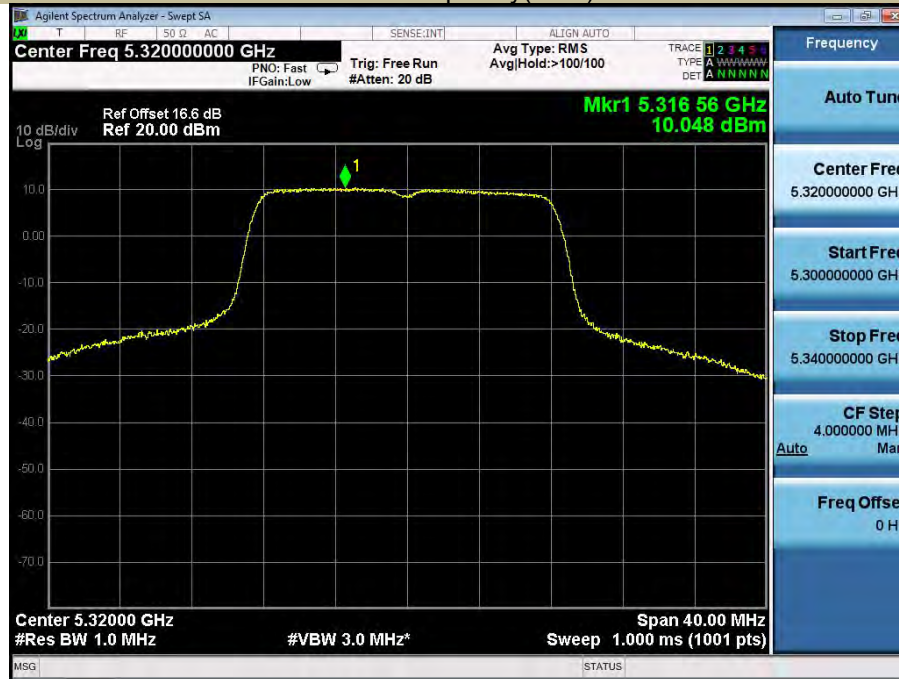


Power Spectral Density
Test Model 802.11a

U-NII – 2A
Frequency(MHz)

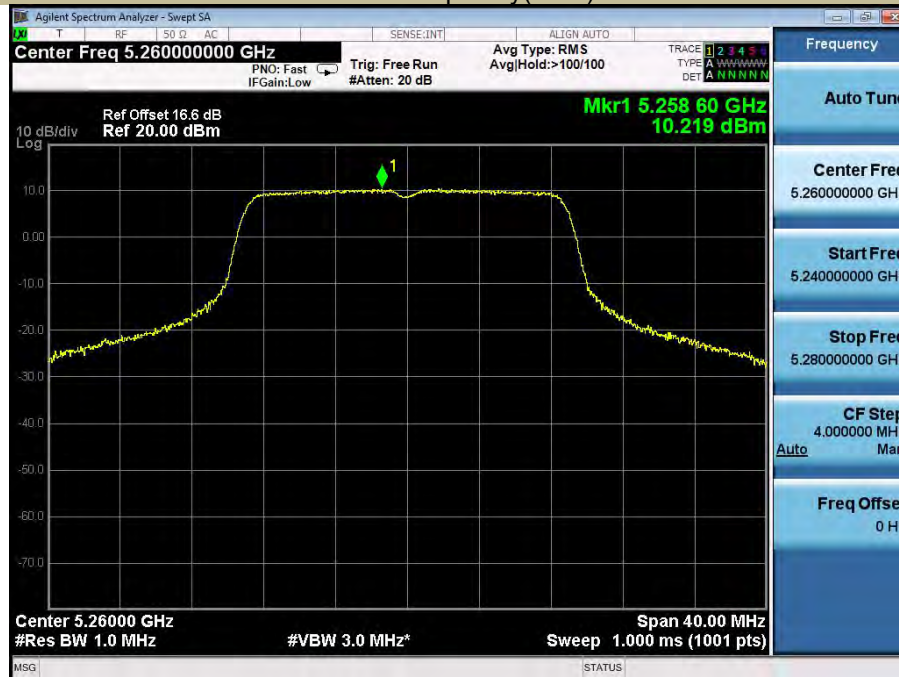
5320



Power Spectral Density
Test Model 802.11n-HT20

U-NII – 2A
Frequency(MHz)

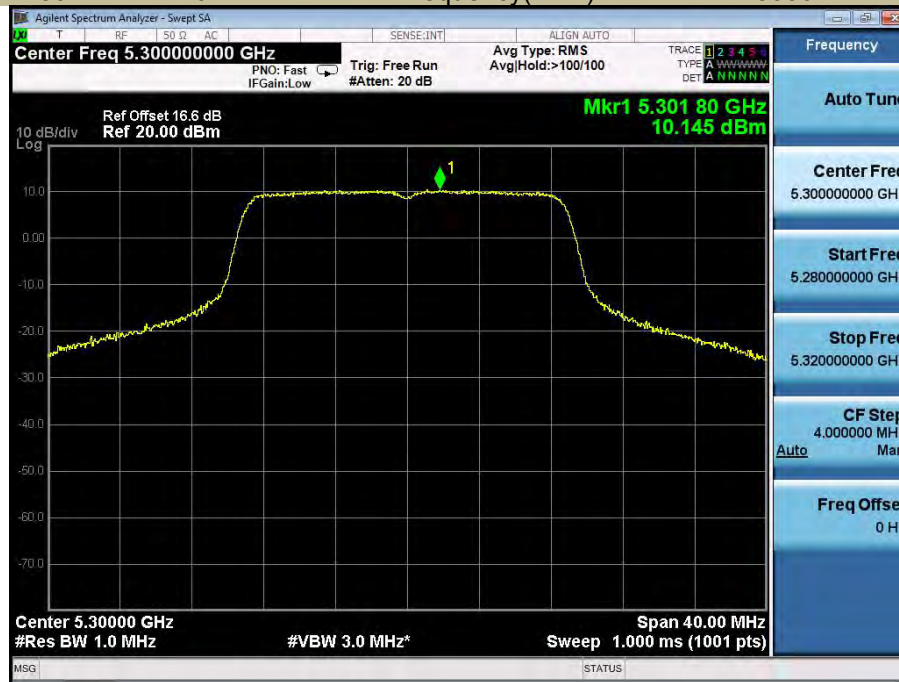
5260



Power Spectral Density
Test Model 802.11n-HT20

U-NII – 2A
Frequency(MHz)

5300



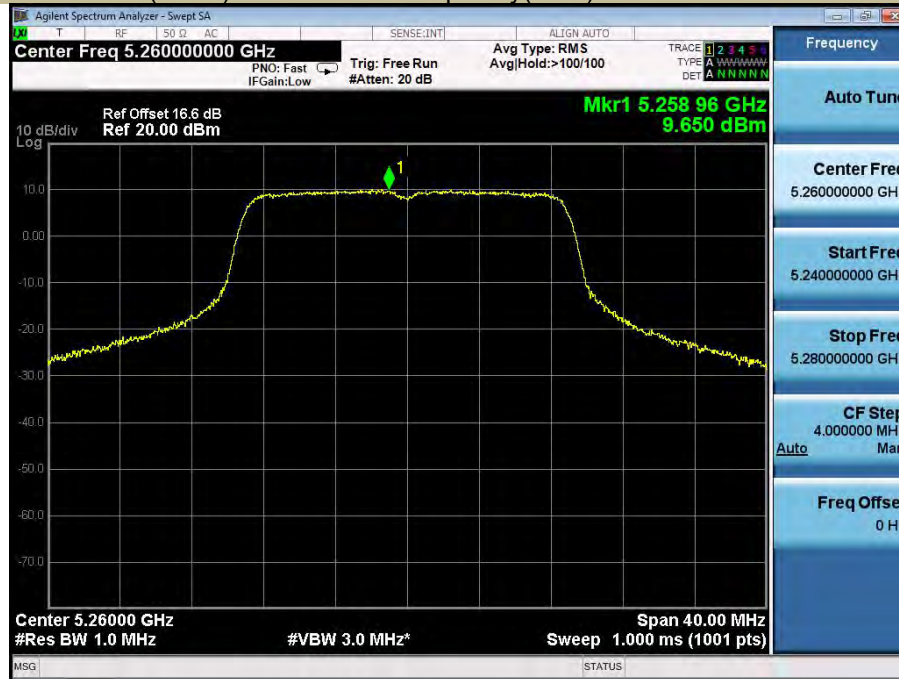
Power Spectral Density
Test Model 802.11n-HT20

U-NII – 2A
Frequency(MHz)

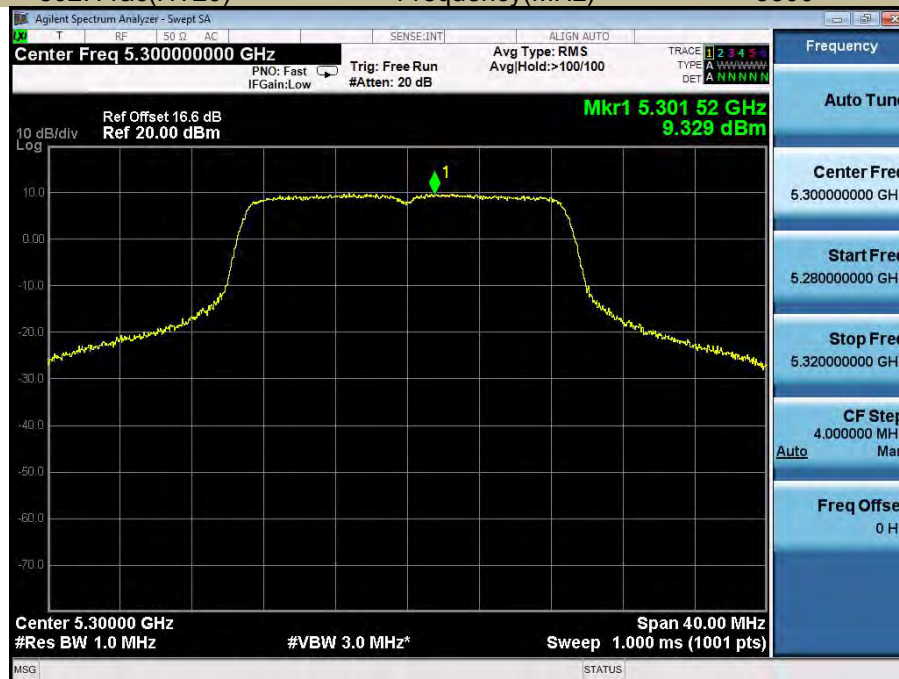
5320



Power Spectral Density
Test Model 802.11ac(HT20) U-NII – 2A
Frequency(MHz) 5260



Power Spectral Density
Test Model 802.11ac(HT20) U-NII – 2A
Frequency(MHz) 5300



Power Spectral Density

Test Model 802.11ac(HT20)

U-NII – 2A

Frequency(MHz)

5320



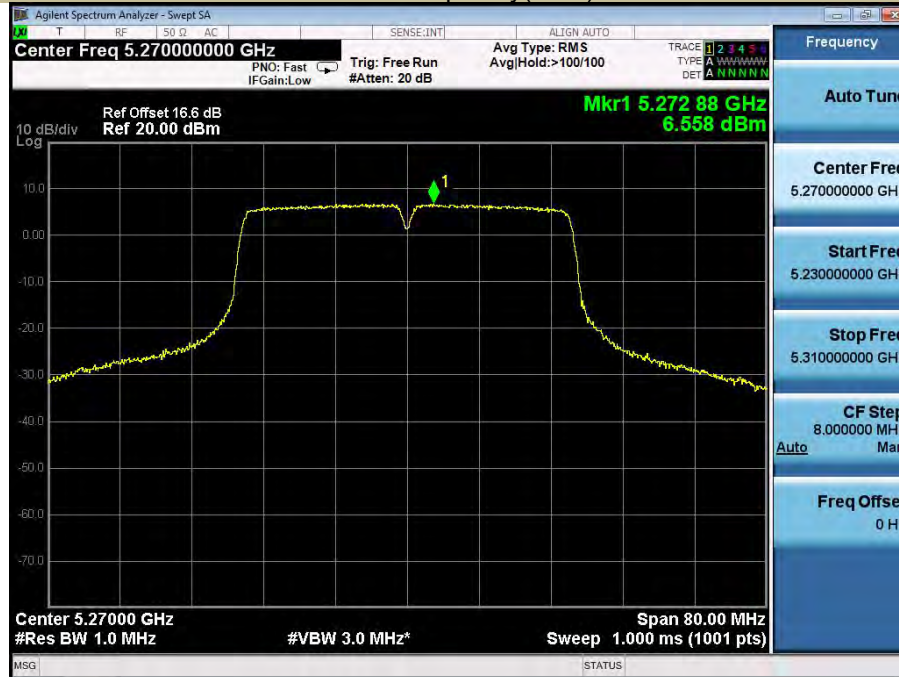
Power Spectral Density

Test Model 802.11n-HT40

U-NII – 2A

Frequency(MHz)

5270



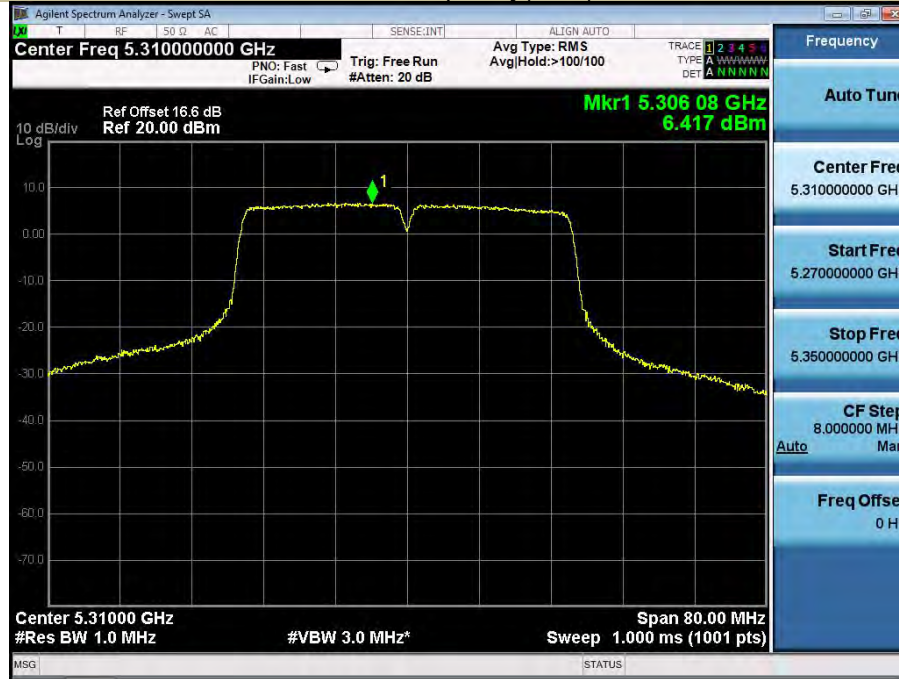
Power Spectral Density

Test Model 802.11n-HT40

U-NII – 2A

Frequency(MHz)

5310



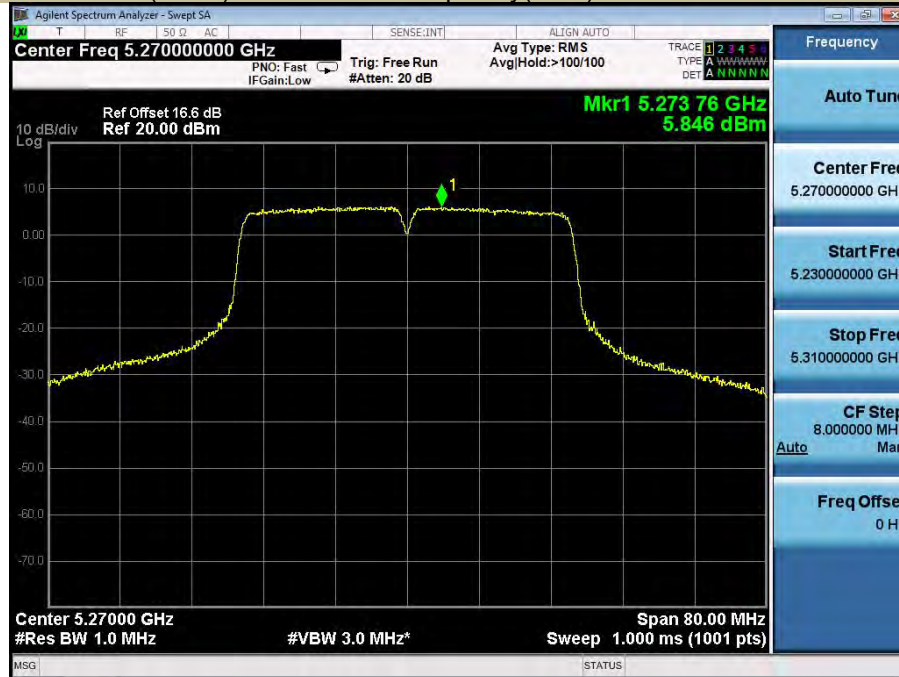
Power Spectral Density

Test Model 802.11ac(HT40)

U-NII – 2A

Frequency(MHz)

5270



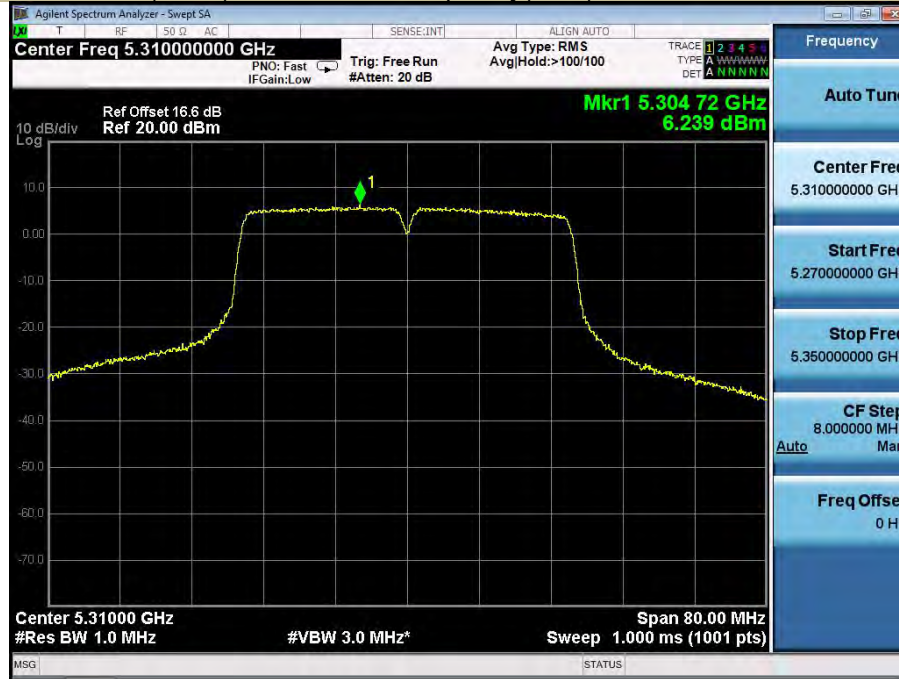
Power Spectral Density

Test Model 802.11ac(HT40)

U-NII – 2A

Frequency(MHz)

5310



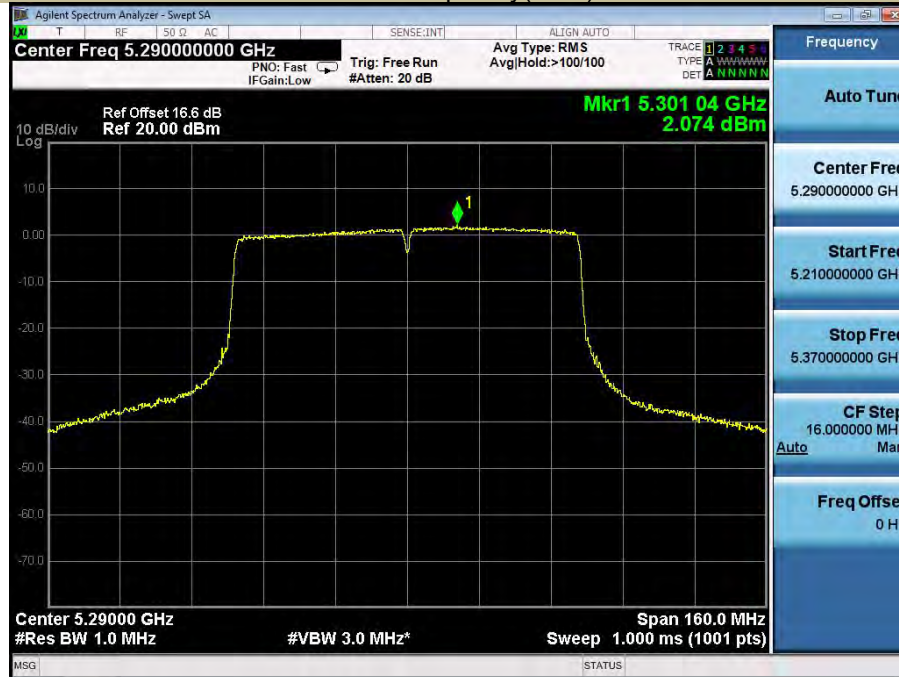
Power Spectral Density

Test Model 802.11ac 80

U-NII – 2A

Frequency(MHz)

5290



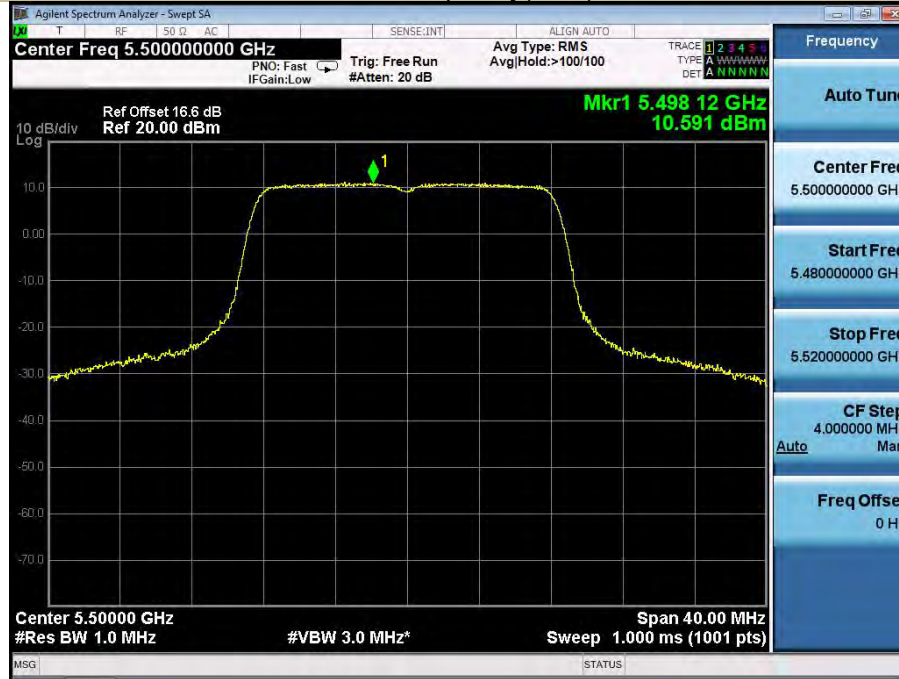
5470-5725MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5500	10.591	11
	5580	10.095	11
	5720	10.817	11
802.11n-HT20	5500	10.771	11
	5580	10.206	11
	5720	10.249	11
802.11ac(VHT20)	5500	10.036	11
	5580	9.931	11
	5720	10.151	11
802.11n-HT40	5510	7.137	11
	5550	6.910	11
	5710	7.050	11
802.11ac(VHT40)	5510	6.374	11
	5550	6.572	11
	5710	6.615	11
802.11ac(VHT80)	5530	1.777	11
	5690	2.135	11

Power Spectral Density
Test Model 802.11a

U-NII – 2C
Frequency(MHz)

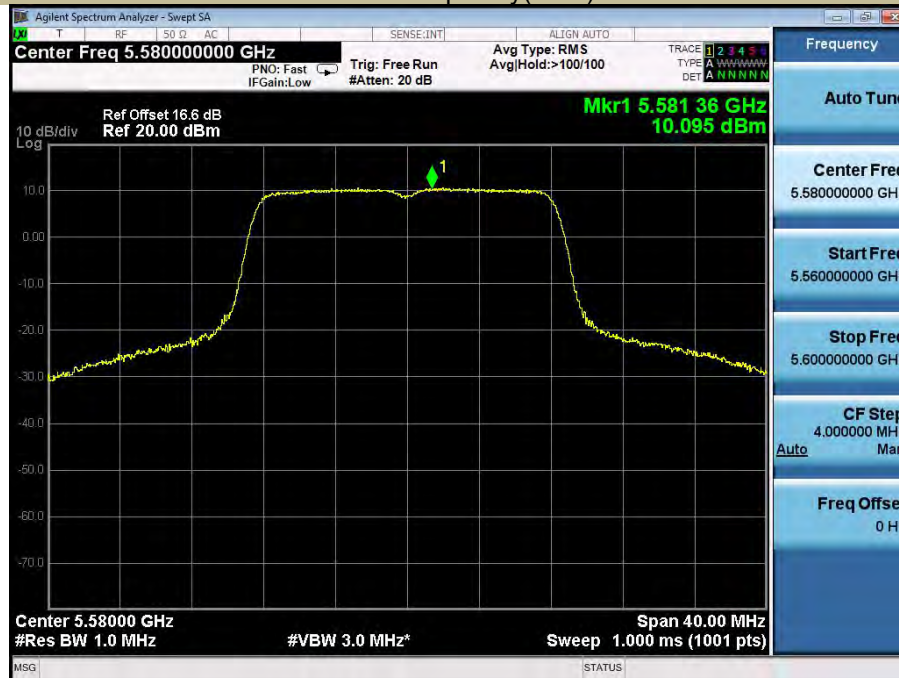
5500



Power Spectral Density
Test Model 802.11a

U-NII – 2C
Frequency(MHz)

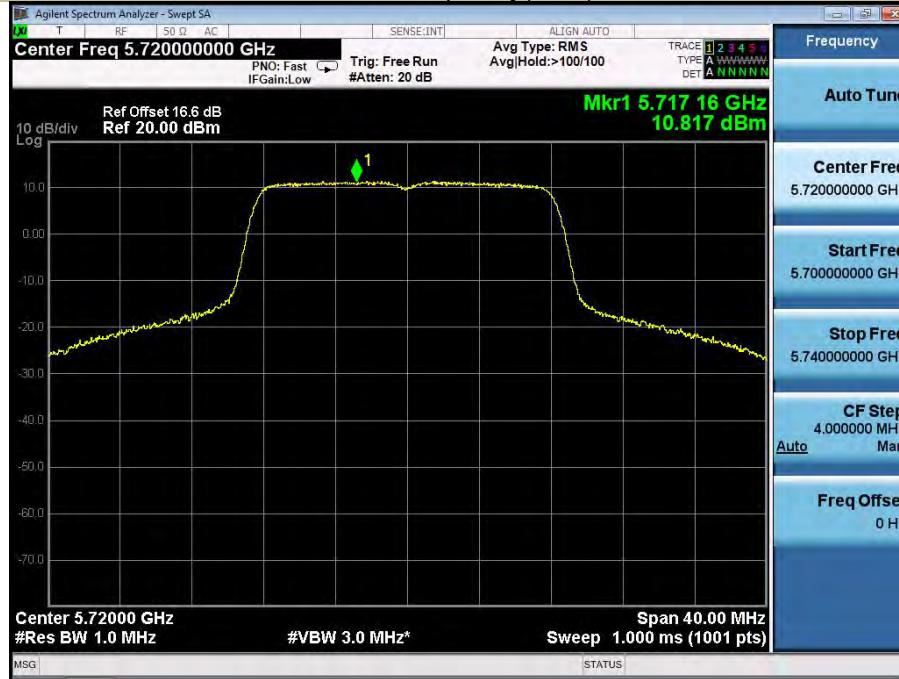
5580



Power Spectral Density
Test Model 802.11a

U-NII – 2C
Frequency(MHz)

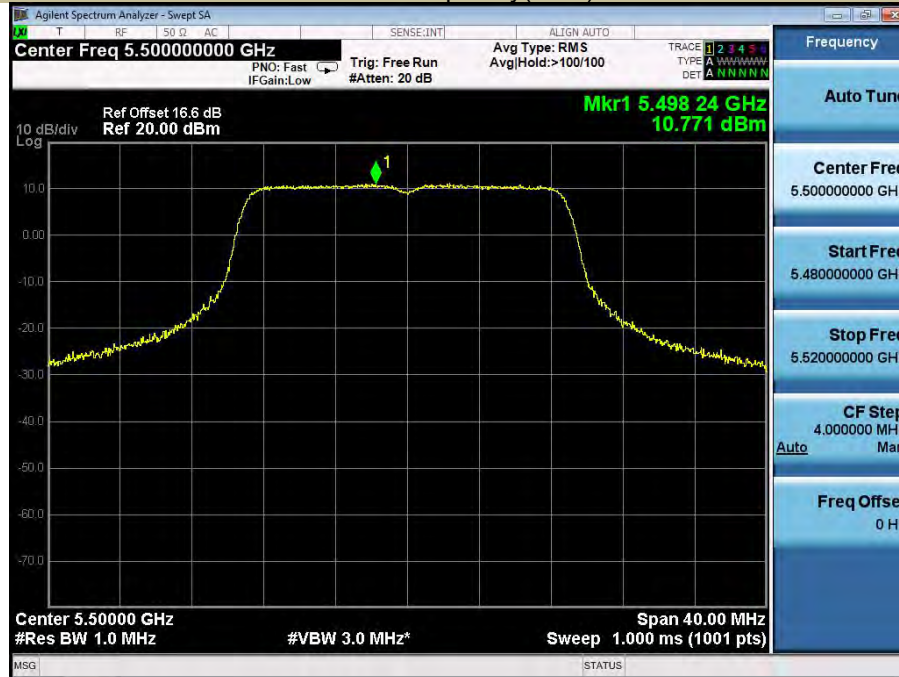
5720



Power Spectral Density
Test Model 802.11n-HT20

U-NII – 2C
Frequency(MHz)

5500



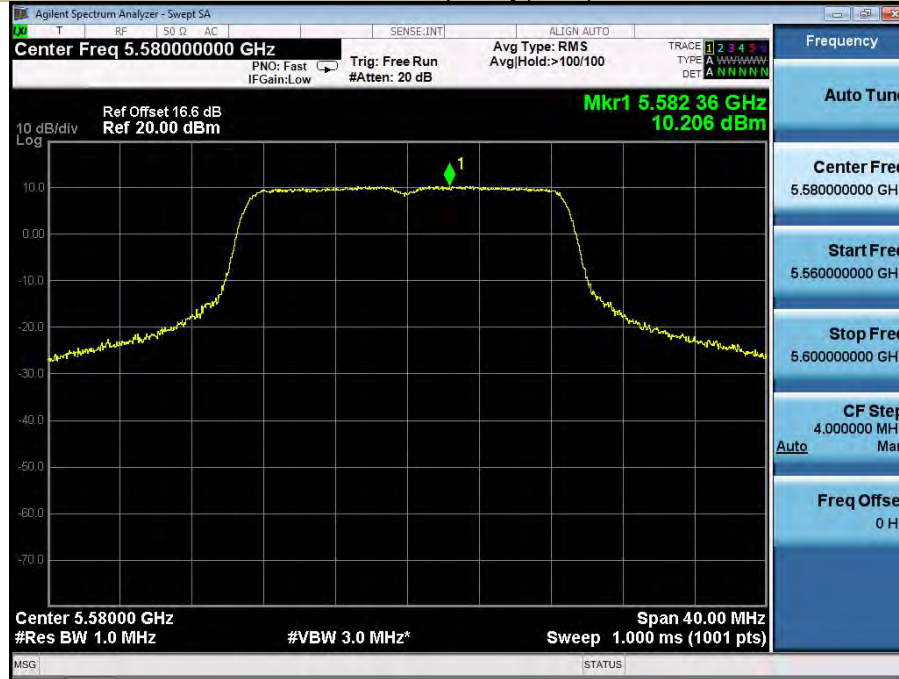
Power Spectral Density

Test Model 802.11n-HT20

U-NII – 2C

Frequency(MHz)

5580



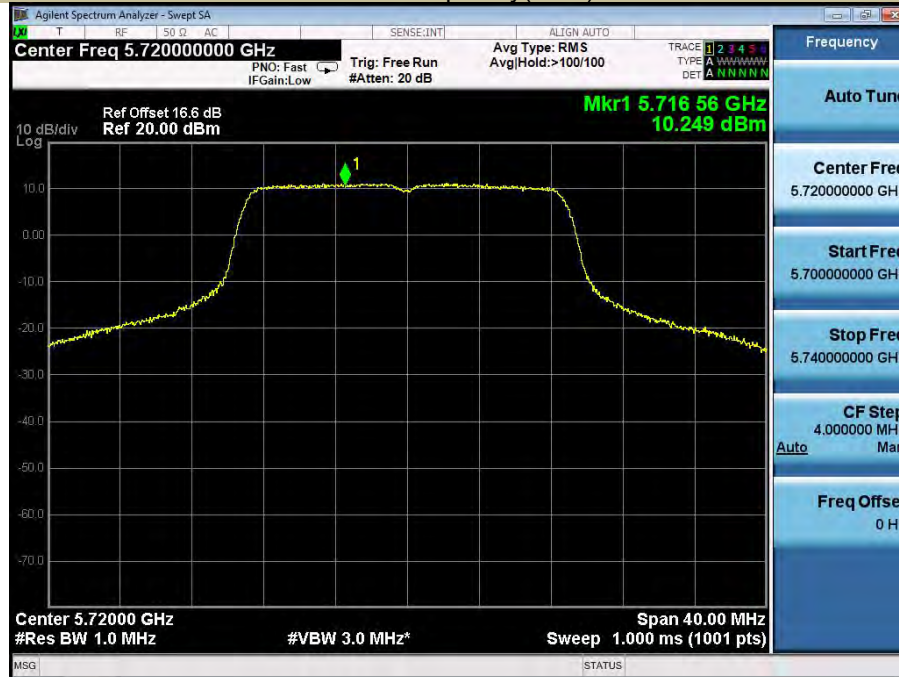
Power Spectral Density

Test Model 802.11n-HT20

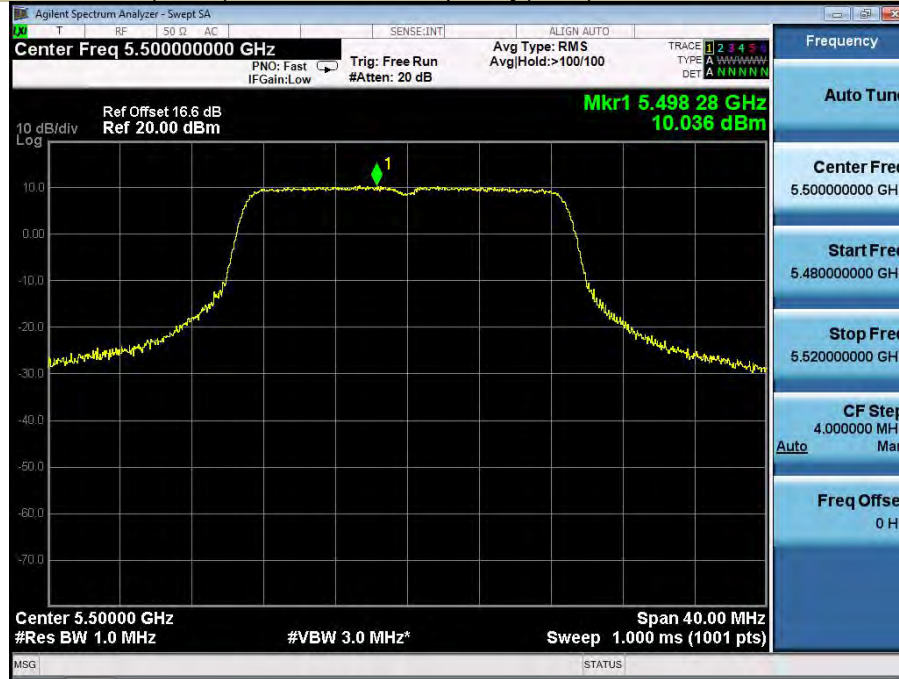
U-NII – 2C

Frequency(MHz)

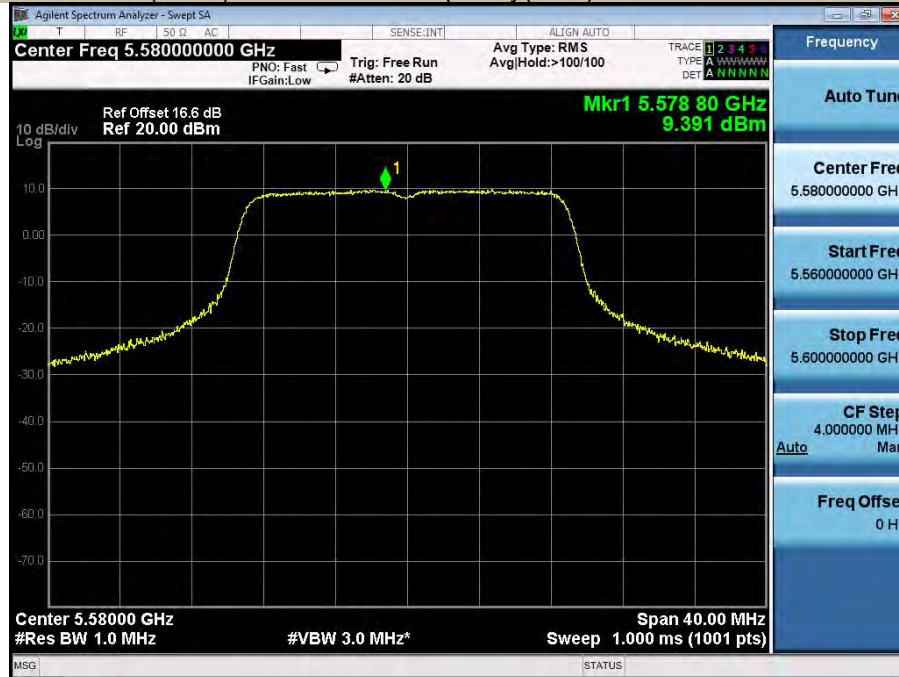
5720



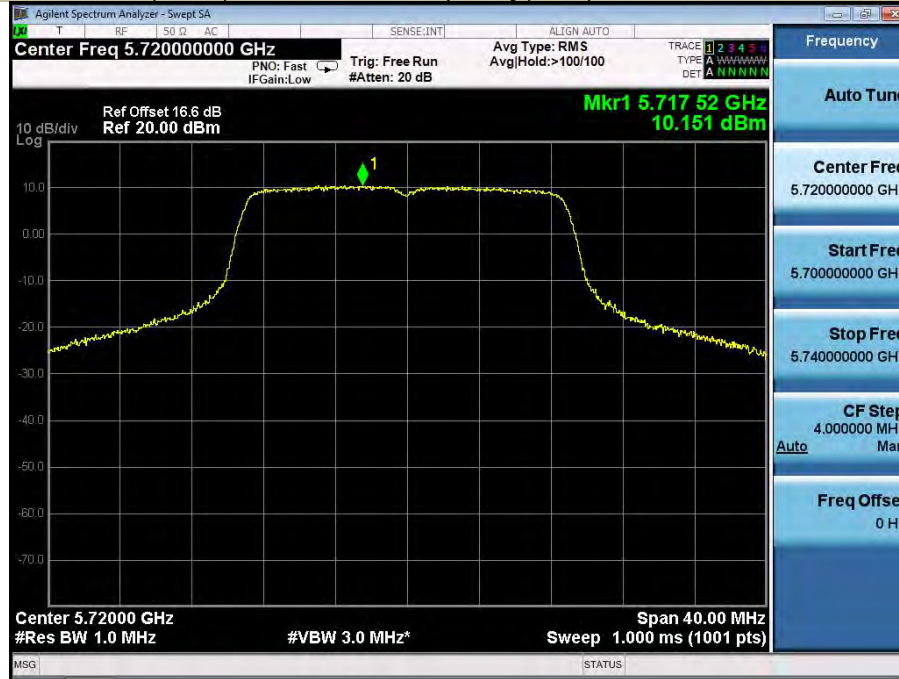
Power Spectral Density
Test Model 802.11ac(HT20) U-NII – 2C
Frequency(MHz) 5500



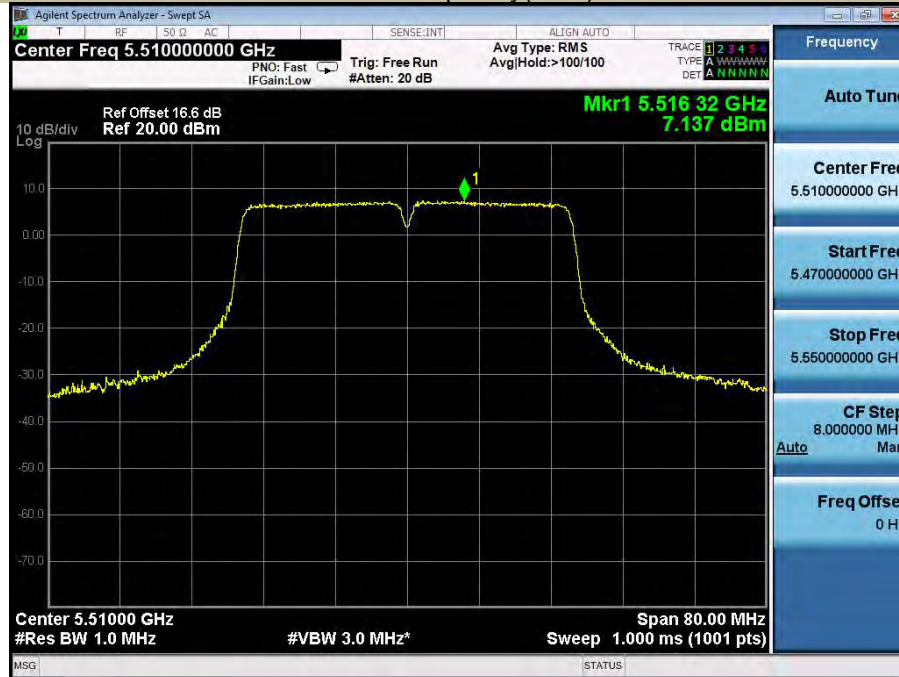
Power Spectral Density
Test Model 802.11ac(HT20) U-NII – 2C
Frequency(MHz) 5580



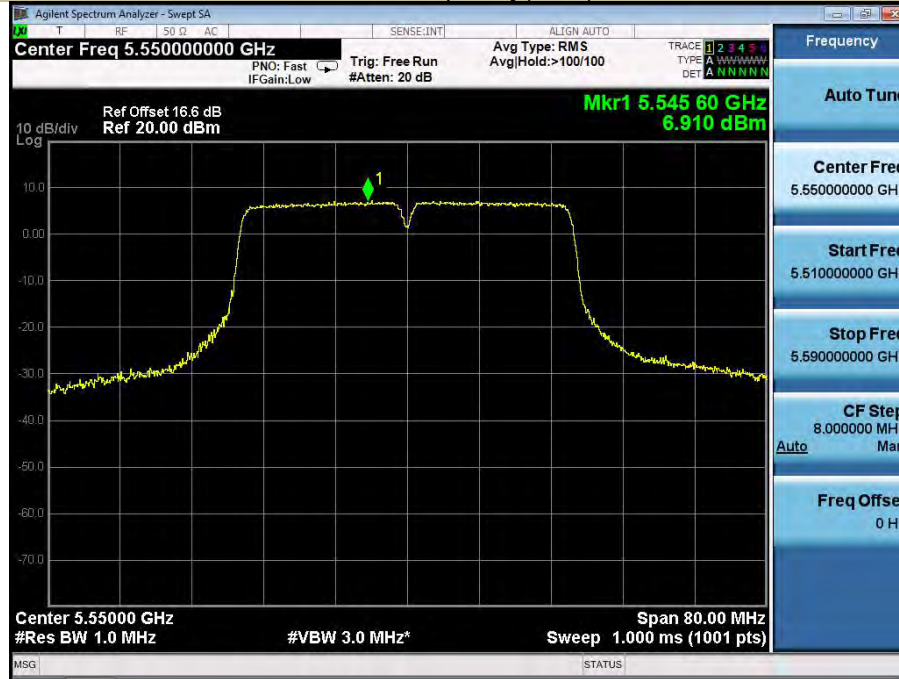
Power Spectral Density
Test Model 802.11ac(HT20) U-NII – 2C
Frequency(MHz) 5720



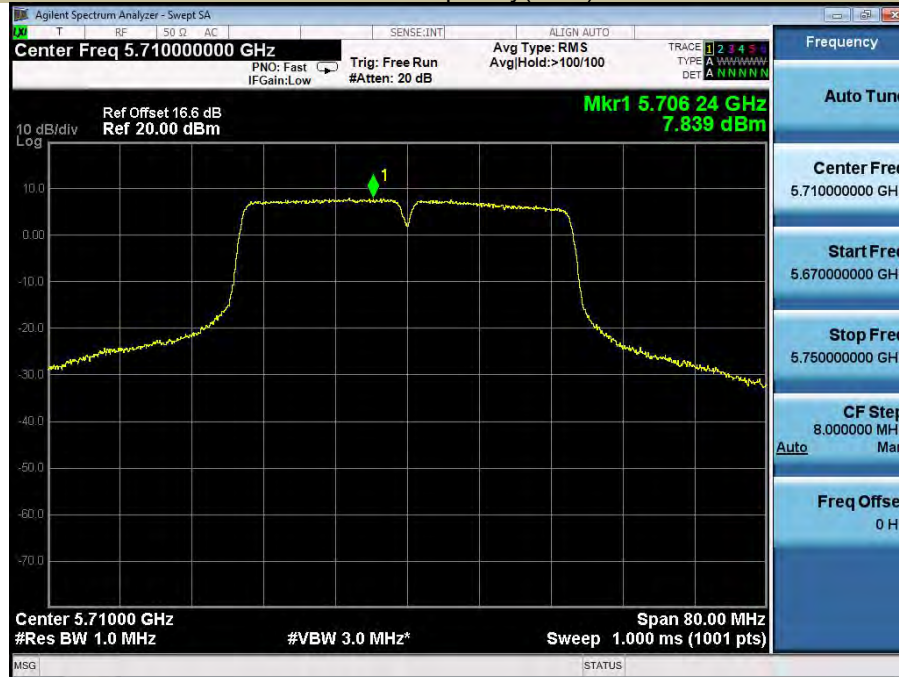
Power Spectral Density
Test Model 802.11n-HT40 U-NII – 2C
Frequency(MHz) 5510



Power Spectral Density
Test Model 802.11n-HT40 U-NII – 2C
Frequency(MHz) 5550



Power Spectral Density
Test Model 802.11n-HT40 U-NII – 2C
Frequency(MHz) 5710



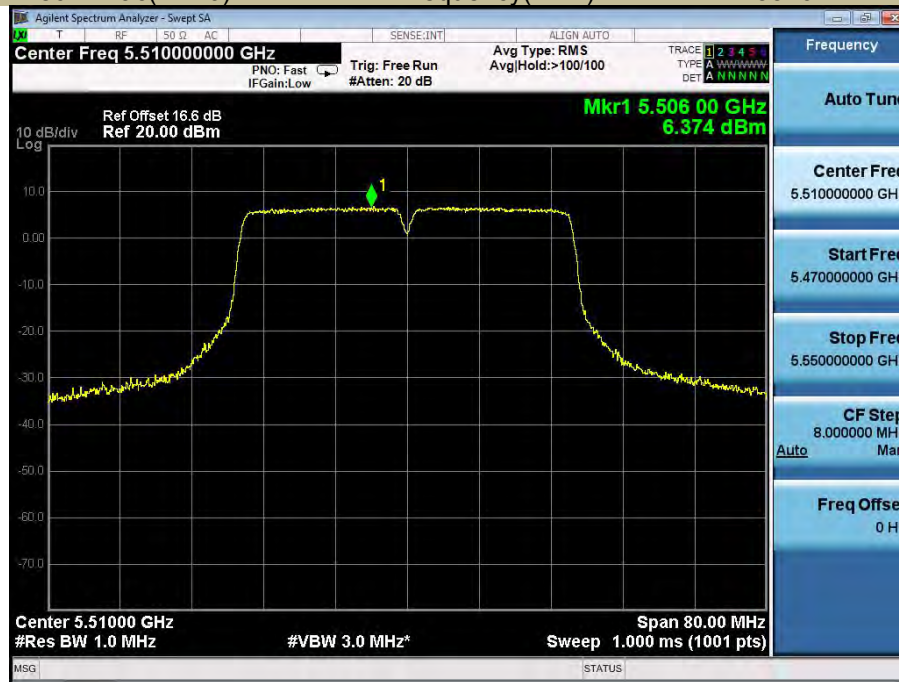
Power Spectral Density

Test Model 802.11ac(HT40)

U-NII – 2C

Frequency(MHz)

5510



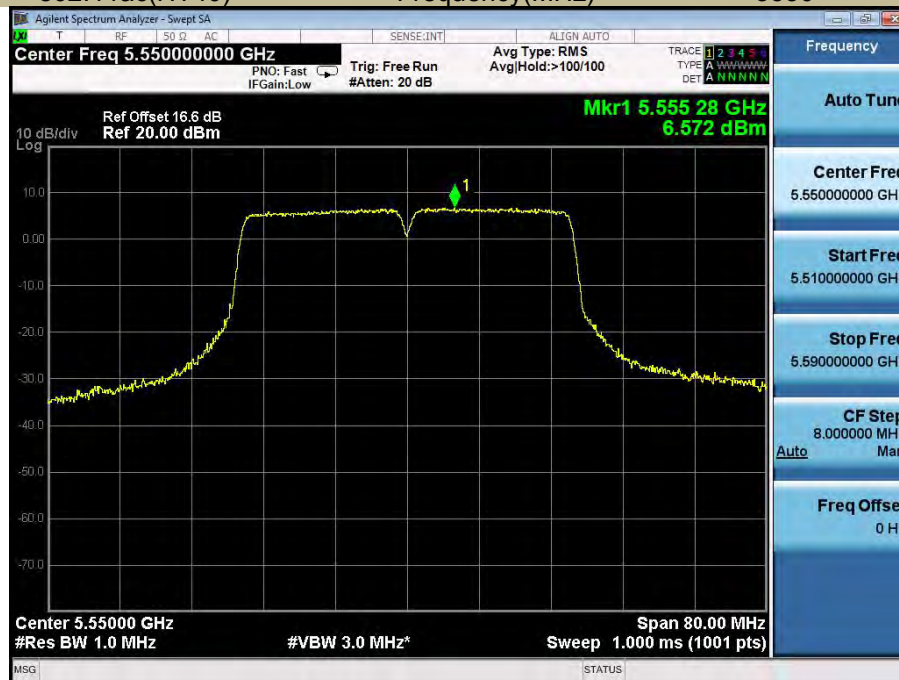
Power Spectral Density

Test Model 802.11ac(HT40)

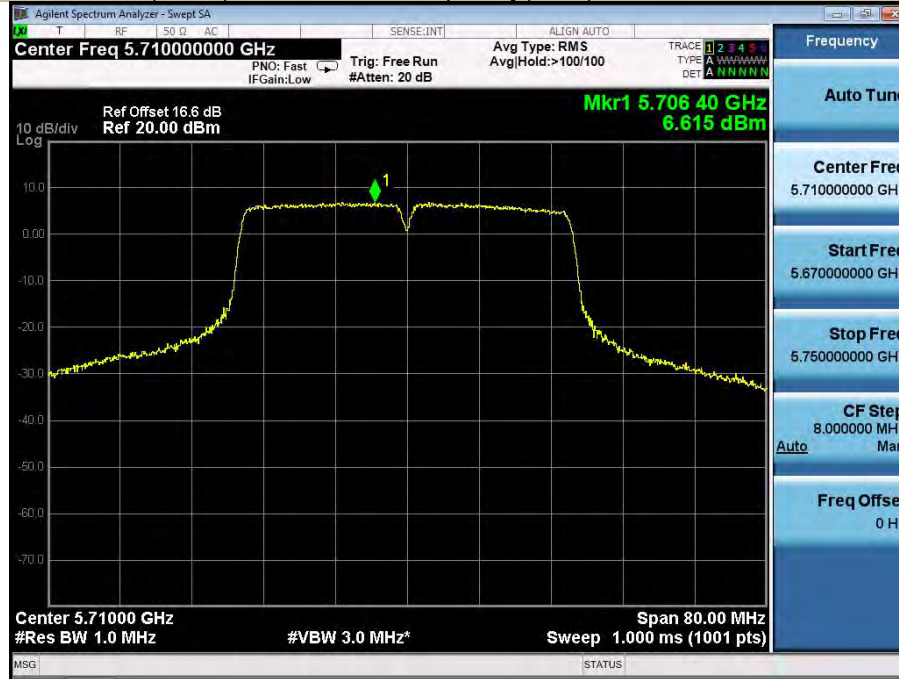
U-NII – 2C

Frequency(MHz)

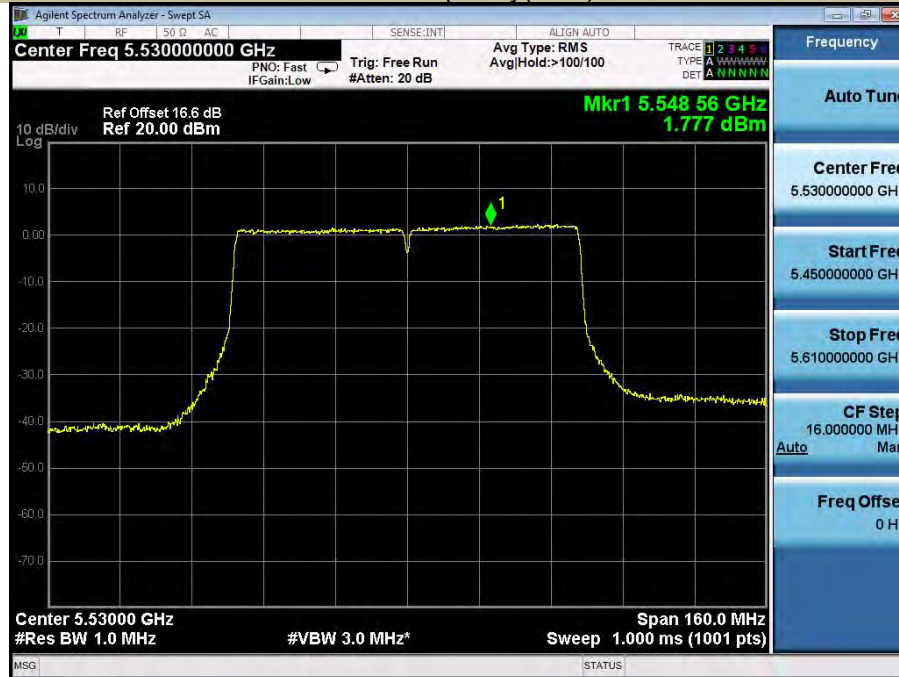
5550



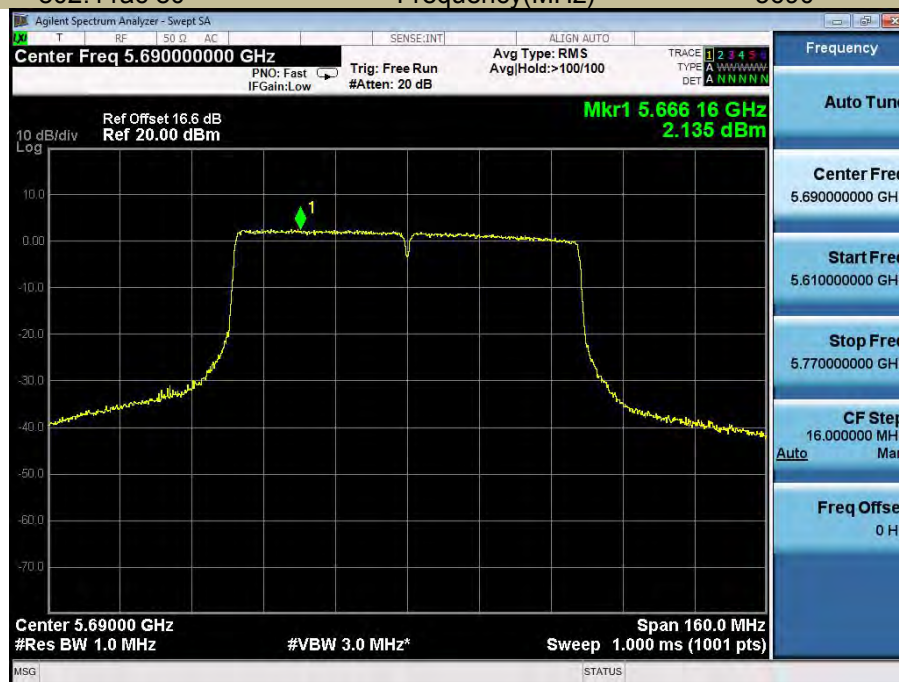
Power Spectral Density
Test Model 802.11ac(HT40) U-NII – 2C
Frequency(MHz) 5710



Power Spectral Density
Test Model 802.11ac 80 U-NII – 2C
Frequency(MHz) 5530



5690



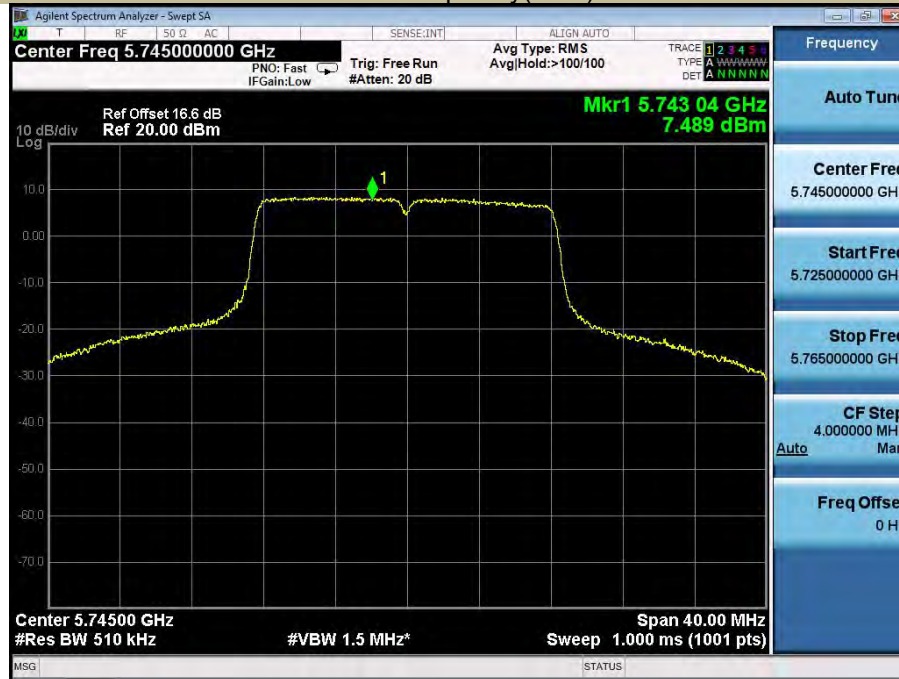
5725-5850MHz

Operating mode	Test Channel	Power Spectral Density dBm/MHz	Limit (dBm/MHz)
802.11a	5745	7.489	30
	5785	7.423	30
	5825	7.410	30
802.11n-HT20	5745	8.279	30
	5785	6.702	30
	5825	7.018	30
802.11ac(VHT20)	5745	7.665	30
	5785	6.841	30
	5825	7.151	30
802.11n-HT40	5755	4.729	30
	5795	3.255	30
802.11ac(VHT40)	5755	4.380	30
	5795	3.030	30
802.11ac(VHT80)	5775	0.614	30

Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

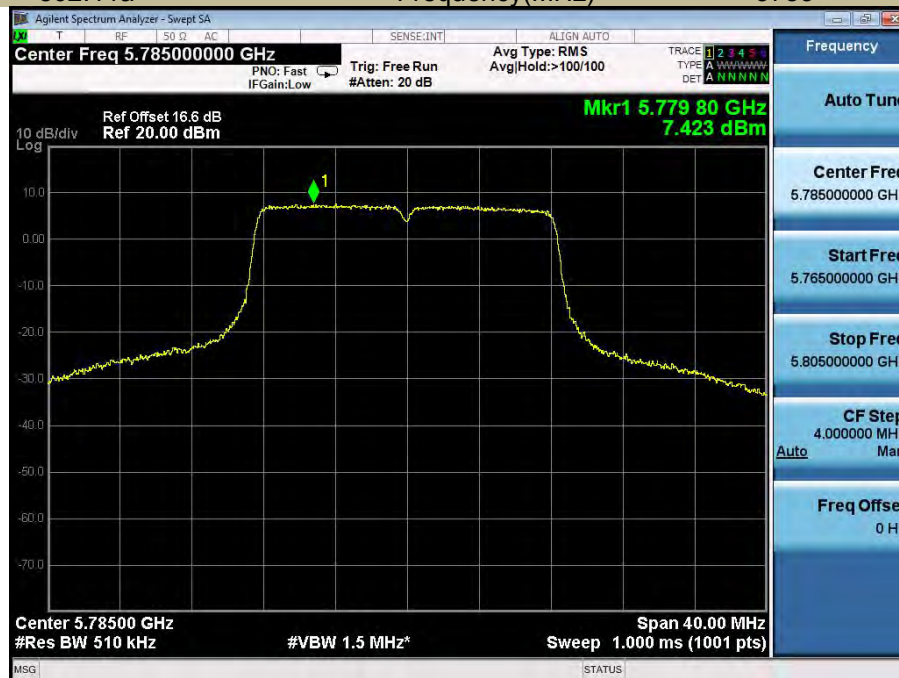
5745



Power Spectral Density
Test Model 802.11a

U-NII - 3
Frequency(MHz)

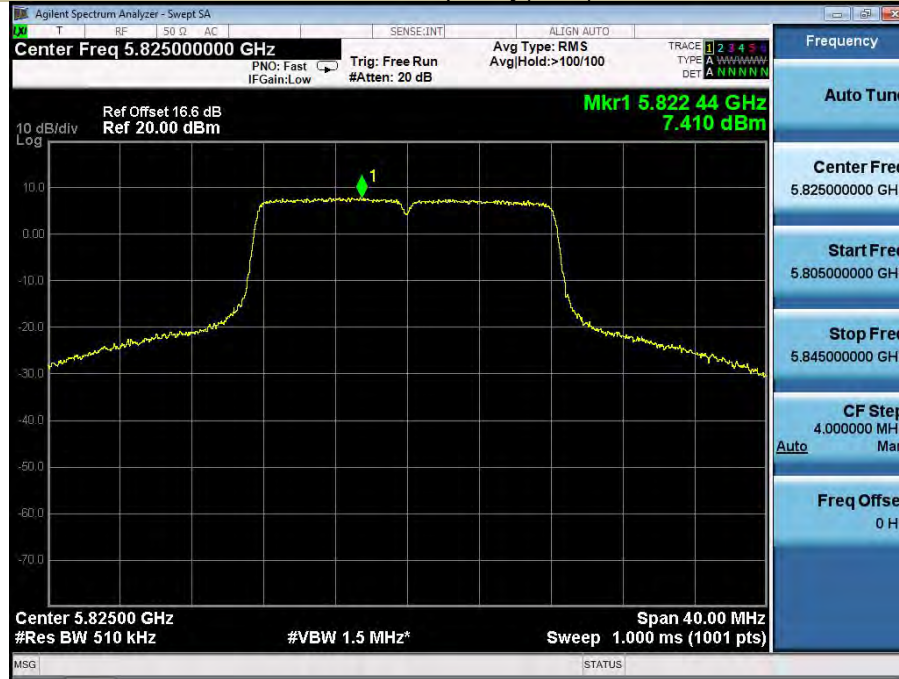
5785



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



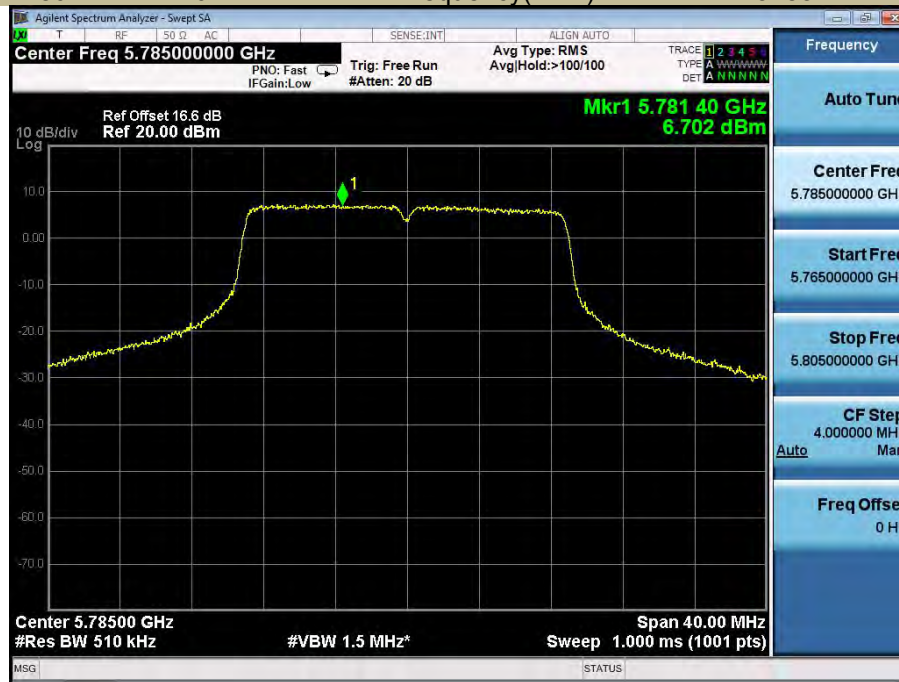
Power Spectral Density

Test Model 802.11n-HT20

U-NII - 3

Frequency(MHz)

5785



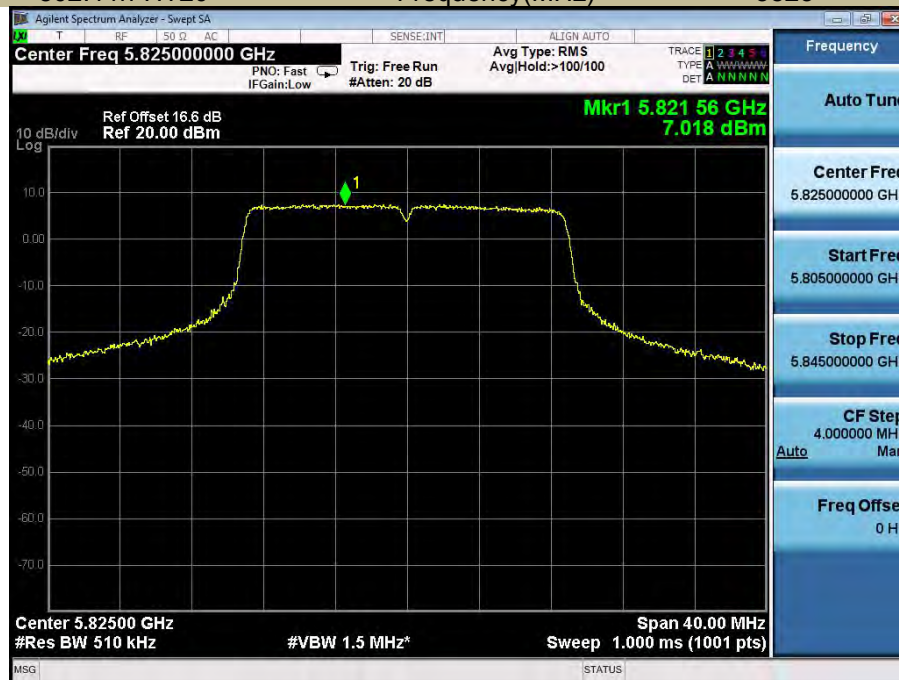
Power Spectral Density

Test Model 802.11n-HT20

U-NII - 3

Frequency(MHz)

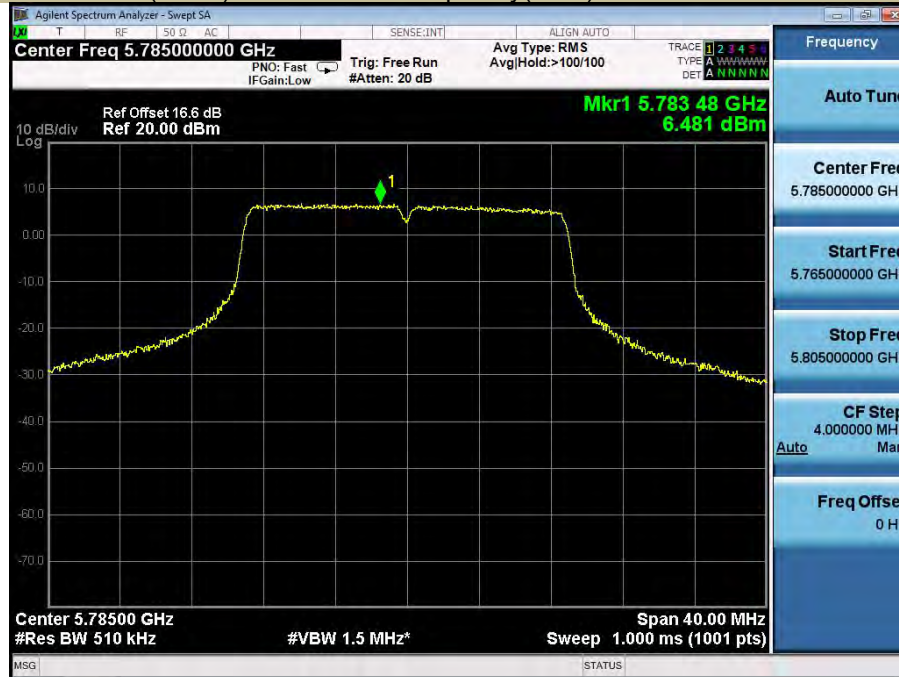
5825



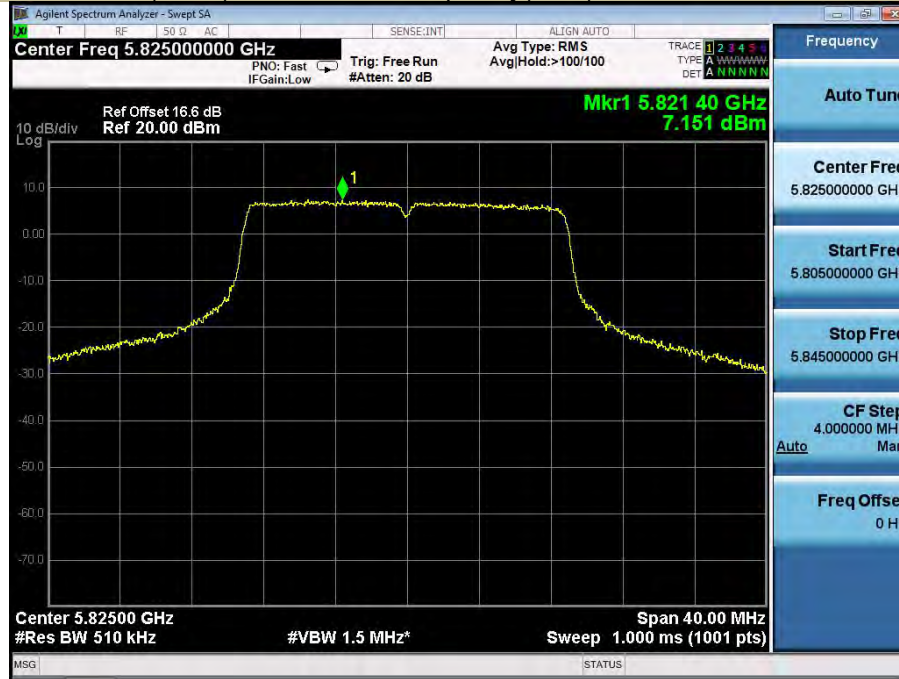
Power Spectral Density
Test Model 802.11ac(HT20) U-NII - 3
Frequency(MHz) 5745



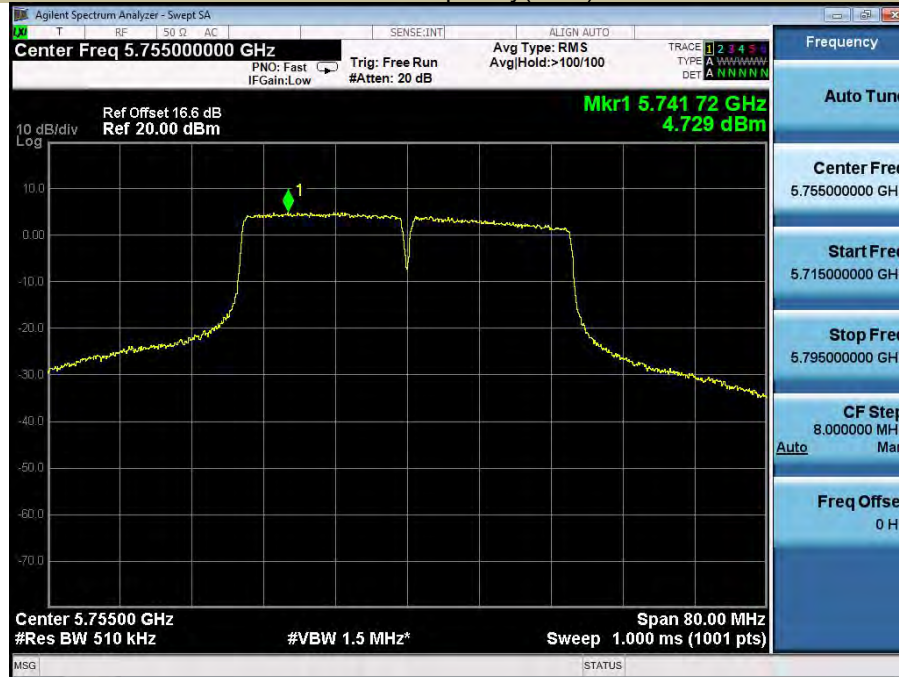
Power Spectral Density
Test Model 802.11ac(HT20) U-NII - 3
Frequency(MHz) 5785



Power Spectral Density
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



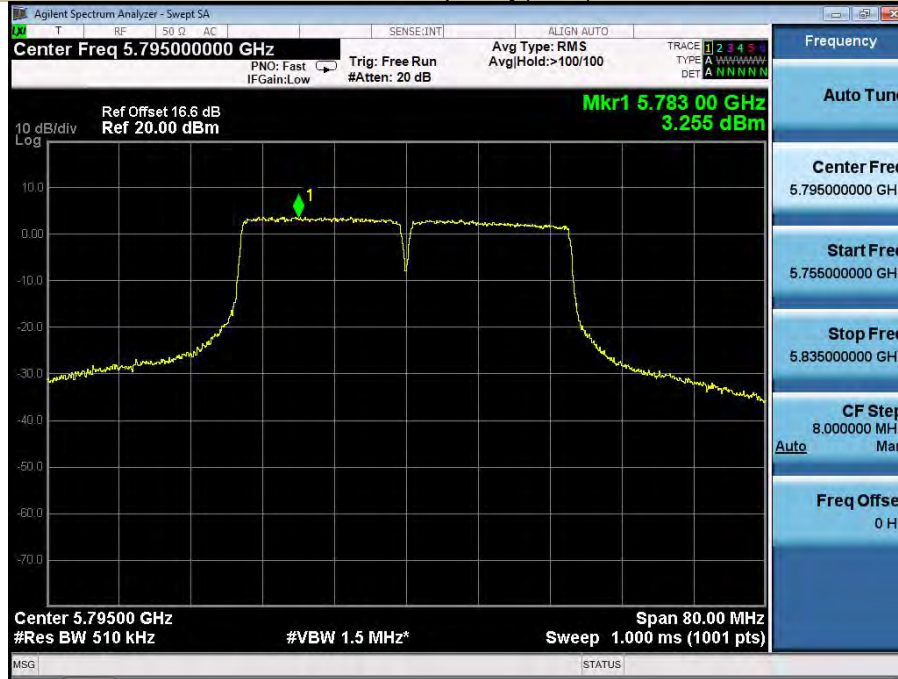
Power Spectral Density

Test Model 802.11n-HT40

U-NII - 3

Frequency(MHz)

5795



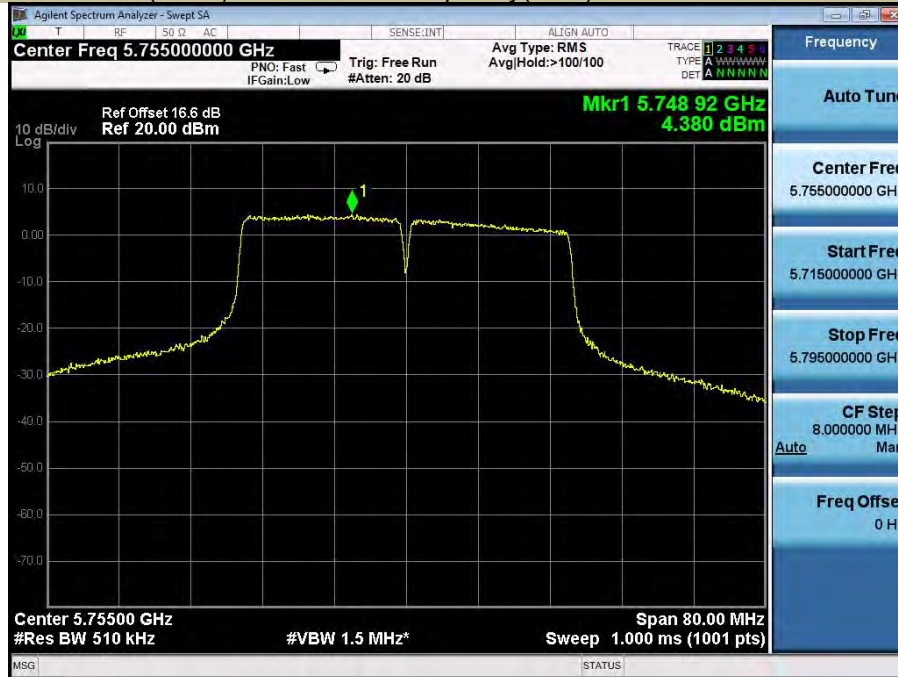
Power Spectral Density

Test Model 802.11ac(HT40)

U-NII - 3

Frequency(MHz)

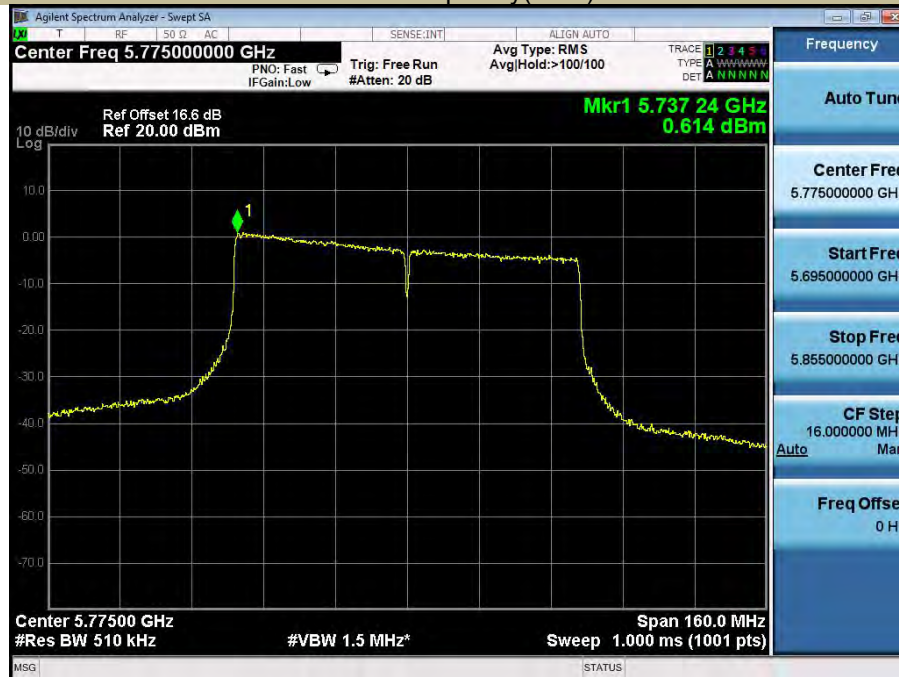
5755



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



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 the video bandwidth (VBW) =30 kHz.

Set Span= Entire absence of modulation emissions bandwidth

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
	-10	5180.0079	7.9	Pass
	0	5180.0021	2.1	Pass
	10	5180.0014	1.4	Pass
	20	5180.0085	8.5	Pass
	30	5180.0084	8.4	Pass
	45	5180.0064	6.4	Pass
85% Vnom	25	5180.0055	5.5	Pass
115% Vnom	25	5180.0086	8.6	Pass

5200

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5200.0105	10.5	Pass
	0	5200.0050	5.0	Pass
	10	5200.0052	5.2	Pass
	20	5200.0048	4.8	Pass
	30	5200.0043	4.3	Pass
	45	5200.0024	2.4	Pass
85% Vnom	25	5200.0103	10.3	Pass
115% Vnom	25	5200.0076	7.6	Pass

5240

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5240.0122	12.2	Pass
	0	5240.0133	13.3	Pass
	10	5240.0076	7.6	Pass
	20	5240.0056	5.6	Pass
	30	5240.0175	17.5	Pass
	45	5240.0093	9.3	Pass
85% Vnom	25	5240.0104	10.4	Pass
115% Vnom	25	5240.0071	7.1	Pass

5190

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5190.0144	14.4	Pass
	0	5190.0121	12.1	Pass
	10	5190.0111	11.1	Pass
	20	5190.0115	11.5	Pass
	30	5190.0147	14.7	Pass
	45	5190.0142	14.2	Pass
85% Vnom	25	5190.0144	14.4	Pass
115% Vnom	25	5190.0153	15.3	Pass

5230

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5230.0093	9.3	Pass
	0	5230.0136	13.6	Pass
	10	5230.0071	7.1	Pass
	20	5230.0158	15.8	Pass
	30	5230.0069	6.9	Pass
	45	5230.0135	13.5	Pass
85% Vnom	25	5230.0076	7.6	Pass
115% Vnom	25	5230.0140	14.0	Pass

5210

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5210.0108	10.8	Pass
	0	5210.0062	6.2	Pass
	10	5210.0158	15.8	Pass
	20	5210.0117	11.7	Pass
	30	5210.0133	13.3	Pass
	45	5210.0142	14.2	Pass
85% Vnom	25	5210.0082	8.2	Pass
115% Vnom	25	5210.0097	9.7	Pass

802.11a

5260

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5260.0158	15.8	Pass
	0	5260.0123	12.3	Pass
	10	5260.0083	8.3	Pass
	20	5260.0103	10.3	Pass
	30	5260.0092	9.2	Pass
	45	5260.0136	13.6	Pass
85% Vnom	25	5260.0148	14.8	Pass
115% Vnom	25	5260.0117	11.7	Pass

5300

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5300.0152	15.2	Pass
	0	5300.0120	12.0	Pass
	10	5300.0077	7.7	Pass
	20	5300.0111	11.1	Pass
	30	5300.0079	7.9	Pass
	45	5300.0118	11.8	Pass
85% Vnom	25	5300.0104	10.4	Pass
115% Vnom	25	5300.0127	12.7	Pass

5320

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5320.0112	11.2	Pass
	0	5320.0108	10.8	Pass
	10	5320.0093	9.3	Pass
	20	5320.0129	12.9	Pass
	30	5320.0145	14.5	Pass
	45	5320.0157	15.7	Pass
85% Vnom	25	5320.0063	6.3	Pass
115% Vnom	25	5320.0155	15.5	Pass

5270

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5270.0159	15.9	Pass
	0	5270.0148	14.8	Pass
	10	5270.0079	7.9	Pass
	20	5270.0093	9.3	Pass
	30	5270.0075	7.5	Pass
	45	5270.0110	11.0	Pass
85% Vnom	25	5270.0099	9.9	Pass
115% Vnom	25	5270.0082	8.2	Pass

5310

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5310.0162	16.2	Pass
	0	5310.0099	9.9	Pass
	10	5310.0134	13.4	Pass
	20	5310.0089	8.9	Pass
	30	5310.0095	9.5	Pass
	45	5310.0075	7.5	Pass
85% Vnom	25	5310.0125	12.5	Pass
115% Vnom	25	5310.0153	15.3	Pass

5290

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5290.0147	14.7	Pass
	0	5290.0106	10.6	Pass
	10	5290.0072	7.2	Pass
	20	5290.0136	13.6	Pass
	30	5290.0090	9.0	Pass
	45	5290.0165	16.5	Pass
85% Vnom	25	5290.0109	10.9	Pass
115% Vnom	25	5290.0123	12.3	Pass

802.11a

5500

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5500.0126	12.6	Pass
	0	5500.0144	14.4	Pass
	10	5500.0143	14.3	Pass
	20	5500.0118	11.8	Pass
	30	5500.0102	10.2	Pass
	45	5500.0152	15.2	Pass
85% Vnom	25	5500.0078	7.8	Pass
115% Vnom	25	5500.0097	9.7	Pass

5580

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5580.0136	13.6	Pass
	0	5580.0169	16.9	Pass
	10	5580.0085	8.5	Pass
	20	5580.0176	17.6	Pass
	30	5580.0164	16.4	Pass
	45	5580.0080	8.0	Pass
85% Vnom	25	5580.0122	12.2	Pass
115% Vnom	25	5580.0095	9.5	Pass

5720

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5720.0141	14.1	Pass
	0	5720.0096	9.6	Pass
	10	5720.0134	13.4	Pass
	20	5720.0071	7.1	Pass
	30	5720.0098	9.8	Pass
	45	5720.0128	12.8	Pass
85% Vnom	25	5720.0071	7.1	Pass
115% Vnom	25	5720.0122	12.2	Pass

5510

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5510.0138	13.8	Pass
	0	5510.0119	11.9	Pass
	10	5510.0103	10.3	Pass
	20	5510.0152	15.2	Pass
	30	5510.0118	11.8	Pass
	45	5510.0066	6.6	Pass
85% Vnom	25	5510.0057	5.7	Pass
115% Vnom	25	5510.0103	10.3	Pass

5550

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5550.0098	9.8	Pass
	0	5550.0052	5.2	Pass
	10	5550.0140	14.0	Pass
	20	5550.0133	13.3	Pass
	30	5550.0023	2.3	Pass
	45	5550.0110	11.0	Pass
85% Vnom	25	5550.0133	13.3	Pass
115% Vnom	25	5550.0130	13.0	Pass

5710

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5710.0148	14.8	Pass
	0	5710.0052	5.2	Pass
	10	5710.0123	12.3	Pass
	20	5710.0113	11.3	Pass
	30	5710.0118	11.8	Pass
	45	5710.0081	8.1	Pass
85% Vnom	25	5710.0057	5.7	Pass
115% Vnom	25	5710.0080	8.0	Pass

5530

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5530.0145	14.5	Pass
	0	5530.0124	12.4	Pass
	10	5530.0083	8.3	Pass
	20	5530.0103	10.3	Pass
	30	5530.0146	14.6	Pass
	45	5530.0059	5.9	Pass
85% Vnom	25	5530.0145	14.5	Pass
115% Vnom	25	5530.0073	7.3	Pass

5690

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5690.0076	7.6	Pass
	0	5690.0088	8.8	Pass
	10	5690.0107	10.7	Pass
	20	5690.0130	13.0	Pass
	30	5690.0151	15.1	Pass
	45	5690.0073	7.3	Pass
85% Vnom	25	5690.0056	5.6	Pass
115% Vnom	25	5690.0082	8.2	Pass

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5745

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5745.0044	4.4	Pass
	0	5745.0113	11.3	Pass
	10	5745.0148	14.8	Pass
	20	5745.0109	10.9	Pass
	30	5745.0138	13.8	Pass
	45	5745.0047	4.7	Pass
85% Vnom	25	5745.0043	4.3	Pass
115% Vnom	25	5745.0094	9.4	Pass

5785

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5785.0123	12.3	Pass
	0	5785.0094	9.4	Pass
	10	5785.0186	18.6	Pass
	20	5785.0136	13.6	Pass
	30	5785.0173	17.3	Pass
	45	5785.0188	18.8	Pass
85% Vnom	25	5785.0155	15.5	Pass
115% Vnom	25	5785.0148	14.8	Pass

5825

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5825.0140	14.0	Pass
	0	5825.0127	12.7	Pass
	10	5825.0086	8.6	Pass
	20	5825.0184	18.4	Pass
	30	5825.0105	10.5	Pass
	45	5825.0106	10.6	Pass
85% Vnom	25	5825.0130	13.0	Pass
115% Vnom	25	5825.0180	18.0	Pass

5755

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5755.0130	13.0	Pass
	0	5755.0082	8.2	Pass
	10	5755.0183	18.3	Pass
	20	5755.0169	16.9	Pass
	30	5755.0132	13.2	Pass
	45	5755.0158	15.8	Pass
85% Vnom	25	5755.0125	12.5	Pass
115% Vnom	25	5755.0115	11.5	Pass

5795

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5795.0112	11.2	Pass
	0	5795.0161	16.1	Pass
	10	5795.0149	14.9	Pass
	20	5795.0142	14.2	Pass
	30	5795.0172	17.2	Pass
	45	5795.0156	15.6	Pass
85% Vnom	25	5795.0091	9.1	Pass
115% Vnom	25	5795.0092	9.2	Pass

5775

Voltage(V)	Temp(°C)	Test Frequency (MHz)	Max. Deviation (KHz)	Verdict
	-10	5775.0093	9.3	Pass
	0	5775.0149	14.9	Pass
	10	5775.0153	15.3	Pass
	20	5775.0117	11.7	Pass
	30	5775.0184	18.4	Pass
	45	5775.0119	11.9	Pass
85% Vnom	25	5775.0100	10.0	Pass
115% Vnom	25	5775.0087	8.7	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	2400/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)

Test mode:		802.11a		Frequency(MHz):		5180	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7578.43	V	61.71	-33.51	-27	-6.51		
10360.00	V	61.93	-33.30	-27	-6.30		
15540.00	V	57.99	-37.23	-27	-10.23		
7578.43	H	59.56	-35.67	-27	-8.67		
10360.00	H	60.47	-34.75	-27	-7.75		
15540.00	H	56.23	-39.00	-27	-12.00		

Test mode:		802.11a		Frequency(MHz):		5200	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7570.57	V	59.11	-36.12	-27	-9.12		
10400.00	V	61.77	-33.45	-27	-6.45		
15600.00	V	53.83	-41.40	-27	-14.40		
7570.57	H	58.46	-36.77	-27	-9.77		
10400.00	H	55.05	-40.18	-27	-13.18		
15600.00	H	54.43	-40.79	-27	-13.79		

Test mode:		802.11a		Frequency(MHz):		5240	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7587.26	V	59.14	-36.09	-27	-9.09		
10480.00	V	58.85	-36.37	-27	-9.37		
15720.00	V	57.78	-37.45	-27	-10.45		
7587.26	H	64.97	-30.26	-27	-3.26		
10480.00	H	59.53	-35.70	-27	-8.70		
15720.00	H	53.85	-41.38	-27	-14.38		

Test mode:		802.11n HT20		Frequency(MHz):		5180	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7847.24	V	61.78	-33.45	-27	-6.45		
10360.00	V	62.13	-33.10	-27	-6.10		
15540.00	V	59.40	-35.83	-27	-8.83		
7847.24	H	58.29	-36.94	-27	-9.94		
10360.00	H	57.91	-37.32	-27	-10.32		
15540.00	H	55.92	-39.31	-27	-12.31		

Test mode:		802.11n HT20		Frequency(MHz):		5200	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)		E.I.R.P (dBm)	Limit (dBm)	Over(dB)	
7694.29	V	63.11		-32.11	-27	-5.11	
10400.00	V	61.06		-34.17	-27	-7.17	
15600.00	V	57.98		-37.25	-27	-10.25	

7694.29	H	60.76	-34.47	-27	-7.47
10400.00	H	61.67	-33.55	-27	-6.55
15600.00	H	63.11	-32.11	-27	-5.11

Test mode: 802.11n HT20 Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7786.47	V	60.98	-34.25	-27	-7.25
10480.00	V	61.85	-33.38	-27	-6.38
15720.00	V	55.34	-39.88	-27	-12.88
7786.47	H	64.21	-31.01	-27	-4.01
10480.00	H	60.27	-34.95	-27	-7.95
15720.00	H	53.34	-41.88	-27	-14.88

Test mode: 802.11ac (VHT20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7561.25	V	57.63	-37.59	-27	-10.59
10360.00	V	63.00	-32.23	-27	-5.23
15540.00	V	56.78	-38.44	-27	-11.44
7561.25	H	58.98	-36.25	-27	-9.25
10360.00	H	58.01	-37.21	-27	-10.21
15540.00	H	53.20	-42.03	-27	-15.03

Test mode: 802.11ac (VHT20) Frequency(MHz): 5200

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7763.53	V	62.54	-32.69	-27	-5.69
10400.00	V	59.64	-35.58	-27	-8.58
15600.00	V	55.99	-39.24	-27	-12.24
7763.53	H	59.31	-35.92	-27	-8.92
10400.00	H	57.50	-37.72	-27	-10.72
15600.00	H	56.14	-39.09	-27	-12.09

Test mode: 802.11ac (VHT20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7642.79	V	59.57	-35.65	-27	-8.65
10480.00	V	60.82	-34.41	-27	-7.41
15720.00	V	58.35	-36.87	-27	-9.87
7642.79	H	63.40	-31.83	-27	-4.83
10480.00	H	60.78	-34.45	-27	-7.45
15720.00	H	53.42	-41.81	-27	-14.81

Test mode: 802.11n40 Frequency(MHz): 5190

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7559.64	V	58.55	-36.67	-27	-9.67

10380.00	V	60.92	-34.31	-27	-7.31
15570.00	V	57.85	-37.38	-27	-10.38
7559.64	H	60.07	-35.16	-27	-8.16
10380.00	H	56.16	-39.07	-27	-12.07
15570.00	H	55.63	-39.60	-27	-12.60

Test mode: 802.11n40 Frequency(MHz): 5230

Freq. (MHz)	Ant. Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7653.58	V	63.47	-31.75	-27	-4.75
10460.00	V	58.55	-36.68	-27	-9.68
15690.00	V	53.16	-42.06	-27	-15.06
7653.58	H	61.62	-33.61	-27	-6.61
10460.00	H	59.07	-36.15	-27	-9.15
15690.00	H	59.70	-35.53	-27	-8.53

Test mode: 802.11ac (VHT40) Frequency(MHz): 5190

Freq. (MHz)	Ant. Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7682.28	V	61.92	-33.30	-27	-6.30
10380.00	V	57.58	-37.65	-27	-10.65
15570.00	V	59.80	-35.42	-27	-8.42
7682.28	H	59.64	-35.59	-27	-8.59
10380.00	H	58.87	-36.36	-27	-9.36
15570.00	H	52.30	-42.93	-27	-15.93

Test mode: 802.11ac (VHT40) Frequency(MHz): 5230

Freq. (MHz)	Ant. Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7684.21	V	62.10	-33.13	-27	-6.13
10460.00	V	63.42	-31.81	-27	-4.81
15690.00	V	53.62	-41.61	-27	-14.61
7684.21	H	58.50	-36.73	-27	-9.73
10460.00	H	56.05	-39.18	-27	-12.18
15690.00	H	56.20	-39.03	-27	-12.03

Test mode: 802.11ac80 Frequency(MHz): 5210

Freq. (MHz)	Ant. Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7648.37	V	60.71	-34.51	-27	-7.51
10420.00	V	59.11	-36.11	-27	-9.11
15630.00	V	53.28	-41.94	-27	-14.94
7648.37	H	61.81	-33.42	-27	-6.42
10420.00	H	58.31	-36.91	-27	-9.91
15630.00	H	60.71	-34.51	-27	-7.51

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

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11a Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.05	H	56.38	-38.85	-27	Pass
5149.75	V	54.57	-40.66	-27	Pass

Test mode: 802.11a Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5353.20	V	52.33	-42.90	-27	Pass
5351.60	H	53.08	-42.15	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

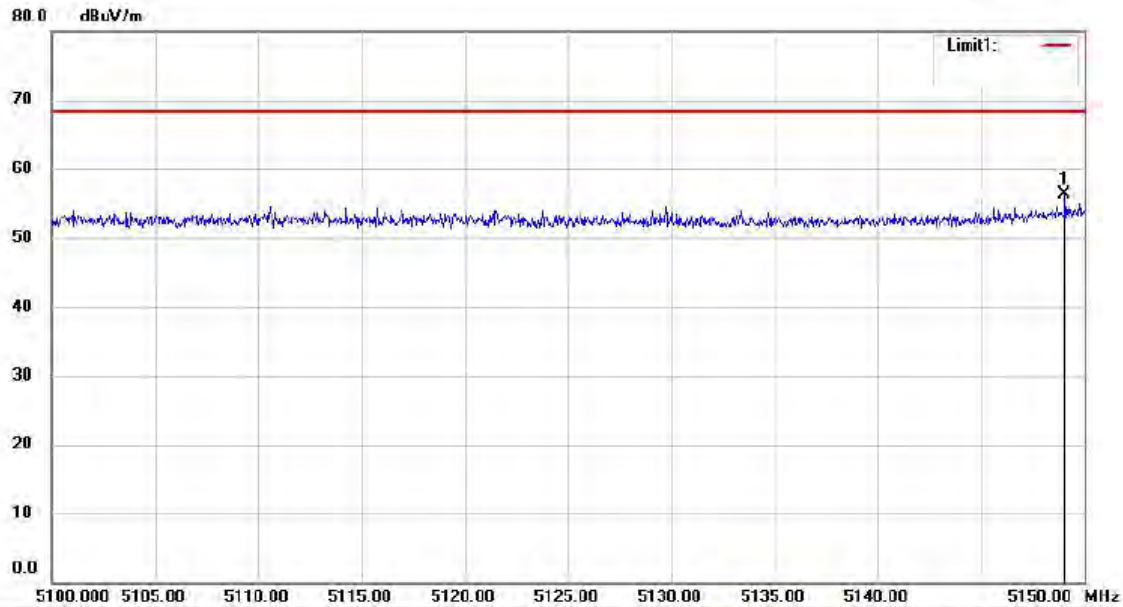
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

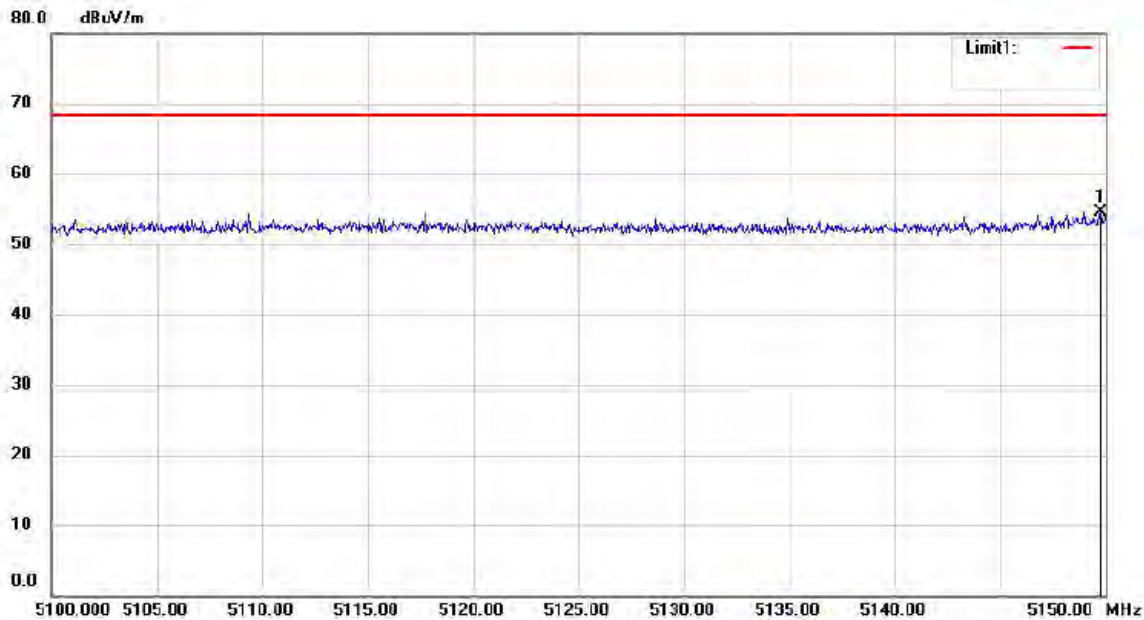
d is the measurement distance in 3 meters

U-NII - 1
 Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5180 ☐ 5200 ☐ 5240 Ant. Pol H



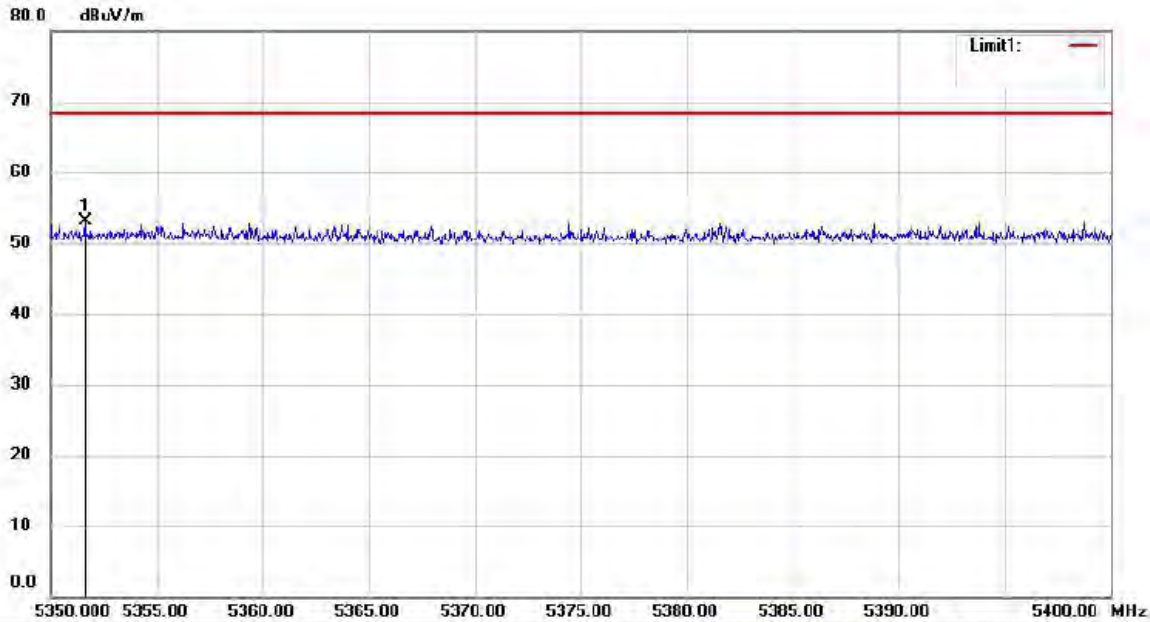
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
 Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5180 ☐ 5200 ☐ 5240 Ant. Pol V



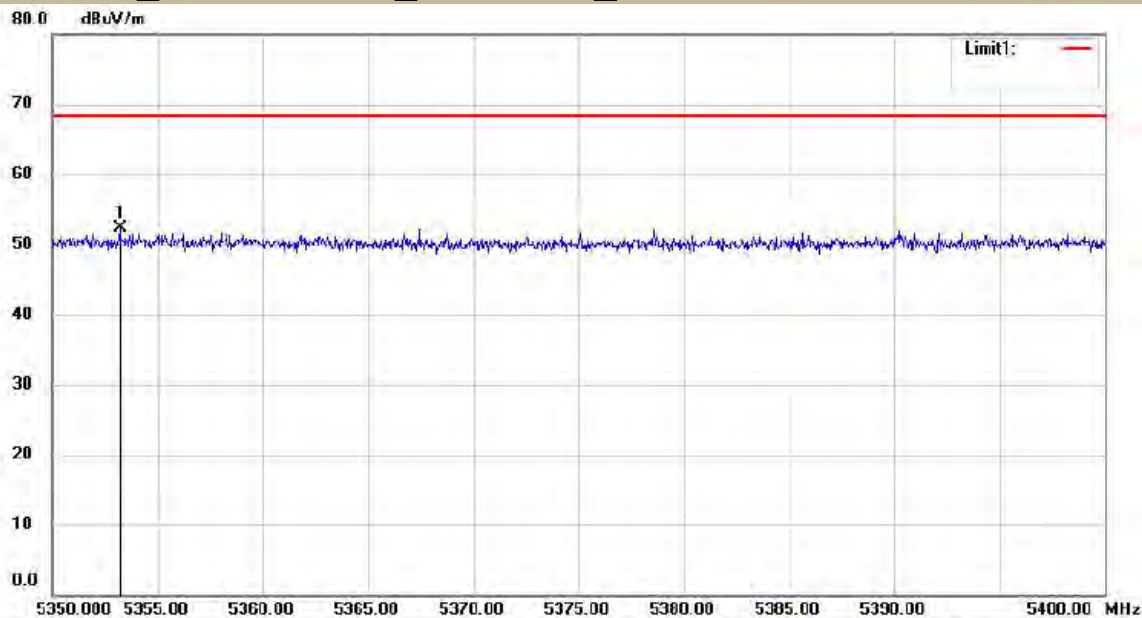
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
 Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

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



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

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



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n20 Frequency(MHz): 5180

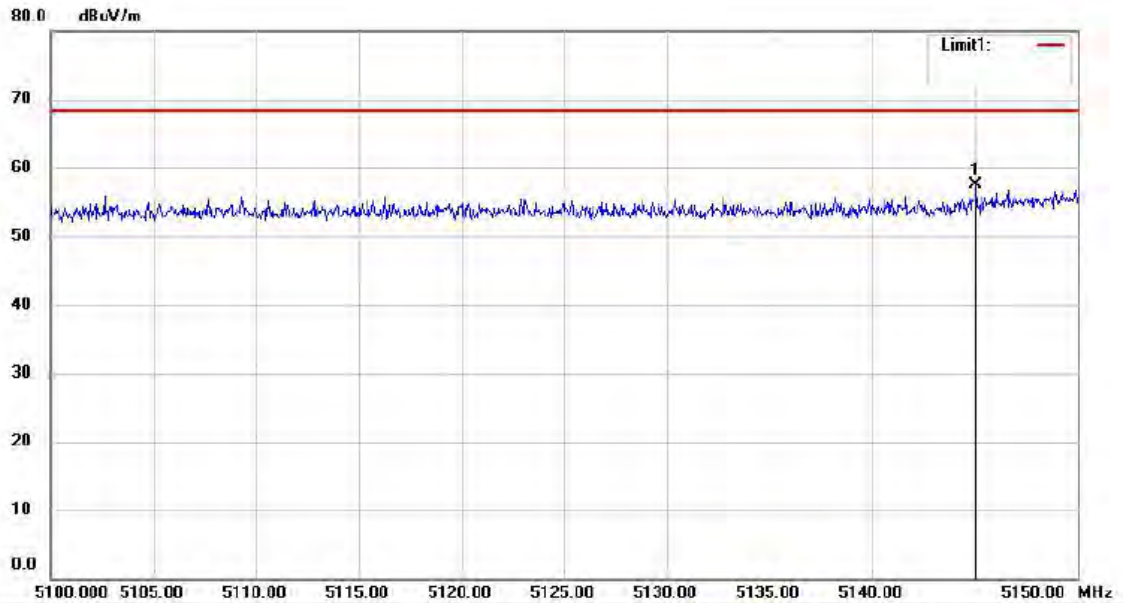
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5145.05	H	57.47	-37.76	-27	Pass
5148.65	V	61.43	-33.80	-27	Pass

Test mode: 802.11n20 Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5357.15	V	52.74	-42.49	-27	Pass
5352.50	H	53.23	-42.00	-27	Pass

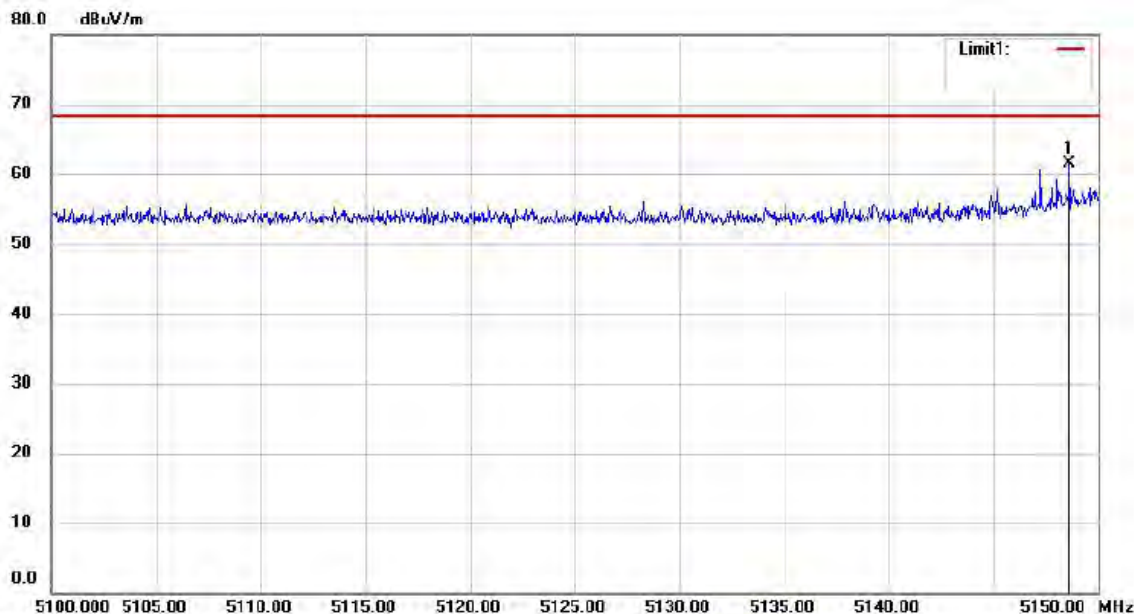
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol H



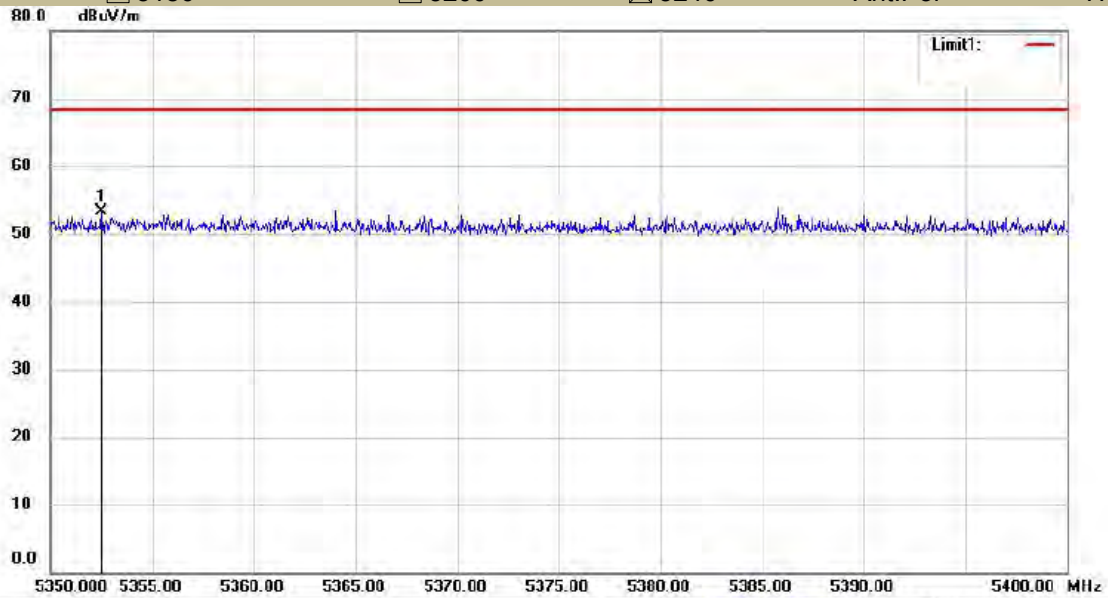
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol V



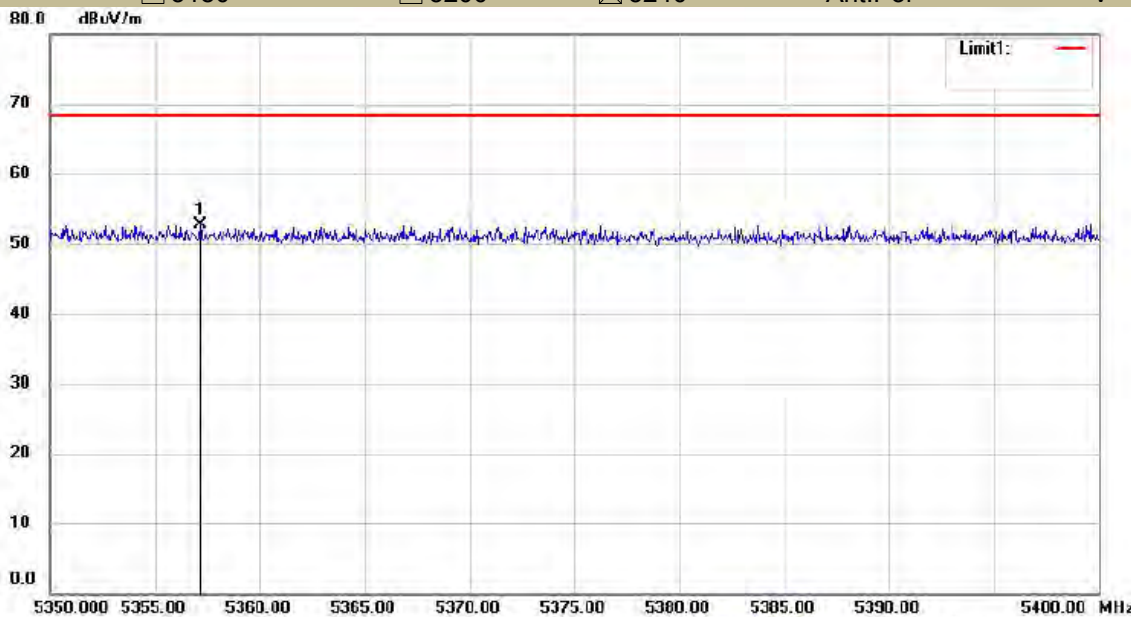
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

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



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

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



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac (VHT20) Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.75	H	55.47	-39.76	-27	Pass
5148.95	V	55.50	-39.73	-27	Pass

Test mode: 802.11ac (VHT20) Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5353.20	V	52.83	-42.40	-27	Pass
5351.60	H	53.58	-41.65	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

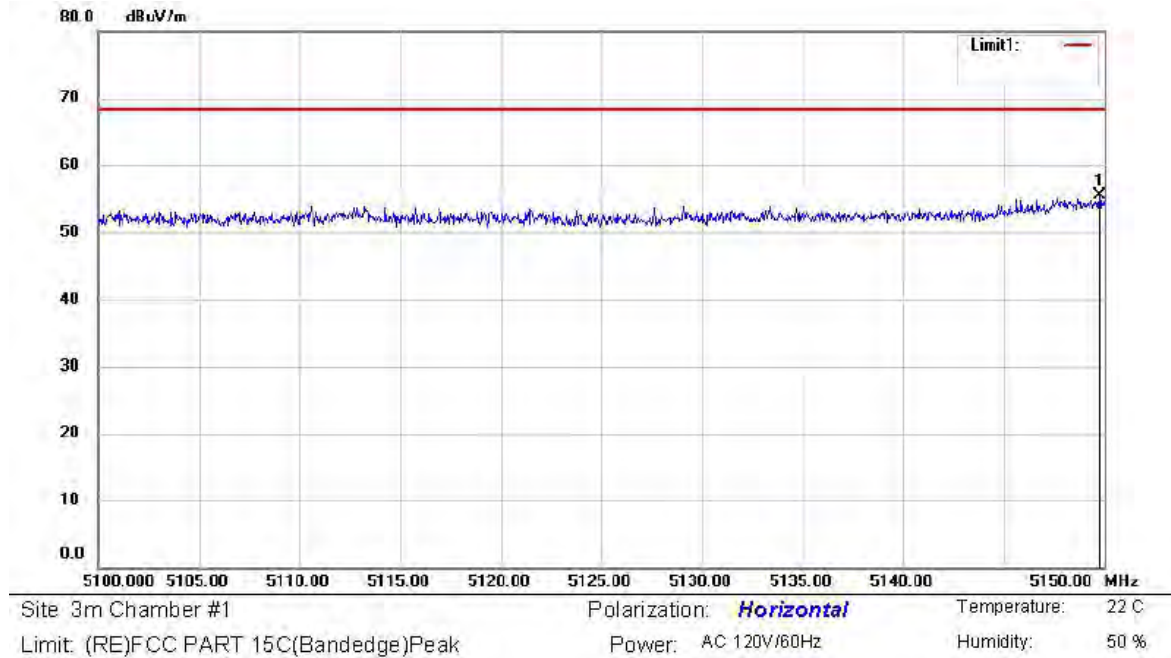
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

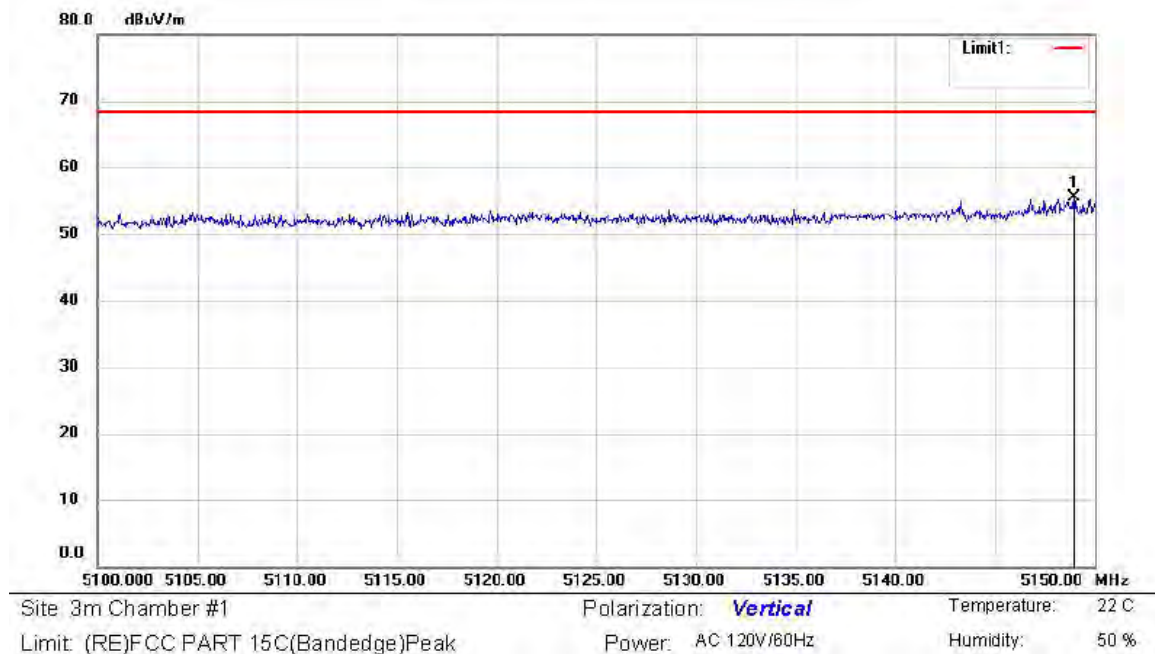
(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

d is the measurement distance in 3 meters

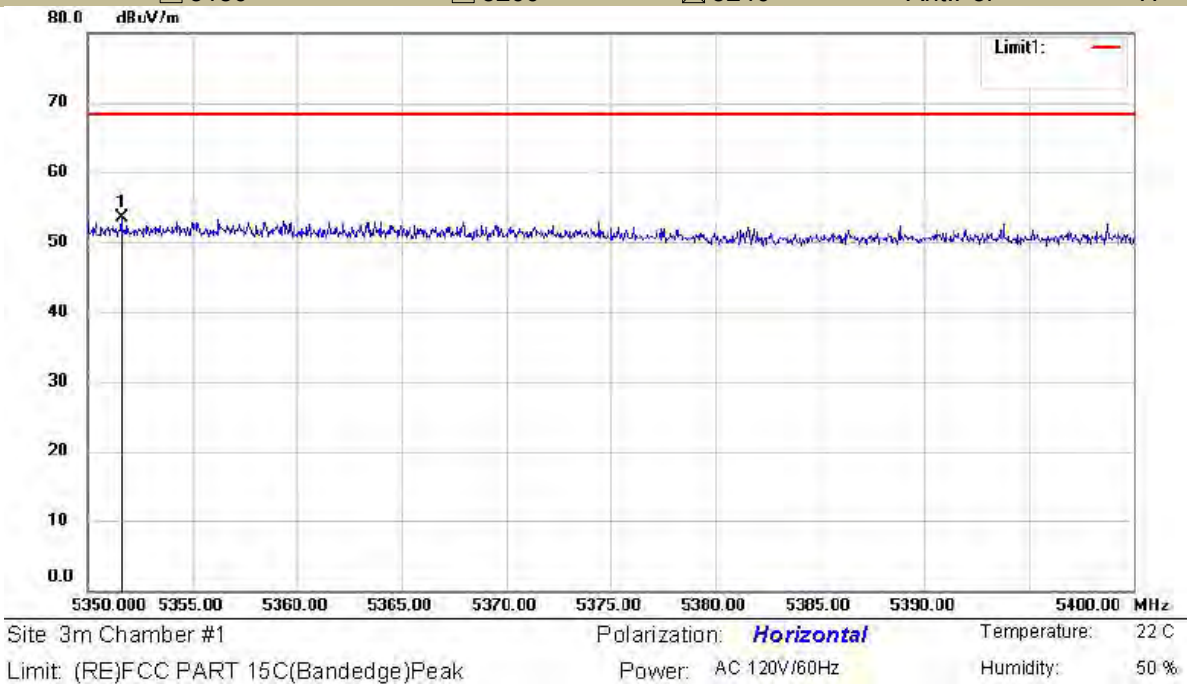
U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT20)
☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol H



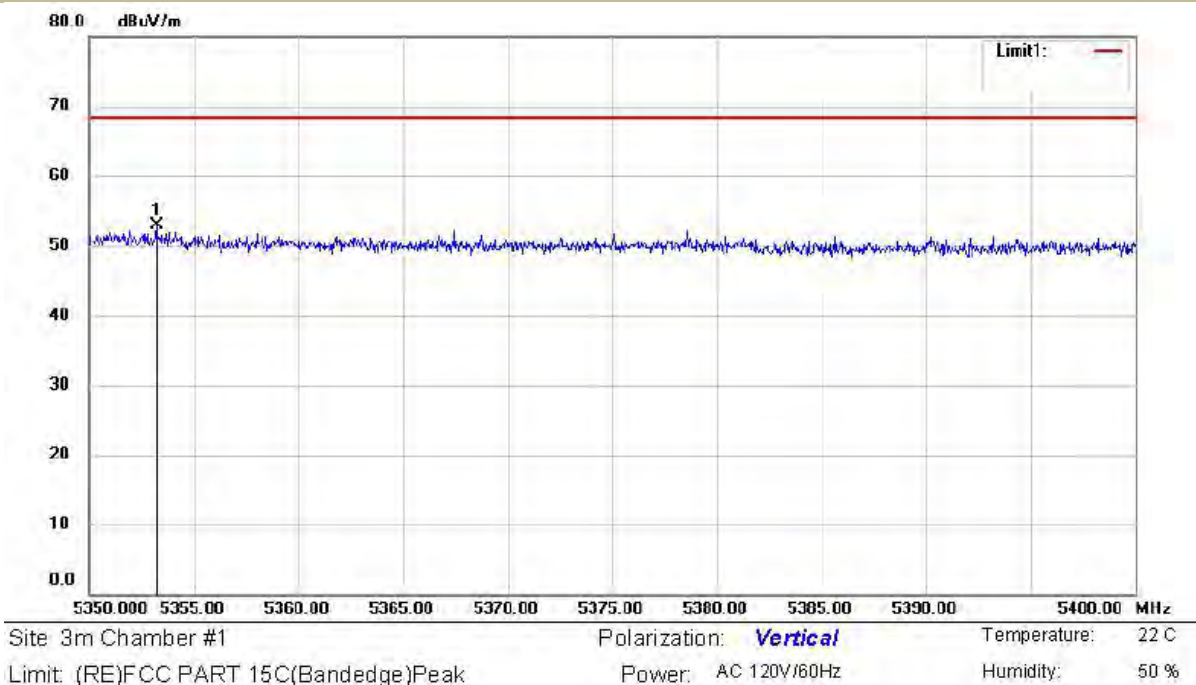
U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT20)
☒ 5180 ☐ 5200 ☐ 5240 Ant.Pol V



U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5180 ☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT20)
☐ 5200 ☒ 5240 Ant.Pol H



U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5180 ☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT20)
☐ 5200 ☒ 5240 Ant.Pol V



● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n40		Frequency(MHz): 5190			
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.20	H	57.48	-37.75	-27	Pass
5148.65	V	58.43	-36.80	-27	Pass

Test mode: 802.11n40		Frequency(MHz): 5230			
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5355.60	V	53.08	-42.15	-27	Pass
5352.50	H	53.73	-41.50	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

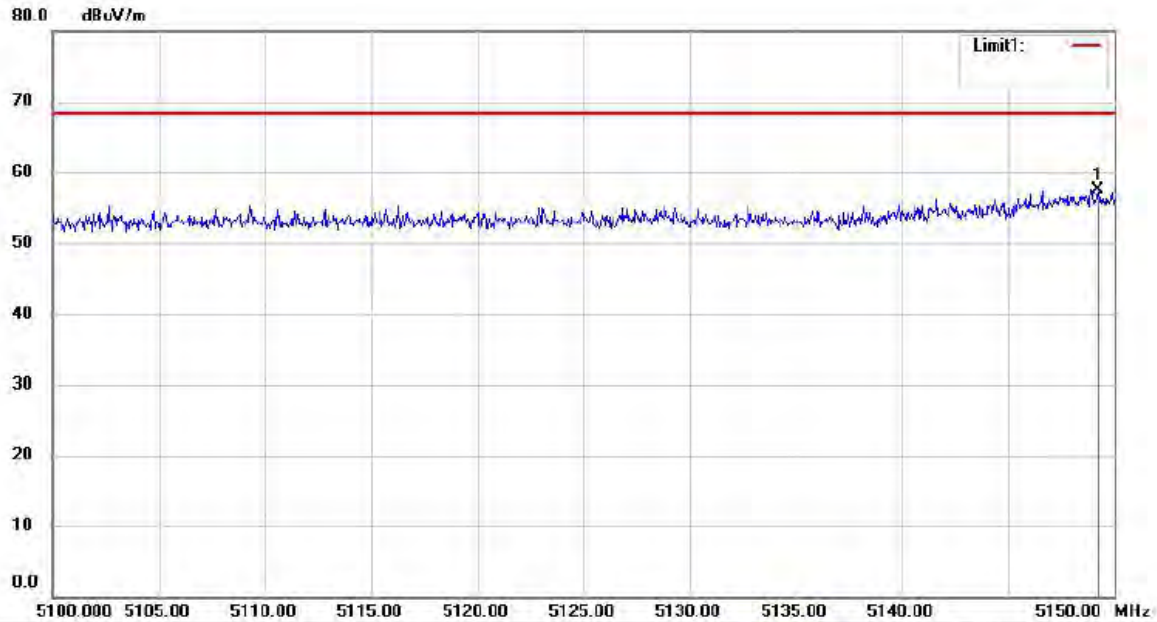
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

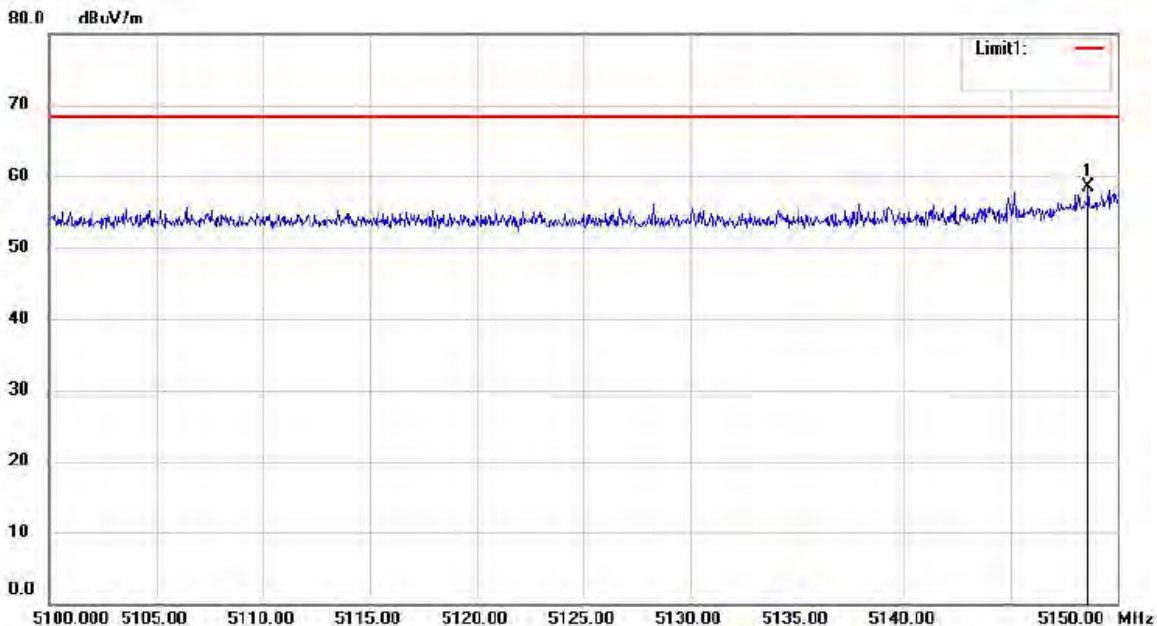
d is the measurement distance in 3 meters

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☒ 5190 ☐ 5200 ☐ 5240 Ant.Pol H



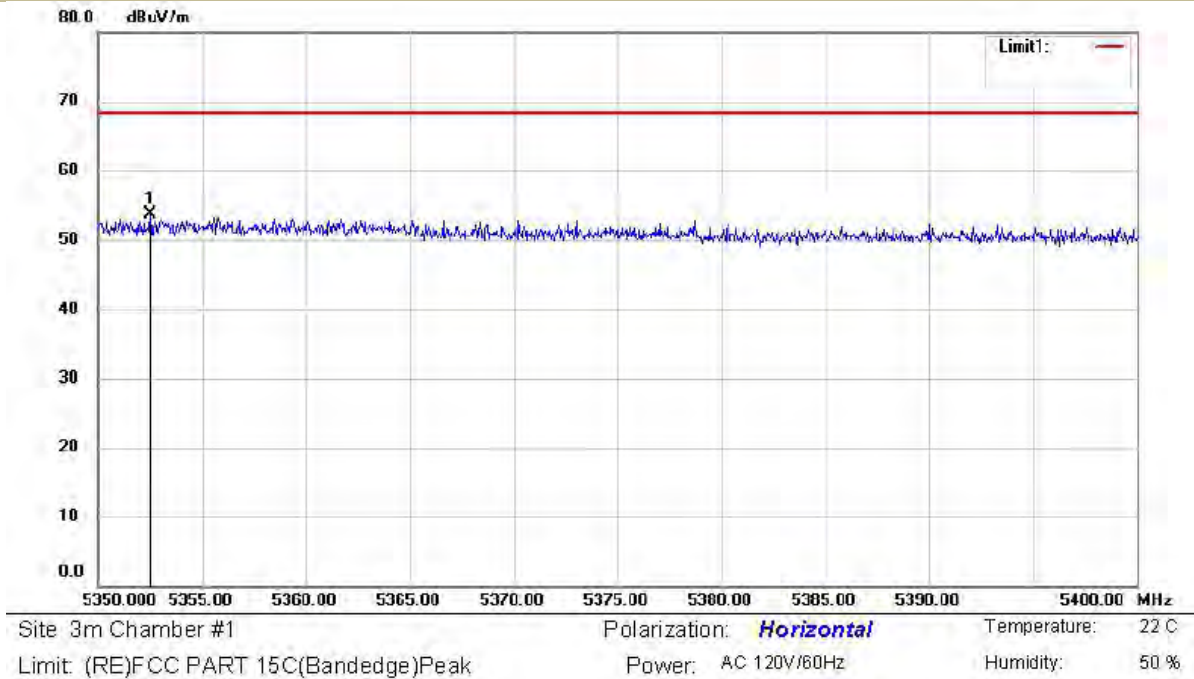
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☒ 5190 ☐ 5200 ☐ 5240 Ant.Pol V

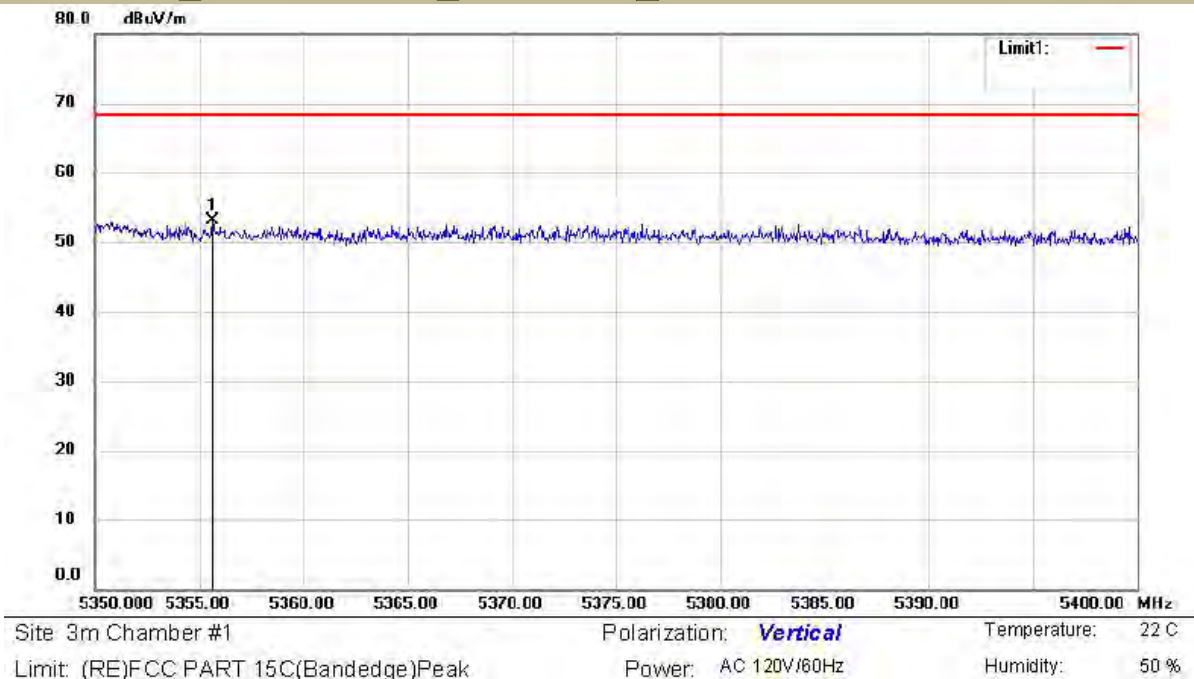


Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5180 ☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☐ 5200 ☒ 5230 Ant.Pol H



U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5180 ☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☐ 5200 ☒ 5230 Ant.Pol V



☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac (VHT40) Frequency(MHz): 5190

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.20	H	58.98	-36.25	-27	Pass
5149.60	V	59.61	-35.62	-27	Pass

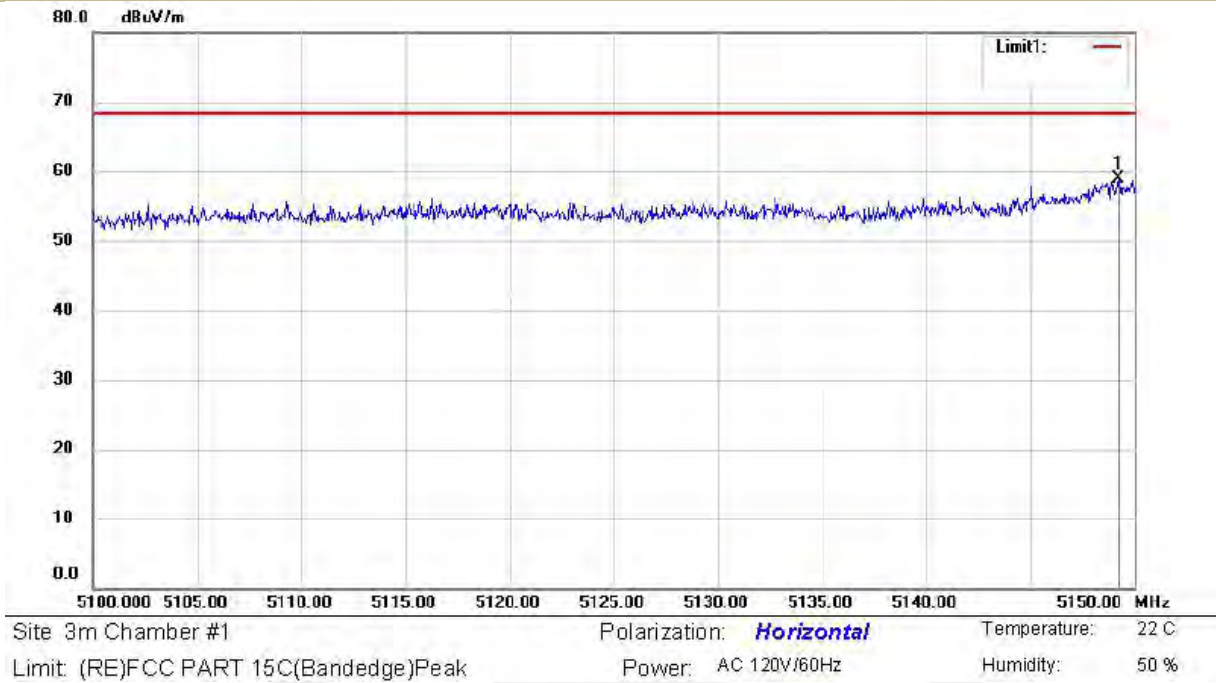
Test mode: 802.11ac (VHT40) Frequency(MHz): 5230

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5354.05	V	52.56	-42.67	-27	Pass
5352.50	H	53.73	-41.50	-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[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

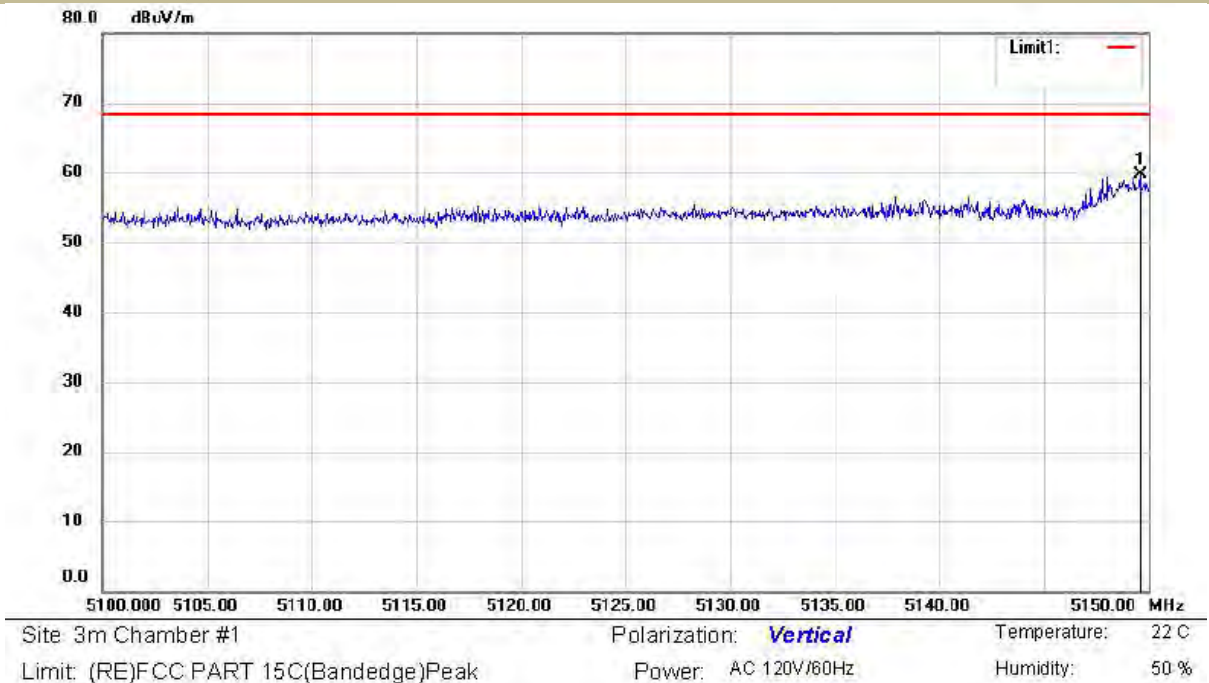
U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☒ 5190 ☐ 5200 ☐ 5240 Ant.Pol H



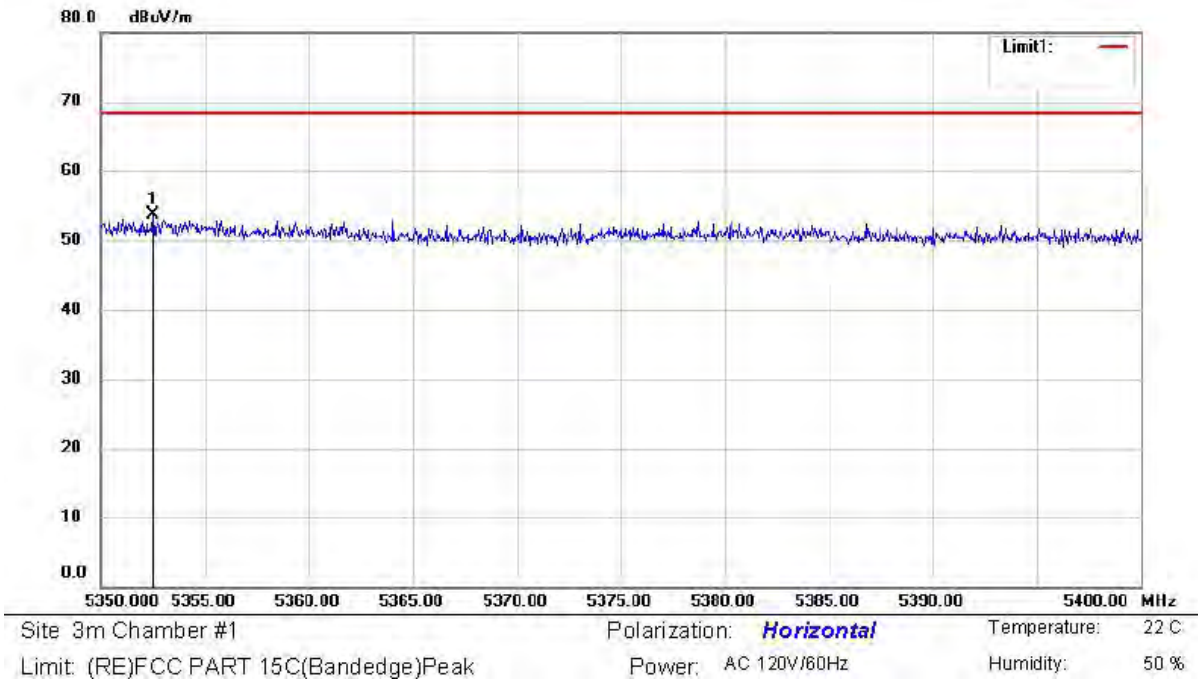
U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☒ 5190 ☐ 5200 ☐ 5240 Ant.Pol V



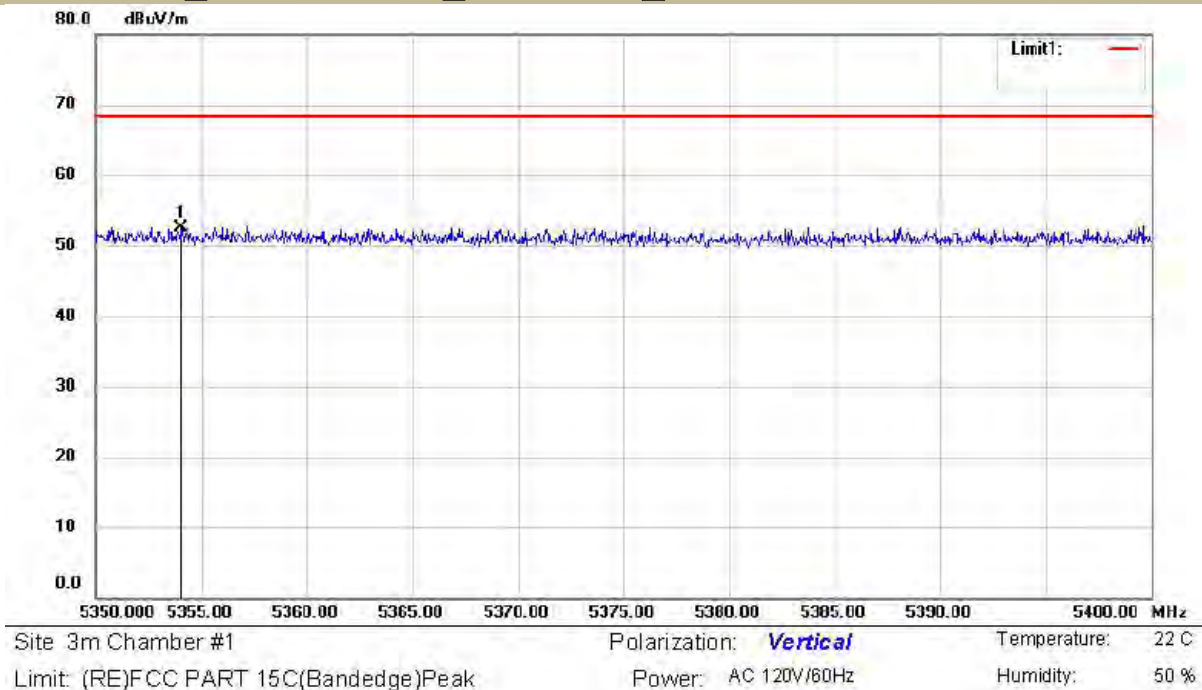
U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☐ 5180 ☐ 5200 ☒ 5230 Ant.Pol H



U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☐ 5180 ☐ 5200 ☒ 5230 Ant.Pol V



● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac80 Frequency(MHz): 5210

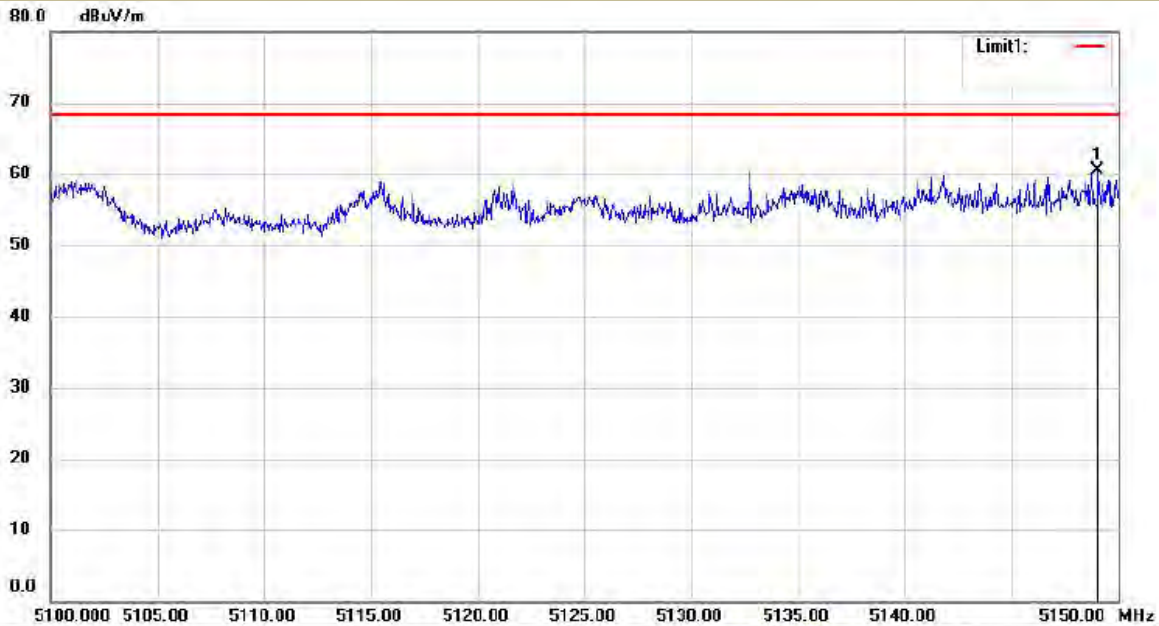
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.08	H	60.42	-34.81	-27	Pass
5145.15	V	66.16	-29.07	-27	Pass

Test mode: 802.11ac80 Frequency(MHz): 5210

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5364.85	V	52.98	-42.25	-27	Pass
5357.45	H	53.54	-41.69	-27	Pass

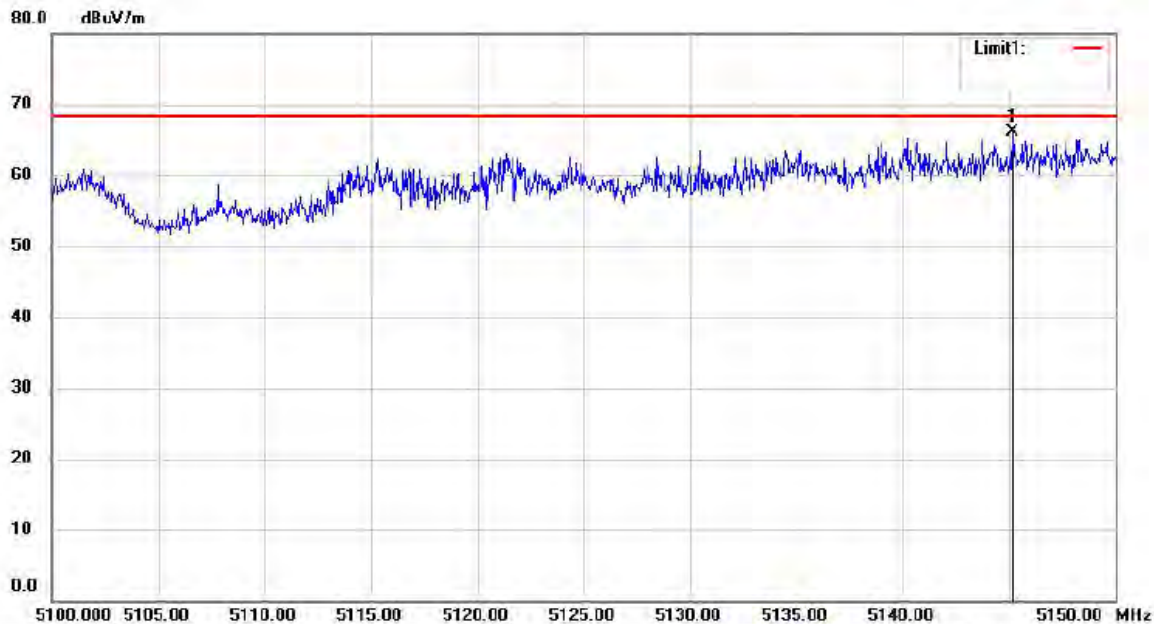
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac80
☒ 5210 ☐ 5200 ☐ 5240 Ant.Pol H



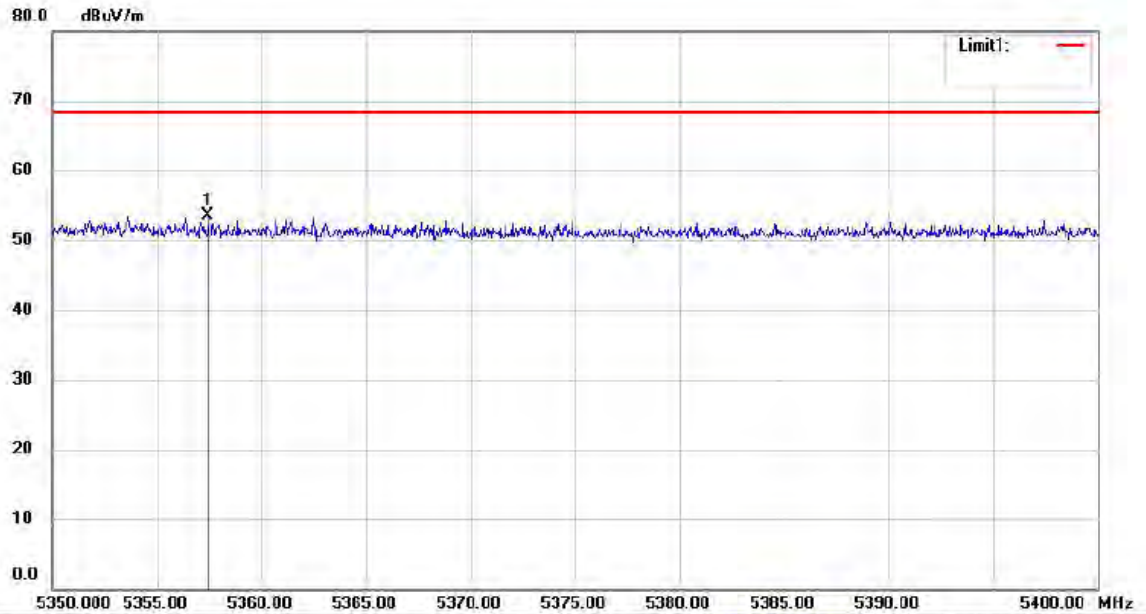
Site: 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac80
☒ 5210 ☐ 5200 ☐ 5240 Ant.Pol V



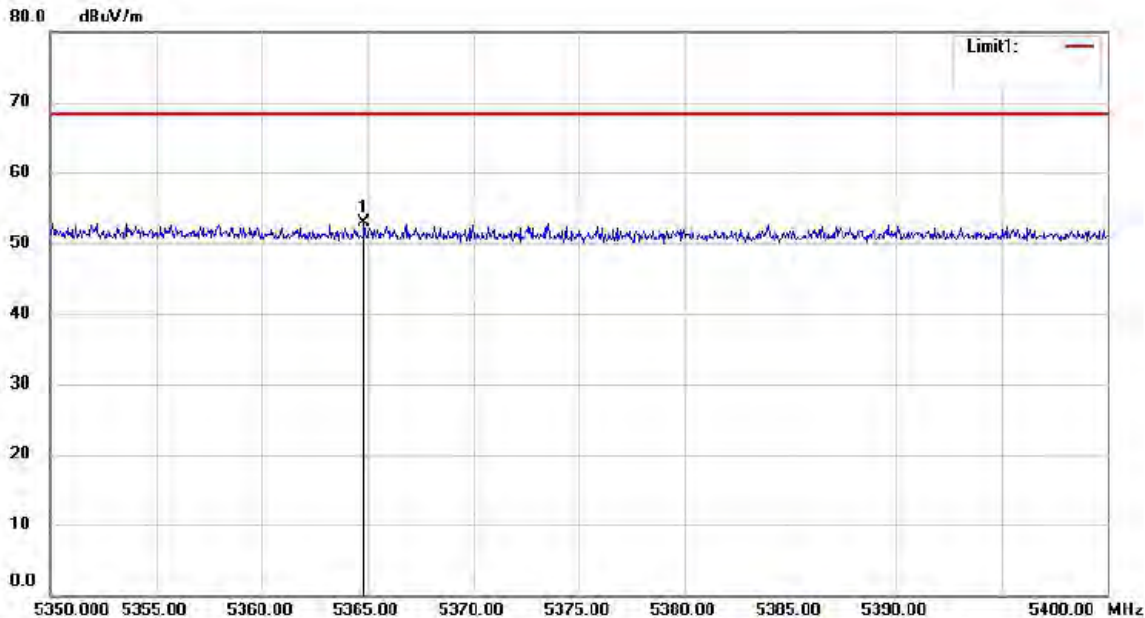
Site: 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac80
☐ 5180 ☐ 5200 ☒ 5210 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII - 1
Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac80
☐ 5180 ☐ 5200 ☒ 5210 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

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

Test mode:		802.11a		Frequency(MHz):		5260	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7656.22	V	61.06	-34.17	-27	-7.17		
10520.00	V	62.14	-33.09	-27	-6.09		
15780.00	V	54.51	-40.71	-27	-13.71		
7656.22	H	60.30	-34.93	-27	-7.93		
10520.00	H	57.38	-37.85	-27	-10.85		
15780.00	H	52.18	-43.05	-27	-16.05		

Test mode:		802.11a		Frequency(MHz):		5300	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7740.45	V	63.07	-32.16	-27	-5.16		
10600.00	V	61.51	-33.72	-27	-6.72		
15900.00	V	53.76	-41.47	-27	-14.47		
7740.45	H	60.74	-34.49	-27	-7.49		
10600.00	H	58.34	-36.89	-27	-9.89		
15900.00	H	59.28	-35.95	-27	-8.95		

Test mode:		802.11a		Frequency(MHz):		5320	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7658.17	V	59.68	-35.54	-27	-8.54		
10640.00	V	59.08	-36.15	-27	-9.15		
15960.00	V	55.69	-39.54	-27	-12.54		
7658.17	H	62.28	-32.95	-27	-5.95		
10640.00	H	60.29	-34.94	-27	-7.94		
15960.00	H	54.08	-41.15	-27	-14.15		

Test mode:		802.11 n (HT20)		Frequency(MHz):		5260	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
7638.39	V	58.69	-36.54	-27	-9.54		
10520.00	V	59.75	-35.48	-27	-8.48		
15780.00	V	55.92	-39.31	-27	-12.31		
7638.39	H	60.55	-34.68	-27	-7.68		
10520.00	H	55.66	-39.57	-27	-12.57		
15780.00	H	54.14	-41.08	-27	-14.08		

Test mode: 802.11 n (HT20) Frequency(MHz): 5300

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7789.94	V	63.63	-31.60	-27	-4.60
10600.00	V	59.24	-35.98	-27	-8.98
15900.00	V	56.12	-39.11	-27	-12.11
7789.94	H	61.71	-33.52	-27	-6.52
10600.00	H	57.90	-37.33	-27	-10.33
15900.00	H	56.50	-38.72	-27	-11.72

Test mode: 802.11 n (HT20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7593.95	V	59.98	-35.25	-27	-8.25
10640.00	V	57.99	-37.24	-27	-10.24
15960.00	V	58.74	-36.48	-27	-9.48
7593.95	H	62.03	-33.20	-27	-6.20
10640.00	H	58.81	-36.42	-27	-9.42
15960.00	H	54.04	-41.19	-27	-14.19

Test mode: 802.11ac (VHT20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7759.07	V	60.38	-34.84	-27	-7.84
10520.00	V	60.18	-35.04	-27	-8.04
15780.00	V	54.70	-40.52	-27	-13.52
7759.07	H	59.83	-35.40	-27	-8.40
10520.00	H	57.62	-37.60	-27	-10.60
15780.00	H	56.07	-39.16	-27	-12.16

Test mode: 802.11ac (VHT20) Frequency(MHz): 5300

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7745.43	V	61.35	-33.88	-27	-6.88
10600.00	V	58.41	-36.82	-27	-9.82
15900.00	V	55.20	-40.03	-27	-13.03
7745.43	H	59.14	-36.09	-27	-9.09
10600.00	H	57.75	-37.47	-27	-10.47
15900.00	H	59.06	-36.17	-27	-9.17

Test mode: 802.11ac (VHT20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7720.79	V	60.32	-34.91	-27	-7.91
10640.00	V	60.42	-34.81	-27	-7.81
15960.00	V	56.93	-38.30	-27	-11.30
7720.79	H	62.07	-33.16	-27	-6.16
10640.00	H	61.25	-33.98	-27	-6.98
15960.00	H	51.04	-44.19	-27	-17.19

Test mode: 802.11n40 Frequency(MHz): 5270

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7621.96	V	60.66	-34.57	-27	-7.57
10540.00	V	62.68	-32.55	-27	-5.55
15810.00	V	56.69	-38.54	-27	-11.54
7621.96	H	59.91	-35.31	-27	-8.31
10540.00	H	57.72	-37.51	-27	-10.51
15810.00	H	52.68	-42.55	-27	-15.55

Test mode: 802.11n40 Frequency(MHz): 5310

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7835.69	V	60.90	-34.33	-27	-7.33
10620.00	V	59.42	-35.81	-27	-8.81
15930.00	V	55.24	-39.99	-27	-12.99
7835.69	H	61.08	-34.15	-27	-7.15
10620.00	H	59.93	-35.30	-27	-8.30
15930.00	H	55.87	-39.36	-27	-12.36

Test mode: 802.11ac (VHT40) Frequency(MHz): 5270

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7772.92	V	57.55	-37.67	-27	-10.67
10540.00	V	57.33	-37.90	-27	-10.90
15810.00	V	56.78	-38.45	-27	-11.45
7772.92	H	61.05	-34.18	-27	-7.18
10540.00	H	59.58	-35.65	-27	-8.65
15810.00	H	53.85	-41.38	-27	-14.38

Test mode: 802.11ac (VHT40) Frequency(MHz): 5310

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7711.42	V	61.12	-34.11	-27	-7.11
10620.00	V	58.07	-37.16	-27	-10.16
15930.00	V	57.65	-37.58	-27	-10.58
7711.42	H	60.31	-34.92	-27	-7.92
10620.00	H	60.46	-34.77	-27	-7.77
15930.00	H	52.70	-42.53	-27	-15.53

Test mode: 802.11ac (VHT80) Frequency(MHz): 5290

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7850.51	V	60.85	-34.37	-27	-7.37
10580.00	V	58.67	-36.55	-27	-9.55
15870.00	V	54.46	-40.77	-27	-13.77
7850.51	H	60.37	-34.86	-27	-7.86
10580.00	H	59.33	-35.90	-27	-8.90
15870.00	H	59.35	-35.87	-27	-8.87

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



- ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11a Frequency(MHz): 5260

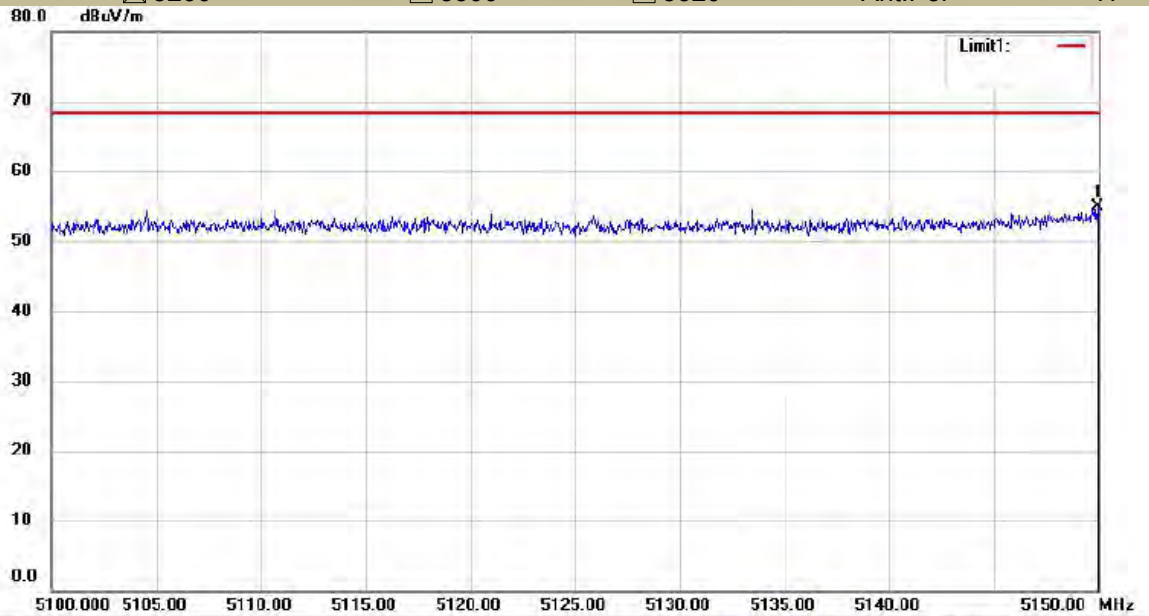
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.95	H	54.88	-40.35	-27	Pass
5147.90	V	53.10	-42.13	-27	Pass

Test mode: 802.11a Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.55	V	54.04	-41.19	-27	Pass
5351.75	H	53.80	-41.43	-27	Pass

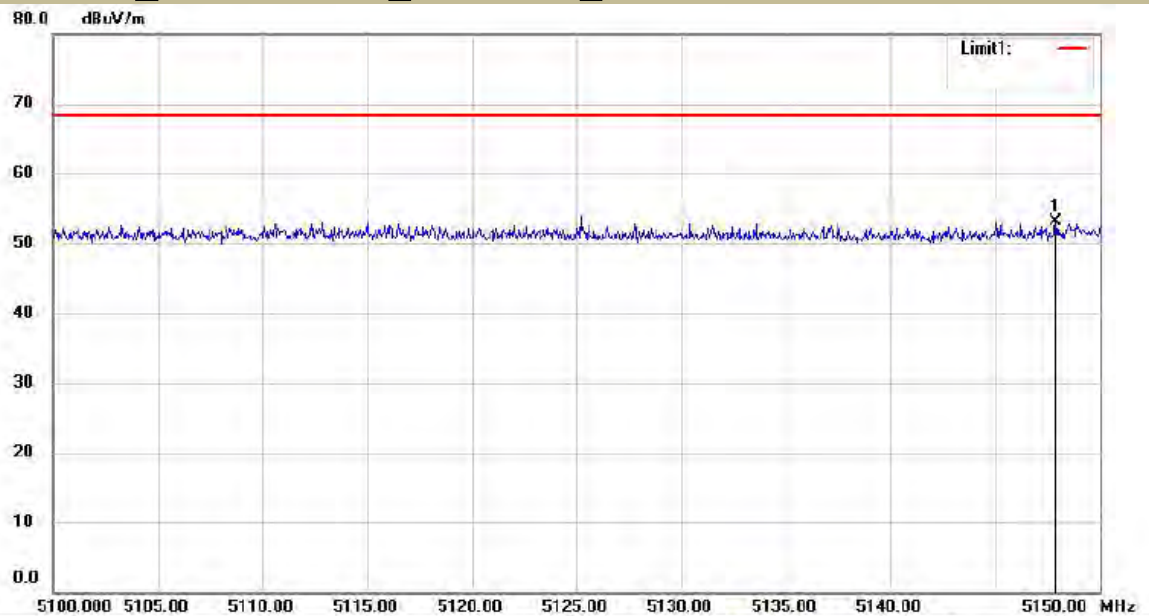
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 5260 ☒ 802.11a ☐ 5300 ☐ 802.11n(HT20) ☐ 5320 ☐ 802.11 ac (VHT20)
Ant. Pol H



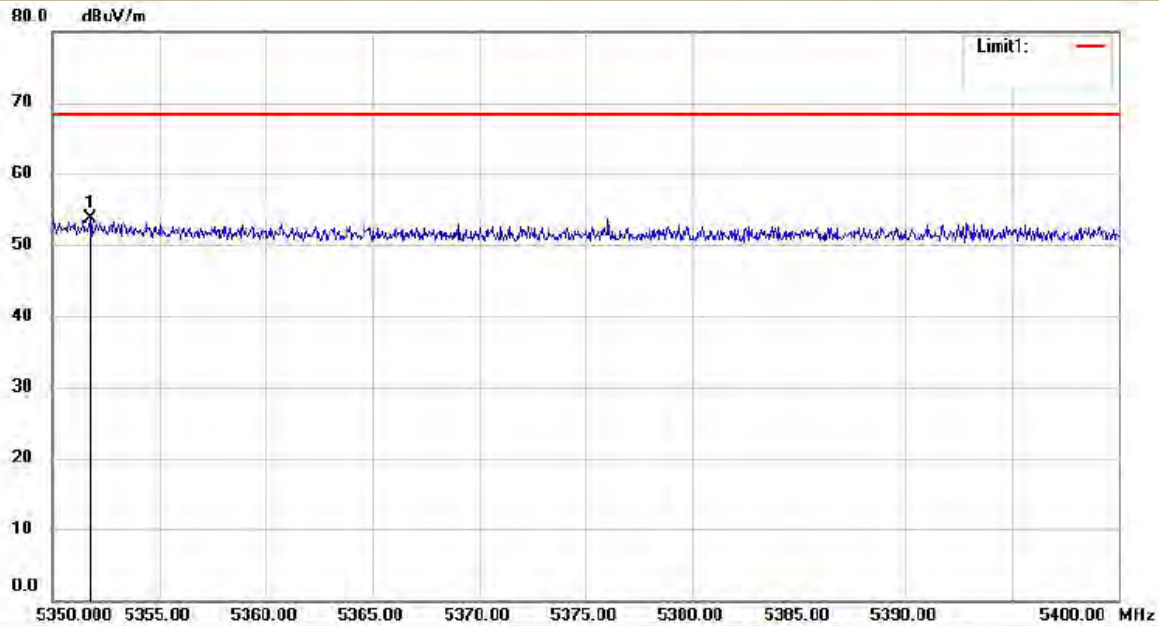
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 5260 ☒ 802.11a ☐ 5300 ☐ 802.11n(HT20) ☐ 5320 ☐ 802.11 ac (VHT20)
Ant. Pol V



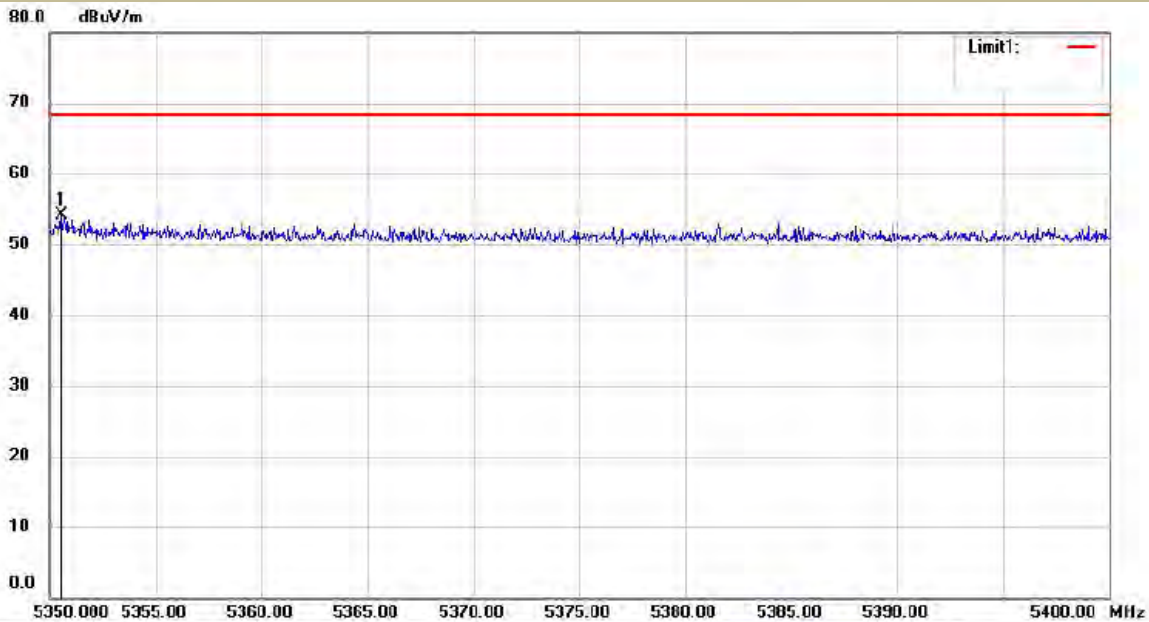
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5260 ☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5300 ☒ 5320 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5260 ☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5300 ☒ 5320 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n20 Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.25	H	53.38	-41.85	-27	Pass
5149.25	V	52.97	-42.26	-27	Pass

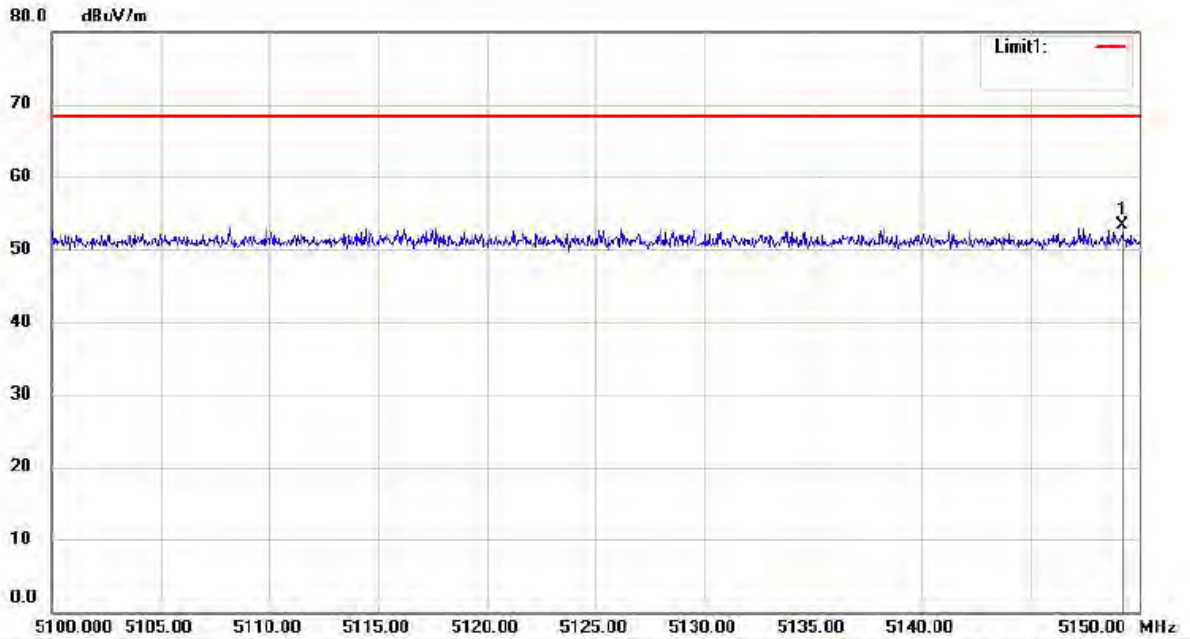
Test mode: 802.11n20 Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.15	V	59.16	-36.07	-27	Pass
5351.25	H	64.50	-30.73	-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

U-NII -2A

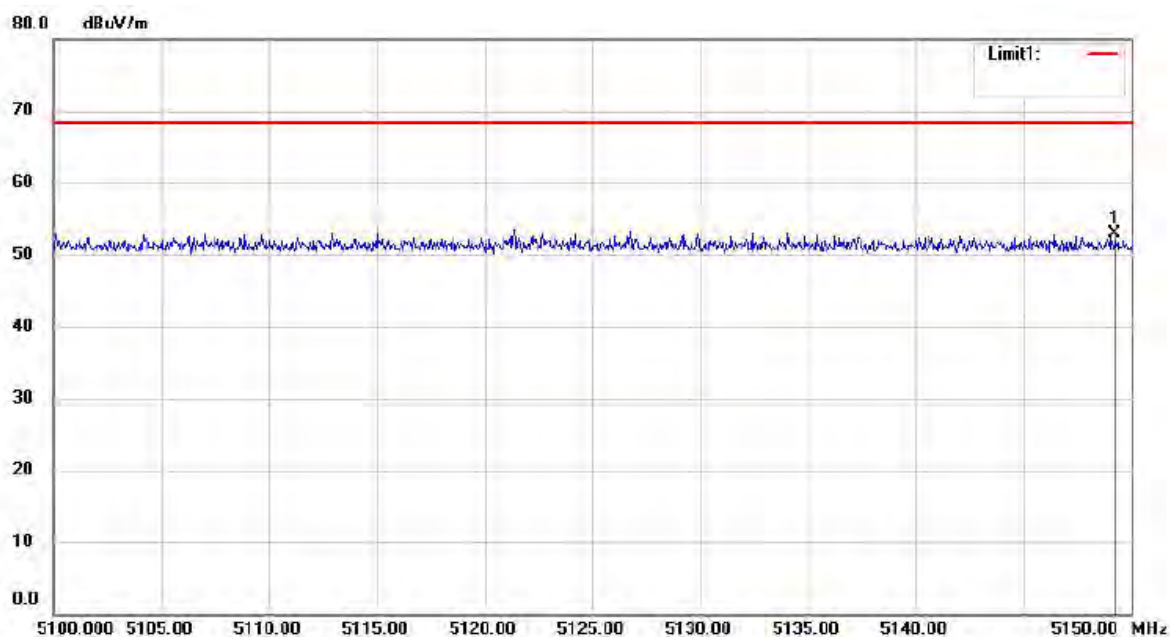
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol V



Site: 3m Chamber #1

Polarization: **Vertical**

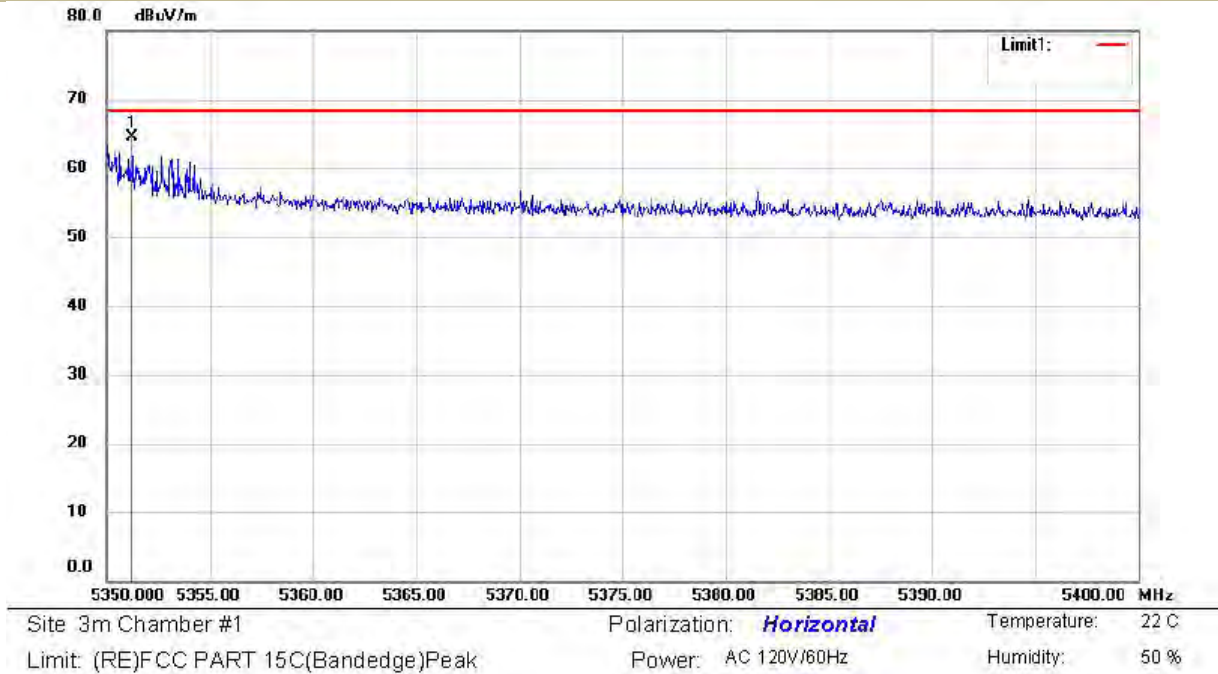
Temperature: 22 C

Limit: (RE)FCC PART 15C(Bandedge)Peak

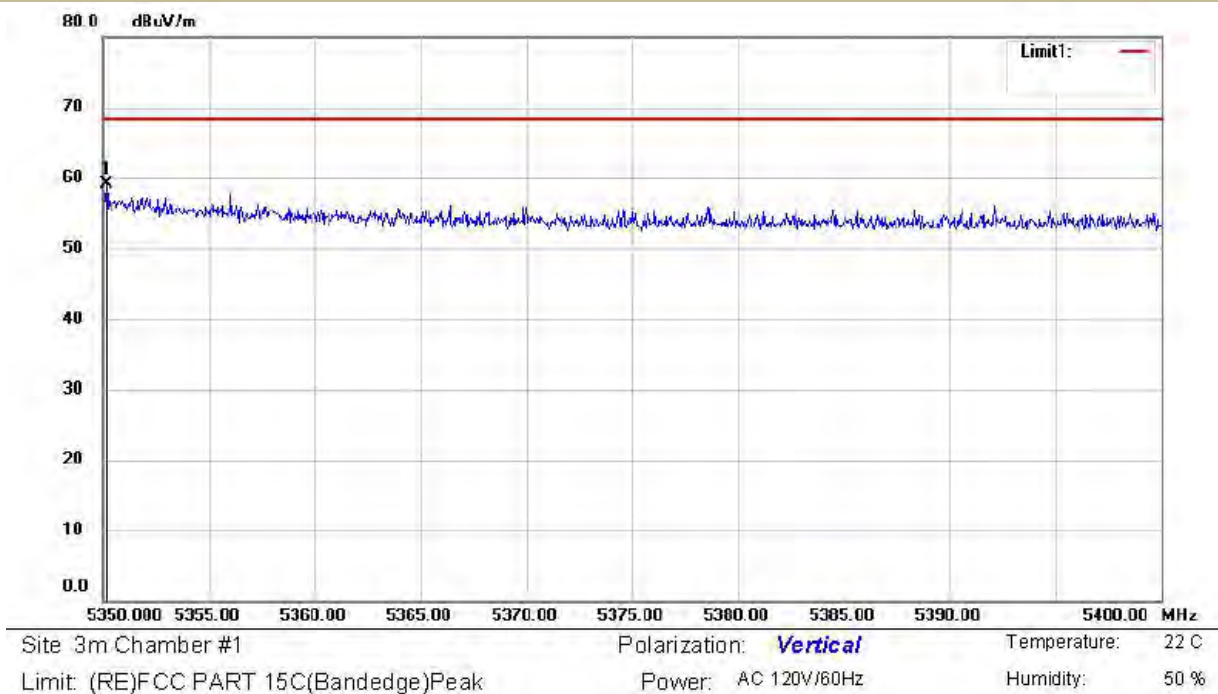
Power: AC 120V/60Hz

Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5260 ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5300 ☒ 5320 Ant.Pol H



Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5260 ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5300 ☒ 5320 Ant.Pol V



● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11 ac (VHT20) Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.95	H	54.88	-40.35	-27	Pass
5147.90	V	53.60	-41.63	-27	Pass

Test mode: 802.11 ac (VHT20) Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.55	V	54.54	-40.69	-27	Pass
5351.75	H	54.30	-40.93	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

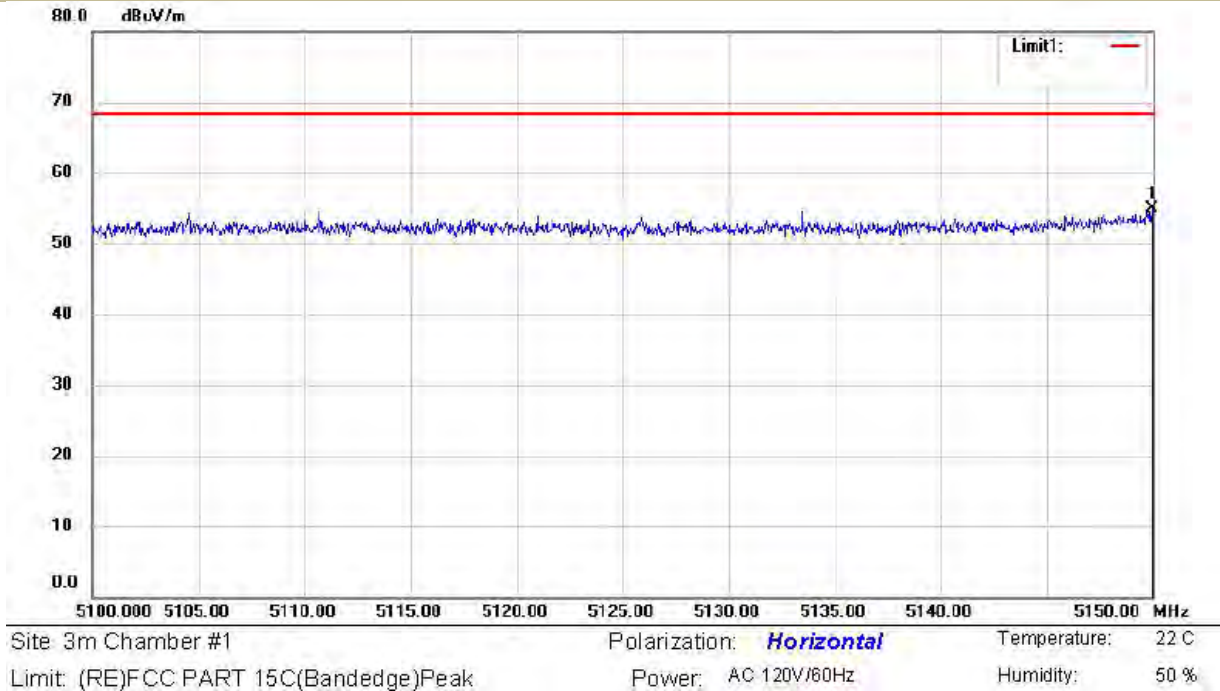
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

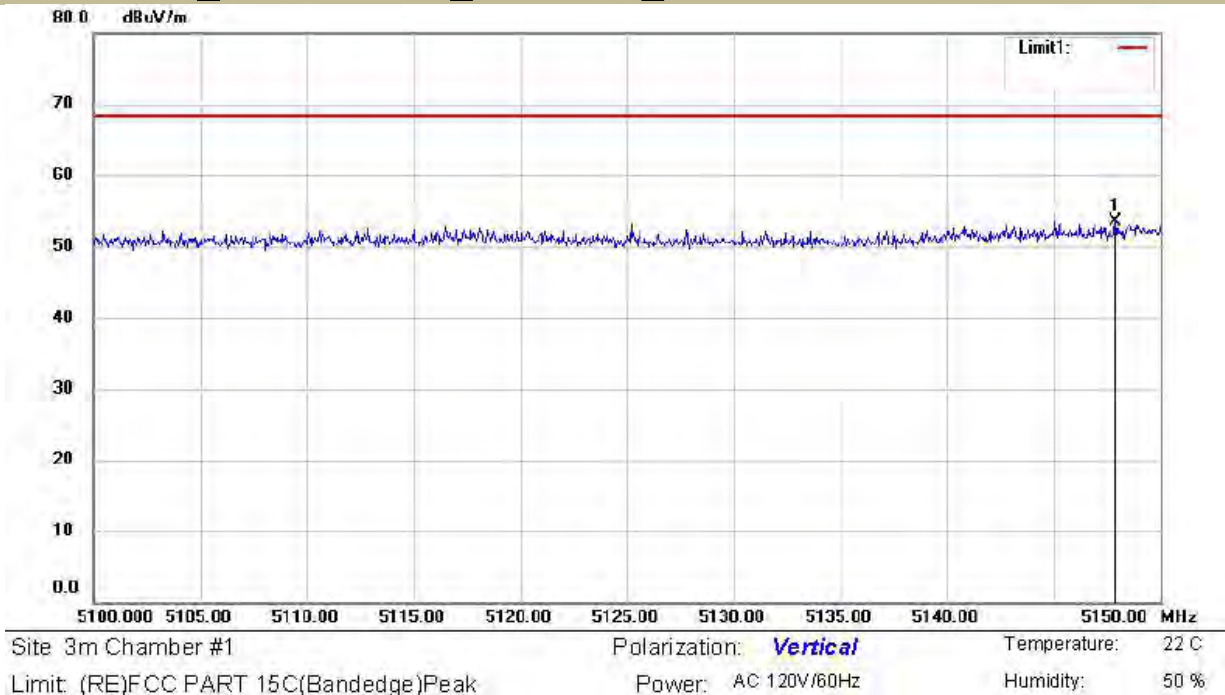
(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

d is the measurement distance in 3 meters

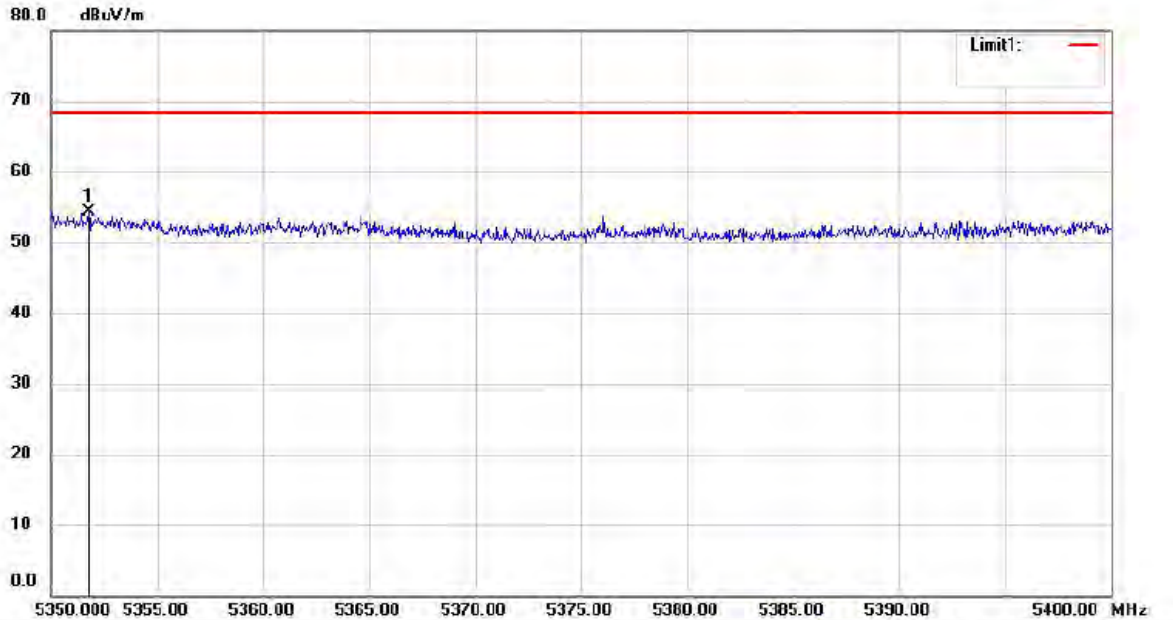
Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol H



Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☒ 5260 ☐ 5300 ☐ 5320 Ant.Pol V

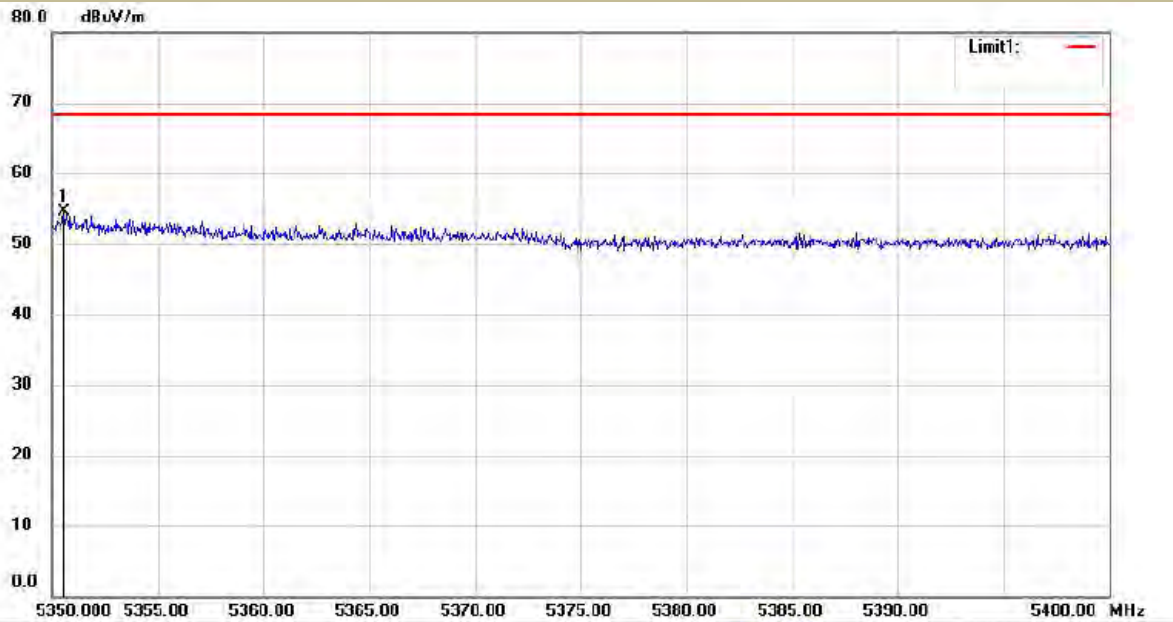


Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☐ 5260 ☐ 5300 ☒ 5320 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☐ 5260 ☐ 5300 ☒ 5320 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n40		Frequency(MHz): 5270			
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5149.35	H	53.22	-42.01	-27	Pass
5149.25	V	53.47	-41.76	-27	Pass

Test mode: 802.11n40		Frequency(MHz): 5310			
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.15	V	58.66	-36.57	-27	Pass
5350.05	H	62.83	-32.40	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

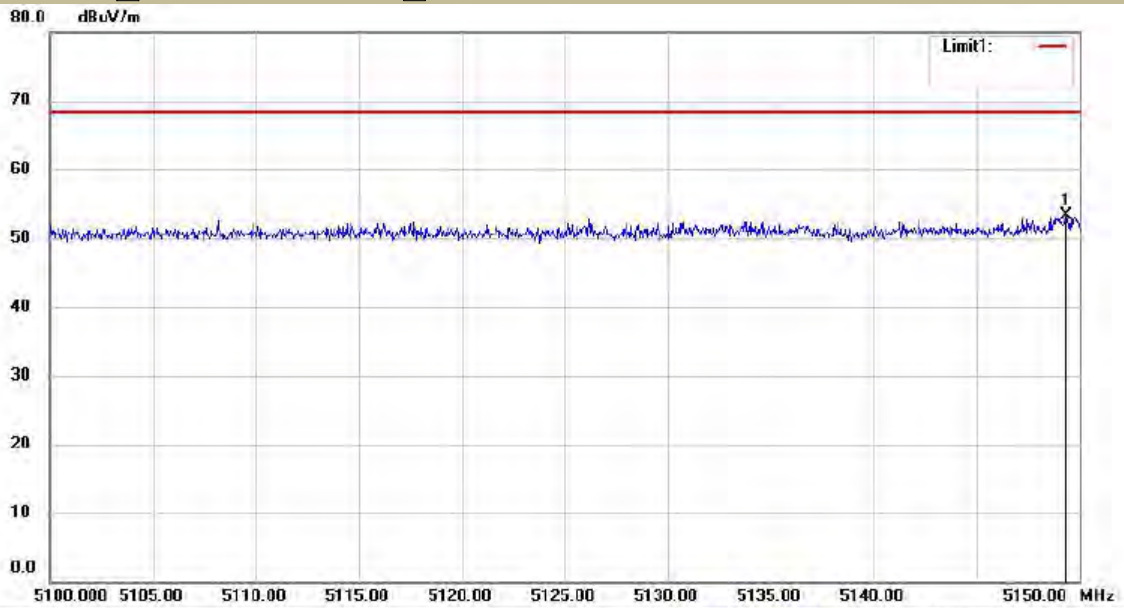
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

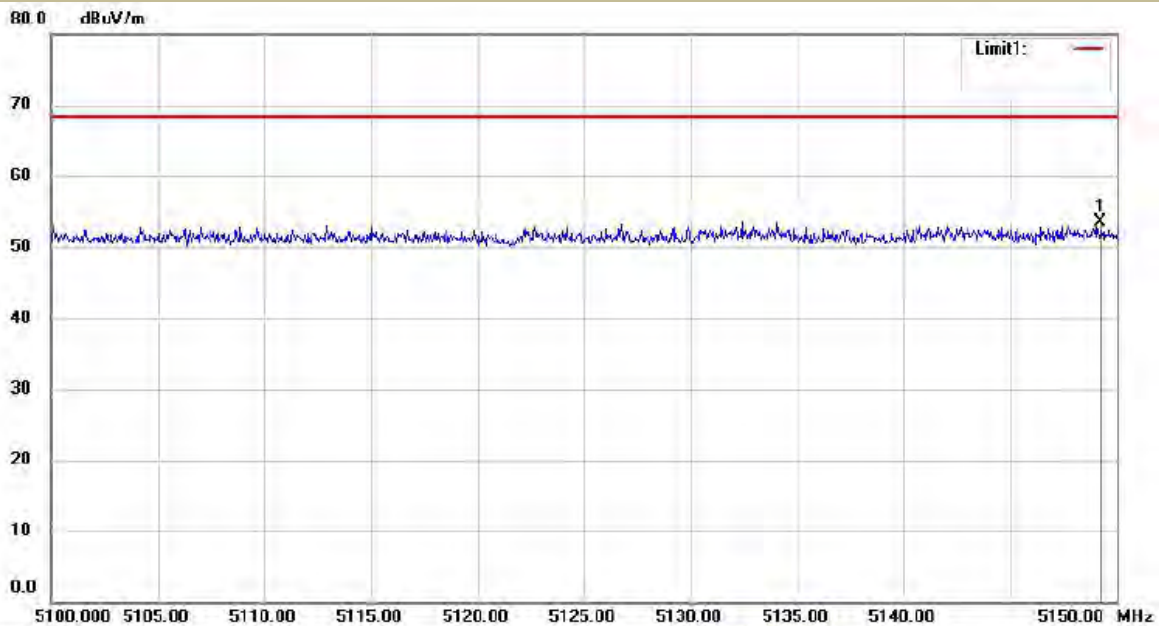
d is the measurement distance in 3 meters

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11n(HT40) ☐ 802.11ac (VHT40)
☒ 5270 ☐ 5310 Ant.Pol H



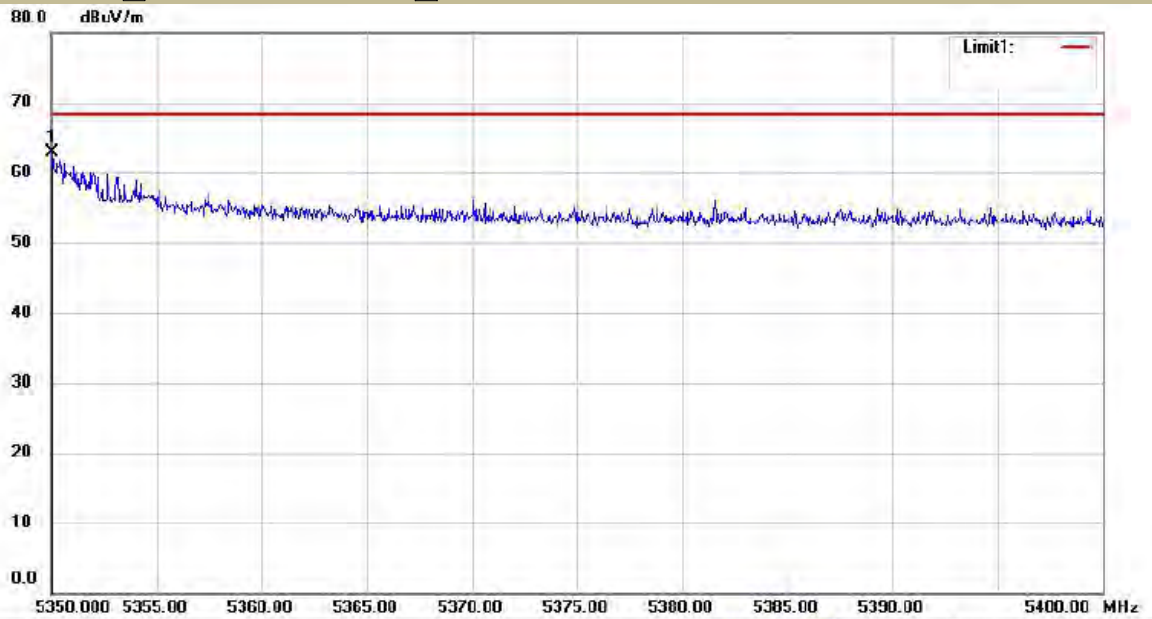
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11n(HT40) ☐ 802.11ac (VHT40)
☒ 5270 ☐ 5310 Ant.Pol V



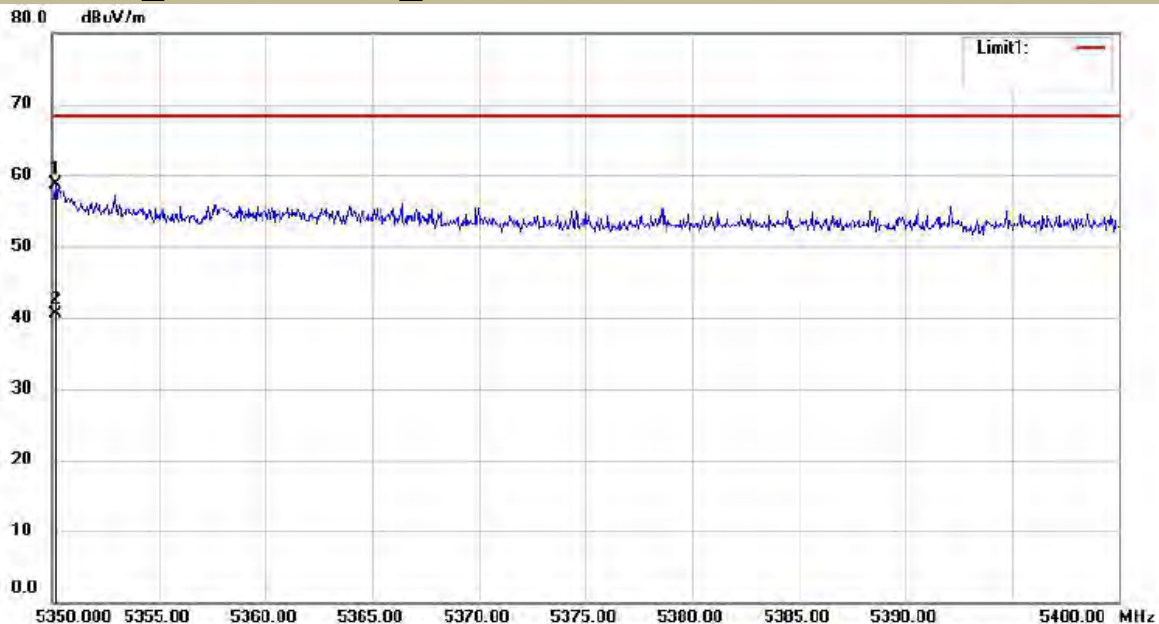
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☒ 802.11n(HT40) ☐ 802.11ac (VHT40)
☐ 5270 ☒ 5310 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☒ 802.11n(HT40) ☐ 802.11ac (VHT40)
☐ 5270 ☒ 5310 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac (VHT40) Frequency(MHz): 5270

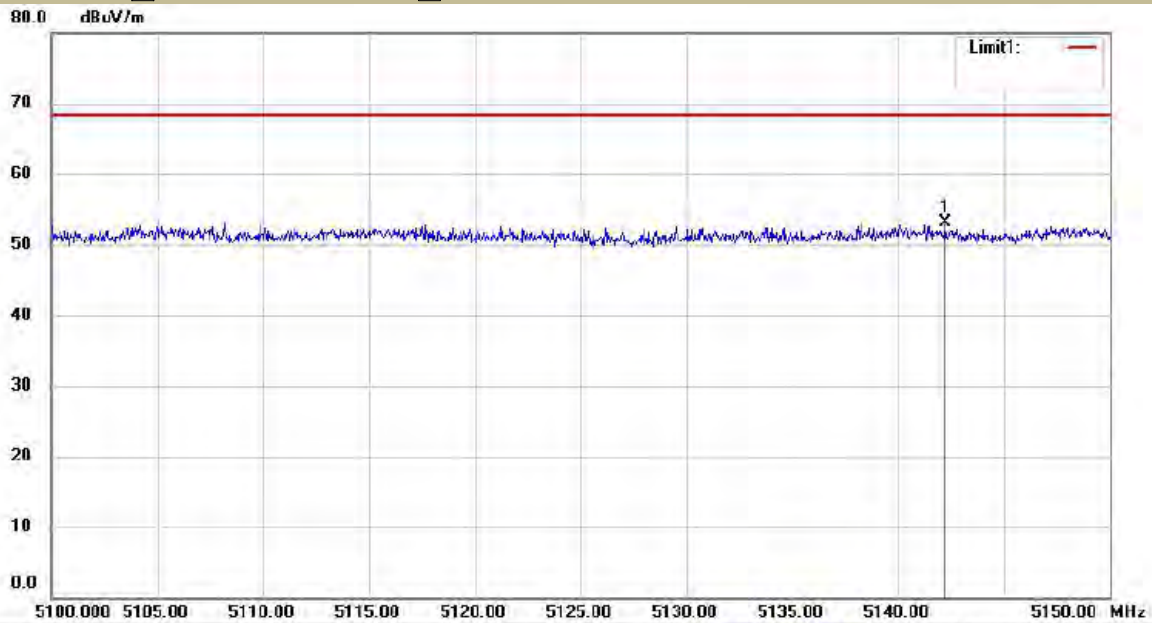
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5142.20	H	53.09	-42.14	-27	Pass
5149.25	V	53.47	-41.76	-27	Pass

Test mode: 802.11ac (VHT40) Frequency(MHz): 5310

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.15	V	59.16	-36.07	-27	Pass
5351.25	H	61.00	-34.23	-27	Pass

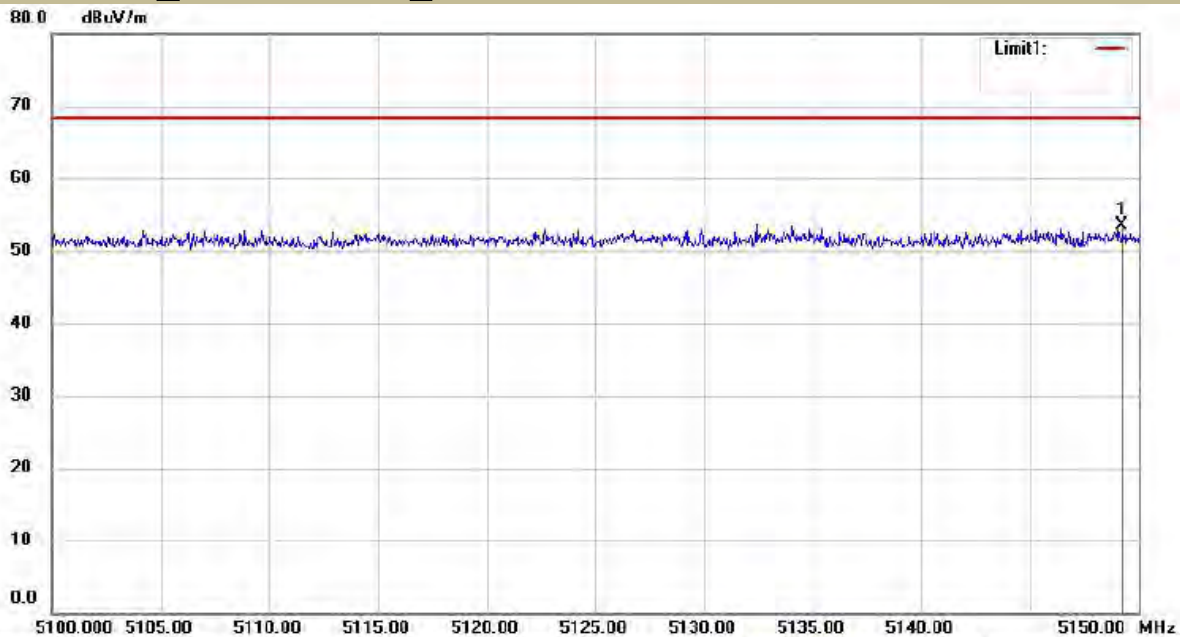
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

U-NII -2A
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☒ 5270 ☐ 5310 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2A
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☒ 5270 ☐ 5310 Ant.Pol V

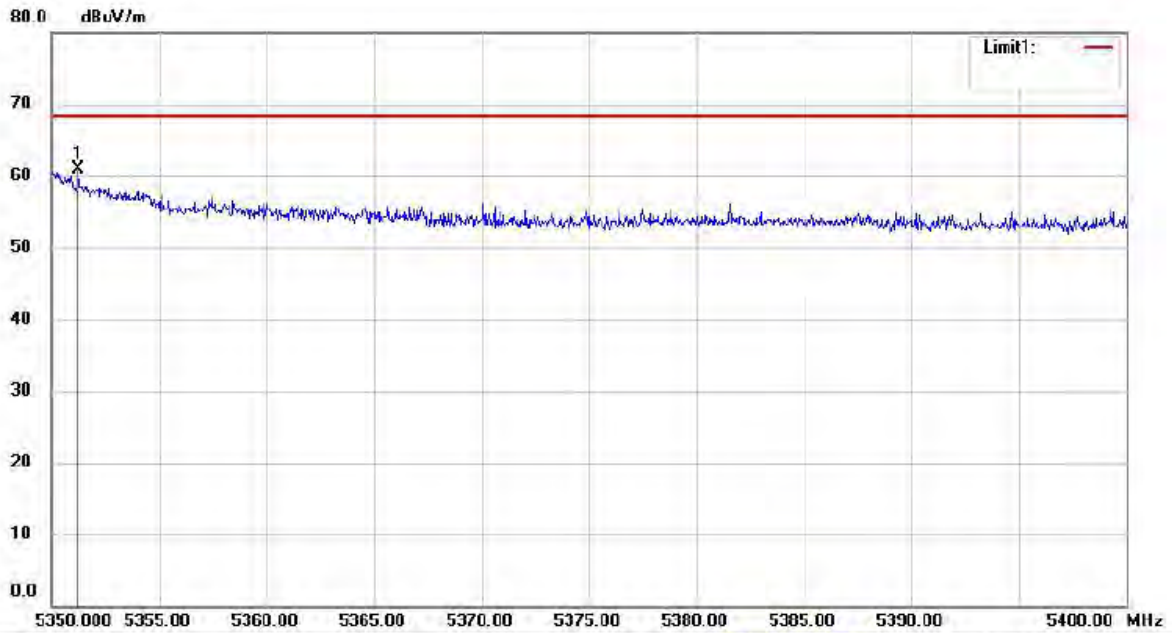


Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2A

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

☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☐ 5270 ☒ 5310 Ant.Pol H

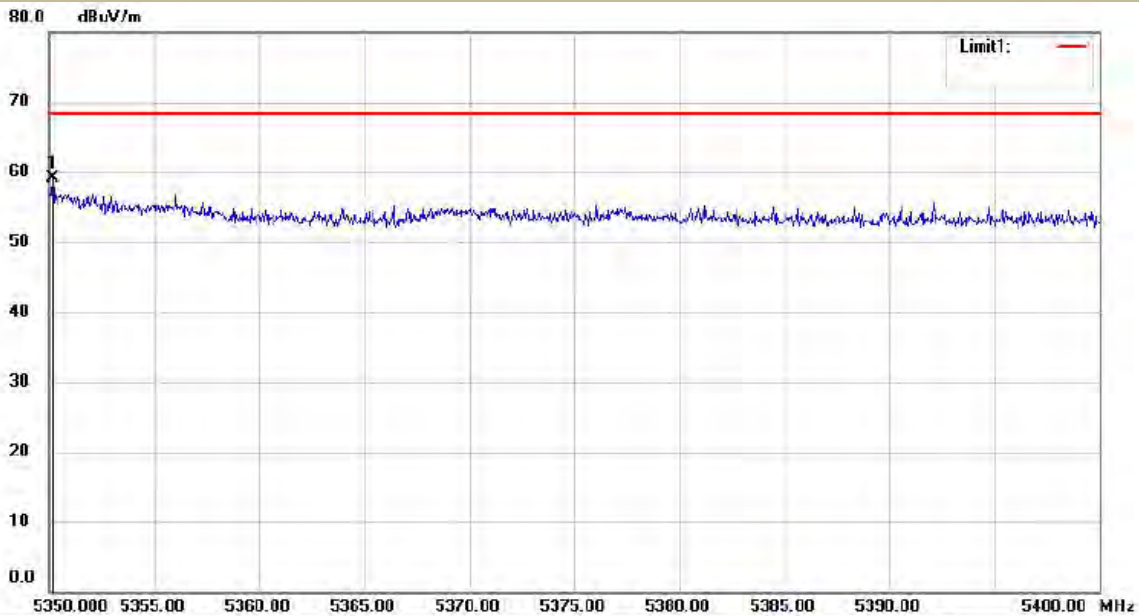


Site: 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2A

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

☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☐ 5270 ☒ 5310 Ant.Pol V



Site: 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac (VHT80) Frequency(MHz): 5290

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5138.10	H	53.97	-41.26	-27	Pass
5146.00	V	53.43	-41.80	-27	Pass

Test mode: 802.11ac (VHT80) Frequency(MHz): 5290

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5350.70	V	58.14	-37.09	-27	Pass
5355.25	H	56.07	-39.16	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

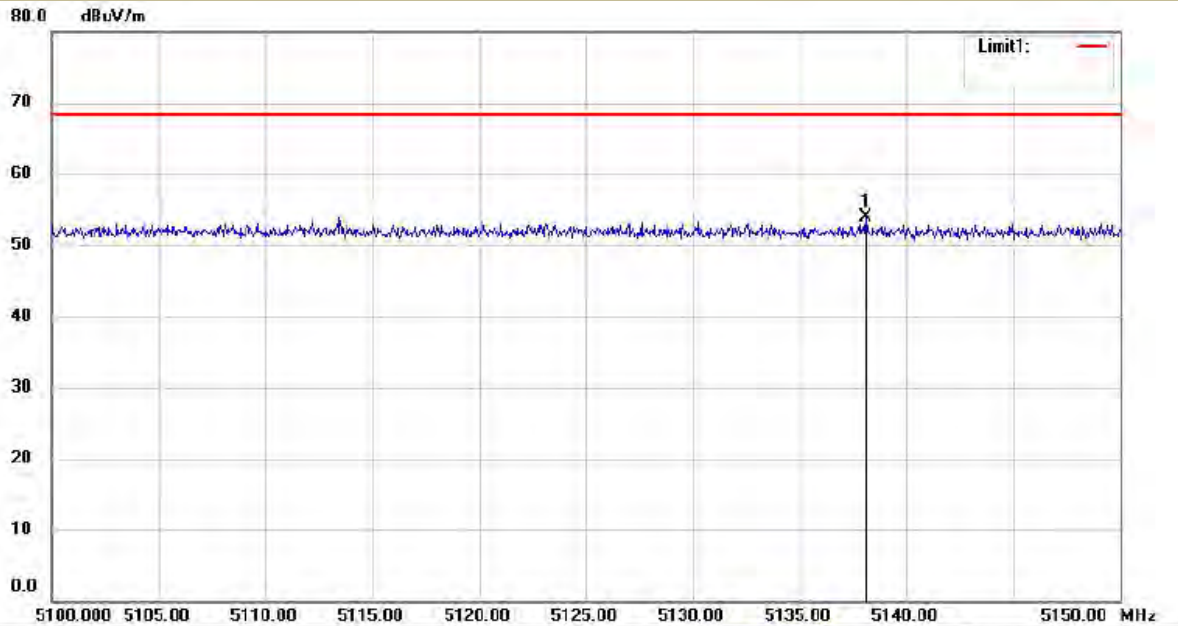
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

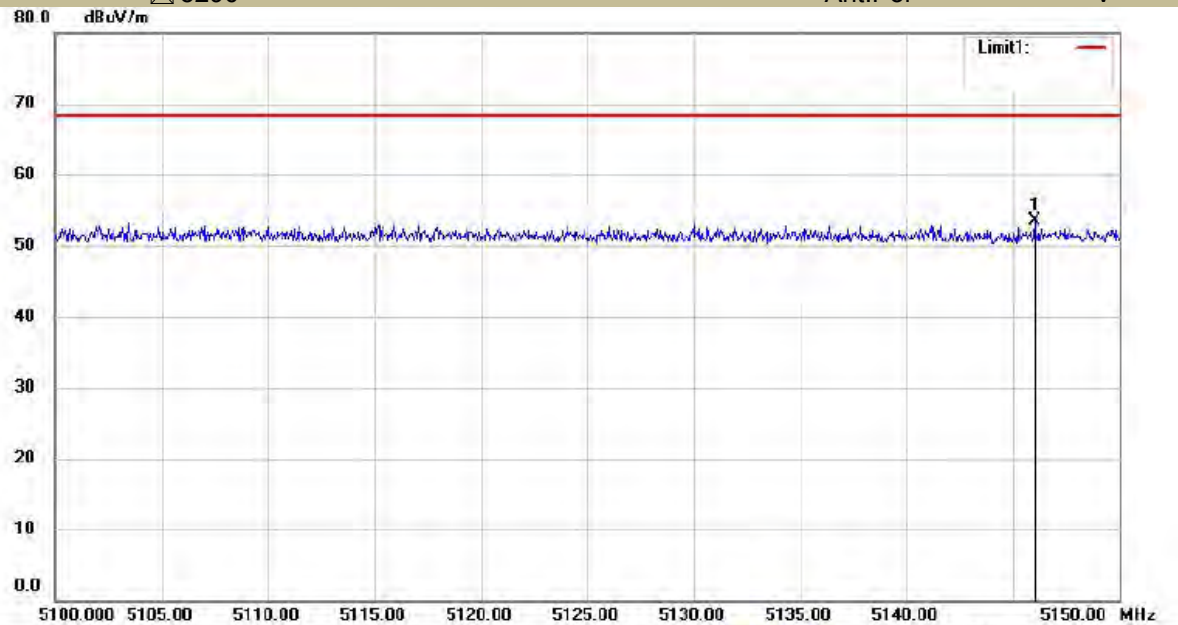
d is the measurement distance in 3 meters

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11ac (VHT80)
☒ 5290 Ant.Pol H



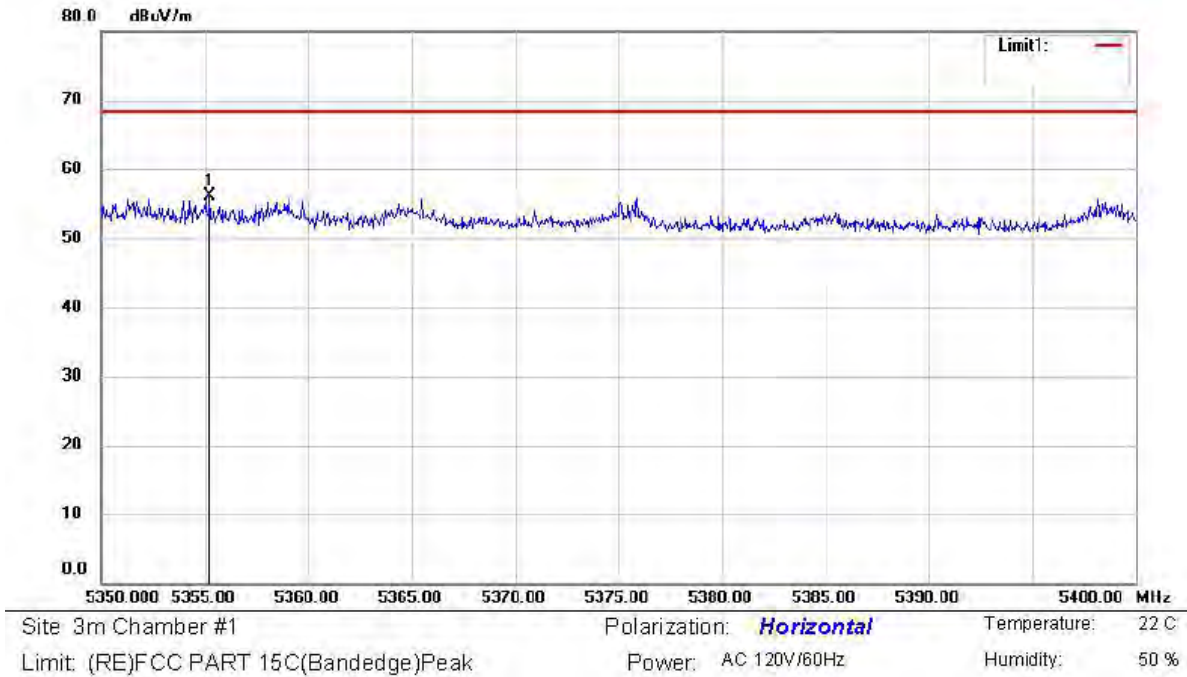
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11ac (VHT80)
☒ 5290 Ant.Pol V

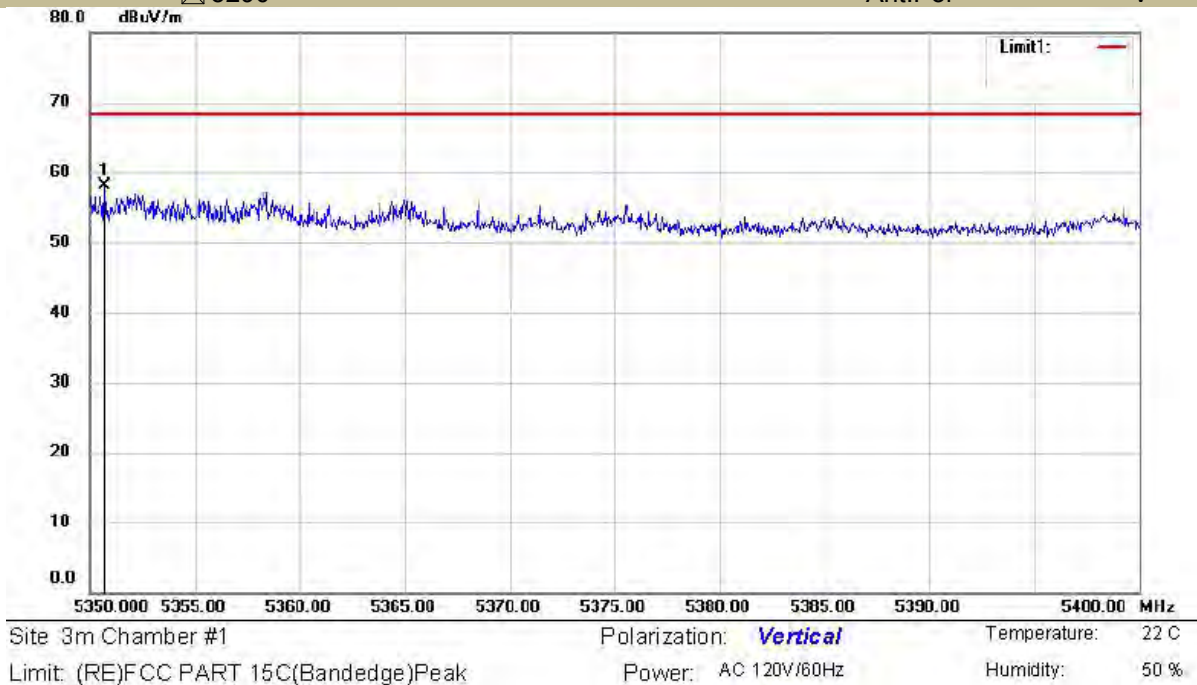


Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☒ 802.11ac (VHT80)
☒ 5290 Ant.Pol H



Test Model U-NII -2A
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☒ 802.11ac (VHT80)
☒ 5290 Ant.Pol V



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

Test mode: 802.11a Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7816.18	V	60.19	-35.04	-27	-8.04
11000.00	V	59.04	-36.19	-27	-9.19
16500.00	V	53.91	-41.32	-27	-14.32
7816.18	H	58.37	-36.86	-27	-9.86
11000.00	H	57.56	-37.67	-27	-10.67
16500.00	H	55.22	-40.01	-27	-13.01

Test mode: 802.11a Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7768.33	V	59.86	-35.37	-27	-8.37
11160.00	V	58.76	-36.46	-27	-9.46
16740.00	V	54.00	-41.23	-27	-14.23
7768.33	H	61.13	-34.10	-27	-7.10
11160.00	H	58.57	-36.65	-27	-9.65
16740.00	H	58.38	-36.85	-27	-9.85

Test mode: 802.11a Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7669.36	V	57.54	-37.69	-27	-10.69
11400.00	V	58.89	-36.34	-27	-9.34
17100.00	V	56.29	-38.93	-27	-11.93
7669.36	H	61.96	-33.26	-27	-6.26
11400.00	H	61.25	-33.98	-27	-6.98
17100.00	H	51.52	-43.71	-27	-16.71

Test mode: 802.11 n (HT20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7751.14	V	59.47	-35.76	-27	-8.76
11000.00	V	58.26	-36.97	-27	-9.97
16500.00	V	58.39	-36.83	-27	-9.83
7751.14	H	61.64	-33.59	-27	-6.59
11000.00	H	58.52	-36.70	-27	-9.70
16500.00	H	53.85	-41.38	-27	-14.38

Test mode: 802.11 n (HT20) Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7701.32	V	62.25	-32.98	-27	-5.98
11160.00	V	60.34	-34.89	-27	-7.89
16740.00	V	60.2	-35.03	-27	-8.03
7701.32	H	62.26	-32.97	-27	-5.97

11160.00	H	57.99	-37.24	-27	-10.24
16740.00	H	57.6	-37.63	-27	-10.63

Test mode: 802.11 n (HT20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7832.24	V	62.69	-32.54	-27	-5.54
11400.00	V	57.29	-37.94	-27	-10.94
17100.00	V	56.81	-38.42	-27	-11.42
7832.24	H	61.45	-33.78	-27	-6.78
11400.00	H	60.55	-34.68	-27	-7.68
17100.00	H	59.9	-35.33	-27	-8.33

Test mode: 802.11ac (VHT20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7564.55	V	61.31	-33.92	-27	-6.92
11000.00	V	63.81	-31.42	-27	-4.42
16500.00	V	58.96	-36.27	-27	-9.27
7564.55	H	61.42	-33.81	-27	-6.81
11000.00	H	62.18	-33.05	-27	-6.05
16500.00	H	61.15	-34.08	-27	-7.08

Test mode: 802.11ac (VHT20) Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7774.48	V	62.12	-33.11	-27	-6.11
11160.00	V	58.8	-36.43	-27	-9.43
16740.00	V	60.46	-34.77	-27	-7.77
7774.48	H	62.92	-32.31	-27	-5.31
11160.00	H	60.57	-34.66	-27	-7.66
16740.00	H	55.01	-40.22	-27	-13.22

Test mode: 802.11ac (VHT20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7620.83	V	60.47	-34.76	-27	-7.76
11400.00	V	58.30	-36.93	-27	-9.93
17100.00	V	54.46	-40.77	-27	-13.77
7620.83	H	60.71	-34.52	-27	-7.52
11400.00	H	57.80	-37.43	-27	-10.43
17100.00	H	59.37	-35.85	-27	-8.85

Test mode: 802.11n40 Frequency(MHz): 5510

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7555.66	V	60.01	-35.21	-27	-8.21
11020.00	V	62.11	-33.12	-27	-6.12
16530.00	V	56.77	-38.45	-27	-11.45

7555.66	H	59.50	-35.72	-27	-8.72
11020.00	H	54.95	-40.28	-27	-13.28
16530.00	H	54.14	-41.08	-27	-14.08

Test mode: 802.11n40 Frequency(MHz): 5550

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7737.59	V	63.02	-32.21	-27	-5.21
11100.00	V	60.72	-34.51	-27	-7.51
16650.00	V	59.46	-35.77	-27	-8.77
7737.59	H	60	-35.23	-27	-8.23
11100.00	H	57.26	-37.97	-27	-10.97
16650.00	H	61.69	-33.54	-27	-6.54

Test mode: 802.11n40 Frequency(MHz): 5710

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7766.42	V	58.52	-36.71	-27	-9.71
11420.00	V	60.60	-34.63	-27	-7.63
17130.00	V	57.02	-38.21	-27	-11.21
7766.42	H	57.90	-37.32	-27	-10.32
11420.00	H	57.57	-37.66	-27	-10.66
17130.00	H	55.79	-39.43	-27	-12.43

Test mode: 802.11ac (VHT40) Frequency(MHz): 5510

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7648.93	V	59.68	-35.55	-27	-8.55
11020.00	V	57.83	-37.40	-27	-10.40
16530.00	V	58.62	-36.61	-27	-9.61
7648.93	H	59.82	-35.41	-27	-8.41
11020.00	H	60.56	-34.67	-27	-7.67
16530.00	H	51.11	-44.12	-27	-17.12

Test mode: 802.11ac (VHT40) Frequency(MHz): 5550

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7632.62	V	59.82	-35.41	-27	-8.41
11100.00	V	61.23	-33.99	-27	-6.99
16650.00	V	55.39	-39.84	-27	-12.84
7632.62	H	62.35	-32.87	-27	-5.87
11100.00	H	59.27	-35.96	-27	-8.96
16650.00	H	56.06	-39.17	-27	-12.17

Test mode: 802.11ac (VHT40) Frequency(MHz): 5710

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7762.77	V	60.17	-35.06	-27	-8.06
11420.00	V	62.94	-32.29	-27	-5.29
17130.00	V	58.49	-36.74	-27	-9.74

7762.77	H	60.77	-34.46	-27	-7.46
11420.00	H	63.33	-31.9	-27	-4.9
17130.00	H	55.18	-40.05	-27	-13.05

Test mode: 802.11ac (VHT80) Frequency(MHz): 5530

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7788.61	V	58.60	-36.63	-27	-9.63
11060.00	V	62.59	-32.64	-27	-5.64
16590.00	V	54.35	-40.88	-27	-13.88
7788.61	H	60.16	-35.07	-27	-8.07
11060.00	H	57.95	-37.28	-27	-10.28
16590.00	H	54.78	-40.45	-27	-13.45

Test mode: 802.11ac (VHT80) Frequency(MHz): 5690

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7739.66	V	62.39	-32.84	-27	-5.84
11380.00	V	62.15	-33.08	-27	-6.08
17070.00	V	57.45	-37.78	-27	-10.78
7739.66	H	61.49	-33.74	-27	-6.74
11380.00	H	58.61	-36.62	-27	-9.62
17070.00	H	59.99	-35.24	-27	-8.24

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

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11a Frequency(MHz): 5500

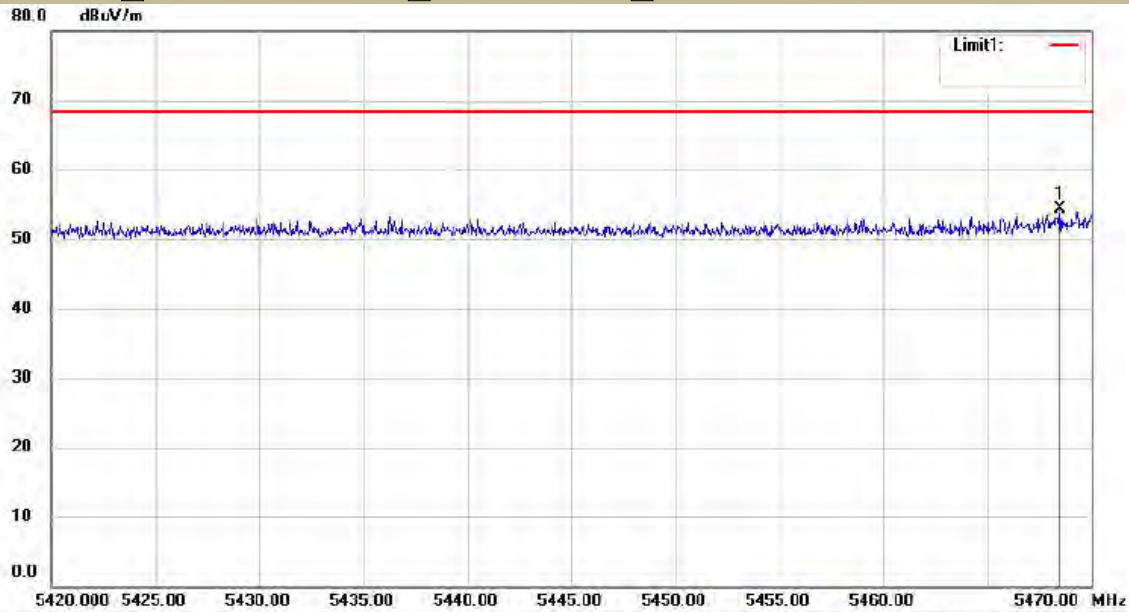
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5468.50	H	54.40	-40.83	-27	Pass
5469.75	V	53.29	-41.94	-27	Pass

Test mode: 802.11a Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.95	V	64.75	-30.48	-27	Pass
5725.05	H	65.59	-29.64	-27	Pass

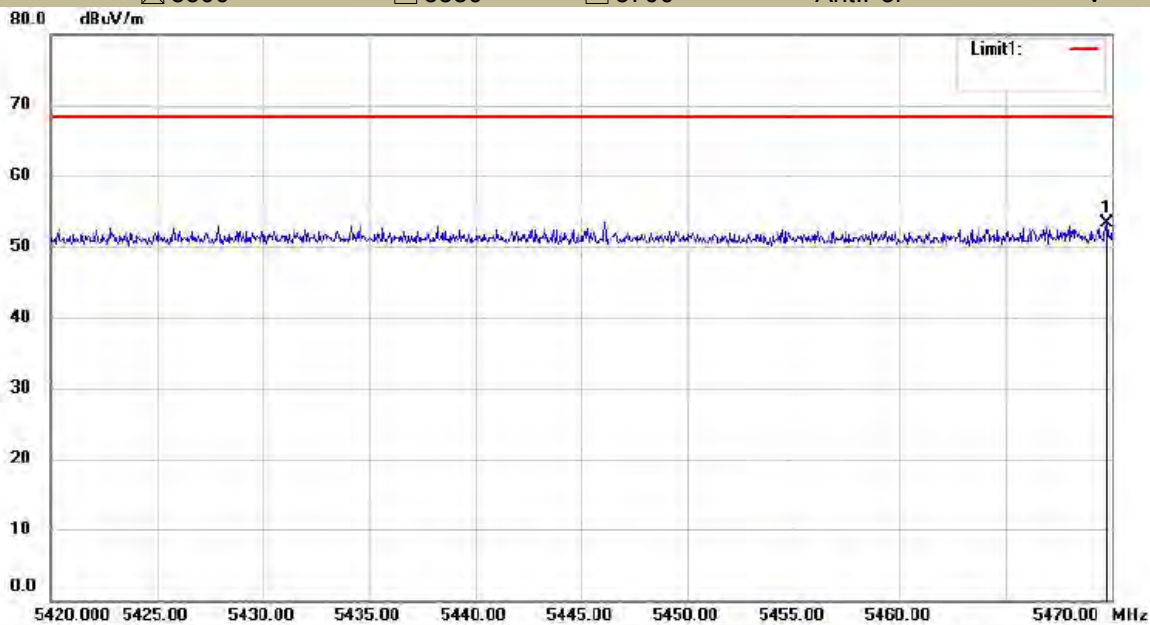
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 5500 ☒ 802.11a ☐ 5580 ☐ 802.11n(HT20) ☐ 802.11 ac (VHT20) Ant.Pol H



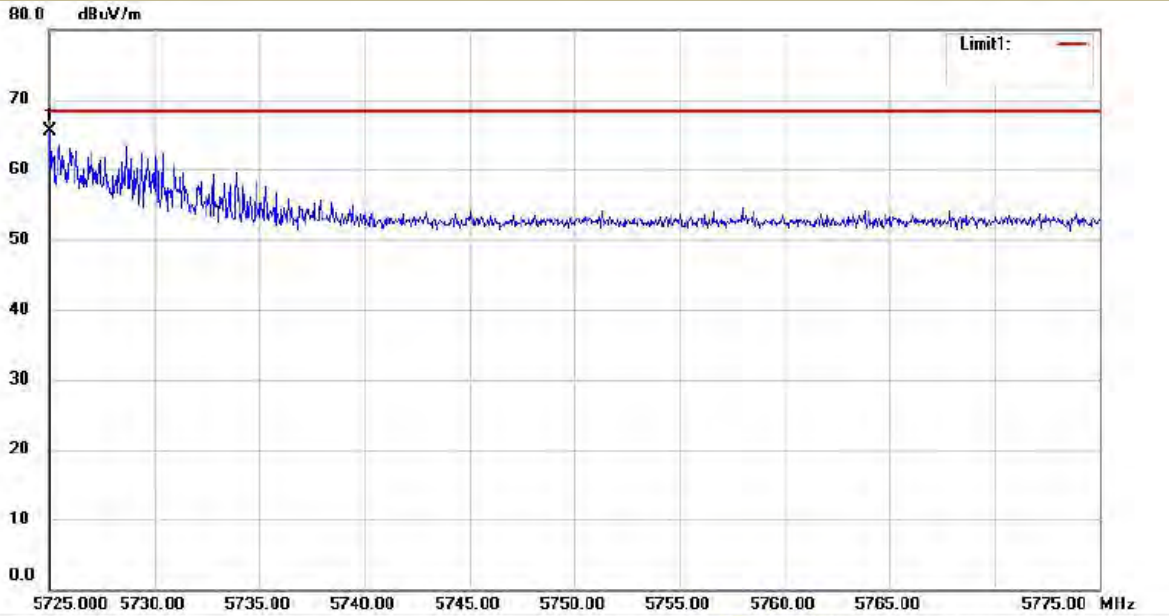
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 5500 ☒ 802.11a ☐ 5580 ☐ 802.11n(HT20) ☐ 802.11 ac (VHT20) Ant.Pol V



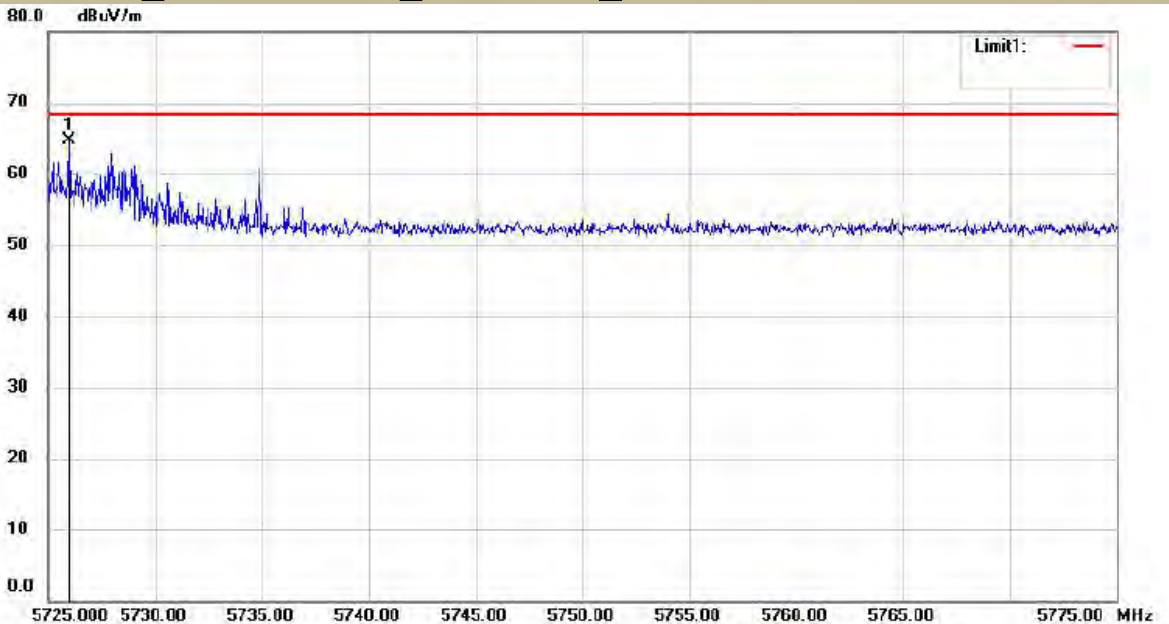
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5500 ☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5580 ☒ 5700 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5500 ☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5580 ☒ 5700 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n20 Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5468.85	H	53.40	-41.83	-27	Pass
5465.95	V	52.20	-43.03	-27	Pass

Test mode: 802.11n20 Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.15	V	57.36	-37.87	-27	Pass
5725.15	H	61.18	-34.05	-27	Pass

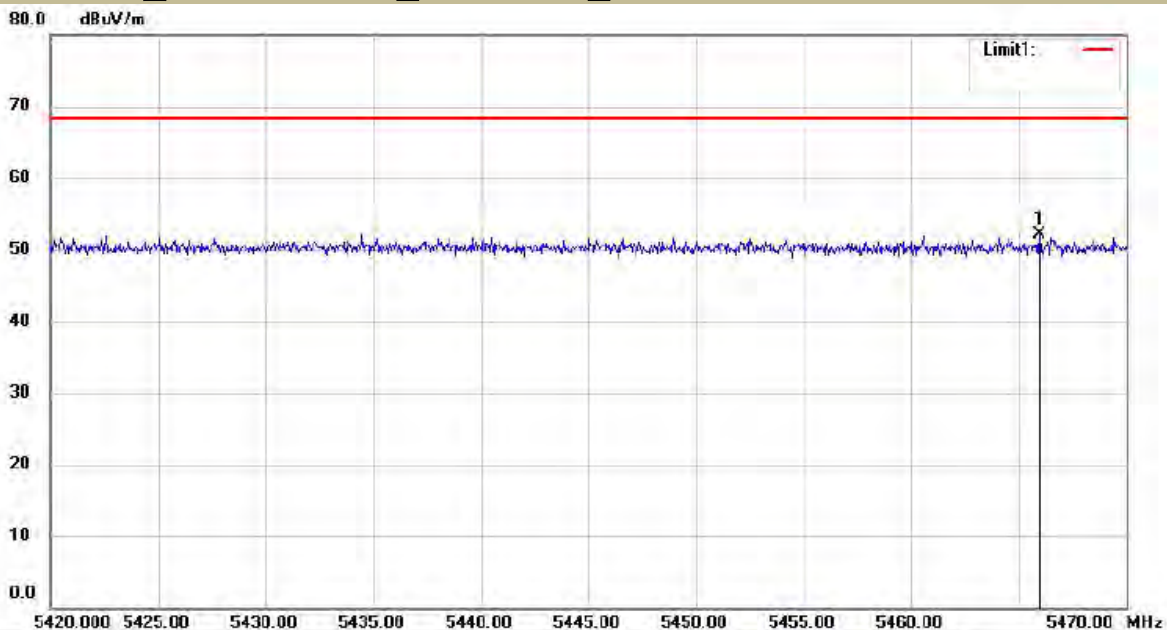
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol H



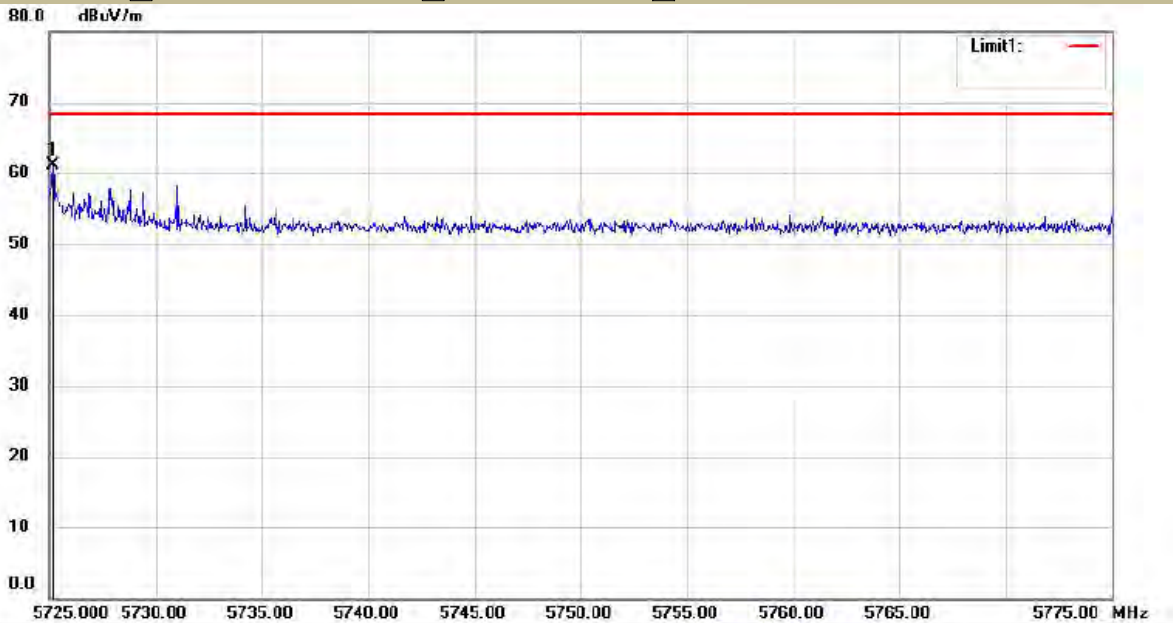
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol V



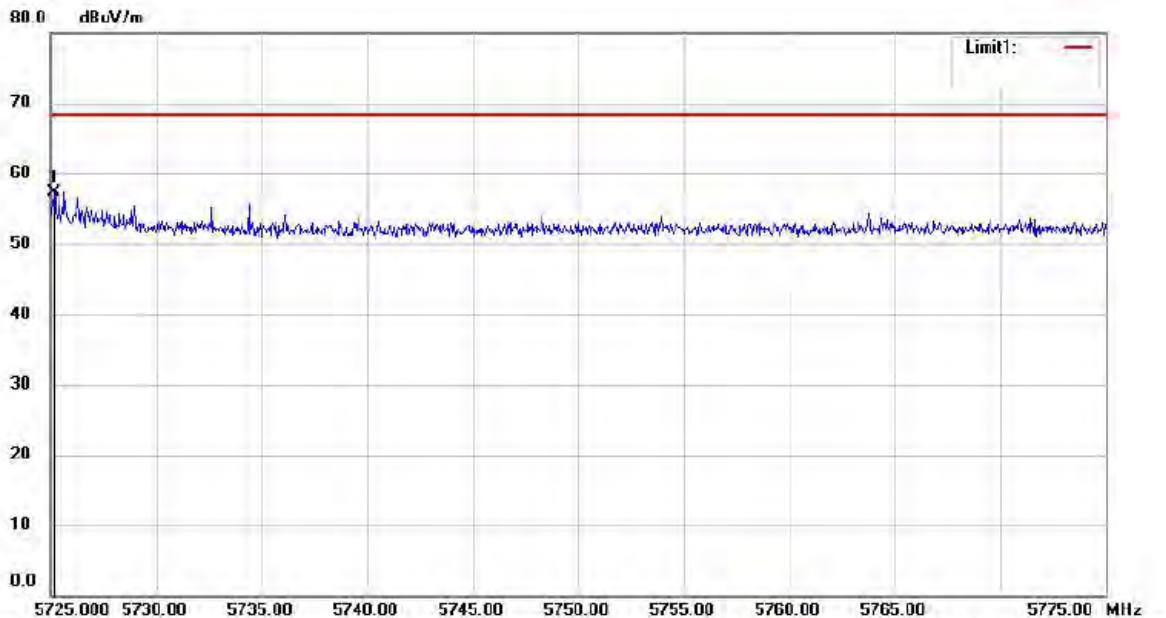
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5500 ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5580 ☒ 5700 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5500 ☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11 ac (VHT20)
☐ 5580 ☒ 5700 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11 ac (VHT20) Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5470.00	H	55.99	-39.24	-27	Pass
5469.75	V	54.79	-40.44	-27	Pass

Test mode: 802.11 ac (VHT20) Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.20	V	59.99	-35.24	-27	Pass
5725.05	H	64.09	-31.14	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

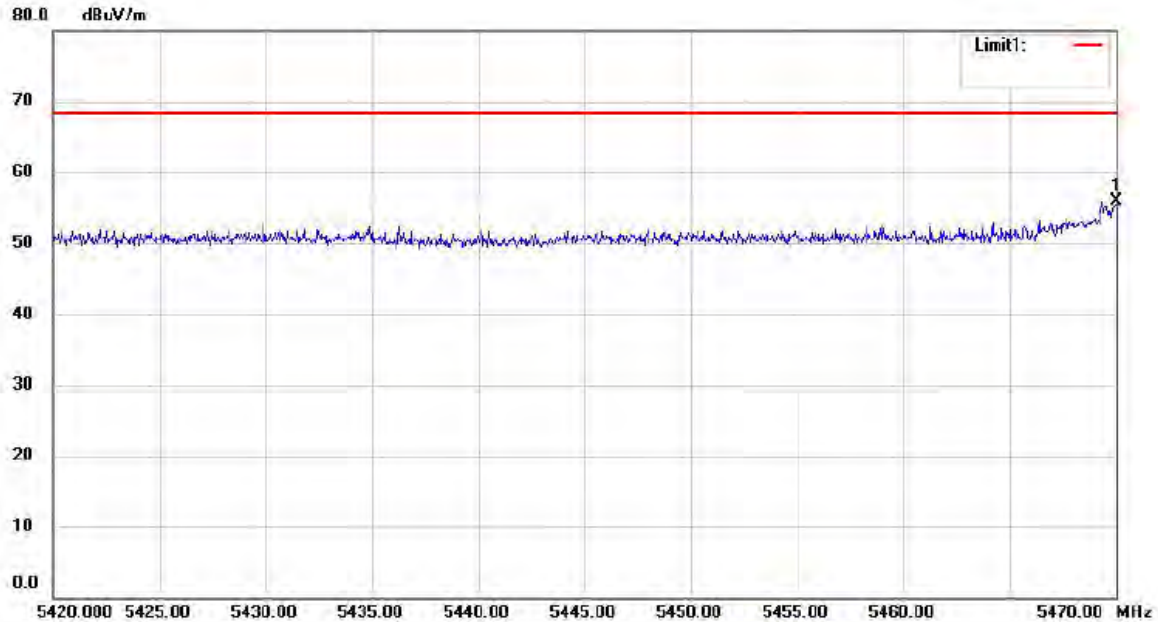
(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

(4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77

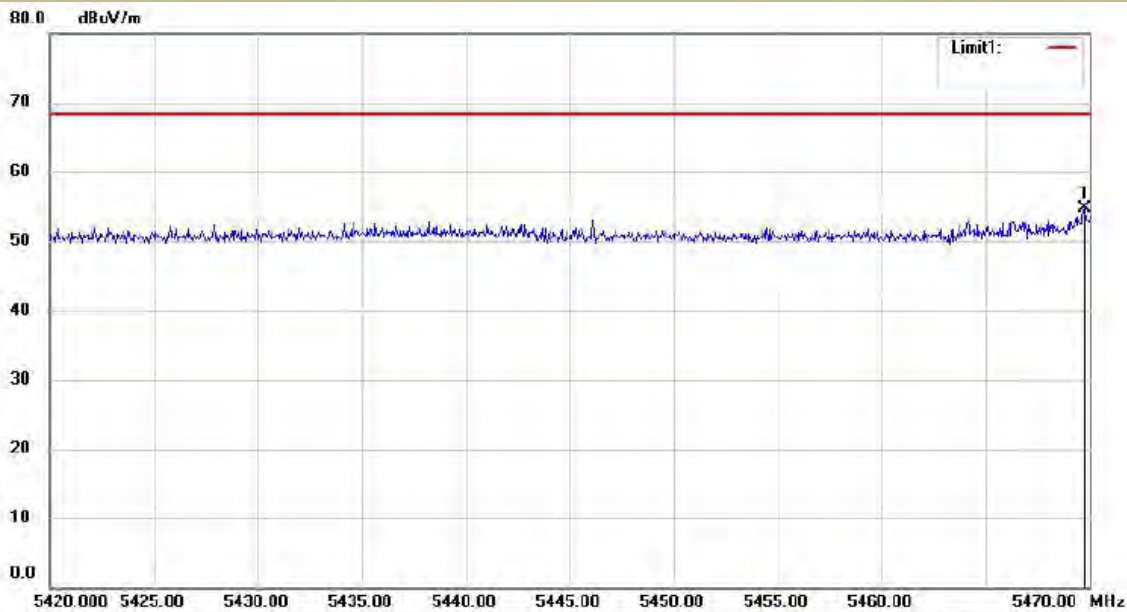
d is the measurement distance in 3 meters

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol H



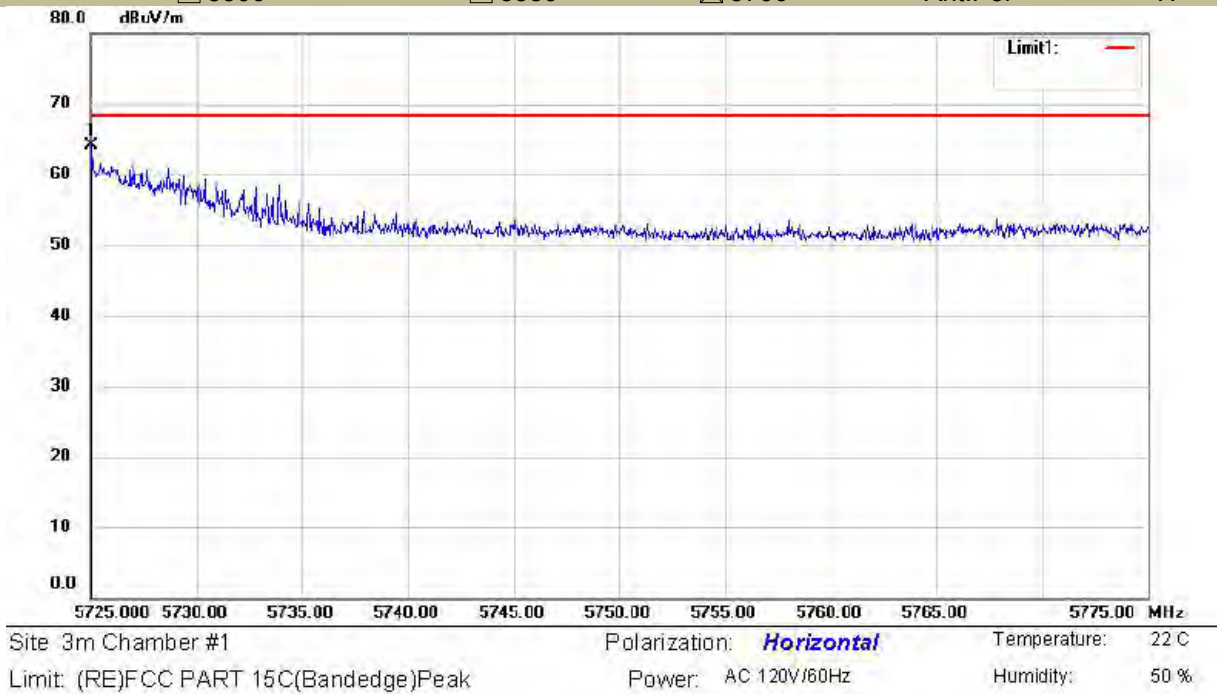
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☒ 5500 ☐ 5580 ☐ 5700 Ant.Pol V

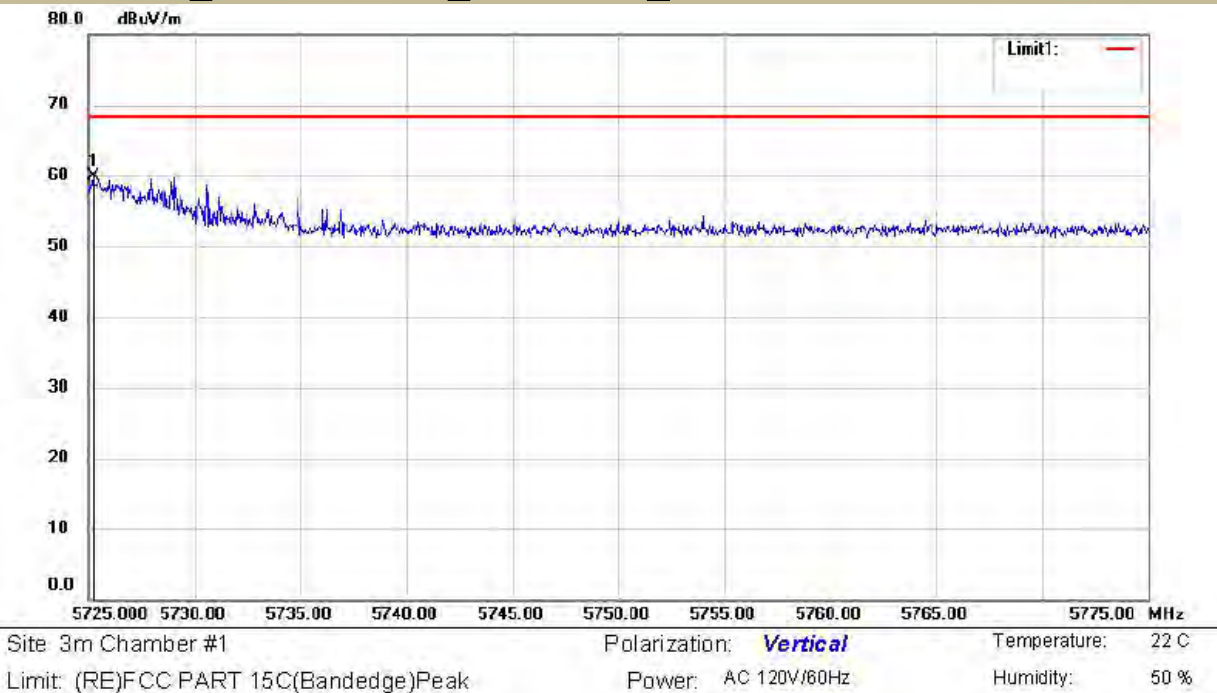


Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5500 ☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☐ 5580 ☒ 5700 Ant.Pol H



Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 5500 ☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11 ac (VHT20)
☐ 5580 ☒ 5700 Ant.Pol V



● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11n40 Frequency(MHz): 5510

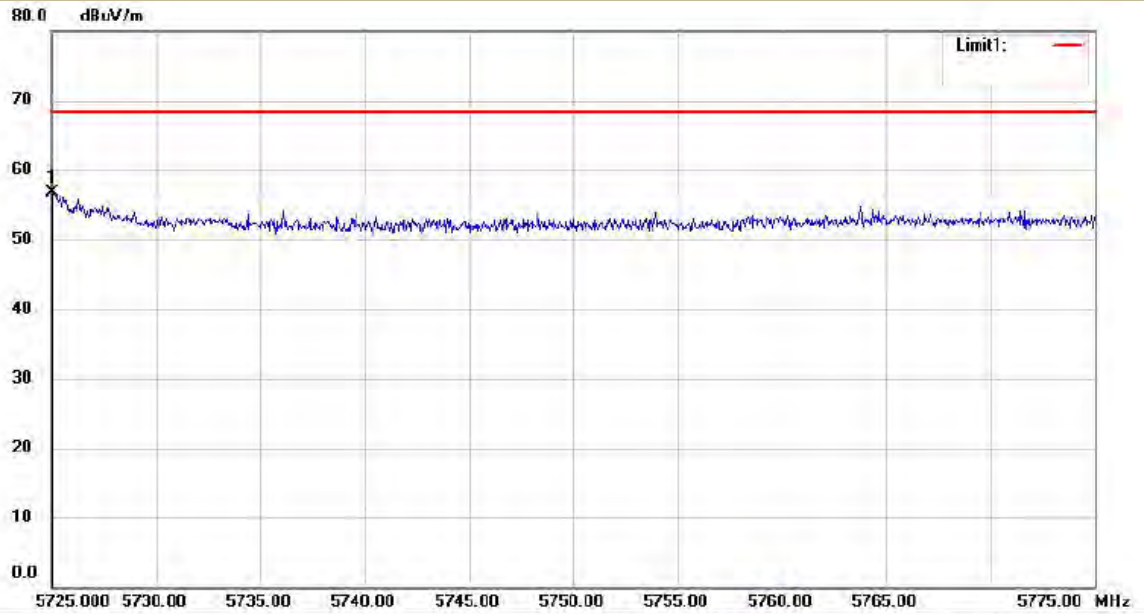
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5468.85	H	53.90	-41.33	-27	Pass
5465.95	V	52.70	-42.53	-27	Pass

Test mode: 802.11n40 Frequency(MHz): 5670

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.05	V	56.70	-38.53	-27	Pass
5725.15	H	60.18	-35.05	-27	Pass

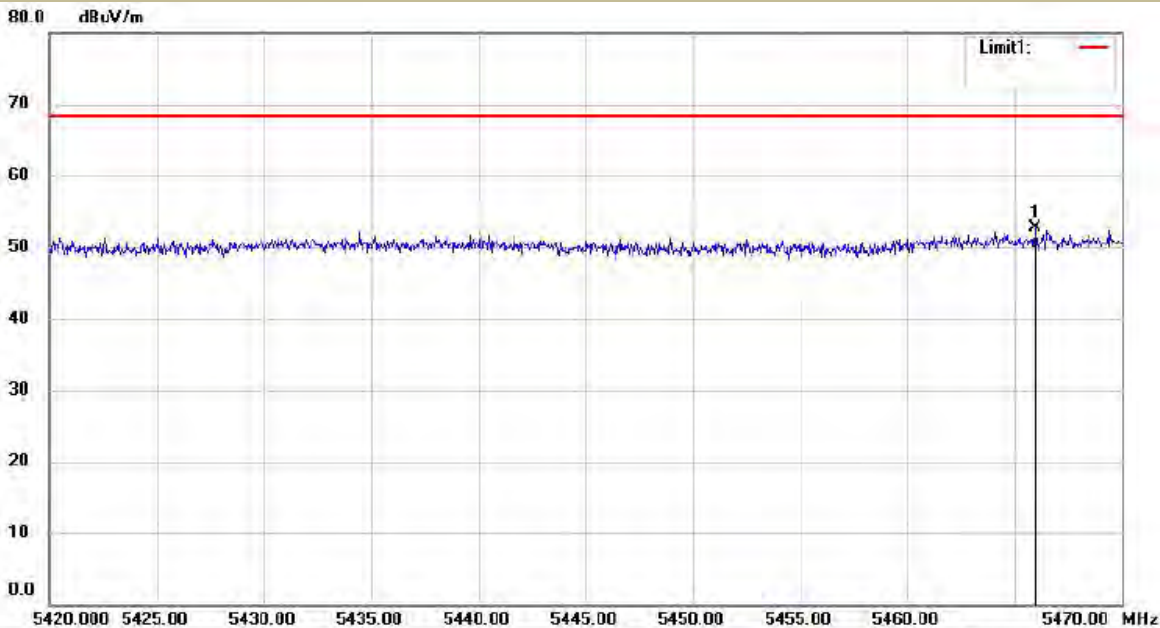
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11n(HT40) ☐ 802.11ac (VHT40)
☒ 5510 ☐ 5670 Ant.Pol H



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☒ 802.11n(HT40) ☐ 802.11ac (VHT40)
☒ 5510 ☐ 5670 Ant.Pol V



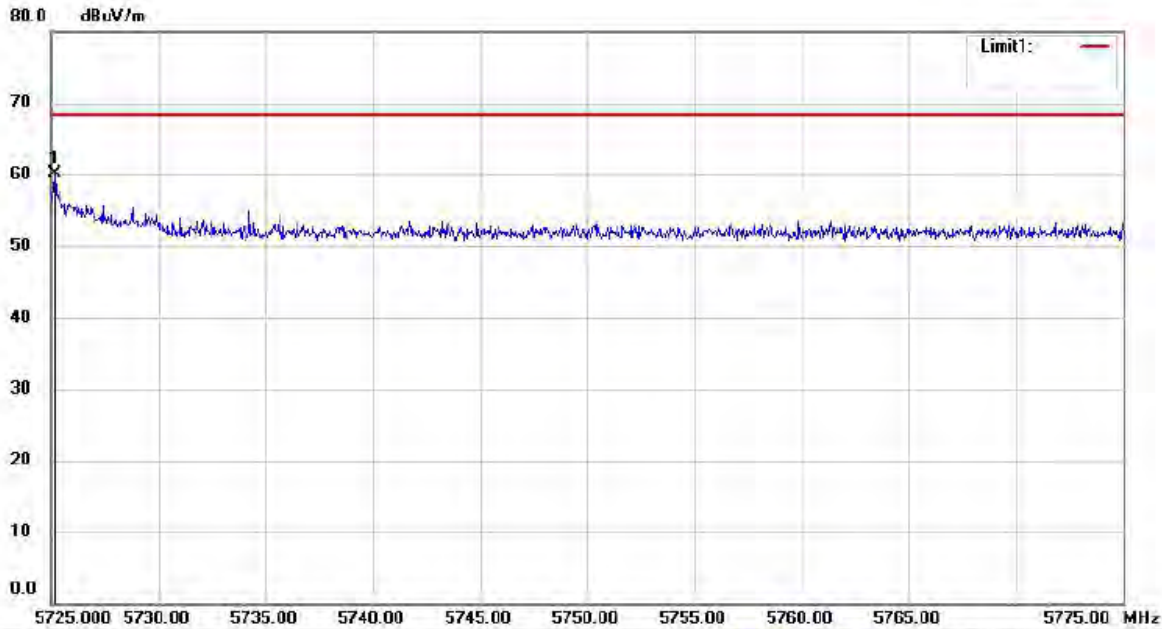
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2C

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

☒ 802.11n(HT40) ☐ 802.11ac (VHT40)

☐ 5510 ☒ 5670 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C

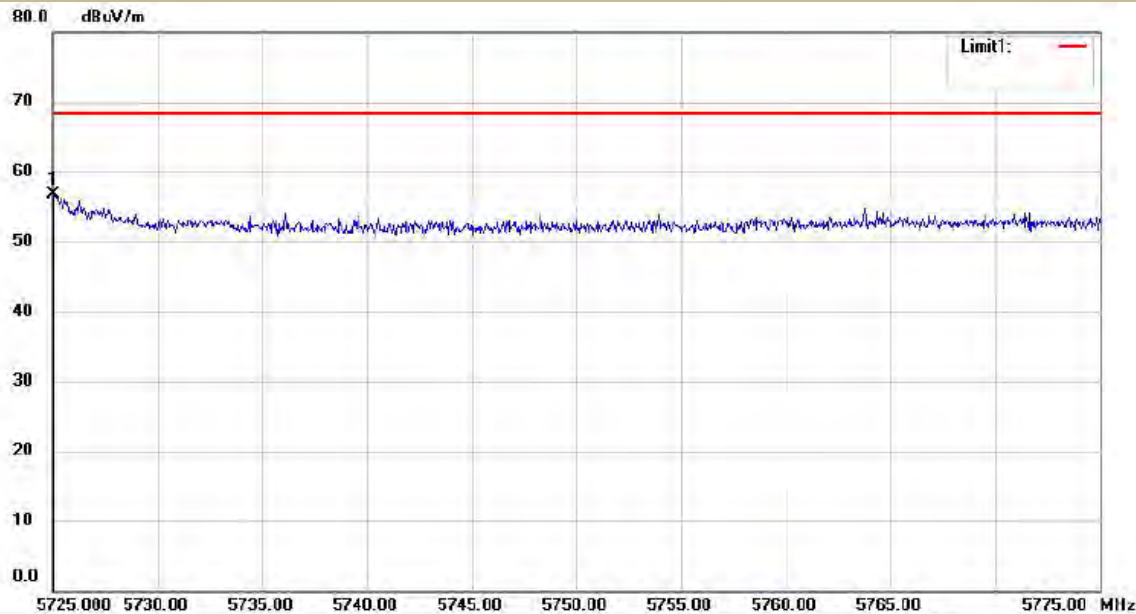
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2C

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

☒ 802.11n(HT40) ☐ 802.11ac (VHT40)

☐ 5510 ☒ 5670 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C

Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test mode: 802.11ac (VHT40) Frequency(MHz): 5510

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5468.85	H	53.40	-41.83	-27	Pass
5465.95	V	52.20	-43.03	-27	Pass

Test mode: 802.11ac (VHT40) Frequency(MHz): 5670

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.65	V	56.25	-38.98	-27	Pass
5725.15	H	59.18	-36.05	-27	Pass

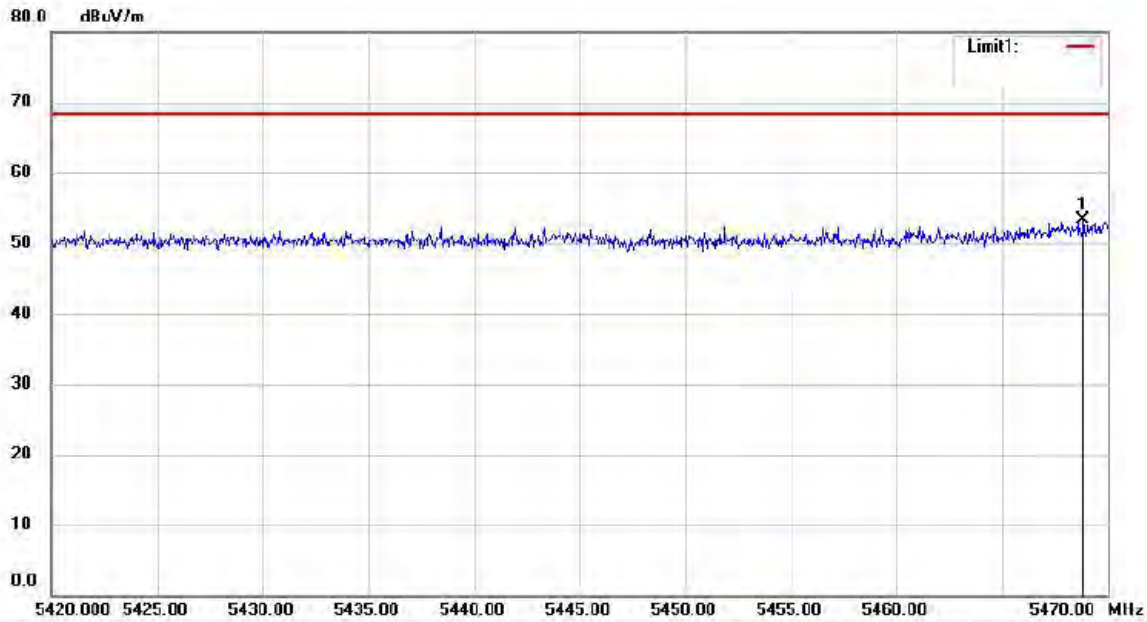
Note: (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).

(2) Emission Level= Reading Level+Correct Factor +Cable Loss.

(3) Correct Factor= Ant_F + Cab_L - Preamp

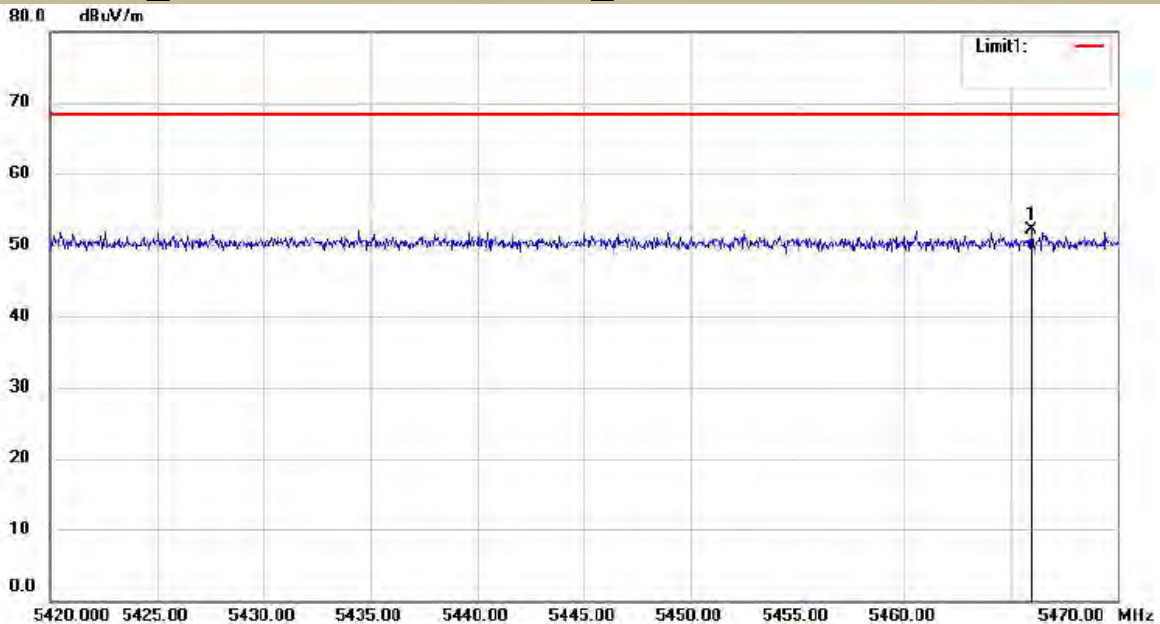
(4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

U-NII -2C
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☒ 5510 ☐ 5670 Ant.Pol H



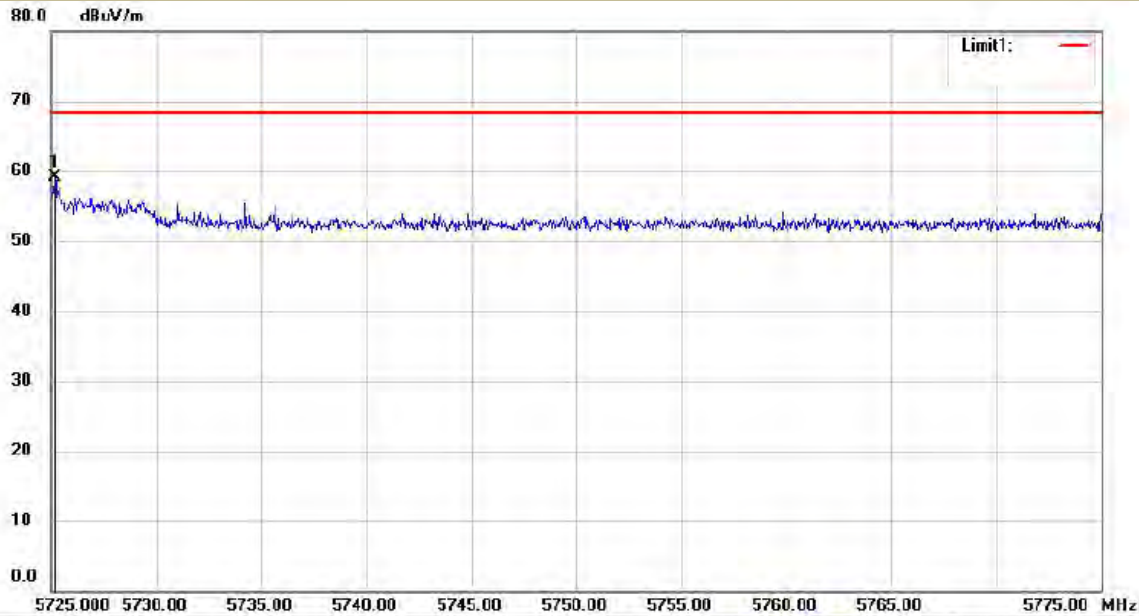
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -2C
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☒ 5510 ☐ 5670 Ant.Pol V



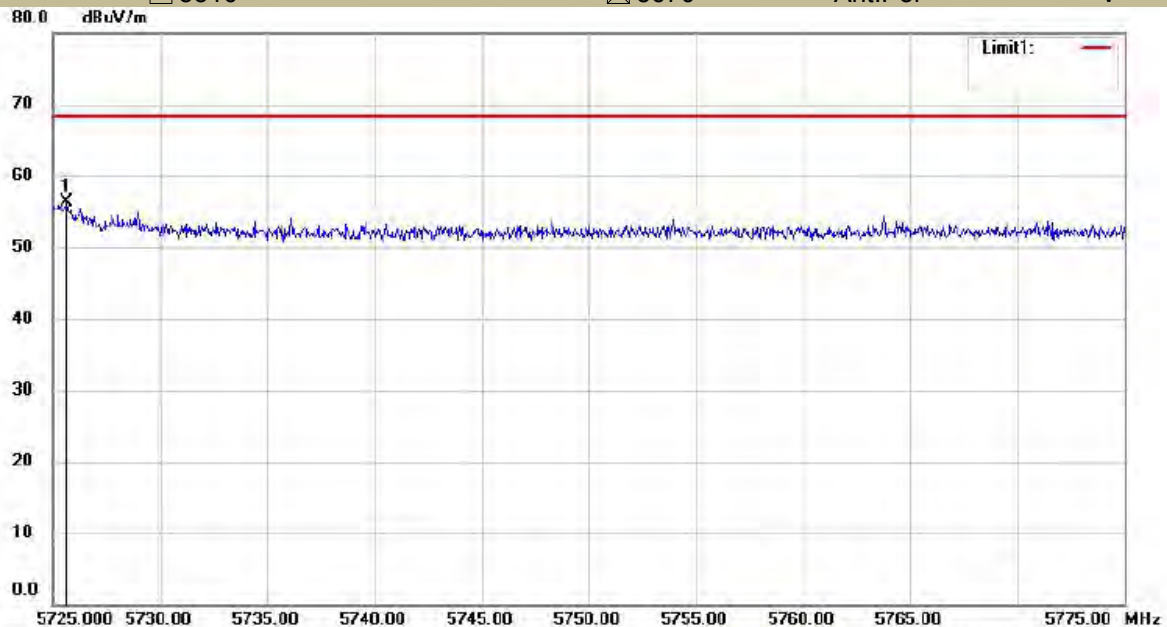
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☐ 5510 ☒ 5670 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
☐ 802.11n(HT40) ☒ 802.11ac (VHT40)
☐ 5510 ☒ 5670 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C(Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac (VHT80) Frequency(MHz): 5530

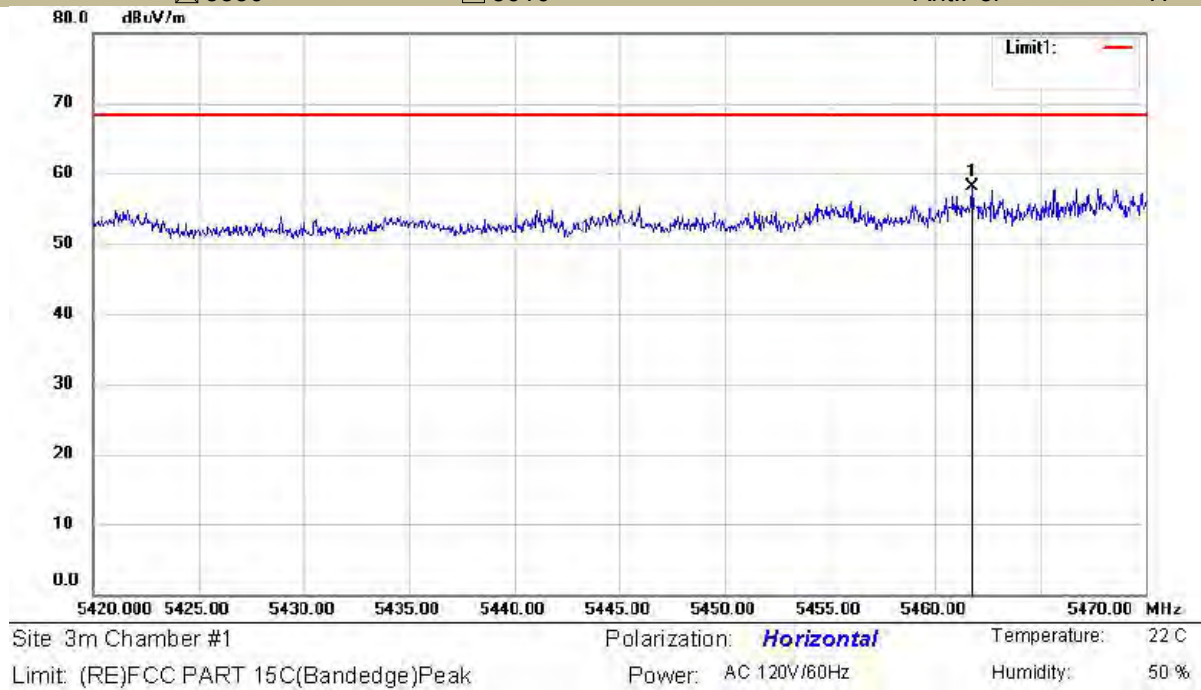
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5461.75	H	58.20	-37.03	-27	Pass
5469.30	V	61.19	-34.04	-27	Pass

Test mode: 802.11ac (VHT80) Frequency(MHz): 5610

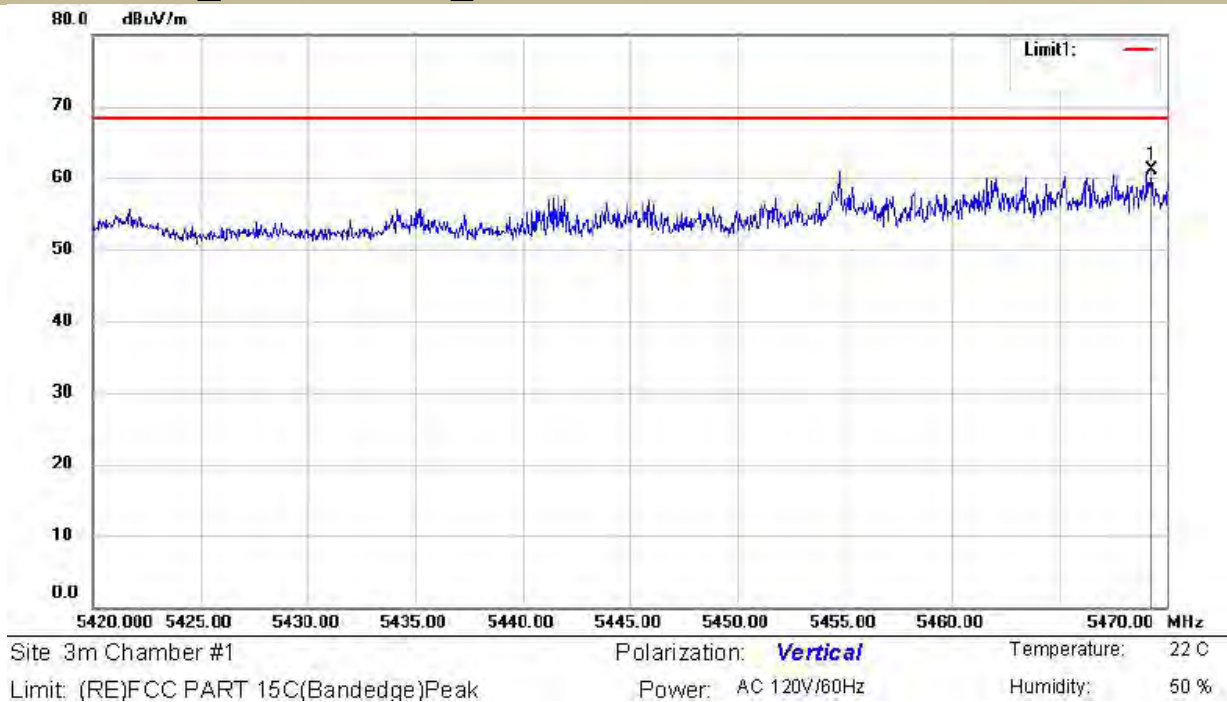
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5726.85	V	54.53	-40.70	-27	Pass
5765.10	H	56.45	-38.78	-27	Pass

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

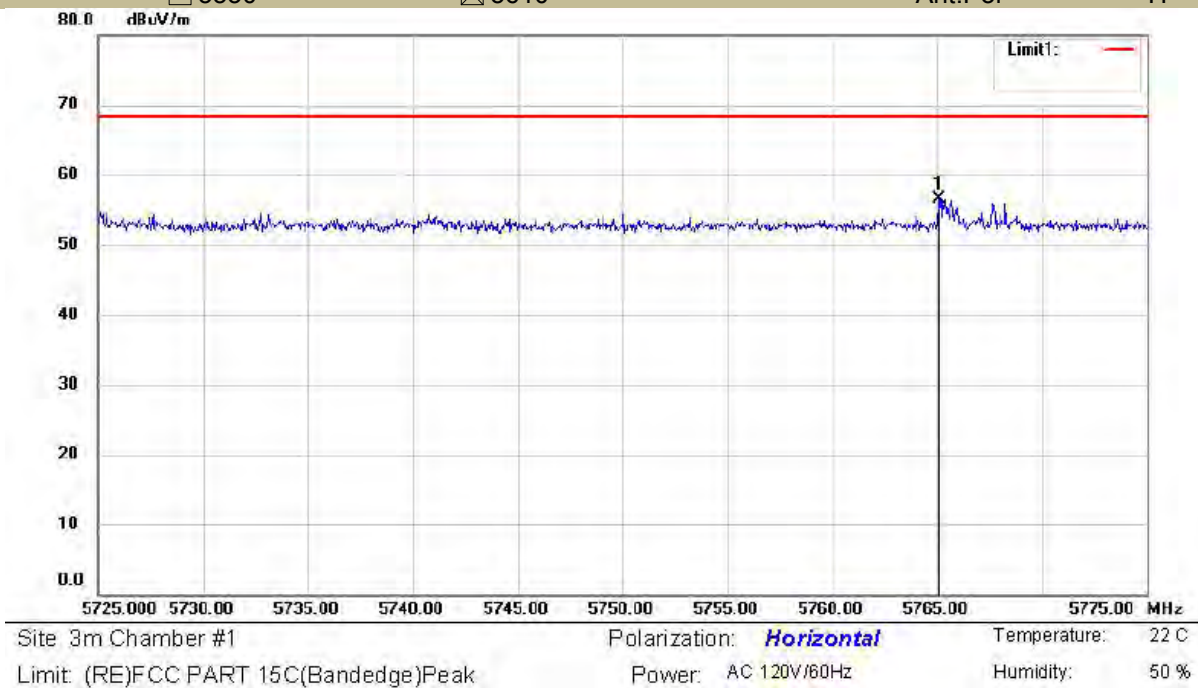
U-NII -2C
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
802.11ac (VHT80)
☒ 5530 ☐ 5610 Ant.Pol H



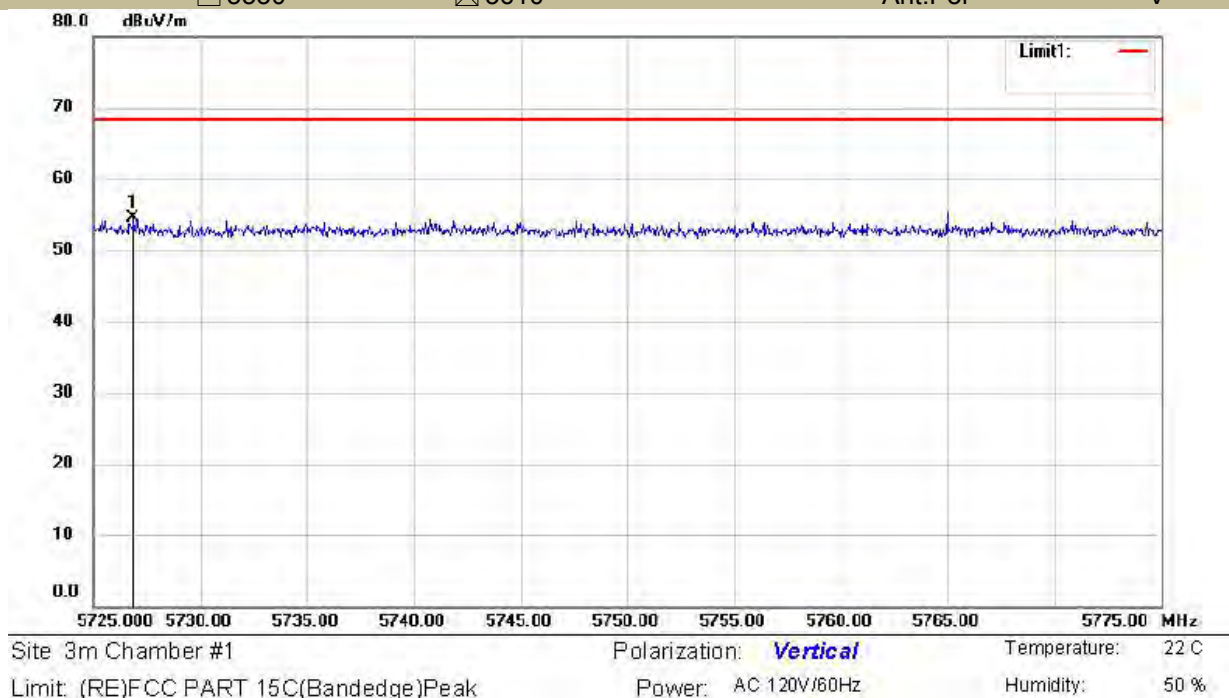
U-NII -2C
Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)
802.11ac (VHT80)
☒ 5530 ☐ 5610 Ant.Pol V



Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
802.11ac (VHT80)
☐ 5530 ☒ 5610 Ant.Pol H



Test Model U-NII -2C
Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)
802.11ac (VHT80)
☐ 5530 ☒ 5610 Ant.Pol V



■ ☒ For Undesirable radiated Spurious Emission in U-NII -3

● ☒ Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode: 802.11a Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7711.24	V	61.05	-34.18	-27	-7.18
11490.00	V	60.95	-34.28	-27	-7.28
17235.00	V	60.74	-34.49	-27	-7.49
7711.24	H	61.77	-33.46	-27	-6.46
11490.00	H	59.11	-36.12	-27	-9.12
17235.00	H	62.53	-32.7	-27	-5.70

Test mode: 802.11a Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7825.28	V	62.68	-32.55	-27	-5.55
11570.00	V	58.98	-36.25	-27	-9.25
17355.00	V	61.94	-33.29	-27	-6.29
7825.28	H	63.37	-31.86	-27	-4.86
11570.00	H	62.03	-33.2	-27	-6.2
17355.00	H	61.71	-33.52	-27	-6.52

Test mode: 802.11a Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7695.20	V	59.26	-35.96	-27	-8.96
11650.00	V	60.07	-35.16	-27	-8.16
17475.00	V	56.60	-38.63	-27	-11.63
7695.20	H	60.61	-34.62	-27	-7.62
11650.00	H	55.87	-39.36	-27	-12.36
17475.00	H	54.38	-40.85	-27	-13.85

Test mode: 802.11n20 Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7578.99	V	61.28	-33.95	-27	-6.95
11490.00	V	57.97	-37.26	-27	-10.26
17235.00	V	58.58	-36.65	-27	-9.65
7578.99	H	61.84	-33.39	-27	-6.39
11490.00	H	61.76	-33.47	-27	-6.47
17235.00	H	55.46	-39.77	-27	-12.77

Test mode: 802.11n20 Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7568.27	V	60.10	-35.13	-27	-8.13
11570.00	V	60.87	-34.36	-27	-7.36
17355.00	V	53.10	-42.13	-27	-15.13
7568.27	H	61.55	-33.68	-27	-6.68

11570.00	H	60.22	-35.00	-27	-8.00
17355.00	H	57.30	-37.93	-27	-10.93

Test mode: 802.11n20 Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7650.85	V	60.33	-34.90	-27	-7.90
11650.00	V	57.84	-37.39	-27	-10.39
17475.00	V	57.56	-37.67	-27	-10.67
7650.85	H	62.56	-32.67	-27	-5.67
11650.00	H	61.16	-34.07	-27	-7.07
17475.00	H	54.54	-40.69	-27	-13.69

Test mode: 802.11ac (VHT20) Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7771.15	V	63.24	-31.99	-27	-4.99
11490.00	V	62.58	-32.65	-27	-5.65
17235.00	V	59.23	-36	-27	-9
7771.15	H	63.93	-31.3	-27	-4.3
11490.00	H	64.08	-31.15	-27	-4.15
17235.00	H	60.4	-34.83	-27	-7.83

Test mode: 802.11ac (VHT20) Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7736.05	V	63.27	-31.96	-27	-4.96
11570.00	V	62.85	-32.38	-27	-5.38
17355.00	V	59.1	-36.13	-27	-9.13
7736.05	H	62.44	-32.79	-27	-5.79
11570.00	H	63.76	-31.47	-27	-4.47
17355.00	H	61.11	-34.12	-27	-7.12

Test mode: 802.11ac (VHT20) Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7848.47	V	63.15	-32.08	-27	-5.08
11650.00	V	59.68	-35.55	-27	-8.55
17475.00	V	61.85	-33.38	-27	-6.38
7848.47	H	61.01	-34.22	-27	-7.22
11650.00	H	59.55	-35.68	-27	-8.68
17475.00	H	57.51	-37.72	-27	-10.72

Test mode: 802.11n40 Frequency(MHz): 5755

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7705.41	V	62.5	-32.73	-27	-5.73

11510.00	V	62.27	-32.96	-27	-5.96
17265.00	V	58.24	-36.99	-27	-9.99
7705.41	H	60.79	-34.44	-27	-7.44
11510.00	H	63.77	-31.46	-27	-4.46
17265.00	H	60.7	-34.53	-27	-7.53

Test mode: 802.11n40 Frequency(MHz): 5795

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7706.00	V	64.16	-31.07	-27	-4.07
11590.00	V	58.68	-36.55	-27	-9.55
17385.00	V	59.9	-35.33	-27	-8.33
7706.00	H	60.53	-34.7	-27	-7.7
11590.00	H	58.4	-36.83	-27	-9.83
17385.00	H	57.06	-38.17	-27	-11.17

Test mode: 802.11ac (VHT40) Frequency(MHz): 5755

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7636.87	V	63.84	-31.39	-27	-4.39
11510.00	V	62.43	-32.8	-27	-5.8
17265.00	V	60.98	-34.25	-27	-7.25
7636.87	H	62.98	-32.25	-27	-5.25
11510.00	H	61.64	-33.59	-27	-6.59
17265.00	H	61.99	-33.24	-27	-6.24

Test mode: 802.11ac (VHT40) Frequency(MHz): 5795

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7765.07	V	60.82	-34.41	-27	-7.41
11590.00	V	61.20	-34.03	-27	-7.03
17385.00	V	53.69	-41.54	-27	-14.54
7765.07	H	62.03	-33.20	-27	-6.20
11590.00	H	59.87	-35.36	-27	-8.36
17385.00	H	59.05	-36.17	-27	-9.17

Test mode: 802.11ac80 Frequency(MHz): 5775

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
7700.64	V	58.36	-36.87	-27	-9.87
11550.00	V	62.46	-32.77	-27	-5.77
17325.00	V	54.24	-40.99	-27	-13.99
7700.64	H	59.08	-36.15	-27	-9.15
11550.00	H	54.88	-40.34	-27	-13.34
17325.00	H	52.54	-42.69	-27	-15.69

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

● ☒ Undesirable radiated Spurious Emission in band edge

Test mode: 802.11a Frequency: 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.00	H	66.37	-28.86	27.00	PASS
5724.37	V	67.82	-27.41	25.58	PASS

Test mode: 802.11a Frequency: 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.00	V	64.64	-30.59	27	PASS
5850.00	H	65.77	-29.46	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

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5745 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5745 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11a ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Spurious Emission in band edge

Test mode: 802.11n20 Frequency: 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5723.00	H	66.12	-29.11	22.44	PASS
5723.75	V	64.60	-30.63	24.15	PASS

Test mode: 802.11n20 Frequency: 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.50	V	56.92	-38.31	25.86	PASS
5850.50	H	59.89	-35.34	25.86	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

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)

☒ 5745 Ant.Pol H



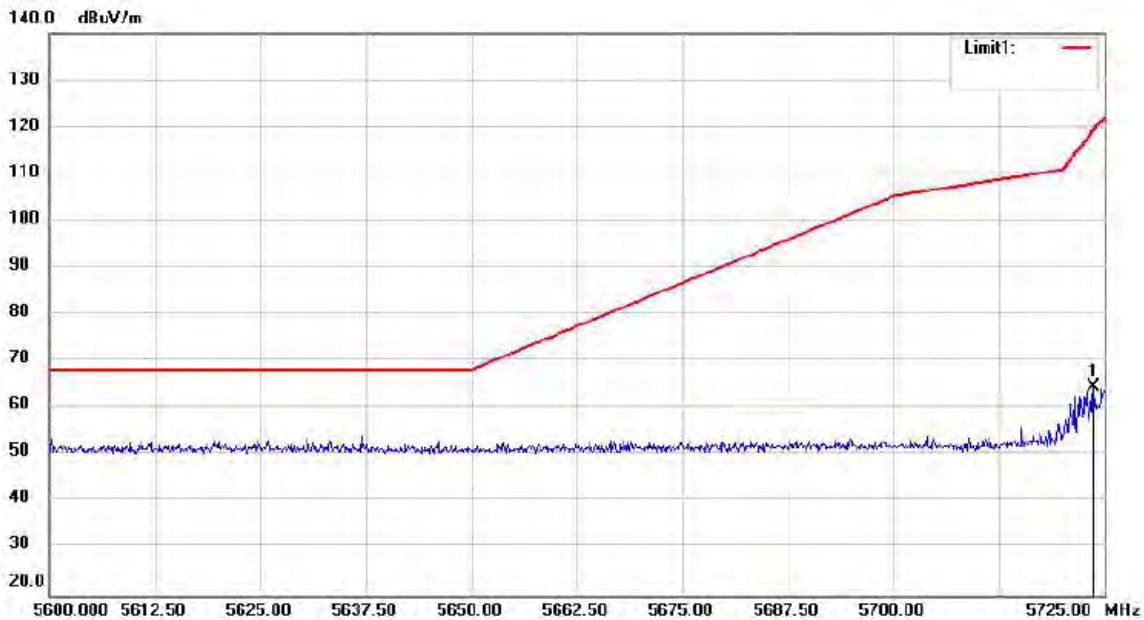
Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)

☒ 5745 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Spurious Emission in band edge

Test mode: 802.11ac (VHT20) Frequency: 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.00	H	64.87	-30.36	27	PASS
5724.37	V	67.82	-27.41	27	PASS

Test mode: 802.11ac (VHT20) Frequency: 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.00	V	64.64	-30.59	27	PASS
5850.00	H	65.77	-29.46	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

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11ac (VHT20) ☐ 802.11n(HT40)
☒ 5745 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11ac (VHT20) ☐ 802.11n(HT40)
☒ 5745 Ant.Pol V



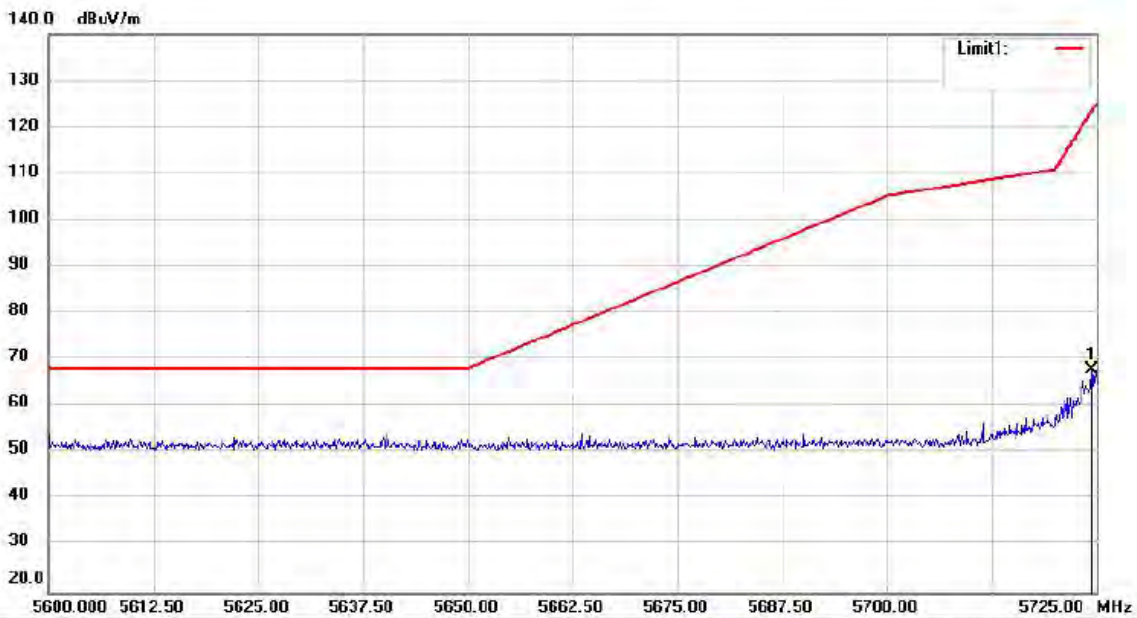
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11ac (VHT20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☒ 802.11ac (VHT20) ☐ 802.11n(HT40)
☒ 5825 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Spurious Emission in band edge

Test mode: 802.11n40 Frequency: 5755

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.00	H	66.03	-29.2	27	PASS
5724.75	V	63.53	-31.7	27	PASS

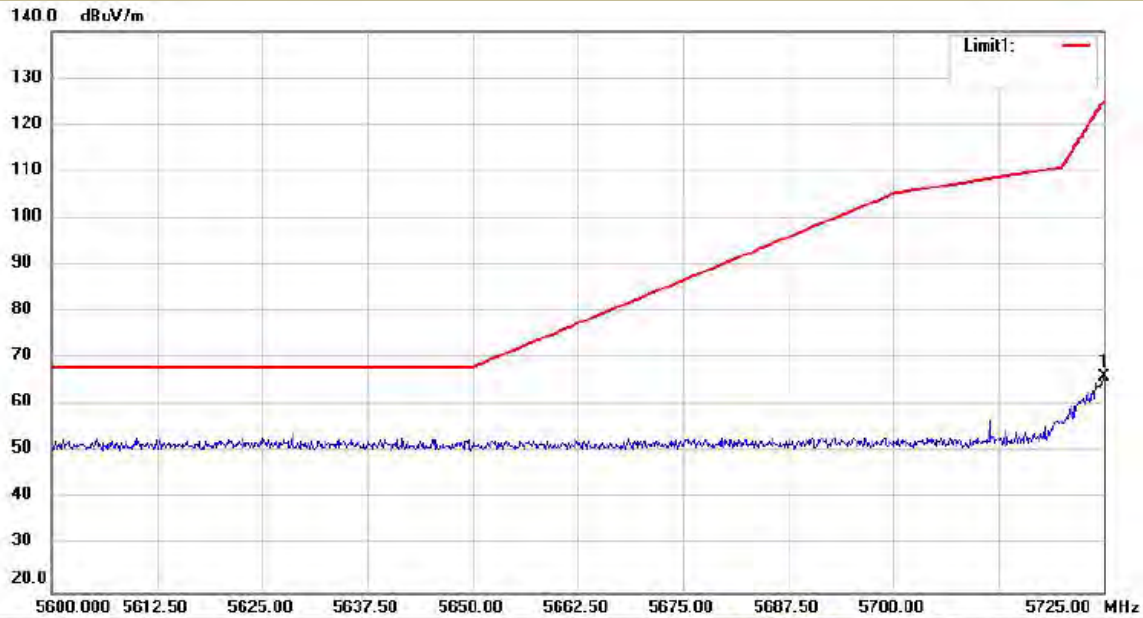
Test mode: 802.11n40 Frequency: 5795

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.50	V	58.42	-36.81	27	PASS
5850.87	H	61.53	-33.70	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

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☒ 5755 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☒ 5755 Ant.Pol V



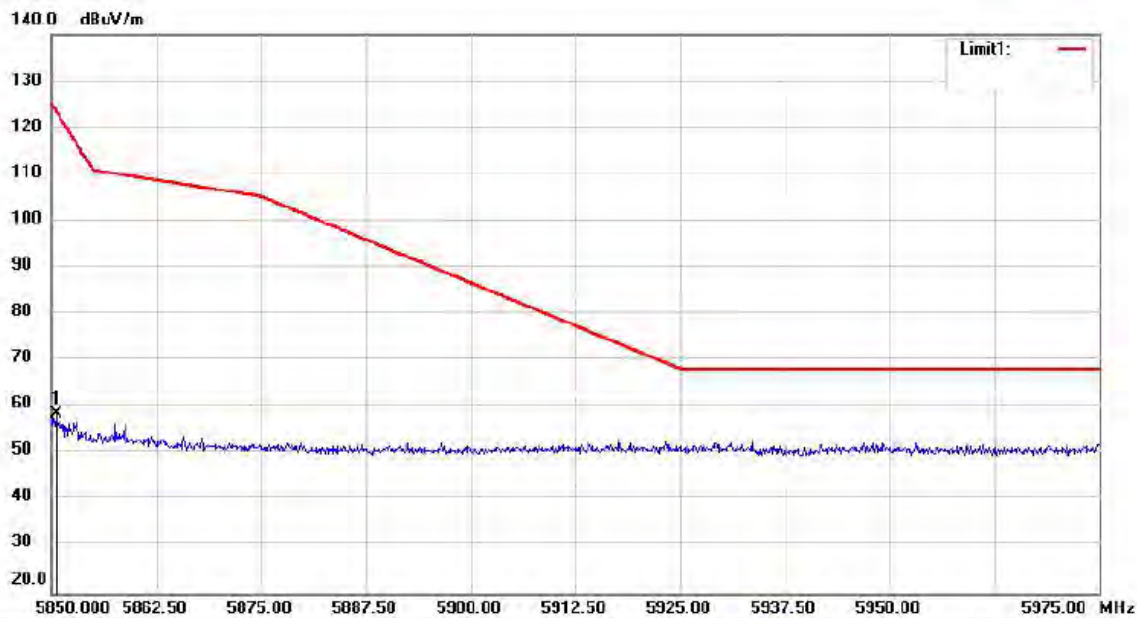
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☒ 5795 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11n(HT40)
☒ 5795 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

Test mode: 802.11ac (VHT40) Frequency: 5755

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5725.00	H	65.53	-29.70	27	PASS
5723.75	V	65.60	-29.63	27	PASS

Test mode: 802.11ac (VHT40) Frequency: 5795

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5850.50	V	61.89	-33.34	27	PASS
5850.50	H	60.92	-34.31	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[dBμV/m] + 20 log(d[meters]) - 104.77
d is the measurement distance in 3 meters

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT40)
☒ 5755 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3

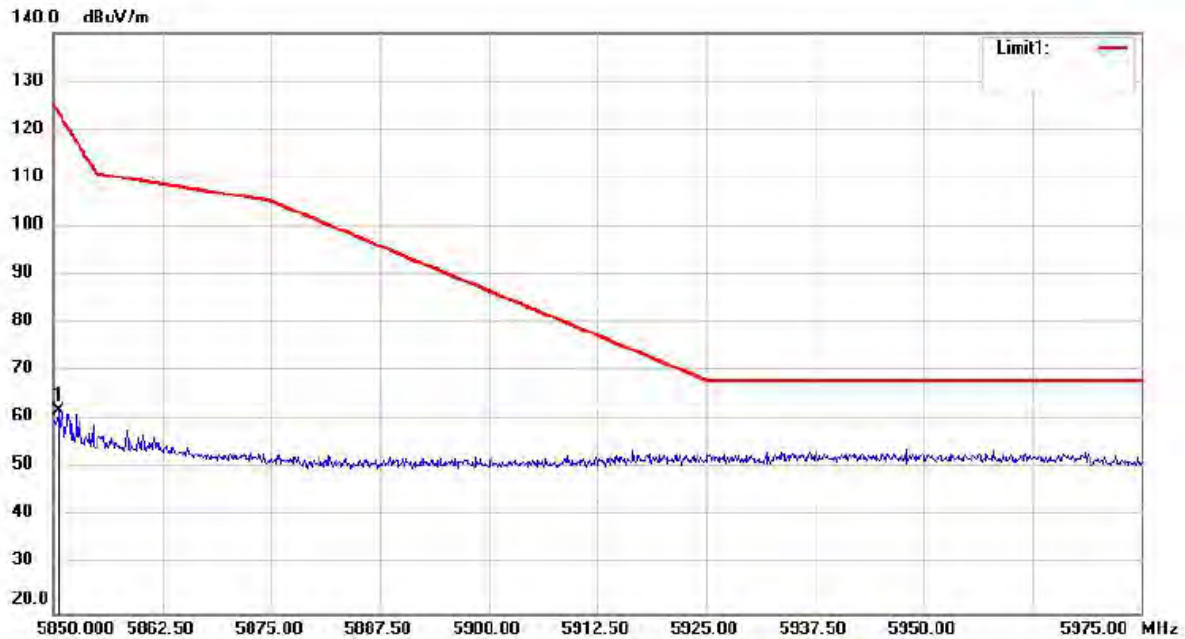
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT40)
☒ 5755 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT40)
☒ 5795 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3

Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☐ 802.11a ☐ 802.11n(HT20) ☒ 802.11ac (VHT40)
☒ 5795 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● ☒ Undesirable radiated Spurious Emission in band edge

Test mode: 802.11ac (VHT80) Frequency: 5775

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5719.50	H	59.55	-35.68	15.46	PASS
5723.25	V	60.98	-34.25	24.96	PASS

Test mode: 802.11ac (VHT80) Frequency: 5775

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5856.12	V	57.02	-38.21	27	PASS
5850.12	H	56.64	-38.59	15.28	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

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11ac (VHT80) ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5775 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11ac (VHT80) ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5775 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
 Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11ac (VHT80) ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5775 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

U-NII -3
Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
☒ 802.11ac (VHT80) ☐ 802.11n(HT20) ☐ 802.11n(HT40)
☒ 5775 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 22 C
Limit: (RE)FCC PART 15C B4 (Bandedge)Peak Power: AC 120V/60Hz Humidity: 50 %

● Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)

All modes 2.4G 802.11b/g/n have been tested, the worst mode is (802.11a TX5180MHz), the data is recorded on the following page, other modulation modes do not exceed this limit



Site Chamber #1 Polarization: **Horizontal** Temperature: 26.9
Limit: (RE)FCC PART 15 C 3m Power: AC 120V/60Hz Humidity: 70 %
Mode: 802.11a TX 5180
Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		30.4238	42.07	-18.81	23.26	40.00	-16.74	QP		
2		34.6385	36.27	-18.71	17.56	40.00	-22.44	QP		
3		149.4857	41.96	-21.56	20.40	43.50	-23.10	QP		
4		416.1791	37.79	-10.62	27.17	46.00	-18.83	QP		
5	*	528.2458	41.30	-8.34	32.96	46.00	-13.04	QP		
6		793.3960	35.05	-3.37	31.68	46.00	-14.32	QP		

*:Maximum data x:Over limit !:over margin

Operator: Lian



Site Chamber #1 Polarization: **Vertical** Temperature: 26.9
 Limit: (RE)FCC PART 15 C 3m Power: AC 120V/60Hz Humidity: 70 %
 Mode: 802.11a TX 5180
 Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	
1	*	35.1278	51.26	-18.53	32.73	40.00	-7.27	QP		
2		146.8877	40.53	-21.65	18.88	43.50	-24.62	QP		
3		463.9696	38.60	-9.79	28.81	46.00	-17.19	QP		
4		528.2458	37.53	-8.34	29.19	46.00	-16.81	QP		
5		622.8900	32.26	-5.70	26.56	46.00	-19.44	QP		
6		982.6200	28.69	0.06	28.75	54.00	-25.25	QP		

*:Maximum data x:Over limit l:over margin

Operator: Lian

8.6 POWER LINE CONDUCTED EMISSIONS

8.6.1 Applicable Standard

According to FCC Part 15.207(a)

8.6.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

8.6.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

8.6.4 Test Procedure

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

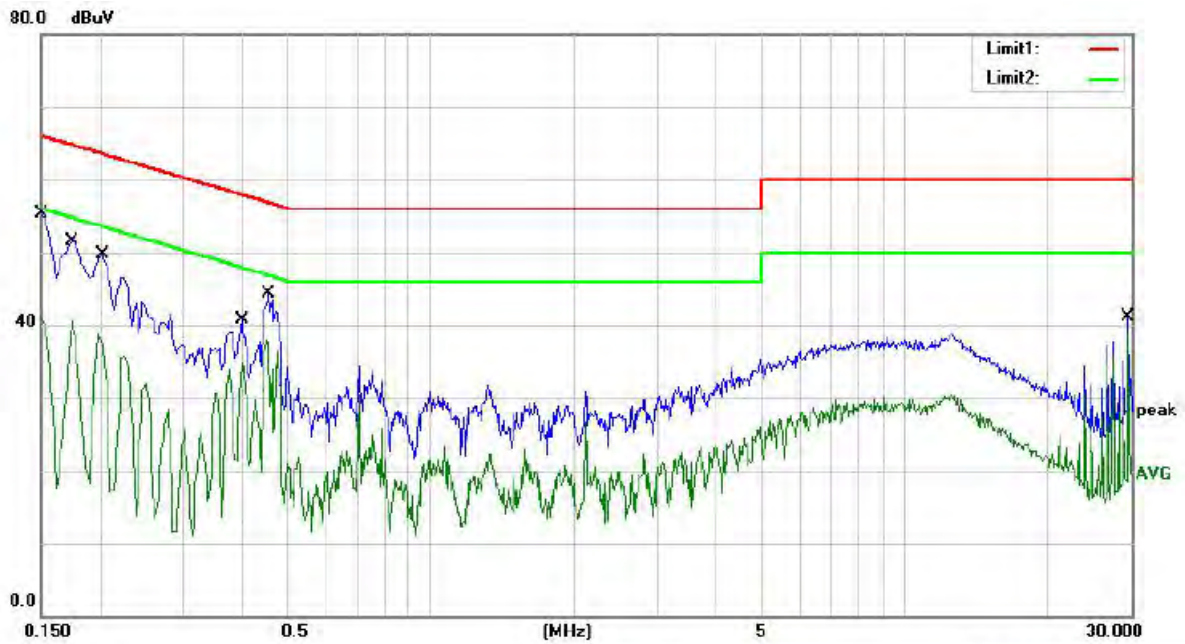
Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Repeat above procedures until all frequency measured were complete.

8.6.5 Test Results

Pass

All mode and the voltage 120V and 240V have been tested, and show the worst result (WIFI ON,120V~ 60Hz) as bellow.



Site: site #1

Phase: **N**

Temperature: 24

Limit: FCC PART 15 C_QP (CE)

Power: AC 120V/60Hz

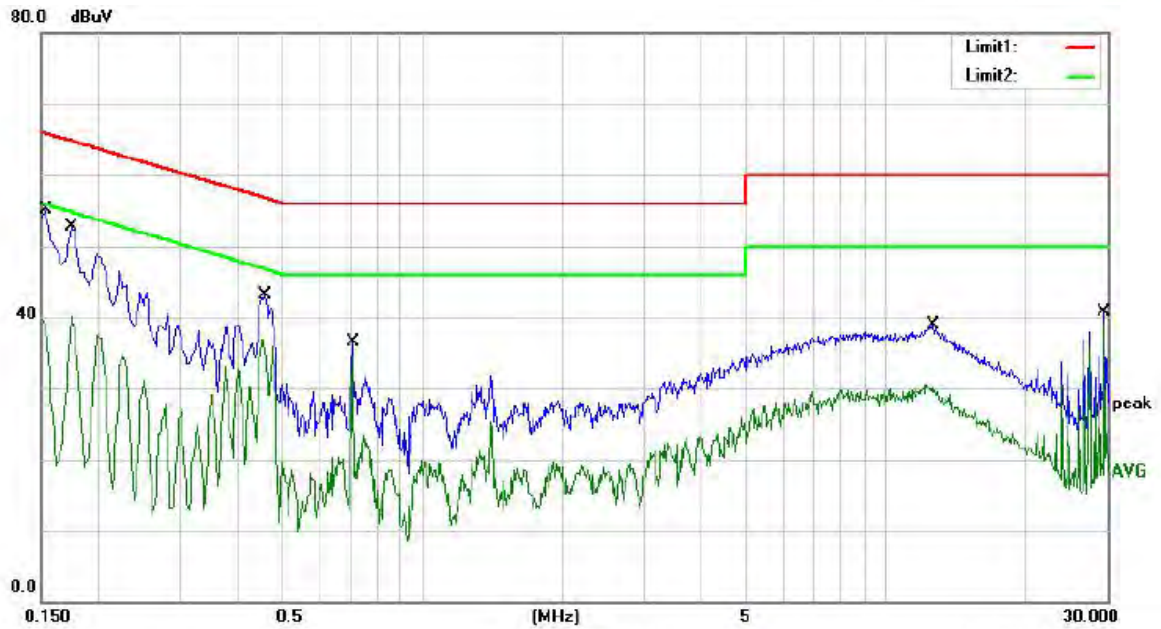
Humidity: 57 %

Mode: 802.11a TX5180

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.38	10.94	55.32	66.00	-10.68	QP	
2		0.1500	30.30	10.94	41.24	56.00	-14.76	AVG	
3		0.1740	40.61	10.94	51.55	64.77	-13.22	QP	
4		0.1740	29.65	10.94	40.59	54.77	-14.18	AVG	
5		0.2020	38.80	10.94	49.74	63.53	-13.79	QP	
6		0.2020	27.97	10.94	38.91	53.53	-14.62	AVG	
7		0.3980	29.77	10.95	40.72	57.90	-17.18	QP	
8		0.3980	24.01	10.95	34.96	47.90	-12.94	AVG	
9		0.4540	33.42	10.96	44.38	56.80	-12.42	QP	
10	*	0.4540	27.01	10.96	37.97	46.80	-8.83	AVG	
11		29.6380	30.12	10.92	41.04	60.00	-18.96	QP	
12		29.6380	28.21	10.92	39.13	50.00	-10.87	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Jason



Site site #1

Phase: **L1**

Temperature: 24

Limit: FCC PART 15 C QP (CE)

Power: AC 120V/60Hz

Humidity: 57 %

Mode: 802.11a TX5180

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1540	44.11	10.94	55.05	65.78	-10.73	QP	
2		0.1540	29.04	10.94	39.98	55.78	-15.80	AVG	
3		0.1740	41.72	10.94	52.66	64.77	-12.11	QP	
4		0.1740	29.16	10.94	40.10	54.77	-14.67	AVG	
5		0.4580	32.12	10.96	43.08	56.73	-13.65	QP	
6	*	0.4580	26.03	10.96	36.99	46.73	-9.74	AVG	
7		0.7060	25.59	10.96	36.55	56.00	-19.45	QP	
8		0.7060	23.58	10.96	34.54	46.00	-11.46	AVG	
9		12.6420	27.94	10.94	38.88	60.00	-21.12	QP	
10		12.6420	19.59	10.94	30.53	50.00	-19.47	AVG	
11		29.6380	29.81	10.92	40.73	60.00	-19.27	QP	
12		29.6380	28.43	10.92	39.35	50.00	-10.65	AVG	

*:Maximum data x:Over limit !:over margin

Comment: Factor build in receiver.

Operator: Jason

8.7 ANTENNA APPLICATION

8.7.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

8.7.2 Result

PASS.

The EUT has 1 antennas: an Internal Antenna for WIFI 5G, the gain is 4.64 dBi;

Note: ☒ Antennas use a permanently attached antenna which is not replaceable.
☐ Not using a standard antenna jack or electrical connector for antenna replacement
☐ The antenna has to be professionally installed (please provide method of installation)

which in accordance to section 15.203, please refer to the internal photos.

Detail of factor for radiated emission

Frequency(MHz)	Ant_F(dB)	Cab_L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

*** End of Report ***

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