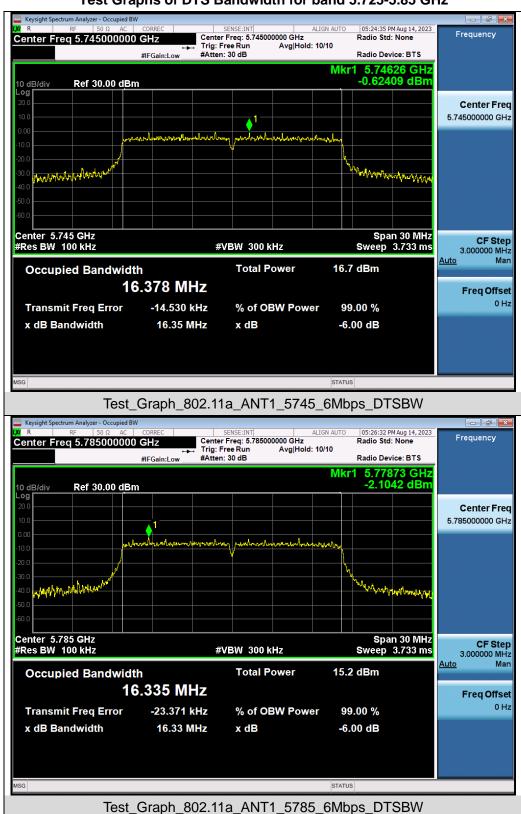
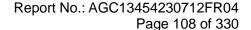


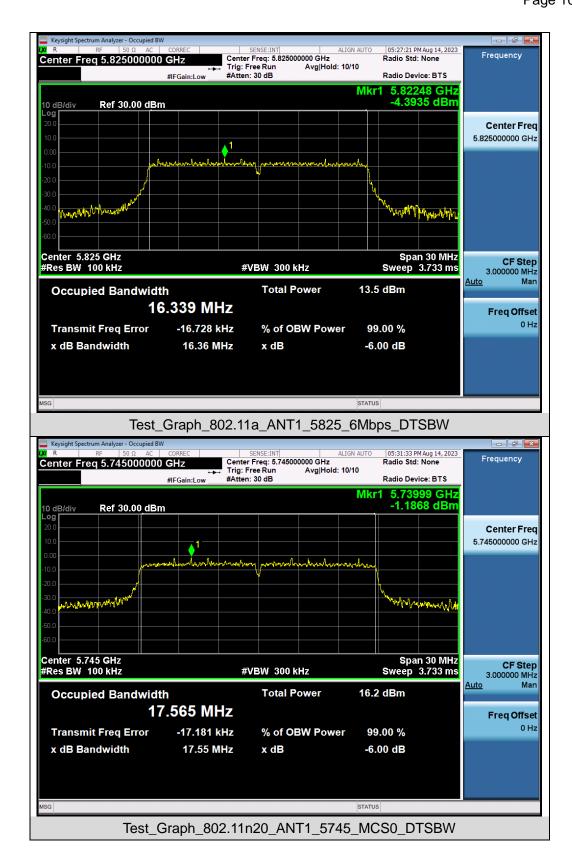


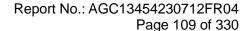
# Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz



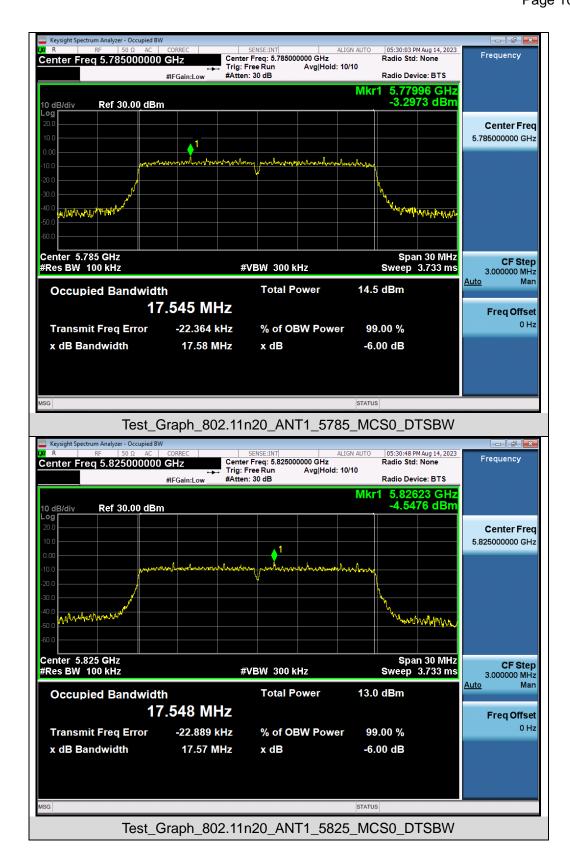


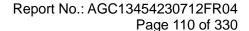




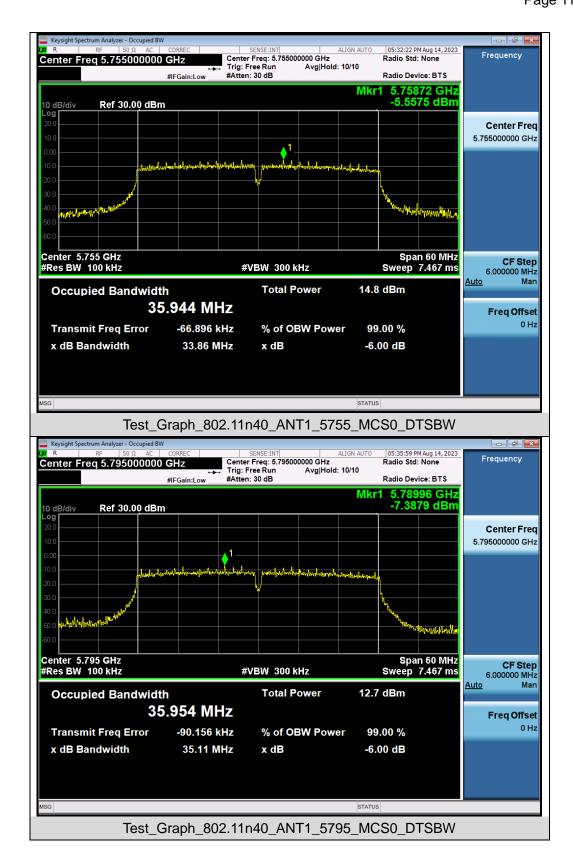


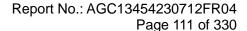




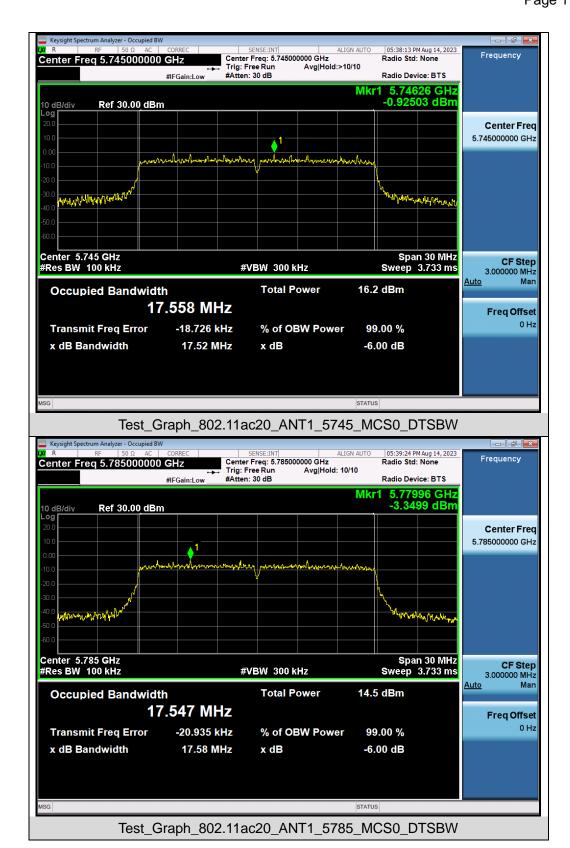


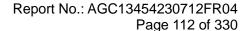




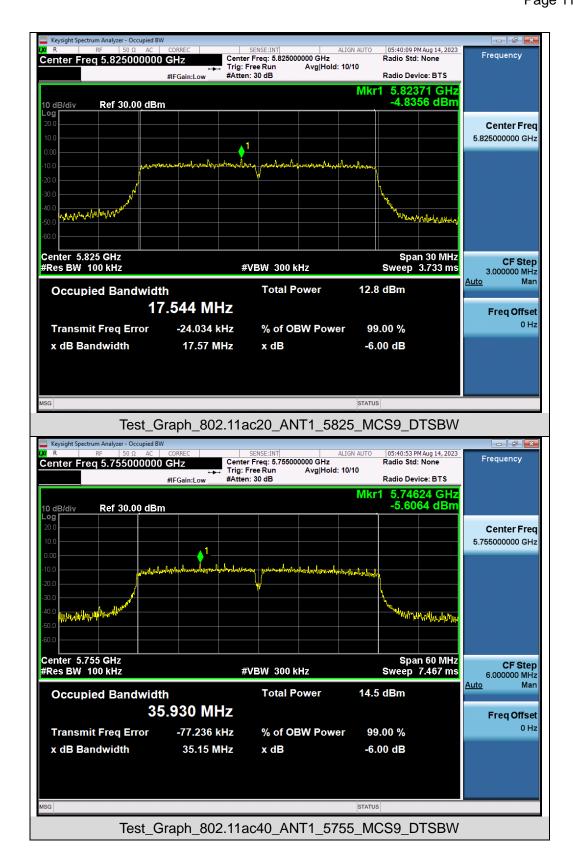


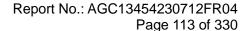




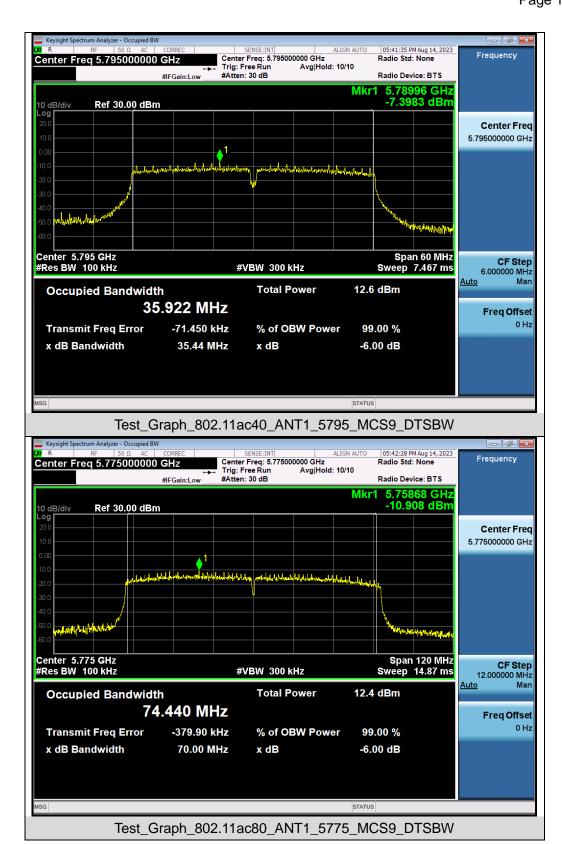


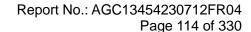




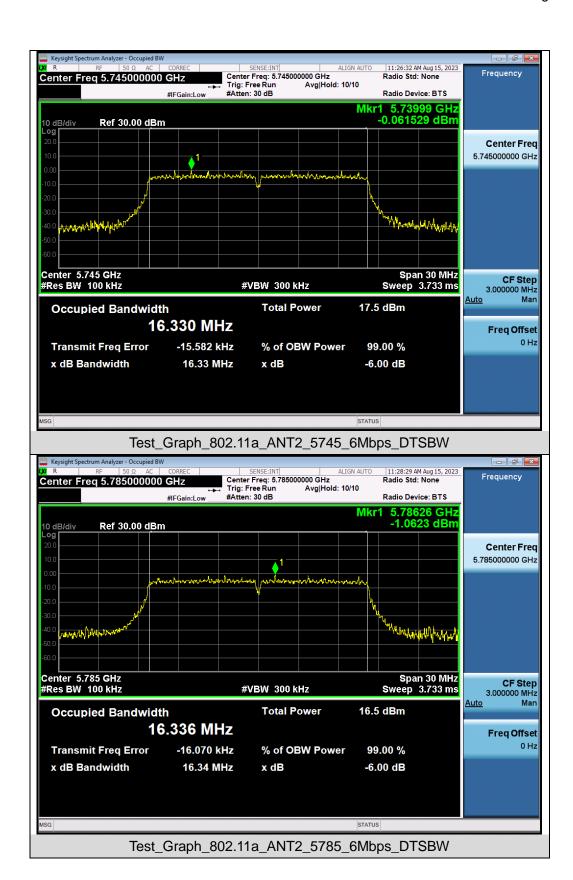


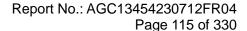




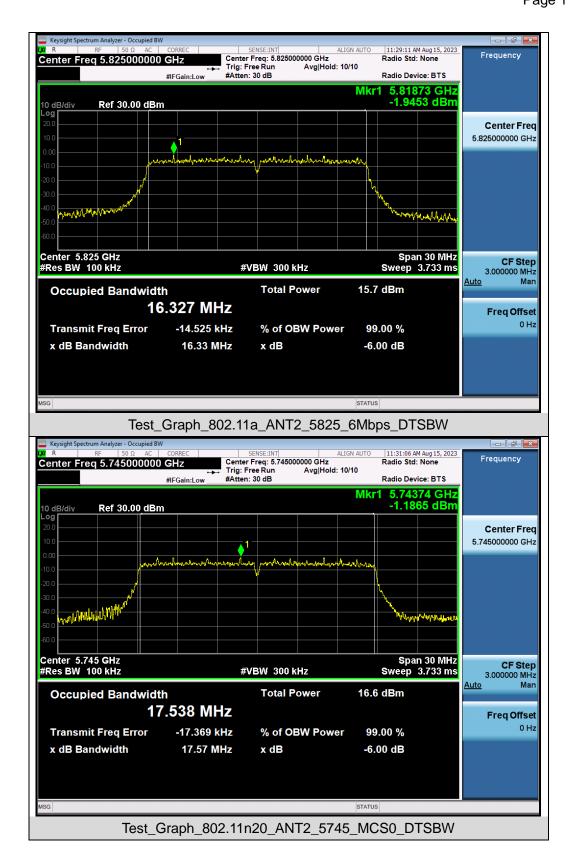


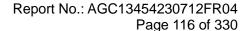




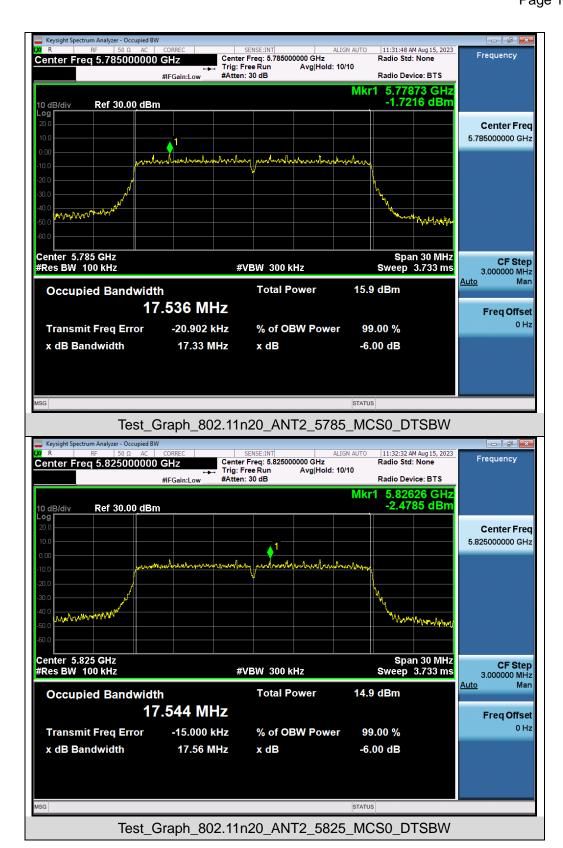


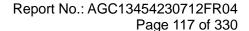




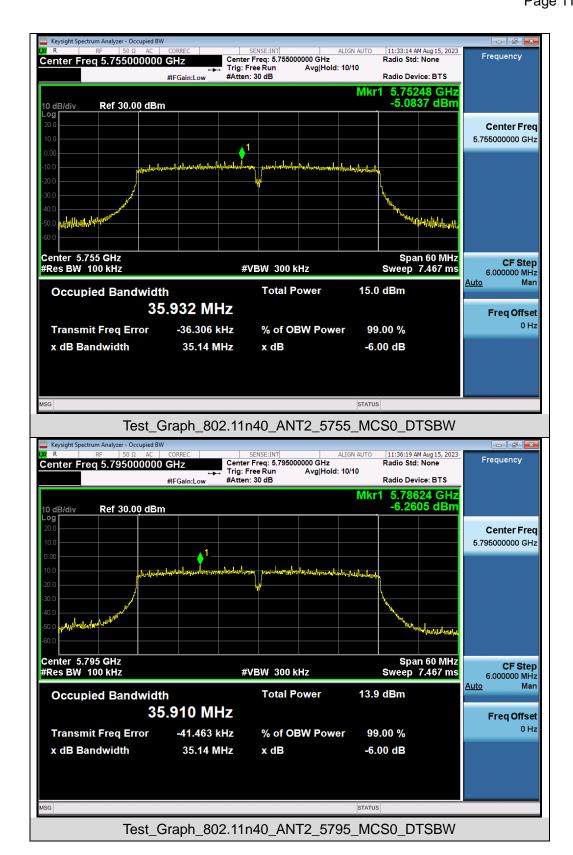


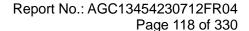




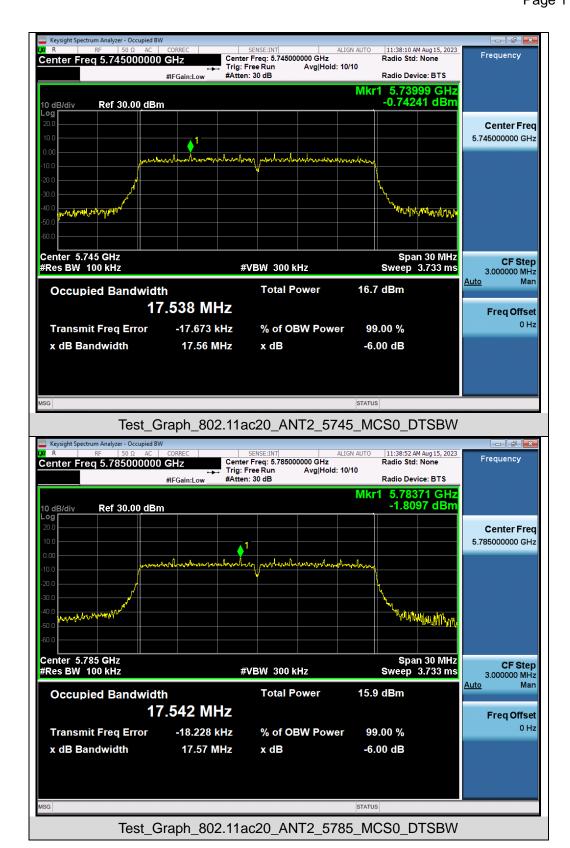


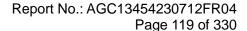




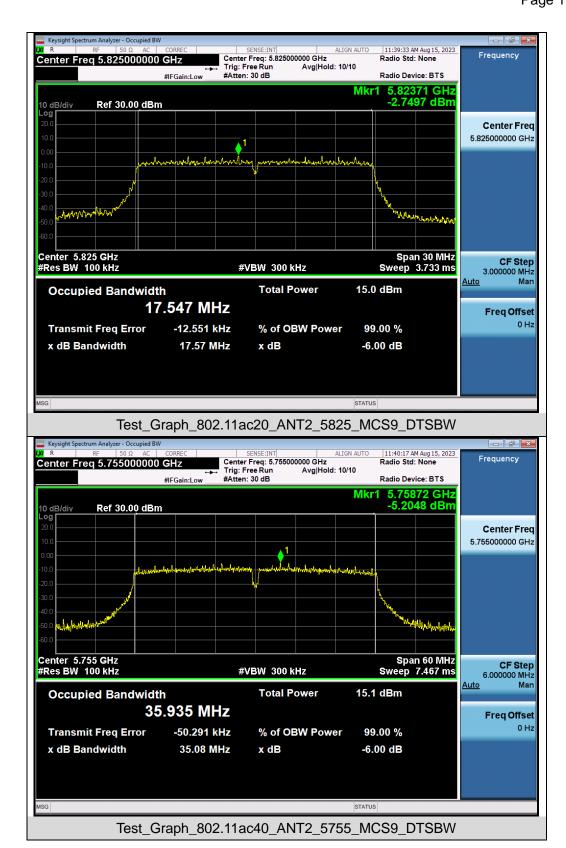






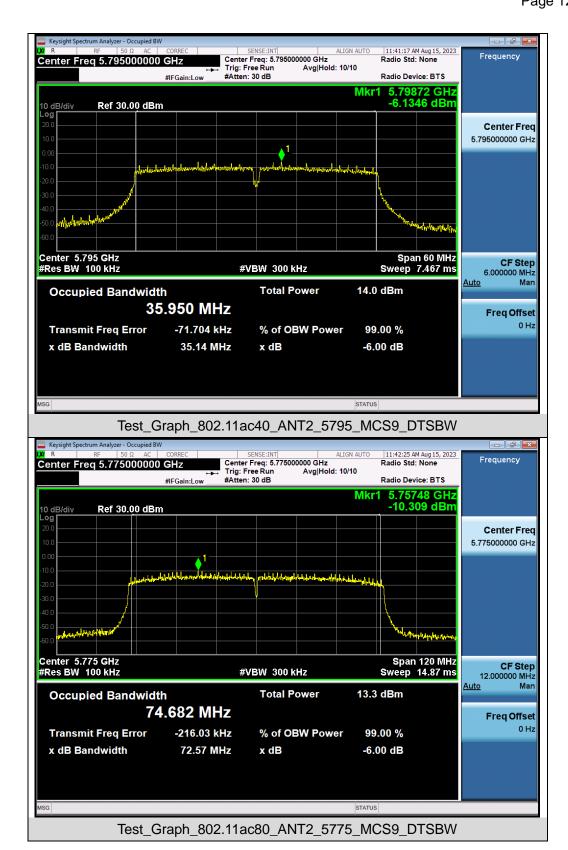














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### 8. POWER SPECTRAL DENSITY MEASUREMENT

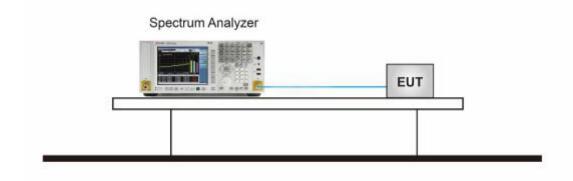
#### **8.1 MEASUREMENT LIMITS**

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
		Client devices	11dBm/ MHz
U-NII-2A		/	11dBm/ MHz
U-NII-2C	/		11dBm/ MHz
U-NII-3		/	30 dBm/500kHz

### **8.2 MEASUREMENT PROCEDURE**

- 1. Connect EUT RF output port to the Spectrum Analyzer.
- 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	0.266	11	Pass	
802.11a	5200	0.681	11	Pass	
	5240	2.053	11	Pass	
	5180	-0.961	11	Pass	
802.11n20	5200	-0.538	11	Pass	
	5240	1.257	11	Pass	
902 44 540	5190	-3.311	11	Pass	
802.11n40	5230	-2.612	11	Pass	
	5180	-0.434	11	Pass	
802.11ac20	5200	0.023	11	Pass	
	5240	0.889	11	Pass	
902 110040	5190	-3.979	11	Pass	
802.11ac40	5230	-2.599	11	Pass	
802.11ac80	5210	-6.015	11	Pass	





Те	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	0.621	11	Pass		
802.11a	5200	1.203	11	Pass		
	5240	2.831	11	Pass		
	5180	-0.342	11	Pass		
802.11n20	5200	0.569	11	Pass		
	5240	1.709	11	Pass		
802.11n40	5190	-2.793	11	Pass		
002.111140	5230	-1.766	11	Pass		
	5180	-0.183	11	Pass		
802.11ac20	5200	0.284	11	Pass		
	5240	2.124	11	Pass		
902 110040	5190	-3.205	11	Pass		
802.11ac40	5230	-2.040	11	Pass		
802.11ac80	5210	-5.894	11	Pass		



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Te	Test Data of Conducted Output Power Density for band 5.25-5.35 GHz-ANT 1					
Test Mode	Test Channel (MHz)	, ,		Pass or Fail		
	5260	-0.065	11	Pass		
802.11a	5300	0.964	11	Pass		
	5320	1.485	11	Pass		
	5260	-1.093	11	Pass		
802.11n20	5300	-0.198	11	Pass		
	5320	0.728	11	Pass		
902 11 - 10	5270	-4.028	11	Pass		
802.11n40	5310	-2.983	11	Pass		
	5260	-0.812	11	Pass		
802.11ac20	5300	0.364	11	Pass		
	5320	0.487	11	Pass		
000 11 0010	5270	-3.779	11	Pass		
802.11ac40	5310	-2.484	11	Pass		
802.11ac80	5290	-6.933	11	Pass		



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Те	Test Data of Conducted Output Power Density for band 5.25-5.35 GHz-ANT 2					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail		
	5260	-0.219	11	Pass		
802.11a	5300	1.108	11	Pass		
	5320	1.350	11	Pass		
	5260	-1.008	11	Pass		
802.11n20	5300	0.484	11	Pass		
	5320	0.391	11	Pass		
000 11 - 10	5270	-3.316	11	Pass		
802.11n40	5310	-2.163	11	Pass		
	5260	-0.804	11	Pass		
802.11ac20	5300	0.566	11	Pass		
	5320	0.679	11	Pass		
902 11 0040	5270	-3.701	11	Pass		
802.11ac40	5310	-2.232	11	Pass		
802.11ac80	5290	-6.318	11	Pass		



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Test Data of Conducted Output Power Density for band 5.470-5.725 GHz-ANT 1					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail	
	5500	-0.488	11	Pass	
802.11a	5600	0.850	11	Pass	
	5700	1.623	11	Pass	
	5500	-1.300	11	Pass	
802.11n20	5600	-0.313	11	Pass	
	5700	0.794	11	Pass	
	5510	-4.390	11	Pass	
802.11n40	5590	-3.108	11	Pass	
	5670	-2.185	11	Pass	
	5500	-1.206	11	Pass	
802.11ac20	5600	-0.149	11	Pass	
	5700	0.624	11	Pass	
	5510	-4.851	11	Pass	
802.11ac40	5590	-3.366	11	Pass	
	5670	-2.871	11	Pass	
802.11ac80	5530	-7.815	11	Pass	
002.11ac60	5610	-6.718	11	Pass	



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Test Data of Conducted Output Power Density for band 5.470-5.725 GHz-ANT 2					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail	
	5500	-0.452	11	Pass	
802.11a	5600	2.124	11	Pass	
	5700	2.915	11	Pass	
	5500	-1.892	11	Pass	
802.11n20	5600	1.185	11	Pass	
	5700	2.038	11	Pass	
	5510	-4.295	11	Pass	
802.11n40	5590	-1.956	11	Pass	
	5670	-0.863	11	Pass	
	5500	-1.948	11	Pass	
802.11ac20	5600	1.108	11	Pass	
	5700	1.857	11	Pass	
	5510	-4.399	11	Pass	
802.11ac40	5590	-2.307	11	Pass	
	5670	-0.861	11	Pass	
802.11ac80	5530	-7.087	11	Pass	
602.TT8C80	5610	-5.261	11	Pass	



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7	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	-8.180	-1.190	30	Pass			
802.11a	5785	-9.327	-2.337	30	Pass			
	5825	-11.200	-4.210	30	Pass			
	5745	-8.928	-1.938	30	Pass			
802.11n20	5785	-10.445	-3.455	30	Pass			
	5825	-12.077	-5.087	30	Pass			
802.11n40	5755	-12.072	-5.082	30	Pass			
802.111140	5795	-14.792	-7.802	30	Pass			
	5745	-9.280	-2.290	30	Pass			
802.11ac20	5785	-10.649	-3.659	30	Pass			
	5825	-12.461	-5.471	30	Pass			
802.11ac40	5755	-12.260	-5.270	30	Pass			
602.11a040	5795	-14.008	-7.018	30	Pass			
802.11ac80	5775	-16.368	-9.378	30	Pass			



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٦	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	-7.756	-0.766	30	Pass			
802.11a	5785	-8.304	-1.314	30	Pass			
	5825	-9.501	-2.511	30	Pass			
	5745	-8.808	-1.818	30	Pass			
802.11n20	5785	-8.937	-1.947	30	Pass			
	5825	-10.142	-3.152	30	Pass			
802.11n40	5755	-11.938	-4.948	30	Pass			
802.111140	5795	-12.617	-5.627	30	Pass			
	5745	-8.412	-1.422	30	Pass			
802.11ac20	5785	-9.347	-2.357	30	Pass			
	5825	-10.448	-3.458	30	Pass			
802.11ac40	5755	-11.734	-4.744	30	Pass			
002.11a040	5795	-12.922	-5.932	30	Pass			
802.11ac80	5775	-14.872	-7.882	30	Pass			





Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-MIMO					
Test Mode	(15)		Limits (dBm/MHz)	Pass or Fail	
	5180	2.37	11	Pass	
802.11n20	5200	3.06	11	Pass	
	5240	4.50	11	Pass	
802.11n40	5190	-0.03	11	Pass	
	5230	0.84	11	Pass	
	5180	2.70	11	Pass	
802.11ac20	5200	3.17	11	Pass	
	5240	4.56	11	Pass	
802.11ac40	5190	-0.56	11	Pass	
	5230	0.70	11	Pass	
802.11ac80	5210	-2.94	11	Pass	





Test Data of Conducted Output Power Density for band 5.25-5.35 GHz-MIMO					
Test Mode	Test Channel (MHz)	Average Power Density Limits (dBm/MHz) (dBm/MHz)		Pass or Fail	
	5180	1.96	11	Pass	
802.11n20	5200	3.17	11	Pass	
	5240	3.57	11	Pass	
802.11n40	5190	-0.65	11	Pass	
	5230	0.46	11	Pass	
	5180	2.20	11	Pass	
802.11ac20	5200	3.48	11	Pass	
	5240	3.59	11	Pass	
802.11ac40	5190	-0.73	11	Pass	
	5230	0.65	11	Pass	
802.11ac80	5210	-3.60	11	Pass	



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Test Data of Conducted Output Power Density for band 5.470-5.725 GHz-MIMO					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail	
	5500	1.42	11	Pass	
802.11n20	5600	3.51	11	Pass	
	5700	4.47	11	Pass	
802.11n40	5510	-1.33	11	Pass	
	5590	0.52	11	Pass	
	5670	1.54	11	Pass	
802.11ac20	5500	1.45	11	Pass	
	5600	3.54	11	Pass	
	5700	4.29	11	Pass	
	5510	-1.61	11	Pass	
802.11ac40	5590	0.21	11	Pass	
	5670	1.26	11	Pass	
802.11ac80	5530	-4.43	11	Pass	
	5610	-2.92	11	Pass	



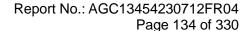
Report No.: AGC13454230712FR04

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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
802.11n20	5745	-5.86	1.13	30	Pass
	5785	-6.62	0.37	30	Pass
	5825	-7.99	-1.00	30	Pass
802.11n40	5755	-8.99	-2.00	30	Pass
	5795	-10.56	-3.57	30	Pass
802.11ac20	5745	-5.81	1.18	30	Pass
	5785	-6.94	0.05	30	Pass
	5825	-8.33	-1.34	30	Pass
802.11ac40	5755	-8.98	-1.99	30	Pass
	5795	-10.42	-3.43	30	Pass
802.11ac80	5775	-12.55	-5.56	30	Pass

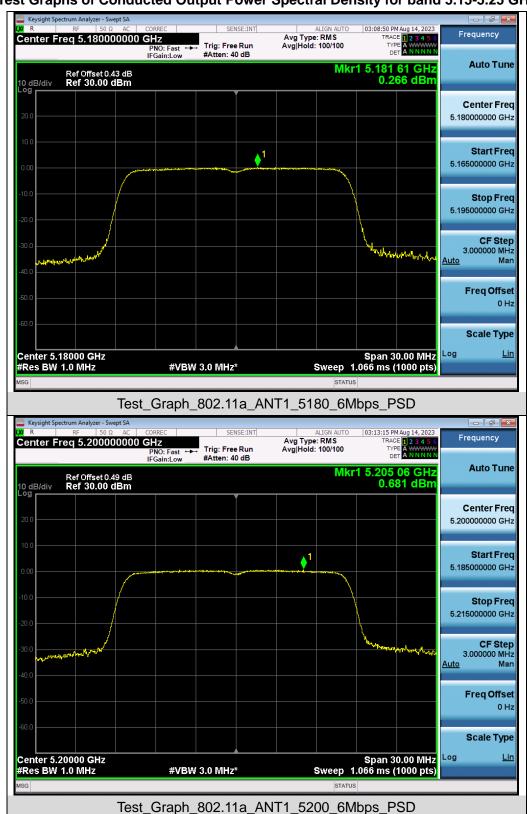
Note:1.Power density(dBm/500kHz) = Power density(dBm/100kHz)+10\*log(500/100).

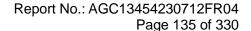
 $2. The \ Total \ PSD(dBm/500kHz) = 10*log \ \{10^{(Ant \ 1 \ PSD/10)} + \ 10^{(Ant \ 2 \ PSD/10)}\} (dBm/500kHz).$ 





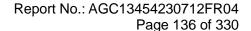
## Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz



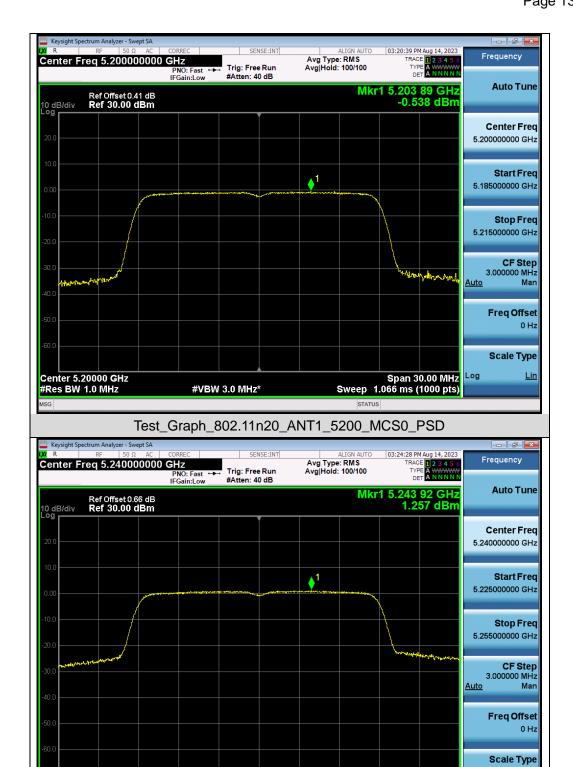










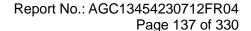


Test Graph 802.11n20 ANT1 5240 MCS0 PSD

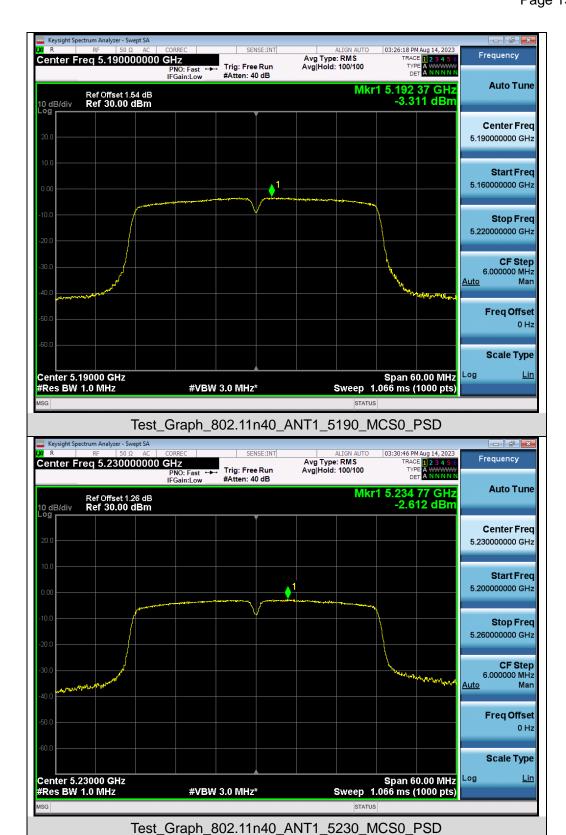
#VBW 3.0 MHz\*

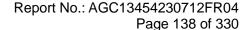
Span 30.00 MHz Sweep 1.066 ms (1000 pts)

Center 5.24000 GHz #Res BW 1.0 MHz

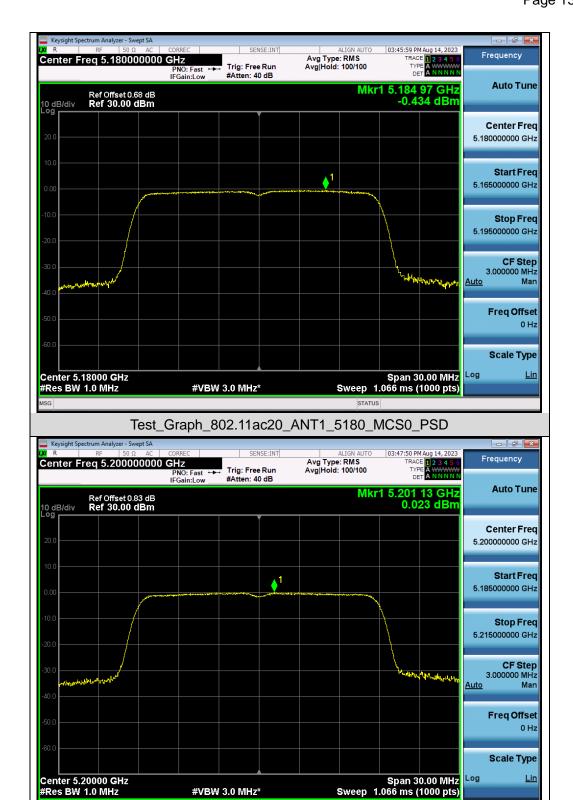




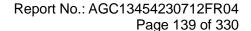




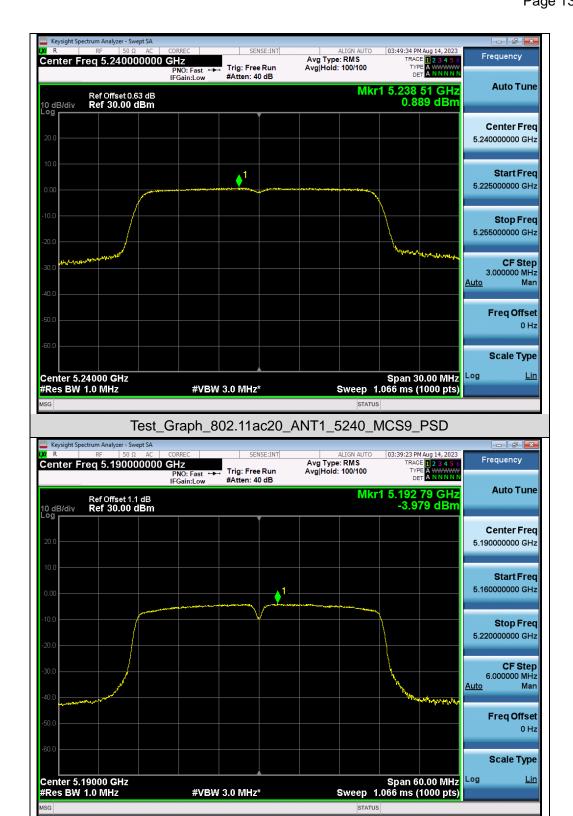




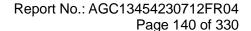
Test Graph 802.11ac20 ANT1 5200 MCS0 PSD



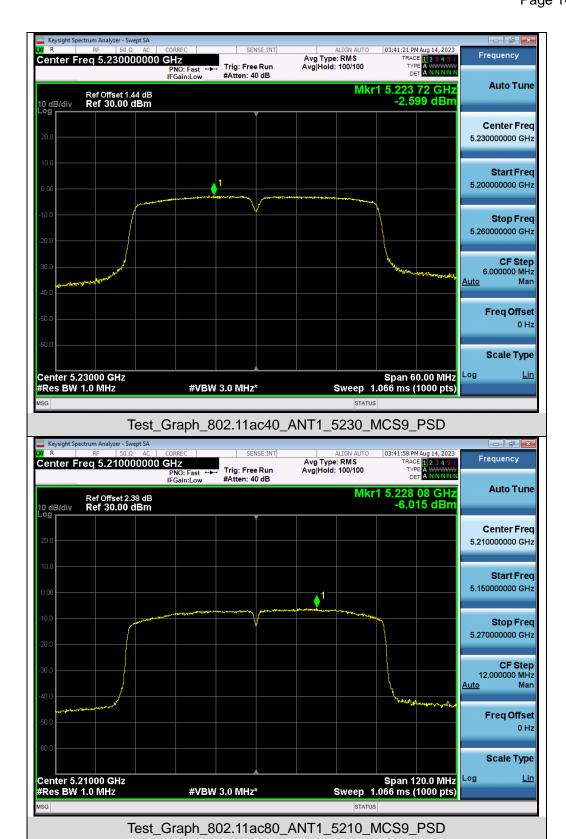


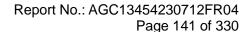


Test Graph 802.11ac40 ANT1 5190 MCS9 PSD

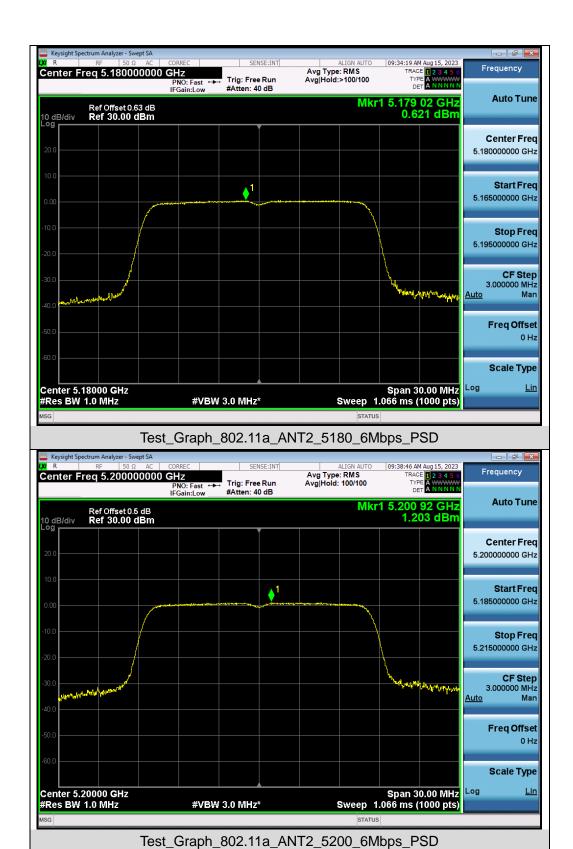


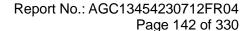




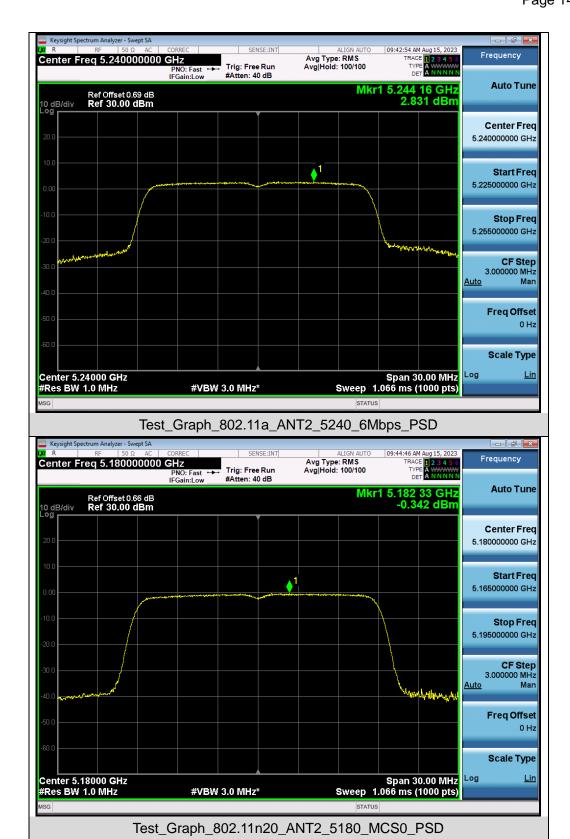


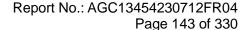










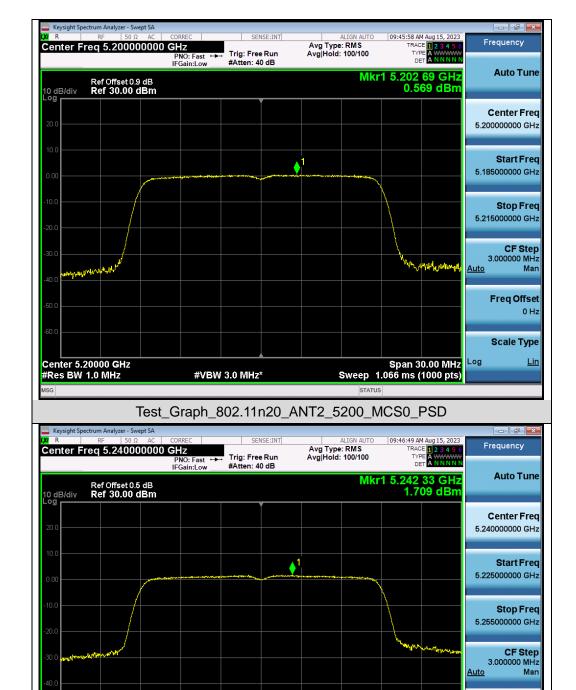


Freq Offset 0 Hz

Scale Type

Span 30.00 MHz Sweep 1.066 ms (1000 pts)



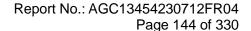


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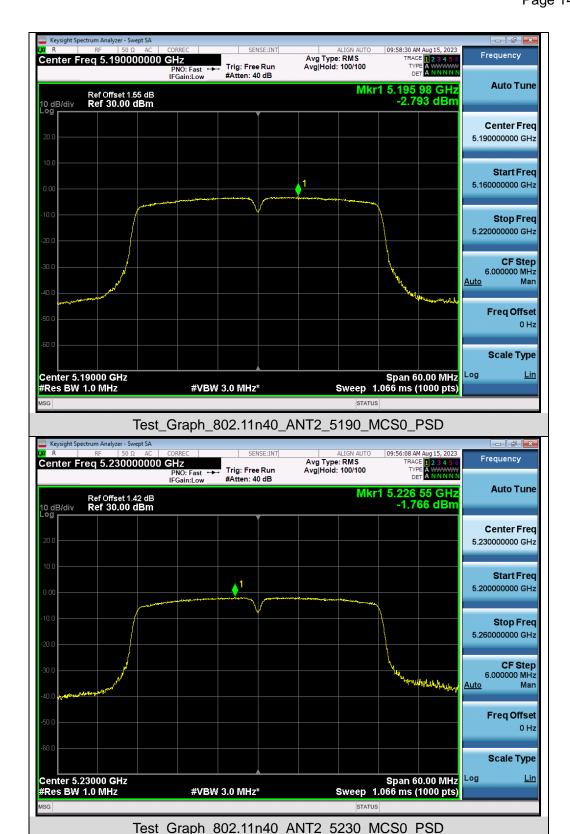
Test Graph 802.11n20 ANT2 5240 MCS0 PSD

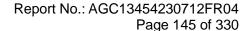
#VBW 3.0 MHz\*

Center 5.24000 GHz #Res BW 1.0 MHz

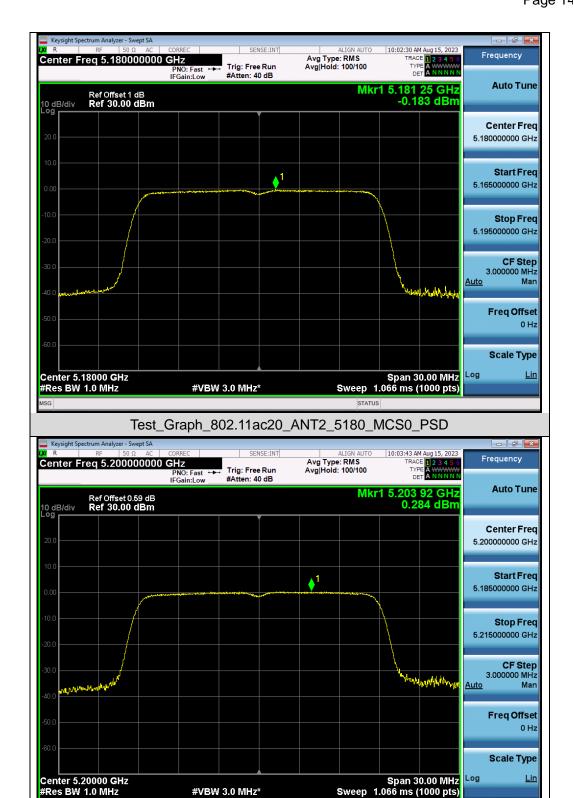




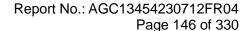






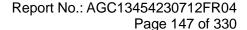


Test Graph 802.11ac20 ANT2 5200 MCS0 PSD

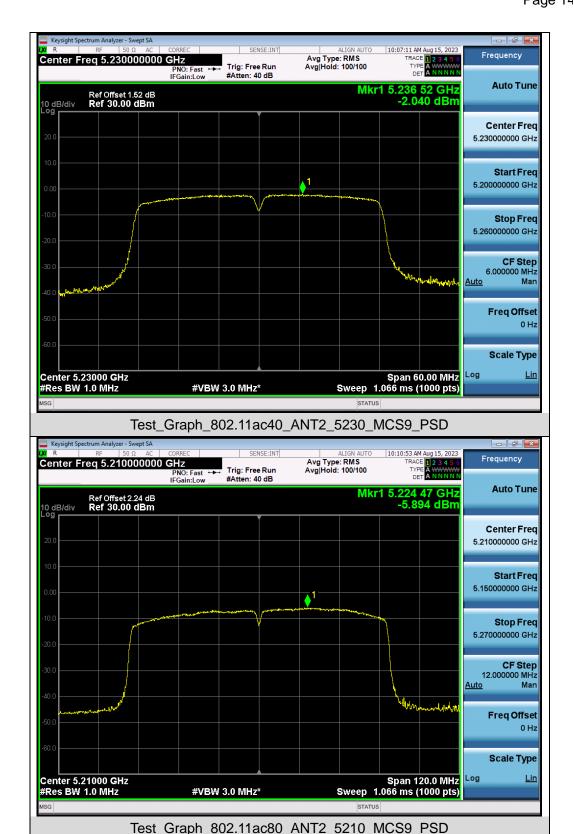


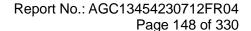






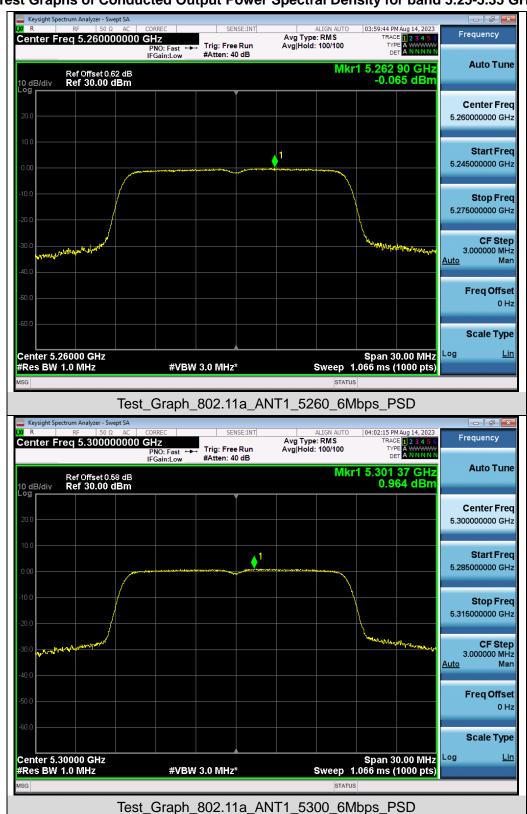


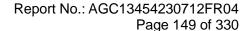






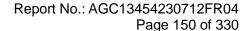
## Test Graphs of Conducted Output Power Spectral Density for band 5.25-5.35 GHz



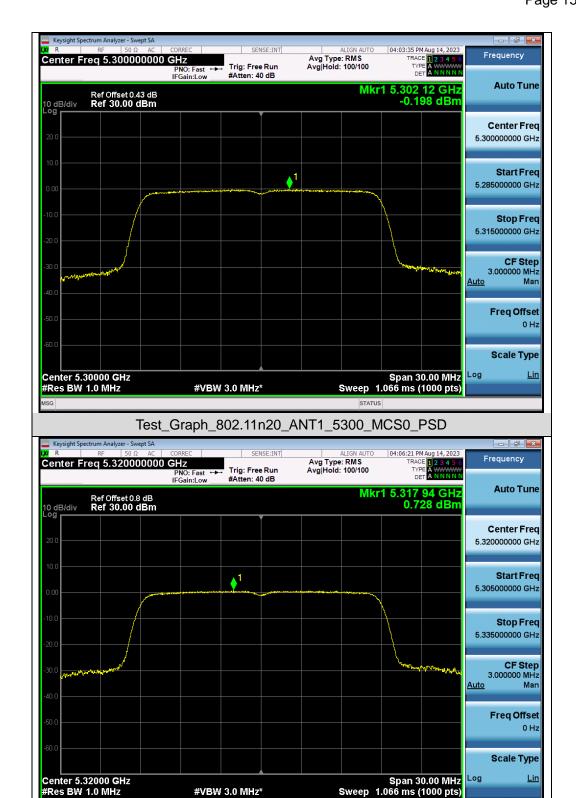










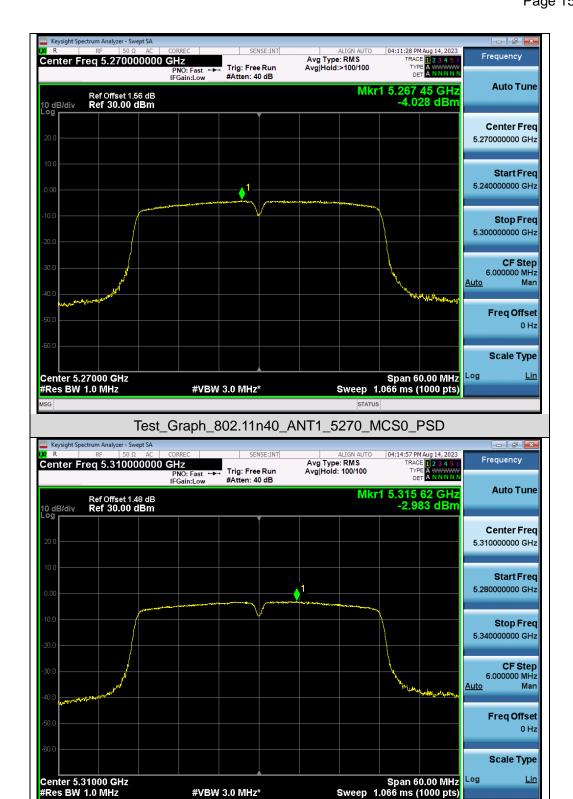


Test Graph 802.11n20 ANT1 5320 MCS0 PSD

#VBW 3.0 MHz\*

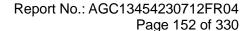






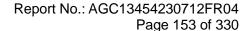
Test Graph 802.11n40 ANT1 5310 MCS0 PSD

#VBW 3.0 MHz\*

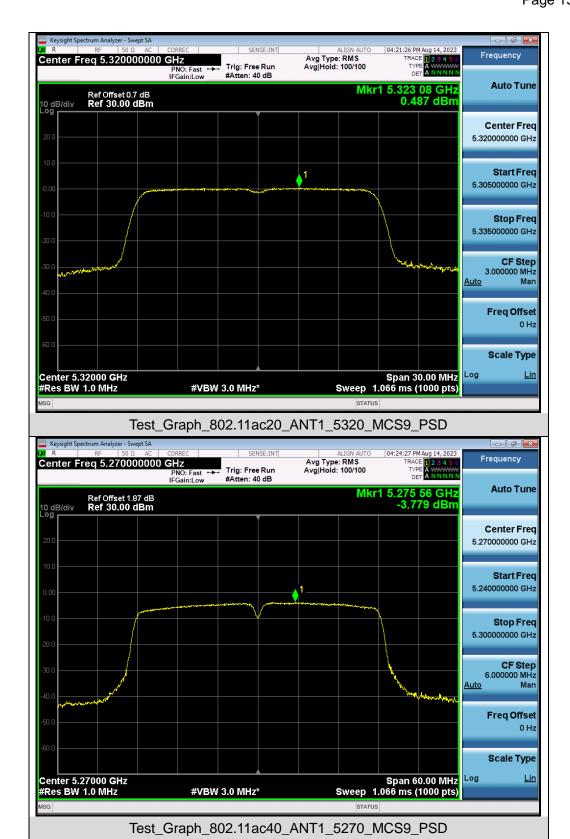


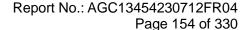






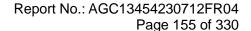




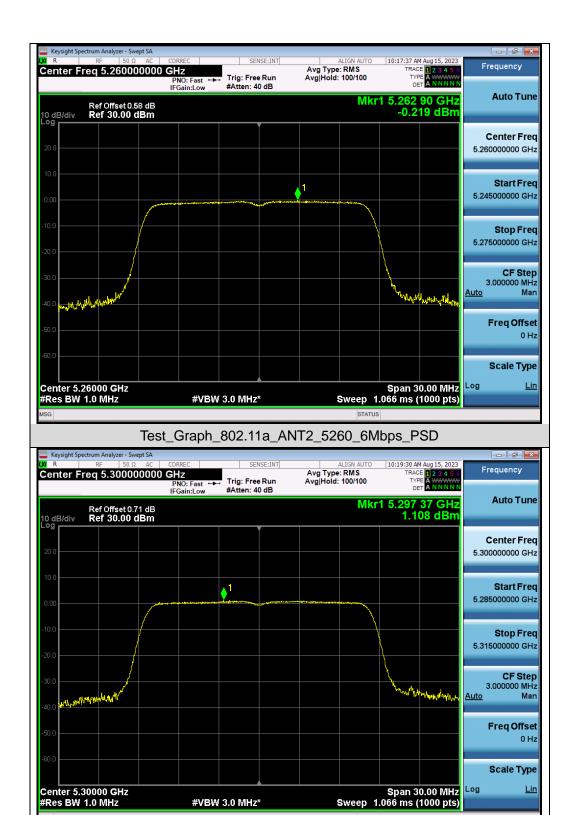




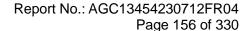




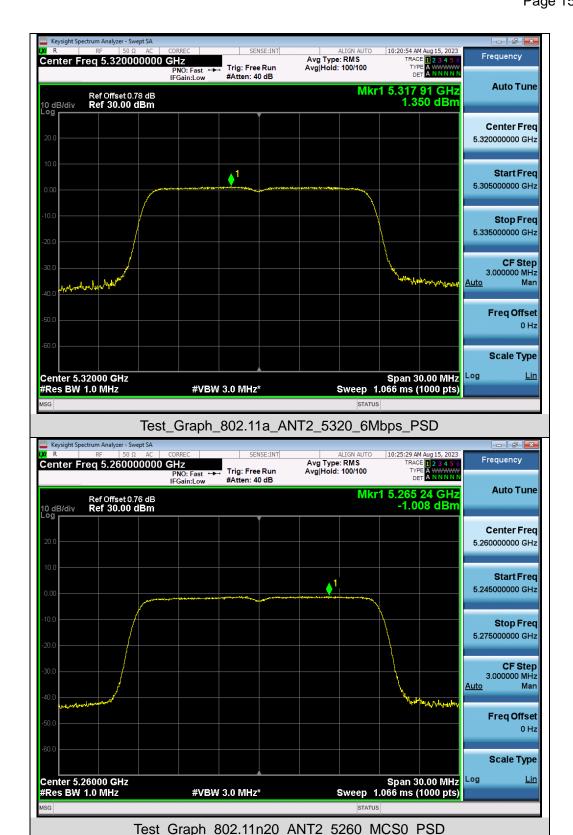


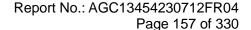


Test\_Graph\_802.11a\_ANT2\_5300\_6Mbps\_PSD

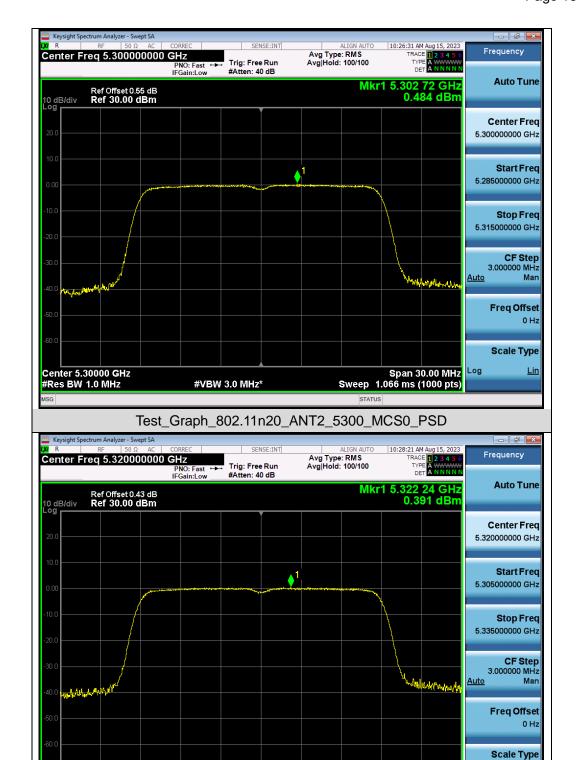










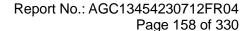


Test Graph 802.11n20 ANT2 5320 MCS0 PSD

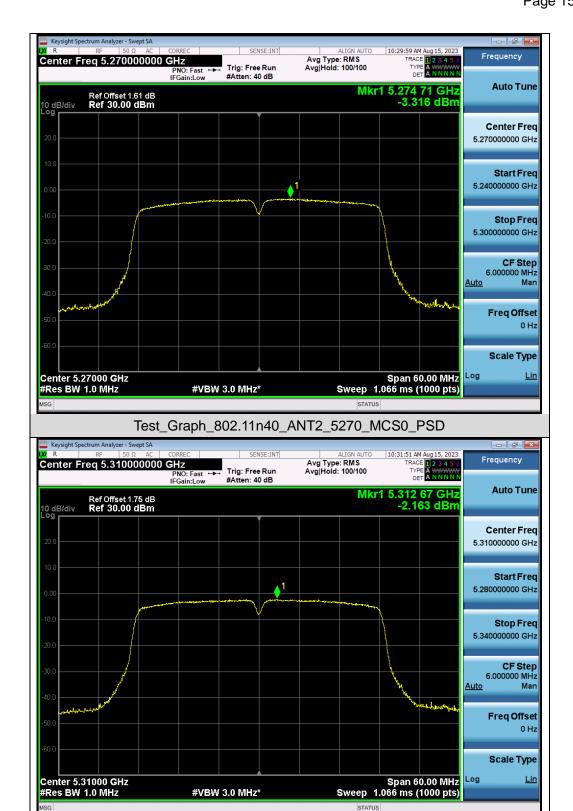
#VBW 3.0 MHz\*

Span 30.00 MHz Sweep 1.066 ms (1000 pts)

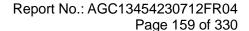
Center 5.32000 GHz #Res BW 1.0 MHz







Test Graph 802.11n40 ANT2 5310 MCS0 PSD







Test Graph 802.11ac20 ANT2 5300 MCS0 PSD

#VBW 3.0 MHz\*

Span 30.00 MHz Sweep 1.066 ms (1000 pts)

Center 5.30000 GHz #Res BW 1.0 MHz

