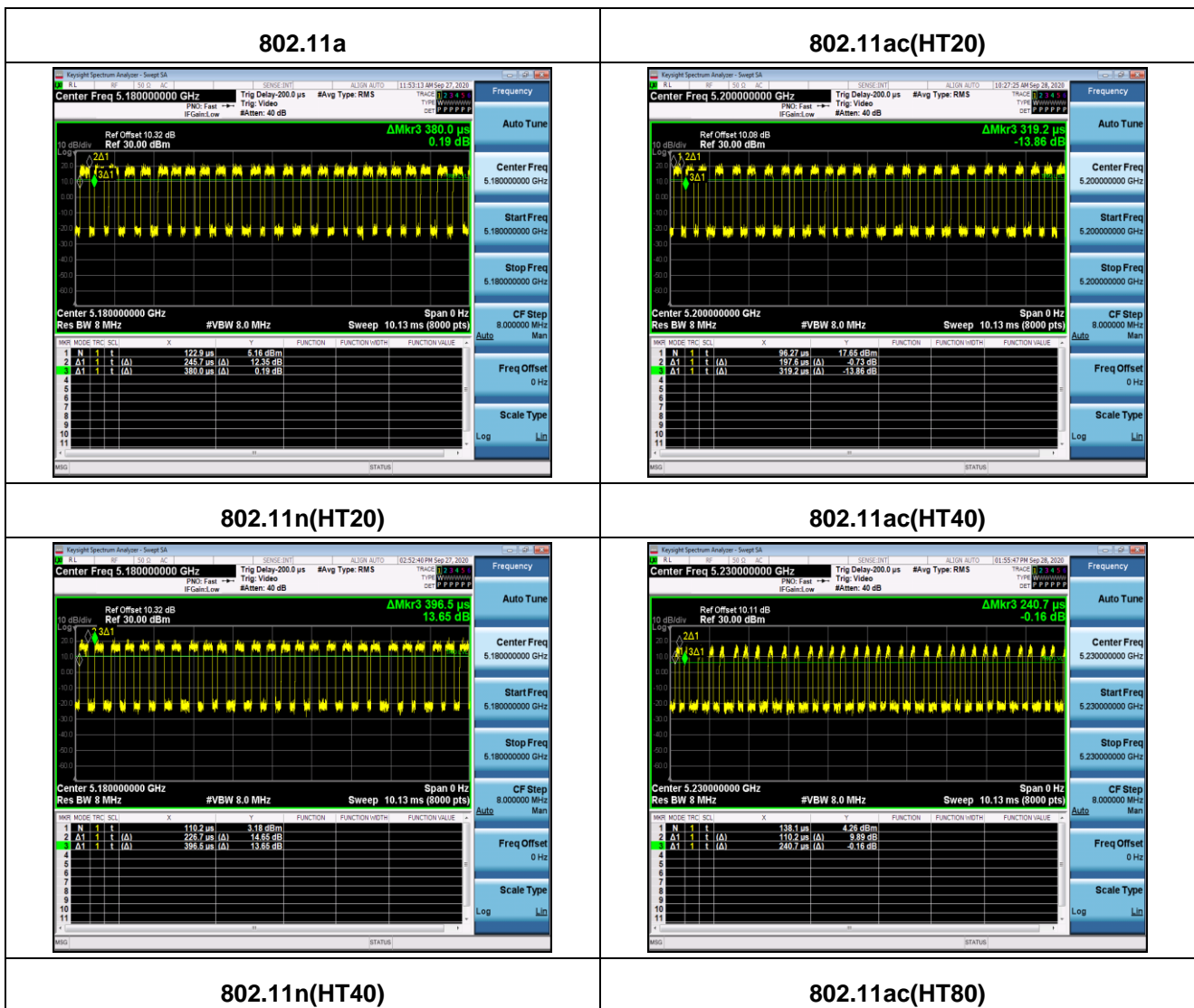
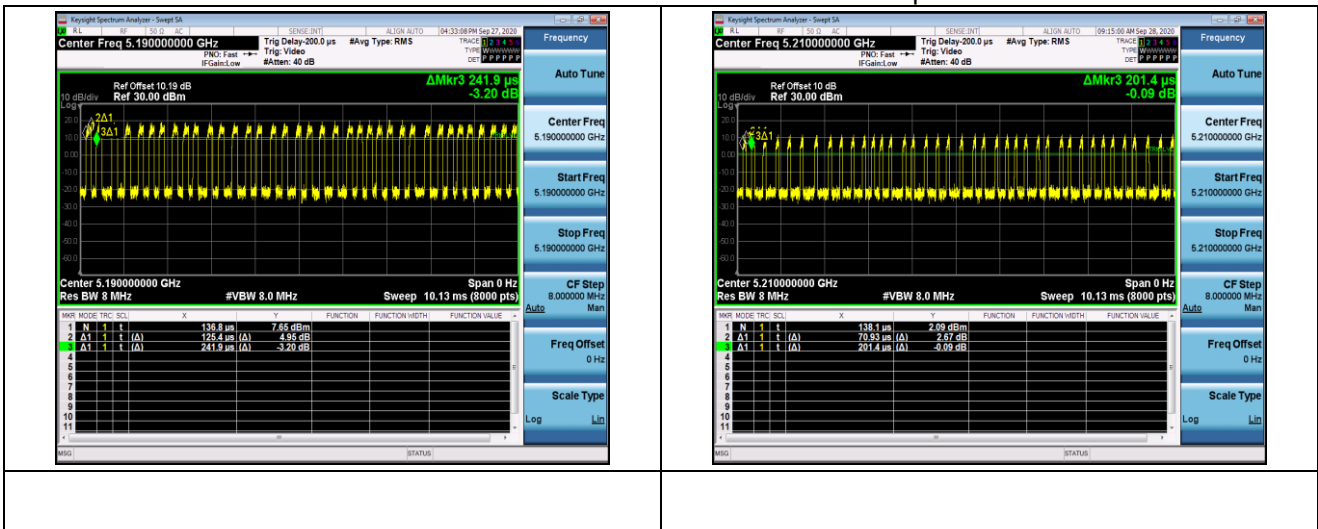


## Measurement Data

Modulation	Duty cycle	Duty Factor
802.11a	64.67%	1.89
802.11n(HT20)	67.68%	1.69
802.11n(HT40)	54.35%	2.65
802.11ac(HT20)	61.90%	2.08
802.11ac(HT40)	45.79%	3.39
802.11ac(HT80)	35.22%	4.53

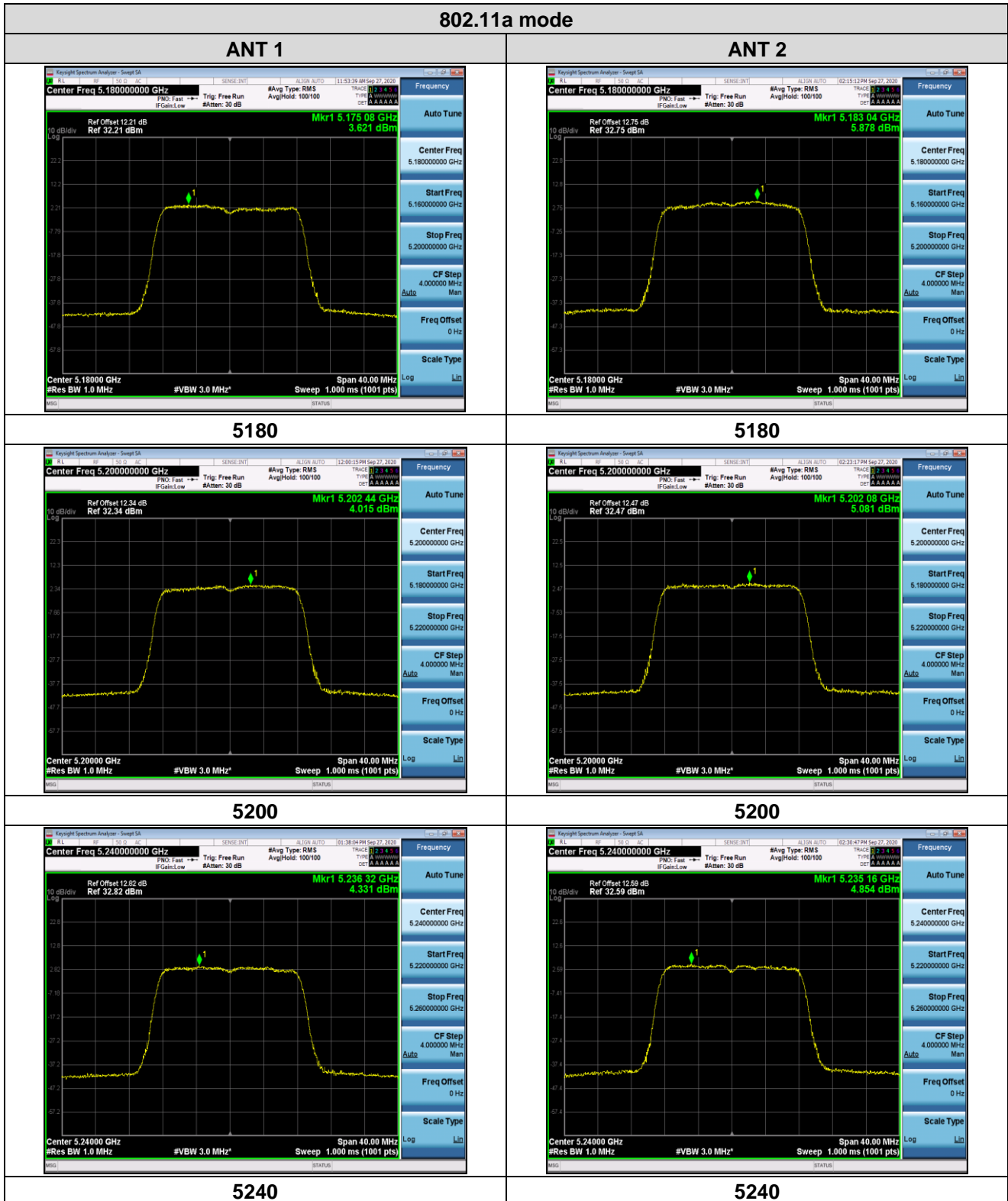


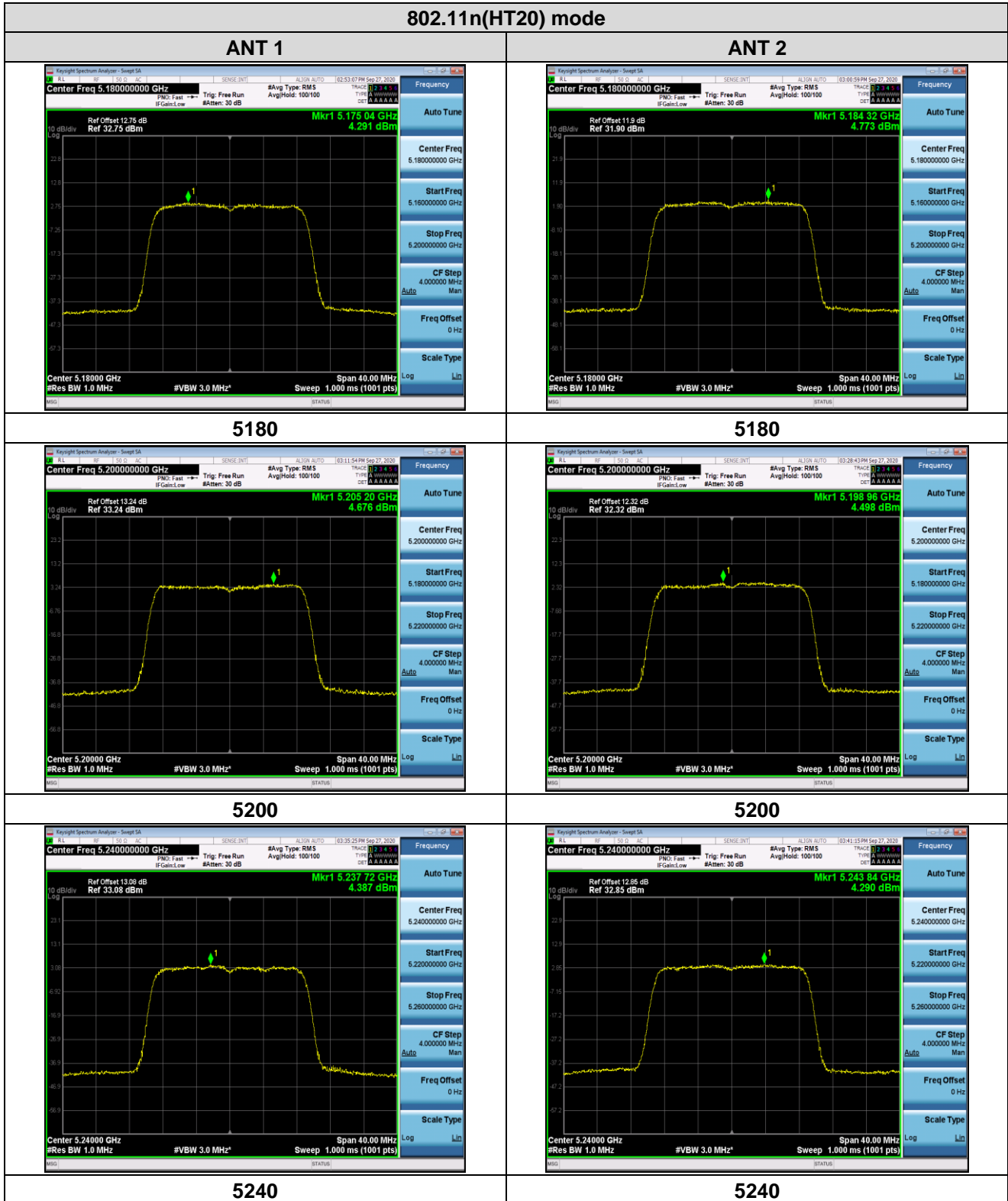


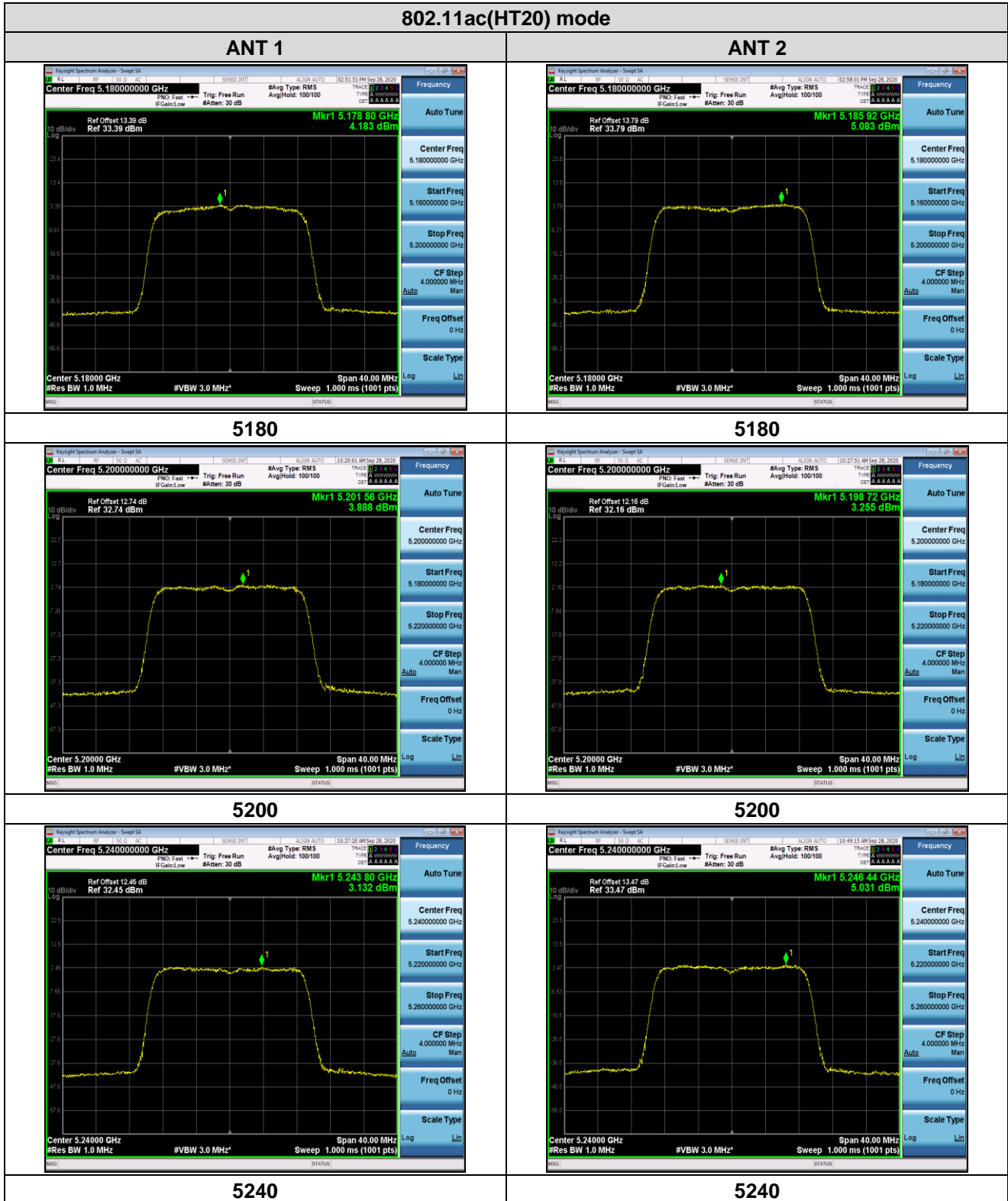
TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	3.62	<=11	PASS
	Ant2	5180	5.88	<=11	PASS
	Ant1	5200	4.02	<=11	PASS
	Ant2	5200	5.08	<=11	PASS
	Ant1	5240	4.33	<=11	PASS
	Ant2	5240	4.85	<=11	PASS
11N20	Ant1	5180	4.29	<=11	PASS
	Ant2	5180	4.77	<=11	PASS
	total	5180	7.55	<=11	PASS
	Ant1	5200	4.68	<=11	PASS
	Ant2	5200	4.5	<=11	PASS
	total	5200	7.60	<=11	PASS
	Ant1	5240	4.39	<=11	PASS
	Ant2	5240	4.29	<=11	PASS
	total	5240	7.35	<=11	PASS
11N40	Ant1	5190	0.79	<=11	PASS
	Ant2	5190	1.99	<=11	PASS
	total	5190	4.44	<=11	PASS
	Ant1	5230	1.72	<=11	PASS
	Ant2	5230	0.75	<=11	PASS
	total	5230	4.27	<=11	PASS
11AC20	Ant1	5180	4.18	<=11	PASS
	Ant2	5180	5.08	<=11	PASS
	total	5180	7.66	<=11	PASS
	Ant1	5200	3.89	<=11	PASS
	Ant2	5200	3.26	<=11	PASS
	total	5200	6.60	<=11	PASS
	Ant1	5240	3.13	<=11	PASS
	Ant2	5240	5.03	<=11	PASS
	total	5240	7.19	<=11	PASS
11AC40	Ant1	5190	2.75	<=11	PASS
	Ant2	5190	3.43	<=11	PASS
	total	5190	6.11	<=11	PASS

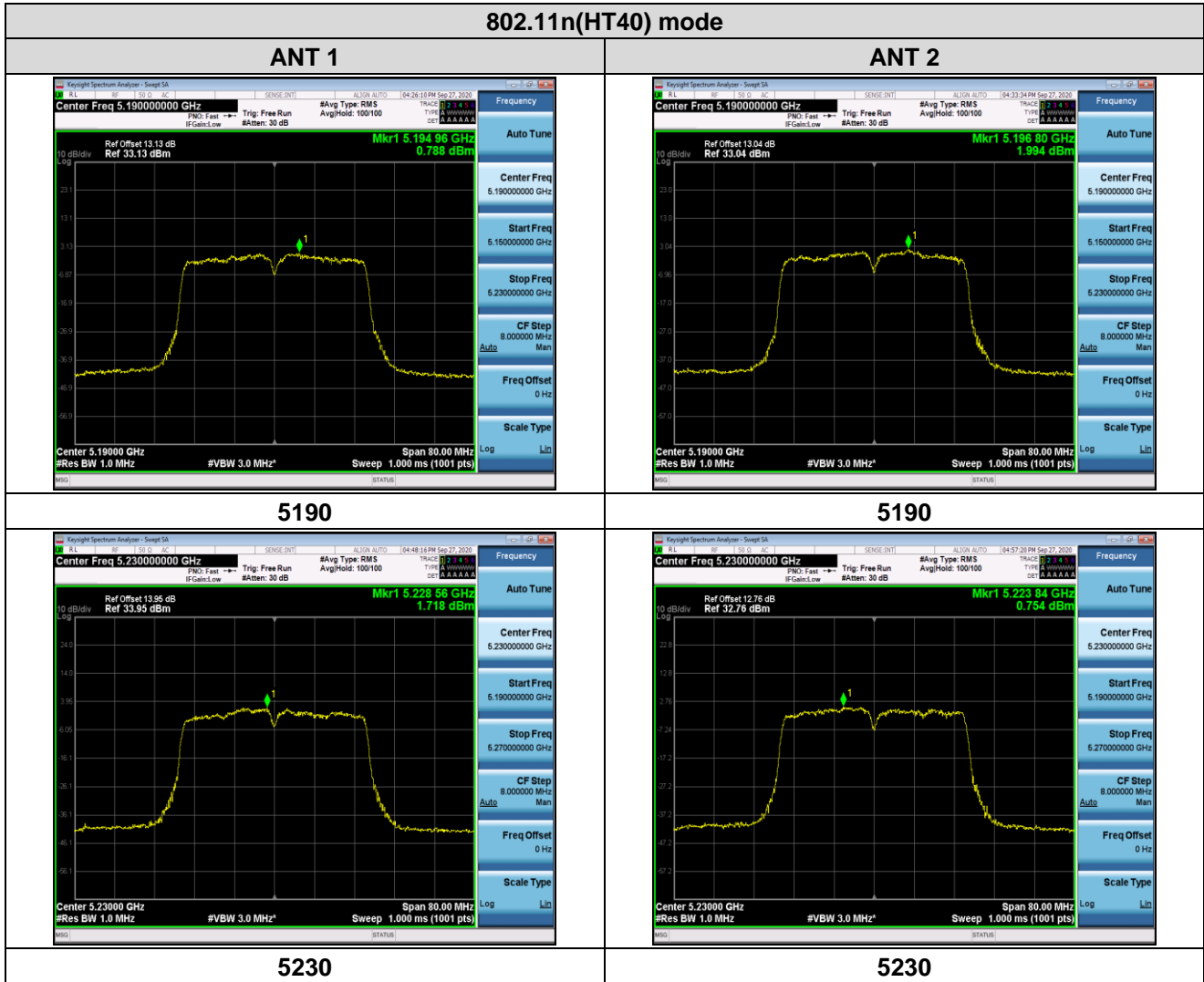
	Ant1	5230	1.69	<=11	PASS
	Ant2	5230	1.52	<=11	PASS
	total	5230	4.62	<=11	PASS
11AC80	Ant1	5210	-2.74	<=11	PASS
	Ant2	5210	-3.06	<=11	PASS
	total	5210	0.11	<=11	PASS

Test plots as followed:





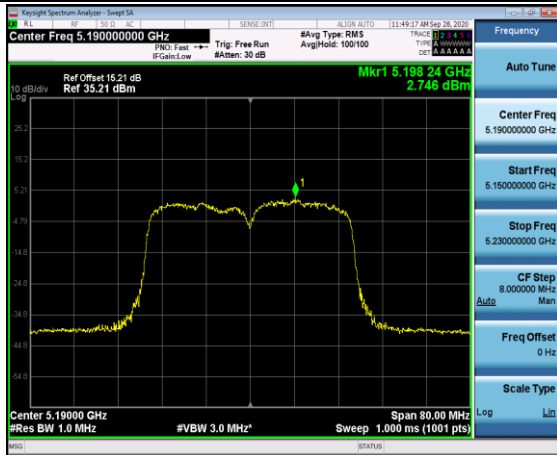






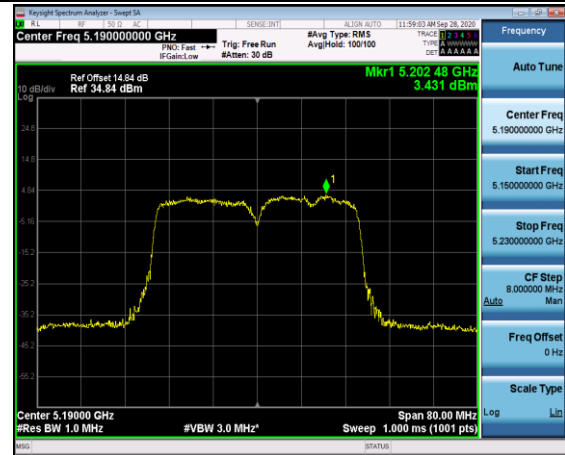
## 802.11ac(HT40) mode

ANT 1



5190

ANT 2



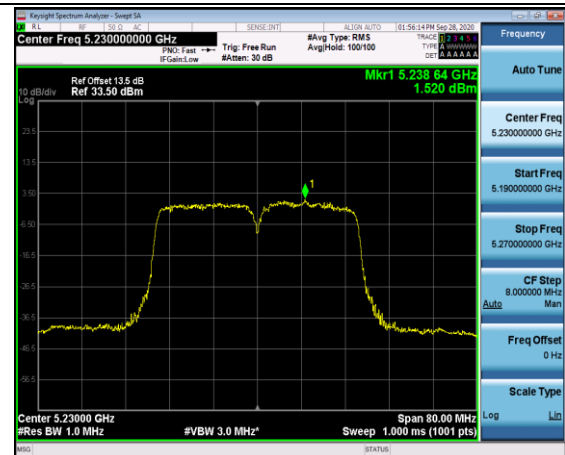
5190

5230



5230

5230



5230

## 802.11ac(HT80) mode

ANT 1



5210

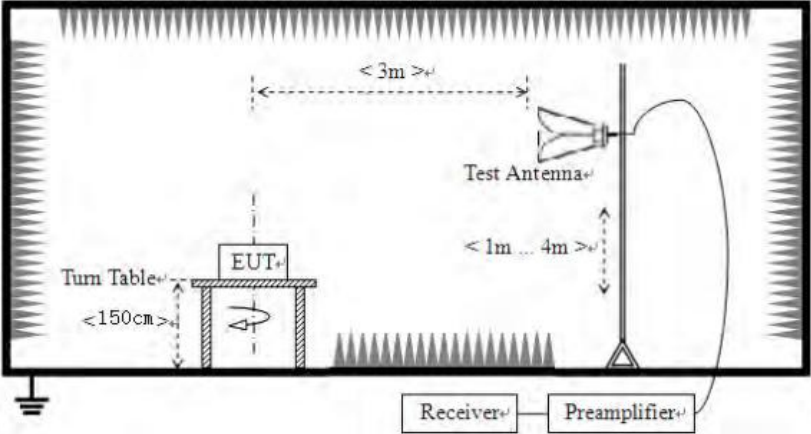
ANT 2



5210

## 7.6 Band Edge

Test Requirement:	FCC Part15 E Section 15.407 and 5.205																							
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																				
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value																				
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> <ol style="list-style-type: none"> <li>(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.</li> <li>(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.</li> <li>(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.</li> </ol>				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																						
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																						
Test Procedure:	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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</li> </ol>																							

	<p>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>
<p>Test setup:</p>	<p>For radiated emissions above 1GHz</p> 
<p>Test Instruments:</p>	<p>Refer to section 5.10 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.2 for details</p>
<p>Test results:</p>	<p>Pass</p>

**Remarks:**

1. Only the worst case Antenna 1 test data.
2. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.
5. According to KDB 789033 D02 v02r01 section G) 1) (d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:  
 $E[dBuV/m] = EIRP[dBm] + 95.2;$   
 For example, if  $EIRP = -27dBm$   
 $E[dBuV/m] = -27 + 95.2 = 68.2dBuV/m.$

**Measurement Data:**

802.11a(HT20)					PK			
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
5150.00	46.95	32.07	8.99	37.49	50.52	68.2	-17.68	Horizontal
5350.00	45.12	31.75	9.29	37.2	48.96	68.2	-19.24	Horizontal
5150.00	44.15	32.07	8.99	37.49	47.72	68.2	-20.48	Vertical
5350.00	44.16	31.75	9.29	37.2	48	68.2	-20.2	Vertical

802.11a(HT20)					AV			
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
5150.00	32.93	32.07	8.99	37.49	36.5	54	-17.5	Horizontal
5350.00	31.68	31.75	9.29	37.2	35.52	54	-18.48	Horizontal
5150.00	31.14	32.07	8.99	37.49	34.71	54	-19.29	Vertical
5350.00	35.60	31.75	9.29	37.2	39.44	54	-14.56	Vertical

802.11n(HT20)					PK			
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
5150.00	42.67	32.07	8.99	37.49	46.24	68.2	-21.96	Horizontal
5350.00	44.85	31.75	9.29	37.2	48.69	68.2	-19.51	Horizontal
5150.00	46.89	32.07	8.99	37.49	50.46	68.2	-17.74	Vertical
5350.00	44.52	31.75	9.29	37.2	48.36	68.2	-19.84	Vertical

802.11n(HT20)					AV			
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
5150.00	33.74	32.07	8.99	37.49	37.31	54	-16.69	Horizontal
5350.00	34.98	31.75	9.29	37.2	38.82	54	-15.18	Horizontal
5150.00	34.62	32.07	8.99	37.49	38.19	54	-15.81	Vertical
5350.00	33.35	31.75	9.29	37.2	37.19	54	-16.81	Vertical

802.11ac(HT20)					PK			
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
5150.00	46.51	32.07	8.99	37.49	50.08	68.2	-18.12	Horizontal
5350.00	42.63	31.75	9.29	37.2	46.47	68.2	-21.73	Horizontal
5150.00	42.67	32.07	8.99	37.49	46.24	68.2	-21.96	Vertical
5350.00	45.40	31.75	9.29	37.2	49.24	68.2	-18.96	Vertical

802.11ac(HT20)					AV			
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
5150.00	34.71	32.07	8.99	37.49	38.28	54	-15.72	Horizontal
5350.00	34.36	31.75	9.29	37.2	38.2	54	-15.8	Horizontal
5150.00	32.39	32.07	8.99	37.49	35.96	54	-18.04	Vertical
5350.00	32.30	31.75	9.29	37.2	36.14	54	-17.86	Vertical

802.11n(HT40)					PK			
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
5150.00	43.77	32.07	8.99	37.49	47.34	68.2	-20.86	Horizontal
5350.00	44.32	31.75	9.29	37.2	48.16	68.2	-20.04	Horizontal
5150.00	45.58	32.07	8.99	37.49	49.15	68.2	-19.05	Vertical
5350.00	45.05	31.75	9.29	37.2	48.89	68.2	-19.31	Vertical

802.11n(HT40)					AV			
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
5150.00	33.02	32.07	8.99	37.49	36.59	54	-17.41	Horizontal
5350.00	31.69	31.75	9.29	37.2	35.53	54	-18.47	Horizontal
5150.00	32.48	32.07	8.99	37.49	36.05	54	-17.95	Vertical
5350.00	34.35	31.75	9.29	37.2	38.19	54	-15.81	Vertical

802.11ac(HT40)					PK			
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
5150.00	45.45	32.07	8.99	37.49	49.02	68.2	-19.18	Horizontal
5350.00	44.07	31.75	9.29	37.2	47.91	68.2	-20.29	Horizontal
5150.00	45.61	32.07	8.99	37.49	49.18	68.2	-19.02	Vertical
5350.00	43.89	31.75	9.29	37.2	47.73	68.2	-20.47	Vertical

802.11ac(HT40)					AV			
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
5150.00	35.86	32.07	8.99	37.49	39.43	54	-14.57	Horizontal
5350.00	32.07	31.75	9.29	37.2	35.91	54	-18.09	Horizontal
5150.00	34.37	32.07	8.99	37.49	37.94	54	-16.06	Vertical
5350.00	31.22	31.75	9.29	37.2	35.06	54	-18.94	Vertical

802.11ac(HT80)					PK			
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
5150.00	43.46	32.07	8.99	37.49	47.03	68.2	-21.17	Horizontal
5350.00	42.85	31.75	9.29	37.2	46.69	68.2	-21.51	Horizontal
5150.00	46.35	32.07	8.99	37.49	49.92	68.2	-18.28	Vertical
5350.00	44.26	31.75	9.29	37.2	48.1	68.2	-20.1	Vertical

802.11ac(HT80)					AV			
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
5150.00	34.40	32.07	8.99	37.49	37.97	54	-16.03	Horizontal
5350.00	35.86	31.75	9.29	37.2	39.7	54	-14.3	Horizontal
5150.00	33.87	32.07	8.99	37.49	37.44	54	-16.56	Vertical
5350.00	33.09	31.75	9.29	37.2	36.93	54	-17.07	Vertical

## 7.7 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 40GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9kHz-150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak 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 (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz	2400/F(KHz)	QP	300m	
	0.490MHz-1.705MHz	24000/F(KHz)	QP	300m	
	1.705MHz-30MHz	30	QP	30m	
	30MHz-88MHz	100	QP	3m	
	88MHz-216MHz	150	QP		
	216MHz-960MHz	200	QP		
	960MHz-1GHz	500	QP		
	Above 1GHz	500	Average		
		5000	Peak		
Test setup:	For radiated emissions from 9kHz to 30MHz				
For radiated emissions from 30MHz to 1GHz					

	<p>For radiated emissions above 1GHz</p>					
Test Instruments:	Refer to section 5.10 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

*Remarks:*

1. Only the worst case Main Antenna test data.
2. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.



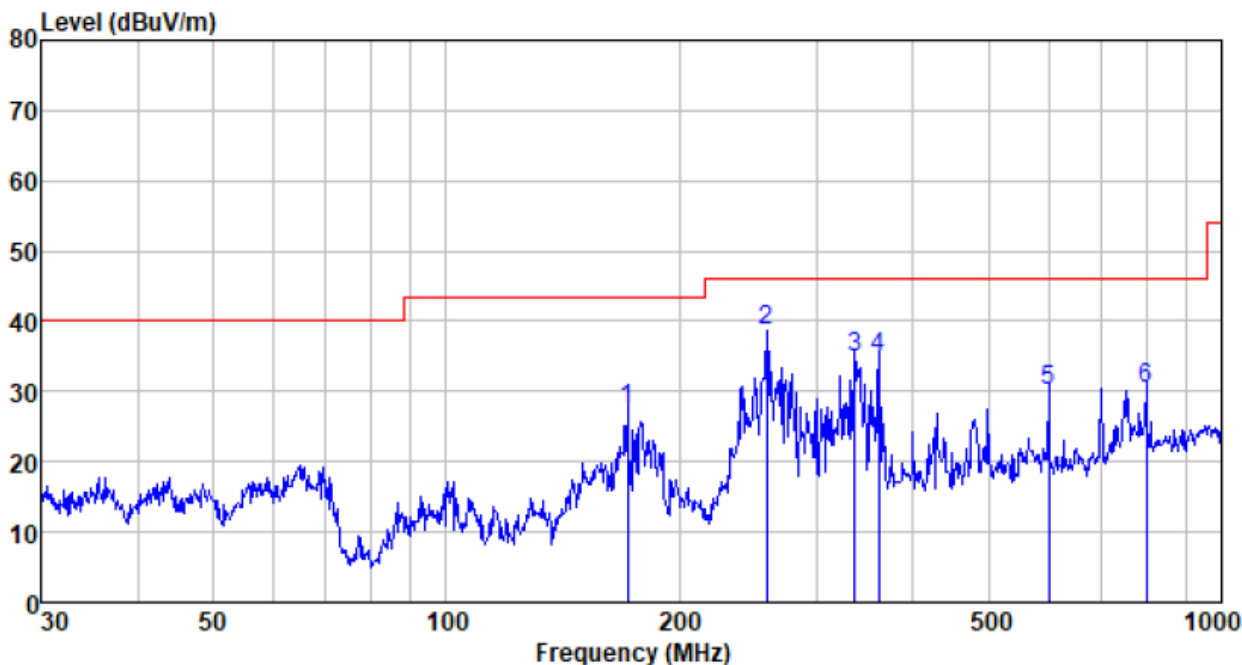
**Measurement Data:**

**9 kHz ~ 30 MHz**

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

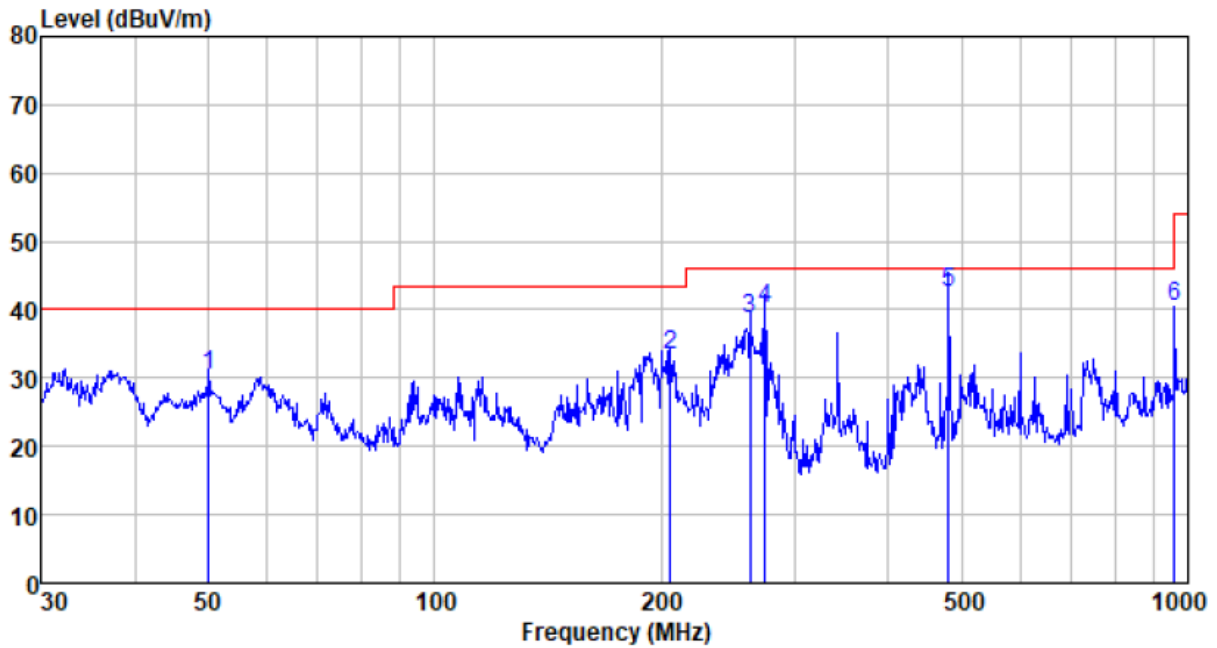
**30MHz~ 1GHz**

**Horizontal:**



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
171.393	54.44	8.53	1.69	37.19	27.47	43.50	-16.03	QP
259.234	61.52	12.44	2.17	37.39	38.74	46.00	-7.26	QP
336.035	55.57	14.29	2.55	37.46	34.95	46.00	-11.05	QP
361.714	54.86	14.72	2.68	37.49	34.77	46.00	-11.23	QP
599.321	44.49	19.44	3.72	37.54	30.11	46.00	-15.89	QP
798.980	42.28	21.40	4.45	37.62	30.51	46.00	-15.49	QP

Vertical:



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
50.057	53.46	12.30	0.77	36.18	30.35	40.00	-9.65	QP
205.675	58.27	10.62	1.88	37.34	33.43	43.50	-10.07	QP
261.975	61.36	12.55	2.18	37.39	38.70	46.00	-7.30	QP
274.194	62.47	12.87	2.24	37.40	40.18	46.00	-5.82	QP
480.528	59.74	16.93	3.22	37.51	42.38	46.00	-3.62	QP
958.794	50.50	22.54	5.08	37.55	40.57	46.00	-5.43	QP

**Above 1GHz:**

**802.11a(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
10360.00	32.76	39.67	14.62	32.65	54.4	74	-19.6	Vertical
15540.00	33.84	38.6	17.66	34.46	55.64	74	-18.36	Vertical
10360.00	34.62	39.67	14.62	32.65	56.26	74	-17.74	Horizontal
15540.00	35.77	38.6	17.66	34.46	57.57	74	-16.43	Horizontal

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
10360.00	23.69	39.67	14.62	32.65	45.33	54	-8.67	Vertical
15540.00	20.82	38.6	17.66	34.46	42.62	54	-11.38	Vertical
10360.00	24.13	39.67	14.62	32.65	45.77	54	-8.23	Horizontal
15540.00	20.20	38.6	17.66	34.46	42	54	-12	Horizontal

**802.11a(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
10400.00	33.55	39.75	14.63	32.71	55.22	74	-18.78	Vertical
15600.00	36.42	38.33	17.67	34.17	58.25	74	-15.75	Vertical
10400.00	36.63	39.75	14.63	32.71	58.3	74	-15.7	Horizontal
15600.00	33.14	38.33	17.67	34.17	54.97	74	-19.03	Horizontal

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
10400.00	22.16	39.75	14.63	32.71	43.83	54	-10.17	Vertical
15600.00	20.01	38.33	17.67	34.17	41.84	54	-12.16	Vertical
10400.00	23.53	39.75	14.63	32.71	45.2	54	-8.8	Horizontal
15600.00	21.02	38.33	17.67	34.17	42.85	54	-11.15	Horizontal

## 802.11a(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
10480.00	33.61	39.82	14.68	32.86	55.25	74	-18.75	Vertical
15720.00	34.23	38.09	17.73	33.66	56.39	74	-17.61	Vertical
10480.00	33.97	39.82	14.68	32.86	55.61	74	-18.39	Horizontal
15720.00	32.35	38.09	17.73	33.66	54.51	74	-19.49	Horizontal

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
10480.00	21.43	39.82	14.68	32.86	43.07	54	-10.93	Vertical
15720.00	23.97	38.09	17.73	33.66	46.13	54	-7.87	Vertical
10480.00	20.28	39.82	14.68	32.86	41.92	54	-12.08	Horizontal
15720.00	22.74	38.09	17.73	33.66	44.9	54	-9.1	Horizontal

## 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
10360.00	33.14	39.67	14.62	32.65	54.78	74	-19.22	Vertical
15540.00	34.89	38.6	17.66	34.46	56.69	74	-17.31	Vertical
10360.00	35.74	39.67	14.62	32.65	57.38	74	-16.62	Horizontal
15540.00	35.07	38.6	17.66	34.46	56.87	74	-17.13	Horizontal

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
10360.00	20.60	39.67	14.62	32.65	42.24	54	-11.76	Vertical
15540.00	23.88	38.6	17.66	34.46	45.68	54	-8.32	Vertical
10360.00	23.63	39.67	14.62	32.65	45.27	54	-8.73	Horizontal
15540.00	22.35	38.6	17.66	34.46	44.15	54	-9.85	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
10400.00	35.75	39.75	14.63	32.71	57.42	74	-16.58	Vertical
15600.00	34.17	38.33	17.67	34.17	56	74	-18	Vertical
10400.00	34.48	39.75	14.63	32.71	56.15	74	-17.85	Horizontal
15600.00	35.88	38.33	17.67	34.17	57.71	74	-16.29	Horizontal

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
10400.00	22.23	39.75	14.63	32.71	43.9	54	-10.1	Vertical
15600.00	24.82	38.33	17.67	34.17	46.65	54	-7.35	Vertical
10400.00	20.32	39.75	14.63	32.71	41.99	54	-12.01	Horizontal
15600.00	23.46	38.33	17.67	34.17	45.29	54	-8.71	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
10480.00	36.49	39.82	14.68	32.86	58.13	74	-15.87	Vertical
15720.00	33.38	38.09	17.73	33.66	55.54	74	-18.46	Vertical
10480.00	32.77	39.82	14.68	32.86	54.41	74	-19.59	Horizontal
15720.00	36.32	38.09	17.73	33.66	58.48	74	-15.52	Horizontal

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
10480.00	24.16	39.82	14.68	32.86	45.8	54	-8.2	Vertical
15720.00	22.09	38.09	17.73	33.66	44.25	54	-9.75	Vertical
10480.00	21.51	39.82	14.68	32.86	43.15	54	-10.85	Horizontal
15720.00	21.25	38.09	17.73	33.66	43.41	54	-10.59	Horizontal

## 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
10360.00	34.65	39.67	14.62	32.65	56.29	74	-17.71	Vertical
15540.00	32.02	38.6	17.66	34.46	53.82	74	-20.18	Vertical
10360.00	34.61	39.67	14.62	32.65	56.25	74	-17.75	Horizontal
15540.00	33.82	38.6	17.66	34.46	55.62	74	-18.38	Horizontal

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
10360.00	21.39	39.67	14.62	32.65	43.03	54	-10.97	Vertical
15540.00	21.33	38.6	17.66	34.46	43.13	54	-10.87	Vertical
10360.00	24.14	39.67	14.62	32.65	45.78	54	-8.22	Horizontal
15540.00	20.70	38.6	17.66	34.46	42.5	54	-11.5	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
10400.00	36.93	39.75	14.63	32.71	58.6	74	-15.4	Vertical
15600.00	34.83	38.33	17.67	34.17	56.66	74	-17.34	Vertical
10400.00	35.77	39.75	14.63	32.71	57.44	74	-16.56	Horizontal
15600.00	35.39	38.33	17.67	34.17	57.22	74	-16.78	Horizontal

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
10400.00	20.58	39.75	14.63	32.71	42.25	54	-11.75	Vertical
15600.00	24.22	38.33	17.67	34.17	46.05	54	-7.95	Vertical
10400.00	22.54	39.75	14.63	32.71	44.21	54	-9.79	Horizontal
15600.00	23.26	38.33	17.67	34.17	45.09	54	-8.91	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
10480.00	34.83	39.82	14.68	32.86	56.47	74	-17.53	Vertical
15720.00	36.49	38.09	17.73	33.66	58.65	74	-15.35	Vertical
10480.00	33.00	39.82	14.68	32.86	54.64	74	-19.36	Horizontal
15720.00	36.70	38.09	17.73	33.66	58.86	74	-15.14	Horizontal

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
10480.00	24.22	39.82	14.68	32.86	45.86	54	-8.14	Vertical
15720.00	22.85	38.09	17.73	33.66	45.01	54	-8.99	Vertical
10480.00	21.02	39.82	14.68	32.86	42.66	54	-11.34	Horizontal
15720.00	23.81	38.09	17.73	33.66	45.97	54	-8.03	Horizontal

## 802.11nHT40) 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
10380.00	34.44	39.71	14.63	32.68	56.1	74	-17.9	Vertical
15570.00	32.97	38.46	17.67	34.32	54.78	74	-19.22	Vertical
10380.00	35.36	39.71	14.63	32.68	57.02	74	-16.98	Horizontal
15570.00	33.24	38.46	17.67	34.32	55.05	74	-18.95	Horizontal

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
10380.00	22.44	39.71	14.63	32.68	44.1	54	-9.9	Vertical
15570.00	23.87	38.46	17.67	34.32	45.68	54	-8.32	Vertical
10380.00	22.53	39.71	14.63	32.68	44.19	54	-9.81	Horizontal
15570.00	20.85	38.46	17.67	34.32	42.66	54	-11.34	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
10460.00	34.34	39.75	14.65	32.74	56	74	-18	Vertical
15690.00	32.13	38.33	17.69	34.03	54.12	74	-19.88	Vertical
10460.00	36.34	39.75	14.65	32.74	58	74	-16	Horizontal
15690.00	36.58	38.33	17.69	34.03	58.57	74	-15.43	Horizontal

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
10460.00	23.41	39.75	14.65	32.74	45.07	54	-8.93	Vertical
15690.00	23.21	38.33	17.69	34.03	45.2	54	-8.8	Vertical
10460.00	20.84	39.75	14.65	32.74	42.5	54	-11.5	Horizontal
15690.00	23.55	38.33	17.69	34.03	45.54	54	-8.46	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
10380.00	35.07	39.71	14.63	32.68	56.73	74	-17.27	Vertical
15570.00	33.30	38.46	17.67	34.32	55.11	74	-18.89	Vertical
10380.00	33.93	39.71	14.63	32.68	55.59	74	-18.41	Horizontal
15570.00	35.34	38.46	17.67	34.32	57.15	74	-16.85	Horizontal

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
10380.00	24.58	39.71	14.63	32.68	46.24	54	-7.76	Vertical
15570.00	20.59	38.46	17.67	34.32	42.4	54	-11.6	Vertical
10380.00	22.93	39.71	14.63	32.68	44.59	54	-9.41	Horizontal
15570.00	24.80	38.46	17.67	34.32	46.61	54	-7.39	Horizontal



## 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
10460.00	33.12	39.75	14.65	32.74	54.78	74	-19.22	Vertical
15690.00	33.07	38.33	17.69	34.03	55.06	74	-18.94	Vertical
10460.00	36.54	39.75	14.65	32.74	58.2	74	-15.8	Horizontal
15690.00	33.37	38.33	17.69	34.03	55.36	74	-18.64	Horizontal

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
10460.00	20.22	39.75	14.65	32.74	41.88	54	-12.12	Vertical
15690.00	22.52	38.33	17.69	34.03	44.51	54	-9.49	Vertical
10460.00	24.67	39.75	14.65	32.74	46.33	54	-7.67	Horizontal
15690.00	20.03	38.33	17.69	34.03	42.02	54	-11.98	Horizontal

## 802.11ac(HT80) 5210MHz

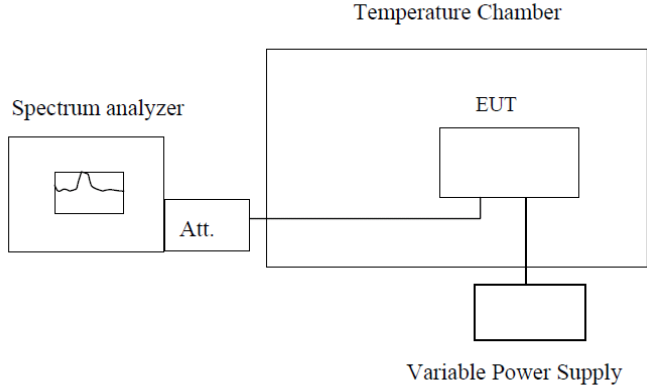
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10420.00	36.36	39.82	14.66	32.8	58.04	74	-15.96	Vertical
15630.00	33.35	38.09	17.71	33.81	55.34	74	-18.66	Vertical
10420.00	36.38	39.82	14.66	32.8	58.06	74	-15.94	Horizontal
15630.00	32.25	38.09	17.71	33.81	54.24	74	-19.76	Horizontal

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
10420.00	20.35	39.82	14.66	32.8	42.03	54	-11.97	Vertical
15630.00	20.76	38.09	17.71	33.81	42.75	54	-11.25	Vertical
10420.00	20.26	39.82	14.66	32.8	41.94	54	-12.06	Horizontal
15630.00	24.45	38.09	17.71	33.81	46.44	54	-7.56	Horizontal

### Notes:

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.

## 7.8 Frequency stability

Test Requirement:	FCC Part15 C Section 15.407(g)
Test Method:	ANSI C63.10:2013, FCC Part 2.1055
Limit:	Manufactures 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
Test Procedure:	The EUT was setup to ANSI C63.4, 2003; tested to 2.1055 for compliance to FCC Part 15.407(g) requirements.
Test setup:	 <p style="text-align: center;"><b>Note :</b> Measurement setup for testing on Antenna connector</p>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Remark: Set the EUT transmits at un-modulation mode to test frequency stability.

**Measurement data:**

Frequency stability versus Temp.					
Power Supply: AC 120V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5190	5190.102	5190.900	5190.547	5190.449
	5200	5200.694	5200.593	5200.032	5200.713
	5210	5210.223	5210.450	5210.600	5210.784
-20	5190	5190.413	5190.599	5190.030	5190.842
	5200	5200.388	5200.126	5200.235	5200.762
	5210	5210.615	5210.314	5210.473	5210.010
-10	5190	5190.985	5190.718	5190.646	5190.813
	5200	5200.424	5200.659	5200.957	5200.704
	5210	5210.411	5210.469	5210.739	5210.192
0	5190	5190.028	5190.524	5190.680	5190.820
	5200	5200.953	5200.496	5200.770	5200.689
	5210	5210.807	5210.407	5210.432	5210.506
10	5190	5190.061	5190.983	5190.559	5190.019
	5200	5200.823	5200.503	5200.968	5200.505
	5210	5210.783	5210.585	5210.934	5210.577
20	5190	5190.800	5190.273	5190.133	5190.877
	5200	5200.161	5200.308	5200.434	5200.496
	5210	5210.397	5210.061	5210.733	5210.162
30	5190	5191.000	5190.189	5190.162	5190.804
	5200	5200.156	5200.752	5200.906	5200.030
	5210	5210.849	5210.125	5210.131	5210.405
40	5190	5190.309	5190.037	5190.653	5190.274
	5200	5200.474	5200.684	5200.785	5200.906
	5210	5210.542	5210.355	5210.105	5210.414
50	5190	5190.168	5190.243	5190.804	5190.529
	5200	5200.642	5200.128	5200.533	5200.929
	5210	5210.162	5210.816	5210.322	5210.953

Frequency stability versus Voltage					
Temperature: 20°C					
Power Supply (VAC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
108	5190	5190.774	5190.519	5190.489	5190.780
	5200	5200.189	5200.836	5200.637	5200.229
	5210	5210.058	5210.890	5210.821	5210.536
132	5190	5190.539	5190.359	5190.728	5190.986
	5200	5200.805	5200.518	5200.309	5200.132
	5210	5210.255	5210.848	5210.952	5210.584

## 8 Test Setup Photo

Reference to the **appendix I** for details.

## 9 EUT Constructional Details

Reference to the **appendix II** for details.

---END---