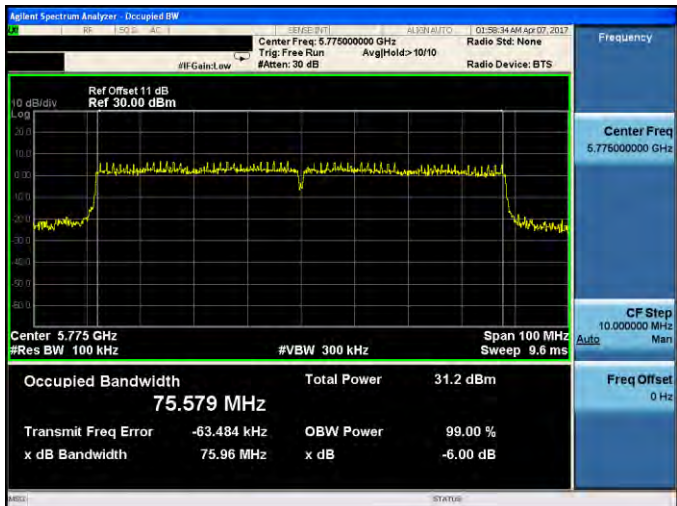




Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ANT-1

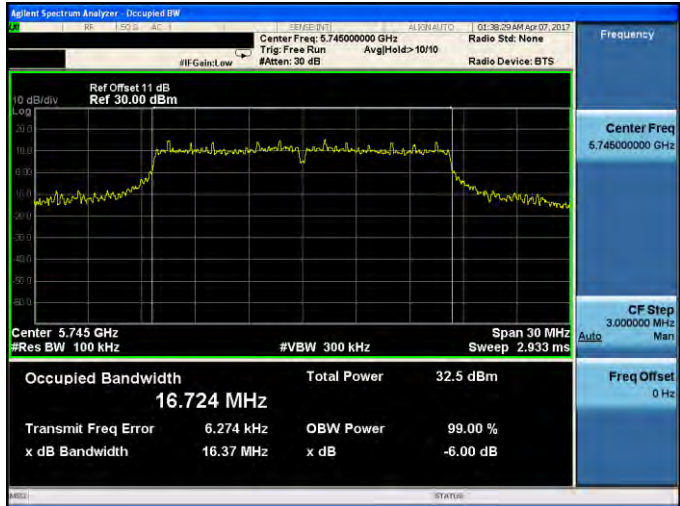
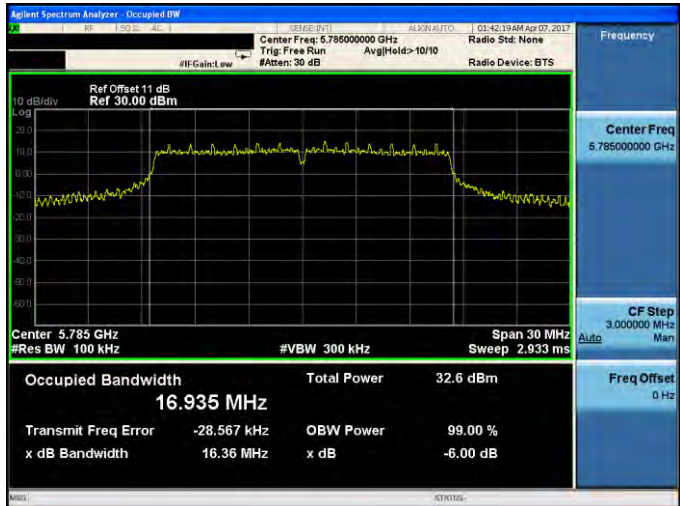
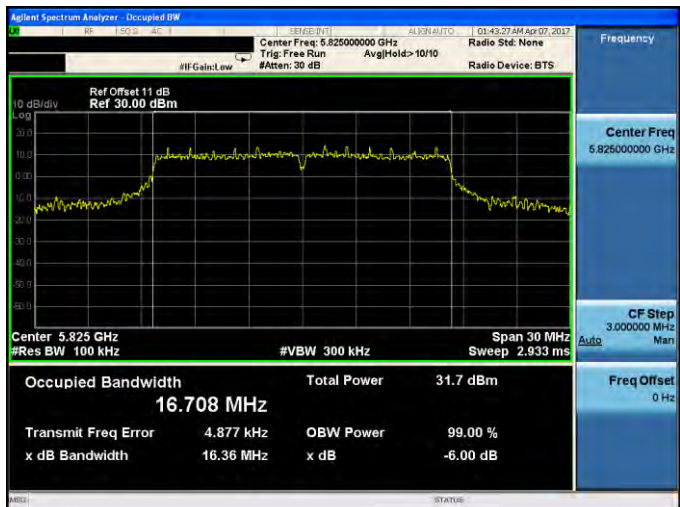
5755 MHz	 Center Freq: 5.755 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 36.286 MHz Total Power: 32.7 dBm Transmit Freq Error: -6.725 kHz x dB Bandwidth: 36.42 MHz OBW Power: 99.00 % x dB: -6.00 dB
5795 MHz	 Center Freq: 5.795 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 36.260 MHz Total Power: 32.2 dBm Transmit Freq Error: -8.140 kHz x dB Bandwidth: 36.40 MHz OBW Power: 99.00 % x dB: -6.00 dB

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

5775 MHz	 Center Freq: 5.775 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 100 MHz Sweep: 9.6 ms Occupied Bandwidth: 75.579 MHz Total Power: 31.2 dBm Transmit Freq Error: -63.484 kHz x dB Bandwidth: 75.96 MHz OBW Power: 99.00 % x dB: -6.00 dB
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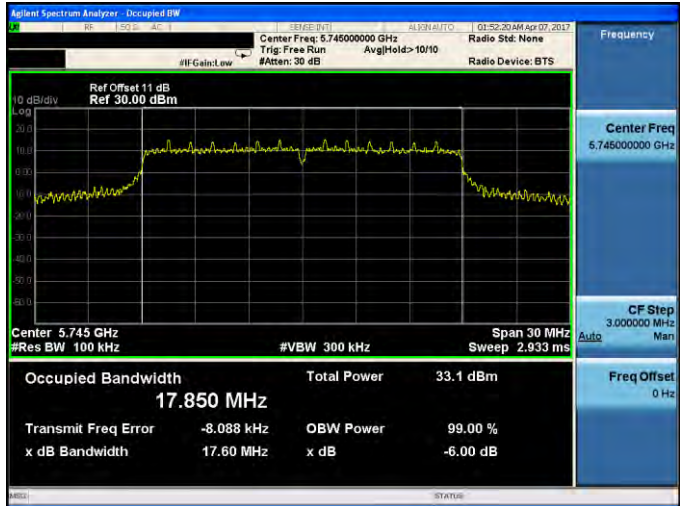
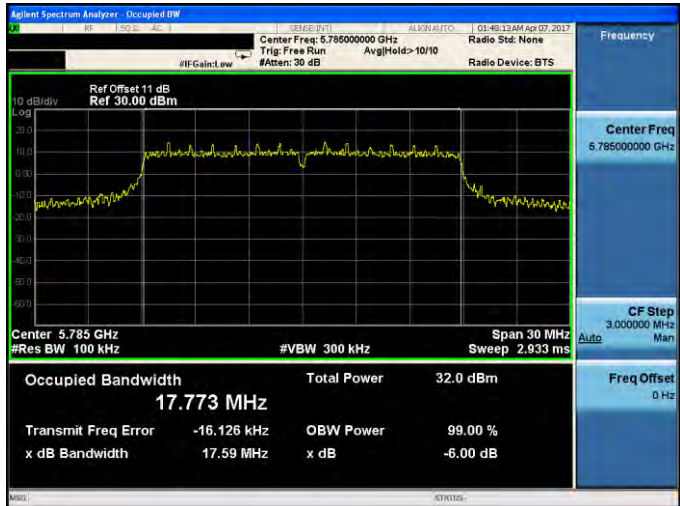
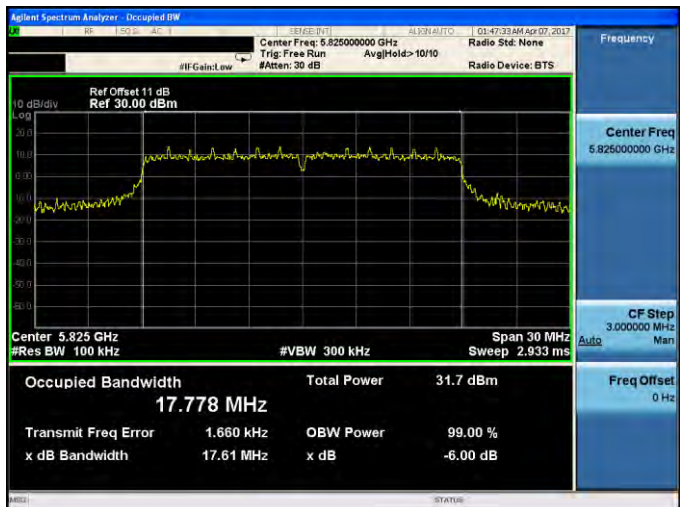


Mode 2: IEEE 802.11a Continuous TX mode_ANT-2

5745 MHz	
5785 MHz	
5825 MHz	

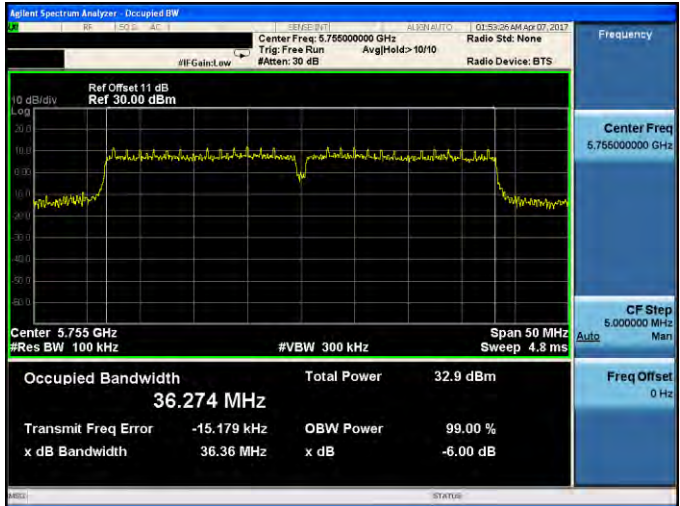
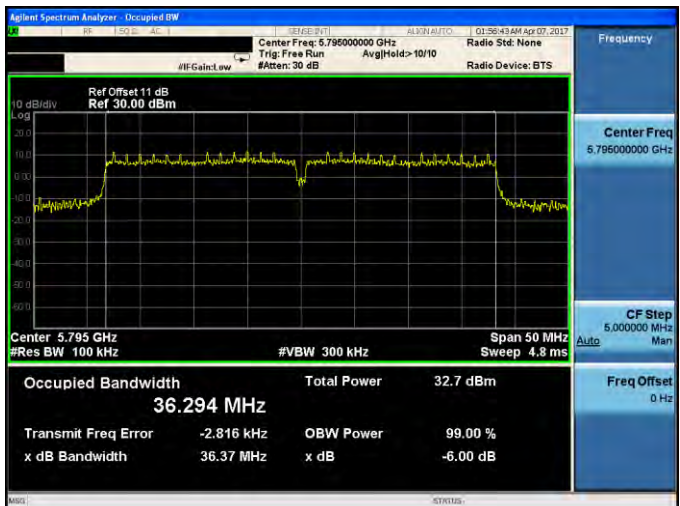


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ANT-2

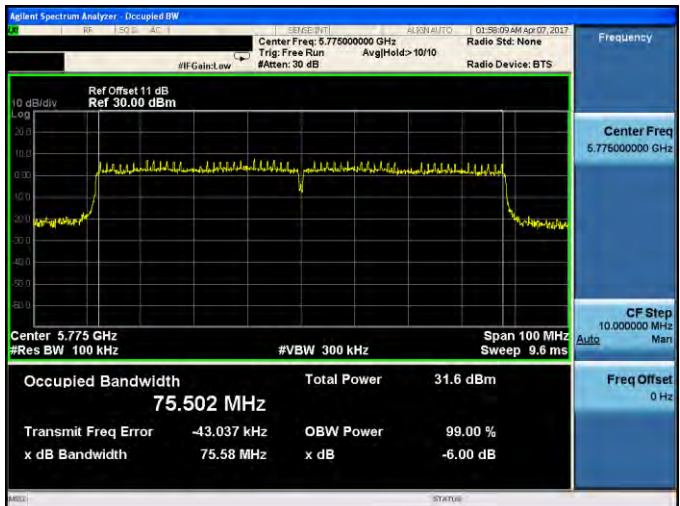
5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #Att: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.850 MHz Total Power 33.1 dBm Transmit Freq Error -8.088 kHz OBW Power 99.00 % x dB Bandwidth 17.60 MHz x dB -6.00 dB Center Freq 5.74500000 GHz CF Step 3.000000 MHz Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #Att: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.773 MHz Total Power 32.0 dBm Transmit Freq Error -16.126 kHz OBW Power 99.00 % x dB Bandwidth 17.59 MHz x dB -6.00 dB Center Freq 5.78500000 GHz CF Step 3.000000 MHz Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #Att: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.778 MHz Total Power 31.7 dBm Transmit Freq Error 1.660 kHz OBW Power 99.00 % x dB Bandwidth 17.61 MHz x dB -6.00 dB Center Freq 5.82500000 GHz CF Step 3.000000 MHz Freq Offset 0 Hz



Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ANT-2

5755 MHz	 Center Freq: 5.755 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 36.274 MHz Total Power: 32.9 dBm Transmit Freq Error: -15.179 kHz OBW Power: 99.00 % x dB Bandwidth: 36.36 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: 36.294 MHz Total Power: 32.7 dBm Transmit Freq Error: -2.816 kHz OBW Power: 99.00 % x dB Bandwidth: 36.37 MHz x dB: -6.00 dB

Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ANT-2

5775 MHz	 Center Freq: 5.775 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 100 MHz Sweep: 9.6 ms Occupied Bandwidth: 75.502 MHz Total Power: 31.6 dBm Transmit Freq Error: -43.037 kHz OBW Power: 99.00 % x dB Bandwidth: 75.58 MHz x dB: -6.00 dB
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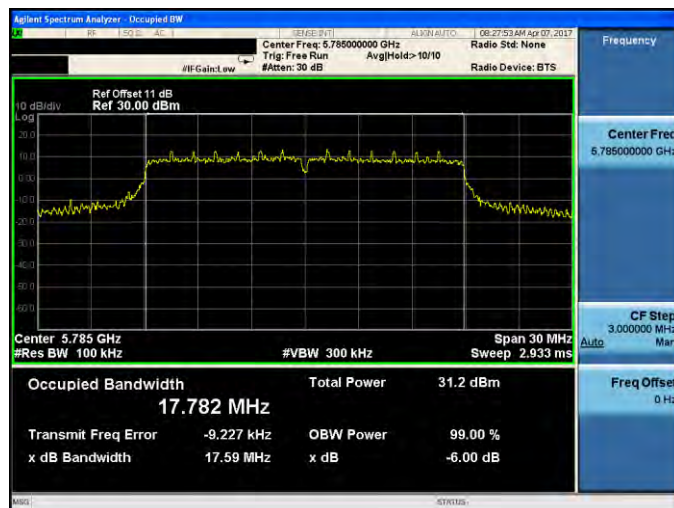
Beamforming on

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

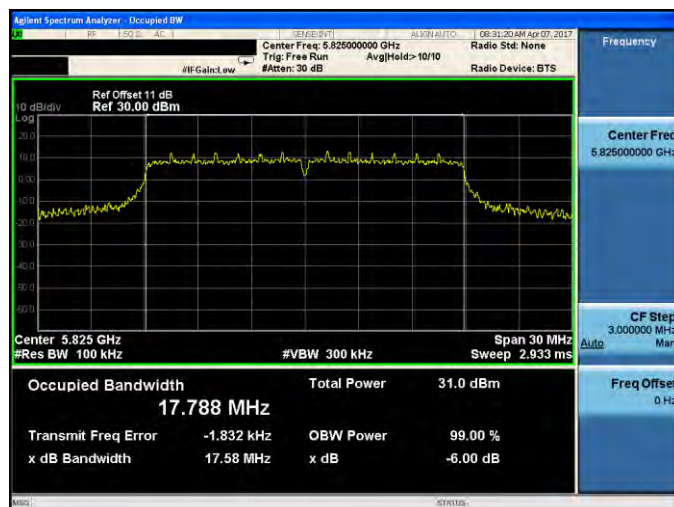
5745 MHz



5785 MHz

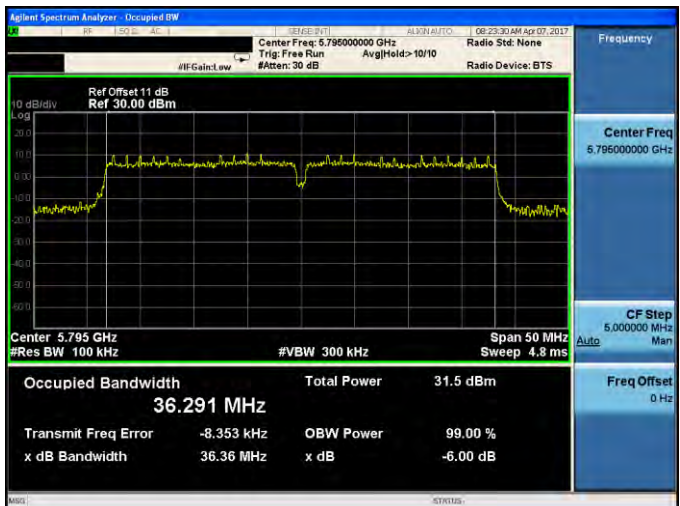


5825 MHz

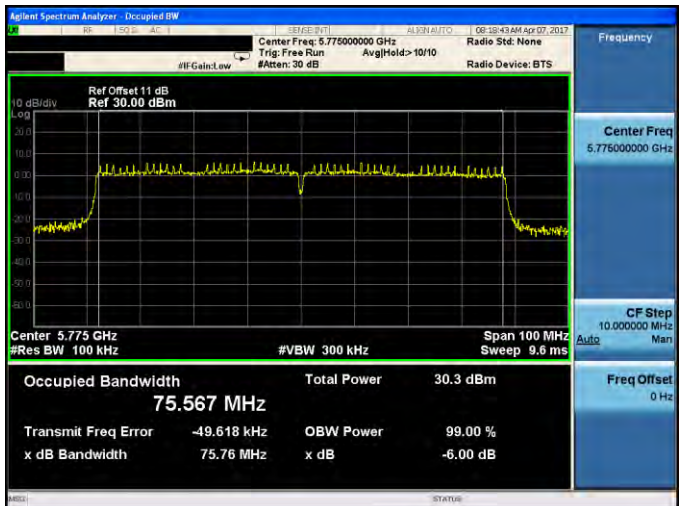




Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ANT-0

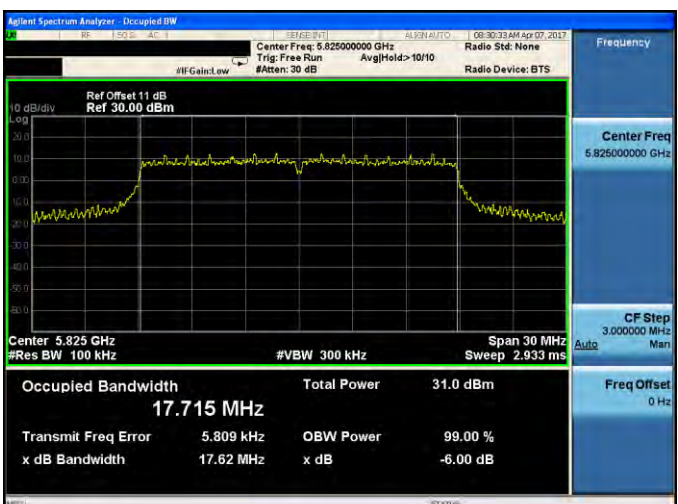
5755 MHz	 Center Freq: 5.755 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 36.297 MHz Total Power: 32.0 dBm Transmit Freq Error: -11.393 kHz OBW Power: 99.00 % x dB Bandwidth: 36.35 MHz x dB: -6.00 dB
5795 MHz	 Center Freq: 5.795 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 50 MHz Sweep: 4.8 ms Occupied Bandwidth: 36.291 MHz Total Power: 31.5 dBm Transmit Freq Error: -8.353 kHz OBW Power: 99.00 % x dB Bandwidth: 36.36 MHz x dB: -6.00 dB

Mode 5: IEEE 802.11ac 80MHz 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: 75.567 MHz Total Power: 30.3 dBm Transmit Freq Error: -49.618 kHz OBW Power: 99.00 % x dB Bandwidth: 75.76 MHz x dB: -6.00 dB
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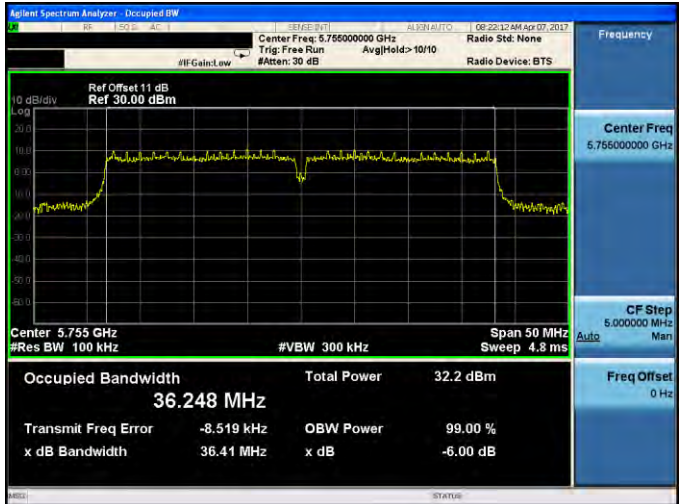


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ANT-1

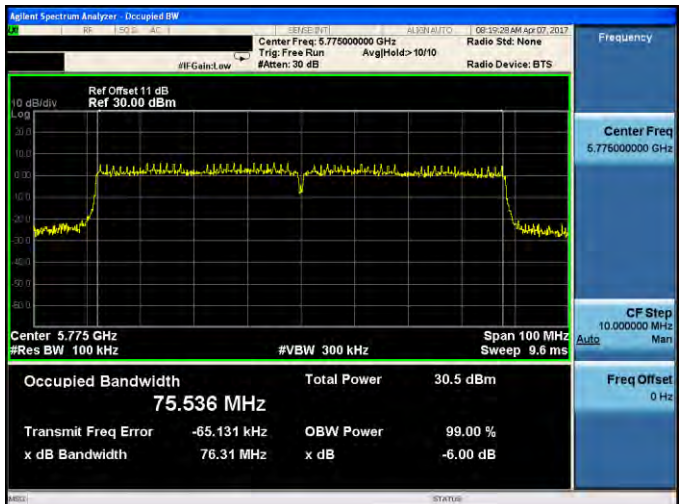
5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.696 MHz Total Power 31.3 dBm Transmit Freq Error -9.311 kHz OBW Power 99.00 % x dB Bandwidth 17.63 MHz x dB -6.00 dB Frequency Center Freq 5.74500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.728 MHz Total Power 30.8 dBm Transmit Freq Error -20.508 kHz OBW Power 99.00 % x dB Bandwidth 17.62 MHz x dB -6.00 dB Frequency Center Freq 5.78500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.715 MHz Total Power 31.0 dBm Transmit Freq Error 5.809 kHz OBW Power 99.00 % x dB Bandwidth 17.62 MHz x dB -6.00 dB Frequency Center Freq 5.82500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz



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

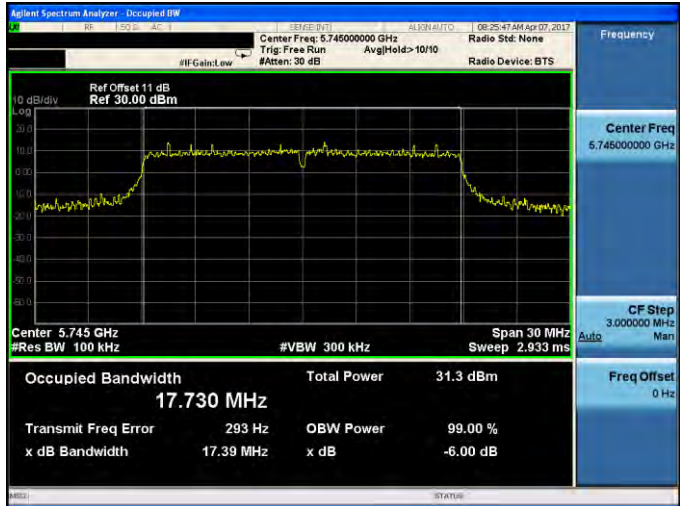
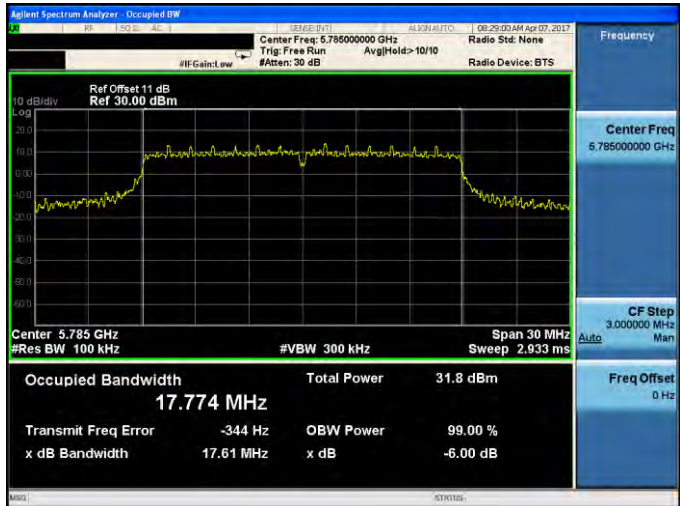
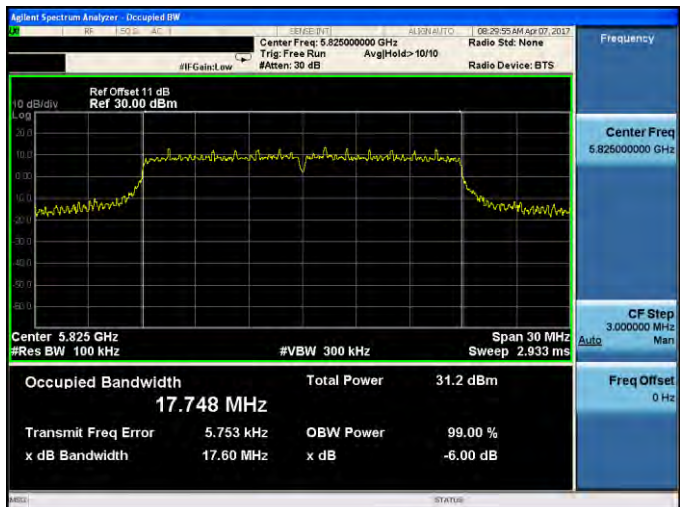
5755 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.75500000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.248 MHz Total Power 32.2 dBm Transmit Freq Error -8.519 kHz OBW Power 99.00 % x dB Bandwidth 36.41 MHz x dB -6.00 dB Frequency Center Freq 5.75500000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz
5795 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.79500000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.795 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.256 MHz Total Power 31.4 dBm Transmit Freq Error -9.249 kHz OBW Power 99.00 % x dB Bandwidth 36.39 MHz x dB -6.00 dB Frequency Center Freq 5.79500000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz

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

5775 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.77500000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.775 GHz #Res BW 100 kHz #VBW 300 kHz Span 100 MHz Sweep 9.6 ms Occupied Bandwidth 75.536 MHz Total Power 30.5 dBm Transmit Freq Error -65.131 kHz OBW Power 99.00 % x dB Bandwidth 76.31 MHz x dB -6.00 dB Frequency Center Freq 5.77500000 GHz CF Step 10.000000 MHz Auto Man Freq Offset 0 Hz
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Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ANT-2

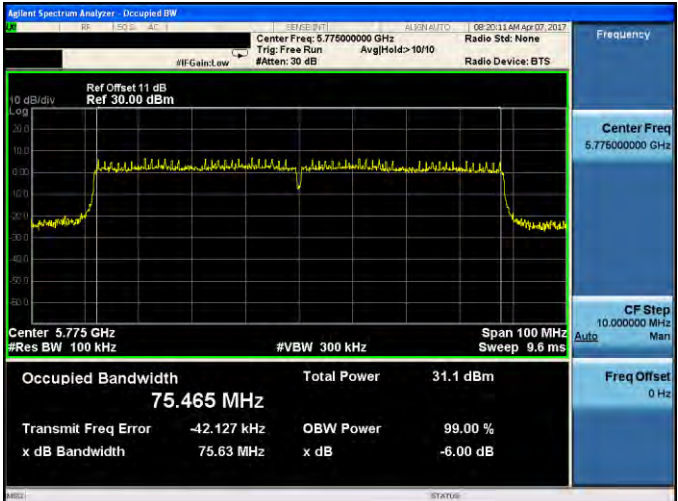
5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #Att: 30 dB Avg Hold> 10/10 Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.730 MHz Total Power 31.3 dBm Transmit Freq Error 293 Hz OBW Power 99.00 % x dB Bandwidth 17.39 MHz x dB -6.00 dB Center Freq 5.74500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #Att: 30 dB Avg Hold> 10/10 Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.774 MHz Total Power 31.8 dBm Transmit Freq Error -344 Hz OBW Power 99.00 % x dB Bandwidth 17.61 MHz x dB -6.00 dB Center Freq 5.78500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #Att: 30 dB Avg Hold> 10/10 Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.748 MHz Total Power 31.2 dBm Transmit Freq Error 5.753 kHz OBW Power 99.00 % x dB Bandwidth 17.60 MHz x dB -6.00 dB Center Freq 5.82500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz



Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ANT-2

5755 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.75500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.251 MHz Total Power 32.0 dBm Transmit Freq Error -16.777 kHz OBW Power 99.00 % x dB Bandwidth 36.36 MHz x dB -6.00 dB Frequency Center Freq 5.75500000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz
5795 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.79500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.795 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.239 MHz Total Power 32.0 dBm Transmit Freq Error -4.243 kHz OBW Power 99.00 % x dB Bandwidth 36.36 MHz x dB -6.00 dB Frequency Center Freq 5.79500000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz

Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ANT-2

5775 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.77500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.775 GHz #Res BW 100 kHz #VBW 300 kHz Span 100 MHz Sweep 9.6 ms Occupied Bandwidth 75.465 MHz Total Power 31.1 dBm Transmit Freq Error -42.127 kHz OBW Power 99.00 % x dB Bandwidth 75.63 MHz x dB -6.00 dB Frequency Center Freq 5.77500000 GHz CF Step 10.000000 MHz Auto Man Freq Offset 0 Hz
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4.7. Peak Power Spectral Density Measurement

■ Limit

Conducted power spectral density

Frequency Range (MHz)	FCC Limit
	Master
5.150 ~ 5.250 GHz	17 dBm/MHz
5.725 ~ 5.850 GHz	30 dBm/500KHz

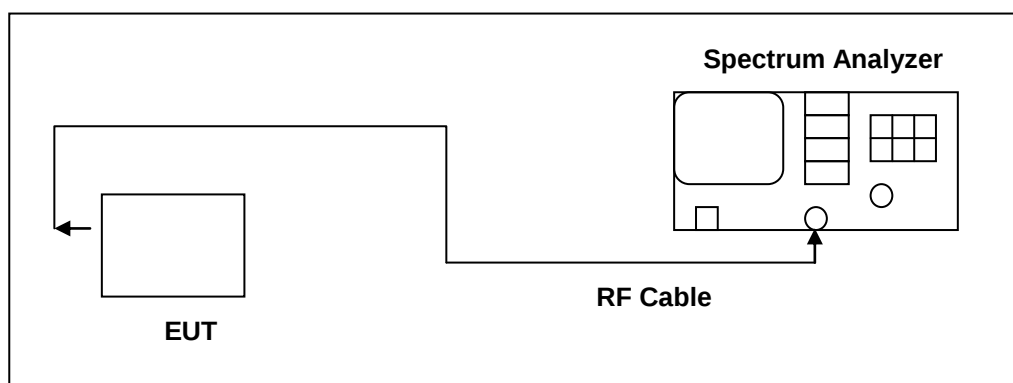
According FCC KDB 662911 D01 v02r01 – for power spectral density measurements on IEEE802.11 devices,

* MIMO mode : Directional Gain = $10 \cdot \log\{[10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20}]^2 / NANT\}$ = 7.67 dBi > 6dBi

* CDD/Beamforming on mode power limit shall be reduced = $17 - 1.67 = 15.33$ dBm/MHz (5.150 ~ 5.250 GHz)

* CDD/Beamforming on mode power limit shall be reduced = $30 - 1.67 = 28.33$ dBm/500KHz (5.725 ~ 5.850 GHz)

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/19/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

**■ Test Procedure**

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r04, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz (5725 ~ 5850MHz use 100 kHz)
VBW	3 MHz (5725 ~ 5850MHz use 300 kHz)
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/100\text{kHz})$ to the measured result.	

Test Result

Test Item	Conducted power spectral density			
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	9.401	0.184	9.585	≤ 15.33
5200	10.349	0.184	10.533	
5240	10.410	0.184	10.594	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	9.021	0.184	9.205	≤ 15.33
5200	10.143	0.184	10.327	
5240	10.098	0.184	10.282	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	9.997	0.184	10.181	≤ 15.33
5200	10.566	0.184	10.750	
5240	10.587	0.184	10.771	

Test Item	Power Spectral Density and E.I.R.P. Spectral Density		
Test Mode	Mode 2: IEEE 802.11a Continuous TX mode		
Frequency (MHz)	ANT-0+1+2		Limit
	(dBm/MHz)		
5180.0	14.447		≤ 15.33
5200.0	15.311		
5240.0	15.325		

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

Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.94	0.184	12.12	≤ 28.33
5785	4.60	0.184	11.77	
5825	3.84	0.184	11.01	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.45	0.184	11.62	≤ 28.33
5785	4.25	0.184	11.42	
5825	3.45	0.184	10.62	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.90	0.184	12.07	≤ 28.33
5785	4.88	0.184	12.05	
5825	4.25	0.184	11.43	
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5745	16.71			≤ 28.33
5785	16.53			
5825	15.80			

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

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

Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	8.340	0.505	8.845	≤ 15.33
5200	10.180	0.505	10.685	
5240	9.980	0.505	10.485	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	8.052	0.505	8.557	≤ 15.33
5200	9.801	0.505	10.306	
5240	9.702	0.505	10.207	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	8.569	0.505	9.074	≤ 15.33
5200	10.011	0.505	10.516	
5240	10.297	0.505	10.802	

Test Item	Power Spectral Density and E.I.R.P. Spectral Density		
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode		
Frequency (MHz)	ANT-0+1+2		Limit
	(dBm/MHz)		
5180.0	13.601		≤ 15.33
5200.0	15.276		
5240.0	15.276		

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

Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.83	0.505	12.33	≤ 28.33
5785	4.39	0.505	11.89	
5825	4.24	0.505	11.73	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.76	0.505	12.25	≤ 28.33
5785	4.68	0.505	12.18	
5825	3.28	0.505	10.77	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.32	0.505	11.82	≤ 28.33
5785	4.07	0.505	11.56	
5825	4.35	0.505	11.84	
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5745	16.91			≤ 28.33
5785	16.65			
5825	16.25			

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

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

Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	0.066	0.909	0.975	≤ 15.33
5230	7.933	0.909	8.842	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-0.390	0.909	0.519	≤ 15.33
5230	7.344	0.909	8.253	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-0.669	0.909	0.240	≤ 15.33
5230	8.240	0.909	9.149	

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

Test Item	Conducted power spectral density	
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode	
Frequency (MHz)	ANT-0+1+2	Limit
	(dBm/MHz)	
5190.0	5.360	≤ 15.33
5230.0	13.535	

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

Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	1.72	0.909	9.62	≤ 28.33
5795	1.88	0.909	9.78	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	1.57	0.909	9.47	≤ 28.33
5795	1.20	0.909	9.10	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	0.81	0.909	8.71	≤ 28.33
5795	0.99	0.909	8.89	
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5755	14.05			≤ 28.33
5795	14.05			

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

Conversion ratio = $10 \cdot \log(500\text{k}/100\text{k})$

Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-3.759	0.164	-3.595	≤ 15.33
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-3.430	0.164	-3.266	≤ 15.33
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-3.644	0.164	-3.480	≤ 15.33
Frequency (MHz)	ANT-0+1+2			Limit
	(dBm/MHz)			
5210.0	1.326			≤ 15.33

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



Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-3.03	0.164	4.12	≤ 28.33
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-3.02	0.164	4.13	≤ 28.33
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-3.61	0.164	3.54	≤ 28.33
Frequency (MHz)	ANT-0+1+2			
	Calculated (dBm/500KHz)			Limit (dBm/MHz)
5775	8.74			≤ 28.33

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

Conversion ratio = $10*\log(500k/100k)$

Beamforming on

Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.861	0.949	6.810	≤ 15.33
5200	9.100	0.949	10.049	
5240	9.142	0.949	10.091	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.122	0.949	6.071	≤ 15.33
5200	9.958	0.949	10.907	
5240	9.527	0.949	10.476	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.368	0.949	7.317	≤ 15.33
5200	9.540	0.949	10.489	
5240	9.929	0.949	10.878	

Test Item	Power Spectral Density and E.I.R.P. Spectral Density		
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode		
Frequency (MHz)	ANT-0+1+2		Limit
	(dBm/MHz)		
5180.0	11.534		≤ 15.33
5200.0	15.267		
5240.0	15.265		

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

Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	4.66	0.949	12.60	≤ 28.33
5785	4.18	0.949	12.12	
5825	3.89	0.949	11.83	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	3.28	0.949	11.22	≤ 28.33
5785	4.56	0.949	12.50	
5825	4.47	0.949	12.40	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	3.47	0.949	11.41	≤ 28.33
5785	1.90	0.949	9.84	
5825	1.45	0.949	9.39	
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5745	16.56			≤ 28.33
5785	16.41			
5825	16.16			

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

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

Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-2.885	2.583	-0.302	≤ 15.33
5230	7.581	2.583	10.164	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-1.480	2.583	1.103	≤ 15.33
5230	7.878	2.583	10.461	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-5.002	2.583	-2.419	≤ 15.33
5230	8.299	2.583	10.882	

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

Test Item	Conducted power spectral density	
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode	
Frequency (MHz)	ANT-0+1+2	Limit
	(dBm/MHz)	
5190.0	4.463	≤ 15.33
5230.0	15.283	

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



Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	0.29	2.583	9.86	≤ 28.33
5795	0.65	2.583	10.22	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	0.85	2.583	10.42	≤ 28.33
5795	0.82	2.583	10.39	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-0.71	2.583	8.87	≤ 28.33
5795	0.80	2.583	10.38	
Frequency (MHz)	ANT-0+1+2			Limit (dBm/500KHz)
	Calculated (dBm/500KHz)			
5755	14.53			≤ 28.33
5795	15.10			

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

Conversion ratio = $10 \cdot \log(500\text{k}/100\text{k})$

Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-6.391	3.944	-2.447	≤ 15.33
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-5.800	3.944	-1.856	≤ 15.33
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-6.193	3.944	-2.249	≤ 15.33
Frequency (MHz)	ANT-0+1+2			Limit
	(dBm/MHz)			
5210.0	2.594			≤ 15.33

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

Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-2.43	3.944	8.51	≤ 28.33
Frequency (MHz)	ANT-1			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-1.56	3.944	9.37	≤ 28.33
Frequency (MHz)	ANT-2			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/MHz)
5775	-4.44	3.944	6.49	≤ 28.33
Frequency (MHz)	ANT-0+1+2			
	Calculated (dBm/500KHz)			Limit (dBm/MHz)
5775	13.05			≤ 28.33

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

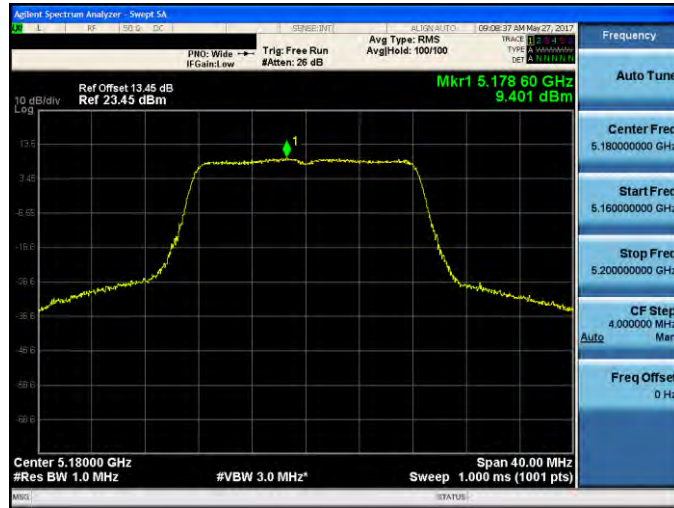
Conversion ratio = 10*Log(500k/100k)



■ Test Graphs

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

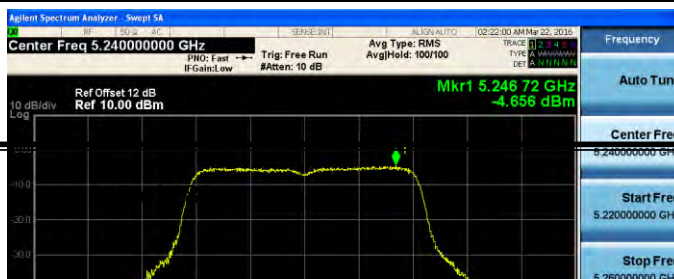
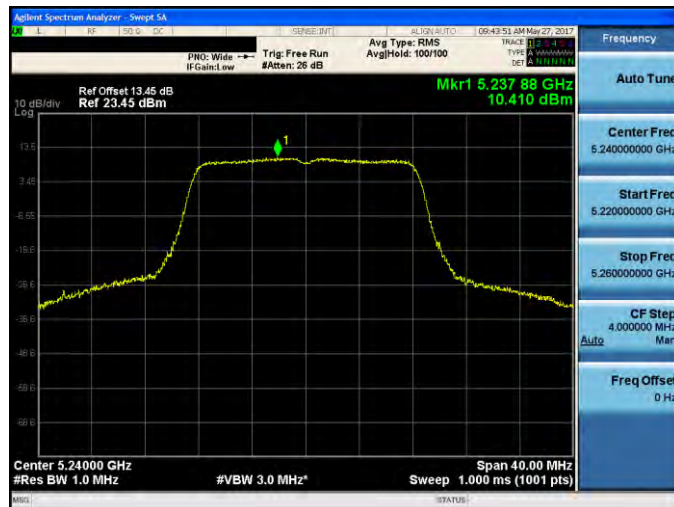
5180 MHz



5200 MHz

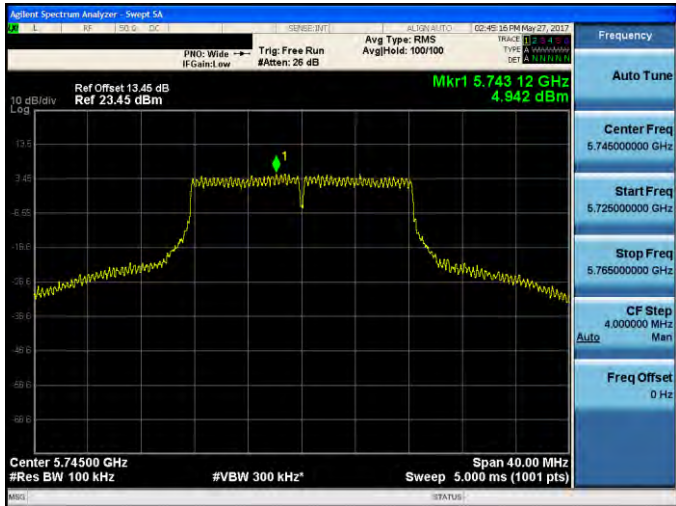
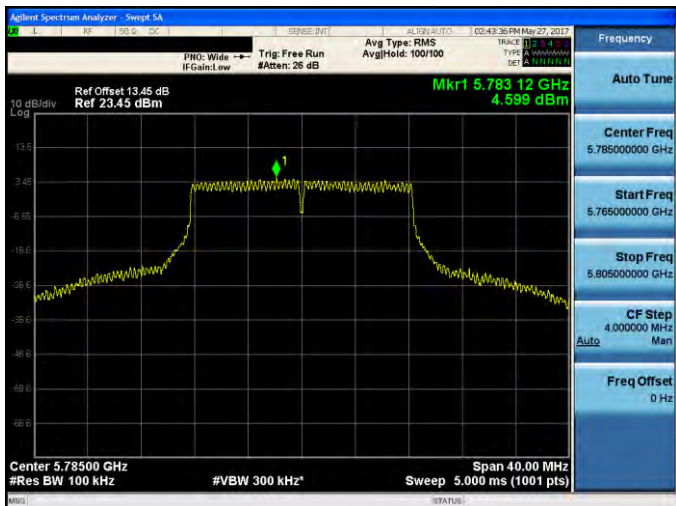
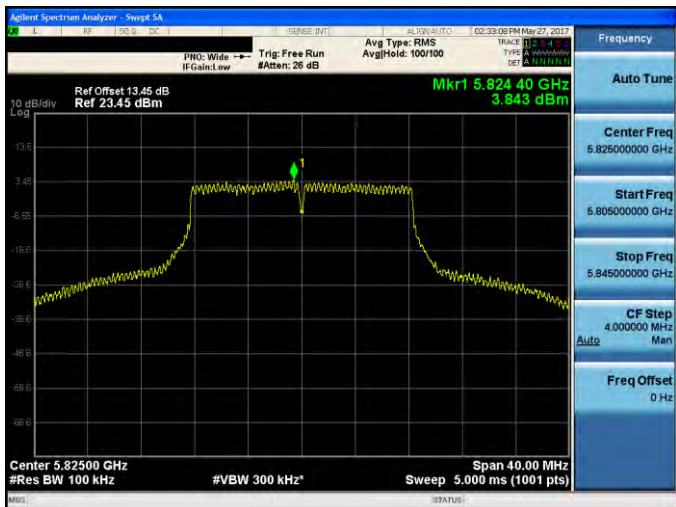


5240 MHz



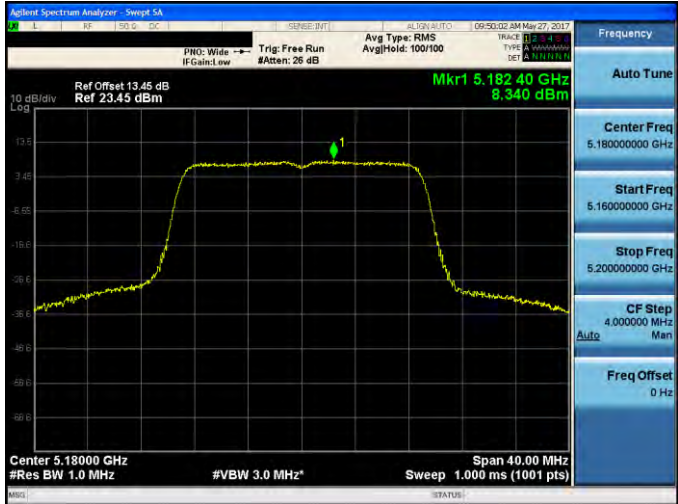


Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0

5745 MHz	
5785 MHz	
5825 MHz	

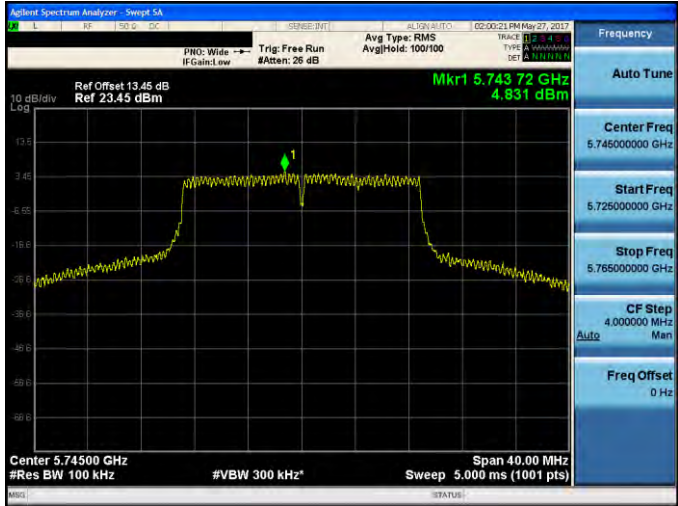
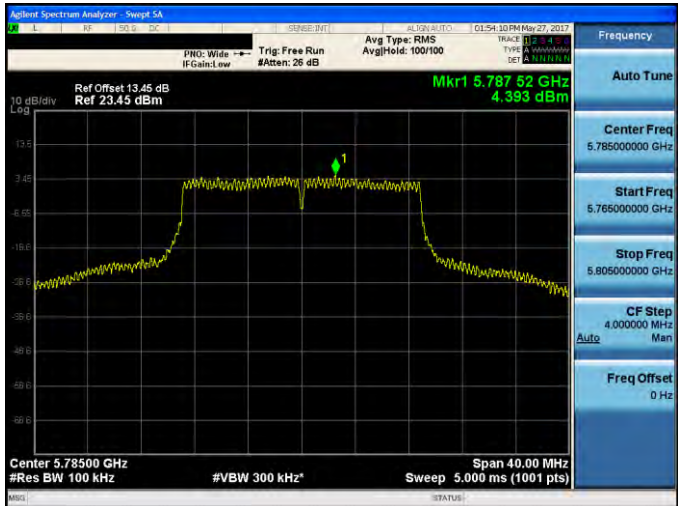
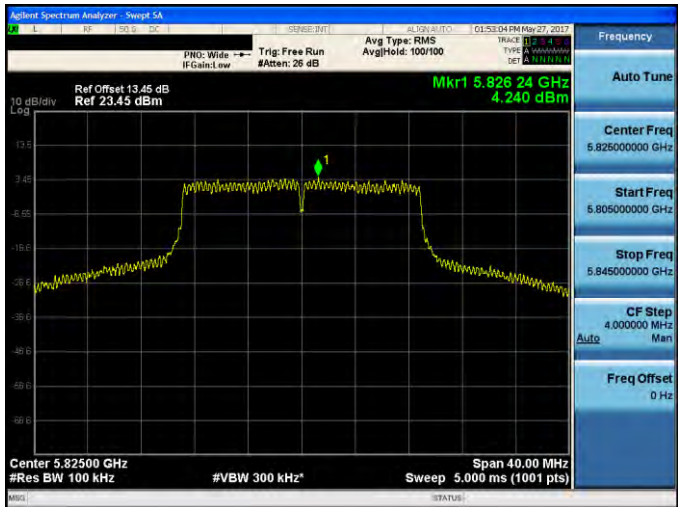


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-0

5180 MHz	
5200 MHz	
5240 MHz	



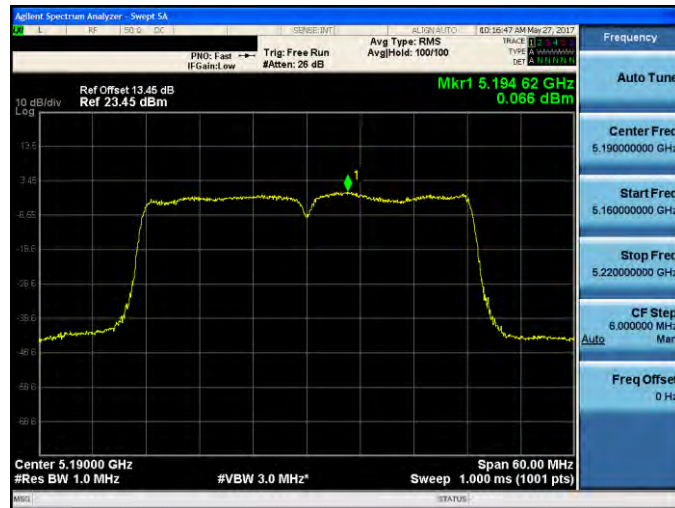
Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-0

5745 MHz	
5785 MHz	
5825 MHz	



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

5190 MHz

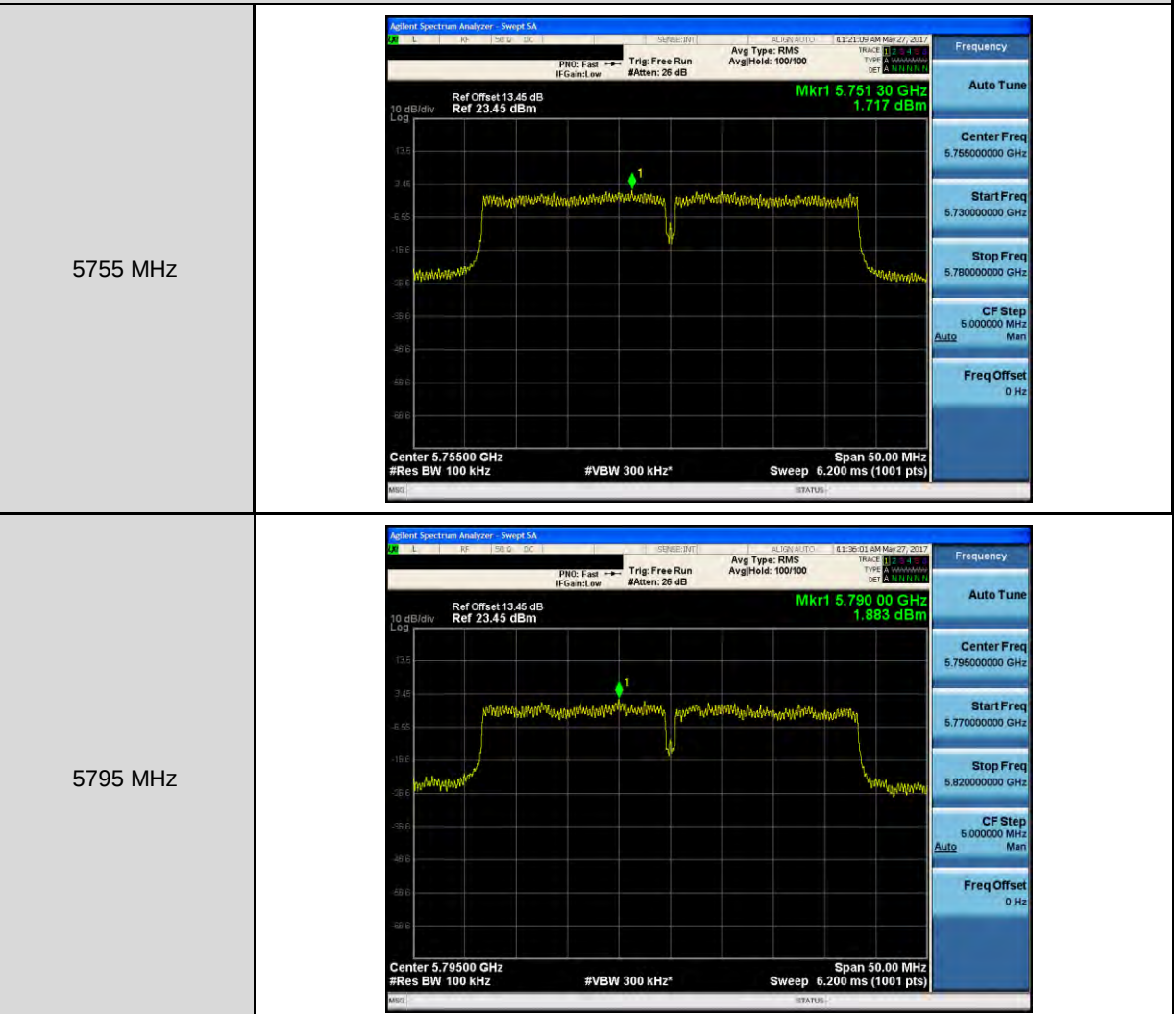


5230 MHz





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





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

5210 MHz



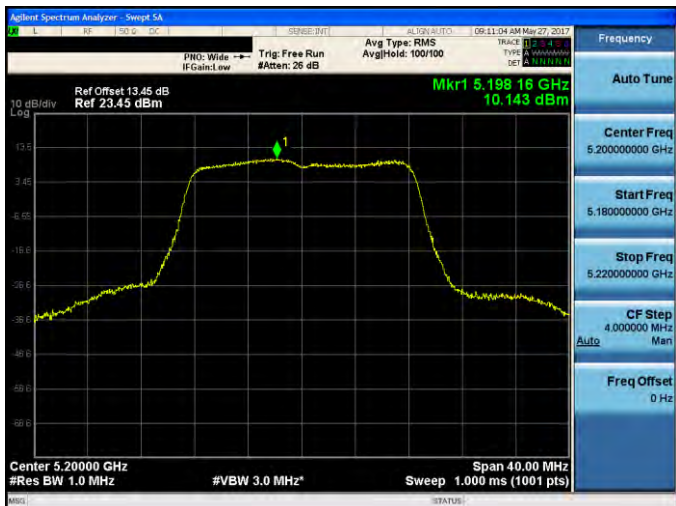
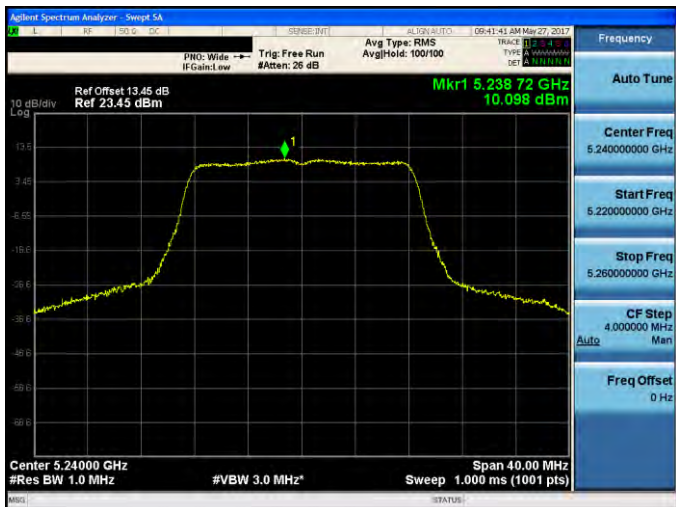
Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-0

5775 MHz





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

5180 MHz	
5200 MHz	
5240 MHz	

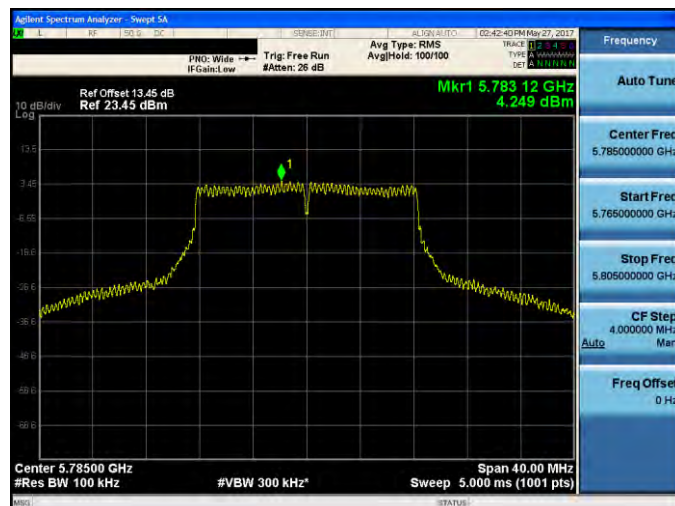


Mode 2: IEEE 802.11a Continuous TX mode_ ANT-1

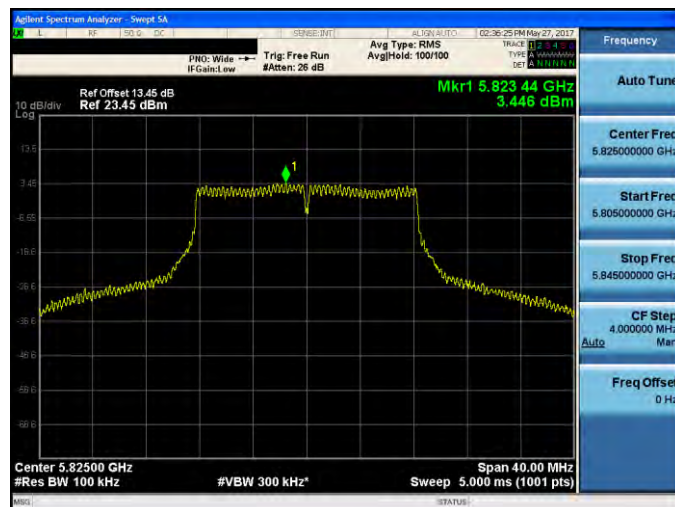
5745 MHz



5785 MHz



5825 MHz



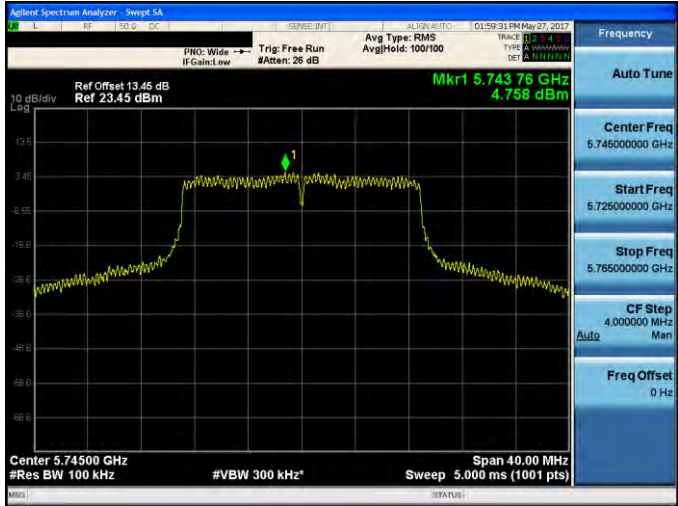
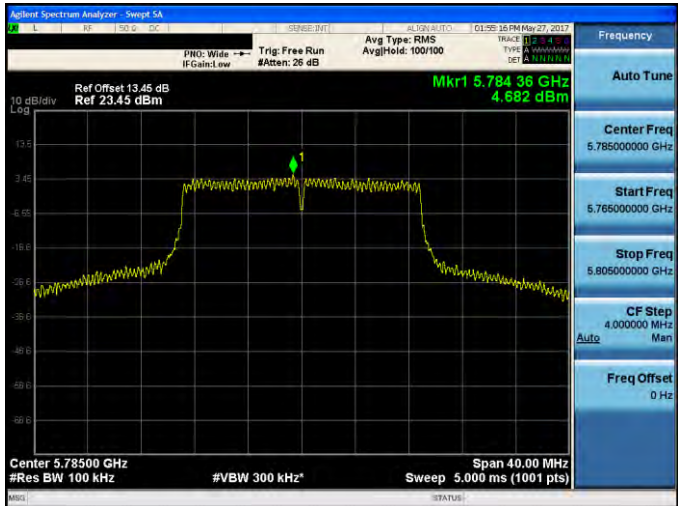


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-1

5180 MHz	
5200 MHz	
5240 MHz	

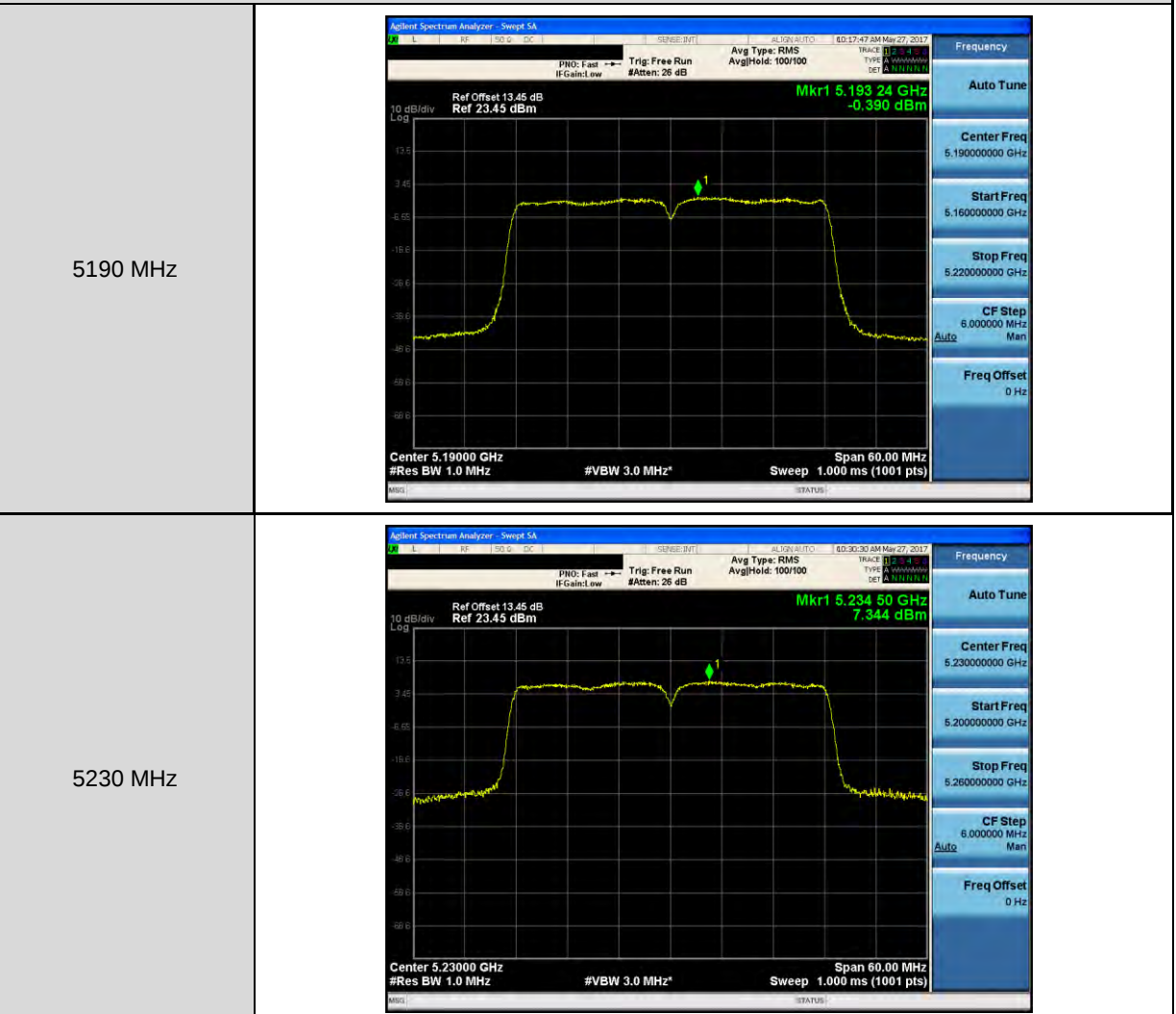


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-1

5745 MHz	 Ref Offset 13.45 dB Ref 23.45 dBm Mkr1 5.74376 GHz 4.758 dBm Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz* Sweep 5.000 ms (1001 pts) Frequency Auto Tune Center Freq 5.745000000 GHz Start Freq 5.725000000 GHz Stop Freq 5.765000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Ref Offset 13.45 dB Ref 23.45 dBm Mkr1 5.78436 GHz 4.682 dBm Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz* Sweep 5.000 ms (1001 pts) Frequency Auto Tune Center Freq 5.785000000 GHz Start Freq 5.765000000 GHz Stop Freq 5.805000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Ref Offset 13.45 dB Ref 23.45 dBm Mkr1 5.82312 GHz 3.278 dBm Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz* Sweep 5.000 ms (1001 pts) Frequency Auto Tune Center Freq 5.825000000 GHz Start Freq 5.805000000 GHz Stop Freq 5.845000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz

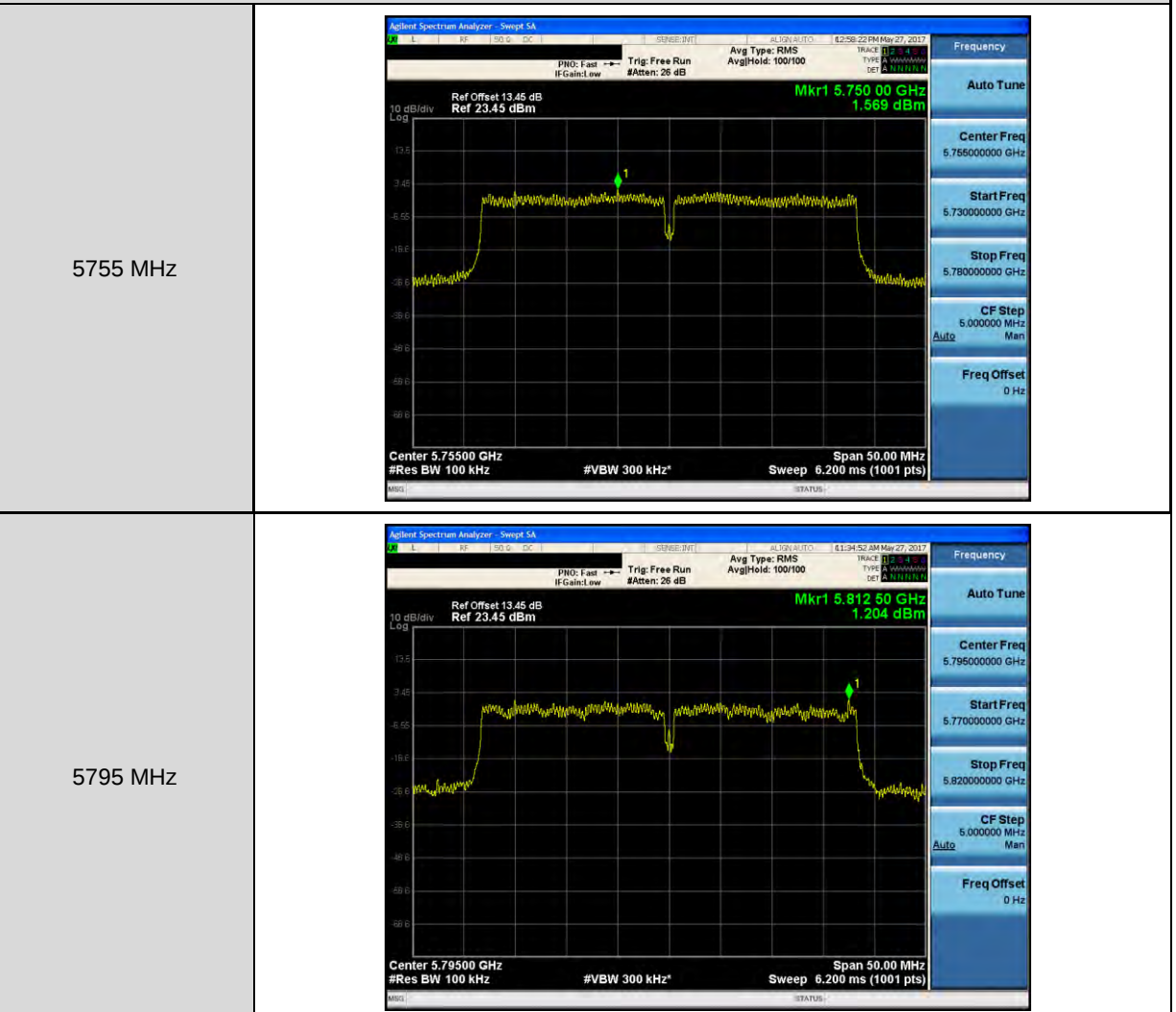


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-1





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





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

5210 MHz



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

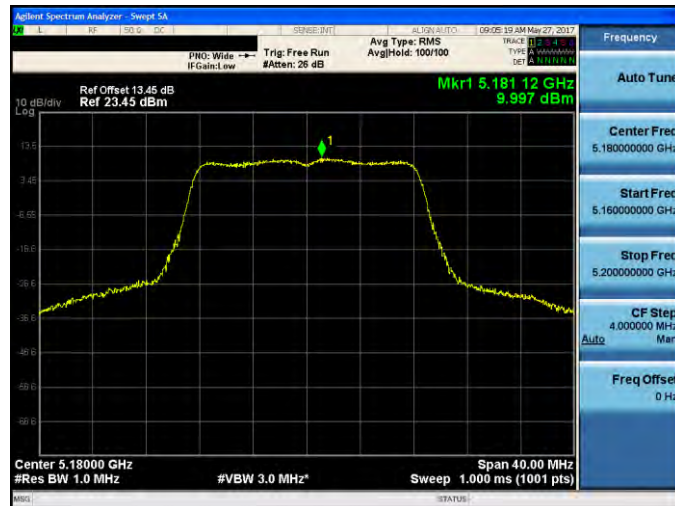
5775 MHz





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

5180 MHz



5200 MHz

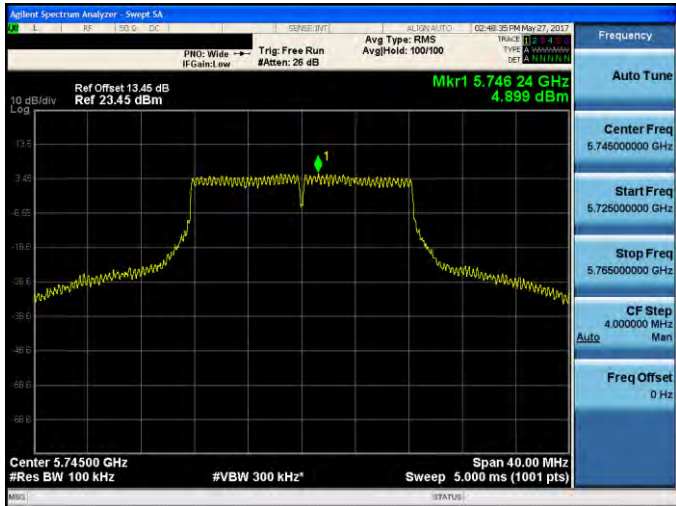
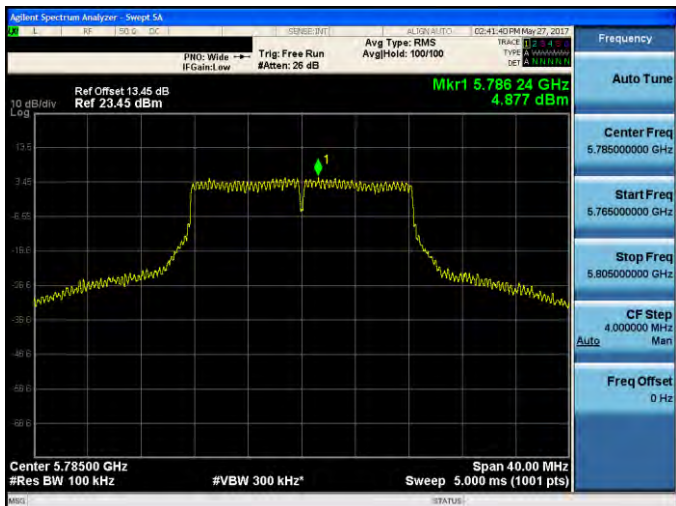
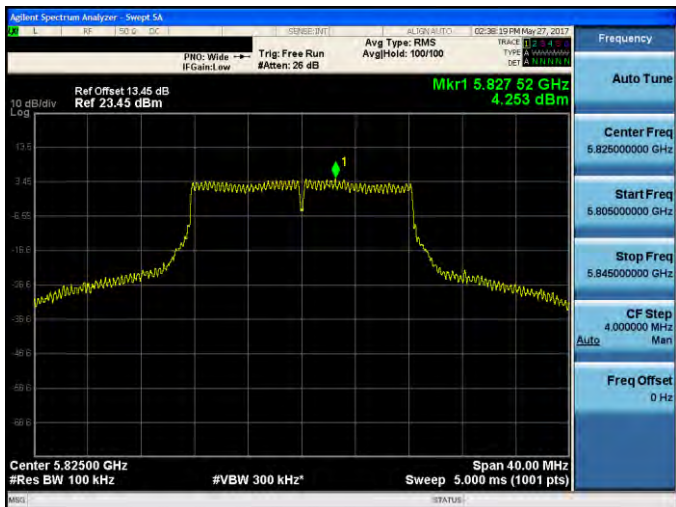


5240 MHz



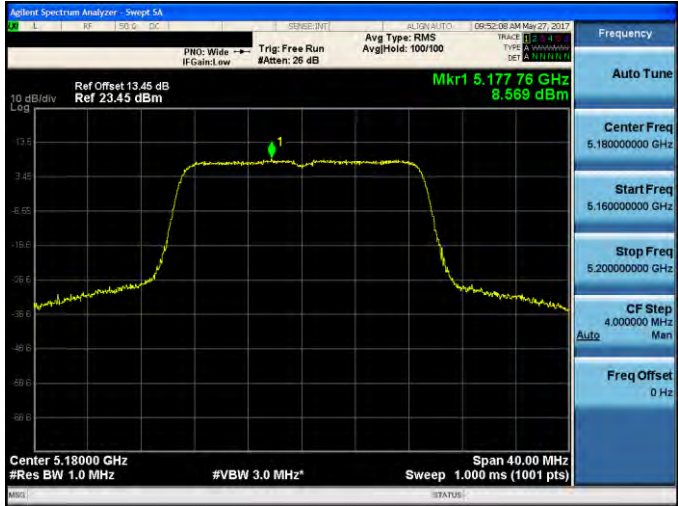
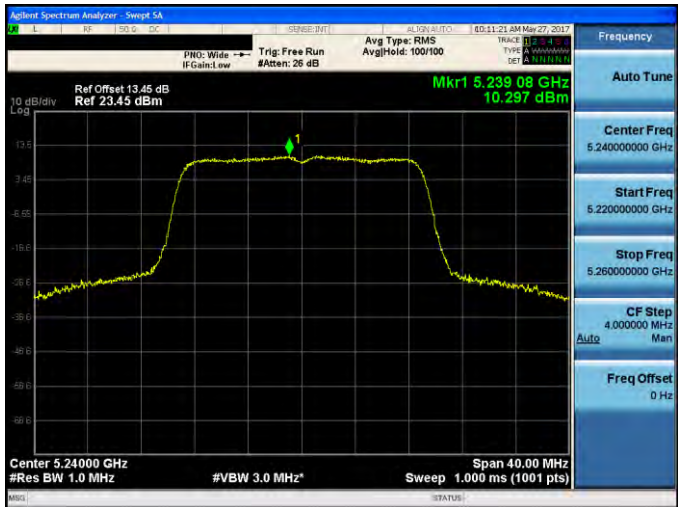


Mode 2: IEEE 802.11a Continuous TX mode_ ANT-2

5745 MHz	
5785 MHz	
5825 MHz	

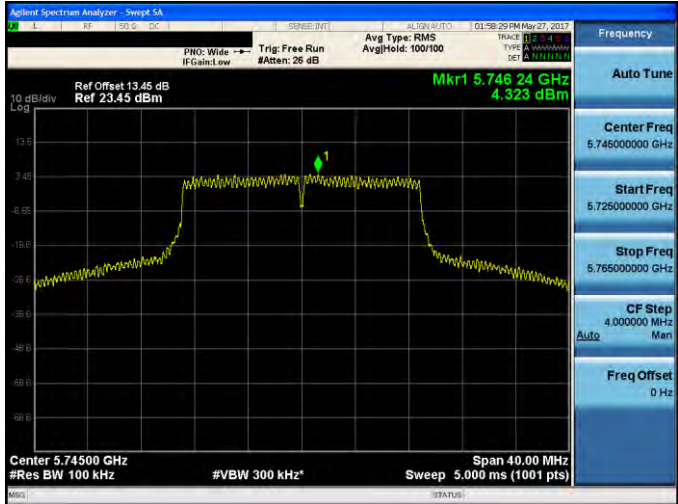
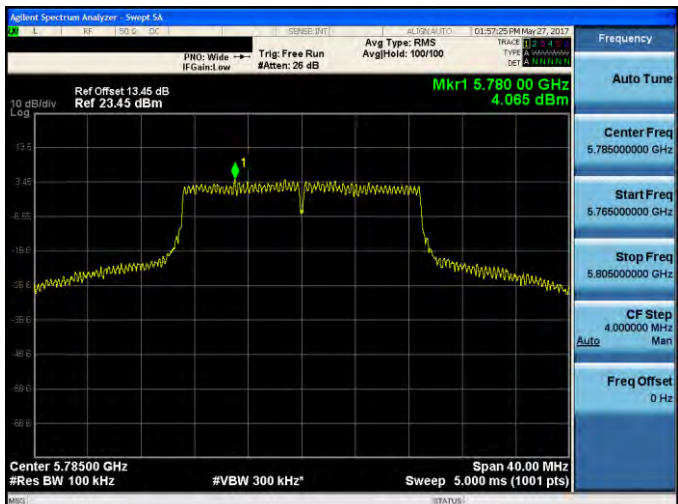
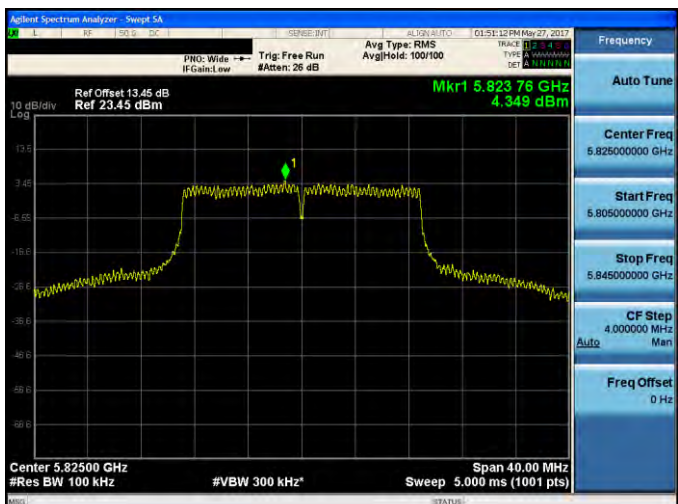


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-2

5180 MHz	
5200 MHz	
5240 MHz	

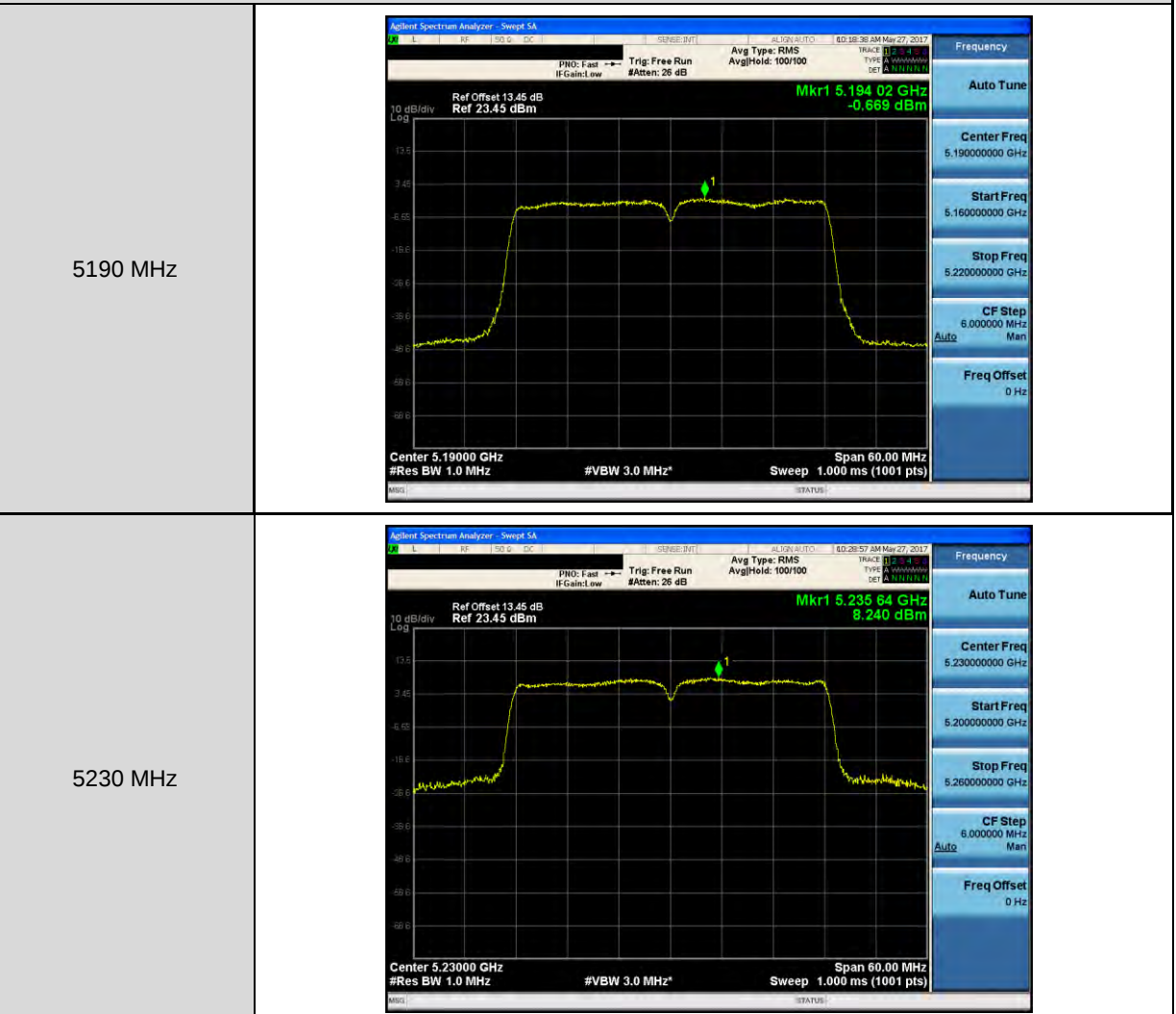


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-2

5745 MHz	
5785 MHz	
5825 MHz	

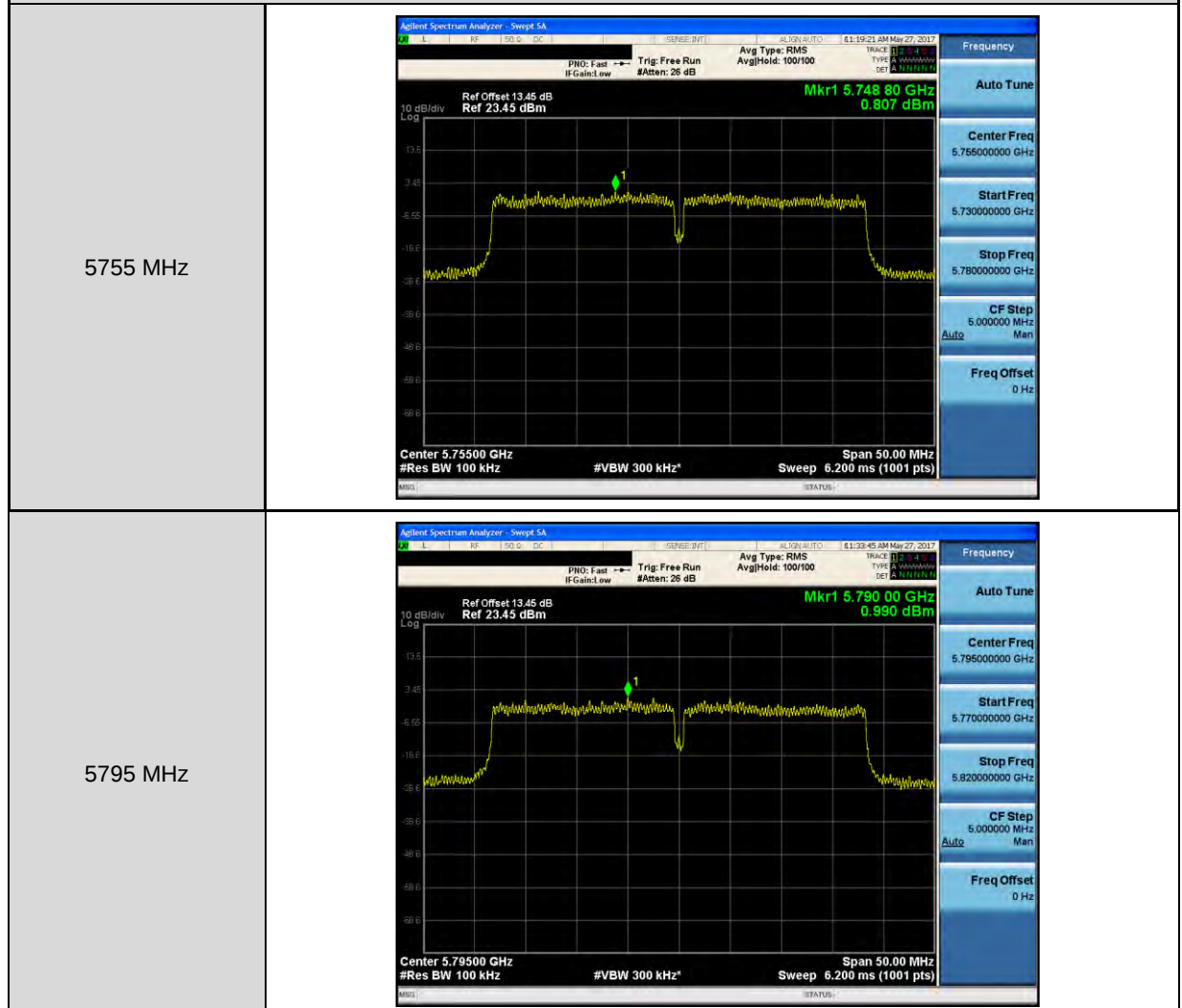


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-2



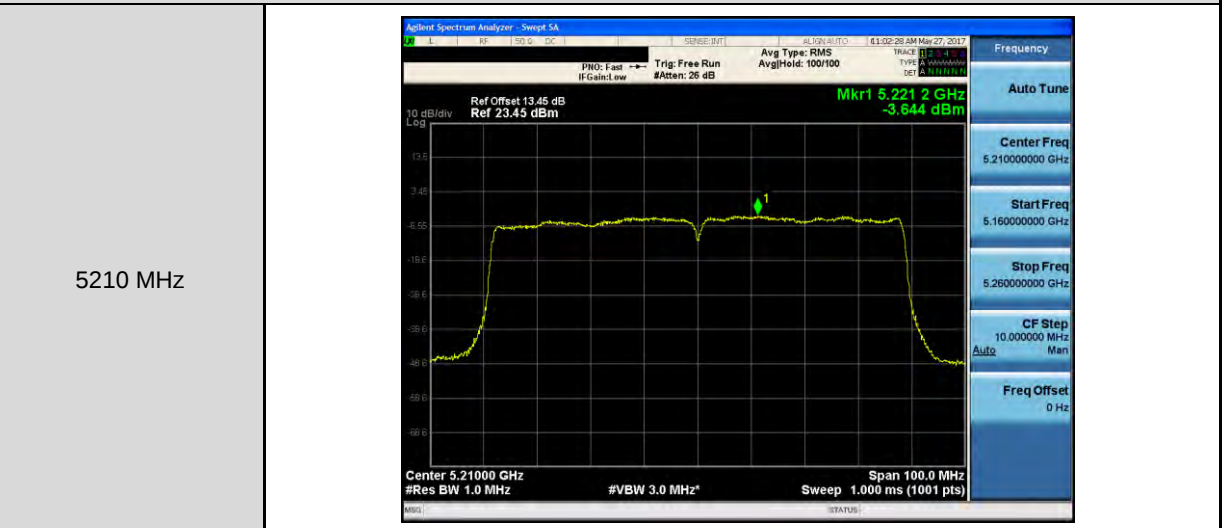


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-2





Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-2



Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-2

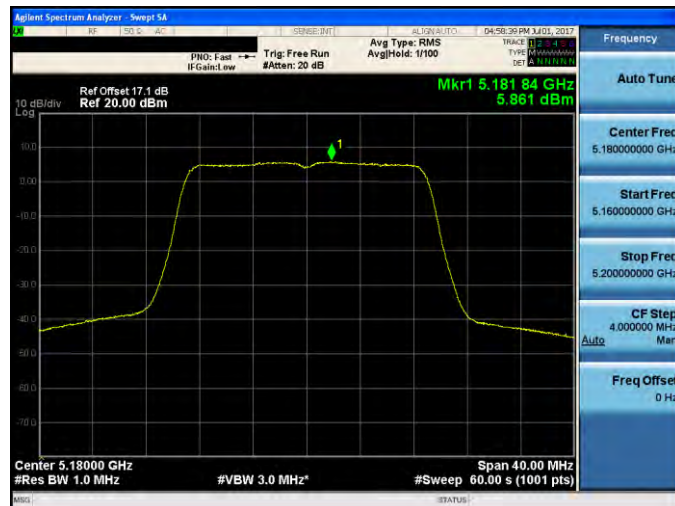




Beamforming on

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

5180 MHz



5200 MHz

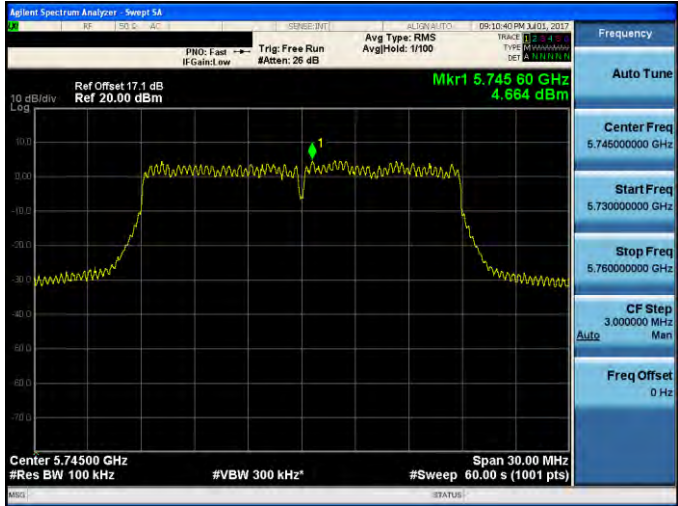
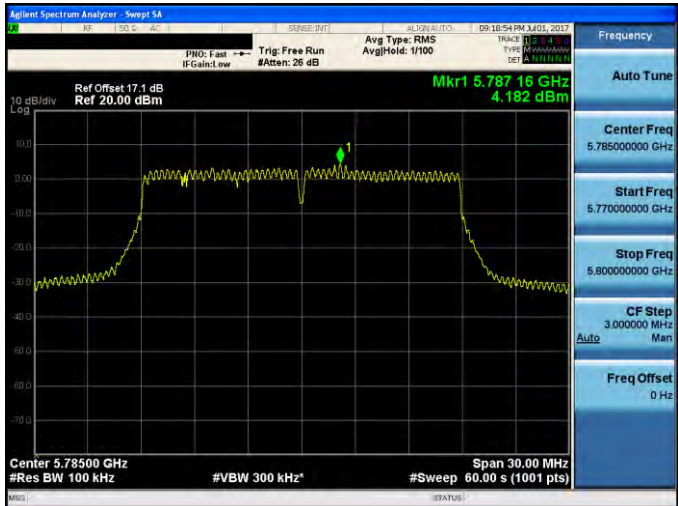
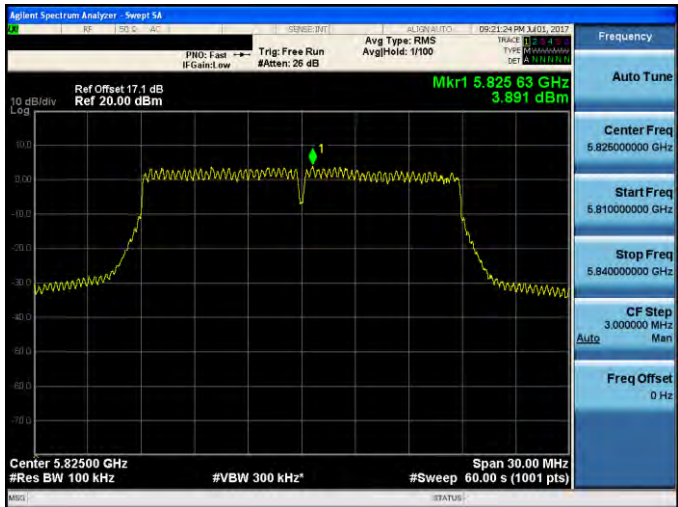


5240 MHz



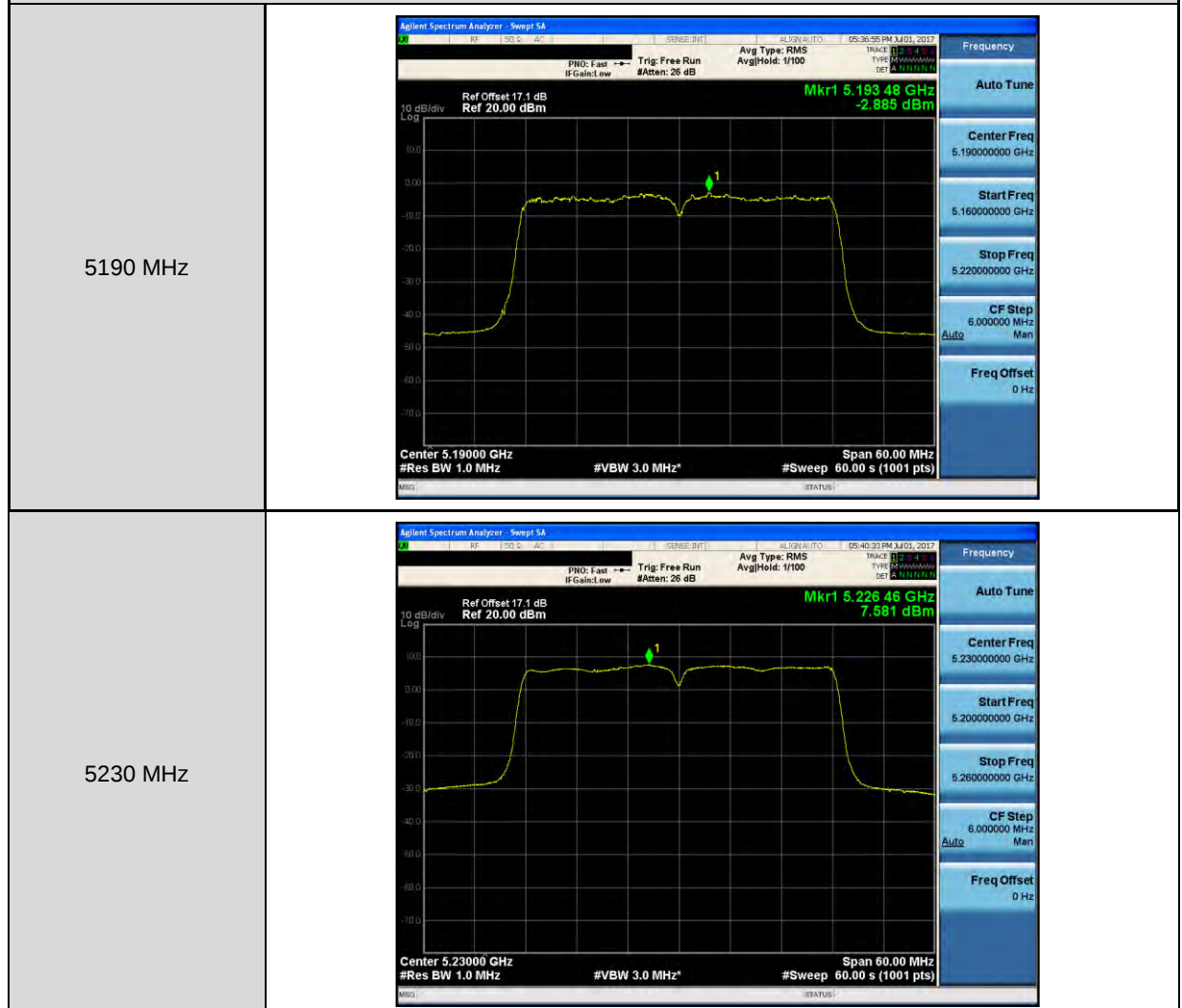


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-0

5745 MHz	 Ref Offset 17.1 dB Ref 20.00 dBm Mkr1 5.745 60 GHz 4.664 dBm Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz #Sweep 60.00 s (1001 pts)
5785 MHz	 Ref Offset 17.1 dB Ref 20.00 dBm Mkr1 5.787 16 GHz 4.182 dBm Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz #Sweep 60.00 s (1001 pts)
5825 MHz	 Ref Offset 17.1 dB Ref 20.00 dBm Mkr1 5.825 63 GHz 3.891 dBm Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz #Sweep 60.00 s (1001 pts)

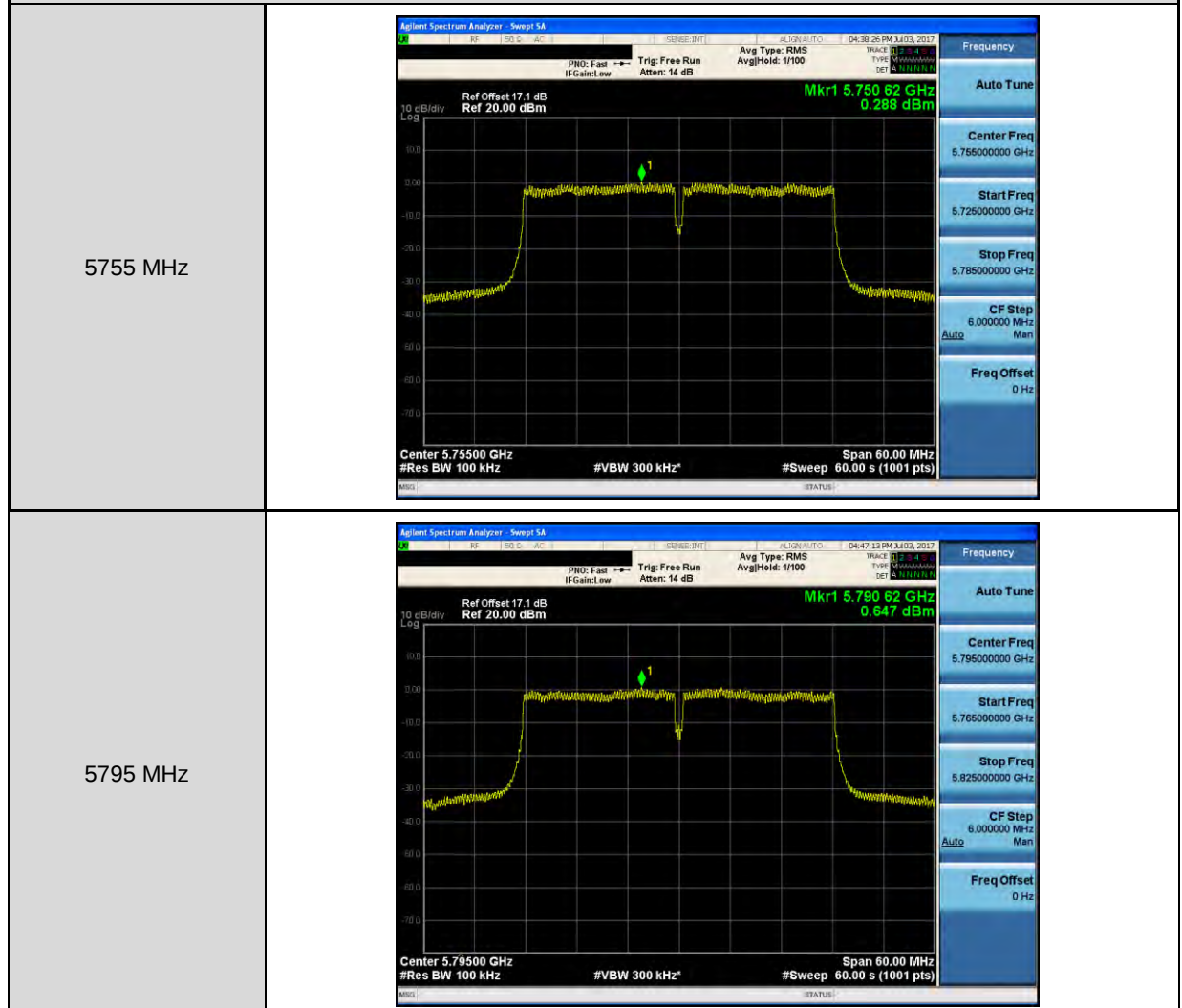


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-0





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





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

5210 MHz



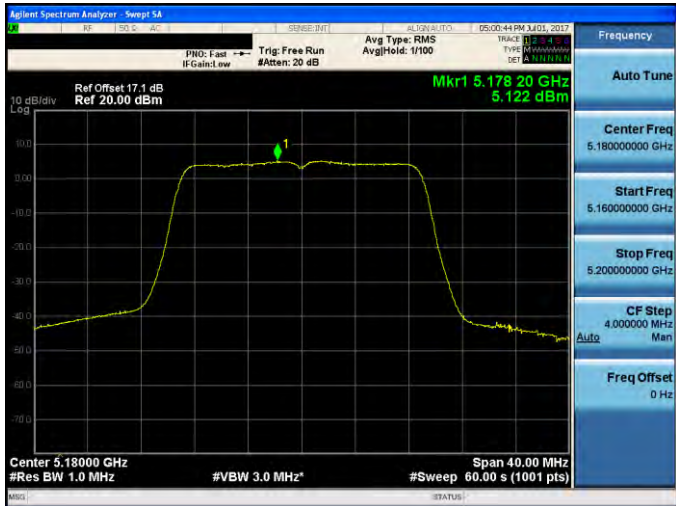
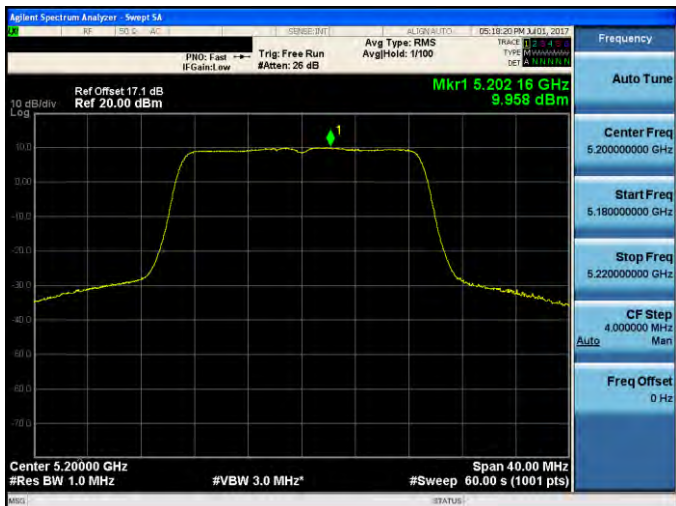
Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-0

5775 MHz



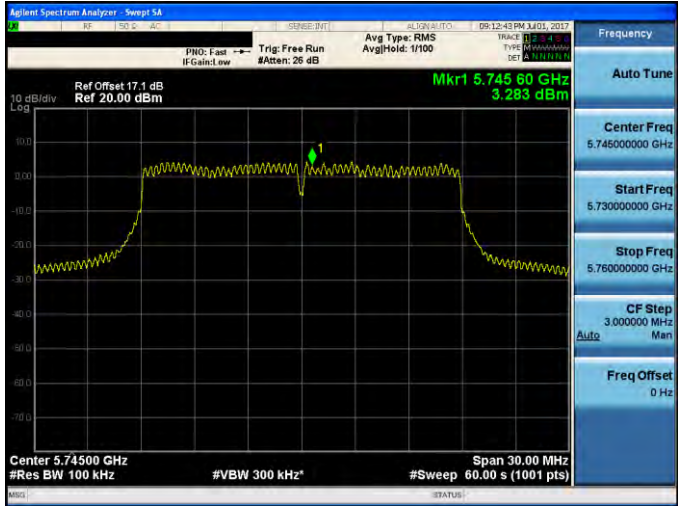
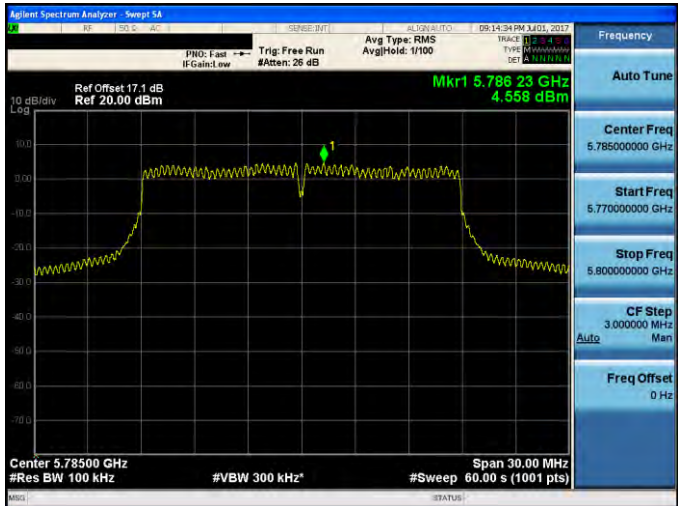


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-1

5180 MHz	
5200 MHz	
5240 MHz	



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

5745 MHz	
5785 MHz	
5825 MHz	

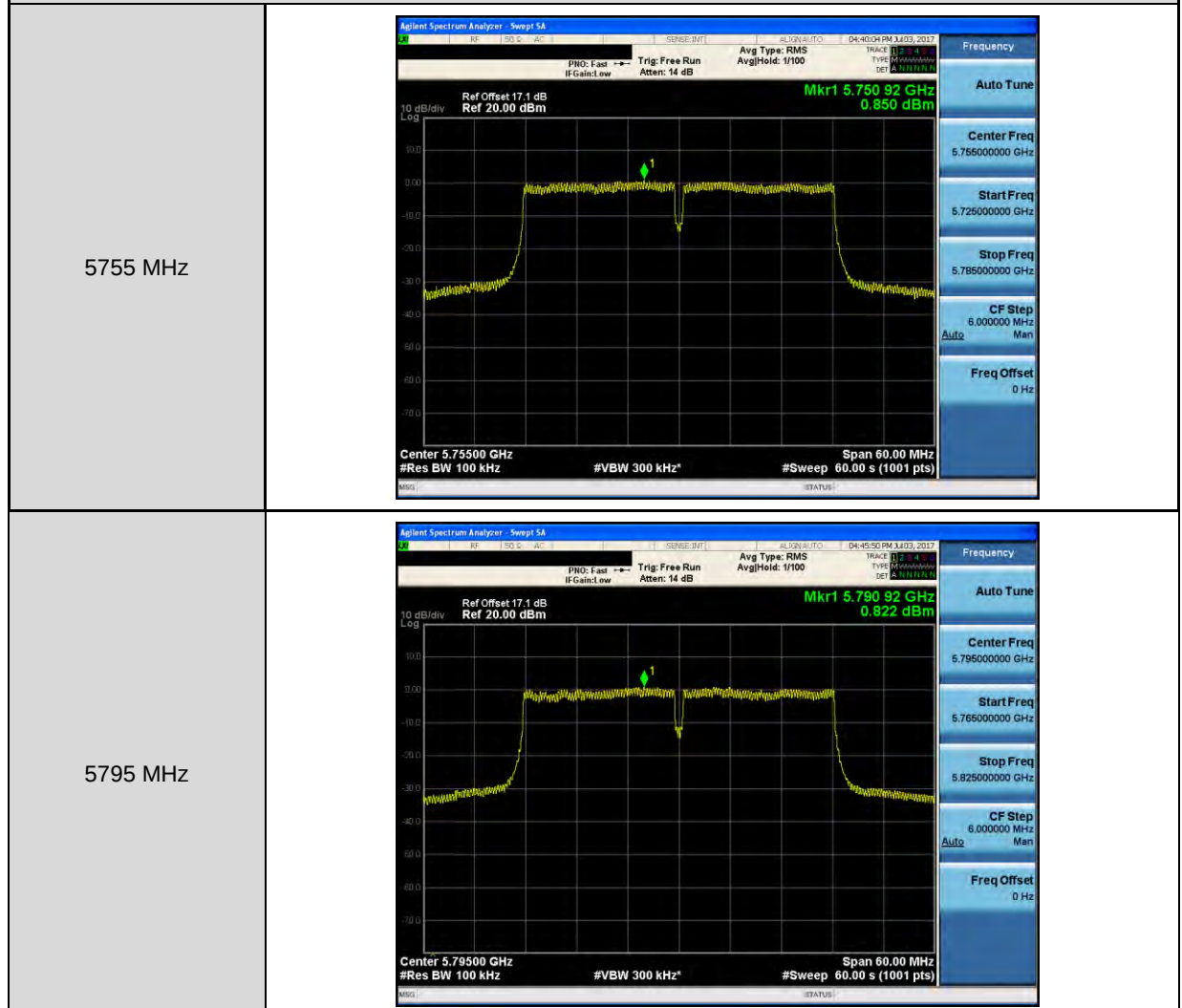


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-1





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





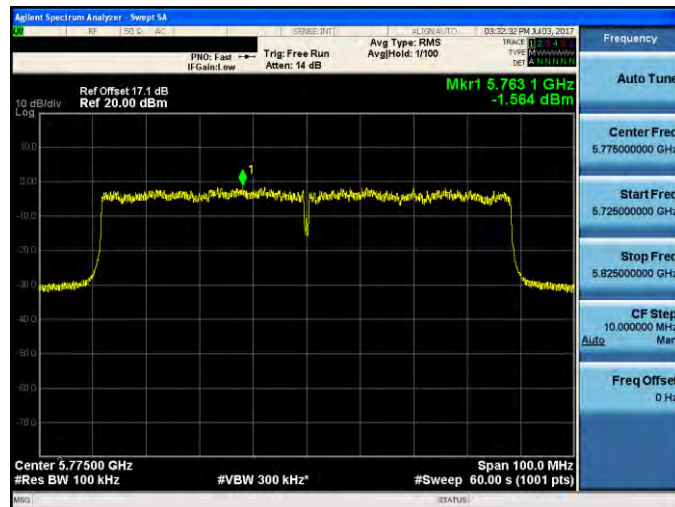
Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-1

5210 MHz



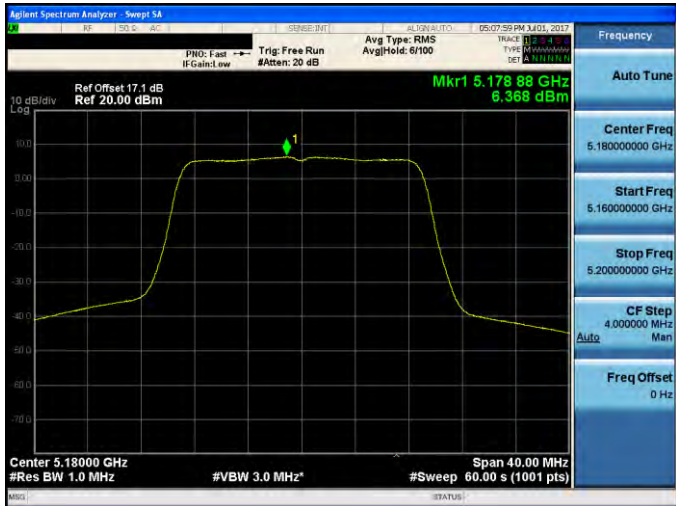
Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-1

5775 MHz





Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-2

5180 MHz	
5200 MHz	
5240 MHz	

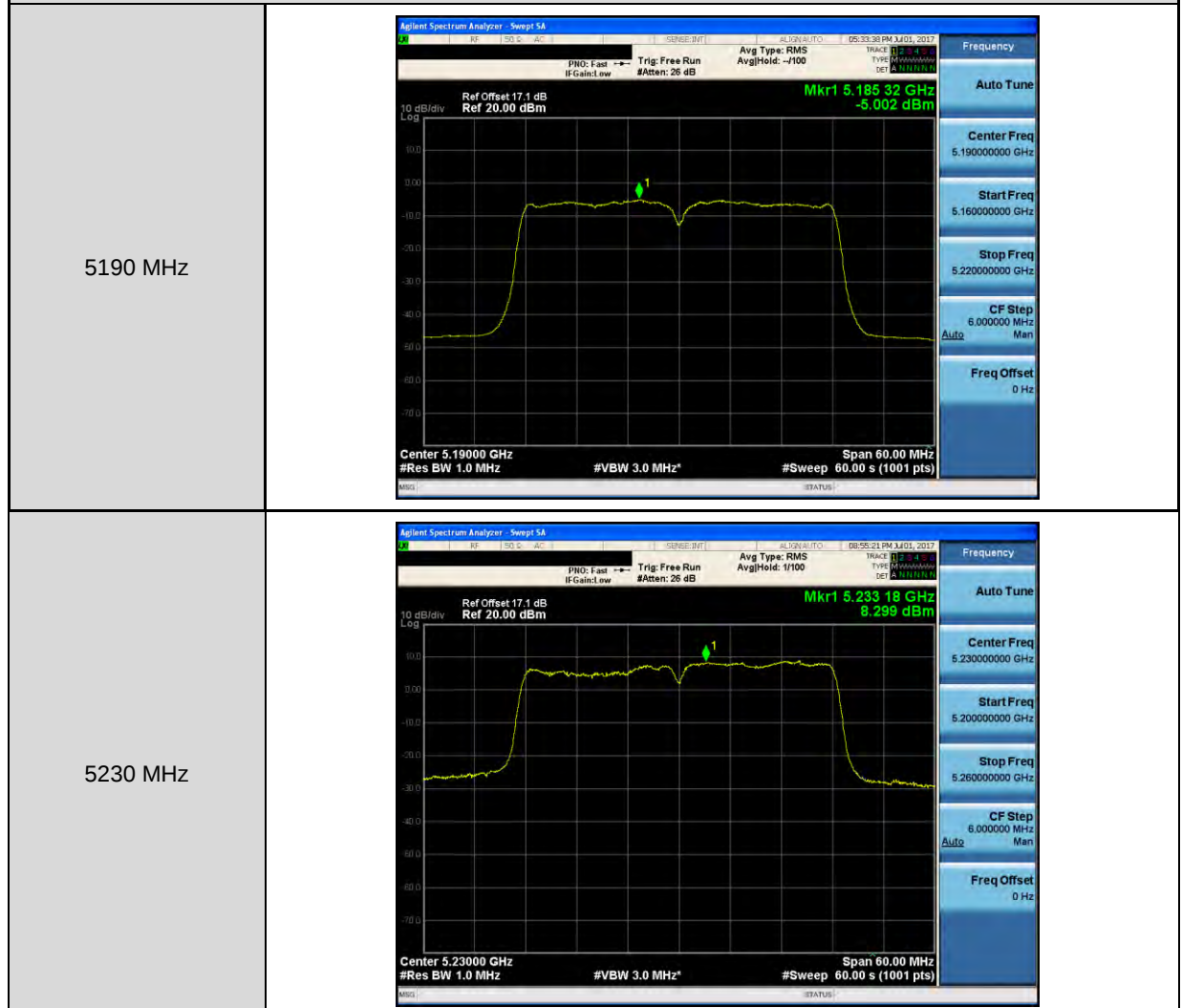


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode _ ANT-2

5745 MHz	
5785 MHz	
5825 MHz	

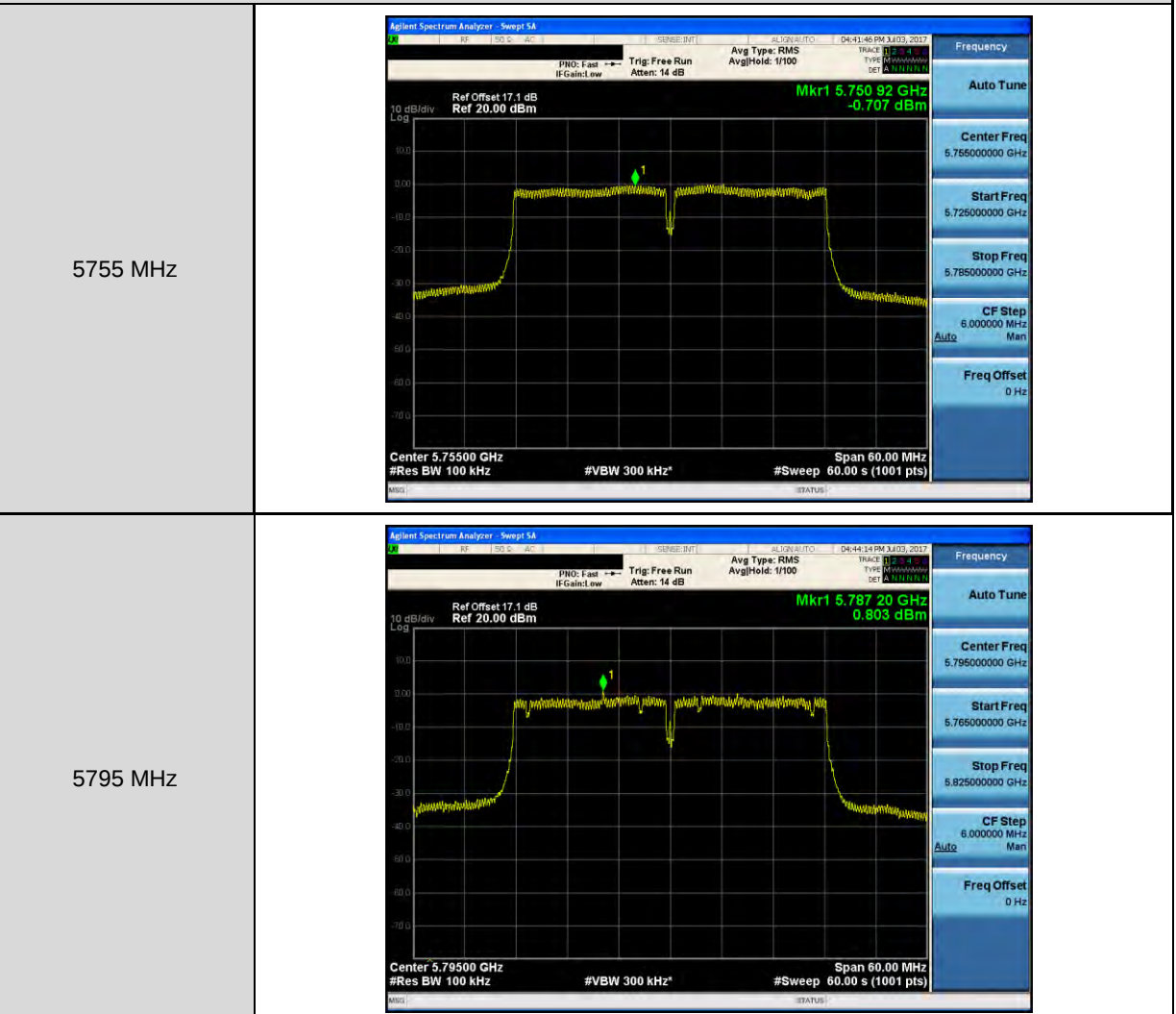


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-2



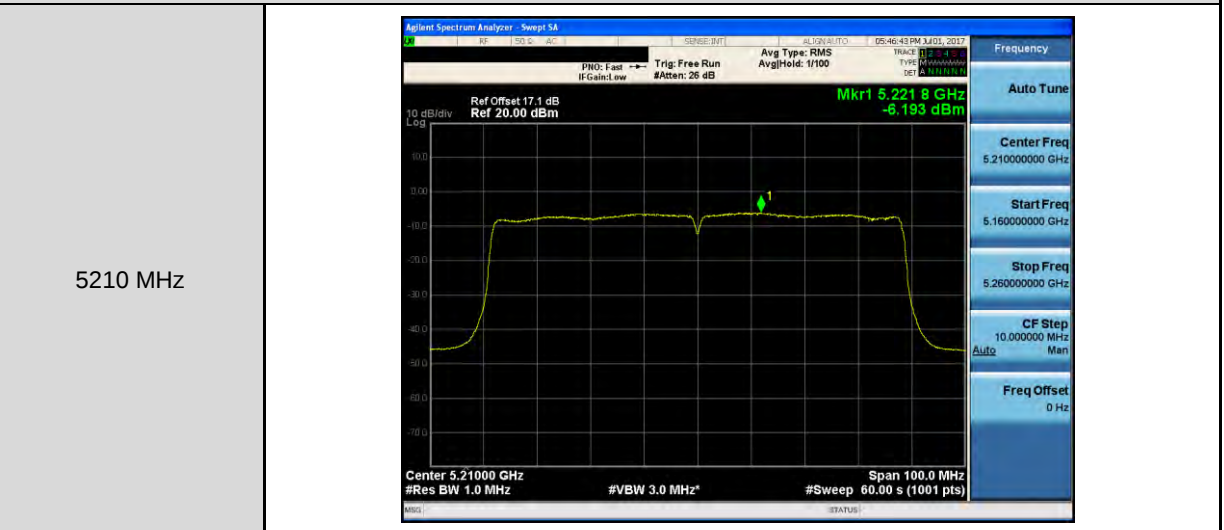


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-2

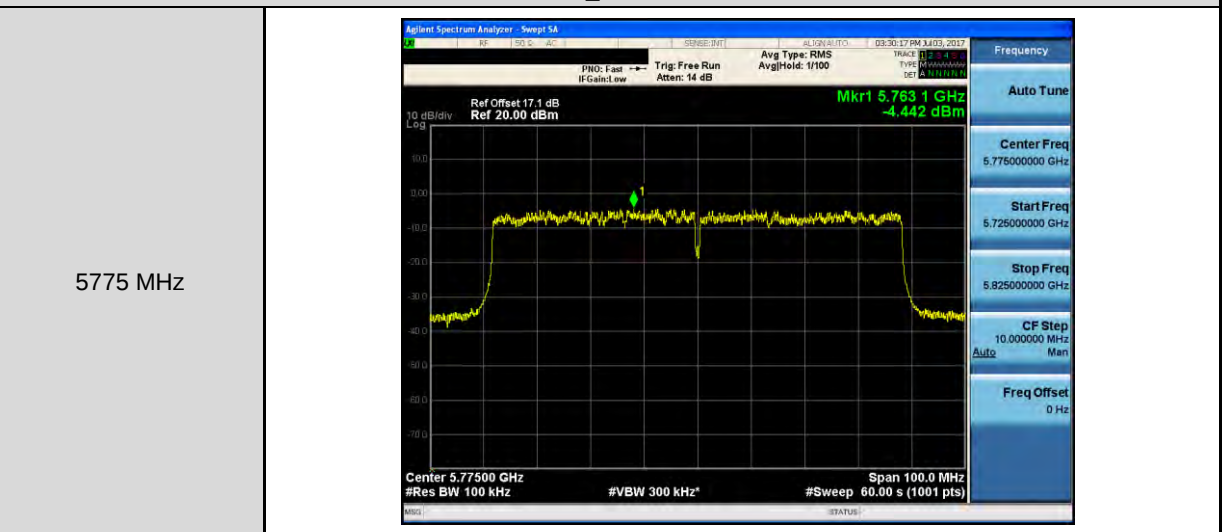




Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-2



Mode 5: IEEE 802.11ac 80MHz Continuous TX mode _ANT-2

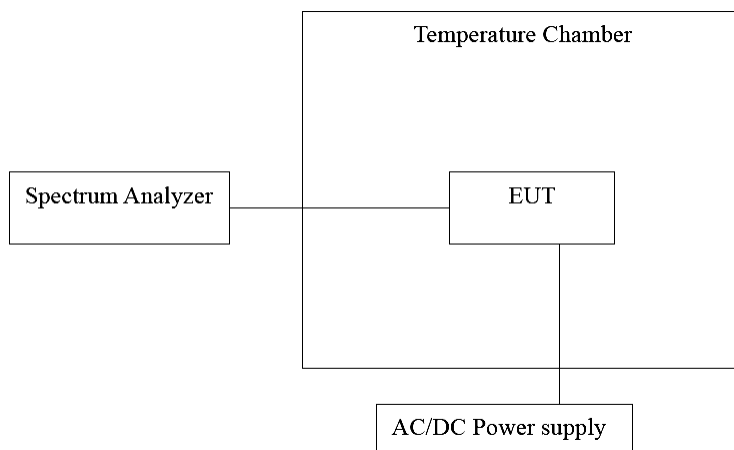


4.8. Frequency Stability Measurement

■ Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	08/08/2016	1 year
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/17/2017	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

1. The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.



■ Test Result

Temperature Variations

Test Item	Frequency Stability					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5199.971	-29000	-5.577	Pass
	10		5199.9883	-11700	-2.250	Pass
	20		5199.9934	-6600	-1.269	Pass
	30		5200.0034	3400	0.654	Pass
	40		5200.013	13000	2.500	Pass
5785 MHz	0	120	5784.9761	-23900	-4.131	Pass
	10		5784.9816	-18400	-3.181	Pass
	20		5784.9919	-8100	-1.400	Pass
	30		5785.0082	8200	1.417	Pass
	40		5785.019	19000	3.284	Pass

Voltage Variations

Test Item	Frequency Stability					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5199.9857	-14300	-2.750	Pass
		120.00	5199.9934	-6600	-1.269	Pass
		102.00	5200.0073	7300	1.404	Pass
5785 MHz	20	138.00	5784.9849	-15100	-2.610	Pass
		120.00	5784.9919	-8100	-1.400	Pass
		102.00	5785.0084	8400	1.452	Pass

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



Beamforming on

Temperature Variations

Test Item	Frequency Stability					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
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5200 MHz	20	138.00	5199.9857	-14300	-2.750	Pass
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		120.00	5784.9919	-8100	-1.400	Pass
		102.00	5785.0084	8400	1.452	Pass

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



4.9. Antenna Requirement

■ Limit

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And According to 15.407 (a), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

■ Antenna Connector Construction

See section 2 – antenna information.

■ Directional Gain Calculated

Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / NANT\}$ = 7.67 dBi > 6dBi

Operate Freq. Band		Directional Gain (dBi)
IEEE 802.11ac 20MHz	U-NII Band I	7.67
	U-NII Band III	7.67
IEEE 802.11ac 40MHz	U-NII Band I	7.67
	U-NII Band III	7.67
IEEE 802.11ac 80MHz	U-NII Band I	7.67
	U-NII Band III	7.67