



Test Mode		Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27 M	14.31	0.027	14.25	0.027	17.29	0.054	≤ 28.05
5230		17.92	0.062	17.83	0.061	20.89	0.123	
5755		17.63	0.058	17.75	0.060	20.70	0.118	≤ 27.74
5795		17.42	0.055	17.31	0.054	20.38	0.109	
5190	400 M	14.23	0.026	14.20	0.026	17.23	0.053	≤ 28.05
5230		17.88	0.061	17.77	0.060	20.84	0.121	
5755		17.55	0.057	17.69	0.059	20.63	0.116	≤ 27.74
5755		17.35	0.054	17.27	0.053	20.32	0.108	

Test Mode		Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6 M	14.10	0.026	14.23	0.026	17.18	0.052	≤ 28.05
5775		17.41	0.055	17.38	0.055	20.41	0.110	≤ 27.74
5210	866.6 M	13.95	0.025	14.00	0.025	16.99	0.050	≤ 28.05
5775		17.33	0.054	17.30	0.054	20.33	0.108	≤ 27.74

Note: The relevant measured result has the offset with cable loss already.

5.4. 26 dB RF Bandwidth Measurement & 99 % Occupied Bandwidth Measurement

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	22.530	21.190	16.478	16.595
5200	32.350	31.430	17.348	17.041
5240	32.320	31.200	17.301	16.866

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	23.040	22.610	17.623	17.878
5200	40.650	36.740	18.985	18.608
5240	37.860	36.230	18.587	18.980

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5190	40.010	39.390	36.012	35.762
5230	63.010	63.410	36.572	36.533

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5210	82.440	83.020	75.524	75.263

Note: The 99 % occupied bandwidth not crossed 5250 MHz.

Beamforming on

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	19.840	20.610	17.523	17.791
5200	19.740	19.920	17.455	17.729
5240	20.080	19.940	17.584	17.586

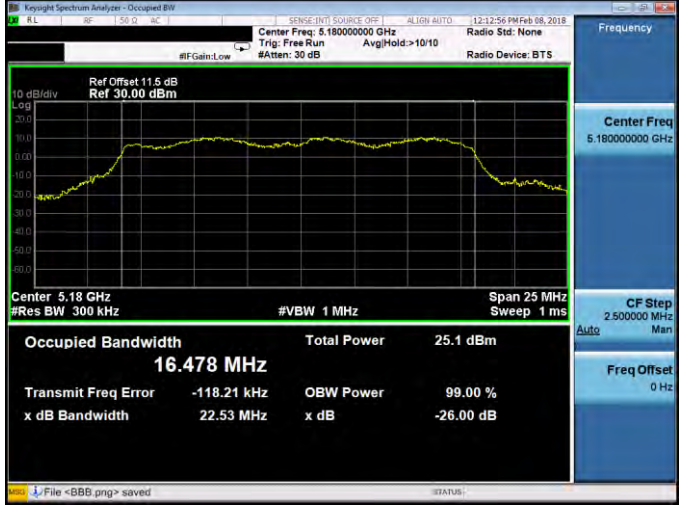
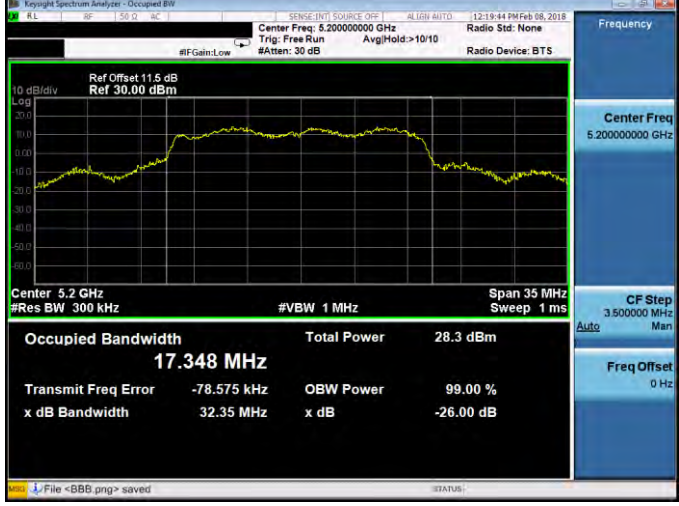
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5190	39.610	39.460	35.743	35.779
5230	39.770	39.780	36.029	35.915

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5210	82.560	81.160	75.487	75.242

Note: The 99 % occupied bandwidth not crossed 5250 MHz.

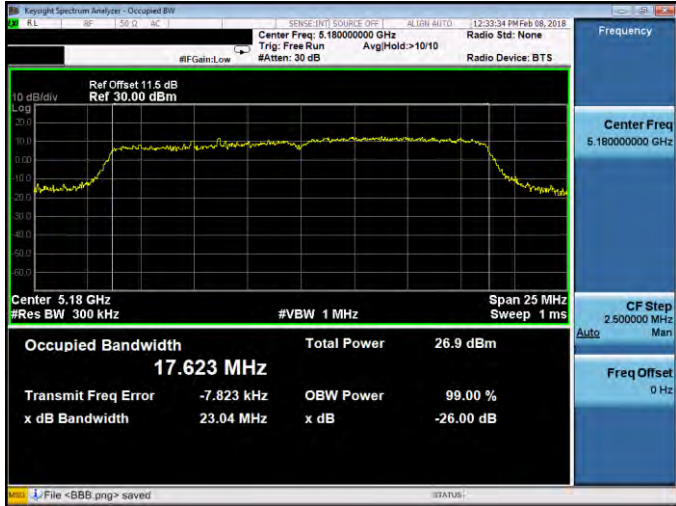
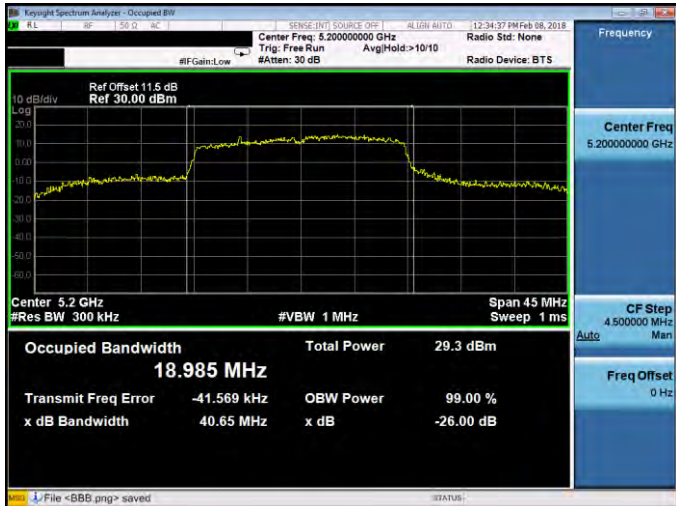
Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0

5180 MHz	 Center Freq: 5.18000000 GHz Ref Offset 11.5 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 16.478 MHz Total Power 25.1 dBm Transmit Freq Error -118.21 kHz OBW Power 99.00 % x dB Bandwidth 22.53 MHz x dB -26.00 dB File <555.png> saved
5200 MHz	 Center Freq: 5.20000000 GHz Ref Offset 11.5 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 35 MHz Sweep 1 ms Occupied Bandwidth 17.348 MHz Total Power 28.3 dBm Transmit Freq Error -78.575 kHz OBW Power 99.00 % x dB Bandwidth 32.35 MHz x dB -26.00 dB File <555.png> saved
5240 MHz	 Center Freq: 5.24000000 GHz Ref Offset 11.5 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 35 MHz Sweep 1 ms Occupied Bandwidth 17.301 MHz Total Power 28.9 dBm Transmit Freq Error -115.59 kHz OBW Power 99.00 % x dB Bandwidth 32.32 MHz x dB -26.00 dB File <555.png> saved



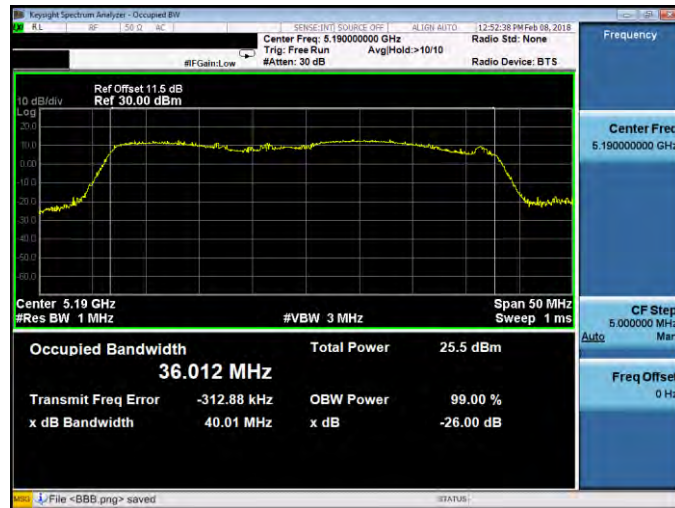
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-0

5180 MHz	 Center Freq: 5.18000000 GHz Ref Offset 11.5 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.623 MHz Total Power 26.9 dBm Transmit Freq Error -7.823 kHz OBW Power 99.00 % x dB Bandwidth 23.04 MHz x dB -26.00 dB
5200 MHz	 Center Freq: 5.20000000 GHz Ref Offset 11.5 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 45 MHz Sweep 1 ms Occupied Bandwidth 18.985 MHz Total Power 29.3 dBm Transmit Freq Error -41.569 kHz OBW Power 99.00 % x dB Bandwidth 40.65 MHz x dB -26.00 dB
5240 MHz	 Center Freq: 5.24000000 GHz Ref Offset 11.5 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 18.587 MHz Total Power 29.0 dBm Transmit Freq Error 711 Hz OBW Power 99.00 % x dB Bandwidth 37.86 MHz x dB -26.00 dB



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

5190 MHz



5230 MHz



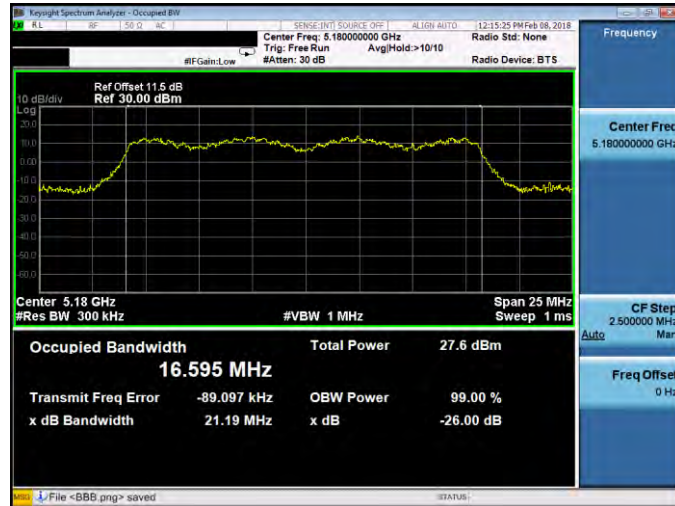
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-0

5210 MHz



Mode 2: IEEE 802.11a Continuous TX mode_ ANT-1

5180 MHz



5200 MHz



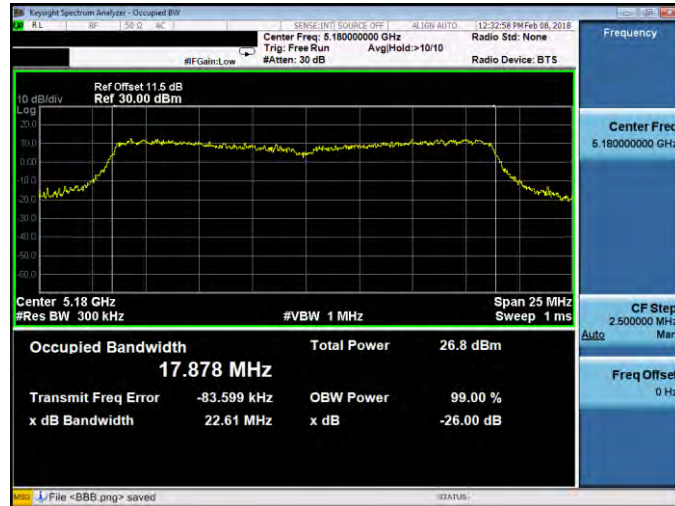
5240 MHz



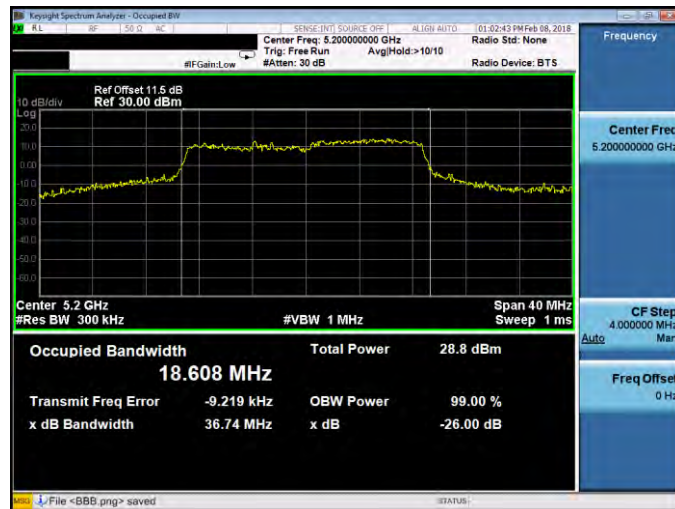


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1

5180 MHz



5200 MHz

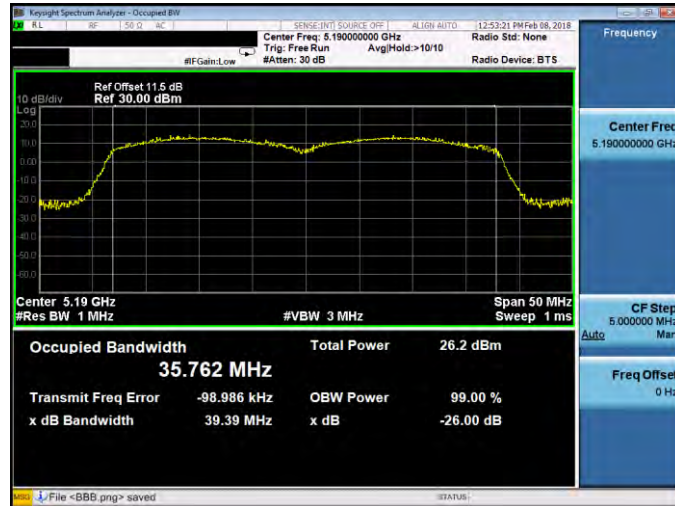


5240 MHz



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1

5190 MHz



5230 MHz



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-1

5210 MHz

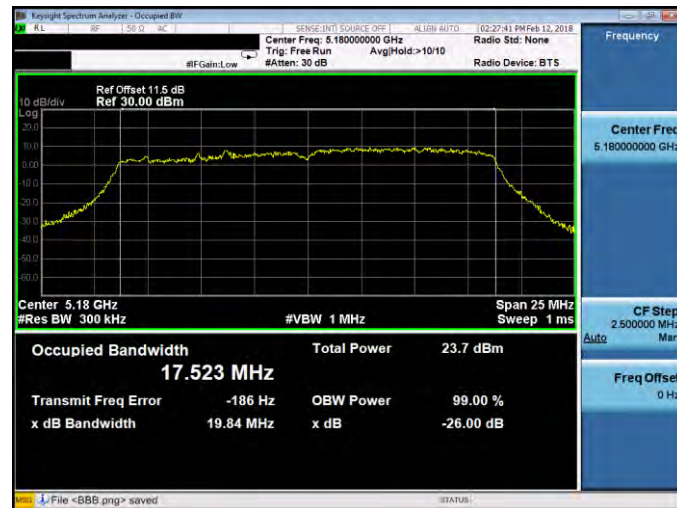




Beamforming on

Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-0

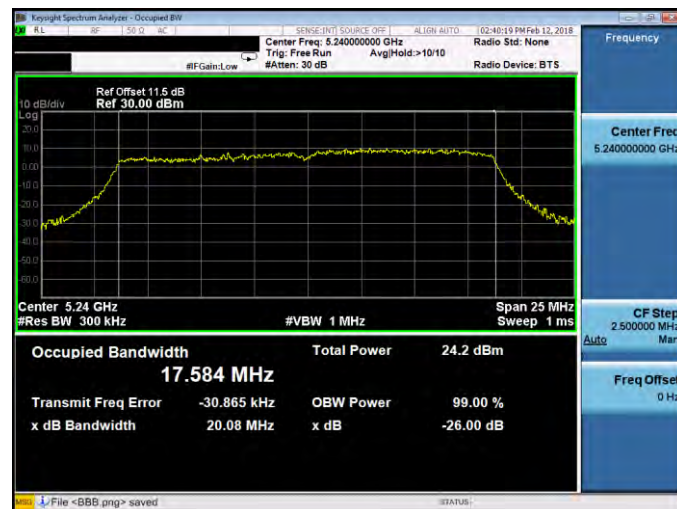
5180 MHz



5200 MHz

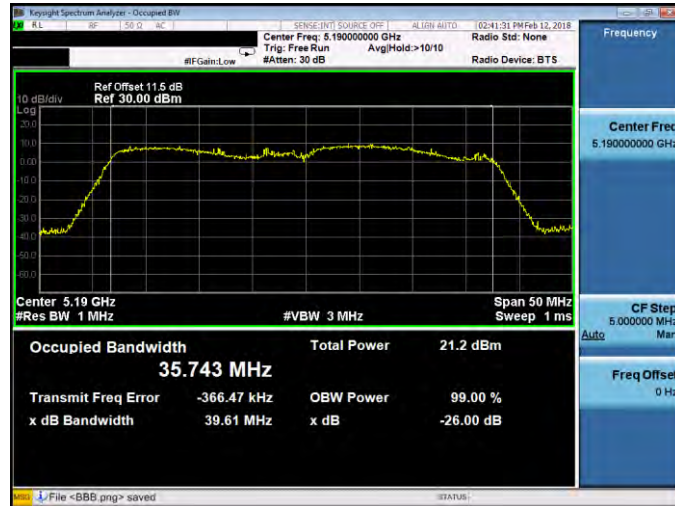


5240 MHz

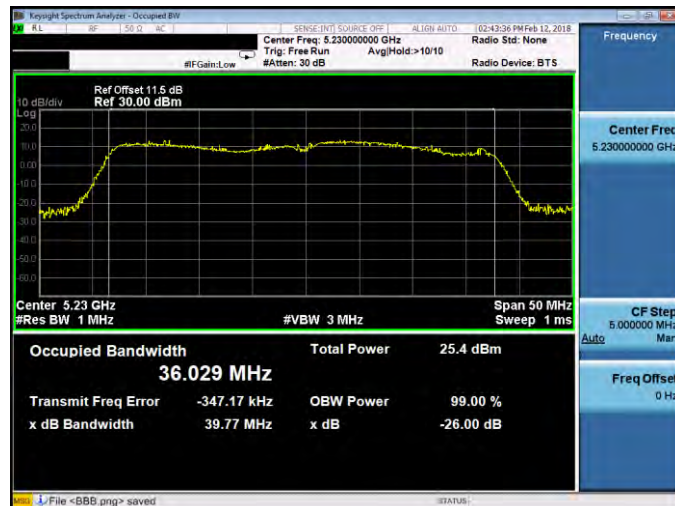


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

5190 MHz



5230 MHz



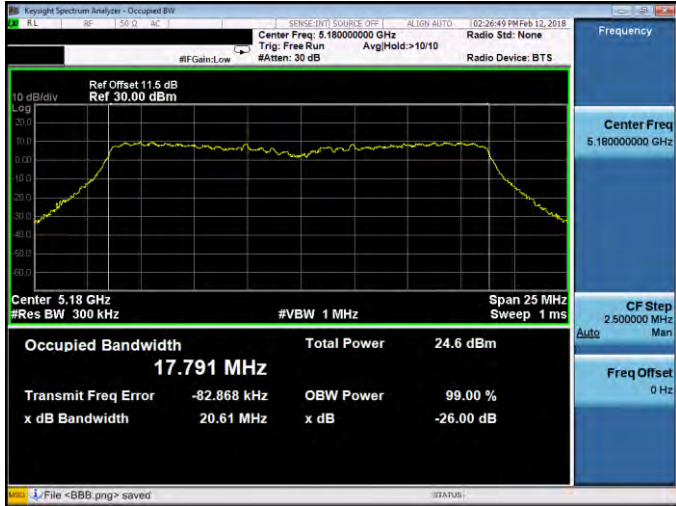
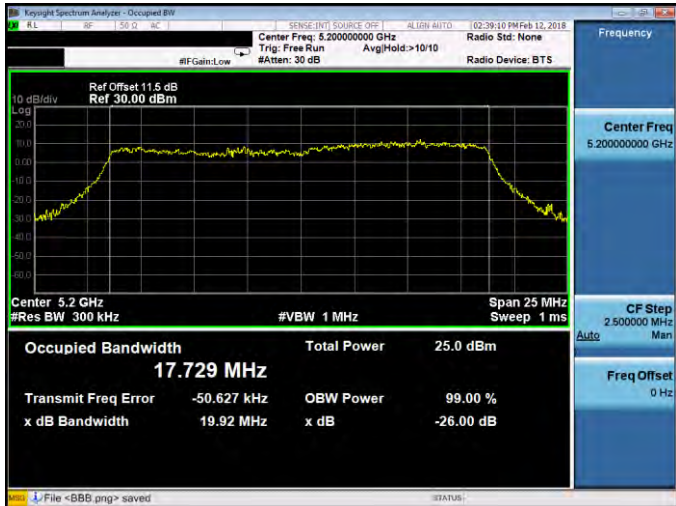
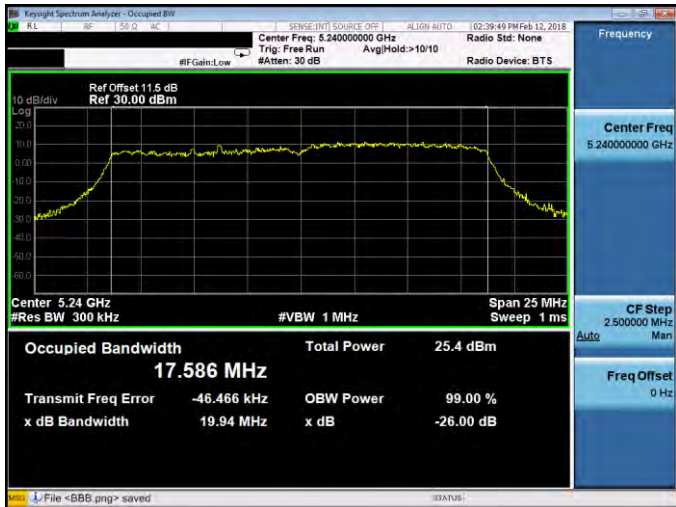
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-0

5210 MHz



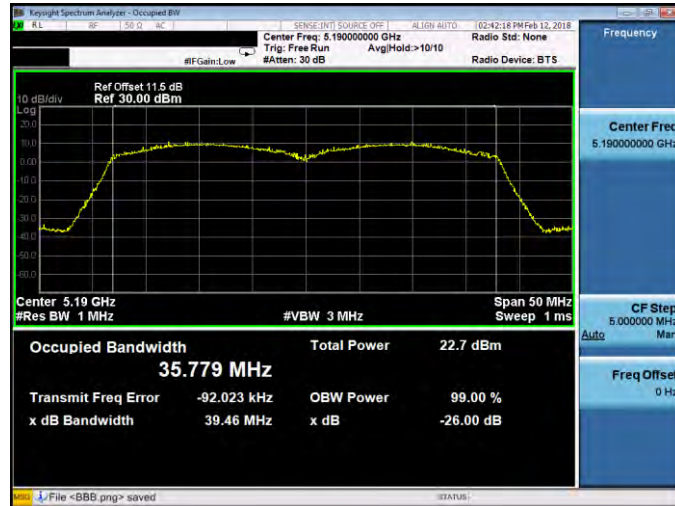


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1

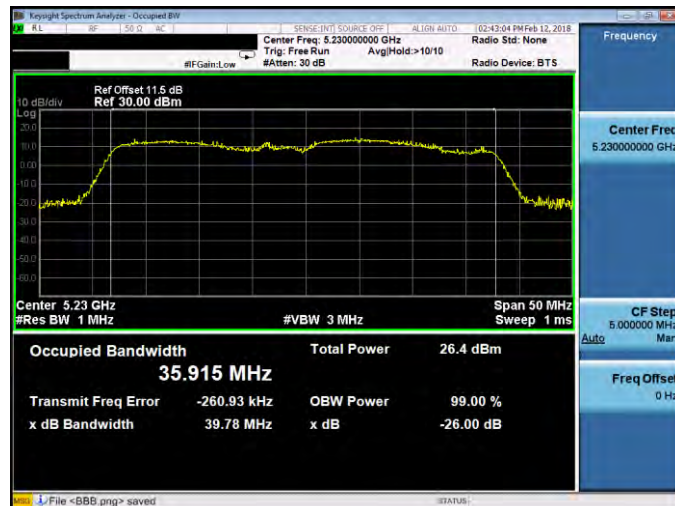
5180 MHz	 Center Freq: 5.18000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BT5 Ref Offset 11.5 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.791 MHz Total Power 24.6 dBm Transmit Freq Error -82.868 kHz OBW Power 99.00 % x dB Bandwidth 20.61 MHz x dB -26.00 dB File <555.png> saved
5200 MHz	 Center Freq: 5.20000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BT5 Ref Offset 11.5 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.729 MHz Total Power 25.0 dBm Transmit Freq Error -50.627 kHz OBW Power 99.00 % x dB Bandwidth 19.92 MHz x dB -26.00 dB File <555.png> saved
5240 MHz	 Center Freq: 5.24000000 GHz Trig: Free Run Avg/Hold: >10/10 Radio Std: None Radio Device: BT5 Ref Offset 11.5 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms Occupied Bandwidth 17.586 MHz Total Power 25.4 dBm Transmit Freq Error -46.466 kHz OBW Power 99.00 % x dB Bandwidth 19.94 MHz x dB -26.00 dB File <555.png> saved

Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1

5190 MHz

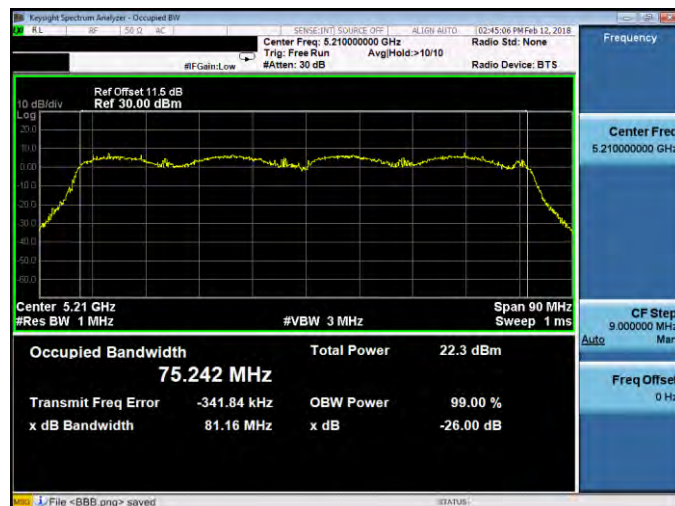


5230 MHz



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-1

5210 MHz



5.5. 6dB RF Bandwidth Measurement

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	16320	16370	> 500
5785	15720	16340	> 500
5825	16320	15730	> 500

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	17160	17610	> 500
5785	17140	16940	> 500
5825	17580	16340	> 500

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5755	35740	35170	> 500
5795	35720	35670	> 500

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5775	75820	75790	> 500



Beamforming on

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	17180	17640	> 500
5785	17290	16900	> 500
5825	17600	17550	> 500

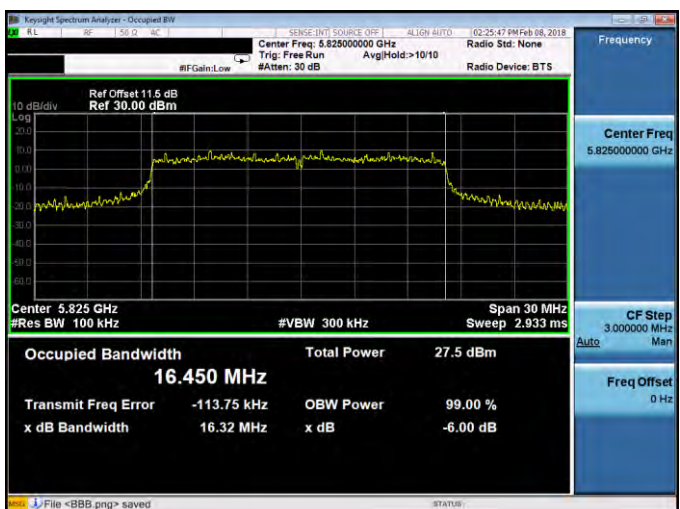
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5755	35690	33890	> 500
5795	35460	35740	> 500

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode		
Frequency (MHz)	6dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5775	75770	75500	> 500



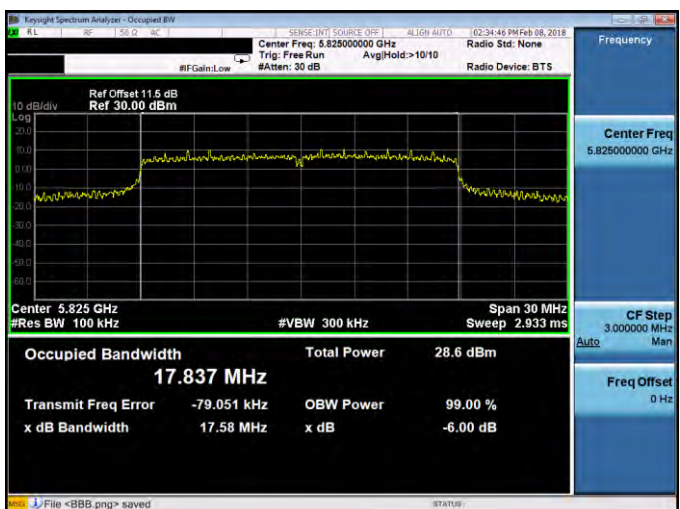
■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ANT-0

5745 MHz	 Center Freq: 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ns Occupied Bandwidth: 16.462 MHz Total Power: 28.5 dBm Transmit Freq Error: -97.546 kHz OBW Power: 99.00 % x dB Bandwidth: 16.32 MHz x dB: -6.00 dB Frequency: 5.74500000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz
5785 MHz	 Center Freq: 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ns Occupied Bandwidth: 16.451 MHz Total Power: 28.0 dBm Transmit Freq Error: -103.11 kHz OBW Power: 99.00 % x dB Bandwidth: 15.72 MHz x dB: -6.00 dB Frequency: 5.78500000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz
5825 MHz	 Center Freq: 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ns Occupied Bandwidth: 16.450 MHz Total Power: 27.5 dBm Transmit Freq Error: -113.75 kHz OBW Power: 99.00 % x dB Bandwidth: 16.32 MHz x dB: -6.00 dB Frequency: 5.82500000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz



Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-0

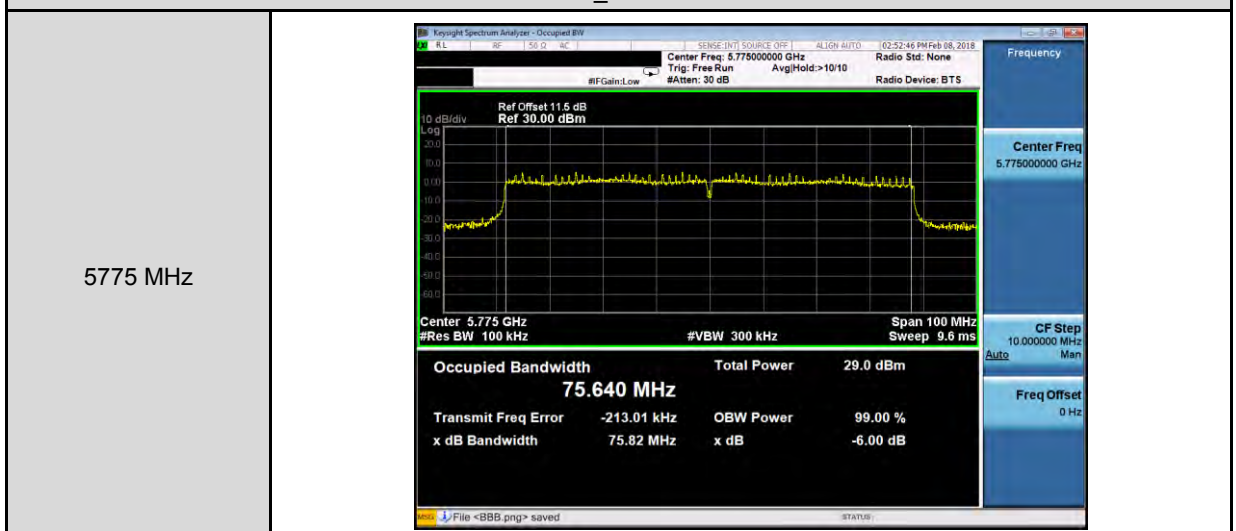
5745 MHz	 Center Freq: 5.745 GHz #Res BW: 100 kHz #VBW: 300 kHz Sweep: 2.933 ms Span: 30 MHz Occupied Bandwidth: 17.790 MHz Total Power: 29.4 dBm Transmit Freq Error: -55.609 kHz OBW Power: 99.00 % x dB Bandwidth: 17.16 MHz x dB: -6.00 dB Radio Device: BTS
5785 MHz	 Center Freq: 5.785 GHz #Res BW: 100 kHz #VBW: 300 kHz Sweep: 2.933 ms Span: 30 MHz Occupied Bandwidth: 17.773 MHz Total Power: 29.5 dBm Transmit Freq Error: -83.789 kHz OBW Power: 99.00 % x dB Bandwidth: 17.14 MHz x dB: -6.00 dB Radio Device: BTS
5825 MHz	 Center Freq: 5.825 GHz #Res BW: 100 kHz #VBW: 300 kHz Sweep: 2.933 ms Span: 30 MHz Occupied Bandwidth: 17.837 MHz Total Power: 28.6 dBm Transmit Freq Error: -79.051 kHz OBW Power: 99.00 % x dB Bandwidth: 17.58 MHz x dB: -6.00 dB Radio Device: BTS



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

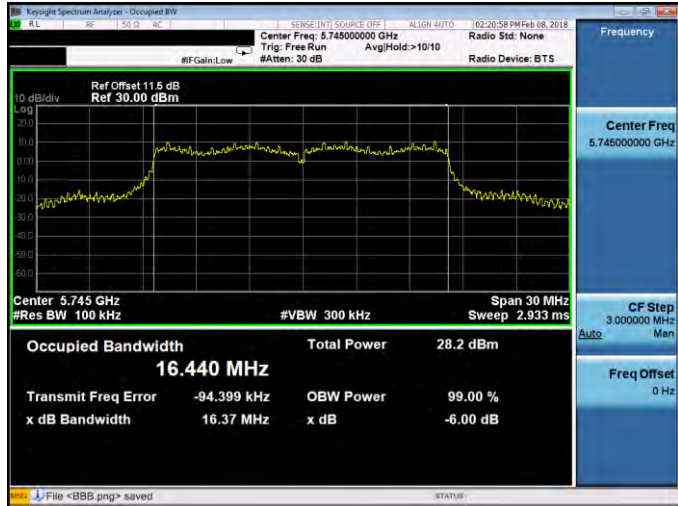
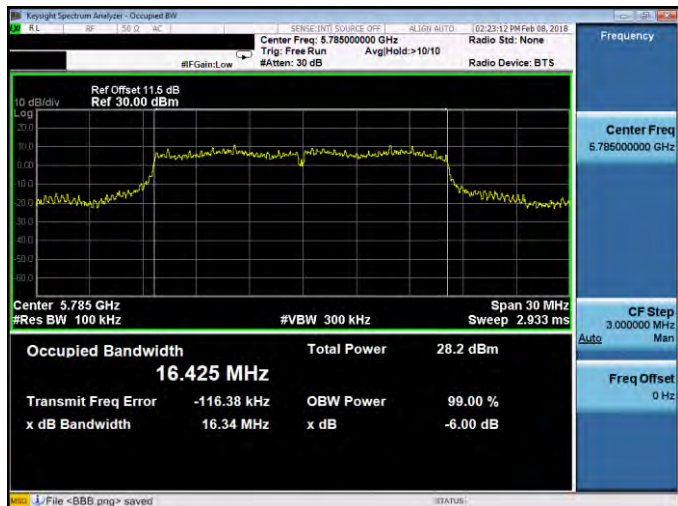
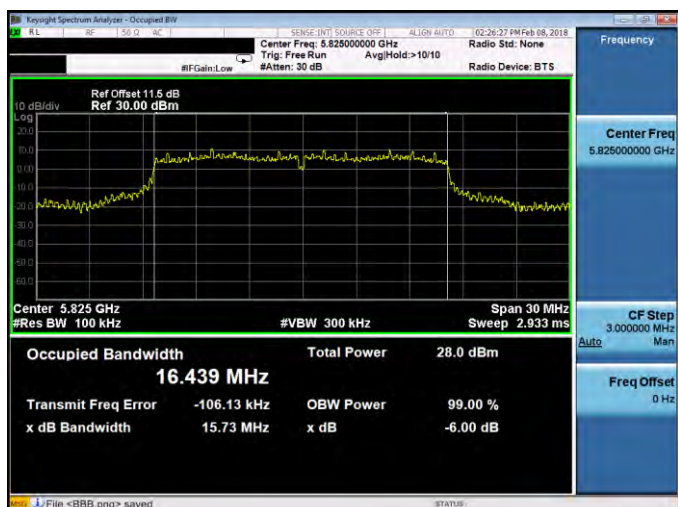


Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-0





Mode 2: IEEE 802.11a Continuous TX mode _ANT-1

5745 MHz	 Keyight Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #Gain: Low #Att: 30 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref Offset 11.5 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.033 ms Occupied Bandwidth 16.440 MHz Total Power 28.2 dBm Transmit Freq Error -94.399 kHz OBW Power 99.00 % x dB Bandwidth 16.37 MHz x dB -6.00 dB File <BBB.png> saved
5785 MHz	 Keyight Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #Gain: Low #Att: 30 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref Offset 11.5 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.033 ms Occupied Bandwidth 16.425 MHz Total Power 28.2 dBm Transmit Freq Error -116.38 kHz OBW Power 99.00 % x dB Bandwidth 16.34 MHz x dB -6.00 dB File <BBB.png> saved
5825 MHz	 Keyight Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #Gain: Low #Att: 30 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS Ref Offset 11.5 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.033 ms Occupied Bandwidth 16.439 MHz Total Power 28.0 dBm Transmit Freq Error -106.13 kHz OBW Power 99.00 % x dB Bandwidth 15.73 MHz x dB -6.00 dB File <BBB.png> saved



Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1

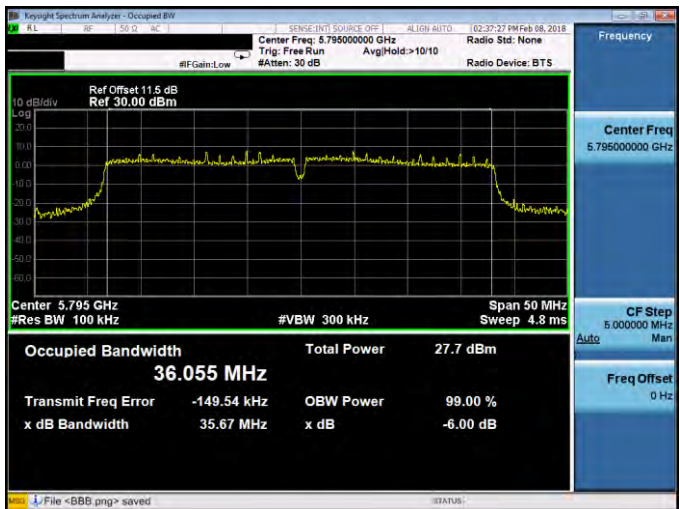
5745 MHz

5785 MHz

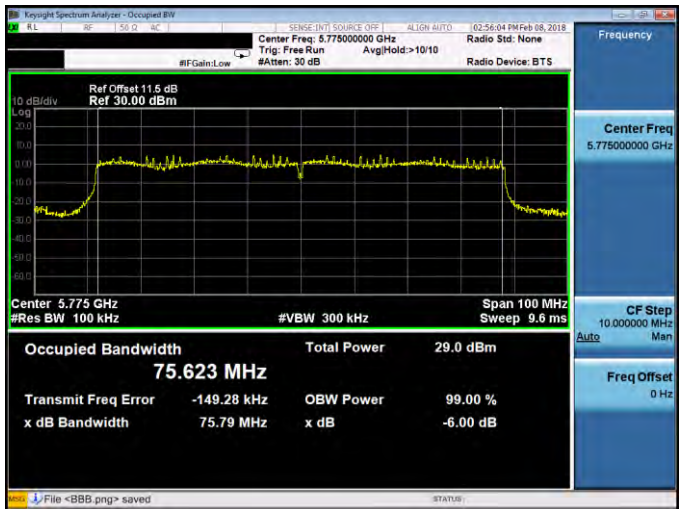
5825 MHz



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1

5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-1

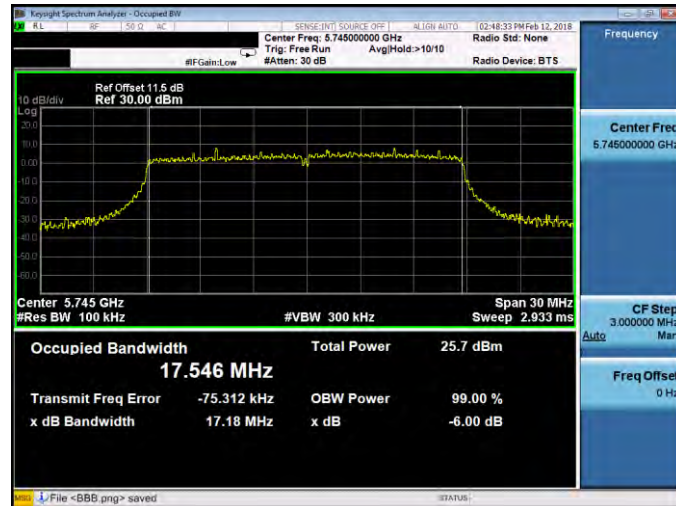
5775 MHz	
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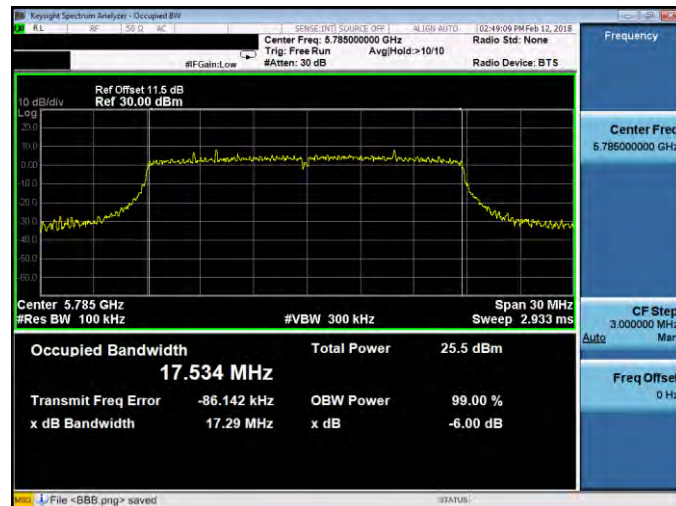
Beamforming on

Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-0

5745 MHz



5785 MHz

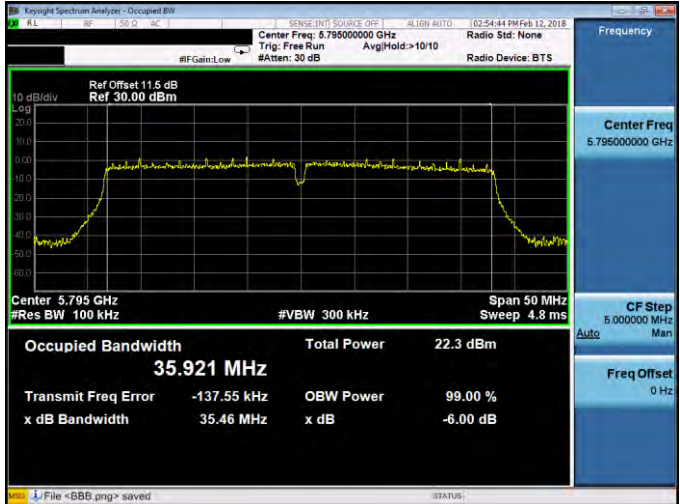


5825 MHz

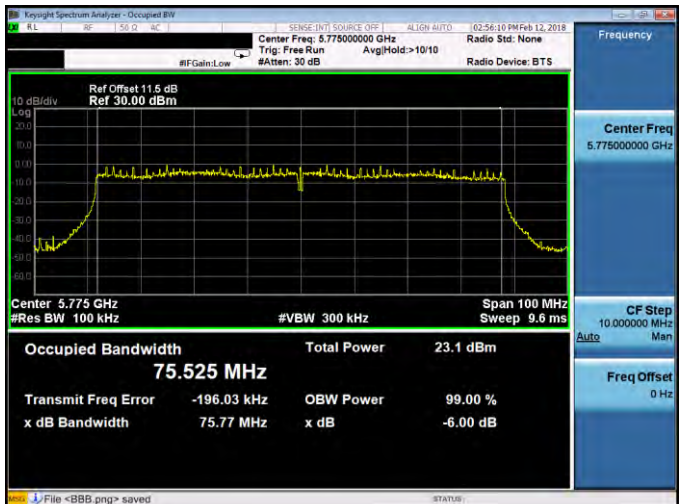




Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

5755 MHz	 Center Freq: 5.755 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 35.905 MHz Total Power: 22.4 dBm Transmit Freq Error: -168.52 kHz OBW Power: 99.00 % x dB Bandwidth: 35.69 MHz x dB: -6.00 dB
5795 MHz	 Center Freq: 5.795 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 35.921 MHz Total Power: 22.3 dBm Transmit Freq Error: -137.55 kHz OBW Power: 99.00 % x dB Bandwidth: 35.46 MHz x dB: -6.00 dB

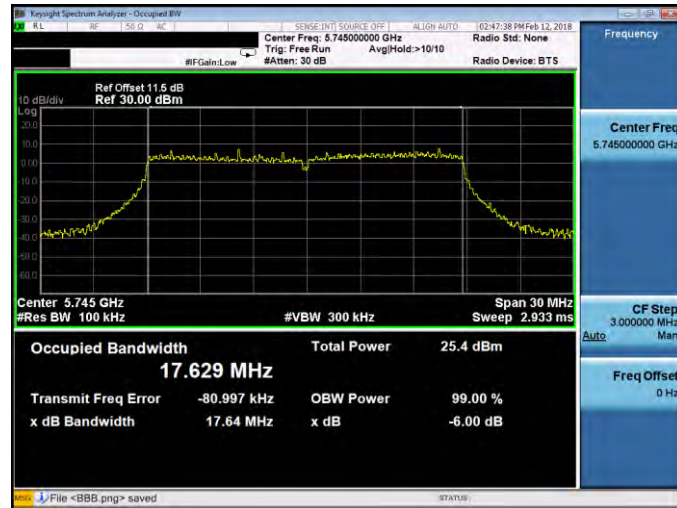
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-0

5775 MHz	 Center Freq: 5.775 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 100 MHz Sweep: 9.6 ms Occupied Bandwidth: 75.525 MHz Total Power: 23.1 dBm Transmit Freq Error: -196.03 kHz OBW Power: 99.00 % x dB Bandwidth: 75.77 MHz x dB: -6.00 dB
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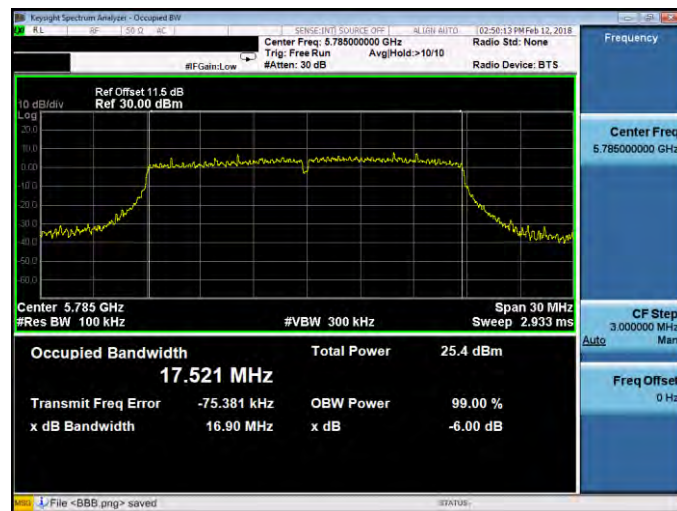


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1

5745 MHz



5785 MHz

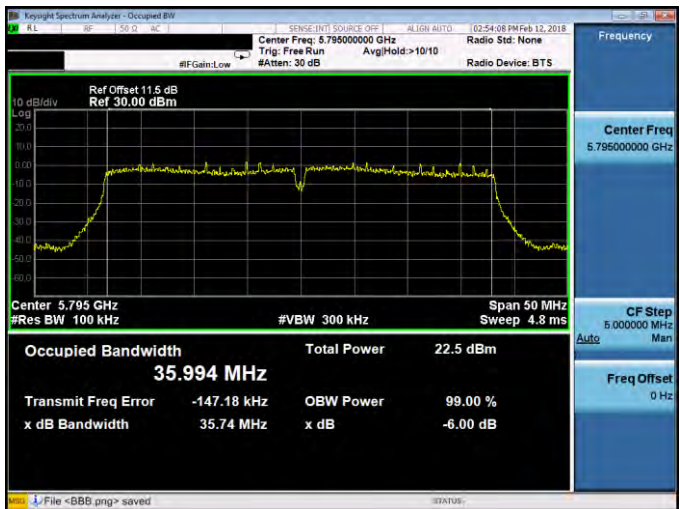


5825 MHz





Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1

5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-1

5775 MHz	
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5.6. Maximum Power Spectral Density Measurement

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	10.281	0.105	10.386	< 15.05
5200	11.434	0.105	11.539	
5240	10.894	0.105	10.999	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	10.677	0.105	10.782	< 15.05
5200	11.620	0.105	11.725	
5240	11.785	0.105	11.890	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	13.598			< 15.05
5200	14.643			
5240	14.477			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5745	2.38	0.105	9.47	< 27.74
5785	1.81	0.105	8.91	
5825	1.78	0.105	8.88	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5745	2.04	0.105	9.14	< 27.74
5785	2.22	0.105	9.32	
5825	1.94	0.105	9.04	
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5745	12.32			< 27.74
5785	12.13			
5825	11.97			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)



Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	10.366	0.039	10.405	< 15.05
5200	11.507	0.039	11.546	
5240	10.601	0.039	10.640	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	9.832	0.039	9.871	< 15.05
5200	11.813	0.039	11.852	
5240	11.567	0.039	11.606	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	13.156			< 15.05
5200	14.712			
5240	14.160			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5745	2.69	0.039	9.72	< 27.74
5785	2.61	0.039	9.64	
5825	1.90	0.039	8.93	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5745	2.66	0.039	9.69	< 27.74
5785	2.64	0.039	9.67	
5825	2.49	0.039	9.52	
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5745	12.71			< 27.74
5785	12.67			
5825	12.25			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	4.973	0.106	5.079	< 15.05
5230	8.255	0.106	8.361	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	5.355	0.106	5.461	< 15.05
5230	8.856	0.106	8.962	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5190	8.284			< 15.05
5230	11.682			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5755	-1.39	0.106	5.71	< 27.74
5795	-1.59	0.106	5.51	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5755	-1.70	0.106	5.39	< 27.74
5795	-1.56	0.106	5.54	
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5755	8.56			< 27.74
5795	8.53			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	1.527	0.240	1.767	< 15.05
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	1.678	0.240	1.918	< 15.05
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5210	4.853			< 15.05

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5775	-4.45	0.240	2.78	< 27.74
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5775	-4.46	0.240	2.77	< 27.74
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5775	5.79			< 27.74

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)



Beamforming on

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.709	0.039	6.748	< 15.05
5200	7.790	0.039	7.829	
5240	7.187	0.039	7.226	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.752	0.039	6.791	< 15.05
5200	8.159	0.039	8.198	
5240	8.269	0.039	8.308	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	9.780			< 15.05
5200	11.028			
5240	10.811			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5745	-1.12	0.039	5.91	< 27.74
5785	-1.15	0.039	5.88	
5825	-1.49	0.039	5.54	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5745	-0.86	0.039	6.17	< 27.74
5785	-0.57	0.039	6.46	
5825	-1.06	0.039	5.97	
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5745	9.05			< 27.74
5785	9.19			
5825	8.77			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	1.737	0.106	1.843	< 15.05
5230	4.620	0.106	4.726	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	2.279	0.106	2.385	< 15.05
5230	5.529	0.106	5.635	
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5190	5.133			< 15.05
5230	8.214			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5755	-4.26	0.106	2.84	< 27.74
5795	-4.51	0.106	2.59	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5755	-4.61	0.106	2.49	< 27.74
5795	-4.76	0.106	2.34	
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5755	5.68			< 27.74
5795	5.48			

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-2.180	0.240	-1.940	< 15.05
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-1.842	0.240	-1.602	< 15.05
Frequency (MHz)	ANT-0+1			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5210	-3.482			< 15.05

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5775	-7.65	0.240	-0.42	< 27.74
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 KHz)	Duty Factor (dB)	Calculated (dBm/500 KHz)	Limit (dBm/500 KHz)
5775	-7.58	0.240	-0.35	< 27.74
Frequency (MHz)	ANT-0+1			Limit (dBm/500 KHz)
	Calculated (dBm/500 KHz)			
5775	2.62			< 27.74

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

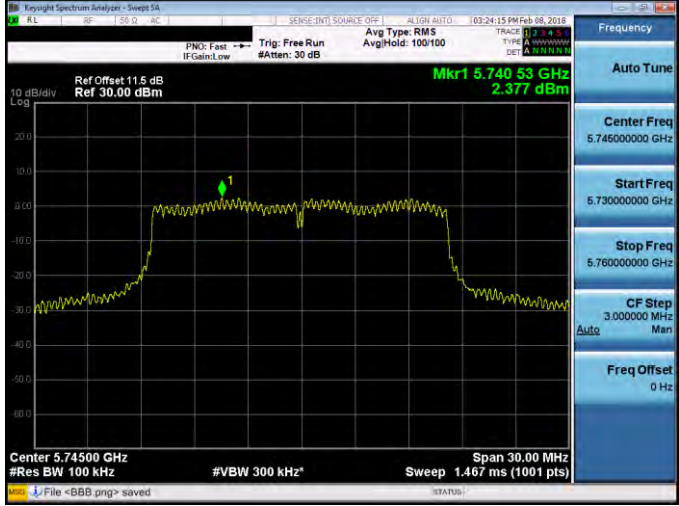
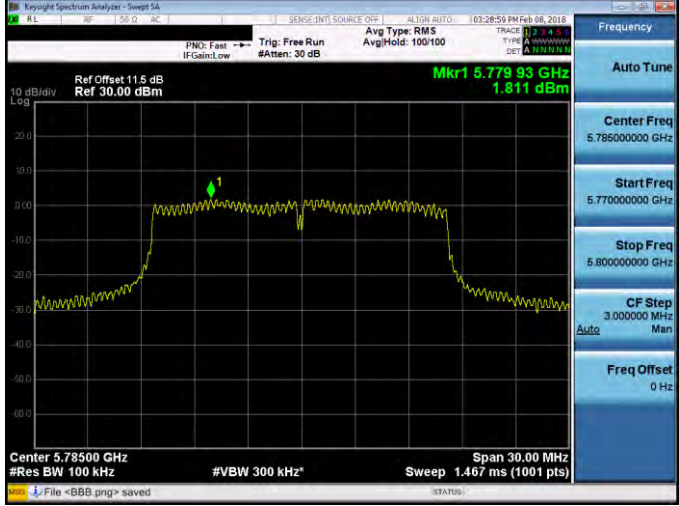
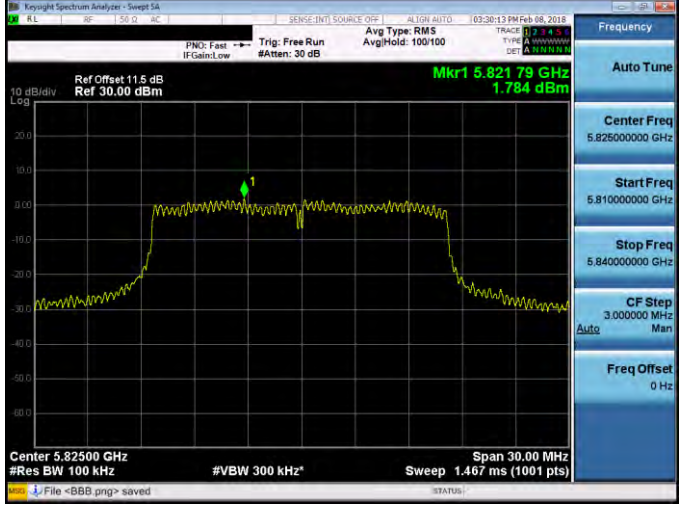
Conversion ratio = 10*Log(500 k/100 k)

Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0

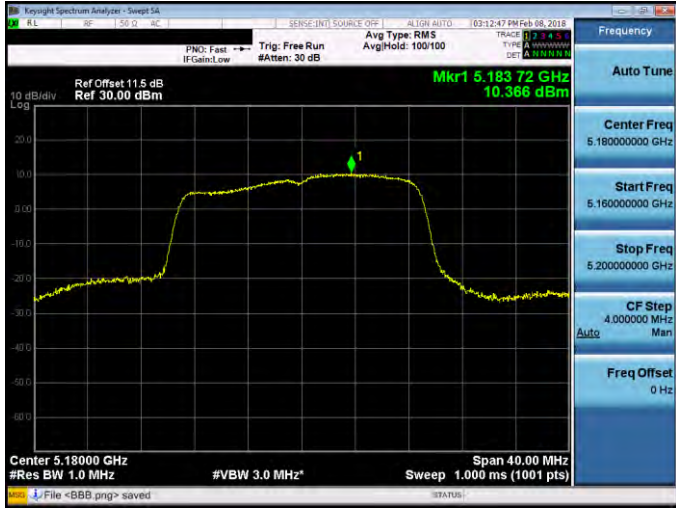
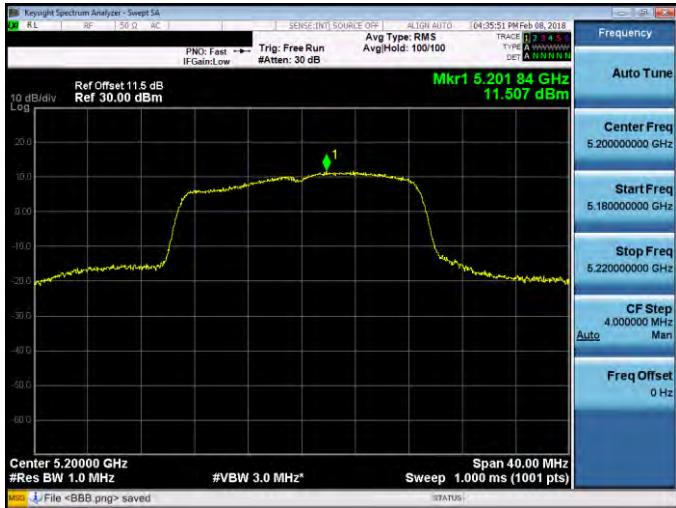
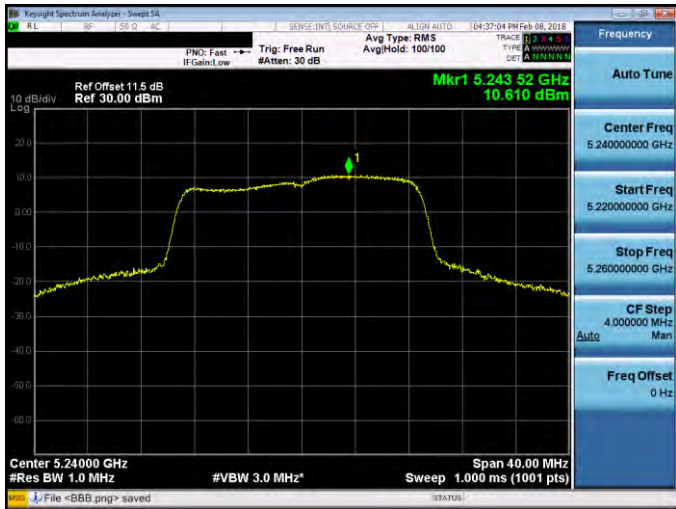
5180 MHz	 Keygraph Spectrum Analyzer - Sweep 54 Ref Offset 11.5 dB Ref 30.00 dBm Mkr1 5.175 56 GHz 10.281 dBm Center 5.18000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) Span 40.00 MHz File <BBB.png> saved Frequency Auto Tune Center Freq 5.180000000 GHz Start Freq 5.160000000 GHz Stop Freq 5.200000000 GHz CF Step 4.000000 MHz Auto Freq Offset 0 Hz
5200 MHz	 Keygraph Spectrum Analyzer - Sweep 54 Ref Offset 11.5 dB Ref 30.00 dBm Mkr1 5.205 64 GHz 11.434 dBm Center 5.20000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) Span 40.00 MHz File <BBB.png> saved Frequency Auto Tune Center Freq 5.200000000 GHz Start Freq 5.180000000 GHz Stop Freq 5.220000000 GHz CF Step 4.000000 MHz Auto Freq Offset 0 Hz
5240 MHz	 Keygraph Spectrum Analyzer - Sweep 54 Ref Offset 11.5 dB Ref 30.00 dBm Mkr1 5.241 24 GHz 10.894 dBm Center 5.24000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts) Span 40.00 MHz File <BBB.png> saved Frequency Auto Tune Center Freq 5.240000000 GHz Start Freq 5.220000000 GHz Stop Freq 5.260000000 GHz CF Step 4.000000 MHz Auto Freq Offset 0 Hz

Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0

5745 MHz	 Key parameters for 5745 MHz: - Center Freq: 5.74500000 GHz - Start Freq: 5.73000000 GHz - Stop Freq: 5.76000000 GHz - CF Step: 3.000000 MHz - Freq Offset: 0 Hz - Mkr1: 5.740 53 GHz, 2.377 dBm
5785 MHz	 Key parameters for 5785 MHz: - Center Freq: 5.78500000 GHz - Start Freq: 5.77000000 GHz - Stop Freq: 5.80000000 GHz - CF Step: 3.000000 MHz - Freq Offset: 0 Hz - Mkr1: 5.779 93 GHz, 1.811 dBm
5825 MHz	 Key parameters for 5825 MHz: - Center Freq: 5.82500000 GHz - Start Freq: 5.81000000 GHz - Stop Freq: 5.84000000 GHz - CF Step: 3.000000 MHz - Freq Offset: 0 Hz - Mkr1: 5.821 79 GHz, 1.784 dBm

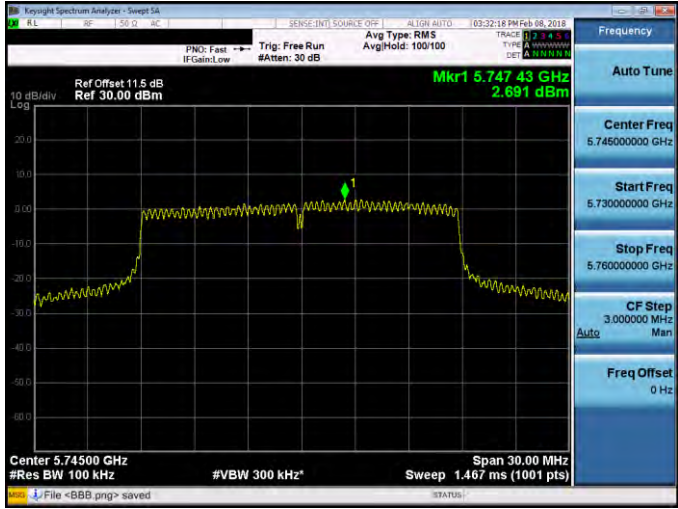
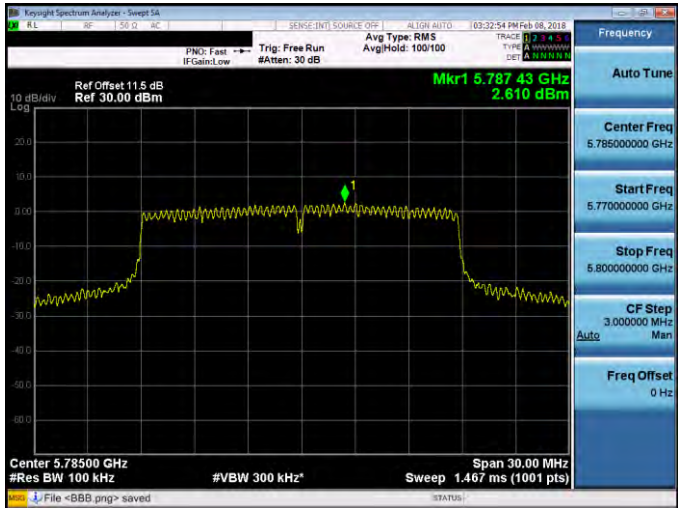
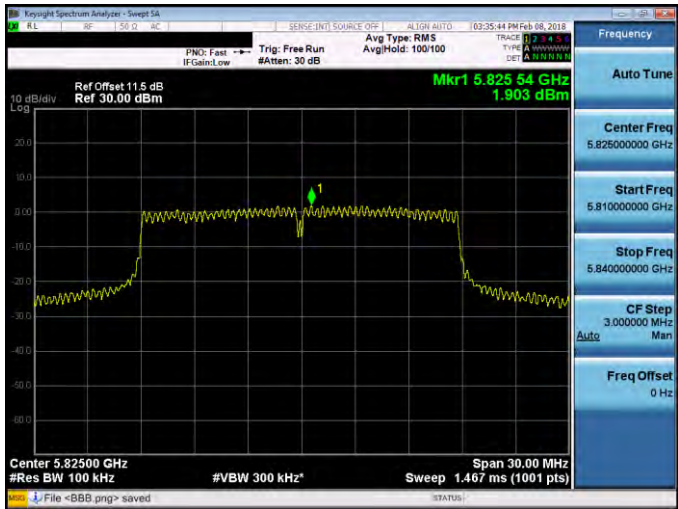


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0

5180 MHz	
5200 MHz	
5240 MHz	



Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0

5745 MHz	 Keygraph Spectrum Analyzer - Sweep 54 RF 50.0 AC SENSE: INT1 SOURCE: OFF ALIGN: AUTO 03:32:18 PM Feb 08, 2018 PNC: Fast Trig: Free Run Avg Type: RMS IF Gain: Low #Atten: 30 dB Avg Hold: 100/100 TYPE: A WNRWV DET: A NNNNN Ref Offset 11.5 dB Ref 30.00 dBm Mkr1 5.747 43 GHz 2.691 dBm 10 dB/div L-FB Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 1.467 ms (1001 pts) File <BBB.png> saved
5785 MHz	 Keygraph Spectrum Analyzer - Sweep 54 RF 50.0 AC SENSE: INT1 SOURCE: OFF ALIGN: AUTO 03:32:54 PM Feb 08, 2018 PNC: Fast Trig: Free Run Avg Type: RMS IF Gain: Low #Atten: 30 dB Avg Hold: 100/100 TYPE: A WNRWV DET: A NNNNN Ref Offset 11.5 dB Ref 30.00 dBm Mkr1 5.787 43 GHz 2.610 dBm 10 dB/div L-FB Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 1.467 ms (1001 pts) File <BBB.png> saved
5825 MHz	 Keygraph Spectrum Analyzer - Sweep 54 RF 50.0 AC SENSE: INT1 SOURCE: OFF ALIGN: AUTO 03:35:44 PM Feb 08, 2018 PNC: Fast Trig: Free Run Avg Type: RMS IF Gain: Low #Atten: 30 dB Avg Hold: 100/100 TYPE: A WNRWV DET: A NNNNN Ref Offset 11.5 dB Ref 30.00 dBm Mkr1 5.825 54 GHz 1.903 dBm 10 dB/div L-FB Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 1.467 ms (1001 pts) File <BBB.png> saved



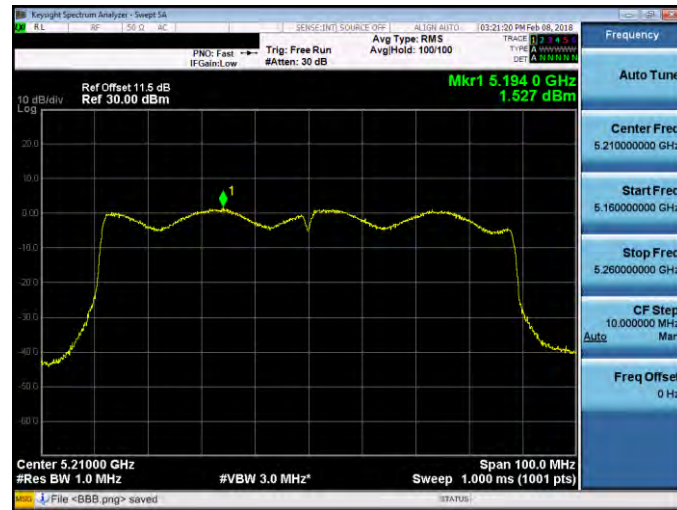


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0	
5755 MHz	
5795 MHz	



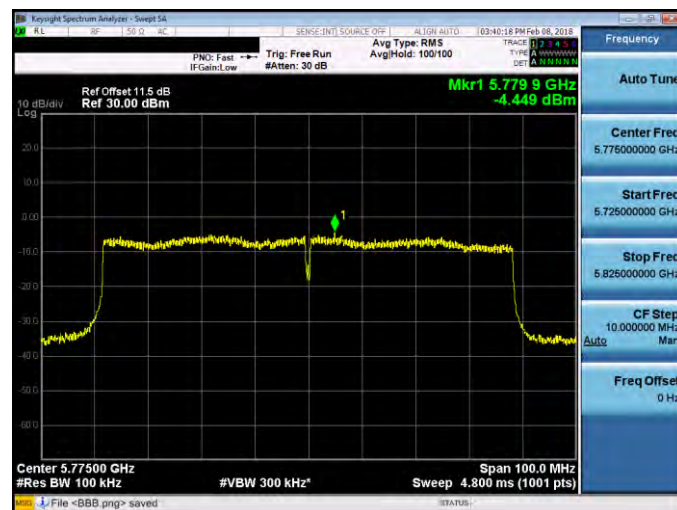
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-0

5210 MHz



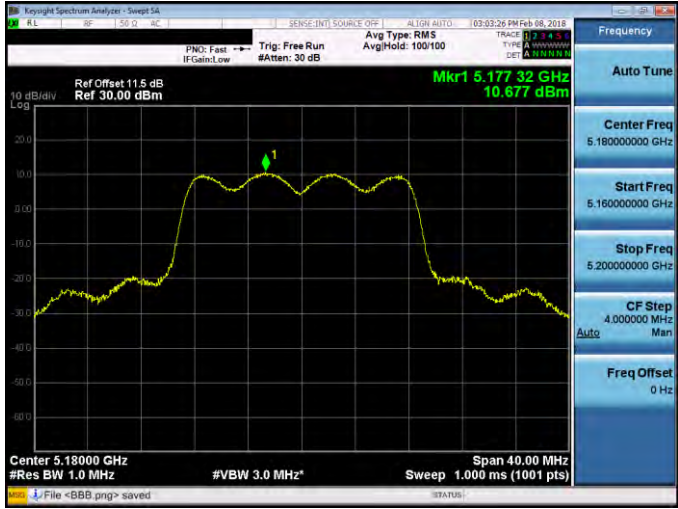
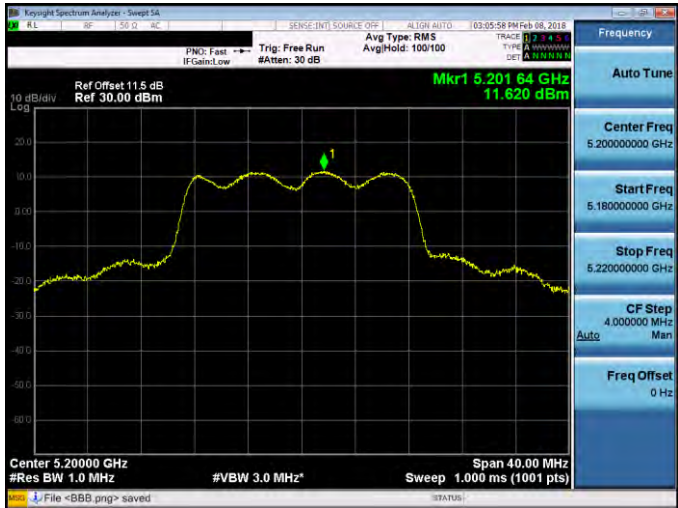
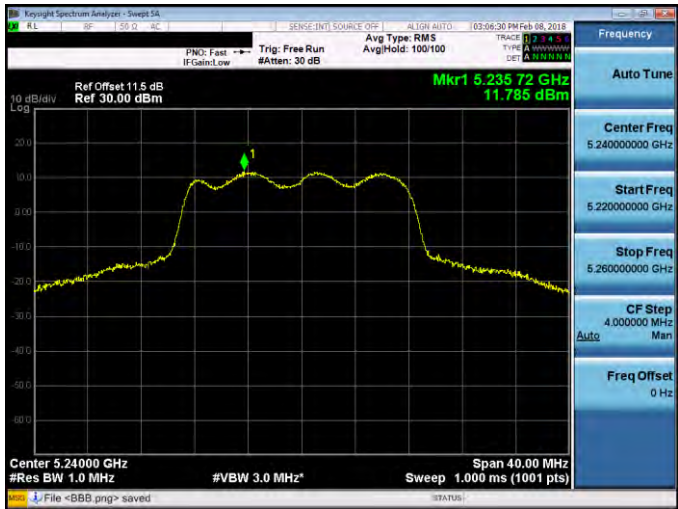
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-0

5775 MHz



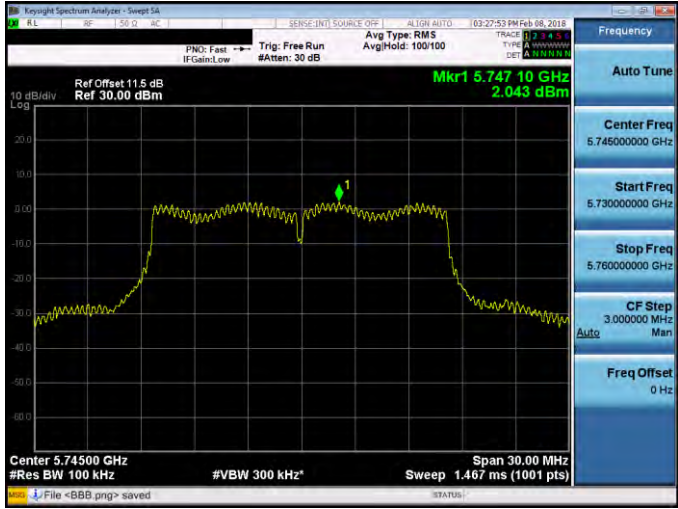
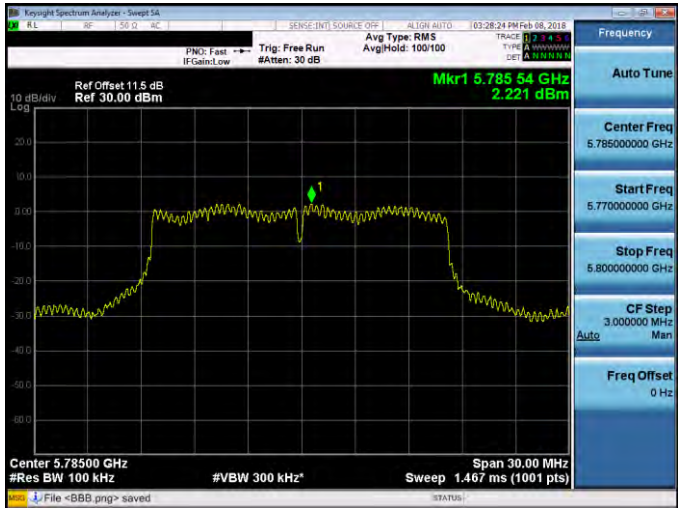
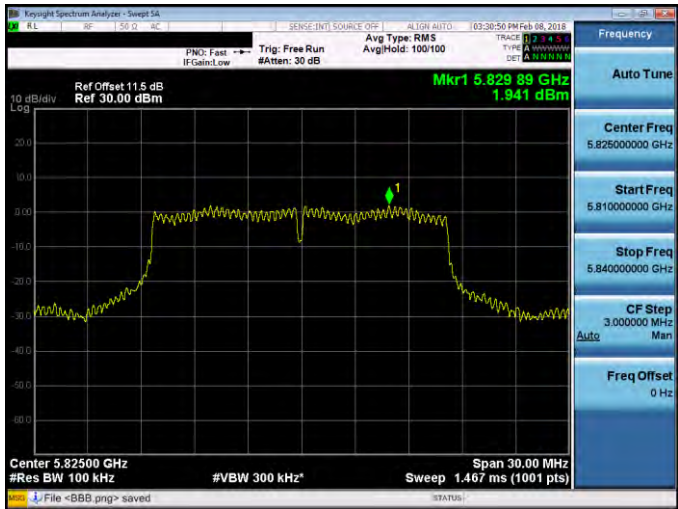


Mode 2: IEEE 802.11a Continuous TX mode_ ANT-1

5180 MHz	
5200 MHz	
5240 MHz	

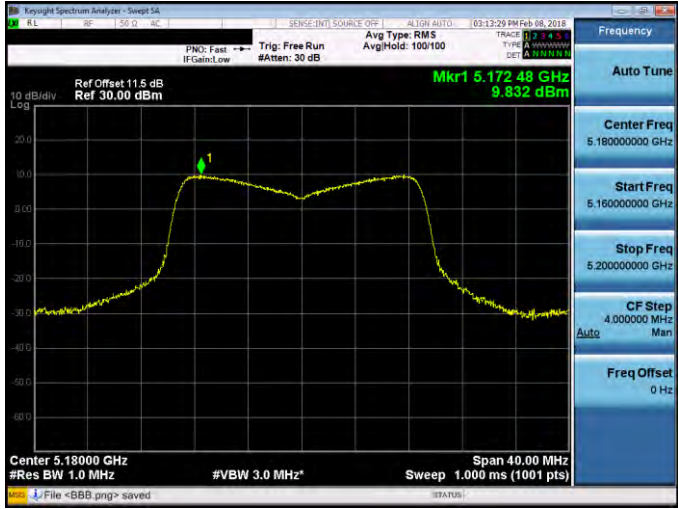
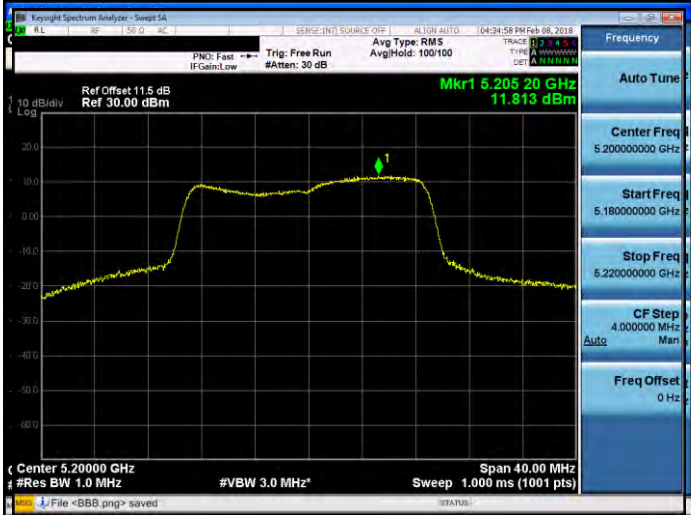
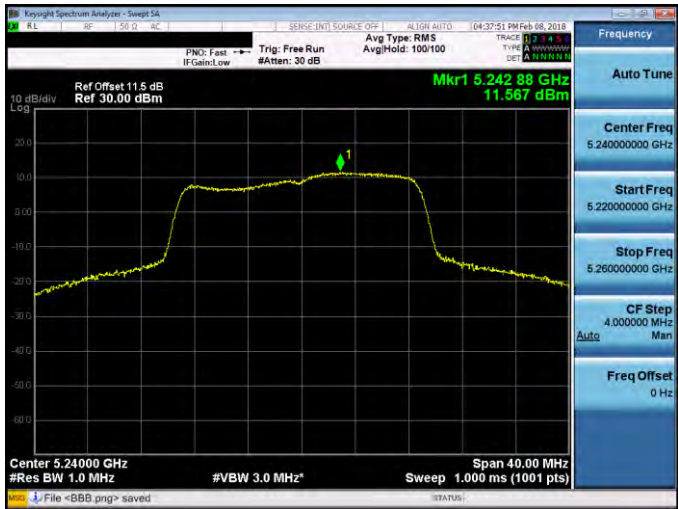


Mode 2: IEEE 802.11a Continuous TX mode_ ANT-1

5745 MHz	
5785 MHz	
5825 MHz	

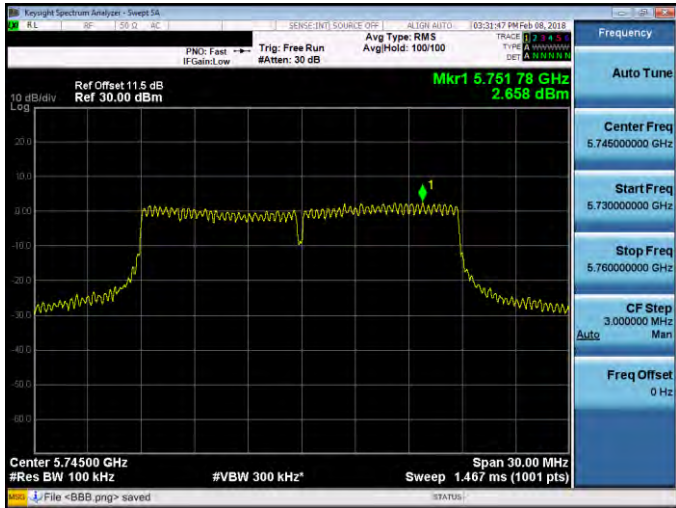
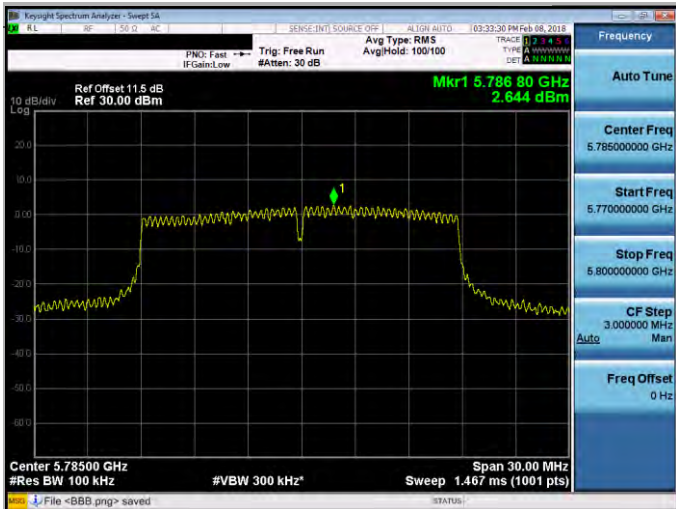
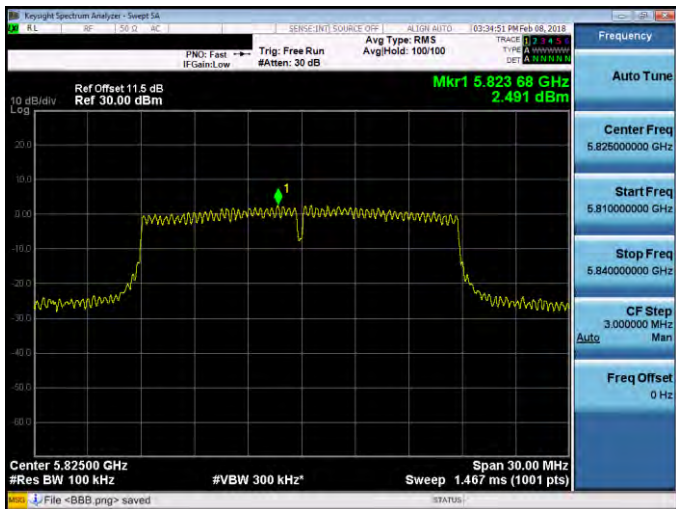


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-1

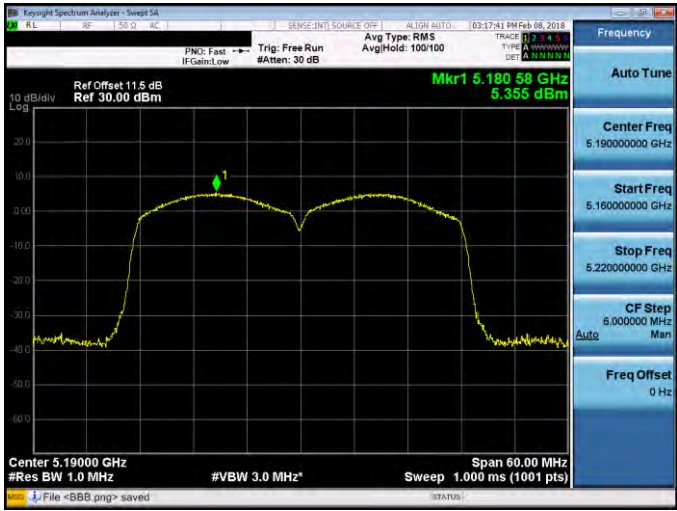
5180 MHz	
5200 MHz	
5240 MHz	

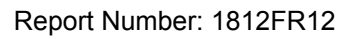


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-1

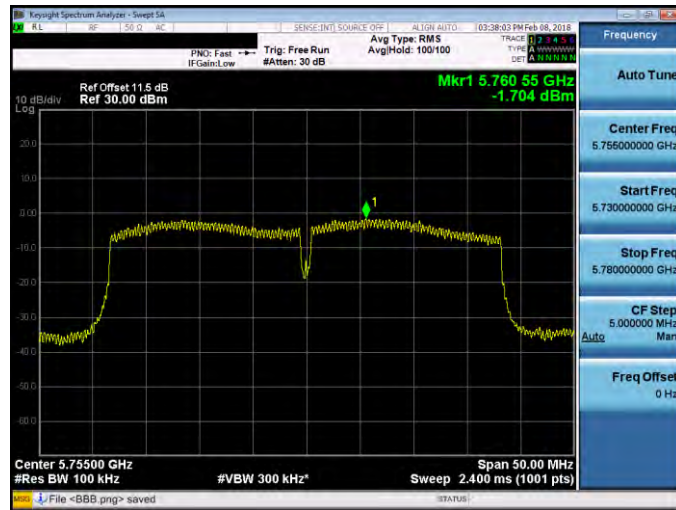
5745 MHz	
5785 MHz	
5825 MHz	



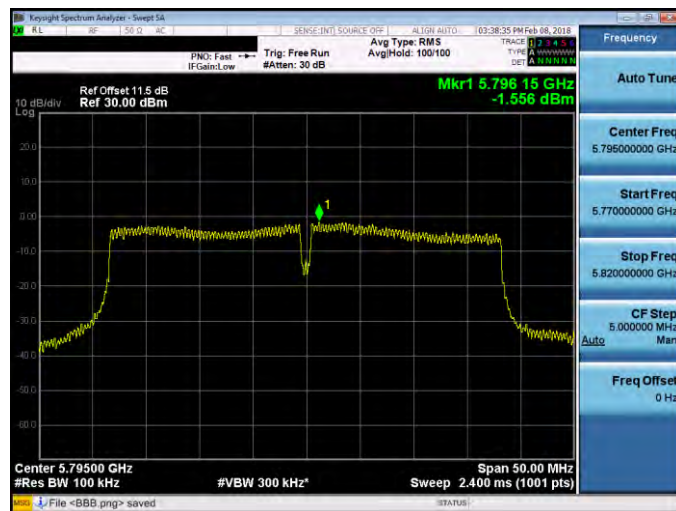
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-1	
5190 MHz	
5230 MHz	



5755 MHz



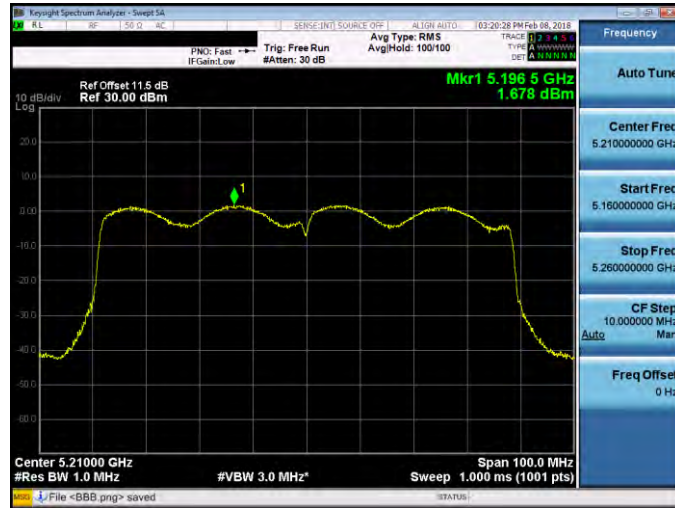
5795 MHz





Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-1

5210 MHz



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-1

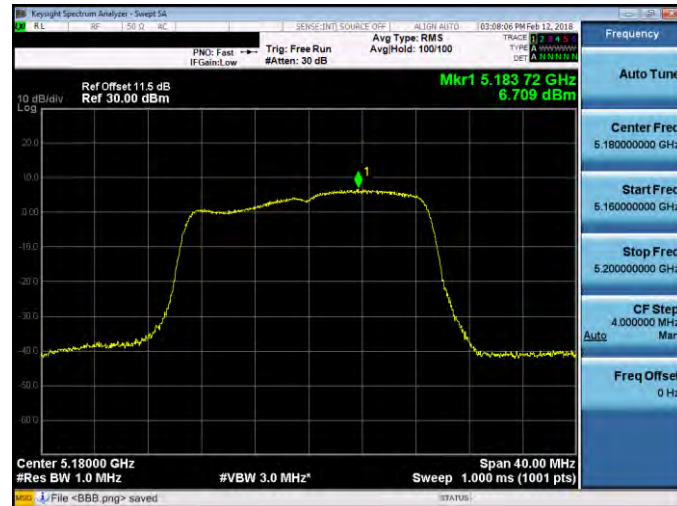
5775 MHz



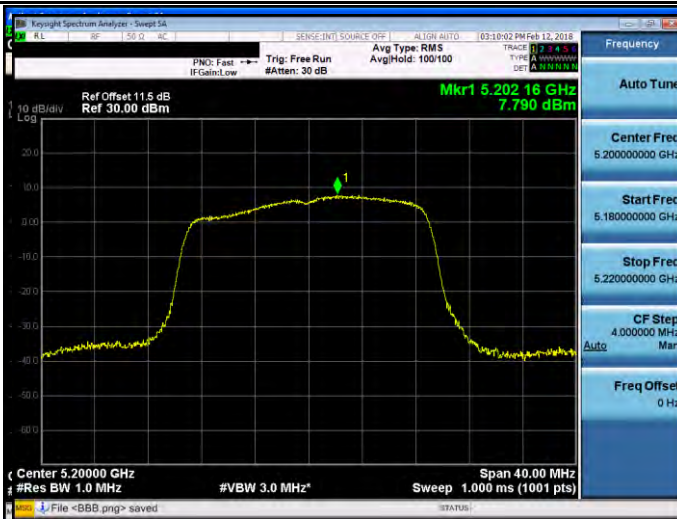
Beamforming on

Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0

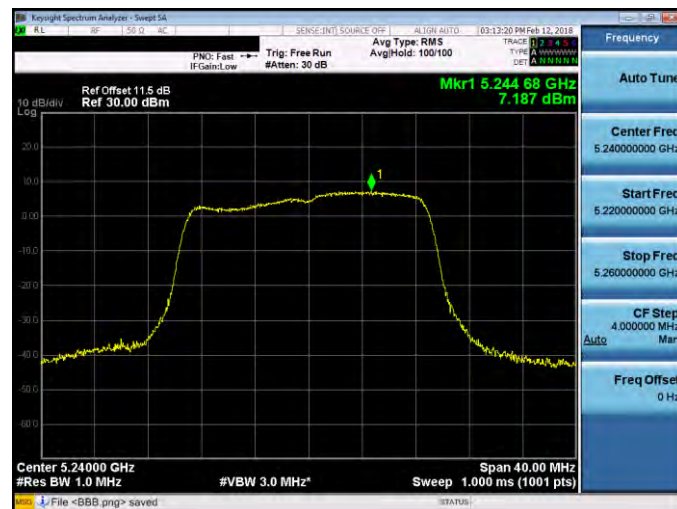
5180 MHz



5200 MHz

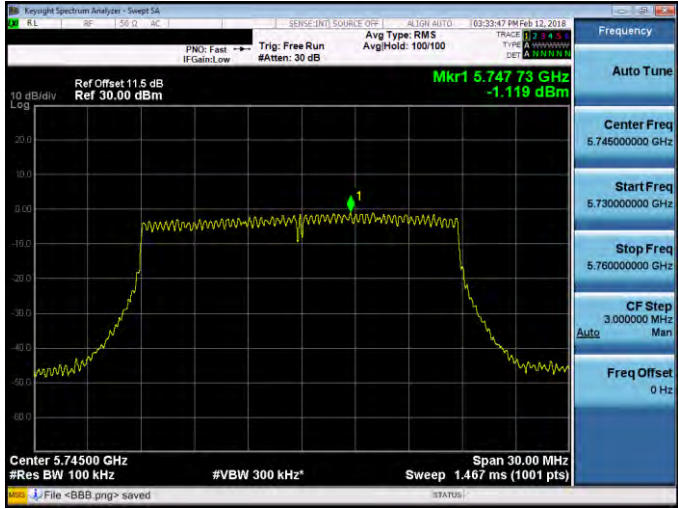
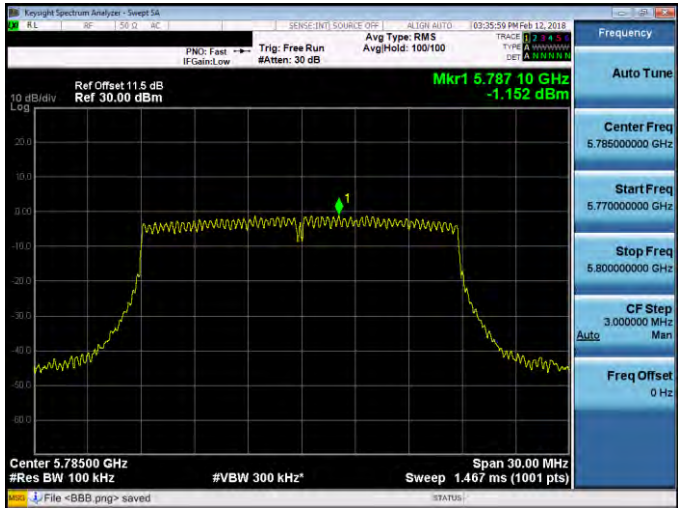
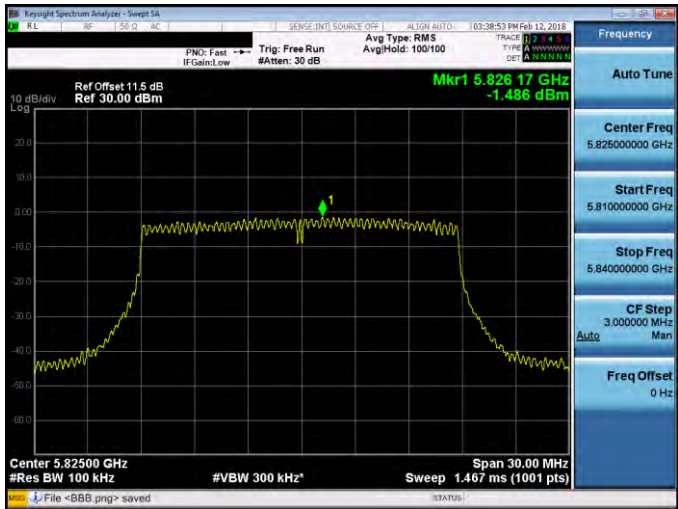


5240 MHz



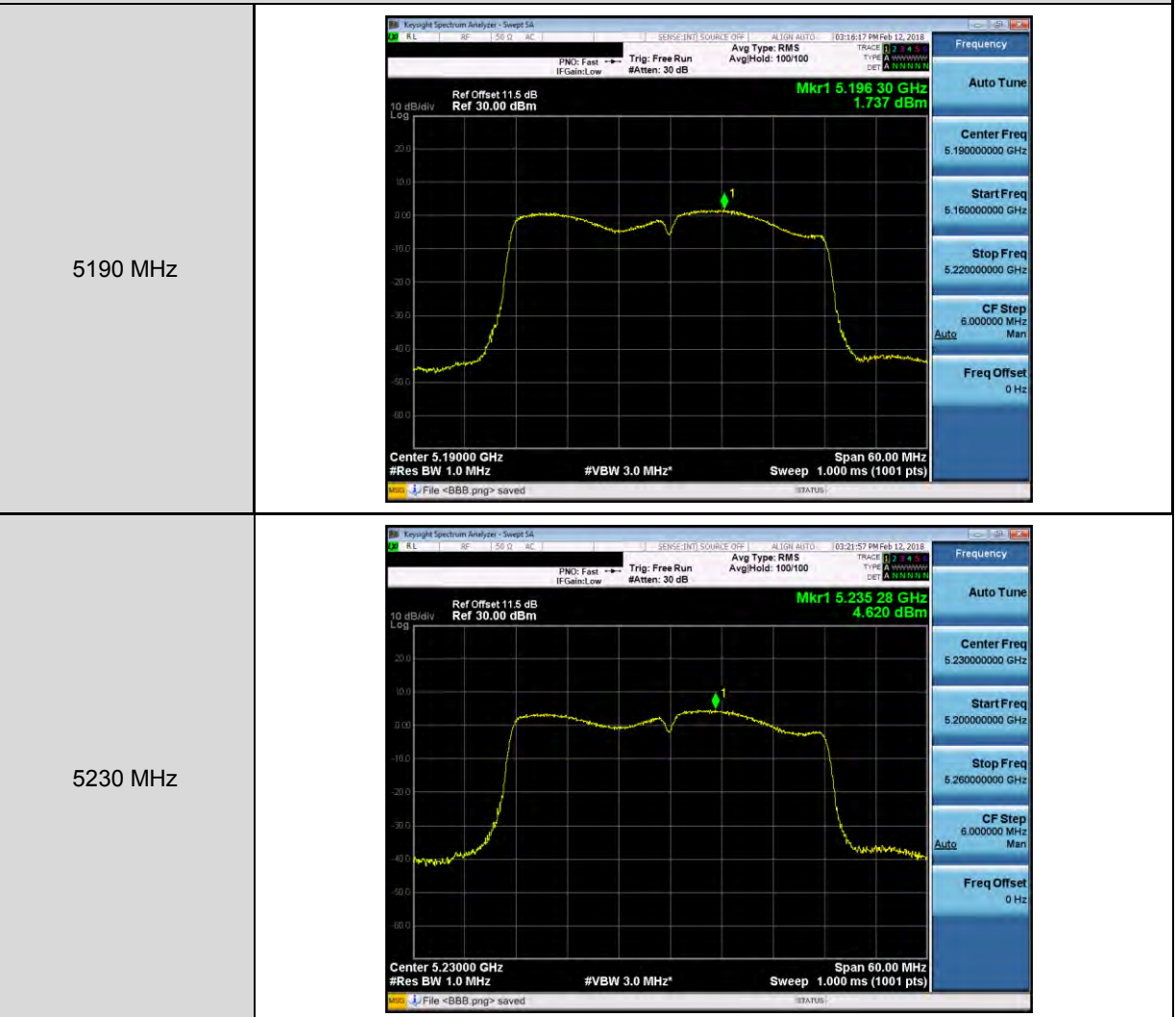


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

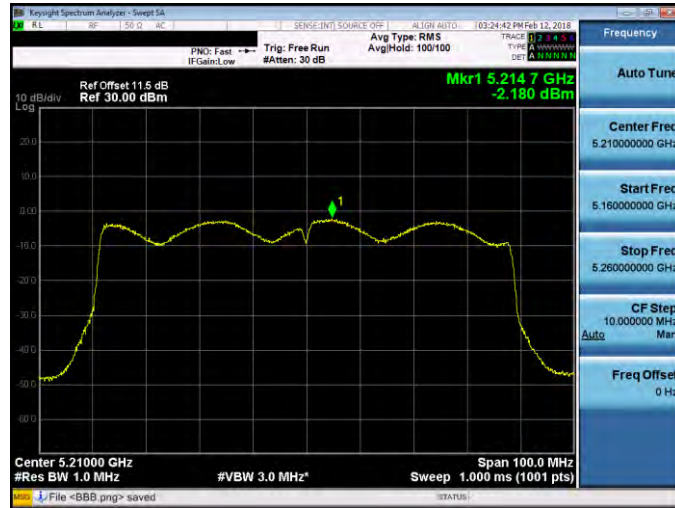






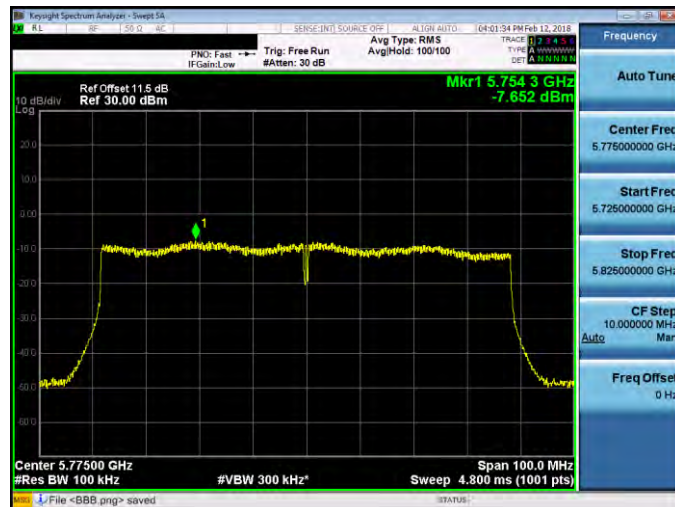
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-0

5210 MHz



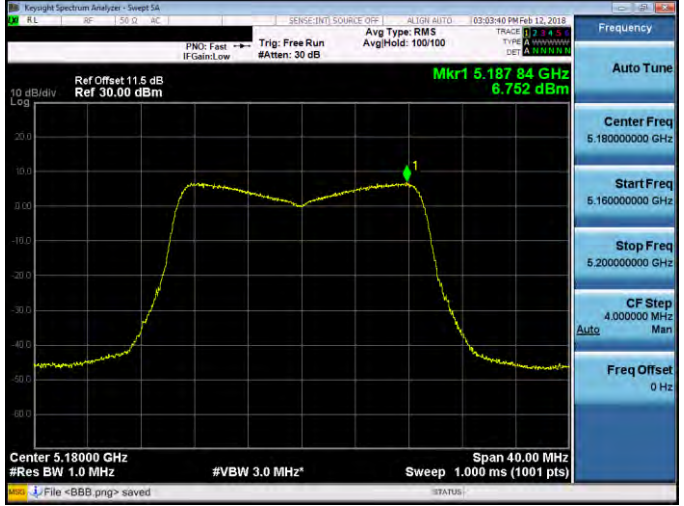
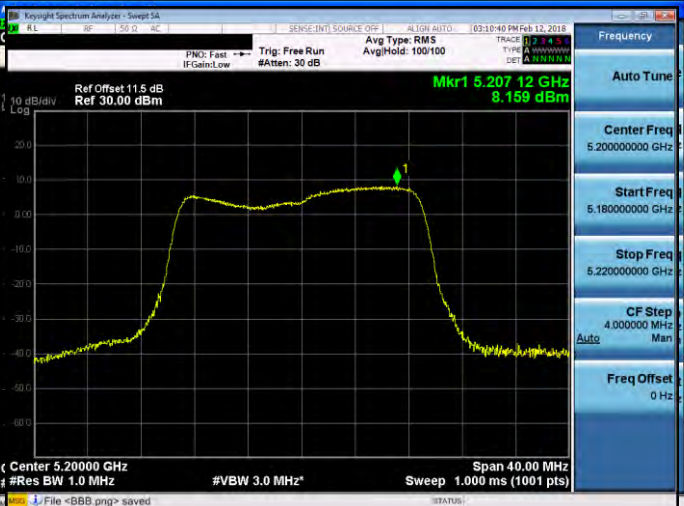
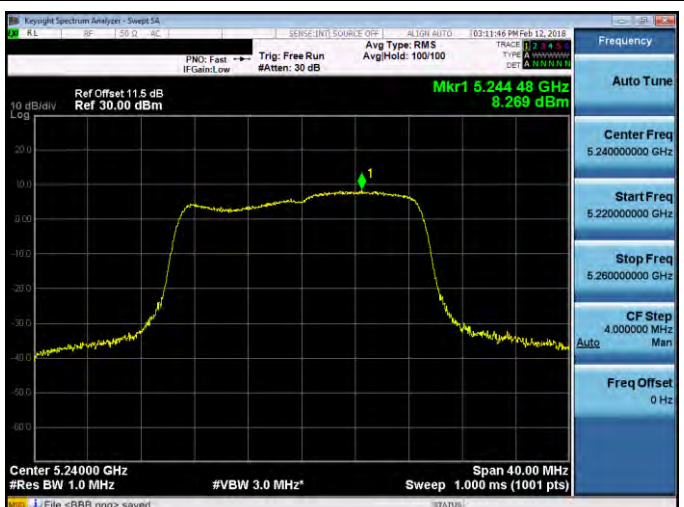
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-0

5775 MHz

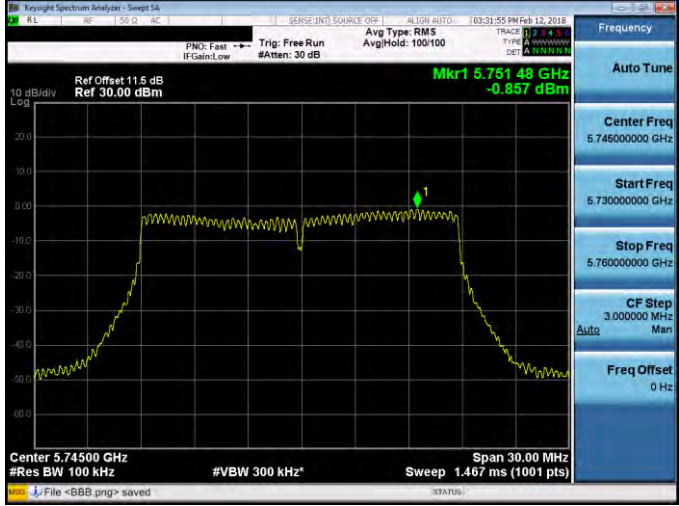
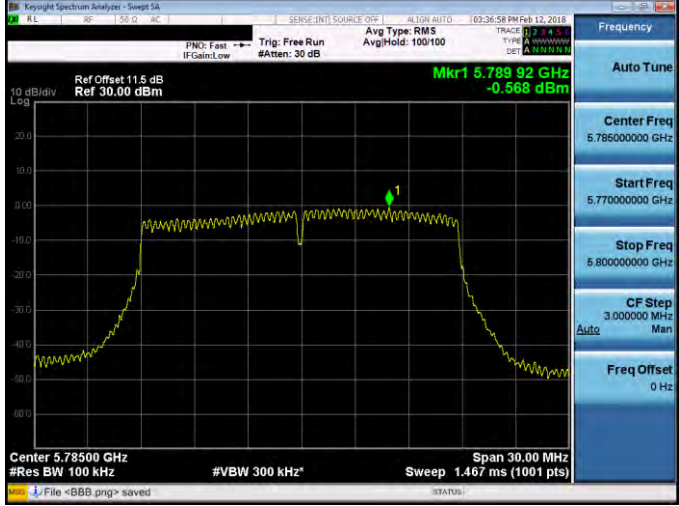
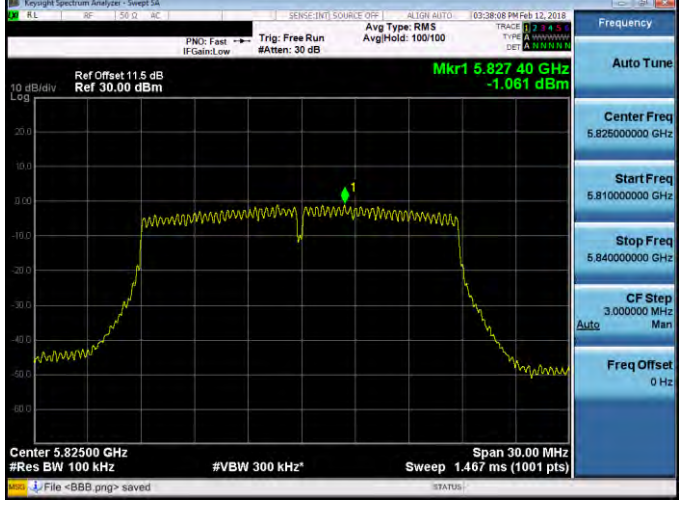




Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-1

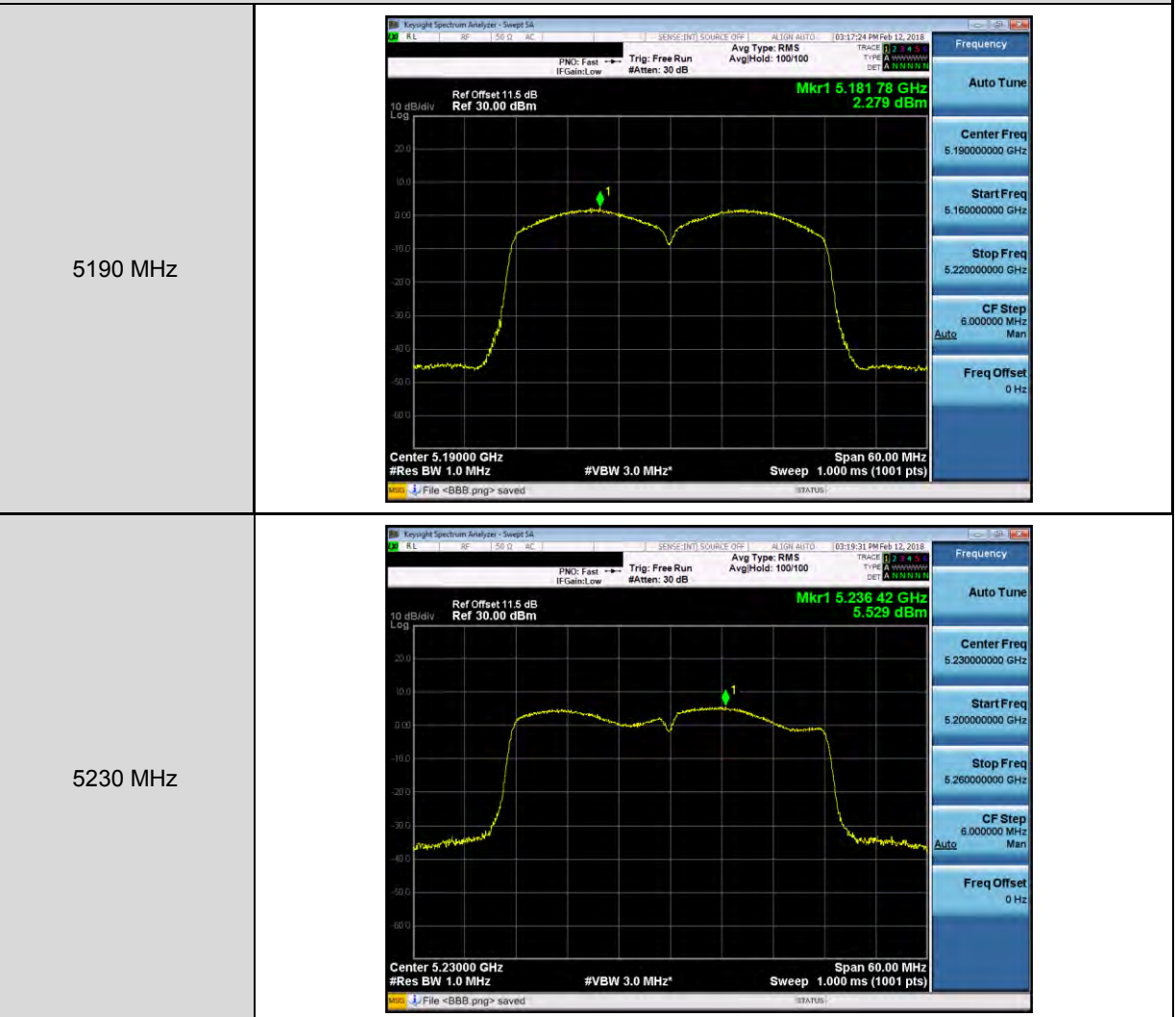
5180 MHz	
5200 MHz	
5240 MHz	

Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-1

5745 MHz	
5785 MHz	
5825 MHz	

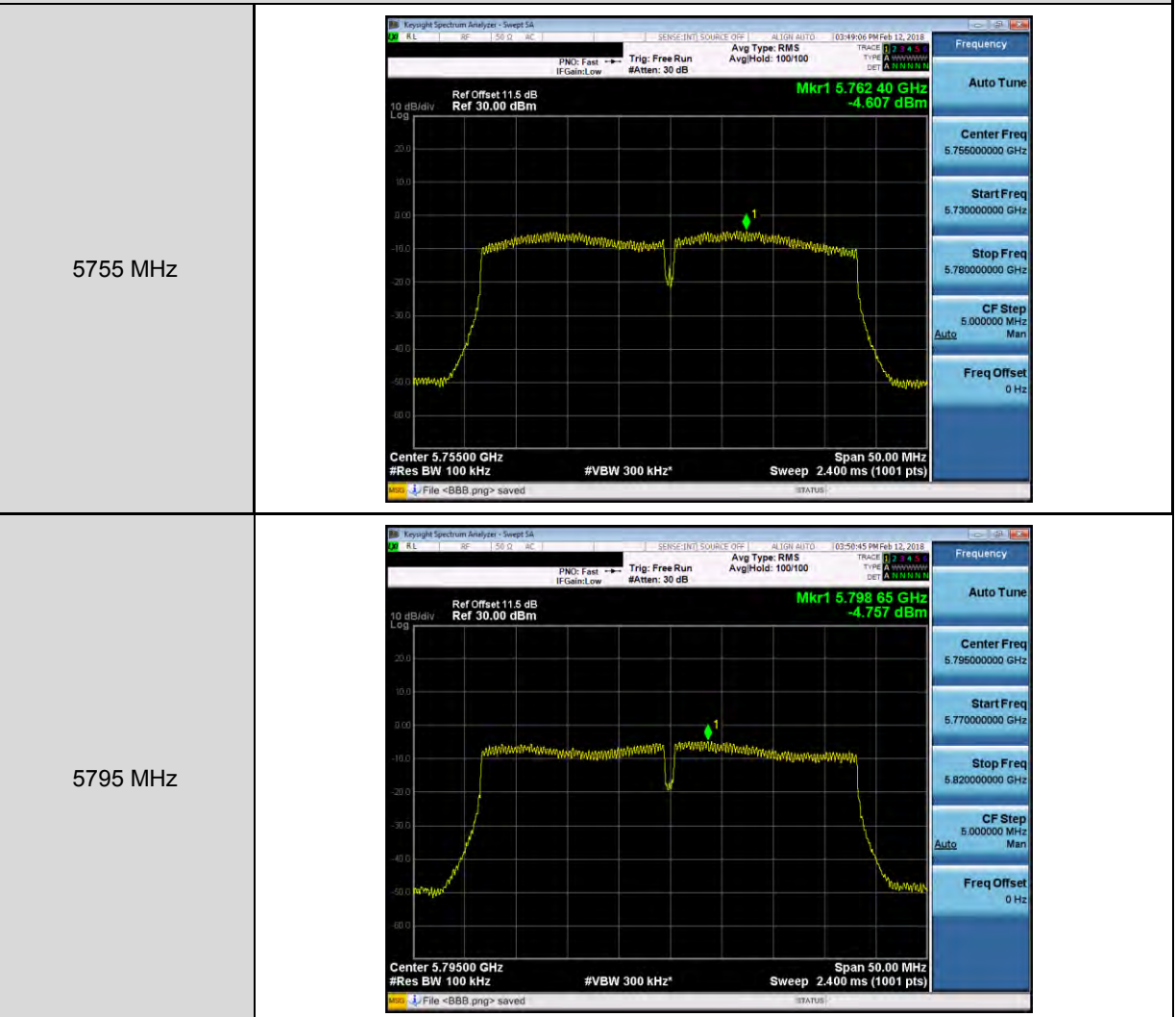


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1





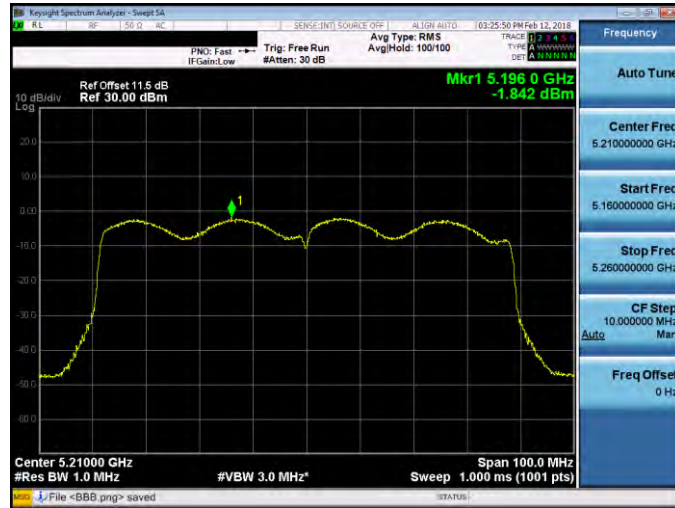
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1





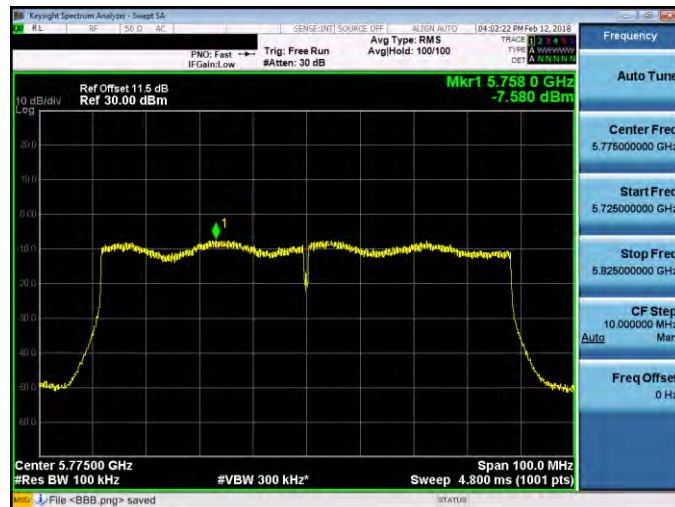
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-1

5210 MHz



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ANT-1

5775 MHz





5.7. Frequency Stability Measurement

Temperature Variations

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5200.0367	36700	7.058	Pass
	10		5200.0128	12800	2.462	Pass
	20		5199.935	-65000	-12.500	Pass
	30		5199.9196	-80400	-15.462	Pass
	40		5199.9005	-99500	-19.135	Pass
5785 MHz	0	120	5785.0397	39700	6.863	Pass
	10		5785.0138	13800	2.385	Pass
	20		5784.9522	-47800	-8.263	Pass
	30		5784.9166	-83400	-14.417	Pass
	40		5784.9011	-98900	-17.096	Pass

Voltage Variations

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5199.9023	-97700	-18.788	Pass
		120.00	5199.9196	-80400	-15.462	Pass
		102.00	5199.9309	-69100	-13.288	Pass
5785 MHz	20	138.00	5784.9017	-98300	-16.992	Pass
		120.00	5784.9166	-83400	-14.417	Pass
		102.00	5784.9315	-68500	-11.841	Pass

Note: The manufacturer's frequency stability specification is better than 20 ppm.



Beamforming on

Temperature Variations

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	20		5199.935	-65000	-12.500	Pass
	30		5199.9196	-80400	-15.462	Pass
	40		5199.9005	-99500	-19.135	Pass
5785 MHz	0	120	5785.0397	39700	6.863	Pass
	10		5785.0138	13800	2.385	Pass
	20		5784.9522	-47800	-8.263	Pass
	30		5784.9166	-83400	-14.417	Pass
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		120.00	5784.9166	-83400	-14.417	Pass
		102.00	5784.9315	-68500	-11.841	Pass

Note: The manufacturer's frequency stability specification is better than 20 ppm.