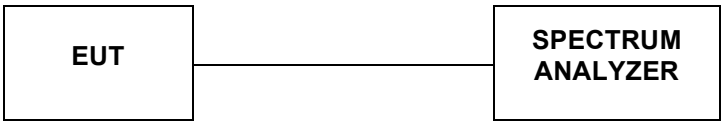
4.7. 26dB Bandwidth

TEST CONFIGURATION



TEST PROCEDURE

According to KDB789033 D02 General UNII Test Procedures New Rules v01 for one of the following procedures may be used for Emission Bandwidth (EBW) measurement:

a. Set RBW = 300 kHz (approximately 1% of the emission bandwidth).
b. Set the video bandwidth (VBW) = 1000 KHz (VBW > RBW)
c. Detector = Peak.
d. Trace mode = max hold.
e. Sweep = auto couple.
f. Allow the trace to stabilize
g. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

LIMIT

No Limits for 26dBc Bandwith

TEST RESULTS

Antenna 0:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.936	22.32	-	Pass
	40	16.918	23.56		
	48	16.923	23.52		
802.11nHT20	36	18.008	22.32	-	Pass
	40	18.056	23.44		
	48	18.097	23.12		
802.11nHT40	38	36.222	42.08	-	Pass
	46	36.293	44.32	-	Pass
802.11ac20	36	18.084	23.40	-	Pass
	40	18.059	22.60		
	48	18.078	23.96		
802.11ac40	38	36.247	42.00	-	Pass
	46	36.235	43.36		
802.11ac80	42	75.322	81.12	-	Pass

Antenna 1:

Type	Channel	99%Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (KHz)	Result
802.11a	36	16.949	23.24	-	Pass
	40	16.901	22.68		
	48	16.942	23.04		
802.11nHT20	36	17.997	23.52	-	Pass
	40	18.012	22.80		
	48	18.074	23.28		
802.11nHT40	38	36.293	41.84	-	Pass
	46	36.312	44.08	-	Pass
802.11ac20	36	18.006	23.04	-	Pass
	40	18.038	22.88		
	48	18.077	23.48		
802.11ac40	38	36.272	42.40	-	Pass
	46	36.304	43.92		
802.11ac80	42	75.218	81.44	-	Pass

99%Bandwidth:
Antenna 0:

802.11a	802.11n HT20
	
CH36	CH36
	
CH40	CH40
	
CH48	CH48

802.11ac20

CH36

802.11n HT40

CH38

CH40

CH46

CH48

802.11ac40

802.11ac80

CH38

CH42

CH46

Antenna 1:

802.11a	802.11n HT20
	
CH36	CH36
	
CH40	CH40
	
CH48	CH48

802.11ac20

CH36

802.11n HT40

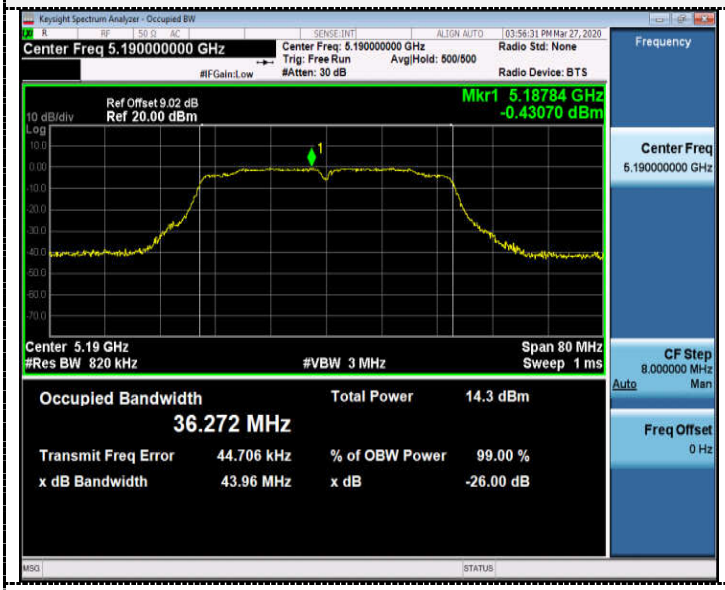
CH38

CH40

CH46

CH48

802.11ac40



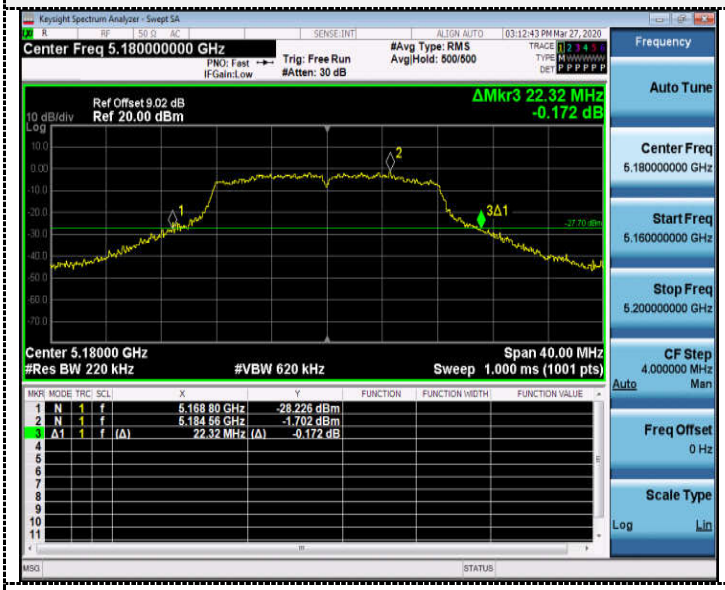
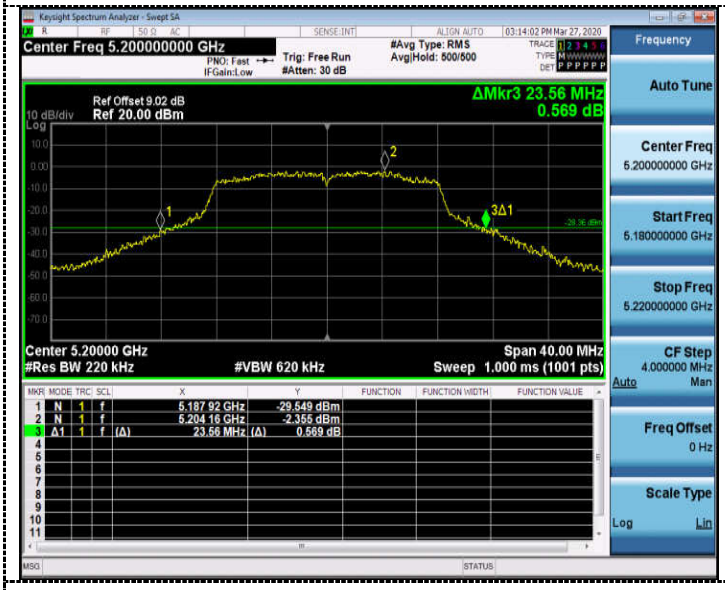
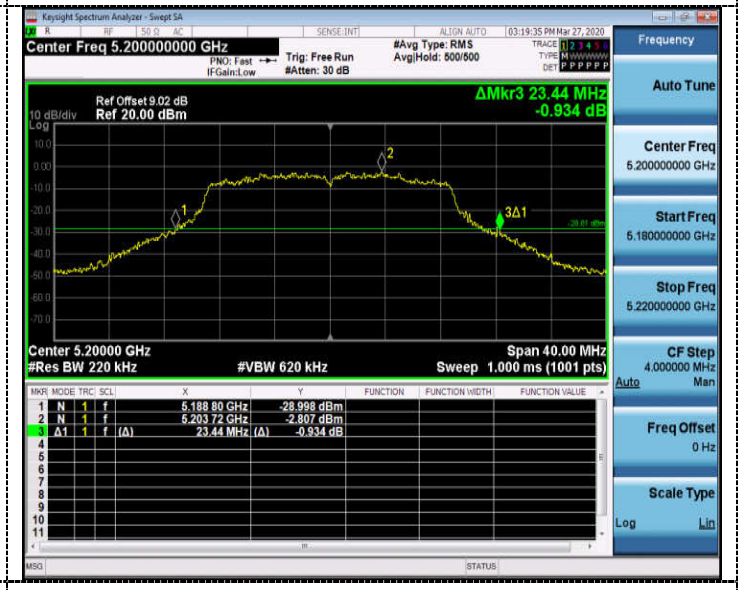
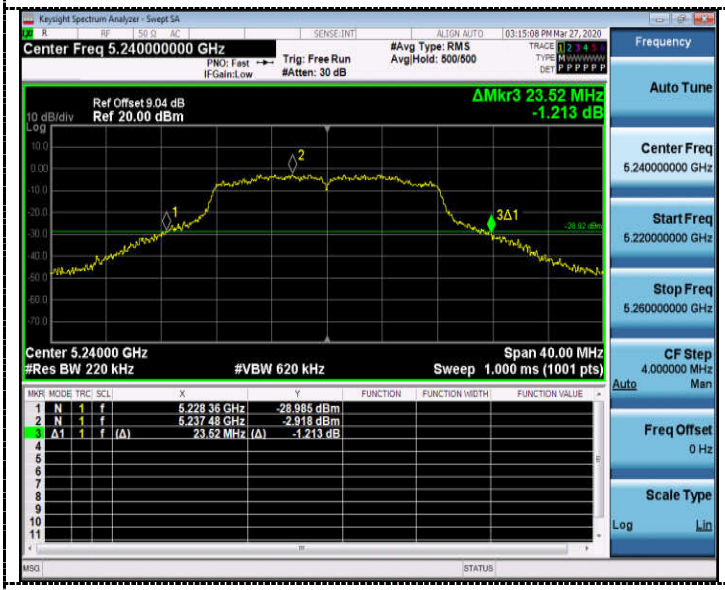
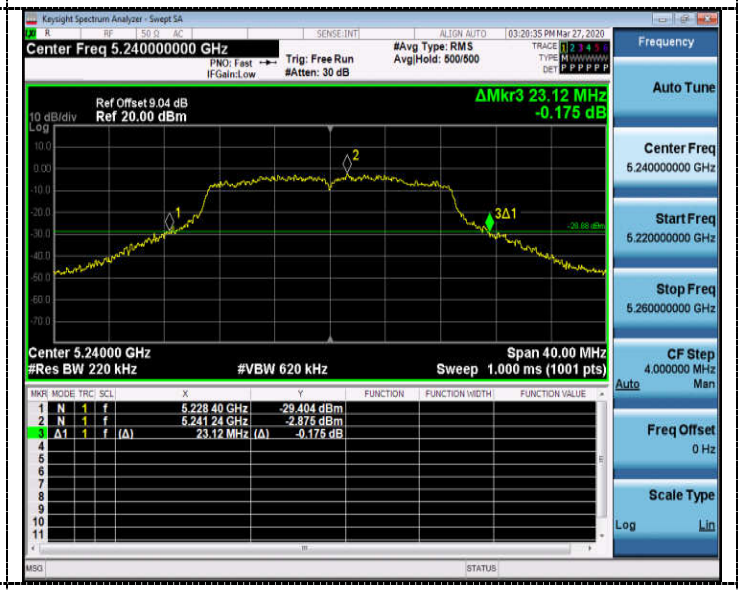
802.11ac80

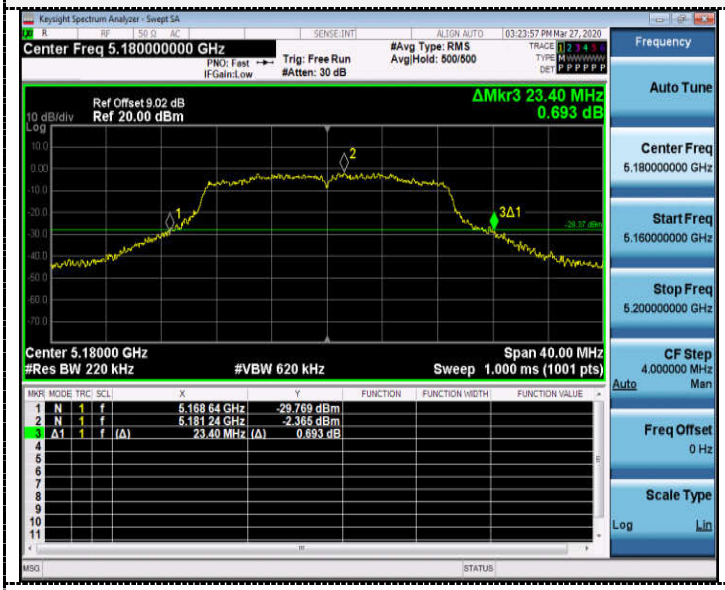
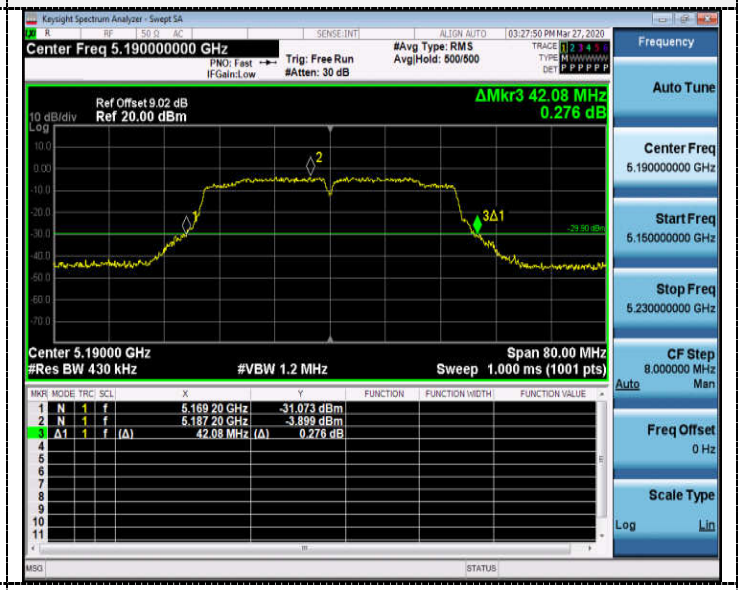
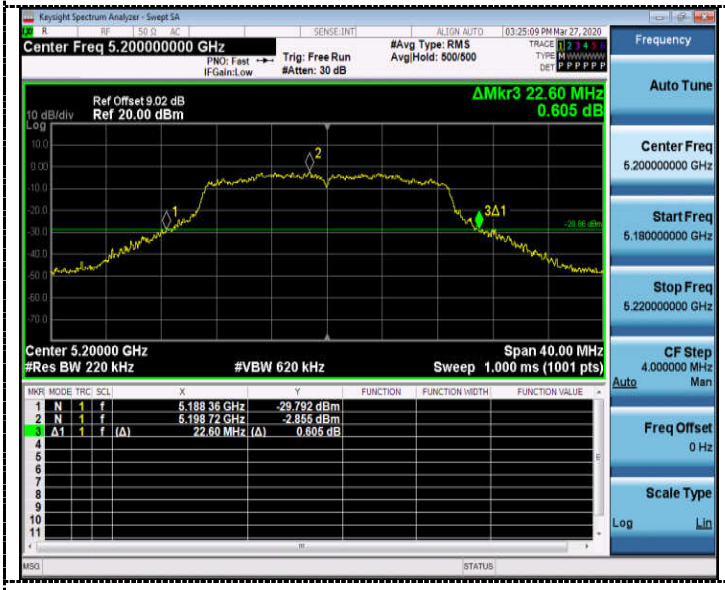
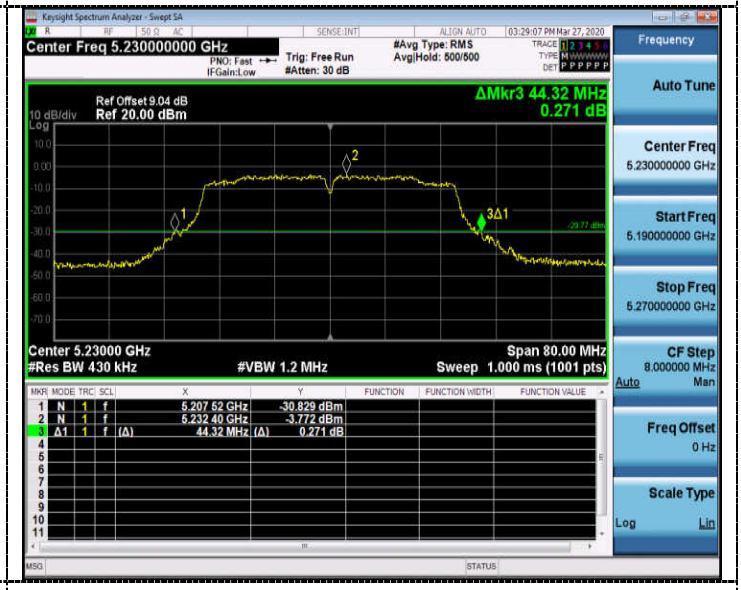
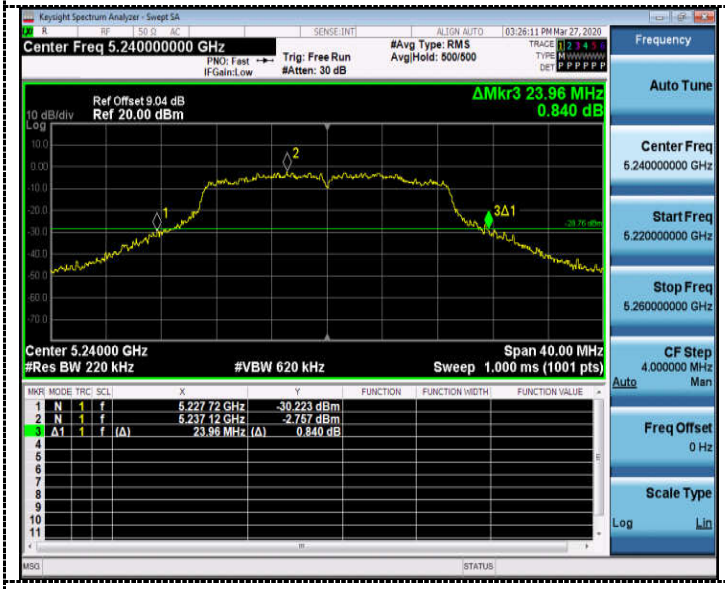
CH38

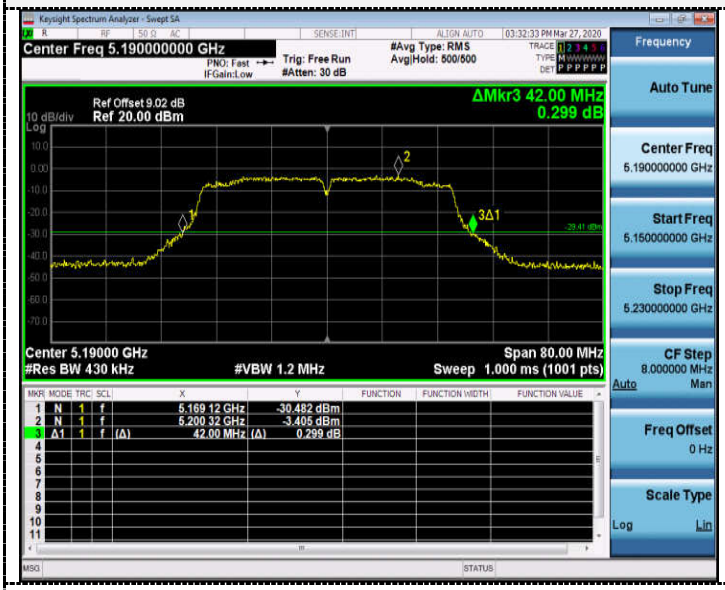
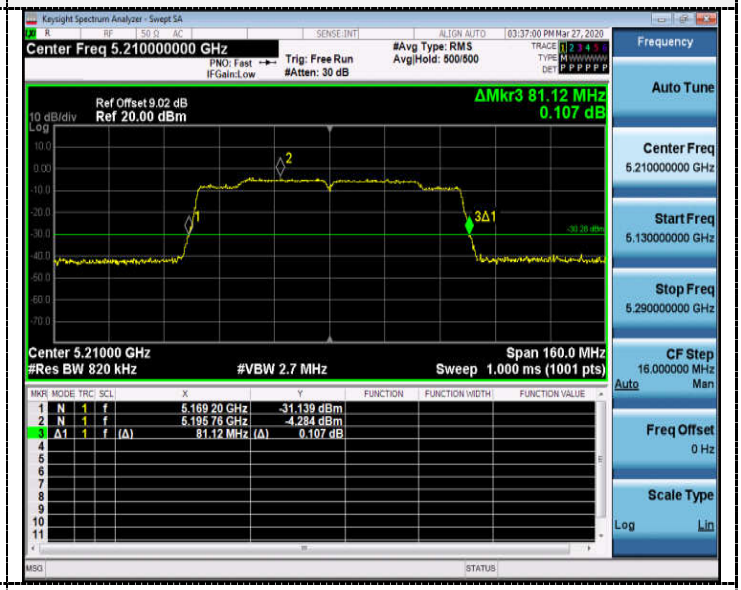
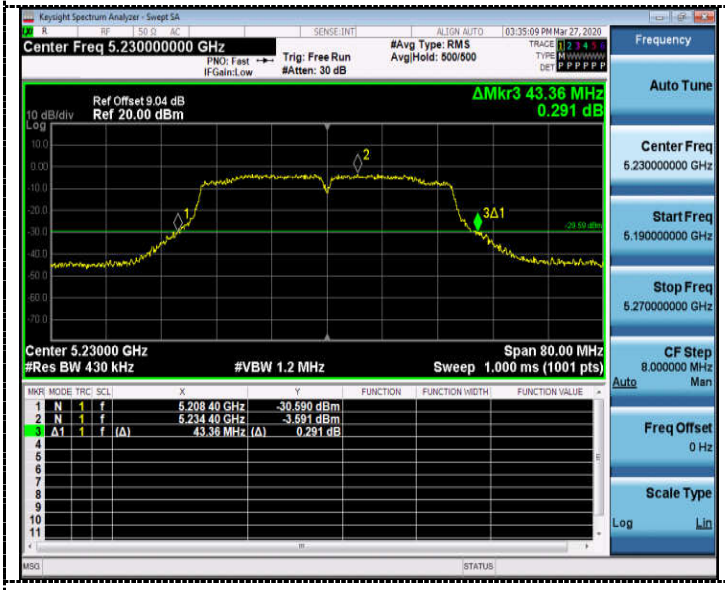
CH42

CH46

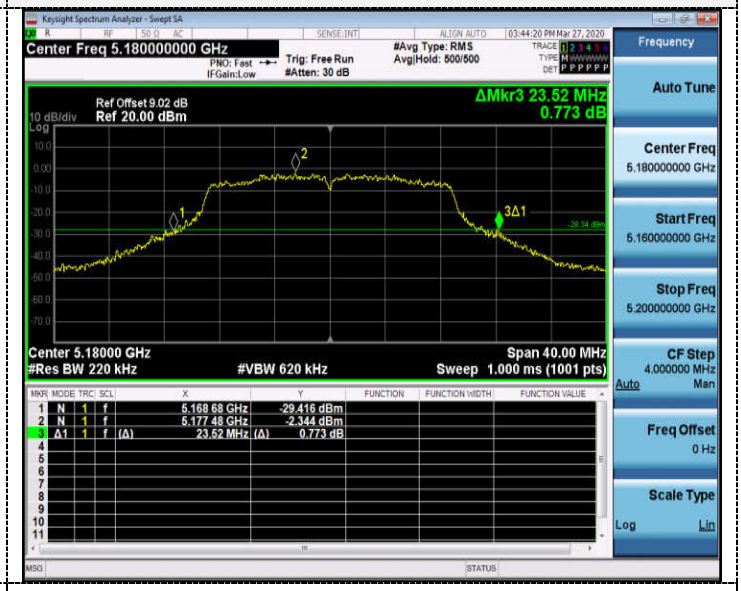
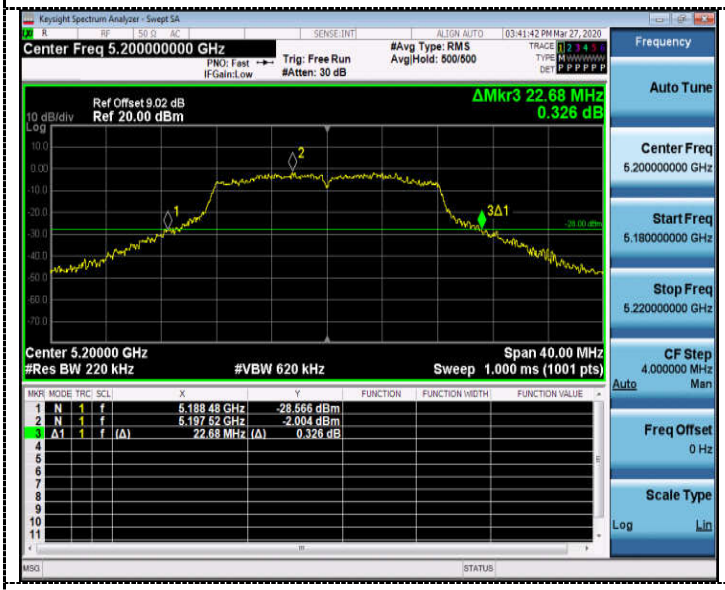
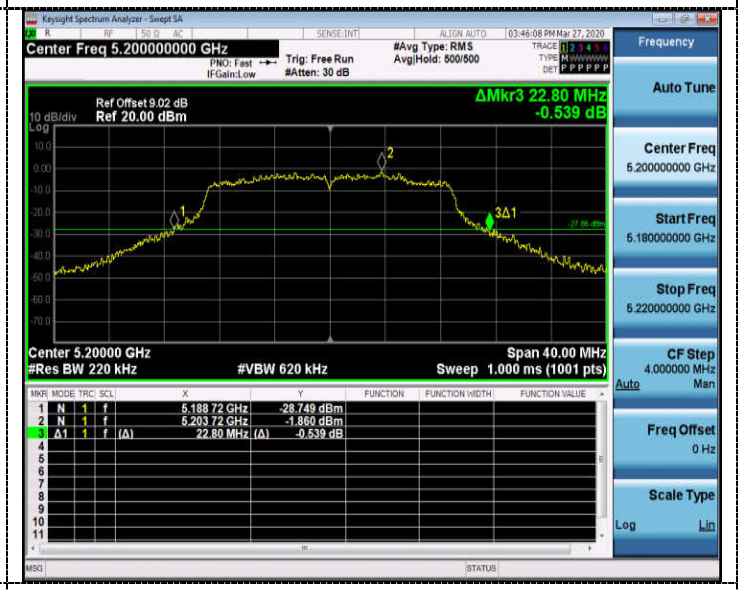
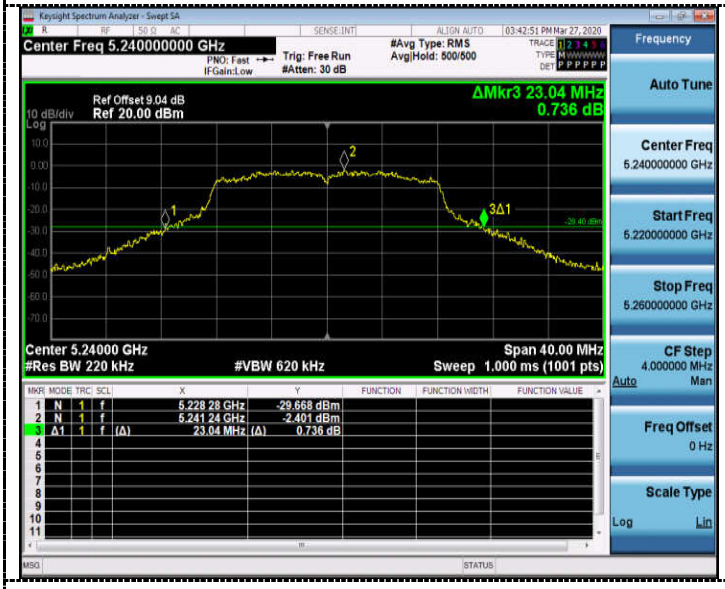
26dB Bandwidth:
Antenna 0:

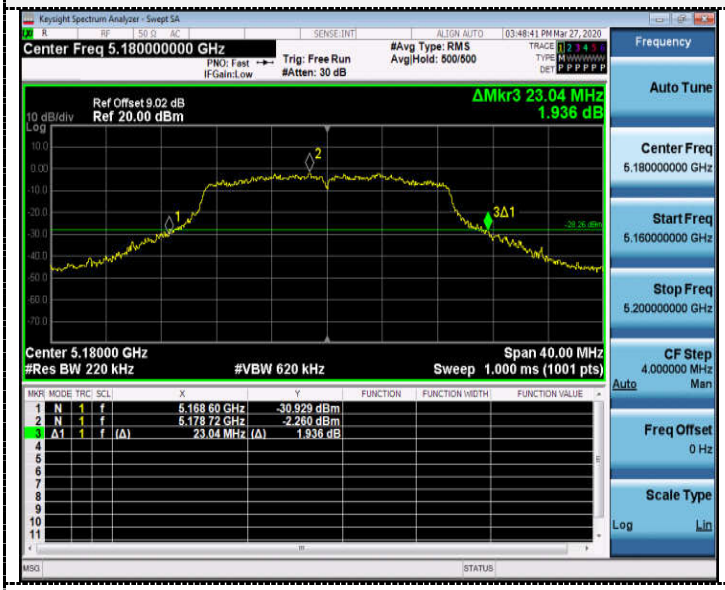
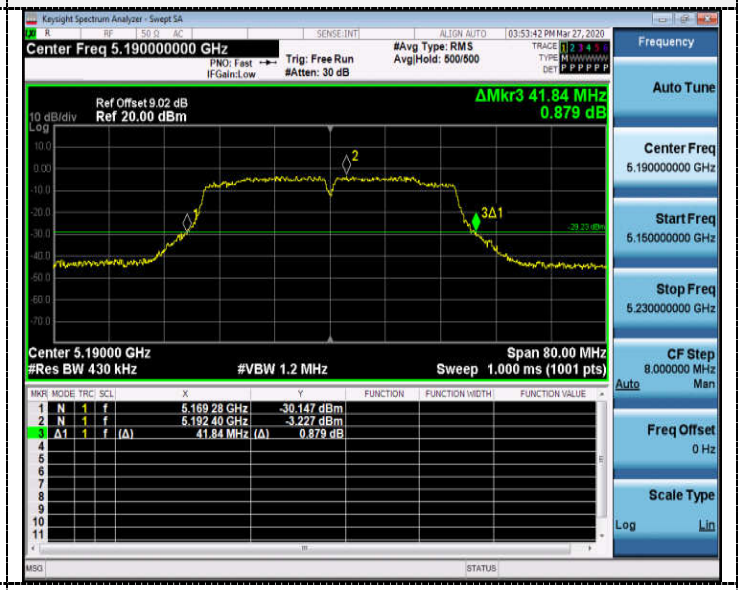
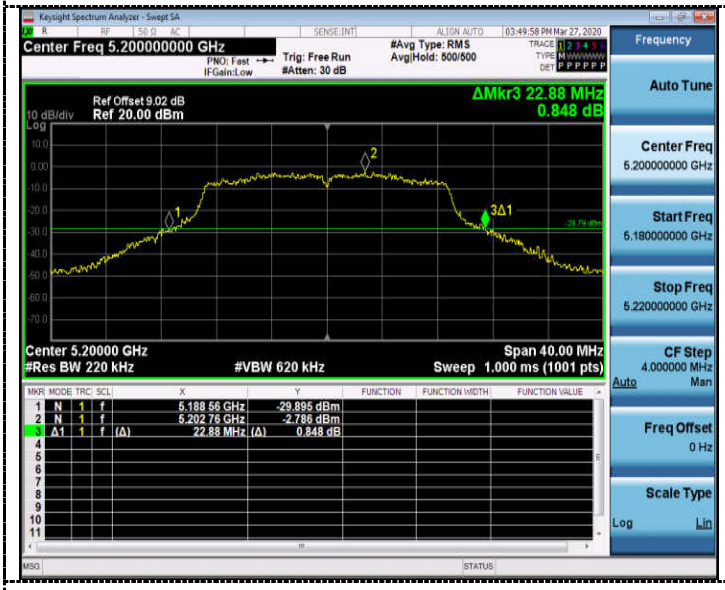
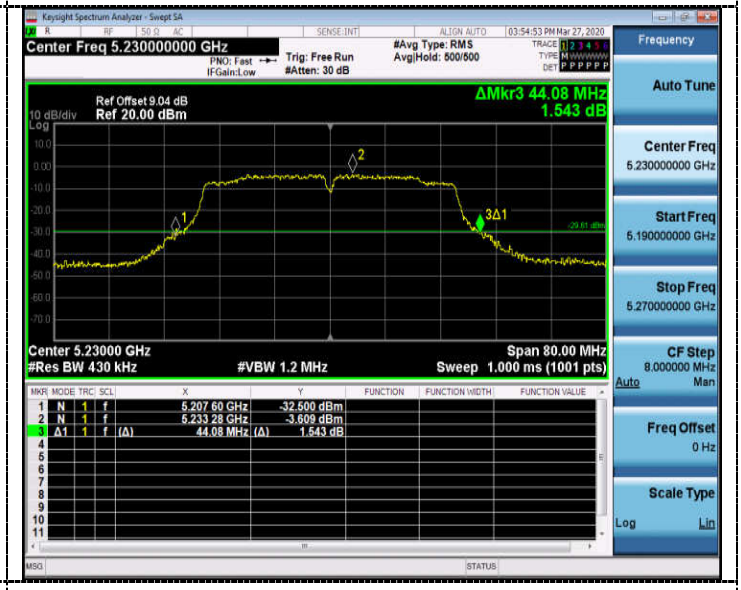
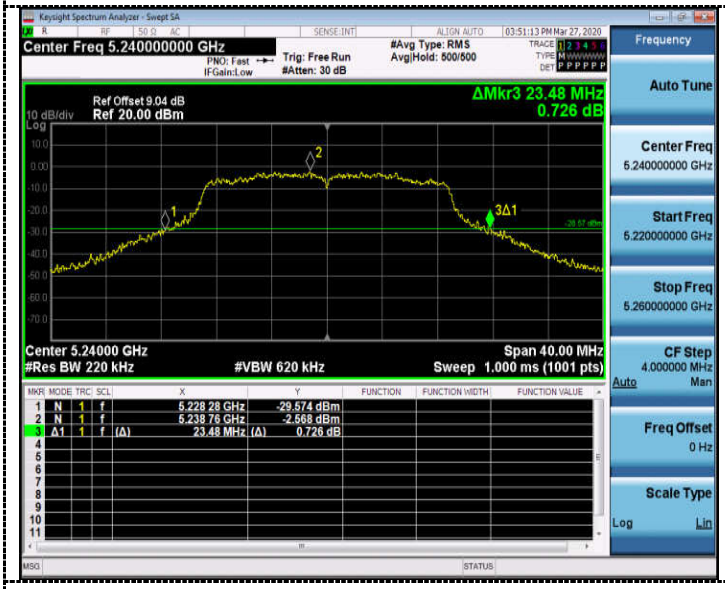
802.11a	802.11n HT20
	
CH36	CH36
	
CH40	CH40
	
CH48	CH48

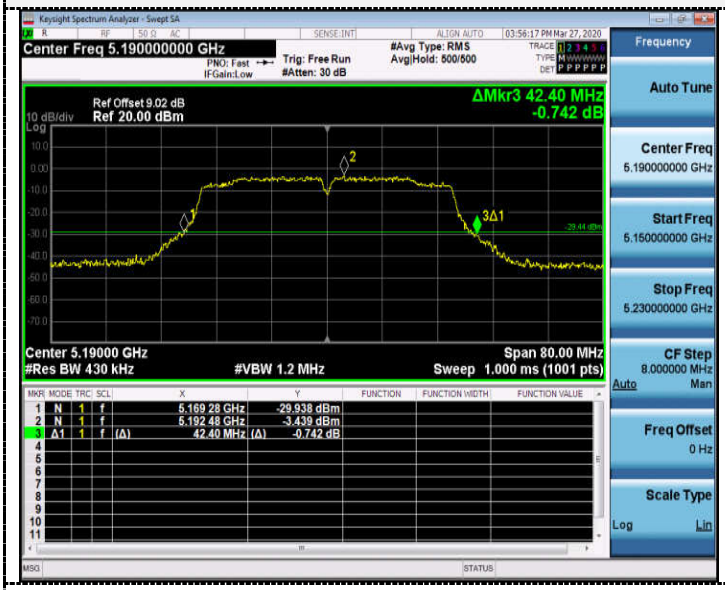
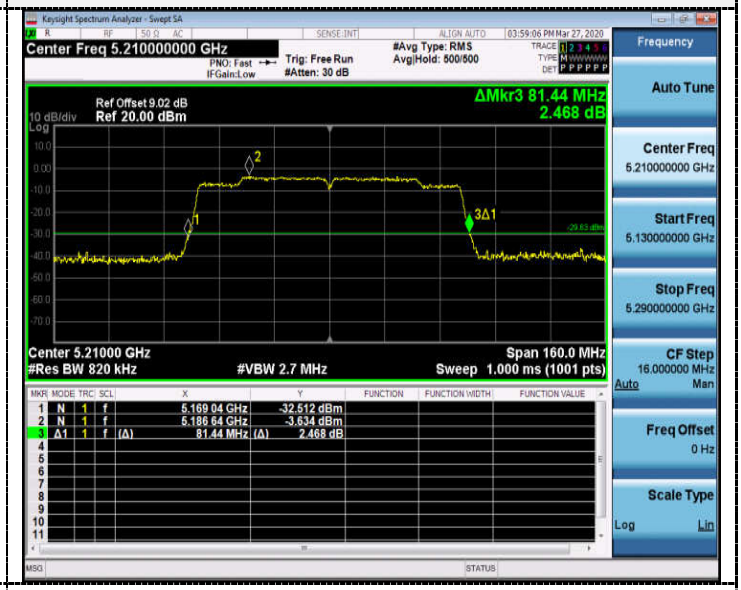
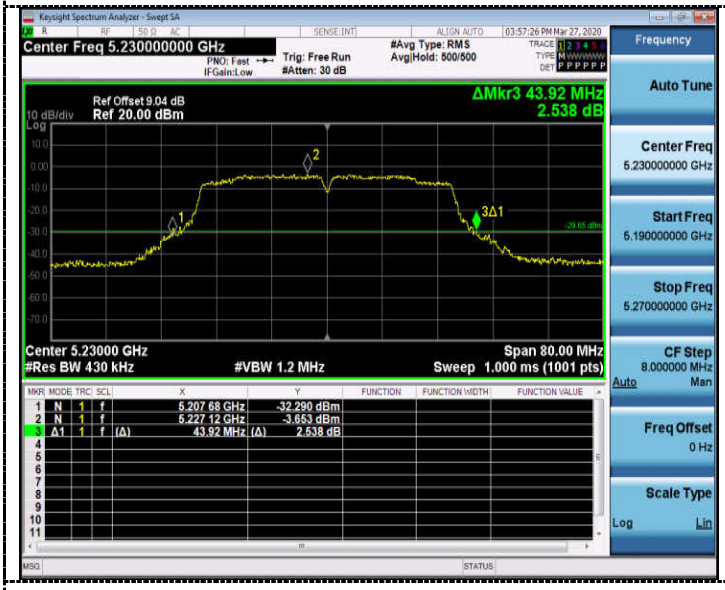
802.11ac20	802.11n HT40
	
CH36	CH38
	
CH40	CH46
	
CH48	

802.11ac40	802.11ac80
	
CH38	CH42
	
CH46	

Antenna 1:

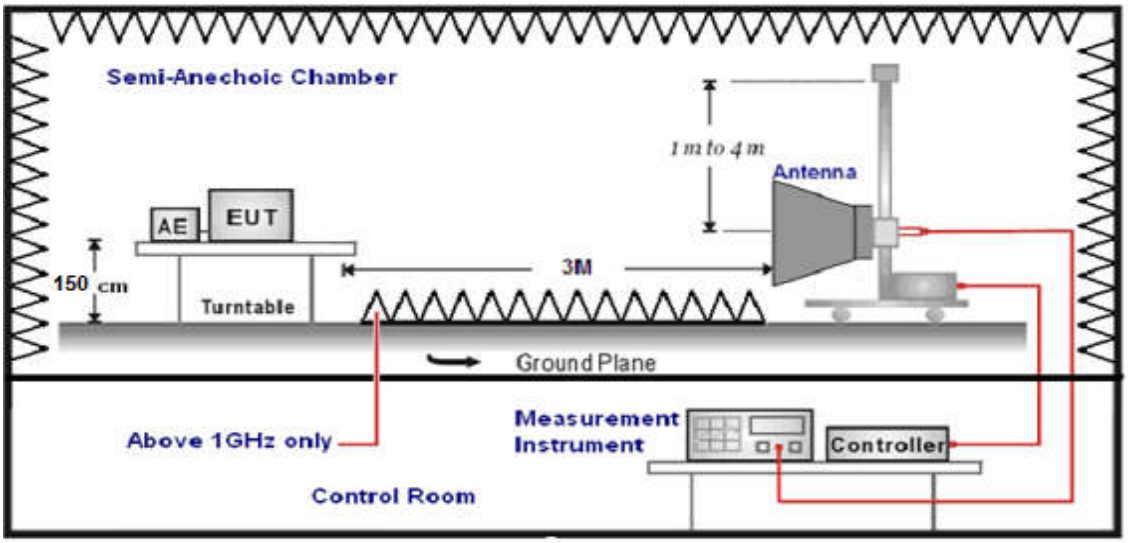
802.11a	802.11n HT20
	
CH36	CH36
	
CH40	CH40
	
CH48	CH48

802.11ac20	802.11n HT40
	
CH36	CH38
	
CH40	CH46
	
CH48	

802.11ac40	802.11ac80
	
CH38	CH42
	
CH46	

4.8. Band Edge Compliance

TEST CONFIGURATION



LIMIT

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

According to §15.407 (b): Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits

Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m)
5150-5250	-27	68.2
5250-5350	-27	68.2
5470-5725	-27	68.2
5725-5850	-27 (beyond 10MHz of the bandedge)	68.2
	-17 (within 10 MHz of band edge)	78.2

TEST PROCEDURE

1. The EUT was placed on a turn table which is 1.5m above 1GHz.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed..
5. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
1GHz-18GHz	Double Ridged Horn Antenna	3