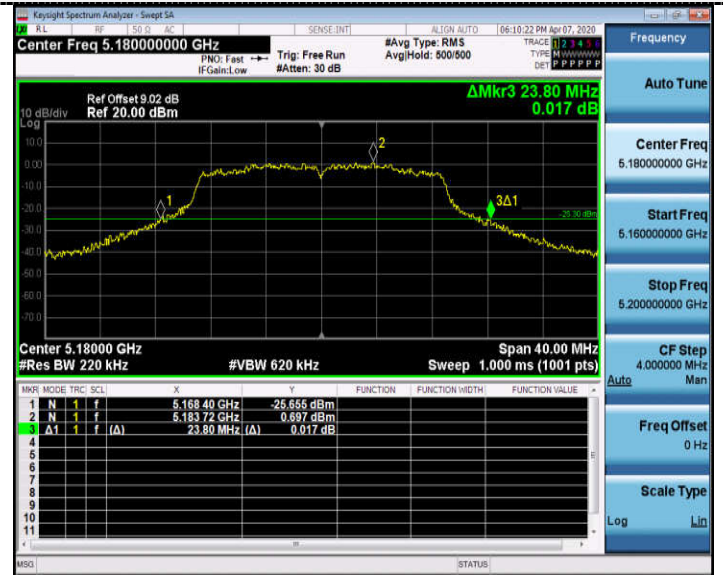


26dB Bandwidth:  
Antenna 0:

802.11a

802.11n HT20



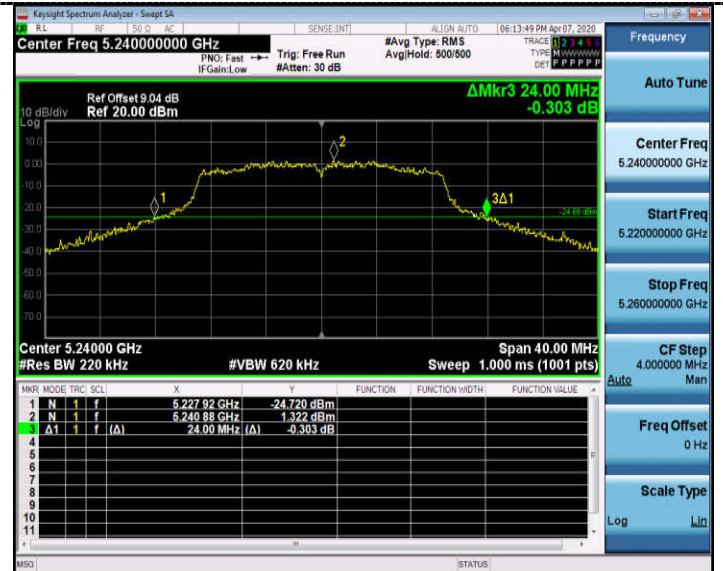
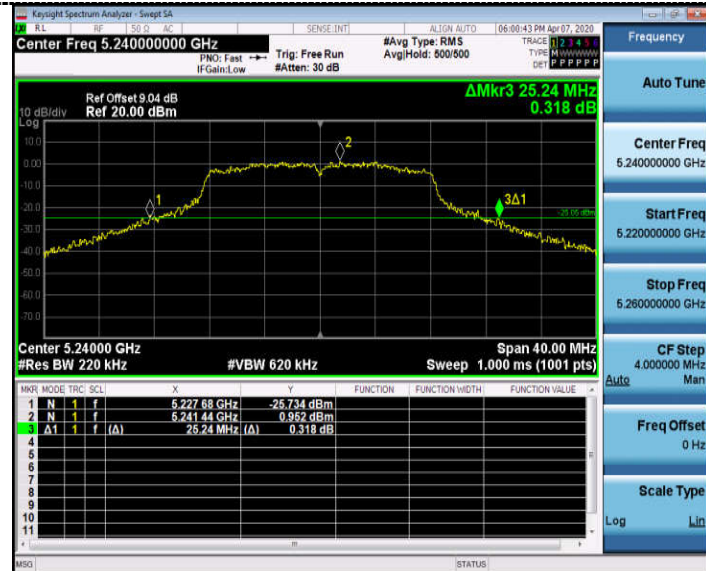
CH36

CH36



CH40

CH40



CH48

CH48

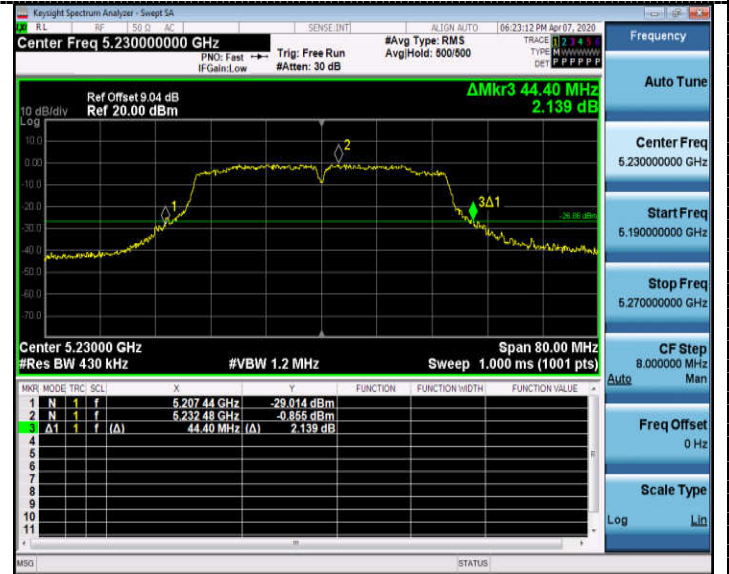
802.11ac20

802.11n HT40



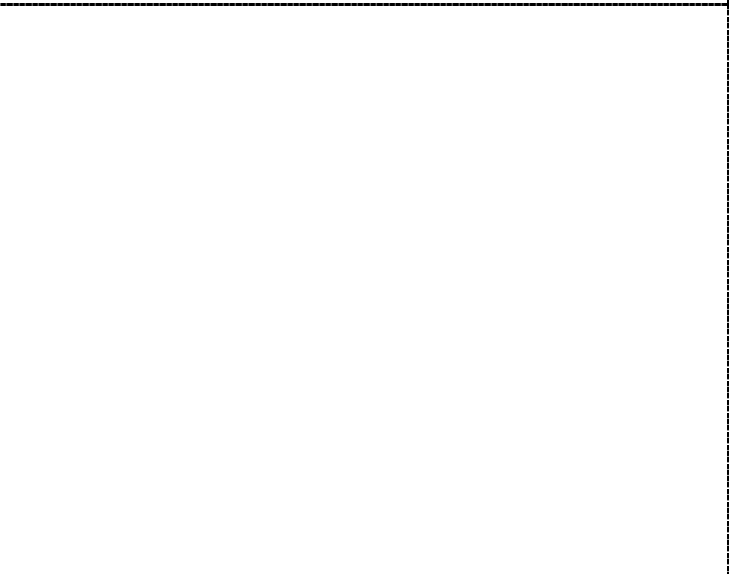
CH36

CH38



CH40

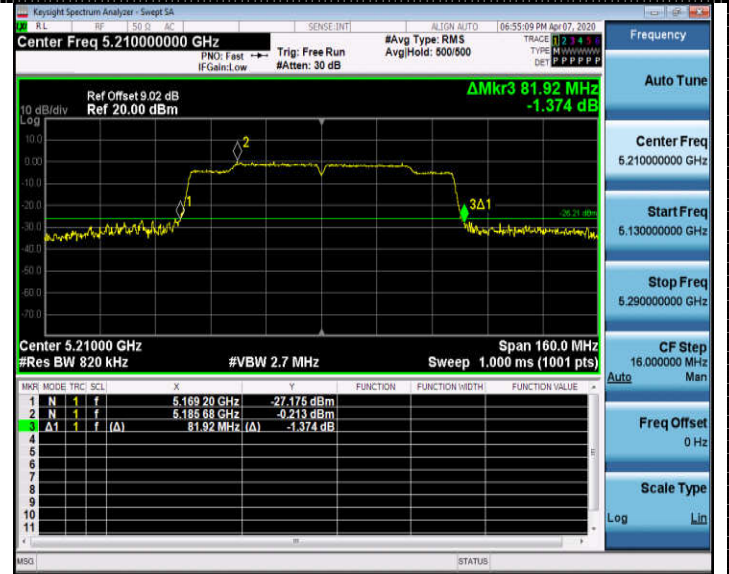
CH46



CH48

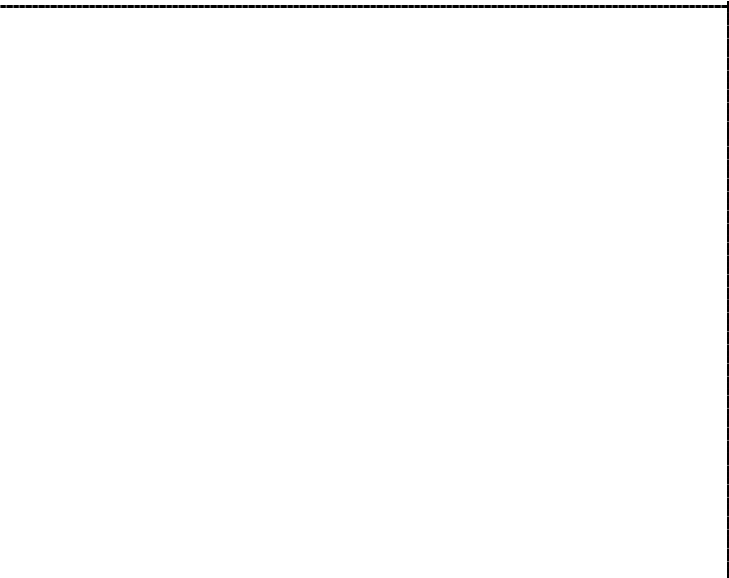
802.11ac40

802.11ac80

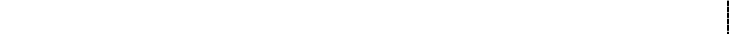


CH38

CH42



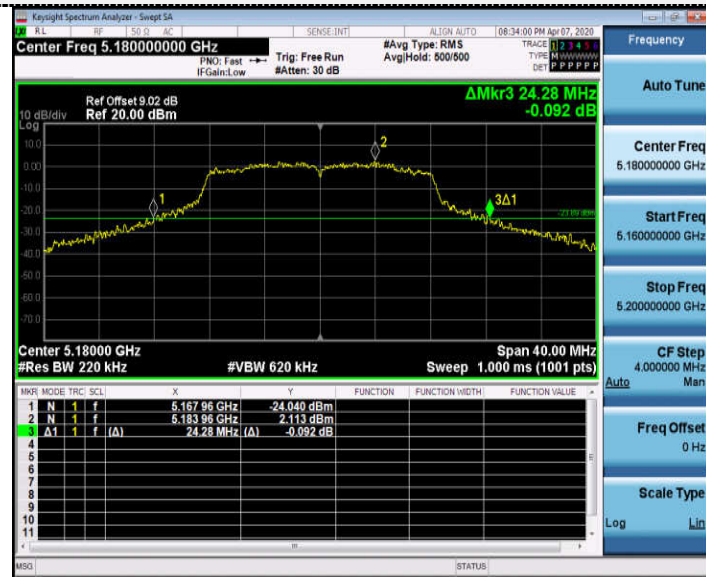
CH46



Antenna 1:

802.11a

802.11n HT20



CH36

CH36



CH40

CH40

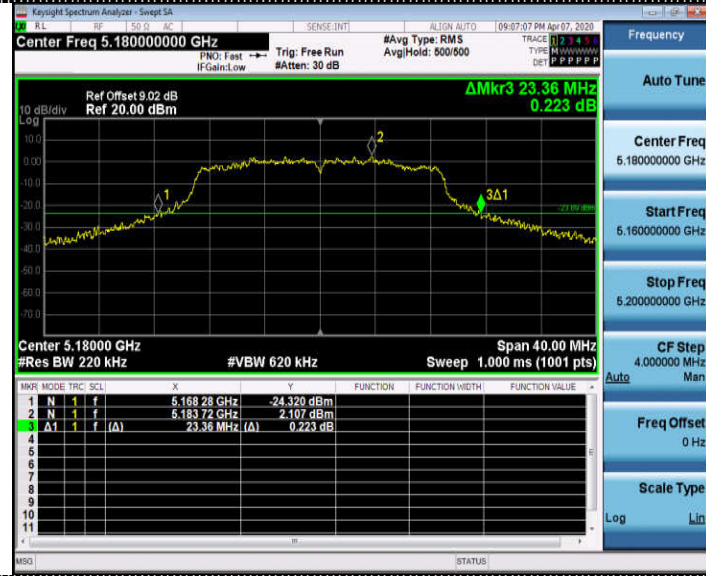


CH48

CH48

802.11ac20

802.11n HT40



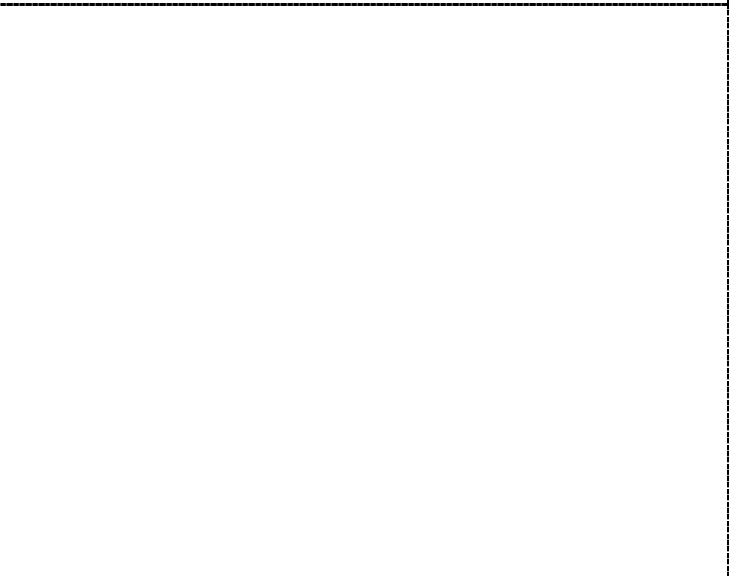
CH36

CH38



CH40

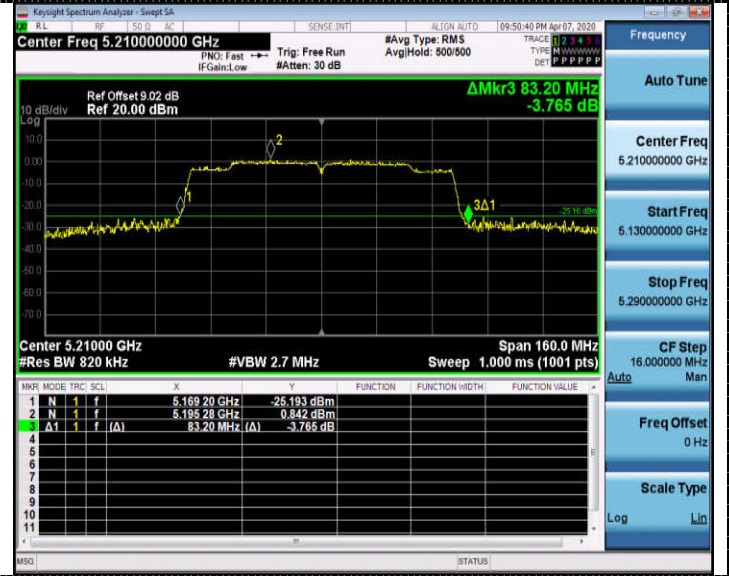
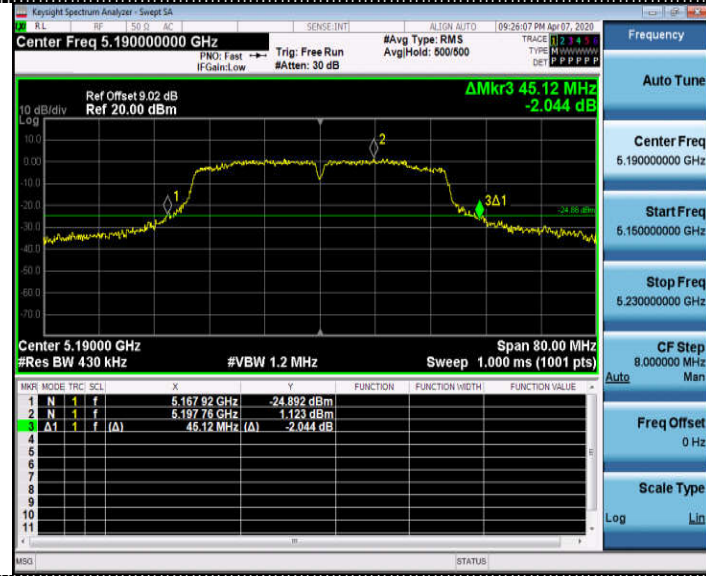
CH46



CH48

802.11ac40

802.11ac80



CH38

CH42

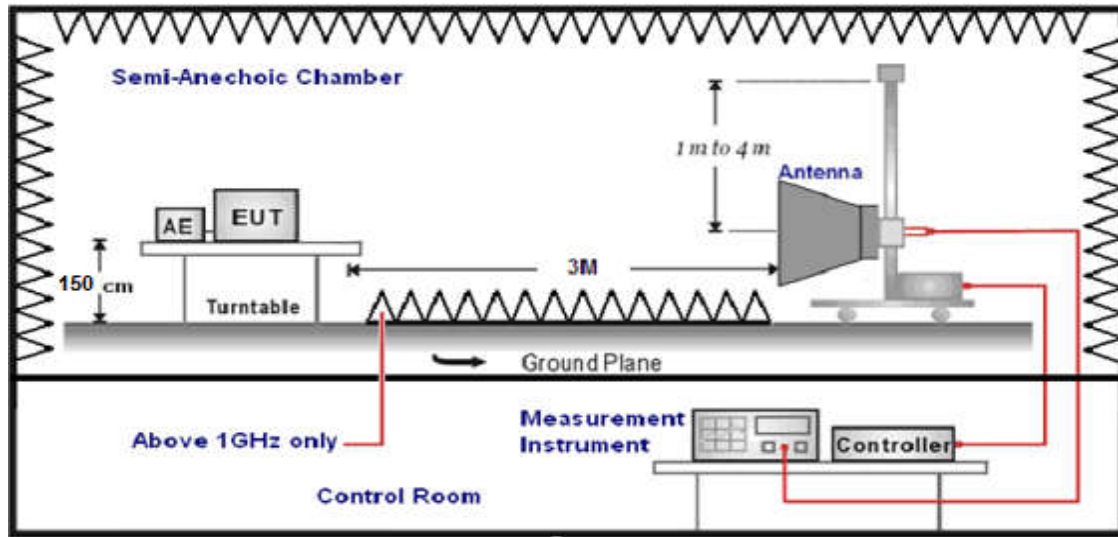


CH46



### 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	$20\log(2400/F(KHz))+40\log(300/3)$	$2400/F(KHz)$
0.49-1.705	3	$20\log(24000/F(KHz))+ 40\log(30/3)$	$24000/F(KHz)$
1.705-30	3	$20\log(30)+ 40\log(30/3)$	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

6. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
1GHz-18GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

### Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

### TEST RESULTS

Remark:For radiated bandedge We measured at both mode, recorded worst case at ant 0 802.11 a mode;

#### **For Radiated Bandedge Measurement**

802.11 a/ Channel 36 :5180 MHz									
Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)	Detector	Polarization
5148.26	35.27	35.58	29.04	8.28	50.09	74	23.91	Peak	Horizontal
5148.26	25.14	35.58	29.04	8.28	39.96	54	14.04	AV	Horizontal

802.11 a/ Channel 48 :5240 MHz									
Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)	Detector	Polarization
5353.12	36.08	35.42	29.06	8.39	50.83	74	23.17	Peak	Horizontal
5353.12	25.43	35.42	29.06	8.39	40.18	54	13.82	AV	Horizontal

802.11 a/ Channel 149 :5745 MHz									
Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)	Detector	Polarization
5674.92	39.45	35.29	29.13	8.65	54.26	86.64	32.38	Peak	Horizontal

802.11 a/ Channel 165 :5825 MHz									
Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit Line (dBμV/m)	Margin (dB)	Detector	Polarization
5899.35	39.80	35.29	29.18	8.80	54.71	87.18	32.47	Peak	Horizontal

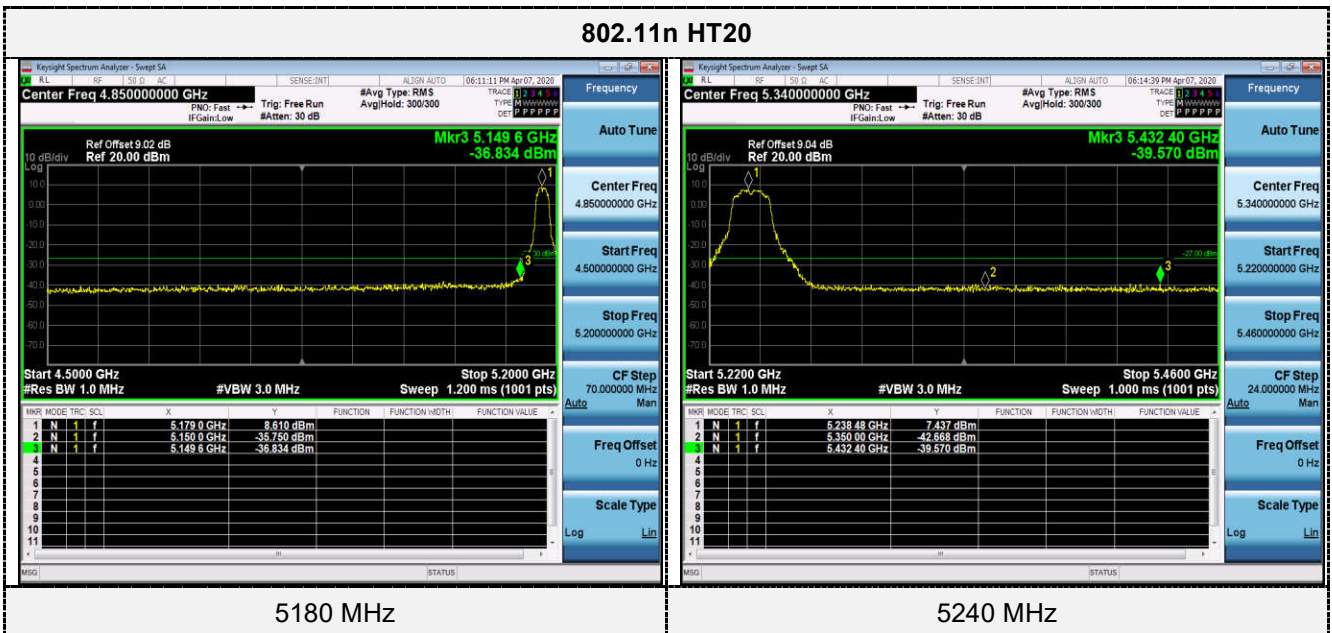
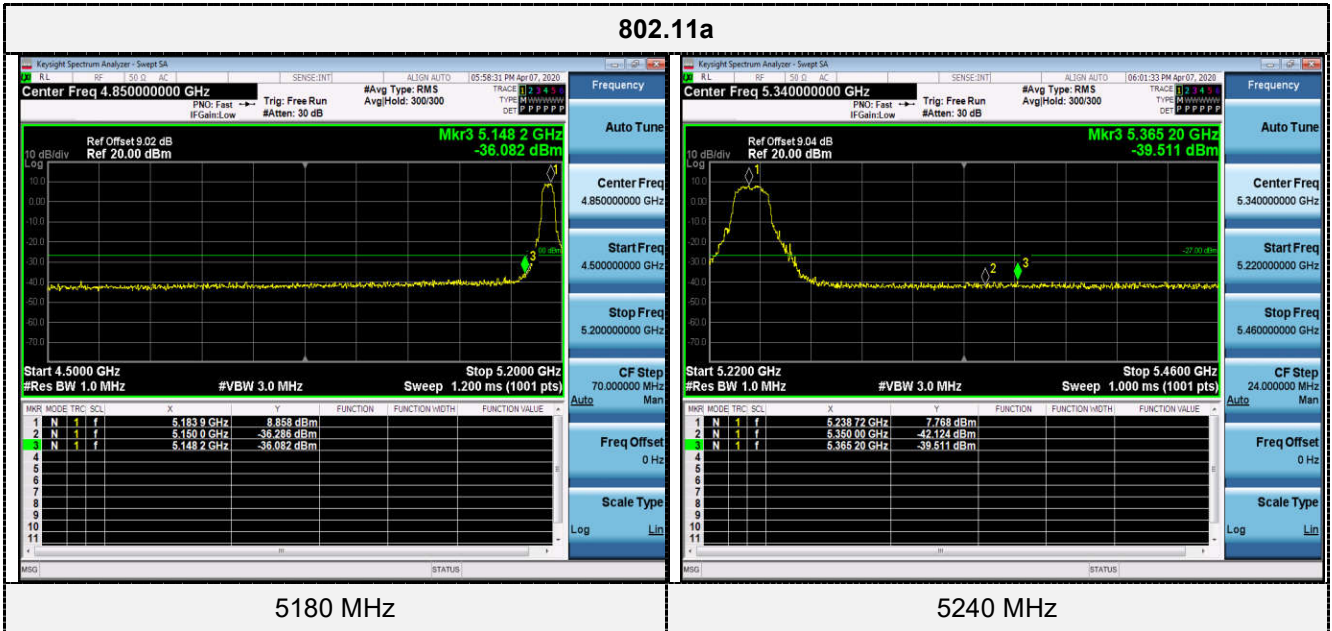
#### **REMARKS:**

1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. The other emission levels were very low against the limit.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. Detector AV is setting spectrum/receiver. RBW=1MHz/VBW=10Hz/Sweep time=Auto/Detector=Peak;

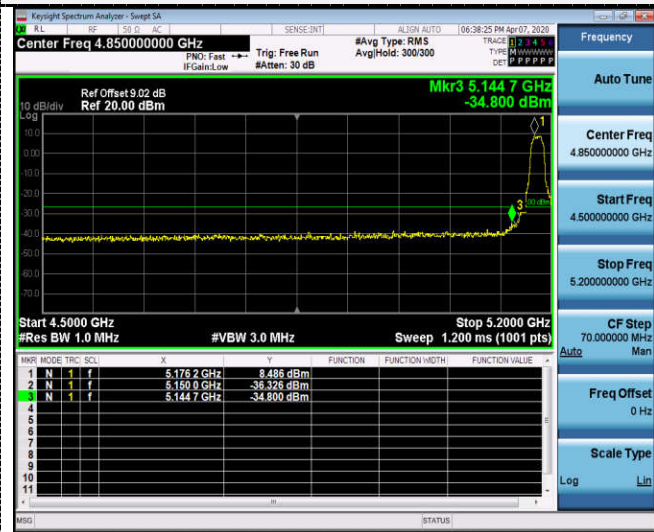


For Conducted Band edge Measurement  
The test results have included the antenna gain

Antenna 0:  
5150-5250MHz:



802.11ac20

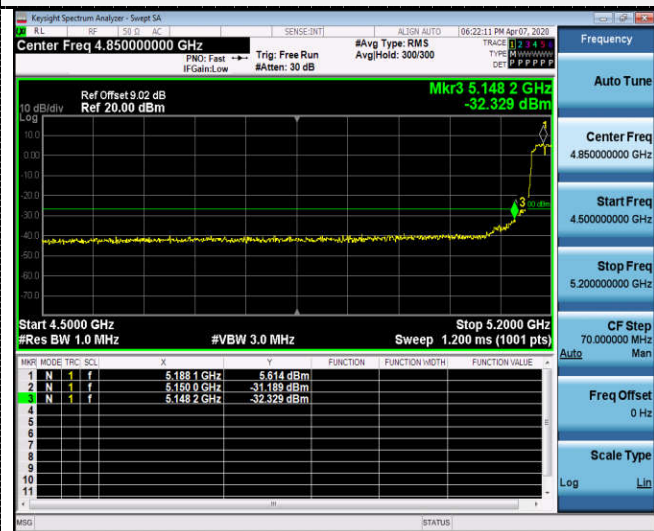


5180 MHz



5240 MHz

802.11n HT40



5190 MHz



5230 MHz