



Report No.: AGC10232240701FR04

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### 10. Conducted Band Edge and Out-of-Band Emissions

## 10.1 Provisions Applicable

	Applicable to	Limit	
Restricted bands	789033 D02 General UNII Test Procedures New Rules v02r01	Field strength at 3m (dBuV/m)	
		PK: 74	AV: 54
Out of the restricted bands	Applicable to	EIRP Limit (dBm/MHz)	Equivalent field Strength at 3m (dBuV/m)
	FCC 15.407(b)(1)	PK: -27	PK: 68.2
	15.407(b)(2)		
	15.407(b)(3)		
	15.407(b)(4)	See Note 2	

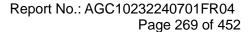
Note 1: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

E = 
$$\frac{1000000 - \sqrt{30 P}}{3}$$
 µV/m, where P is the eirp (Watts).

Note 2: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

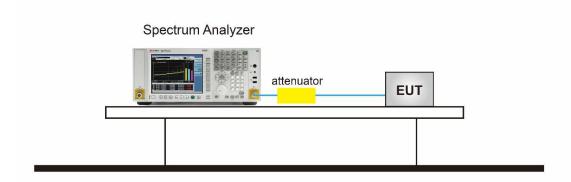
#### **10.2 Measurement Procedure**

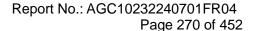
- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the Span = wide enough to capture the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic.
- 3. RBW = 1MHz; VBW= 3MHz; Sweep = auto; Detector function = Peak. (Test frequency below 1GHz)
- 4. RBW = 1 MHz; VBW= 3 MHz; Sweep = auto; Detector function = Peak. (Test frequency Above 1GHz)
- 5. Set SPA Trace 1 Max hold, then View.
- 6. Antenna gain and path loss have been compensated to the Correction factor.
- 7. Mark the maximum useless stray point and compare it with the limit value to record the result.





## 10.3 Measurement Setup (Block Diagram of Configuration)

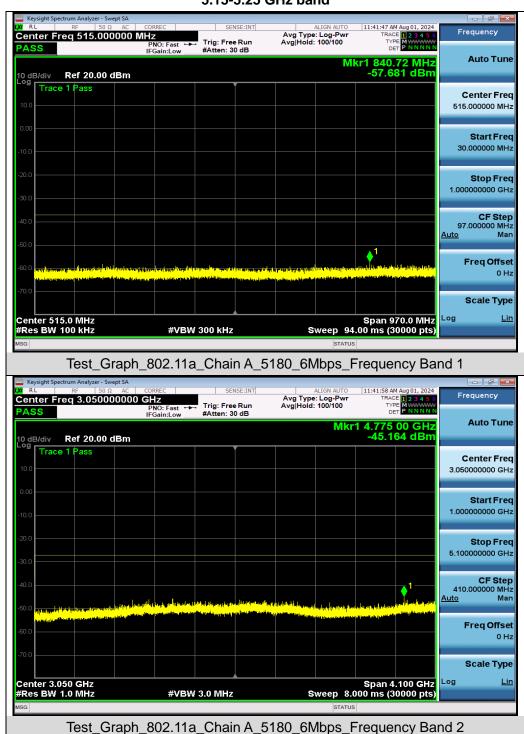


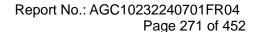




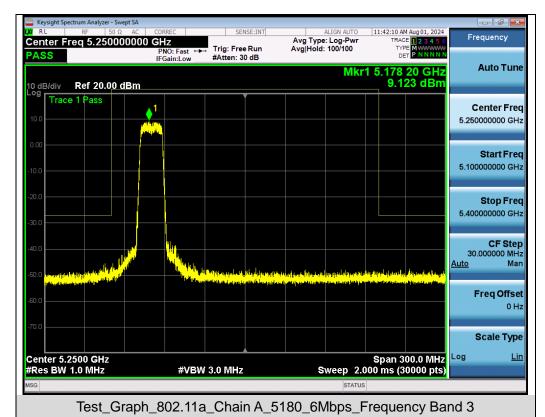
#### 10.4 Measurement Results

# Test Graphs of Spurious Emissions outside of the 5.15-5.25 GHz band for transmitters operating in the 5.15-5.25 GHz band

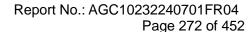




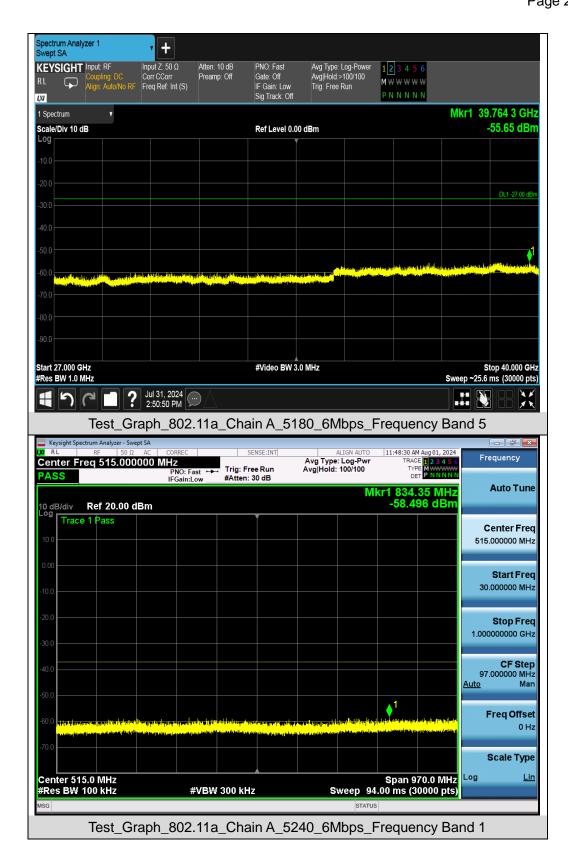


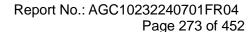












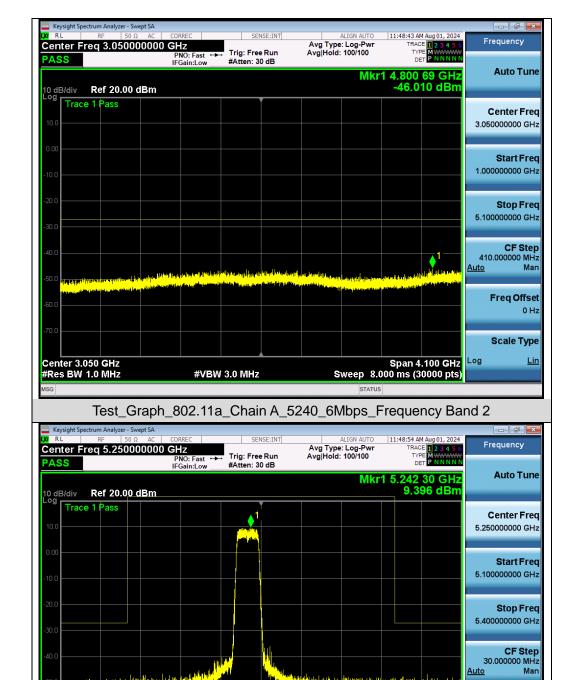
Freq Offset 0 Hz

Scale Type

Log

Span 300.0 MHz Sweep 2.000 ms (30000 pts)



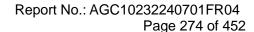


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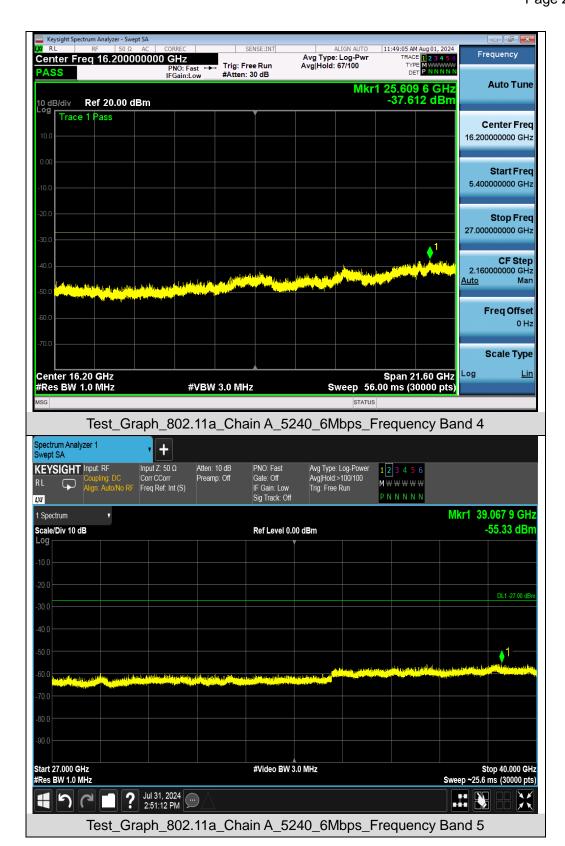
Test Graph 802.11a Chain A 5240 6Mbps Frequency Band 3

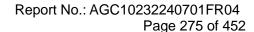
#VBW 3.0 MHz

Center 5.2500 GHz #Res BW 1.0 MHz

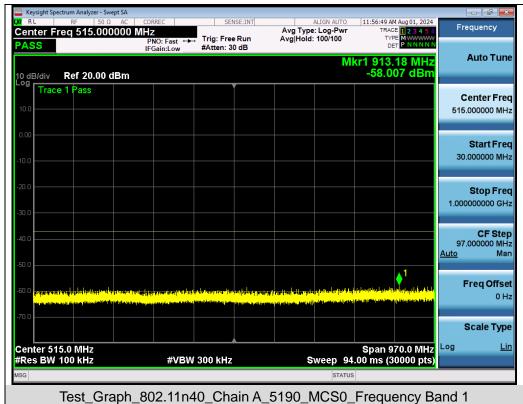




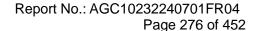




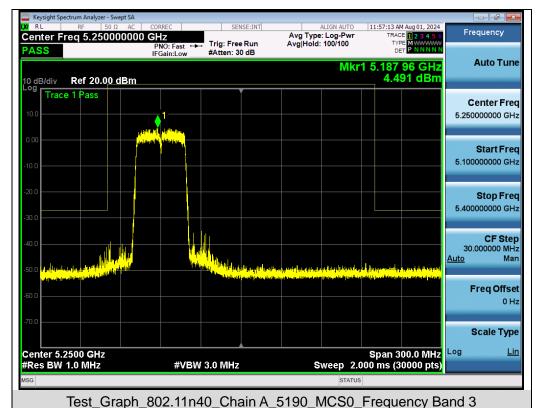




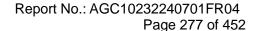




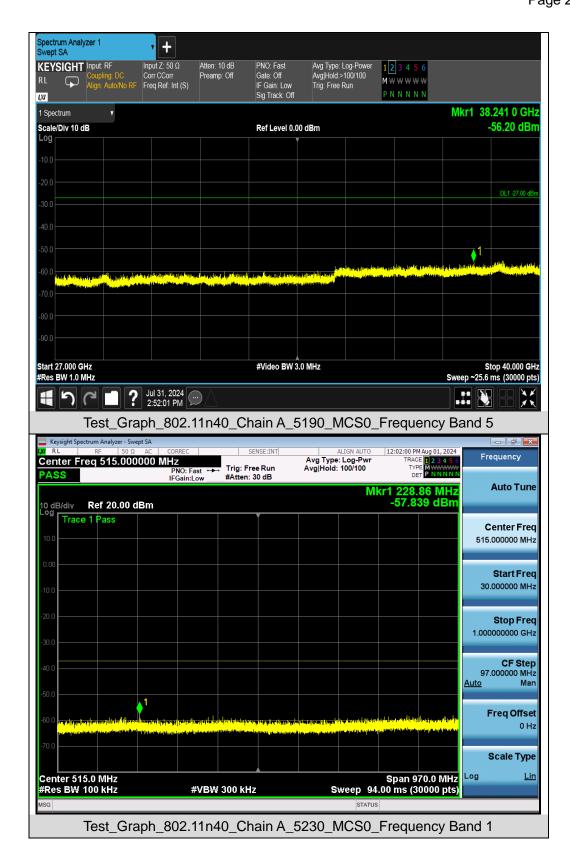


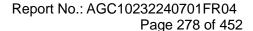






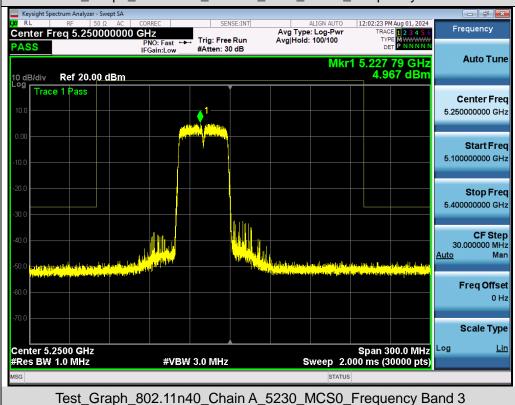


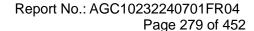




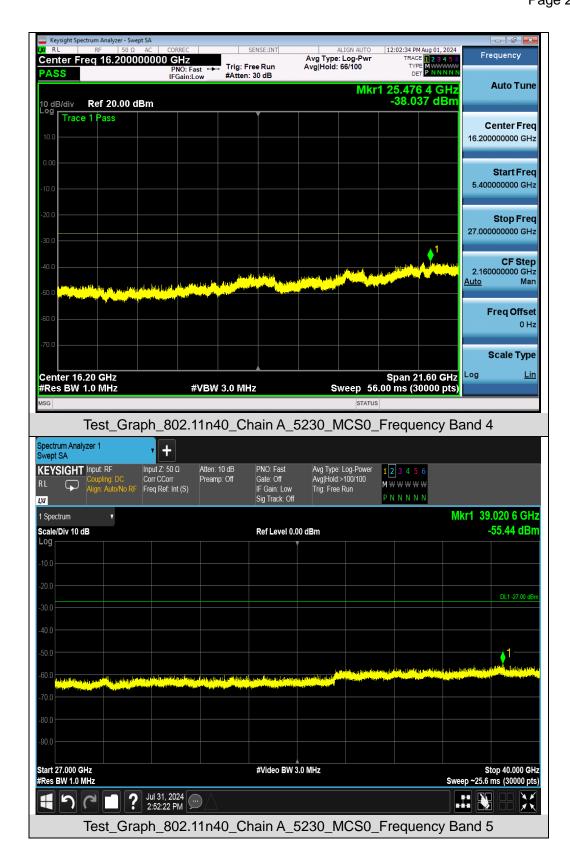


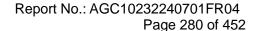






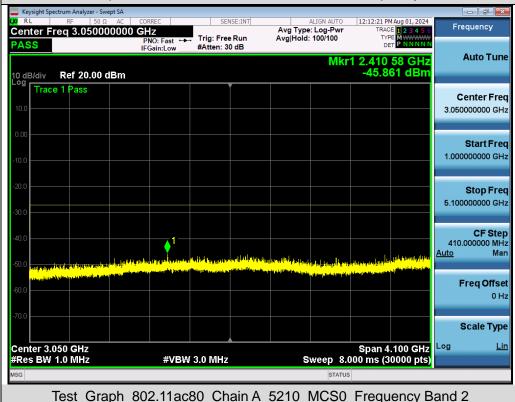




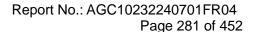




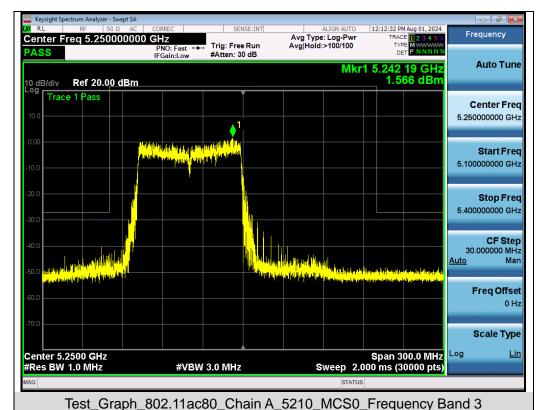




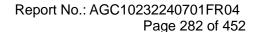
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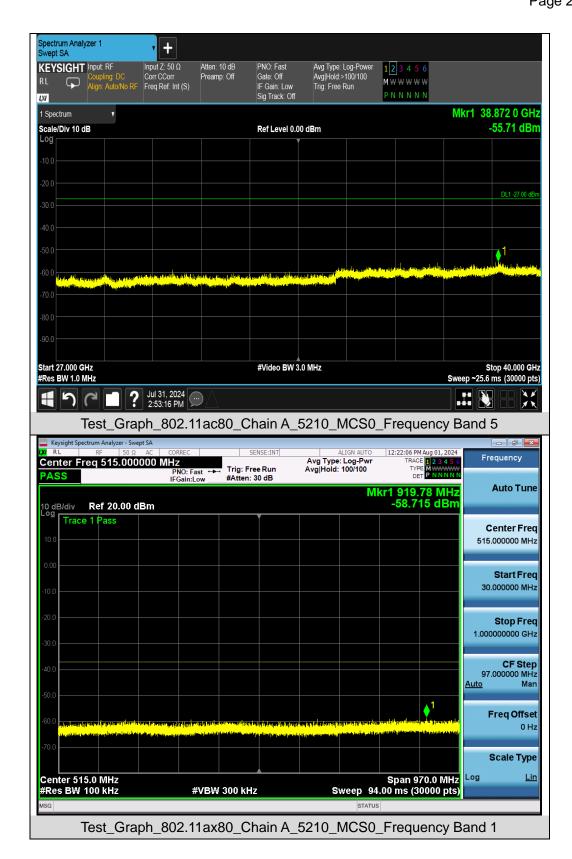


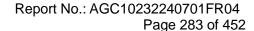






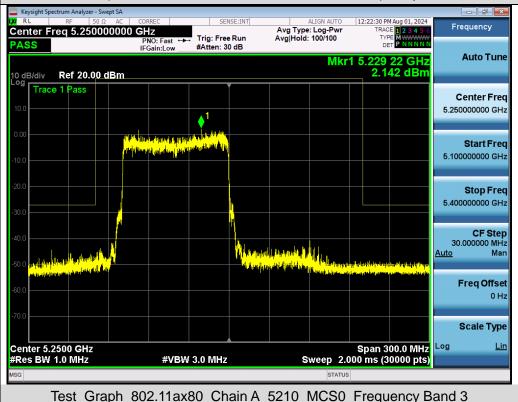


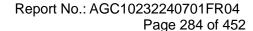




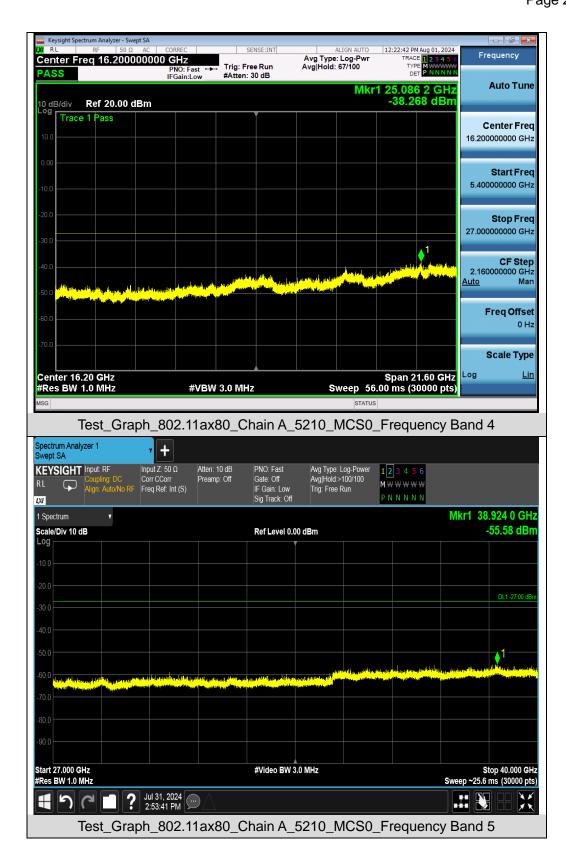




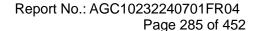








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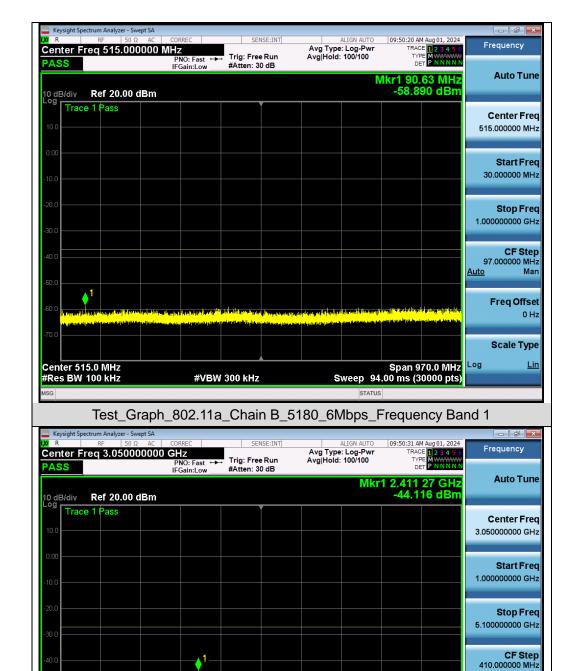
<u>Auto</u>

Span 4.100 GHz Sweep 8.000 ms (30000 pts) Man

Freq Offset 0 Hz

Scale Type



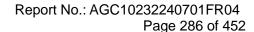


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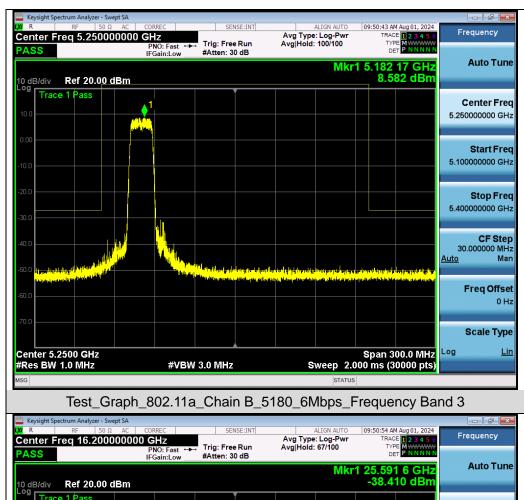
Test Graph 802.11a Chain B 5180 6Mbps Frequency Band 2

#VBW 3.0 MHz

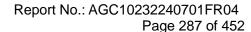
Center 3.050 GHz #Res BW 1.0 MHz



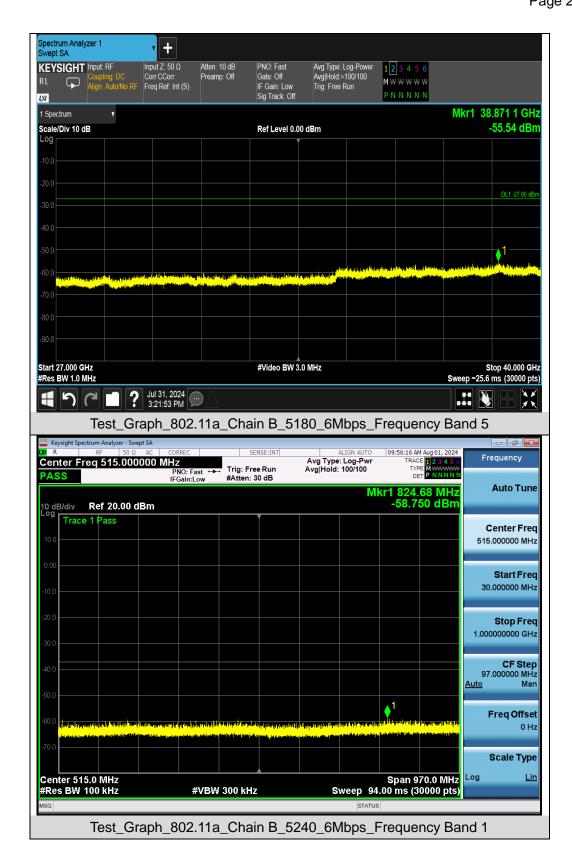


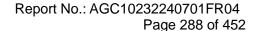












<u>Auto</u>

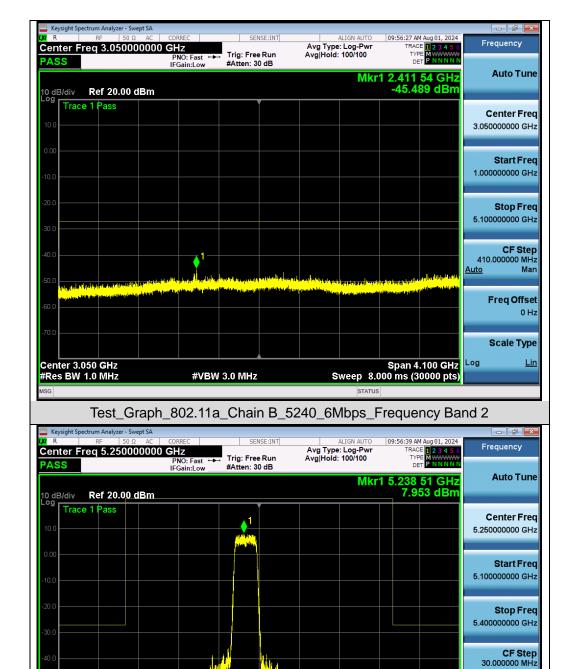
Log

Span 300.0 MHz Sweep 2.000 ms (30000 pts) Man

Freq Offset 0 Hz

Scale Type



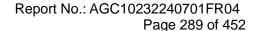


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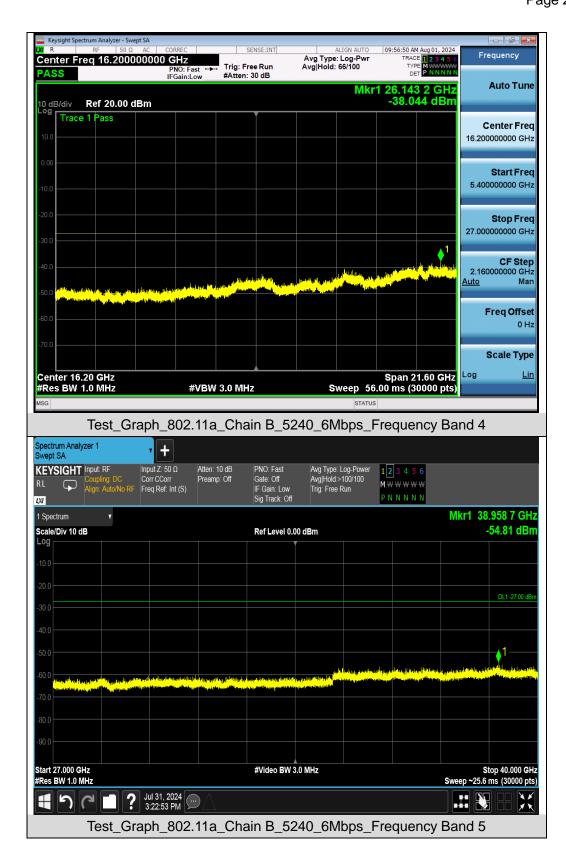
Test Graph 802.11a Chain B 5240 6Mbps Frequency Band 3

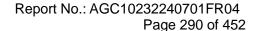
#VBW 3.0 MHz

Center 5.2500 GHz #Res BW 1.0 MHz

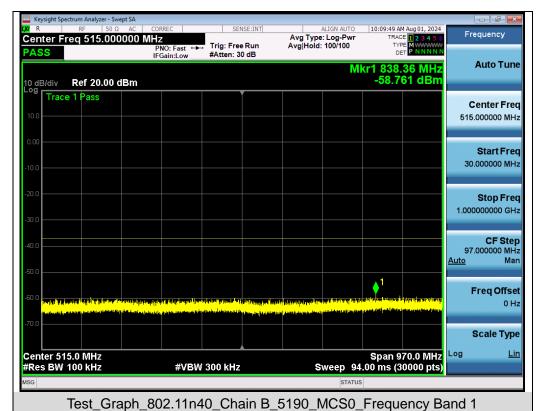


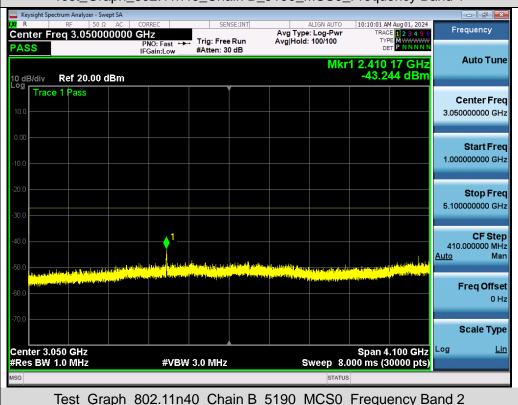


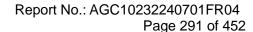




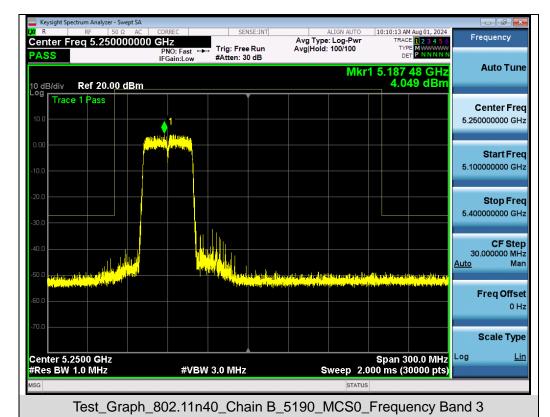




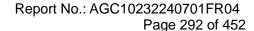




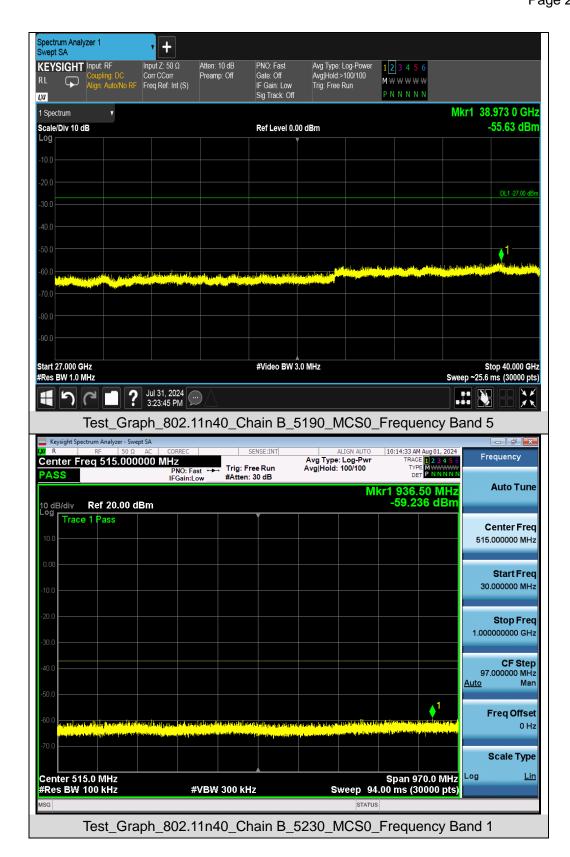


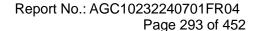






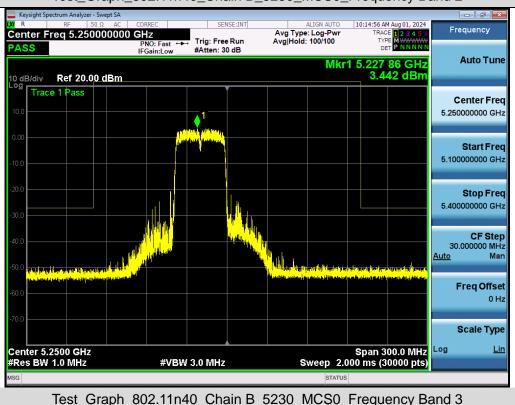


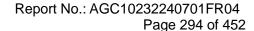




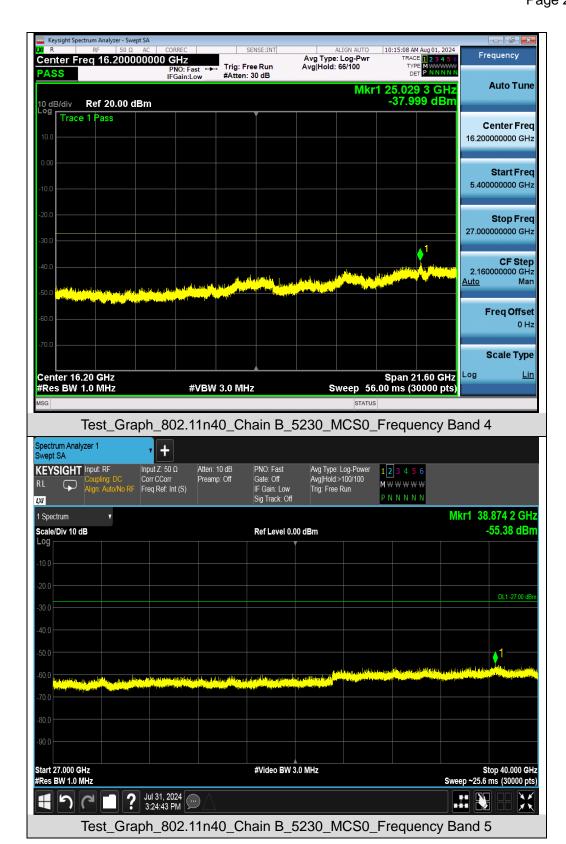


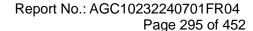






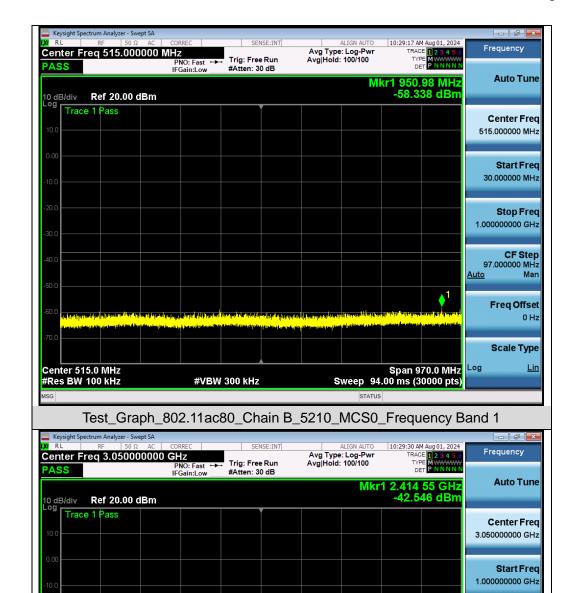






**Stop Freq** 5.100000000 GHz



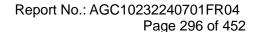


CF Step 410.000000 MHz Auto Man

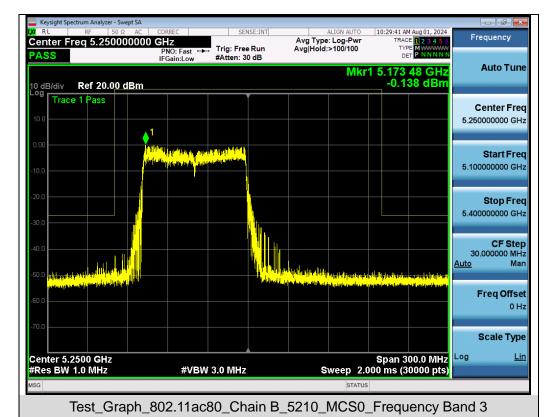
Freq Offset 0 Hz

#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.000 ms (30000 pts)

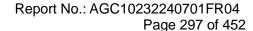
Test\_Graph\_802.11ac80\_Chain B\_5210\_MCS0\_Frequency Band 2



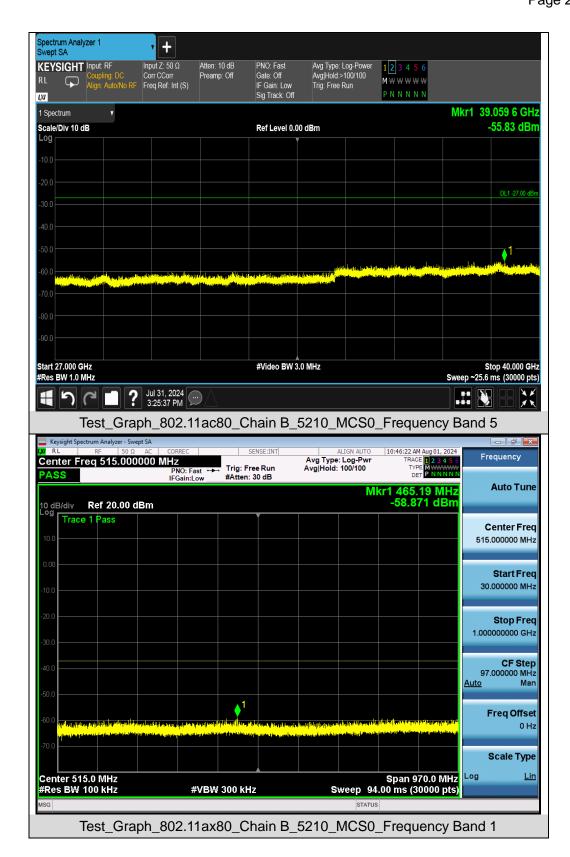


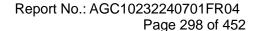












CF Step 30.000000 MHz

> Freq Offset 0 Hz

Scale Type

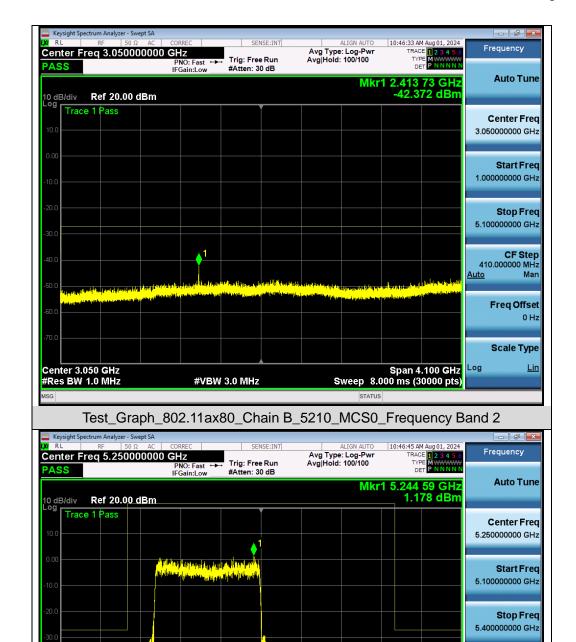
Man

<u>Auto</u>

Log

Span 300.0 MHz Sweep 2.000 ms (30000 pts)



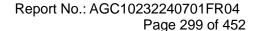


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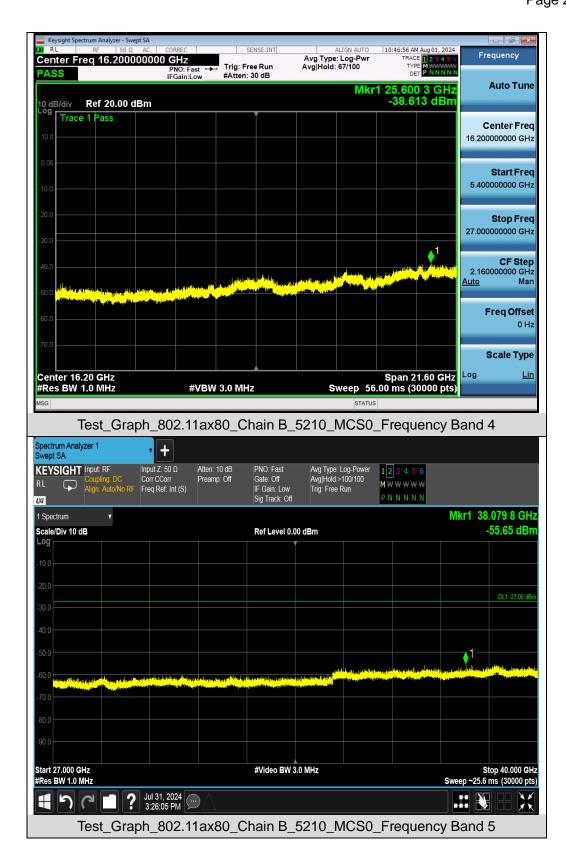
Test Graph 802.11ax80 Chain B 5210 MCS0 Frequency Band 3

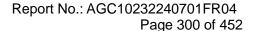
#VBW 3.0 MHz

Center 5.2500 GHz #Res BW 1.0 MHz



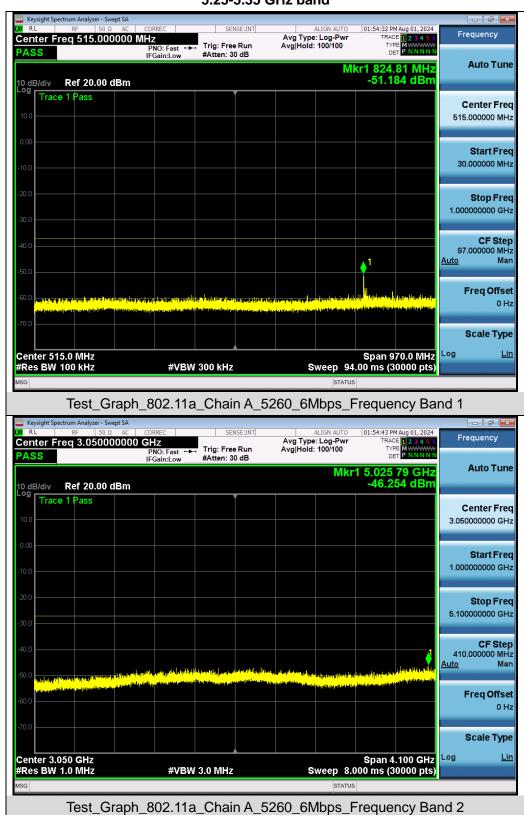


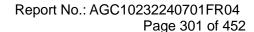




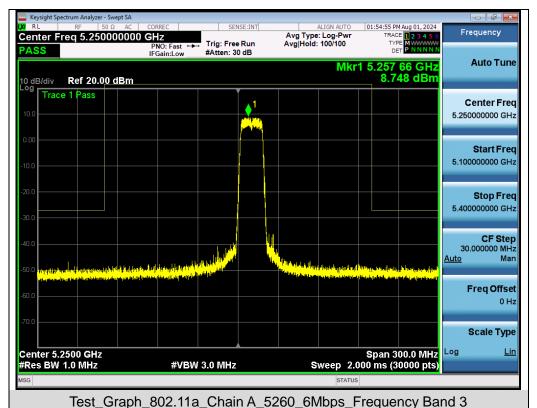


## Test Graphs of Spurious Emissions outside of the 5.25-5.35 GHz band for transmitters operating in the 5.25-5.35 GHz band

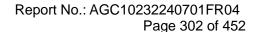




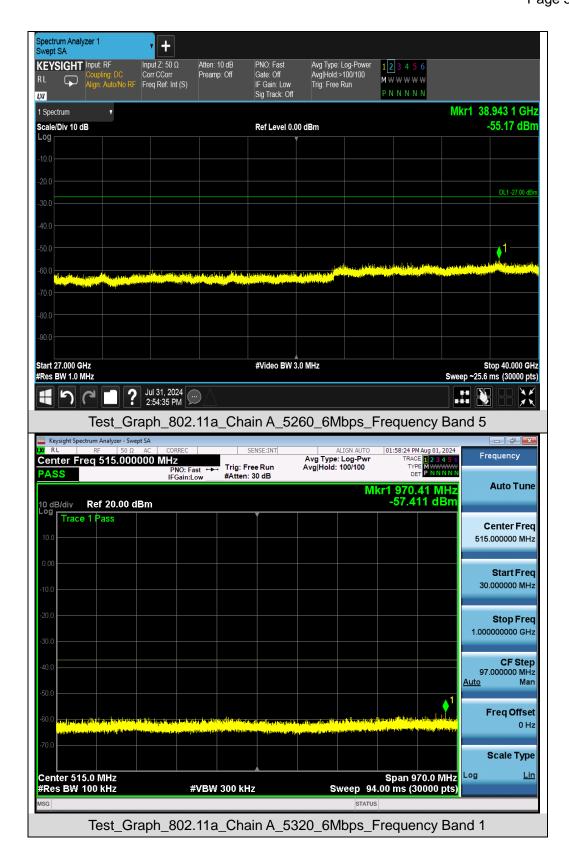


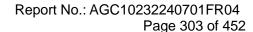










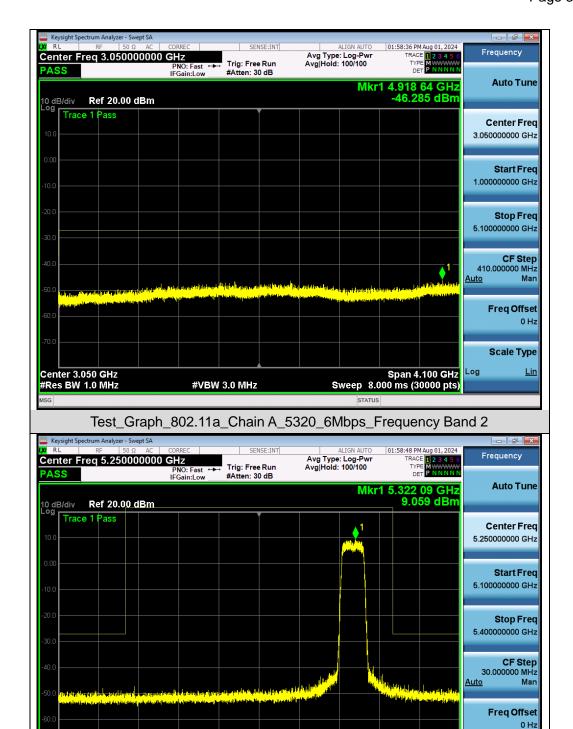


Scale Type

Log

Span 300.0 MHz Sweep 2.000 ms (30000 pts)





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Test Graph 802.11a Chain A 5320 6Mbps Frequency Band 3

#VBW 3.0 MHz

Center 5.2500 GHz #Res BW 1.0 MHz

