

Freq Offset 0 Hz





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OBW Power

Test_Graph_802.11ac20_ANT2_5200_MCS0_OBW

x dB

99.00 %

-26.00 dB

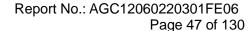
19.050 MHz

29.169 kHz

24.03 MHz

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

Transmit Freq Error x dB Bandwidth



6.000000 MHz

Freq Offset 0 Hz

<u>Auto</u>

19.1 dBm

99.00 %

-26.00 dB





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Total Power

OBW Power

Test Graph 802.11ac40 ANT2 5190 MCS9 OBW

x dB

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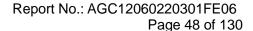
Occupied Bandwidth

Transmit Freq Error x dB Bandwidth

37.832 MHz

28.188 kHz

43.54 MHz

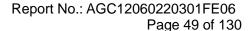






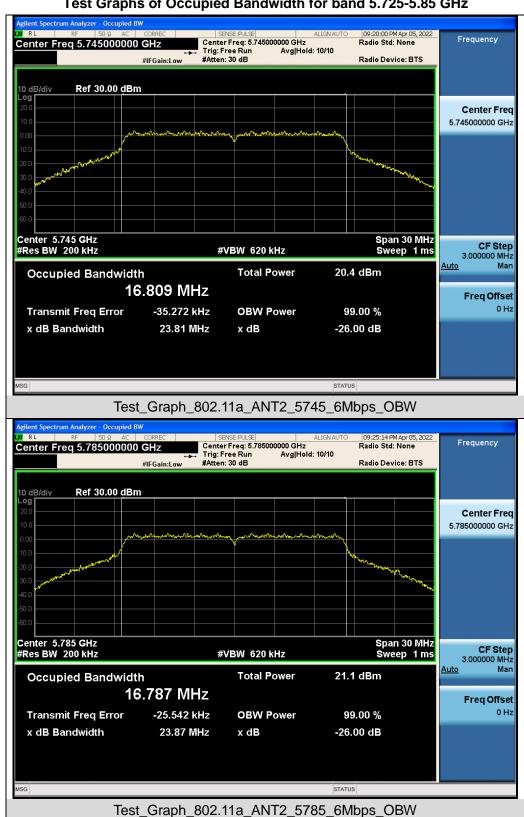
Center 5.21 GHz #Res BW 820 kHz Span 120 MHz Sweep 1 ms **CF Step #VBW 2.4 MHz** 12.000000 MHz Auto **Total Power** 18.9 dBm Occupied Bandwidth 76.851 MHz Freq Offset 0 Hz 139.82 kHz **OBW Power** 99.00 % Transmit Freq Error x dB Bandwidth 83.03 MHz x dB -26.00 dB Test_Graph_802.11ac80_ANT2_5210_MCS9_OBW

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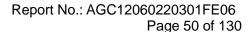




Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz



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Freq Offset 0 Hz





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OBW Power

Test_Graph_802.11n20_ANT2_5745_MCS0_OBW

x dB

99.00 %

-26.00 dB

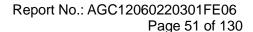
19.060 MHz

-33.067 kHz

24.00 MHz

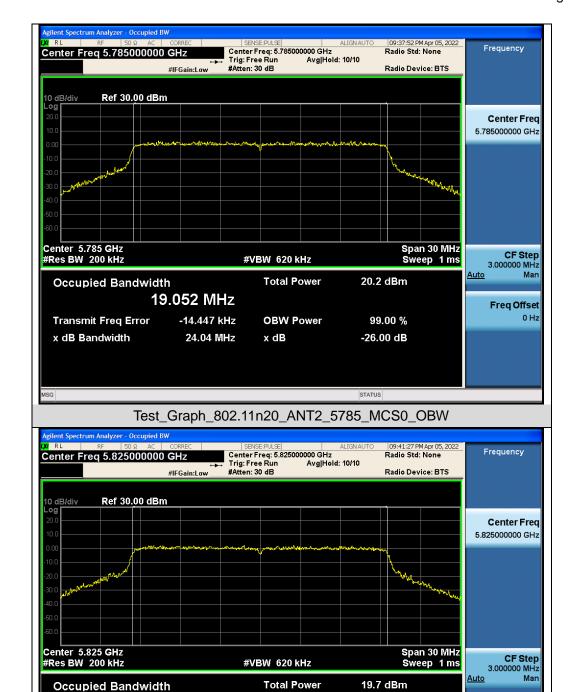
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Transmit Freq Error x dB Bandwidth



Freq Offset 0 Hz





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OBW Power

Test_Graph_802.11n20_ANT2_5825_MCS0_OBW

x dB

99.00 %

-26.00 dB

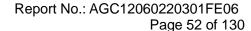
19.071 MHz

-21.514 kHz

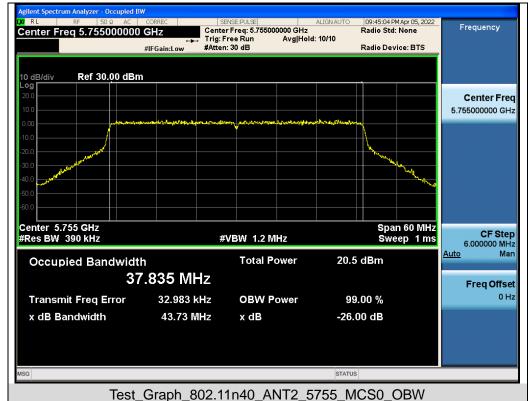
24.22 MHz

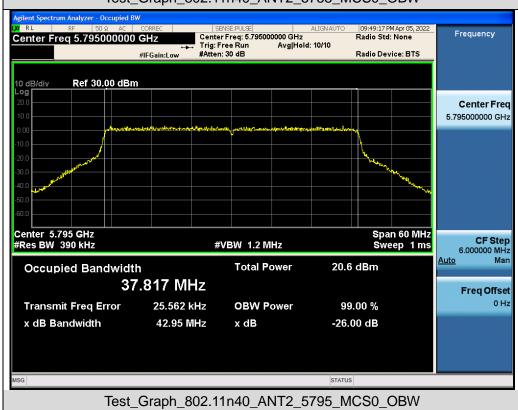
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

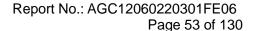
Transmit Freq Error x dB Bandwidth



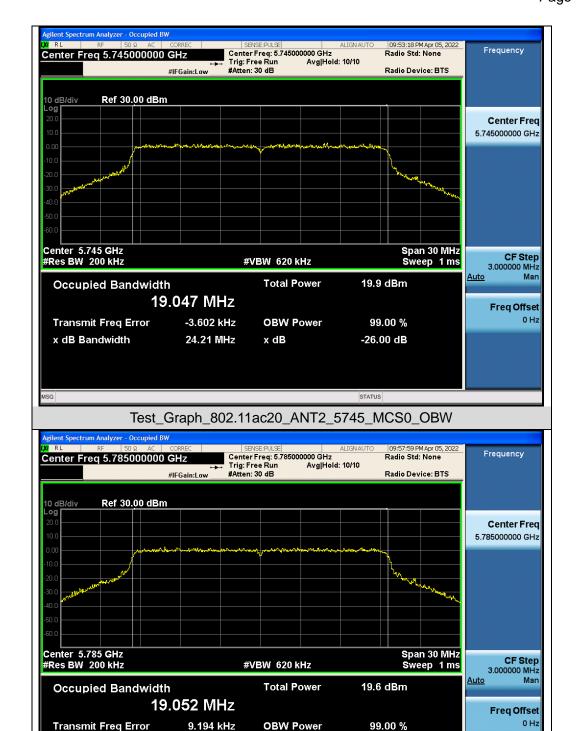












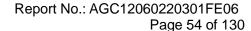
x dB

Test_Graph_802.11ac20_ANT2_5785_MCS0_OBW

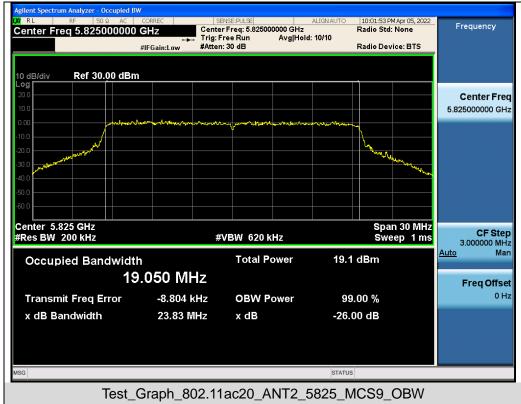
-26.00 dB

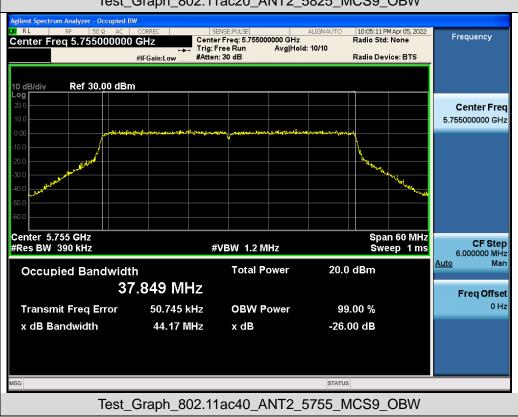
23.72 MHz

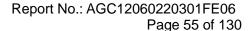
x dB Bandwidth



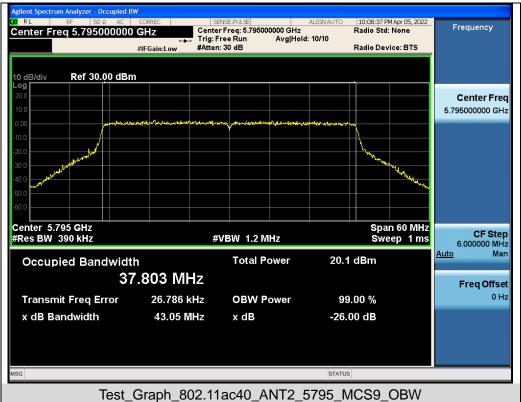


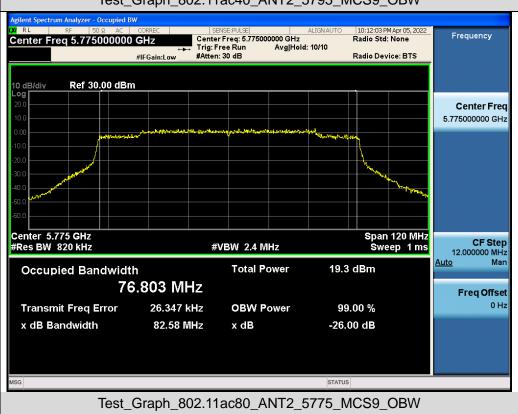


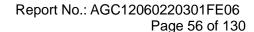






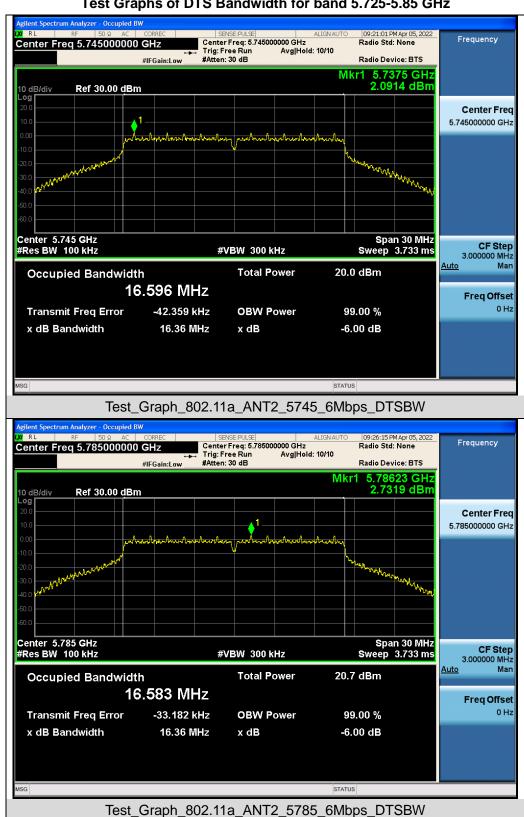


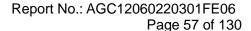




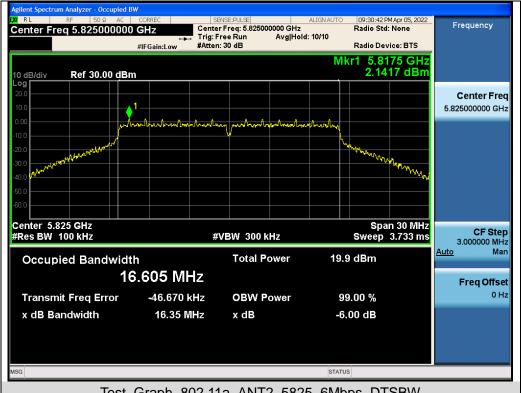




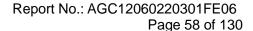












<u>Auto</u>

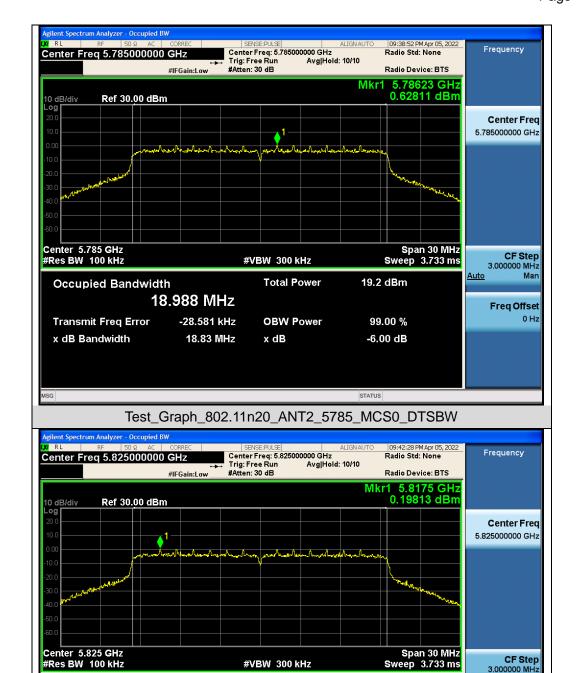
Freq Offset 0 Hz

18.6 dBm

99.00 %

-6.00 dB





Total Power

OBW Power

Test Graph 802.11n20 ANT2 5825 MCS0 DTSBW

x dB

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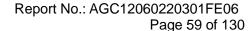
Occupied Bandwidth

Transmit Freq Error x dB Bandwidth

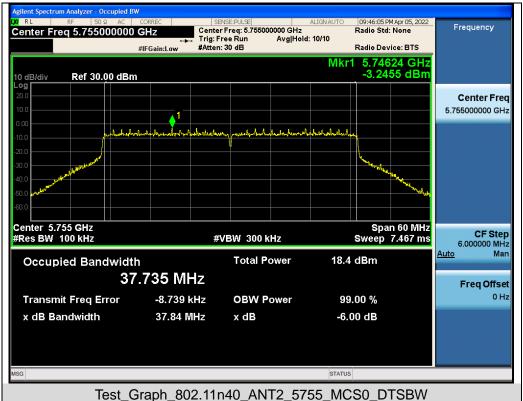
18.987 MHz

-37.568 kHz

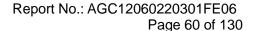
18.64 MHz





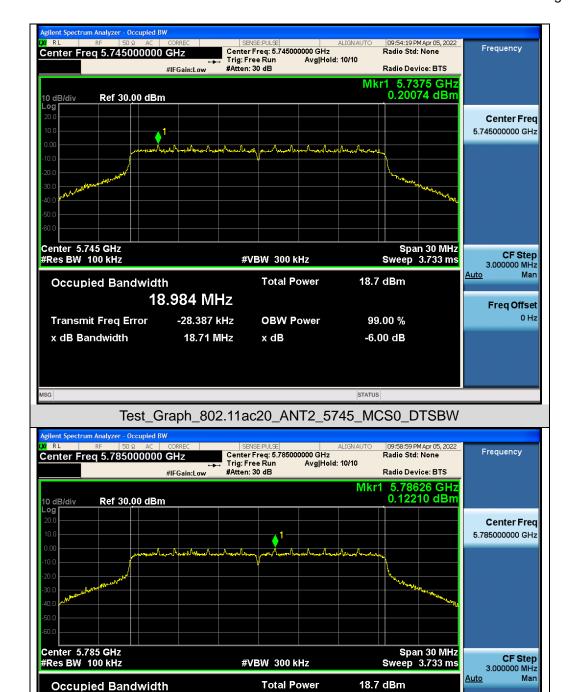






Freq Offset 0 Hz





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OBW Power

Test Graph 802.11ac20 ANT2 5785 MCS0 DTSBW

x dB

99.00 %

-6.00 dB

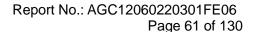
18.967 MHz

-20.595 kHz

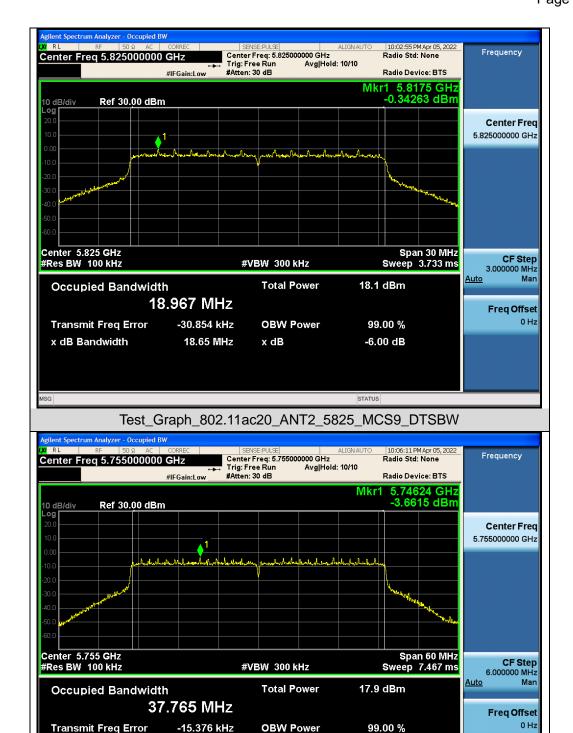
18.78 MHz

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Transmit Freq Error x dB Bandwidth







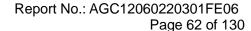
x dB

Test Graph 802.11ac40 ANT2 5755 MCS9 DTSBW

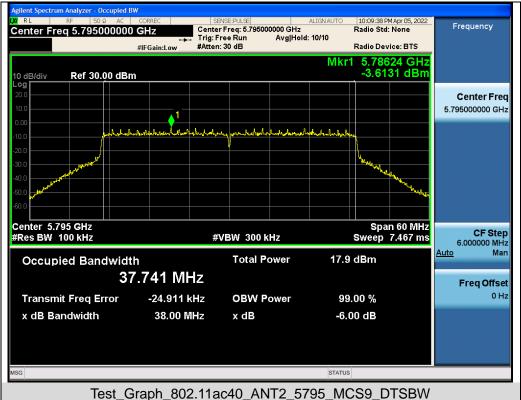
-6.00 dB

38.02 MHz

x dB Bandwidth











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9. MAXIMUM CONDUCTED OUTPUT AVERAGE POWER SPECTRAL DENSITY

9.1. MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer to Section 8.2.

9.3. MEASUREMENT EQUIPMENT USED

Refer to Section 6.

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Report No.: AGC12060220301FE06

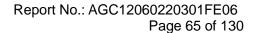
Page 64 of 130

9.4. LIMITS AND 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 Limits (dBm/MHz) (dBm/MHz)		Pass or Fail	
	5180	3.107	11	Pass	
802.11a	5200	2.924	11	Pass	
	5240	2.580	11	Pass	
	5180	-0.007	11	Pass	
802.11n20	5200	-0.328	11	Pass	
	5240	-0.595	11	Pass	
802.11n40	5190	-2.917	11	Pass	
	5230	-3.324	11	Pass	
802.11ac20	5180	-0.249	11	Pass	
	5200	-1.025	11	Pass	
	5240	-1.204	11	Pass	
802.11ac40	5190	-3.188	11	Pass	
	5230	-3.371	11	Pass	
802.11ac80	5210	-6.271	11	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	-2.076	-9.066	30	Pass
802.11a	5785	-0.137	-7.127	30	Pass
	5825	-0.866	-7.856	30	Pass
	5745	-2.826	-9.816	30	Pass
802.11n20	5785	-1.899	-8.889	30	Pass
	5825	-2.839	-9.829	30	Pass
802.11n40	5755	-4.352	-11.342	30	Pass
802.111140	5795	-4.188	-11.178	30	Pass
	5745	-2.001	-8.991	30	Pass
802.11ac20	5785	-1.276	-8.266	30	Pass
	5825	-2.280	-9.27	30	Pass
802.11ac40	5755	-4.162	-11.152	30	Pass
	5795	-4.076	-11.066	30	Pass
802.11ac80	5775	-6.369	-13.359	30	Pass

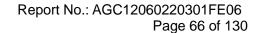
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Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-Ant 2					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz) Limits (dBm/MHz)		Pass or Fail	
	5180	4.046	11	Pass	
802.11a	5200	3.969	11	Pass	
	5240	4.253	11	Pass	
802.11n20	5180	1.585	11	Pass	
	5200	1.491	11	Pass	
	5240	1.717	11	Pass	
802.11n40	5190	-1.564	11	Pass	
	5230	-1.233	11	Pass	
802.11ac20	5180	0.072	11	Pass	
	5200	0.135	11	Pass	
	5240	0.026	11	Pass	
802.11ac40	5190	-2.922	11	Pass	
	5230	-2.625	11	Pass	
802.11ac80	5210	-4.502	11	Pass	

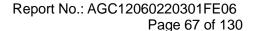
Test Data of Conducted Output Power Density for band 5.725-5.85 GHz-Ant 2					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
	5745	3.211	-3.779	30	Pass
802.11a	5785	2.927	-4.063	30	Pass
	5825	2.498	-4.492	30	Pass
	5745	-0.021	-7.011	30	Pass
802.11n20	5785	0.579	-6.411	30	Pass
	5825	-0.446	-7.436	30	Pass
802.11n40	5755	-3.137	-10.127	30	Pass
002.111140	5795	-2.676	-9.666	30	Pass
	5745	-0.507	-7.497	30	Pass
802.11ac20	5785	-0.687	-7.677	30	Pass
	5825	-0.809	-7.799	30	Pass
802.11ac40	5755	-3.603	-10.593	30	Pass
	5795	-2.893	-9.883	30	Pass
802.11ac80	5775	-6.379	-13.369	30	Pass





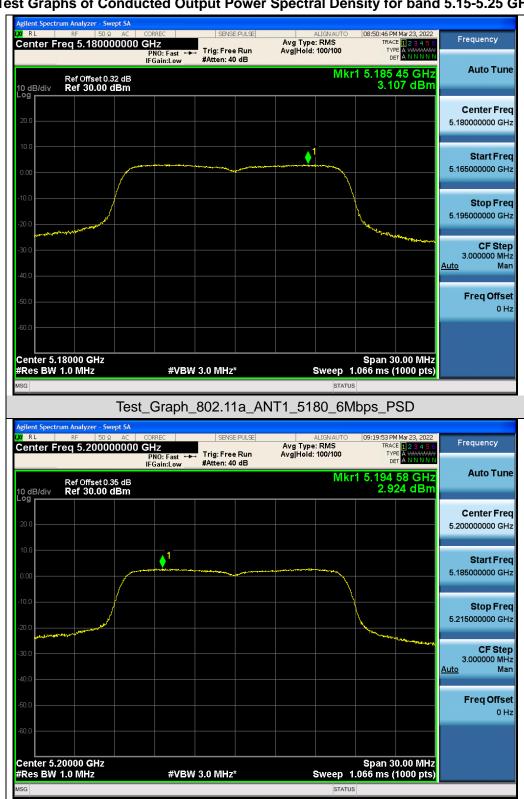
Test Data of Conducted Output Power Density for band 5.15-5.25 GHz-MIMO					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Pass or Fail	
	5180	3.87	11	Pass	
802.11n20	5200	3.69	11	Pass	
	5240	3.72	11	Pass	
000 44 = 40	5190	0.82	11	Pass	
802.11n40	5230	0.86	11	Pass	
	5180	2.92	11	Pass	
802.11ac20	5200	2.60	11	Pass	
	5240	2.46	11	Pass	
802.11ac40	5190	-0.04	11	Pass	
	5230	0.03	11	Pass	
802.11ac80	5210	-2.29	11	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	1.81	-5.18	30	Pass
802.11n20	5785	2.52	-4.47	30	Pass
	5825	1.53	-5.46	30	Pass
802.11n40	5755	-0.69	-7.68	30	Pass
	5795	-0.36	-7.35	30	Pass
	5745	2.63	-5.17	30	Pass
802.11ac20	5785	2.16	-4.95	30	Pass
	5825	2.01	-5.46	30	Pass
802.11ac40	5755	-0.86	-7.85	30	Pass
	5795	-0.43	-7.42	30	Pass
802.11ac80	5775	-3.36	-10.35	30	Pass





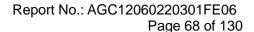
Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz



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Test_Graph_802.11a_ANT1_5200_6Mbps_PSD

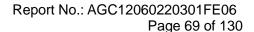
Web: http://www.agccert.com/







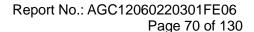






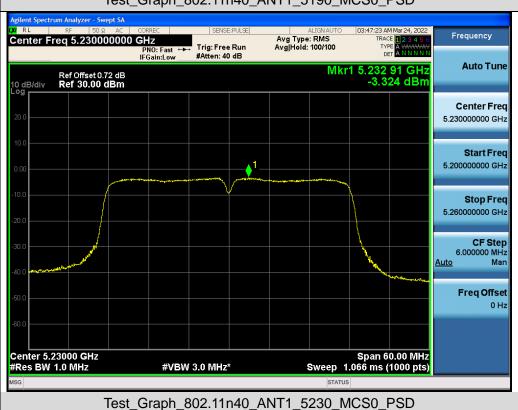


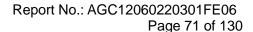












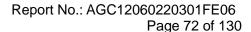




gilent Spectrum Analyzer - Swept SA Frequency Avg Type: RMS Avg|Hold: 100/100 Center Freq 5.200000000 GHz Trig: Free Run #Atten: 40 dB IFGain:Low **Auto Tune** Ref Offset 0.34 dB Ref 30.00 dBm -1.025 dBm 10 dB/div Center Frea 5.200000000 GHz Start Freq 5.185000000 GHz Stop Freq 5.215000000 GHz **CF Step** 3.000000 MHz <u>Auto</u> Man Freq Offset 0 Hz Center 5.20000 GHz #Res BW 1.0 MHz Span 30.00 MHz Sweep 1.066 ms (1000 pts) #VBW 3.0 MHz*

Test_Graph_802.11ac20_ANT1_5200_MCS0_PSD

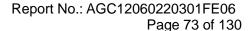
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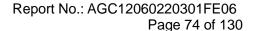






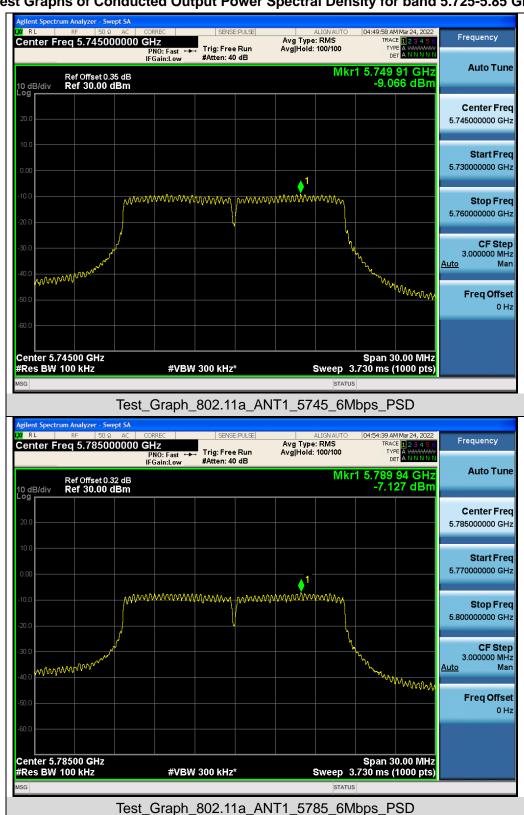




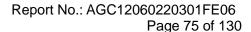




Test Graphs of Conducted Output Power Spectral Density for band 5.725-5.85 GHz



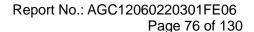
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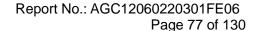






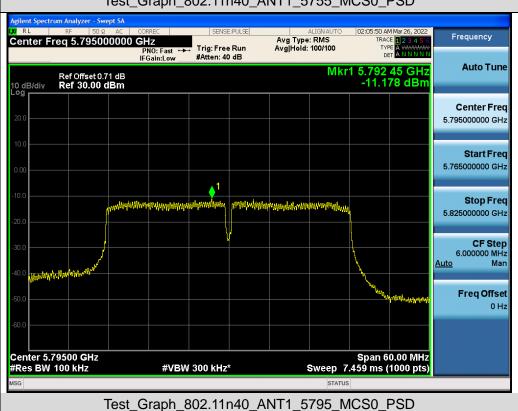


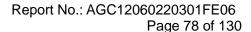




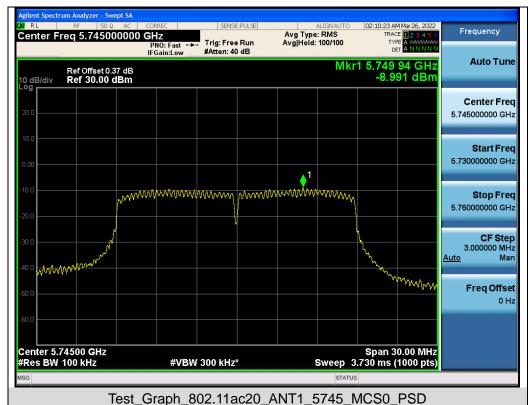




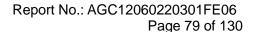




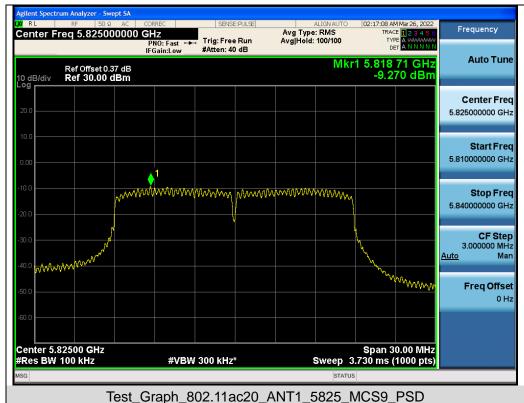




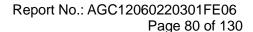




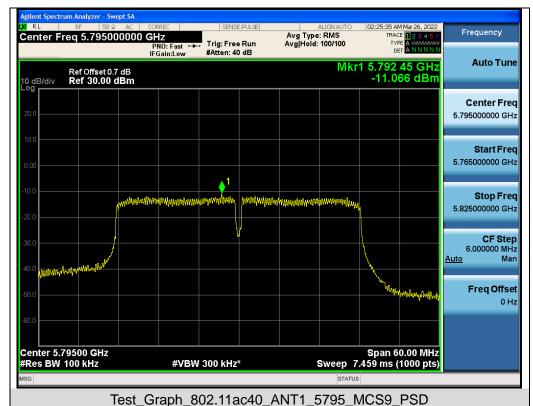
















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10. CONDUCTED SPURIOUS EMISSION

10.1. 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 SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2.

10.3. MEASUREMENT EQUIPMENT USED

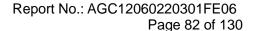
The same as described in section 6.

10.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT					
	Measurement Result				
Applicable Limits	Test channel	Criteri			
	E4EOMIL E2EOMIL	а			
-27dBm/MHz	5150MHz-5250MH z	PASS			
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	5725MHz-5850MH	PASS			
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	Z				
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.					

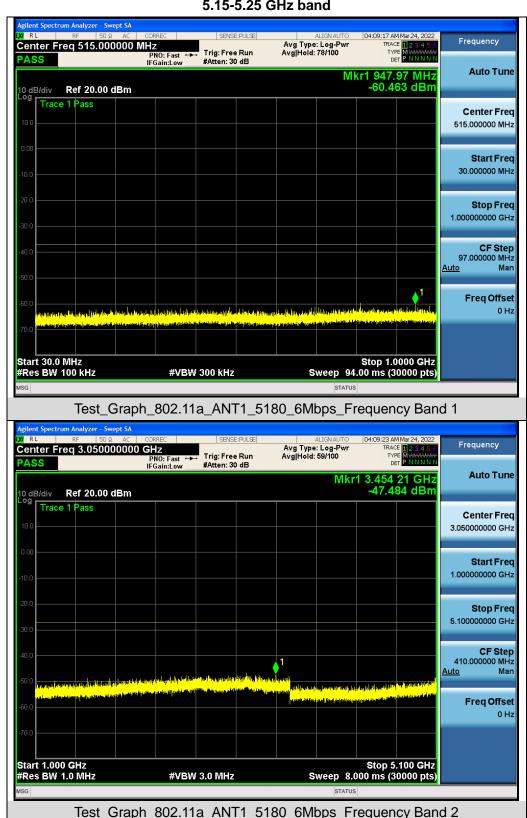
Note: All the 20MHz bandwidth modulation had been tested, the 802.11a20 was the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 was the worst case and record in his test report. All the 80MHz bandwidth modulation had been tested, the 802.11AC80 was the worst case and record in his test report.

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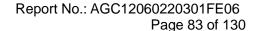




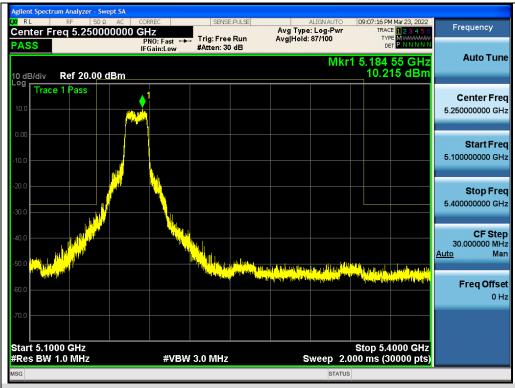
Test Graphs of Spurious Emissions outside of the 5.15-5.35 GHz band for transmitters operating in the 5.15-5.25 GHz band



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Test_Graph_802.11a_ANT1_5180_6Mbps_Frequency Band 3 ent Spectrum Analyzer - Swept SA Frequency Avg Type: Log-Pw Avg|Hold: 56/100 Center Freq 16.200000000 GHz Trig: Free Run #Atten: 30 dB IFGain:Low **Auto Tune** Mkr1 26.045 2 GHz -37.582 dBm 10 dB/div Ref 20.00 dBm Trace 1 Pass Center Frea 16.200000000 GHz Start Freq 5.400000000 GHz Stop Freq 27.000000000 GHz **CF Step** 2.160000000 GHz <u>Auto</u> Freq Offset 0 Hz Start 5.40 GHz #Res BW 1.0 MHz Stop 27.00 GHz Sweep 56.00 ms (30000 pts) #VBW 3.0 MHz Test_Graph_802.11a_ANT1_5180_6Mbps_Frequency Band 4

