

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	34.24	35.58	29.04	8.28	49.06	74	24.94	Peak	Horizontal
5148.26	24.82	35.58	29.04	8.28	39.64	54	14.36	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	34.15	35.42	29.06	8.39	48.90	74	25.10	Peak	Horizontal
5353.12	24.64	35.42	29.06	8.39	39.39	54	14.61	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
5688.67	40.01	35.29	29.13	8.65	54.82	96.82	42.00	Peak	Horizontal

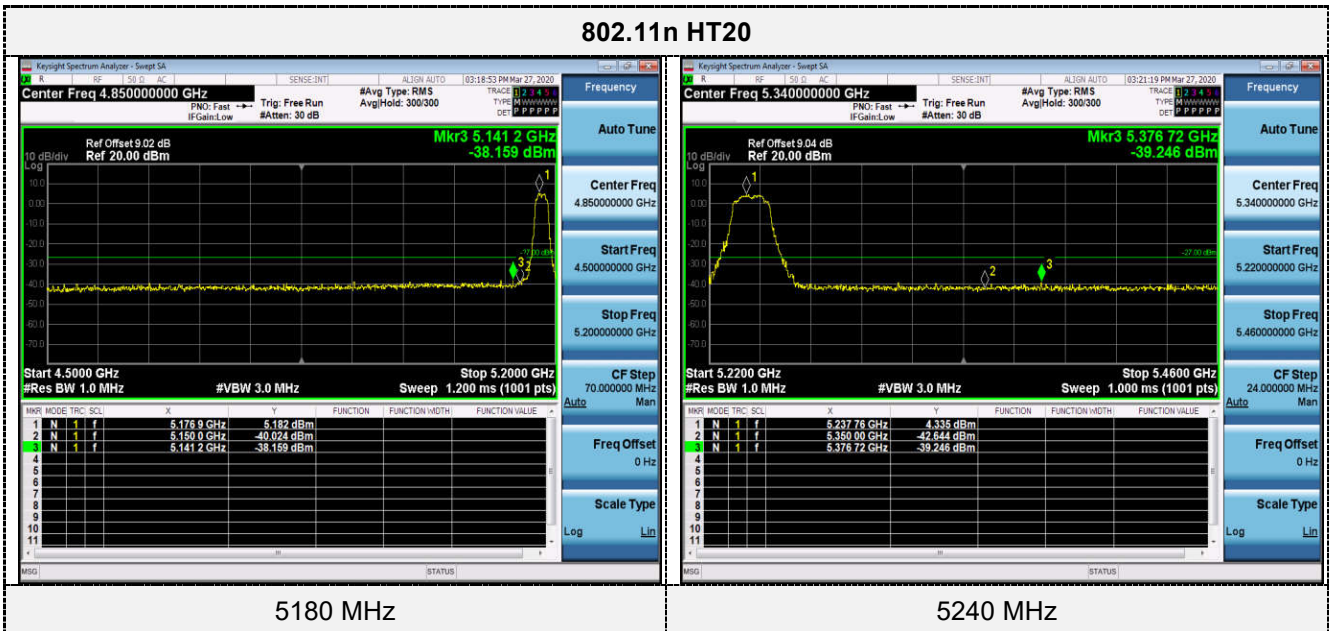
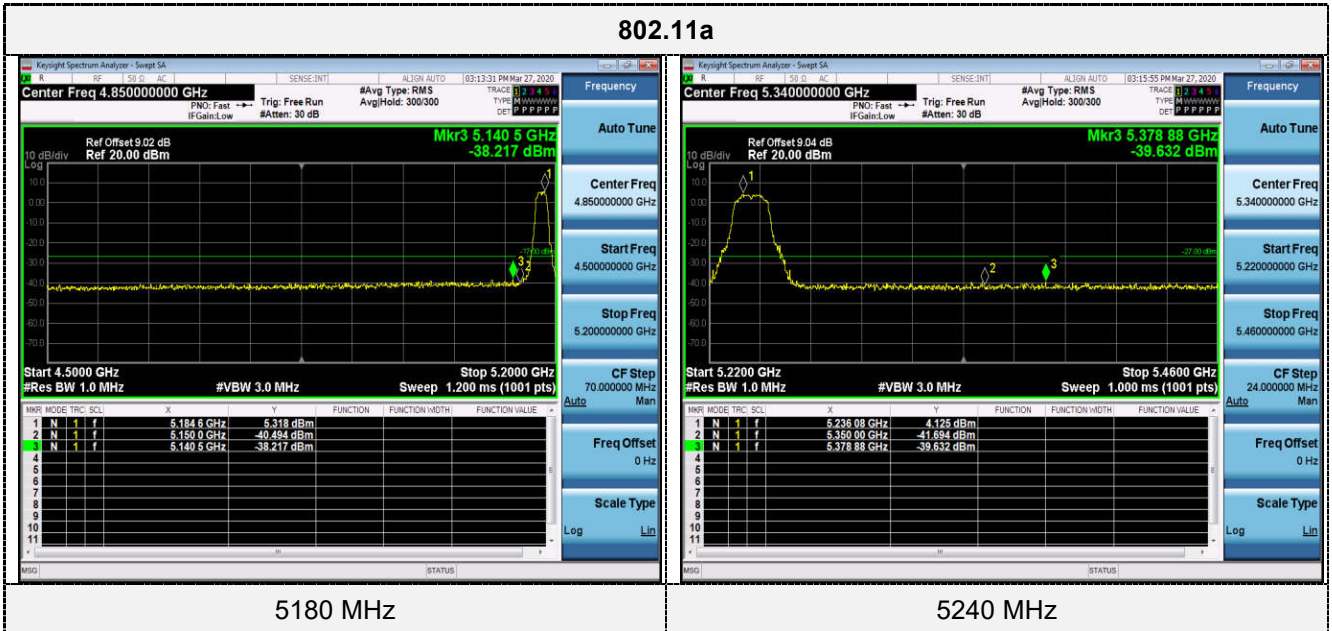
802.11 a/ Channel 165 :5825 MHz									
Freq (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBµV/m)	Limit Line (dBµV/m)	Margin (dB)	Detector	Polarization
5896.93	39.33	35.29	29.18	8.80	54.24	117.68	63.44	Peak	Horizontal

**REMARKS:**

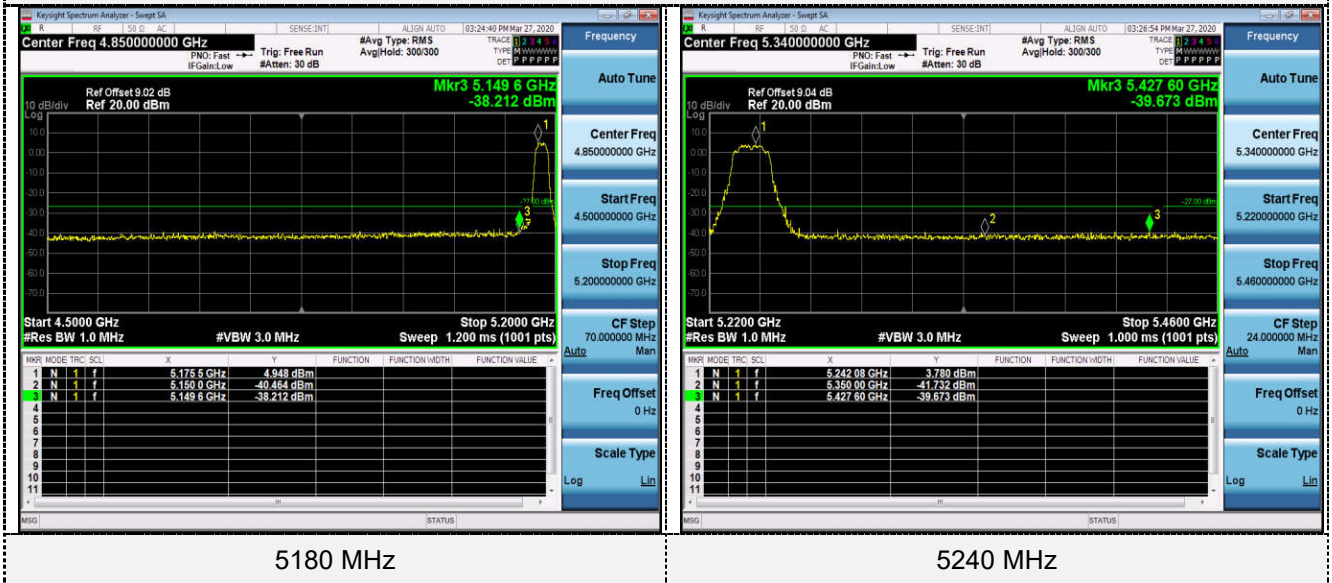
1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. The other emission levels were very low against the limit.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. Detector AV is setting spectrum/receiver. RBW=1MHz/VBW=10Hz/Sweep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

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

Antenna 0:  
5150-5250MHz:



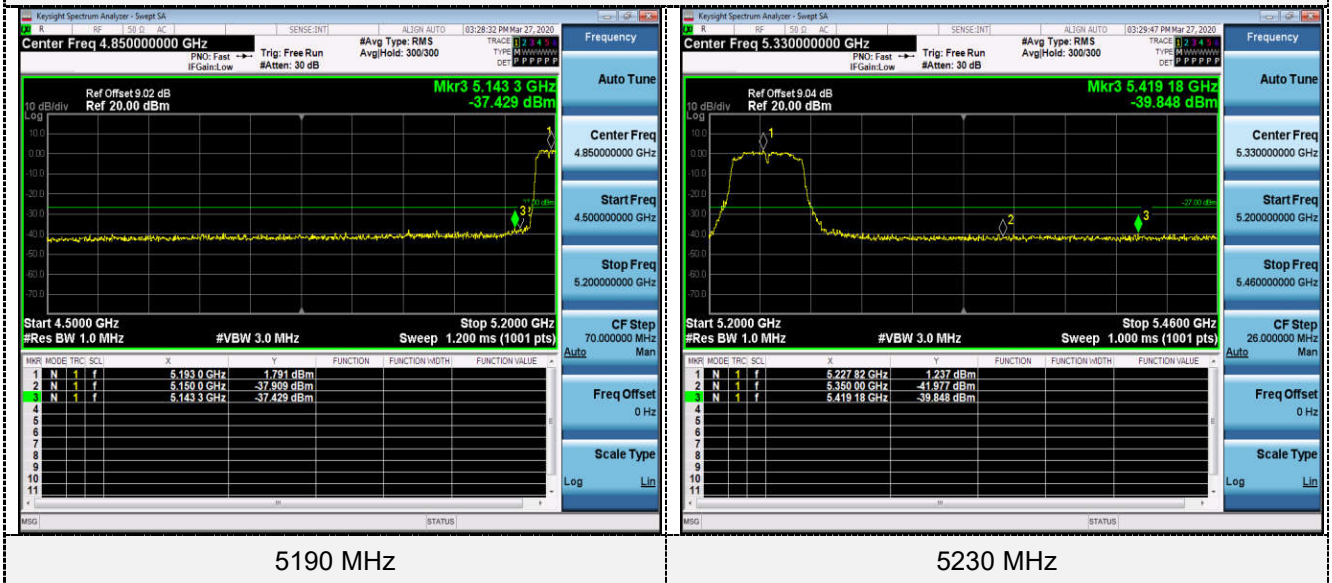
802.11ac20



5180 MHz

5240 MHz

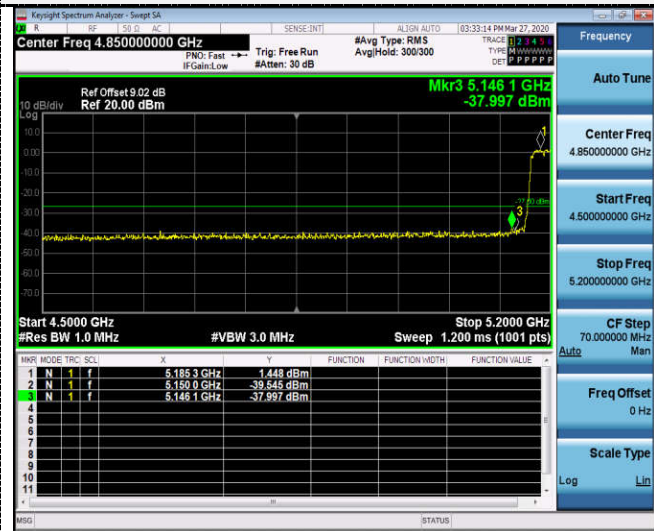
802.11n HT40



5190 MHz

5230 MHz

802.11ac40

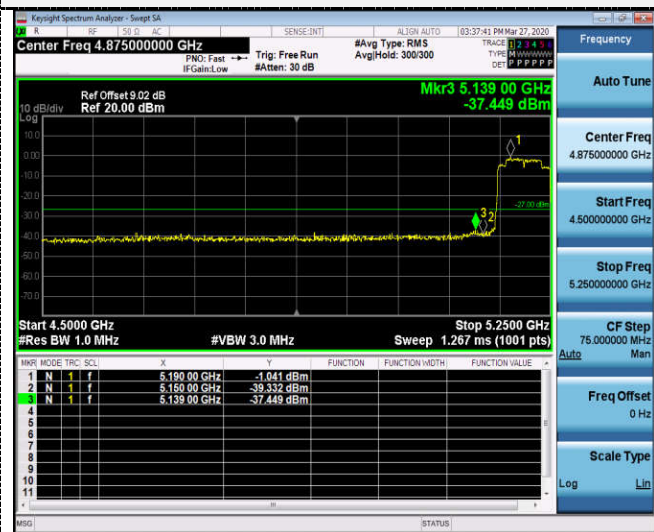


5190 MHz

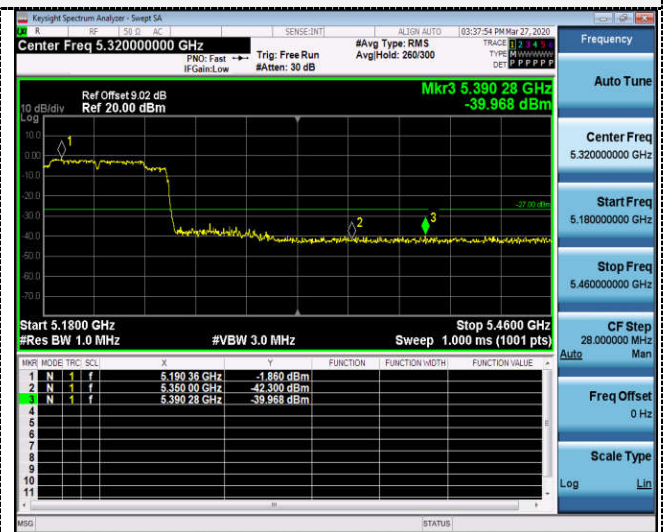


5230 MHz

802.11ac80



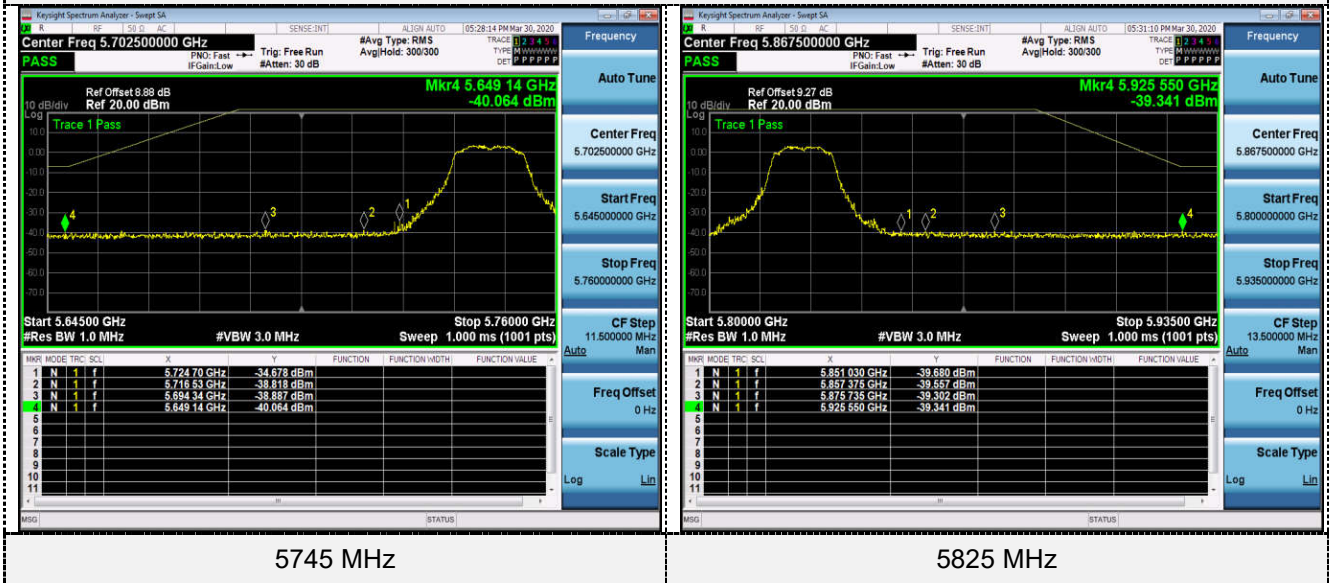
5210 MHz



5210 MHz

5725-5850MHz:

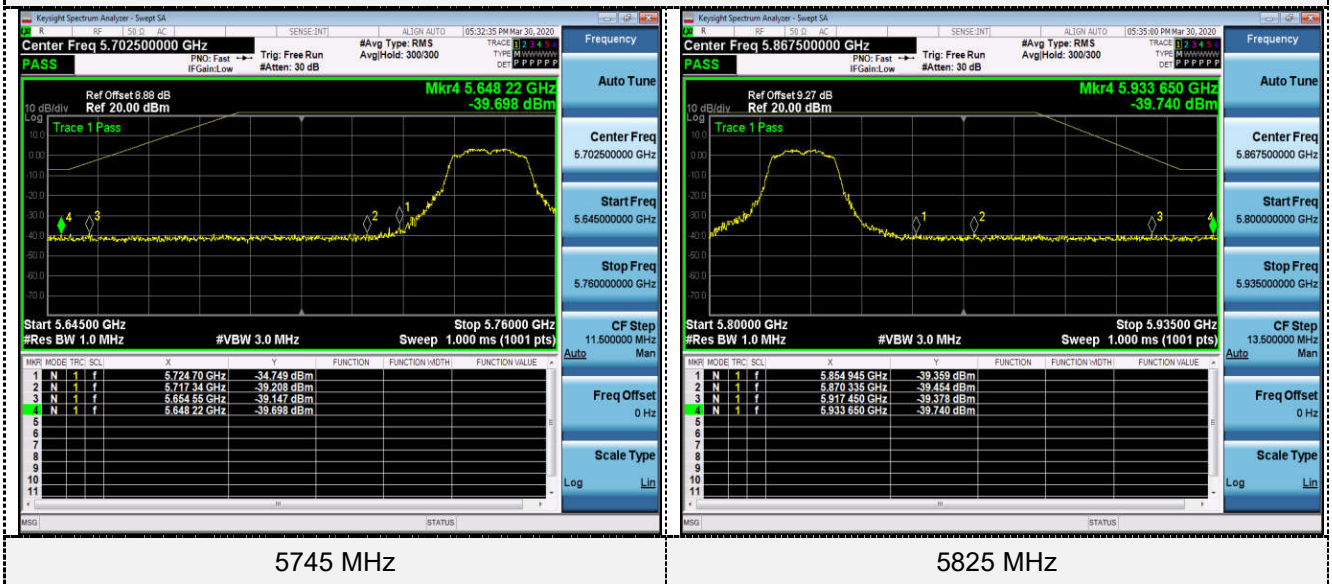
802.11a



5745 MHz

5825 MHz

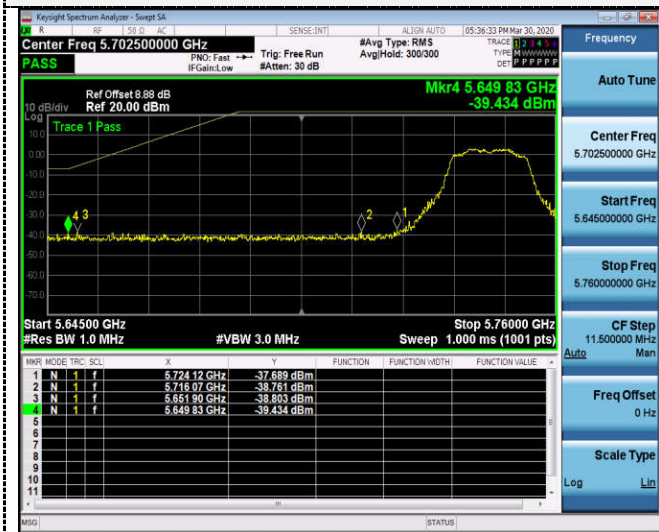
802.11n HT20



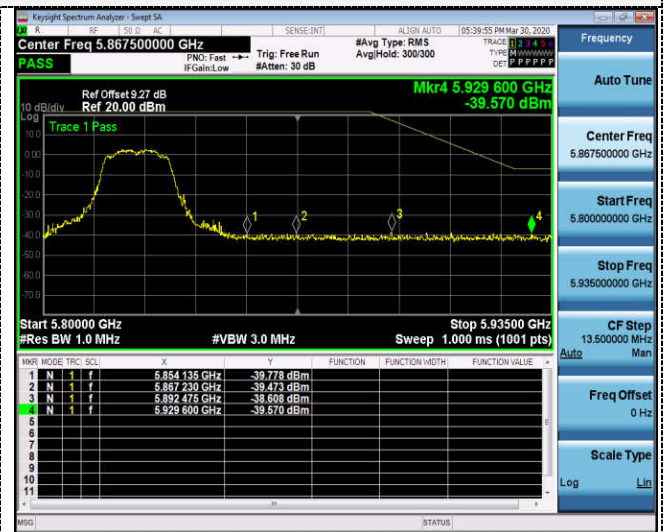
5745 MHz

5825 MHz

802.11ac20



5745 MHz

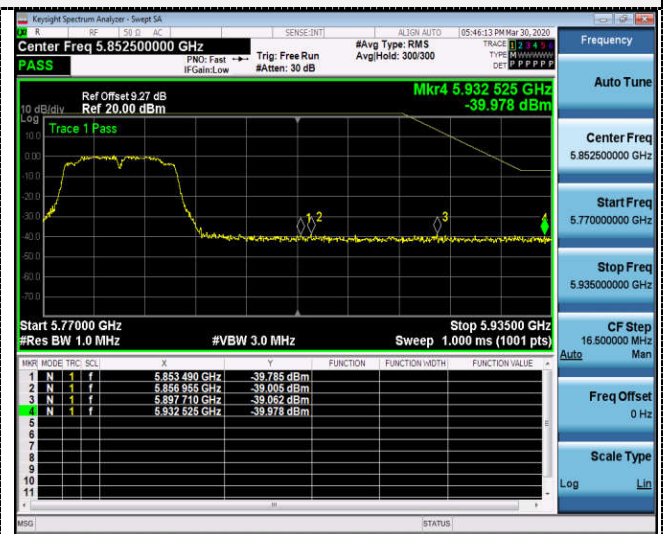


5825 MHz

802.11n HT40



5755 MHz

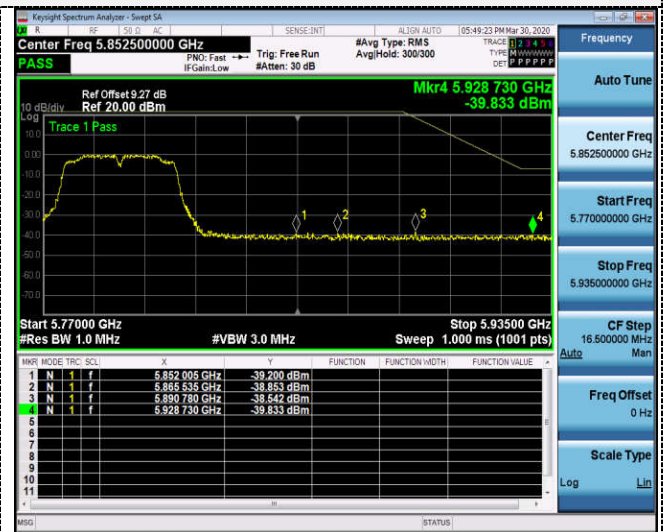


5795 MHz

802.11ac40



5755 MHz



5795 MHz

802.11ac80



5775 MHz

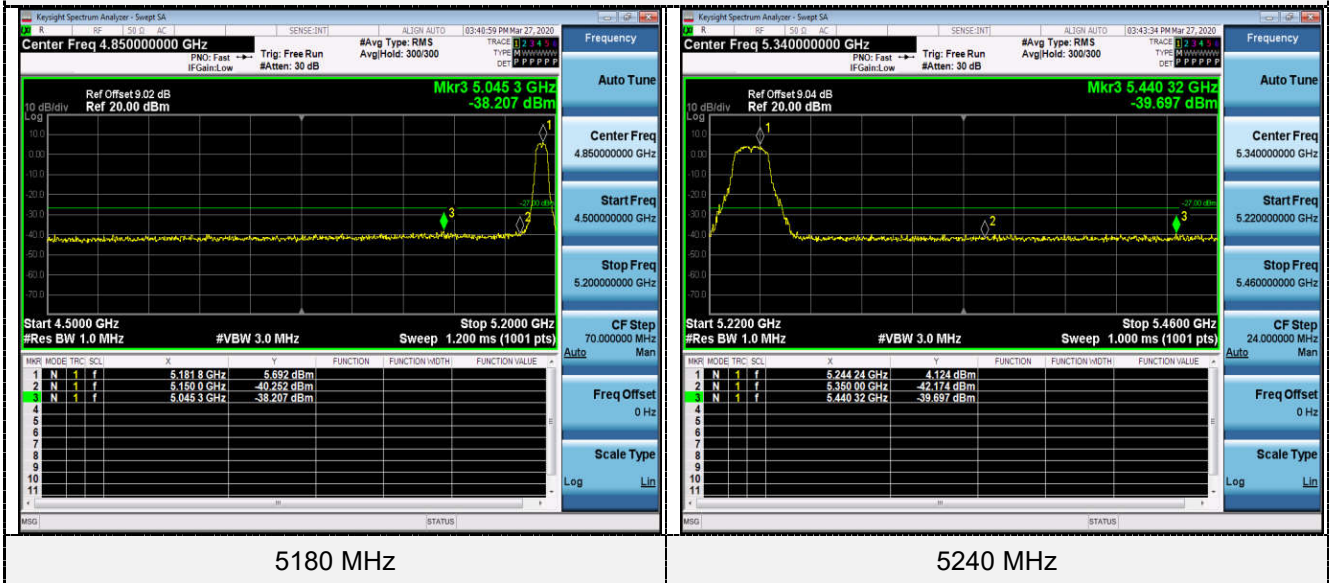


5775 MHz

Antenna 1:

5150-5250MHz:

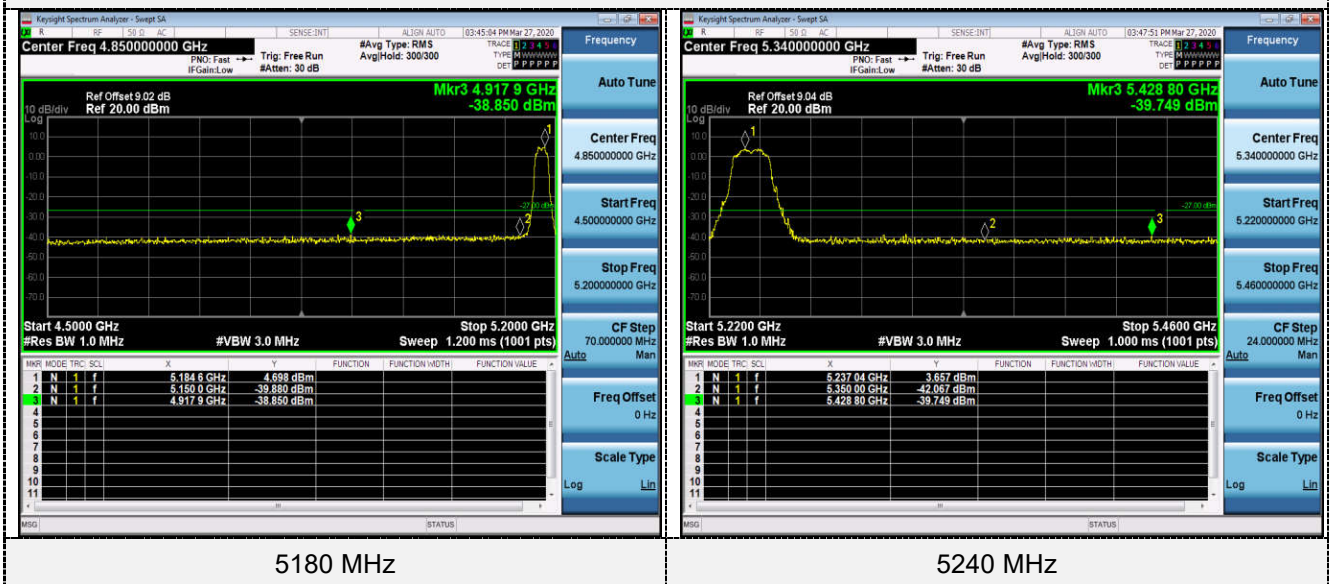
802.11a



5180 MHz

5240 MHz

802.11n HT20

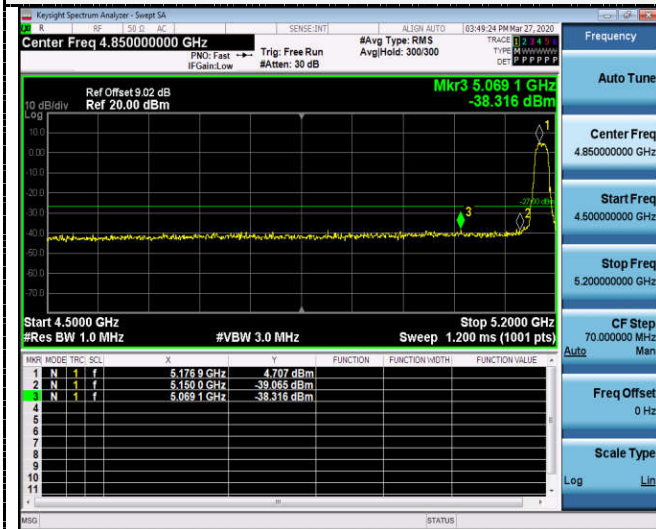


5180 MHz

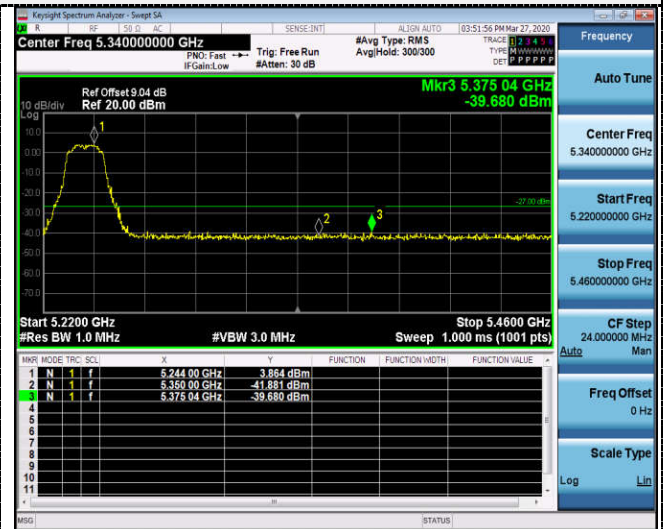
5240 MHz



802.11ac20

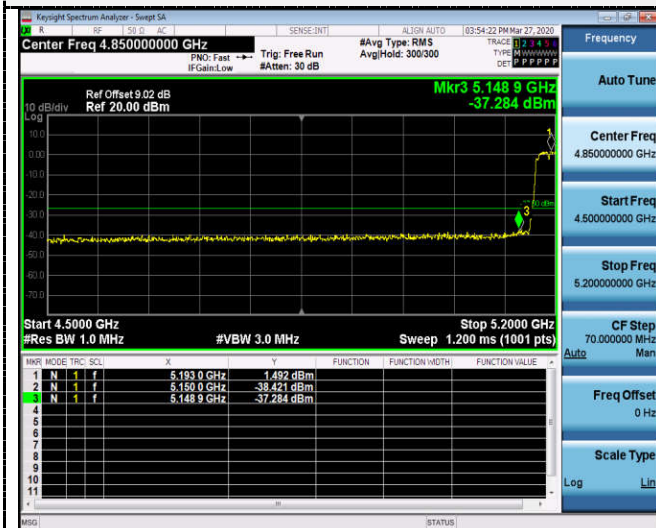


5180 MHz

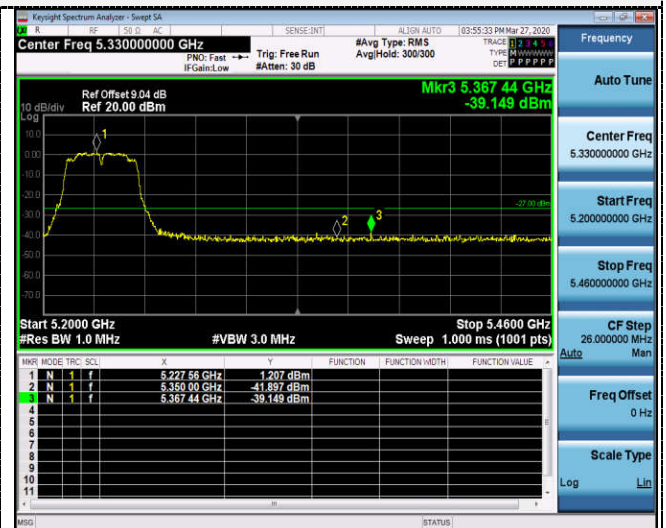


5240 MHz

802.11n HT40

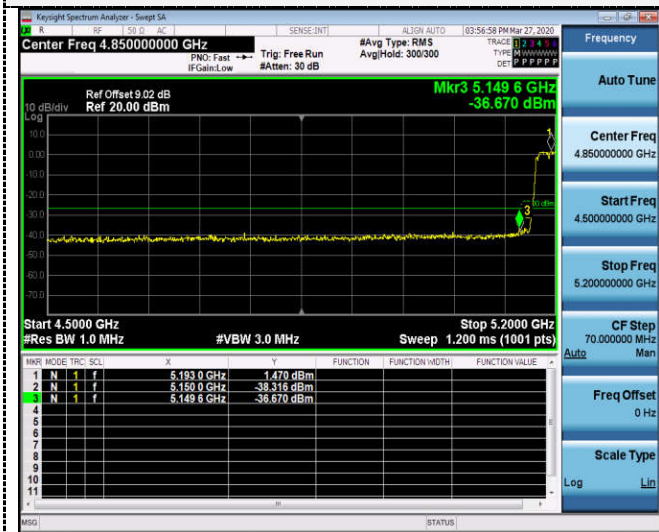


5190 MHz

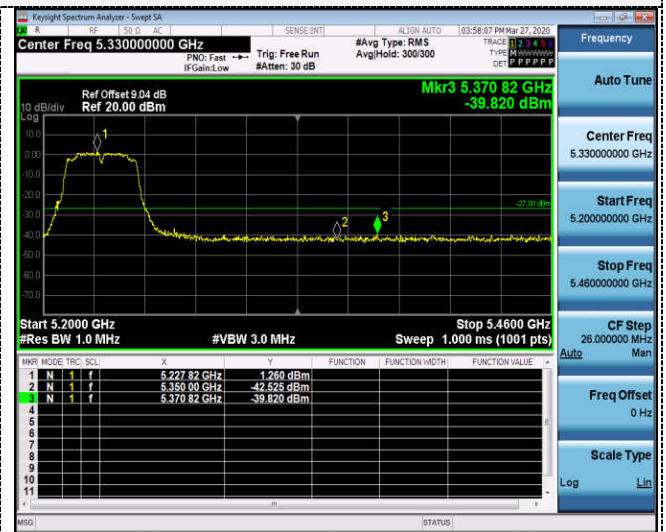


5230 MHz

802.11ac40



5190 MHz

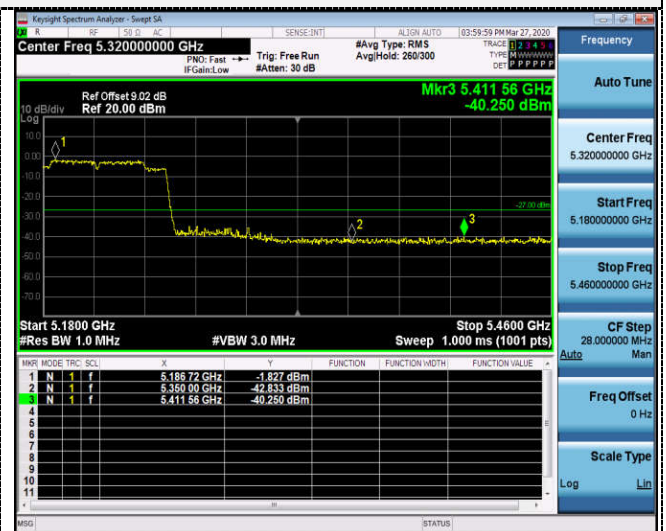


5230 MHz

802.11ac80



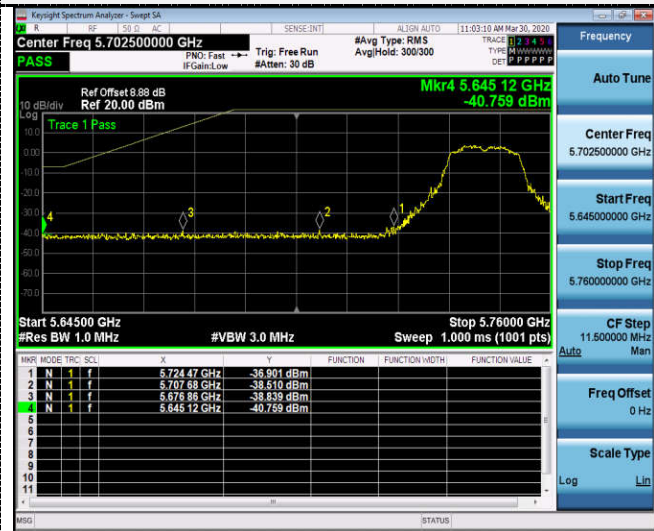
5210 MHz



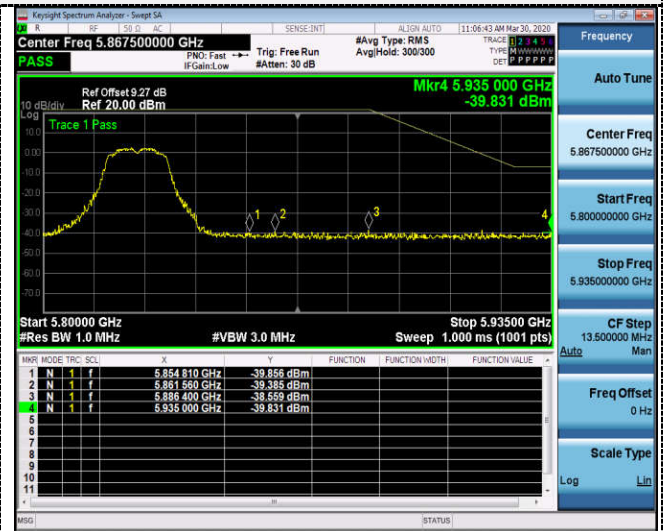
5210 MHz

5725-5850MHz:

802.11a



5745 MHz

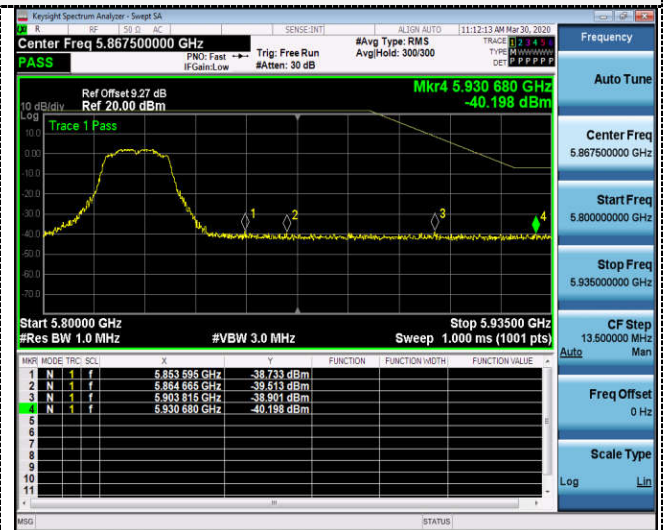


5825 MHz

802.11n HT20



5745 MHz



5825 MHz

802.11ac20



5745 MHz



5825 MHz

802.11n HT40



5755 MHz



5795 MHz

802.11ac40

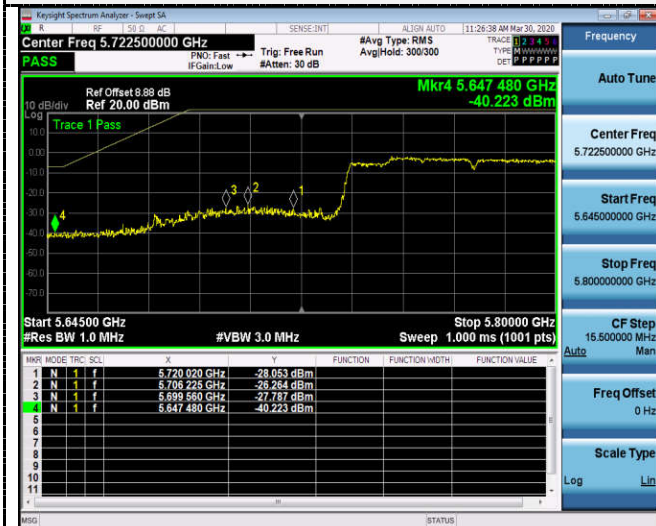


5755 MHz



5795 MHz

802.11ac80



5775 MHz



5775 MHz

## 4.9. Antenna Requirement

### Standard Applicable

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.

### **Antenna Information**

The antenna is FPC antenna, through the buckle stretched out, The directional gains of antenna used for transmitting is 2.46dBi.

Reference to the test report No. **GTS20200303006-1-9**

**5. TEST SETUP PHOTOS OF THE EUT**

Reference to the test report No. GTS20200303006-1-9

**6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT**

Reference to the test report No. GTS20200303006-1-9

.....**End of Report**.....