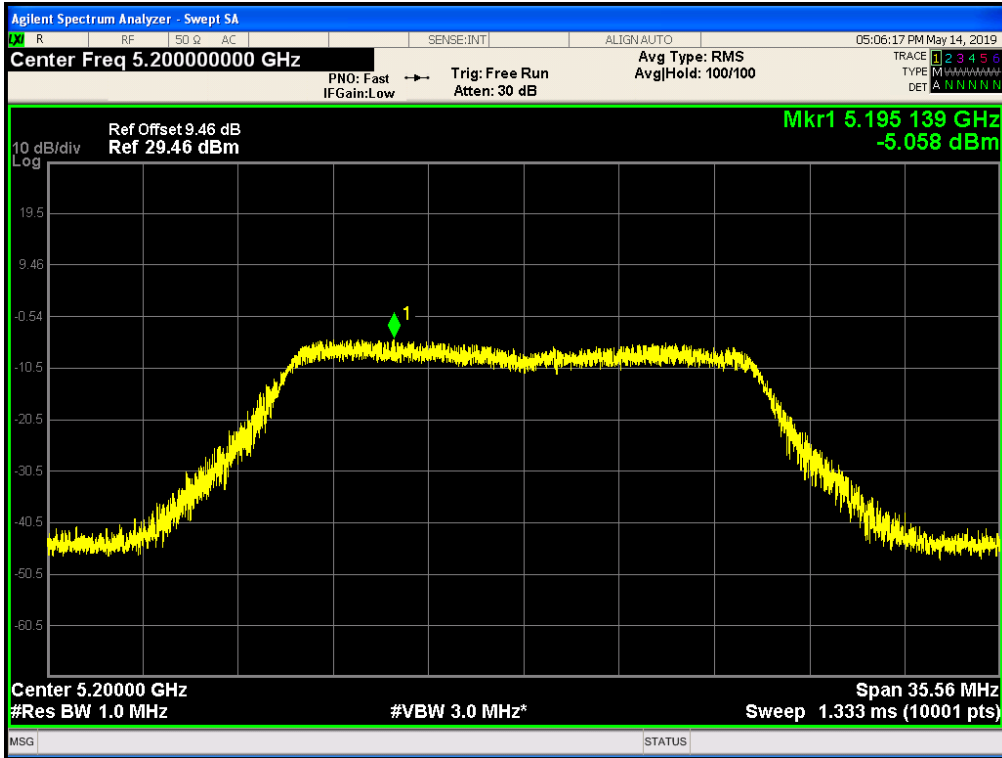
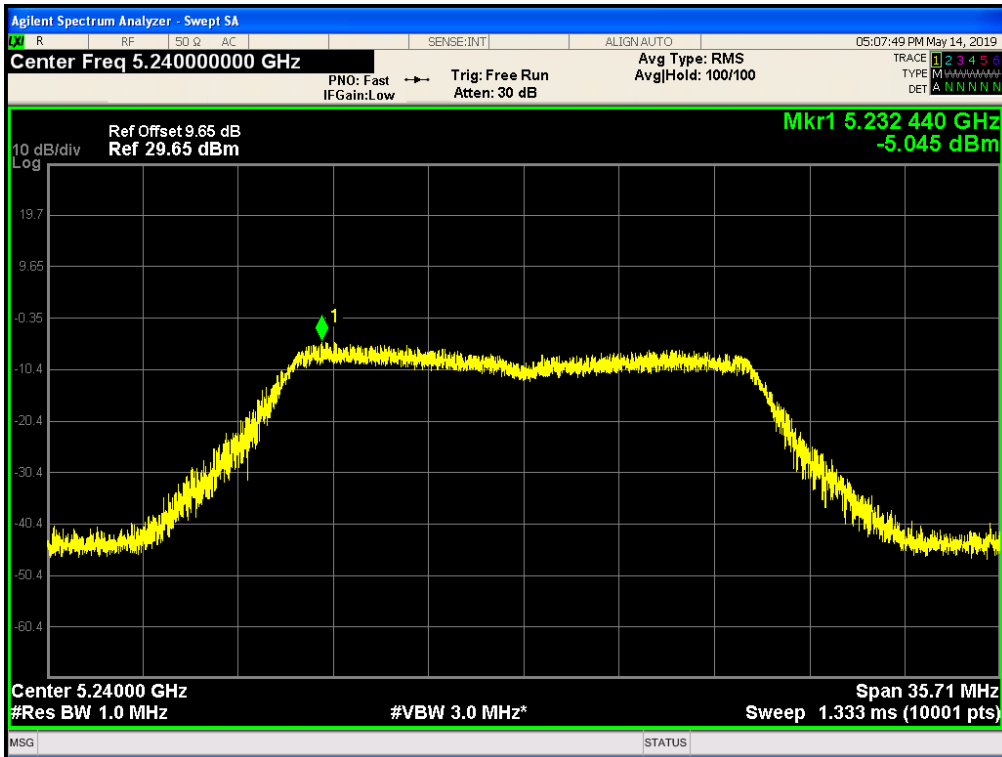


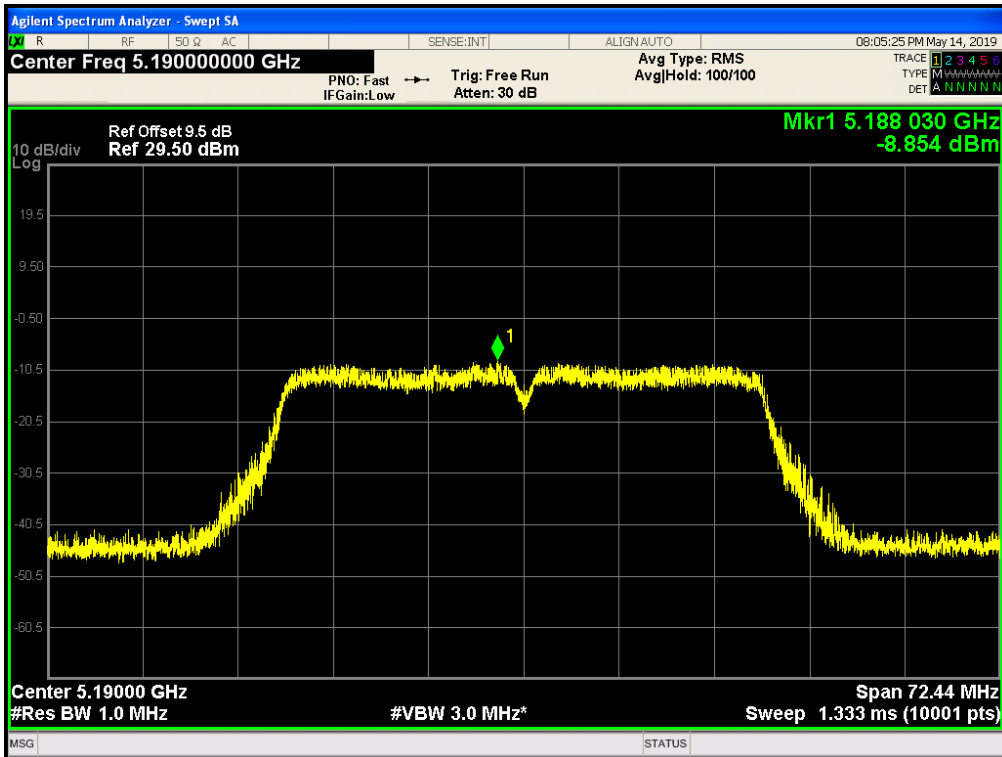
ANT2: PSD 802.11ac20 5200MHz



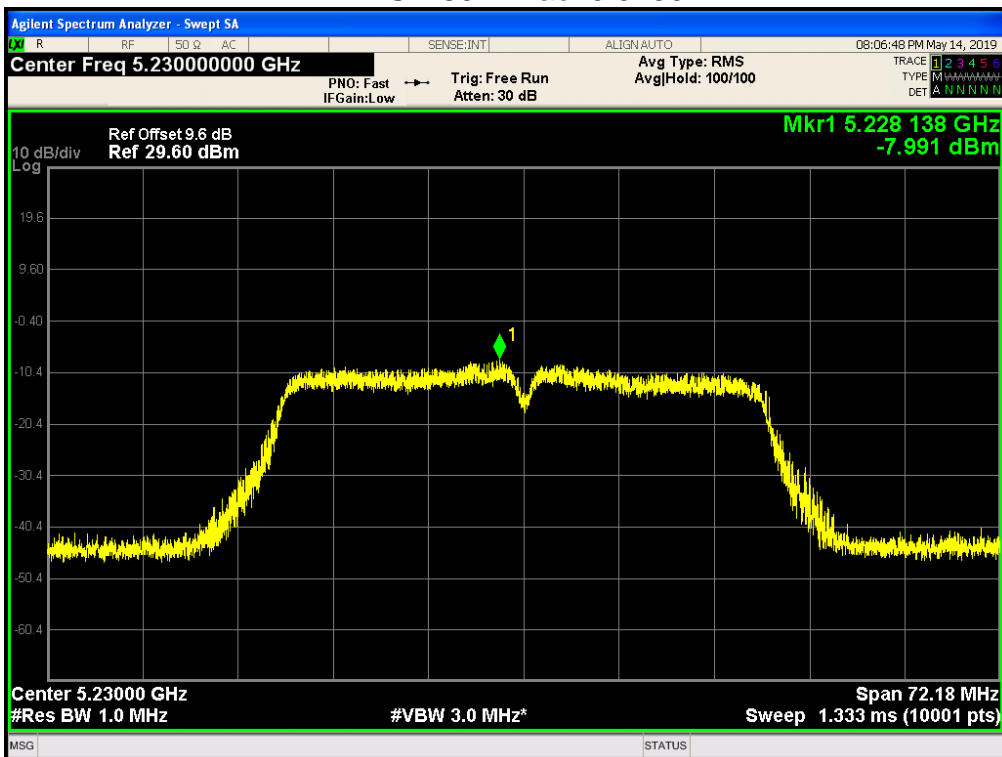
ANT2: PSD 802.11ac20 5240MHz



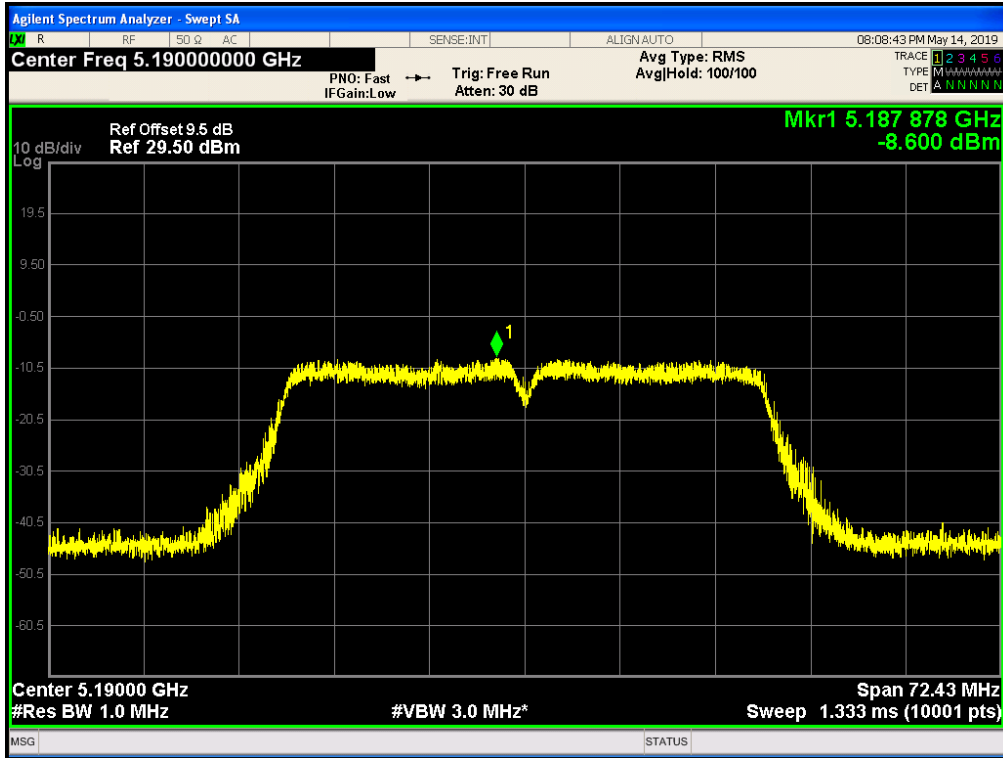
ANT1: PSD 802.11ac40 5190MHz



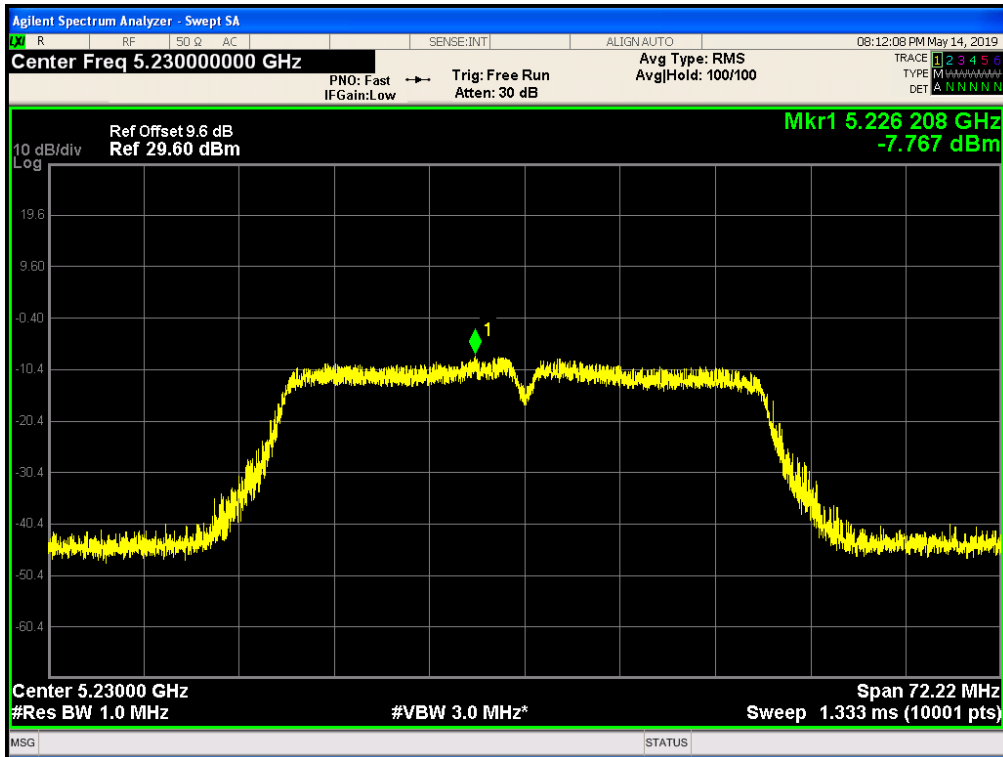
ANT1: PSD 802.11ac40 5230MHz



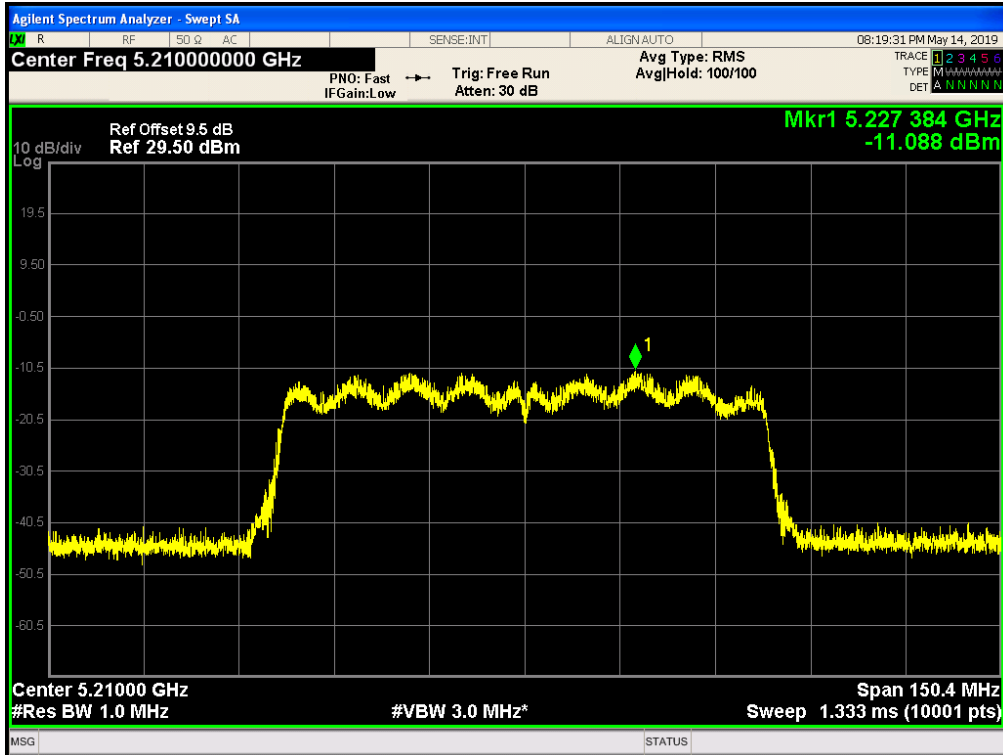
ANT2: PSD 802.11ac40 5190MHz



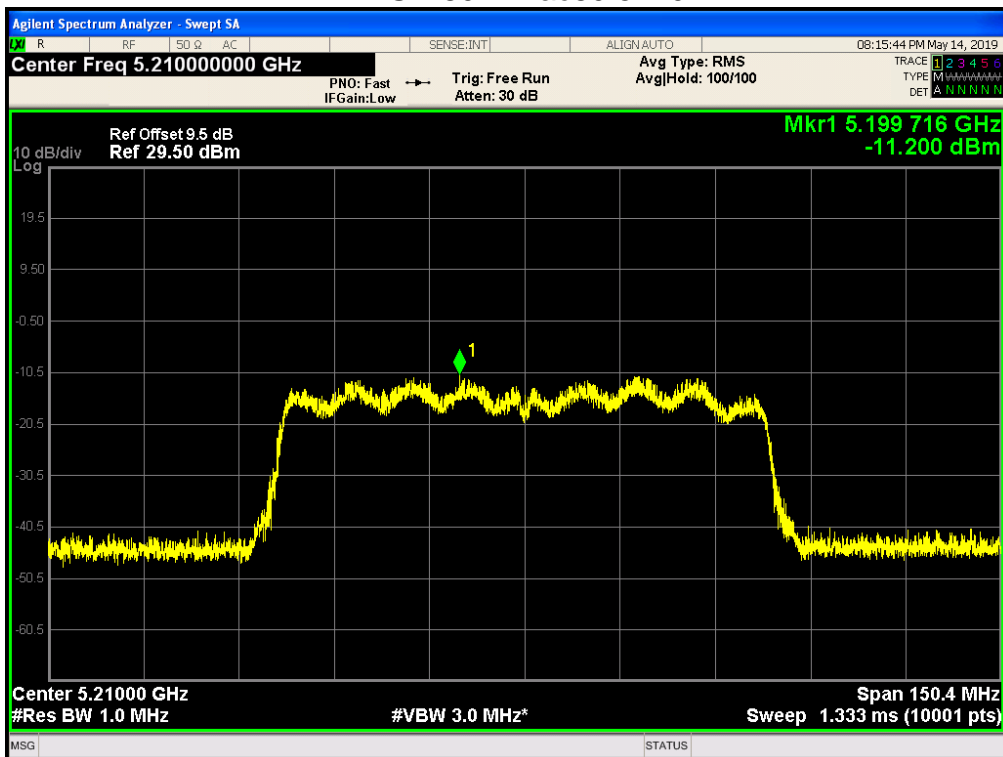
ANT2: PSD 802.11ac40 5230MHz



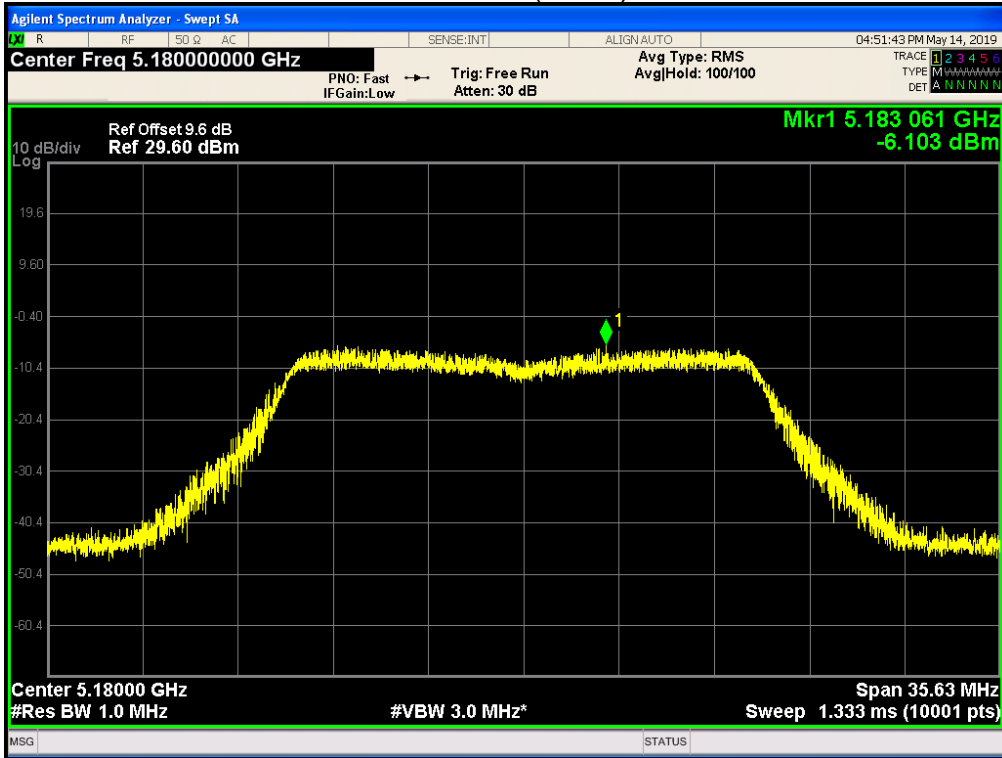
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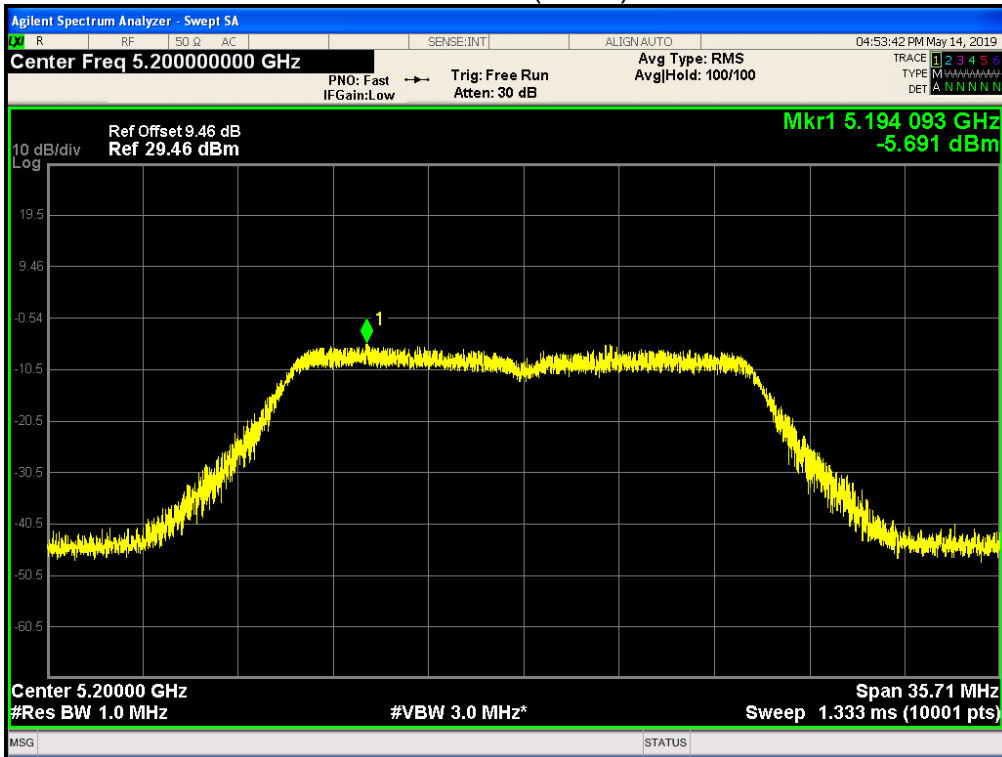
ANT2: PSD 802.11ac80 5210MHz



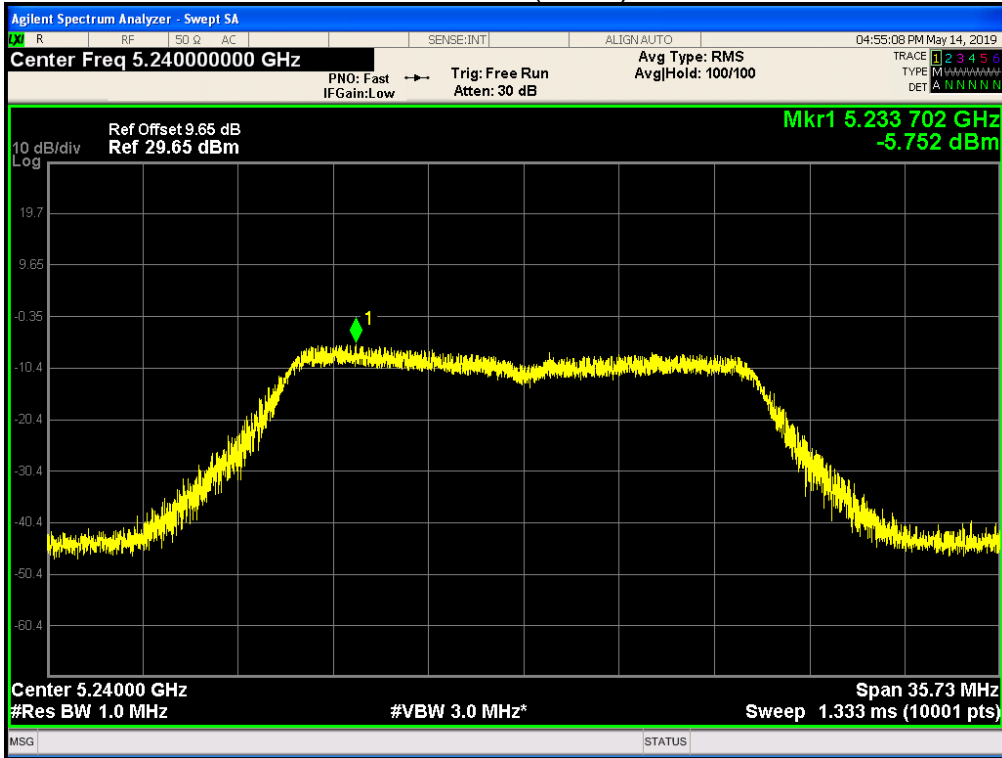
ANT1: PSD 802.11n(HT20) 5180MHz



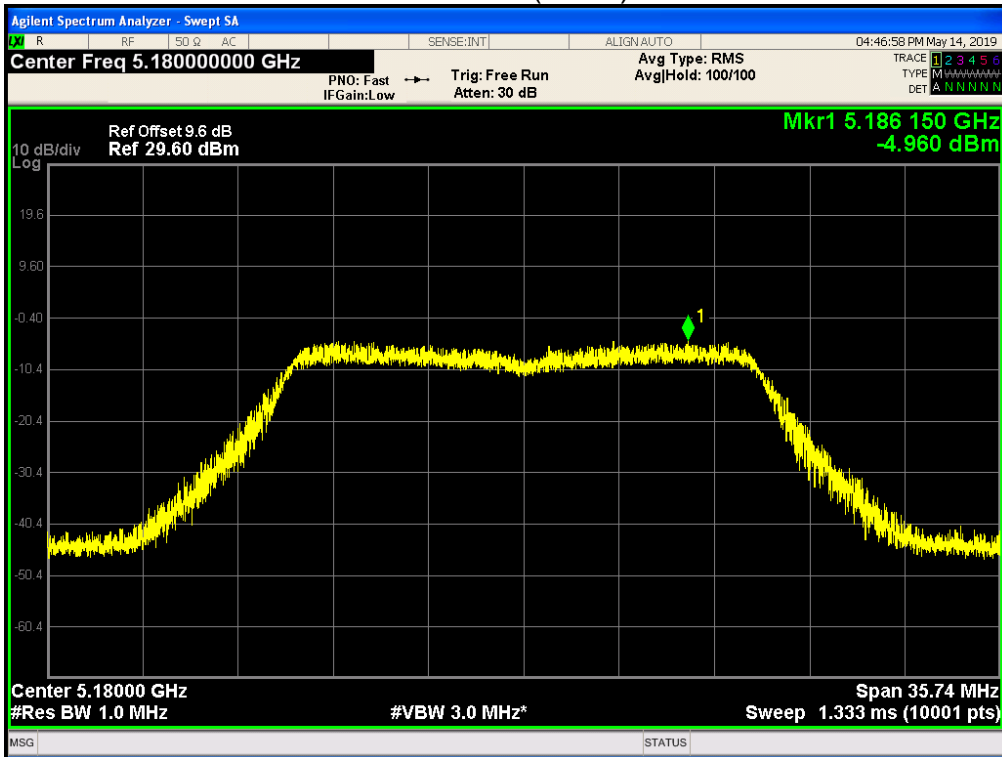
ANT1: PSD 802.11n(HT20) 5200MHz



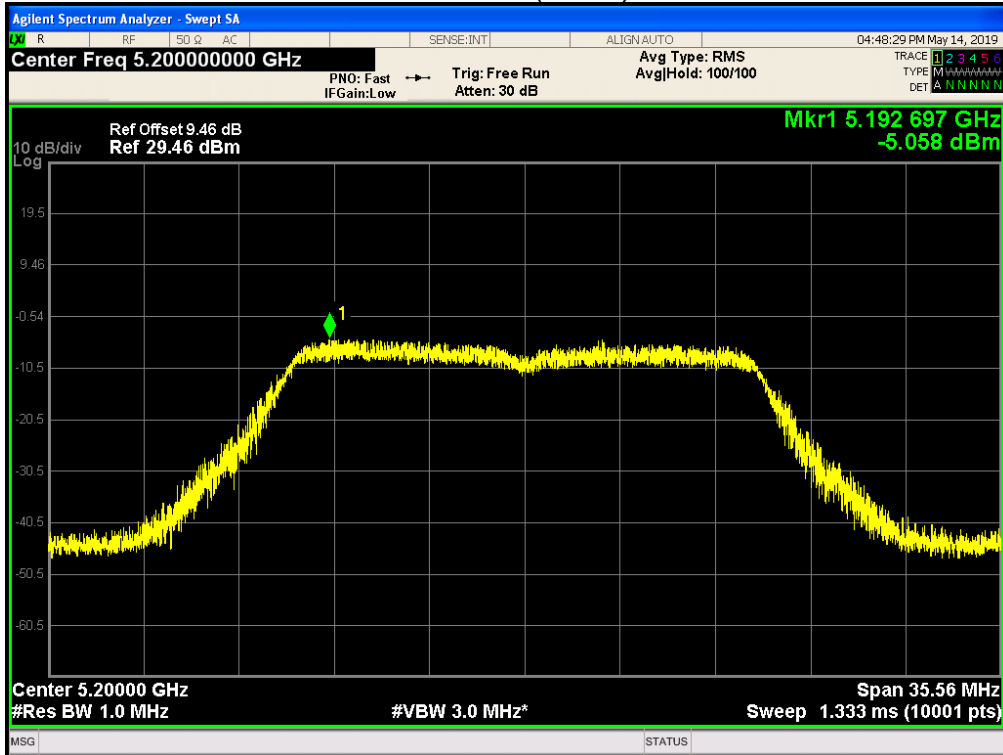
ANT1: PSD 802.11n(HT20) 5240MHz



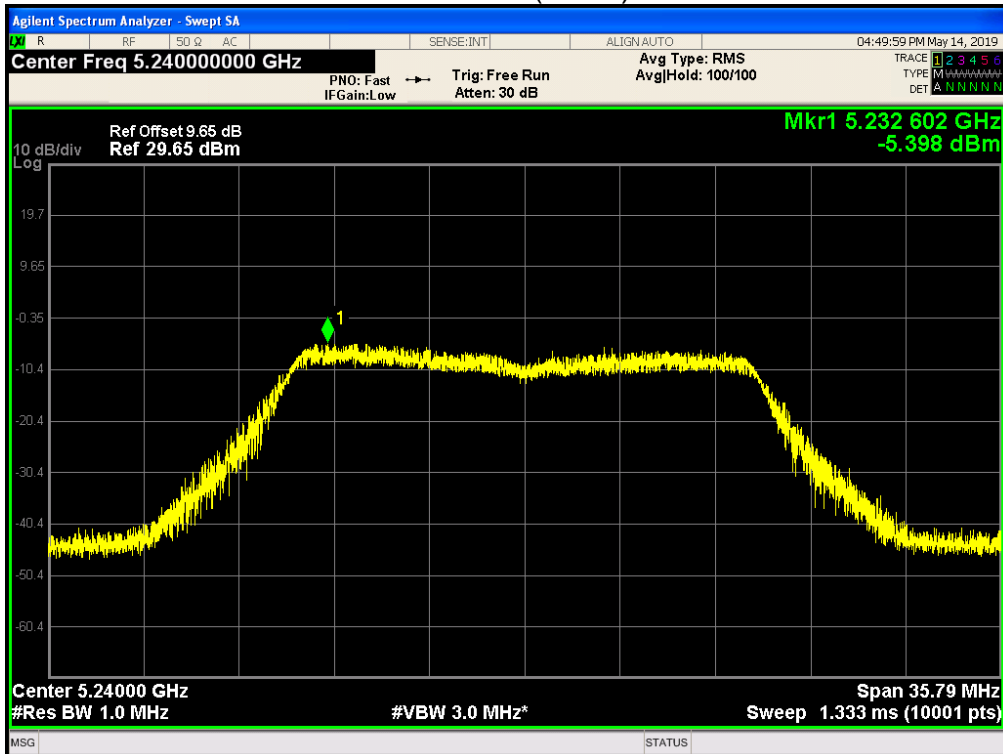
ANT2: PSD 802.11n(HT20) 5180MHz



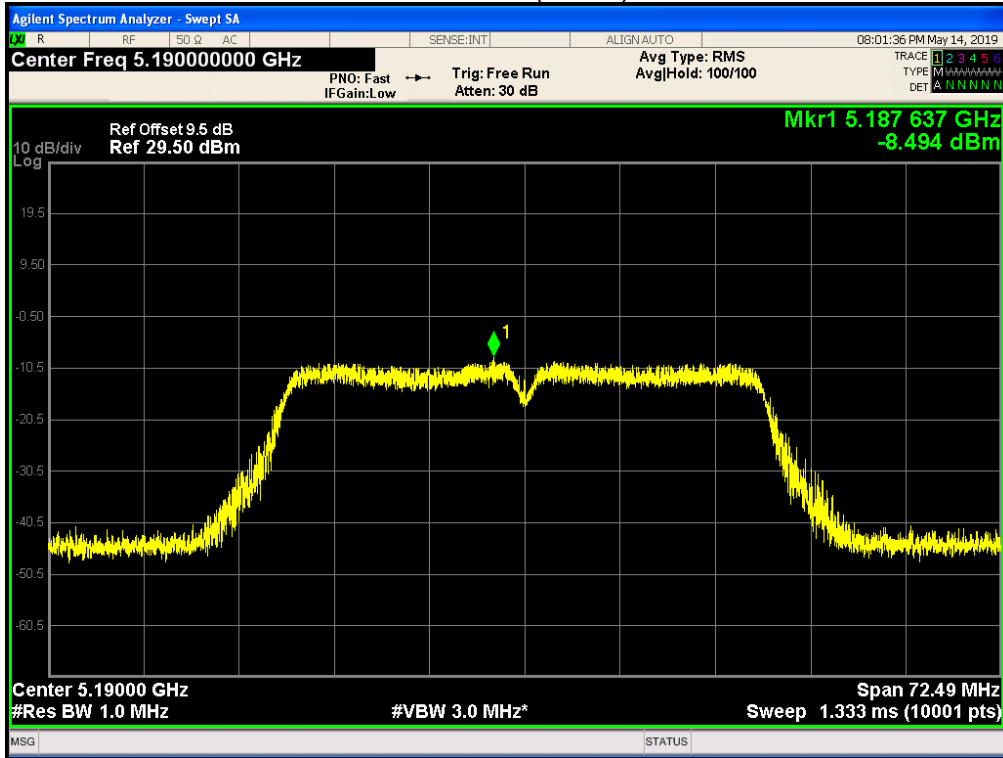
ANT2: PSD 802.11n(HT20) 5200MHz



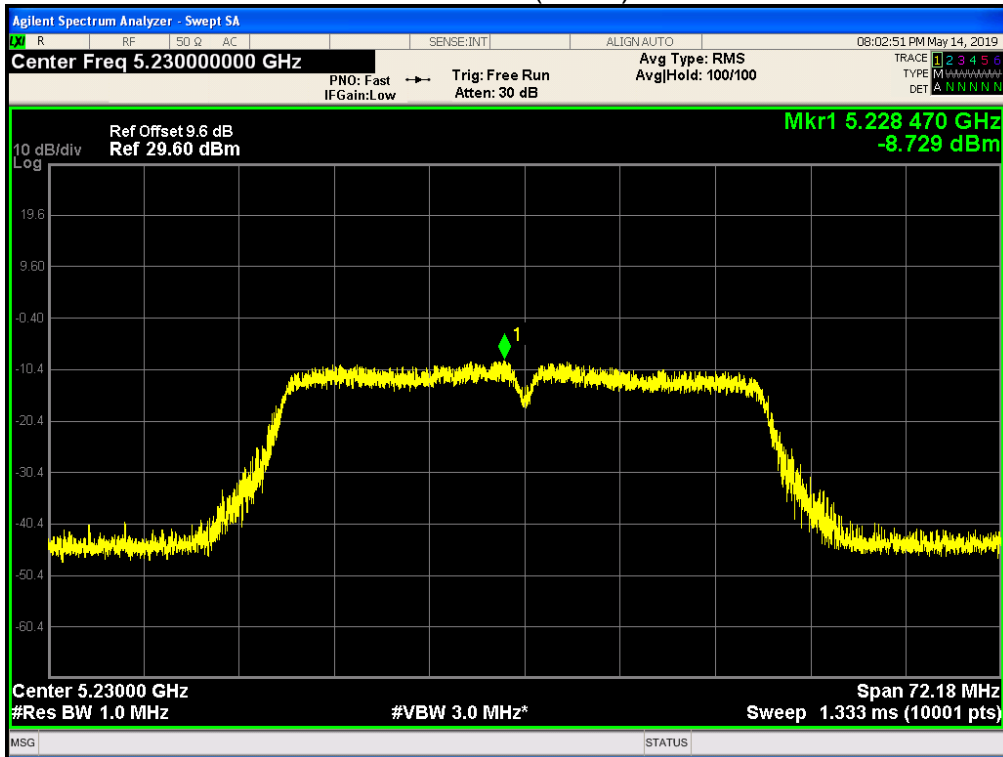
ANT2: PSD 802.11n(HT20) 5240MHz



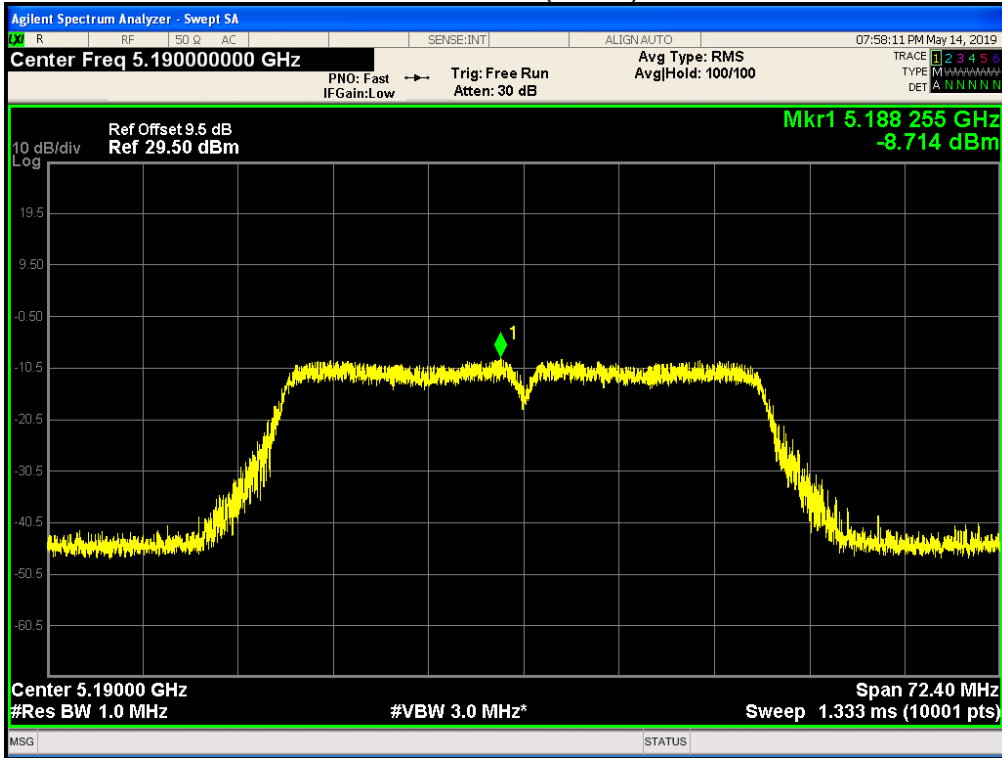
ANT1: PSD 802.11n(HT40) 5190MHz



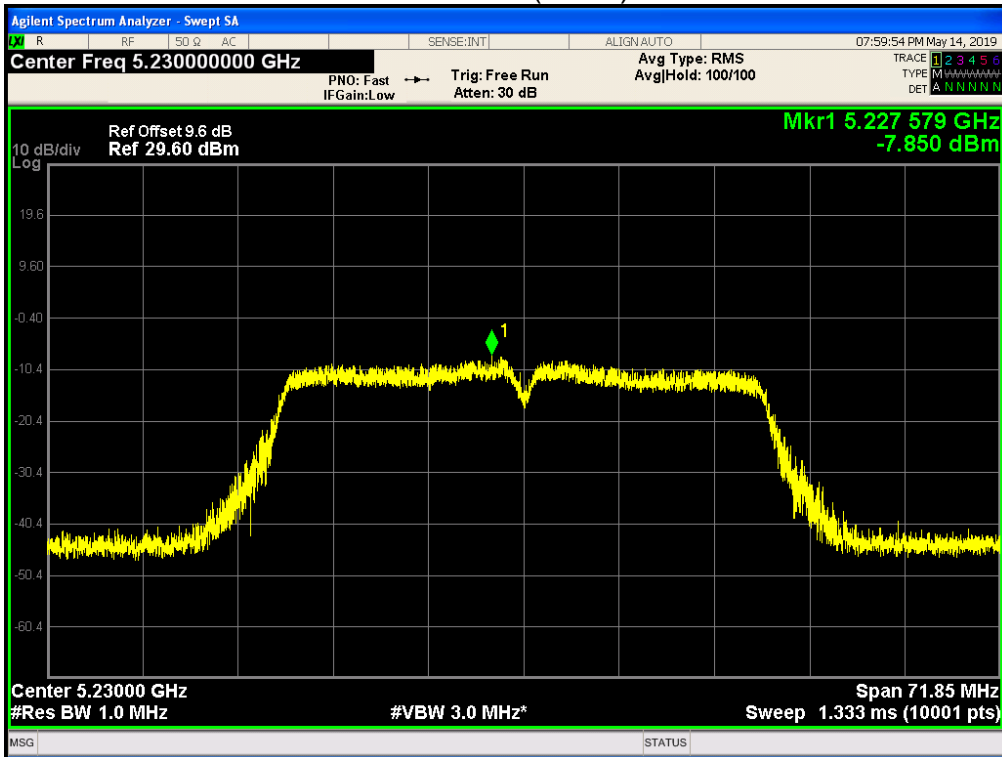
ANT1: PSD 802.11n(HT40) 5230MHz



SANT2: PSD 802.11n(HT40) 5190MHz

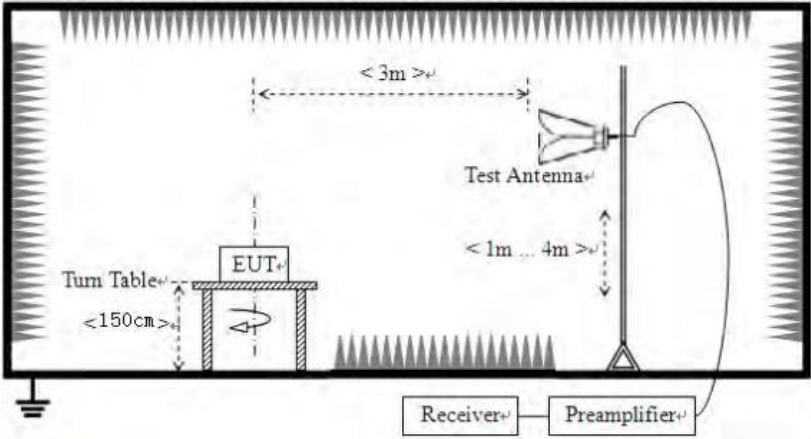


ANT2: PSD 802.11n(HT40) 5230MHz



4.5 Band Edge

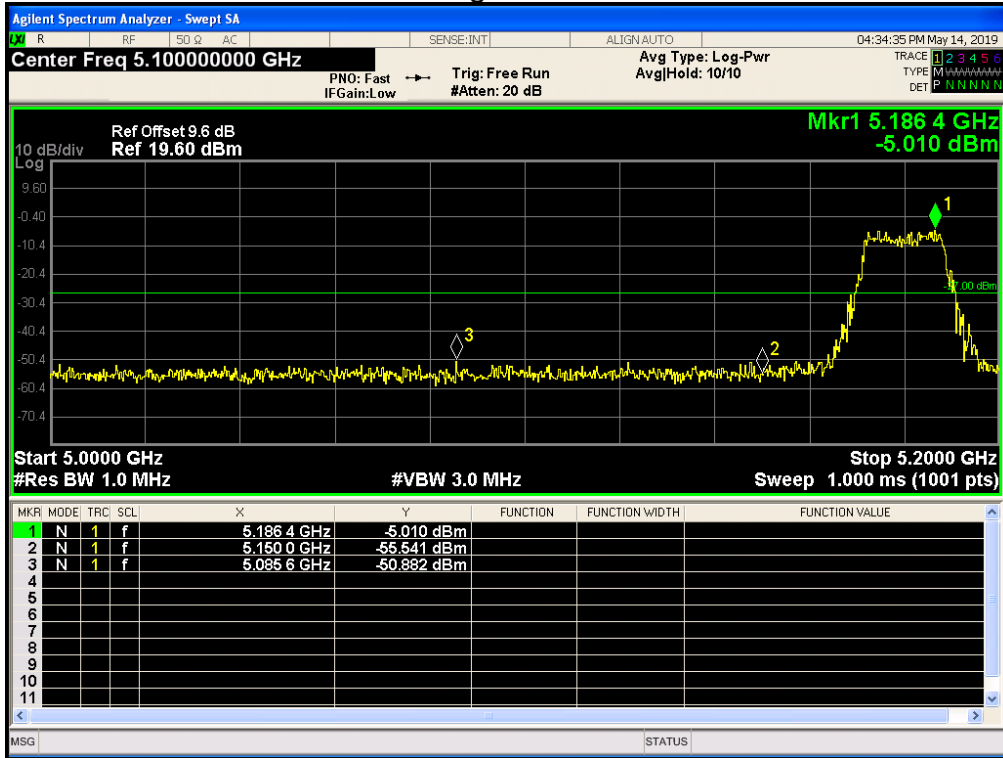
Test Requirement:	FCC Part15 E Section 15.407 and 15.205																							
Test Method:	ANSI C63.10:2013																							
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)																							
Receiver setup:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-1GHz</td> <td>Quasi-peak</td> <td>100KHz</td> <td>300KHz</td> <td>Quasi-peak Value</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>Peak</td> <td>1MHz</td> <td>3MHz</td> <td>Peak Value</td> </tr> <tr> <td>AV</td> <td>1MHz</td> <td>3MHz</td> <td>Average Value</td> </tr> </tbody> </table>				Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value	Above 1GHz	Peak	1MHz	3MHz	Peak Value	AV	1MHz	3MHz	Average Value	
Frequency	Detector	RBW	VBW	Remark																				
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Above 1GHz	Peak	1MHz	3MHz	Peak Value																				
	AV	1MHz	3MHz	Average Value																				
Limit:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Limit (dBuV/m @3m)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td> <td>40.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>88MHz-216MHz</td> <td>43.5</td> <td>Quasi-peak Value</td> </tr> <tr> <td>216MHz-960MHz</td> <td>46.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>960MHz-1GHz</td> <td>54.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td rowspan="2">Above 1GHz</td> <td>54.0</td> <td>Average Value</td> </tr> <tr> <td>68.2</td> <td>Peak Value</td> </tr> </tbody> </table> <p>Undesirable emission limits:</p> <p>(1) 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 EIRP of -27 dBm/MHz.</p> <p>(2) 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 EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.</p> <p>(3) 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 EIRP of -27 dBm/MHz.</p>				Frequency	Limit (dBuV/m @3m)	Remark	30MHz-88MHz	40.0	Quasi-peak Value	88MHz-216MHz	43.5	Quasi-peak Value	216MHz-960MHz	46.0	Quasi-peak Value	960MHz-1GHz	54.0	Quasi-peak Value	Above 1GHz	54.0	Average Value	68.2	Peak Value
Frequency	Limit (dBuV/m @3m)	Remark																						
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960MHz-1GHz	54.0	Quasi-peak Value																						
Above 1GHz	54.0	Average Value																						
	68.2	Peak Value																						
Test Procedure:	<p>a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p>																							
Test setup:	Above 1GHz																							

	 <p>The diagram illustrates the setup for an EMC test within a chamber. An Equipment Under Test (EUT) is placed on a turn table with a diameter of 150 cm. The test antenna is positioned at a distance of 3 m from the EUT and at a height of 1 m to 4 m from the chamber floor. The chamber is grounded, and the antenna is connected to a receiver and preamplifier.</p>
Test results:	Pass

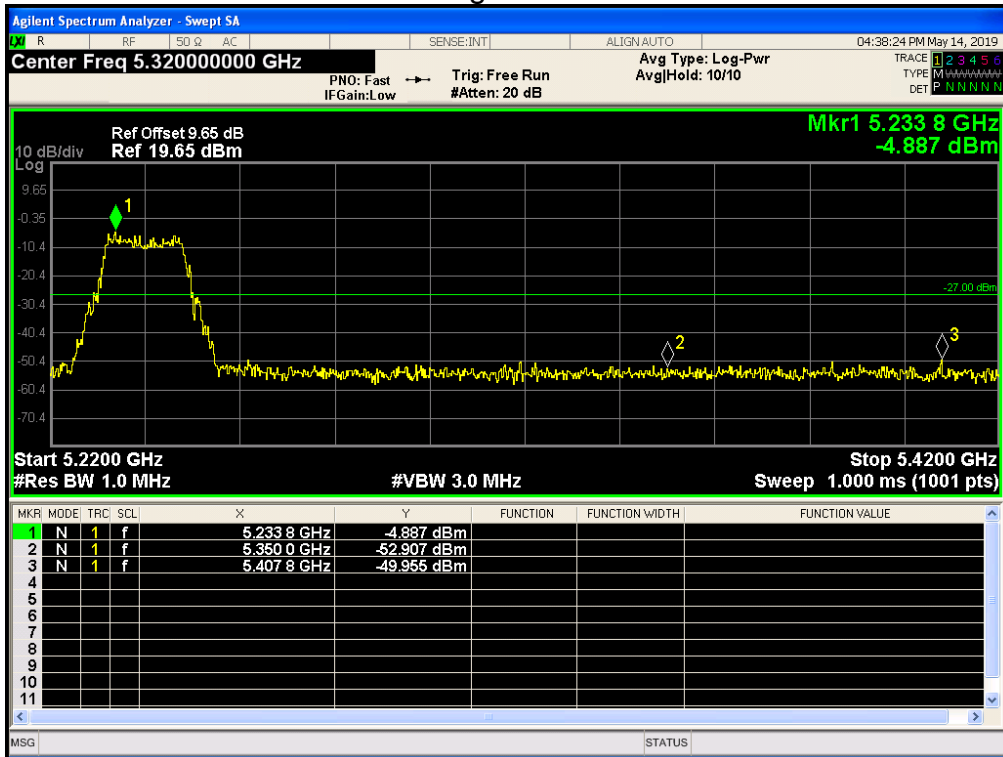
Measurement Data:**Band Edge**

Condition	Mode	Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
ANT1	802.11a	5180	-50.88	-27	Pass
ANT1	802.11a	5240	-49.95	-27	Pass
ANT2	802.11a	5180	-51.52	-27	Pass
ANT2	802.11a	5240	-50.35	-27	Pass
ANT1	802.11ac20	5180	-51.09	-27	Pass
ANT1	802.11ac20	5240	-50.97	-27	Pass
ANT2	802.11ac20	5180	-51.39	-27	Pass
ANT2	802.11ac20	5240	-51.34	-27	Pass
ANT1	802.11ac40	5190	-50.76	-27	Pass
ANT1	802.11ac40	5230	-51.29	-27	Pass
ANT2	802.11ac40	5190	-51.98	-27	Pass
ANT2	802.11ac40	5230	-51.21	-27	Pass
ANT1	802.11n(HT20)	5180	-50.7	-27	Pass
ANT1	802.11n(HT20)	5240	-51.3	-27	Pass
ANT2	802.11n(HT20)	5180	-49.79	-27	Pass
ANT2	802.11n(HT20)	5240	-50.63	-27	Pass
ANT1	802.11n(HT40)	5190	-51.21	-27	Pass
ANT1	802.11n(HT40)	5230	-51.2	-27	Pass
ANT2	802.11n(HT40)	5190	-52.31	-27	Pass
ANT2	802.11n(HT40)	5230	-49.65	-27	Pass

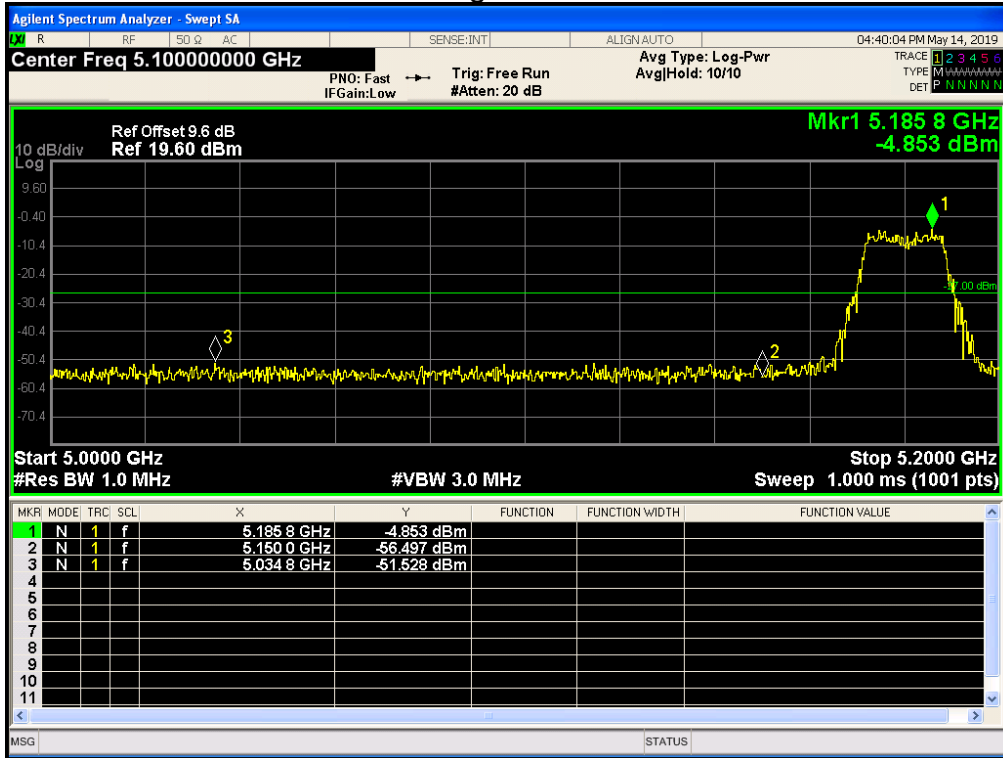
ANT1: Band Edge 802.11a 5180MHz



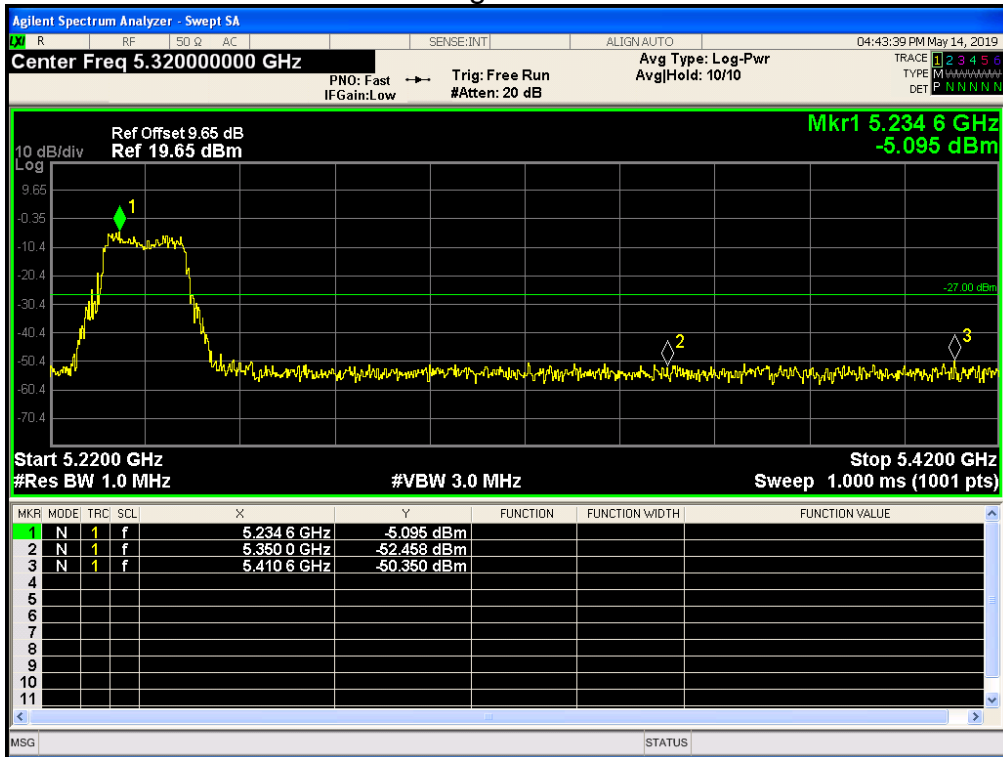
ANT1: Band Edge 802.11a 5240MHz



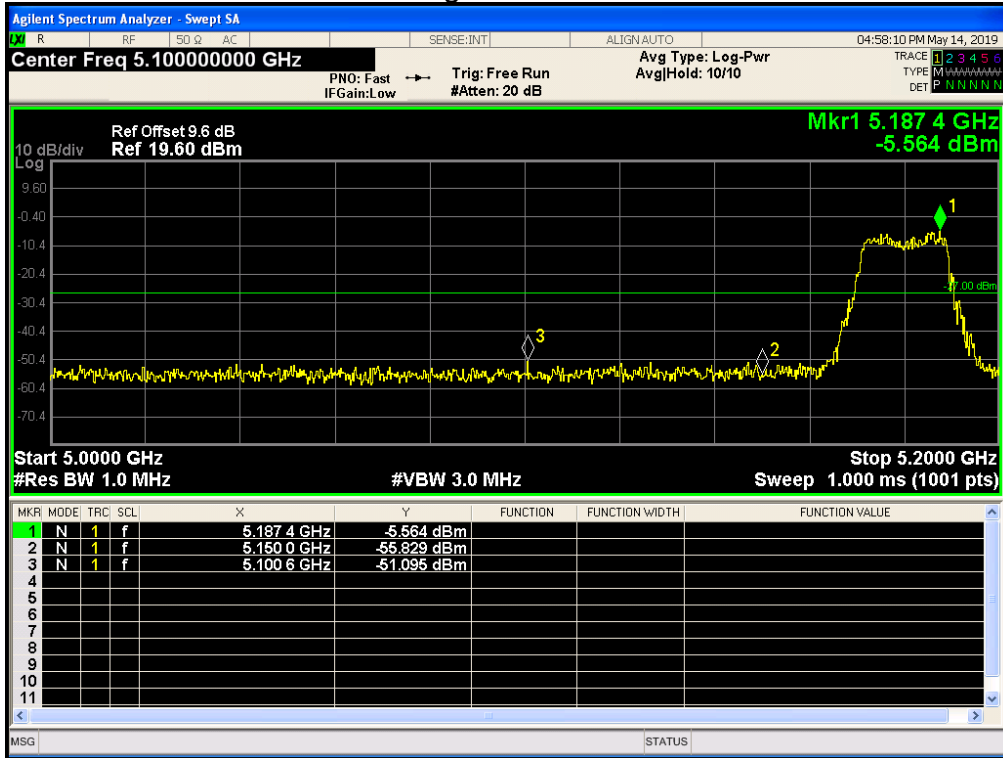
ANT2: Band Edge 802.11a 5180MHz



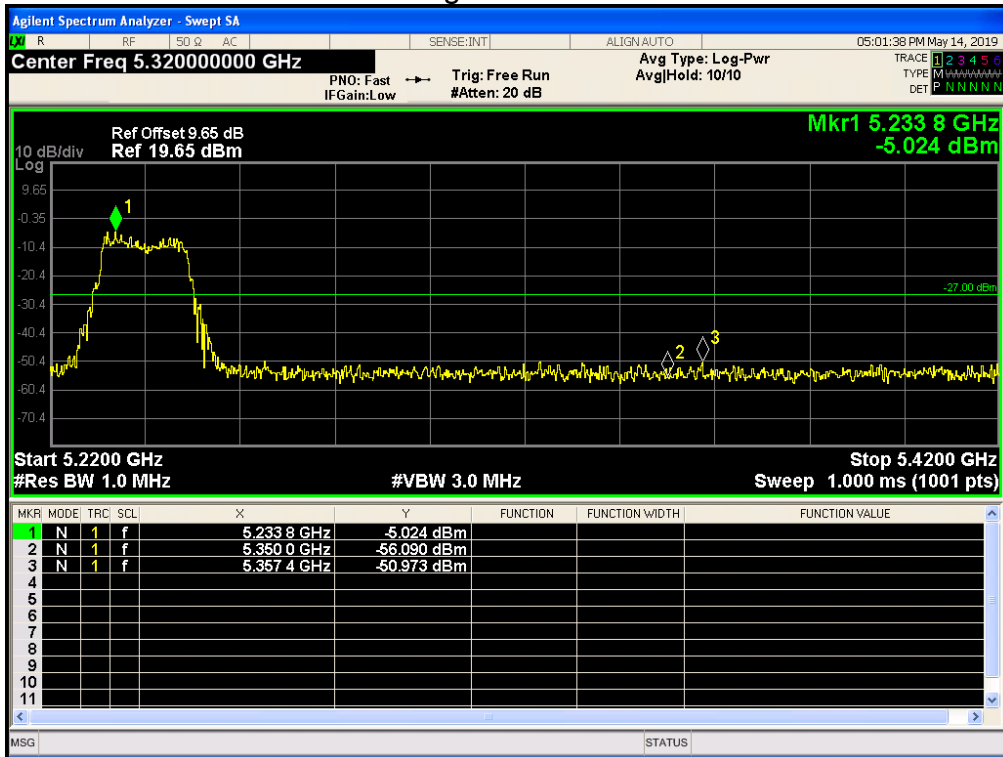
ANT2: Band Edge 802.11a 5240MHz



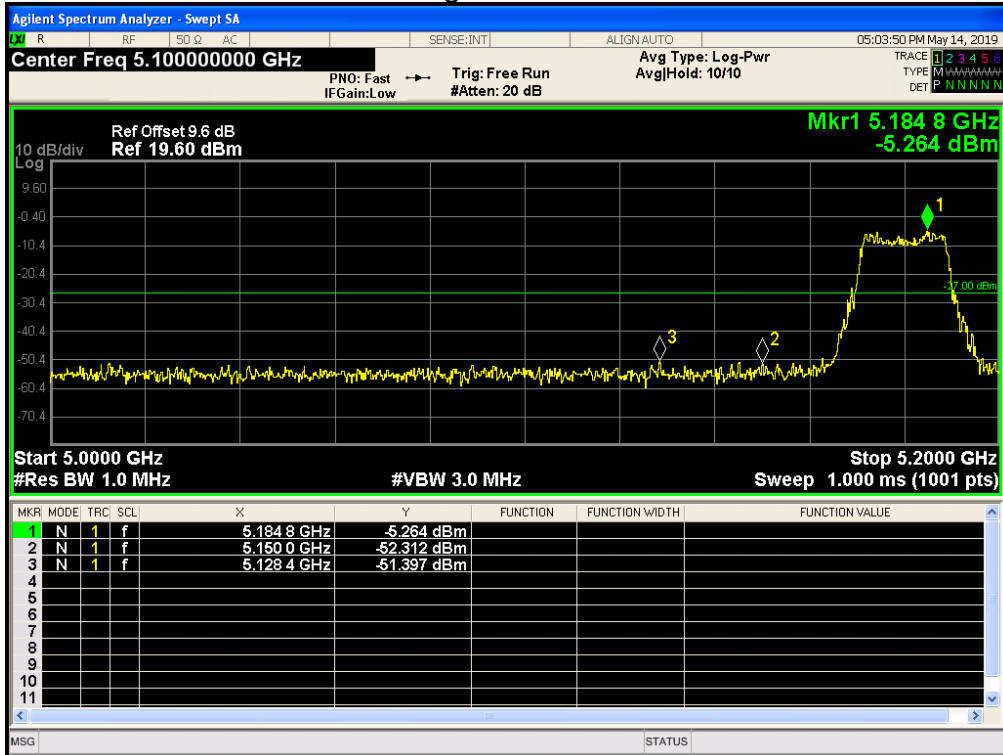
ANT1: Band Edge 802.11ac20 5180MHz



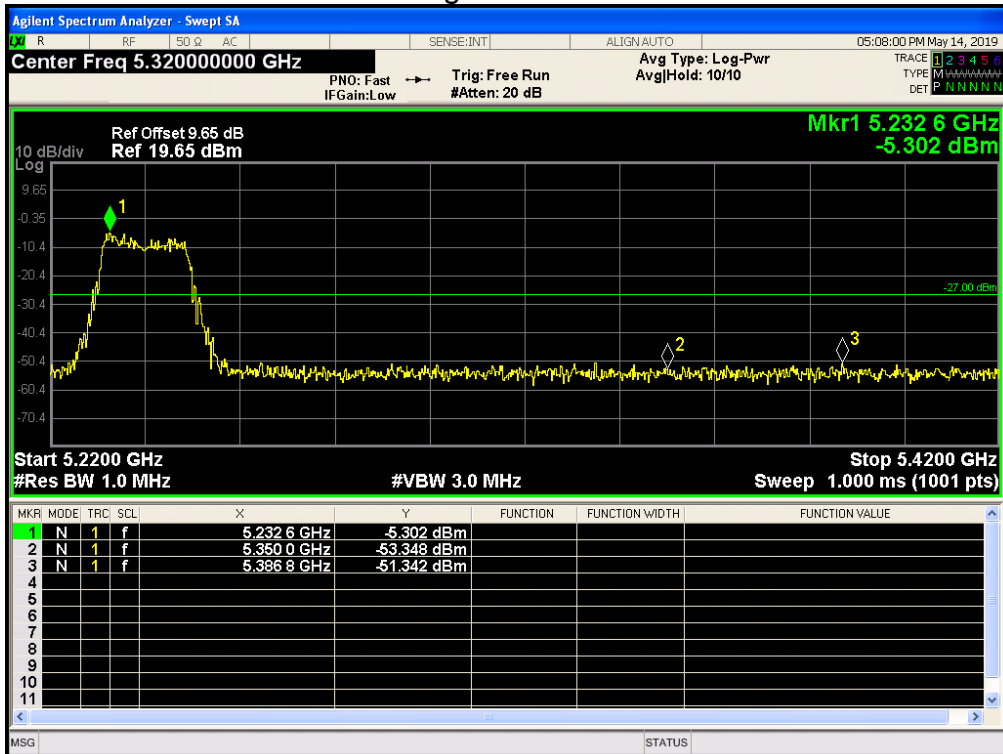
ANT1: Band Edge 802.11ac20 5240MHz



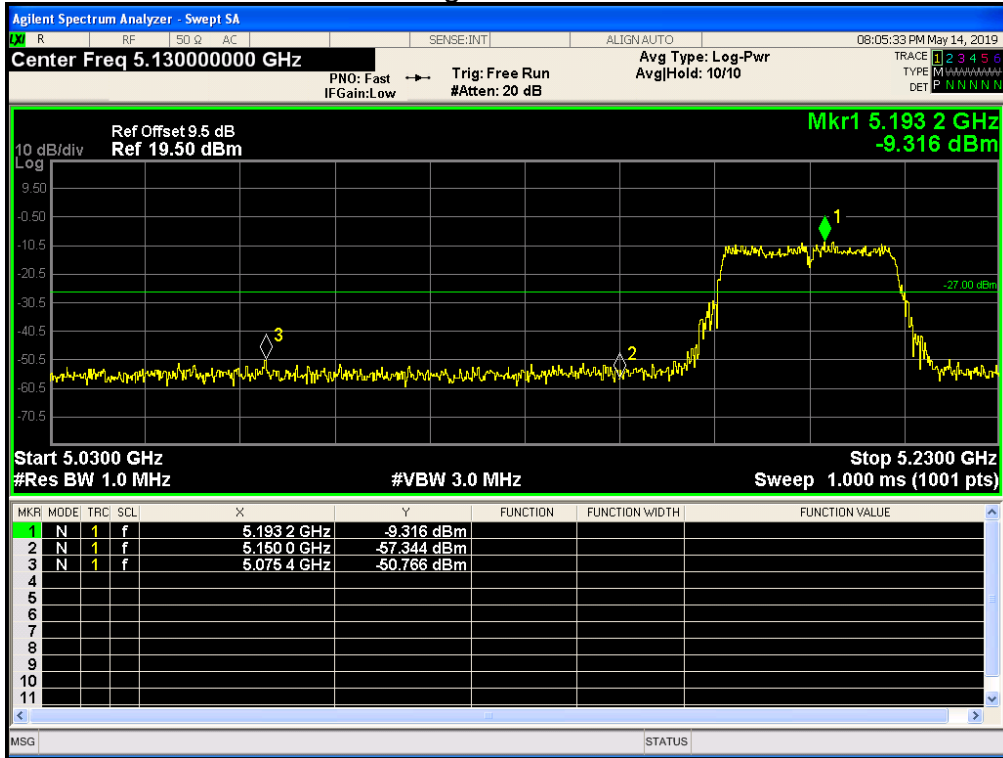
ANT2: Band Edge 802.11ac20 5180MHz



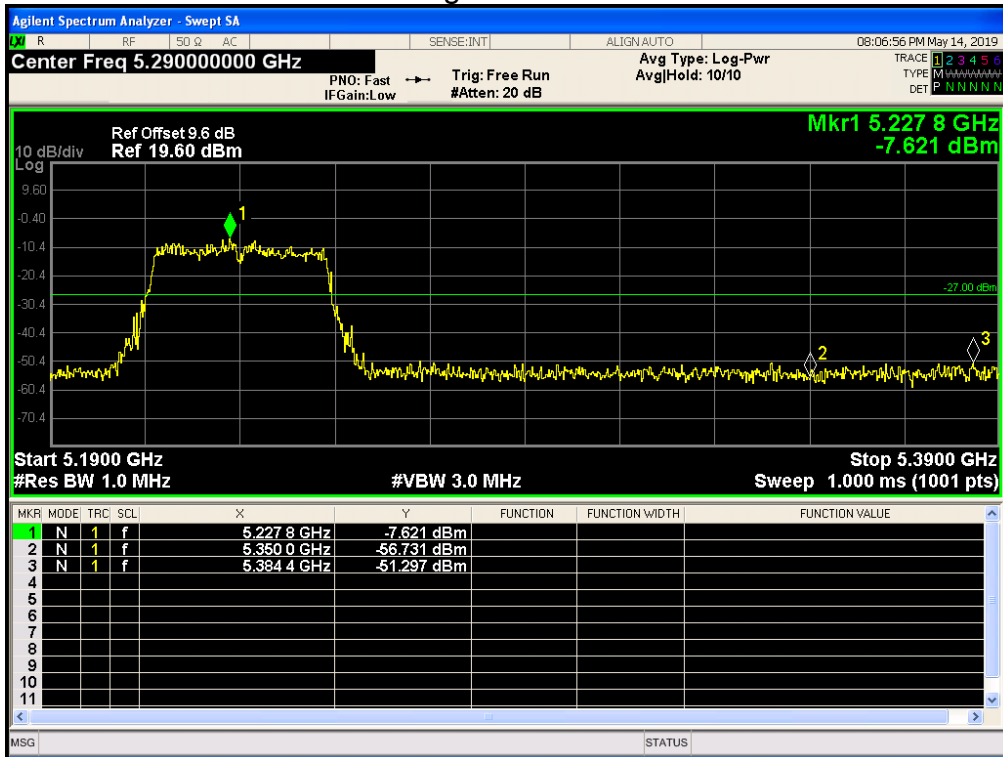
ANT2: Band Edge 802.11ac20 5240MHz



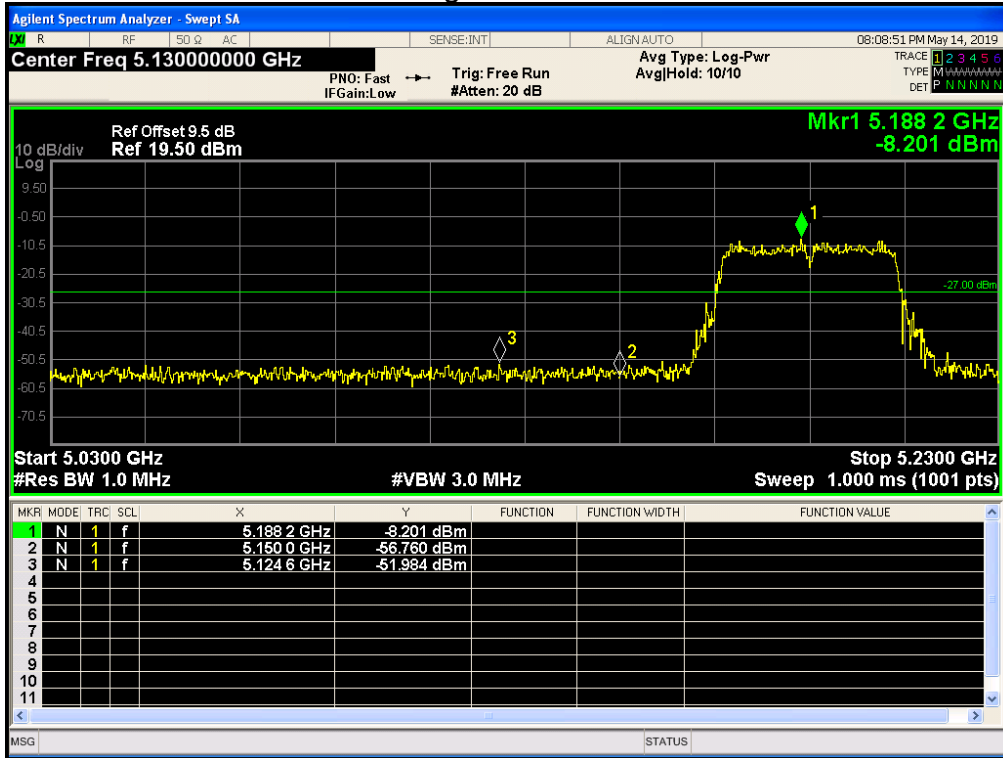
ANT1: Band Edge 802.11ac40 5190MHz



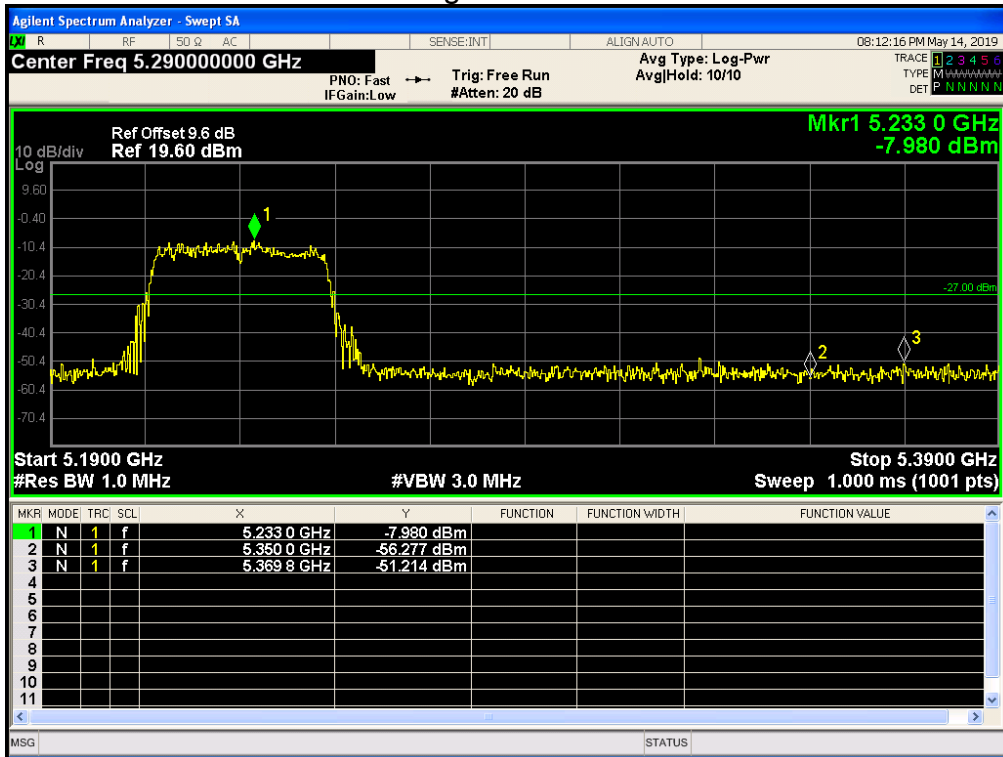
ANT1: Band Edge 802.11ac40 5230MHz



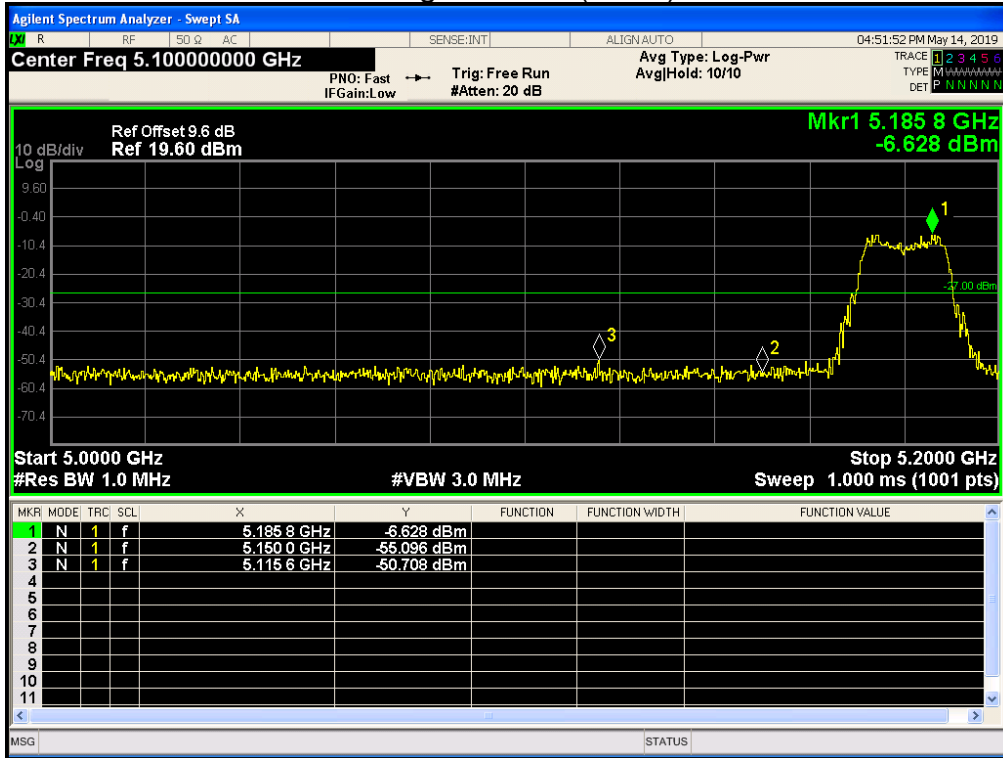
ANT2: Band Edge 802.11ac40 5190MHz



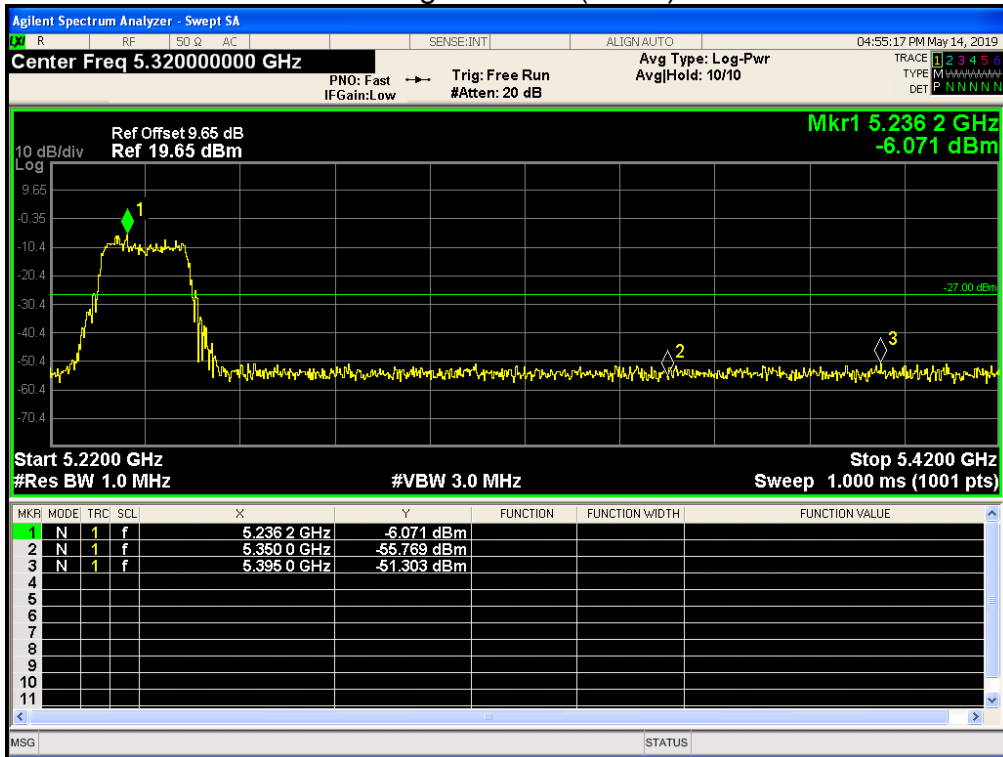
ANT2: Band Edge 802.11ac40 5230MHz



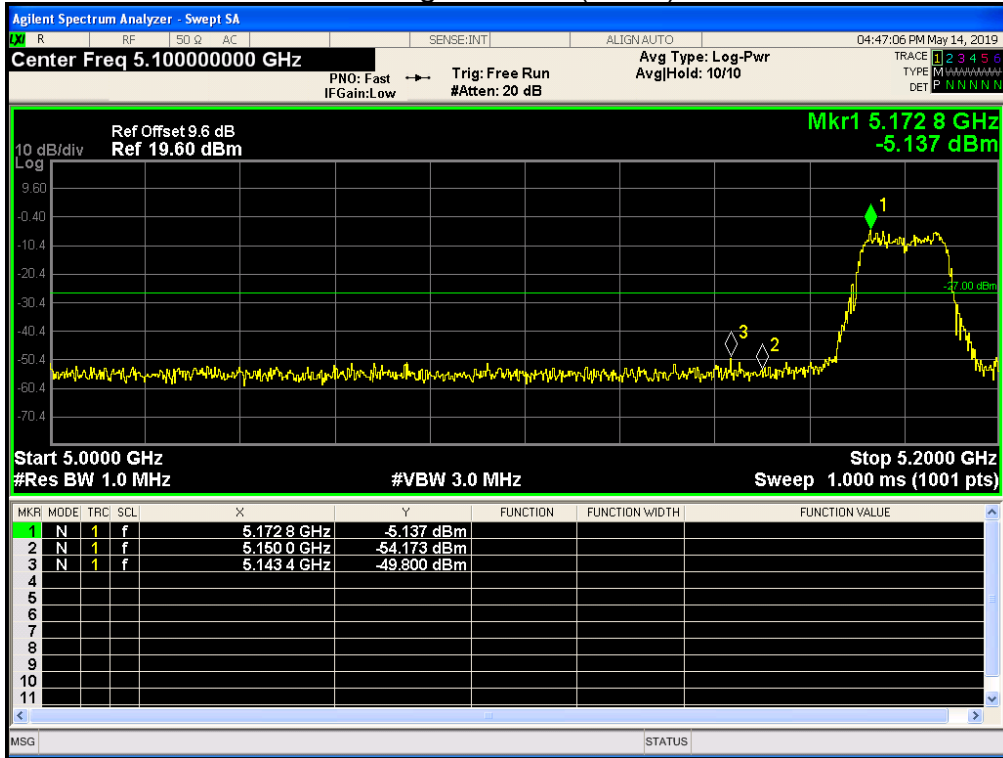
ANT1: Band Edge 802.11n(HT20) 5180MHz



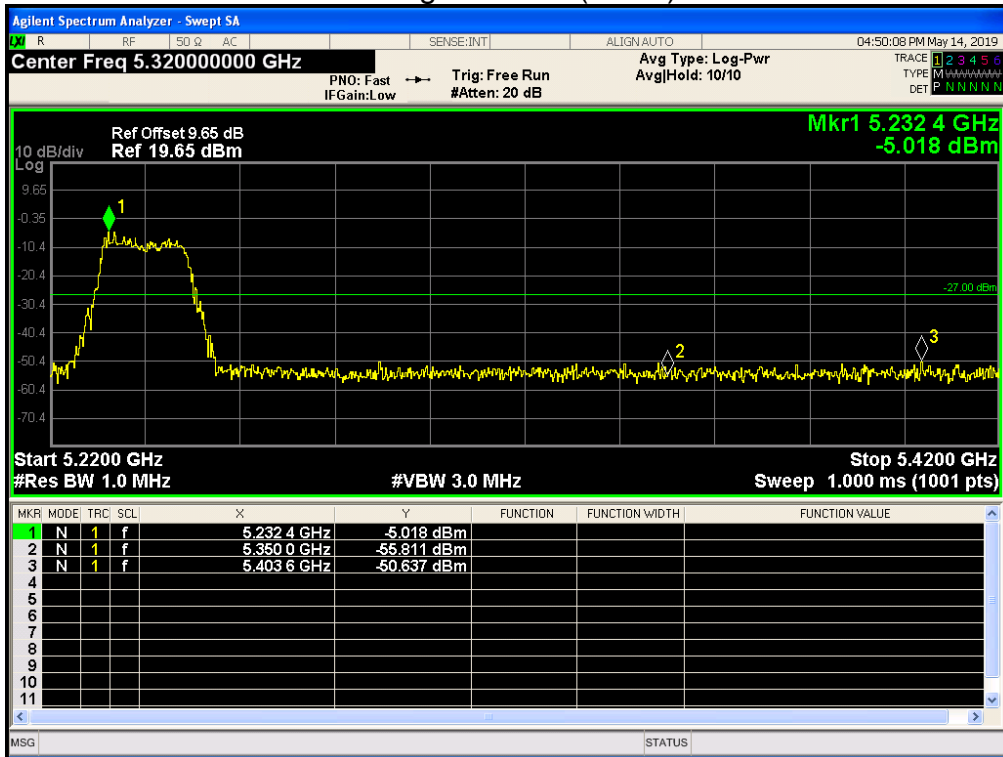
ANT1: Band Edge 802.11n(HT20) 5240MHz



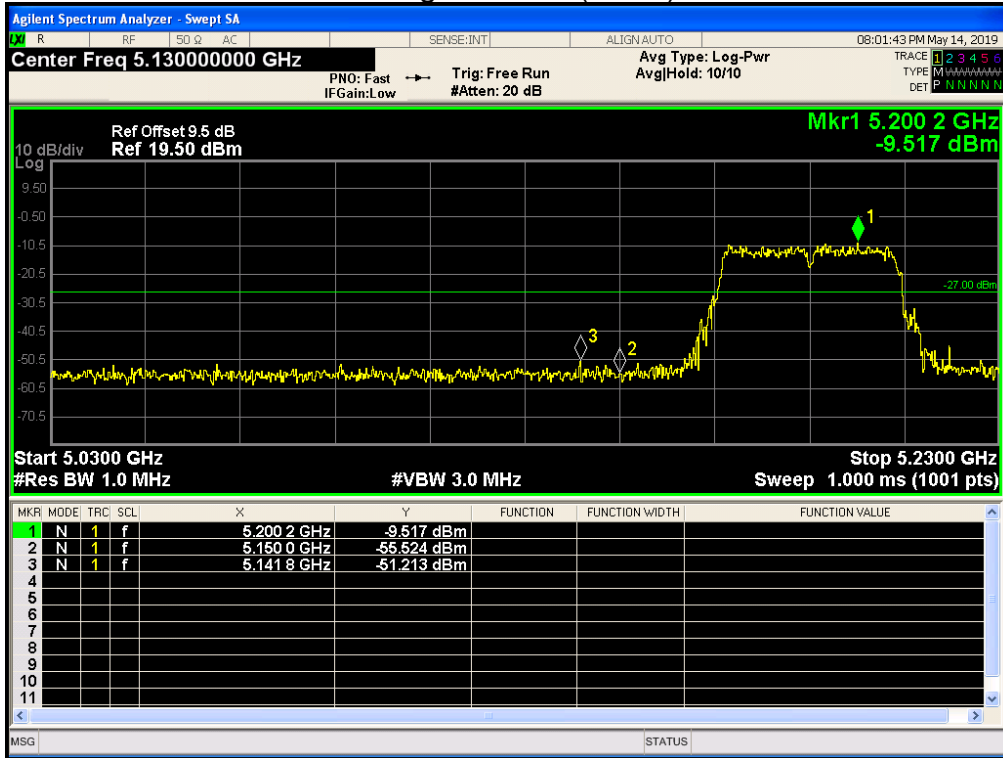
ANT2: Band Edge 802.11n(HT20) 5180MHz



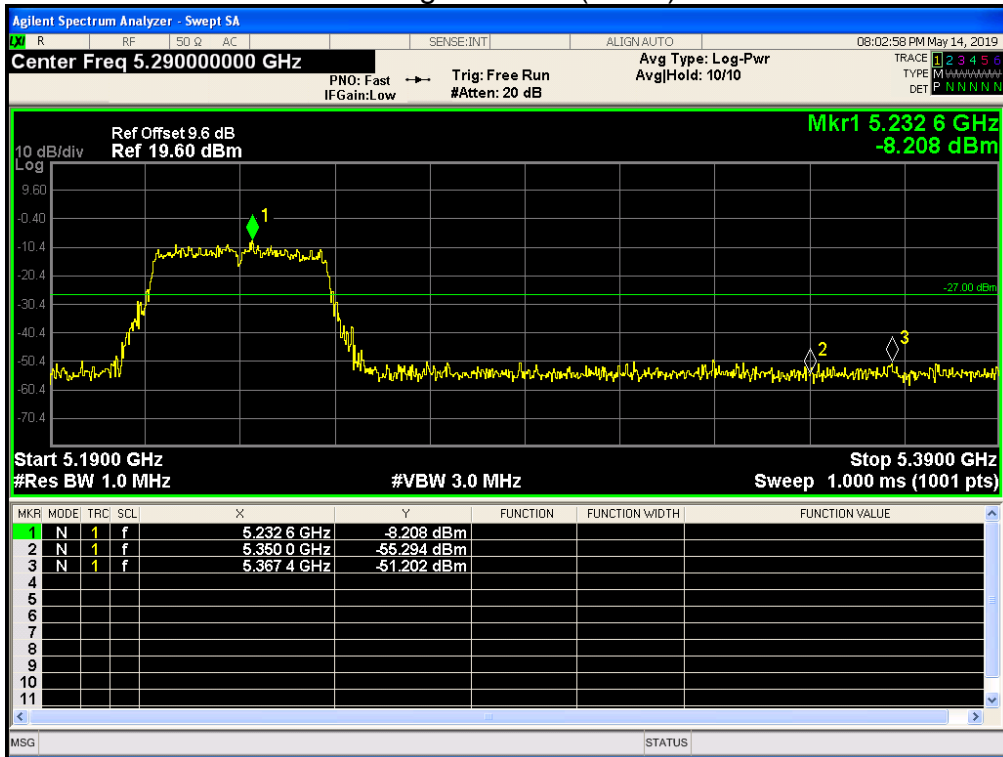
ANT2: Band Edge 802.11n(HT20) 5240MHz



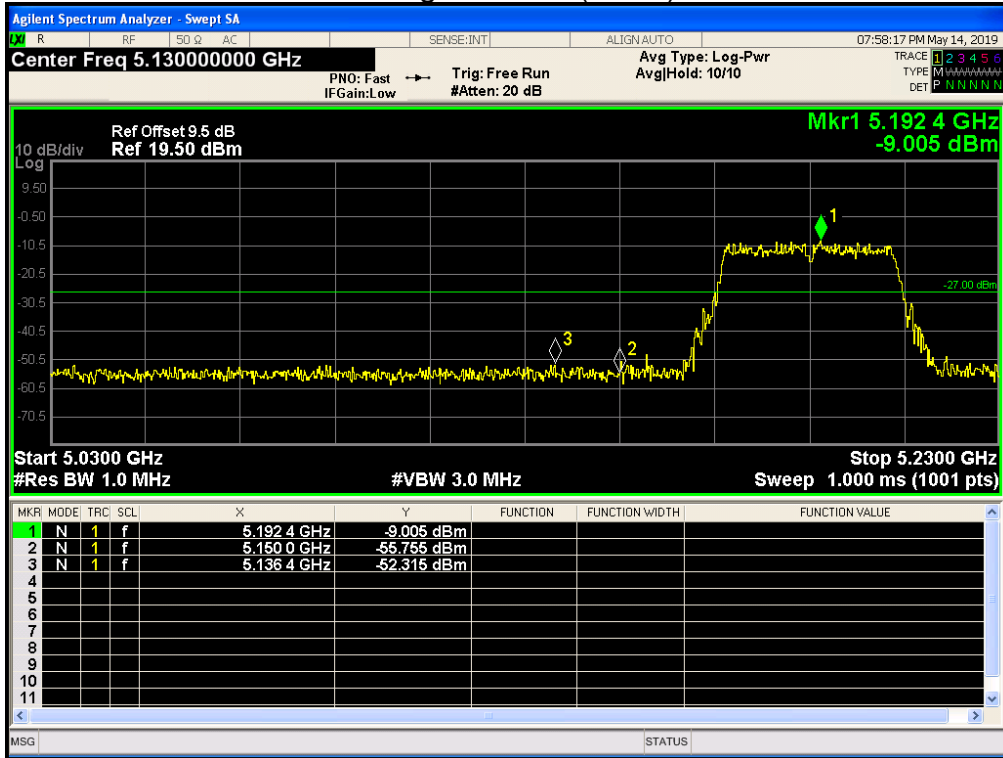
ANT1: Band Edge 802.11n(HT40) 5190MHz



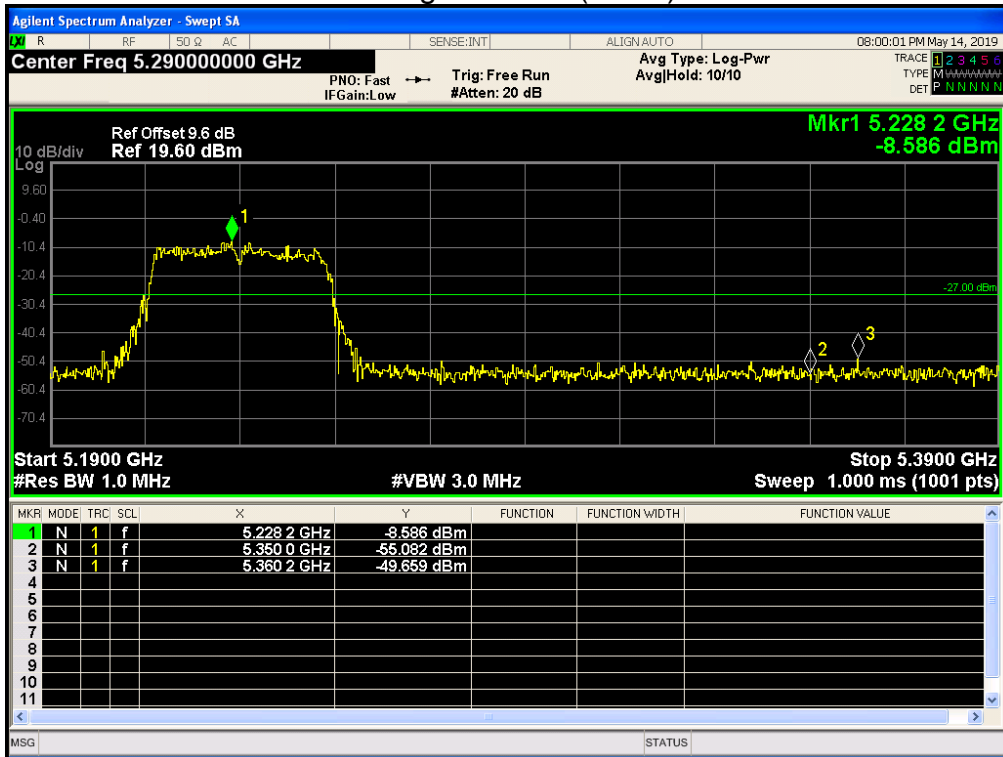
ANT1: Band Edge 802.11n(HT40) 5230MHz



ANT2: Band Edge 802.11n(HT40) 5190MHz

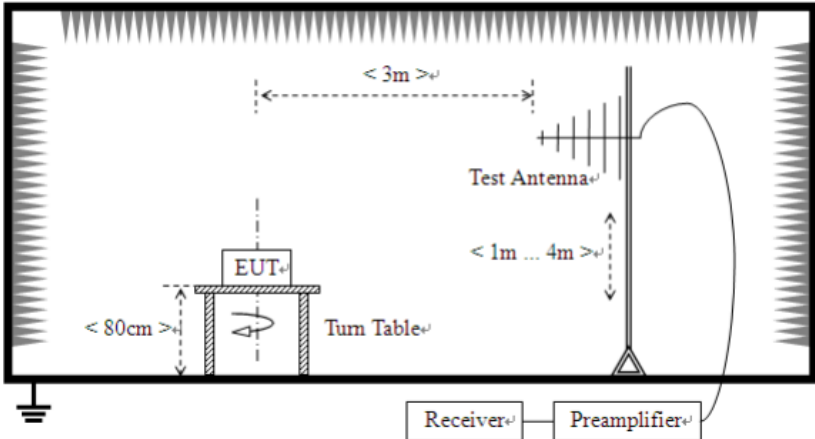


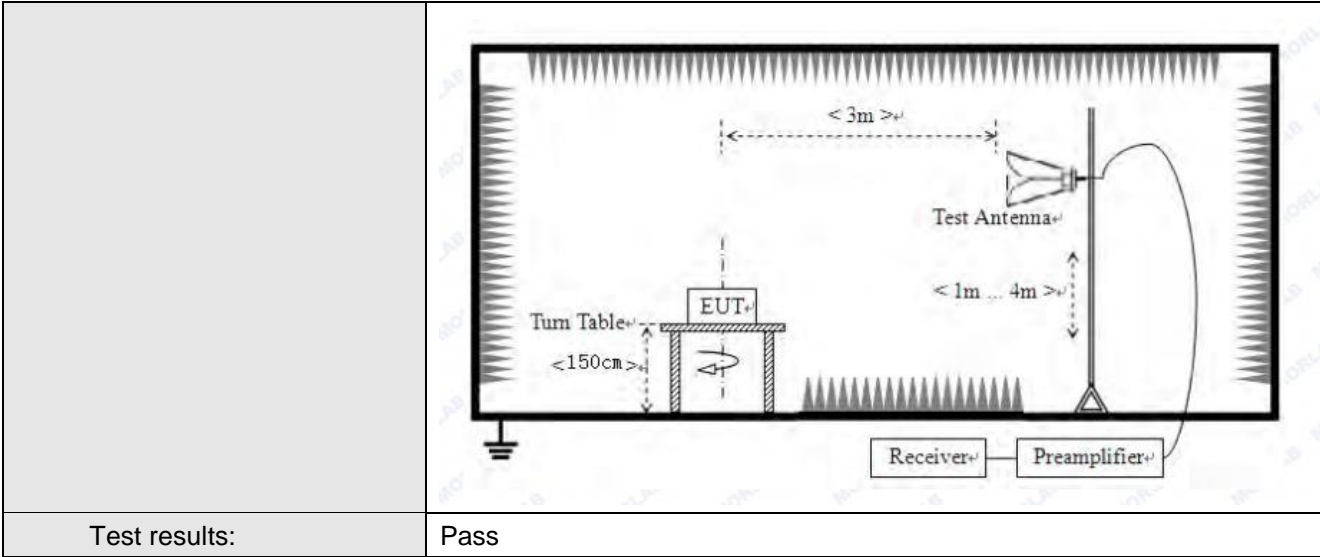
ANT2: Band Edge 802.11n(HT40) 5230MHz



4.6 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	30MHz to 40GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		AV	1MHz	3MHz	Average Value
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	74.0		Peak Value	
		54.0		Average Value	
Test Procedure:	<p>Substitution method was performed to determine the actual ERP emission levels of the EUT. The following test procedure as below:</p> <p>1>.Below 1GHz test procedure:</p> <ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. <p>2>.Above 1GHz test procedure:</p> <ol style="list-style-type: none"> 1. On the test site as test setup graph above, the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider. 2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter. The output of the test antenna shall be connected to the measuring receiver. 3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test. 4. The test antenna shall be raised and lowered from 1m to 4m until a 				

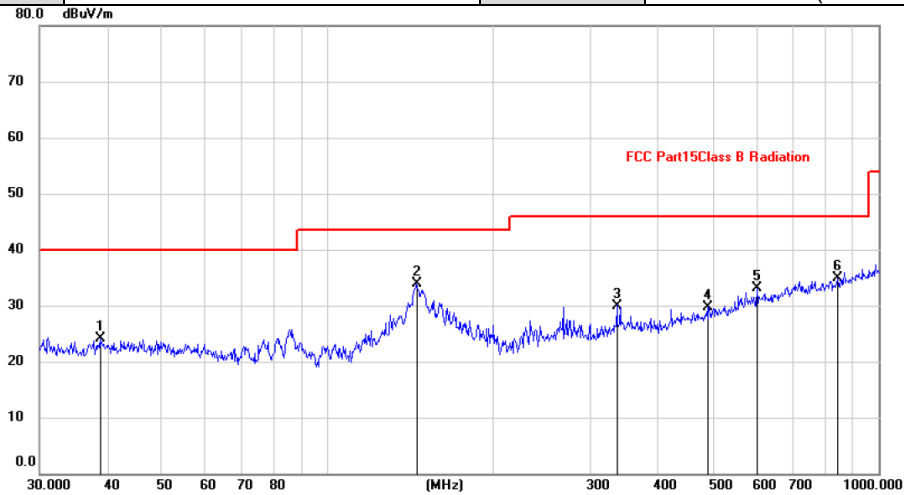
	<p>maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.</p> <ol style="list-style-type: none"> 5. Repeat step 4 for test frequency with the test antenna polarized horizontally. 6. Remove the transmitter and replace it with a substitution antenna 7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output. 8. Repeat step 7 with both antennas horizontally polarized for each test frequency. 9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula: $\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$ where: Pg is the generator output power into the substitution antenna.
Test setup:	<p>Below 1GHz</p>  <p>Above 1GHz</p>



Test results:

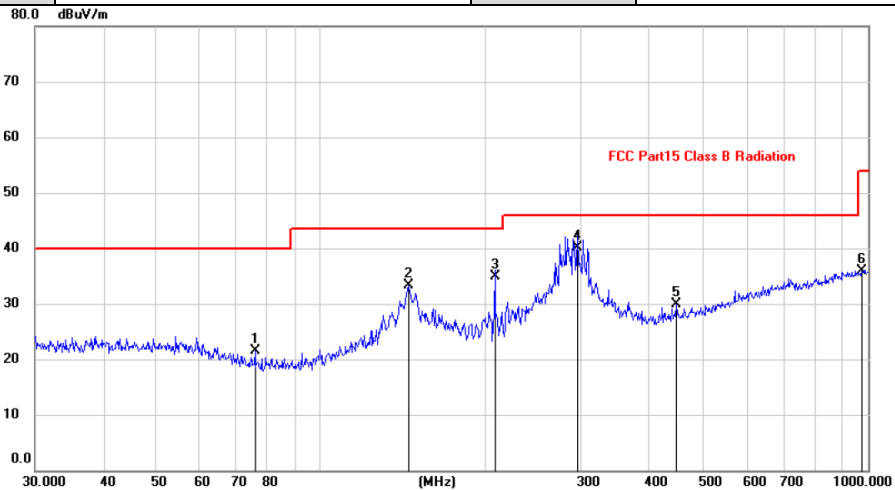
Pass

EUT Description	802.11ac Wireless USB Adapter	Model No.	U1233
Temperature	24°C	Humidity	56%
Pol	Vertical	Test date	2019/5/15
Test Voltage	AC 120V/60Hz	Test mode	802.11 ac20 (MID CH, ANT1+ANT2)



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Antenna Height cm	Table Degree	Comment
1	38.6160	9.10	14.91	24.01	40.00	-15.99	peak			
2 *	145.3506	18.26	15.69	33.95	43.50	-9.55	peak			
3	336.0352	13.85	16.15	30.00	46.00	-16.00	peak			
4	490.7447	10.34	19.45	29.79	46.00	-16.21	peak			
5	601.4265	11.32	21.69	33.01	46.00	-12.99	peak			
6	842.1296	10.16	24.70	34.86	46.00	-11.14	peak			

Pol	Horizontal	Test date	2019/5/15
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No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Antenna Height cm	Table Degree	Comment
1	75.7114	10.32	11.19	21.51	40.00	-18.49	peak			
2	144.8418	17.70	15.65	33.35	43.50	-10.15	peak			
3	207.8501	22.75	12.12	34.87	43.50	-8.63	QP			
4 *	294.1137	25.11	15.09	40.20	46.00	-5.80	QP			
5	446.4141	11.25	18.75	30.00	46.00	-16.00	peak			
6	975.7529	9.72	26.23	35.95	54.00	-18.05	peak			

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

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Above 1GHz:**(worst case : ANT1)****802.11a 5180MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360	18.58	39.67	14.62	32.65	40.22	74.00	-33.78	Vertical
15540	23.48	38.6	17.66	34.46	45.28	74.00	-28.72	Vertical
10360	25.32	39.67	14.62	32.65	46.96	74.00	-27.04	Horizontal
15540	23.43	38.6	17.66	34.46	45.23	74.00	-28.77	Horizontal

802.11a 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400	20.67	39.67	14.62	32.65	42.31	74.00	-31.69	Vertical
15600	23.91	38.6	17.66	34.46	45.71	74.00	-28.29	Vertical
10400	22.68	39.67	14.62	32.65	44.32	74.00	-29.68	Horizontal
15600	24.22	38.6	17.66	34.46	46.02	74.00	-27.98	Horizontal

802.11a 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480	23.30	39.67	14.62	32.65	44.94	74.00	-29.06	Vertical
15720	21.36	38.6	17.66	34.46	43.16	74.00	-30.84	Vertical
10480	22.62	39.67	14.62	32.65	44.26	74.00	-29.74	Horizontal
15720	25.60	38.6	17.66	34.46	47.40	74.00	-26.60	Horizontal

(worst case : ANT1+ANT2)**802.11n(HT20) 5180MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360	20.78	39.67	14.62	32.65	42.42	74.00	-31.58	Vertical
15540	19.13	38.6	17.66	34.46	40.93	74.00	-33.07	Vertical
10360	28.83	39.67	14.62	32.65	50.47	74.00	-23.53	Horizontal
15540	28.11	38.6	17.66	34.46	49.91	74.00	-24.09	Horizontal

802.11n(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400	23.00	39.67	14.62	32.65	44.64	74.00	-29.36	Vertical
15600	24.24	38.6	17.66	34.46	46.04	74.00	-27.96	Vertical
10400	26.21	39.67	14.62	32.65	47.85	74.00	-26.15	Horizontal
15600	19.56	38.6	17.66	34.46	41.36	74.00	-32.64	Horizontal

802.11n(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480	26.26	39.67	14.62	32.65	47.90	74.00	-26.10	Vertical
15720	21.25	38.6	17.66	34.46	43.05	74.00	-30.95	Vertical
10480	21.83	39.67	14.62	32.65	43.47	74.00	-30.53	Horizontal
15720	20.85	38.6	17.66	34.46	42.65	74.00	-31.35	Horizontal

(worst case : ANT1+ANT2)**802.11ac(HT20) 5180MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360	22.41	39.67	14.62	32.65	44.05	74.00	-29.95	Vertical
15540	22.55	38.6	17.66	34.46	44.35	74.00	-29.65	Vertical
10360	24.37	39.67	14.62	32.65	46.01	74.00	-27.99	Horizontal
15540	25.76	38.6	17.66	34.46	47.56	74.00	-26.44	Horizontal

802.11ac(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10400	20.24	39.67	14.62	32.65	41.88	74.00	-32.12	Vertical
15600	26.26	38.6	17.66	34.46	48.06	74.00	-25.94	Vertical
10400	27.13	39.67	14.62	32.65	48.77	74.00	-25.23	Horizontal
15600	20.57	38.6	17.66	34.46	42.37	74.00	-31.63	Horizontal

802.11ac(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10480	23.87	39.67	14.62	32.65	45.51	74.00	-28.49	Vertical
15720	21.33	38.6	17.66	34.46	43.13	74.00	-30.87	Vertical
10480	24.06	39.67	14.62	32.65	45.70	74.00	-28.30	Horizontal
15720	24.61	38.6	17.66	34.46	46.41	74.00	-27.59	Horizontal

(worst case : ANT1+ANT2)**802.11n(HT40) 5190MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380	24.44	39.67	14.62	32.65	46.08	74.00	-27.92	Vertical
15570	22.48	38.6	17.66	34.46	44.28	74.00	-29.72	Vertical
10380	24.71	39.67	14.62	32.65	46.35	74.00	-27.65	Horizontal
15570	25.74	38.6	17.66	34.46	47.54	74.00	-26.46	Horizontal

802.11n(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460	24.13	39.67	14.62	32.65	45.77	74.00	-28.23	Vertical
15690	23.41	38.6	17.66	34.46	45.21	74.00	-28.79	Vertical
10460	24.15	39.67	14.62	32.65	45.79	74.00	-28.21	Horizontal
15690	25.36	38.6	17.66	34.46	47.16	74.00	-26.84	Horizontal

802.11ac(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10380	21.32	39.67	14.62	32.65	42.96	74.00	-31.04	Vertical
15570	20.67	38.6	17.66	34.46	42.47	74.00	-31.53	Vertical
10380	23.80	39.67	14.62	32.65	45.44	74.00	-28.56	Horizontal
15570	21.64	38.6	17.66	34.46	43.44	74.00	-30.56	Horizontal

(worst case : ANT1+ANT2)**802.11ac(HT40) 5230MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10460	23.91	39.67	14.62	32.65	45.55	74.00	-28.45	Vertical
15690	22.97	38.6	17.66	34.46	44.77	74.00	-29.23	Vertical
10460	21.95	39.67	14.62	32.65	43.59	74.00	-30.41	Horizontal
15690	23.75	38.6	17.66	34.46	45.55	74.00	-28.45	Horizontal

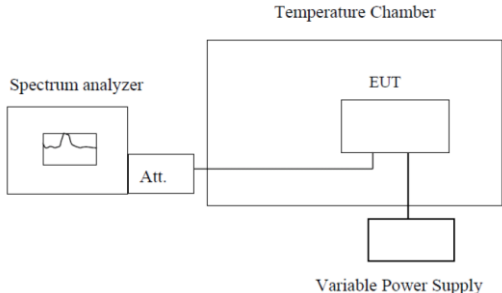
(worst case : ANT1+ANT2)**802.11ac(HT80) 5210MHz**

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10420	21.87	39.67	14.62	32.65	43.51	74.00	-30.49	Vertical
15630	23.21	38.6	17.66	34.46	45.01	74.00	-28.99	Vertical
10420	25.05	39.67	14.62	32.65	46.69	74.00	-27.31	Horizontal
15630	25.14	38.6	17.66	34.46	46.94	74.00	-27.06	Horizontal

Note:

1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

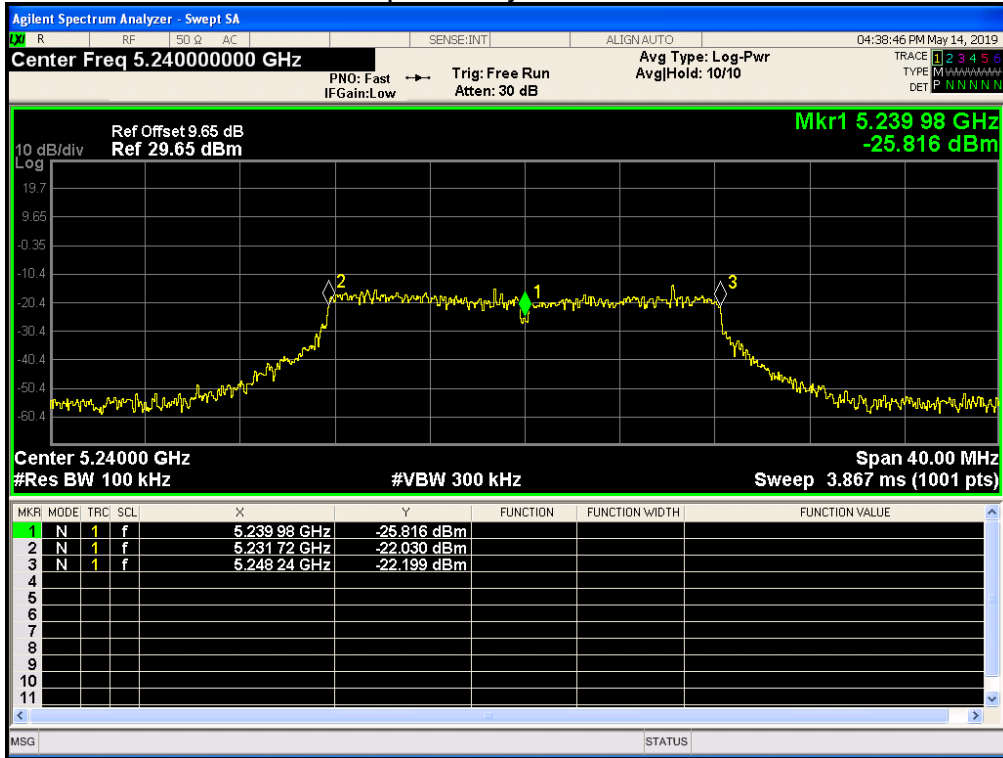
5 Frequency Stability

Test Requirement:	FCC Part15 E Section 15.407 (g)
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 user's manual.
Test setup:	 <p>The diagram illustrates the test setup. On the left, a 'Spectrum analyzer' is shown with a small graph on its screen. A line connects it to a box labeled 'Att.' (Attenuator). From the 'Att.' box, a line goes to the 'EUT' (Equipment Under Test) inside a larger box labeled 'Temperature Chamber'. Below the 'Temperature Chamber' box, a line connects to a box labeled 'Variable Power Supply'.</p>
Test procedure:	<ol style="list-style-type: none"> 1. The EUT is installed in an environment test chamber with external power source. 2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT. 3. A sufficient stabilization period at each temperature is used prior to each frequency measurement. 4. When temperature is stabled, measure the frequency stability. 5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.
Test results:	Pass

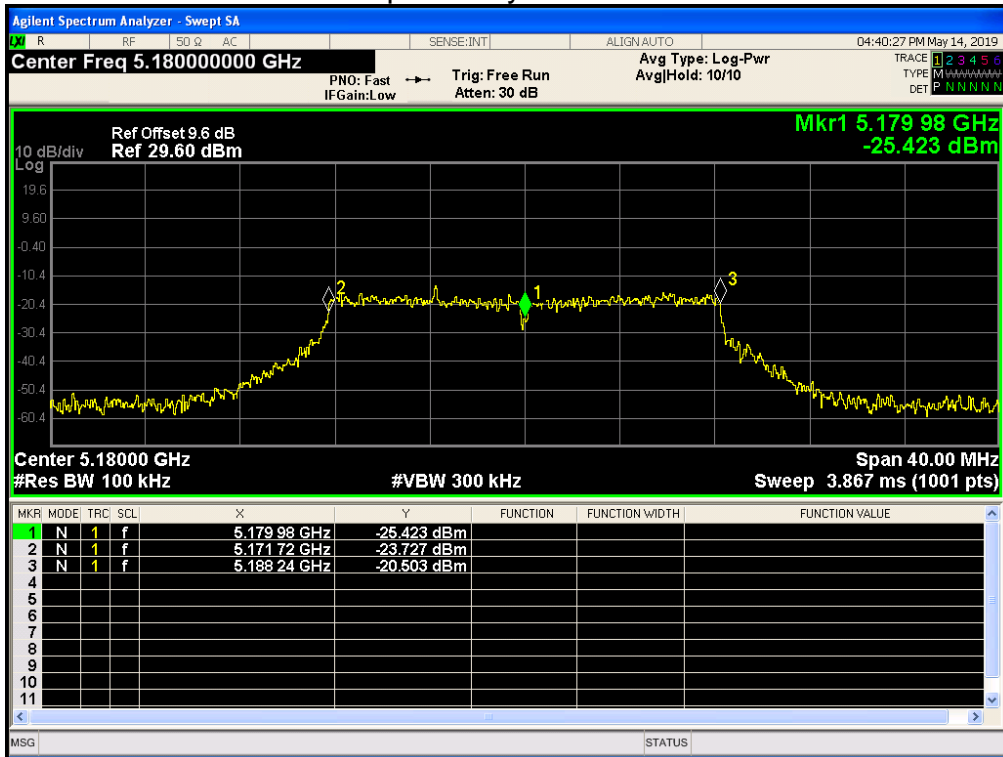
Measurement Data:

Condition	Mode	Frequency (MHz)	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
ANT1	802.11a	5180	5179.98	3.86	25	Pass
ANT1	802.11a	5200	5199.96	7.69	25	Pass
ANT1	802.11a	5240	5239.98	3.82	25	Pass
ANT2	802.11a	5180	5179.98	3.86	25	Pass
ANT2	802.11a	5200	5199.96	7.69	25	Pass
ANT2	802.11a	5240	5239.96	7.63	25	Pass
ANT1	802.11ac20	5180	5179.98	3.86	25	Pass
ANT1	802.11ac20	5200	5199.94	11.54	25	Pass
ANT1	802.11ac20	5240	5239.96	7.63	25	Pass
ANT2	802.11ac20	5180	5180	0	25	Pass
ANT2	802.11ac20	5200	5199.96	7.69	25	Pass
ANT2	802.11ac20	5240	5239.96	7.63	25	Pass
ANT1	802.11ac40	5190	5190	0	25	Pass
ANT1	802.11ac40	5230	5229.92	15.3	25	Pass
ANT2	802.11ac40	5190	5189.96	7.71	25	Pass
ANT2	802.11ac40	5230	5230	0	25	Pass
ANT1	802.11ac80	5210	5210	0	25	Pass
ANT2	802.11ac80	5210	5210	0	25	Pass
ANT1	802.11n(HT20)	5180	5179.96	7.72	25	Pass
ANT1	802.11n(HT20)	5200	5199.94	11.54	25	Pass
ANT1	802.11n(HT20)	5240	5239.92	15.27	25	Pass
ANT2	802.11n(HT20)	5180	5180	0	25	Pass
ANT2	802.11n(HT20)	5200	5199.98	3.85	25	Pass
ANT2	802.11n(HT20)	5240	5239.96	7.63	25	Pass
ANT1	802.11n(HT40)	5190	5189.96	7.71	25	Pass
ANT1	802.11n(HT40)	5230	5230	0	25	Pass
ANT2	802.11n(HT40)	5190	5189.96	7.71	25	Pass
ANT2	802.11n(HT40)	5230	5229.92	15.3	25	Pass

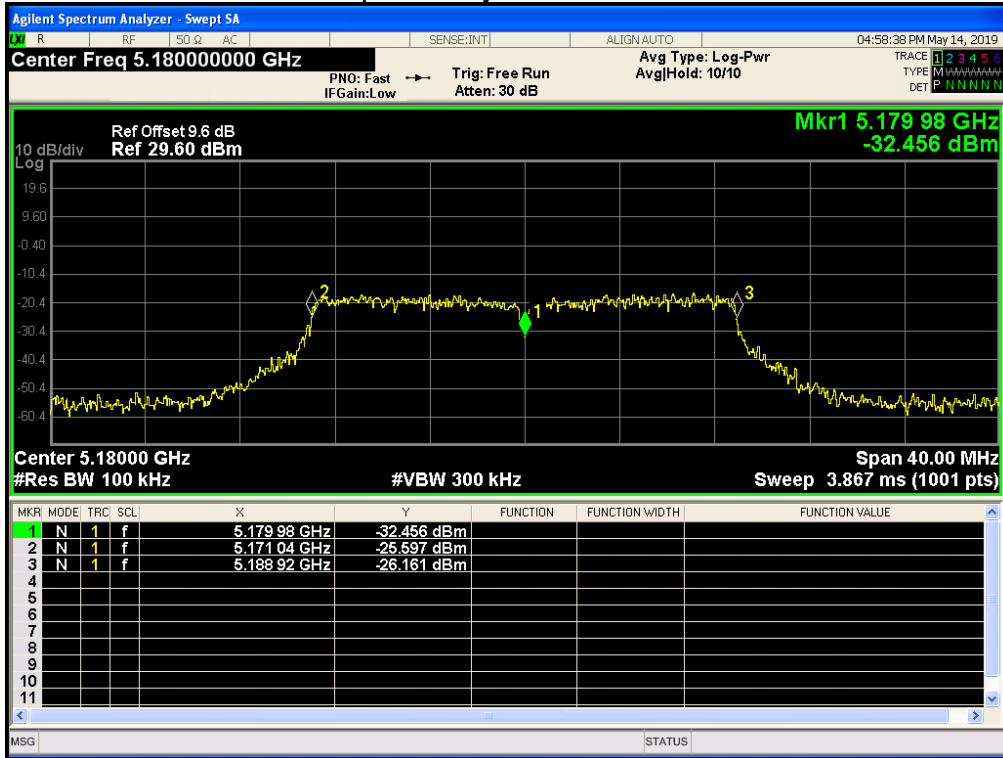
ANT1: Freq. Stability 802.11a 5240MHz



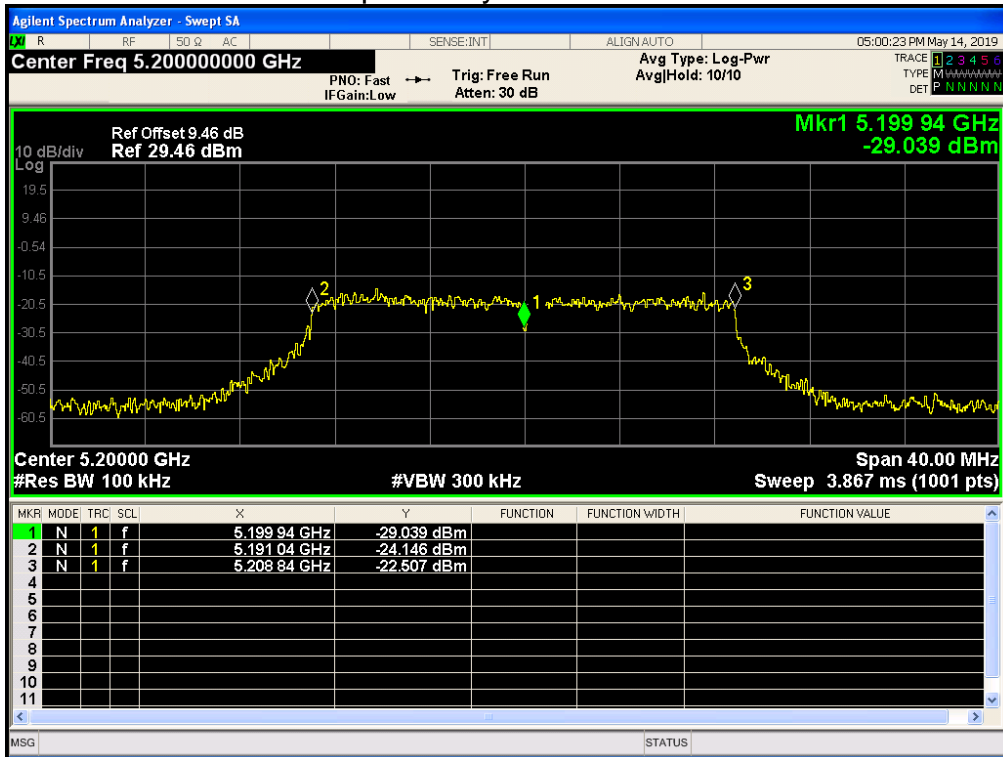
ANT2: Freq. Stability 802.11a 5180MHz



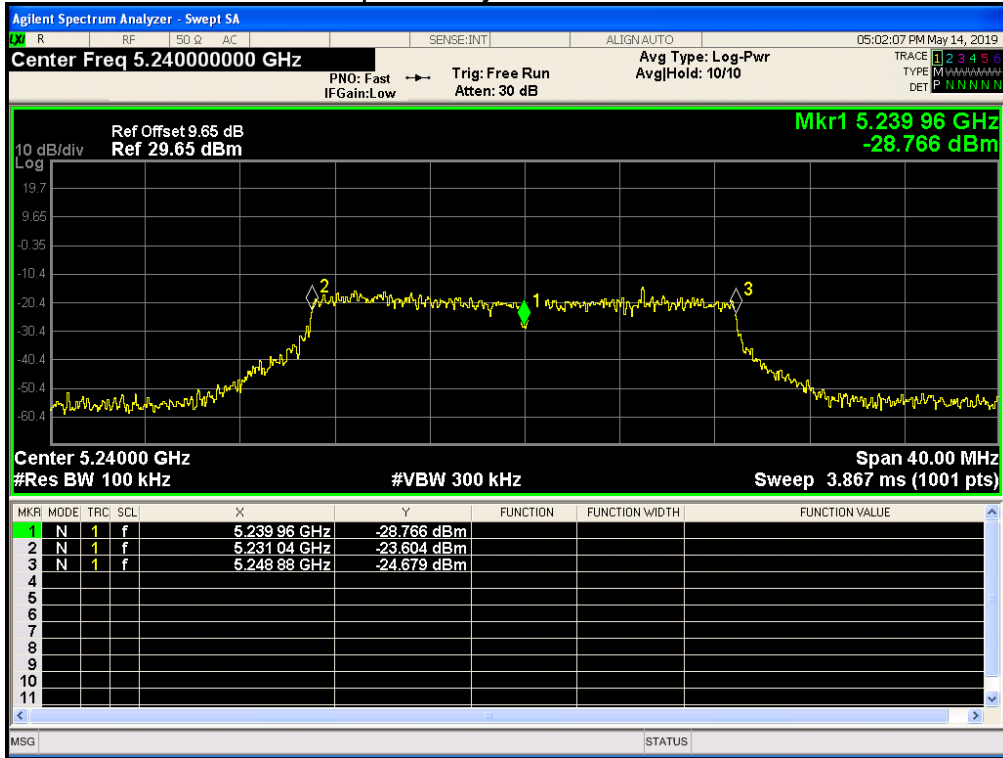
ANT1: Freq. Stability 802.11ac20 5180MHz



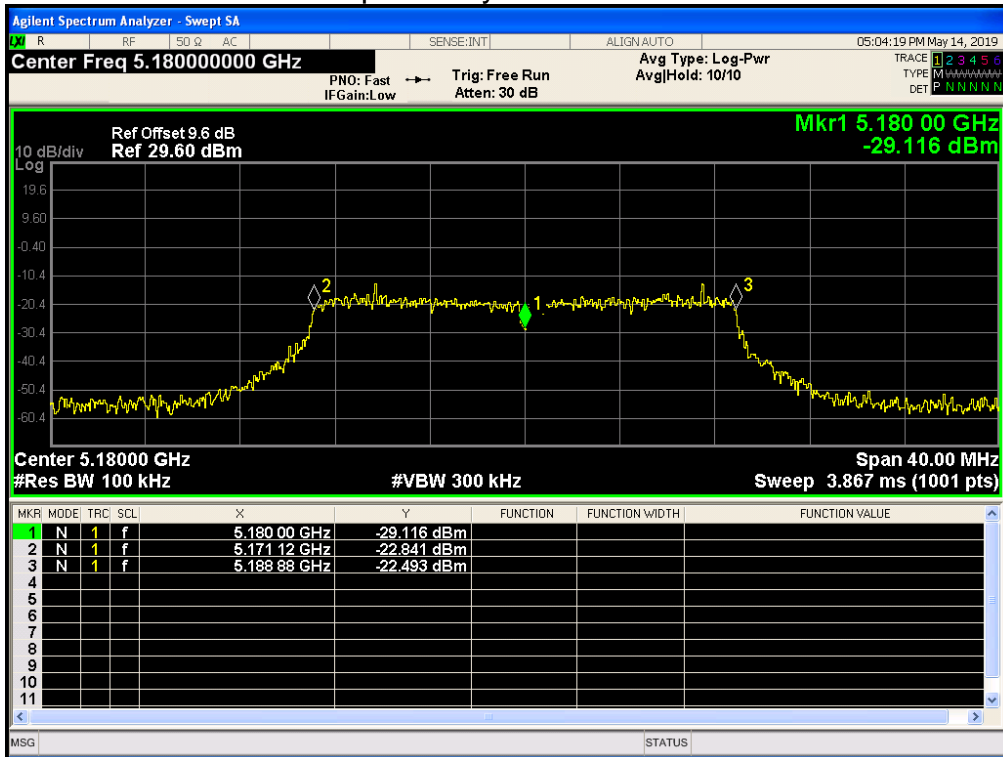
ANT1: Freq. Stability 802.11ac20 5200MHz



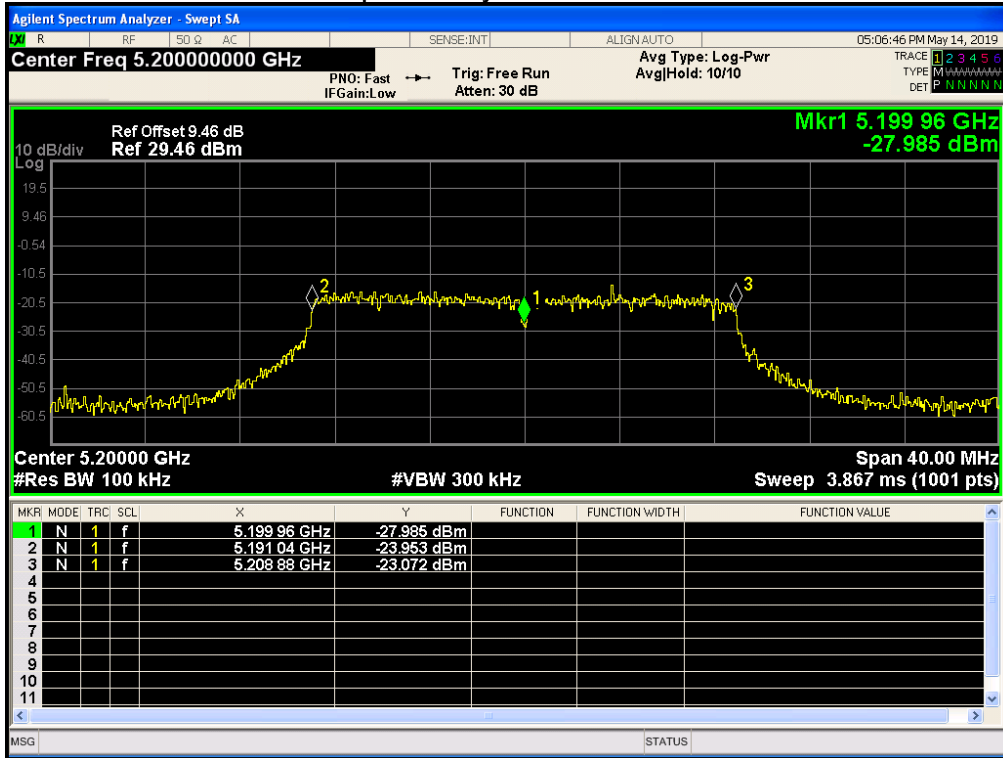
ANT1: Freq. Stability 802.11ac20 5240MHz



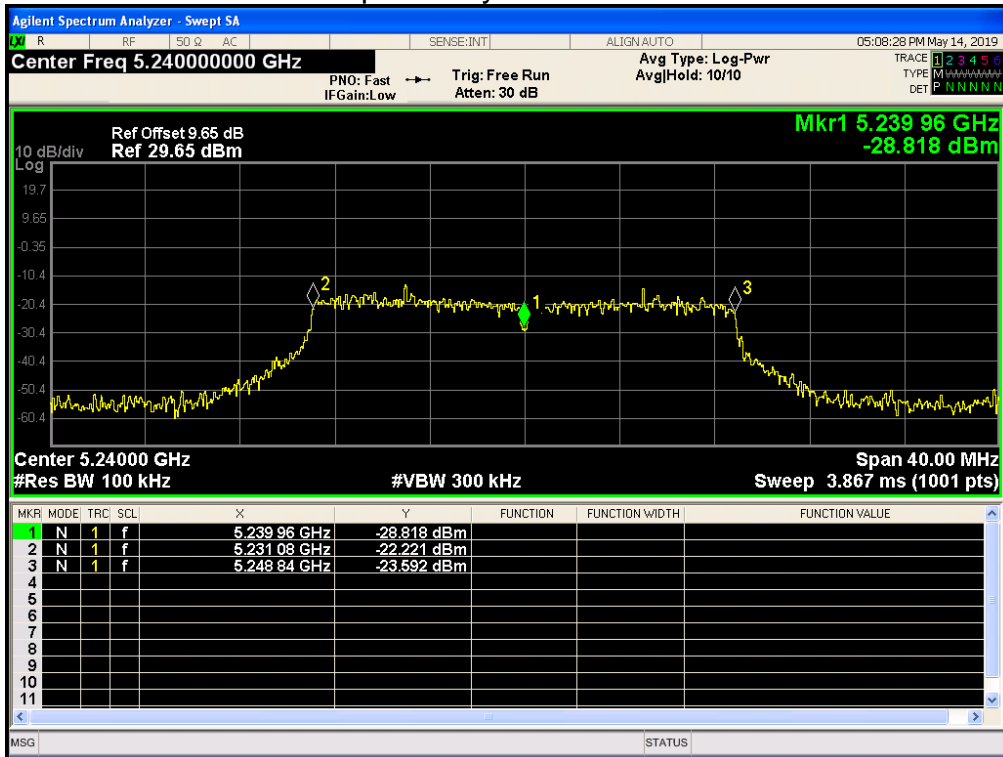
ANT2: Freq. Stability 802.11ac20 5180MHz



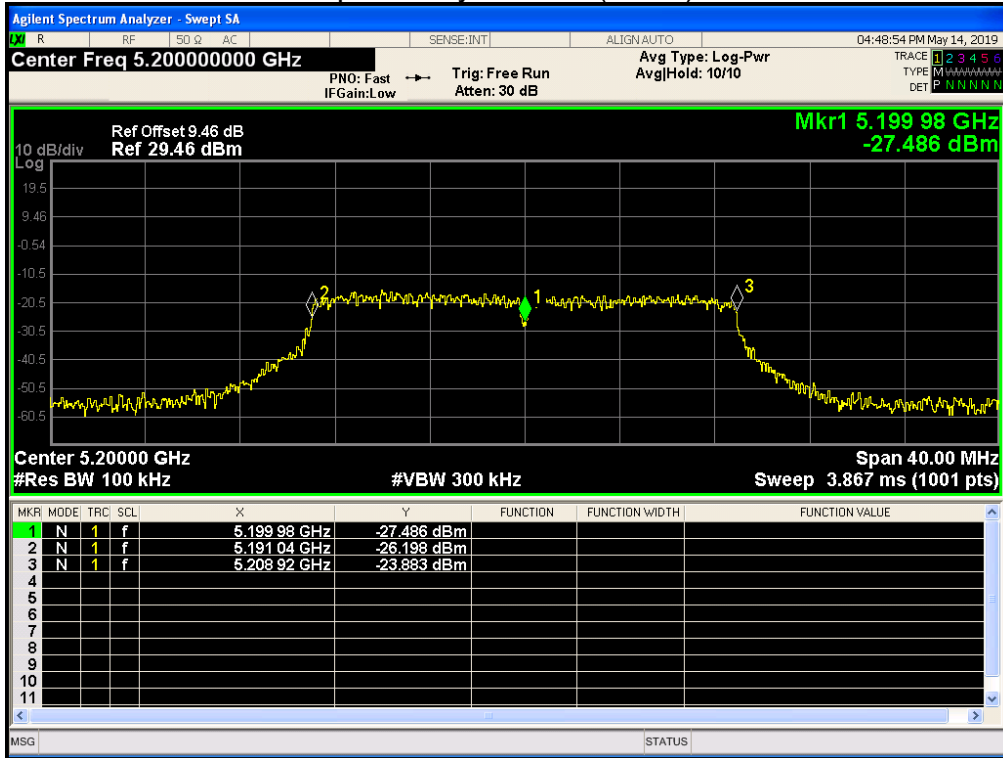
ANT2: Freq. Stability 802.11ac20 5200MHz



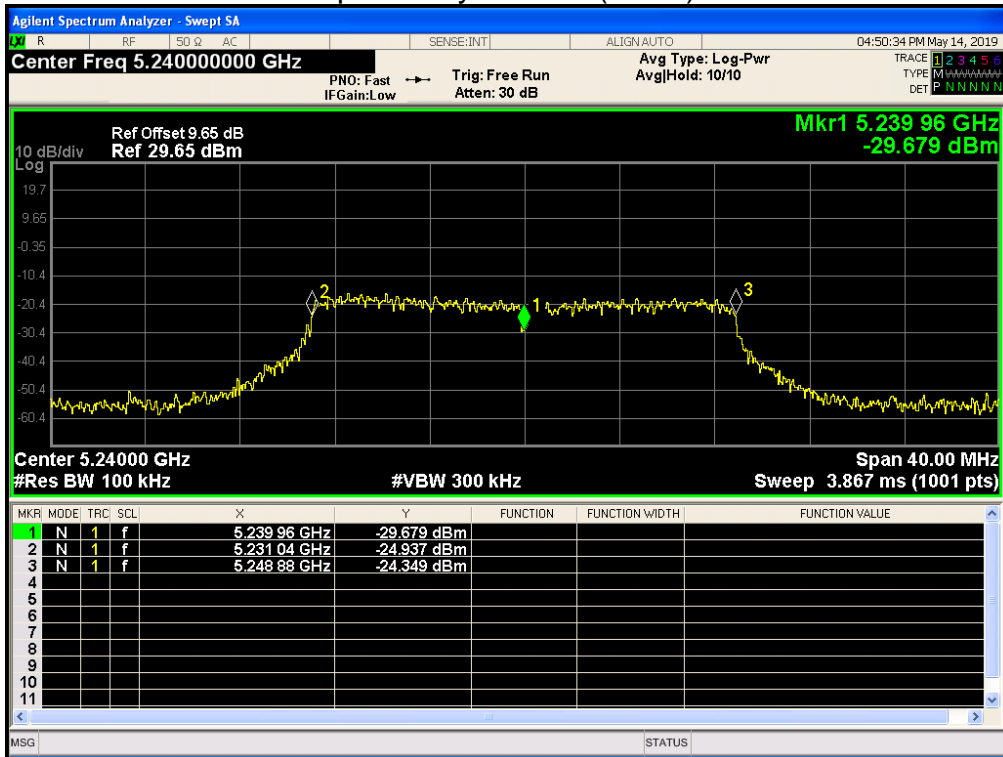
ANT2: Freq. Stability 802.11ac20 5240MHz



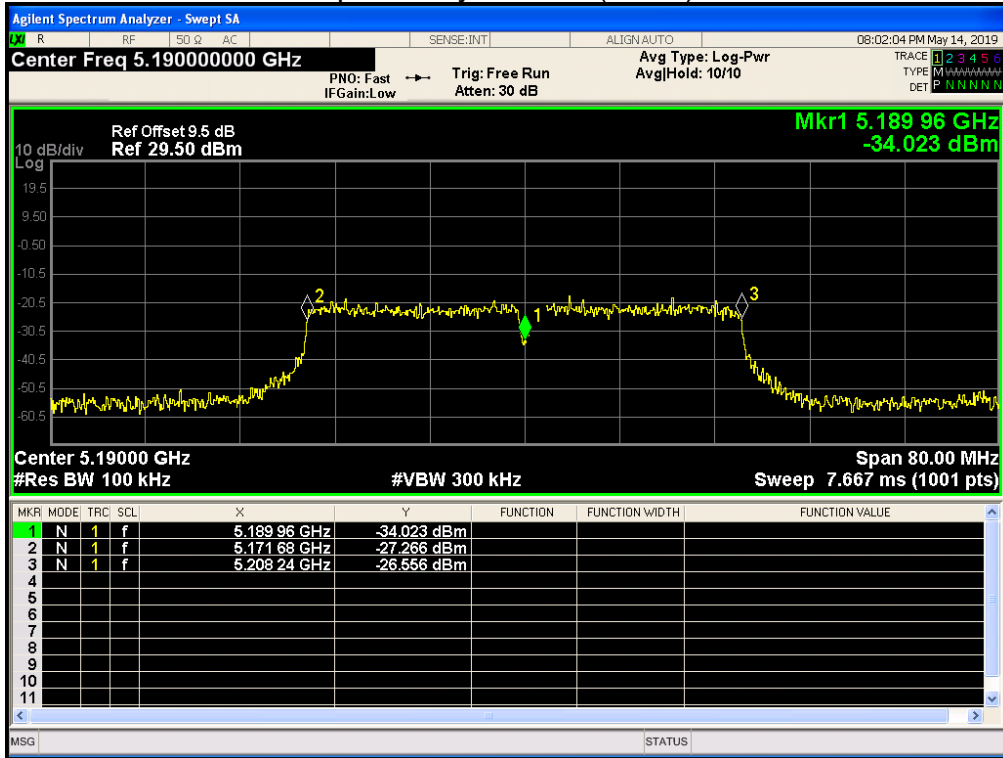
ANT2: Freq. Stability 802.11n(HT20) 5200MHz



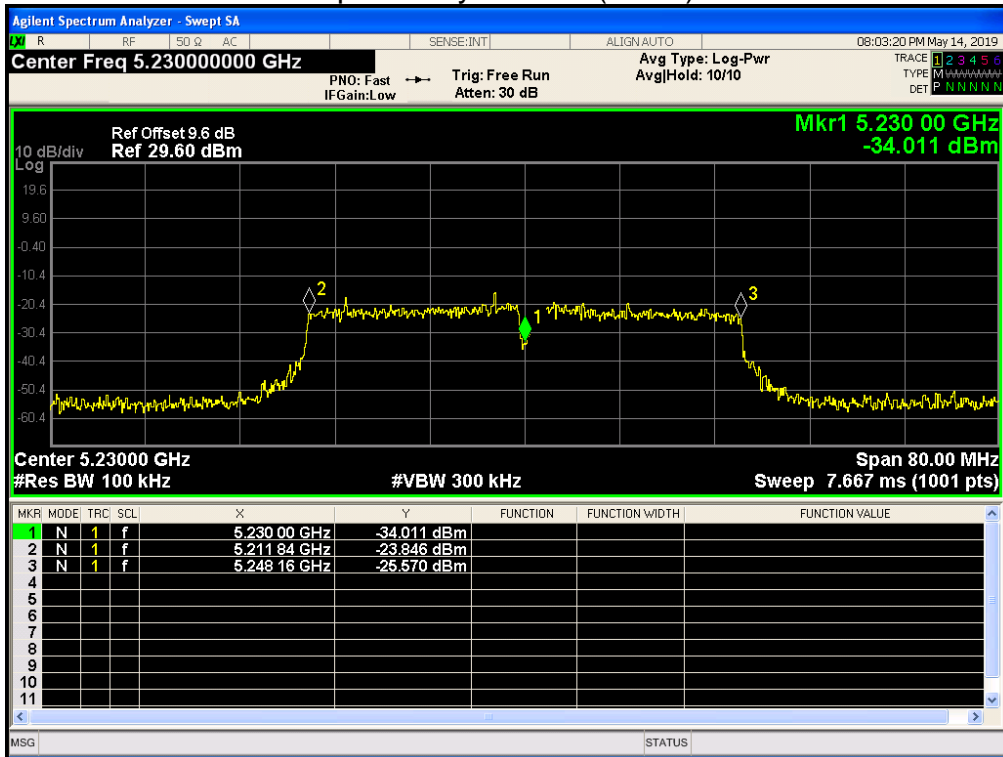
ANT2: Freq. Stability 802.11n(HT20) 5240MHz



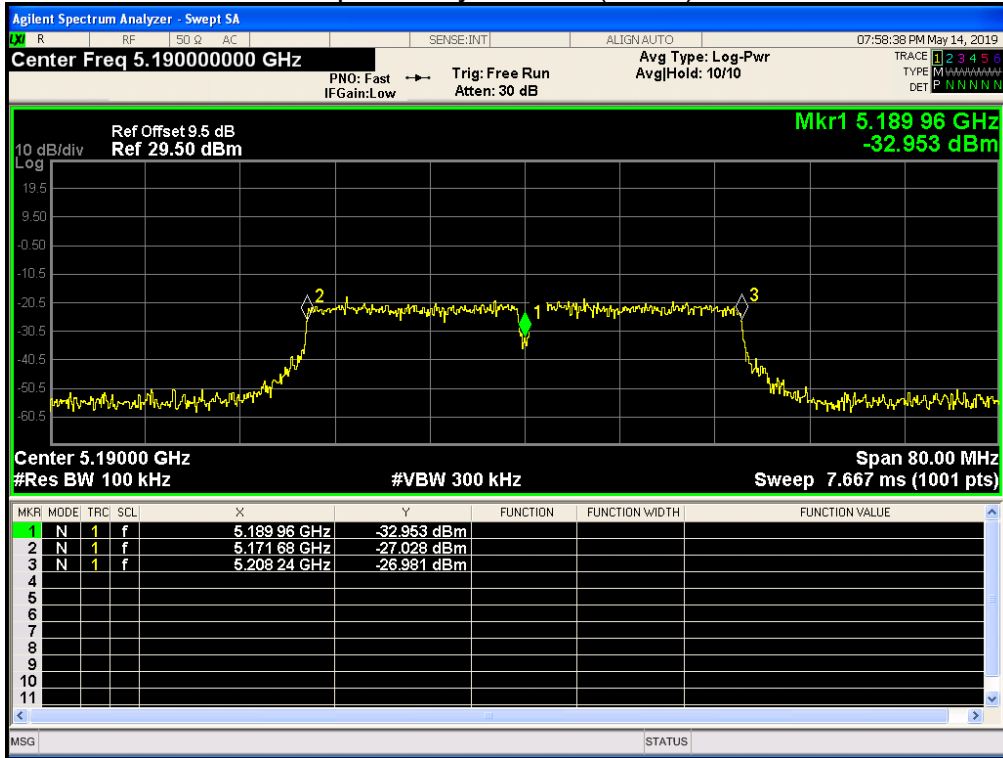
ANT1: Freq. Stability 802.11n(HT40) 5190MHz



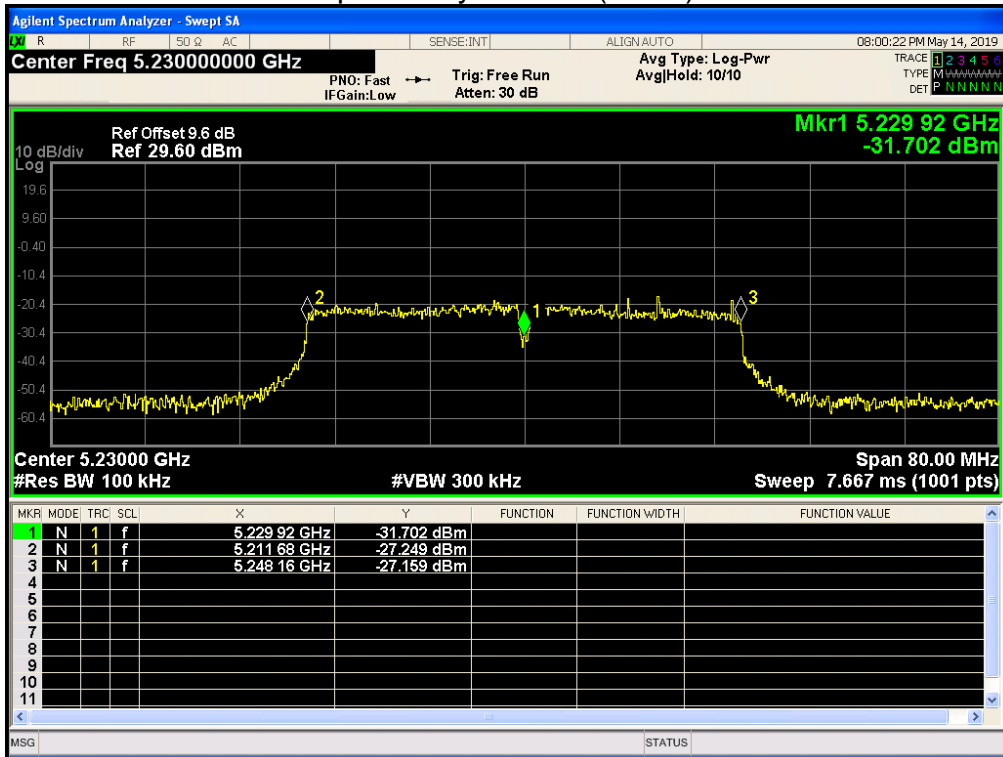
ANT1: Freq. Stability 802.11n(HT40) 5230MHz



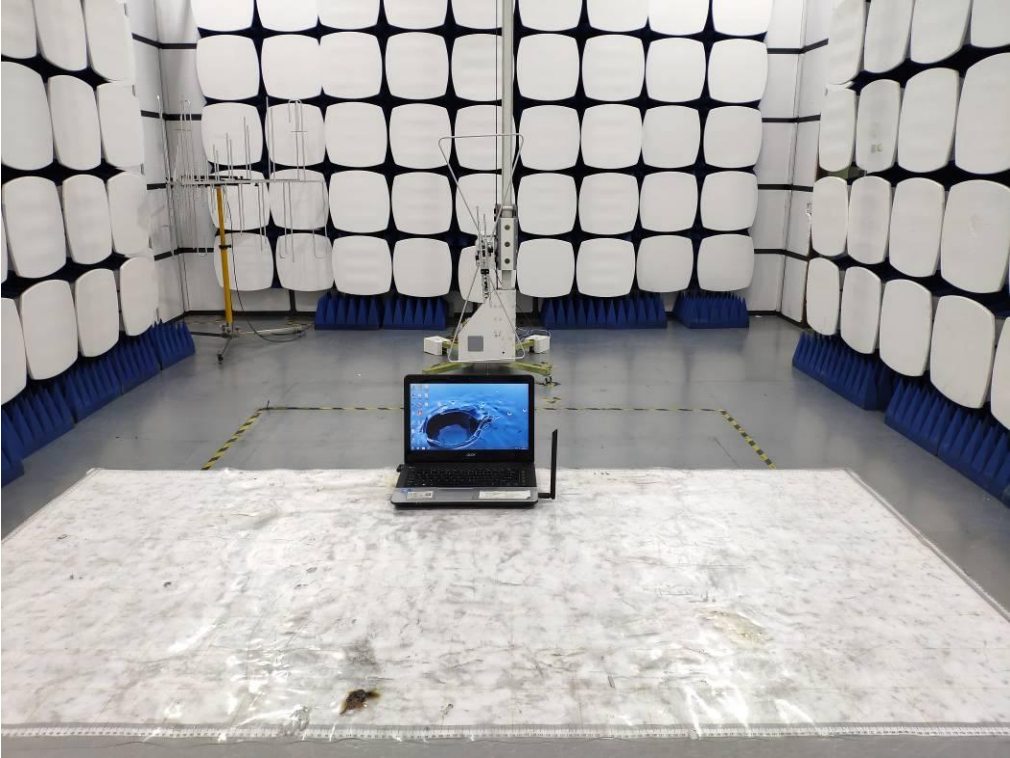
ANT2: Freq. Stability 802.11n(HT40) 5190MHz



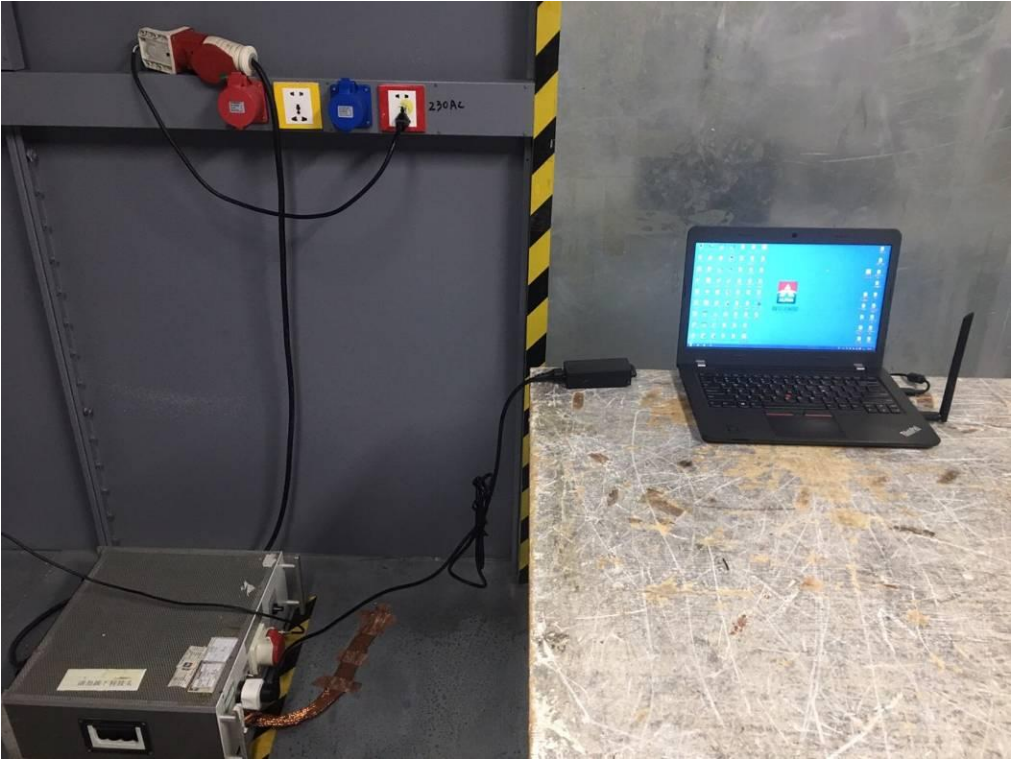
ANT2: Freq. Stability 802.11n(HT40) 5230MHz



6 Test Setup Photo
Radiated Emission



Conducted Emission



7 EUT Photos

Reference to the test report No. T1905010-C01-R02.

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