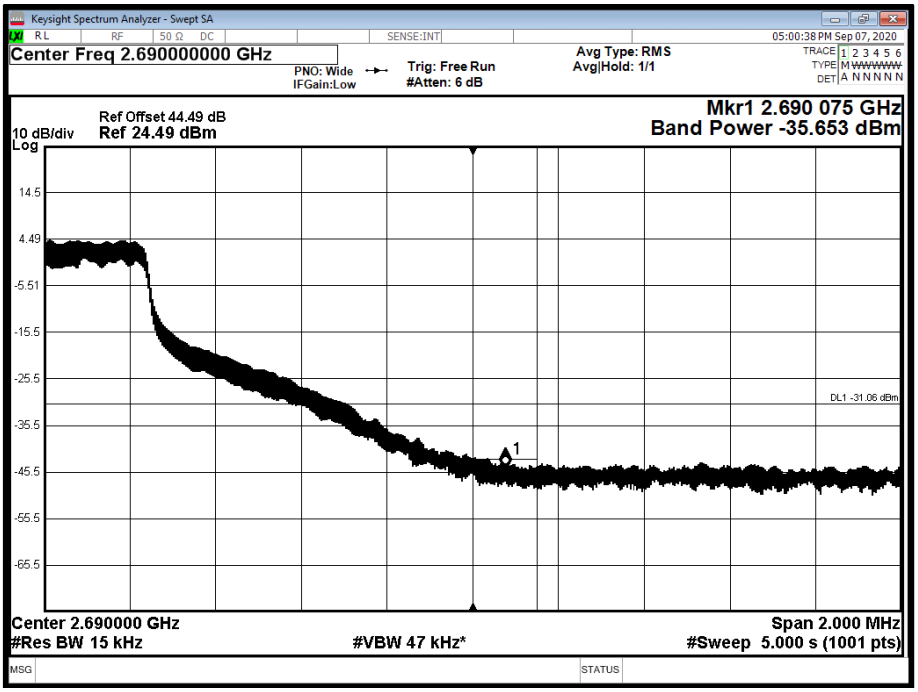
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
50	64QAM	15.0 MHz	2503.50+2518.50	2667.50+2682.50

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T

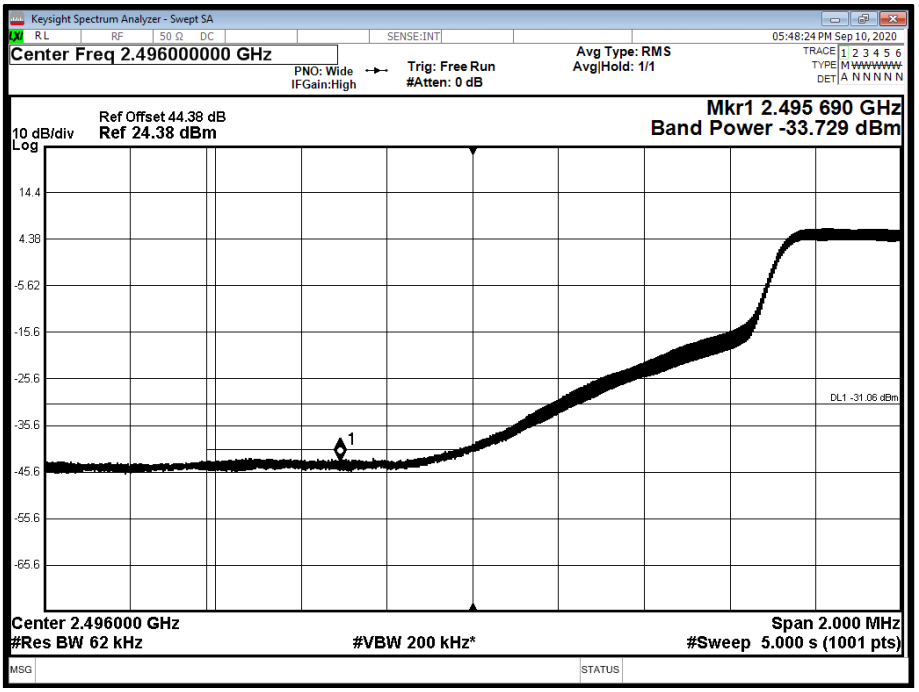


Configuration 3

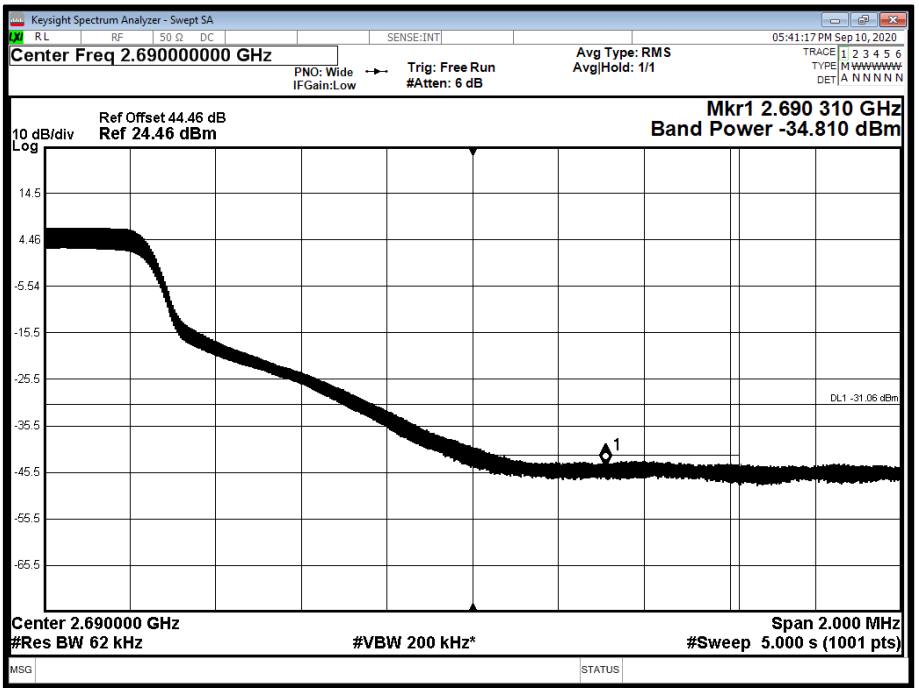
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE Modulation	LTE Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
50	64QAM	15.0 MHz	2503.5+2518.5+2533.5+2548.5	2637.5+2652.5+2667.5+2682.5

Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T

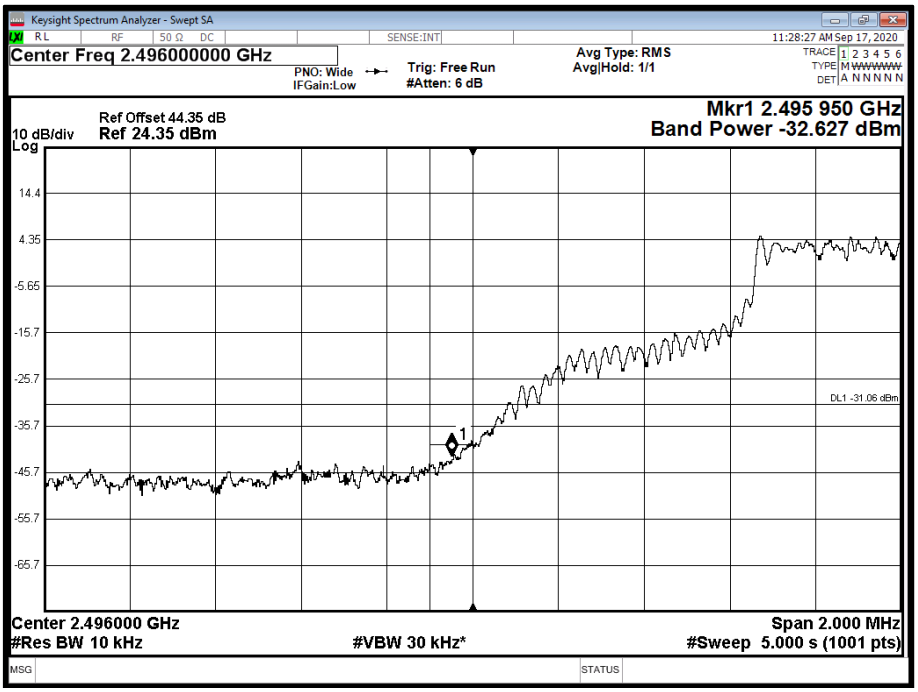


Configuration 4

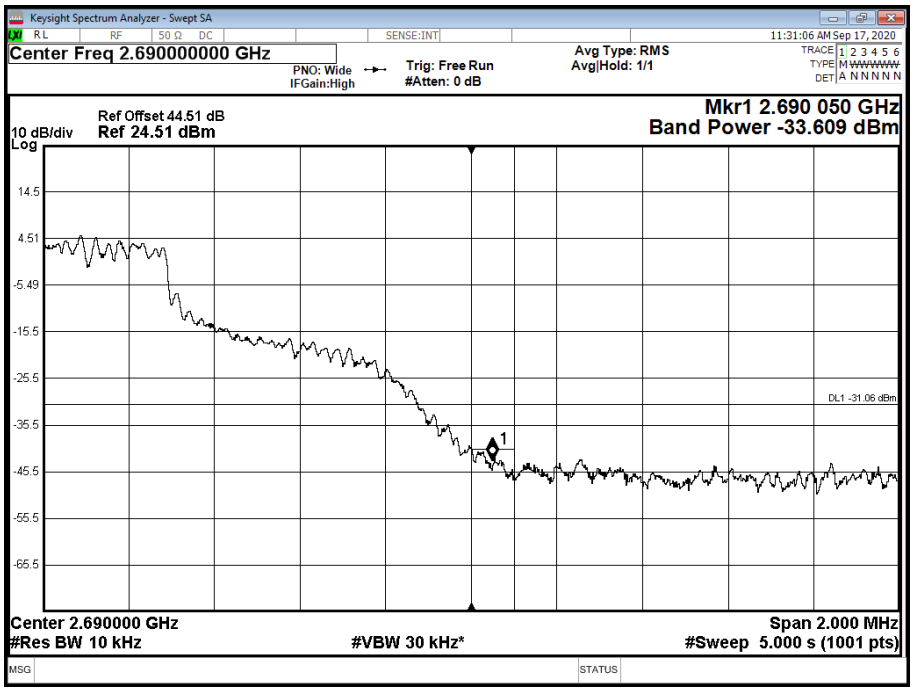
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
28	64QAM	10.0 MHz	2501.00	2685.00
28	64QAM	30.0 MHz	2511.00	2675.01
28	64QAM	50.0 MHz	2521.00	2665.00
28	64QAM	70.0 MHz	2531.01	2655.00
28	64QAM	90.0 MHz	2541.00	2645.01

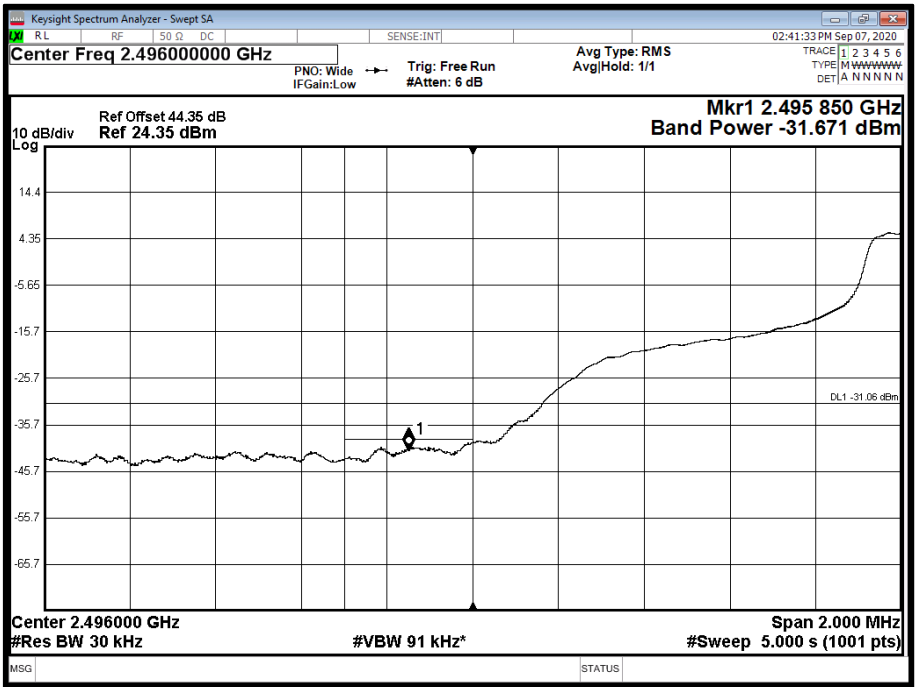
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position B



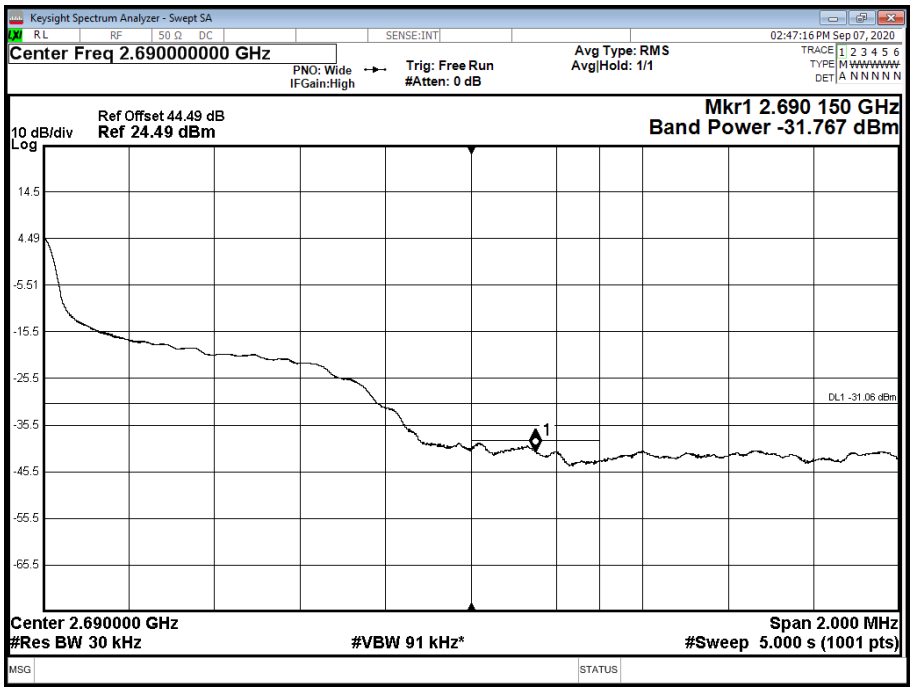
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position T



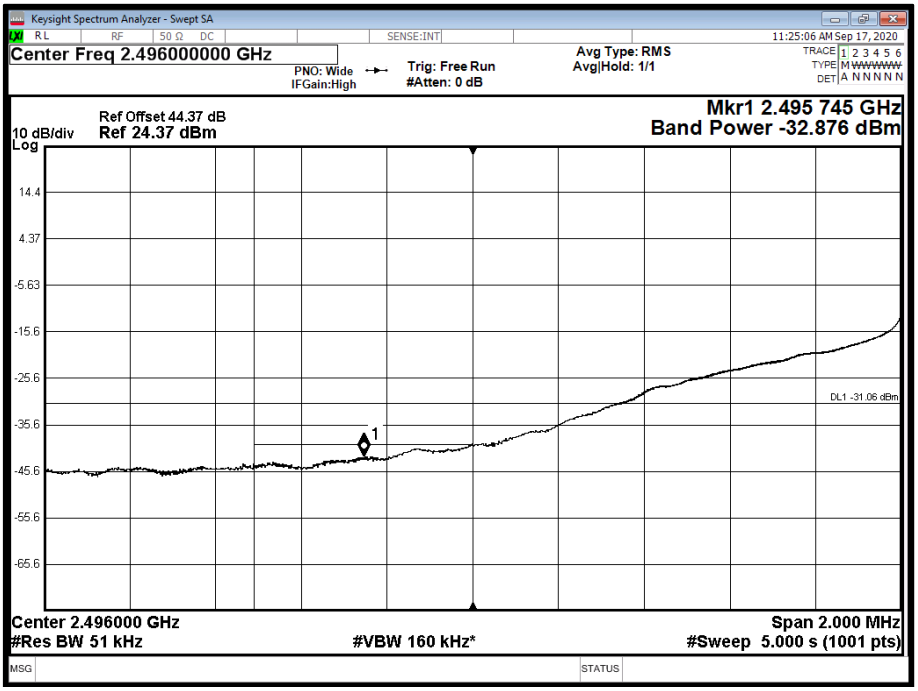
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position B



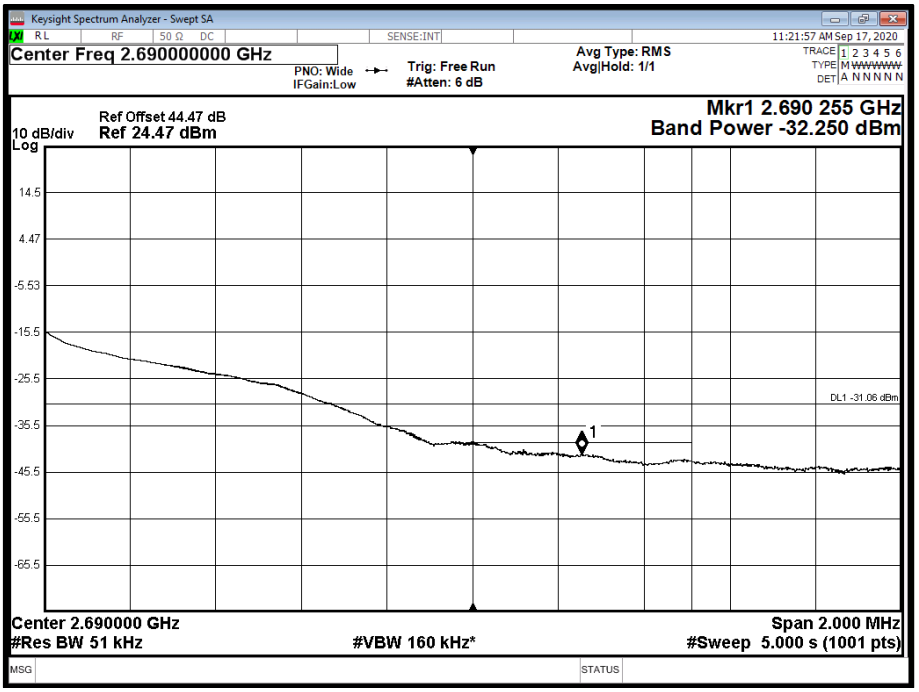
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position T



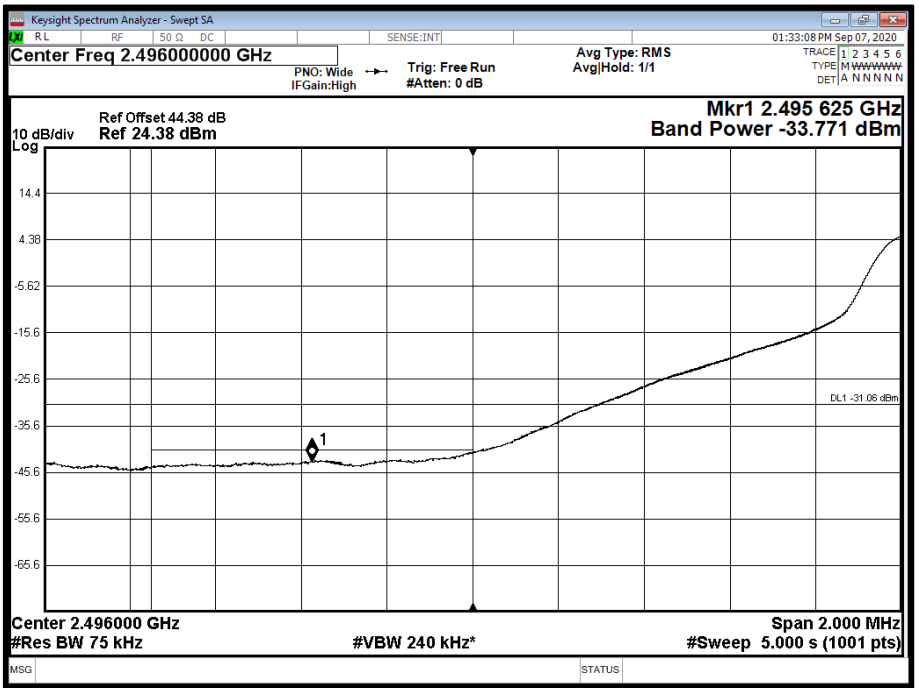
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position B



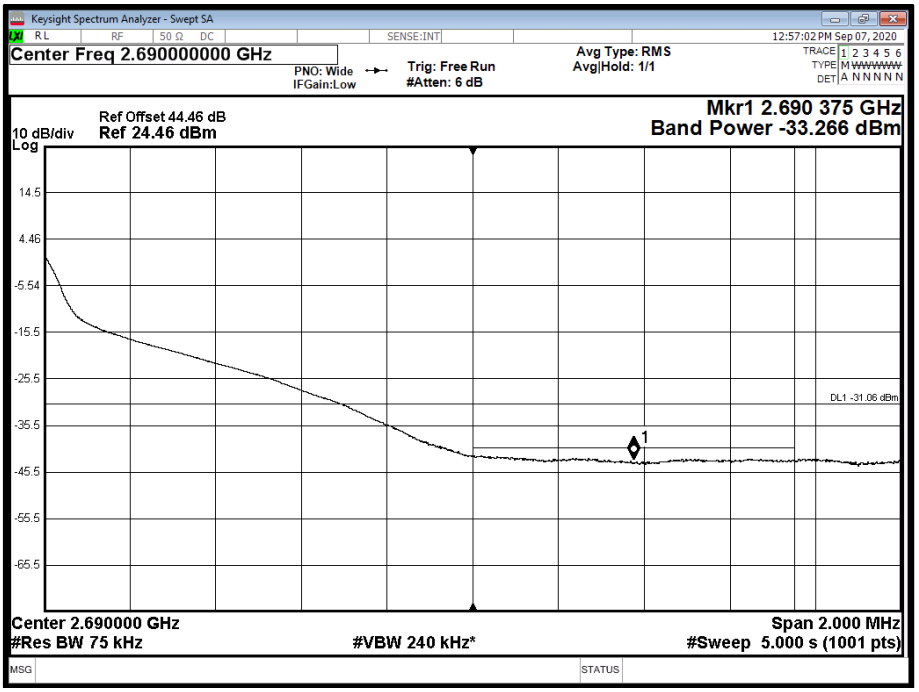
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position T



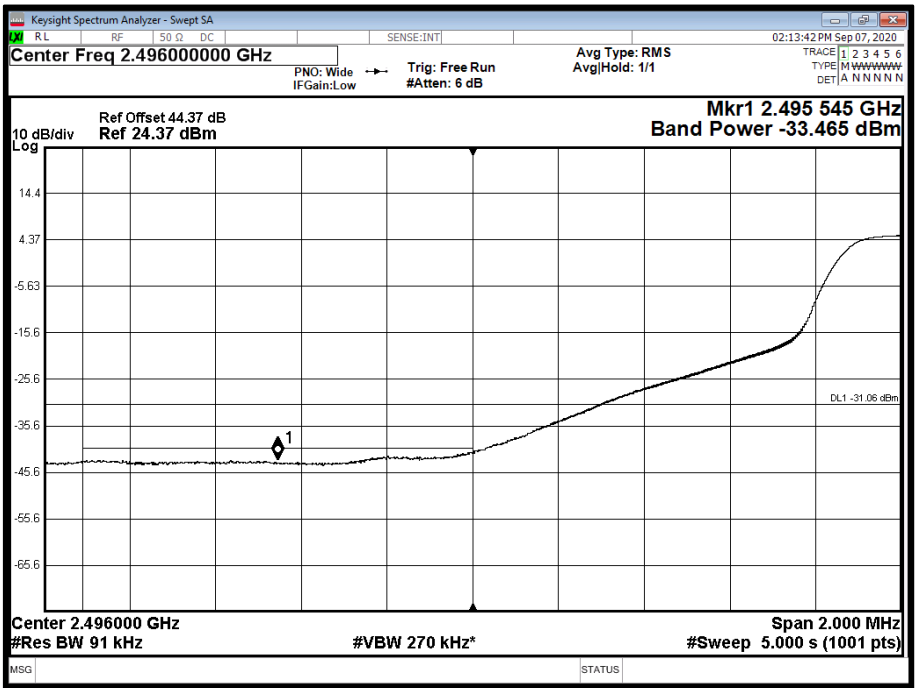
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position B



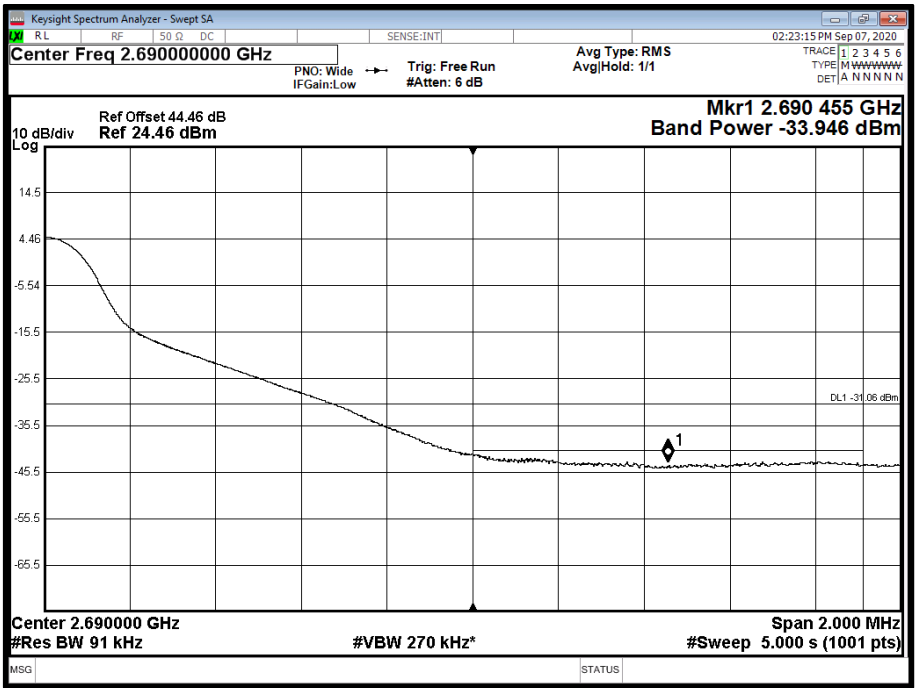
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position T



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position B



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position T

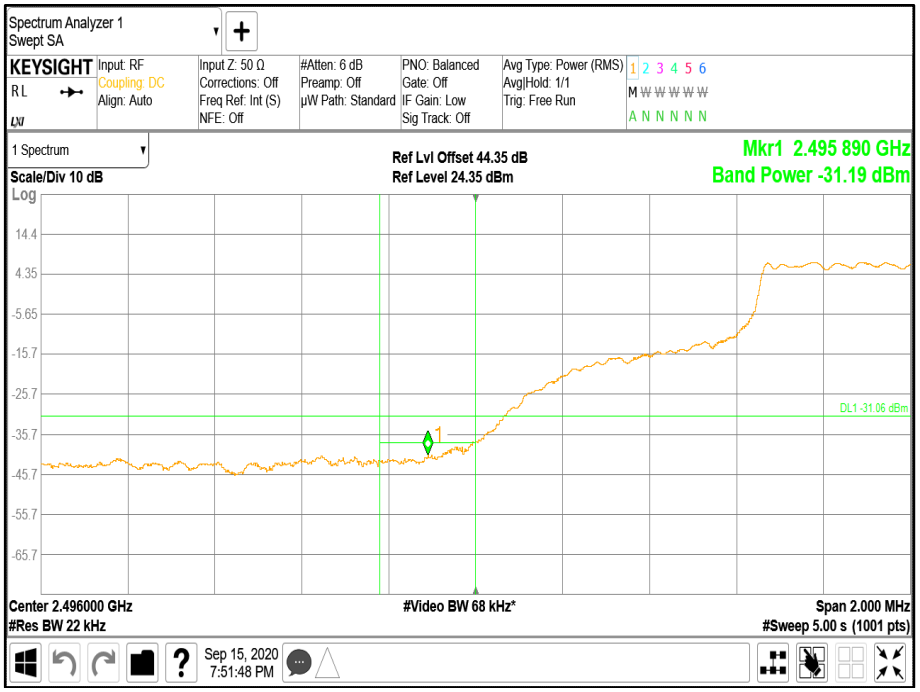


Configuration 5

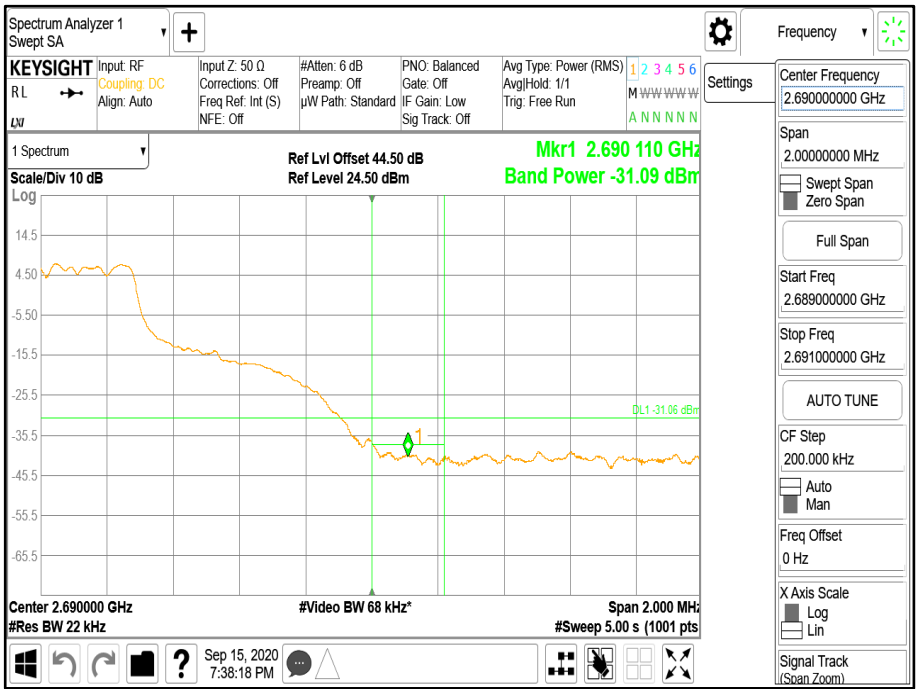
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	NR Modulation	NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
28	64QAM	10.0 MHz	2501+2511	2675+2685
28	64QAM	30.0 MHz	2511+2541	2645.01+2675.01
28	64QAM	50.0 MHz	2521.02+2571	2615.01+2665.02
28	64QAM	70.0 MHz	2531.01+2601.0	2585+2655
28	64QAM	90.0 MHz	2541+2631.01	2555+2645.01

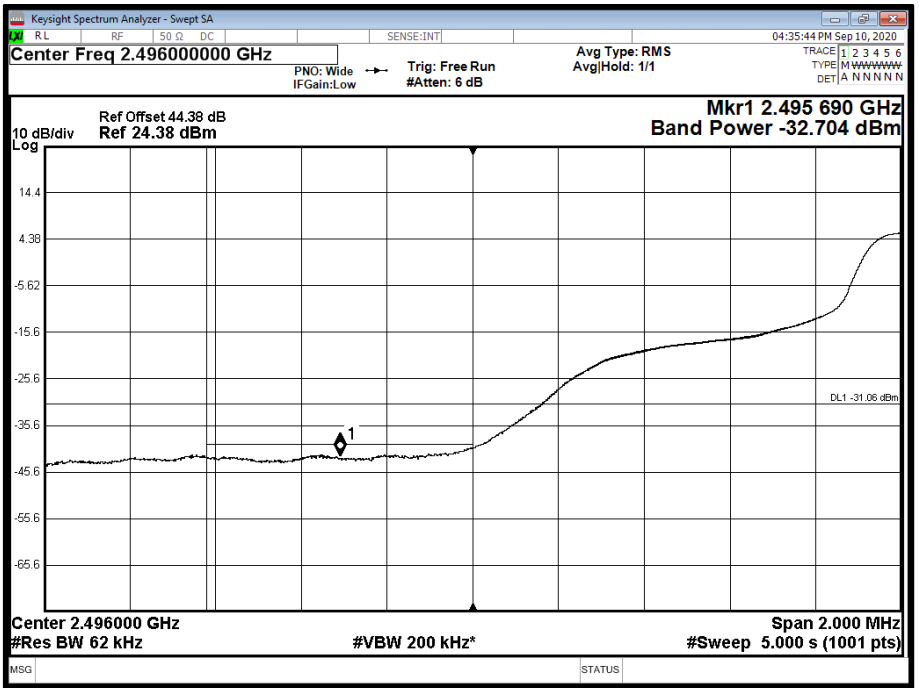
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position B



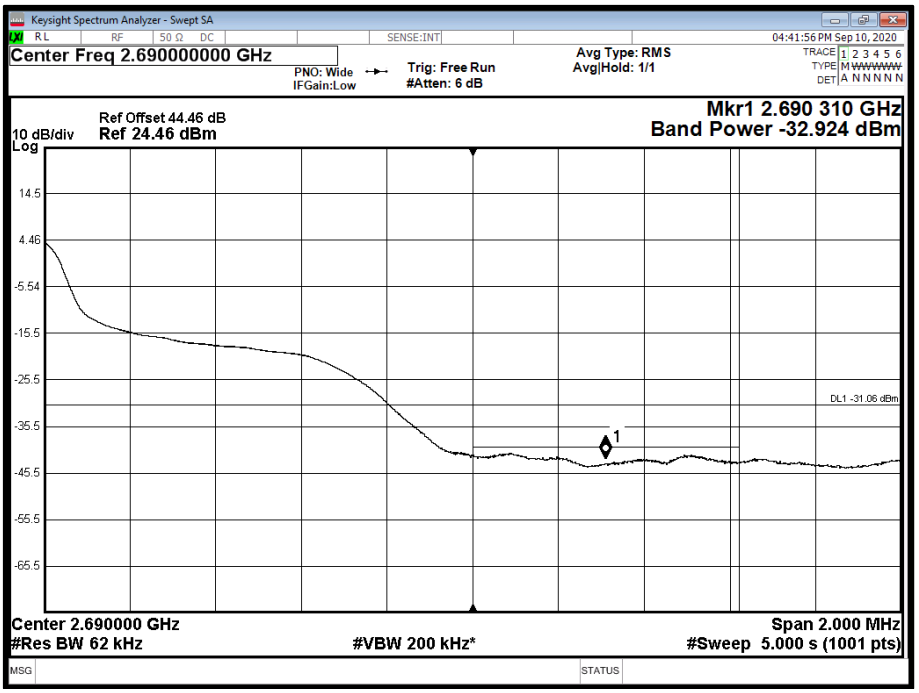
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 10.0 MHz - Channel Position T



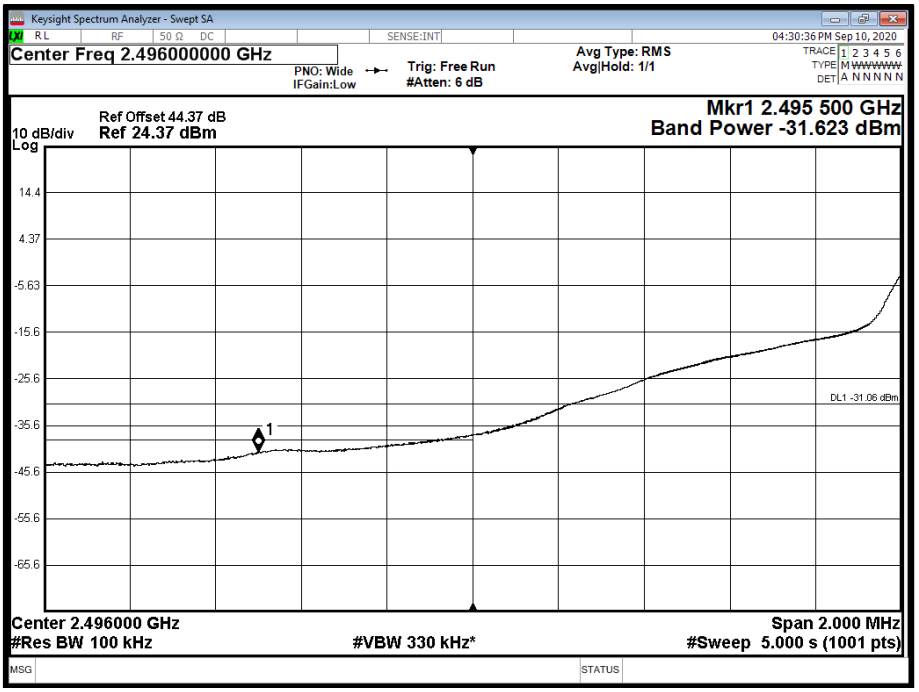
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position B



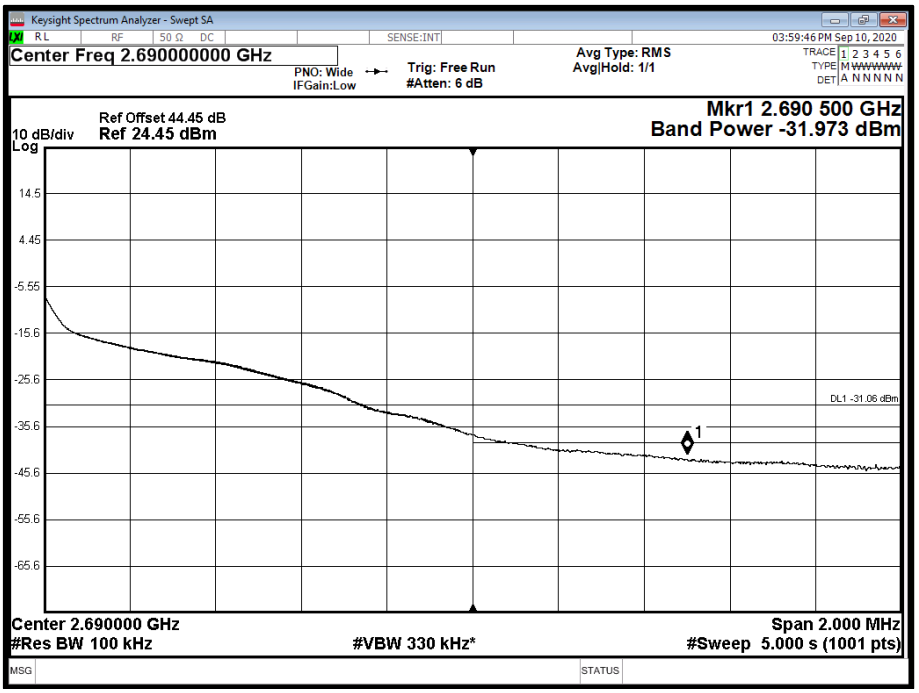
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 30.0 MHz - Channel Position T



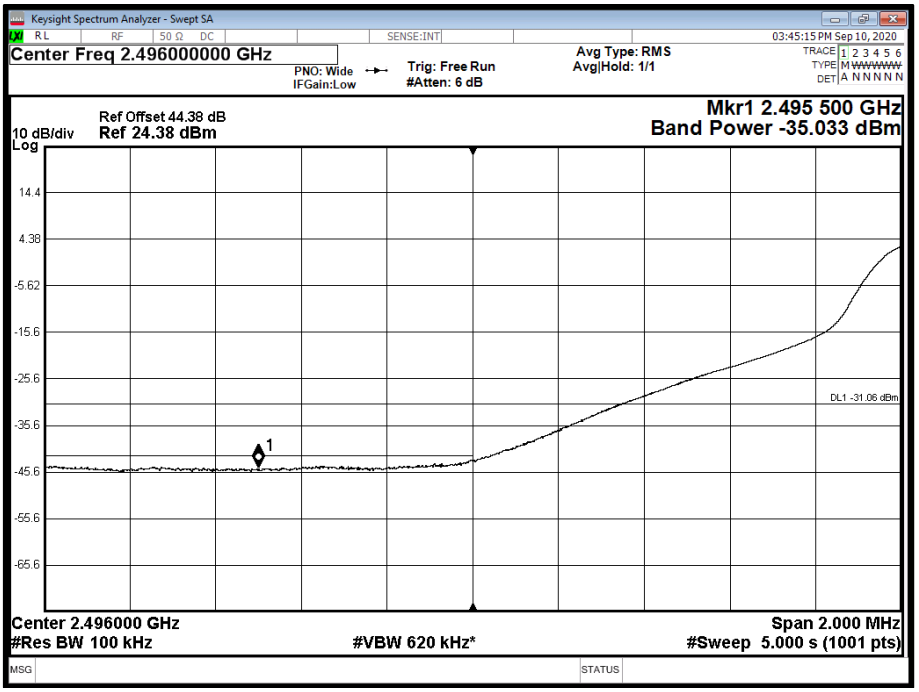
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position B



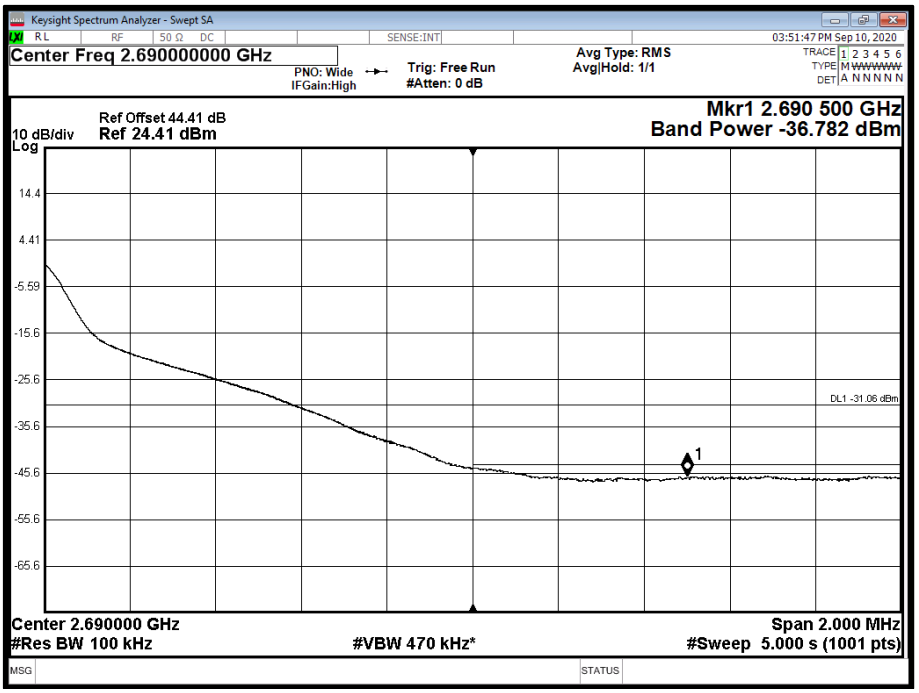
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 50.0 MHz - Channel Position T



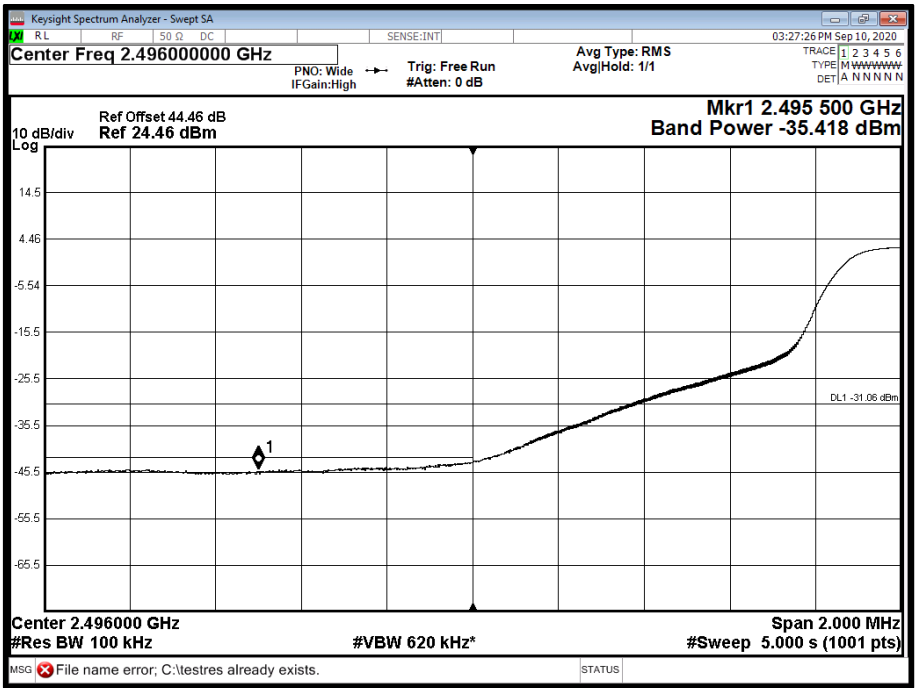
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position B



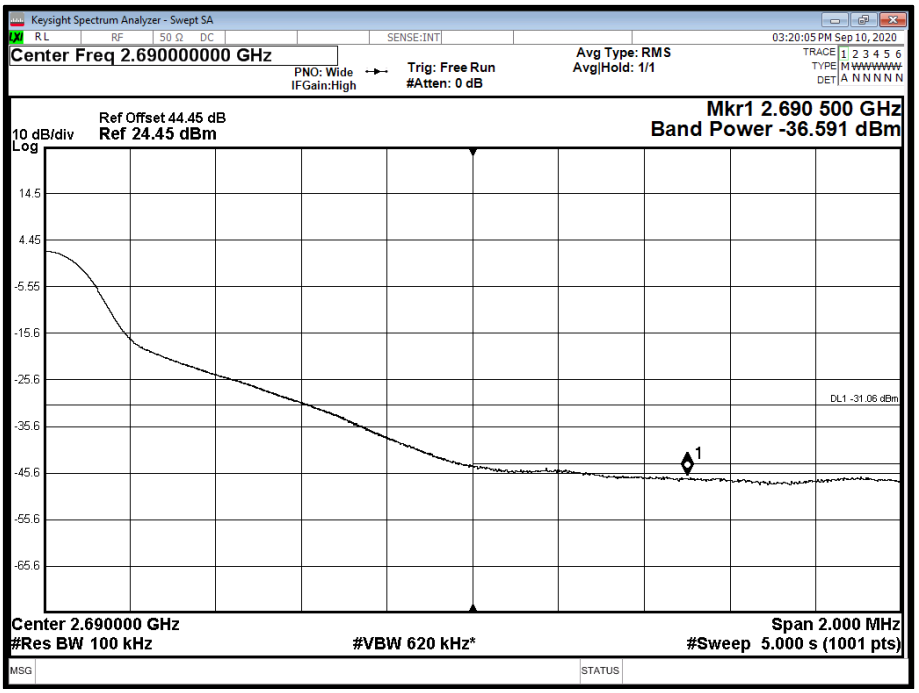
Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 70.0 MHz - Channel Position T



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position B



Antenna Port 28 - NR Modulation 64QAM - NR Carrier Bandwidth 90.0 MHz - Channel Position T

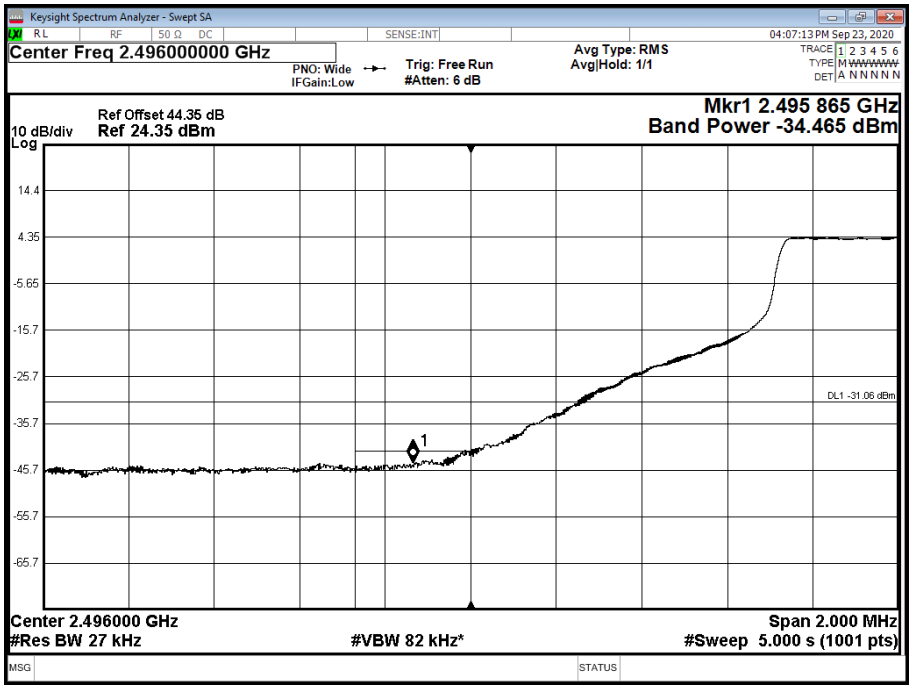


Configuration 6

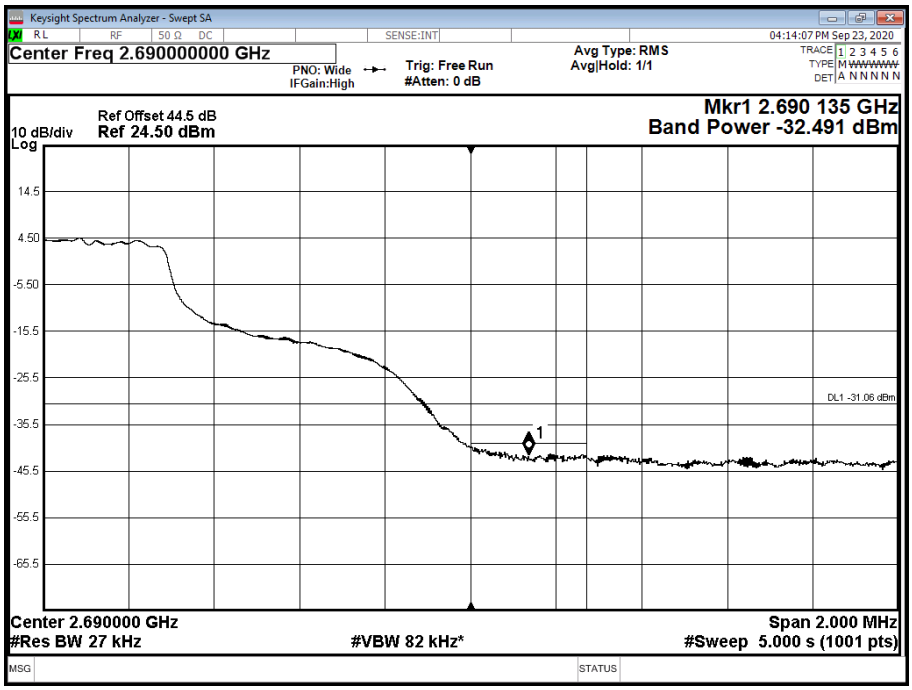
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE + NR Modulation	LTE + NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
28	64QAM	LTE 15.0 MHz + NR 10.0 MHz	2506.01+2513.5	2672.5+2685

Antenna Port 28 – LTE/NR Modulation 64QAM - LTE + NR Carrier Bandwidth LTE 15.0 MHz + NR 10.0 MHz - Channel Position B



Antenna Port 28 – LTE/NR Modulation 64QAM - LTE + NR Carrier Bandwidth LTE 15.0 MHz + NR 10.0 MHz - Channel Position T

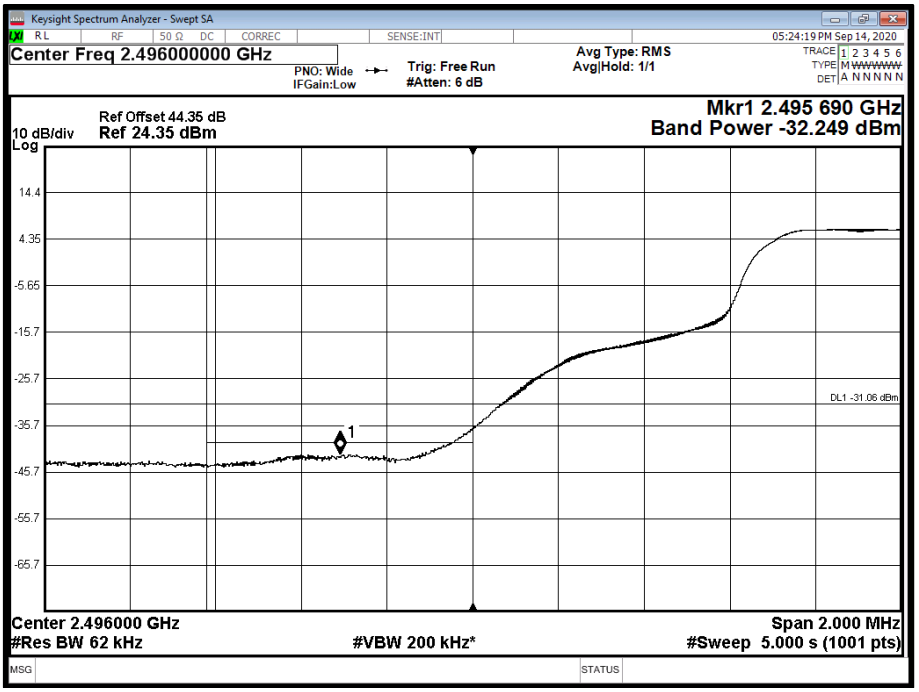


Configuration 7

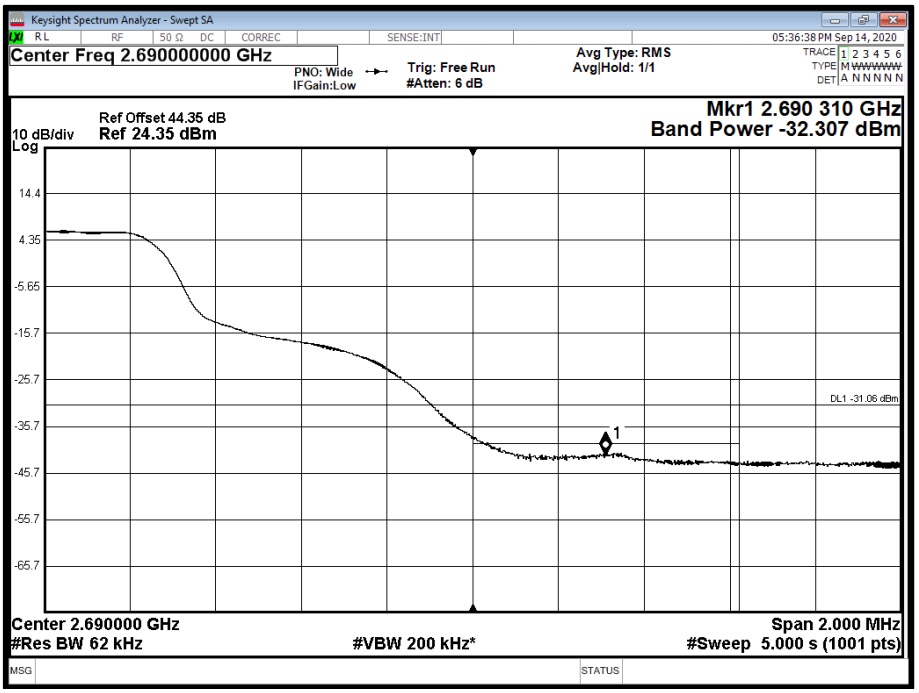
Maximum Output Power 36.0 dBm/MHz, max 55dBm

Antenna Port	LTE / NR Modulation	LTE / NR Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B_{RFBW}	Channel Position T_{RFBW}
28.0	64QAM	LTE 15.0 MHz + LTE 15.0 MHz +LTE 15.0 MHz +LTE 15.0 MHz +NR 10.0 MHz	2501.01+2503.5+2518.5+2533.5+2548.5	2637.5+2652.5+2667.5+2682.5+2685

Antenna Port 28 - LTE / NR Modulation 64QAM - LTE / NR Carrier Bandwidth LTE 15.0 MHz + LTE 15.0 MHz +LTE 15.0 MHz +LTE 15.0 MHz +NR 10.0 MHz - Channel Position B



Antenna Port 28 - LTE / NR Modulation 64QAM - LTE / NR Carrier Bandwidth LTE 15.0 MHz + LTE 15.0 MHz +LTE 15.0 MHz +LTE 15.0 MHz +NR 10.0 MHz - Channel Position T



Limit	-31.06 dBm

2.3 TRANSMITTER SPURIOUS EMISSIONS

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

27, 30 & 31 August and 03, 07, 10, 11 & 14 September 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	21.9 - 23.5°C
Relative Humidity	40.2 - 53.3%

2.3.5 Test Method

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

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 dBm - 10 * Log (1) = -13.0 dBm.

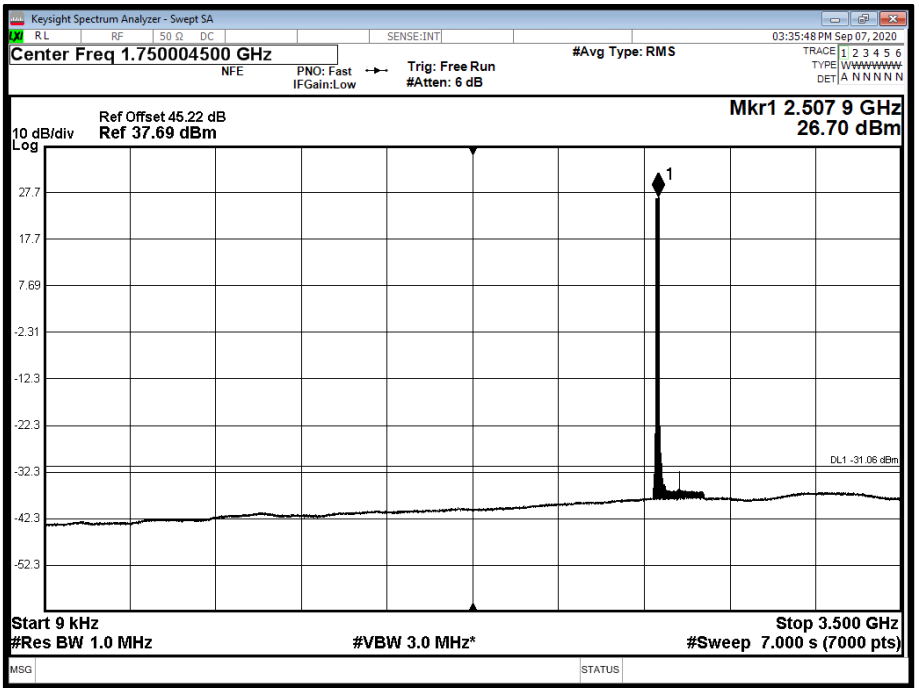
For 64 port, the limit was calculated as being -13 dBm - 10 * Log (64) = -31.06 dBm.

2.3.6 Test Results

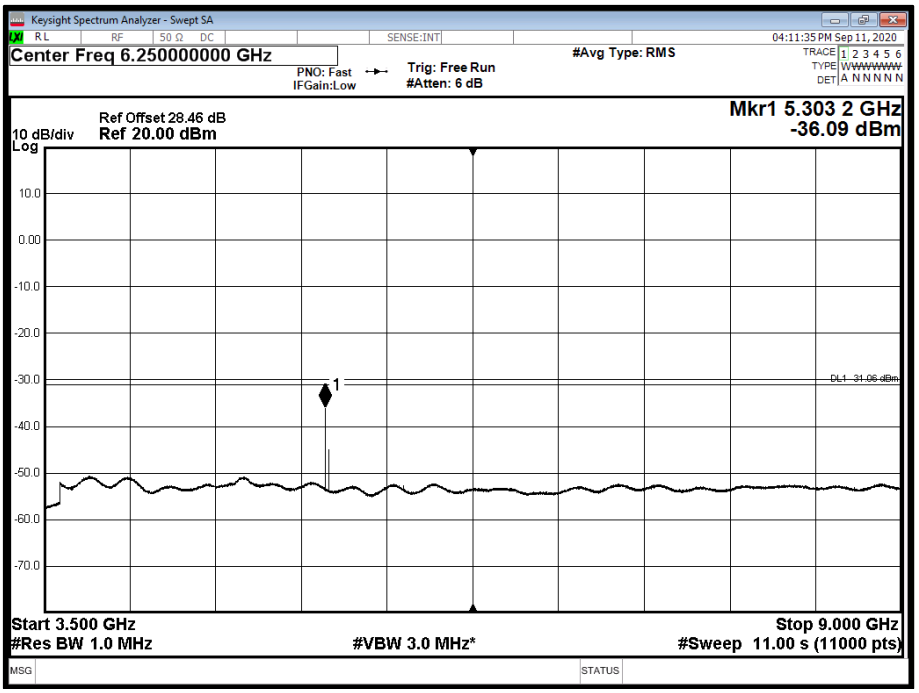
Configuration 1

Maximum Output Power 36.0 dBm/MHz, max 55dBm

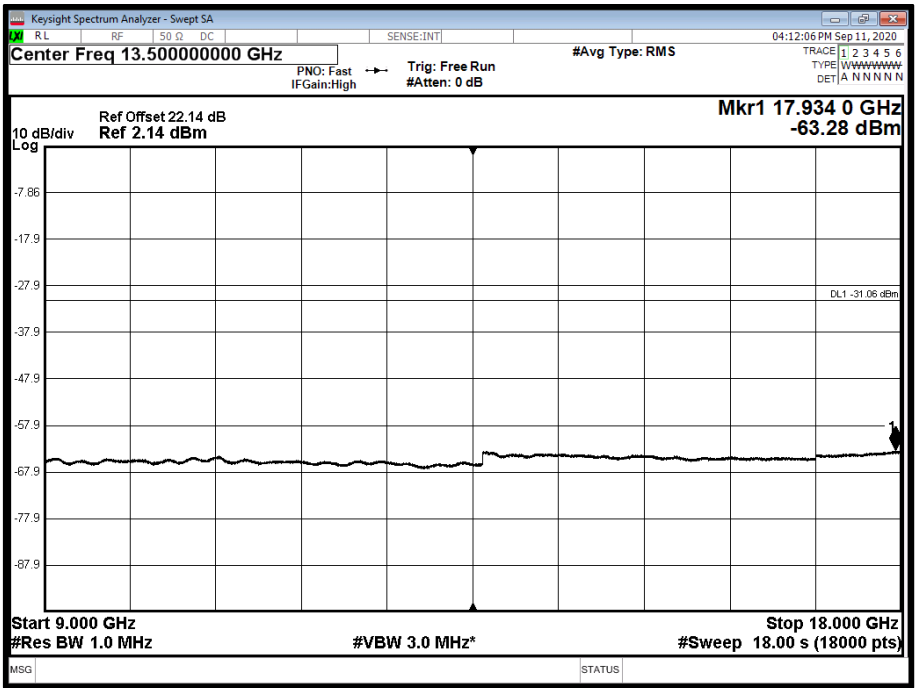
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 1.00 - Range 0.009 to 3500 MHz



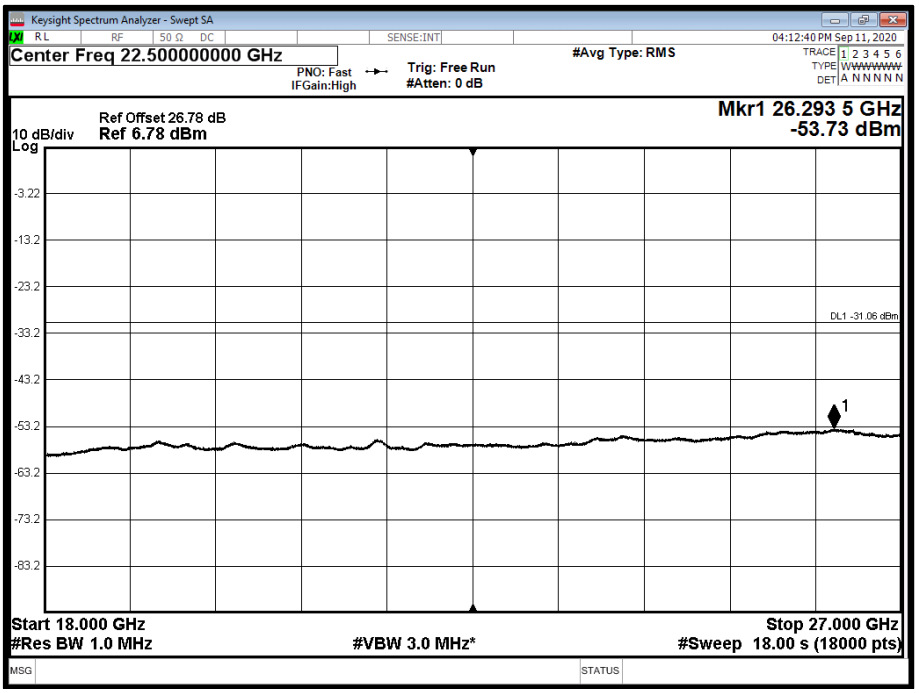
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 2.00 - Range 3500 to 9000 MHz



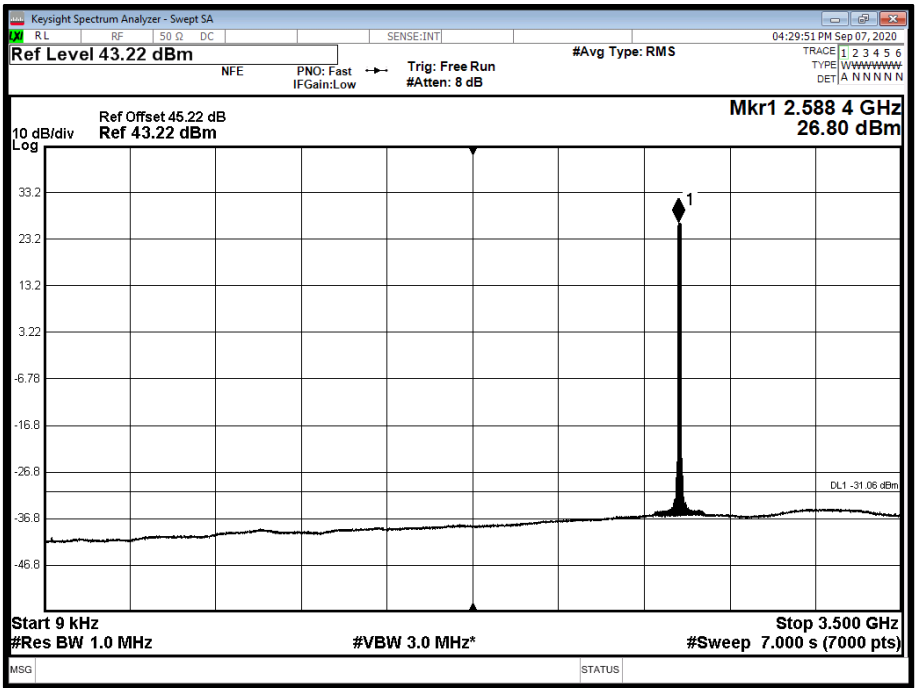
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 3.00 - Range 9000 to 18000 MHz



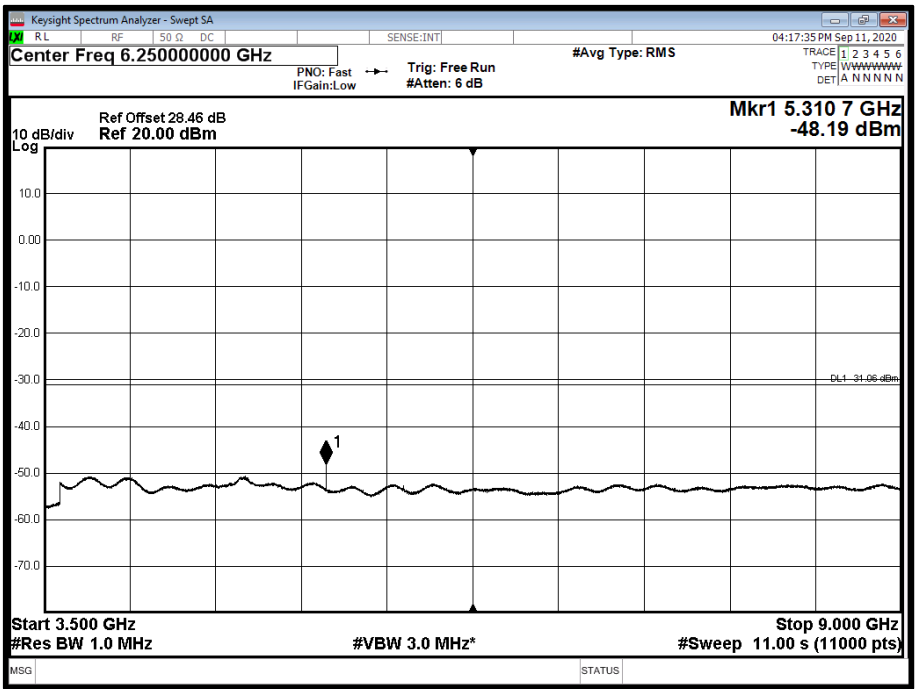
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 4.00 - Range 18000 to 27000 MHz



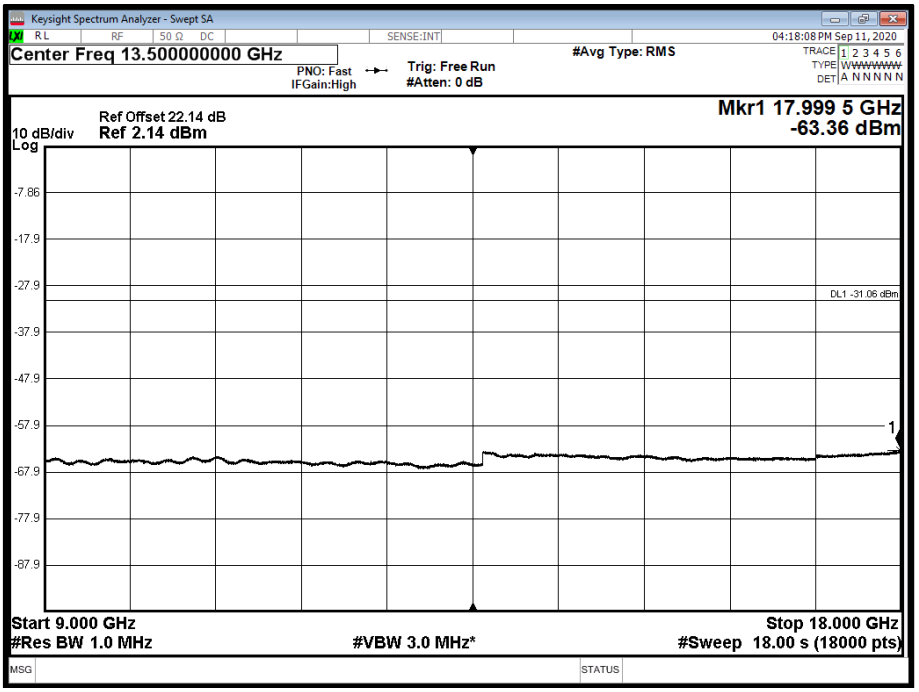
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M - Band 1.00 - Range 0.009 to 3500 MHz



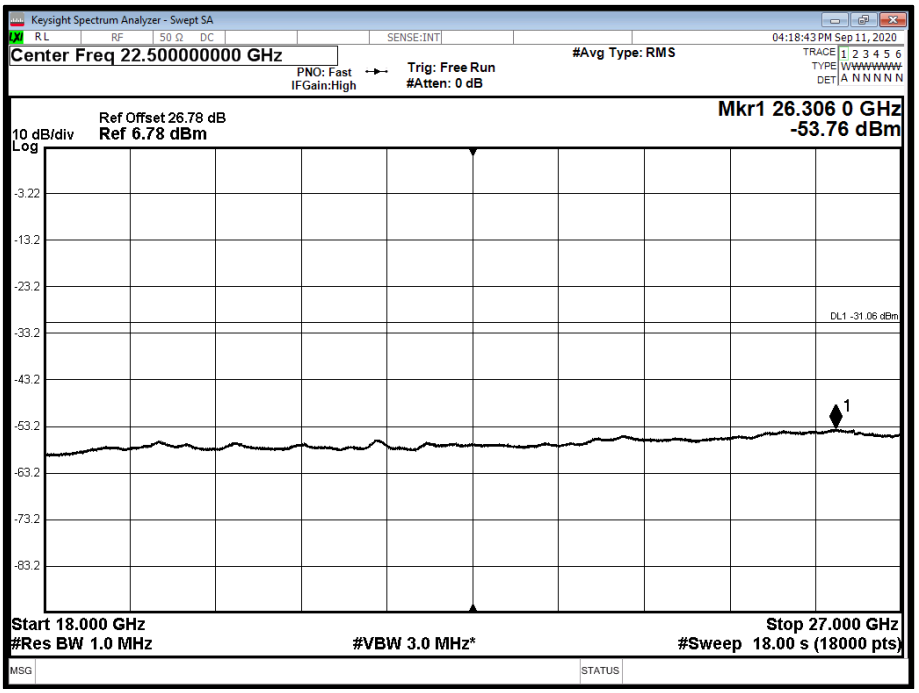
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M - Band 2.00 - Range 3500 to 9000 MHz



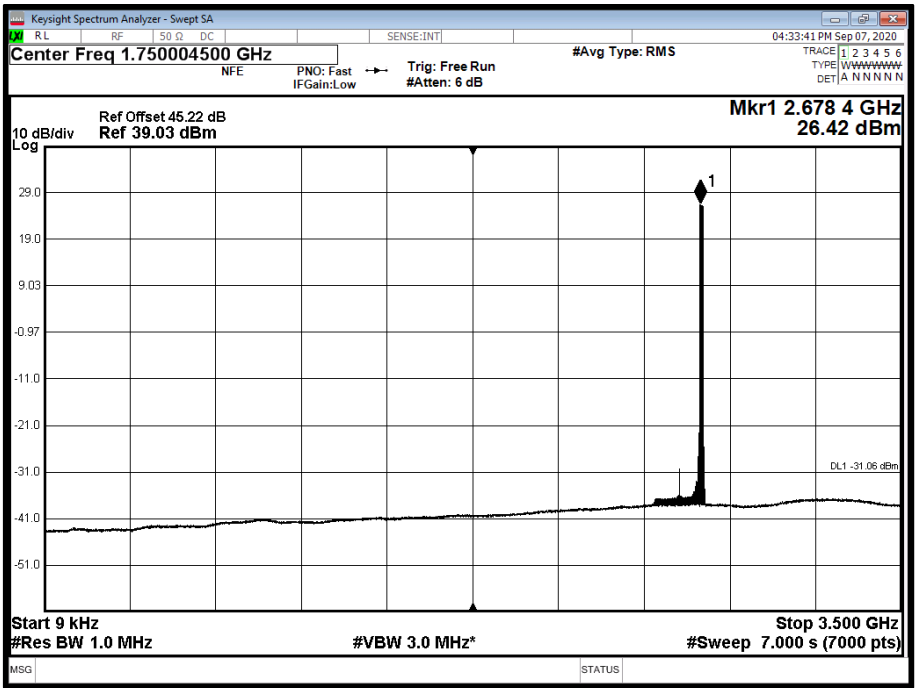
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M - Band 3.00 - Range 9000 to 18000 MHz



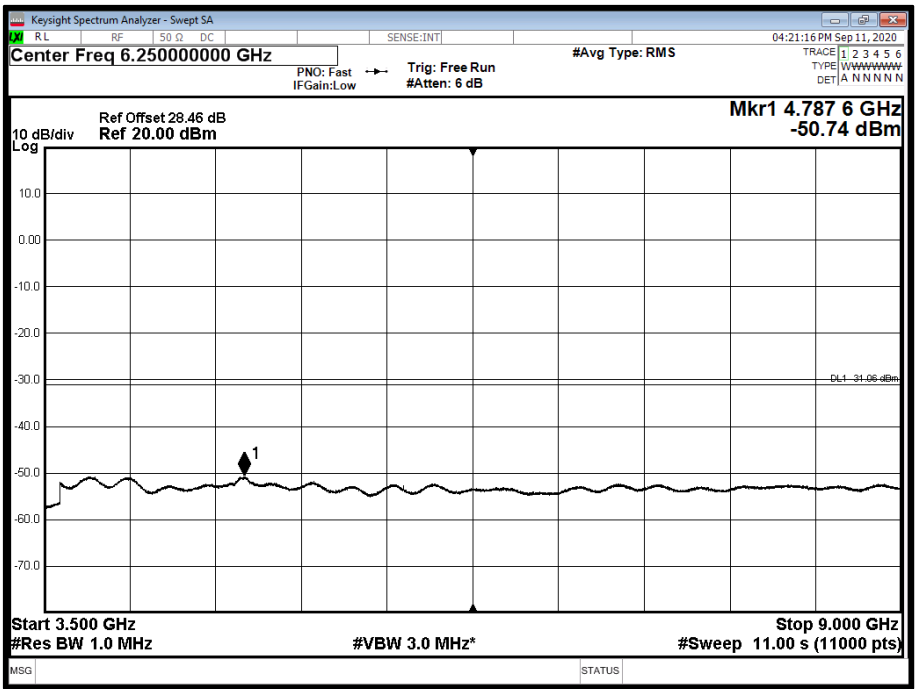
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M - Band 4.00 - Range 18000 to 27000 MHz



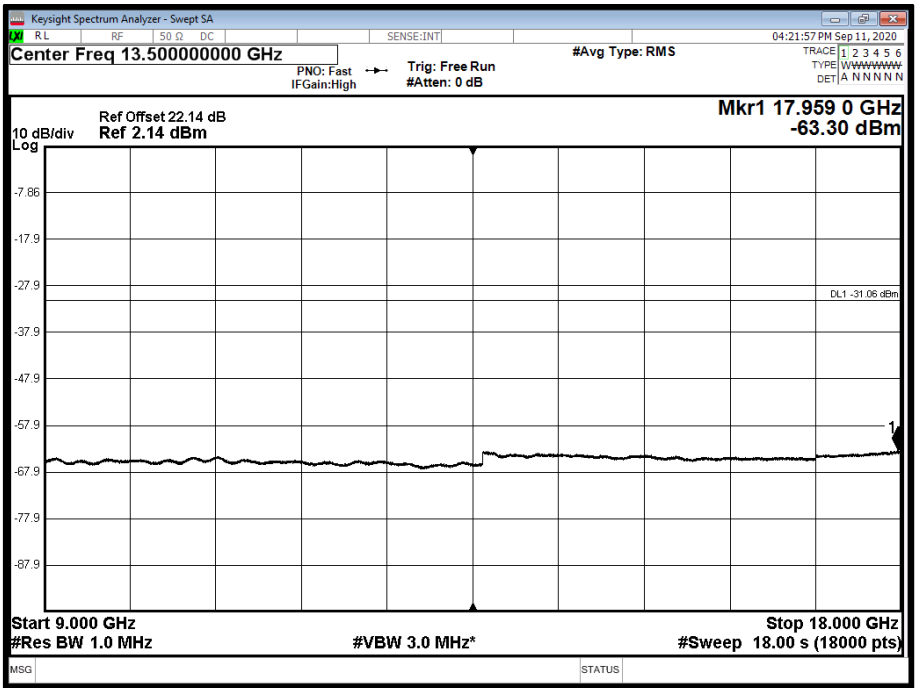
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T - Band 1.00 - Range 0.009 to 3500 MHz



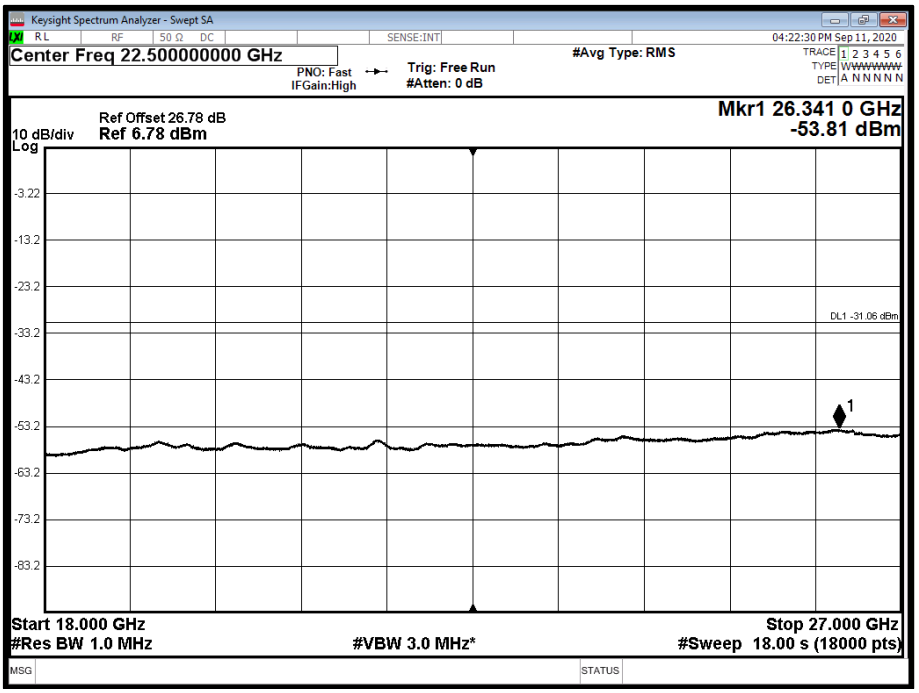
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T - Band 2.00 - Range 3500 to 9000 MHz



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T - Band 3.00 - Range 9000 to 18000 MHz



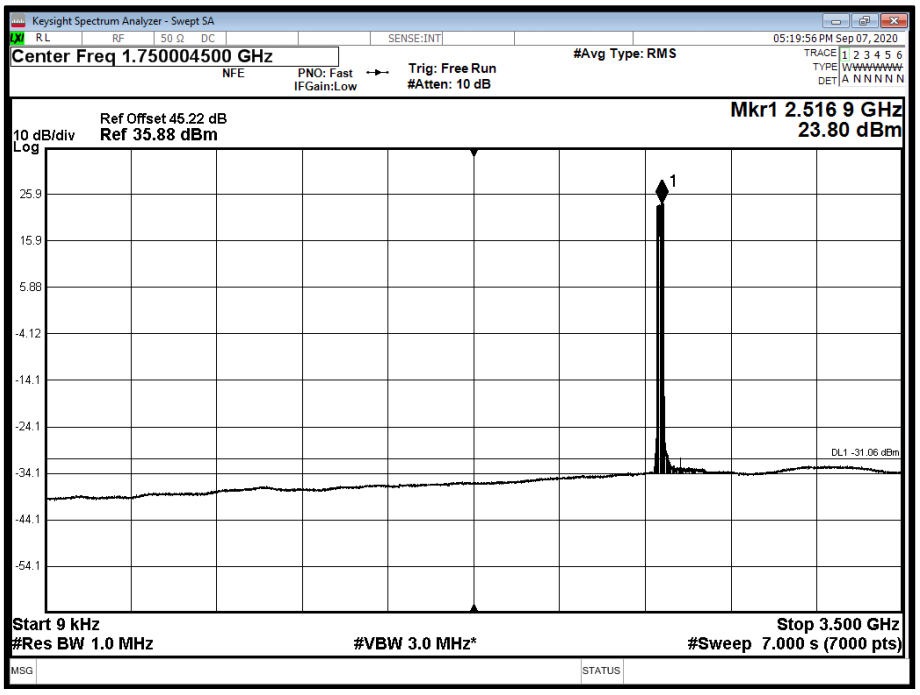
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position T - Band 4.00 - Range 18000 to 27000 MHz



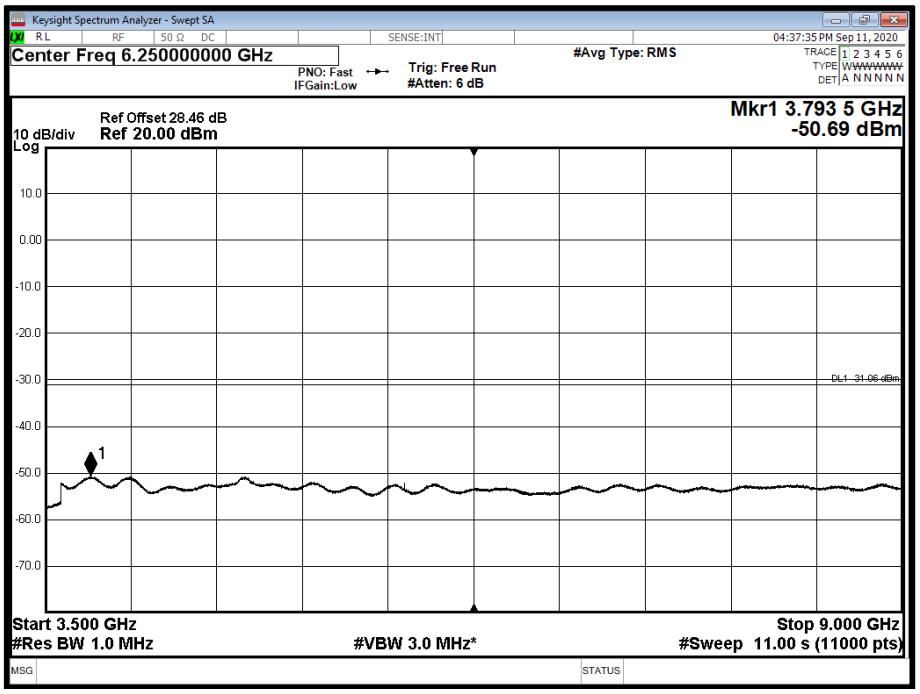
Configuration 2

Maximum Output Power 36.0 dBm/MHz, max 55dBm

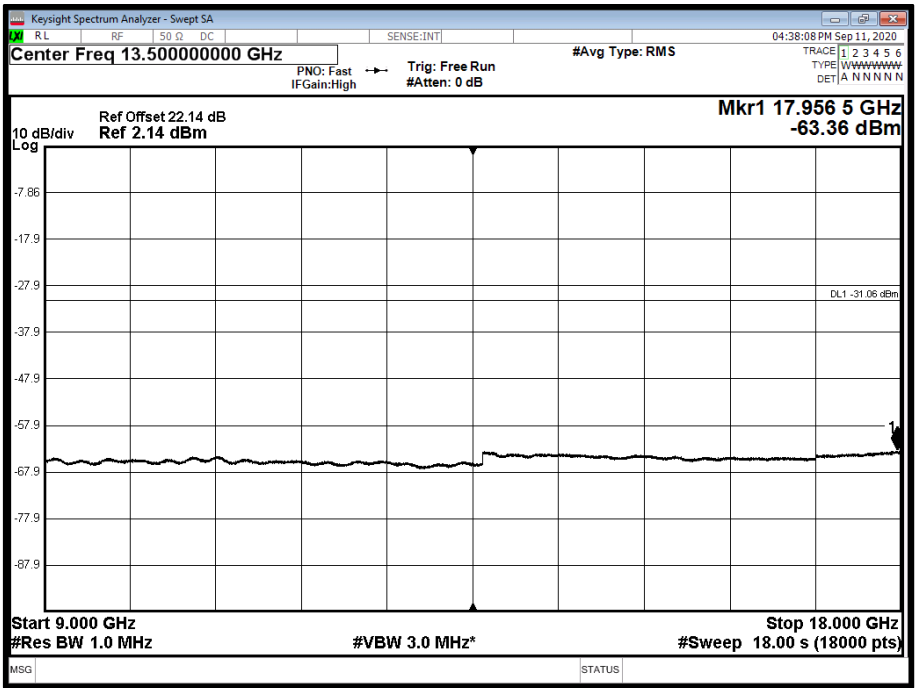
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 1.00 - Range 0.009 to 3500 MHz



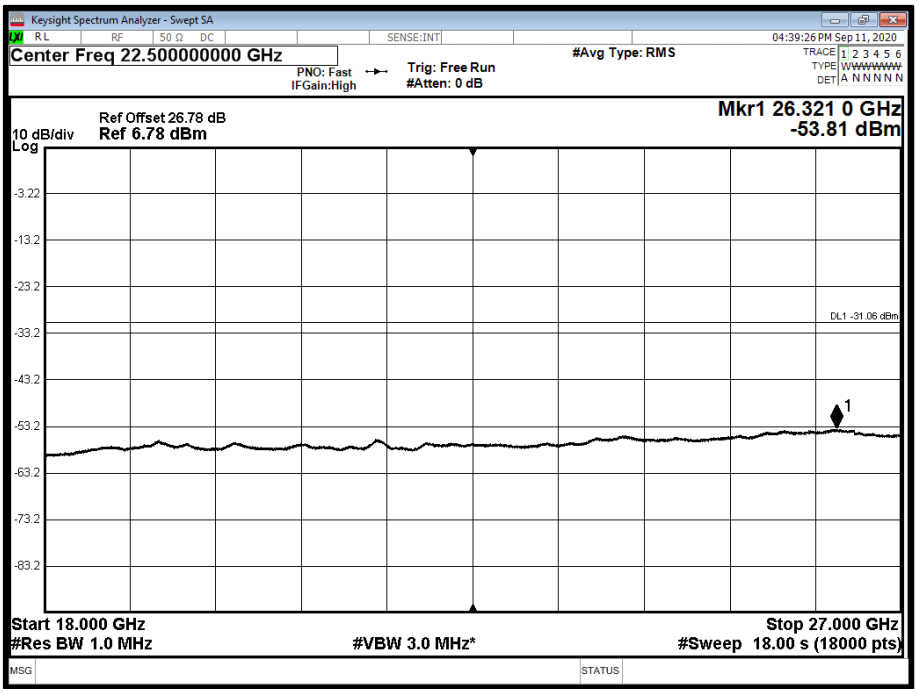
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 2.00 - Range 3500 to 9000 MHz



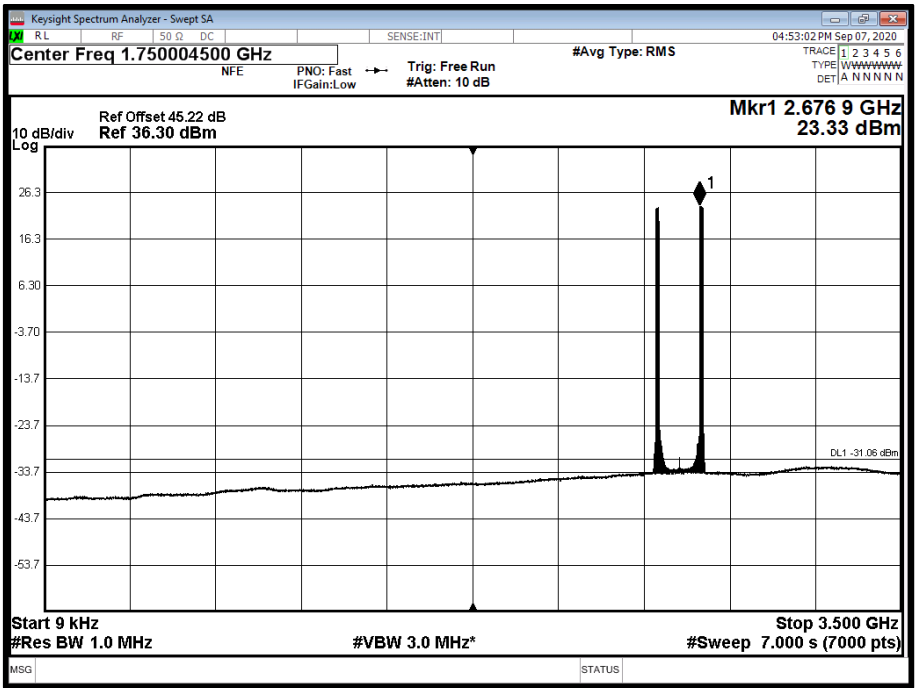
Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 3.00 - Range 9000 to 18000 MHz



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position B - Band 4.00 - Range 18000 to 27000 MHz



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M - Band 1.00 - Range 0.009 to 3500 MHz



Antenna Port 50 - LTE Modulation 64QAM - LTE Carrier Bandwidth 15.0 MHz - Channel Position M - Band 2.00 - Range 3500 to 9000 MHz