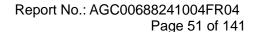
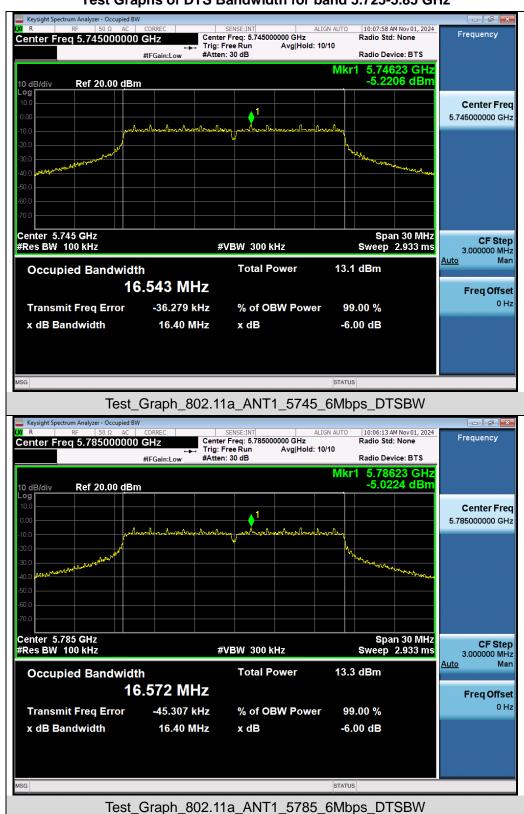


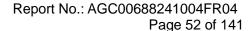
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/





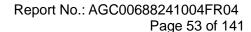
Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz



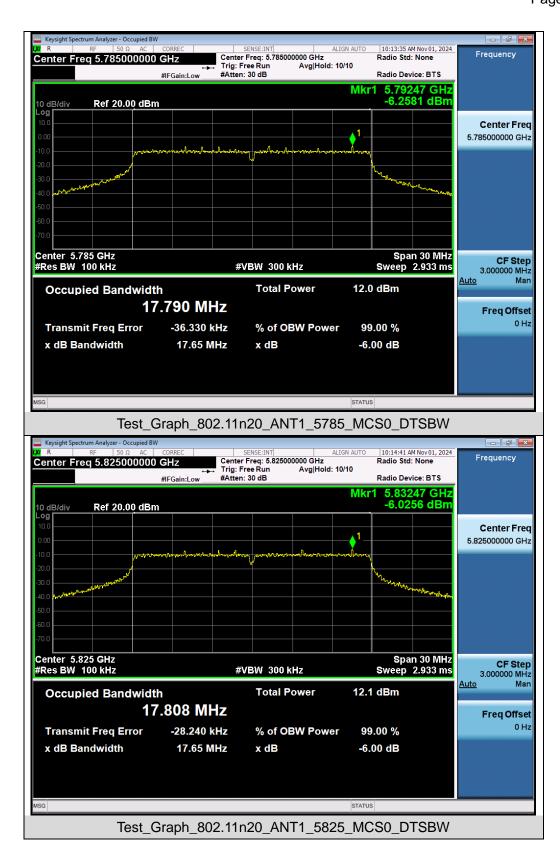




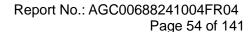




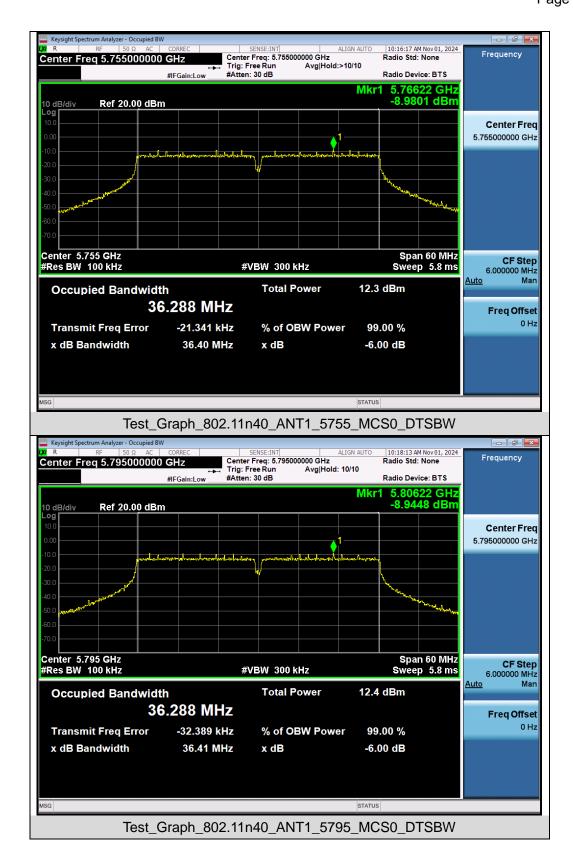


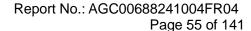


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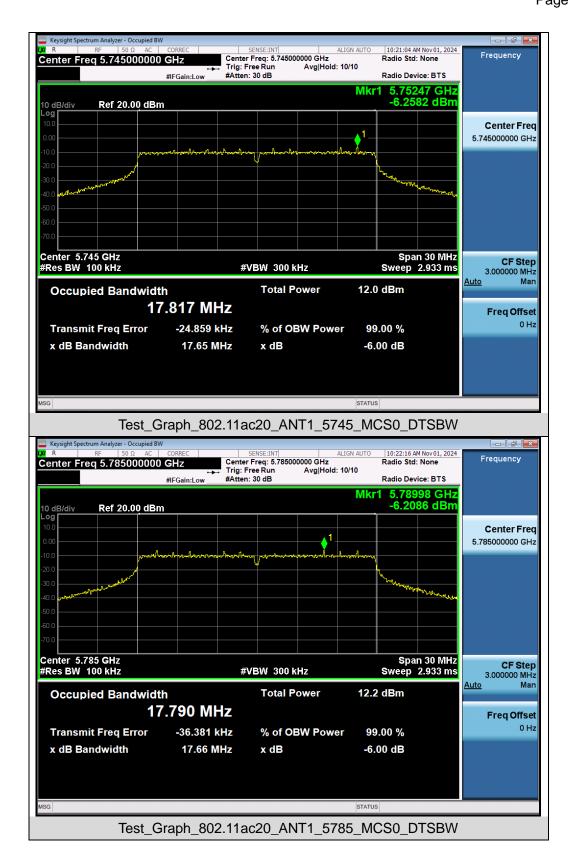


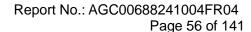




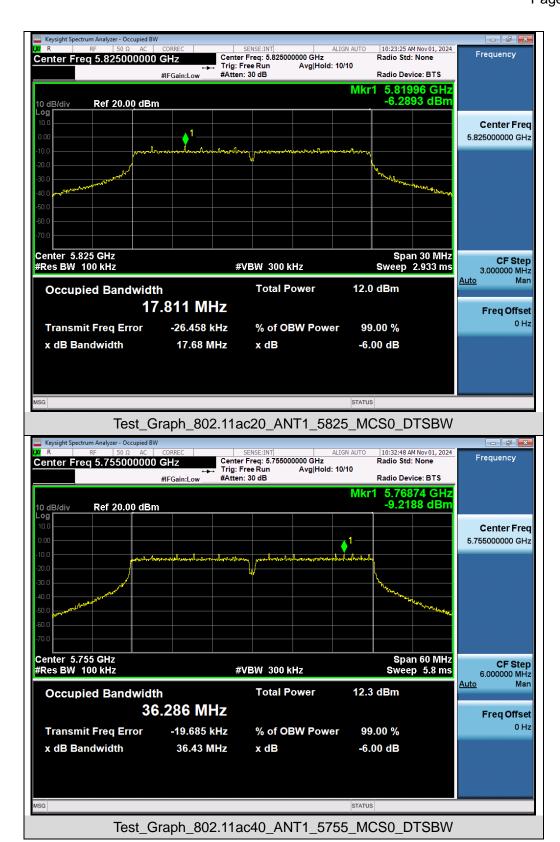




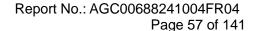




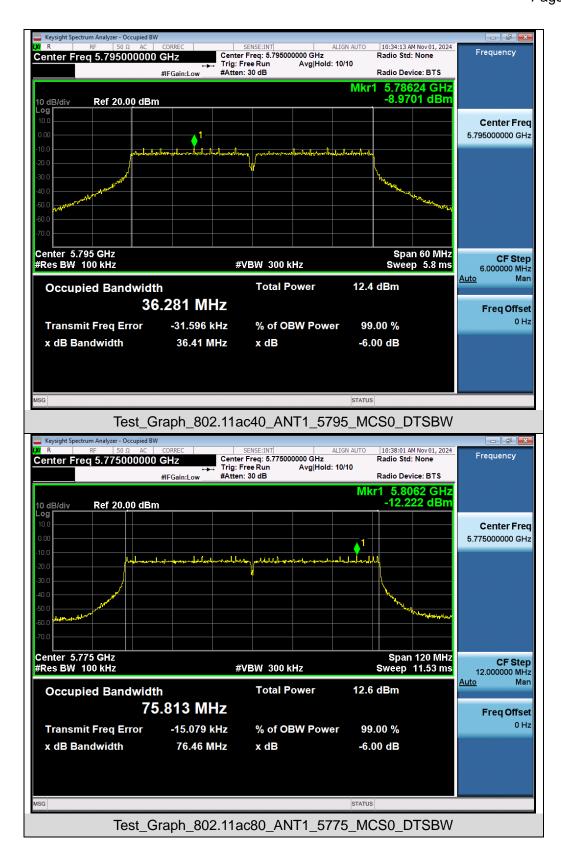


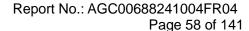


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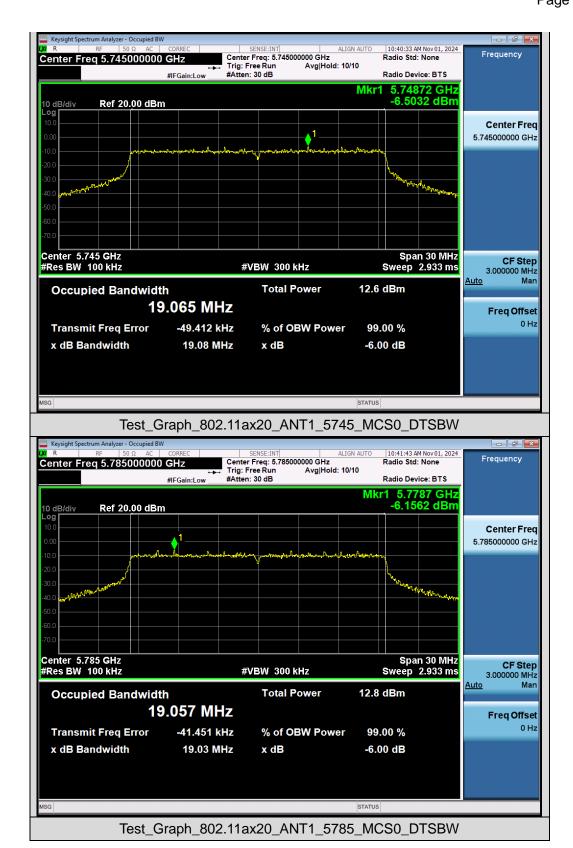


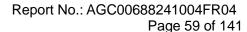




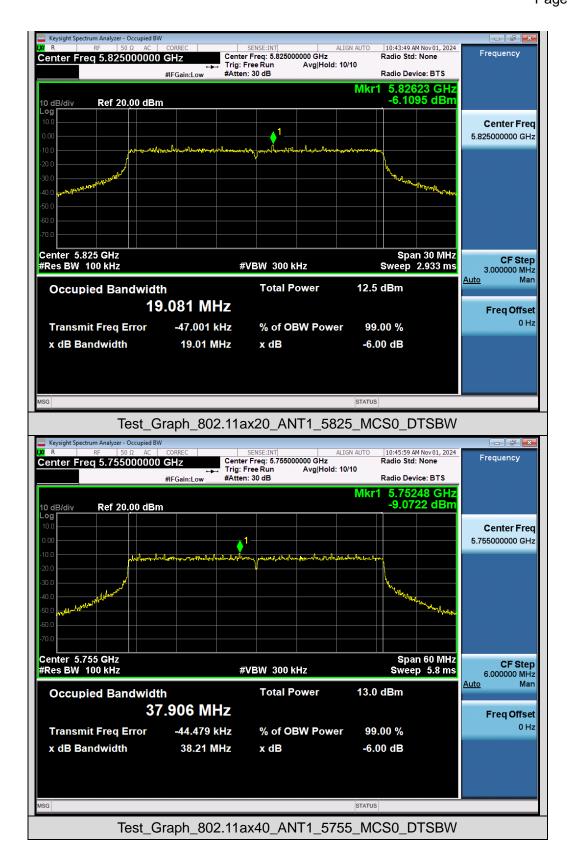




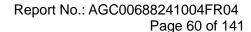




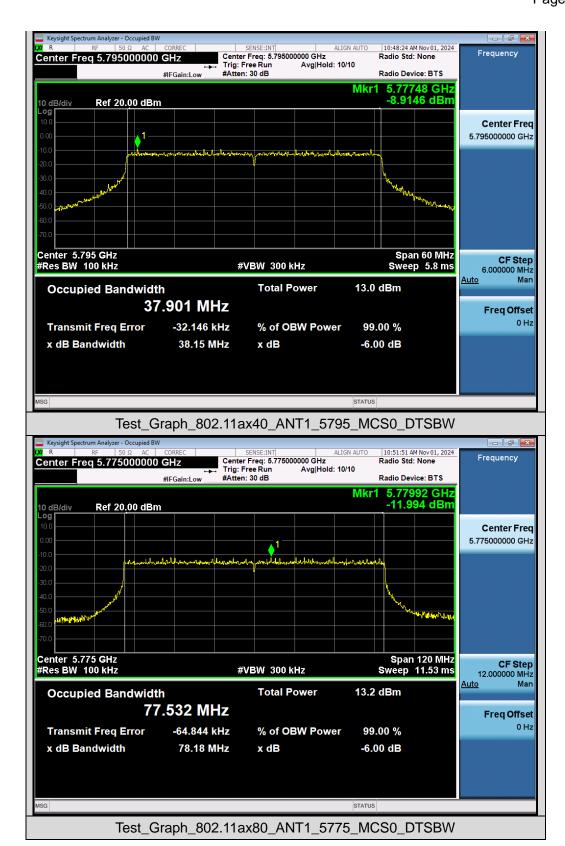




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9. Power Spectral Density Measurement

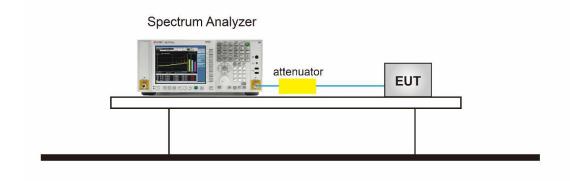
9.1 Provisions Applicable

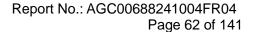
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	17dBm/ MHz
		Indoor Access Point	17dBm/ MHz
	\boxtimes	Client devices	11dBm/ MHz
U-NII-2A	/		11dBm/ MHz
U-NII-2C	/		11dBm/ MHz
U-NII-3	/		30 dBm/500kHz

9.2 Measurement Procedure

- Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.
- 2. Span was set to encompass the entire 26dB EBW of the signal.
- 3. RBW = 1MHz.
- 4. If measurement bandwidth of Maximum PSD is specified in 500 kHz, RBW = 100KHz
- 5. Set VBW≥[3×RBW].
- 6. Sweep Time=Auto couple.
- 7. Detector function=RMS (i.e., power averaging).
- 8. Trace average at least 100 traces in power averaging (rms) mode.
- 9. When the measurement bandwidth of Maximum PSD is specified in 100 kHz, add a constant factor 10*log(500kHz/100kHz) = 6.99 dB to the measured result.
- 10. Determine according to the duty cycle of the equipment: when it is less than 98%, follow the steps below.
- 11. Add [10 log (1/D)], where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is 25%.
- 12. The final test results have been increased by the duty cycle factor and recorded in the report

9.3 Measurement Setup (Block Diagram of Configuration)

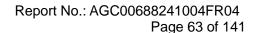






9.4 Measurement Result

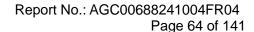
	Test Data of Cond	lucted Output Power Density for ban	d 5.15-5.25 GHz	
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail
802.11a	5180	-2.722	11	Pass
	5200	-3.247	11	Pass
	5240	-3.169	11	Pass
802.11n20	5180	-4.794	11	Pass
	5200	-4.692	11	Pass
	5240	-4.572	11	Pass
802.11n40	5190	-7.877	11	Pass
	5230	-7.781	11	Pass
802.11ac20	5180	-4.884	11	Pass
	5200	-4.843	11	Pass
	5240	-4.752	11	Pass
802.11ac40	5190	-7.888	11	Pass
	5230	-7.681	11	Pass
802.11ac80	5210	-11.060	11	Pass
802.11ax20	5180	-5.234	11	Pass
	5200	-4.976	11	Pass
	5240	-5.259	11	Pass
802.11ax40	5190	-7.633	11	Pass
	5230	-7.679	11	Pass
802.11ax80	5210	-10.847	11	Pass





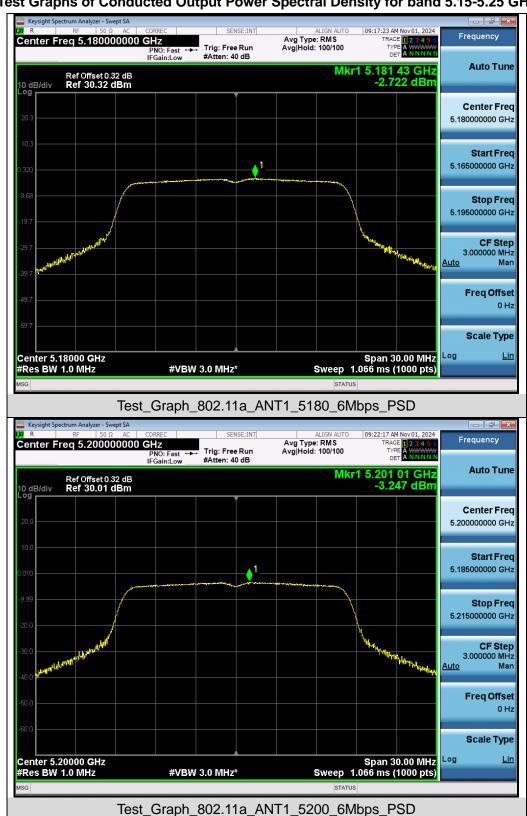
Test Data of Conducted Output Power Density for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-13.783	-6.793	30	Pass
	5785	-13.811	-6.821	30	Pass
	5825	-13.819	-6.829	30	Pass
802.11n20	5745	-15.676	-8.686	30	Pass
	5785	-15.538	-8.548	30	Pass
	5825	-15.274	-8.284	30	Pass
802.11n40	5755	-18.727	-11.737	30	Pass
802.111140	5795	-18.494	-11.504	30	Pass
	5745	-15.308	-8.318	30	Pass
802.11ac20	5785	-15.299	-8.309	30	Pass
	5825	-15.522	-8.532	30	Pass
802.11ac40	5755	-18.667	-11.677	30	Pass
	5795	-18.483	-11.493	30	Pass
802.11ac80	5775	-21.918	-14.928	30	Pass
802.11ax20	5745	-16.434	-9.444	30	Pass
	5785	-16.422	-9.432	30	Pass
	5825	-16.608	-9.618	30	Pass
802.11ax40	5755	-19.680	-12.690	30	Pass
	5795	-19.434	-12.444	30	Pass
802.11ax80	5775	-22.790	-15.800	30	Pass

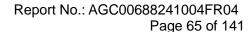
Note:1.Power density(dBm/500kHz) = Power density(dBm/100kHz)+10*log(500/100).



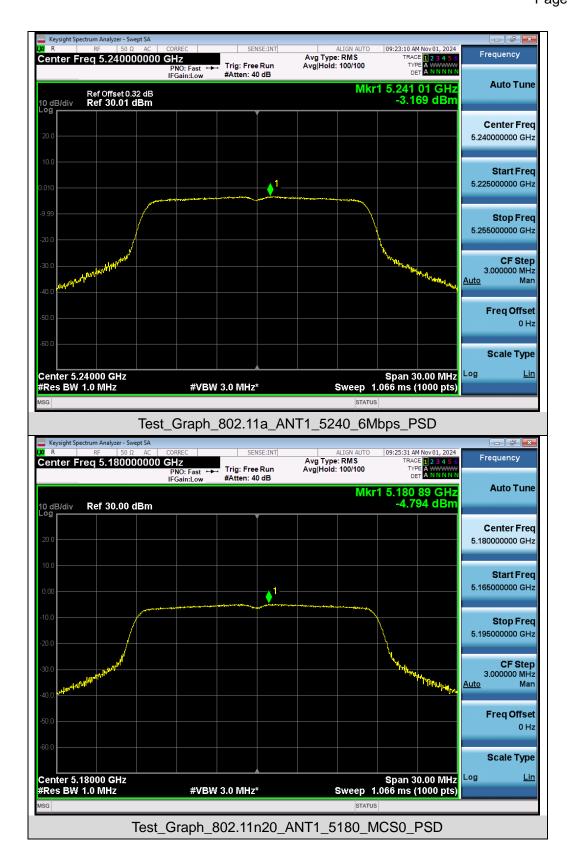


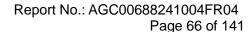
Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz



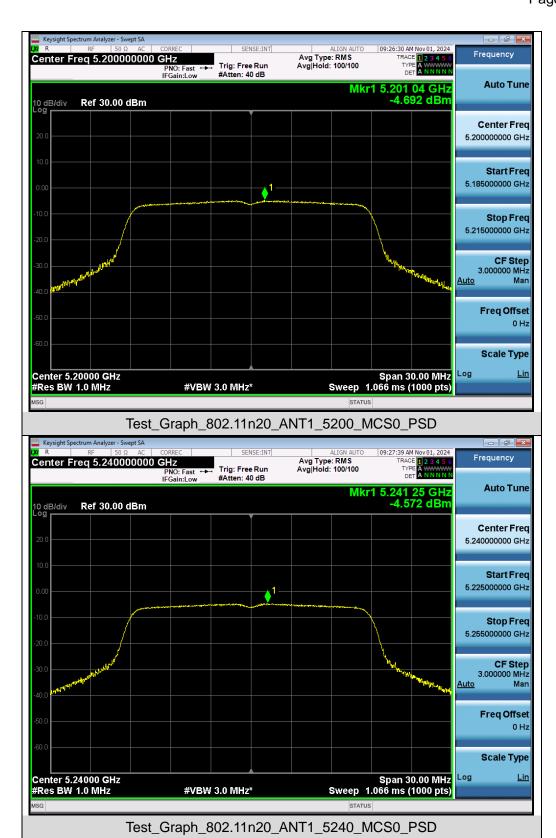


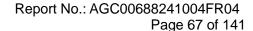




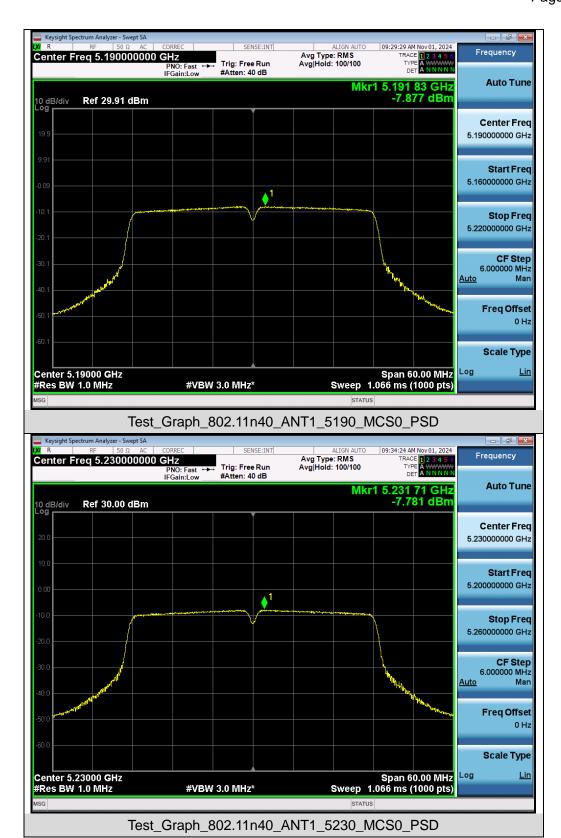


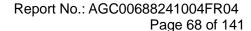




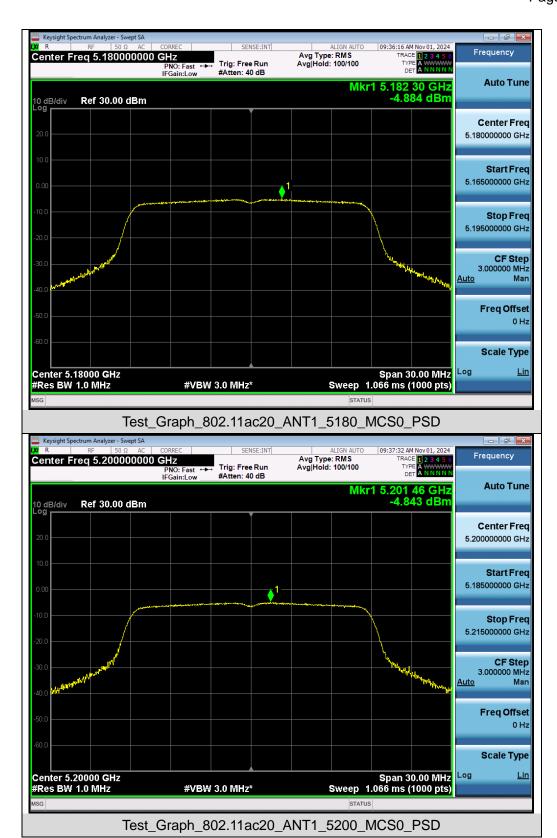


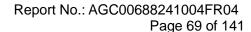




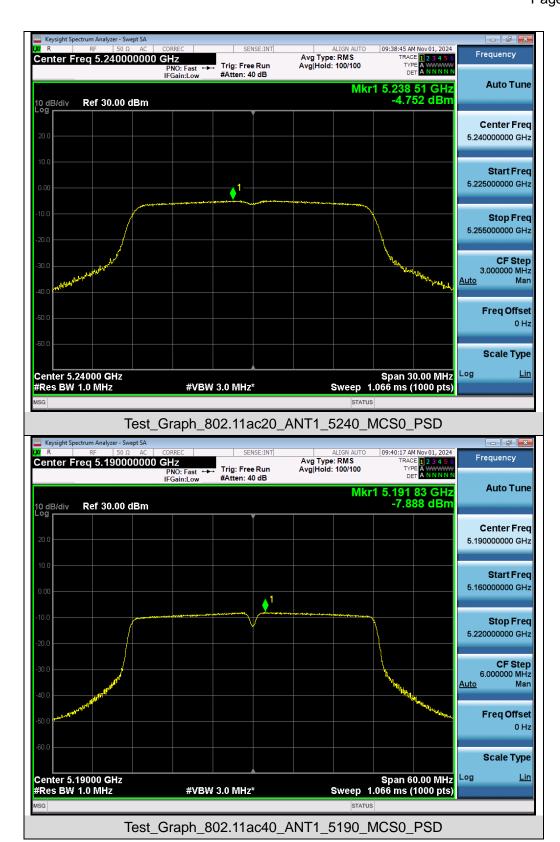


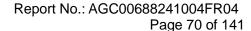




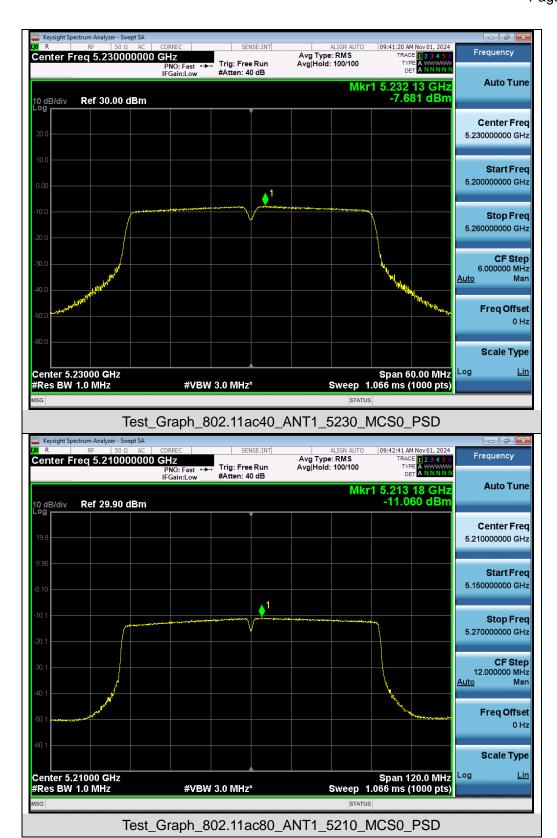


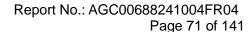




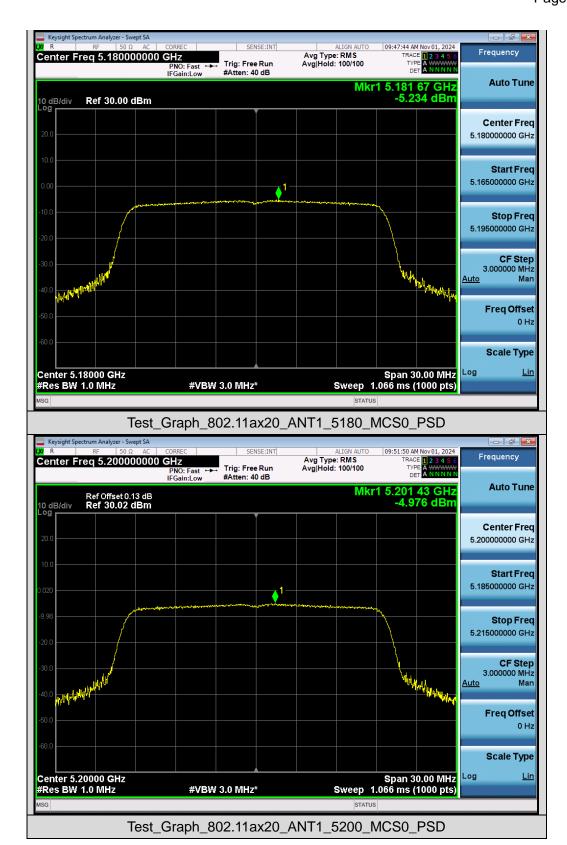


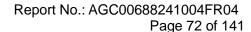




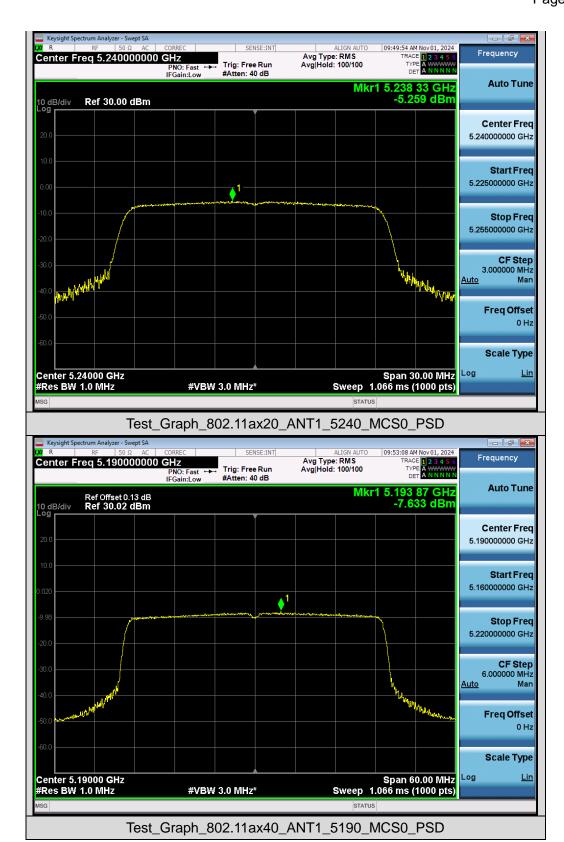


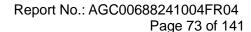




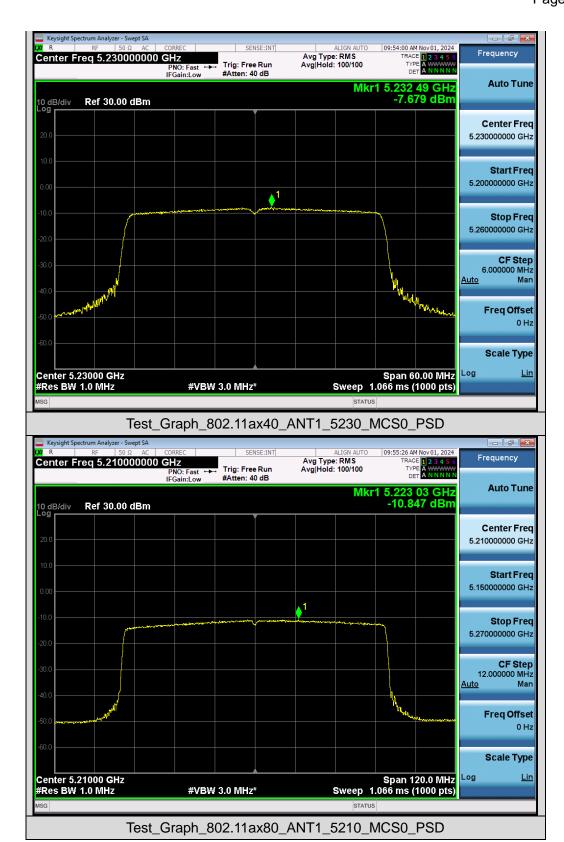


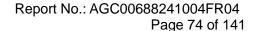






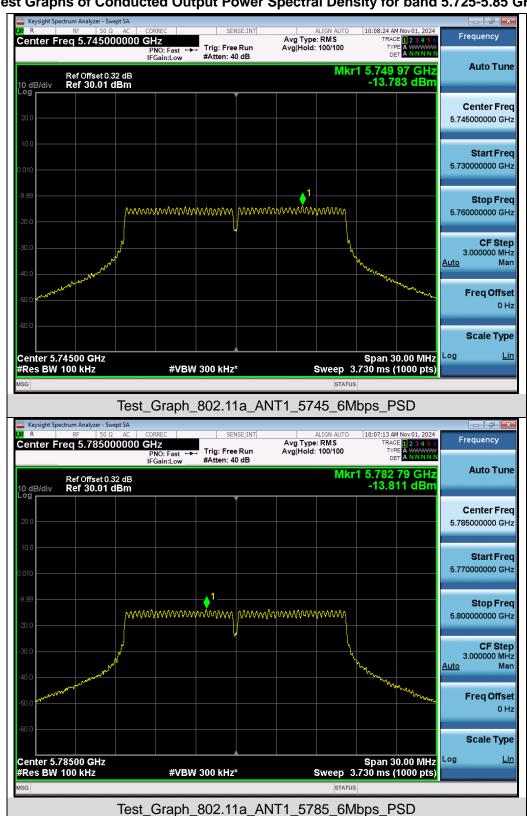


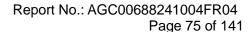




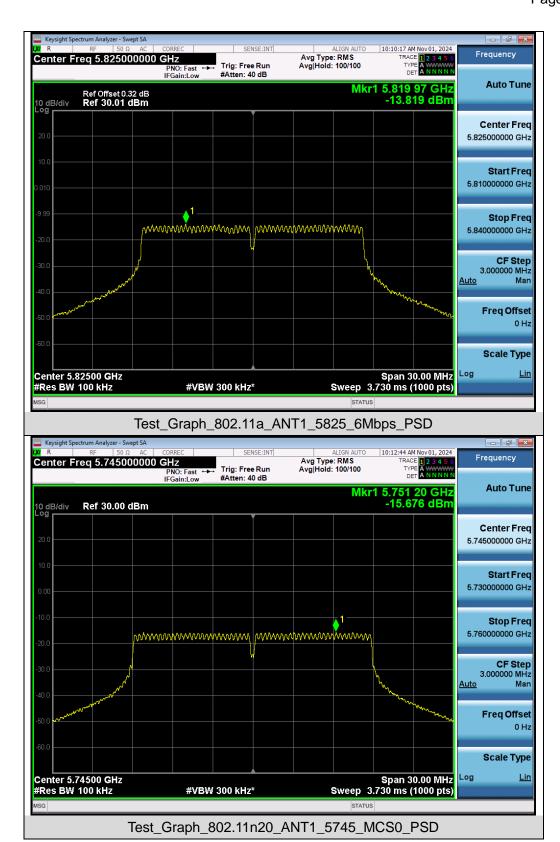


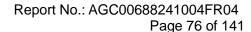
Test Graphs of Conducted Output Power Spectral Density for band 5.725-5.85 GHz



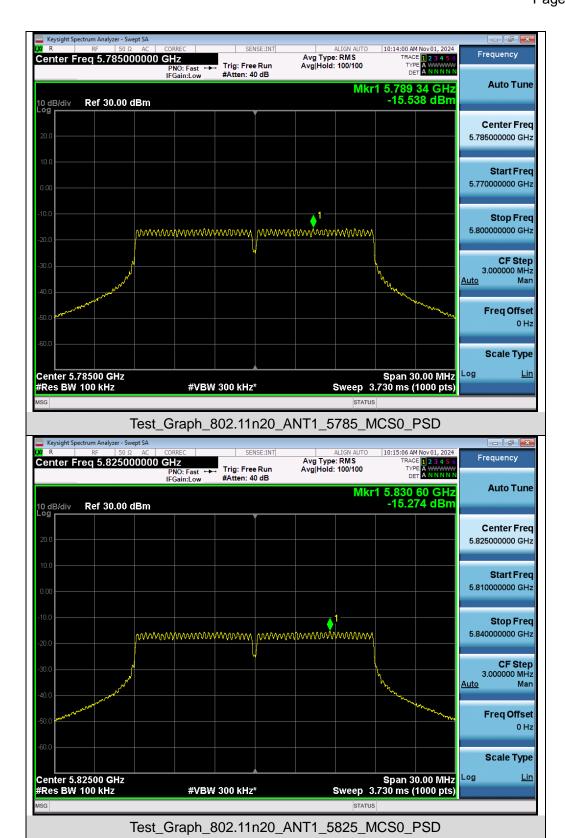


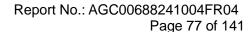




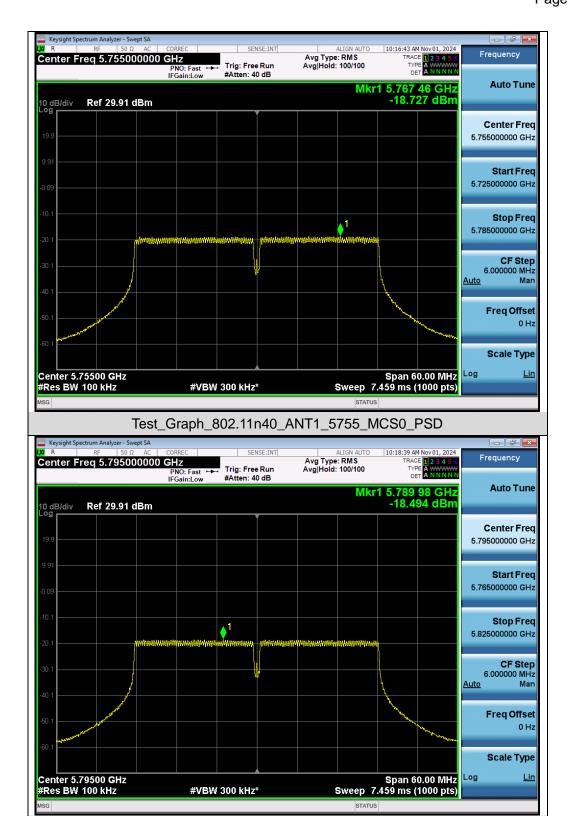




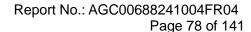




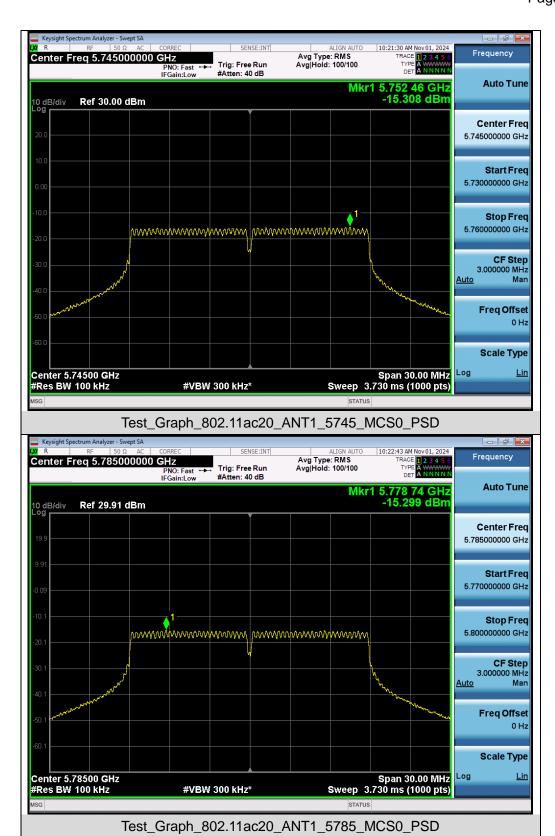


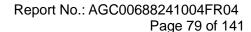


Test Graph 802.11n40 ANT1 5795 MCS0 PSD

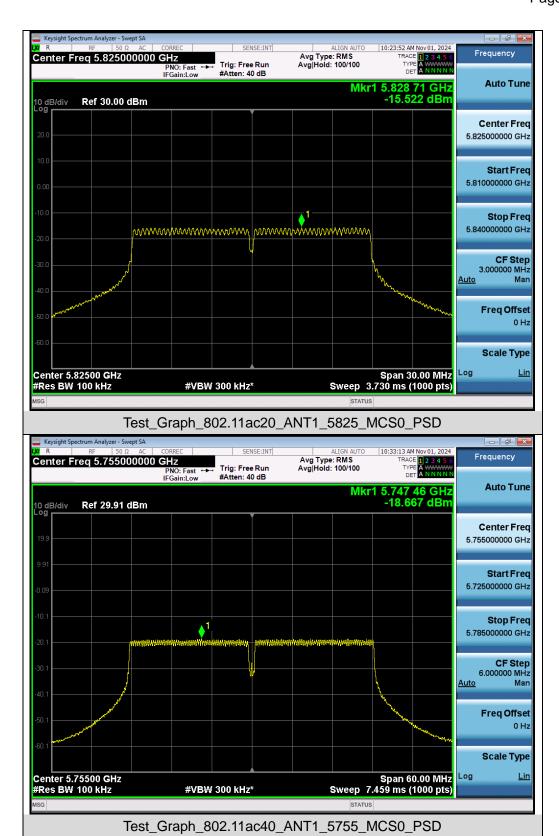


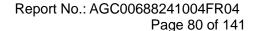




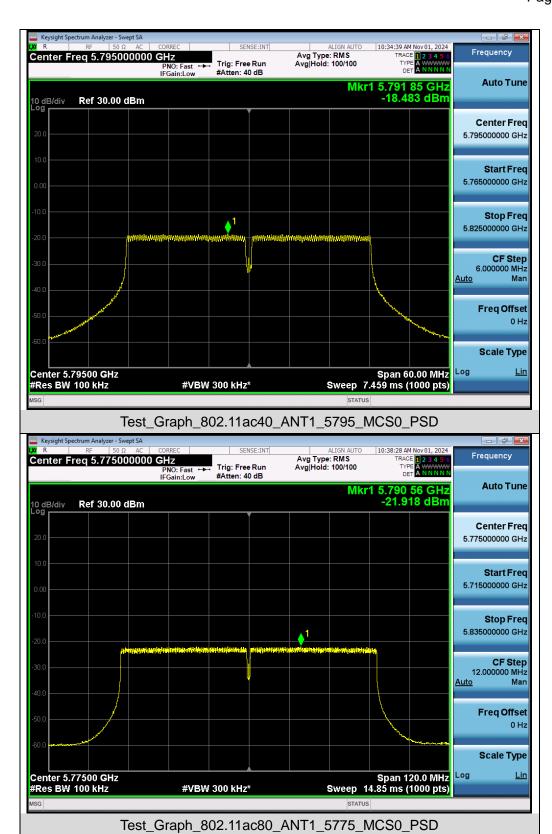


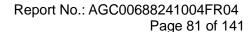




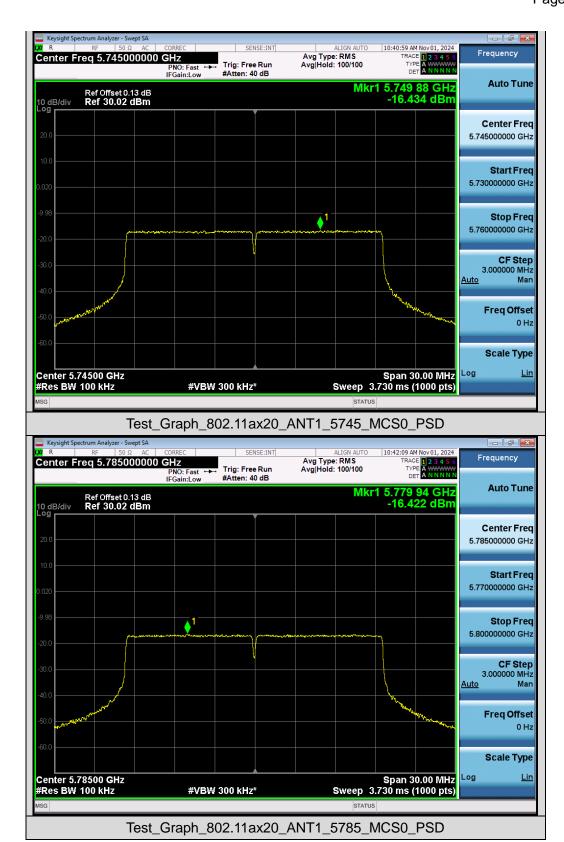


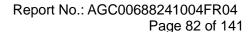




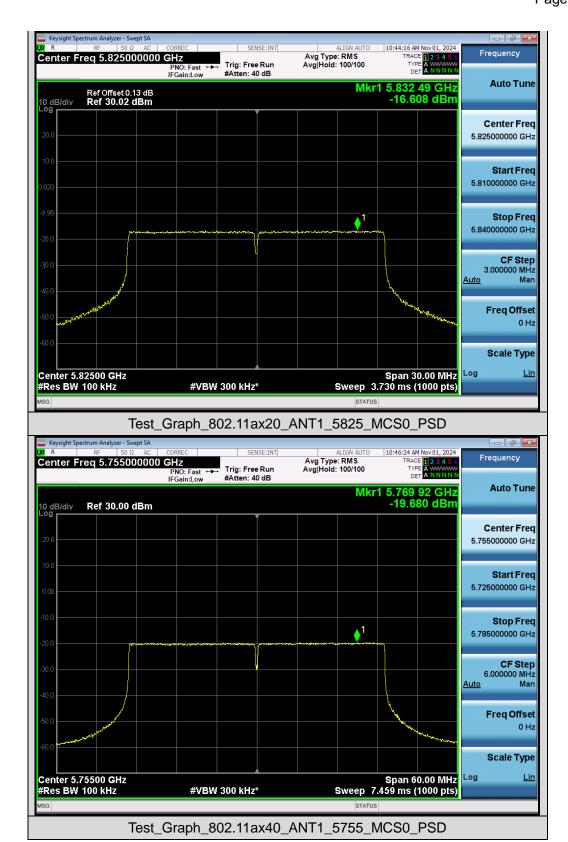


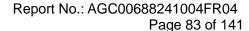




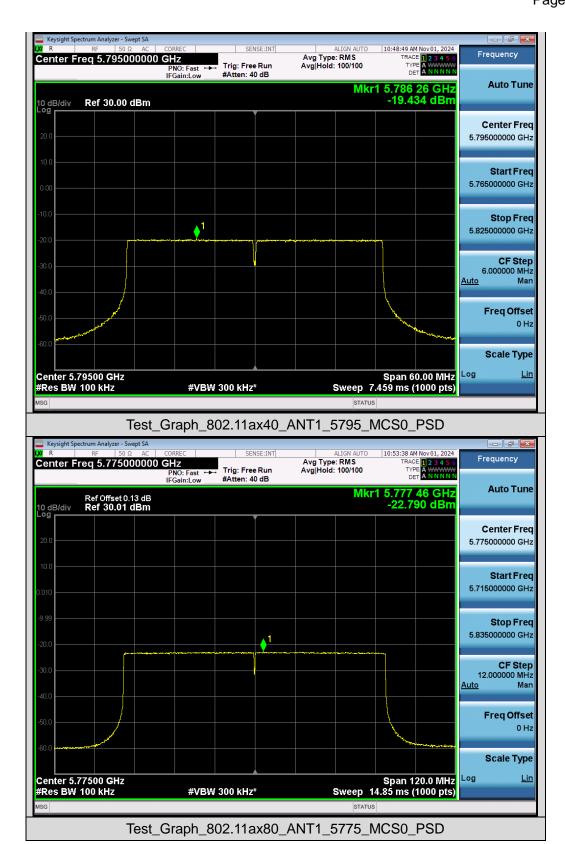














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10. Conducted Band Edge and Out-of-Band Emissions

10.1 Provisions Applicable

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

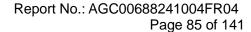
Note 1: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

E =
$$\frac{1000000 \quad \sqrt{30 P}}{3}$$
 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.

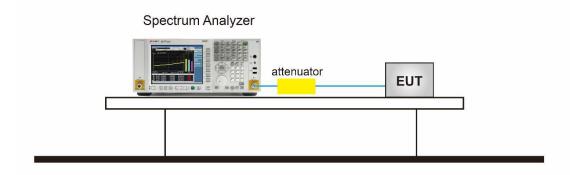
10.2 Measurement Procedure

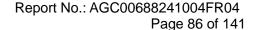
- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the Span = wide enough to capture the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic.
- 3. RBW = 1MHz; VBW= 3MHz; Sweep = 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)

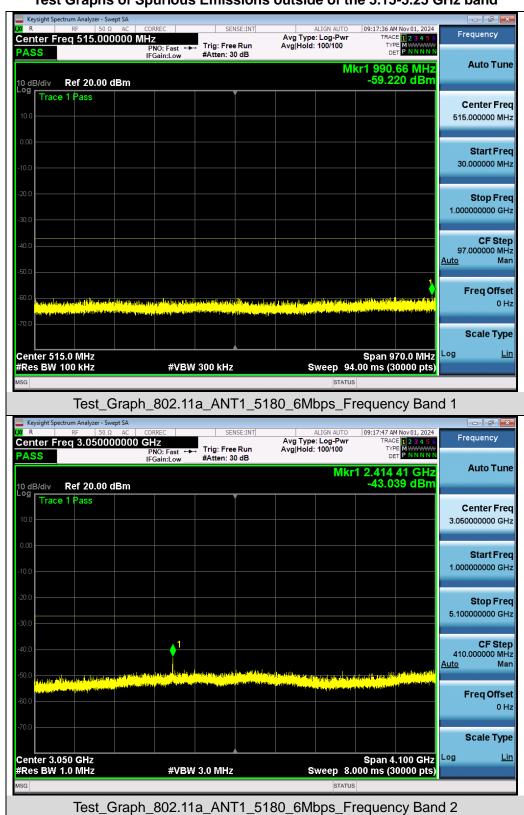


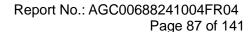




10.4 Measurement Results

Test Graphs of Spurious Emissions outside of the 5.15-5.25 GHz band



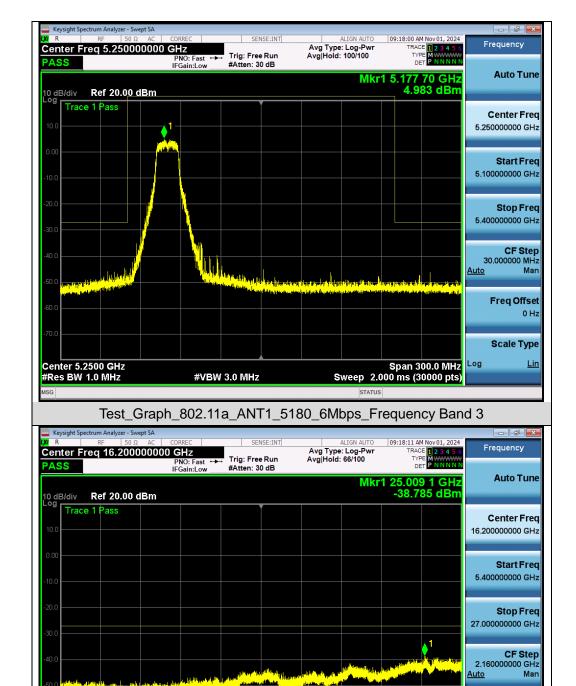


Freq Offset 0 Hz

Scale Type

Span 21.60 GHz Sweep 56.00 ms (30000 pts)



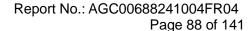


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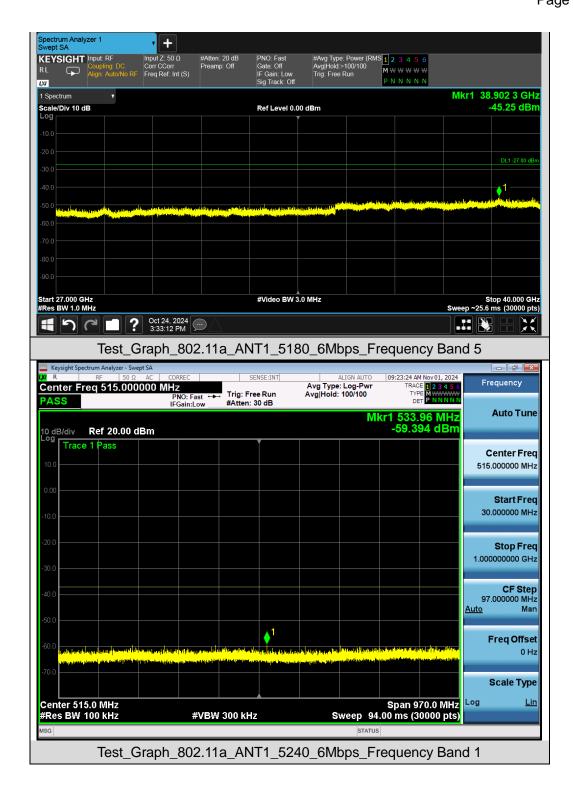
Test Graph 802.11a ANT1 5180 6Mbps Frequency Band 4

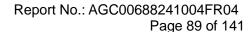
#VBW 3.0 MHz

Center 16.20 GHz #Res BW 1.0 MHz

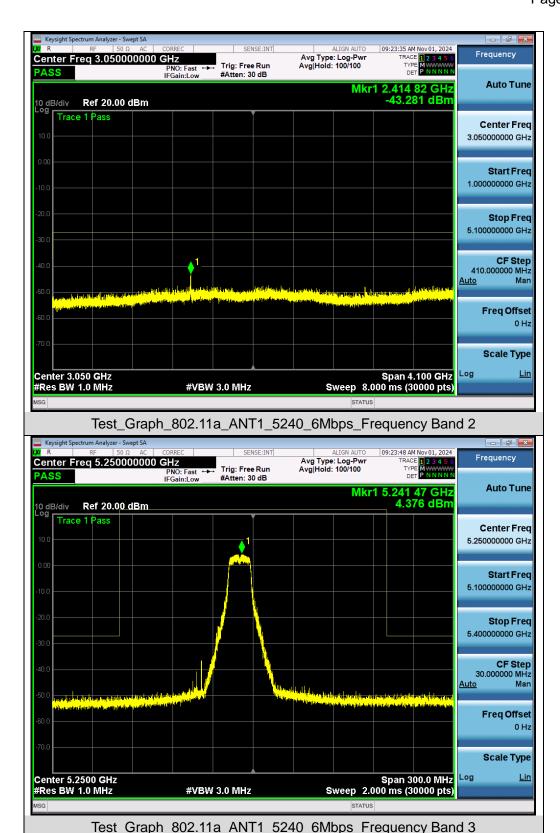


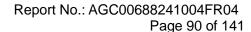




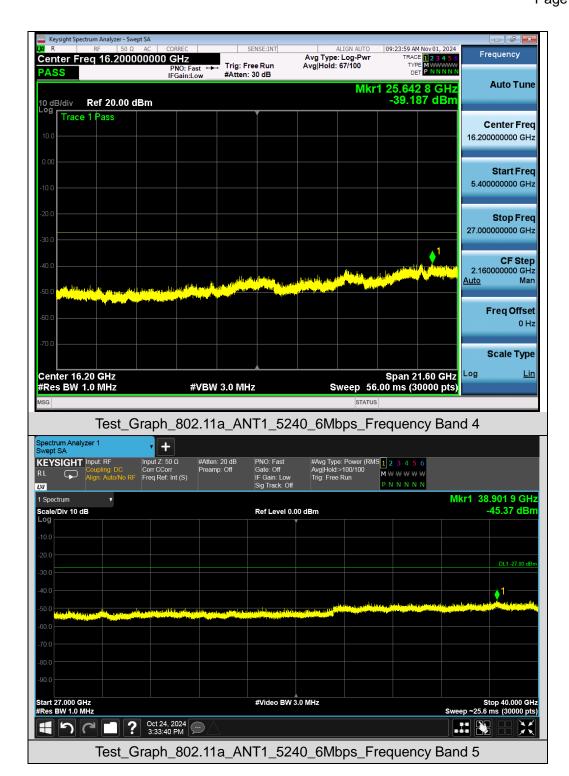


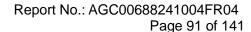




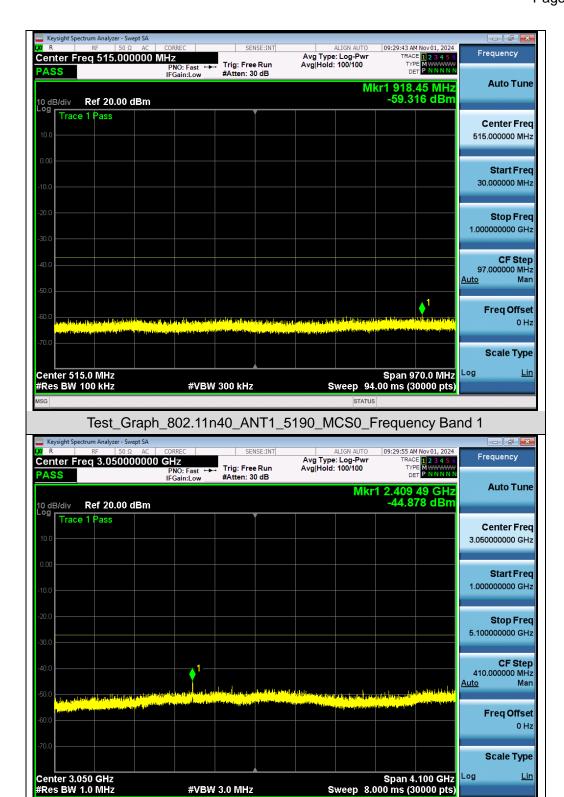




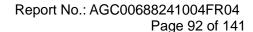








Test Graph 802.11n40 ANT1 5190 MCS0 Frequency Band 2

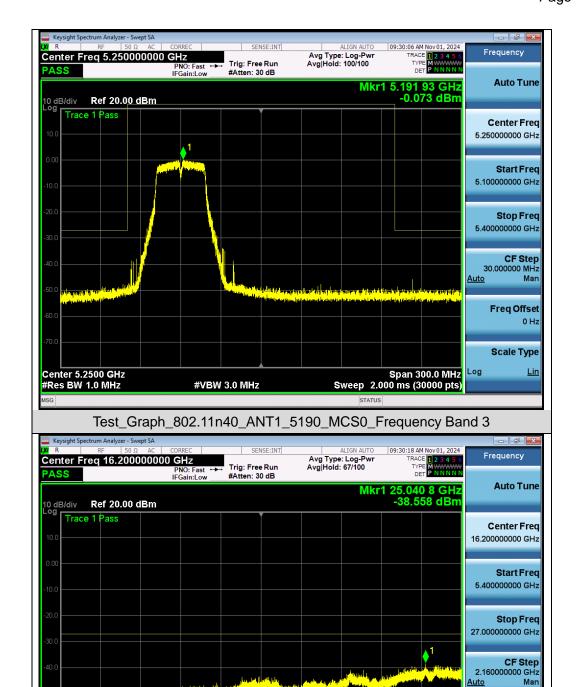


Freq Offset 0 Hz

Scale Type

Span 21.60 GHz Sweep 56.00 ms (30000 pts)



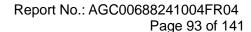


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

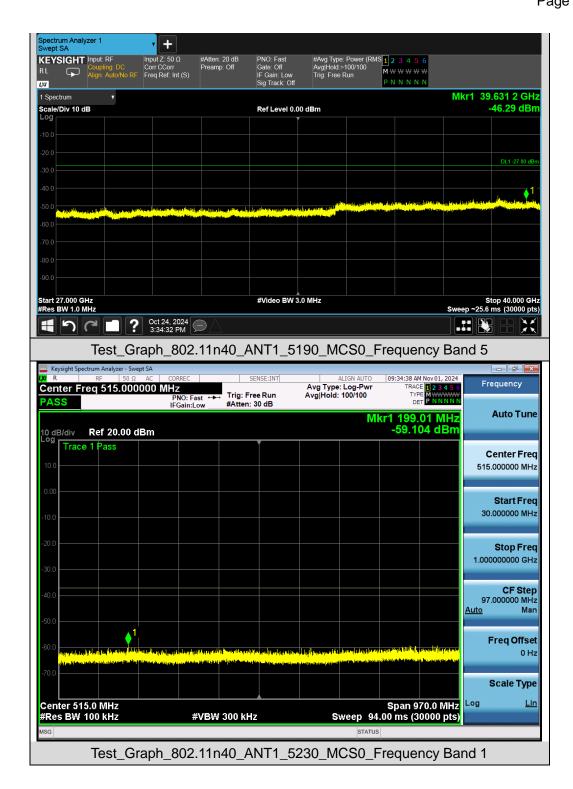
Test Graph 802.11n40 ANT1 5190 MCS0 Frequency Band 4

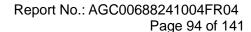
#VBW 3.0 MHz

Center 16.20 GHz #Res BW 1.0 MHz

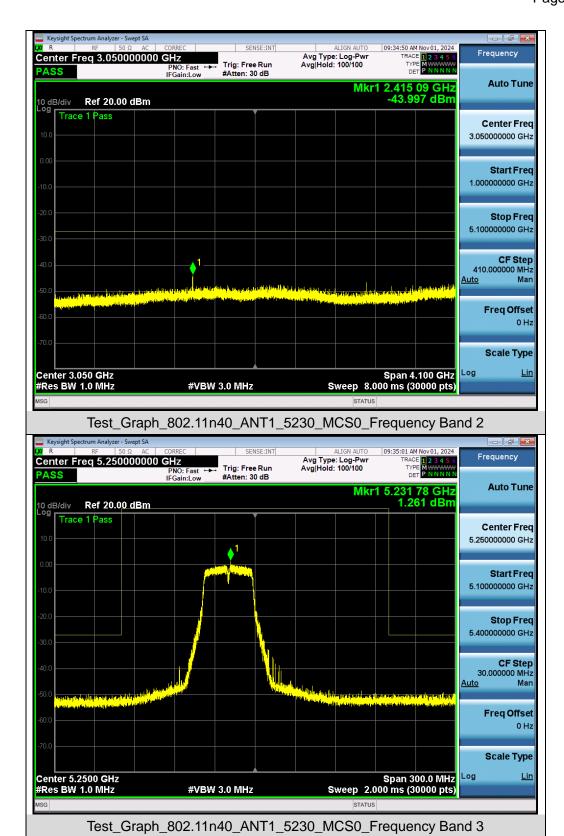


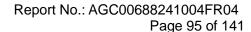




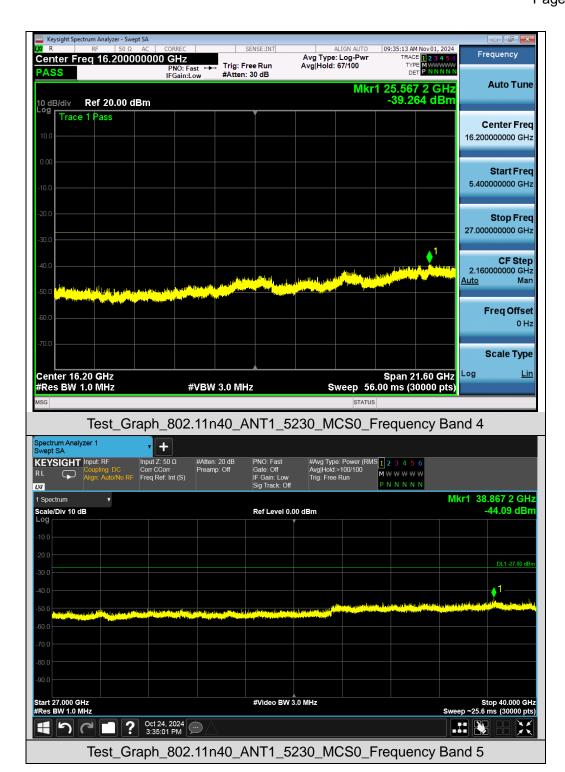


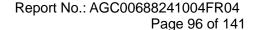










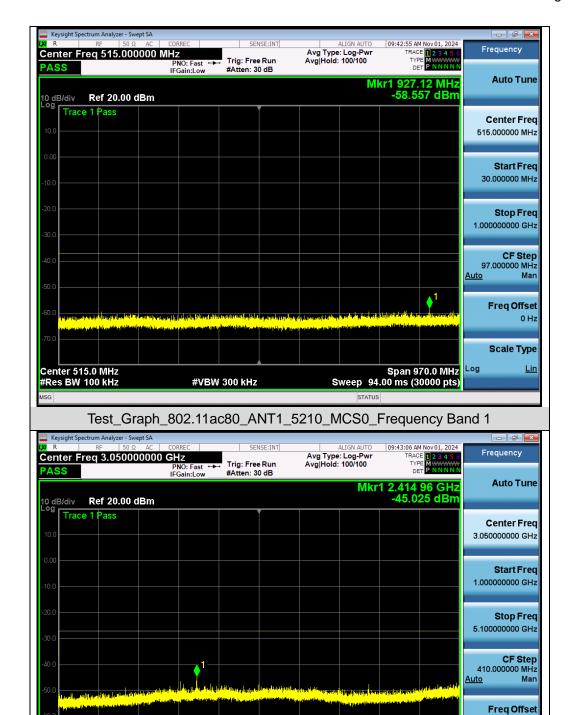


0 Hz

Scale Type

Span 4.100 GHz Sweep 8.000 ms (30000 pts)



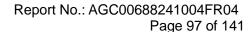


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

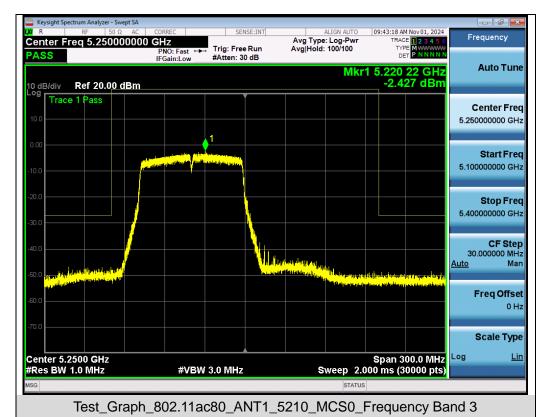
Test_Graph_802.11ac80_ANT1_5210_MCS0_Frequency Band 2

#VBW 3.0 MHz

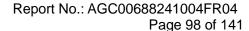
Center 3.050 GHz #Res BW 1.0 MHz



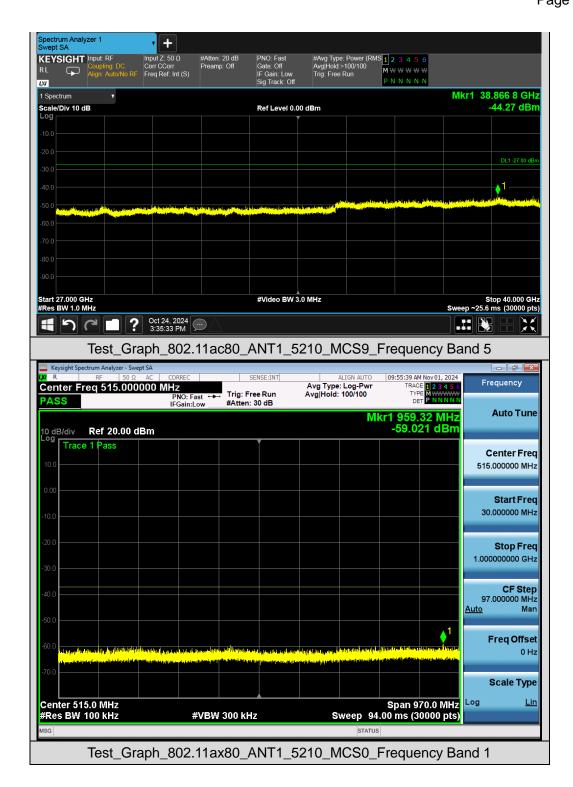


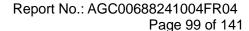




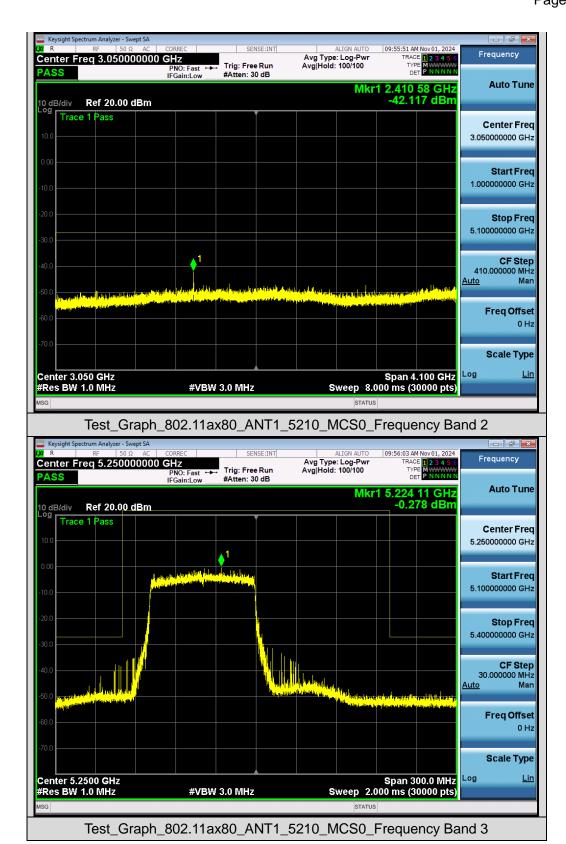


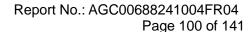




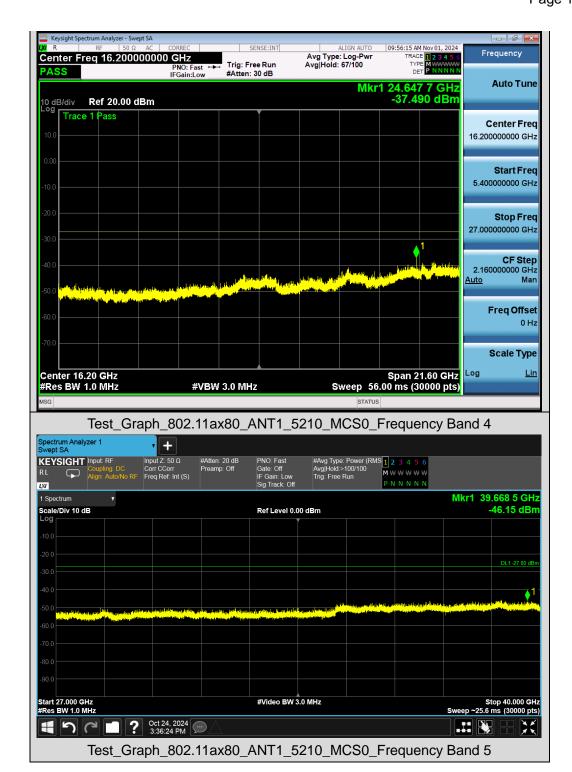


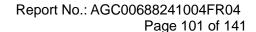






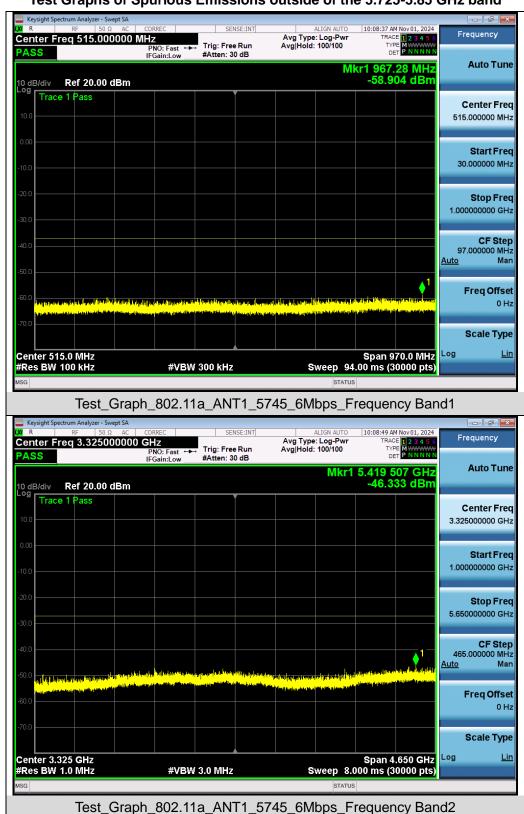


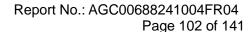






Test Graphs of Spurious Emissions outside of the 5.725-5.85 GHz band





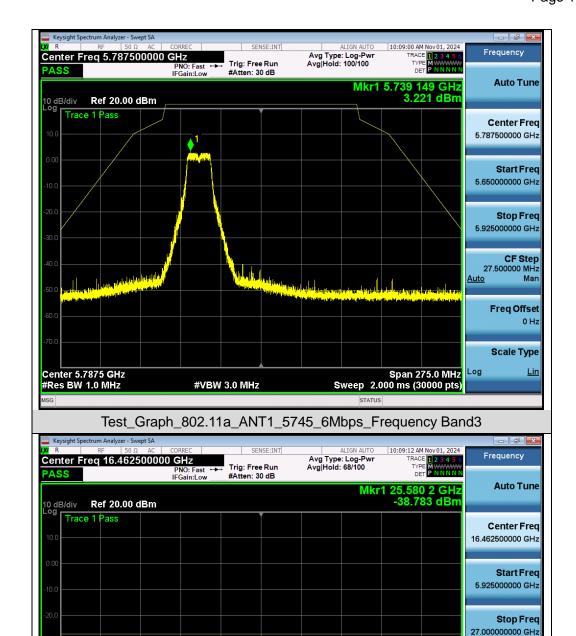
CF Step 2.107500000 GHz

Freq Offset

Man

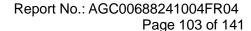
<u>Auto</u>



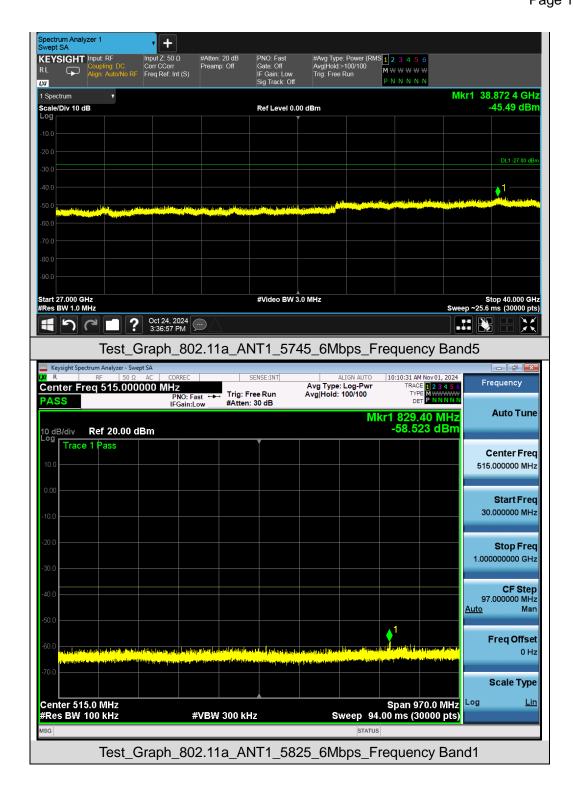


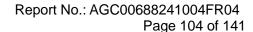
Center 16.46 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 54.00 ms (30000 pts)

Test_Graph_802.11a_ANT1_5745_6Mbps_Frequency Band4

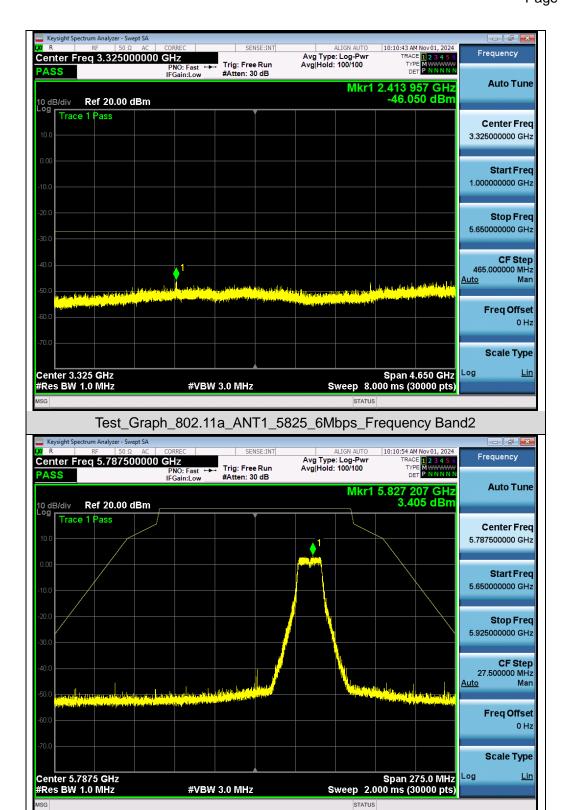












Test Graph 802.11a ANT1 5825 6Mbps Frequency Band3

