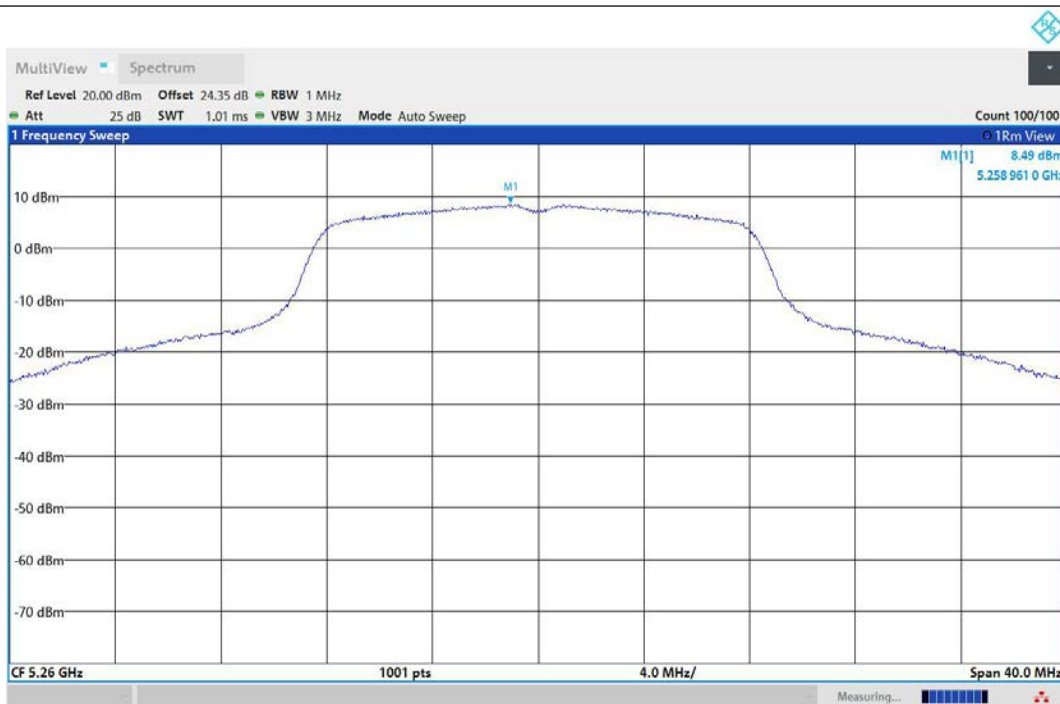
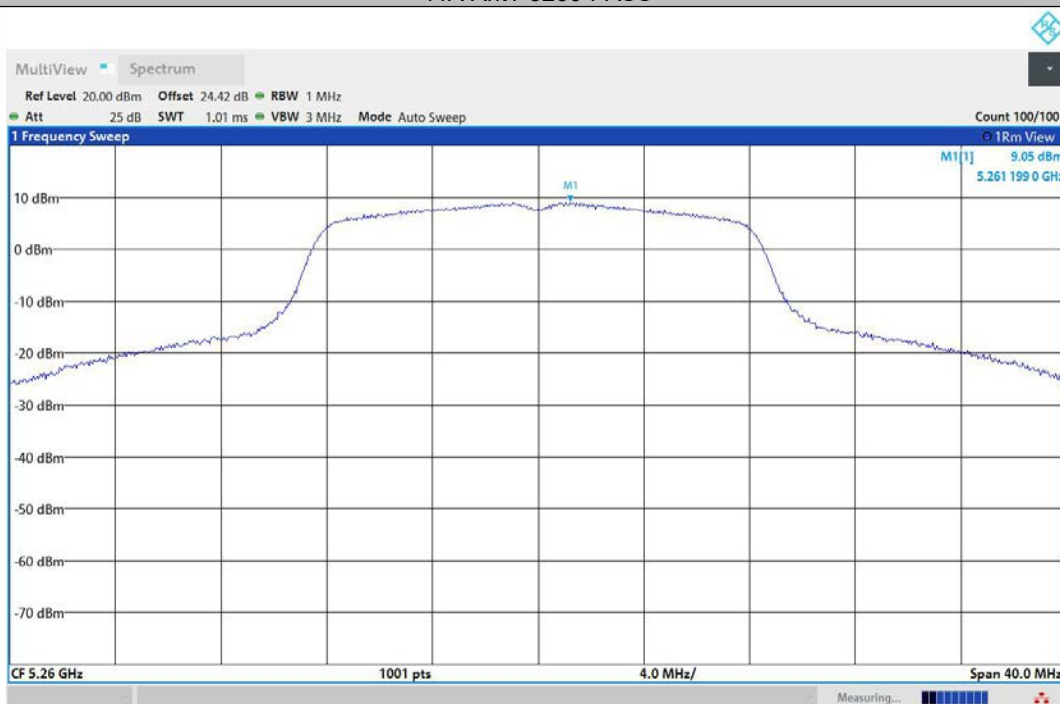
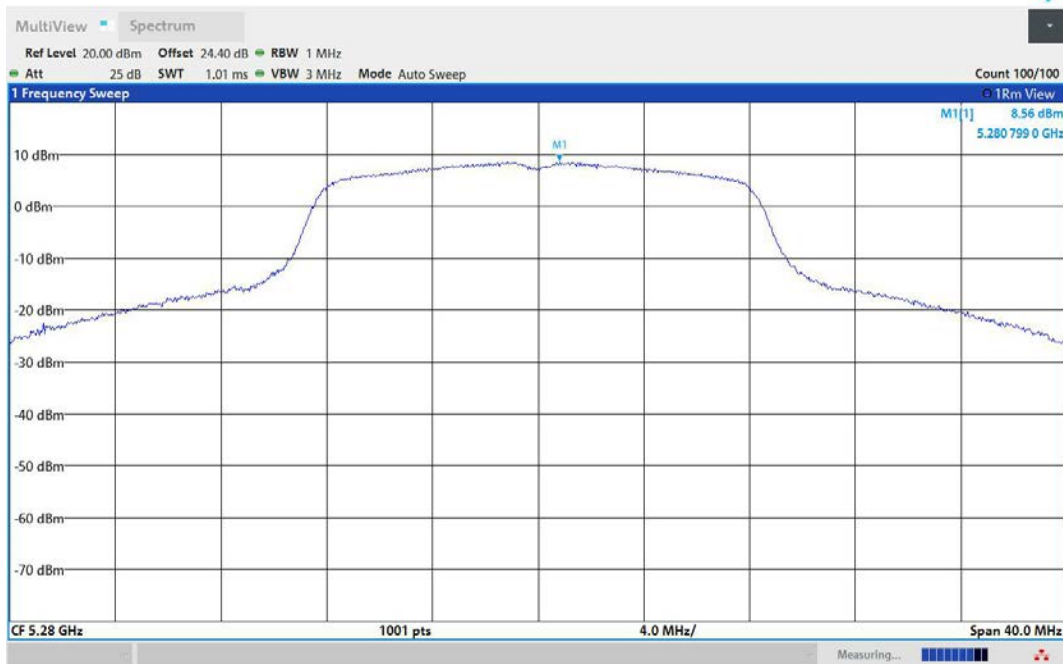




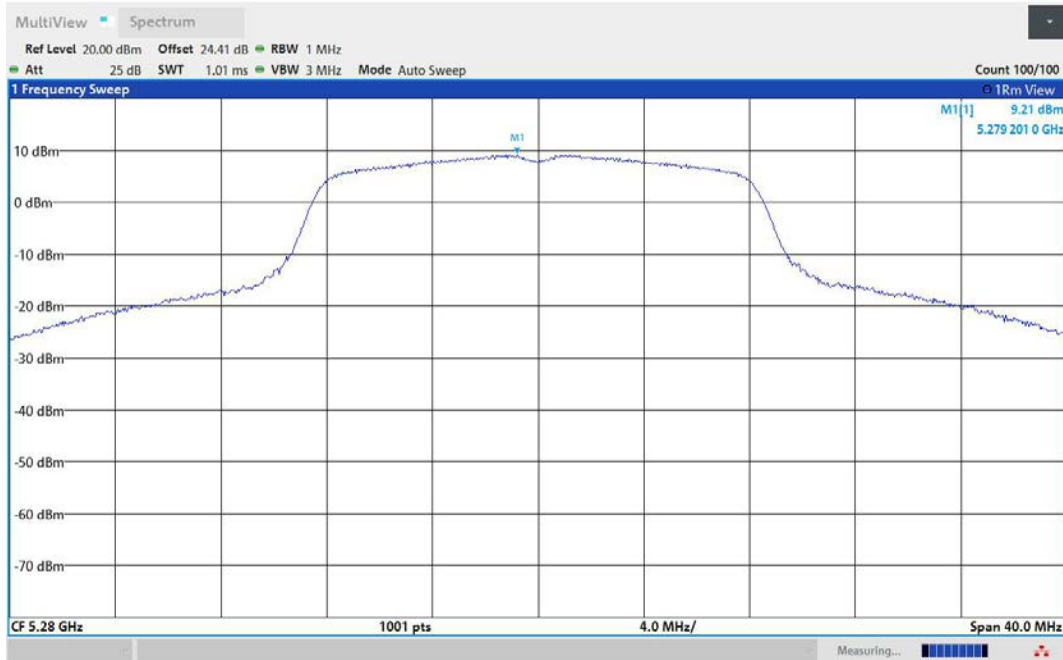
11A-Ant1-5260-PASS



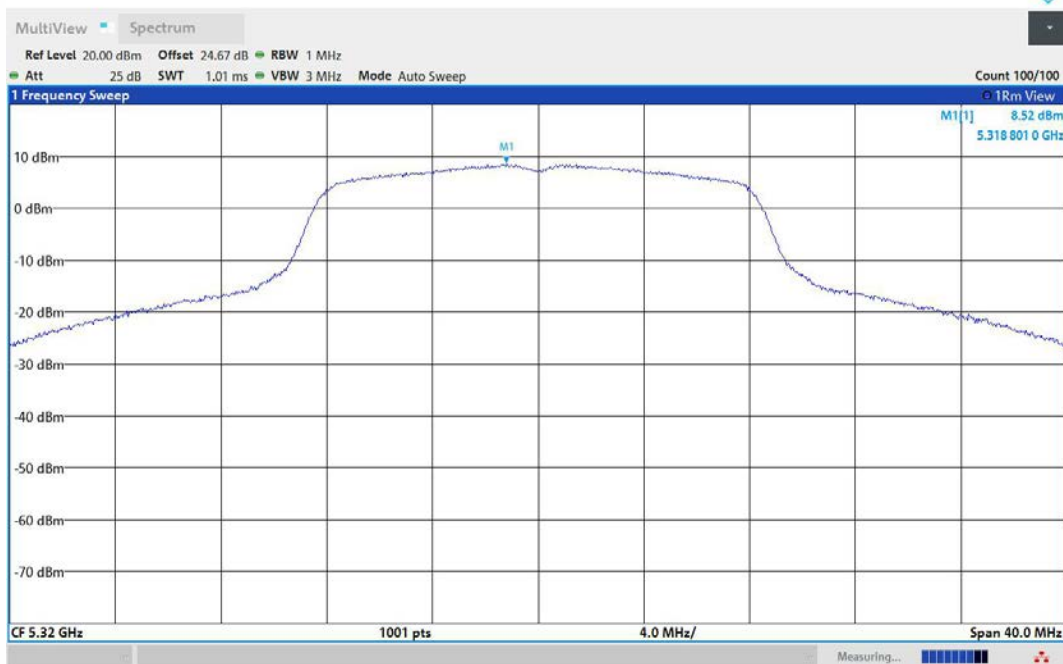
11A-Ant2-5260-PASS



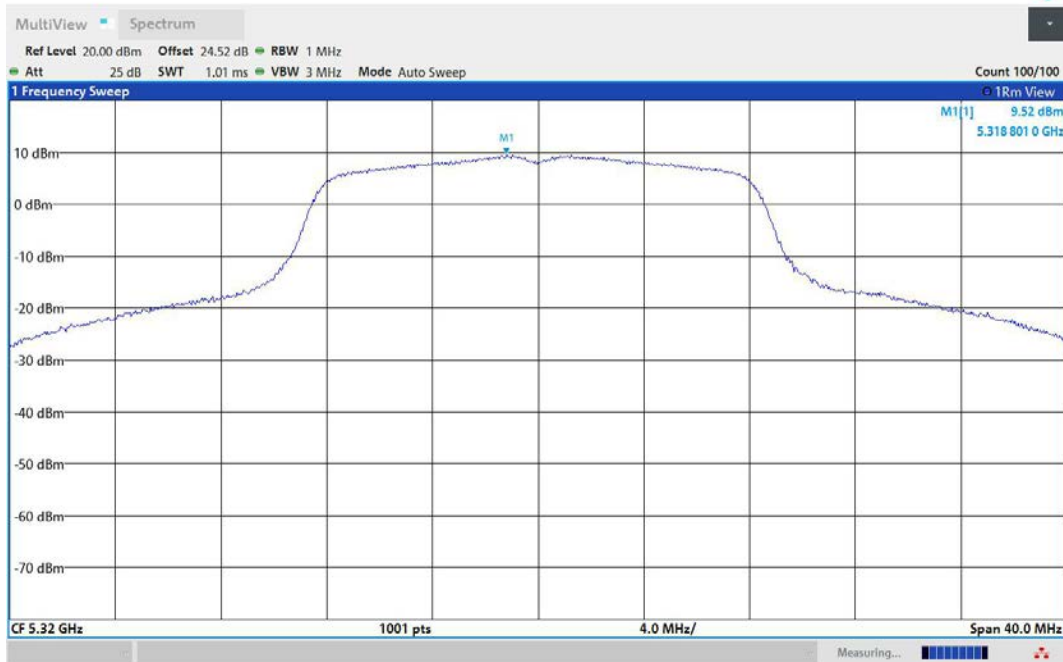
11A-Ant1-5280-PASS



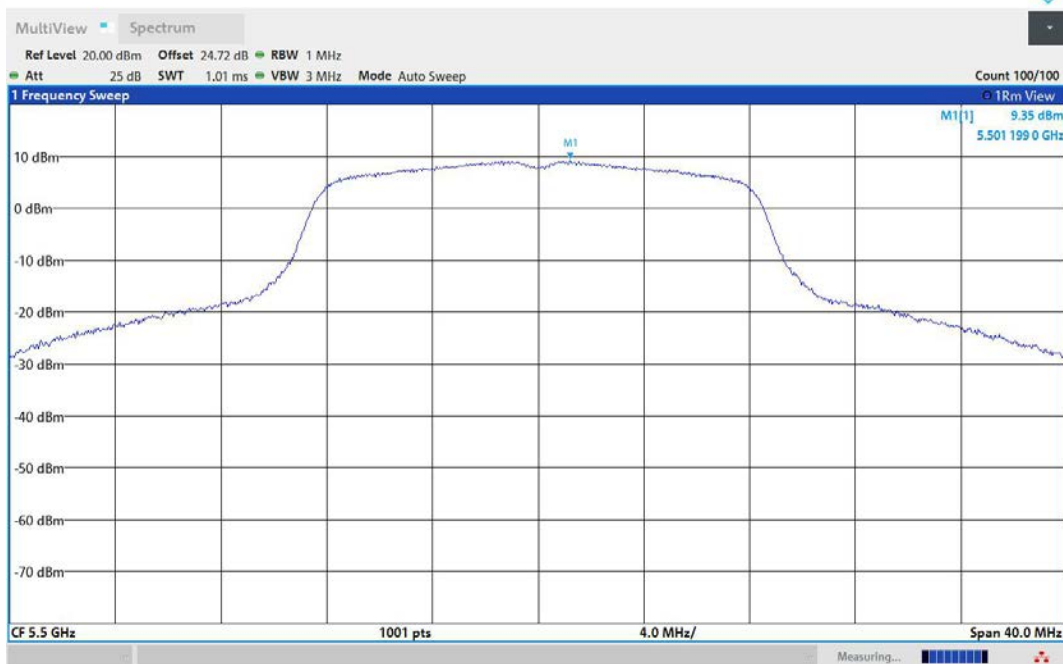
11A-Ant2-5280-PASS



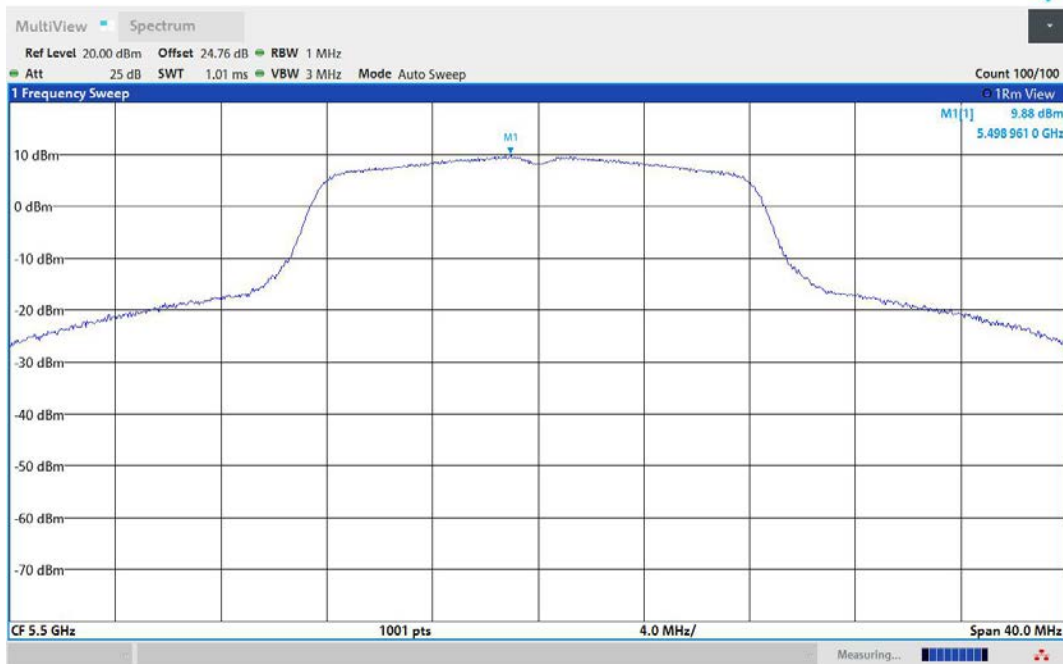
11A-Ant1-5320-PASS



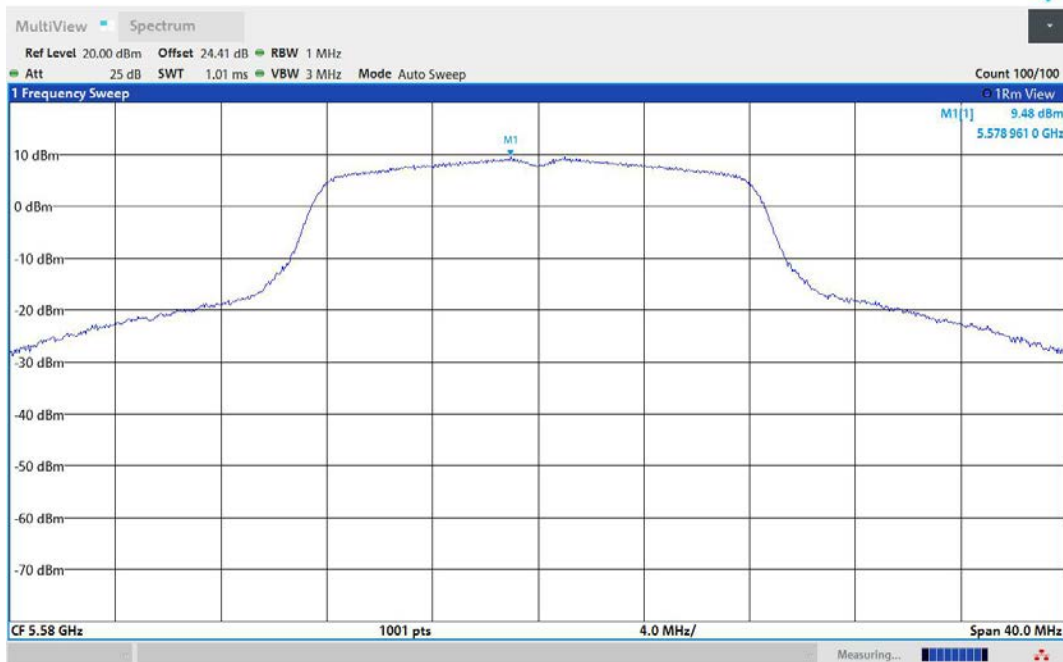
11A-Ant2-5320-PASS



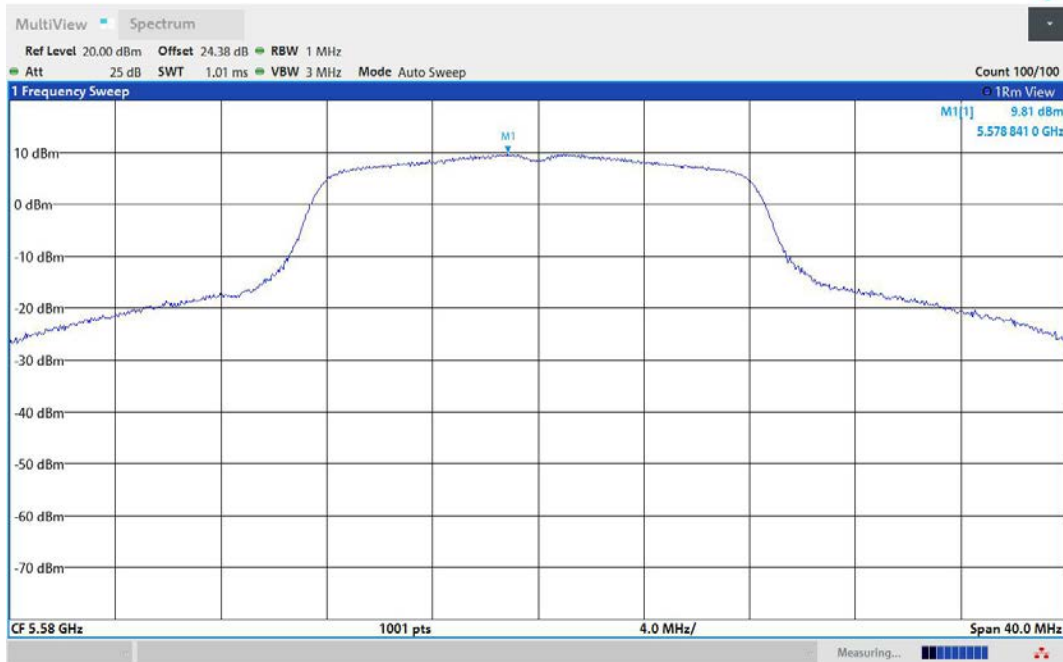
11A-Ant1-5500-PASS



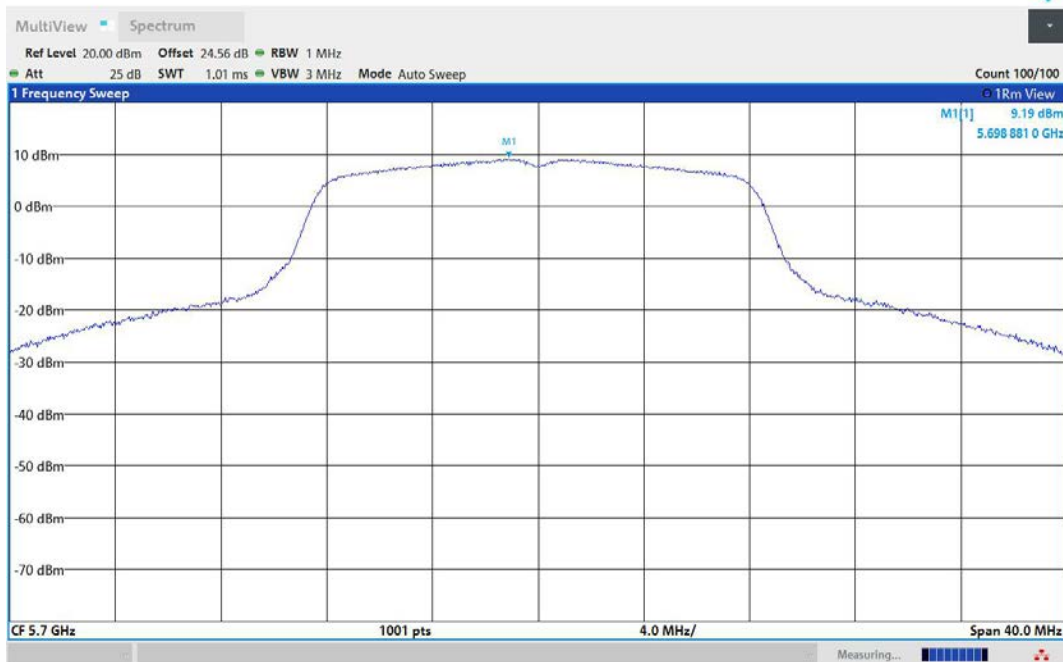
11A-Ant2-5500-PASS



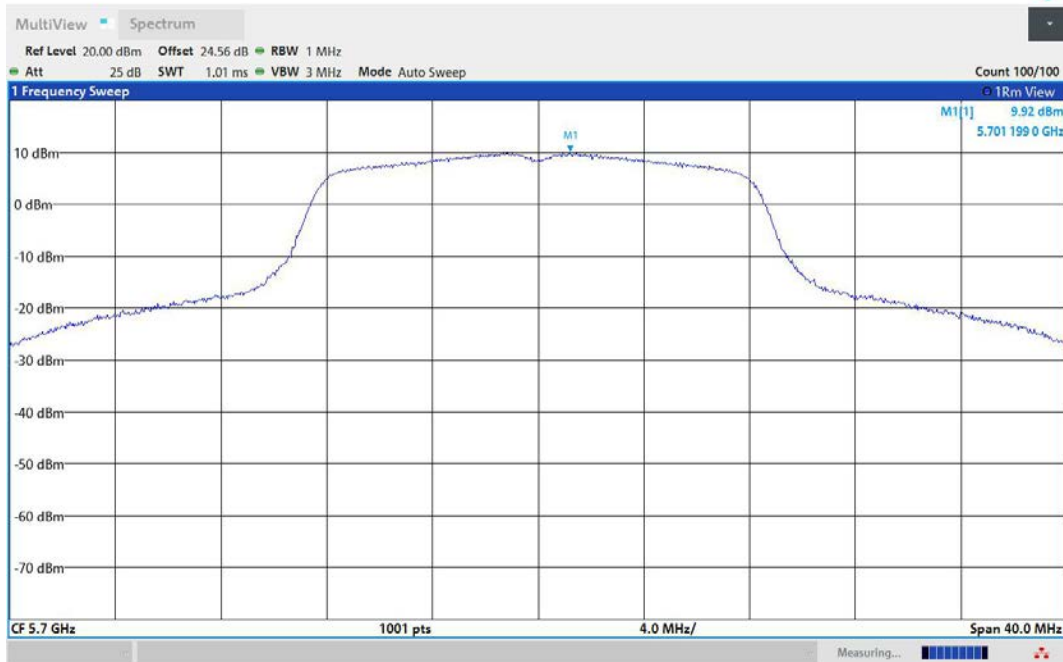
11A-Ant1-5580-PASS



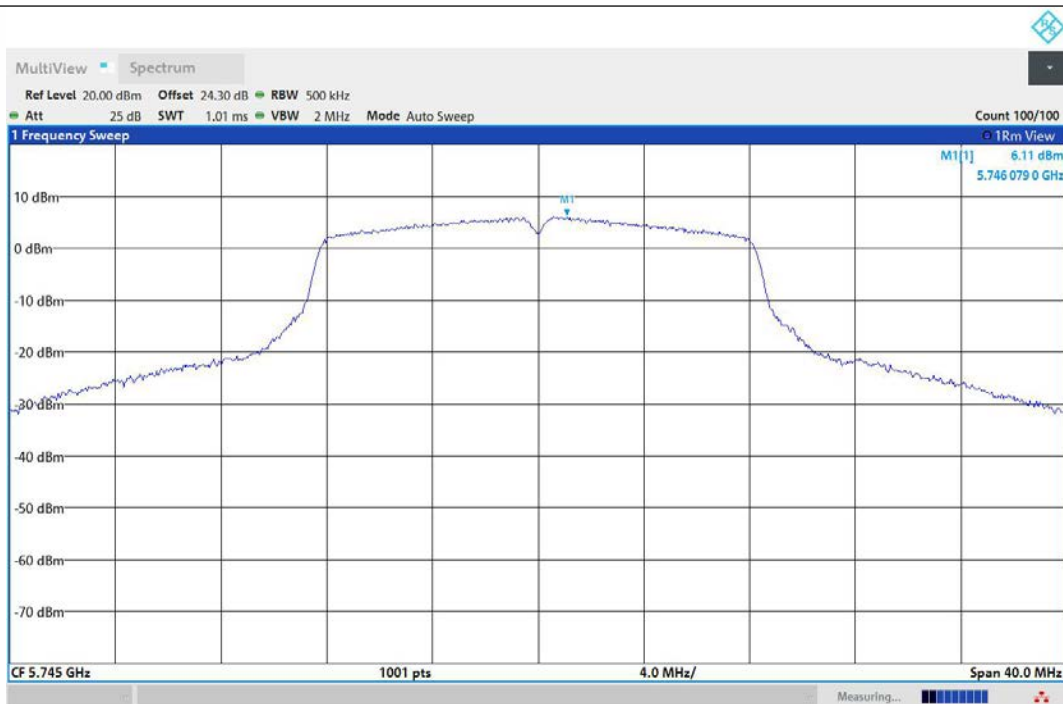
11A-Ant2-5580-PASS



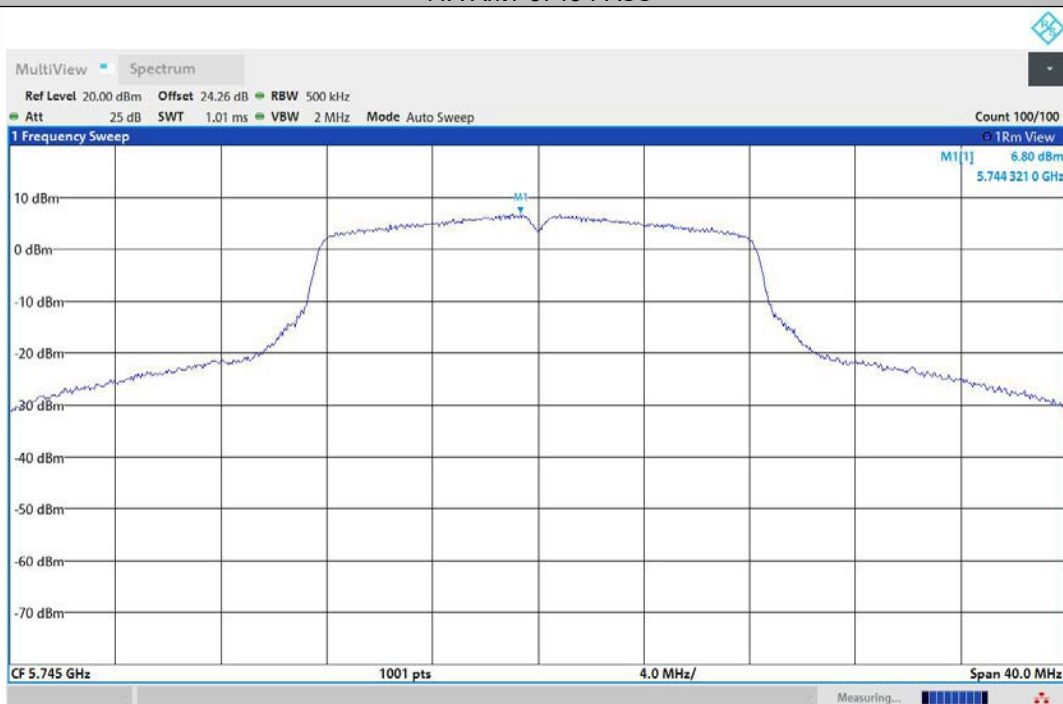
11A-Ant1-5700-PASS



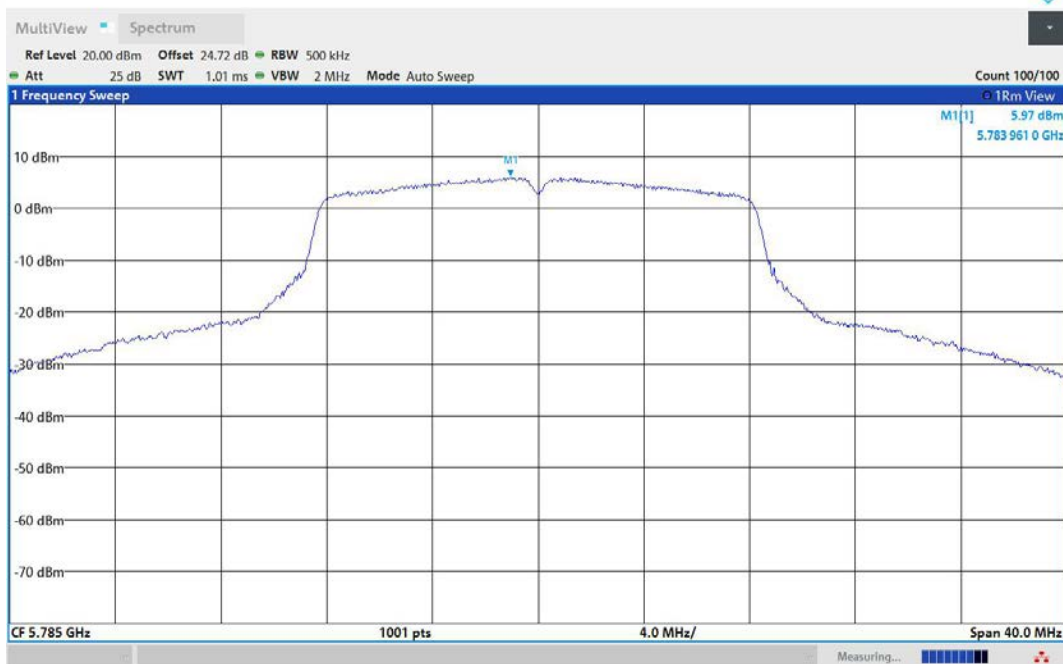
11A-Ant2-5700-PASS



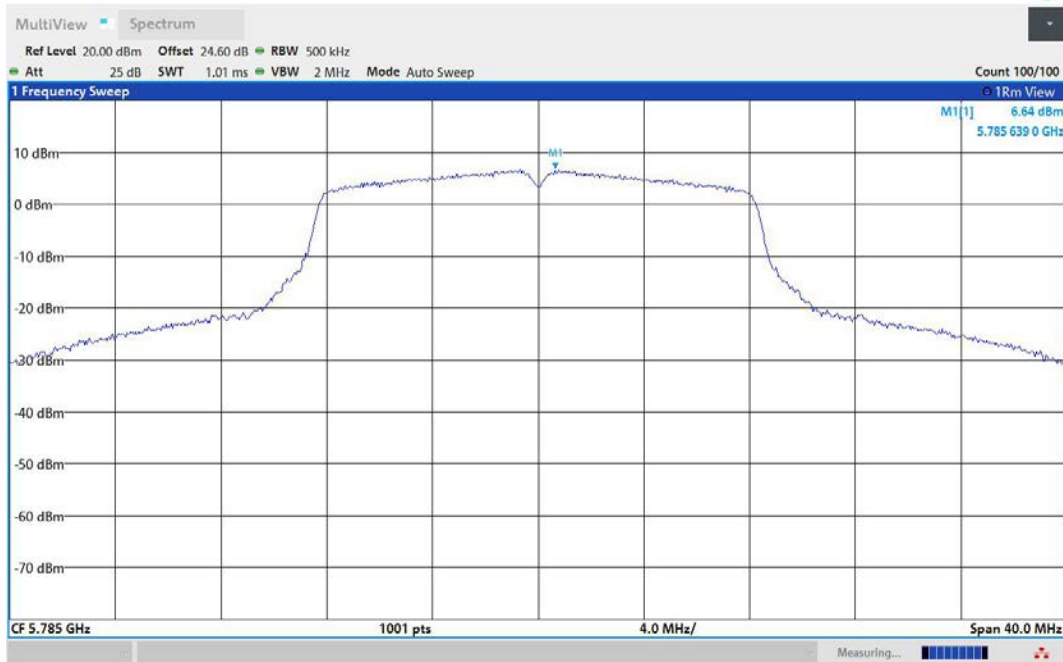
11A-Ant1-5745-PASS



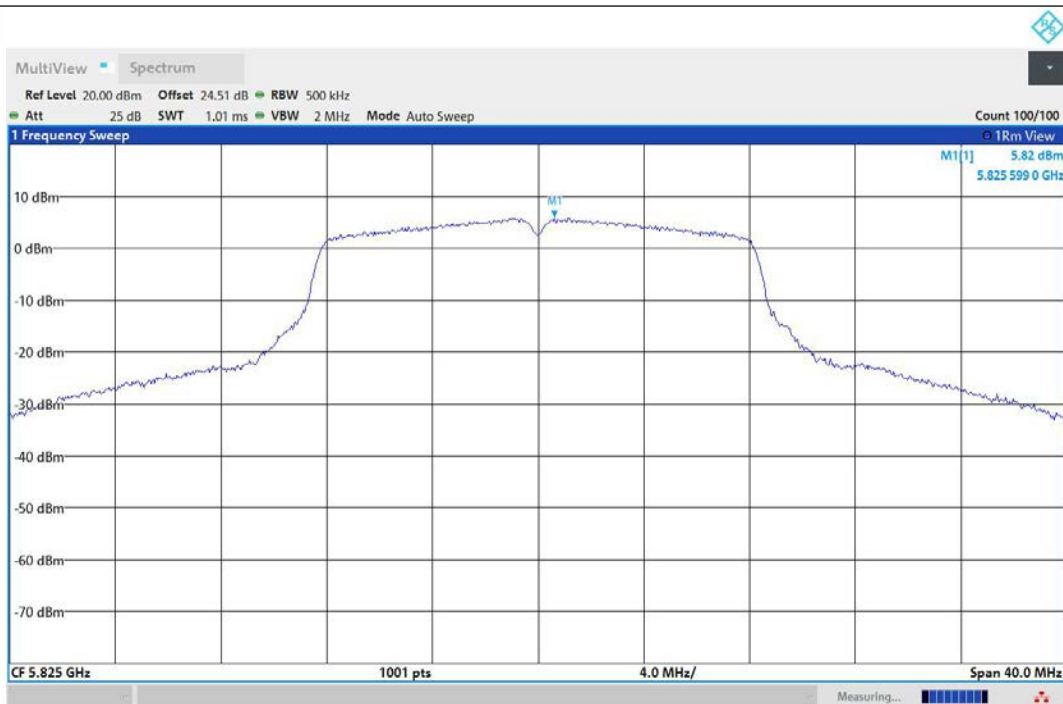
11A-Ant2-5745-PASS



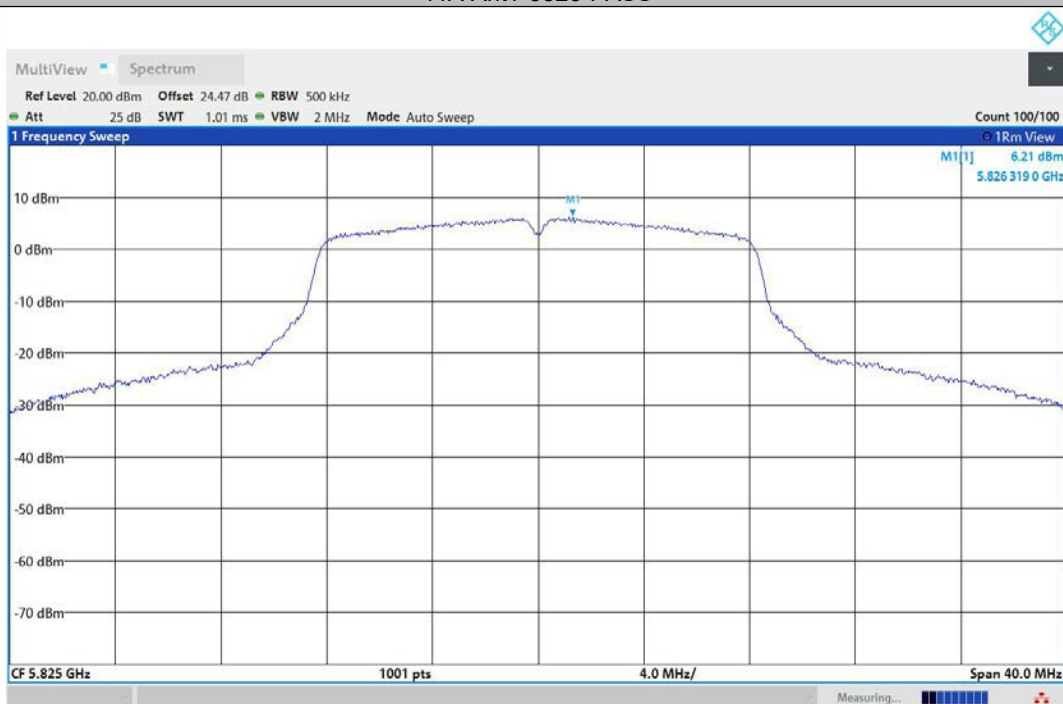
11A-Ant1-5785-PASS



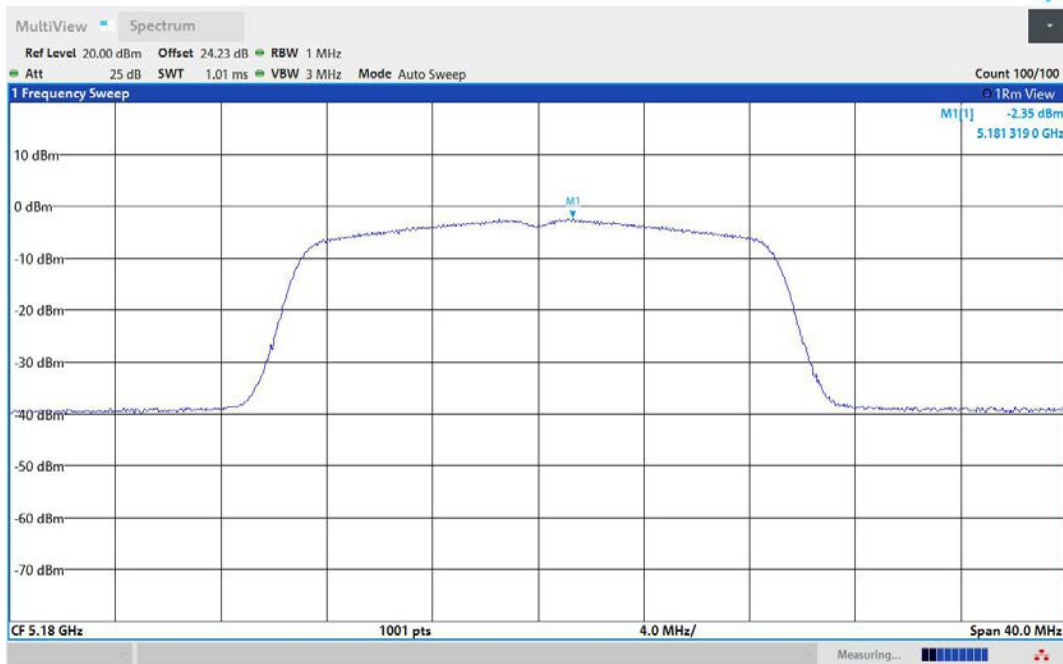
11A-Ant2-5785-PASS



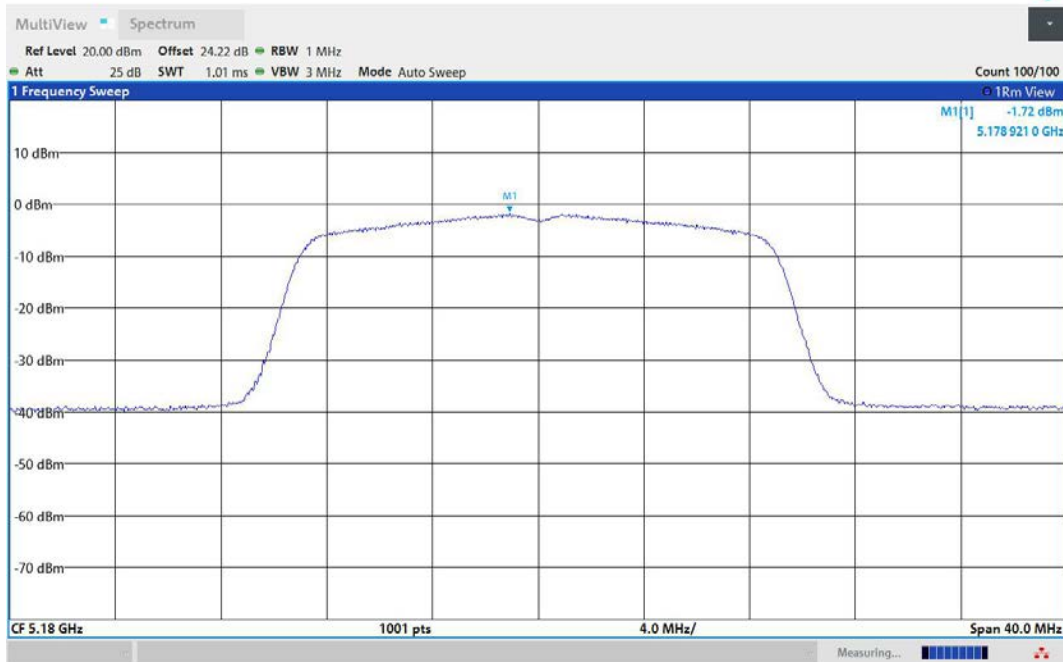
11A-Ant1-5825-PASS



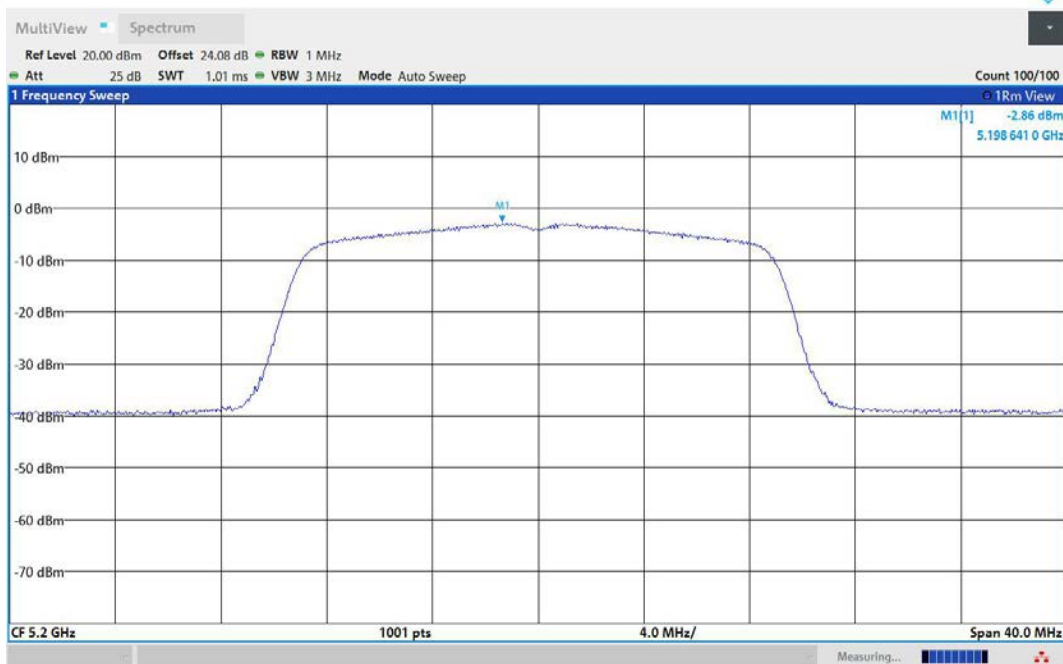
11A-Ant2-5825-PASS



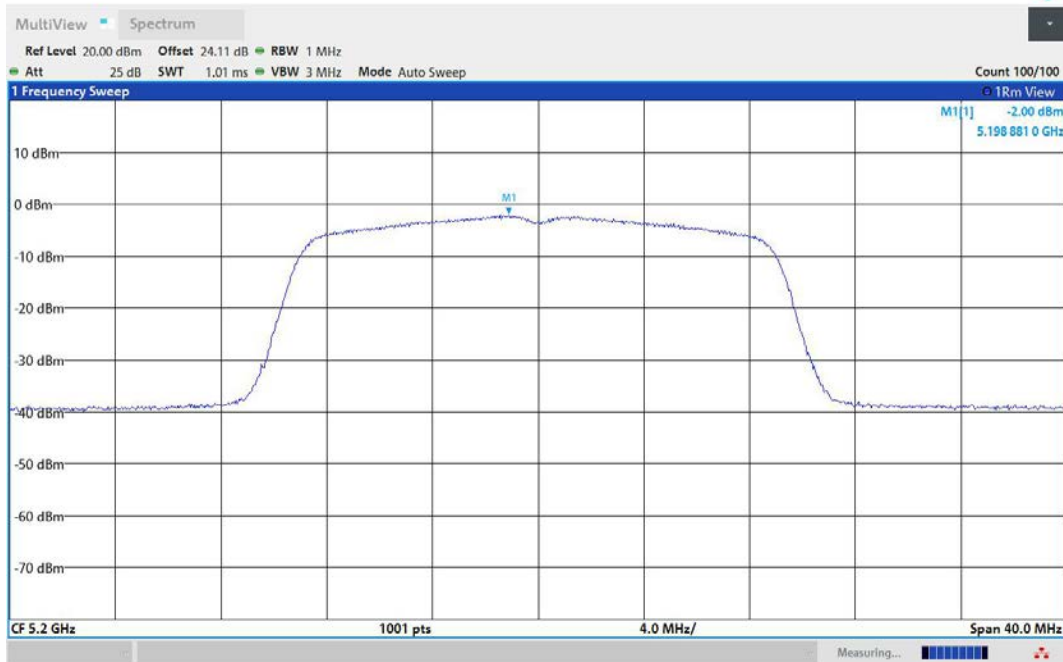
11N20MIMO-Ant1-5180-PASS



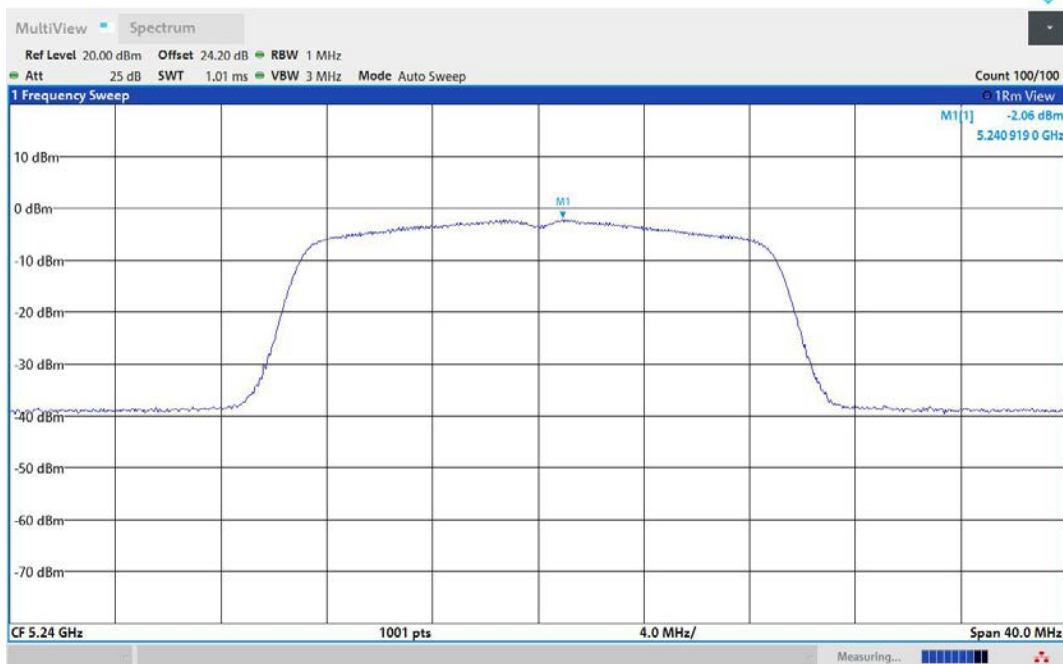
11N20MIMO-Ant2-5180-PASS



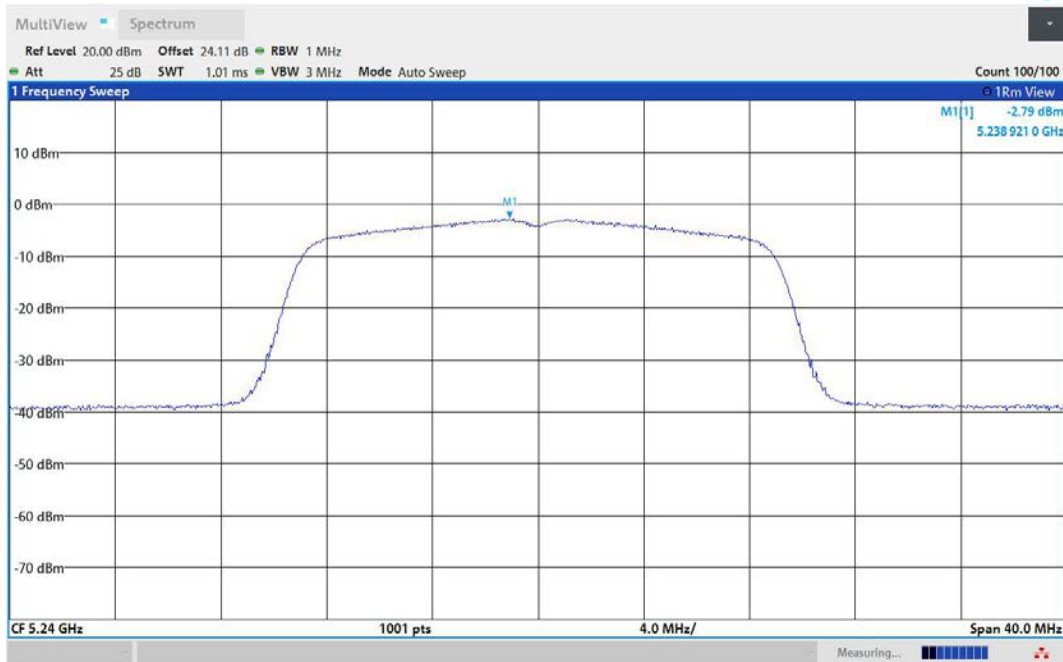
11N20MIMO-Ant1-5200-PASS



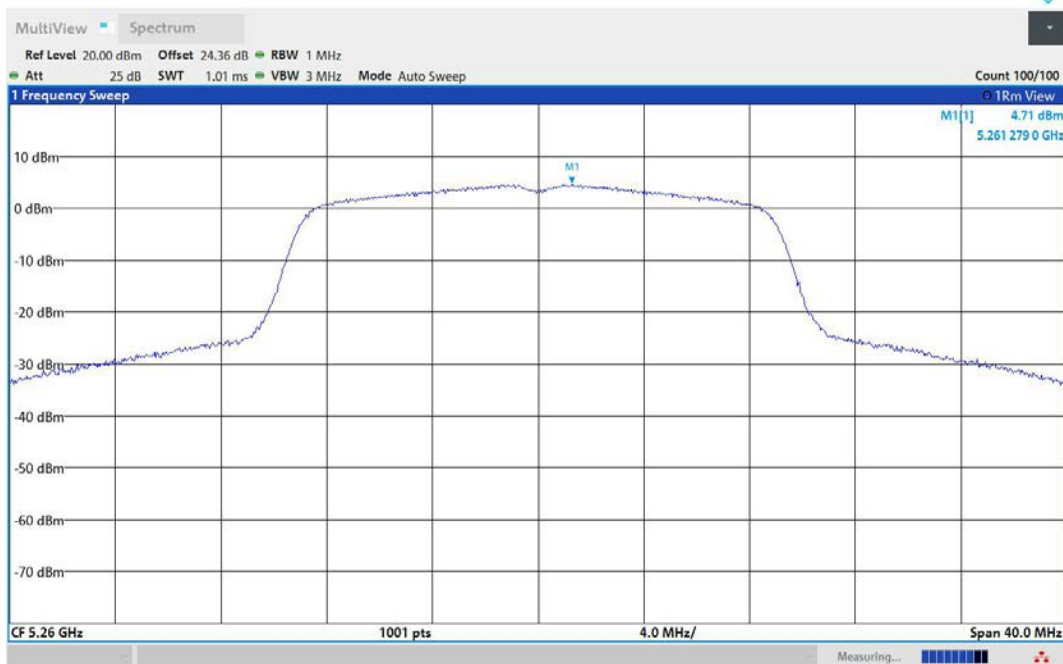
11N20MIMO-Ant2-5200-PASS



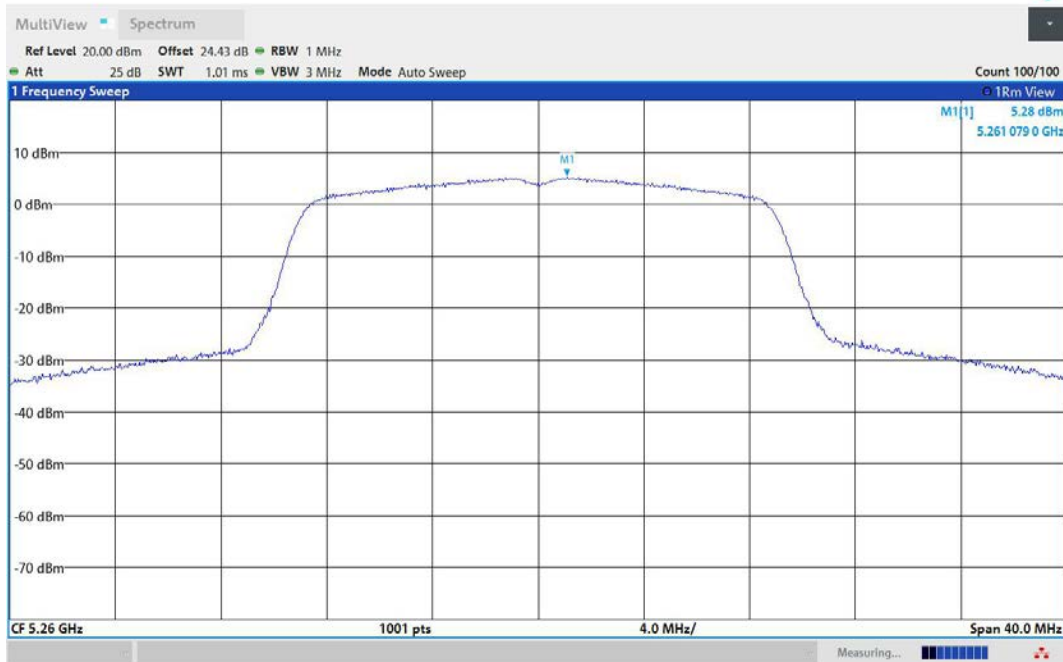
11N20MIMO-Ant2-5240-PASS



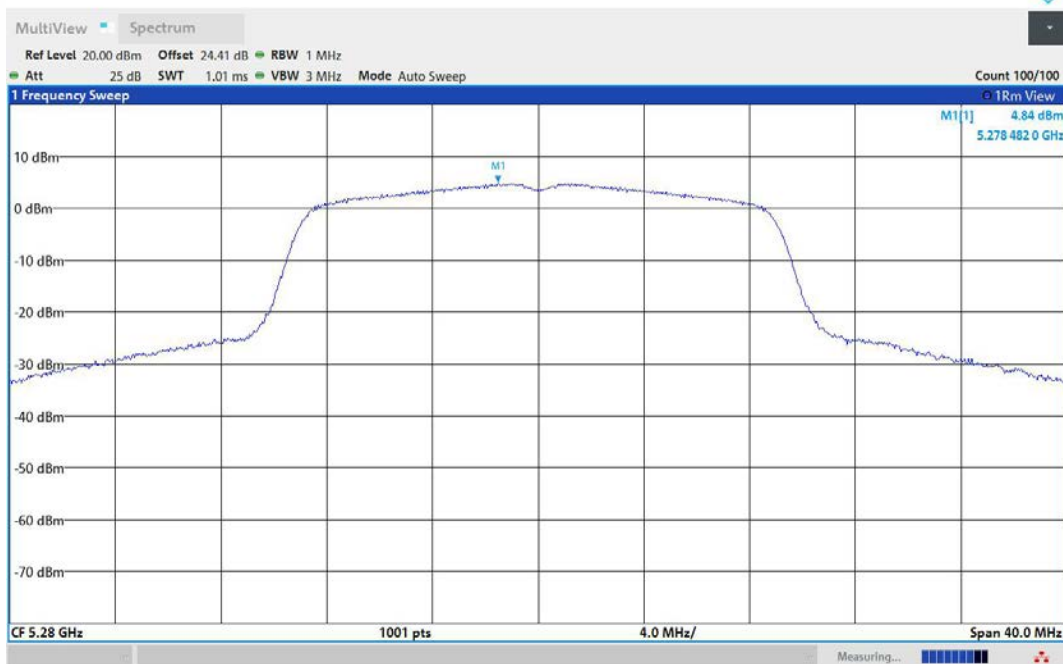
11N20MIMO-Ant1-5240-PASS



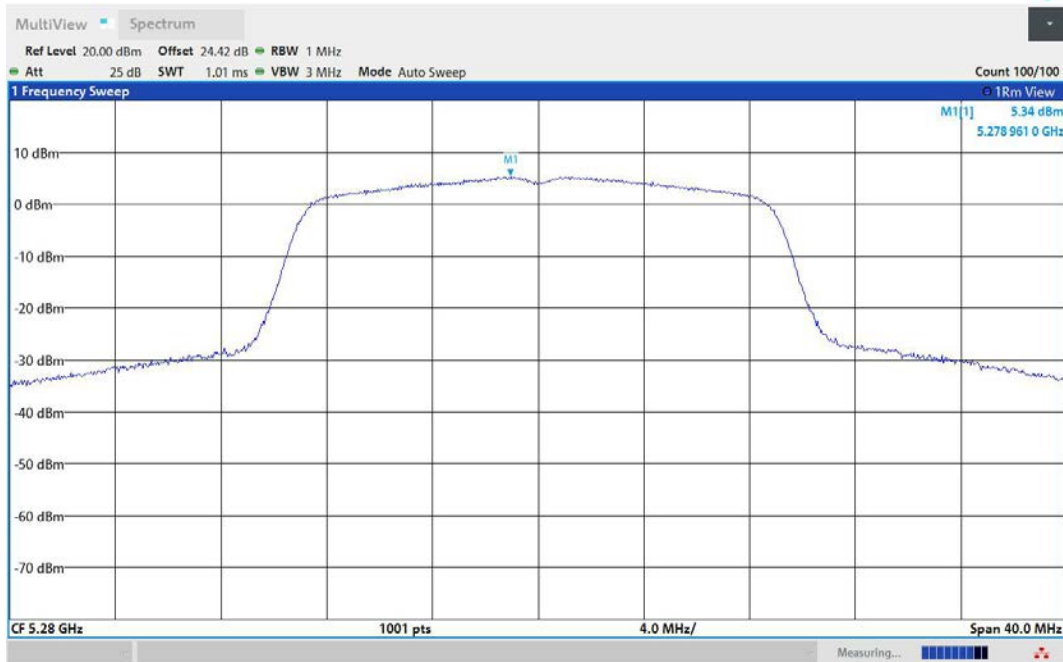
11N20MIMO-Ant1-5260-PASS



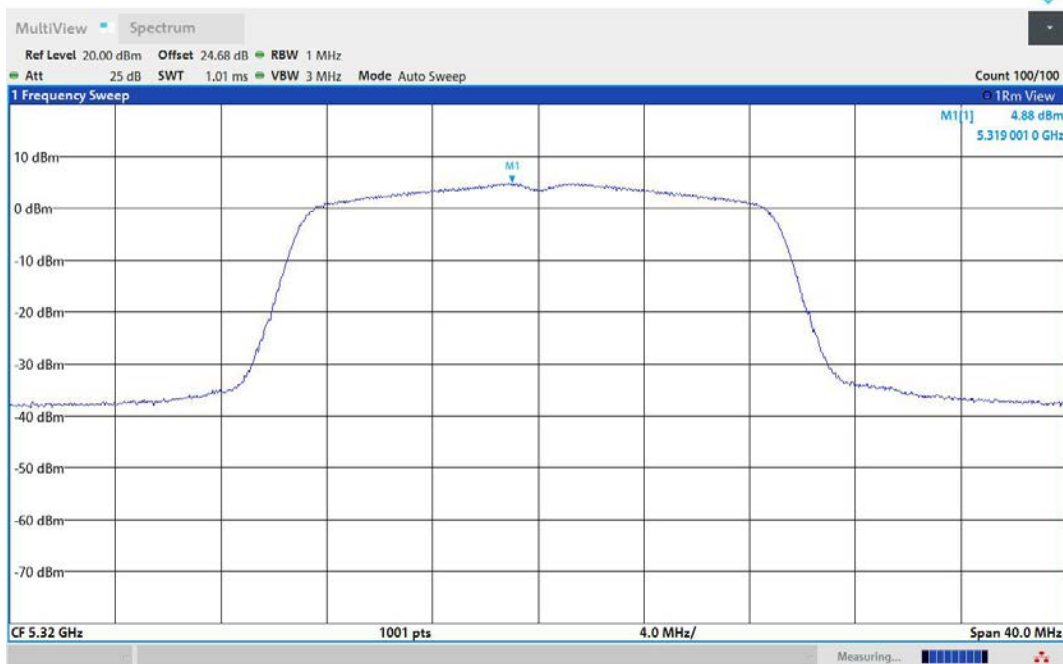
11N20MIMO-Ant2-5260-PASS



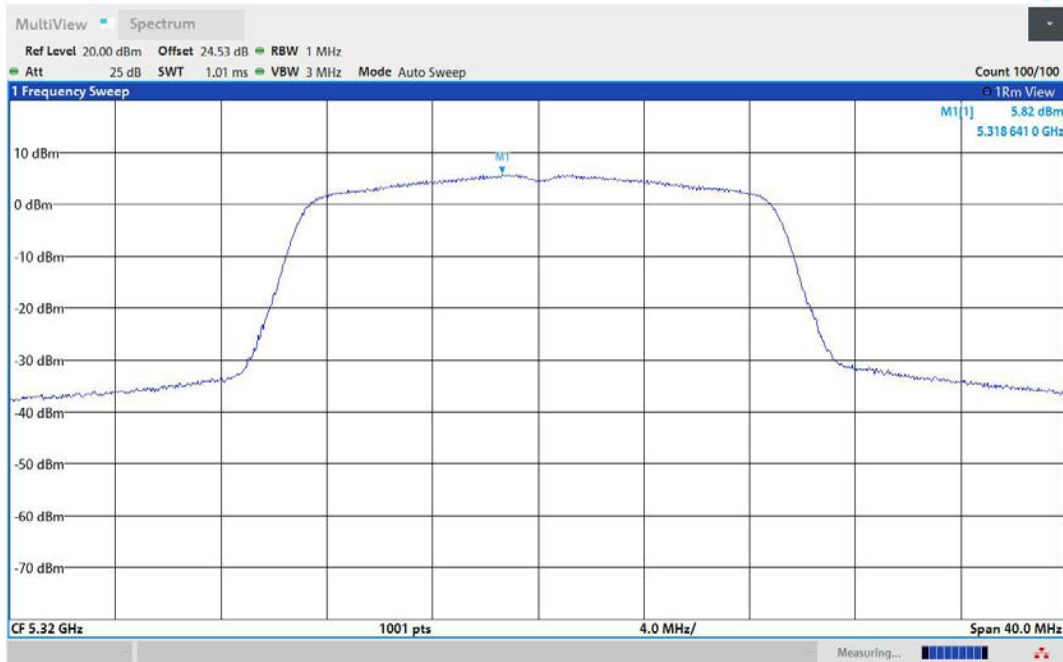
11N20MIMO-Ant1-5280-PASS



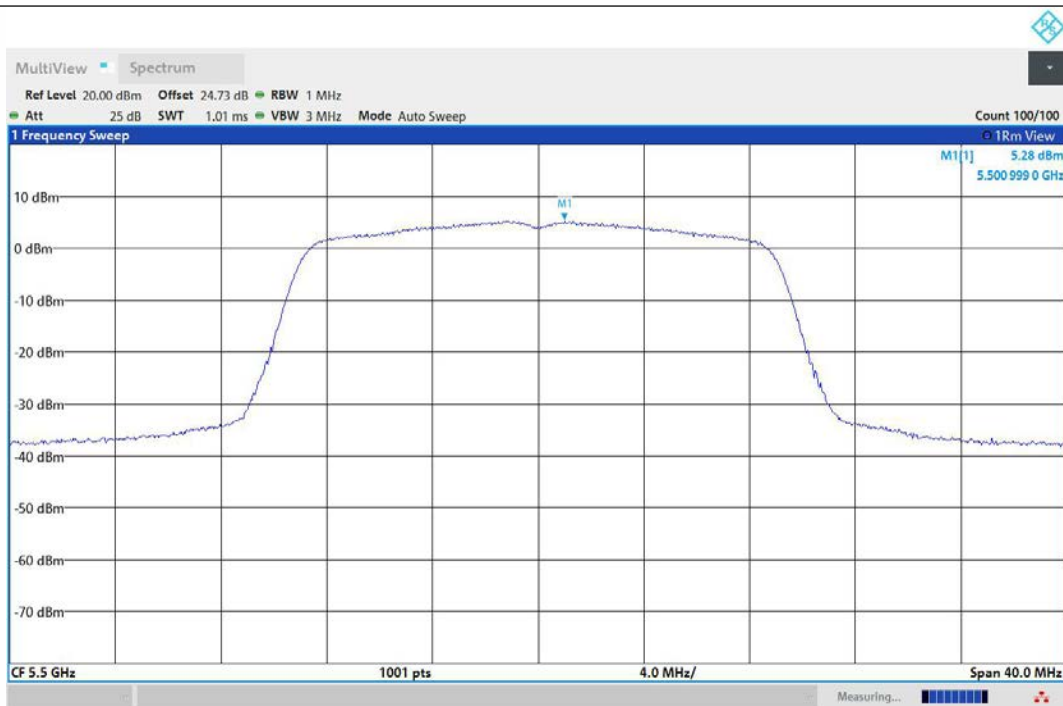
11N20MIMO-Ant2-5280-PASS



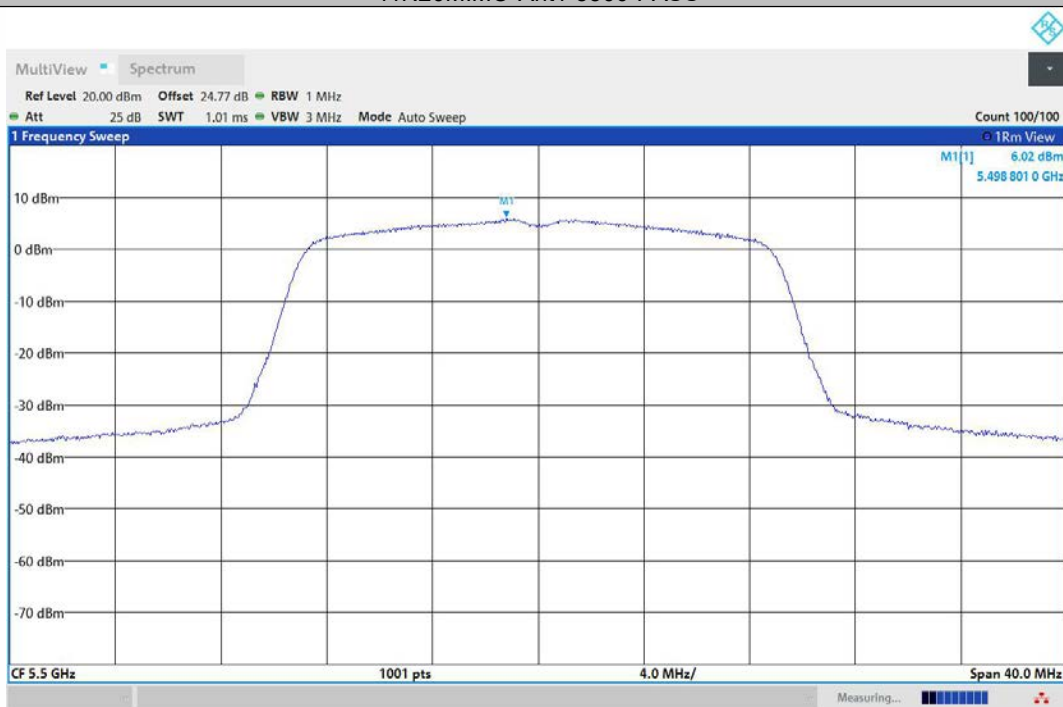
11N20MIMO-Ant1-5320-PASS



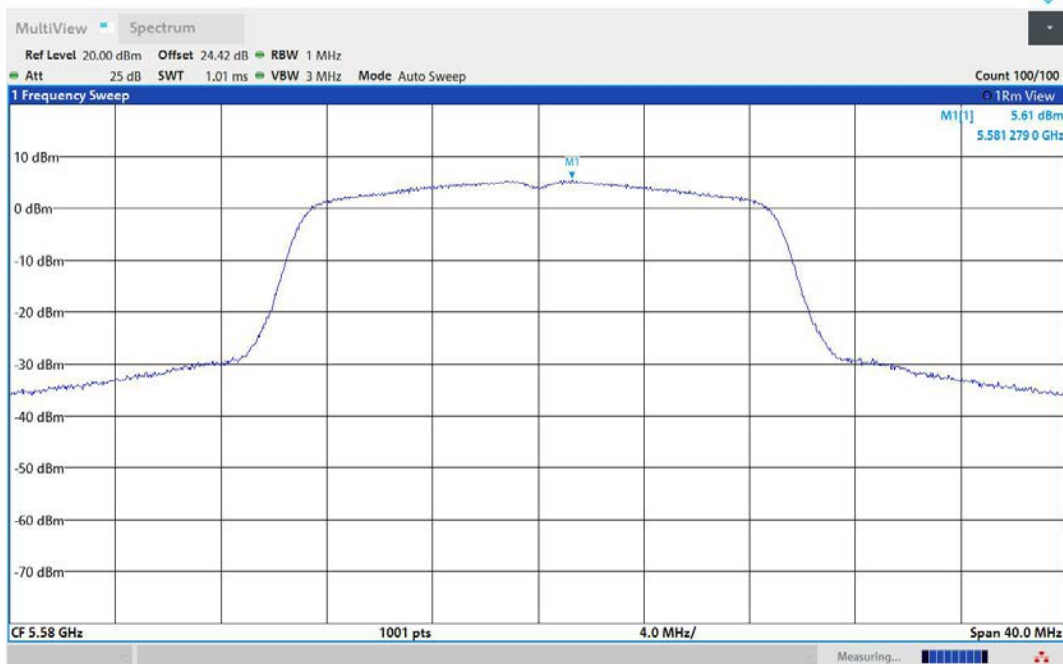
11N20MIMO-Ant2-5320-PASS



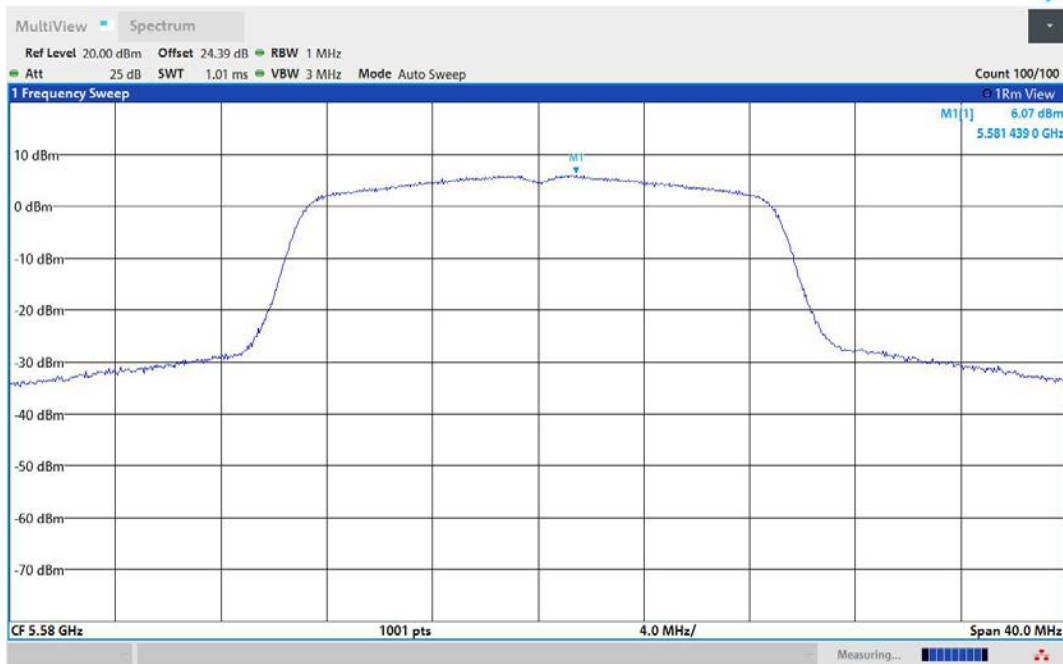
11N20MIMO-Ant1-5500-PASS



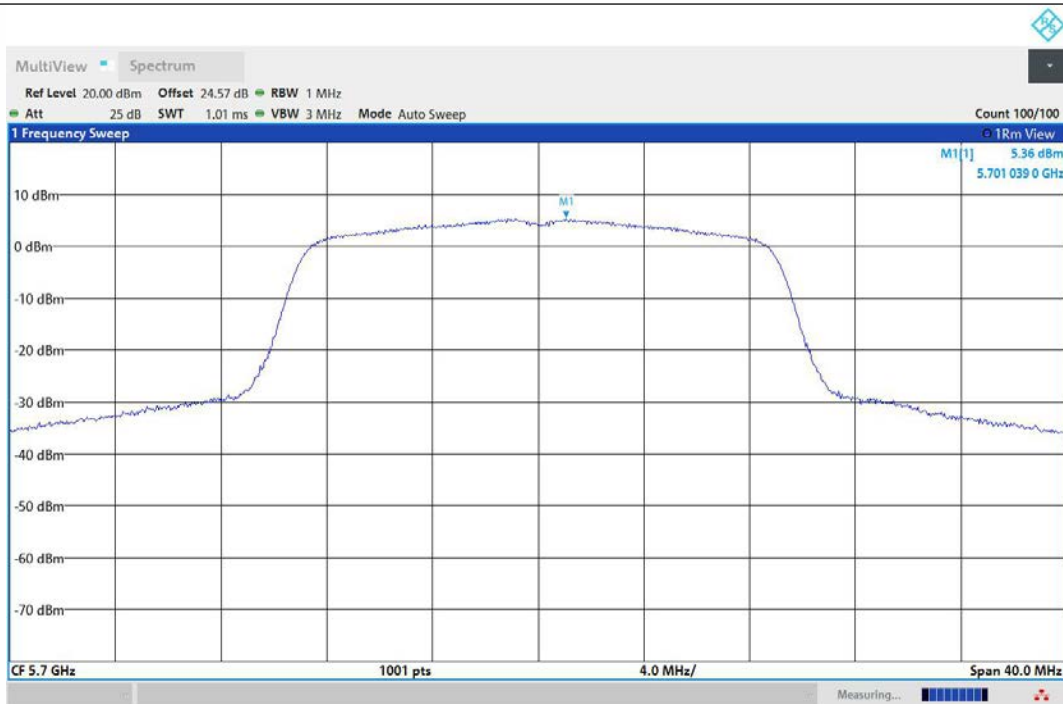
11N20MIMO-Ant2-5500-PASS



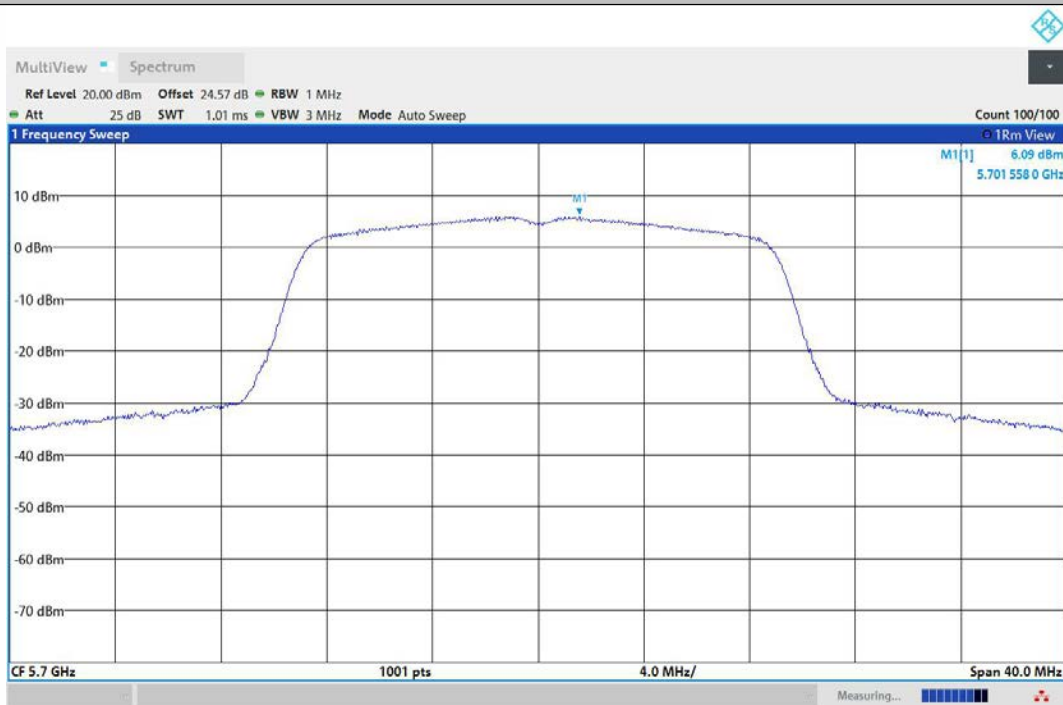
11N20MIMO-Ant1-5580-PASS



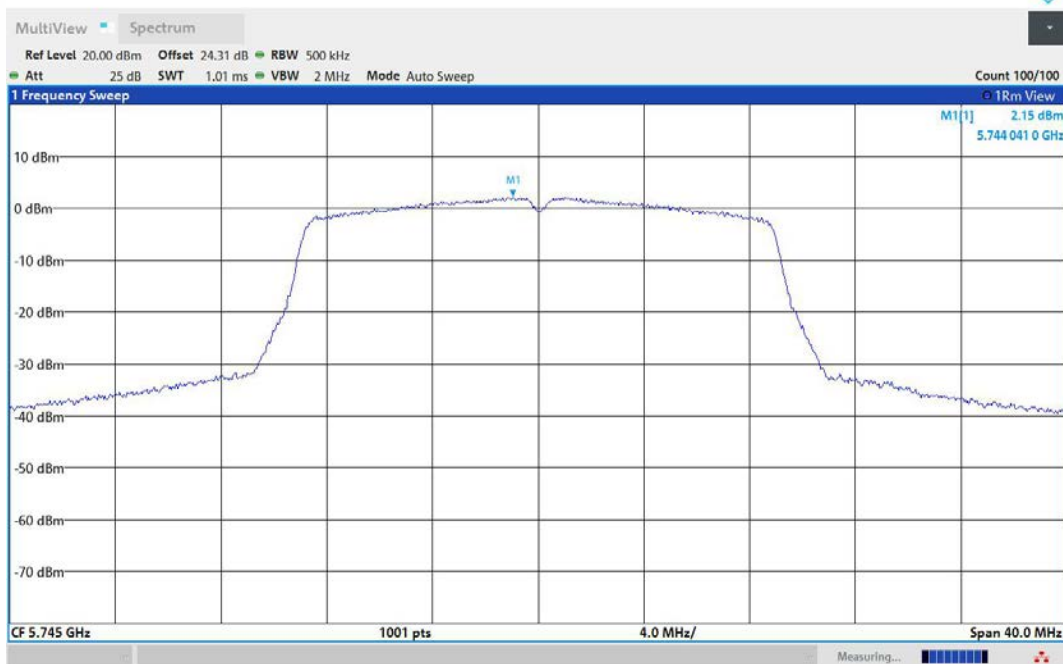
11N20MIMO-Ant2-5580-PASS



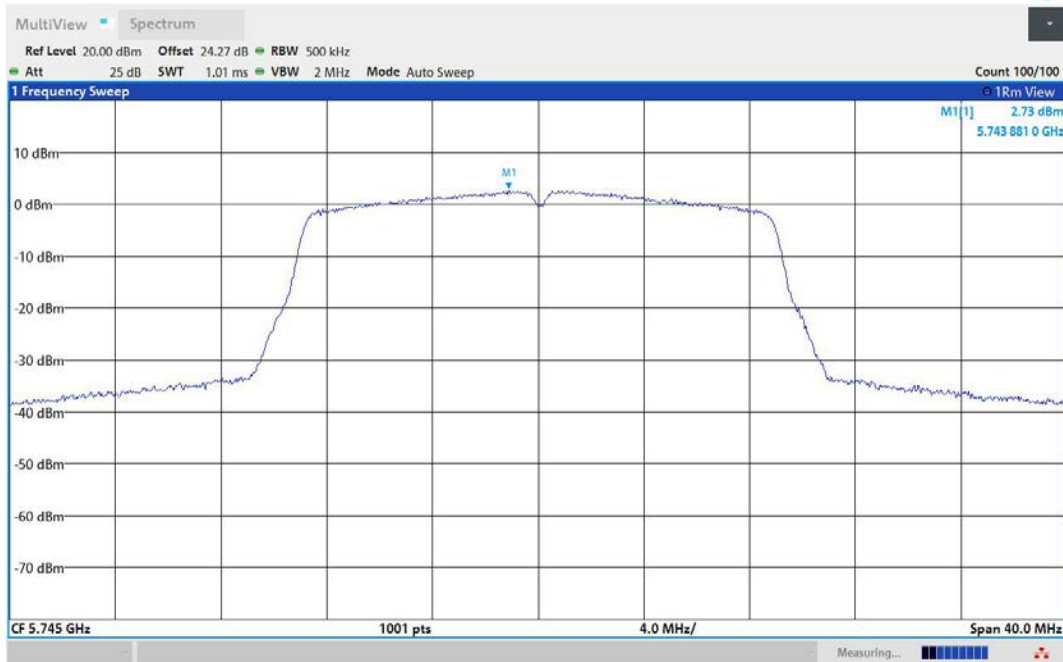
11N20MIMO-Ant1-5700-PASS



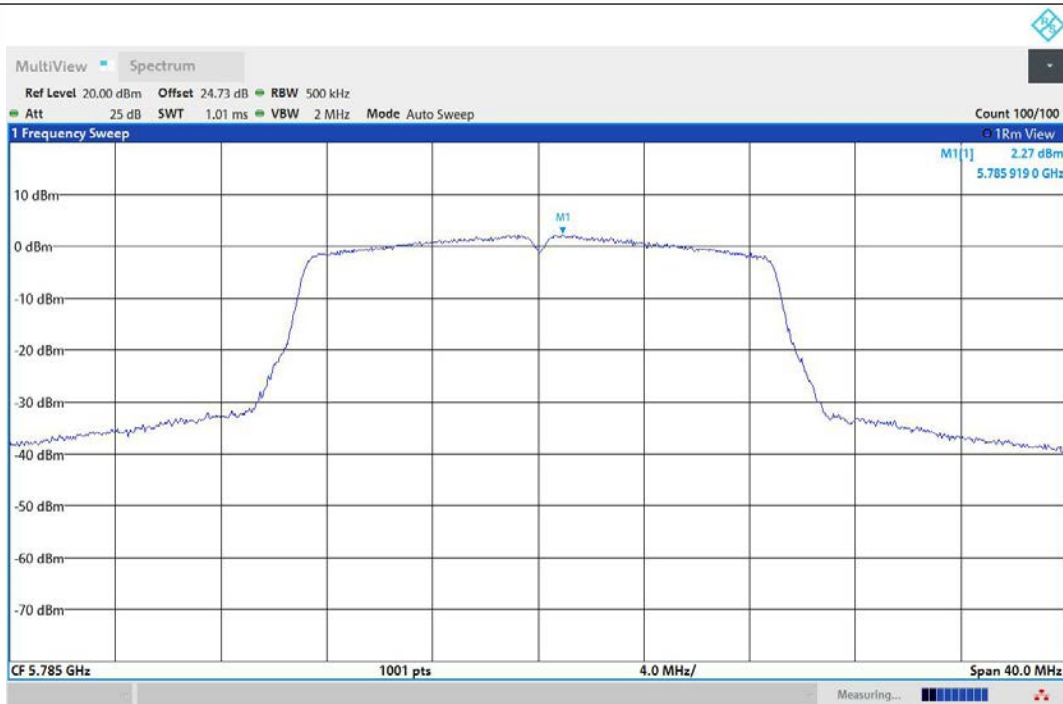
11N20MIMO-Ant2-5700-PASS



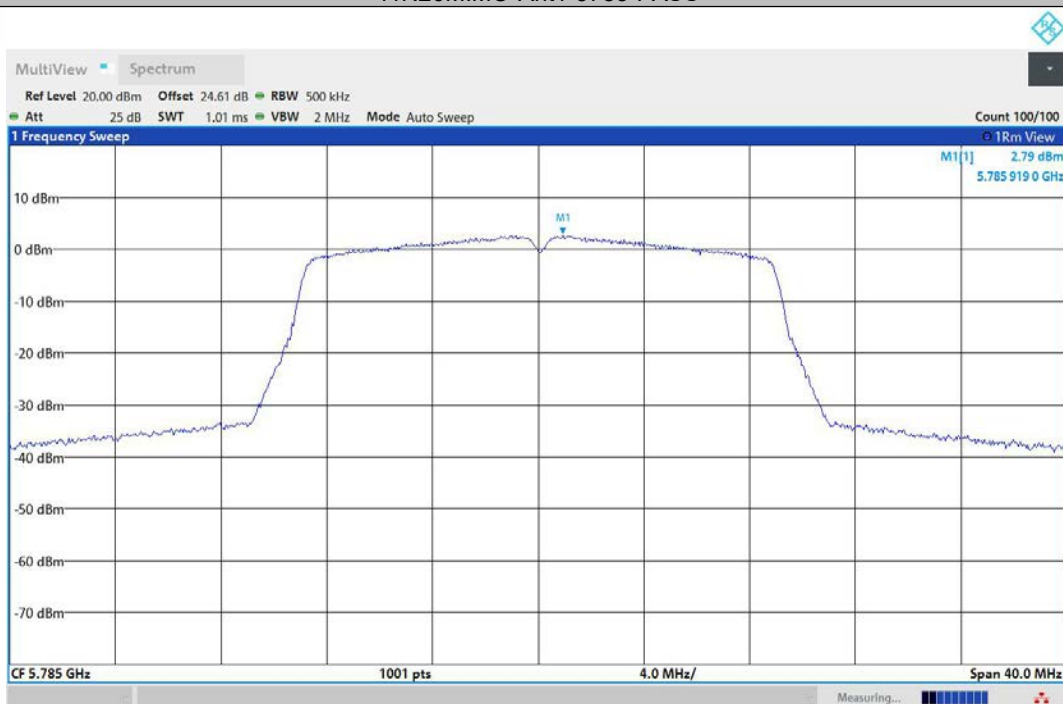
11N20MIMO-Ant1-5745-PASS



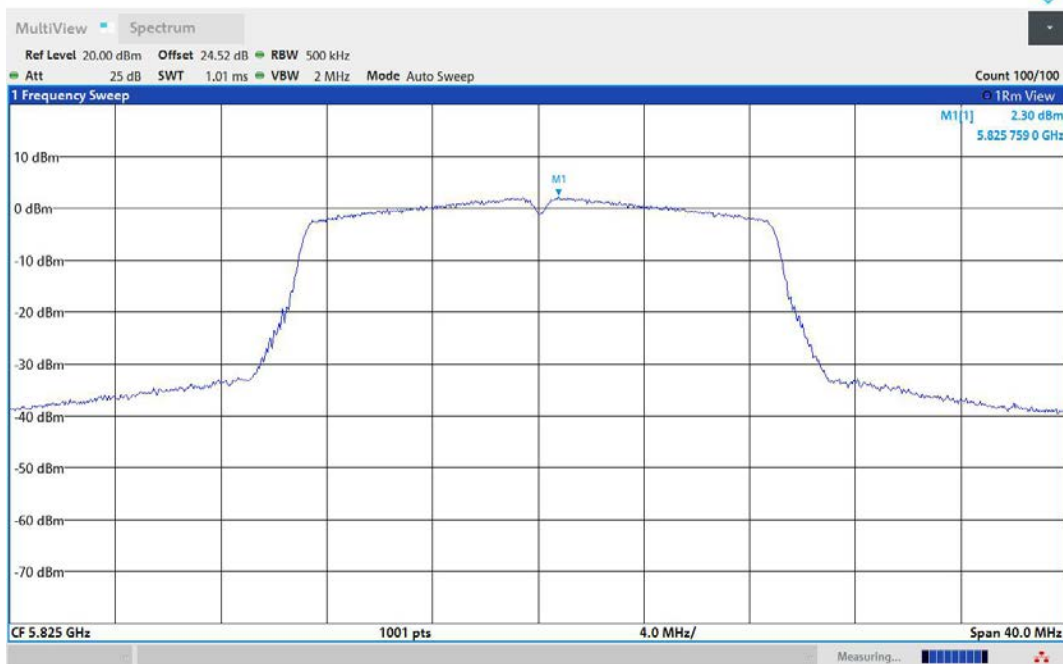
11N20MIMO-Ant2-5745-PASS



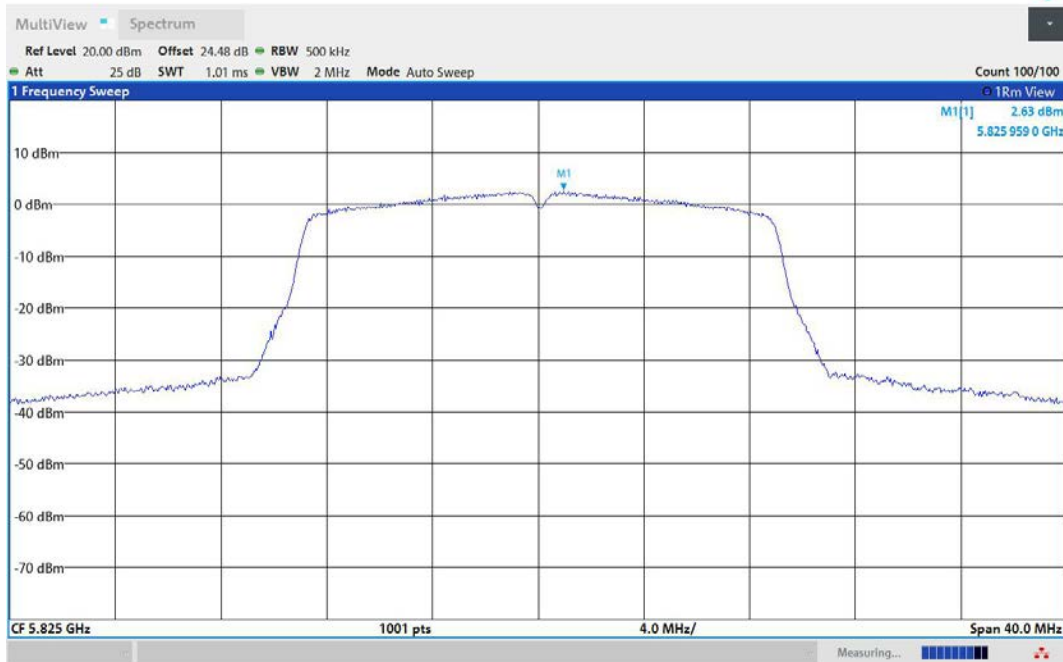
11N20MIMO-Ant1-5785-PASS



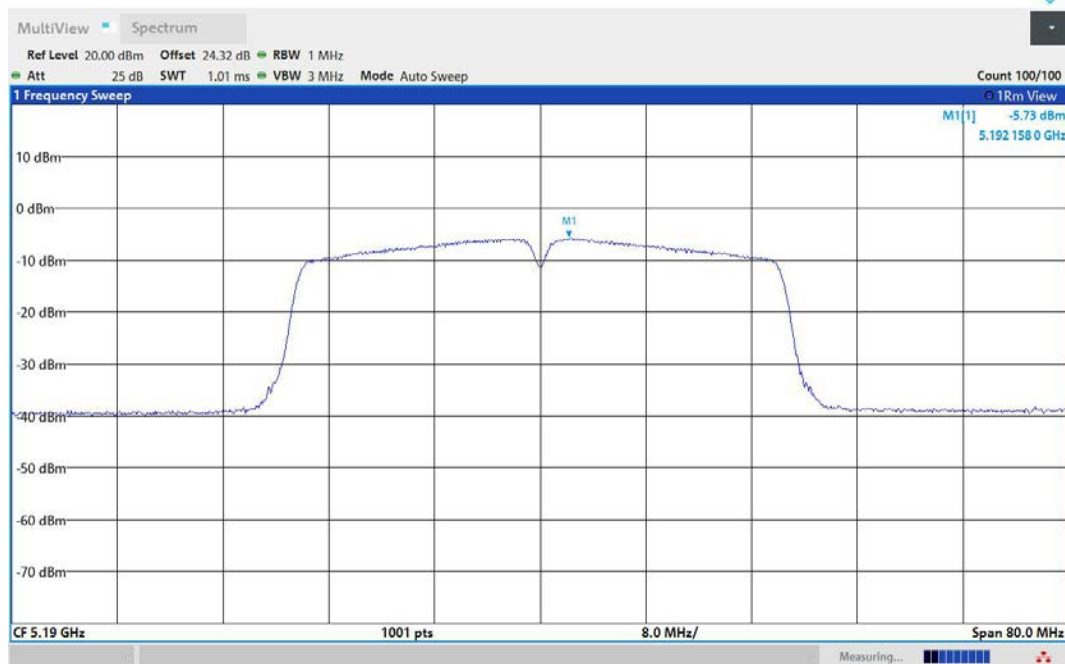
11N20MIMO-Ant2-5785-PASS



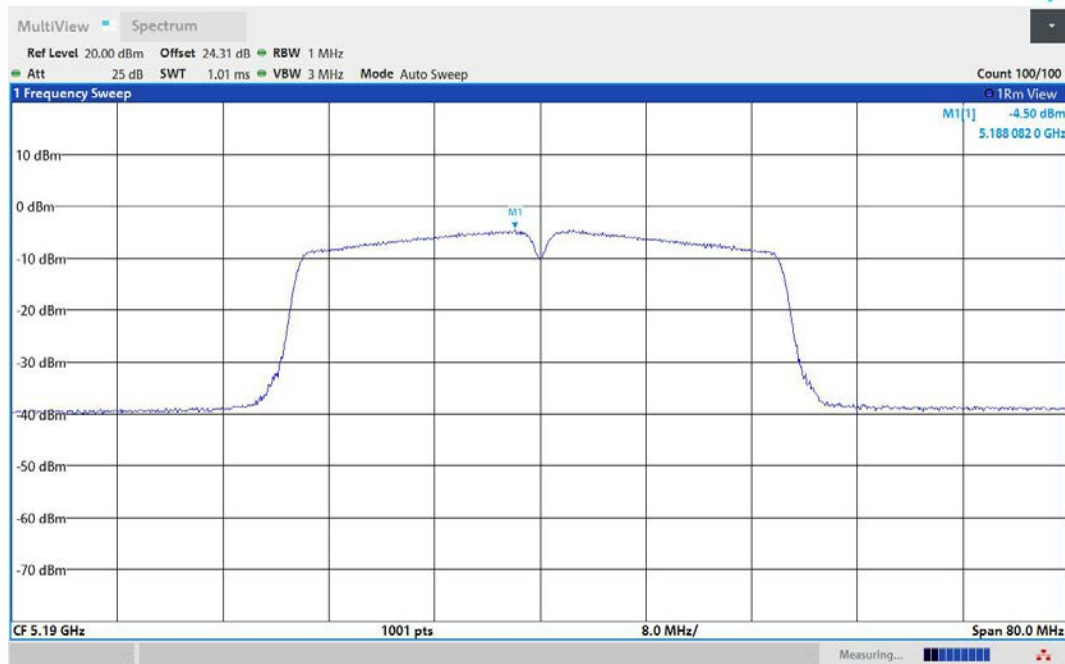
11N20MIMO-Ant1-5825-PASS



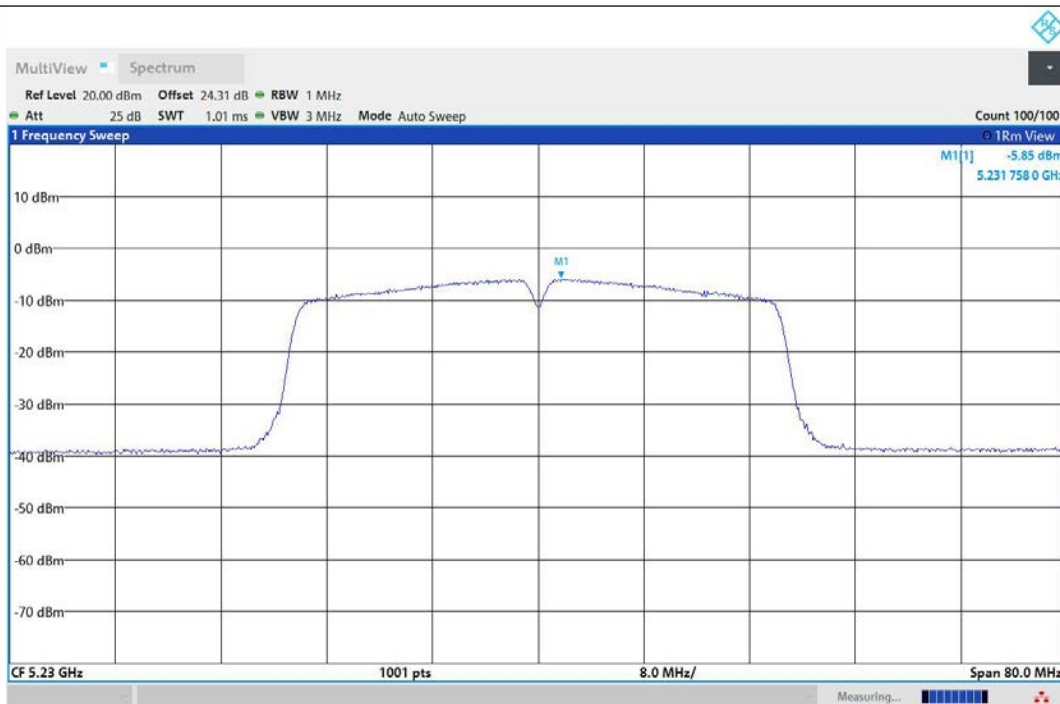
11N20MIMO-Ant2-5825-PASS



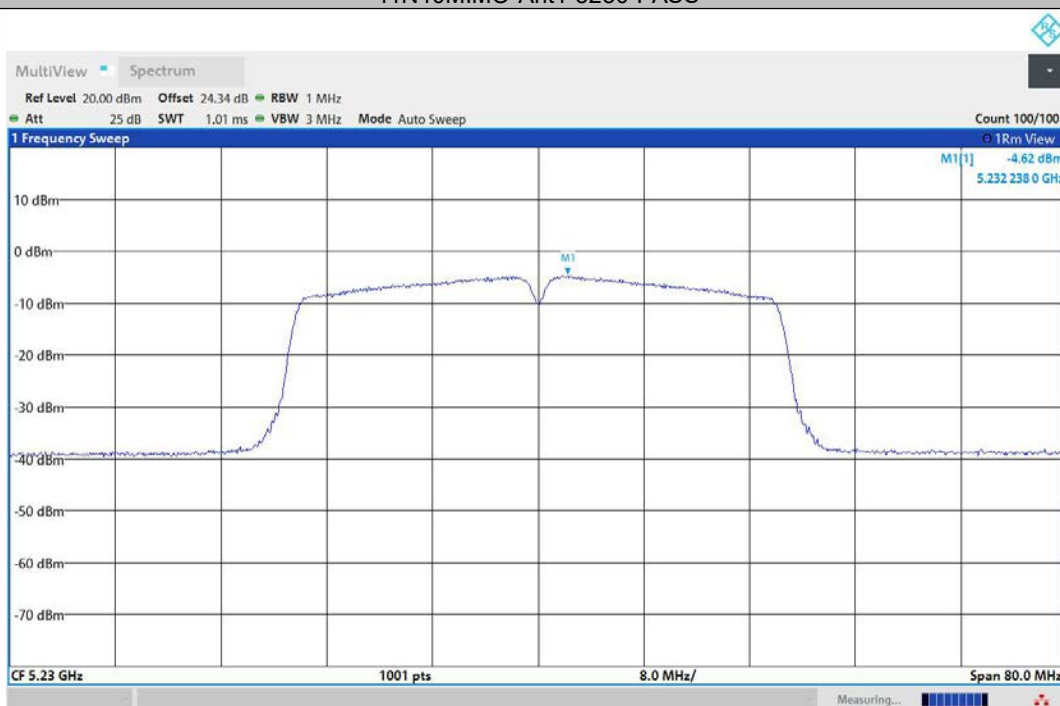
11N40MIMO-Ant1-5190-PASS



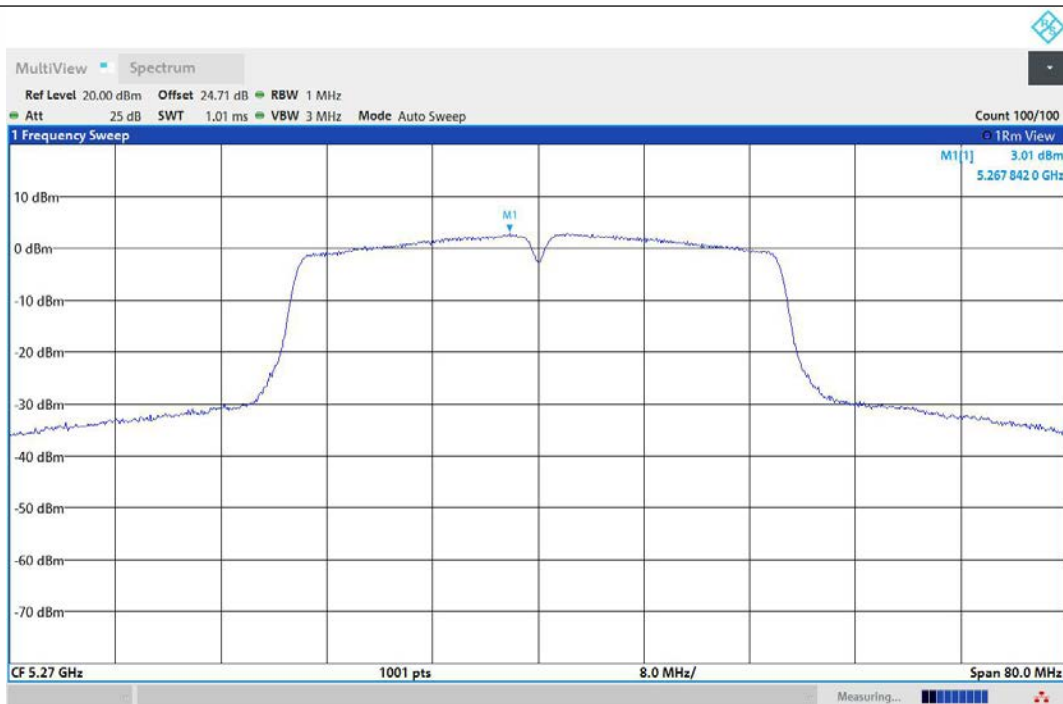
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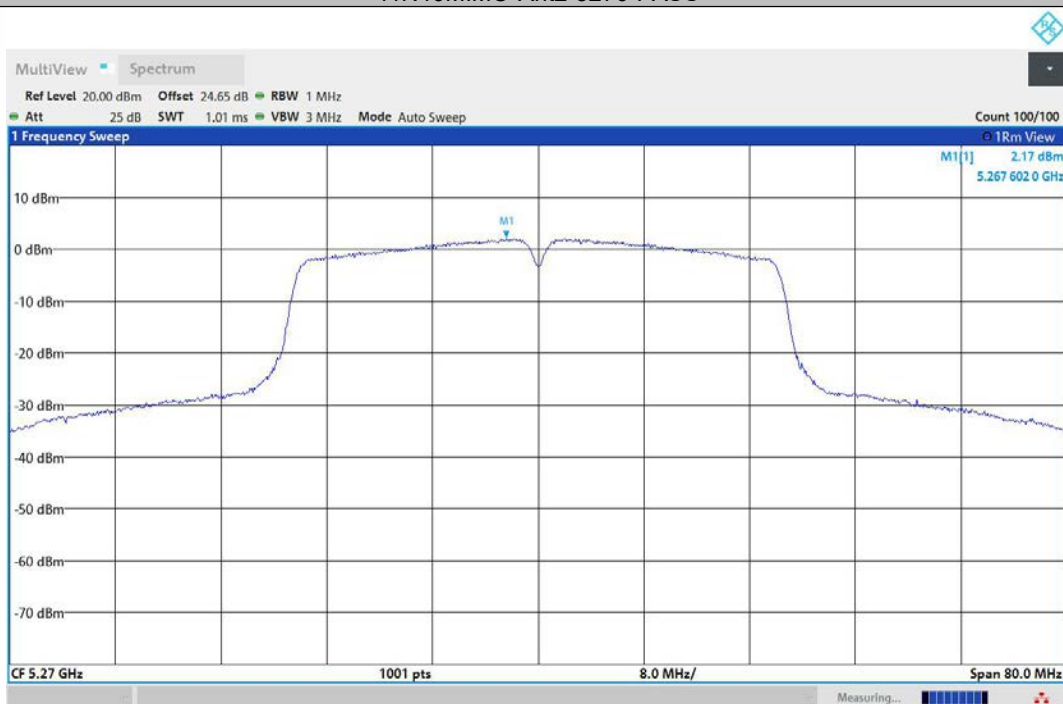
11N40MIMO-Ant1-5230-PASS



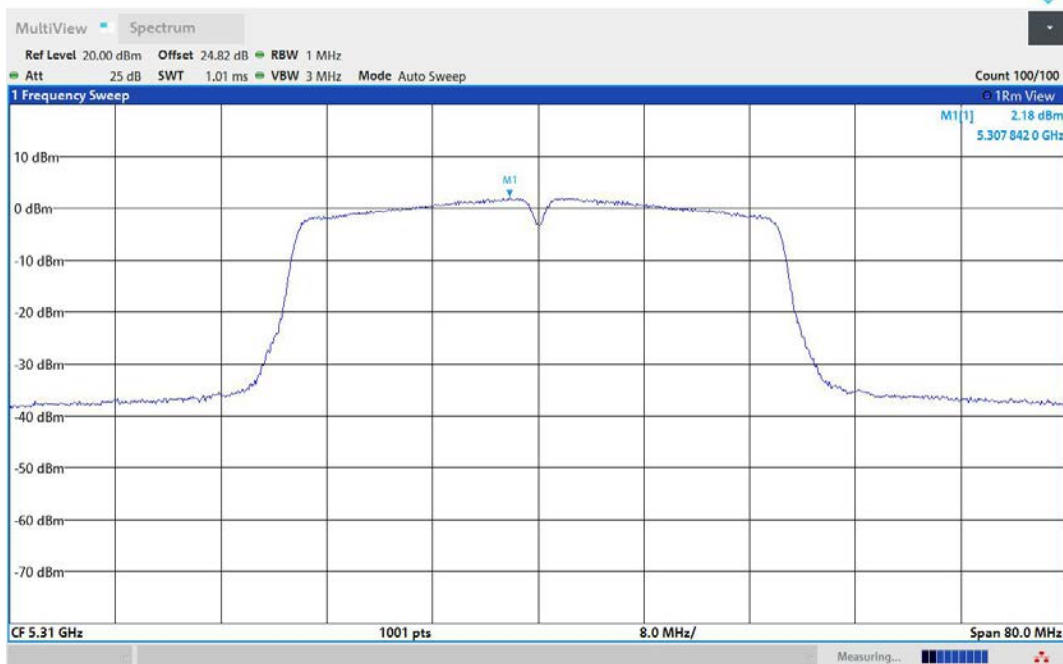
11N40MIMO-Ant2-5230-PASS



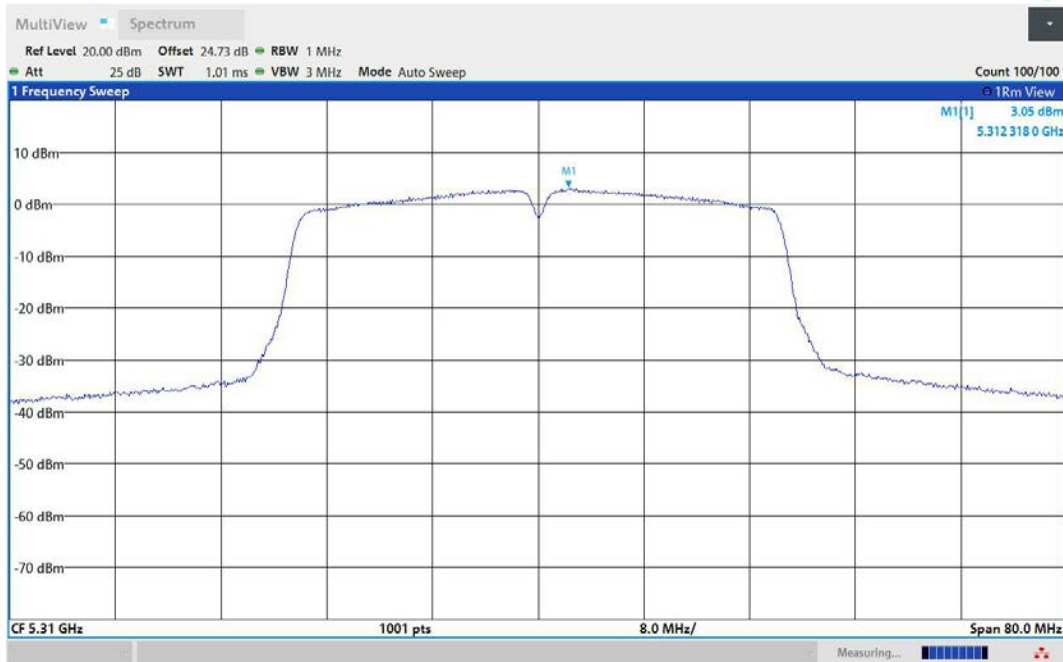
11N40MIMO-Ant2-5270-PASS



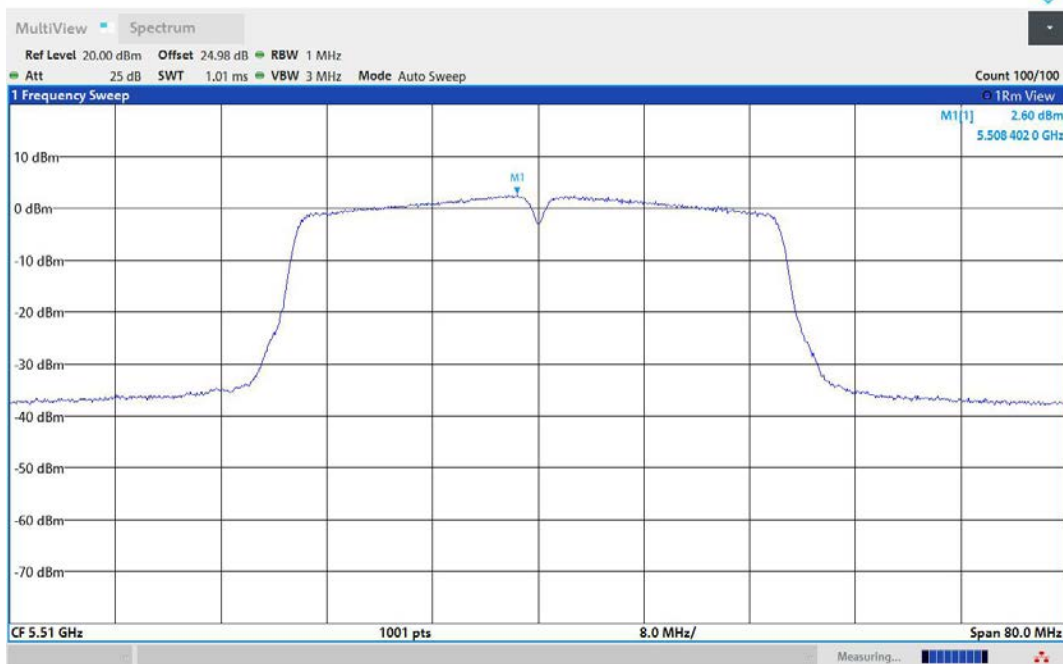
11N40MIMO-Ant1-5270-PASS



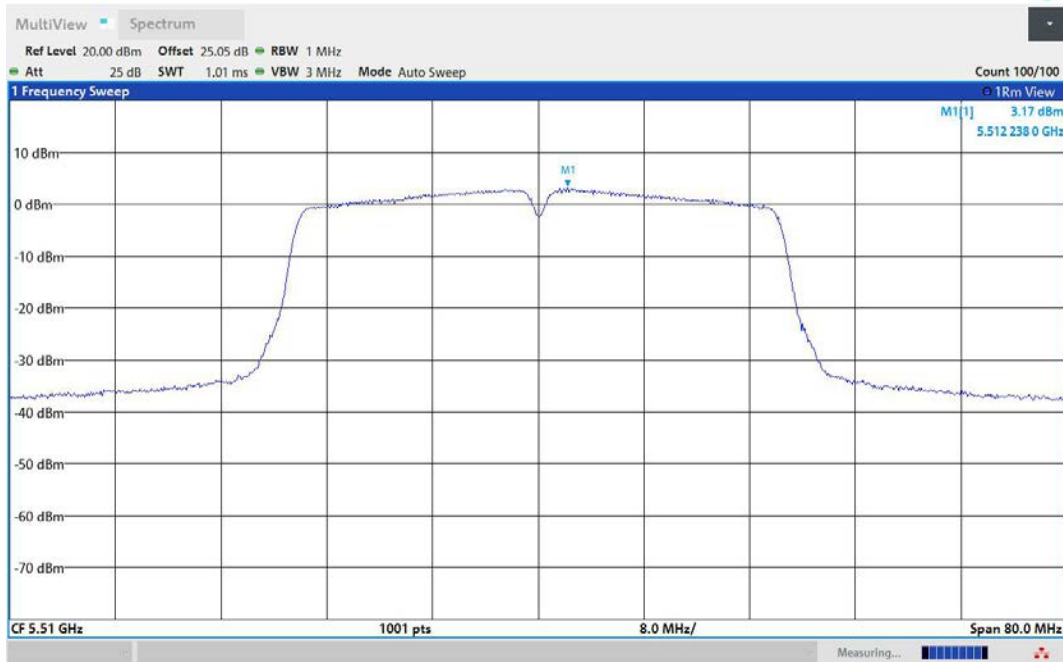
11N40MIMO-Ant1-5310-PASS



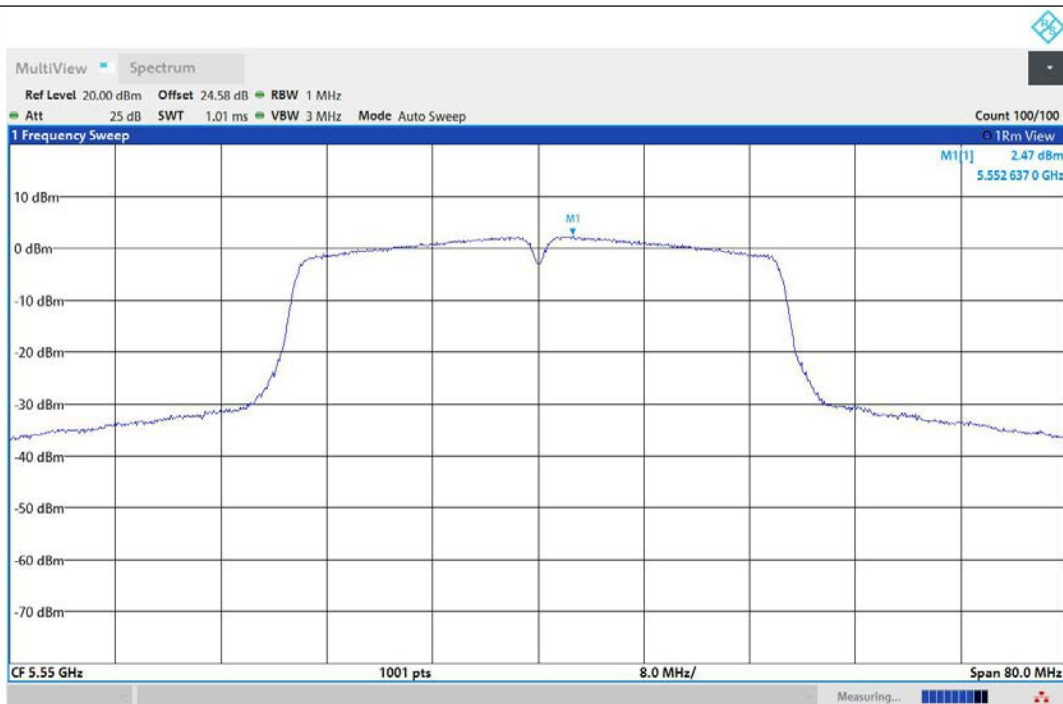
11N40MIMO-Ant2-5310-PASS



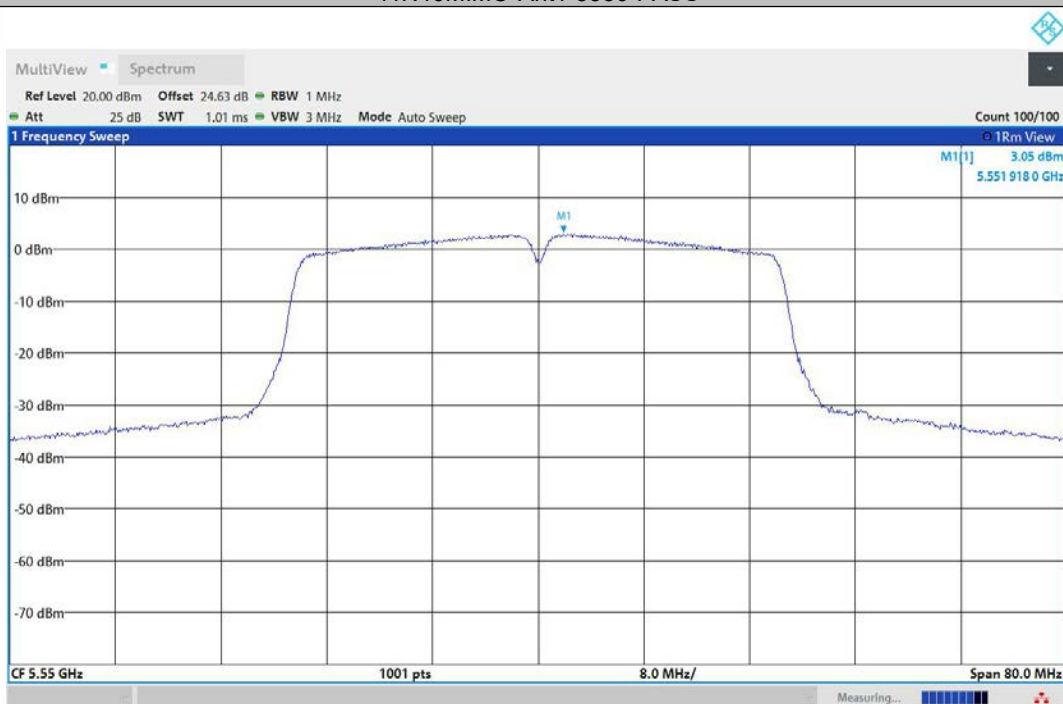
11N40MIMO-Ant1-5510-PASS



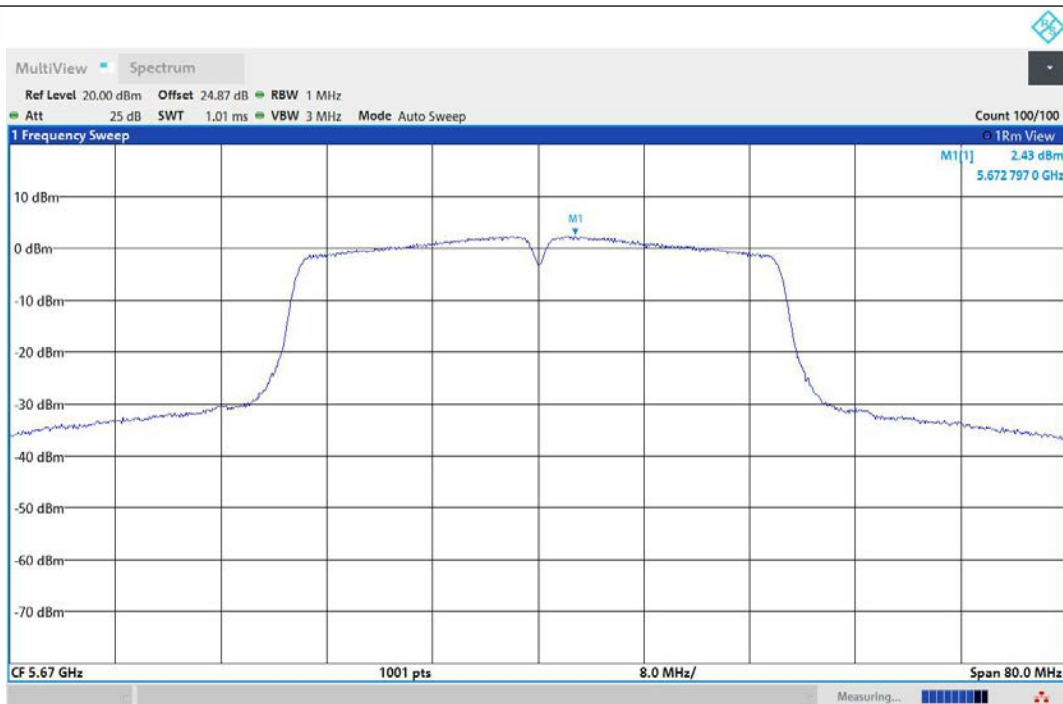
11N40MIMO-Ant2-5510-PASS



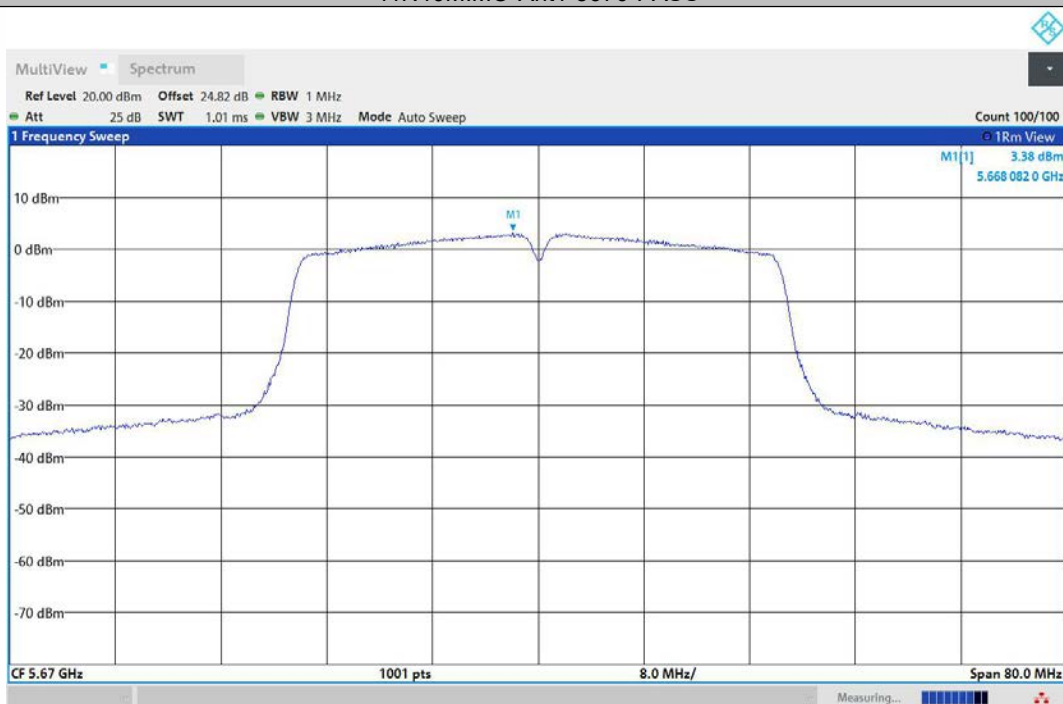
11N40MIMO-Ant1-5550-PASS



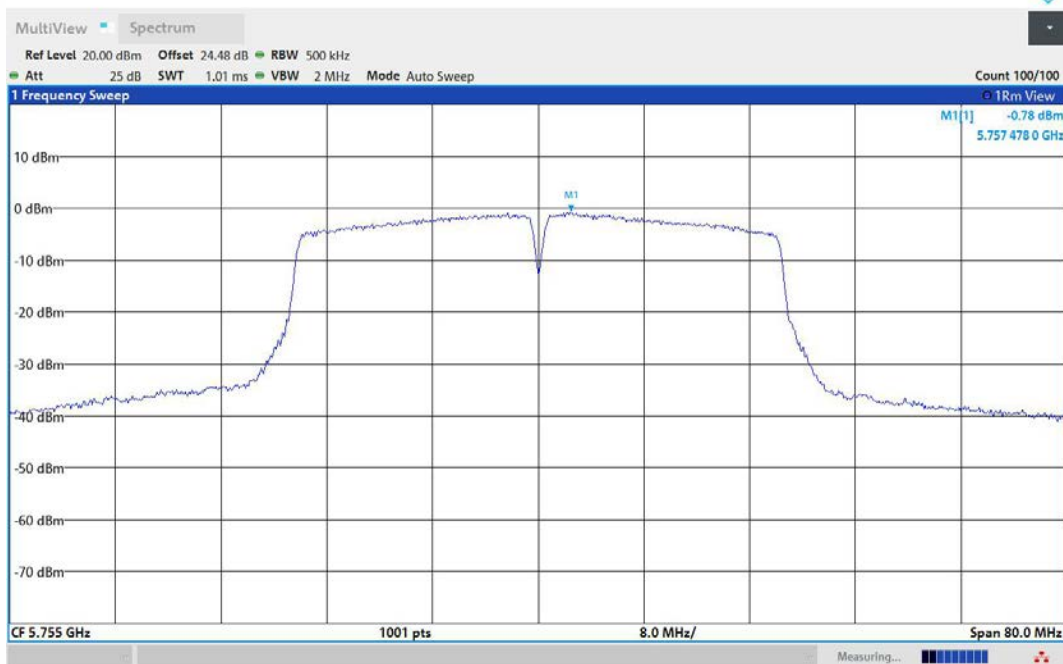
11N40MIMO-Ant2-5550-PASS



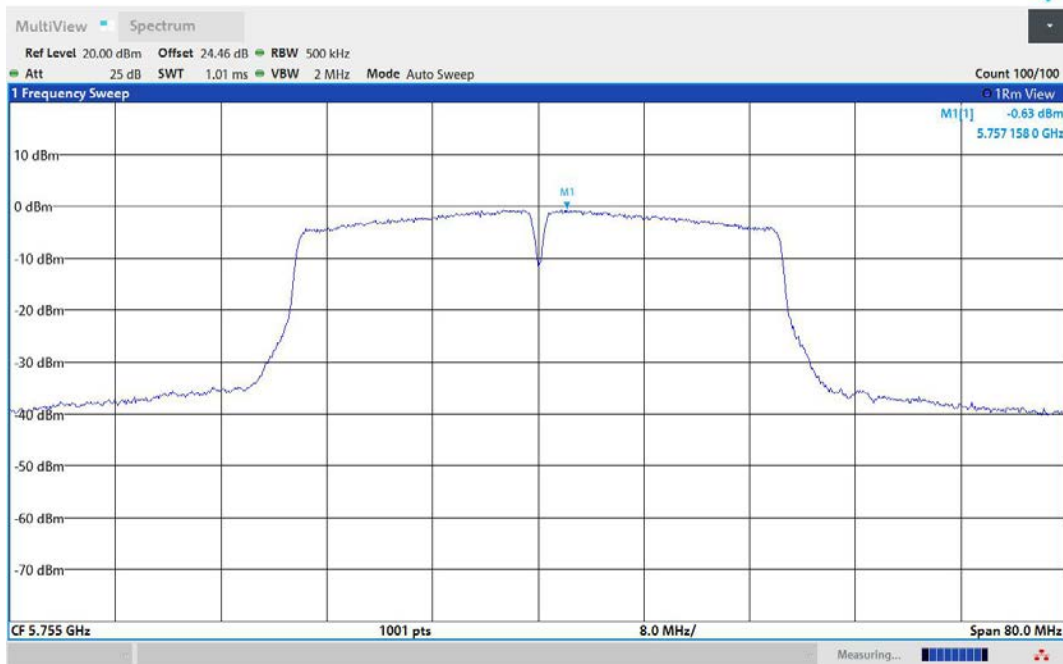
11N40MIMO-Ant1-5670-PASS



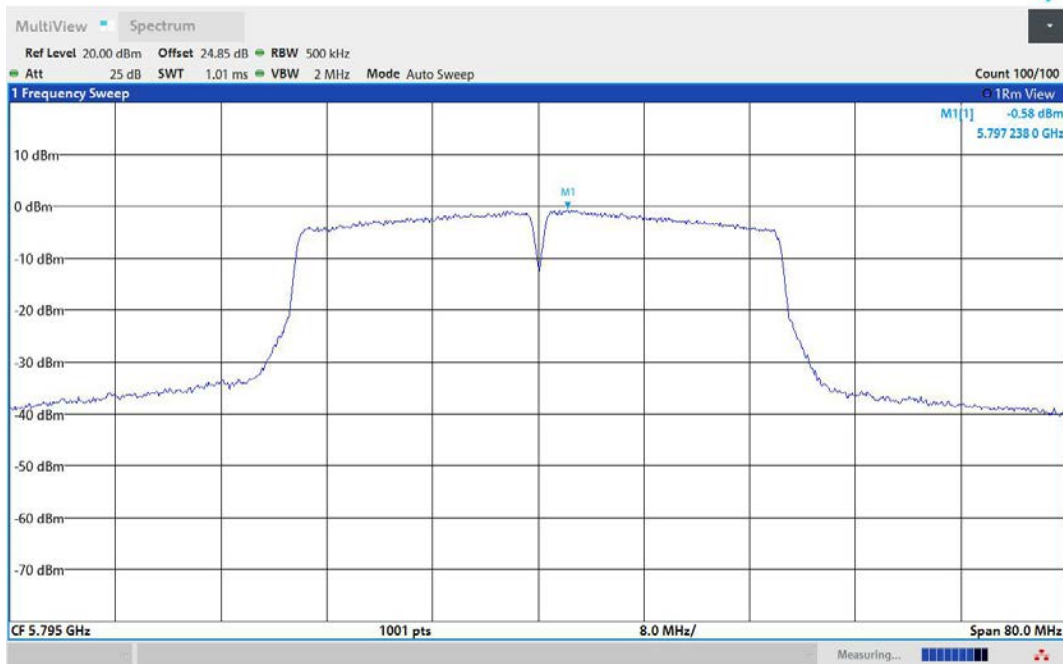
11N40MIMO-Ant2-5670-PASS



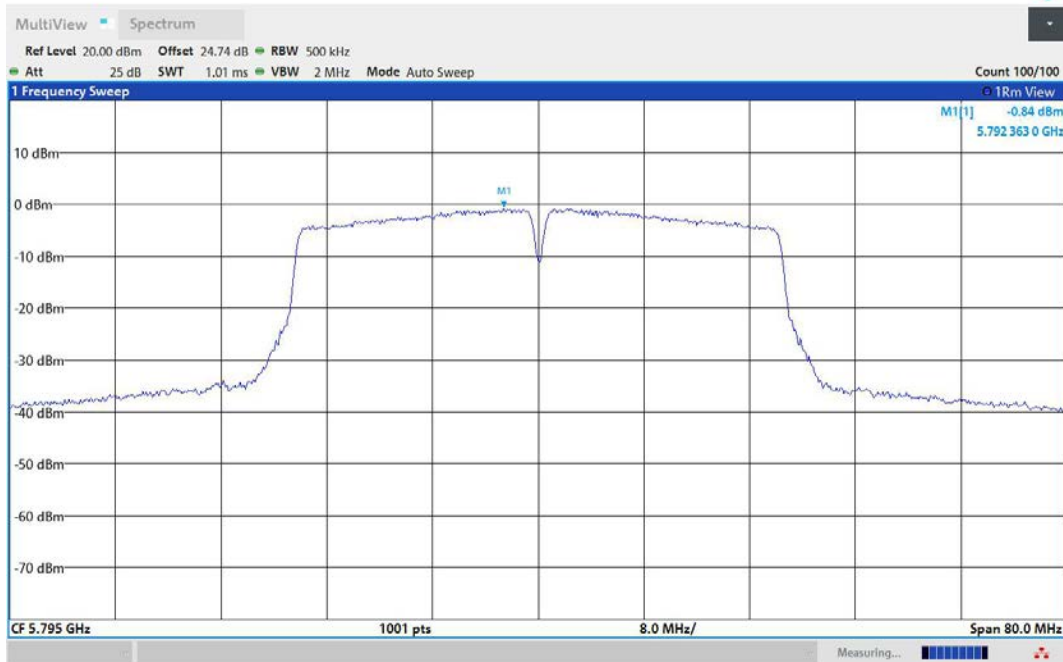
11N40MIMO-Ant1-5755-PASS



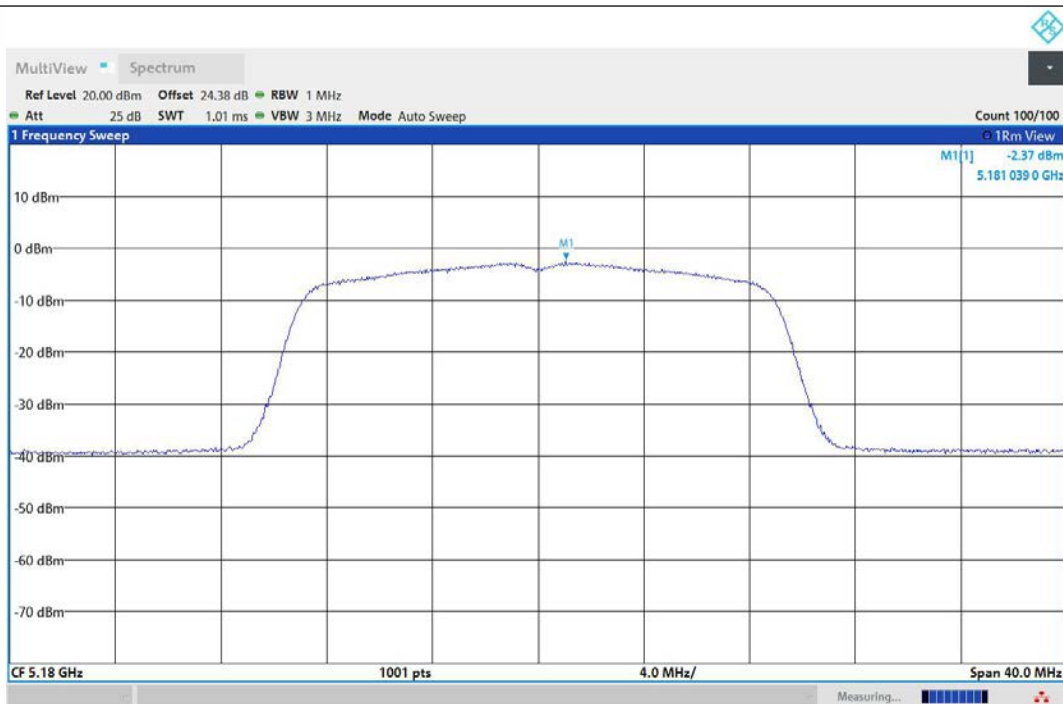
11N40MIMO-Ant2-5755-PASS



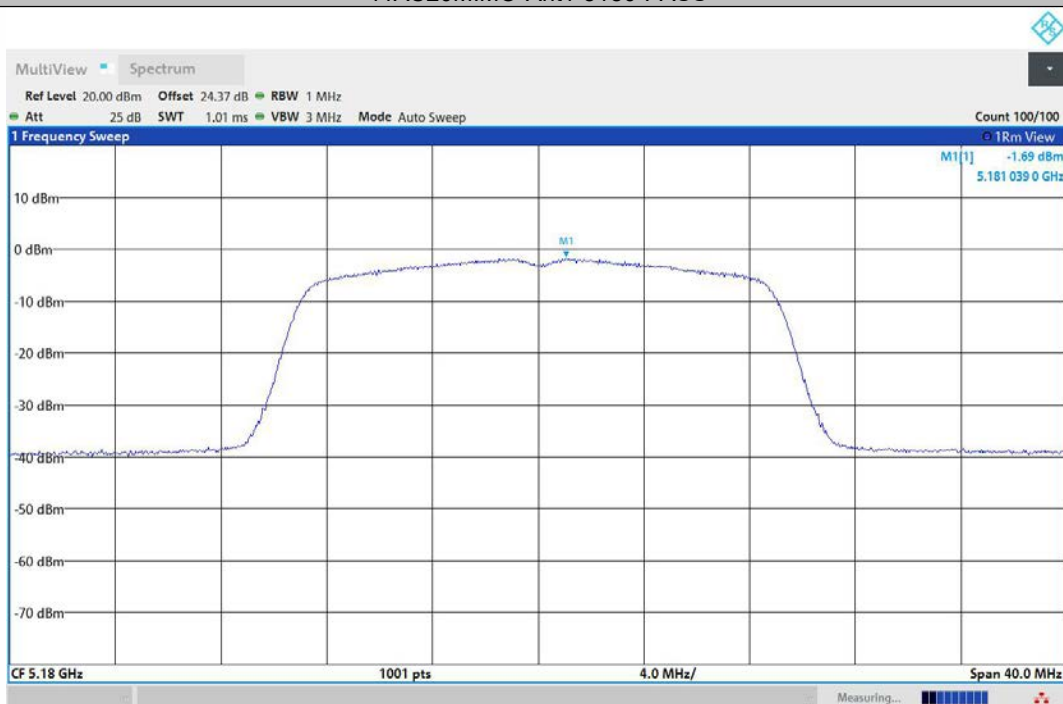
11N40MIMO-Ant1-5795-PASS



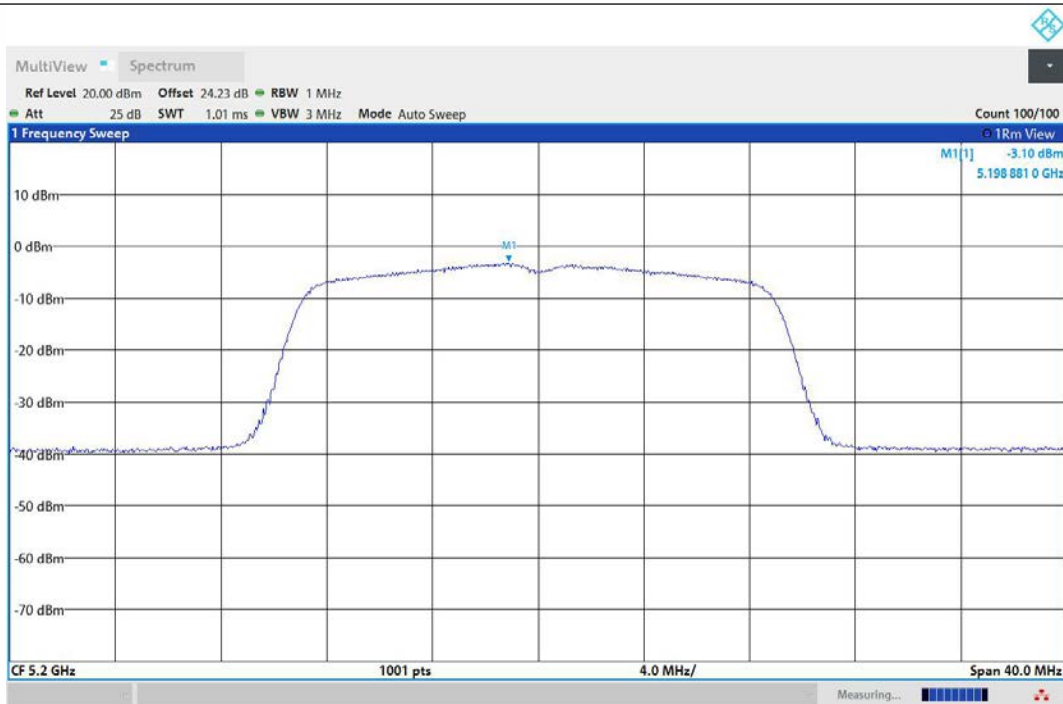
11N40MIMO-Ant2-5795-PASS



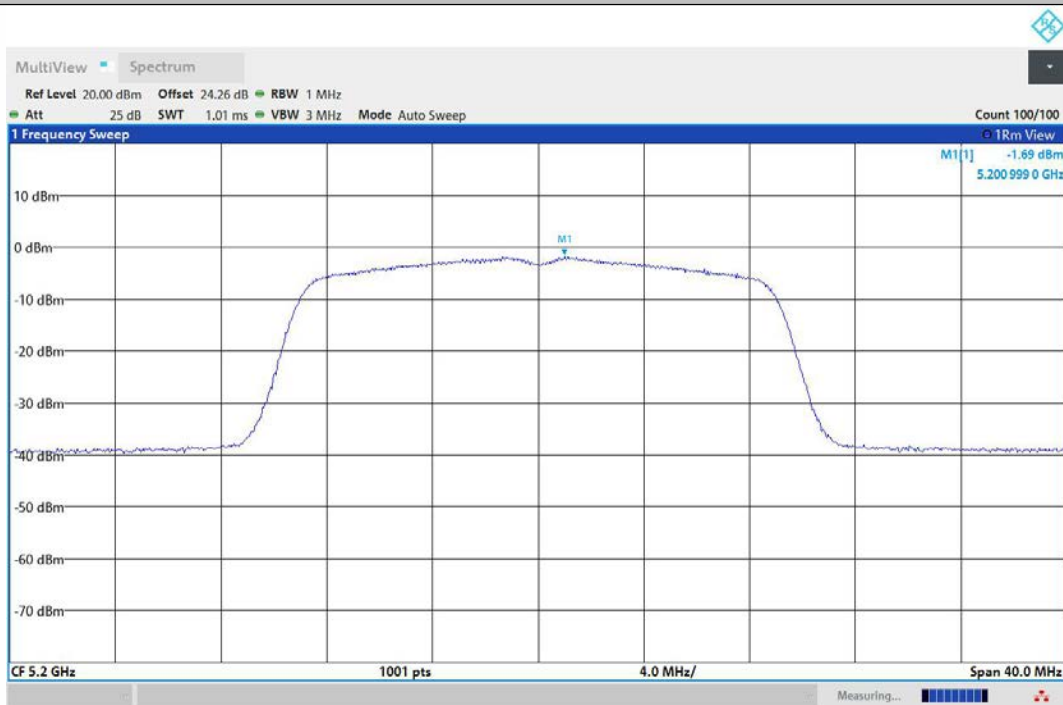
11AC20MIMO-Ant1-5180-PASS



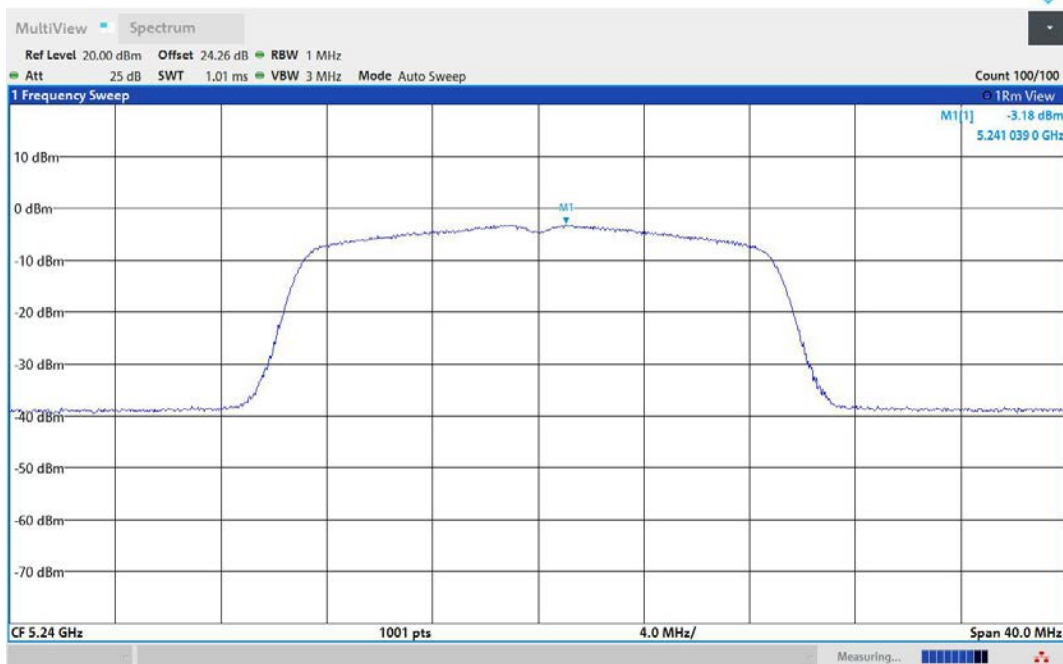
11AC20MIMO-Ant2-5180-PASS



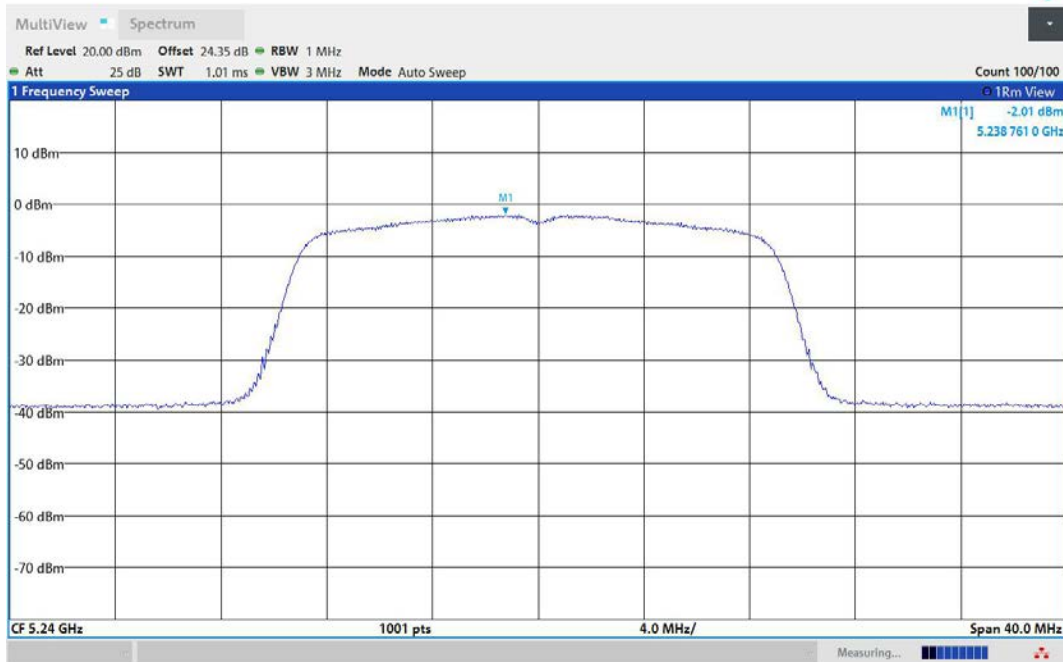
11AC20MIMO-Ant1-5200-PASS



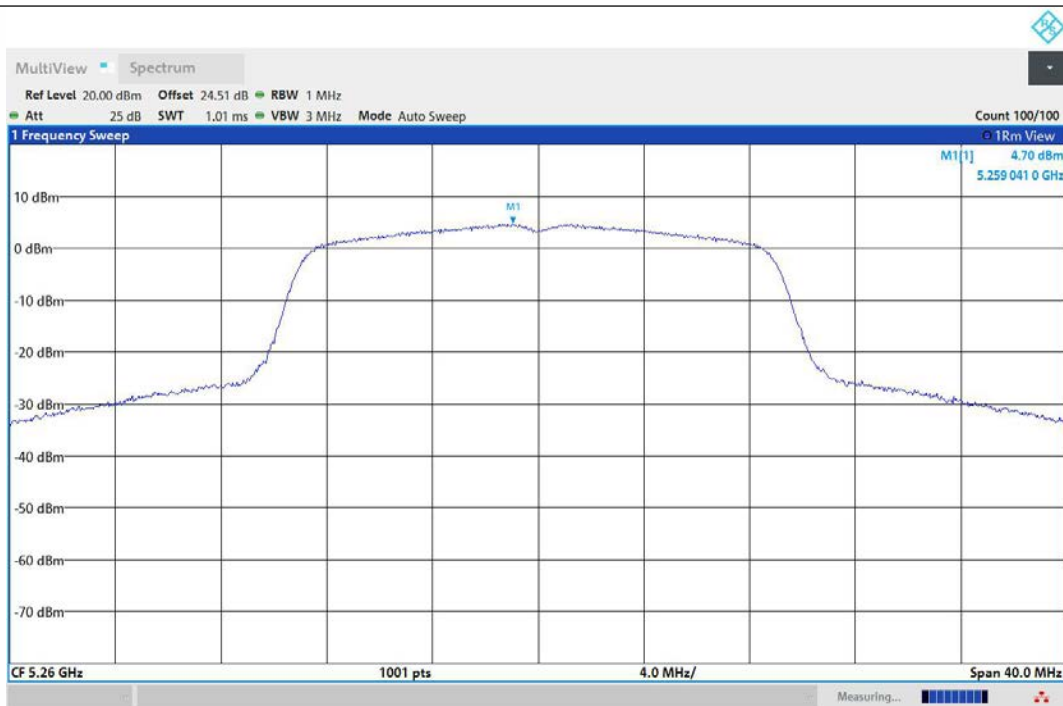
11AC20MIMO-Ant2-5200-PASS



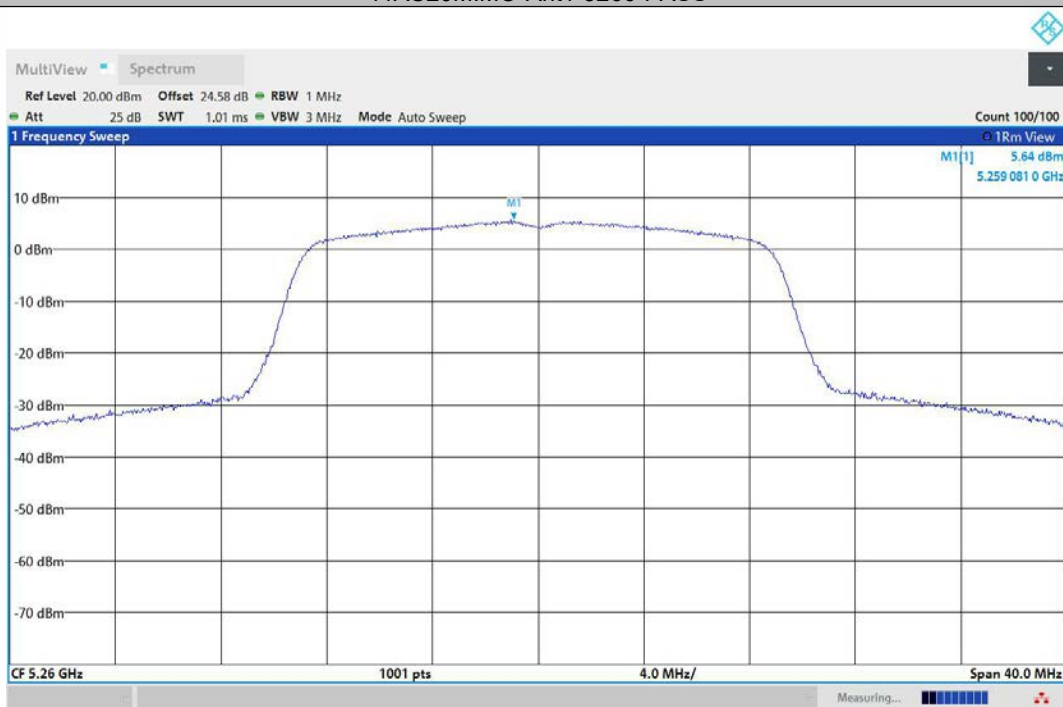
11AC20MIMO-Ant1-5240-PASS



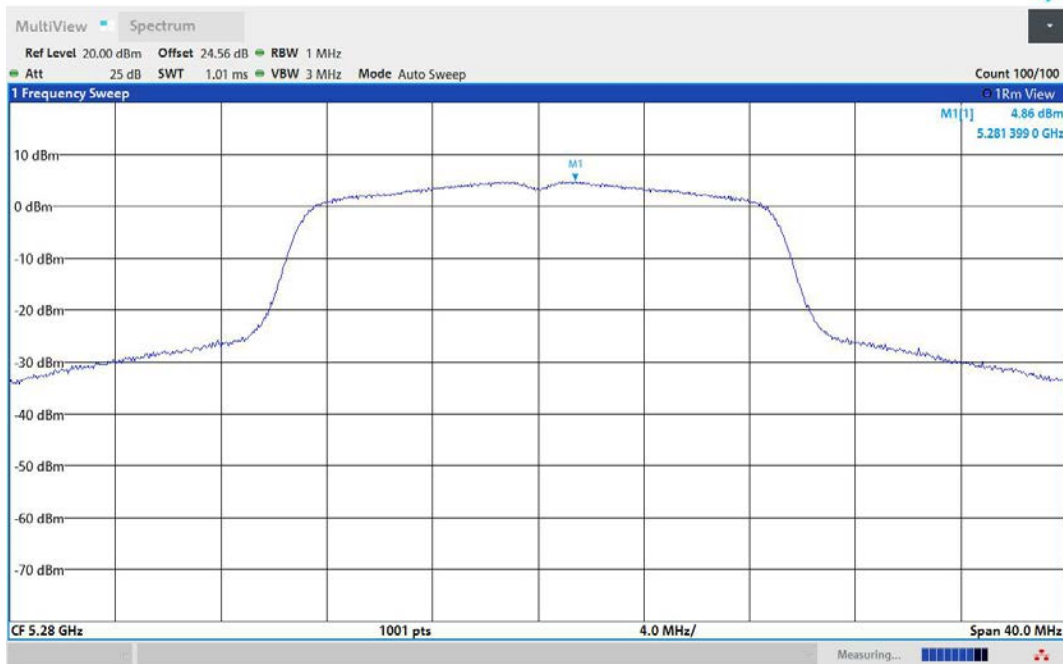
11AC20MIMO-Ant2-5240-PASS



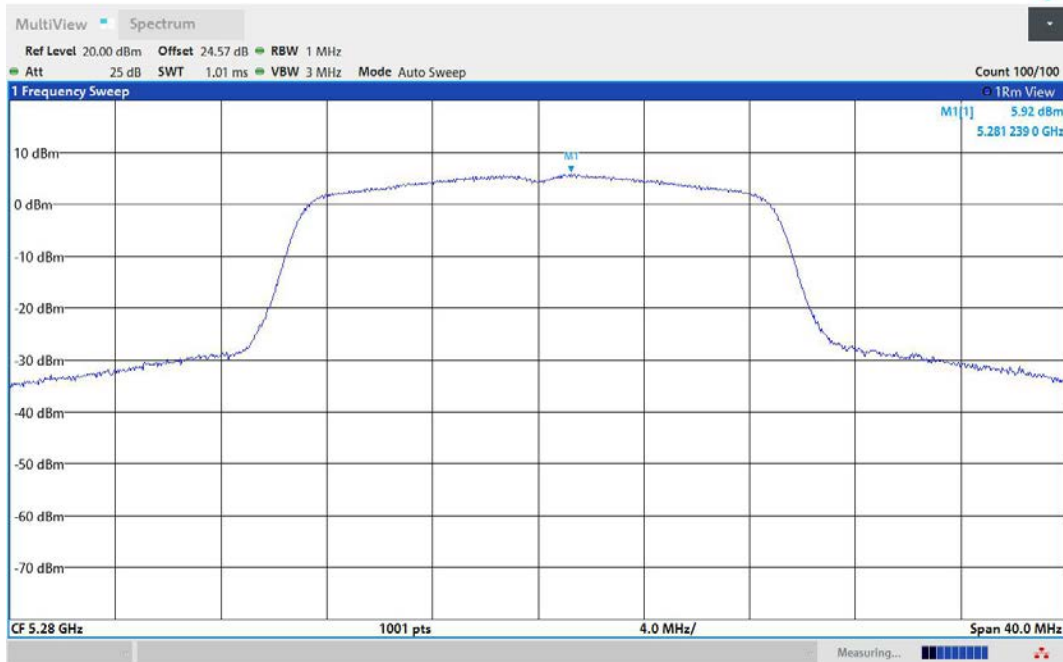
11AC20MIMO-Ant1-5260-PASS



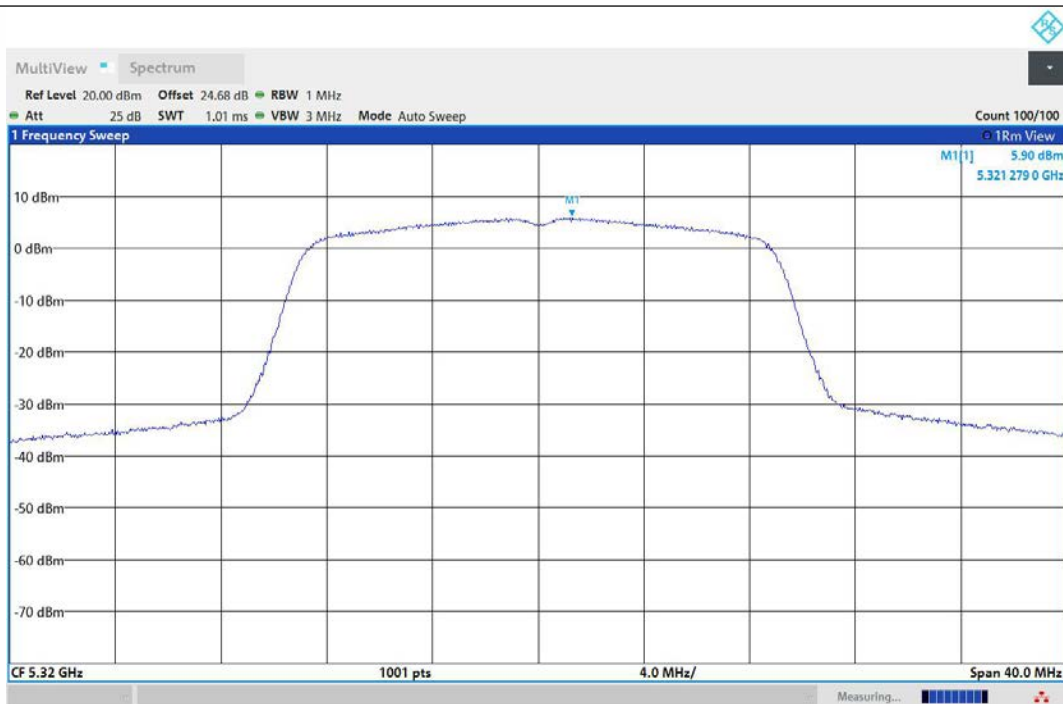
11AC20MIMO-Ant2-5260-PASS



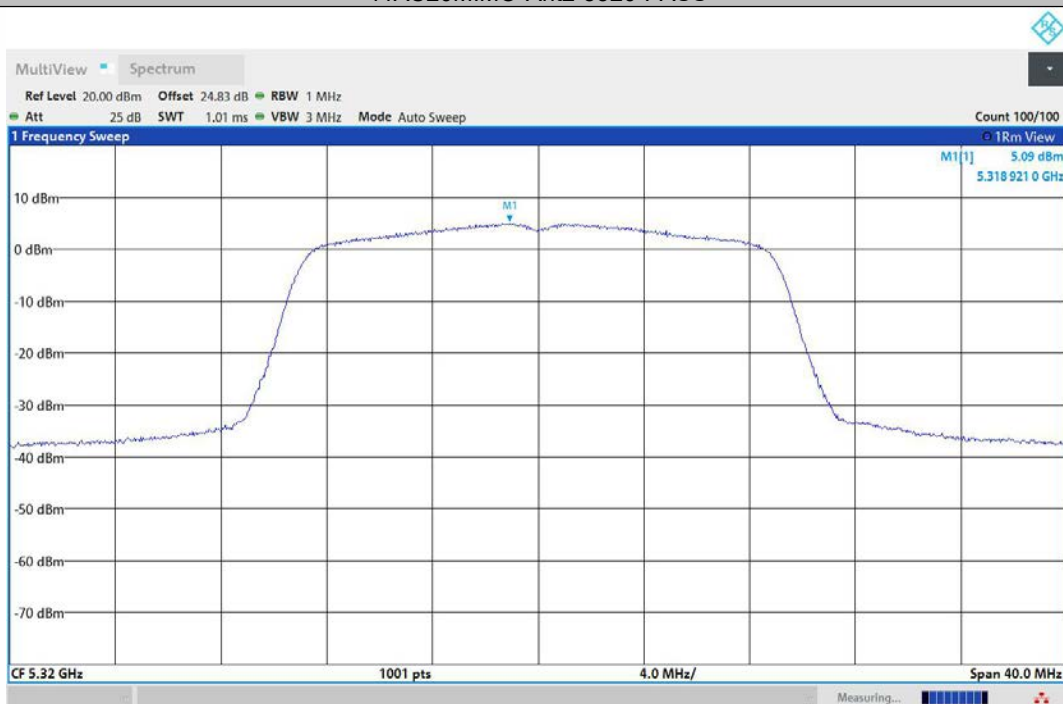
11AC20MIMO-Ant1-5280-PASS



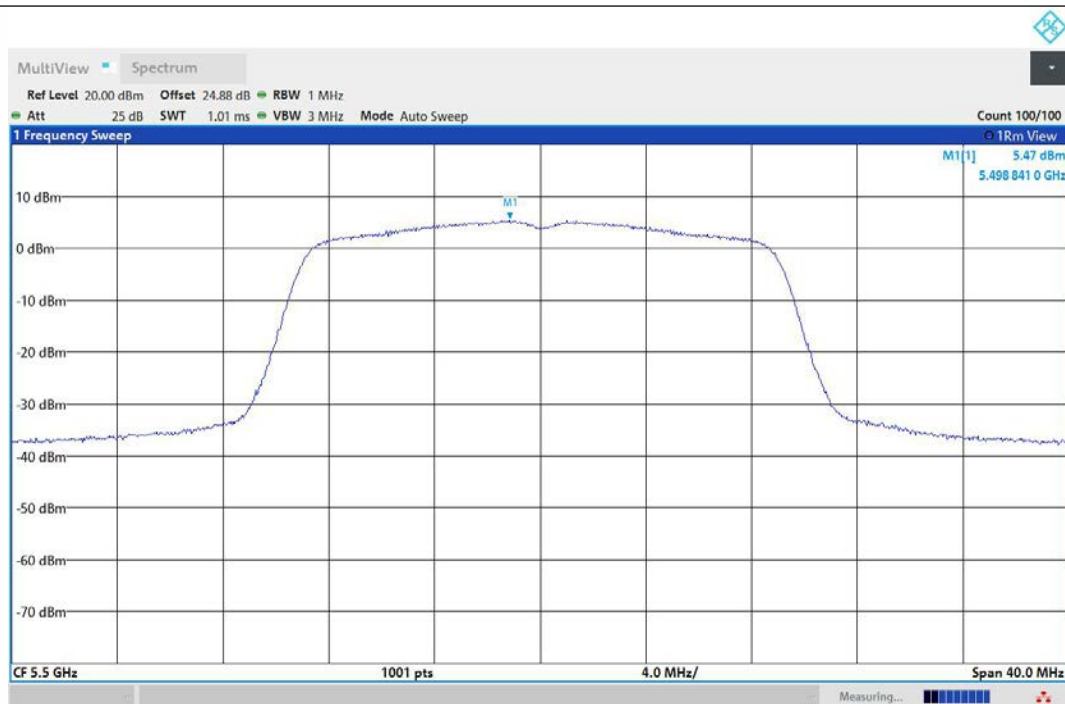
11AC20MIMO-Ant2-5280-PASS



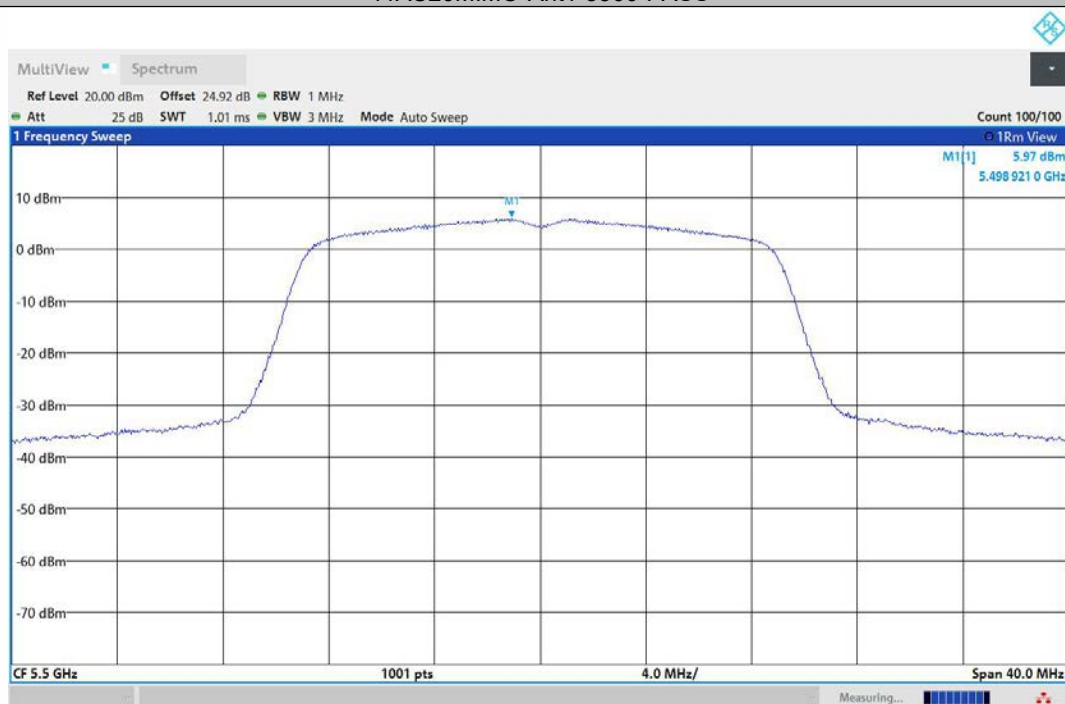
11AC20MIMO-Ant2-5320-PASS



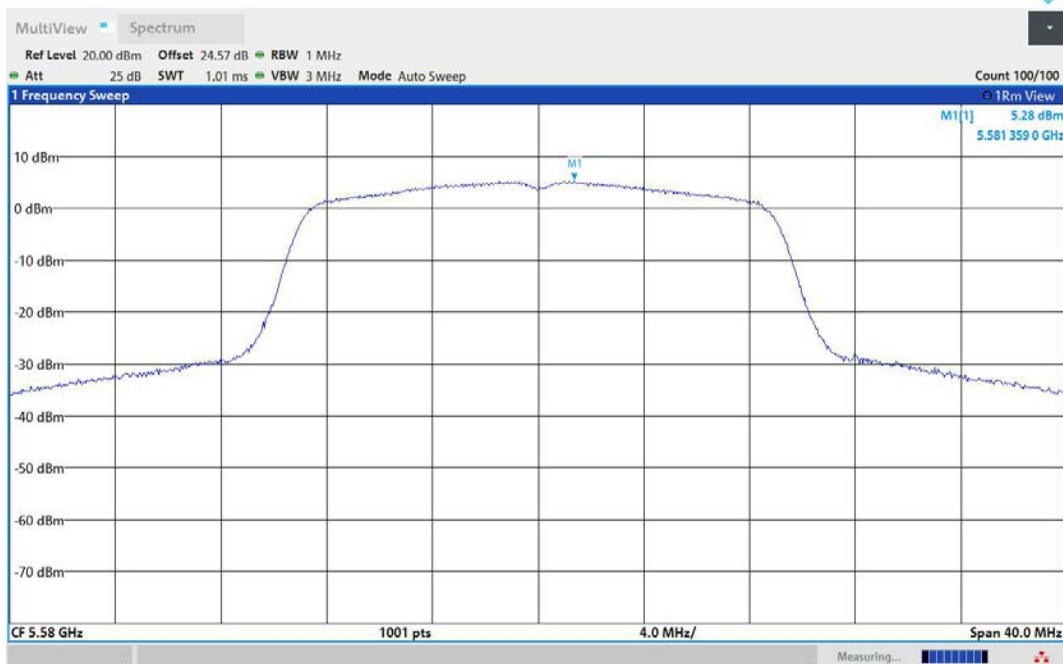
11AC20MIMO-Ant1-5320-PASS



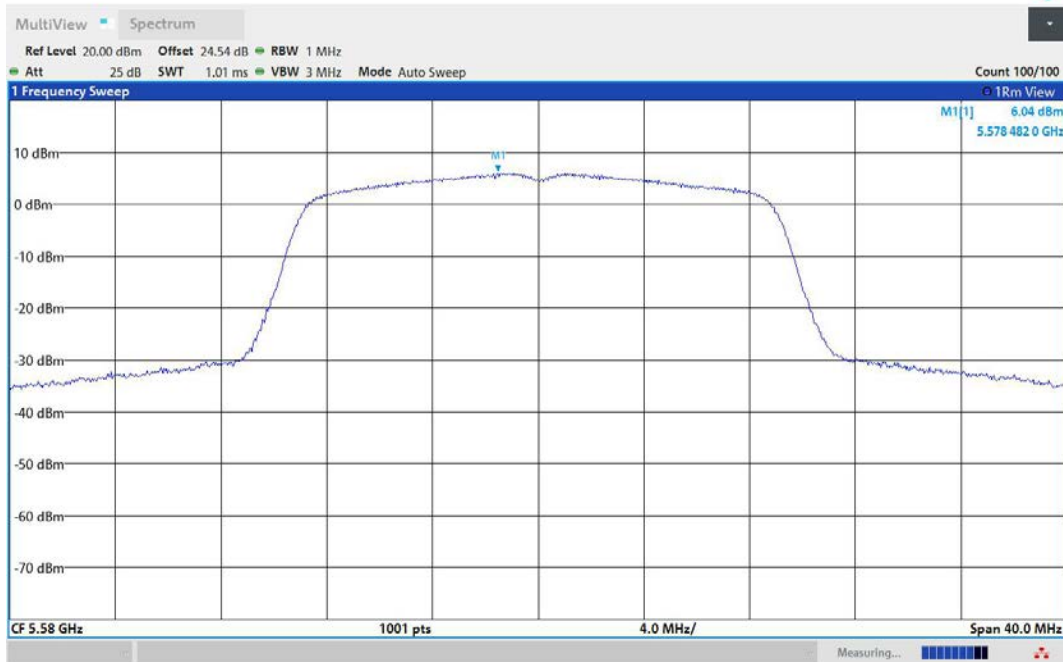
11AC20MIMO-Ant1-5500-PASS



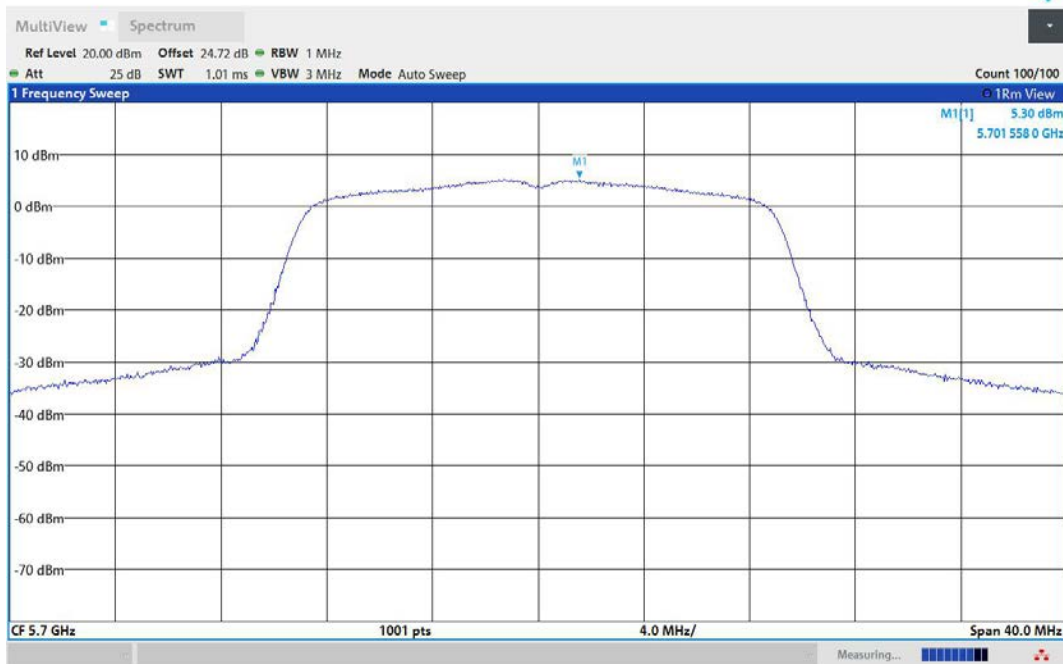
11AC20MIMO-Ant2-5500-PASS



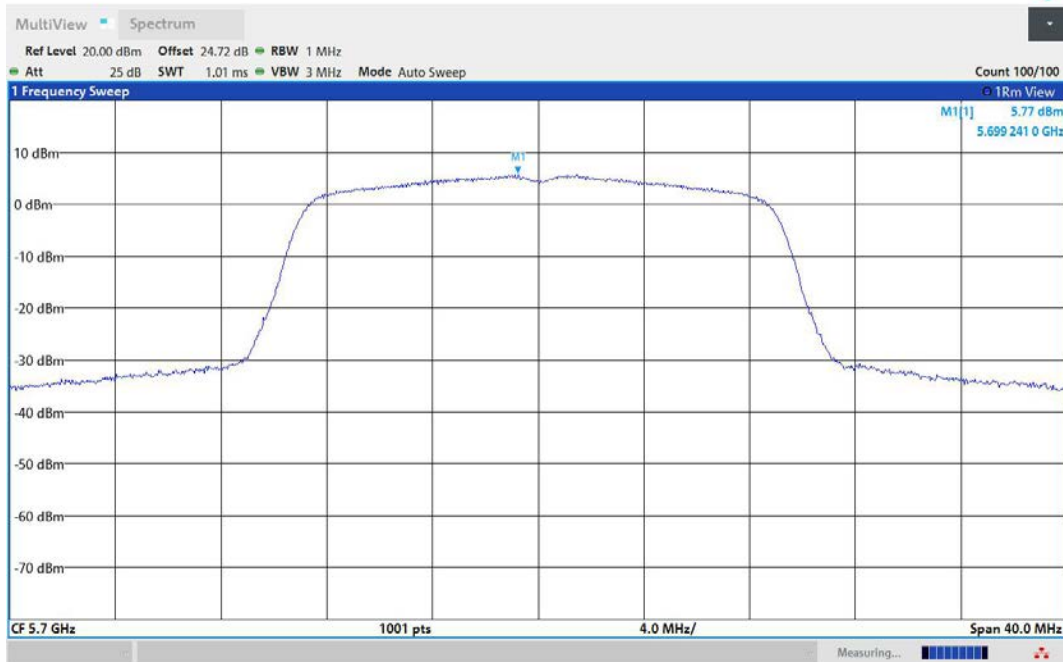
11AC20MIMO-Ant1-5580-PASS



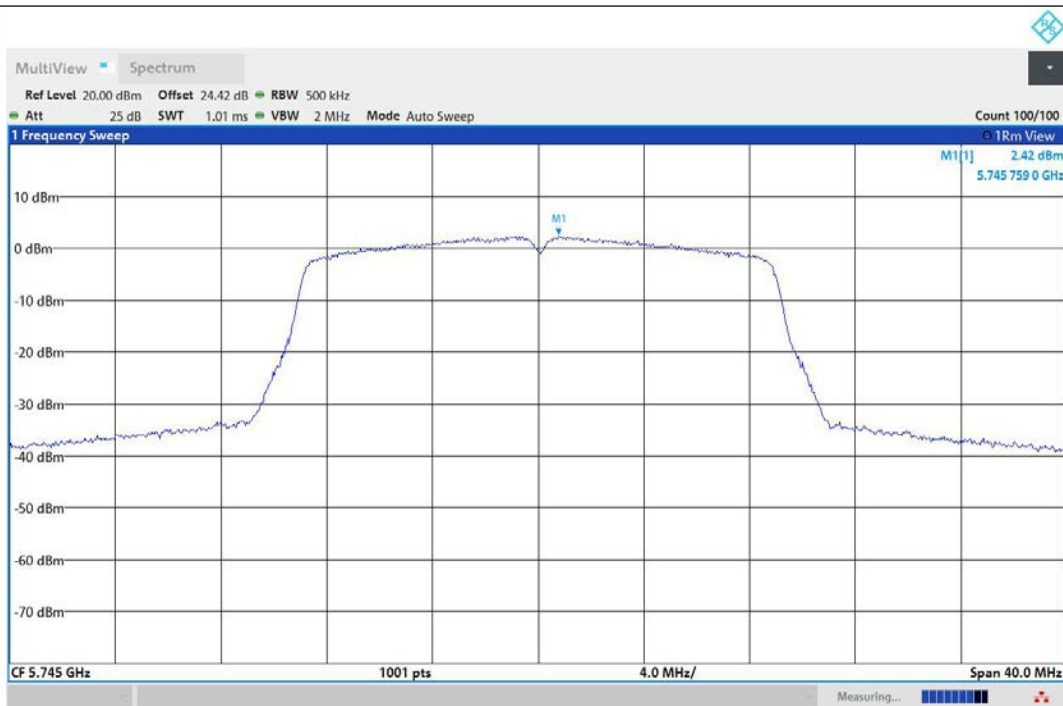
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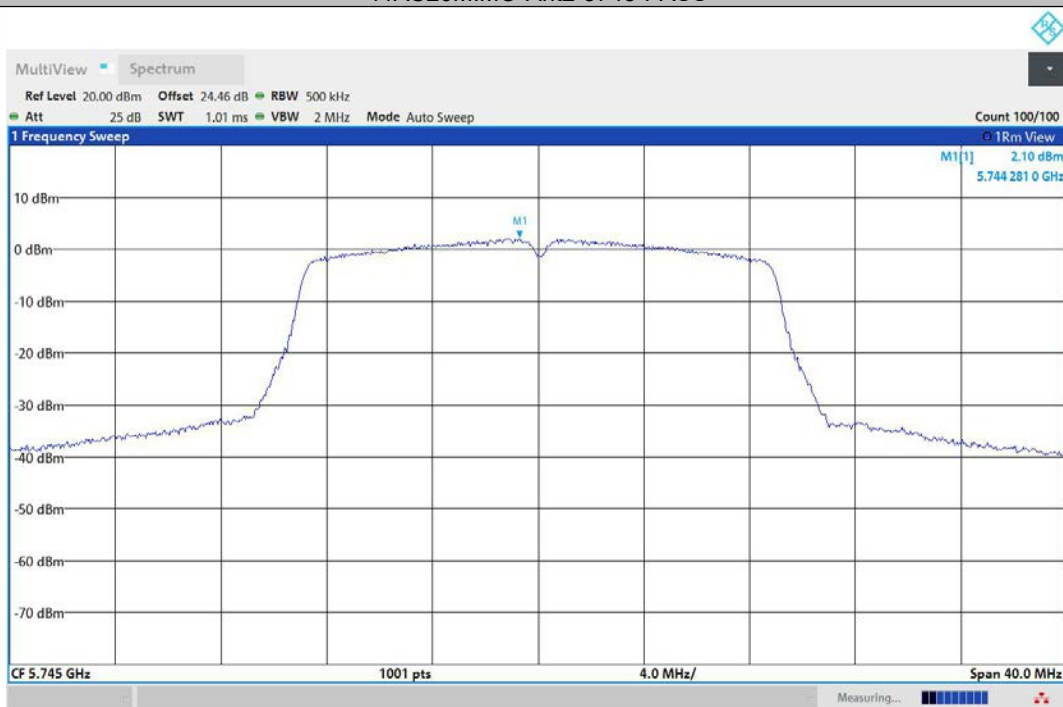
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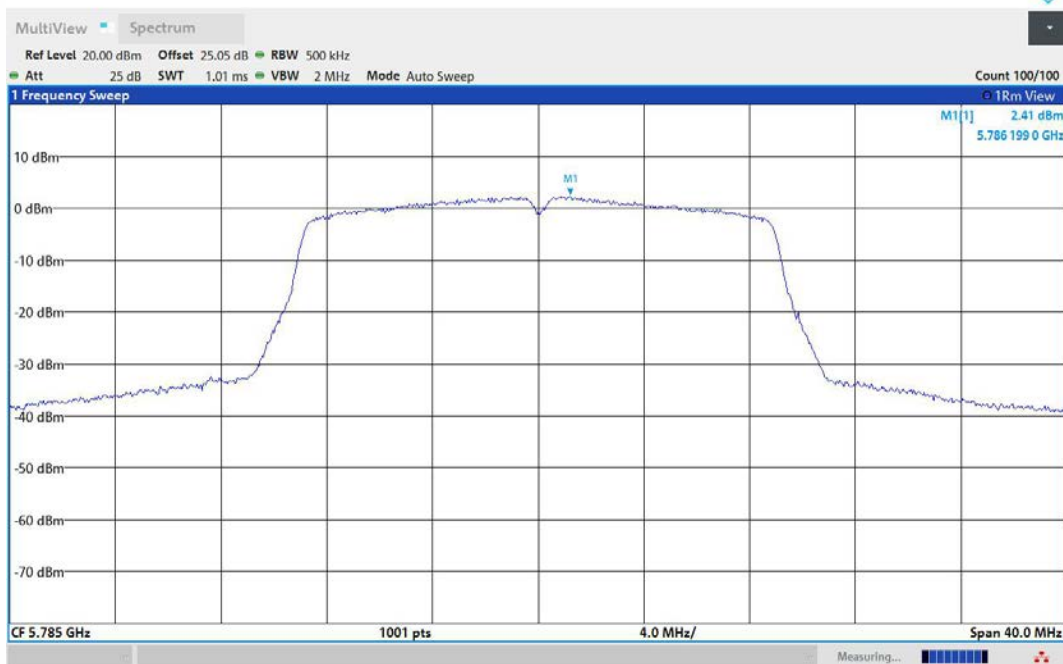
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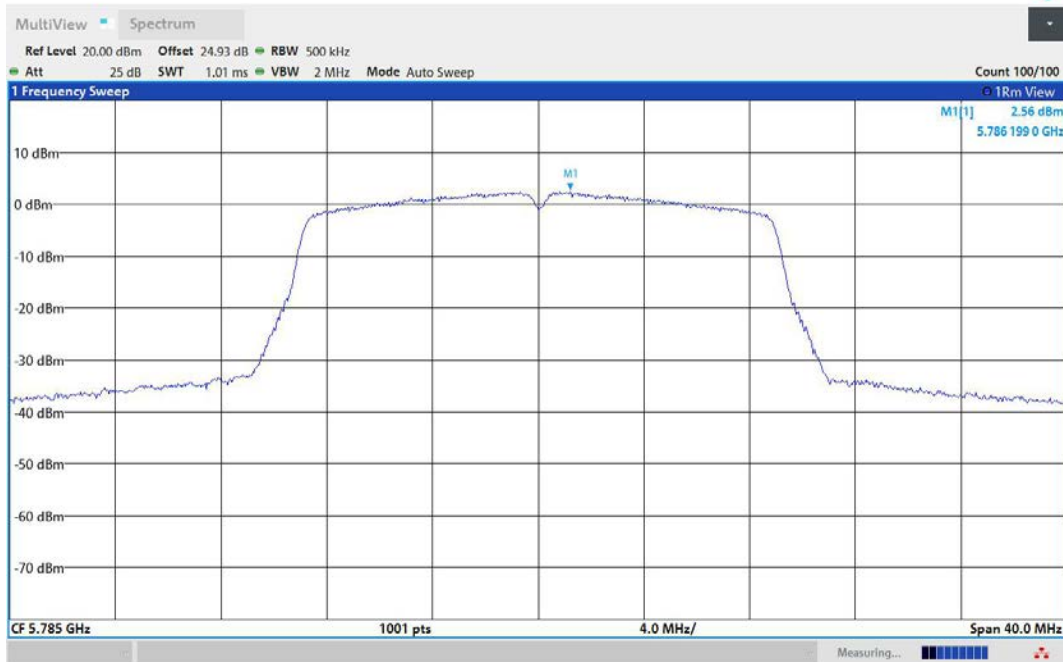
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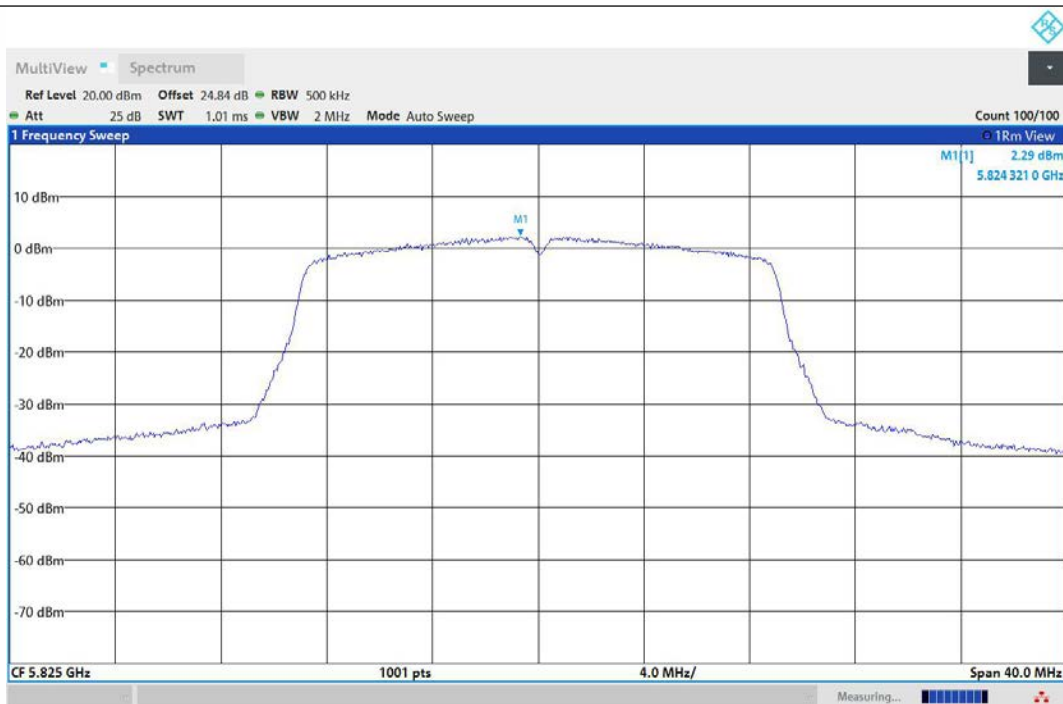
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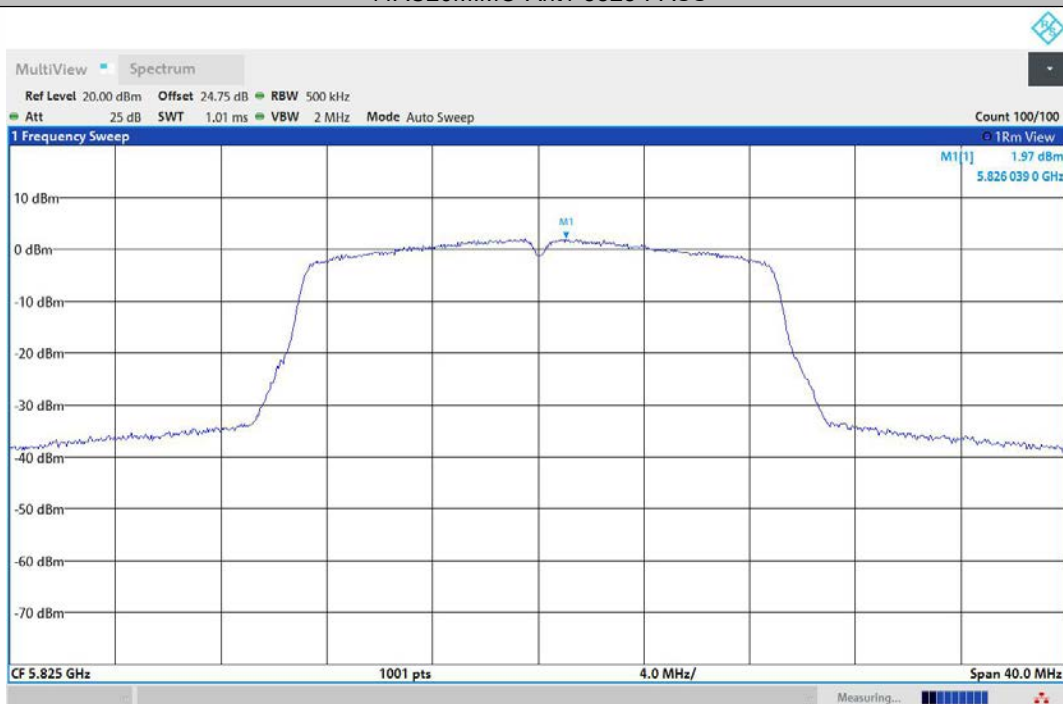
11AC20MIMO-Ant1-5785-PASS



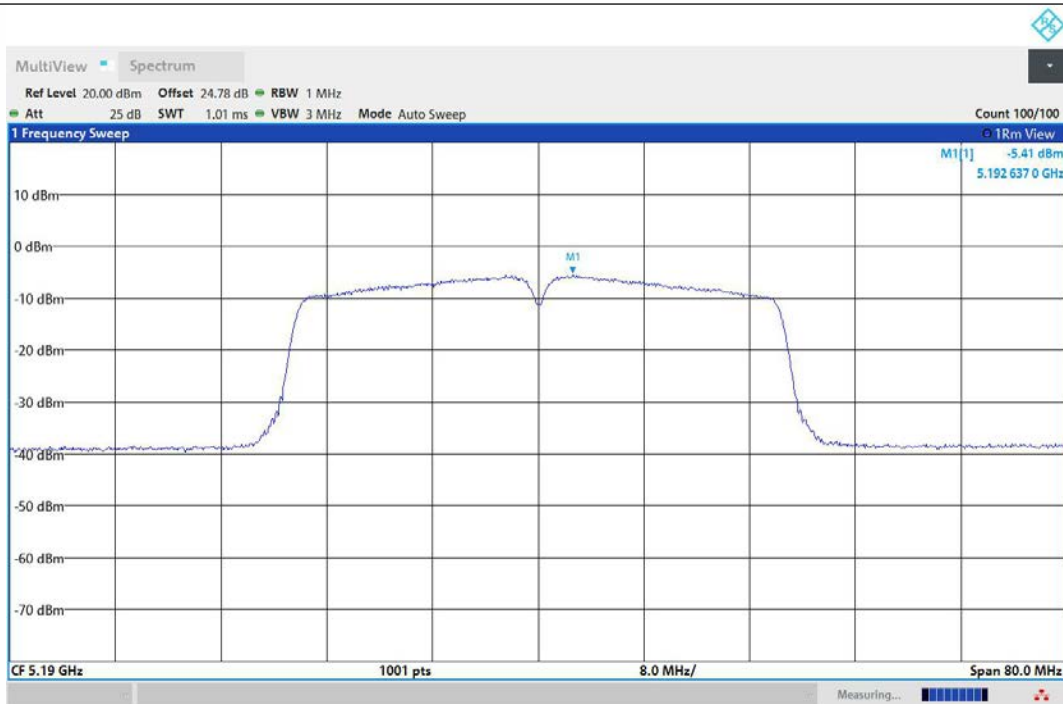
11AC20MIMO-Ant2-5785-PASS



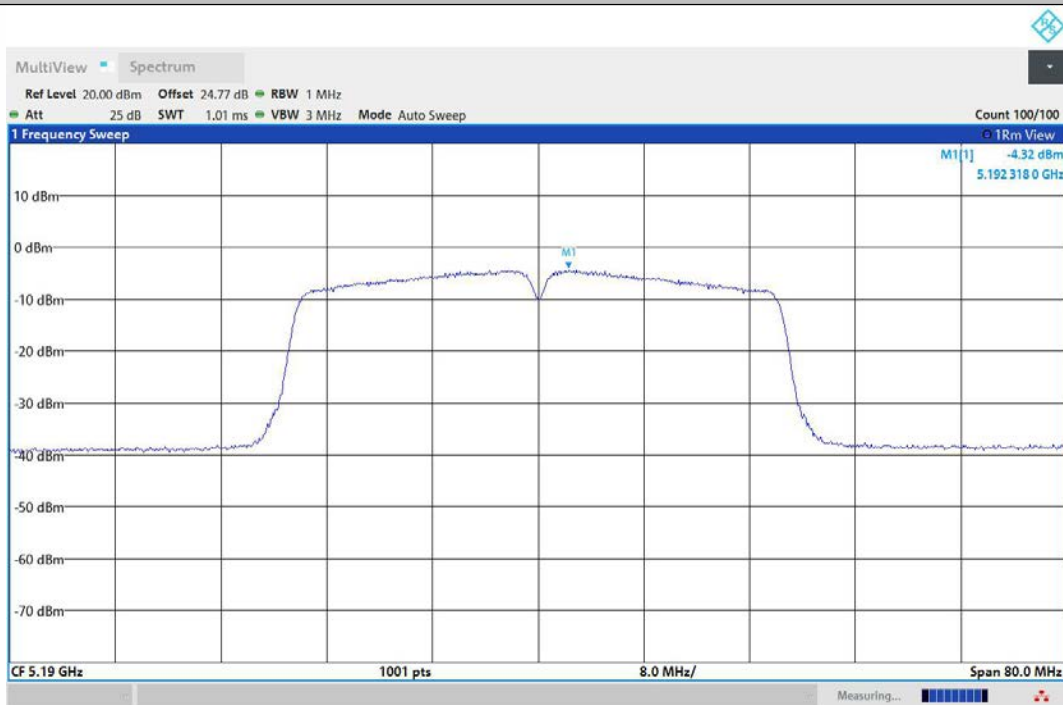
11AC20MIMO-Ant1-5825-PASS



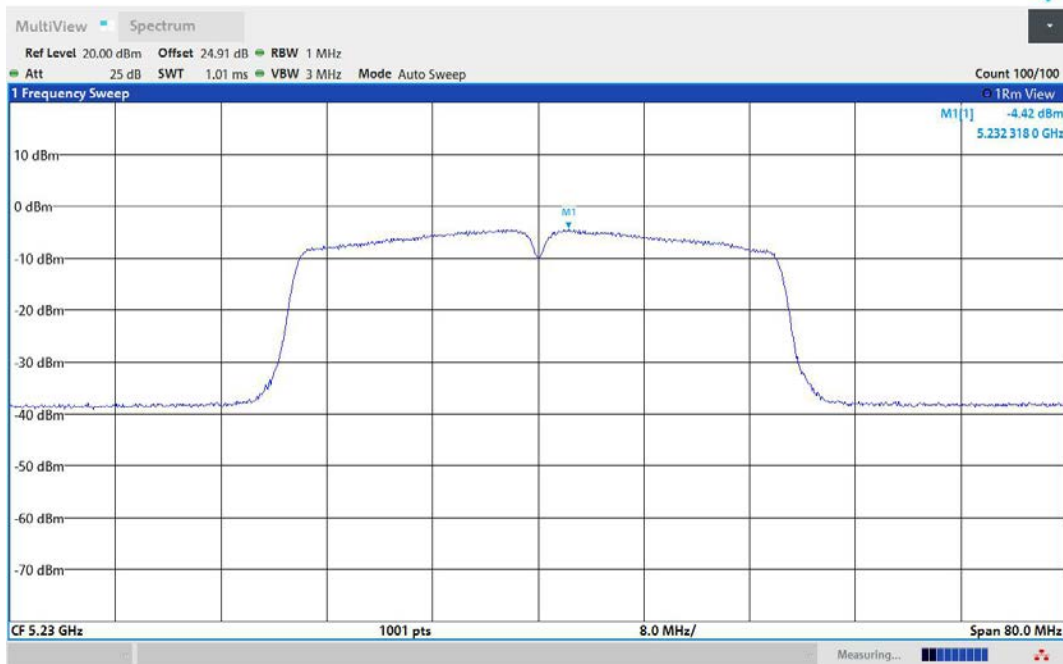
11AC20MIMO-Ant2-5825-PASS



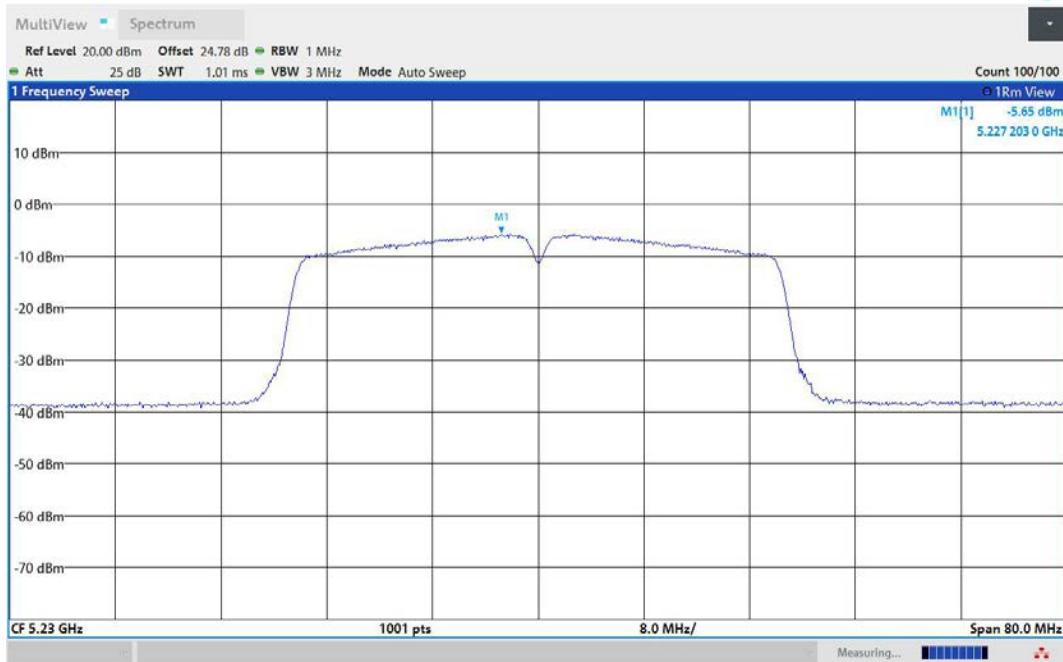
11AC40MIMO-Ant1-5190-PASS



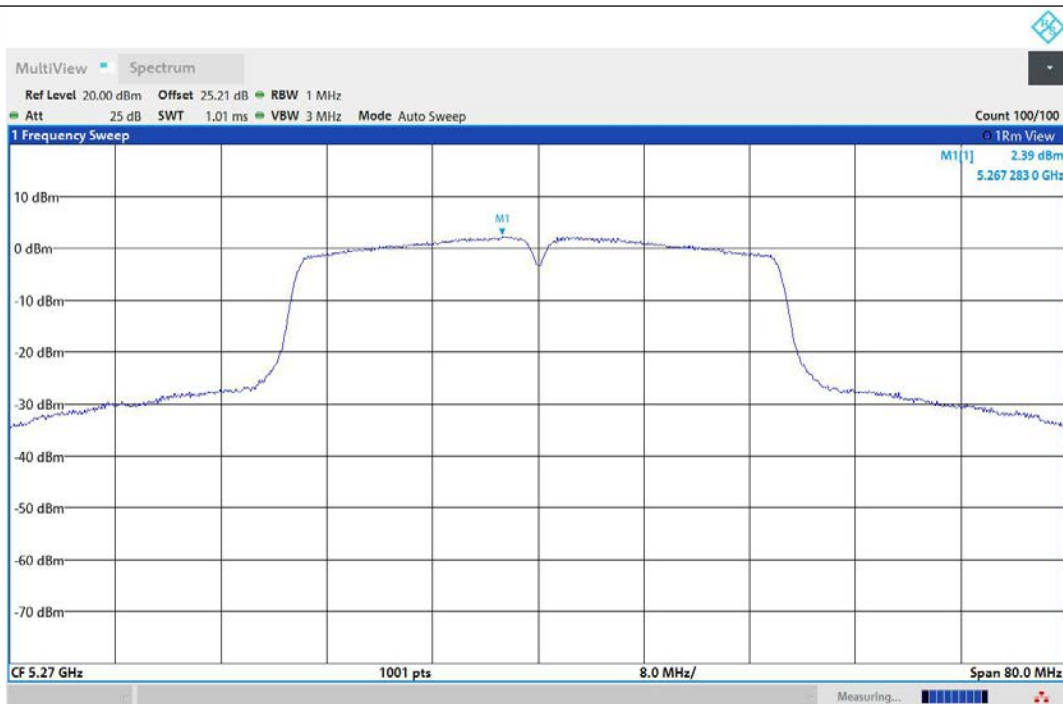
11AC40MIMO-Ant2-5190-PASS



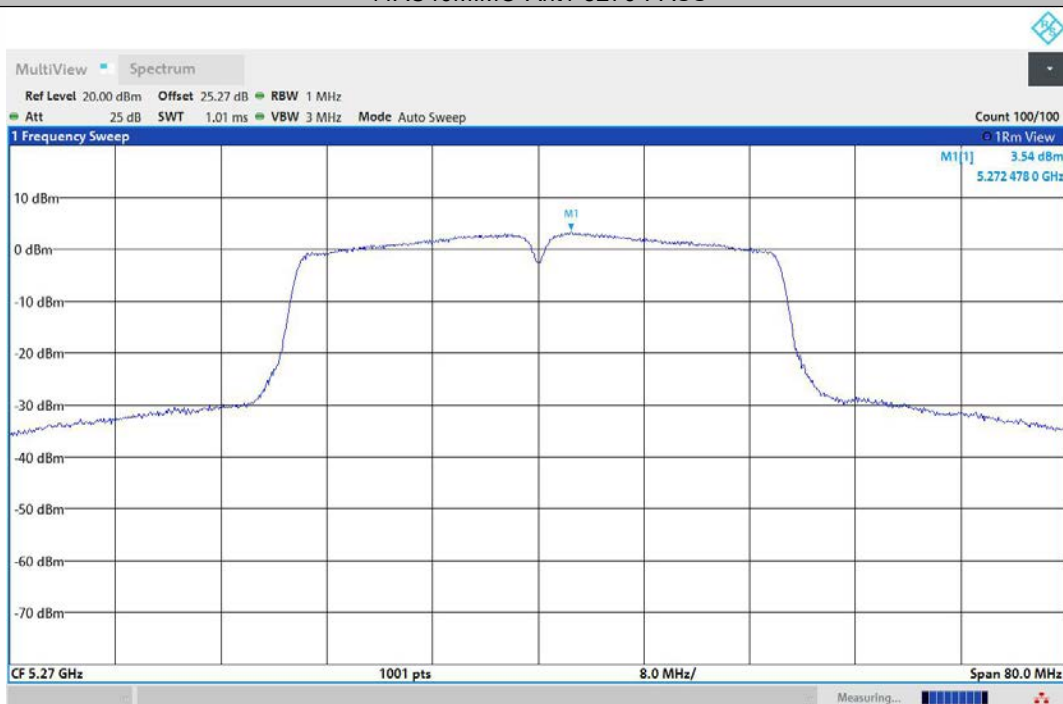
11AC40MIMO-Ant2-5230-PASS



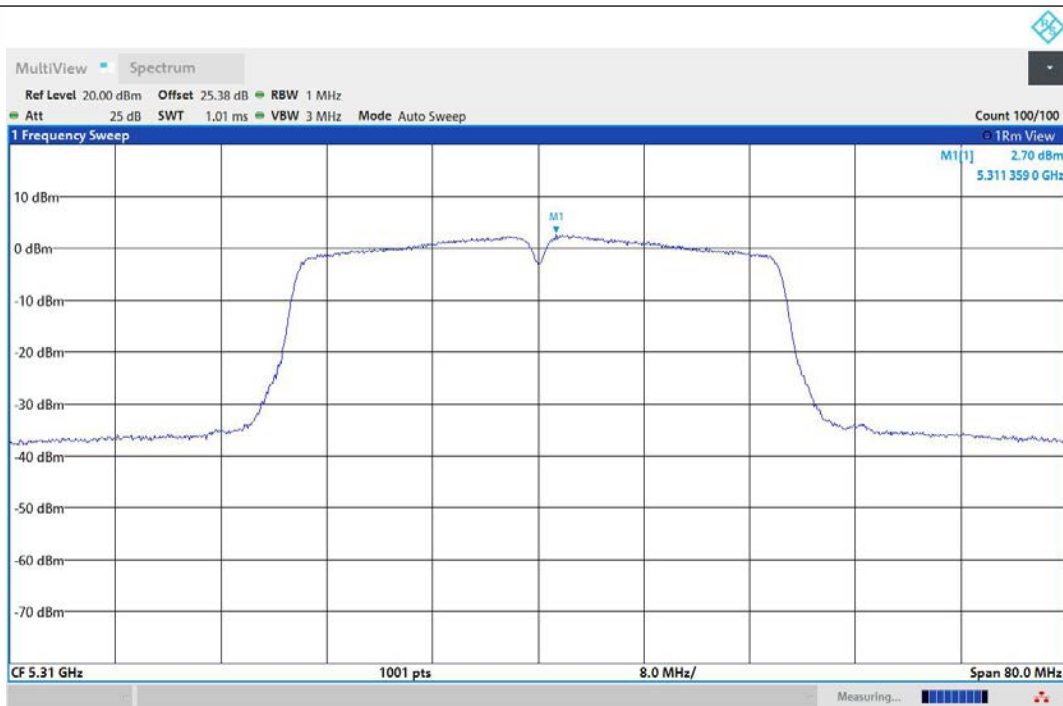
11AC40MIMO-Ant1-5230-PASS



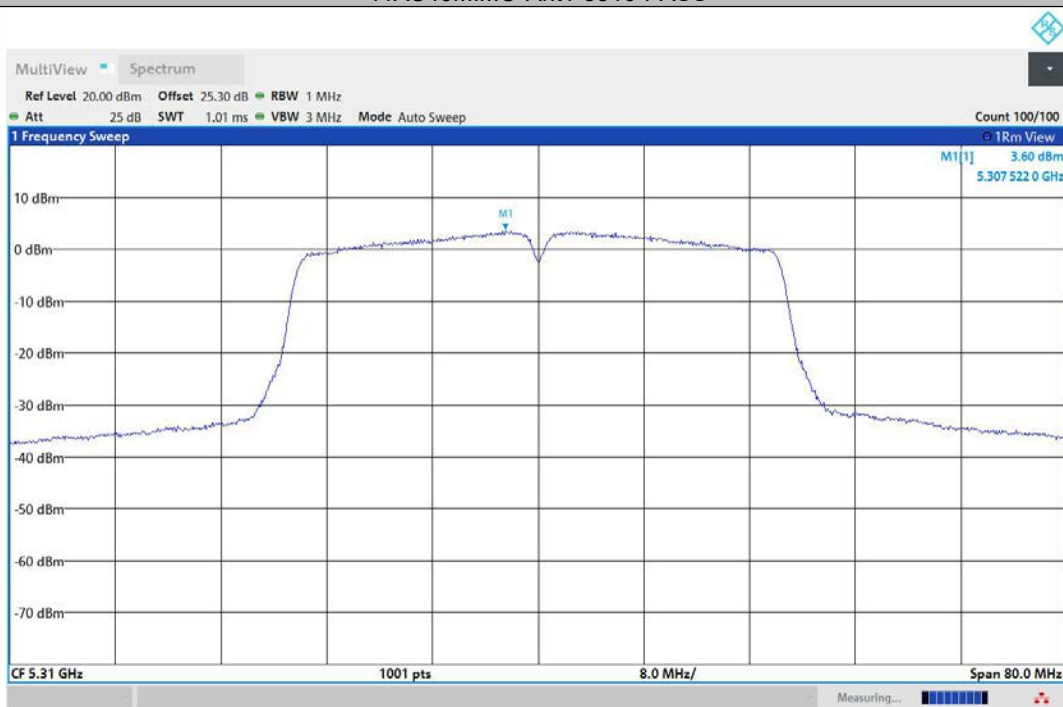
11AC40MIMO-Ant1-5270-PASS



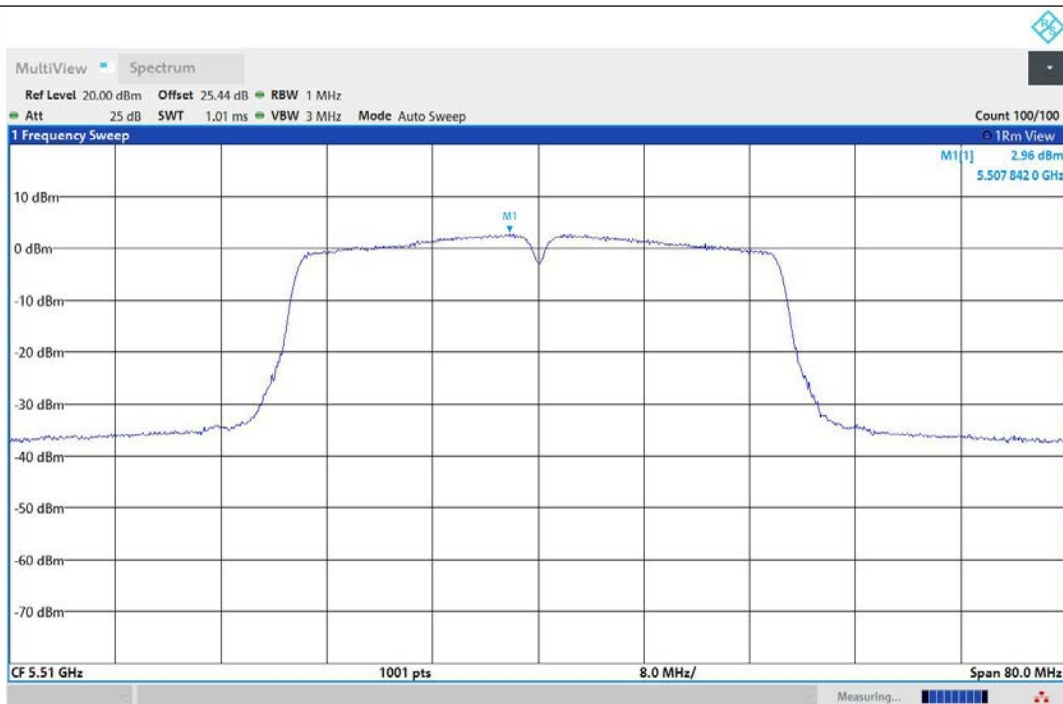
11AC40MIMO-Ant2-5270-PASS



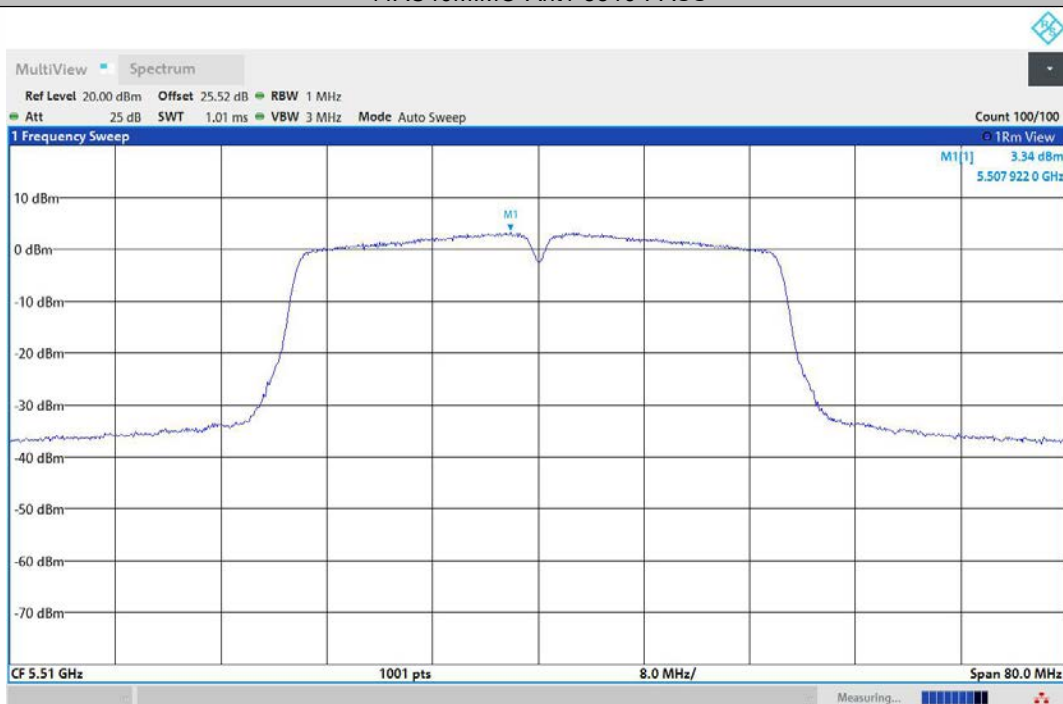
11AC40MIMO-Ant1-5310-PASS



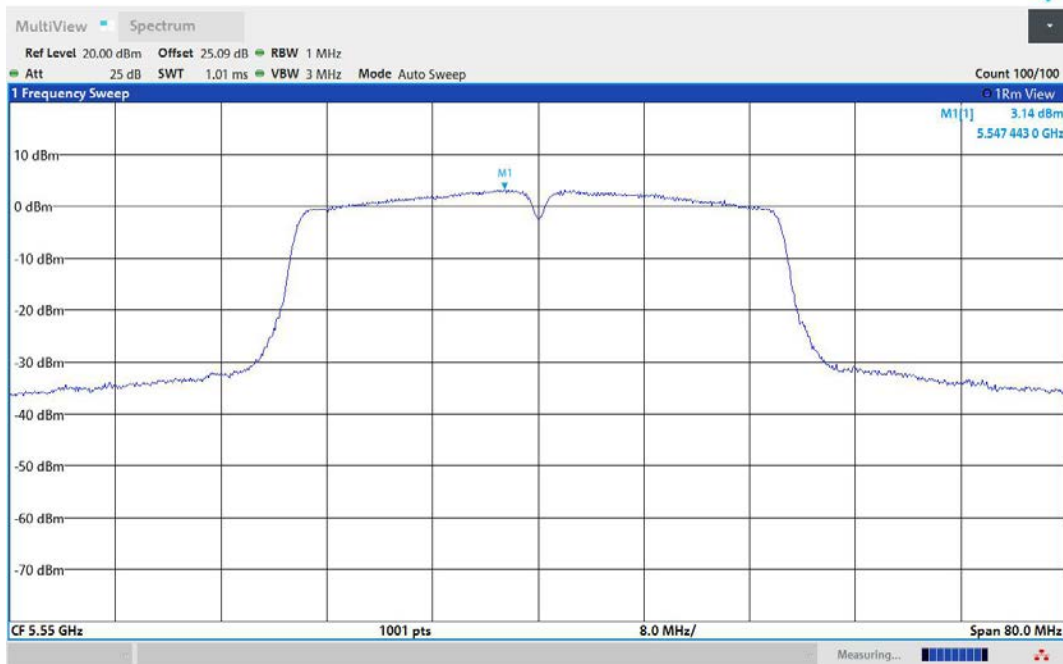
11AC40MIMO-Ant2-5310-PASS



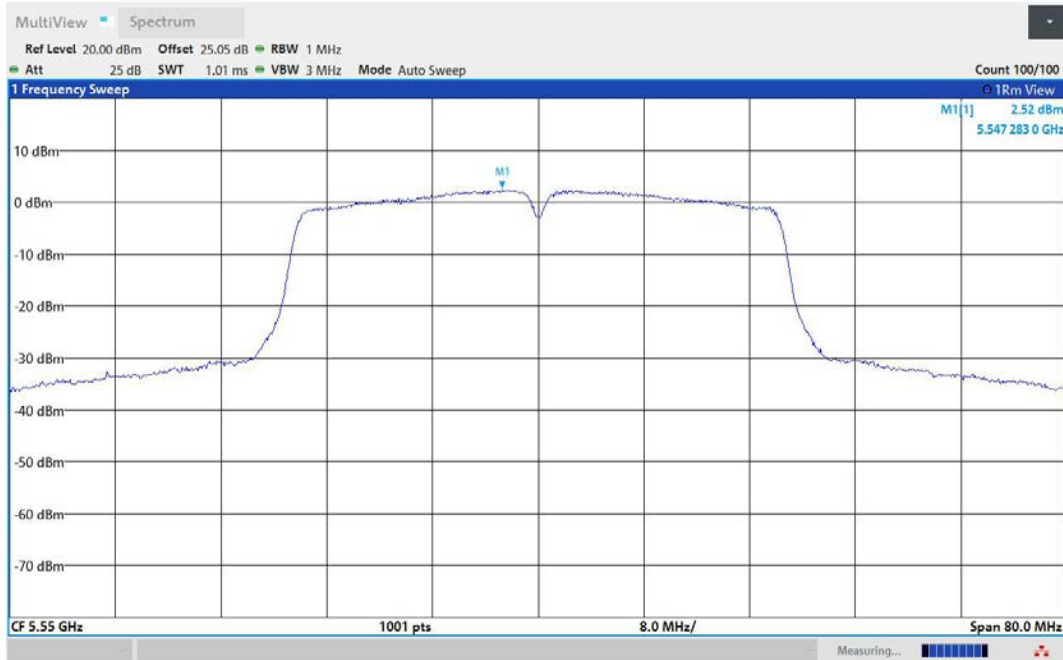
11AC40MIMO-Ant1-5510-PASS



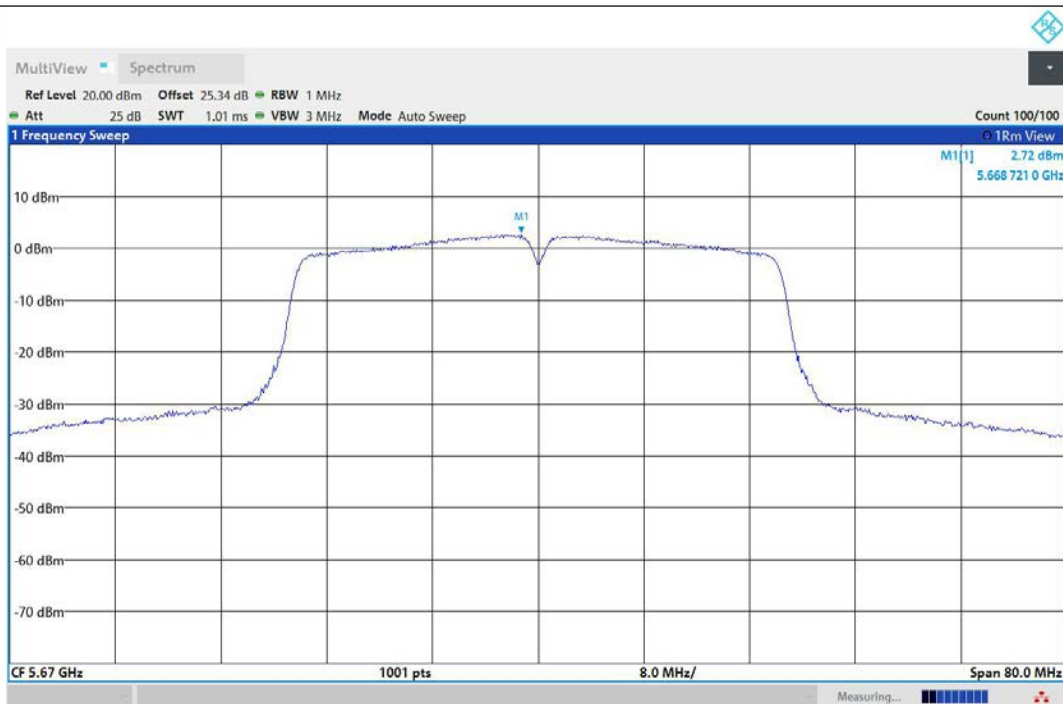
11AC40MIMO-Ant2-5510-PASS



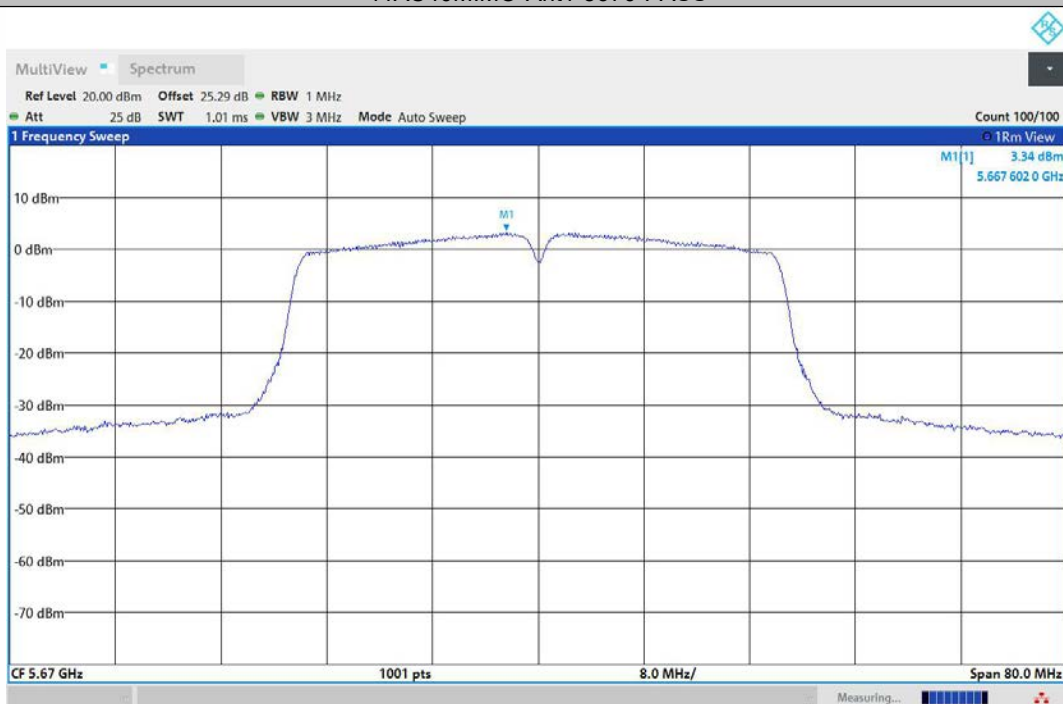
11AC40MIMO-Ant2-5550-PASS



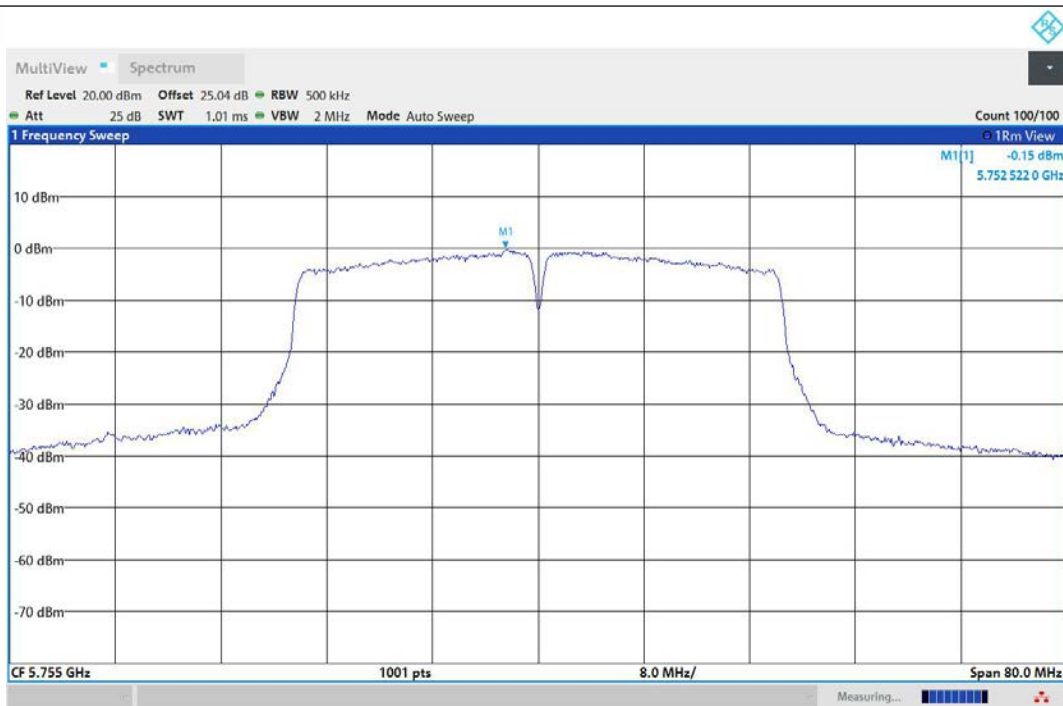
11AC40MIMO-Ant1-5550-PASS



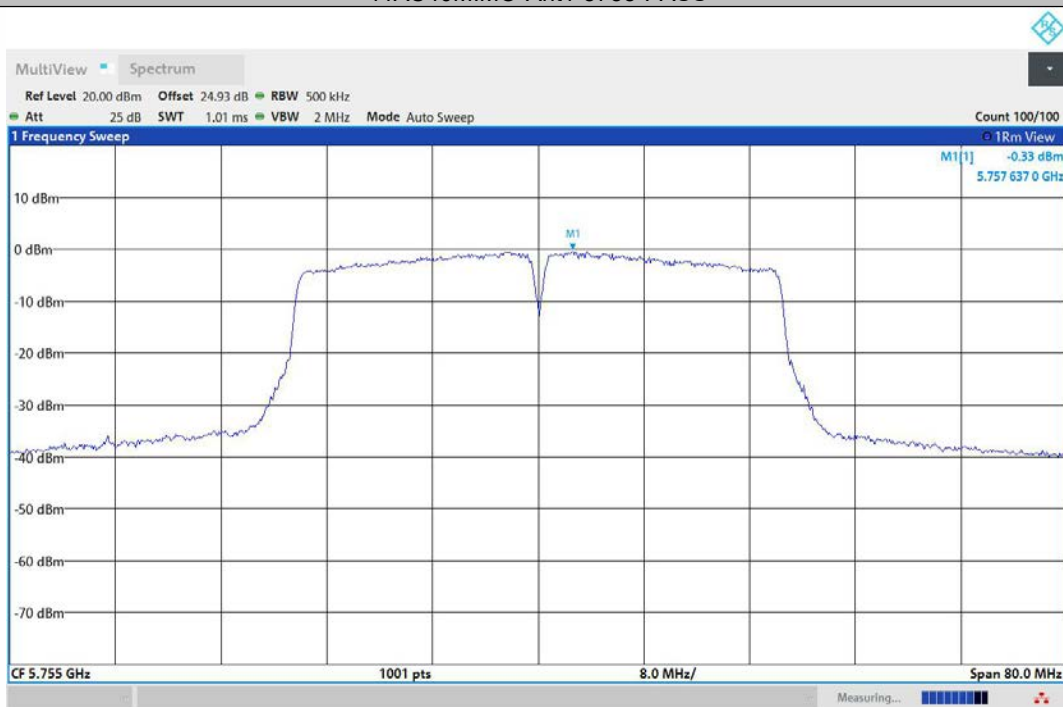
11AC40MIMO-Ant1-5670-PASS



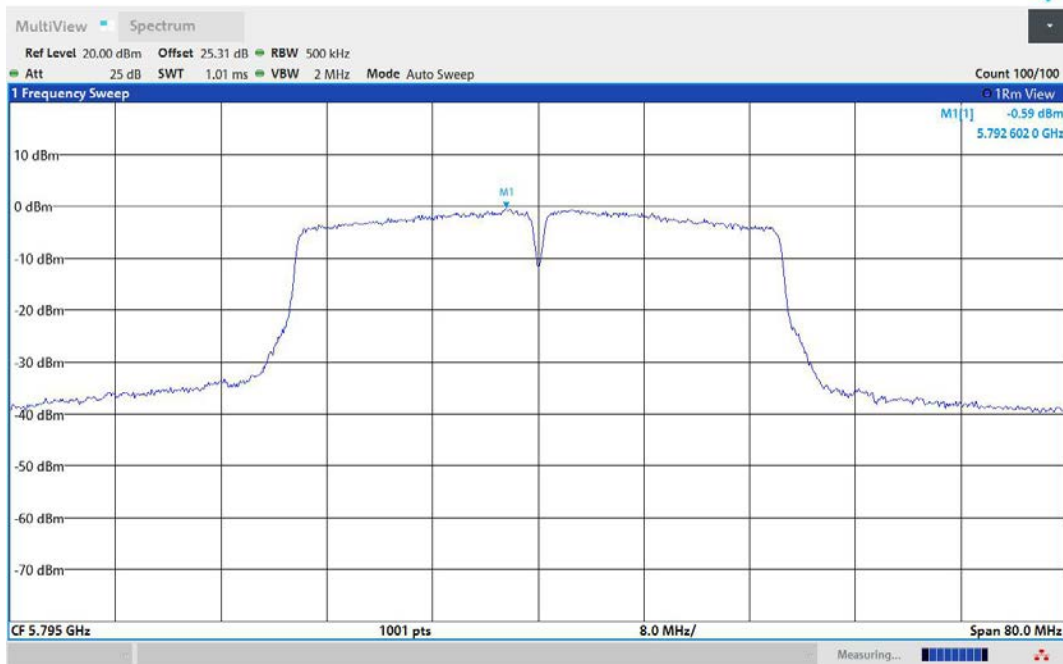
11AC40MIMO-Ant2-5670-PASS



11AC40MIMO-Ant1-5755-PASS



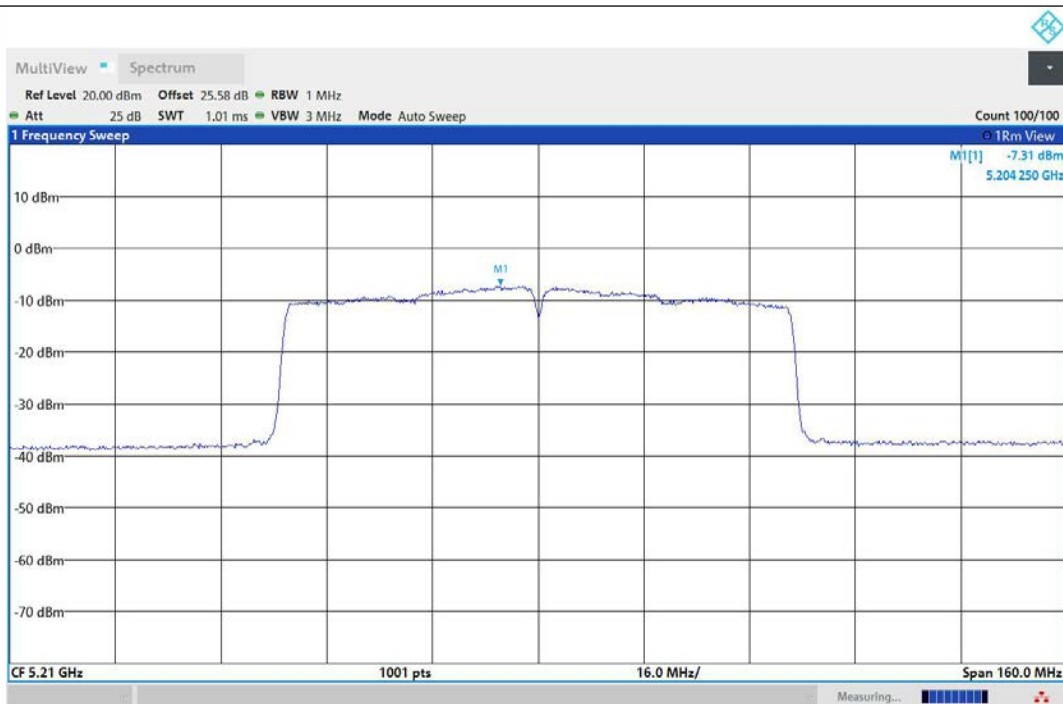
11AC40MIMO-Ant2-5755-PASS



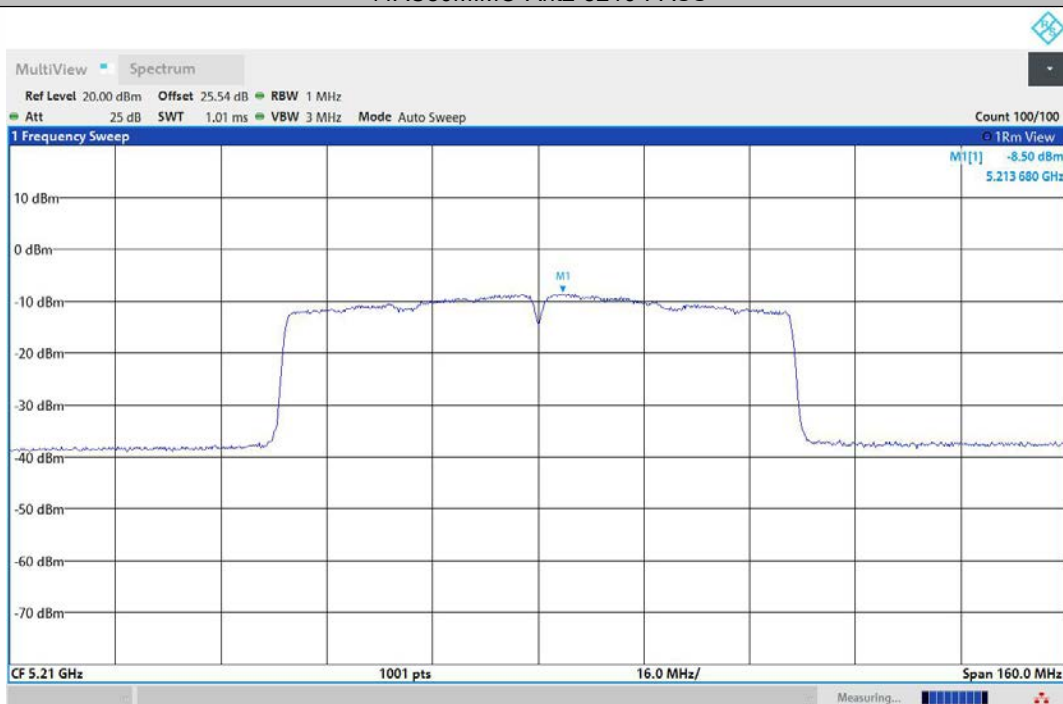
11AC40MIMO-Ant1-5795-PASS



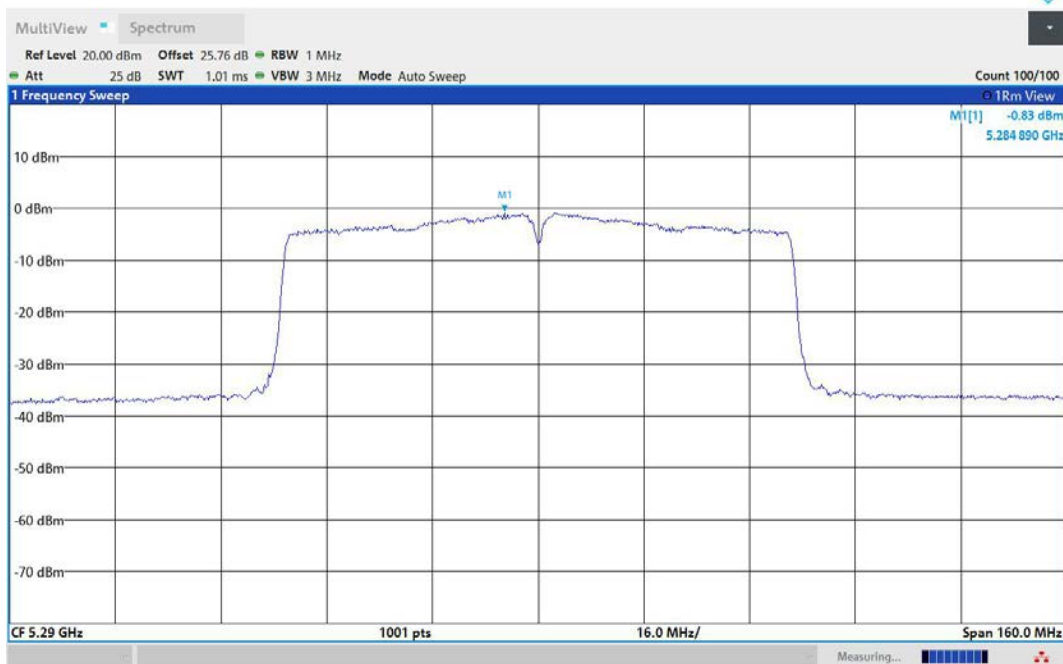
11AC40MIMO-Ant2-5795-PASS



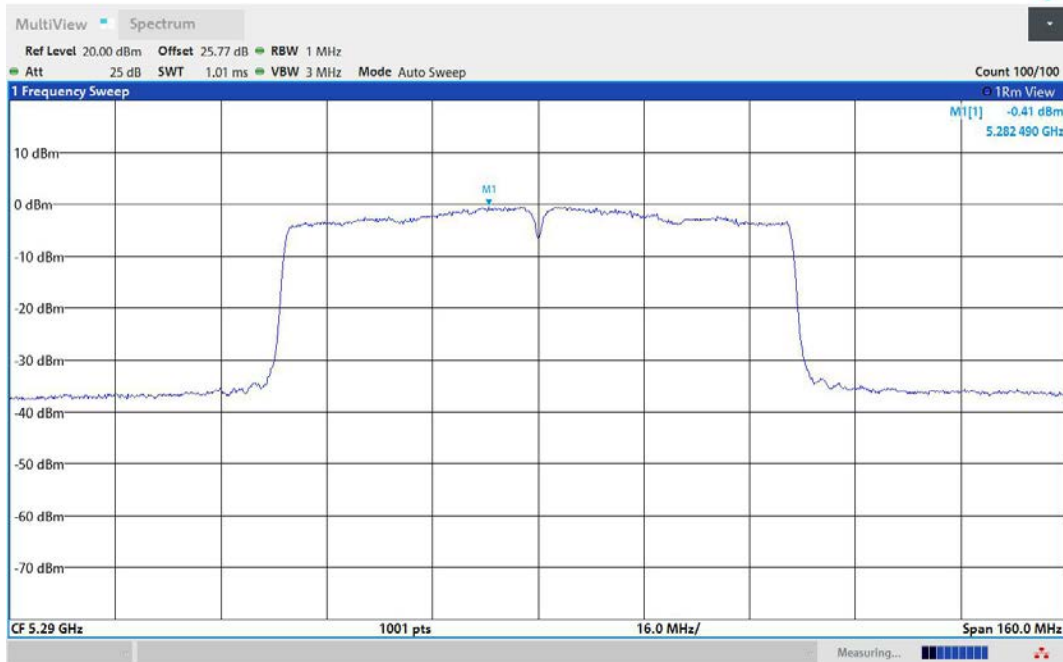
11AC80MIMO-Ant2-5210-PASS



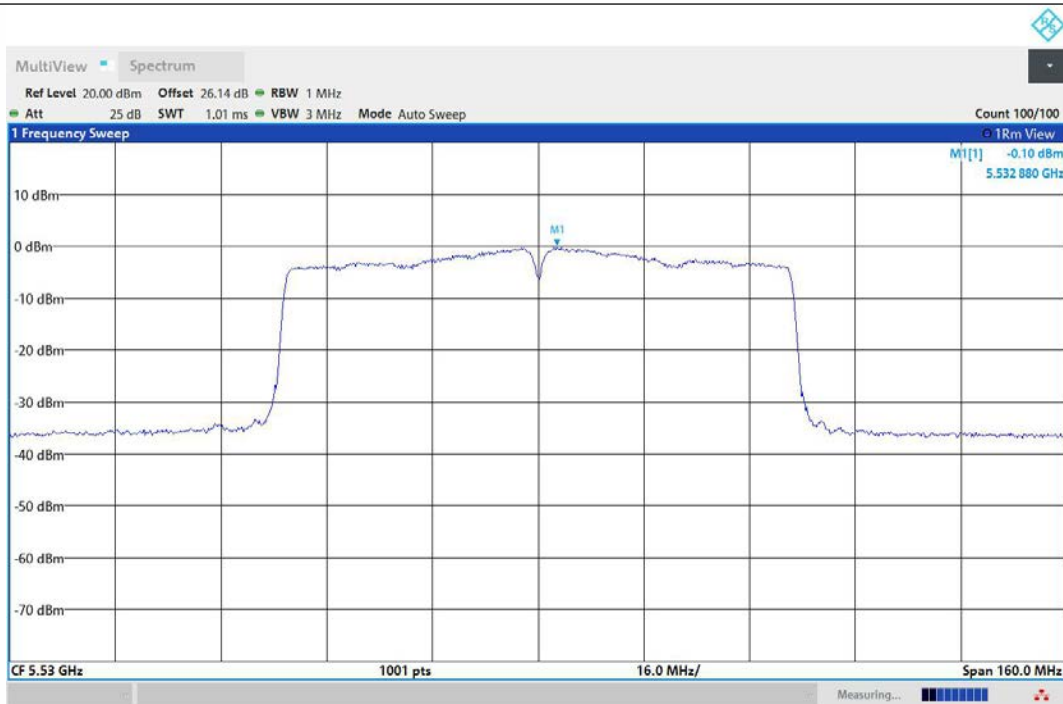
11AC80MIMO-Ant1-5210-PASS



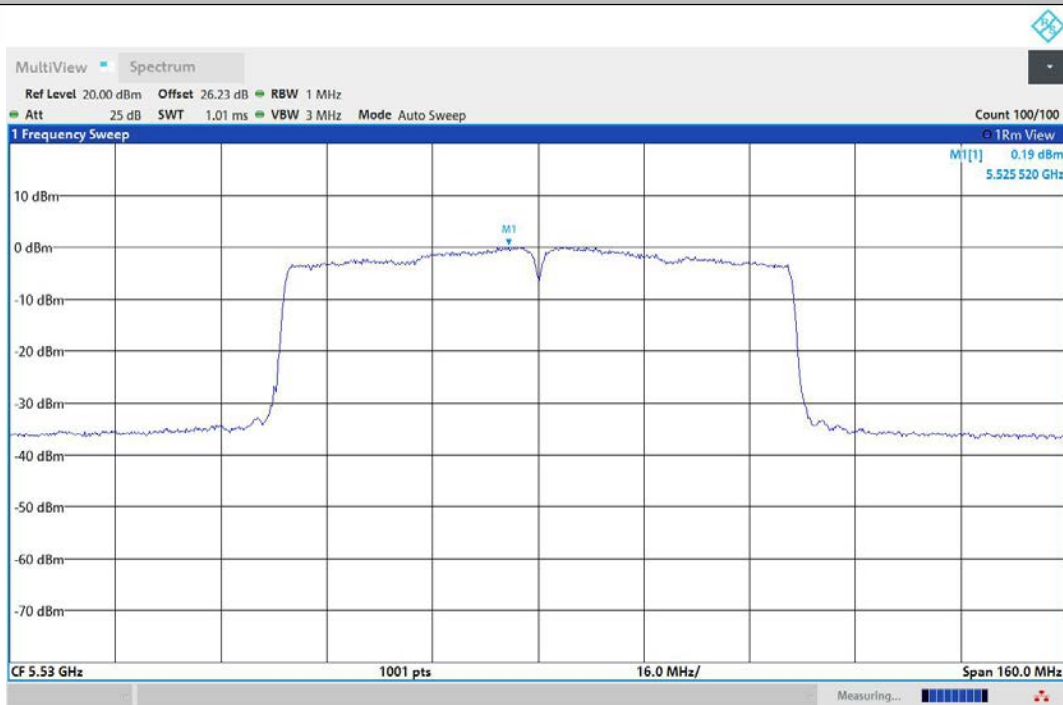
11AC80MIMO-Ant1-5290-PASS



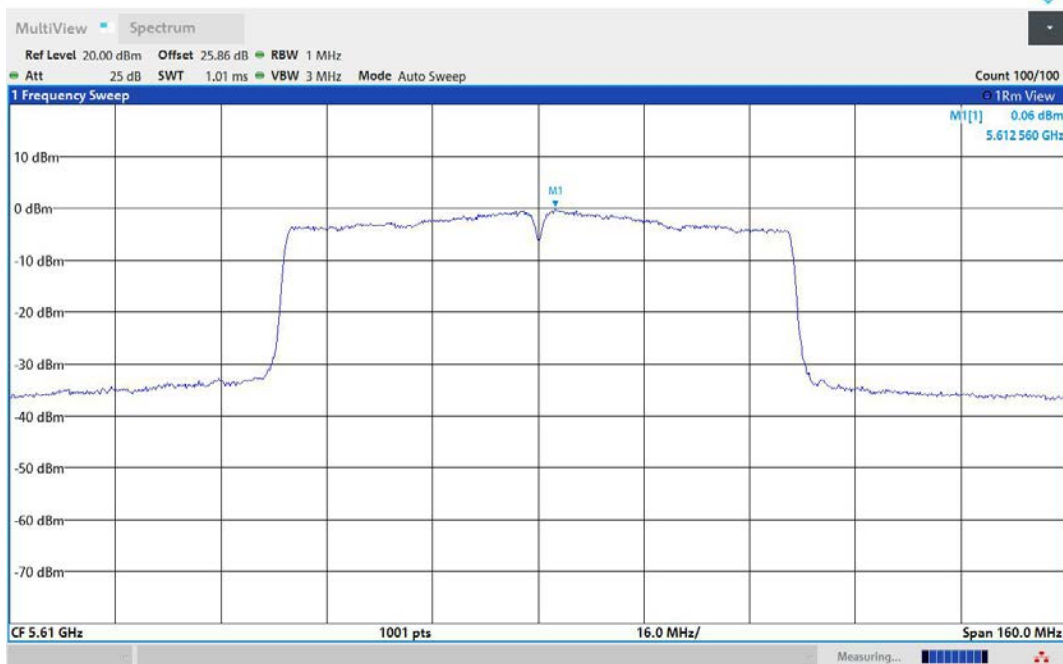
11AC80MIMO-Ant2-5290-PASS



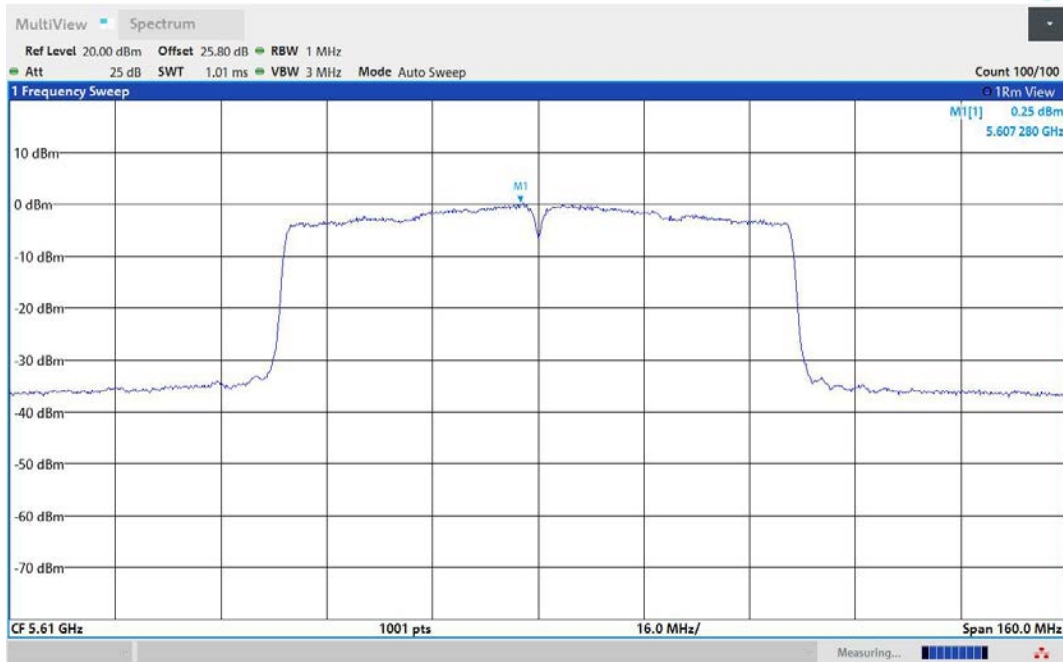
11AC80MIMO-Ant1-5530-PASS



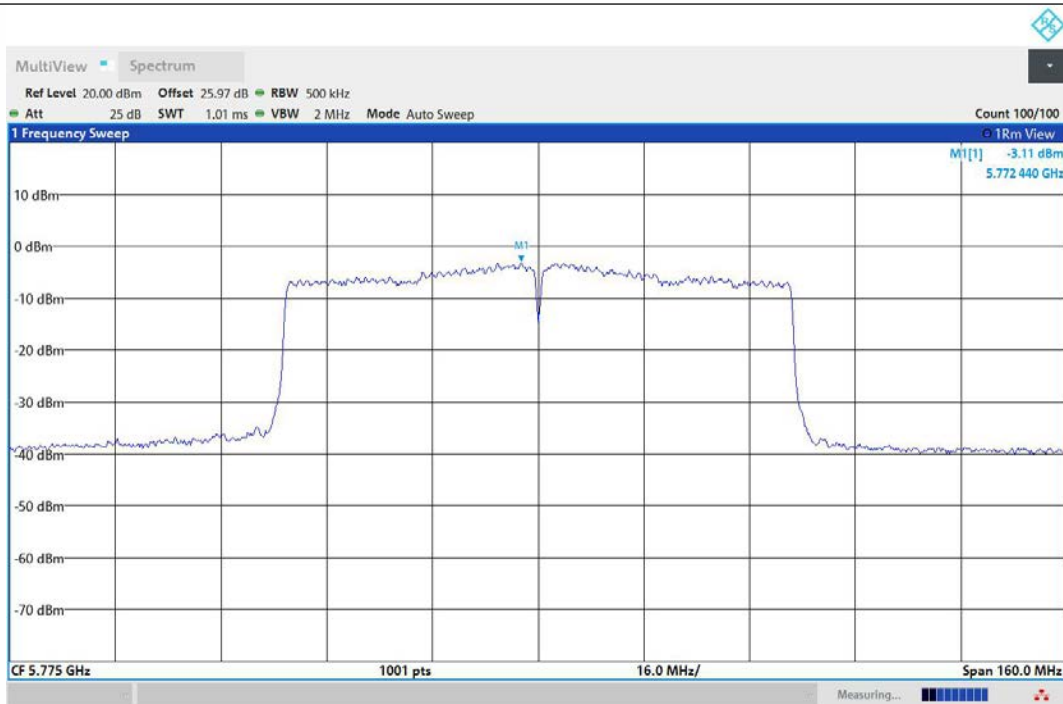
11AC80MIMO-Ant2-5530-PASS



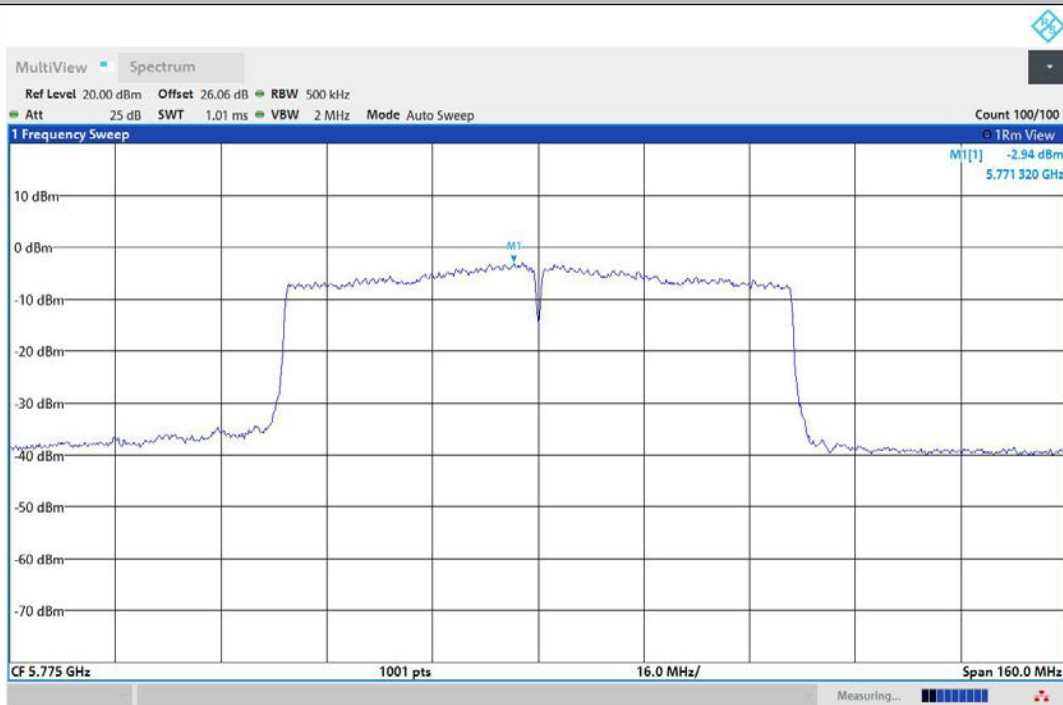
11AC80MIMO-Ant1-5610-PASS



11AC80MIMO-Ant2-5610-PASS



11AC80MIMO-Ant2-5775-PASS



11AC80MIMO-Ant1-5775-PASS

8.4 UNDESIRABLE RADIATED SPURIOUS EMISSION

8.4.1 Applicable Standard

According to FCC Part 15.407 (b)
According to 789033 D02 Section II(G)

8.4.2 Conformance Limit

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

Restricted Frequency(MHz)	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log ($\mu\text{V/m}$)	300
0.490-1.705	2400/F(KHz)	20 log ($\mu\text{V/m}$)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The provisions of §15.205 apply to intentional radiators operating under this section, 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

- Remark:
1. Emission level in dBuV/m=20 log (uV/m)
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

8.4.3 Test Configuration

Test according to clause 6.2 radio frequency test setup 2.

8.4.4 Test Procedure

■ Unwanted Emissions Measurements below 1000 MHz

Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

The EUT was placed on a turn table which is 0.8m above ground plane.

And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Repeat above procedures until all frequency measured was complete.

We use software control the EUT, Let EUT hopping on and transmit with highest power, All the modes have been tested and the worst result was reported.

Use the following spectrum analyzer settings:

Set RBW=120kHz for $f < 1$ GHz(30MHz to 1GHz), 200Hz for $f < 150$ KHz(9KHz to 150KHz), 9KHz for $f < 30$ MHz (150KHz to 30KHz).

Set the VBW > RBW.

Detector = Peak.

Trace mode = max hold.

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Repeat above procedures until all frequency measured was complete.

■ Unwanted Maximum peak Emissions Measurements above 1000 MHz

Maximum emission levels are measured by setting the analyzer as follows:

RBW = 1 MHz.

VBW $\geq$ 3 MHz.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately $1/x$, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

■ Unwanted Average Emissions Measurements above 1000 MHz

Method VB (Averaging using reduced video bandwidth): Alternative method.

RBW = 1 MHz.

Video bandwidth. • If the EUT is configured to transmit with duty cycle $\geq$ 98 percent, set $VBW \leq RBW/100$ (i.e., 10 kHz) but not less than 10 Hz.

• If the EUT duty cycle is < 98 percent, set $VBW \geq 1/T$, where T is defined in section II.B.1.a).

Video bandwidth mode or display mode • The instrument shall be set to ensure that video filtering is applied in the power domain. Typically, this requires setting the detector mode to RMS and setting the Average-VBW Type to Power (RMS).

• As an alternative, the analyzer may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some analyzers require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of $1/x$, where x is the duty cycle. For example, use at least 200 traces if the duty cycle is 25 percent. (If a specific emission is demonstrated to be continuous—i.e., 100 percent duty cycle—rather than turning on and off with the transmit cycle, at least 50 traces shall be averaged).

■ Band edge measurements.

Unwanted band-edge emissions may be measured using either of the special band-edge measurement techniques (the marker-delta or integration methods) described below. Note that the marker-delta method is primarily a radiated measurement technique that requires the 99% occupied bandwidth edge to be within 2 MHz of the authorized band edge, whereas the integration method can be used in either a radiated or conducted measurement without any special requirement with regards to the displacement of the unwanted emission(s) relative to the authorized bandwidth.

Marker-Delta Method.

The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

8.4.5 Test Results

Temperature : 25°C
Humidity : 60 %

ATM Pressure:: 1011 mbar
Test Engineer: CZF

- ☒ For Undesirable radiated Spurious Emission in U-NII – 1
 - ☒ Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
- All of the configurations or modes are tested, the data of the worst case is recorded in the report.
Highest gain of each antenna and highest output power is ANT1 and MIMO as below:

ANT1:

Test mode: 802.11n(20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8086.41	V	56.80	-38.43	-27	11.43
10739.5	V	62.68	-32.55	-27	5.55
17190.9	V	67.94	-27.29	-27	0.29
8001.41	H	55.83	-39.4	-27	12.4
11485.6	H	62.23	-33	-27	6
17770.9	H	66.54	-28.69	-27	1.69

Test mode: 802.11n(20) Frequency(MHz): 5200

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7293.37	V	55.56	-39.67	-27	12.67
10916.5	V	62.15	-33.08	-27	6.08
17096.9	V	66.93	-28.3	-27	1.3
8133.41	H	56.64	-38.59	-27	11.59
11101.5	H	62.85	-32.38	-27	5.38
17243.9	H	67.26	-27.97	-27	0.97

Test mode: 802.11n(20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7984.41	V	57.15	-38.08	-27	11.08
10682.5	V	62.16	-33.07	-27	6.07
17163.9	V	67.55	-27.68	-27	0.68
8139.42	H	56.59	-38.64	-27	11.64
10975.5	H	62.66	-32.57	-27	5.57
17017.9	H	67.16	-28.07	-27	1.07

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8085.0200	V	56.67	-38.56	-27	11.56
10738.1100	V	62.52	-32.71	-27	5.71
17192.1800	V	67.91	-27.32	-27	0.32
8013.1000	H	55.75	-39.48	-27	12.48
11497.2900	H	62.02	-33.21	-27	6.21
17782.5900	H	66.38	-28.85	-27	1.85

Test mode: 802.11n(20) Frequency(MHz): 5200

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7291.9800	V	55.43	-39.80	-27	12.80
10915.1100	V	61.99	-33.24	-27	6.24
17098.1800	V	66.9	-28.33	-27	1.33
8145.1000	H	56.56	-38.67	-27	11.67
11113.1900	H	62.64	-32.59	-27	5.59
17255.5900	H	67.1	-28.13	-27	1.13

Test mode: 802.11n(20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7983.0200	V	57.02	-38.21	-27	11.21
10681.1100	V	62	-33.23	-27	6.23
17165.1800	V	67.52	-27.71	-27	0.71
8151.1100	H	56.51	-38.72	-27	11.72
10987.1900	H	62.45	-32.78	-27	5.78
17029.5900	H	67	-28.23	-27	1.23

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

ANT1:

Test mode: 802.11n(20)		Frequency(MHz): 5180			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8086.41	V	56.80	74.00	17.20	Peak
10739.5	V	62.68	74.00	11.32	Peak
17190.9	V	67.94	74.00	6.06	Peak
8086.41	V	40.69	54.00	13.31	Avg
10739.5	V	44.97	54.00	9.03	Avg
17190.9	V	46.20	54.00	7.80	Avg
8001.41	H	55.83	74.00	18.17	Peak
11485.6	H	62.23	74.00	11.77	Peak
17770.9	H	66.54	74.00	7.46	Peak
8001.41	H	39.89	54.00	14.11	Avg
11485.6	H	43.27	54.00	10.73	Avg
17770.9	H	46.42	54.00	7.58	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5200			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7293.37	V	55.56	74.00	18.44	Peak
10916.5	V	62.15	74.00	11.85	Peak
17096.9	V	66.93	74.00	7.07	Peak
7293.37	V	38.97	54.00	15.03	Avg
10916.5	V	44.09	54.00	9.91	Avg
17096.9	V	45.93	54.00	8.07	Avg
8133.41	H	56.64	74.00	17.36	Peak
11101.5	H	62.85	74.00	11.15	Peak
17243.9	H	67.26	74.00	6.74	Peak
8133.41	H	40.22	54.00	13.78	Avg
11101.5	H	44.47	54.00	9.53	Avg
17243.9	H	45.49	54.00	8.51	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5240			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7984.41	V	57.15	74.00	16.85	Peak
10682.5	V	62.16	74.00	11.84	Peak
17163.9	V	67.55	74.00	6.45	Peak
7984.41	V	39.88	54.00	14.12	Avg
10682.5	V	45.09	54.00	8.91	Avg
17163.9	V	46.80	54.00	7.20	Avg
8139.42	H	56.59	74.00	17.41	Peak
10975.5	H	62.66	74.00	11.34	Peak
17017.9	H	67.16	74.00	6.84	Peak
8139.42	H	40.82	54.00	13.18	Avg
10975.5	H	44.36	54.00	9.64	Avg
17017.9	H	46.77	54.00	7.23	Avg

MIMO:

Test mode: 802.11n(20)		Frequency(MHz): 5180			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8085.0200	V	56.67	74.00	17.33	Peak
10738.1100	V	62.52	74.00	11.48	Peak
17192.1800	V	67.91	74.00	6.09	Peak
8087.6900	V	40.67	54.00	13.33	Avg
10737.2500	V	44.71	54.00	9.29	Avg
17188.6500	V	46.01	54.00	7.99	Avg
8013.1000	H	55.75	74.00	18.25	Peak
11497.2900	H	62.02	74.00	11.98	Peak
17782.5900	H	66.38	74.00	7.62	Peak
8013.1000	H	39.75	54.00	14.25	Avg
11482.2900	H	43.09	54.00	10.91	Avg
17767.5900	H	46.29	54.00	7.71	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5200			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7291.9800	V	55.43	74.00	18.57	Peak
10915.1100	V	61.99	74.00	12.01	Peak
17098.1800	V	66.90	74.00	7.10	Peak
7294.6500	V	38.95	54.00	15.05	Avg
10914.2500	V	43.83	54.00	10.17	Avg
17094.6500	V	45.74	54.00	8.26	Avg
8145.1000	H	56.56	74.00	17.44	Peak
11113.1900	H	62.64	74.00	11.36	Peak
17255.5900	H	67.10	74.00	6.90	Peak
8145.1000	H	40.08	54.00	13.92	Avg
11098.1900	H	44.29	54.00	9.71	Avg
17240.5900	H	45.36	54.00	8.64	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5240			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7983.0200	V	57.02	74.00	16.98	Peak
10681.1100	V	62.00	74.00	12.00	Peak
17165.1800	V	67.52	74.00	6.48	Peak
7985.6900	V	39.86	54.00	14.14	Avg
10680.2500	V	44.83	54.00	9.17	Avg
17161.6500	V	46.61	54.00	7.39	Avg
8151.1100	H	56.51	74.00	17.49	Peak
10987.1900	H	62.45	74.00	11.55	Peak
17029.5900	H	67.00	74.00	7.00	Peak
8151.1100	H	40.68	54.00	13.32	Avg
10972.1900	H	44.18	54.00	9.82	Avg
17014.5900	H	46.64	54.00	7.36	Avg

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n(20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5140.41	V	53.83	-41.4	-27	Pass
5142.2	H	53.46	-41.77	-27	Pass

Test mode: 802.11n(20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5352.58	V	54.55	-40.68	-27	Pass
5353.10	H	54.98	-40.25	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11n(20) Frequency(MHz): 5180

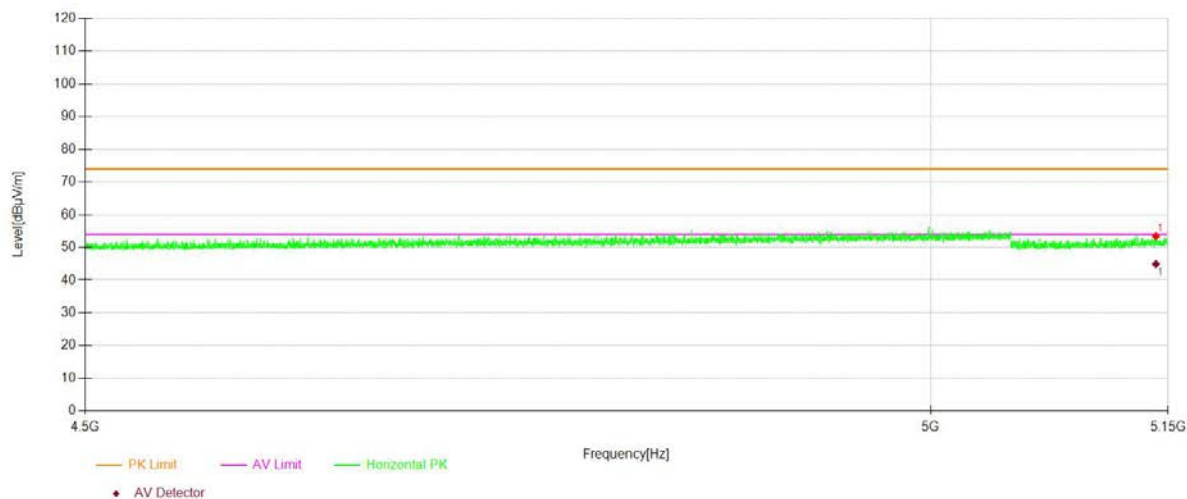
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5140.41	V	53.83	74.00	20.17	Peak
5140.41	V	45.33	54.00	8.67	Avg
5142.2	H	53.46	74.00	20.54	Peak
5142.2	H	44.94	54.00	9.06	Avg

Test mode: 802.11n(20) Frequency(MHz): 5240

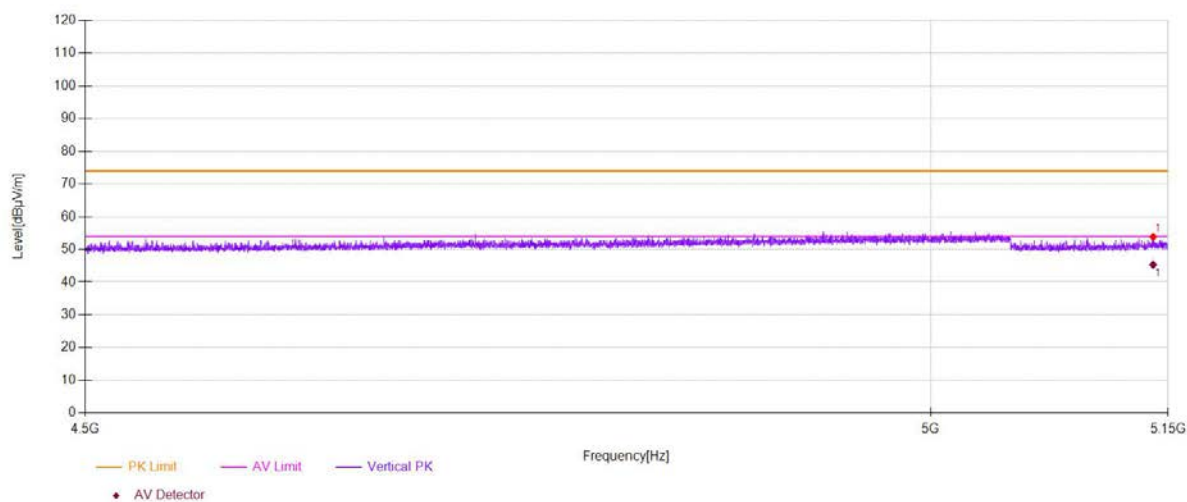
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5352.58	V	54.55	74.00	19.45	Peak
5352.58	V	45.55	54.00	8.45	Avg
5353.10	H	54.98	74.00	19.02	Peak
5353.10	H	45.04	54.00	8.96	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

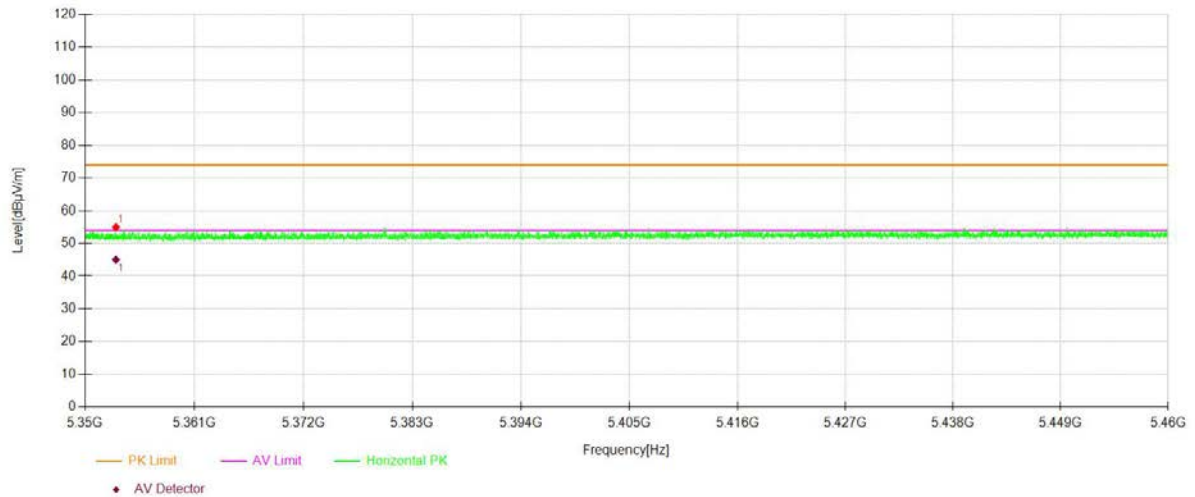
Test Model U-NII - 1
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11n(HT40)
☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol H



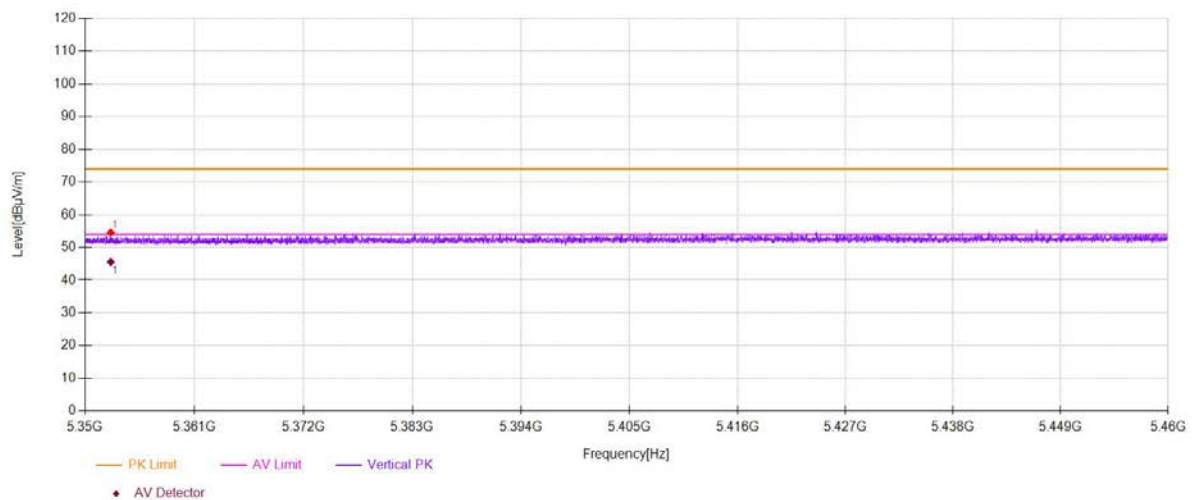
Test Model U-NII - 1
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11n(HT40)
☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol V



Test Model U-NII - 1
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☒ 802.11n(20) ☐ 802.11n(HT40)
☐ 5180 ☐ 5200 ☒ 5240 Ant.Pol H



Test Model U-NII - 1
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)
☐ 5180 ☐ 5200 ☒ 5240 Ant.Pol V



- ☒ For Undesirable radiated Spurious Emission in U-NII -2A
- ☒ Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

All of the configurations or modes are tested, the data of the worst case is recorded in the report.
Highest gain of each antenna and highest output power is ANT1 and MIMO as below:

ANT1:

Test mode: 802.11n(20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8080.41	V	56.39	-38.84	-27	11.84
11085.5	V	62.98	-32.25	-27	5.25
17676.9	V	67.26	-27.97	-27	0.97
8171.42	H	56.57	-38.66	-27	11.66
10971.5	H	62.72	-32.51	-27	5.51
17046.9	H	67.77	-27.46	-27	0.46

Test mode: 802.11n(20) Frequency(MHz): 5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8131.41	V	56.58	-38.65	-27	11.65
11597.6	V	62.46	-32.77	-27	5.77
17049.9	V	67.93	-27.3	-27	0.3
8337.43	H	57.12	-38.11	-27	11.11
11100.5	H	62.74	-32.49	-27	5.49
17018.9	H	67.32	-27.91	-27	0.91

Test mode: 802.11n(20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7418.37	V	55.32	-39.91	-27	12.91
10731.5	V	62.61	-32.62	-27	5.62
16992.9	V	66.92	-28.31	-27	1.31
8414.43	H	56.45	-38.78	-27	11.78
10983.5	H	62.76	-32.47	-27	5.47
17042.9	H	67.00	-28.23	-27	1.23

MIMO:

Test mode: 802.11n(20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8079.0200	V	56.26	-38.97	-27	11.97
11084.1100	V	62.82	-32.41	-27	5.41
17678.1800	V	67.23	-28.00	-27	1.00
8183.1100	H	56.49	-38.74	-27	11.74
10983.1900	H	62.51	-32.72	-27	5.72
17058.5900	H	67.61	-27.62	-27	0.62

Test mode: 802.11n(20) Frequency(MHz): 5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8130.0200	V	56.45	-38.78	-27	11.78
11596.2100	V	62.3	-32.93	-27	5.93
17051.1800	V	67.9	-27.33	-27	0.33
8349.1200	H	57.04	-38.19	-27	11.19
11112.1900	H	62.53	-32.70	-27	5.70
17030.5900	H	67.16	-28.07	-27	1.07

Test mode: 802.11n(20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7416.9800	V	55.19	-40.04	-27	13.04
10730.1100	V	62.45	-32.78	-27	5.78
16994.1800	V	66.89	-28.34	-27	1.34
8426.1200	H	56.37	-38.86	-27	11.86
10995.1900	H	62.55	-32.68	-27	5.68
17054.5900	H	66.84	-28.39	-27	1.39

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

ANT1:

Test mode: 802.11n(20)		Frequency(MHz): 5260			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8080.41	V	56.39	74.00	17.61	Peak
11085.5	V	62.98	74.00	11.02	Peak
17676.9	V	67.26	74.00	6.74	Peak
8080.41	V	40.63	54.00	13.37	Avg
11085.5	V	44.58	54.00	9.42	Avg
17676.9	V	46.48	54.00	7.52	Avg
8171.42	H	56.57	74.00	17.43	Peak
10971.5	H	62.72	74.00	11.28	Peak
17046.9	H	67.77	74.00	6.23	Peak
8171.42	H	40.39	54.00	13.61	Avg
10971.5	H	44.49	54.00	9.51	Avg
17046.9	H	46.93	54.00	7.07	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5280			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8131.41	V	56.58	74.00	17.42	PK
11597.6	V	62.46	74.00	11.54	PK
17049.9	V	67.93	74.00	6.07	PK
8131.41	V	40.62	54.00	13.38	Avg
11597.6	V	43.17	54.00	10.83	Avg
17049.9	V	46.11	54.00	7.89	Avg
8337.43	H	57.12	74.00	16.88	Peak
11100.5	H	62.74	74.00	11.26	Peak
17018.9	H	67.32	74.00	6.68	Peak
8337.43	H	39.97	54.00	14.03	Avg
11100.5	H	44.52	54.00	9.48	Avg
17018.9	H	46.29	54.00	7.71	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5320			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7418.37	V	55.32	74.00	18.68	Peak
10731.5	V	62.61	74.00	11.39	Peak
16992.9	V	66.92	74.00	7.08	Peak
7418.37	V	39.66	54.00	14.34	Avg
10731.5	V	45.09	54.00	8.91	Avg
16992.9	V	47.05	54.00	6.95	Avg
8414.43	H	56.45	74.00	17.55	Peak
10983.5	H	62.76	74.00	11.24	Peak
17042.9	H	67.00	74.00	7.00	Peak
8414.43	H	40.37	54.00	13.63	Avg
10983.5	H	44.83	54.00	9.17	Avg
17042.9	H	46.94	54.00	7.06	Avg

MIMO:

Test mode: 802.11n(20)		Frequency(MHz): 5260			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8079.0200	V	56.26	74.00	17.74	Peak
11084.1100	V	62.82	74.00	11.18	Peak
17678.1800	V	67.23	74.00	6.77	Peak
8081.6900	V	40.61	54.00	13.39	Avg
11083.2500	V	44.32	54.00	9.68	Avg
17674.6500	V	46.29	54.00	7.71	Avg
8183.1100	H	56.49	74.00	17.51	Peak
10983.1900	H	62.51	74.00	11.49	Peak
17058.5900	H	67.61	74.00	6.39	Peak
8183.1100	H	40.25	54.00	13.75	Avg
10968.1900	H	44.31	54.00	9.69	Avg
17043.5900	H	46.80	54.00	7.20	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5280			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
8130.0200	V	56.45	74.00	17.55	Peak
11596.2100	V	62.30	74.00	11.70	Peak
17051.1800	V	67.90	74.00	6.10	Peak
8132.6900	V	40.60	54.00	13.40	Avg
11595.3500	V	42.91	54.00	11.09	Avg
17047.6500	V	45.92	54.00	8.08	Avg
8349.1200	H	57.04	74.00	16.96	Peak
11112.1900	H	62.53	74.00	11.47	Peak
17030.5900	H	67.16	74.00	6.84	Peak
8349.1200	H	39.83	54.00	14.17	Avg
11097.1900	H	44.34	54.00	9.66	Avg
17015.5900	H	46.16	54.00	7.84	Avg

Test mode: 802.11n(20)		Frequency(MHz): 5320			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7416.9800	V	55.19	74.00	18.81	Peak
10730.1100	V	62.45	74.00	11.55	Peak
16994.1800	V	66.89	74.00	7.11	Peak
7419.6500	V	39.64	54.00	14.36	Avg
10729.2500	V	44.83	54.00	9.17	Avg
16990.6500	V	46.86	54.00	7.14	Avg
8426.1200	H	56.37	74.00	17.63	Peak
10995.1900	H	62.55	74.00	11.45	Peak
17054.5900	H	66.84	74.00	7.16	Peak
8426.1200	H	40.23	54.00	13.77	Avg
10980.1900	H	44.65	54.00	9.35	Avg
17039.5900	H	46.81	54.00	7.19	Avg

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n(20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5141.22	V	53.33	-41.9	-27	Pass
5146.75	H	53.49	-41.74	-27	Pass

Test mode: 802.11n(20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.66	V	56.66	-38.57	-27	Pass
5351.52	H	56.85	-38.38	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

Test mode: 802.11n(20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5141.22	V	53.33	74.00	20.67	Peak
5141.22	V	44.95	54.00	9.05	Avg
5146.75	H	53.49	74.00	20.51	Peak
5146.75	H	44.91	54.00	9.09	Avg

Test mode: 802.11n(20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5350.66	V	56.66	74.00	17.34	Peak
5350.66	V	45.25	54.00	8.75	Avg
5351.52	H	56.85	74.00	17.15	Peak
5351.52	H	44.96	54.00	9.04	Avg

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4)The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.