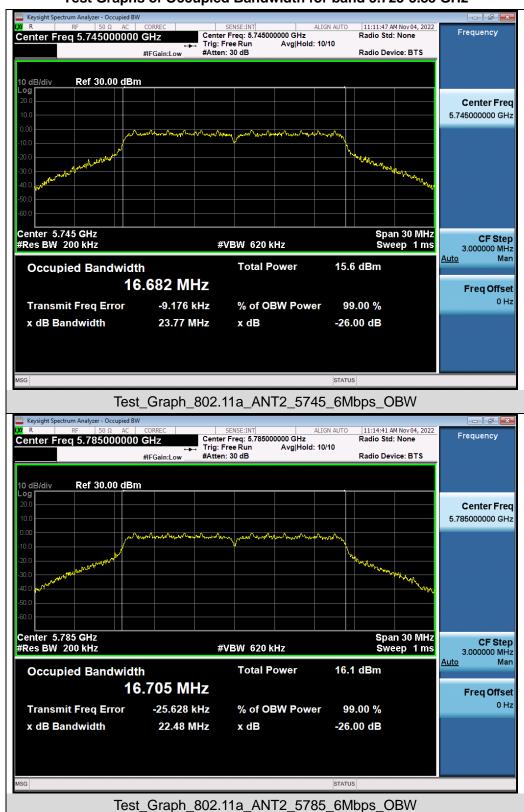


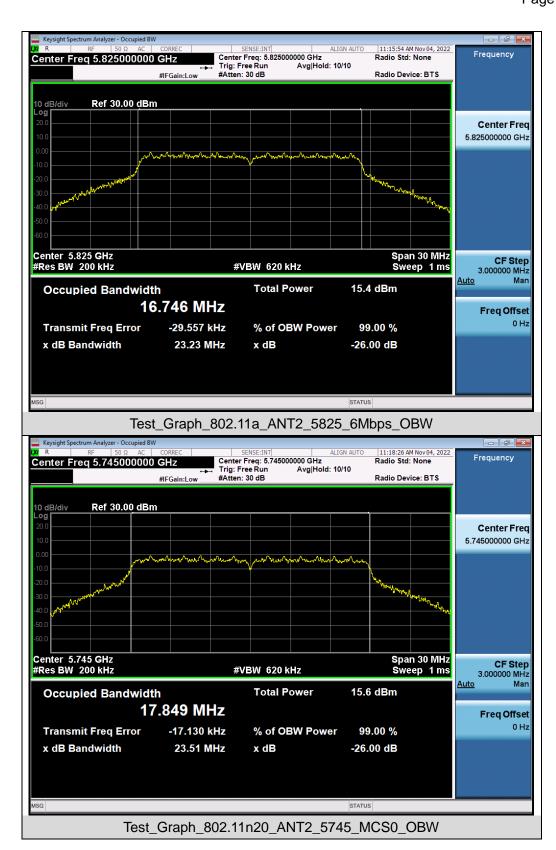


Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz

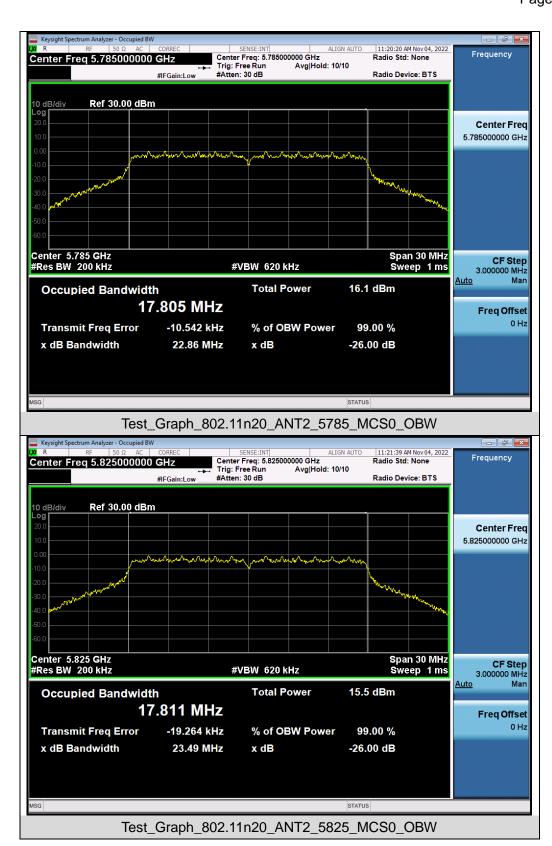


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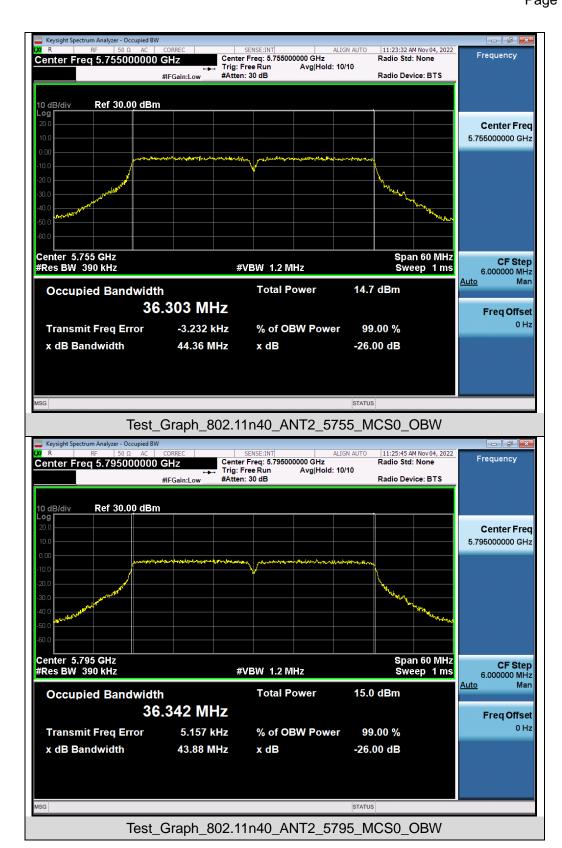


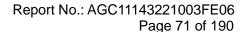




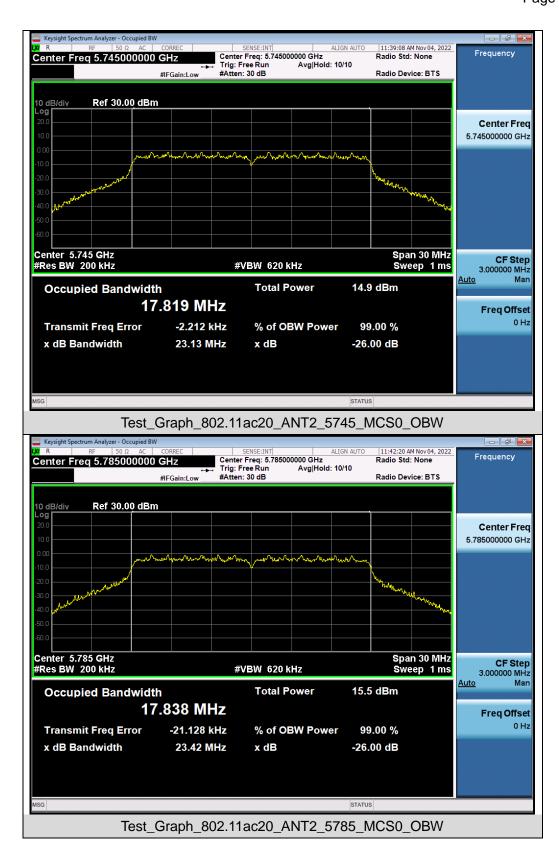


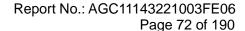










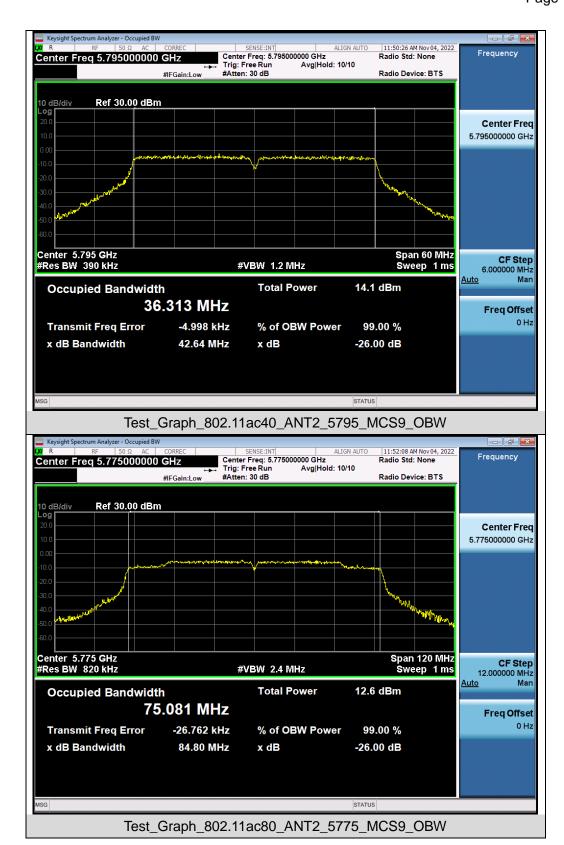


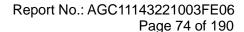




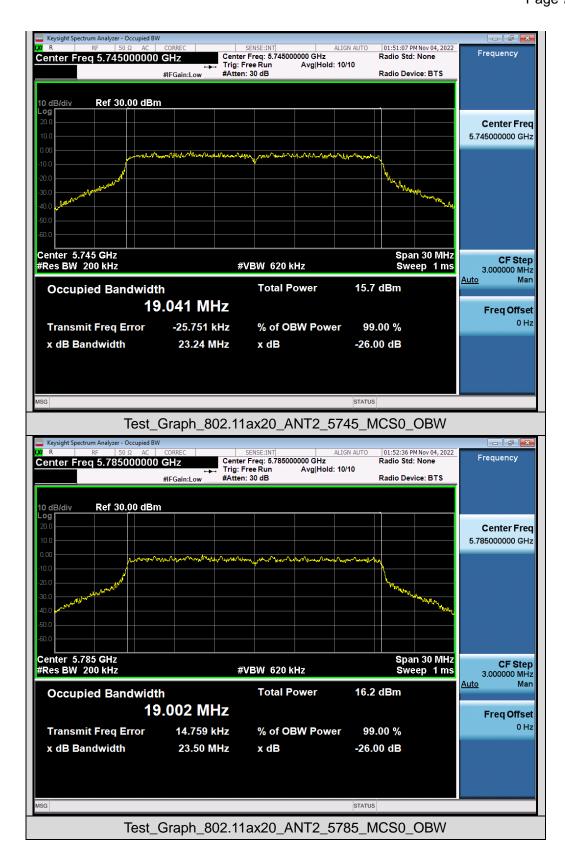




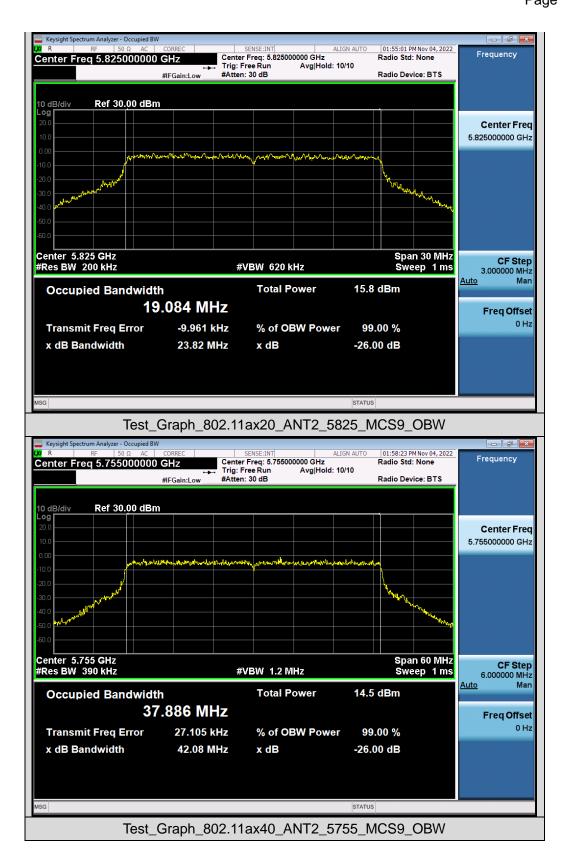




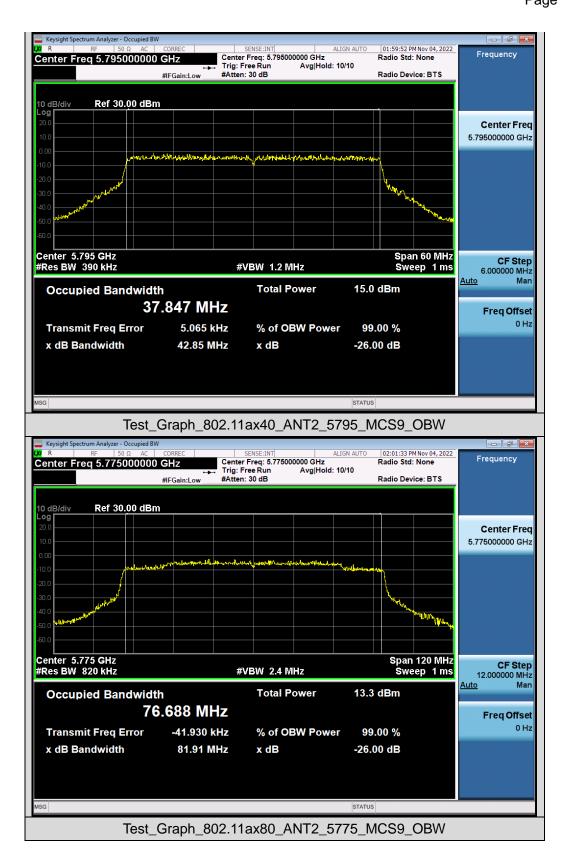


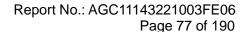






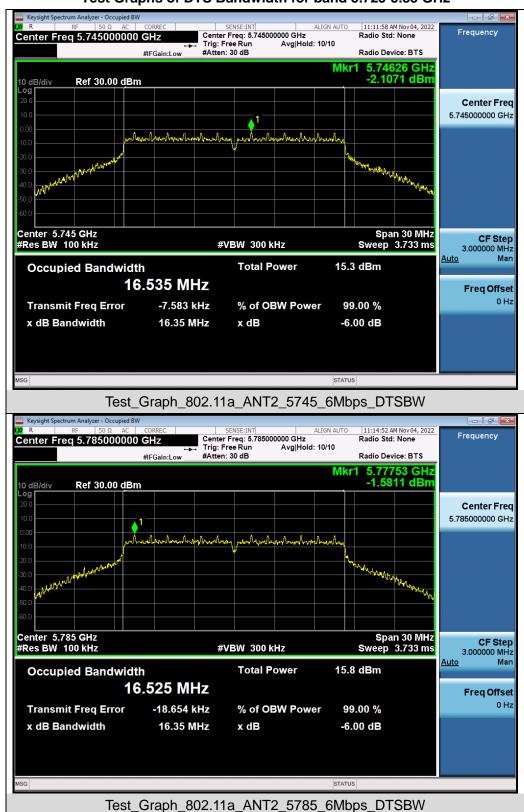






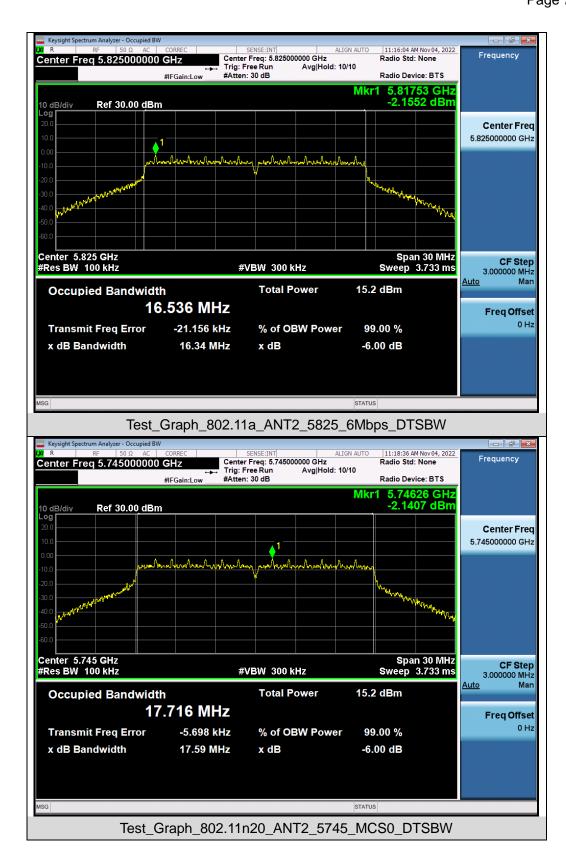


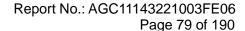
Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz



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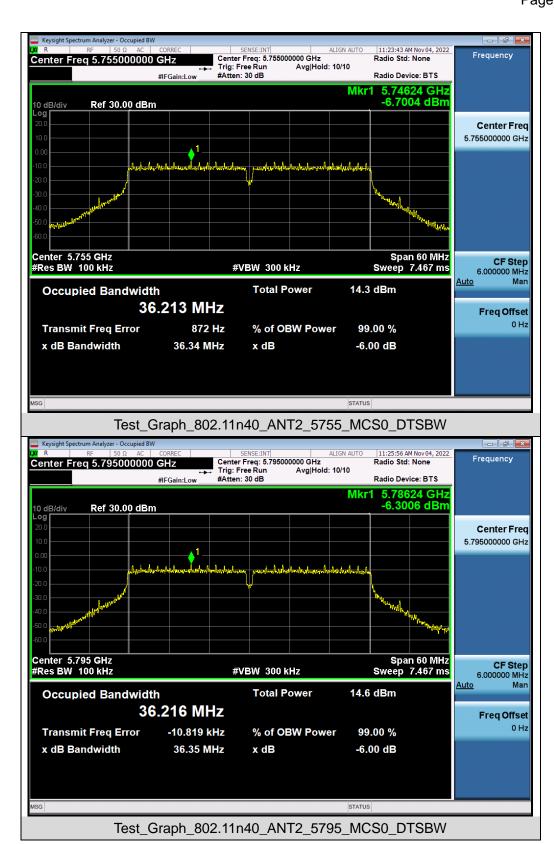




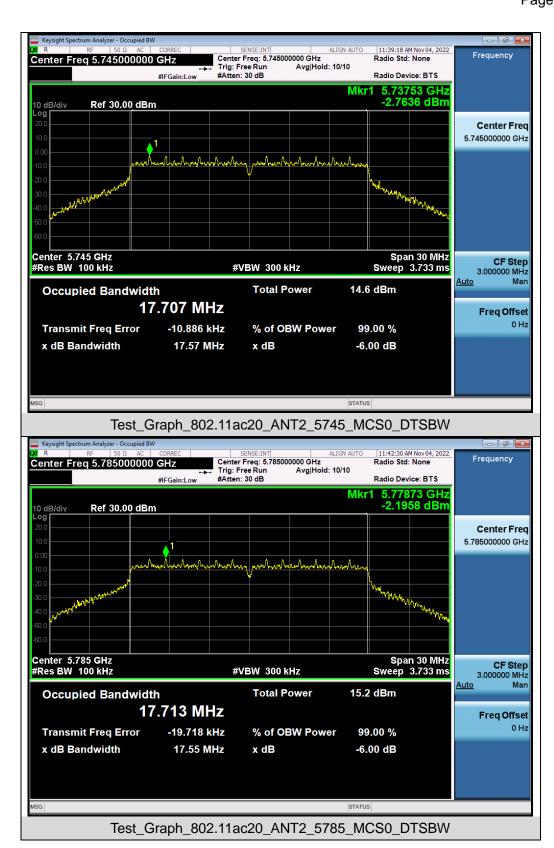


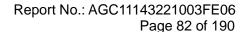




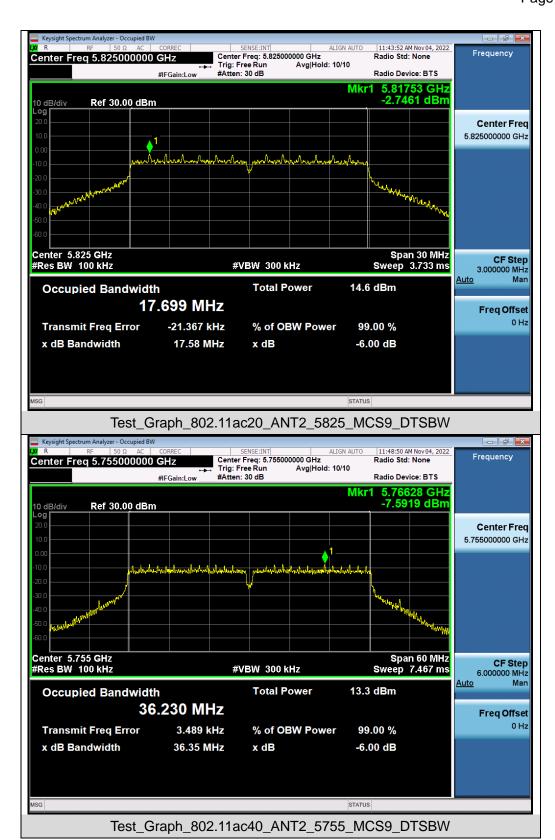


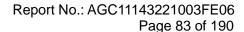




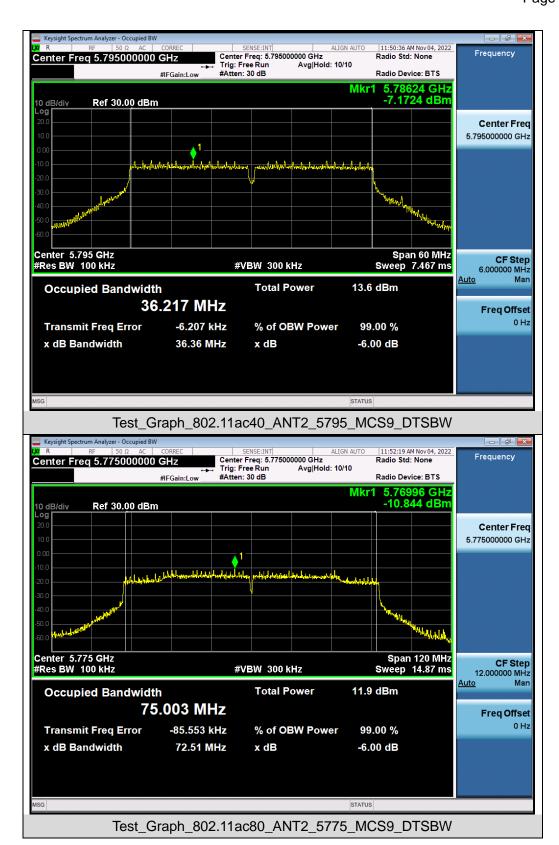




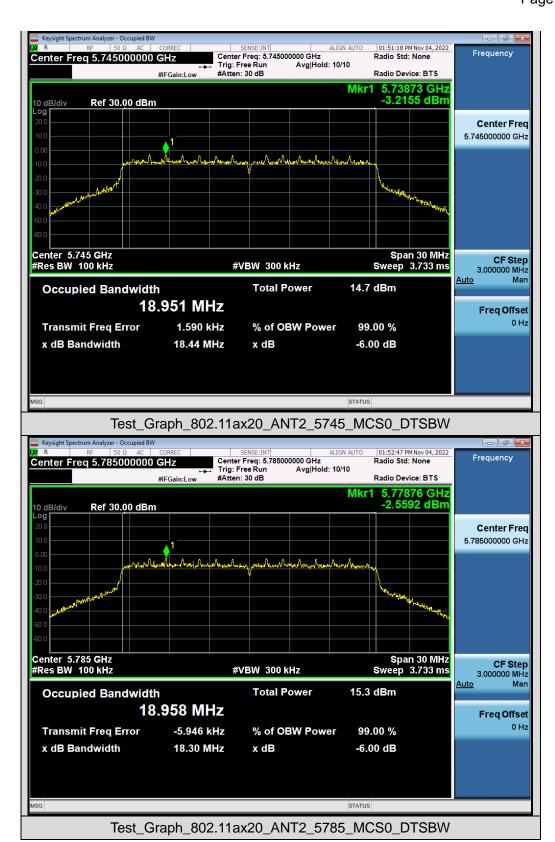




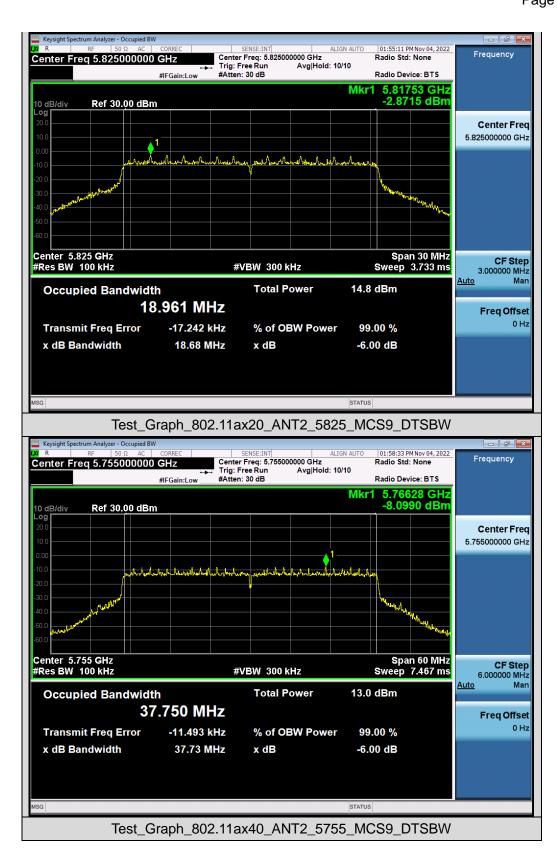




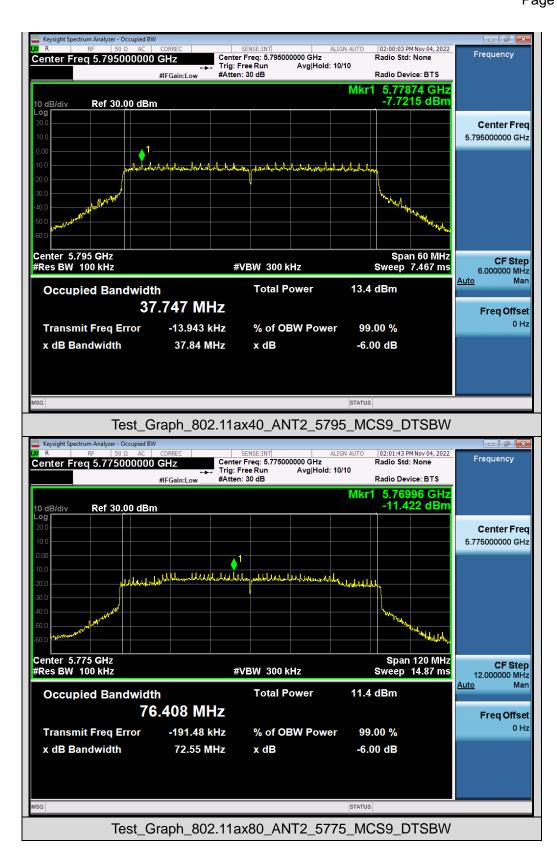














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8. POWER SPECTRAL DENSITY MEASUREMENT

8.1 MEASUREMENT LIMITS

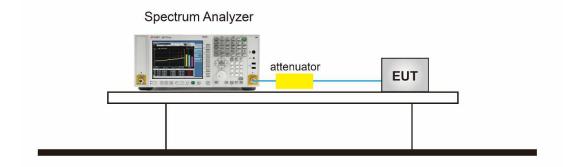
Operation Band	EUT Category		LIMIT		
		Outdoor Access Point	17dBm/ MHz		
U-NII-1		Fixed point-to-point Access Point	17dBm/ MHz		
O-INII- I		Indoor Access Point	17dBm/ MHz		
	\square	Client devices	11dBm/ MHz		
U-NII-2A		/	11dBm/ MHz		
U-NII-2C	/				11dBm/ MHz
U-NII-3	/		30 dBm/500kHz		

8.2 MEASUREMENT PROCEDURE

□ For Average power spectral density test:

- 1. 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. Record the test results in the report.

8.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



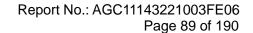


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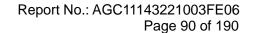
8.4 MEASUREMENT RESULT

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-ANT 1						
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail		
	5180	1.519	11	Pass		
802.11a	5200	2.091	11	Pass		
	5240	1.665	11	Pass		
	5180	1.567	11	Pass		
802.11n20	5200	1.534	11	Pass		
	5240	1.549	11	Pass		
902 11540	5190	-2.410	11	Pass		
802.11n40	5230	-2.206	11	Pass		
	5180	0.631	11	Pass		
802.11ac20	5200	0.720	11	Pass		
	5240	0.543	11	Pass		
202.11	5190	-2.887	11	Pass		
802.11ac40	5230	-3.202	11	Pass		
802.11ac80	5210	-6.640	11	Pass		
	5180	-0.403	11	Pass		
802.11ax20	5200	-0.282	11	Pass		
	5240	-0.207	11	Pass		
902 11 ov 10	5190	-4.341	11	Pass		
802.11ax40	5230	-4.456	11	Pass		
802.11ax80	5210	-7.512	11	Pass		



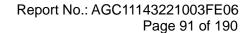


Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-ANT 2						
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail		
	5180	1.297	11	Pass		
802.11a	5200	1.126	11	Pass		
	5240	0.919	11	Pass		
	5180	1.122	11	Pass		
802.11n20	5200	0.839	11	Pass		
	5240	0.210	11	Pass		
802.11n40	5190	-2.894	11	Pass		
002.111140	5230	-3.509	11	Pass		
	5180	-0.239	11	Pass		
802.11ac20	5200	-0.428	11	Pass		
	5240	-1.067	11	Pass		
802.11ac40	5190	-3.612	11	Pass		
802.118040	5230	-4.479	11	Pass		
802.11ac80	5210	-7.655	11	Pass		
	5180	-0.826	11	Pass		
802.11ax20	5200	-1.085	11	Pass		
	5240	-1.425	11	Pass		
802.11ax40	5190	-5.040	11	Pass		
602.118X40	5230	-5.652	11	Pass		
802.11ax80	5210	-8.508	11	Pass		



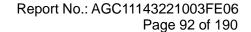


Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-MIMO						
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail		
	5180	4.36	9.22	Pass		
802.11n20	5200	4.21	9.22	Pass		
	5240	3.94	9.22	Pass		
802.11n40	5190	0.37	9.22	Pass		
802.111140	5230	0.20	9.22	Pass		
	5180	3.23	9.22	Pass		
802.11ac20	5200	3.19	9.22	Pass		
	5240	2.82	9.22	Pass		
000 44 40	5190	-0.22	9.22	Pass		
802.11ac40	5230	-0.78	9.22	Pass		
802.11ac80	5210	-4.11	9.22	Pass		
	5180	2.40	9.22	Pass		
802.11ax20	5200	2.35	9.22	Pass		
	5240	2.24	9.22	Pass		
000 44 5 40	5190	-1.67	9.22	Pass		
802.11ax40	5230	-2.00	9.22	Pass		
802.11ax80	5210	-4.97	9.22	Pass		



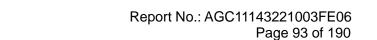


Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-ANT 1						
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail	
	5745	-8.011	-1.021	30	Pass	
802.11a	5785	-7.829	-0.839	30	Pass	
	5825	-8.367	-1.377	30	Pass	
	5745	-8.315	-1.325	30	Pass	
802.11n20	5785	-8.084	-1.094	30	Pass	
	5825	-8.535	-1.545	30	Pass	
802.11n40	5755	-11.858	-4.868	30	Pass	
802.111140	5795	-11.578	-4.588	30	Pass	
	5745	-9.176	-2.186	30	Pass	
802.11ac20	5785	-8.898	-1.908	30	Pass	
	5825	-8.995	-2.005	30	Pass	
002 44 5 540	5755	-13.107	-6.117	30	Pass	
802.11ac40	5795	-13.092	-6.102	30	Pass	
802.11ac80	5775	-15.793	-8.803	30	Pass	
	5745	-10.938	-3.948	30	Pass	
802.11ax20	5785	-10.065	-3.075	30	Pass	
	5825	-10.503	-3.513	30	Pass	
902 11 av 40	5755	-13.996	-7.006	30	Pass	
802.11ax40	5795	-14.049	-7.059	30	Pass	
802.11ax80	5775	-16.777	-9.787	30	Pass	





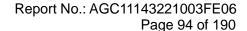
Т	Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-ANT 2							
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail			
	5745	-8.41	-1.420	30	Pass			
802.11a	5785	-7.698	-0.708	30	Pass			
	5825	-8.234	-1.244	30	Pass			
	5745	-8.646	-1.656	30	Pass			
802.11n20	5785	-7.62	-0.630	30	Pass			
	5825	-8.217	-1.227	30	Pass			
802.11n40	5755	-12.796	-5.806	30	Pass			
802.111140	5795	-11.905	-4.915	30	Pass			
	5745	-8.783	-1.793	30	Pass			
802.11ac20	5785	-8.869	-1.879	30	Pass			
	5825	-8.793	-1.803	30	Pass			
000 44 = -40	5755	-13.097	-6.107	30	Pass			
802.11ac40	5795	-12.431	-5.441	30	Pass			
802.11ac80	5775	-16.039	-9.049	30	Pass			
	5745	-10.468	-3.478	30	Pass			
802.11ax20	5785	-9.881	-2.891	30	Pass			
	5825	-10.768	-3.778	30	Pass			
000 11 ov 10	5755	-13.836	-6.846	30	Pass			
802.11ax40	5795	-13.786	-6.796	30	Pass			
802.11ax80	5775	-17.236	-10.246	30	Pass			





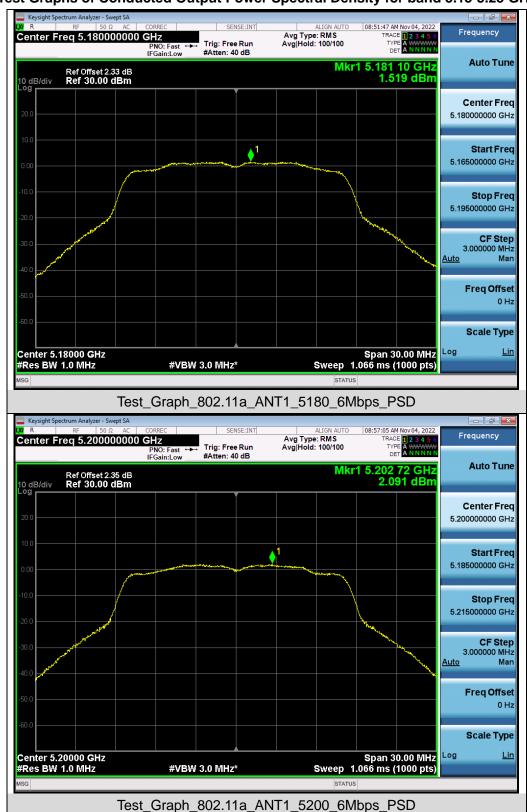
Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-MIMO							
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail		
	5745	-5.47	1.52	27.68	Pass		
802.11n20	5785	-4.84	2.15	27.68	Pass		
	5825	-5.36	1.63	27.68	Pass		
802.11n40	5755	-9.29	-2.30	27.68	Pass		
002.111140	5795	-8.73	-1.74	27.68	Pass		
	5745	-5.96	1.03	27.68	Pass		
802.11ac20	5785	-5.87	1.12	27.68	Pass		
	5825	-5.88	1.11	27.68	Pass		
802.11ac40	5755	-10.09	-3.10	27.68	Pass		
002.11ac40	5795	-9.74	-2.75	27.68	Pass		
802.11ac80	5775	-12.90	-5.91	27.68	Pass		
	5745	-7.69	-0.70	27.68	Pass		
802.11ax20	5785	-6.96	0.03	27.68	Pass		
	5825	-7.62	-0.63	27.68	Pass		
802.11ax40	5755	-10.90	-3.91	27.68	Pass		
	5795	-10.91	-3.92	27.68	Pass		
802.11ax80	5775	-13.99	-7.00	27.68	Pass		

Note:1. Power density(dBm/500kHz) = Power density(dBm/100kHz) +10*log(500/100). 2.The Total PSD (dBm/500kHz) = $10*log \{10^{(Ant 1 PSD/10)} + 10^{(Ant 2 PSD/10)}\}(dBm/500kHz)$





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



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Test Graph 802.11n20 ANT1 5180 MCS0 PSD



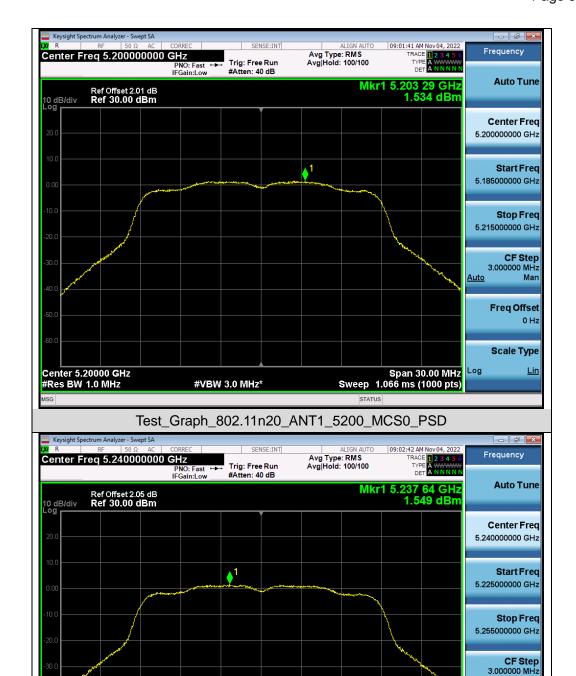
<u>Auto</u>

Span 30.00 MHz Sweep 1.066 ms (1000 pts) Man

Freq Offset 0 Hz

Scale Type





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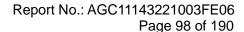
Test Graph 802.11n20 ANT1 5240 MCS0 PSD

#VBW 3.0 MHz*

Center 5.24000 GHz #Res BW 1.0 MHz







Scale Type

Span 30.00 MHz Sweep 1.066 ms (1000 pts)





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Test Graph 802.11ac20 ANT1 5200 MCS0 PSD

#VBW 3.0 MHz*

Center 5.20000 GHz #Res BW 1.0 MHz



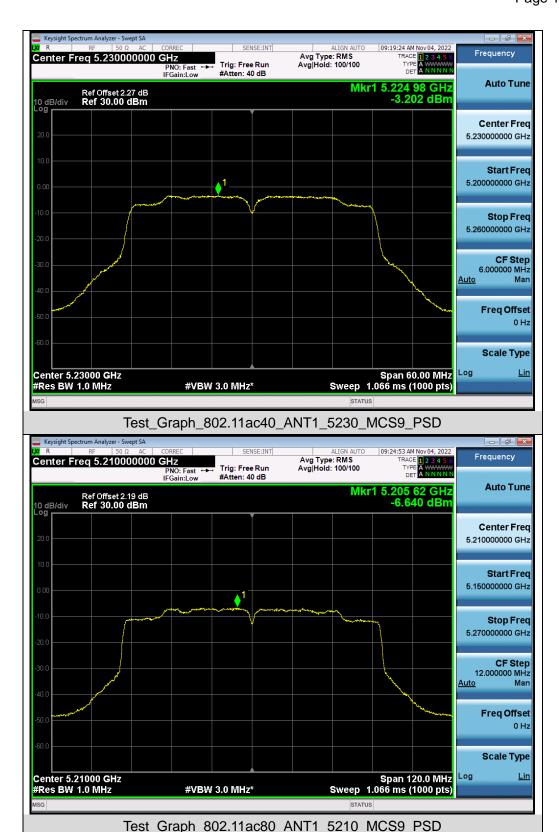




Test Graph 802.11ac40 ANT1 5190 MCS9 PSD



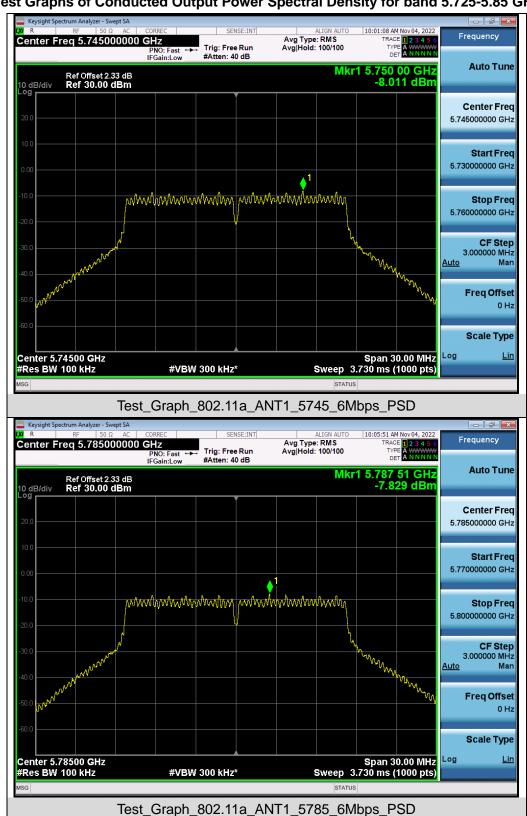








Test Graphs of Conducted Output Power Spectral Density for band 5.725-5.85 GHz

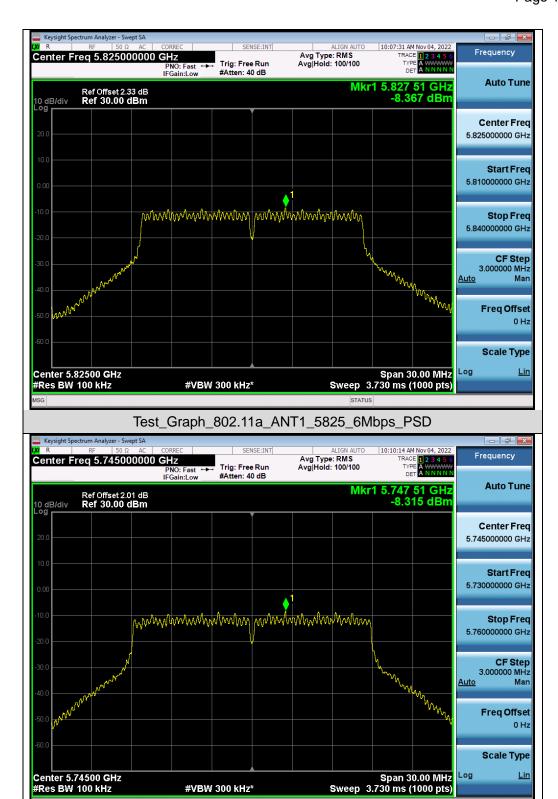


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Web: http://www.agccert.com/



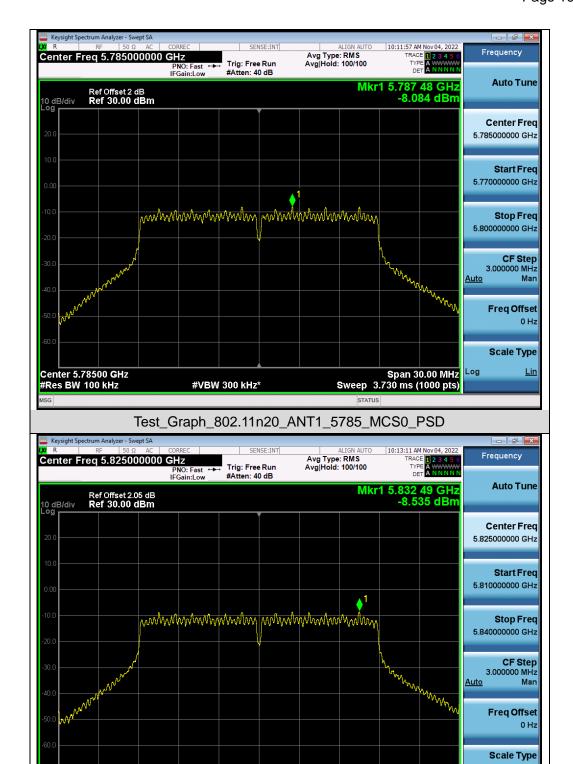




Test Graph 802.11n20 ANT1 5745 MCS0 PSD







Test Graph 802.11n20 ANT1 5825 MCS0 PSD

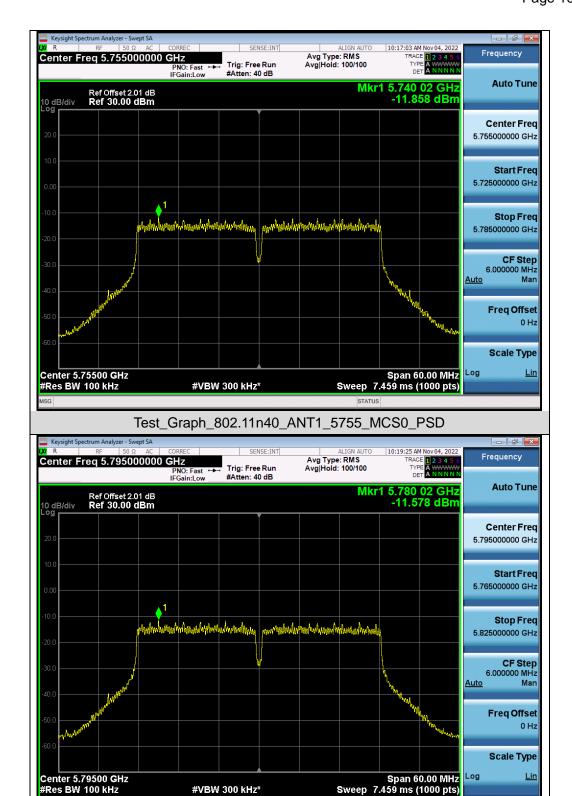
#VBW 300 kHz*

Span 30.00 MHz Sweep 3.730 ms (1000 pts)

Center 5.82500 GHz #Res BW 100 kHz



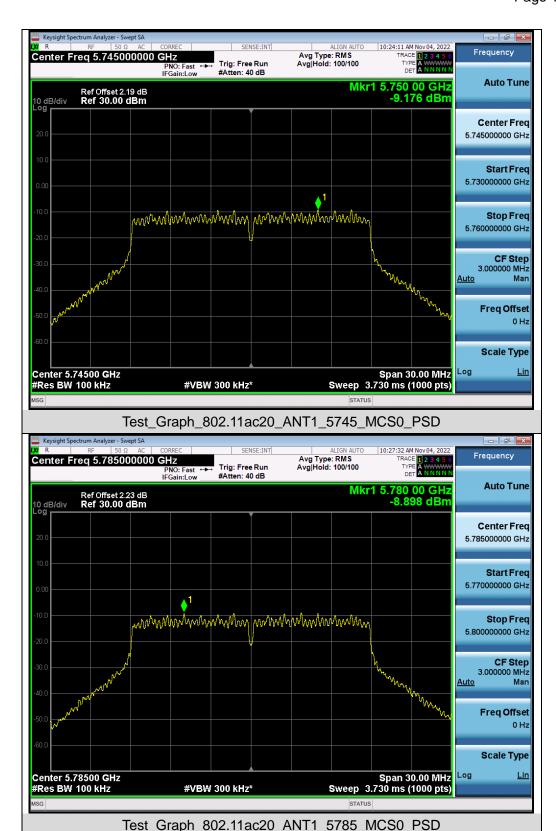




Test Graph 802.11n40 ANT1 5795 MCS0 PSD

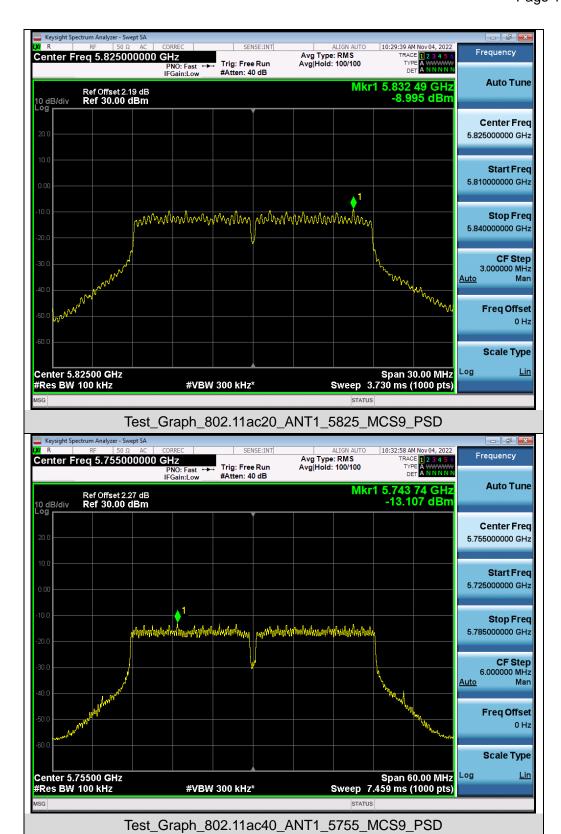






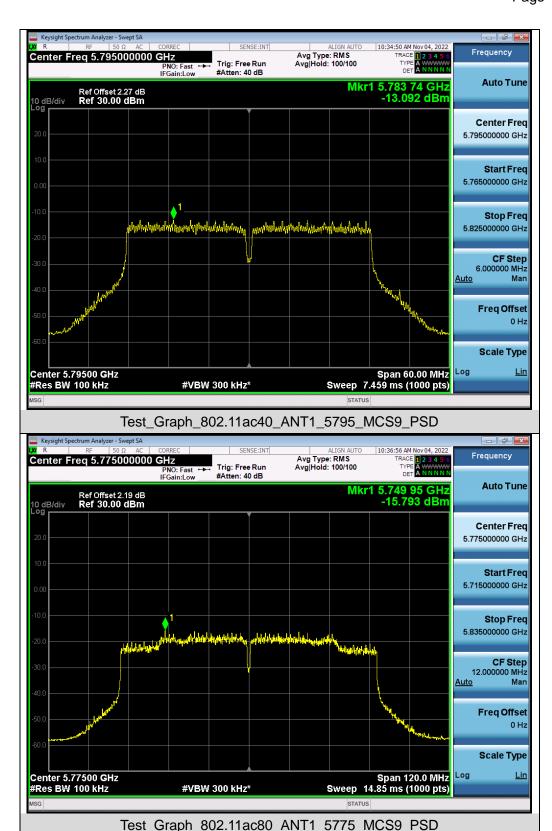














AGC[®]

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9. CONDUCTED SPURIOUS EMISSION

9.1 MEASUREMENT LIMIT

Restricted bands	Applicable to	Limit	
	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:

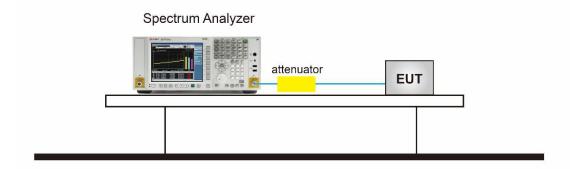
E =
$$\frac{1000000 - \sqrt{30 P}}{3}$$
 µV/m, where P is the eirp (Watts).

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.

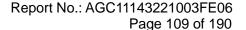
9.2 MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the Middle and the bottom operation frequency individually.
- 3. 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.
- 4. RBW = 100 kHz; VBW= 300 kHz; Sweep = auto; Detector function = peak.(Test frequency below 1GHz)
- 5. RBW = 1 MHz; VBW= 3 MHz; Sweep = auto; Detector function = peak.(Test frequency Above 1GHz)
- 6. Set SPA Trace 1 Max hold, then View.
- 7. Mark the maximum useless stray point and compare it with the limit value to record the result.

9.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



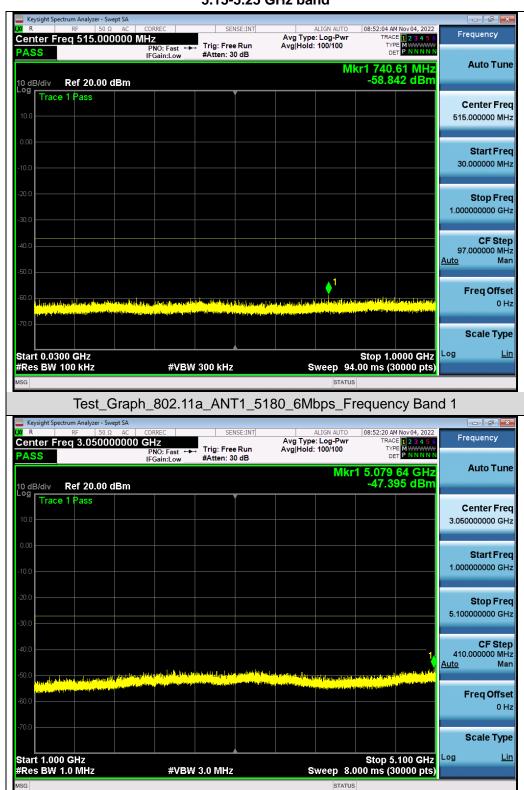
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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.





9.4 MEASUREMENT RESULTS

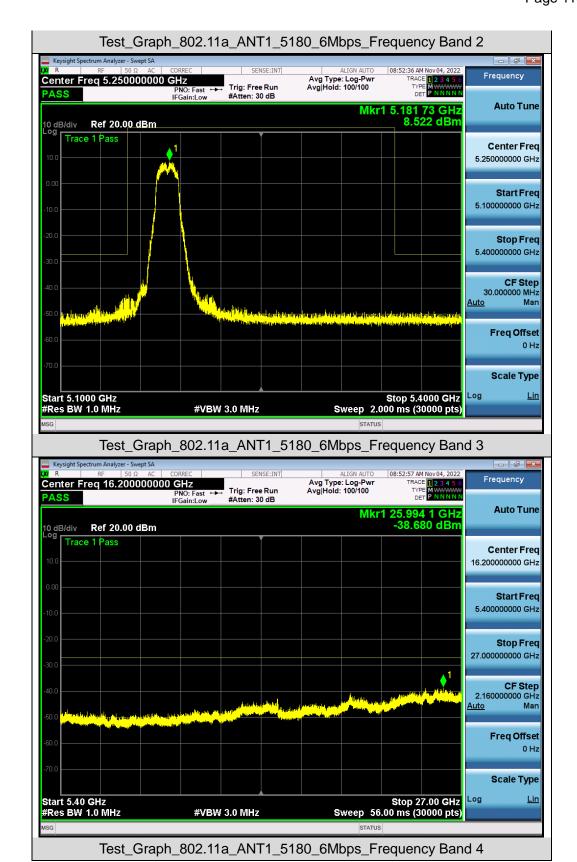
Test Graphs of Spurious Emissions outside of the 5.15-5.35 GHz band for transmitters operating in the 5.15-5.25 GHz band



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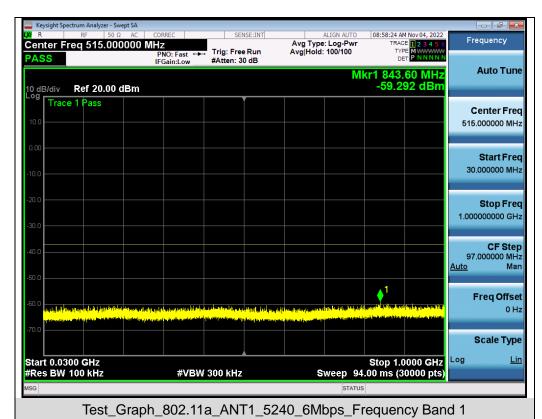








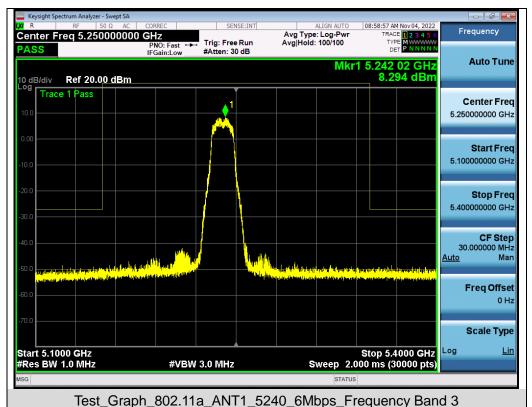








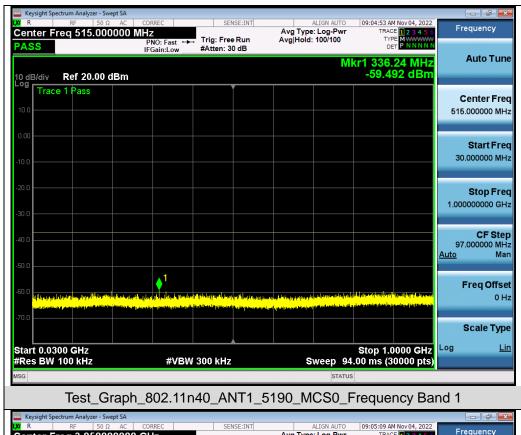








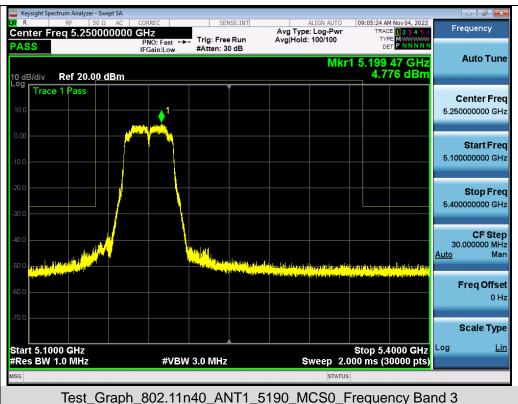
















1.000000000 GHz

Stop Freq 5.100000000 GHz

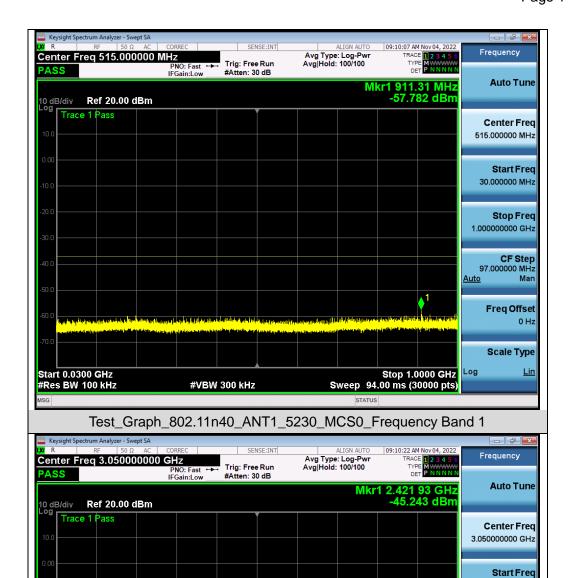
CF Step 410.000000 MHz

Freq Offset

Man

<u>Auto</u>





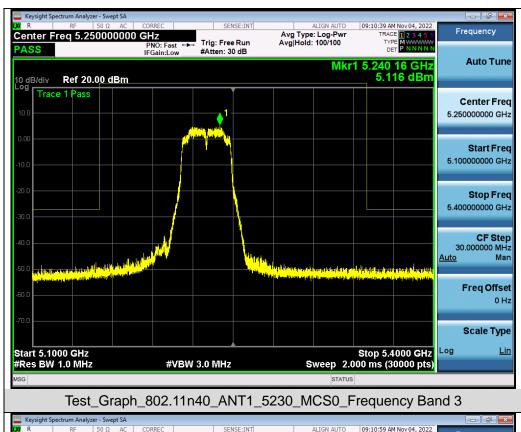
Start 1.000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 8.000 ms (30000 pts)

Test_Graph_802.11n40_ANT1_5230_MCS0_Frequency Band 2

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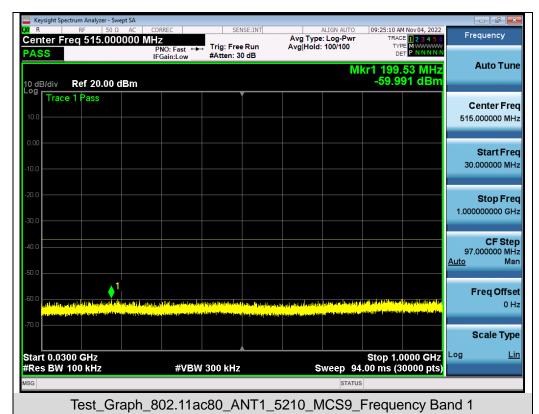








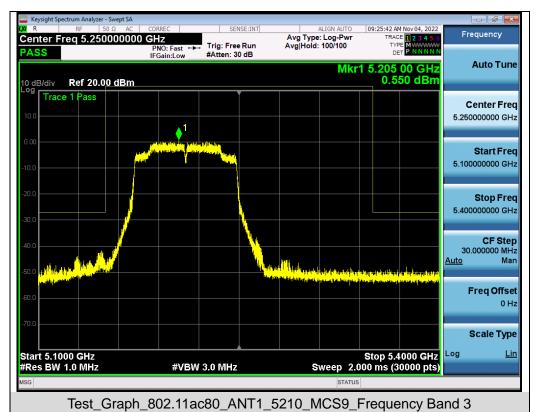








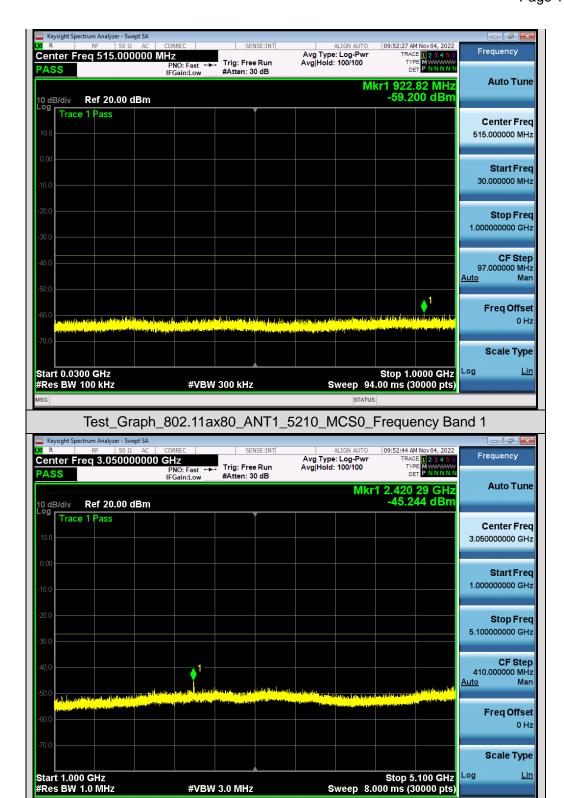












Test_Graph_802.11ax80_ANT1_5210_MCS0_Frequency Band 2

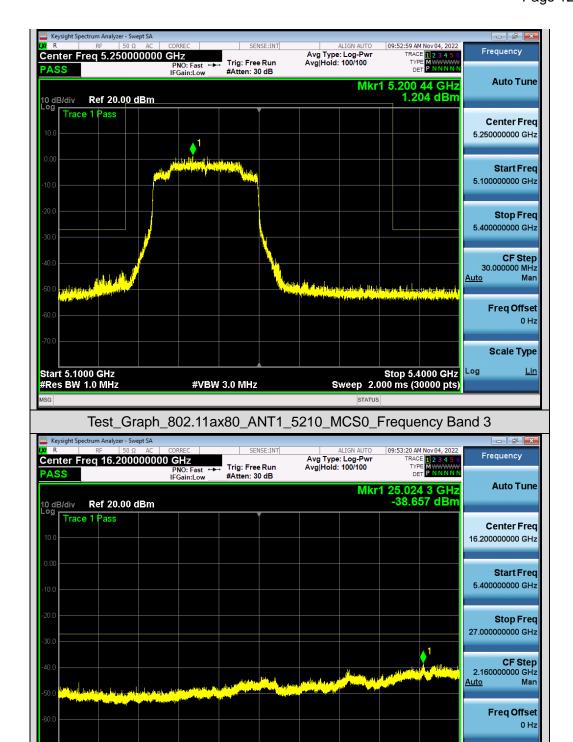


Scale Type

Log

Stop 27.00 GHz Sweep 56.00 ms (30000 pts)





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Test_Graph_802.11ax80_ANT1_5210_MCS0_Frequency Band 4

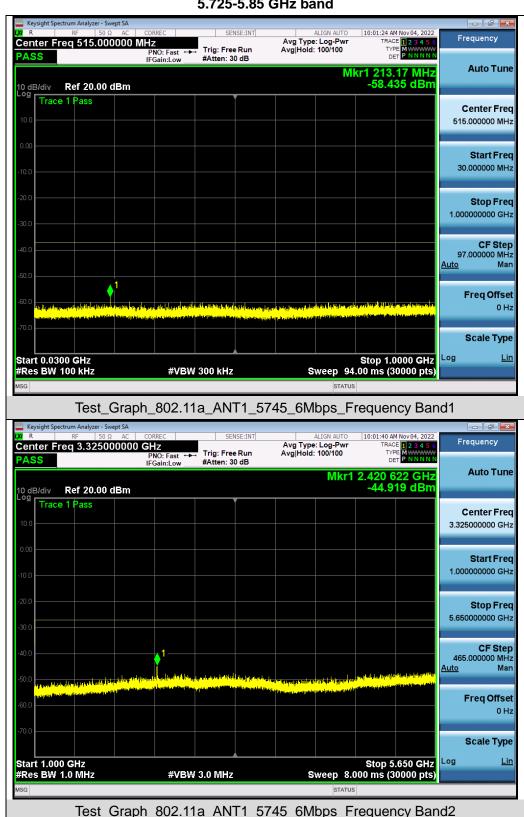
#VBW 3.0 MHz

Start 5.40 GHz #Res BW 1.0 MHz





Test Graphs of Spurious Emissions outside of the 5.725-5.85 GHz band for transmitters operating in the 5.725-5.85 GHz band



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.