

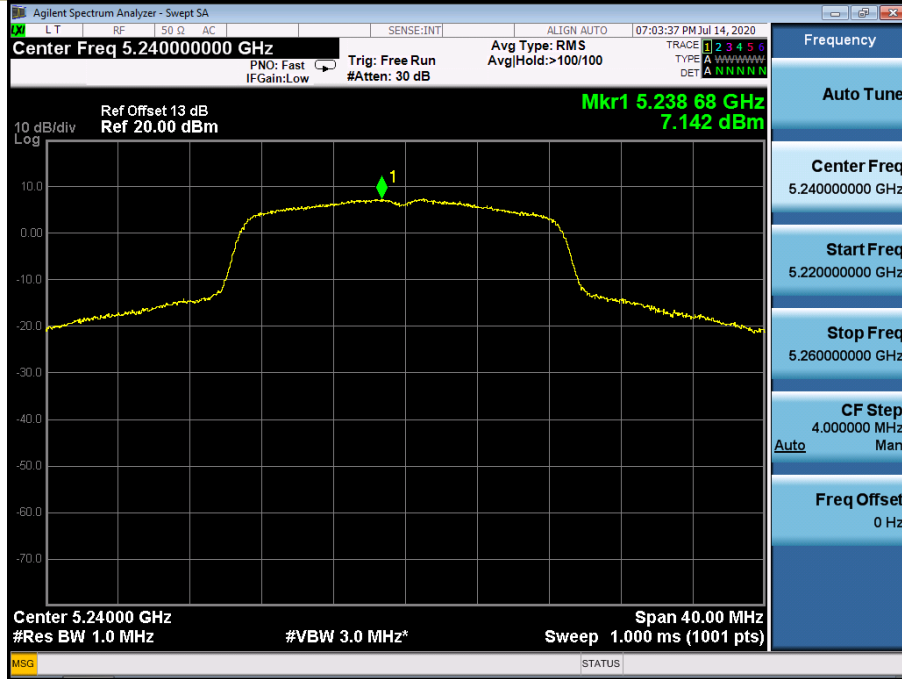
Power Spectral Density

U-NII - 1

Test Model 802.11ac(HT20)

Frequency(MHz)

5240



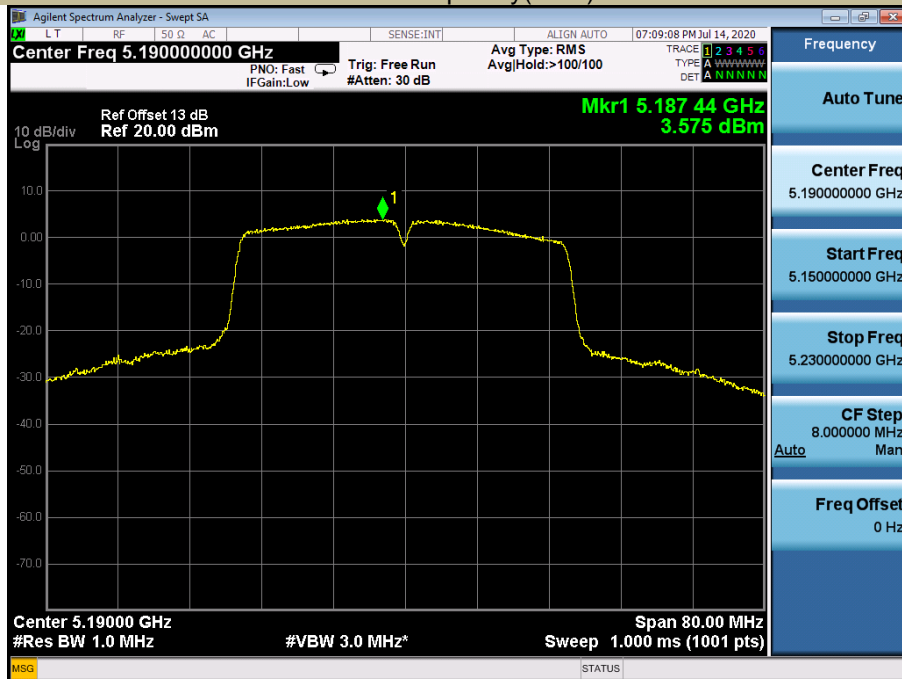
Power Spectral Density

U-NII - 1

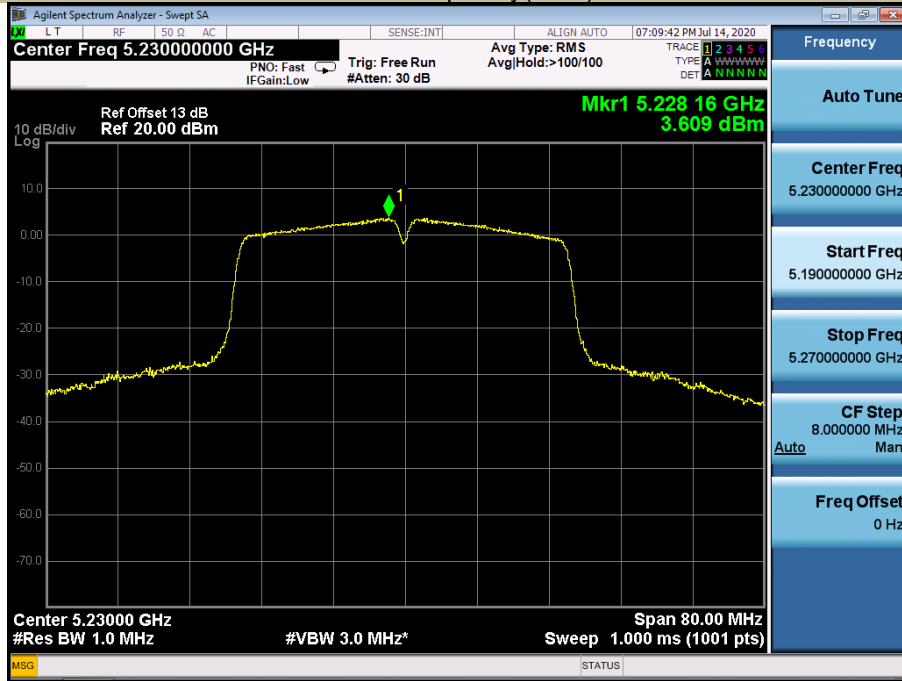
Test Model 802.11n-HT40

Frequency(MHz)

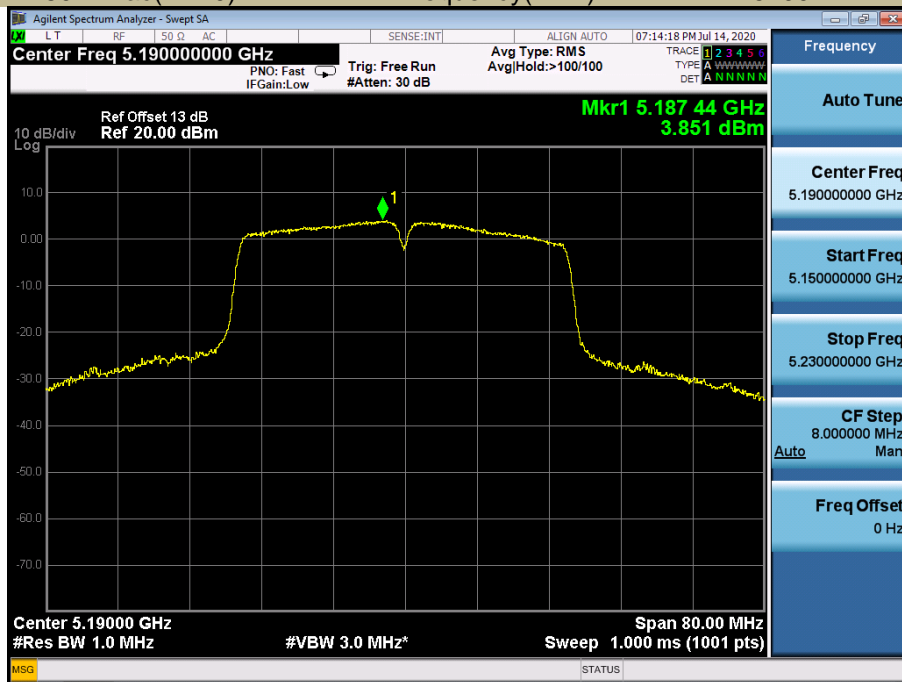
5190



Power Spectral Density U-NII - 1
 Test Model 802.11n-HT40 Frequency(MHz) 5230



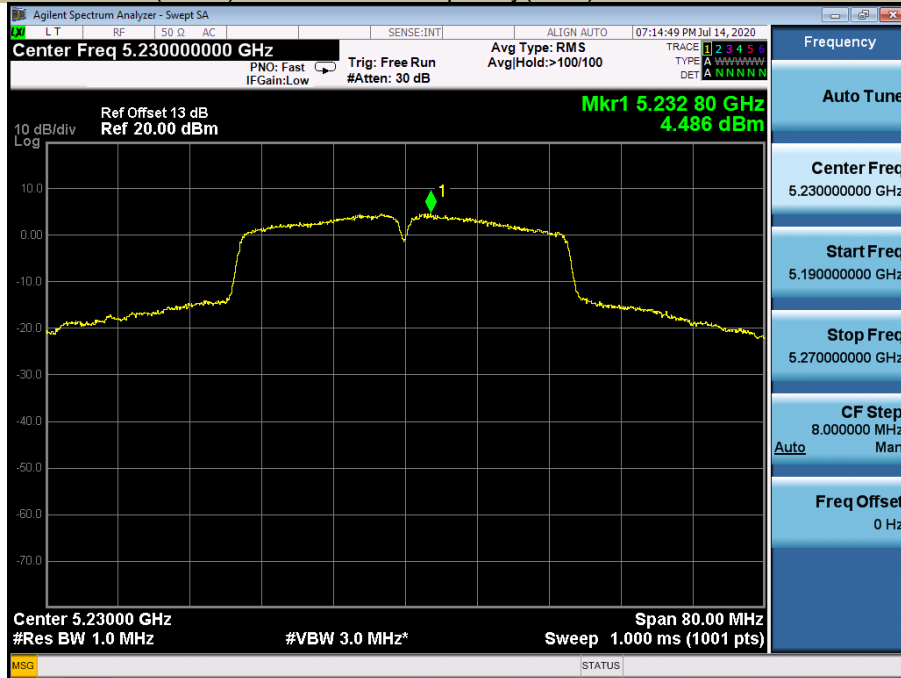
Power Spectral Density U-NII - 1
 Test Model 802.11ac(HT40) Frequency(MHz) 5190



Power Spectral Density
Test Model 802.11ac(HT40)

U-NII - 1
Frequency(MHz)

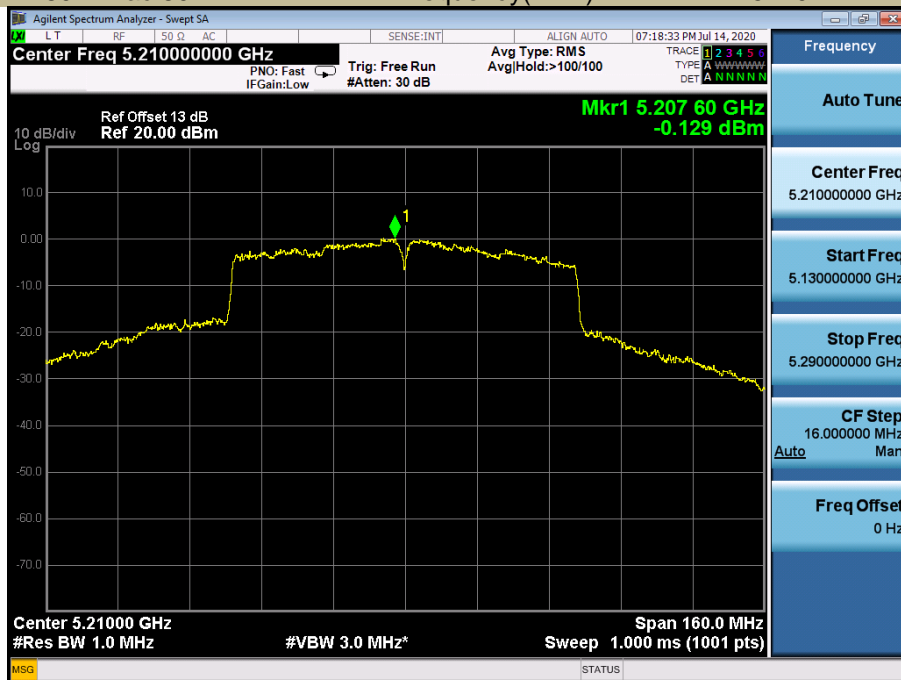
5230



Power Spectral Density
Test Model 802.11ac 80

U-NII - 1
Frequency(MHz)

5210



5725-5850MHz

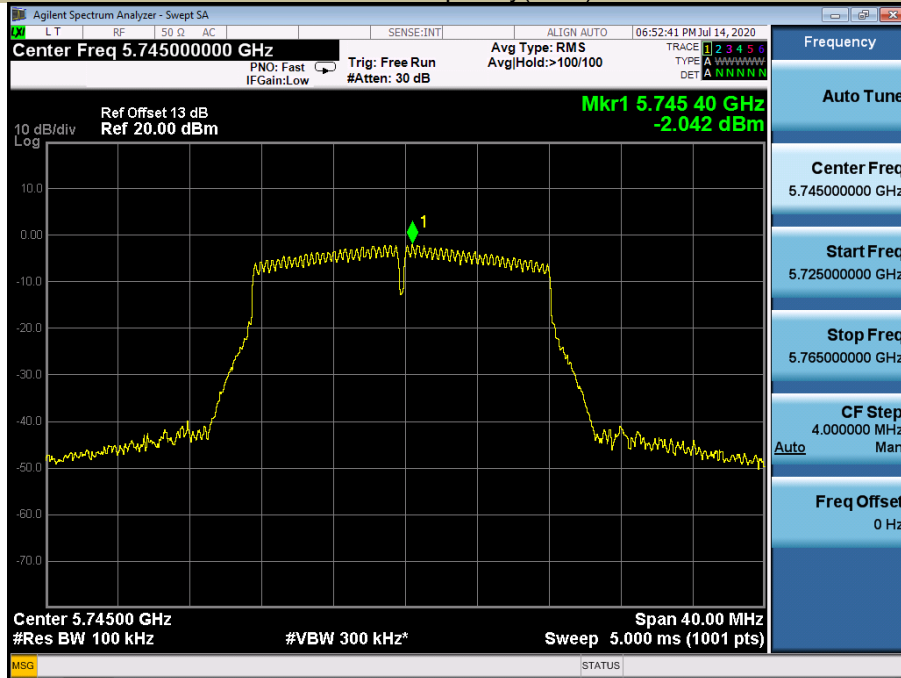
Operating mode	Test Channel	Power Spectral Density dBm/100kHz	Power Spectral Density dBm/500kHz	Limit (dBm/500kHz)
802.11a	5745	-2.042	4.948	30
	5785	-2.830	4.160	30
	5825	-2.072	4.918	30
802.11n-HT20	5745	-2.551	4.439	30
	5785	-2.409	4.581	30
	5825	-2.271	4.719	30
802.11ac(HT20)	5745	-2.898	4.092	30
	5785	-2.757	4.233	30
	5825	-2.511	4.479	30
802.11n-HT40	5755	-5.493	1.497	30
	5795	-5.168	1.822	30
802.11ac(HT40)	5755	-5.335	1.655	30
	5795	-5.236	1.754	30
802.11ac(HT80)	5775	-8.031	-1.041	30

If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

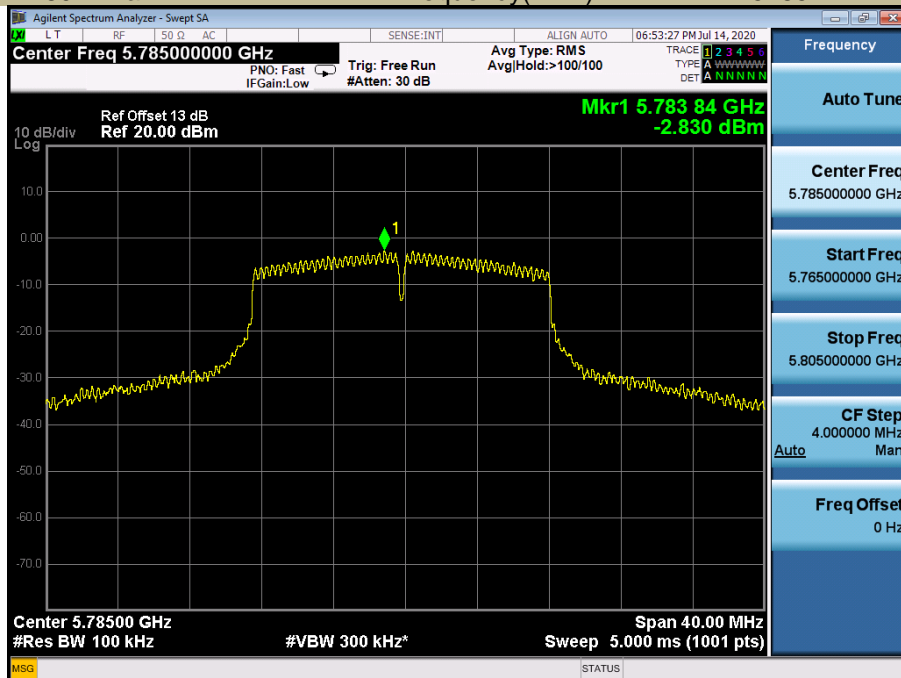
5745



Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

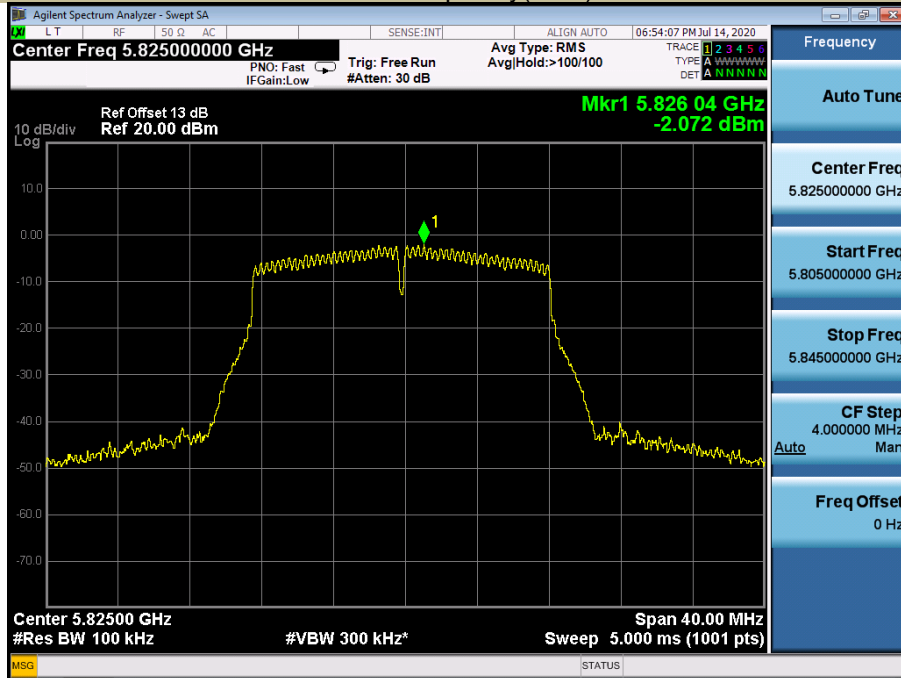
5785



Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

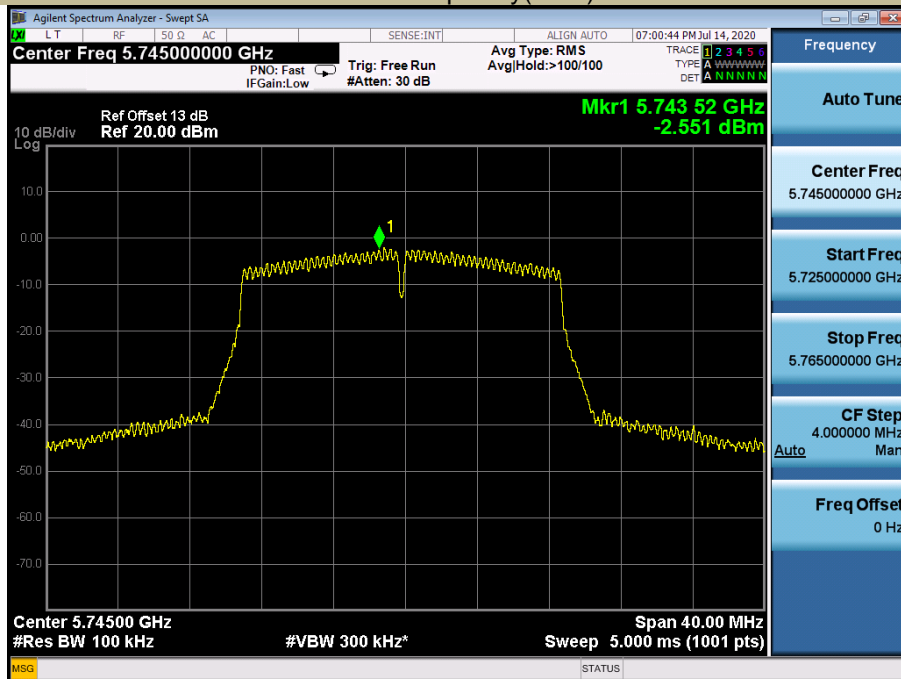
5825



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 3
Frequency(MHz)

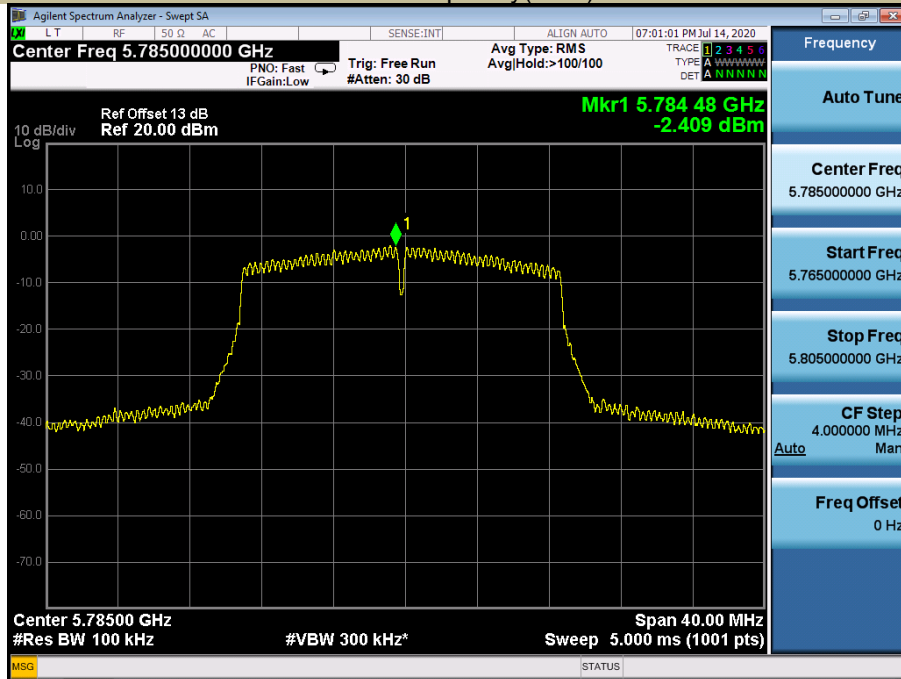
5745



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 3
Frequency(MHz)

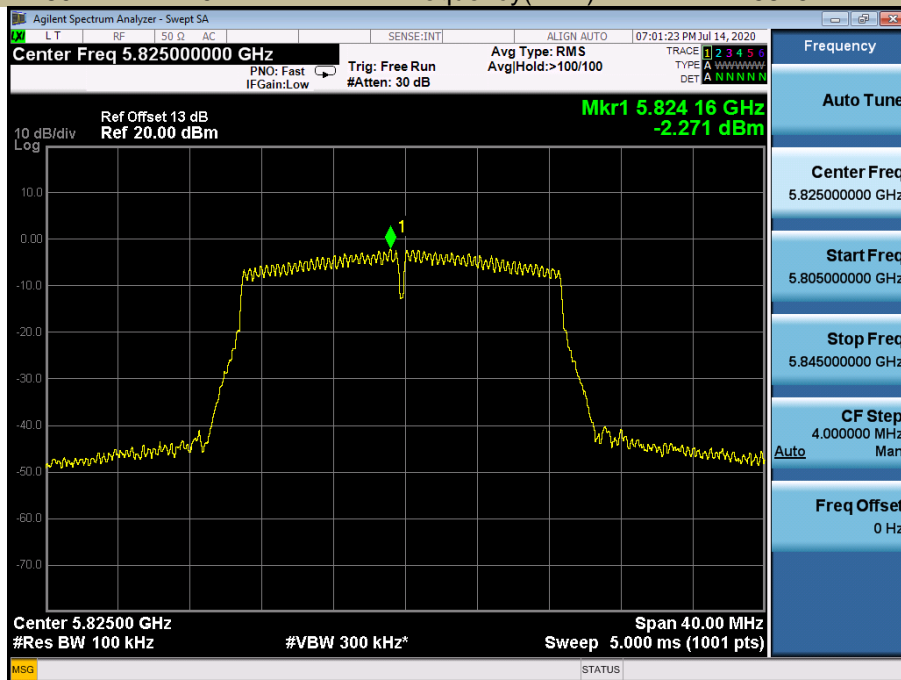
5785



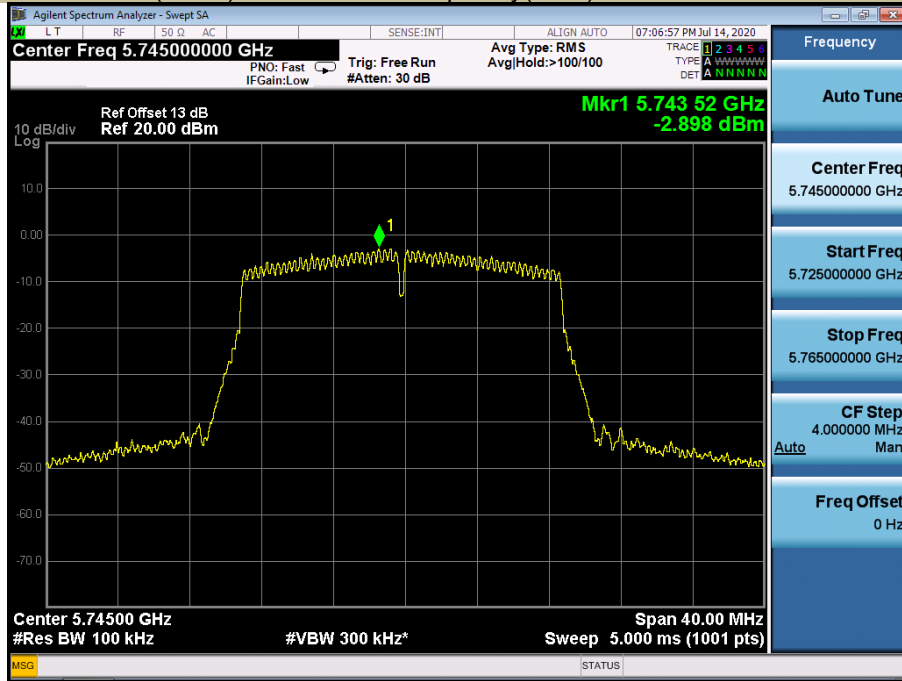
Power Spectral Density
Test Model 802.11n-HT20

U-NII - 3
Frequency(MHz)

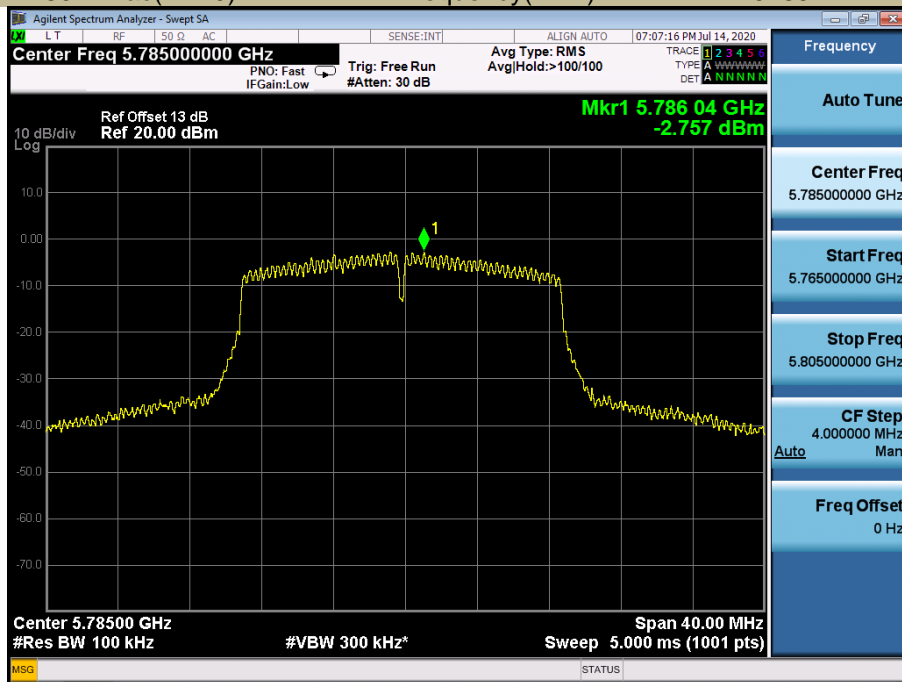
5825



Power Spectral Density U-NII - 3
 Test Model 802.11ac(HT20) Frequency(MHz) 5745



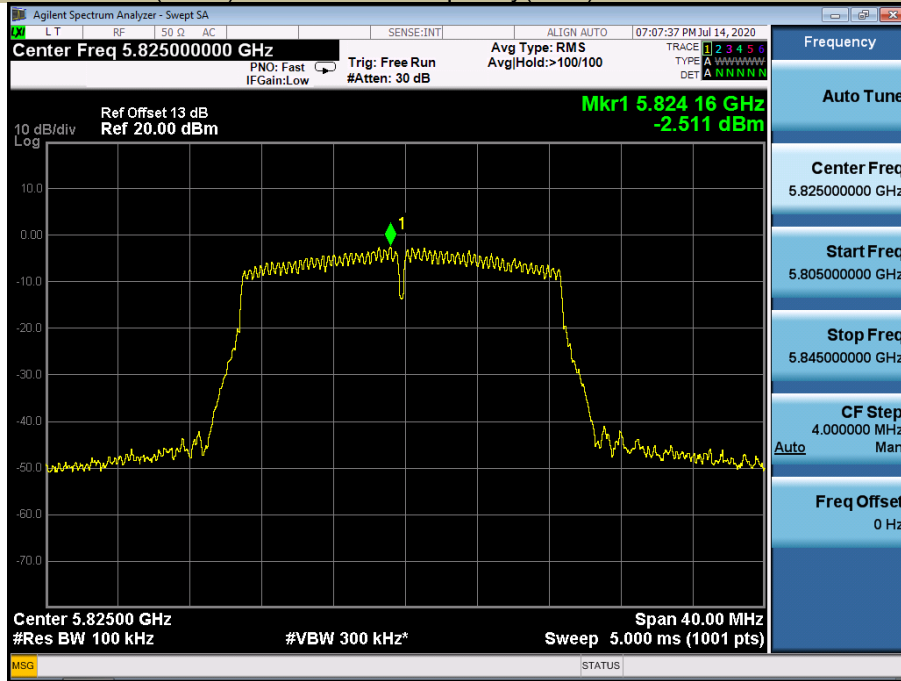
Power Spectral Density U-NII - 3
 Test Model 802.11ac(HT20) Frequency(MHz) 5785



Power Spectral Density
Test Model 802.11ac(HT20)

U-NII - 3
Frequency(MHz)

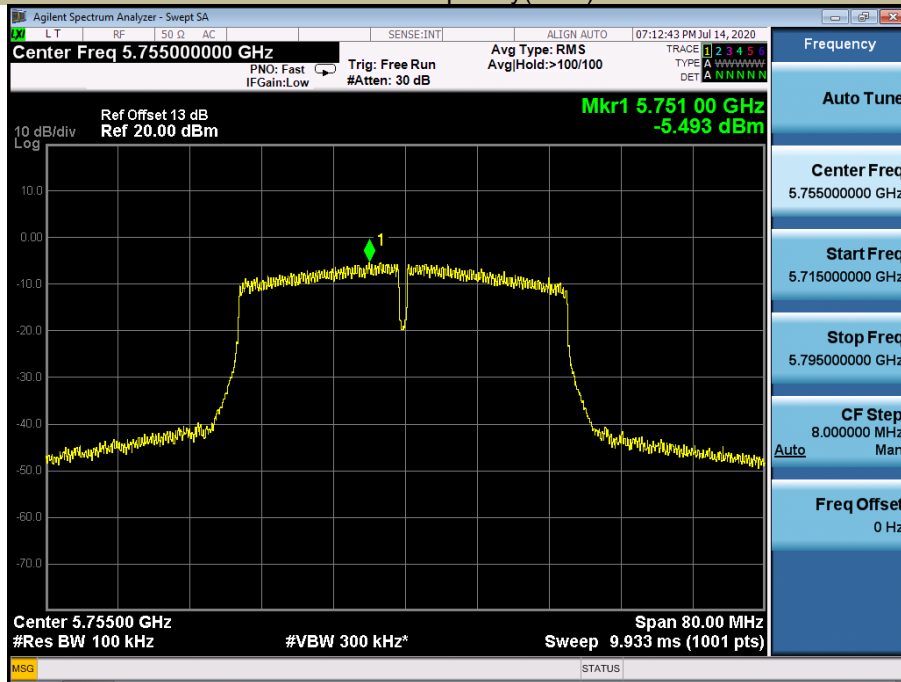
5825



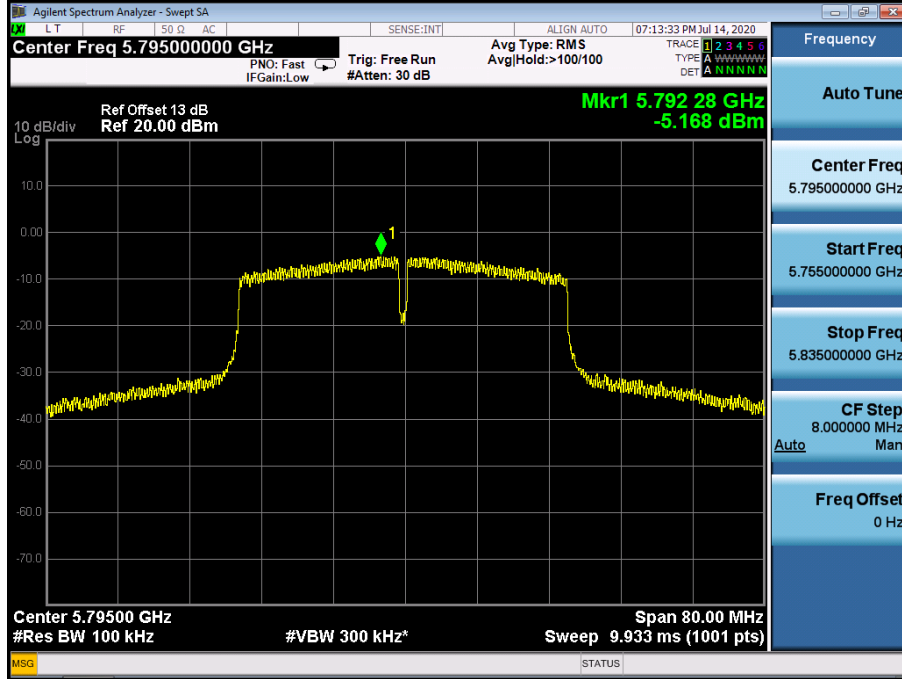
Power Spectral Density
Test Model 802.11n-HT40

U-NII - 3
Frequency(MHz)

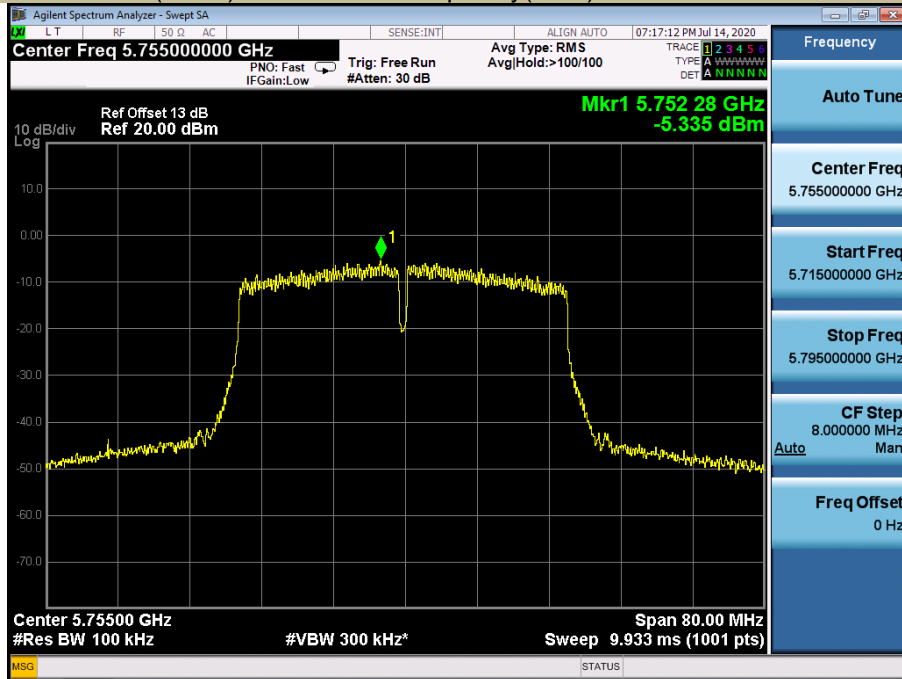
5755



Power Spectral Density U-NII - 3
 Test Model 802.11n-HT40 Frequency(MHz) 5795



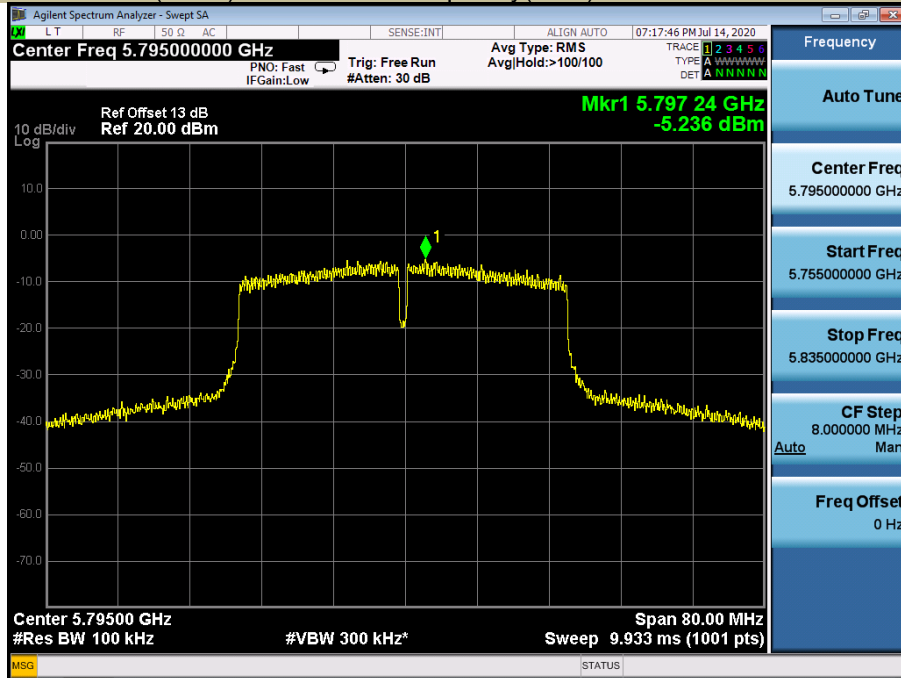
Power Spectral Density U-NII - 3
 Test Model 802.11ac(HT40) Frequency(MHz) 5755



Power Spectral Density
Test Model 802.11ac(HT40)

U-NII - 3
Frequency(MHz)

5795



Power Spectral Density
Test Model 802.11ac 80

U-NII - 3
Frequency(MHz)

5775



For 1T1R-Antenna 1

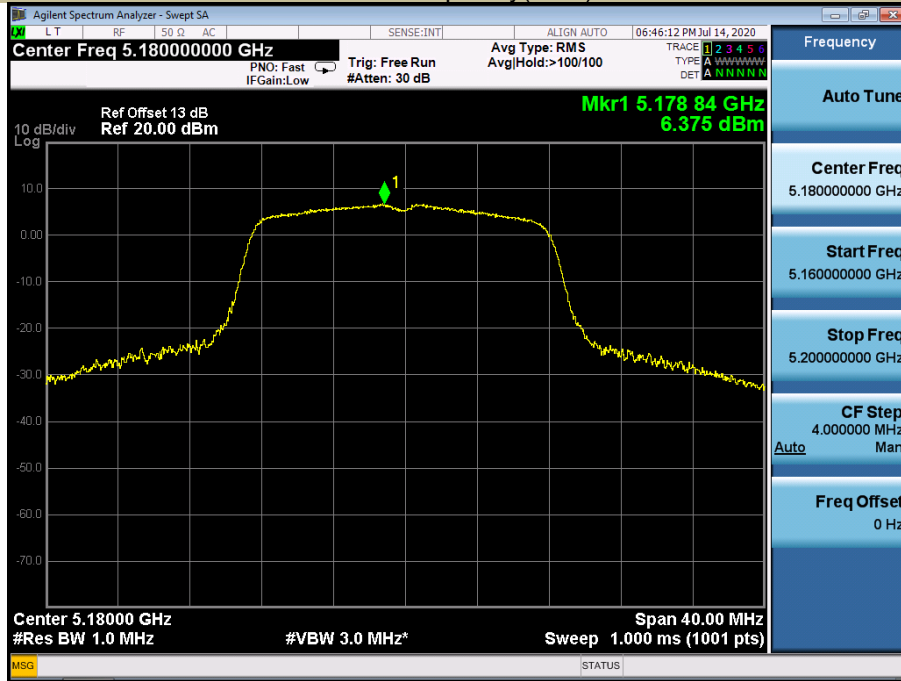
5150-5250MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5180	6.375	17
	5200	6.286	17
	5240	7.977	17
802.11n-HT20	5180	5.120	17
	5200	5.003	17
	5240	6.959	17
802.11ac(HT20)	5180	6.071	17
	5200	5.473	17
	5240	7.260	17
802.11n-HT40	5190	3.945	17
	5230	3.121	17
802.11ac(HT40)	5190	3.888	17
	5230	4.744	17
802.11ac(HT80)	5210	-0.380	17

Power Spectral Density
Test Model 802.11a

U-NII - 1
Frequency(MHz)

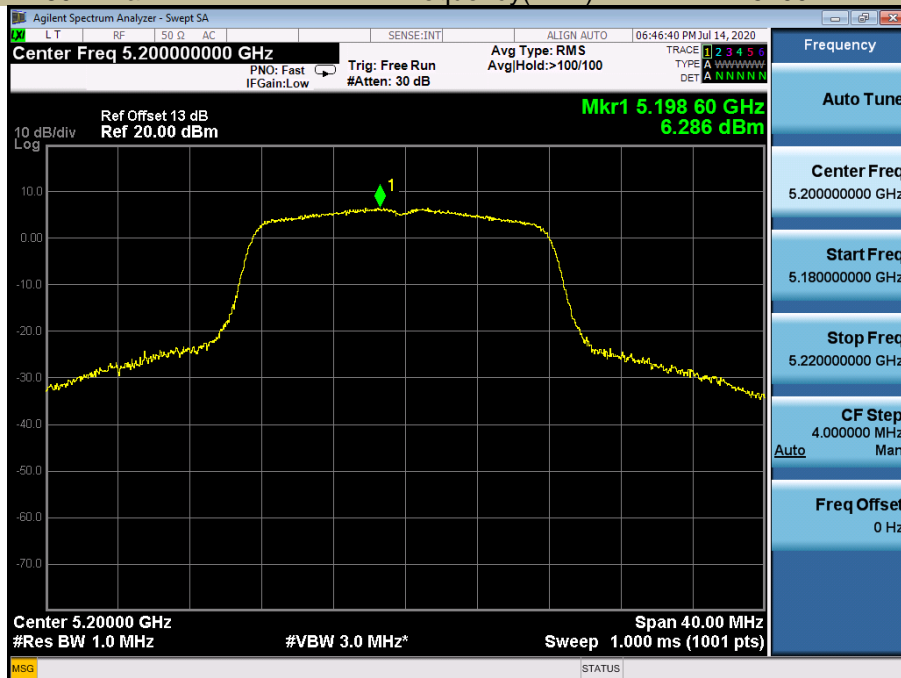
5180



Power Spectral Density
Test Model 802.11a

U-NII - 1
Frequency(MHz)

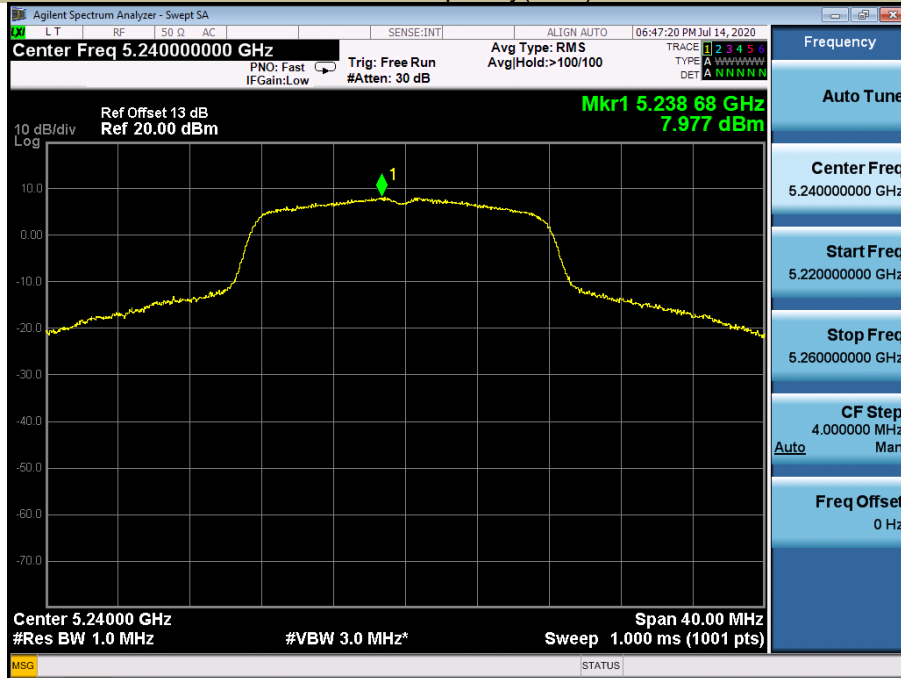
5200



Power Spectral Density
Test Model 802.11a

U-NII - 1
Frequency(MHz)

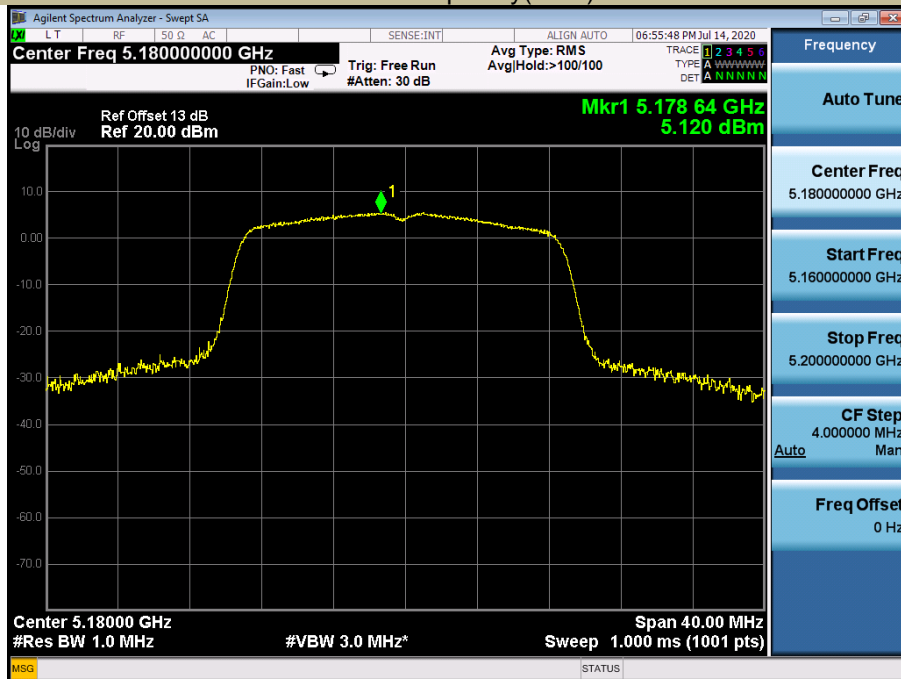
5240



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 1
Frequency(MHz)

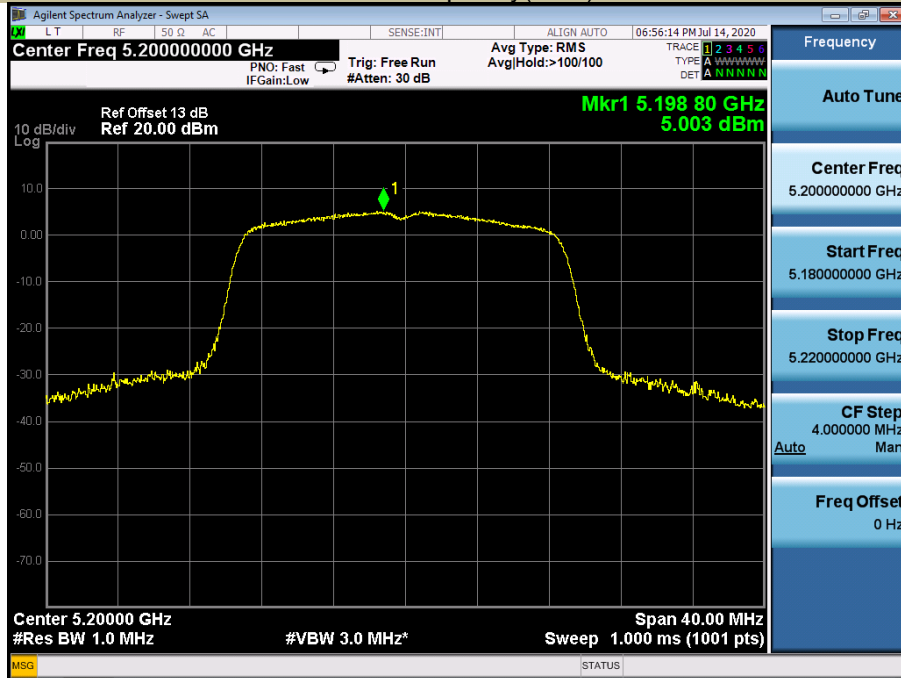
5180



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 1
Frequency(MHz)

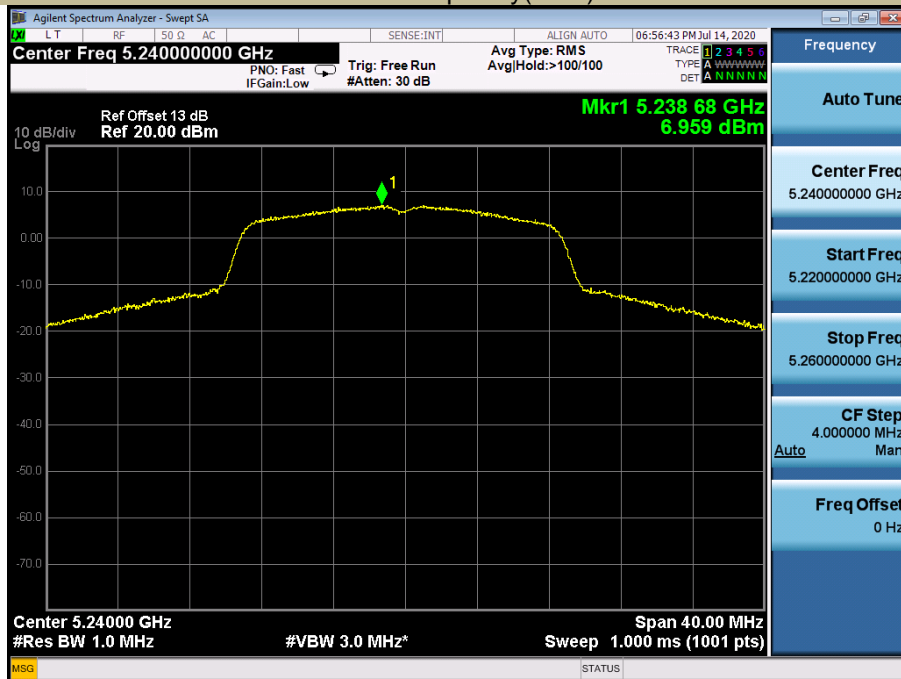
5200



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 1
Frequency(MHz)

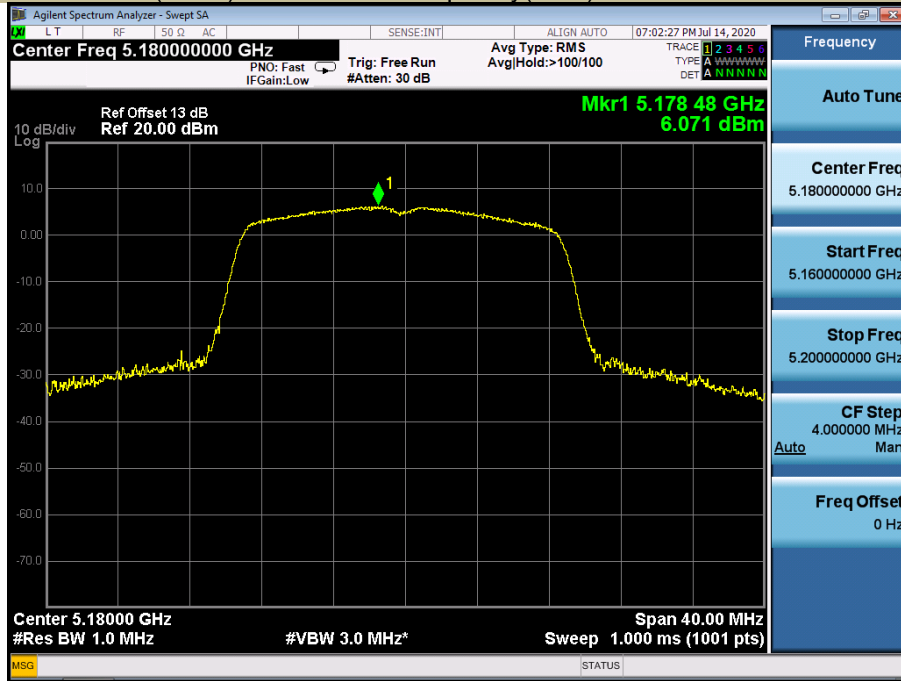
5240



Power Spectral Density
Test Model 802.11ac(HT20)

U-NII - 1
Frequency(MHz)

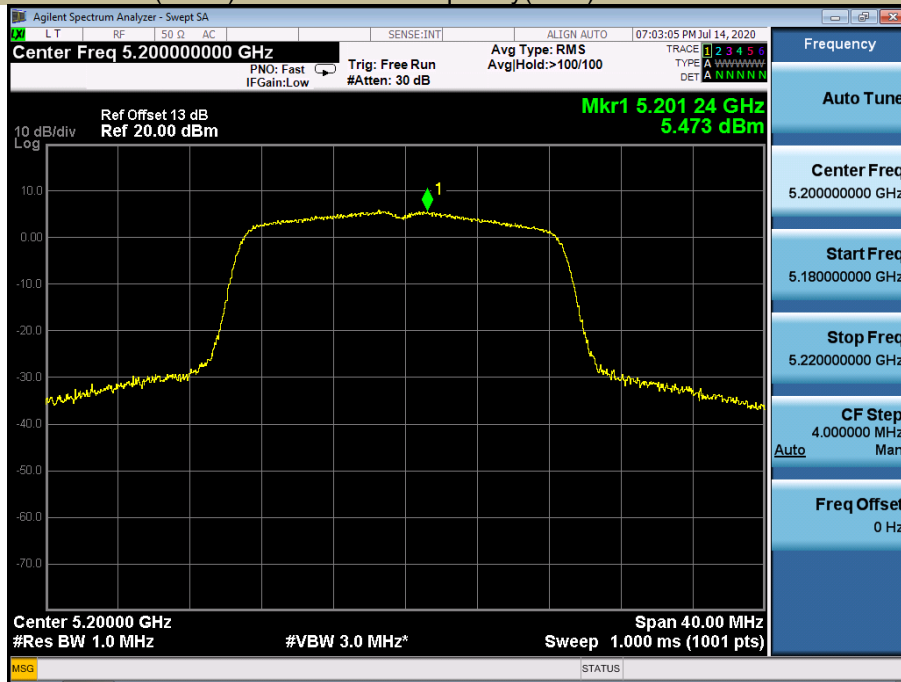
5180



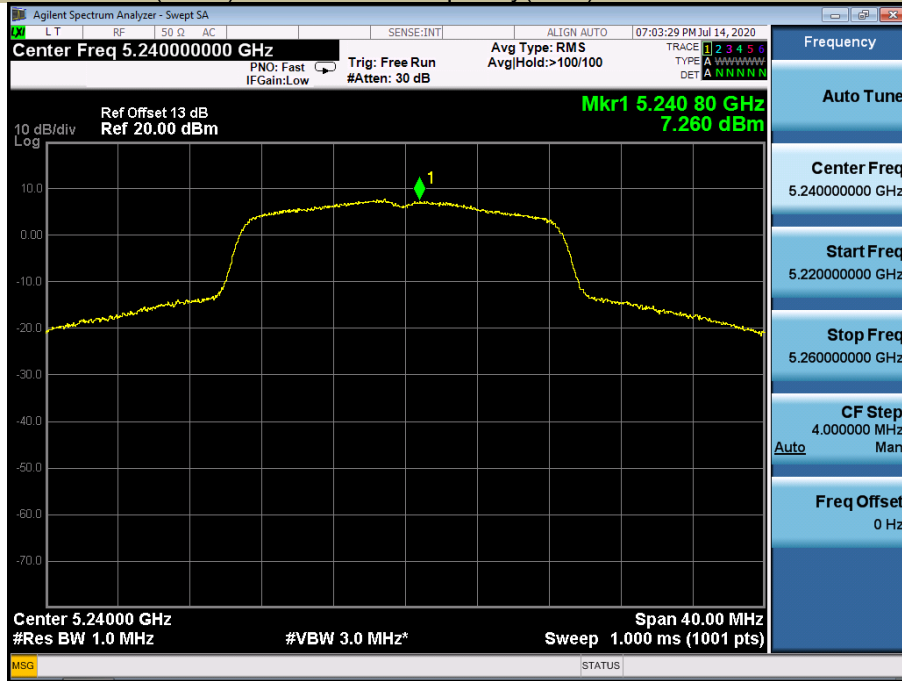
Power Spectral Density
Test Model 802.11ac(HT20)

U-NII - 1
Frequency(MHz)

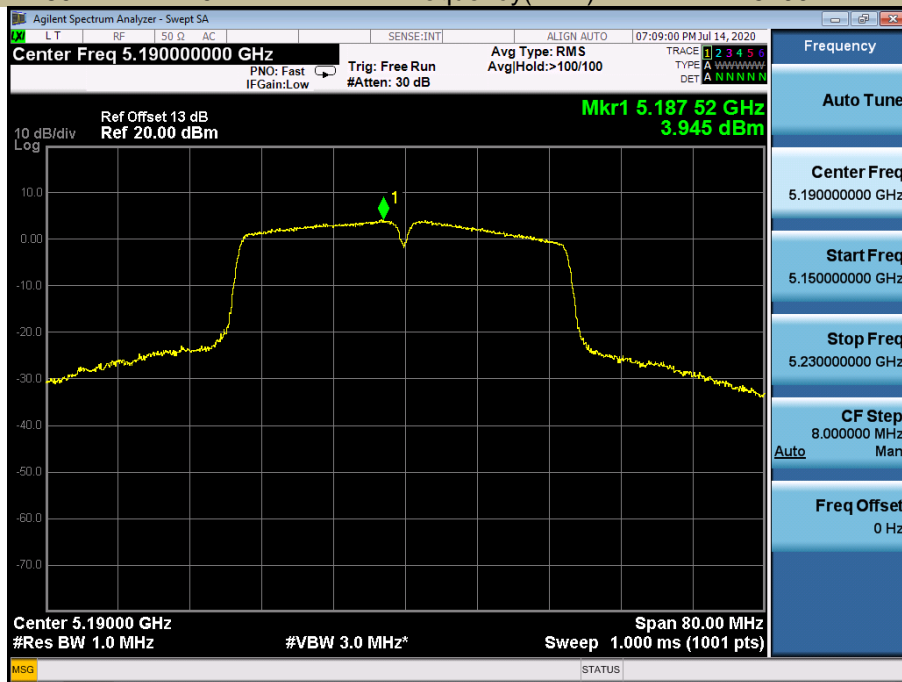
5200



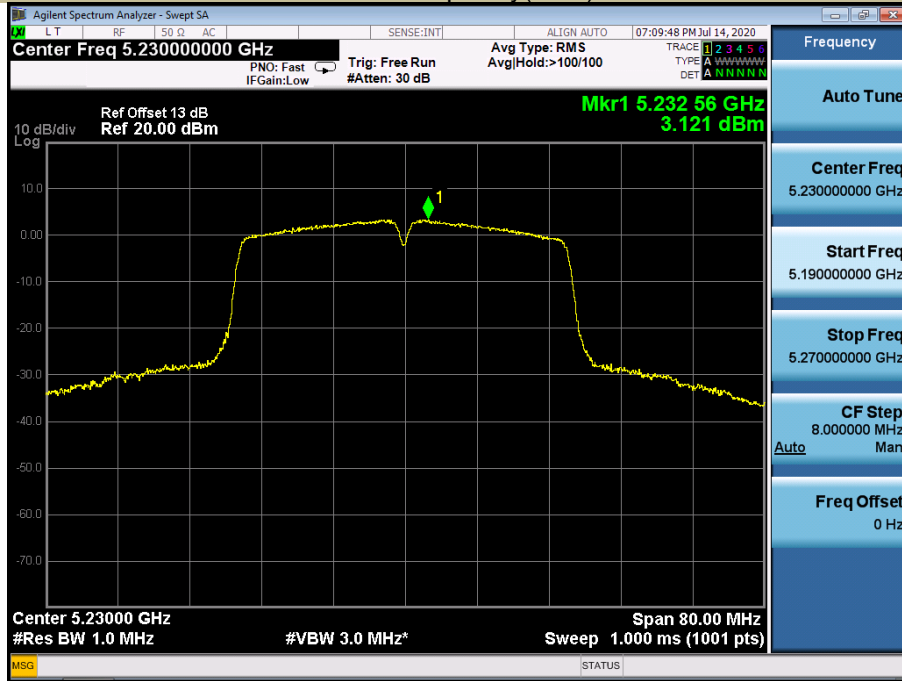
Power Spectral Density U-NII - 1
 Test Model 802.11ac(HT20) Frequency(MHz) 5240



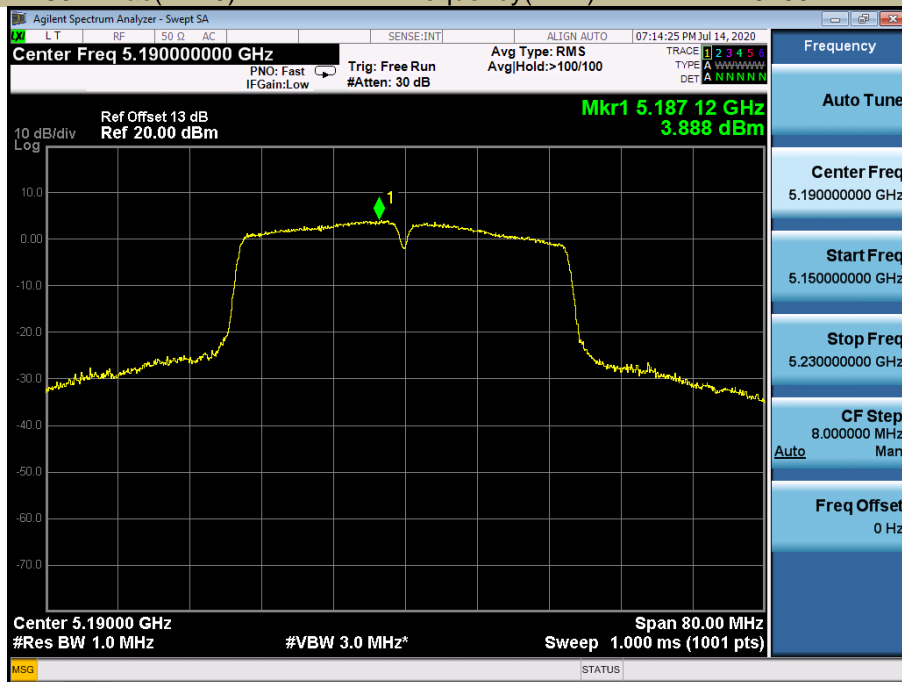
Power Spectral Density U-NII - 1
 Test Model 802.11n-HT40 Frequency(MHz) 5190



Power Spectral Density U-NII - 1
 Test Model 802.11n-HT40 Frequency(MHz) 5230



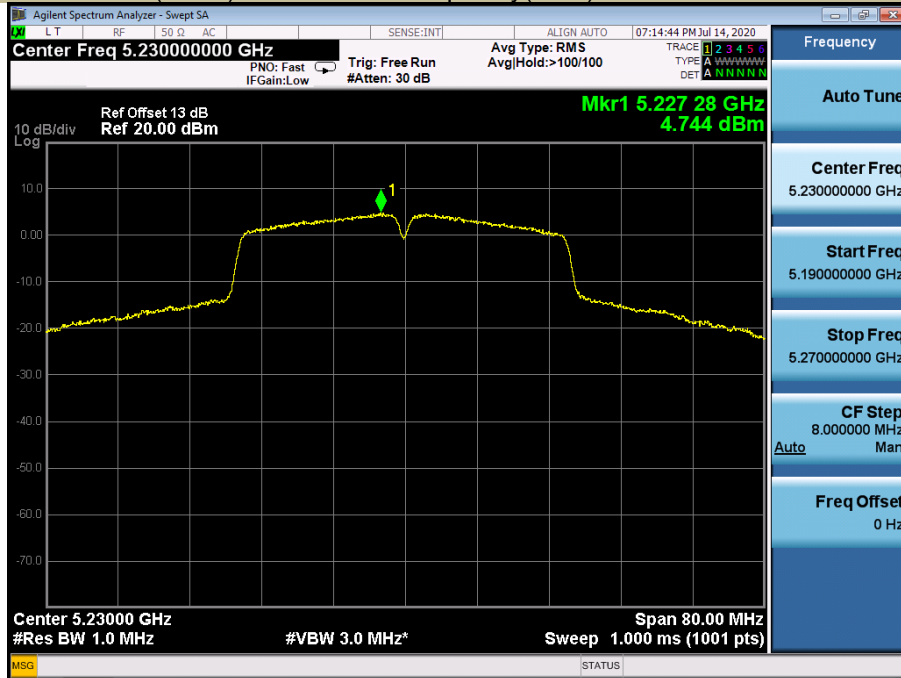
Power Spectral Density U-NII - 1
 Test Model 802.11ac(HT40) Frequency(MHz) 5190



Power Spectral Density
Test Model 802.11ac(HT40)

U-NII - 1
Frequency(MHz)

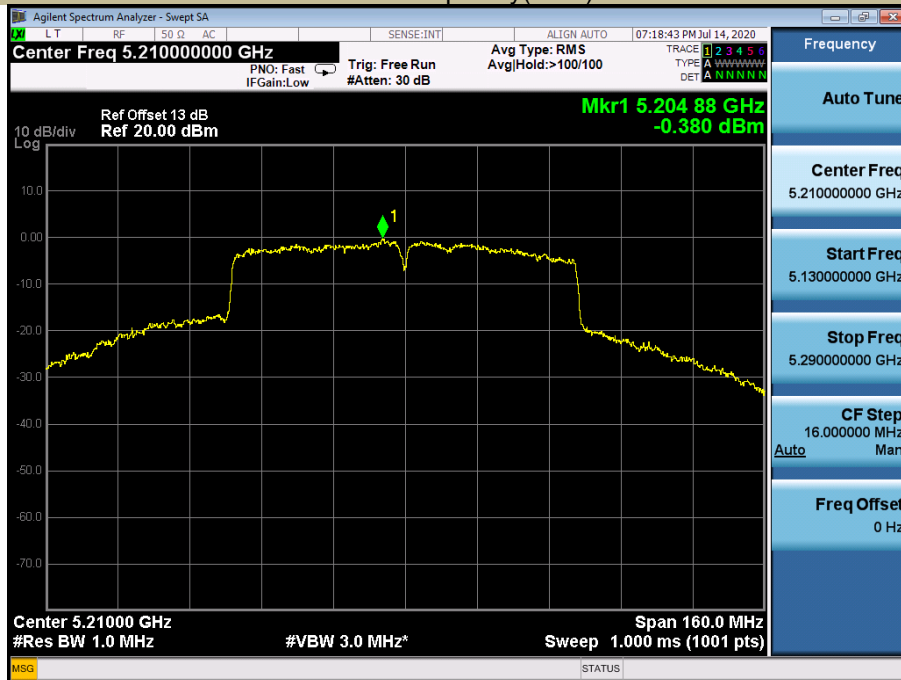
5230



Power Spectral Density
Test Model 802.11ac 80

U-NII - 1
Frequency(MHz)

5210



5725-5850MHz

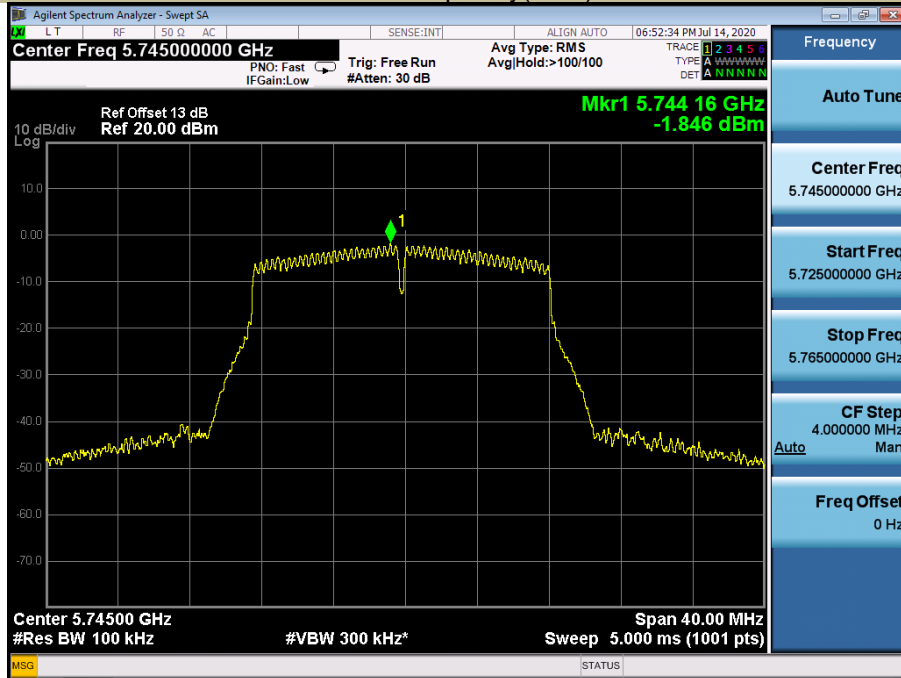
Operating mode	Test Channel	Power Spectral Density dBm/100kHz	Power Spectral Density dBm/500kHz	Limit (dBm/500kHz)
802.11a	5745	-1.846	5.144	30
	5785	-2.742	4.248	30
	5825	-2.039	4.951	30
802.11n-HT20	5745	-2.482	4.508	30
	5785	-2.240	4.750	30
	5825	-2.481	4.509	30
802.11ac(HT20)	5745	-3.126	3.864	30
	5785	-2.522	4.468	30
	5825	-2.812	4.178	30
802.11n-HT40	5755	-5.740	1.250	30
	5795	-4.999	1.991	30
802.11ac(HT40)	5755	-5.797	1.193	30
	5795	-5.219	1.771	30
802.11ac(HT80)	5775	-7.661	-0.671	30

If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

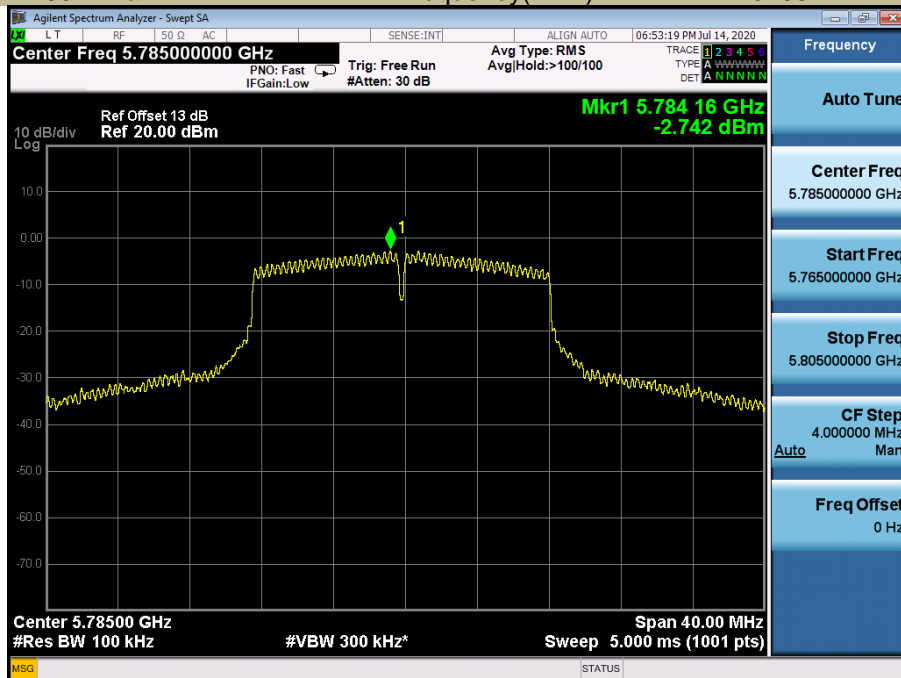
5745



Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

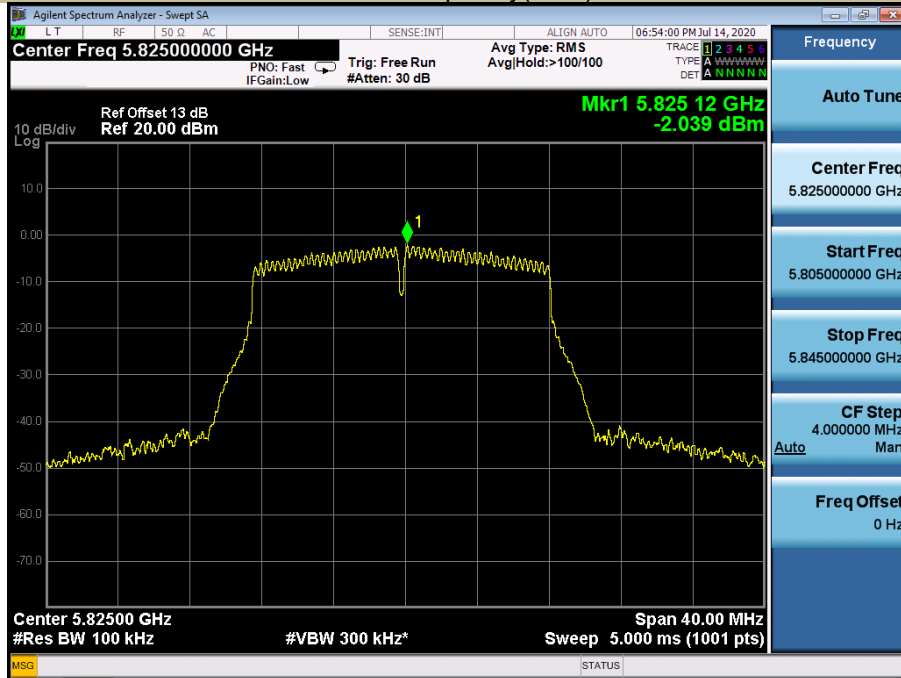
5785



Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

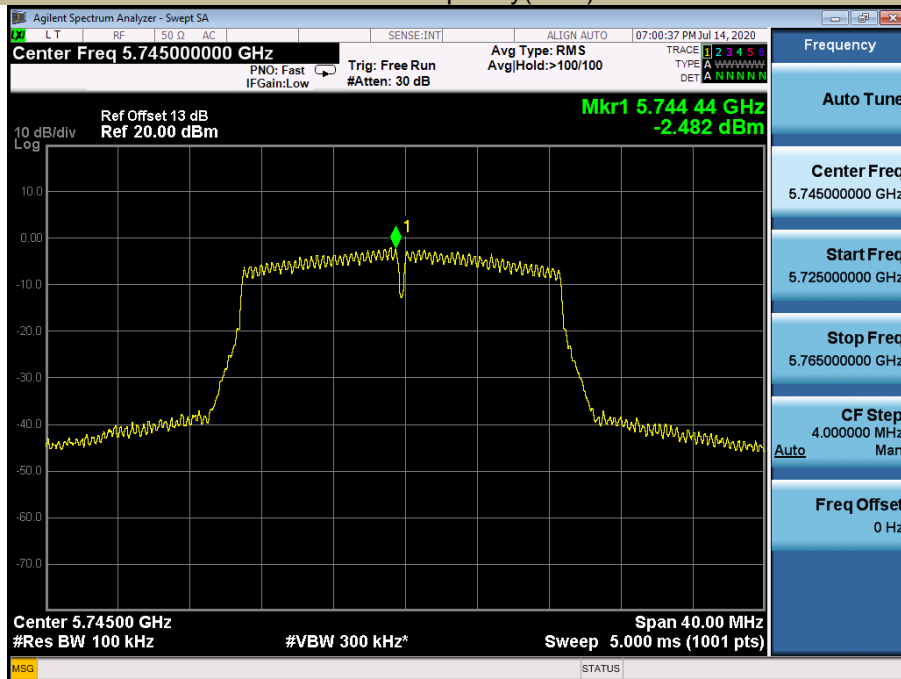
5825



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 3
Frequency(MHz)

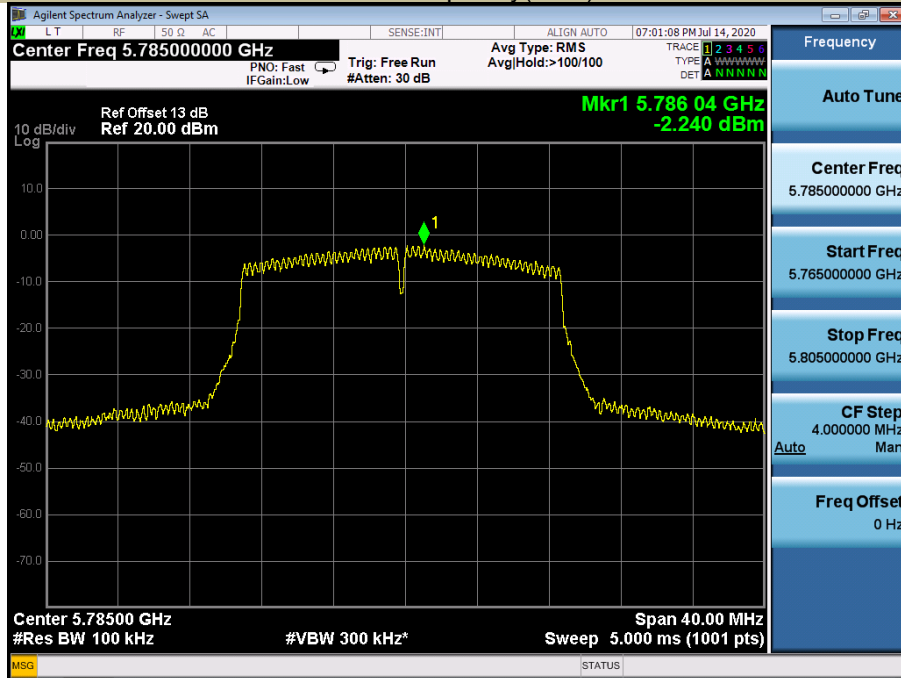
5745



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 3
Frequency(MHz)

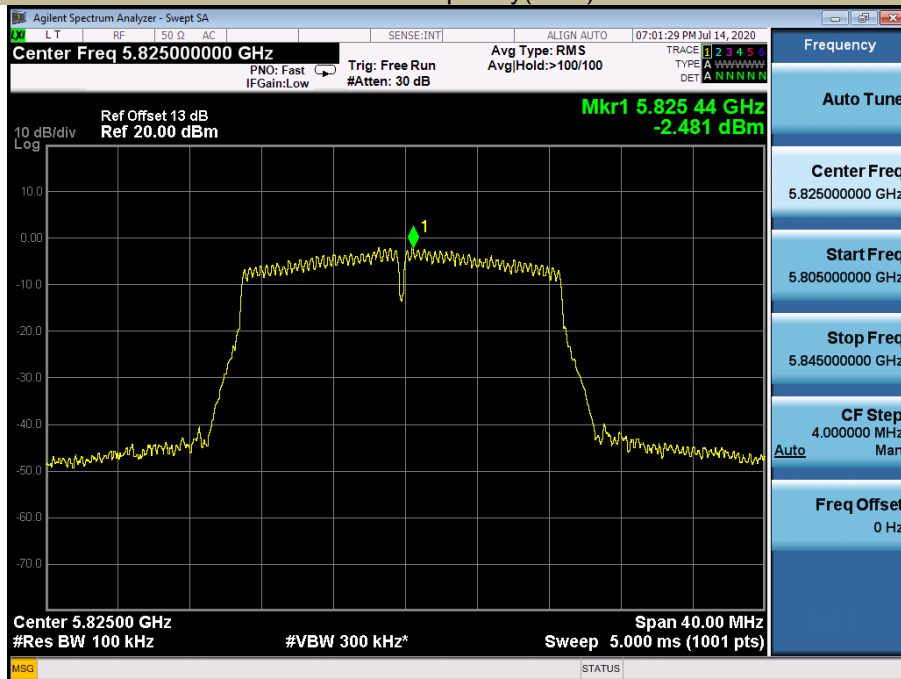
5785



Power Spectral Density
Test Model 802.11n-HT20

U-NII - 3
Frequency(MHz)

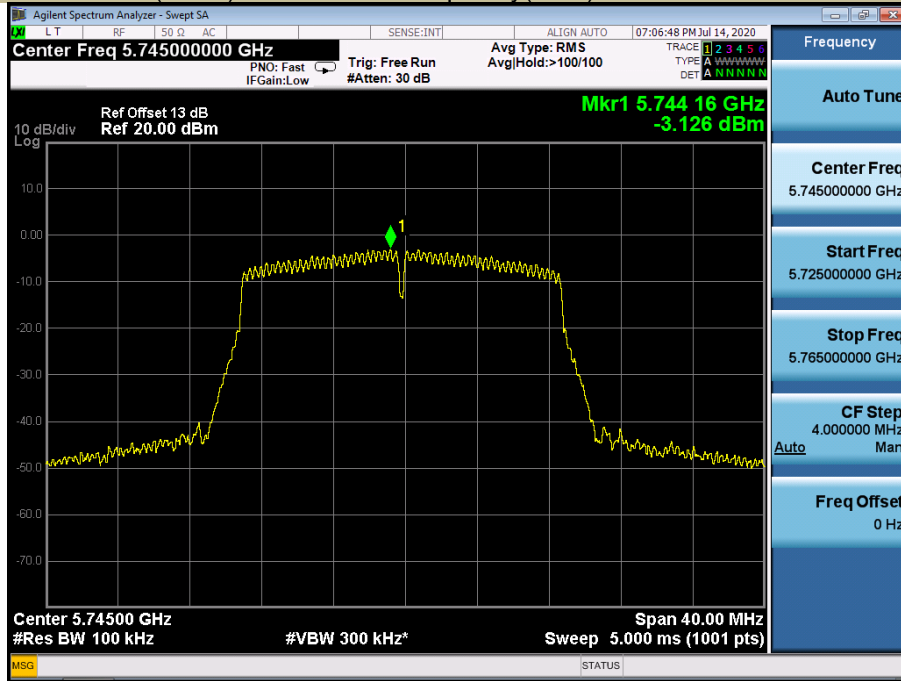
5825



Power Spectral Density
Test Model 802.11ac(HT20)

U-NII - 3
Frequency(MHz)

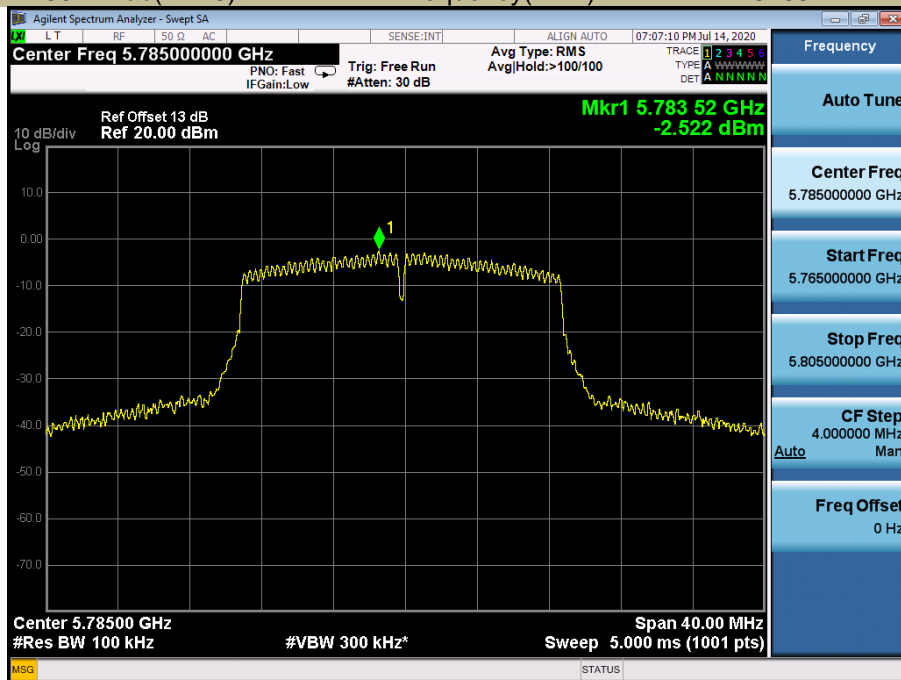
5745



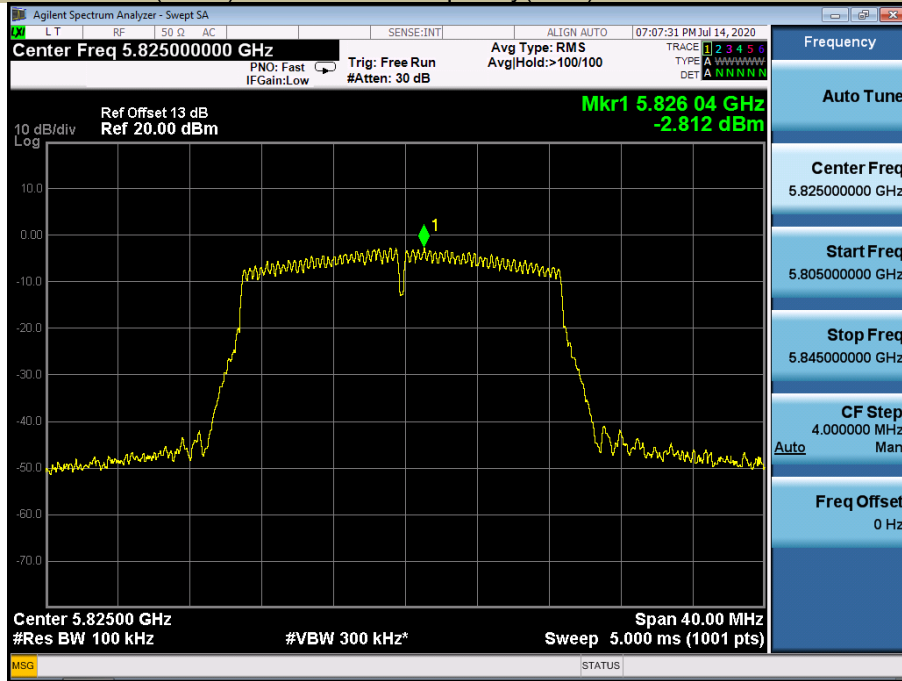
Power Spectral Density
Test Model 802.11ac(HT20)

U-NII - 3
Frequency(MHz)

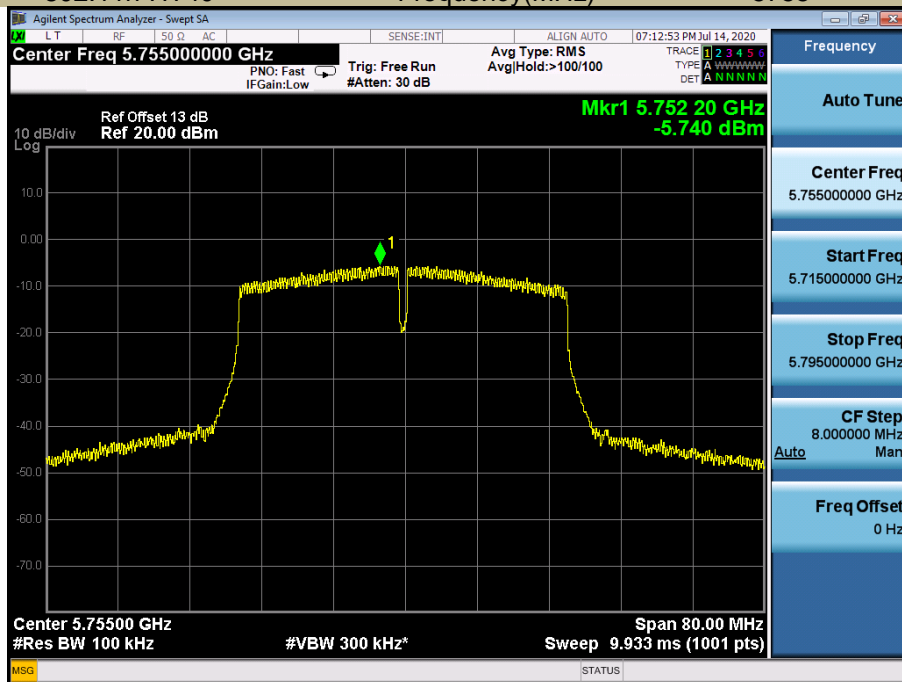
5785



Power Spectral Density U-NII - 3
 Test Model 802.11ac(HT20) Frequency(MHz) 5825

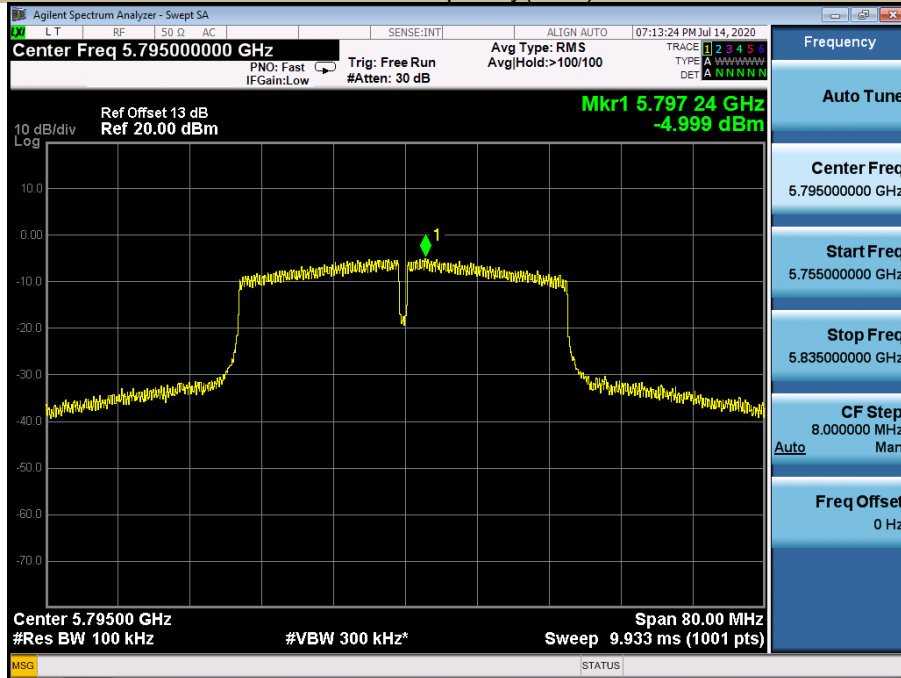


Power Spectral Density U-NII - 3
 Test Model 802.11n-HT40 Frequency(MHz) 5755



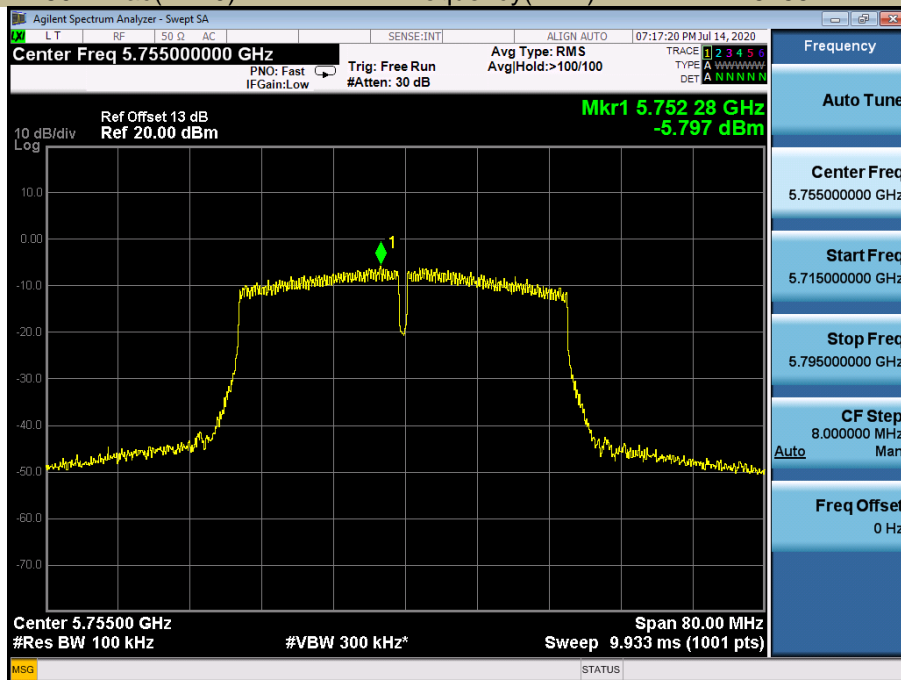
Power Spectral Density
Test Model 802.11n-HT40

U-NII - 3
Frequency(MHz) 5795



Power Spectral Density
Test Model 802.11ac(HT40)

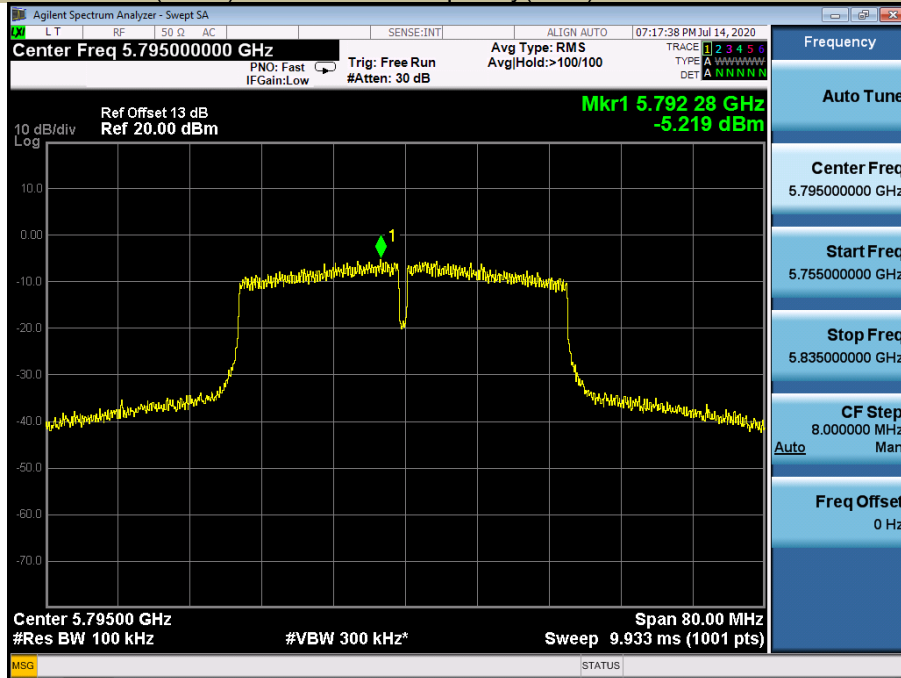
U-NII - 3
Frequency(MHz) 5755



Power Spectral Density
Test Model 802.11ac(HT40)

U-NII - 3
Frequency(MHz)

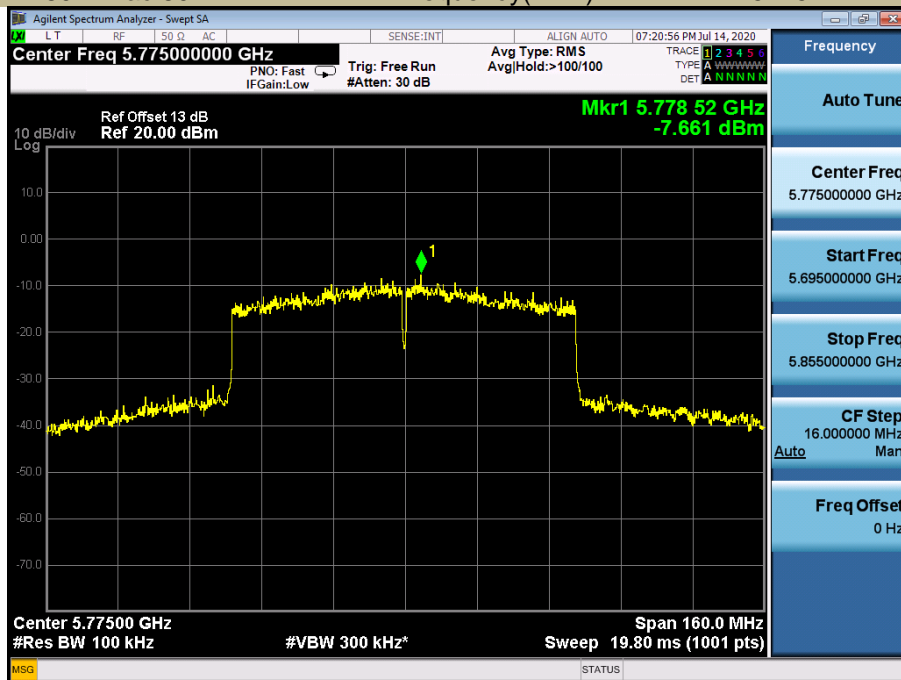
5795



Power Spectral Density
Test Model 802.11ac 80

U-NII - 3
Frequency(MHz)

5775



For 2T2R– Total

5150-5250MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz			Limit (dBm/MHz)
		Antenna 0	Antenna 1	Total	
802.11n-HT20	5180	5.414	5.12	8.28	15
	5200	5.098	5.003	8.06	15
	5240	6.594	6.959	9.79	15
802.11ac(HT20)	5180	5.961	6.071	9.03	15
	5200	5.49	5.473	8.49	15
	5240	7.142	7.26	10.21	15
802.11n-HT40	5190	3.575	3.945	6.77	15
	5230	3.609	3.121	6.38	15
802.11ac(HT40)	5190	3.851	3.888	6.88	15
	5230	4.486	4.744	7.63	15
802.11ac(HT80)	5210	-0.129	-0.38	2.76	15

5725-5850MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz			Limit (dBm/MHz)
		Antenna 0	Antenna 1	Total	
802.11n-HT20	5745	4.439	4.508	7.48	28
	5785	4.581	4.75	7.68	28
	5825	4.719	4.509	7.63	28
802.11ac(HT20)	5745	4.092	3.864	6.99	28
	5785	4.233	4.468	7.36	28
	5825	4.479	4.178	7.34	28
802.11n-HT40	5755	1.497	1.25	4.39	28
	5795	1.822	1.991	4.92	28
802.11ac(HT40)	5755	1.655	1.193	4.44	28
	5795	1.754	1.771	4.77	28
802.11ac(HT80)	5775	-1.041	-0.671	2.16	28

8.4 FREQUENCY STABILITY

8.4.1 Applicable Standard

According to FCC Part 15.407(g)
ANSI C63.10 Section 6.8

8.4.2 Conformance Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

8.4.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.4.4 Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 10 kHz.

Set Span= Entire absence of modulation emissions band

Set the video bandwidth (VBW) =30 kHz. width

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

Allow the trace to stabilize.

The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

Beginning at each temperature level specified in user manual , the frequency shall be measured within one minute after application of primary power to the transmitter and at intervals of no more than one minute thereafter until ten minutes have elapsed or until sufficient measurements are obtained to indicate clearly that the frequency has stabilized within the applicable tolerance, whichever time period is greater. During each test, the ambient temperature shall not be allowed to rise more than 10° centigrade above the respective beginning ambient temperature level

Measure and record the results in the test report.

8.4.5 Test Results

802.11a		5180		
Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5180.0028	2.8	Pass
	-10	5179.9837	-16.3	Pass
	0	5179.9959	-4.1	Pass
	10	5179.9819	-18.1	Pass
	20	5179.9949	-5.1	Pass
	30	5179.9909	-9.1	Pass
	40	5180.0094	9.4	Pass
55	5180.0122	12.2	Pass	
85% Vnom	25	5180.0164	16.4	Pass
115% Vnom	25	5180.0056	5.6	Pass

		5200		
Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5199.9997	-0.3	Pass
	-10	5200.0112	11.2	Pass
	0	5199.9969	-3.1	Pass
	10	5200.0048	4.8	Pass
	20	5200.0112	11.2	Pass
	30	5200.0169	16.9	Pass
	40	5200.0036	3.6	Pass
55	5199.9974	-2.6	Pass	
85% Vnom	25	5200.0027	2.7	Pass
115% Vnom	25	5200.0059	5.9	Pass

		5240		
Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5240.0124	12.4	Pass
	-10	5240.0057	5.7	Pass
	0	5240.0107	10.7	Pass
	10	5240.0026	2.6	Pass
	20	5239.9958	-4.2	Pass
	30	5240.0042	4.2	Pass
	40	5239.9804	-19.6	Pass
55	5240.0048	4.8	Pass	
85% Vnom	25	5240.0169	16.9	Pass
115% Vnom	25	5240.0126	12.6	Pass

5190

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5189.9976	-2.4	Pass
	-10	5190.0123	12.3	Pass
	0	5189.9845	-15.5	Pass
	10	5189.9848	-15.2	Pass
	20	5190.0056	5.6	Pass
	30	5189.9882	-11.8	Pass
	40	5190.0075	7.5	Pass
	55	5189.9834	-16.6	Pass
85% Vnom	25	5189.9935	-6.5	Pass
115% Vnom	25	5190.0154	15.4	Pass

5230

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5229.9996	-0.4	Pass
	-10	5230.0001	0.1	Pass
	0	5229.9921	-7.9	Pass
	10	5229.9945	-5.5	Pass
	20	5230.0197	19.7	Pass
	30	5230.0164	16.4	Pass
	40	5230.0096	9.6	Pass
	55	5229.9953	-4.7	Pass
85% Vnom	25	5229.9851	-14.9	Pass
115% Vnom	25	5230.0112	11.2	Pass

5210

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5209.9949	-5.1	Pass
	-10	5209.9887	-11.3	Pass
	0	5209.9872	-12.8	Pass
	10	5209.9883	-11.7	Pass
	20	5209.9951	-4.9	Pass
	30	5210.0199	19.9	Pass
	40	5210.0109	10.9	Pass
	55	5209.9819	-18.1	Pass
85% Vnom	25	5210.0153	15.3	Pass
115% Vnom	25	5210.0016	1.6	Pass

802.11a

5745

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5745.004	4	Pass
	-10	5744.9814	-18.6	Pass
	0	5744.9949	-5.1	Pass
	10	5744.9819	-18.1	Pass
	20	5744.9842	-15.8	Pass
	30	5744.9838	-16.2	Pass
	40	5745.0061	6.1	Pass
55	5744.9816	-18.4	Pass	
85% Vnom	25	5744.9983	-1.7	Pass
115% Vnom	25	5745.0005	0.5	Pass

5785

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5784.9889	-11.1	Pass
	-10	5785.0034	3.4	Pass
	0	5785.0192	19.2	Pass
	10	5785.0099	9.9	Pass
	20	5784.9949	-5.1	Pass
	30	5785.0178	17.8	Pass
	40	5785.0094	9.4	Pass
55	5785.0055	5.5	Pass	
85% Vnom	25	5784.9918	-8.2	Pass
115% Vnom	25	5785.0091	9.1	Pass

5825

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5824.9902	-9.8	Pass
	-10	5824.9922	-7.8	Pass
	0	5825.0187	18.7	Pass
	10	5825.0132	13.2	Pass
	20	5825.0145	14.5	Pass
	30	5825.0125	12.5	Pass
	40	5825.0185	18.5	Pass
55	5824.9906	-9.4	Pass	
85% Vnom	25	5824.9833	-16.7	Pass
115% Vnom	25	5824.9884	-11.6	Pass

5755

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5755.0114	11.4	Pass
	-10	5755.0104	10.4	Pass
	0	5754.9972	-2.8	Pass
	10	5755.0155	15.5	Pass
	20	5754.9829	-17.1	Pass
	30	5754.9971	-2.9	Pass
	40	5754.9985	-1.5	Pass
	55	5755.0163	16.3	Pass
85% Vnom	25	5755.0106	10.6	Pass
115% Vnom	25	5755.0079	7.9	Pass

5795

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5794.9919	-8.1	Pass
	-10	5794.9846	-15.4	Pass
	0	5795.0016	1.6	Pass
	10	5795.0089	8.9	Pass
	20	5795.0197	19.7	Pass
	30	5795.0071	7.1	Pass
	40	5795.0183	18.3	Pass
	55	5795.0195	19.5	Pass
85% Vnom	25	5795.0013	1.3	Pass
115% Vnom	25	5794.9934	-6.6	Pass

5775

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
Vnom	-20	5775.0034	3.4	Pass
	-10	5775.0064	6.4	Pass
	0	5774.9959	-4.1	Pass
	10	5774.9841	-15.9	Pass
	20	5775.0185	18.5	Pass
	30	5775.0083	8.3	Pass
	40	5775.0064	6.4	Pass
	55	5775.0059	5.9	Pass
85% Vnom	25	5775.0145	14.5	Pass
115% Vnom	25	5774.9952	-4.8	Pass

8.5 UNDESIRABLE RADIATED SPURIOUS EMISSION

8.5.1 Applicable Standard

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

8.5.2 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 (µV/m)	Field Strength (dBµV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/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 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

8.5.3 Test Configuration

Test according to clause 6.2 radio frequency test setup

8.5.4 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 < 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.

8.5.5 Test Results

The voltage 120V & 240V and the modes 802.11a/n/ac has been tested and the worst result recorded as below

- For Undesirable radiated Spurious Emission in U-NII – 1
 - Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
- The 802.11a/n/ac SISO and MIMO modes have been tested and the worst case mode recorded as below:

Test mode:	802.11ac	Frequency(MHz):	5180
Mode:	SISO antenna 0	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9573.22	V	55.67	-39.56	-27	-39.56
12023.65	V	56.49	-38.74	-27	-38.74
13685.87	V	57.46	-37.77	-27	-37.77
9408.63	H	54.79	-40.44	-27	-40.44
12133.62	H	56.61	-38.62	-27	-38.62
15263.67	H	59.36	-35.87	-27	-35.87

Test mode:	802.11ac	Frequency(MHz):	5200
Mode:	SISO antenna 0	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8291.02	V	52.52	-42.71	-27	-15.71
10039.39	V	55.88	-39.35	-27	-12.35
15250.44	V	58.28	-36.95	-27	-9.95
9140.58	H	53.13	-42.10	-27	-15.1
14125.95	H	59.12	-36.11	-27	-9.11
17258.70	H	59.99	-35.24	-27	-8.24

Test mode:	802.11ac	Frequency(MHz):	5240
Mode:	SISO antenna 0	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
9573.22	V	54.20	-41.03	-27	-14.03
11402.55	V	56.83	-38.40	-27	-11.4
15459.03	V	58.61	-36.62	-27	-9.62
10669.17	H	55.33	-39.90	-27	-12.9
14381.38	H	57.98	-37.25	-27	-10.25
17268.68	H	60.42	-34.81	-27	-7.81

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

Test mode: 802.11ac		Frequency(MHz): 5180					
Mode: SISO antenna 0		Test By: XW					
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
9573.22	V	55.67	43.15	74	54	-18.33	-10.85
12023.65	V	56.49	45.36	74	54	-17.51	-8.64
13685.87	V	57.46	46.82	74	54	-16.54	-7.18
9408.63	H	54.79	45.26	74	54	-19.21	-8.74
12133.62	H	56.61	47.39	74	54	-17.39	-6.61
15263.67	H	59.36	48.27	74	54	-14.64	-5.73

Test mode: 802.11ac		Frequency(MHz): 5200					
Mode: SISO antenna 0		Test By: XW					
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
8291.02	V	52.52	40.17	74	54	-21.48	-13.83
10039.39	V	55.88	43.52	74	54	-18.12	-10.48
15250.44	V	58.28	46.89	74	54	-15.72	-7.11
9140.58	H	53.13	40.59	74	54	-20.87	-13.41
14125.95	H	59.12	48.63	74	54	-14.88	-5.37
17258.70	H	59.99	48.25	74	54	-14.01	-5.75

Test mode: 802.11ac		Frequency(MHz): 5240					
Mode: SISO antenna 0		Test By: XW					
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
9573.22	V	54.20	43.28	74	54	-19.8	-10.72
11402.55	V	56.83	45.63	74	54	-17.17	-8.37
15459.03	V	58.61	48.71	74	54	-15.39	-5.29
10669.17	H	55.33	44.28	74	54	-18.67	-9.72
14381.38	H	57.98	46.39	74	54	-16.02	-7.61
17268.68	H	60.42	49.76	74	54	-13.58	-4.24

- 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 mode:	802.11n40	Frequency(MHz):	5190
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7996.05	V	58.86	-36.37	-27	-9.37
10383.39	V	50.39	-44.84	-27	-17.84
15573.63	V	53.47	-41.76	-27	-14.76
7941.48	H	55.31	-39.92	-27	-12.92
10380.21	H	53.48	-41.75	-27	-14.75
15570.79	H	50.17	-45.06	-27	-18.06

Test mode:	802.11n40	Frequency(MHz):	5230
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7829.48	V	56.77	-38.46	-27	-11.46
10463.18	V	52.44	-42.79	-27	-15.79
15693.33	V	51.72	-43.51	-27	-16.51
7729.51	H	57.78	-37.45	-27	-10.45
10460.26	H	51.49	-43.74	-27	-16.74
15690.85	H	51.11	-44.12	-27	-17.12

- 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

Test mode: 802.11n40		Frequency(MHz): 5190					
Mode: MIMO		Test By: XW					
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
7996.05	V	58.86	47.99	74	54	-15.14	-6.01
10383.39	V	50.39	42.84	74	54	-23.61	-11.16
15573.63	V	53.47	41.57	74	54	-20.53	-12.43
7941.48	H	55.31	46.78	74	54	-18.69	-7.22
10380.21	H	53.48	43.6	74	54	-20.52	-10.4
15570.79	H	50.17	40.23	74	54	-23.83	-13.77

Test mode: 802.11n40		Frequency(MHz): 5230					
Mode: MIMO		Test By: XW					
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
7829.48	V	56.77	46.12	74	54	-17.23	-7.88
10463.18	V	52.44	44.22	74	54	-21.56	-9.78
15693.33	V	51.72	40.29	74	54	-22.28	-13.71
7729.51	H	57.78	46.32	74	54	-16.22	-7.68
10460.26	H	51.49	44.31	74	54	-22.51	-9.69
15690.85	H	51.11	42.57	74	54	-22.89	-11.43

- 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 mode:	802.11ac80	Frequency(MHz):	5210
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
8010.06	V	58.89	-36.34	-27	-9.34
10423.59	V	52.00	-43.23	-27	-16.23
15633.27	V	50.82	-44.41	-27	-17.41
7794.76	H	57.81	-37.42	-27	-10.42
10420.56	H	50.76	-44.47	-27	-17.47
15630.32	H	50.07	-45.16	-27	-18.16

- 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[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode:	802.11ac80	Frequency(MHz):	5210
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
8010.06	V	58.89	45.9	74	54	-15.11	-8.1
10423.59	V	52.00	42.51	74	54	-22.00	-11.49
15633.27	V	50.82	40.70	74	54	-23.18	-13.3
7794.76	H	57.81	47.67	74	54	-16.19	-6.33
10420.56	H	50.76	42.22	74	54	-23.24	-11.78
15630.32	H	50.07	40.96	74	54	-23.93	-13.04

- 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
 The 802.11a/n/ac SISO and MIMO modes have been tested and the worst case mode recorded as below:

Test mode:	802.11ac	Frequency(MHz):	5180
Mode:	SISO antenna 0	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5059.00	H	45.91	-49.32	-27	Pass
5149.35	V	48.33	-46.9	-27	Pass

Test mode:	802.11ac	Frequency(MHz):	5240
Mode:	SISO antenna 0	Test By:	XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5355.72	H	43.78	-51.45	-27	Pass
5359.02	V	44.90	-50.33	-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:	802.11ac	Frequency(MHz):	5180
Mode:	SISO antenna 0	Test By:	XW

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5059.00	H	45.91	74	-28.09	32.90	54	-21.10
5149.35	V	48.33	74	-25.67	34.50	54	-19.50

Test mode:	802.11ac	Frequency(MHz):	5240
Mode:	SISO antenna 0	Test By:	XW

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5355.72	H	43.78	74	-30.22	30.20	54	-23.80
5359.02	V	44.90	74	-29.10	31.50	54	-22.50

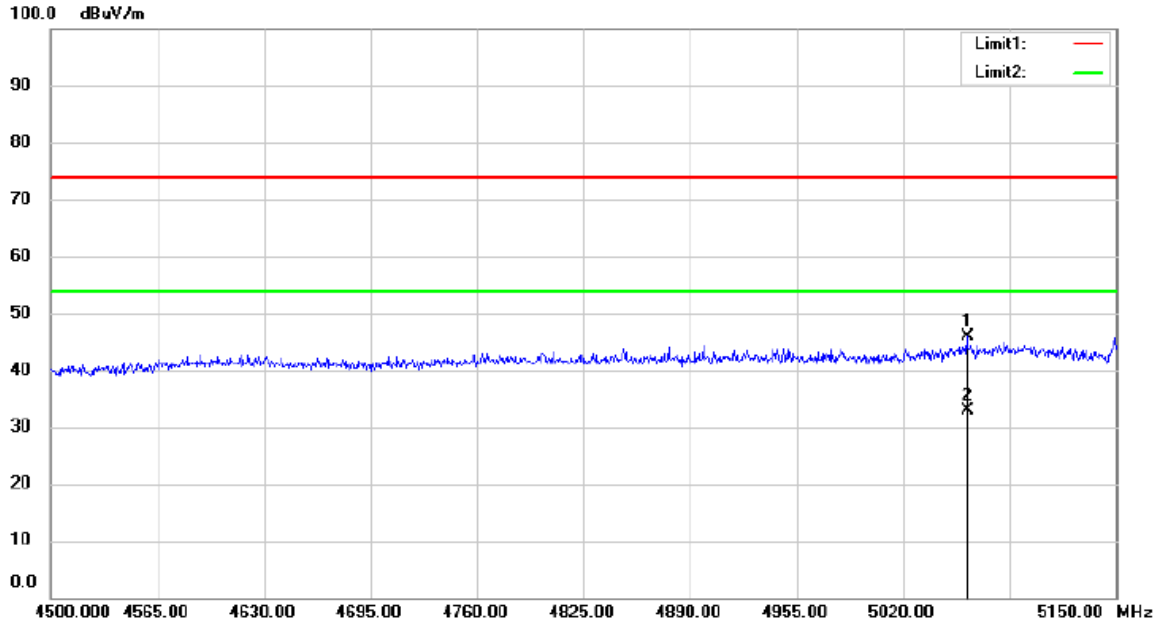
- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions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

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

5180 802.11ac 802.11n(HT20) 802.11n(HT40)

5200 5240 Ant. Pol H



Site 3m Chamber #3 Polarization: **Horizontal** Temperature: 22.5 C

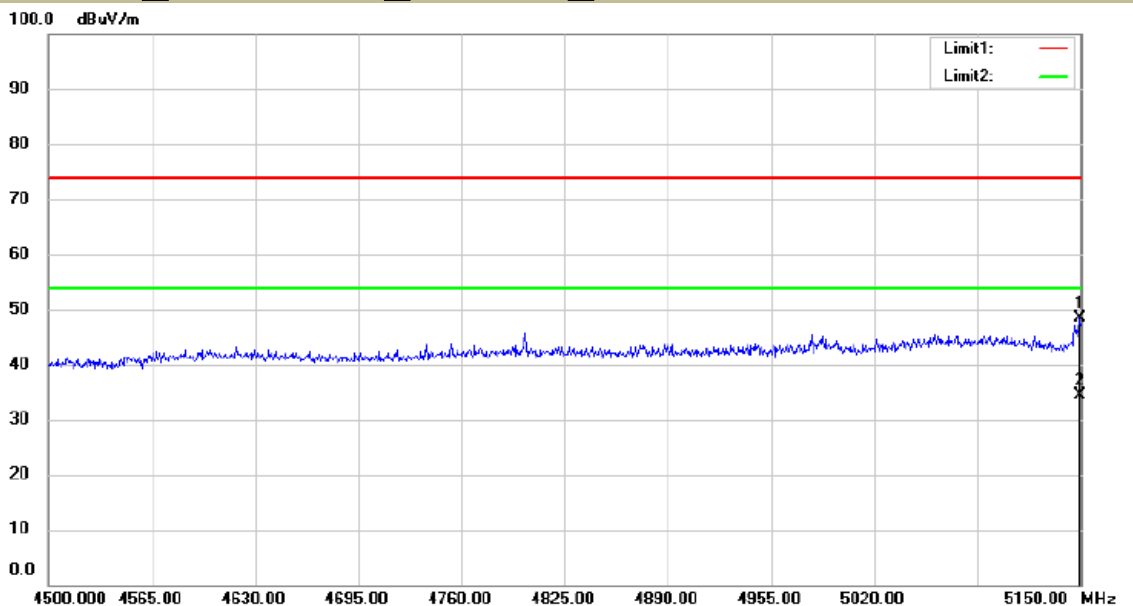
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 45 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

5180 802.11ac 802.11n(HT20) 802.11n(HT40)

5200 5240 Ant. Pol V



Site 3m Chamber #3 Polarization: **Vertical** Temperature: 22.5 C

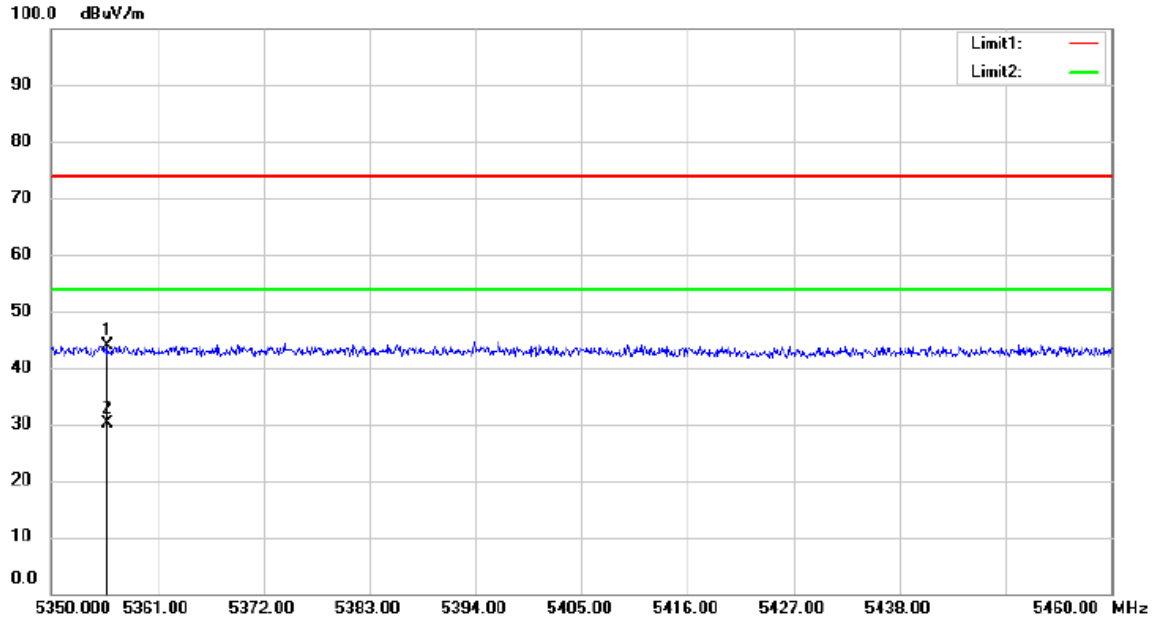
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 45 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5180 802.11ac 802.11n(HT20) 802.11n(HT40)

5200 5240 Ant.Pol H



Site 3m Chamber #3 Polarization: **Horizontal** Temperature: 22.5 C

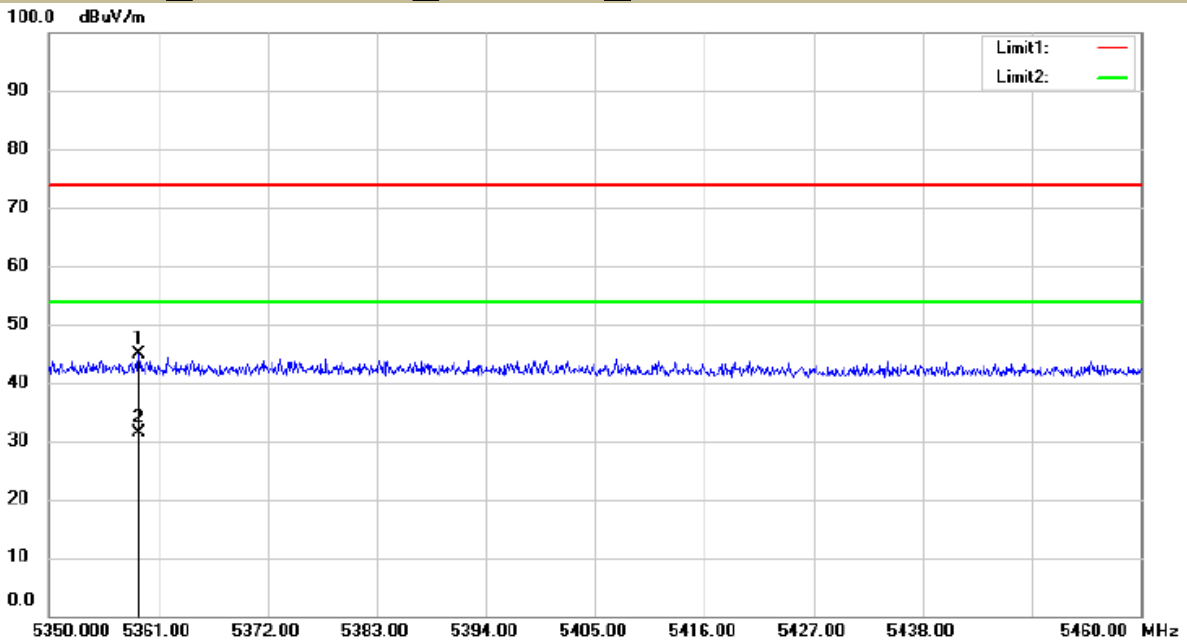
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 45 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5180 802.11ac 802.11n(HT20) 802.11n(HT40)

5200 5240 Ant.Pol V



Site 3m Chamber #3 Polarization: **Vertical** Temperature: 22.5 C

Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 45 %

Test mode:	802.11n40	Frequency(MHz):	5190
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant. Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
2135.79	H	46.09	-49.14	-27	Pass
5121.20	V	45.72	-49.51	-27	Pass

Test mode:	802.11n40	Frequency(MHz):	5230
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant. Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5358.40	H	45.47	-49.76	-27	Pass
5360.57	V	45.65	-49.58	-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:	802.11n40	Frequency(MHz):	5190
Mode:	MIMO	Test By:	XW

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
2135.79	H	46.09	74	-27.91	36.10	54	-17.90
5121.20	V	45.72	74	-28.28	35.20	54	-18.80

Test mode:	802.11n40	Frequency(MHz):	5230
Mode:	MIMO	Test By:	XW

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5358.40	H	45.47	74	-28.53	36.70	54	-17.30
5360.57	V	45.65	74	-28.35	37.40	54	-16.60

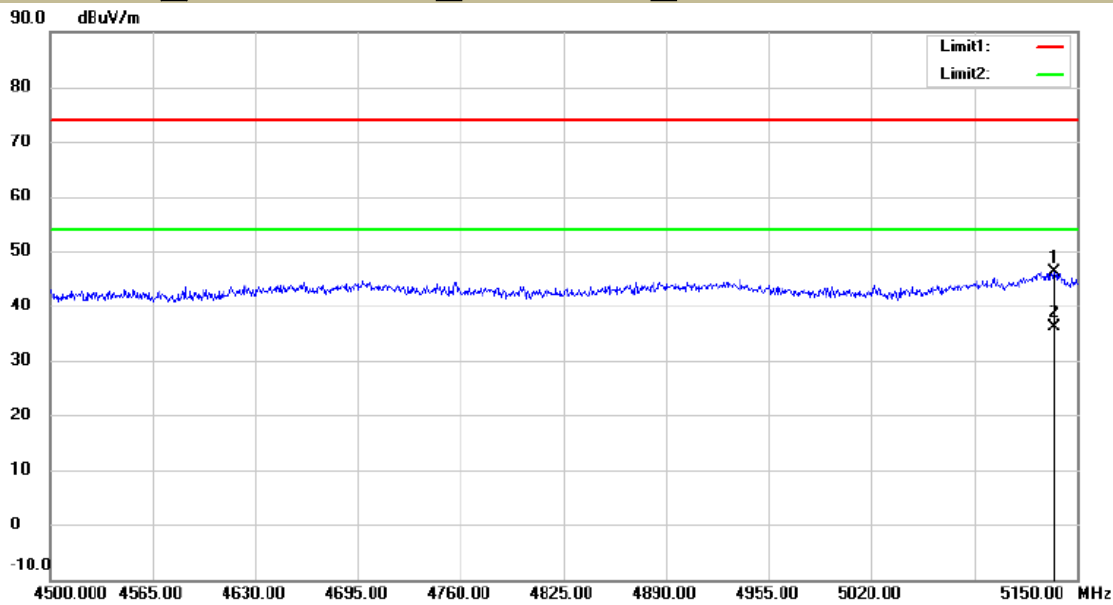
- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are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

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11n(HT40)

5190 5200 5240 Ant. Pol H



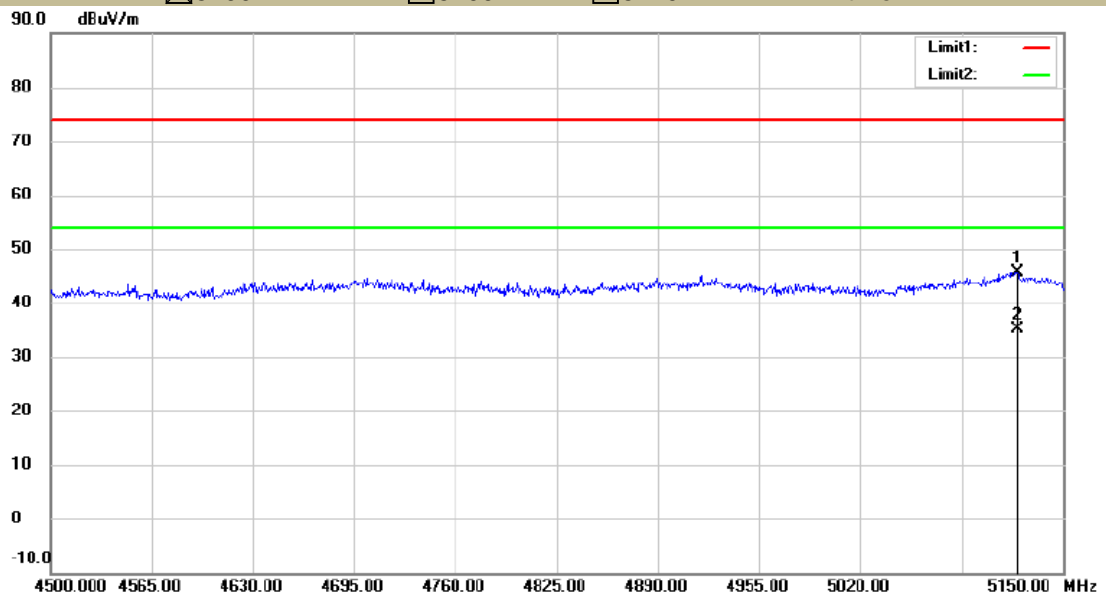
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11n(HT40)

5190 5200 5240 Ant. Pol V



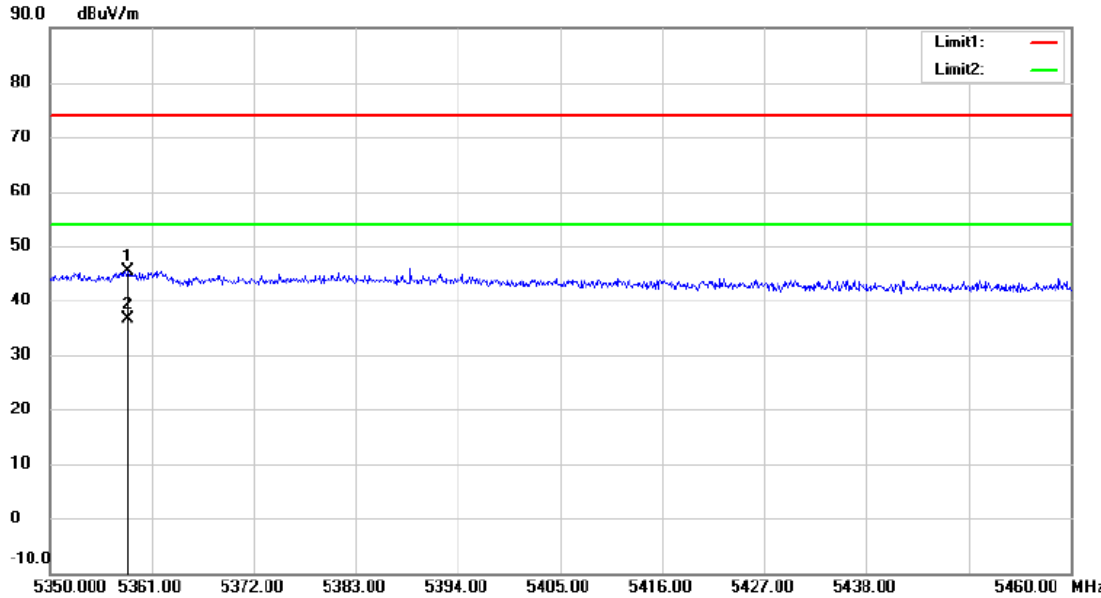
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

802.11ac 802.11n(HT20) 802.11n(HT40)

5190 5200 5230 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C

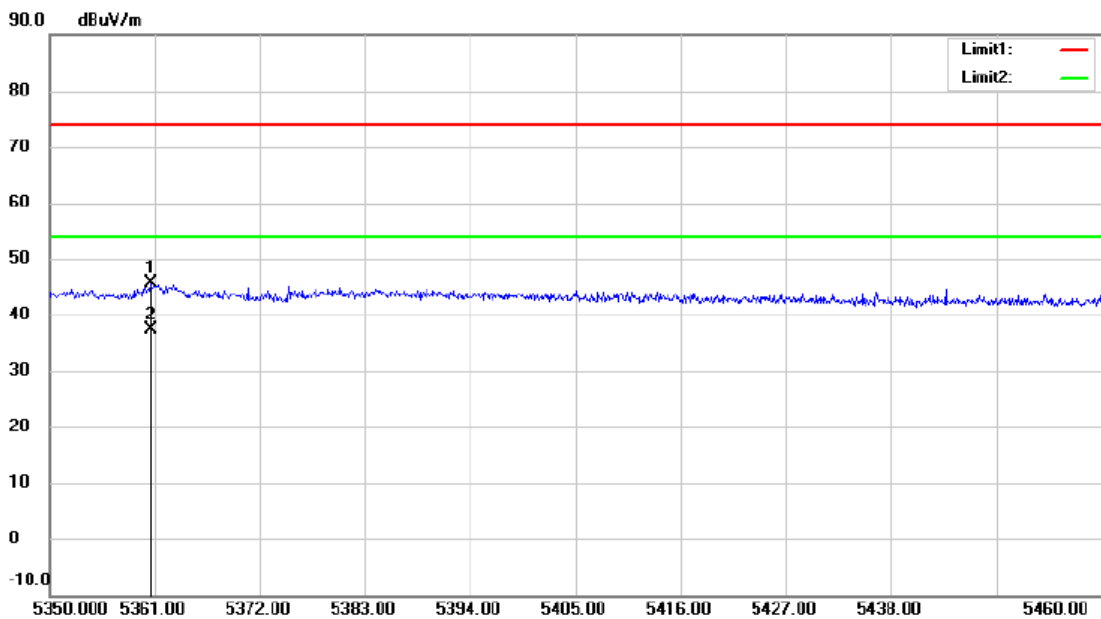
Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

802.11ac 802.11n(HT20) 802.11n(HT40)

5190 5200 5230 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C

Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %

Test mode:	802.11ac80	Frequency(MHz):	5210
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant. Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5096.99	H	44.20	-51.03	-27	Pass
5146.23	V	46.45	-48.78	-27	Pass

Test mode:	802.11ac80	Frequency(MHz):	5210
Mode:	MIMO	Test By:	XW

Freq. (MHz)	Ant. Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5358.14	H	45.63	-49.60	-27	Pass
5365.59	V	45.82	-49.41	-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:	802.11ac80	Frequency(MHz):	5210
Mode:	MIMO	Test By:	XW

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5096.99	H	44.20	74	-29.80	35.40	54	-18.60
5146.23	V	46.45	74	-27.55	35.90	54	-18.10

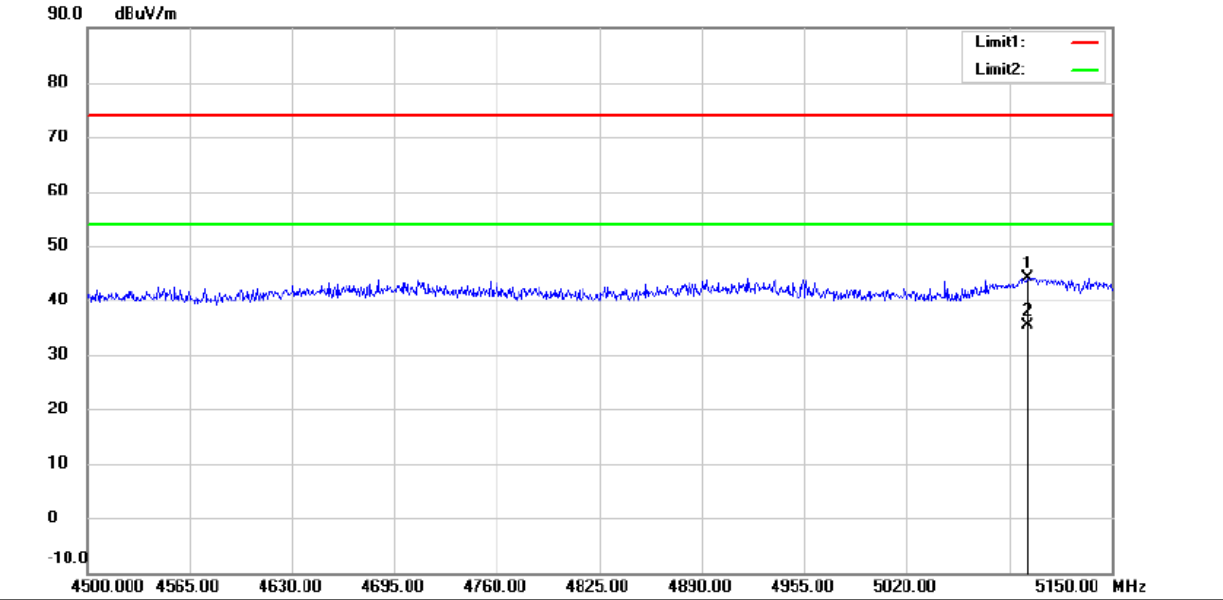
Test mode:	802.11ac80	Frequency(MHz):	5210
Mode:	MIMO	Test By:	XW

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)	Over(dB)
5358.14	H	45.63	74	-28.37	36.40	54	-17.60
5365.59	V	45.82	74	-28.18	37.00	54	-17.00

- 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)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

U-NII - 1

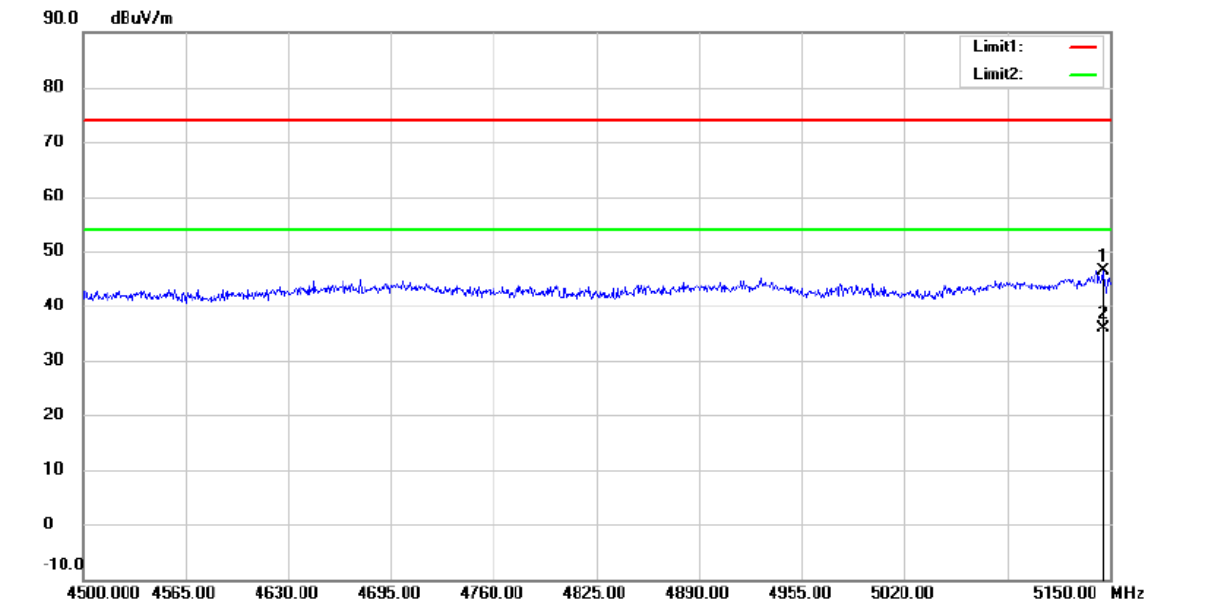
Test Model	Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)		
	<input checked="" type="checkbox"/> 802.11ac80		
	<input checked="" type="checkbox"/> 5210	Ant.Pol	H



Site 3m Chamber #1	Polarization: Horizontal	Temperature: 29.5 C
Limit: (RE)FCC PART 15 CLASS B	Power: AC 120V/60Hz	Humidity: 48 %

U-NII - 1

Test Model	Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)		
	<input checked="" type="checkbox"/> 802.11ac80		
	<input checked="" type="checkbox"/> 5210	Ant.Pol	V



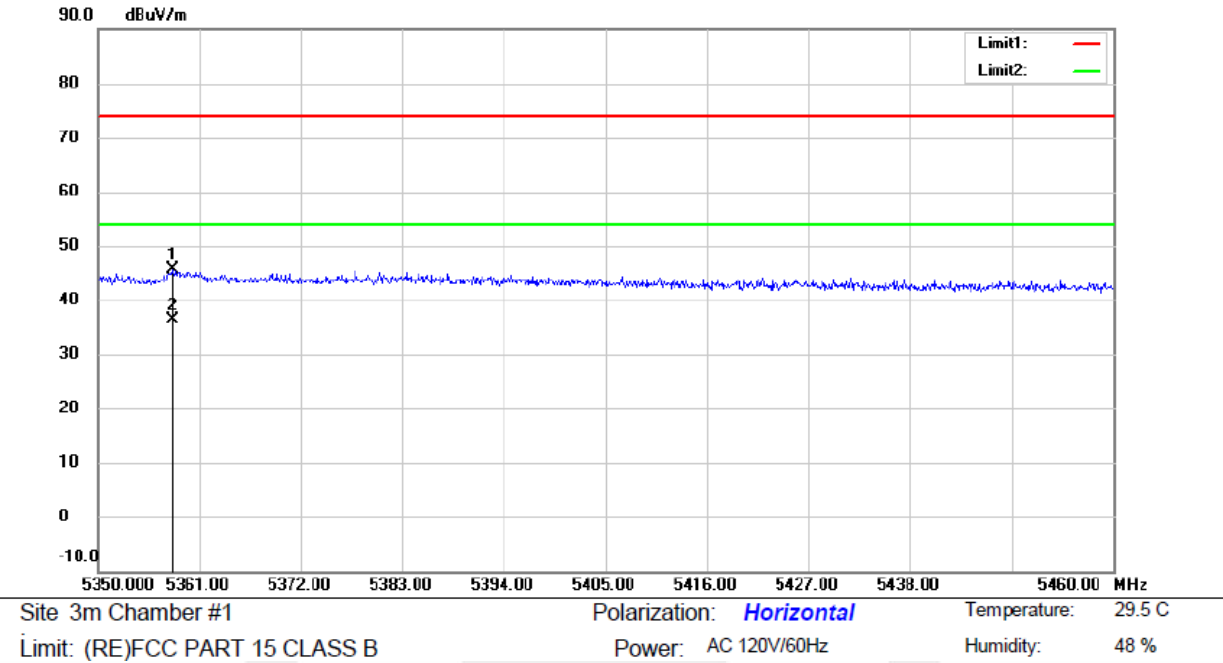
Site 3m Chamber #1	Polarization: Vertical	Temperature: 29.5 C
Limit: (RE)FCC PART 15 CLASS B	Power: AC 120V/60Hz	Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

802.11ac80
5210

Ant.Pol **H**

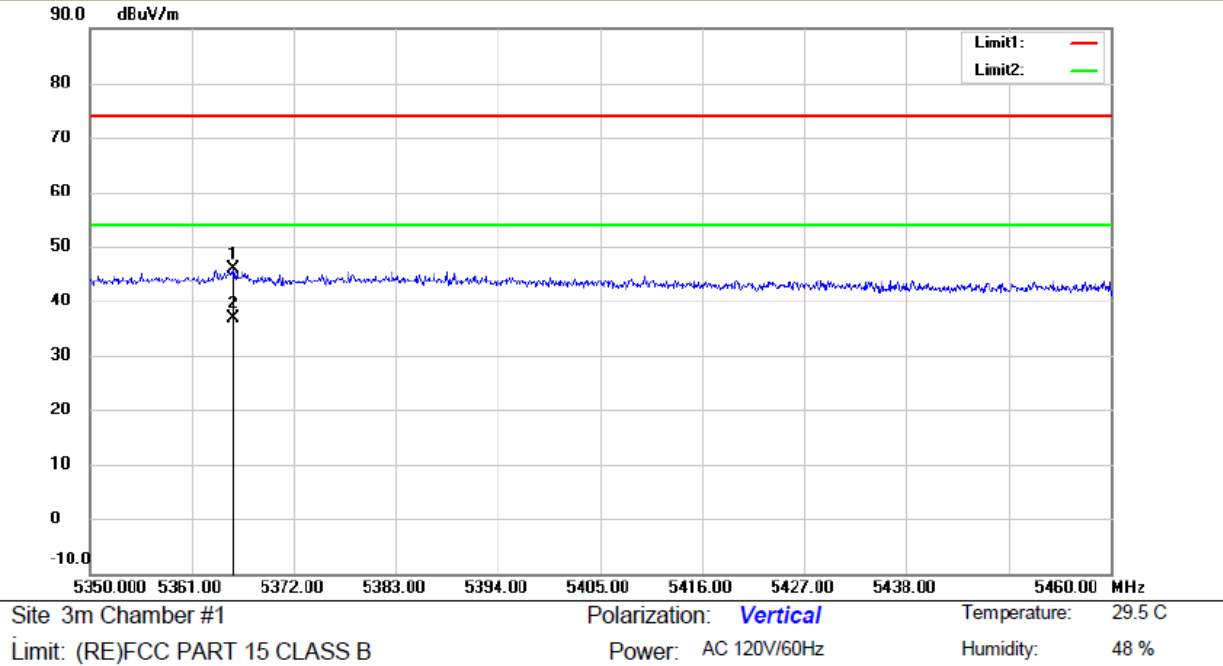


U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

802.11ac80
5210

Ant.Pol **V**



- For Undesirable radiated Spurious Emission in U-NII -3
- Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)
The 802.11a/n/ac SISO and MIMO modes have been tested and the worst case mode recorded as below:

Test mode: 802.11ac Frequency(MHz): 5745
Mode: SISO antenna 0 Test By: XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
10416.26	V	56.19	-39.04	-27	-12.04
14594.94	V	57.57	-37.66	-27	-10.66
16954.63	V	59.20	-36.03	-27	-9.03
9371.99	H	54.23	-41.00	-27	-14.00
11397.61	H	56.91	-38.32	-27	-11.32
15254.85	H	58.87	-36.36	-27	-9.36

Test mode: 802.11ac Frequency(MHz): 5785
Mode: SISO antenna 0 Test By: XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
10049.55	V	55.30	-39.93	-27	-12.93
15184.47	V	59.25	-35.98	-27	-8.98
17935.08	V	60.36	-34.87	-27	-7.87
10094.67	H	55.70	-39.53	-27	-12.53
12570.93	H	57.04	-38.19	-27	-11.19
17045.53	H	59.49	-35.74	-27	-8.74

Test mode: 802.11ac Frequency(MHz): 5825
Mode: SISO antenna 0 Test By: XW

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
10499.39	V	55.53	-39.70	-27	-12.70
14360.61	V	58.09	-37.14	-27	-10.14
17726.36	V	59.90	-35.33	-27	-8.33
11098.52	H	56.37	-38.86	-27	-11.86
15031.63	H	58.48	-36.75	-27	-9.75
17517.53	H	60.76	-34.47	-27	-7.47

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[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters