



5.3. Maximum Conducted Output Power Measurement

Test Mode		Mode 2: IEEE 802.11a Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	6 M	16.25	0.042	16.36	0.043	16.35	0.043	16.21	0.042	22.31	0.170	≤ 30
5200		16.20	0.042	16.14	0.041	16.24	0.042	16.18	0.041	22.21	0.166	
5220		16.21	0.042	16.18	0.041	16.26	0.042	16.12	0.041	22.21	0.166	
5240		16.11	0.041	16.20	0.042	16.25	0.042	16.22	0.042	22.22	0.167	
5745		18.95	0.079	18.70	0.074	19.02	0.080	18.72	0.074	24.87	0.307	≤ 30
5765		18.96	0.079	18.87	0.077	19.14	0.082	18.86	0.077	24.98	0.315	
5785		19.01	0.080	18.98	0.079	19.08	0.081	18.97	0.079	25.03	0.318	
5805		19.05	0.080	18.94	0.078	19.03	0.080	18.96	0.079	25.02	0.317	
5825	54 M	18.97	0.079	19.06	0.081	19.15	0.082	19.08	0.081	25.09	0.323	≤ 30
5180		16.17	0.041	16.30	0.043	16.28	0.042	16.15	0.041	22.25	0.168	
5200		16.10	0.041	16.04	0.040	16.20	0.042	16.10	0.041	22.13	0.163	
5220		16.11	0.041	16.10	0.041	16.20	0.042	16.05	0.040	22.14	0.164	
5240		16.05	0.040	16.13	0.041	16.17	0.041	16.13	0.041	22.14	0.164	≤ 30
5745		18.87	0.077	18.60	0.072	18.93	0.078	18.68	0.074	24.79	0.301	
5765		18.88	0.077	18.81	0.076	19.05	0.080	18.80	0.076	24.91	0.310	
5785		18.95	0.079	18.90	0.078	18.95	0.079	18.90	0.078	24.95	0.312	
5805		18.98	0.079	18.85	0.077	18.81	0.076	18.89	0.077	24.90	0.309	≤ 30
5825		18.90	0.078	19.00	0.079	19.07	0.081	19.01	0.080	25.02	0.317	

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



Test Mode		Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	26 M	15.96	0.039	15.89	0.039	16.01	0.040	15.98	0.040	21.98	0.158	≤ 30
5200		16.01	0.040	15.95	0.039	16.08	0.041	15.95	0.039	22.02	0.159	
5220		16.00	0.040	16.03	0.040	16.04	0.040	15.98	0.040	22.03	0.160	
5240		15.97	0.040	15.96	0.039	16.04	0.040	16.02	0.040	22.02	0.159	
5745		18.32	0.068	18.34	0.068	18.45	0.070	18.43	0.070	24.41	0.276	≤ 30
5765		18.29	0.067	18.23	0.067	18.49	0.071	18.48	0.070	24.39	0.275	
5785		18.31	0.068	18.13	0.065	18.42	0.070	18.50	0.071	24.36	0.273	
5805		18.29	0.067	18.29	0.067	18.55	0.072	18.53	0.071	24.44	0.278	
5825		18.21	0.066	18.31	0.068	18.43	0.070	18.52	0.071	24.39	0.275	
5180		346.8 M	15.90	0.039	15.80	0.038	15.94	0.039	15.91	0.039	21.91	0.155
5200	15.89		0.039	15.91	0.039	16.01	0.040	15.88	0.039	21.94	0.156	
5220	15.92		0.039	15.93	0.039	15.98	0.040	15.92	0.039	21.96	0.157	
5240	15.90		0.039	15.87	0.039	15.97	0.040	15.93	0.039	21.94	0.156	
5745	18.20		0.066	18.29	0.067	18.35	0.068	18.30	0.068	24.31	0.270	≤ 30
5765	18.21		0.066	18.17	0.066	18.40	0.069	18.40	0.069	24.32	0.270	
5785	18.30		0.068	18.04	0.064	18.39	0.069	18.45	0.070	24.32	0.270	
5805	18.19		0.066	18.17	0.066	18.50	0.071	18.43	0.070	24.35	0.272	
5825	18.10		0.065	18.20	0.066	18.37	0.069	18.48	0.070	24.31	0.270	

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



Test Mode		Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	54 M	16.29	0.043	16.36	0.043	16.34	0.043	16.45	0.044	22.38	0.173	≤ 30
5230		18.45	0.070	18.53	0.071	18.51	0.071	18.42	0.070	24.50	0.282	
5755		17.75	0.060	17.85	0.061	17.35	0.054	17.62	0.058	23.67	0.233	≤ 30
5795		17.66	0.058	17.65	0.058	17.60	0.058	17.54	0.057	23.63	0.231	
5190	800 M	16.20	0.042	16.28	0.042	16.28	0.042	16.39	0.044	22.31	0.170	≤ 30
5230		18.39	0.069	18.47	0.070	18.40	0.069	18.35	0.068	24.42	0.277	
5755		17.66	0.058	17.72	0.059	17.28	0.053	17.51	0.056	23.57	0.227	≤ 30
5795		17.59	0.057	17.60	0.058	17.51	0.056	17.49	0.056	23.57	0.227	

Test Mode		Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	117.2 M	14.22	0.026	14.18	0.026	14.20	0.026	14.23	0.026	20.23	0.105	≤ 30
5775		18.23	0.067	18.42	0.070	17.80	0.060	18.34	0.068	24.22	0.265	≤ 30
5210	1733.2 M	14.12	0.026	14.07	0.026	14.08	0.026	14.14	0.026	20.12	0.103	≤ 30
5775		18.14	0.065	18.35	0.068	17.70	0.059	18.27	0.067	24.14	0.260	≤ 30

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



Beamforming on

Test Mode		Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	26 M	9.86	0.010	9.75	0.009	9.92	0.010	9.84	0.010	15.86	0.039	≤ 25.51
5200		9.81	0.010	9.78	0.010	9.96	0.010	9.88	0.010	15.88	0.039	
5220		9.80	0.010	9.85	0.010	9.97	0.010	9.80	0.010	15.88	0.039	
5240		9.83	0.010	9.80	0.010	9.93	0.010	9.83	0.010	15.87	0.039	
5745		11.98	0.016	12.13	0.016	12.19	0.017	12.22	0.017	18.15	0.065	≤ 24.53
5765		12.13	0.016	12.25	0.017	12.14	0.016	12.19	0.017	18.20	0.066	
5785		11.95	0.016	12.05	0.016	11.99	0.016	12.10	0.016	18.04	0.064	
5805		12.07	0.016	12.13	0.016	12.07	0.016	12.08	0.016	18.11	0.065	
5825		12.21	0.017	12.14	0.016	11.97	0.016	12.06	0.016	18.12	0.065	
5180		346.8 M	9.80	0.010	9.69	0.009	9.82	0.010	9.80	0.010	15.80	0.038
5200	9.75		0.009	9.71	0.009	9.86	0.010	9.77	0.009	15.79	0.038	
5220	9.72		0.009	9.77	0.009	9.85	0.010	9.69	0.009	15.78	0.038	
5240	9.75		0.009	9.73	0.009	9.86	0.010	9.73	0.009	15.79	0.038	
5745	11.88		0.015	12.05	0.016	12.10	0.016	12.14	0.016	18.06	0.064	≤ 24.53
5765	12.01		0.016	12.13	0.016	12.06	0.016	12.08	0.016	18.09	0.064	
5785	11.88		0.015	11.97	0.016	11.85	0.015	12.00	0.016	17.95	0.062	
5805	12.01		0.016	12.06	0.016	11.94	0.016	11.95	0.016	18.01	0.063	
5825	12.16	0.016	12.07	0.016	11.89	0.015	11.94	0.016	18.04	0.064		

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



Test Mode		Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	54 M	10.05	0.010	9.99	0.010	10.11	0.010	10.09	0.010	16.08	0.041	≤ 25.51
5230		11.80	0.015	11.83	0.015	11.79	0.015	11.87	0.015	17.84	0.061	
5755		11.32	0.014	11.25	0.013	11.35	0.014	11.28	0.013	17.32	0.054	≤ 24.53
5795		11.34	0.014	11.20	0.013	11.40	0.014	11.24	0.013	17.32	0.054	
5190	800 M	9.96	0.010	9.89	0.010	10.04	0.010	9.95	0.010	15.98	0.040	≤ 25.51
5230		11.71	0.015	11.71	0.015	11.70	0.015	11.73	0.015	17.73	0.059	
5755		11.21	0.013	11.20	0.013	11.27	0.013	11.19	0.013	17.24	0.053	≤ 24.53
5795		11.23	0.013	11.13	0.013	11.30	0.013	11.14	0.013	17.22	0.053	

Test Mode		Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode										
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		ANT-3		ANT-0+1+2+3		FCC Limit (dBm)
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	117.2 M	7.91	0.006	7.86	0.006	8.02	0.006	7.97	0.006	13.96	0.025	≤ 25.51
5775		11.90	0.015	11.80	0.015	11.89	0.015	11.82	0.015	17.87	0.061	≤ 24.53
5210	1733.2 M	7.81	0.006	7.78	0.006	7.93	0.006	7.89	0.006	13.87	0.024	≤ 25.51
5775		11.82	0.015	11.72	0.015	11.77	0.015	11.70	0.015	17.77	0.060	≤ 24.53

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

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

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5180	22.320	20.460	20.500	20.590
5200	20.880	20.250	20.150	20.560
5240	21.060	20.360	20.390	20.950
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5180	16.573	16.514	16.455	16.518
5200	16.522	16.517	16.465	16.527
5240	16.570	16.572	16.524	16.530

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5180	23.350	24.150	26.620	23.620
5200	23.790	23.540	23.110	23.130
5240	23.290	24.510	22.830	22.390
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5180	17.901	17.937	17.960	17.968
5200	17.940	17.903	17.938	17.914
5240	17.902	17.915	17.937	17.933

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



Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5190	46.570	45.230	47.430	44.990
5230	48.310	49.200	48.540	45.530
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5190	36.893	36.870	36.831	36.915
5230	37.012	36.950	36.899	37.026

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5210	87.500	86.420	87.040	86.890
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5210	76.199	76.214	76.263	76.297

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



Beamforming on

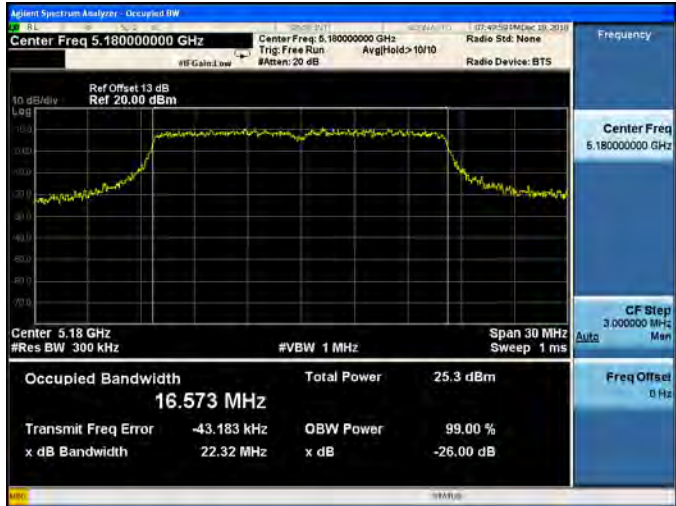
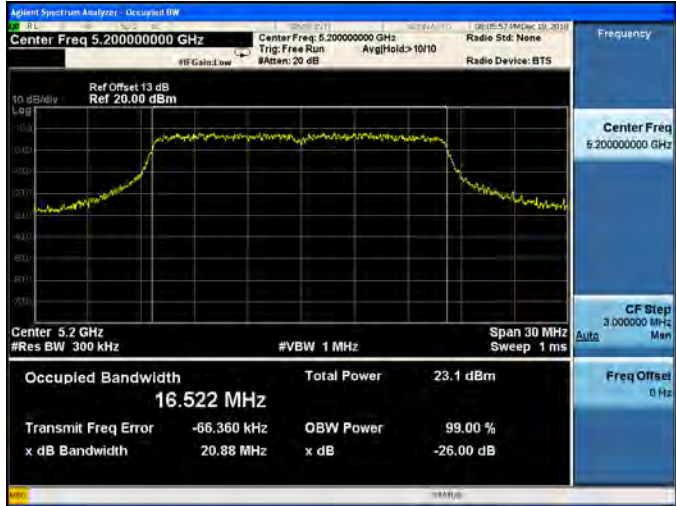
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5180	22.960	22.370	21.900	21.850
5200	21.500	22.520	22.460	21.950
5240	22.340	22.020	22.160	22.490
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5180	17.843	17.837	17.865	17.866
5200	17.836	17.878	17.897	17.893
5240	17.824	17.889	17.900	17.897

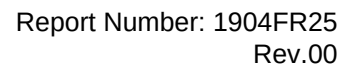
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5190	44.890	45.130	44.990	44.130
5230	45.090	44.950	44.620	44.510
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5190	36.813	36.862	36.828	36.783
5230	36.911	36.877	36.864	36.910

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode			
Frequency (MHz)	26 dB Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5210	87.130	85.240	88.120	87.270
Frequency (MHz)	99 % Occupied Bandwidth (MHz)			
	ANT-0	ANT-1	ANT-2	ANT-3
5210	76.124	76.176	76.158	76.170

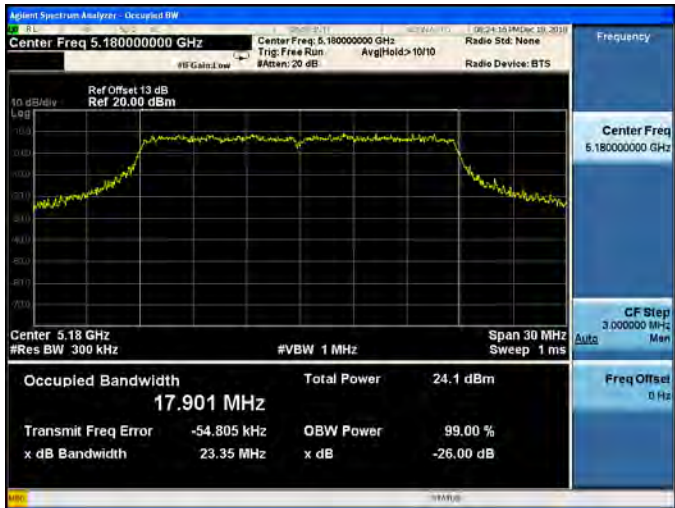
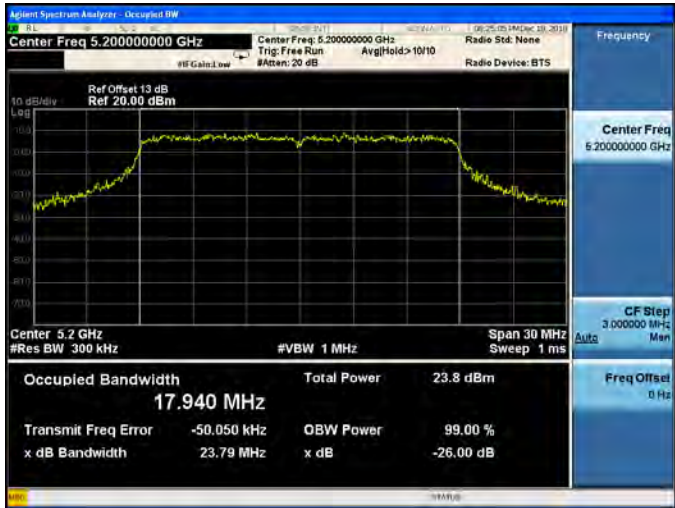
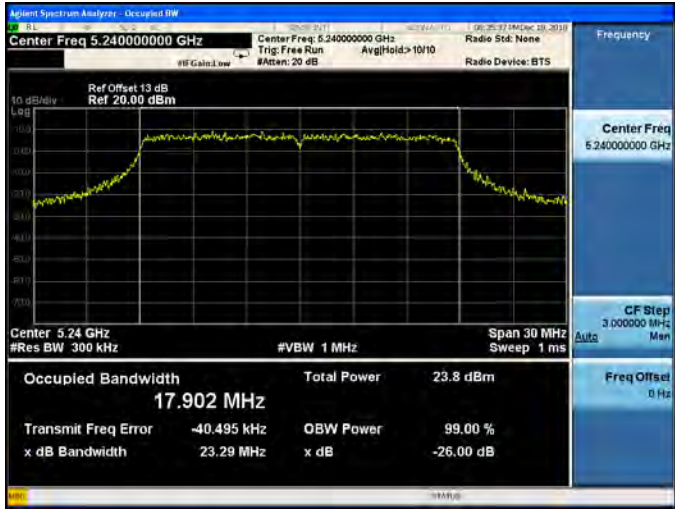
Note: The 99 % occupied bandwidth not crossed 5250 MHz.

■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ANT-0	
5180 MHz	 Center Freq 5.180000000 GHz Center Freq 5.18 GHz Ref Offset 13 dB Ref 20.00 dBm Span 30 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 1 ms Occupied Bandwidth 16.573 MHz Total Power 25.3 dBm Transmit Freq Error -43.183 kHz OBW Power 99.00 % x dB Bandwidth 22.32 MHz x dB -26.00 dB
5200 MHz	 Center Freq 5.200000000 GHz Center Freq 5.2 GHz Ref Offset 13 dB Ref 20.00 dBm Span 30 MHz #Res BW 300 kHz #VBW 1 MHz Sweep 1 ms Occupied Bandwidth 16.522 MHz Total Power 23.1 dBm Transmit Freq Error -66.360 kHz OBW Power 99.00 % x dB Bandwidth 20.88 MHz x dB -26.00 dB

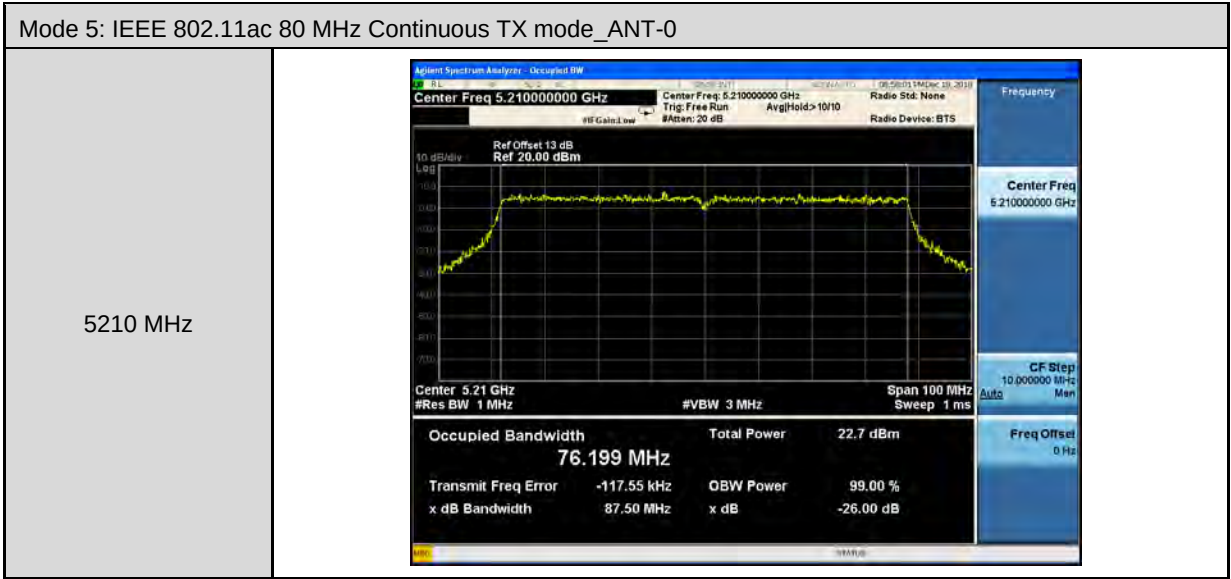




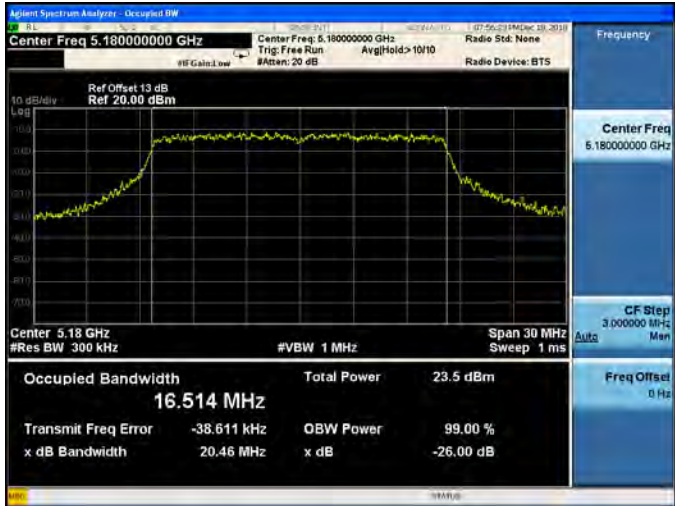
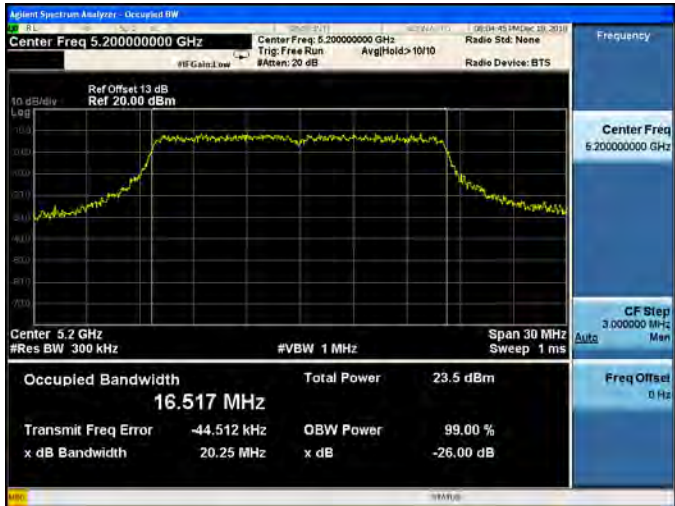
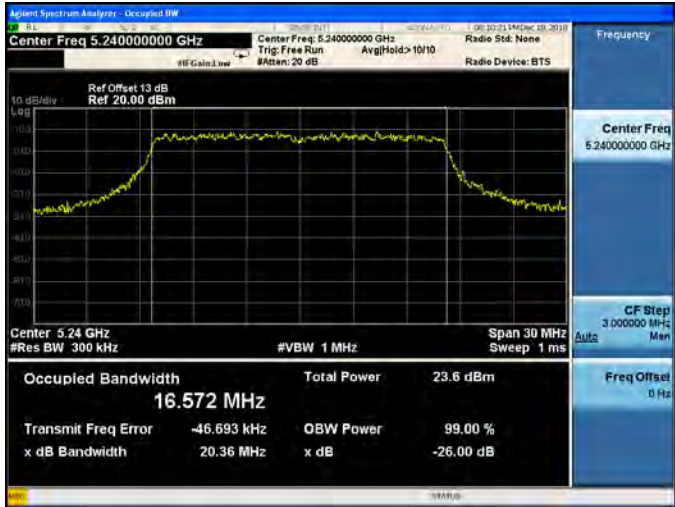
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	



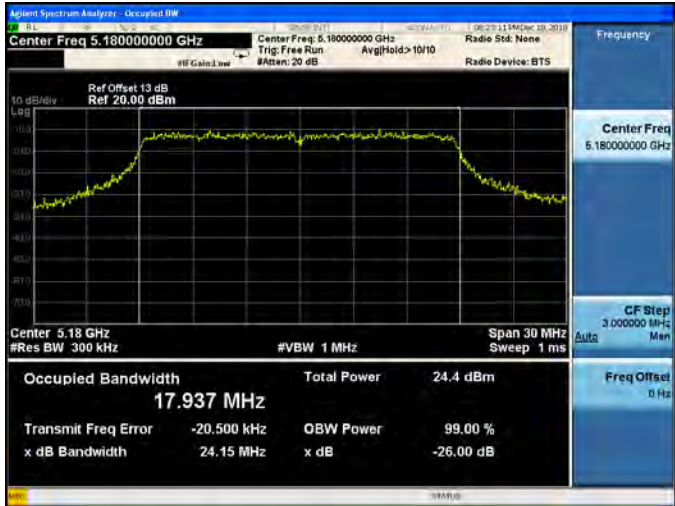
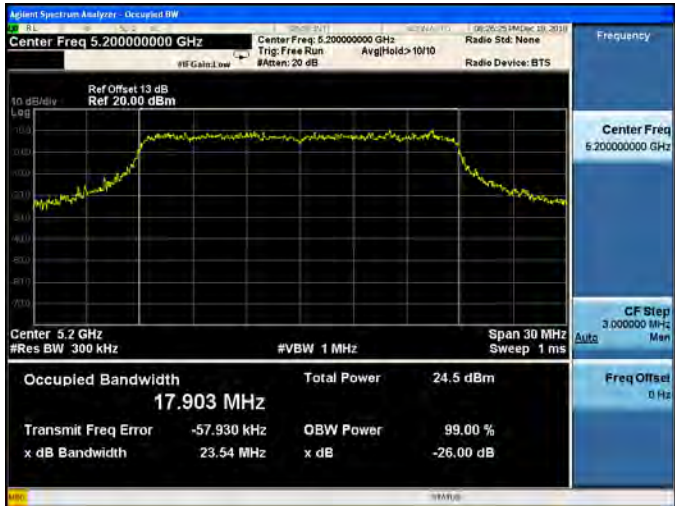
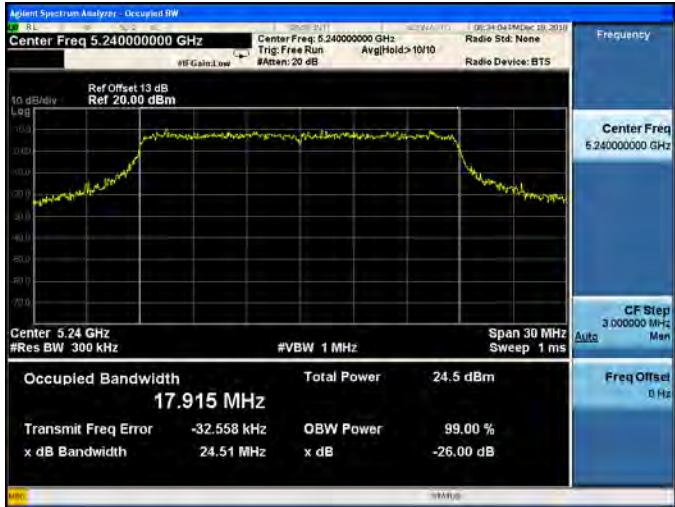
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0	
5190 MHz	
5230 MHz	





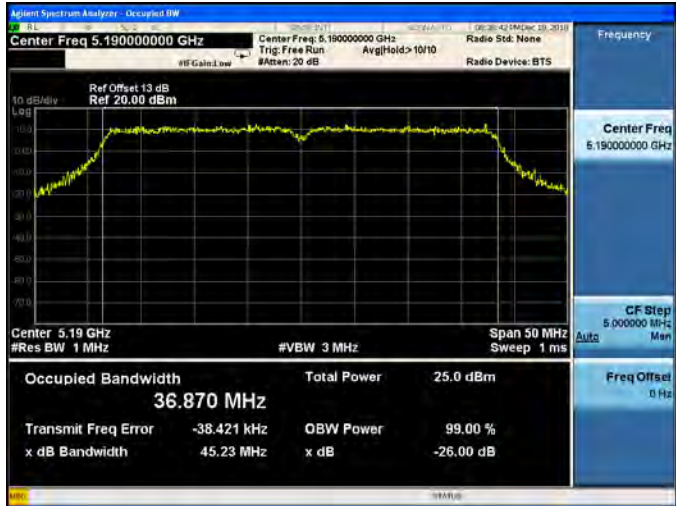
Mode 2: IEEE 802.11a Continuous TX mode_ANT-1	
5180 MHz	
5200 MHz	
5240 MHz	

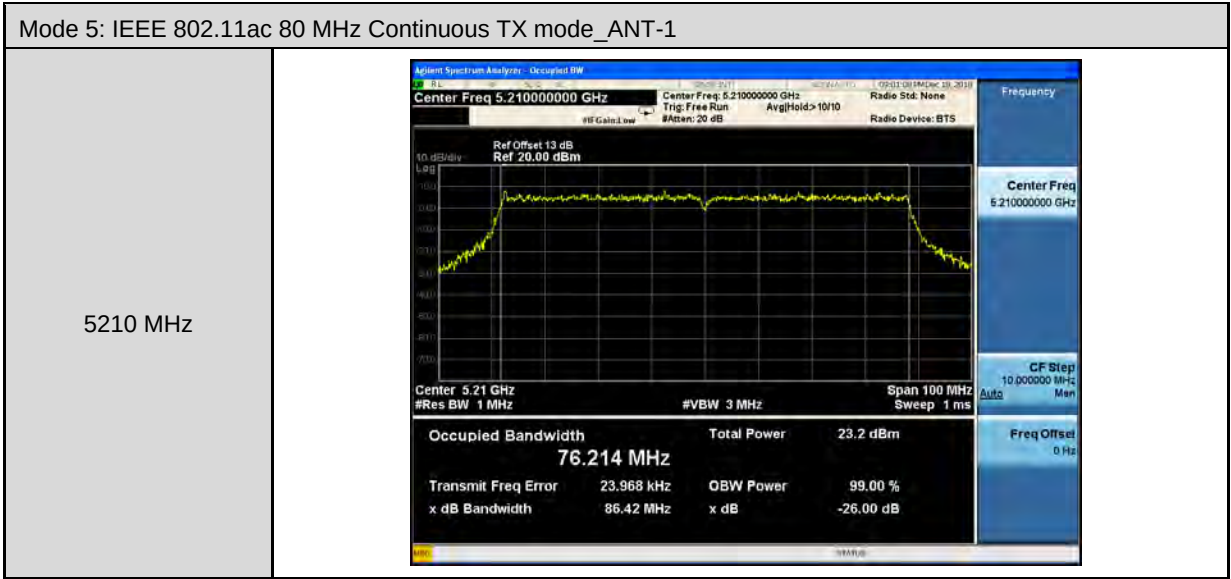


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1	
5180 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz Occupied Bandwidth 17.937 MHz Total Power 24.4 dBm Transmit Freq Error -20.500 kHz OBW Power 99.00 % x dB Bandwidth 24.15 MHz x dB -26.00 dB
5200 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz Occupied Bandwidth 17.903 MHz Total Power 24.5 dBm Transmit Freq Error -57.930 kHz OBW Power 99.00 % x dB Bandwidth 23.54 MHz x dB -26.00 dB
5240 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz Occupied Bandwidth 17.915 MHz Total Power 24.5 dBm Transmit Freq Error -32.558 kHz OBW Power 99.00 % x dB Bandwidth 24.51 MHz x dB -26.00 dB



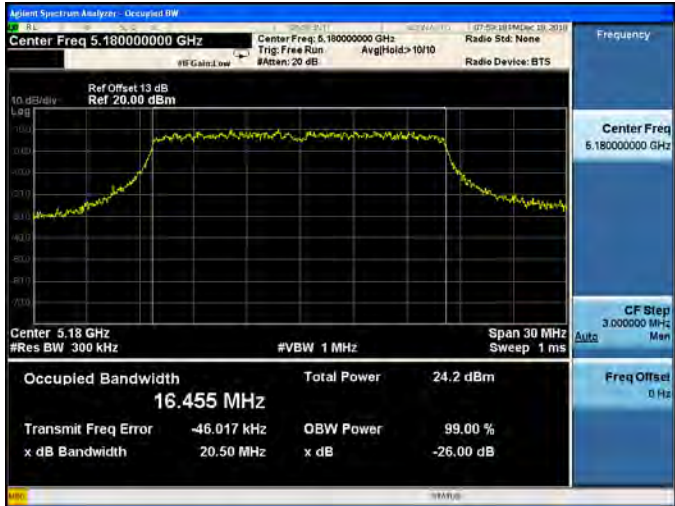
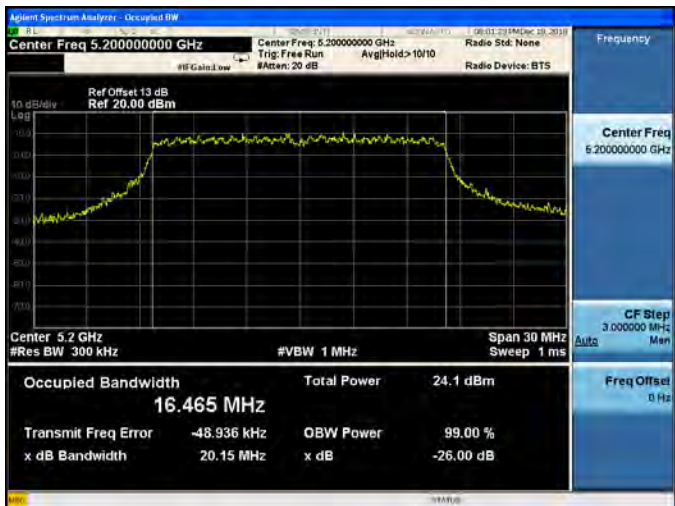
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1

5190 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.190000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.19 GHz #Res BW 1 MHz Occupied Bandwidth 36.870 MHz Total Power 25.0 dBm Transmit Freq Error -38.421 kHz x dB Bandwidth 45.23 MHz OBW Power 99.00 % x dB -26.00 dB
5230 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.230000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.23 GHz #Res BW 1 MHz Occupied Bandwidth 36.950 MHz Total Power 27.1 dBm Transmit Freq Error -59.292 kHz x dB Bandwidth 49.20 MHz OBW Power 99.00 % x dB -26.00 dB

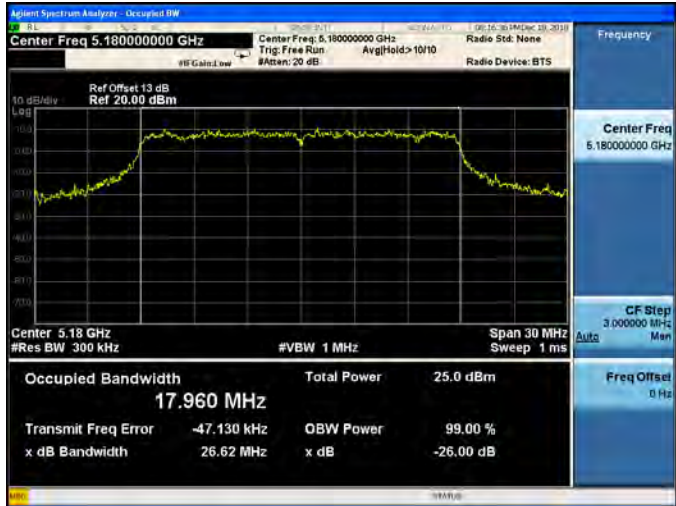
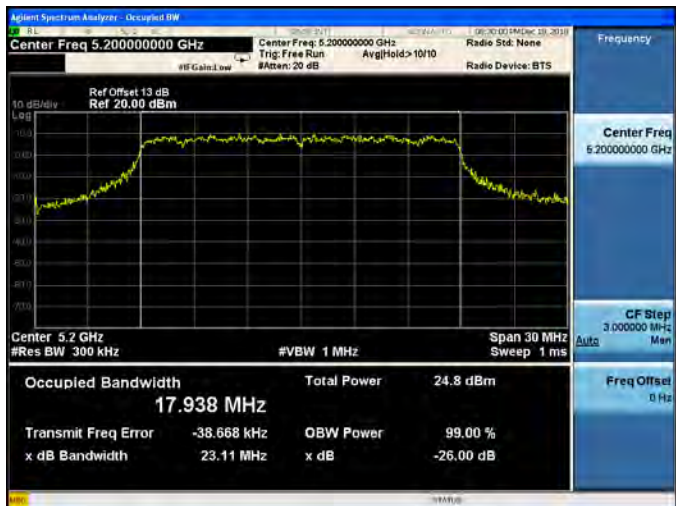
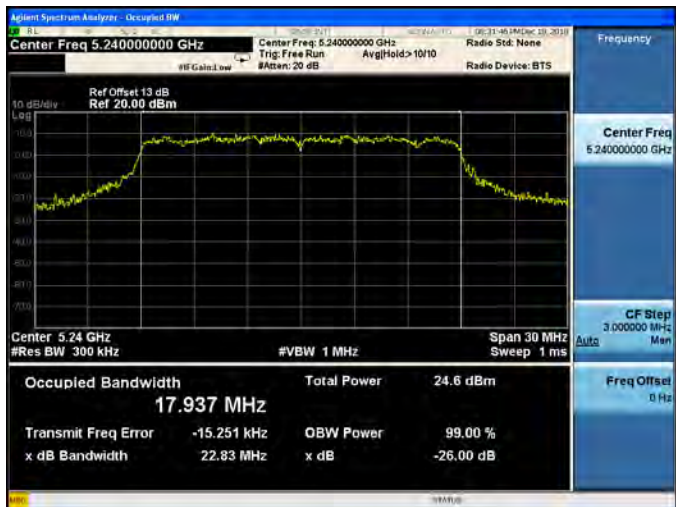




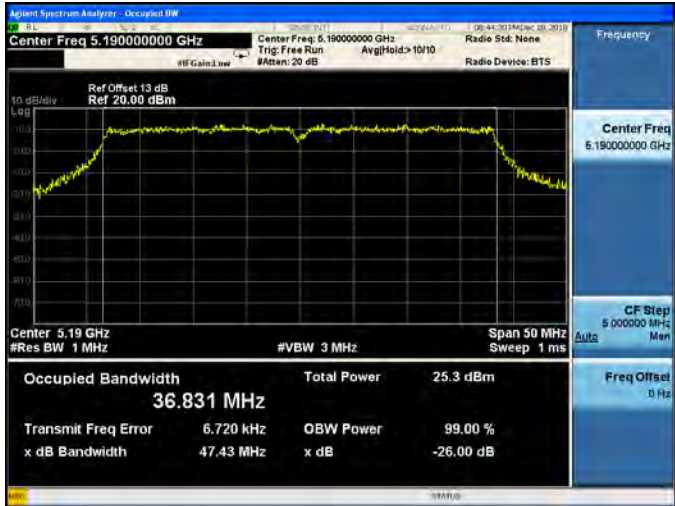
Mode 2: IEEE 802.11a Continuous TX mode_ANT-2

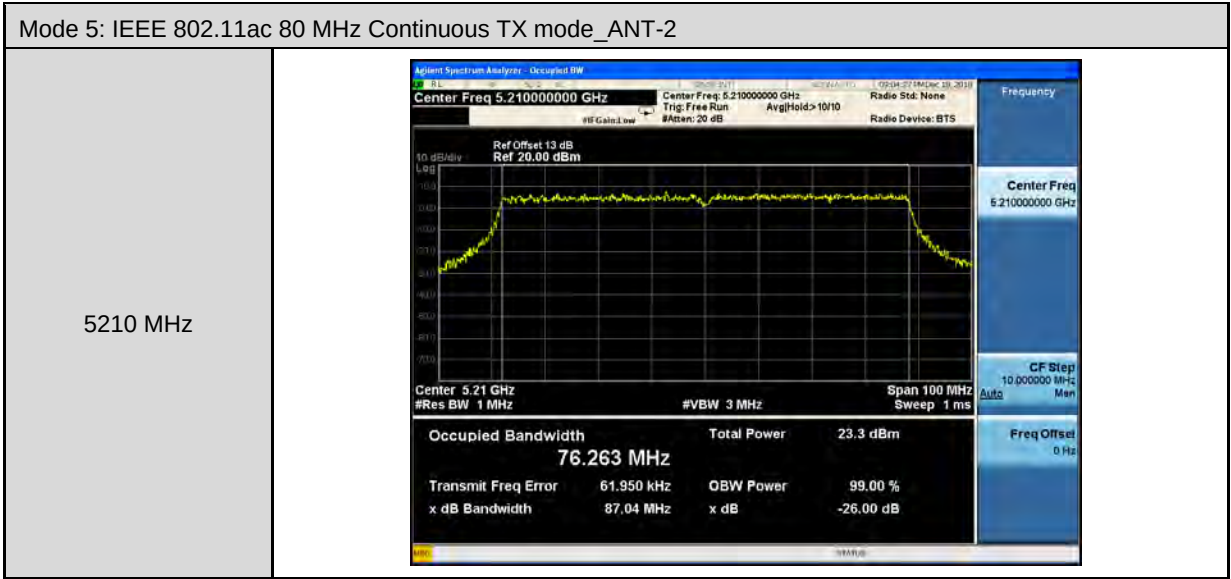
5180 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz Occupied Bandwidth 16.455 MHz Total Power 24.2 dBm Transmit Freq Error -46.017 kHz x dB Bandwidth 20.50 MHz OBW Power 99.00 % x dB -26.00 dB
5200 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz Occupied Bandwidth 16.465 MHz Total Power 24.1 dBm Transmit Freq Error -48.936 kHz x dB Bandwidth 20.15 MHz OBW Power 99.00 % x dB -26.00 dB
5240 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz Occupied Bandwidth 16.524 MHz Total Power 23.5 dBm Transmit Freq Error -39.207 kHz x dB Bandwidth 20.39 MHz OBW Power 99.00 % x dB -26.00 dB



Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-2	
5180 MHz	
5200 MHz	
5240 MHz	

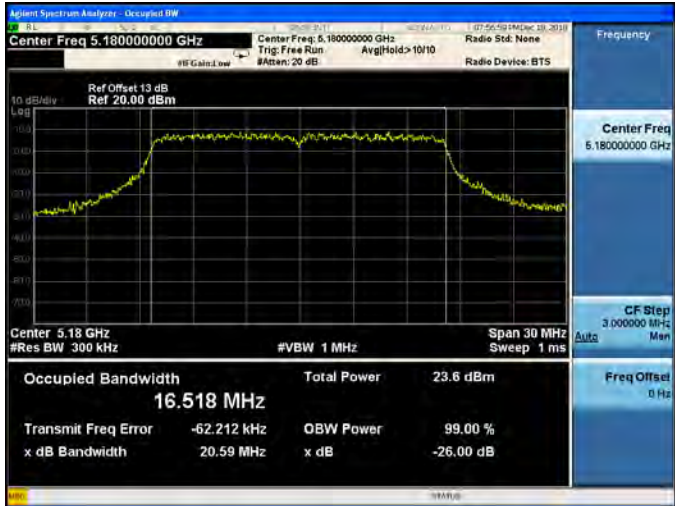


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5190 MHz	
5230 MHz	

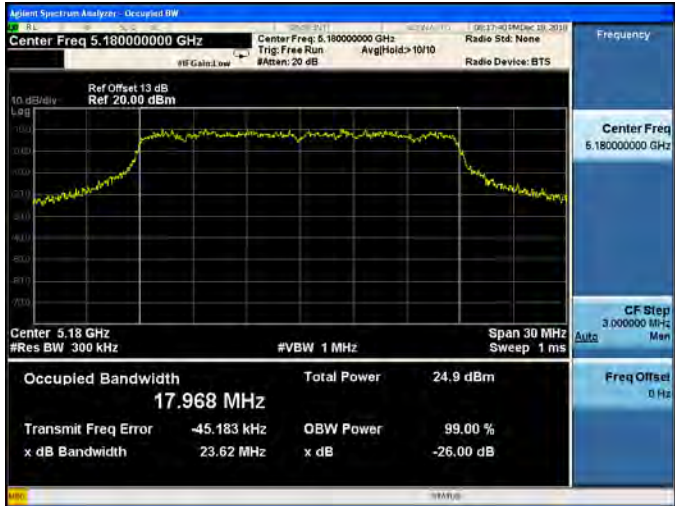
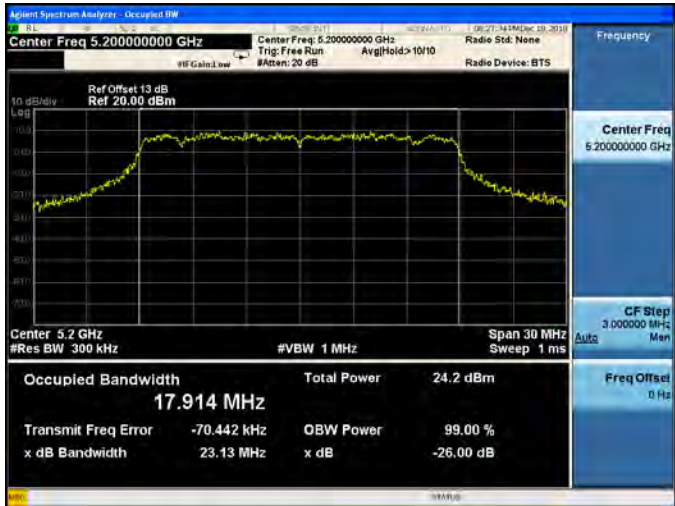
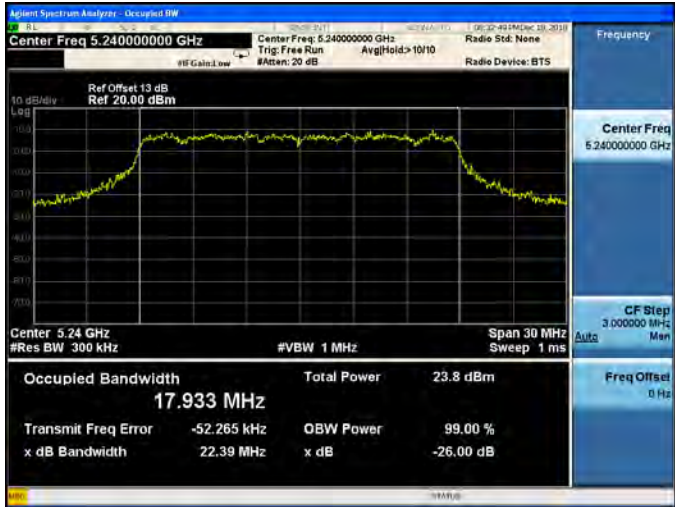




Mode 2: IEEE 802.11a Continuous TX mode_ANT-3

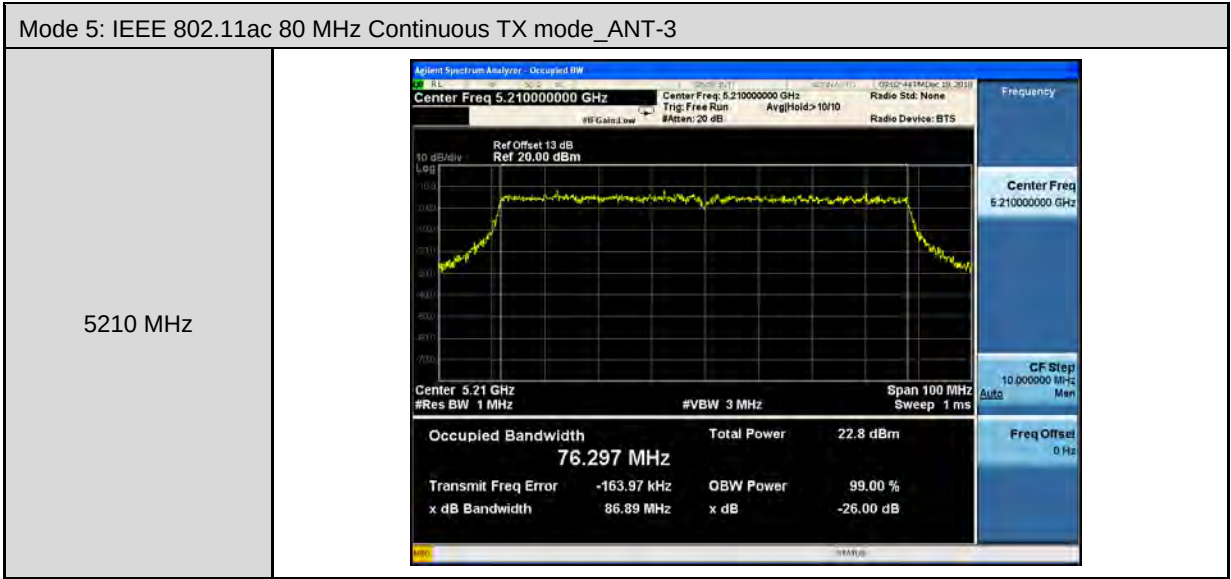
5180 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Radio Std: None Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 16.518 MHz Total Power 23.6 dBm Transmit Freq Error -62.212 kHz OBW Power 99.00 % x dB Bandwidth 20.59 MHz x dB -26.00 dB
5200 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Radio Std: None Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 16.527 MHz Total Power 23.4 dBm Transmit Freq Error -56.170 kHz OBW Power 99.00 % x dB Bandwidth 20.56 MHz x dB -26.00 dB
5240 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Radio Std: None Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 16.530 MHz Total Power 22.9 dBm Transmit Freq Error -51.748 kHz OBW Power 99.00 % x dB Bandwidth 20.95 MHz x dB -26.00 dB



Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-3	
5180 MHz	
5200 MHz	
5240 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5190 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.190000000 GHz Center Freq: 5.190000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.19 GHz #Res BW 1 MHz #VBW 3 MHz Span 50 MHz Sweep 1 ms Occupied Bandwidth 36.915 MHz Total Power 24.9 dBm Transmit Freq Error -71.985 kHz OBW Power 99.00 % x dB Bandwidth 44.99 MHz x dB -26.00 dB Frequency Center Freq 5.190000000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz
5230 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.230000000 GHz Center Freq: 5.230000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.23 GHz #Res BW 1 MHz #VBW 3 MHz Span 50 MHz Sweep 1 ms Occupied Bandwidth 37.026 MHz Total Power 26.2 dBm Transmit Freq Error -145.25 kHz OBW Power 99.00 % x dB Bandwidth 45.53 MHz x dB -26.00 dB Frequency Center Freq 5.230000000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz





Beamforming on

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

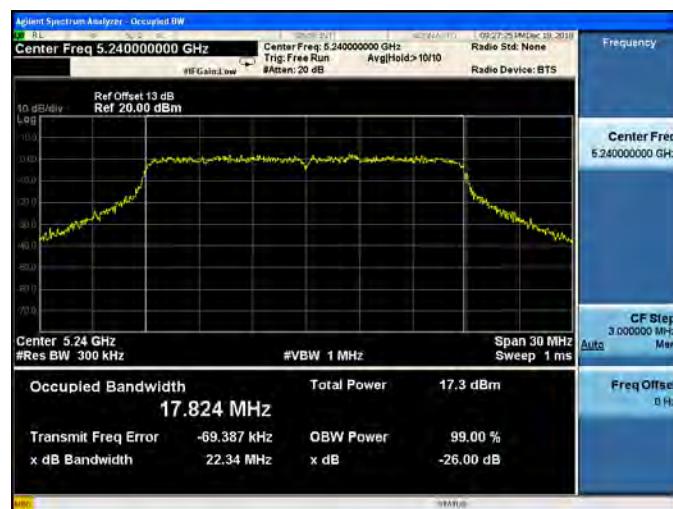
5180 MHz



5200 MHz



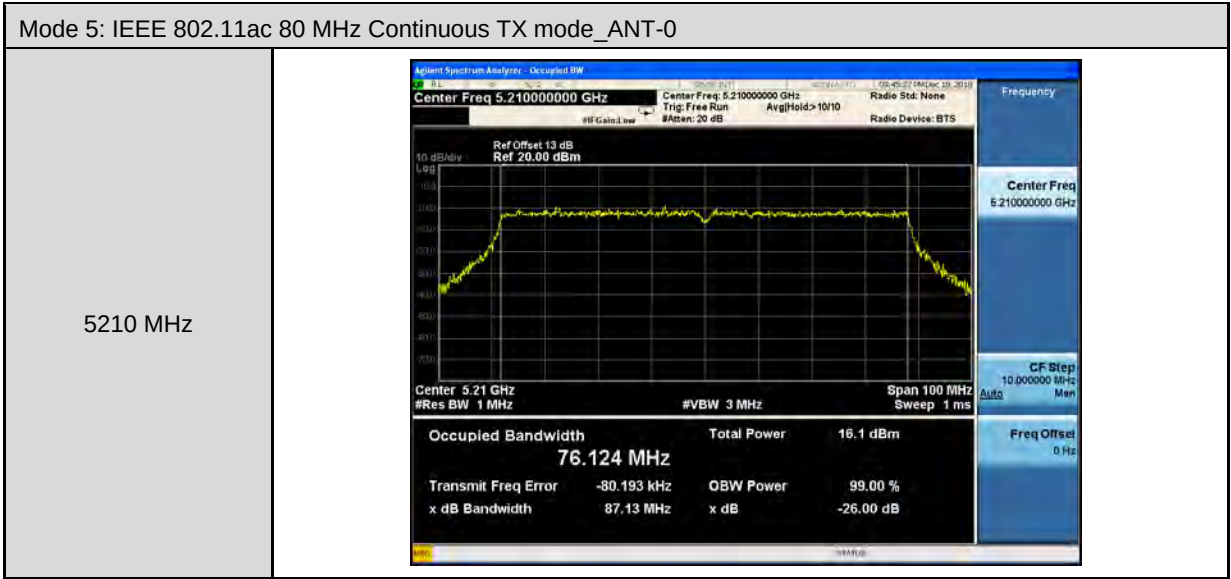
5240 MHz



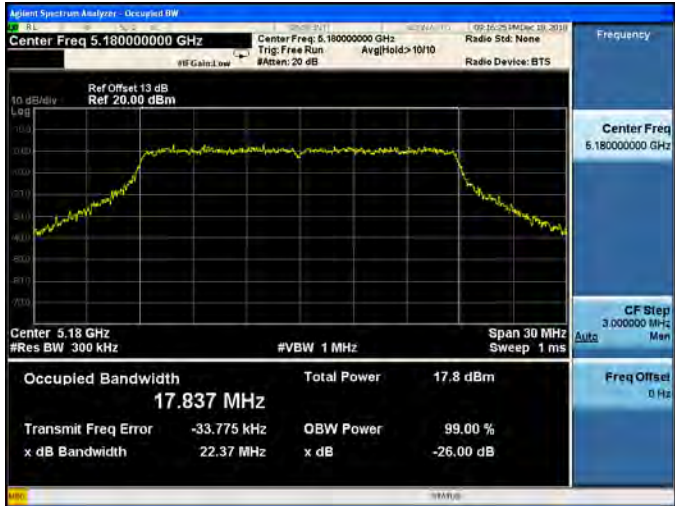
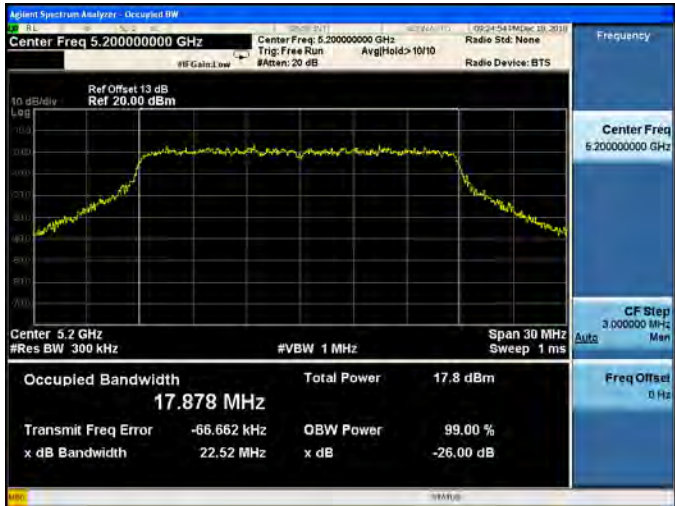
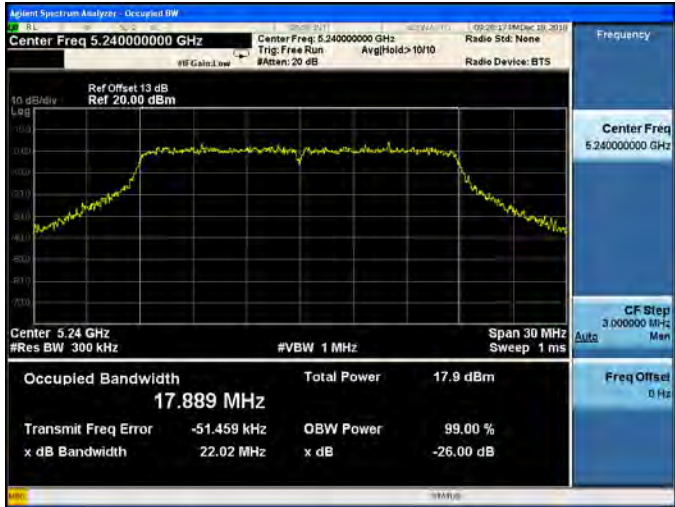


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

5190 MHz	
5230 MHz	



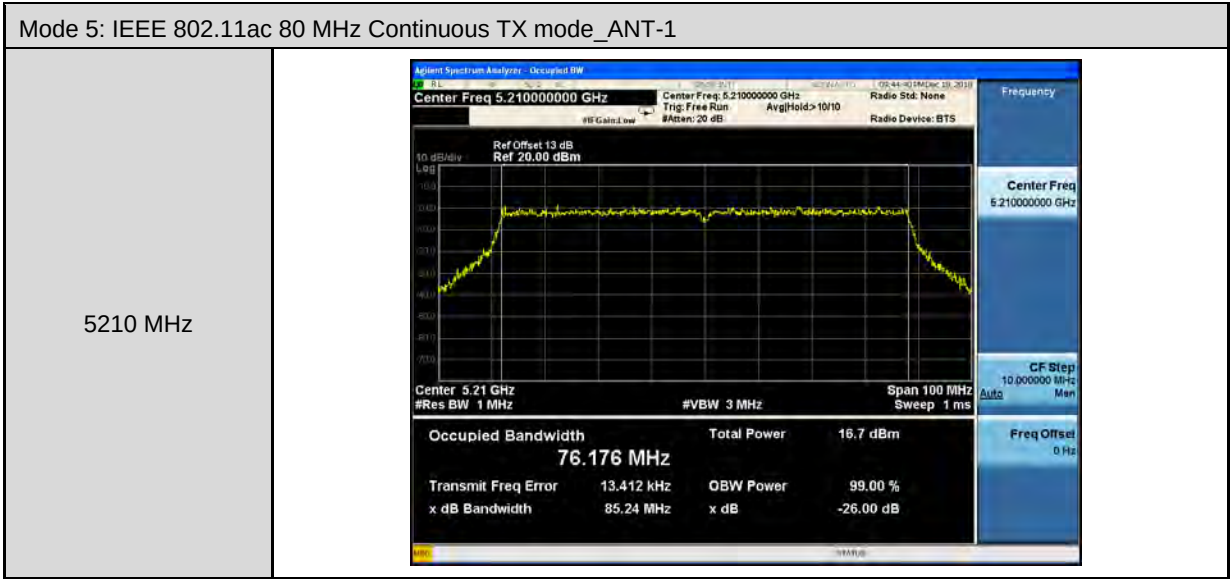


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1	
5180 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz Occupied Bandwidth 17.837 MHz Total Power 17.8 dBm Transmit Freq Error -33.775 kHz x dB Bandwidth 22.37 MHz OBW Power 99.00 % x dB -26.00 dB
5200 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz Occupied Bandwidth 17.878 MHz Total Power 17.8 dBm Transmit Freq Error -66.662 kHz x dB Bandwidth 22.52 MHz OBW Power 99.00 % x dB -26.00 dB
5240 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz Occupied Bandwidth 17.889 MHz Total Power 17.9 dBm Transmit Freq Error -51.459 kHz x dB Bandwidth 22.02 MHz OBW Power 99.00 % x dB -26.00 dB



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

5190 MHz	
5230 MHz	





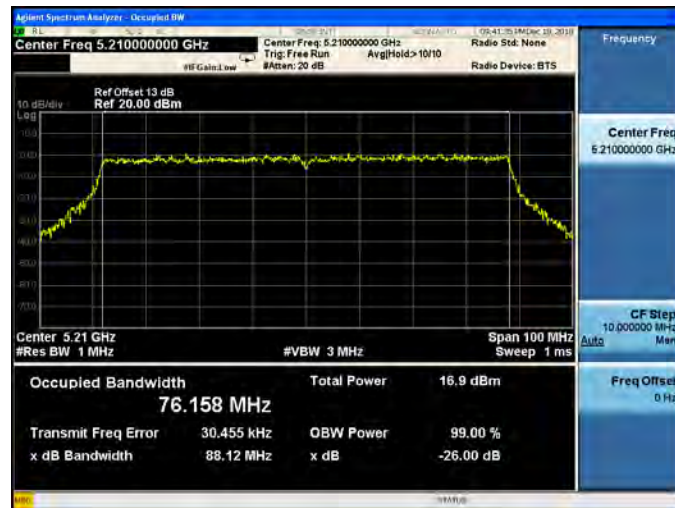
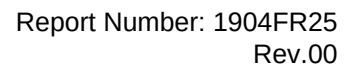
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-2

5180 MHz	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz Occupied Bandwidth 17.865 MHz Total Power 18.0 dBm Transmit Freq Error -34.742 kHz OBW Power 99.00 % x dB Bandwidth 21.90 MHz x dB -26.00 dB
5200 MHz	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz Occupied Bandwidth 17.891 MHz Total Power 17.9 dBm Transmit Freq Error -65.112 kHz OBW Power 99.00 % x dB Bandwidth 22.46 MHz x dB -26.00 dB
5240 MHz	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz Occupied Bandwidth 17.900 MHz Total Power 17.6 dBm Transmit Freq Error -37.198 kHz OBW Power 99.00 % x dB Bandwidth 22.16 MHz x dB -26.00 dB



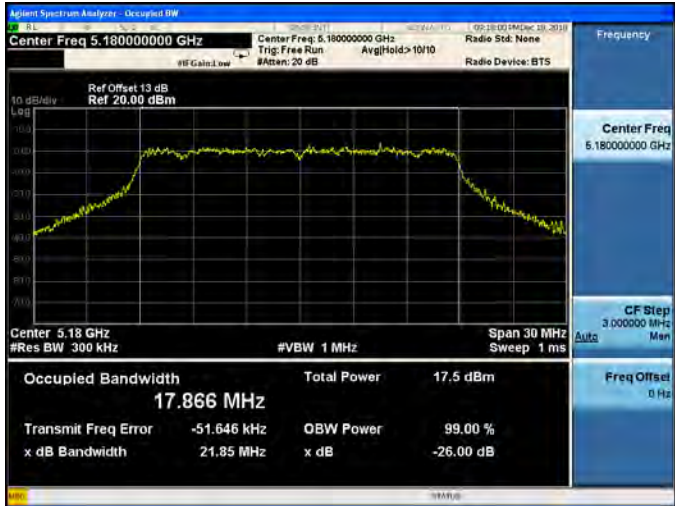
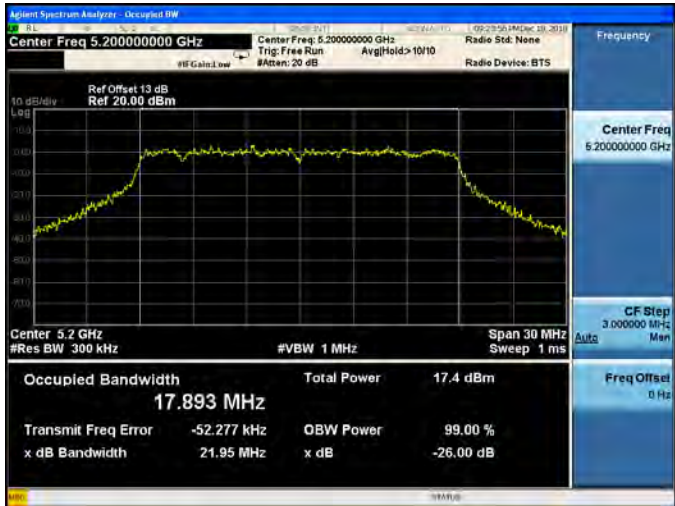
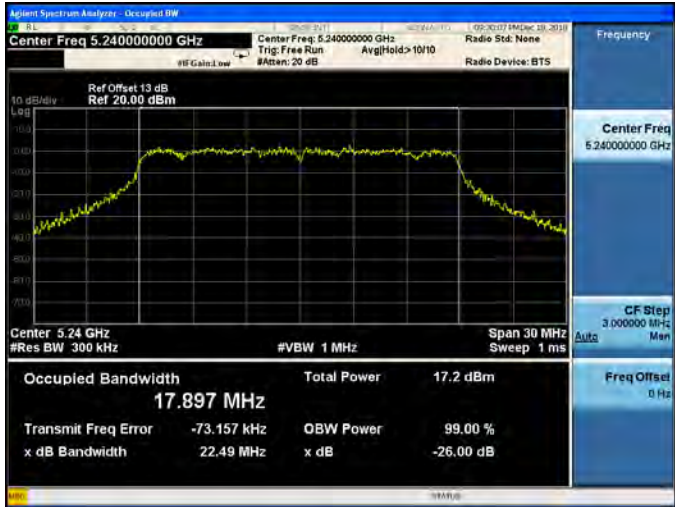
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2

5190 MHz	
5230 MHz	





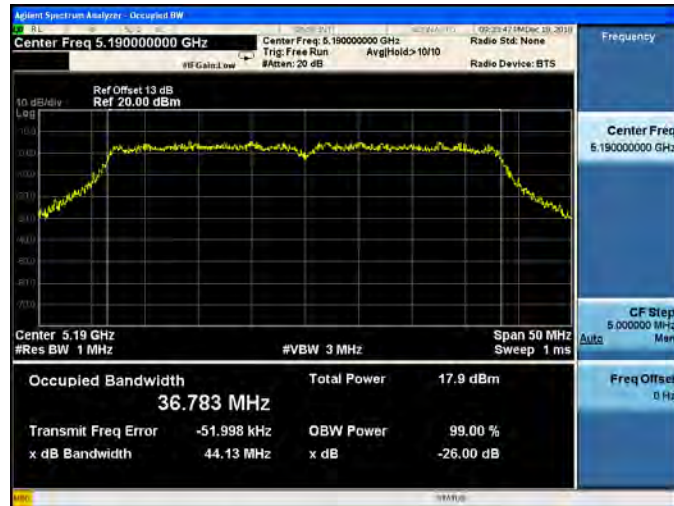
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-3

5180 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz Occupied Bandwidth 17.866 MHz Total Power 17.5 dBm Transmit Freq Error -51.646 kHz x dB Bandwidth 21.85 MHz OBW Power 99.00 % x dB -26.00 dB
5200 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz Occupied Bandwidth 17.893 MHz Total Power 17.4 dBm Transmit Freq Error -52.277 kHz x dB Bandwidth 21.95 MHz OBW Power 99.00 % x dB -26.00 dB
5240 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz Occupied Bandwidth 17.897 MHz Total Power 17.2 dBm Transmit Freq Error -73.157 kHz x dB Bandwidth 22.49 MHz OBW Power 99.00 % x dB -26.00 dB



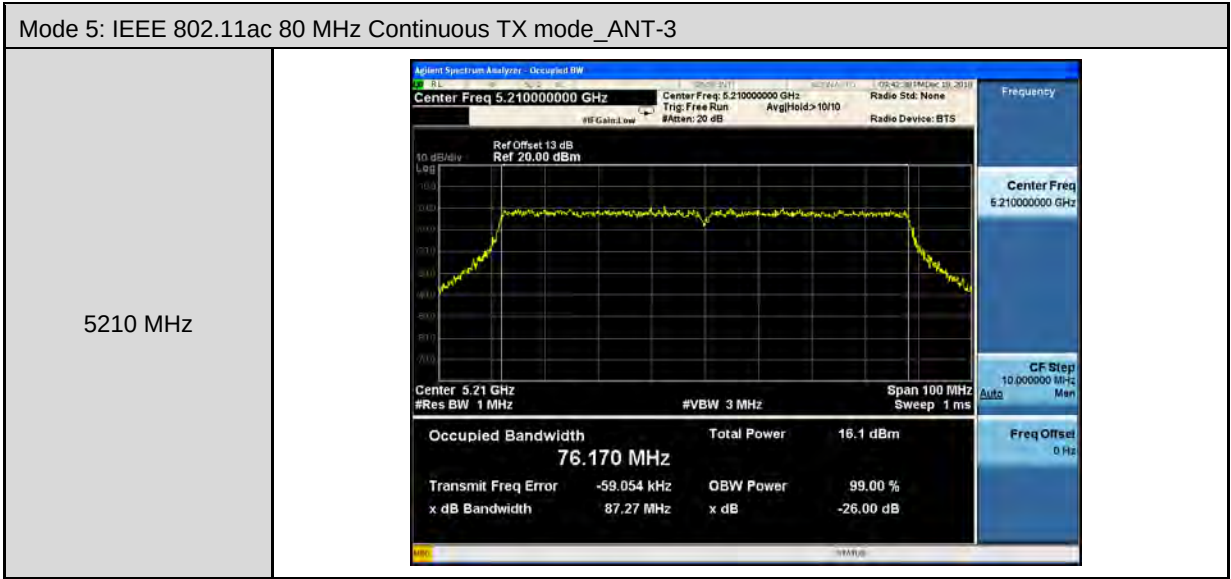
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3

5190 MHz



5230 MHz





5.5. 6 dB RF Bandwidth Measurement

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5745	16380	16320	16350	16330	≥ 500
5785	16330	16320	16330	16340	≥ 500
5825	16350	16350	16360	16370	≥ 500

Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5745	17730	17720	17660	17760	≥ 500
5785	17730	17690	17720	17750	≥ 500
5825	17770	17750	17730	17740	≥ 500

Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5755	36450	36490	36500	36490	≥ 500
5795	36500	36450	36500	36410	≥ 500

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5775	76510	76480	76560	76470	≥ 500



Beamforming on

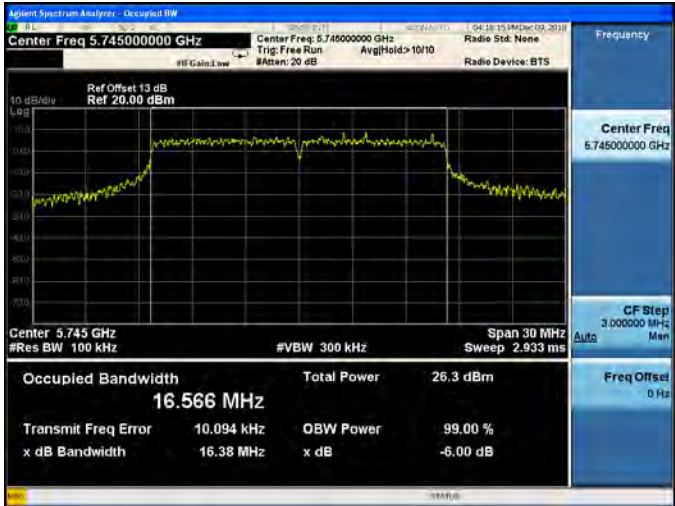
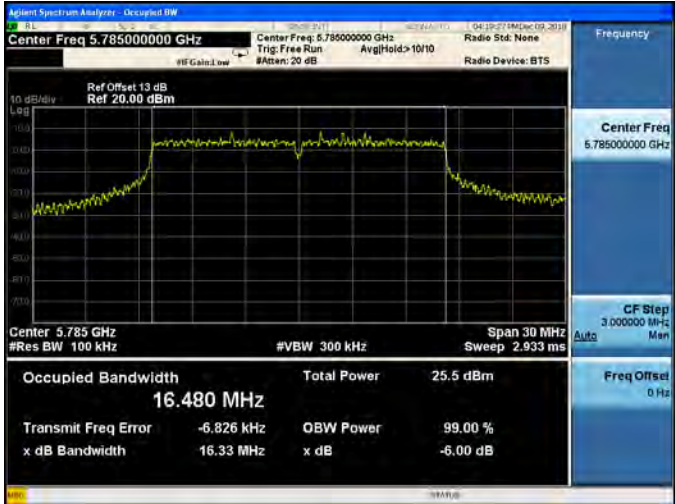
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5745	17740	17700	17670	17730	≥ 500
5785	17780	17750	17740	17740	≥ 500
5825	17720	17710	17730	17740	≥ 500

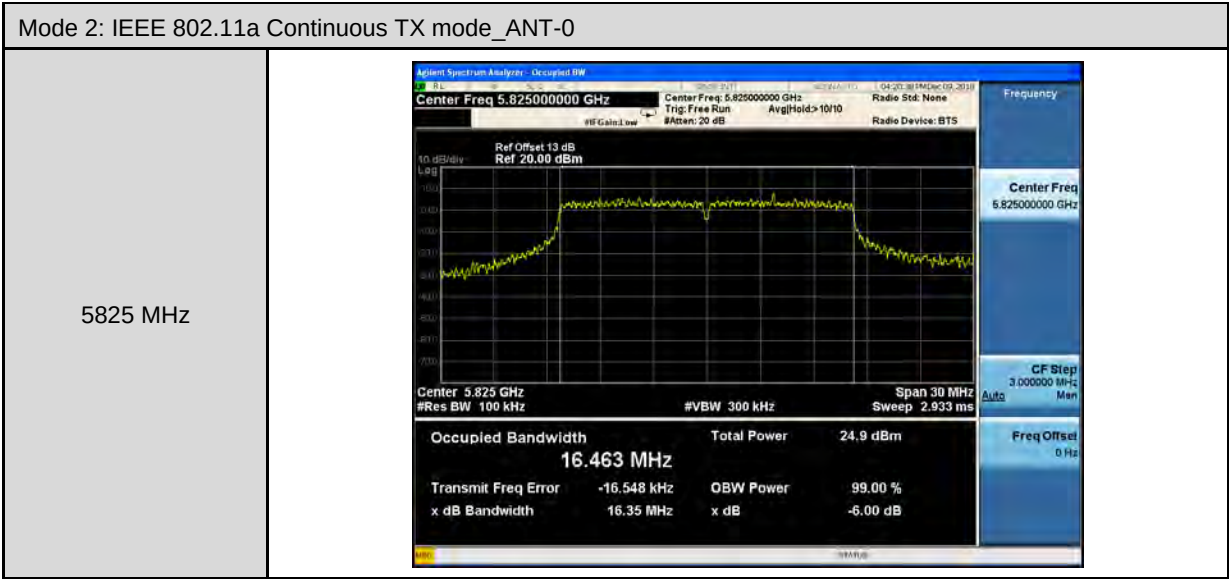
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5755	36410	36480	36480	36490	≥ 500
5795	36510	36500	36480	36480	≥ 500

Test Mode	Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode				
Frequency (MHz)	ANT-0	ANT-1	ANT-2	ANT-3	Limit (kHz)
5775	76460	76540	76510	76510	≥ 500



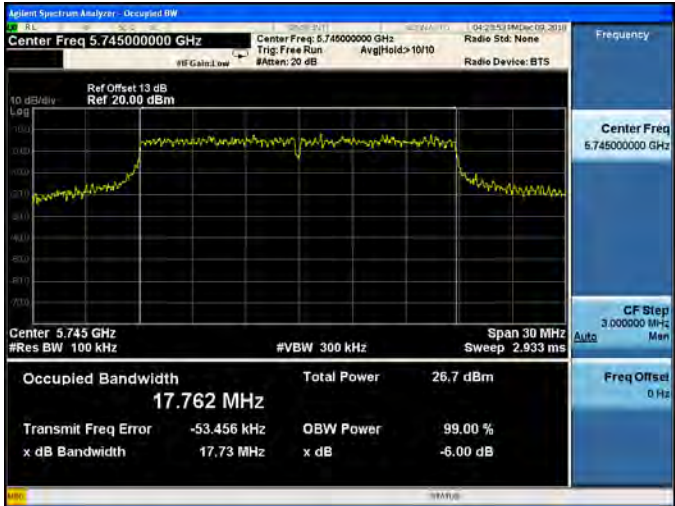
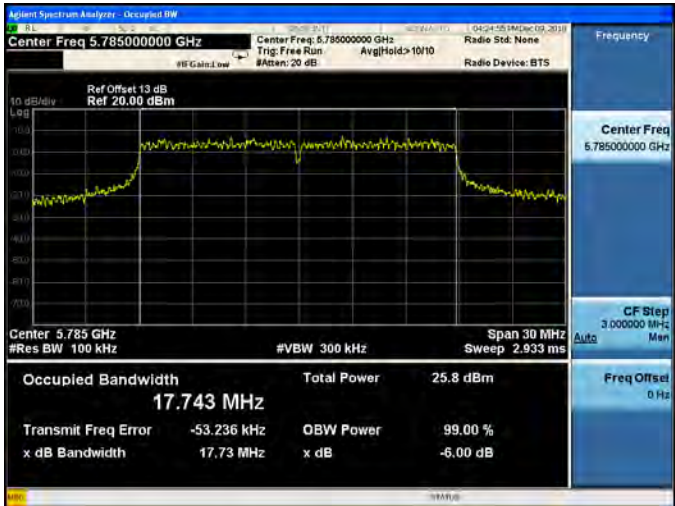
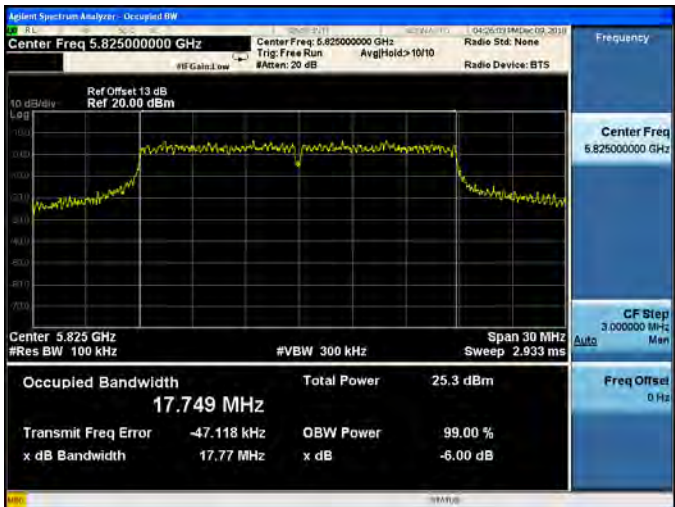
■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ANT-0	
5745 MHz	
5785 MHz	



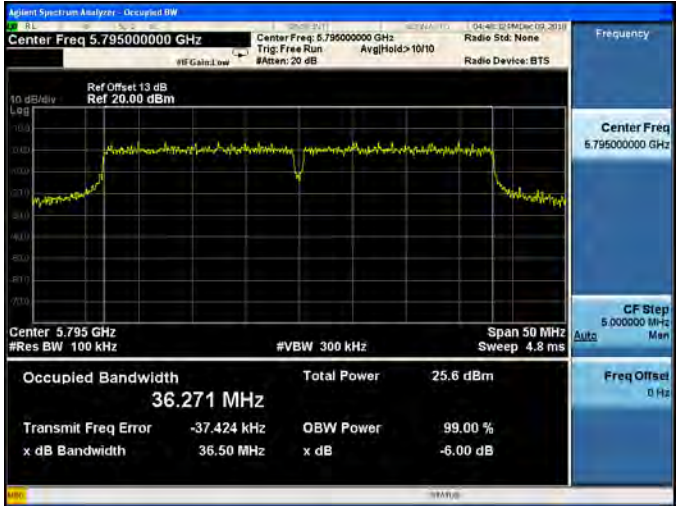


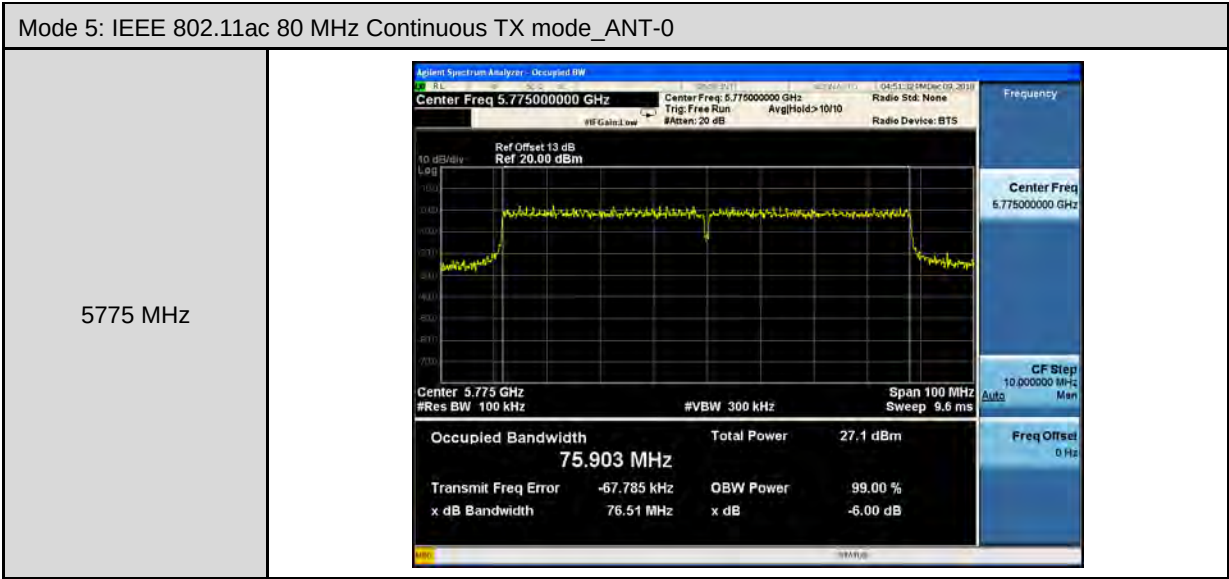
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-0

5745 MHz	
5785 MHz	
5825 MHz	



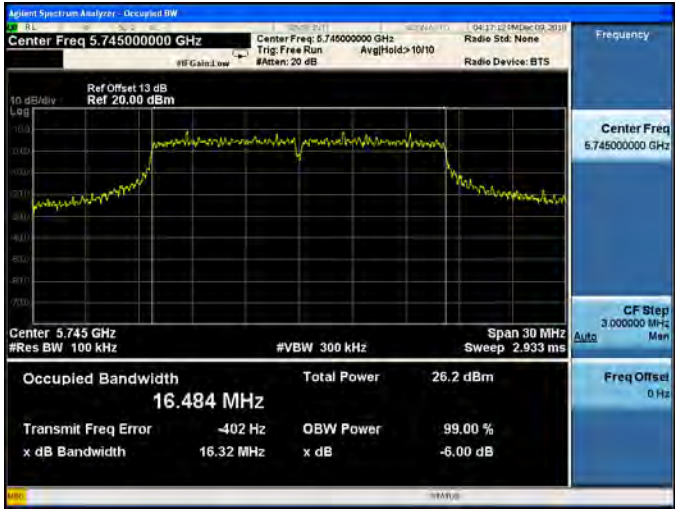
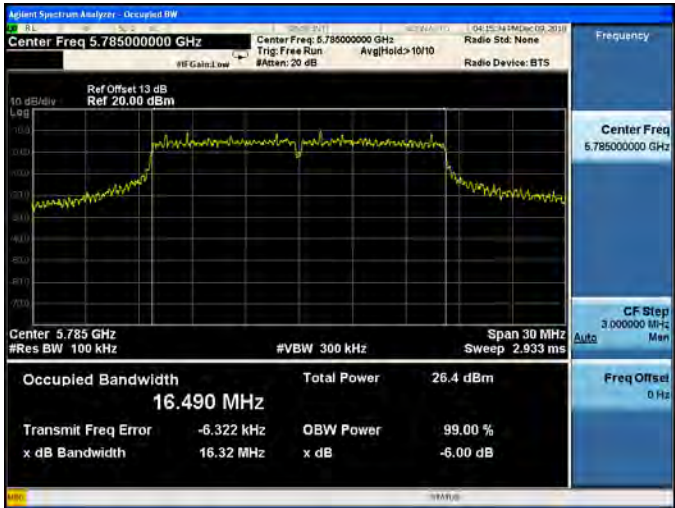
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0

5755 MHz	
5795 MHz	



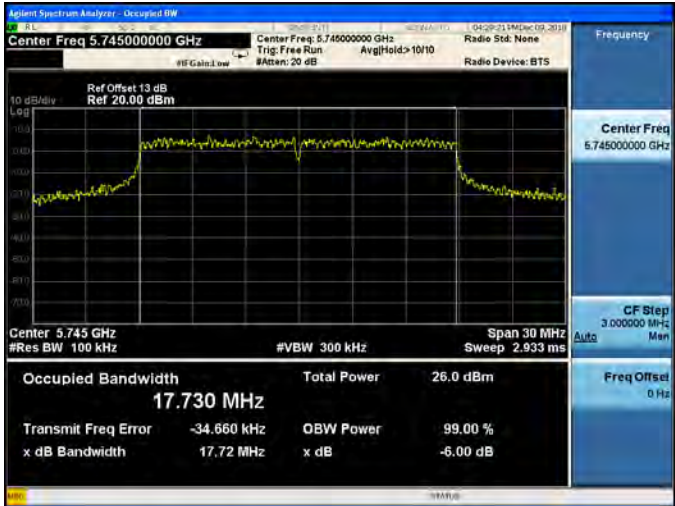
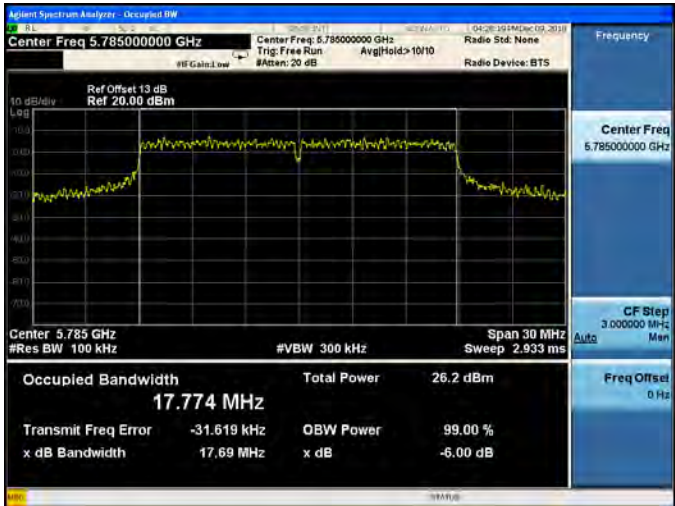
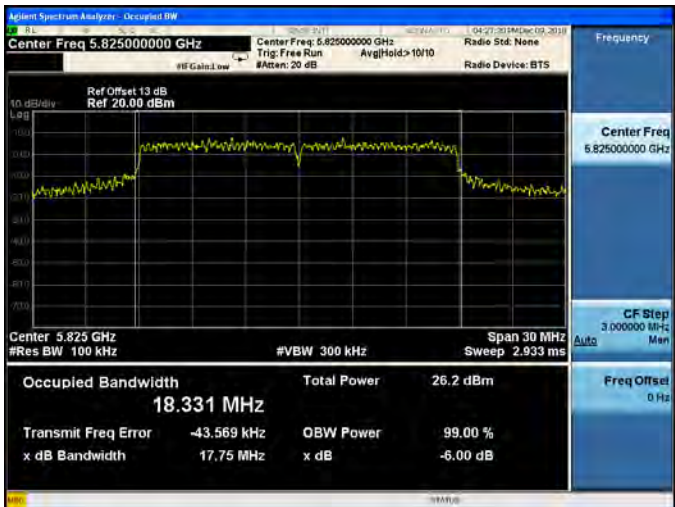


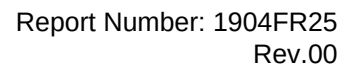
Mode 2: IEEE 802.11a Continuous TX mode_ANT-1

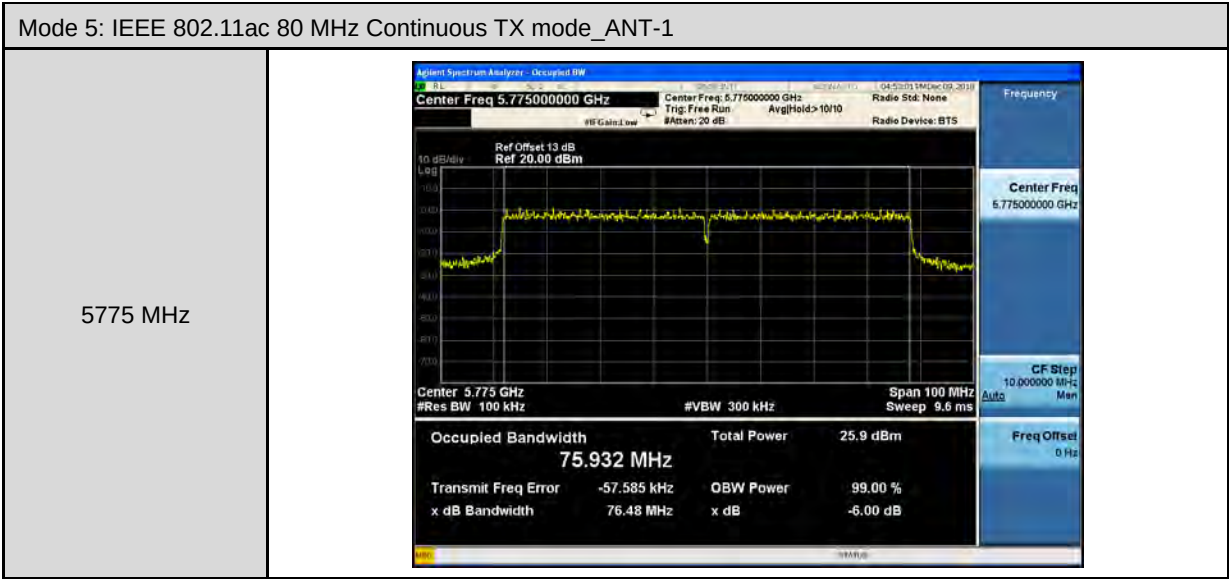
5745 MHz	
5785 MHz	
5825 MHz	



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

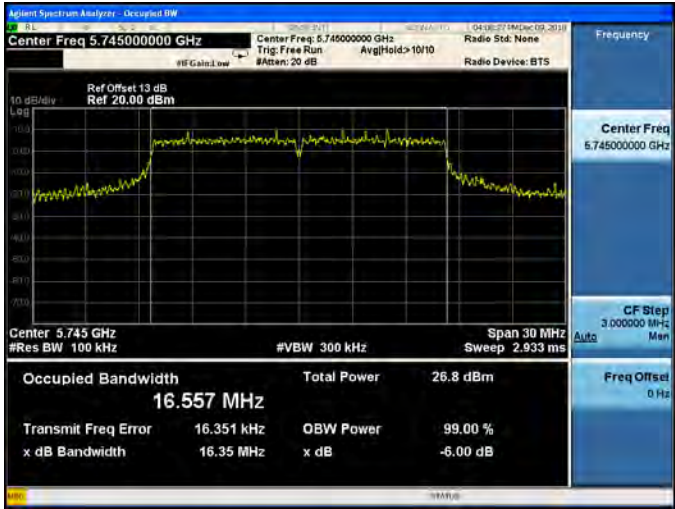
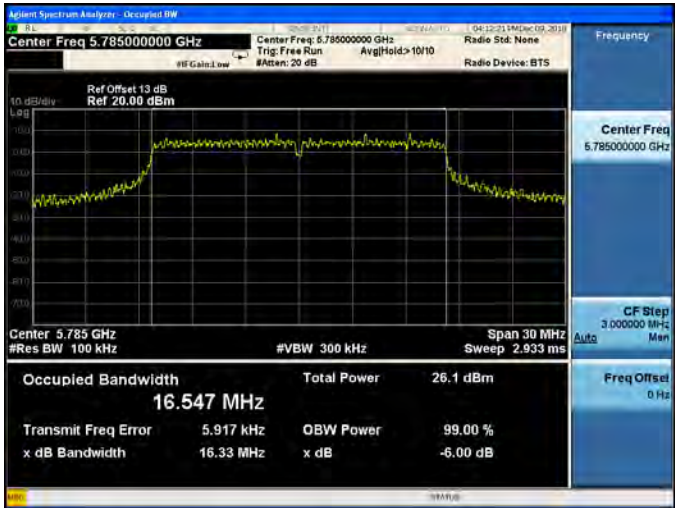
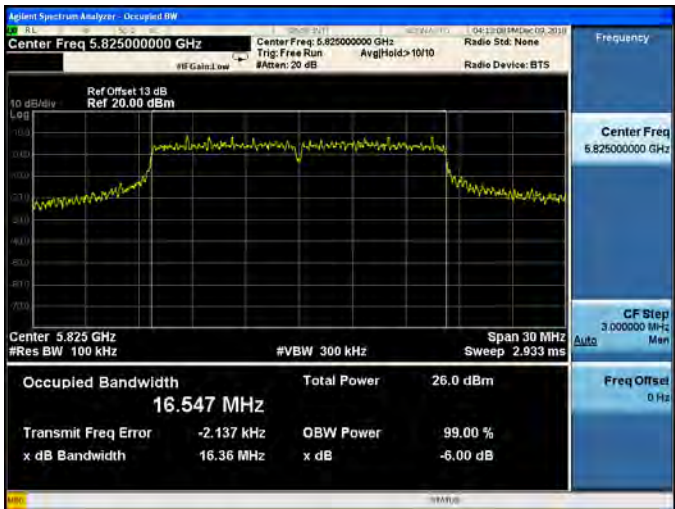
5745 MHz	
5785 MHz	
5825 MHz	

232 of 317

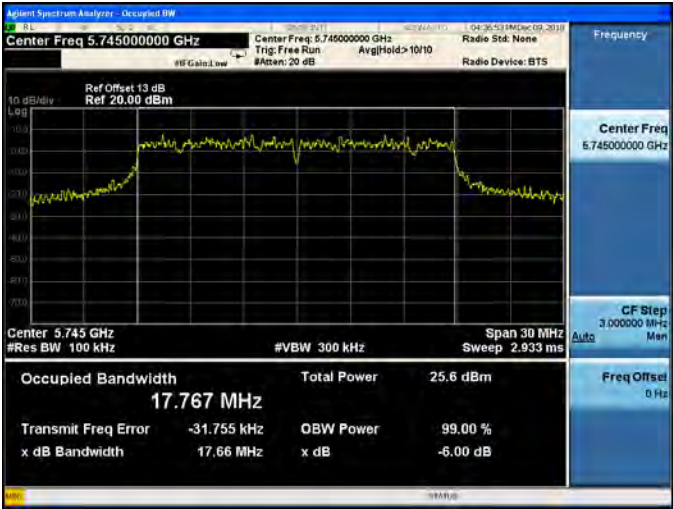
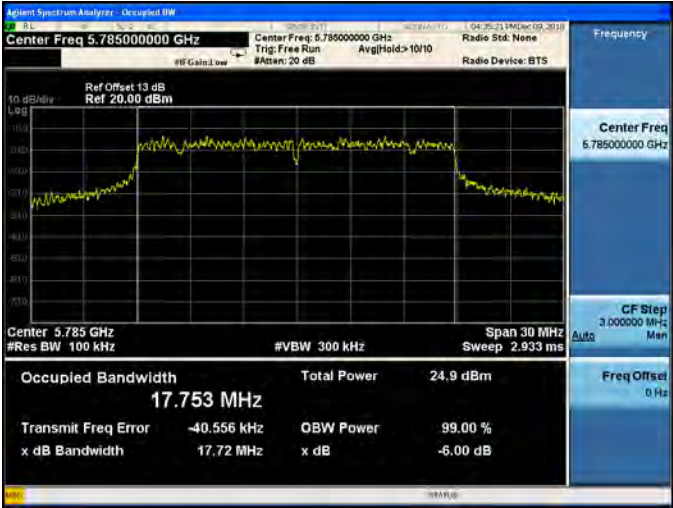
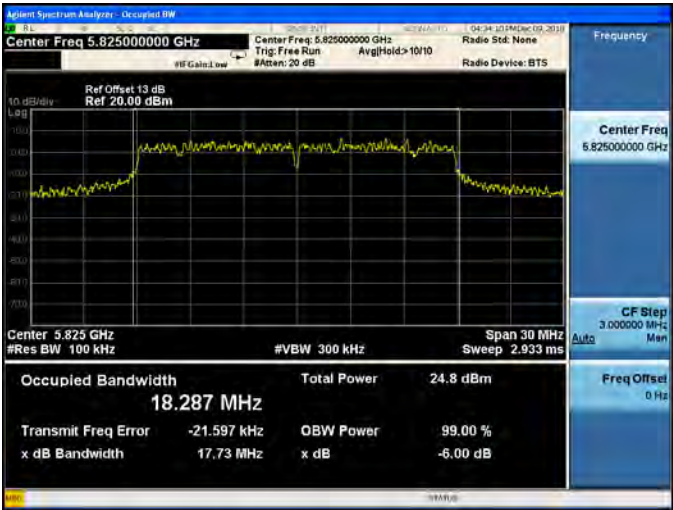




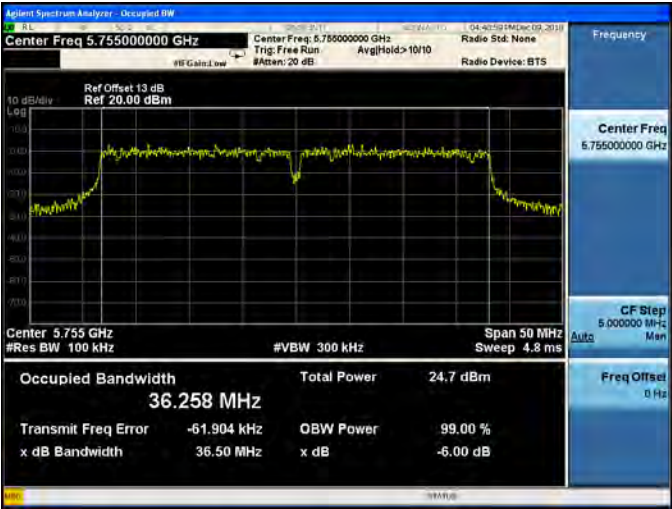
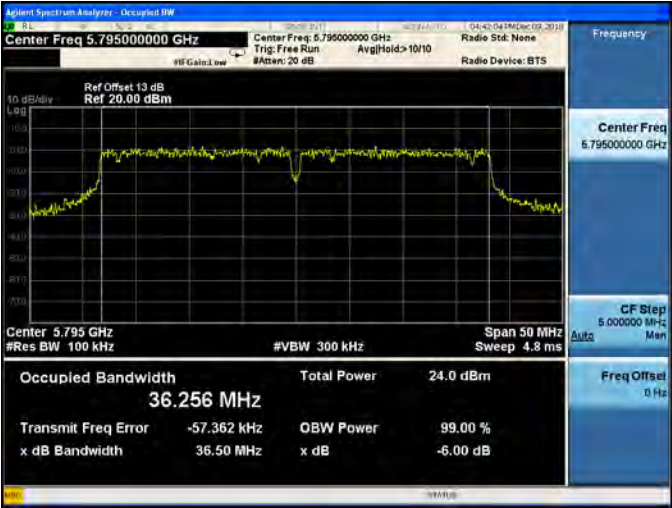
Mode 2: IEEE 802.11a Continuous TX mode_ANT-2

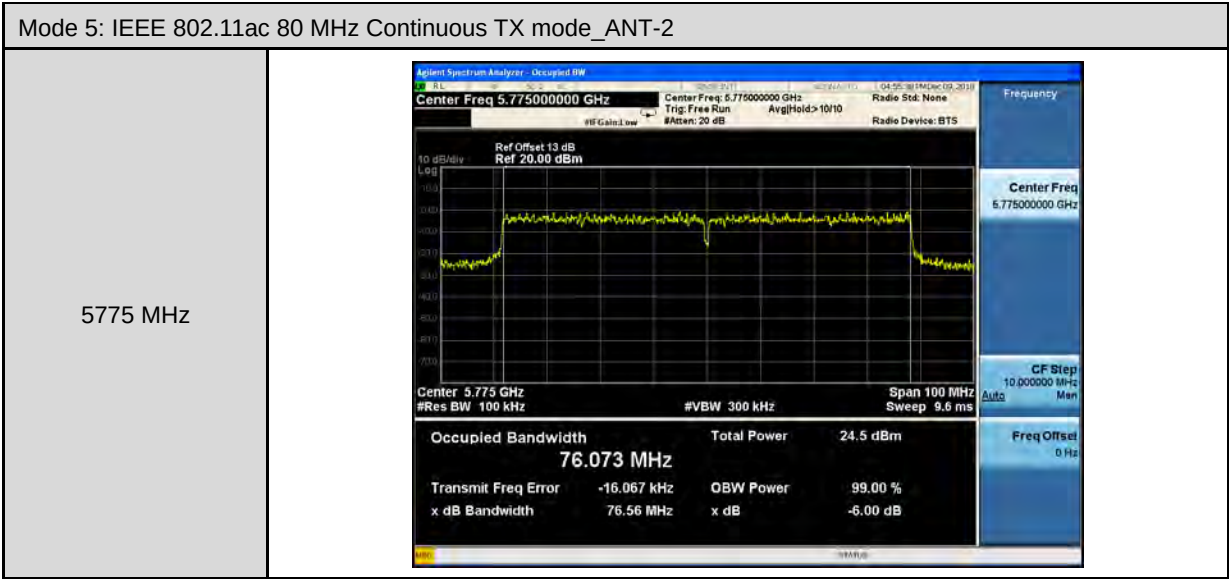
5745 MHz	
5785 MHz	
5825 MHz	



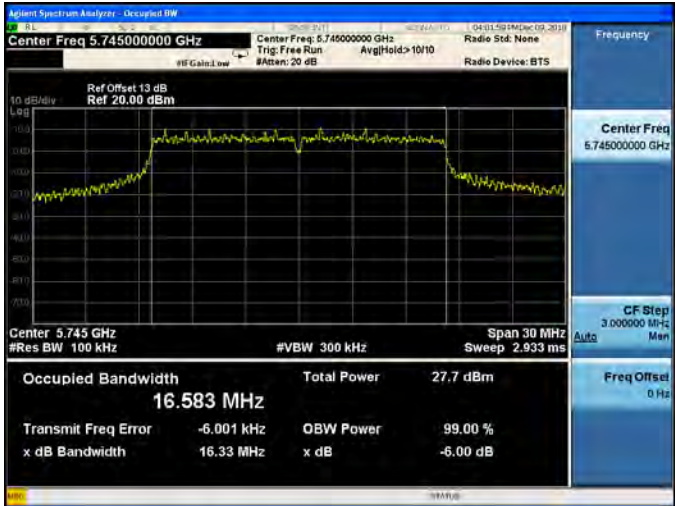
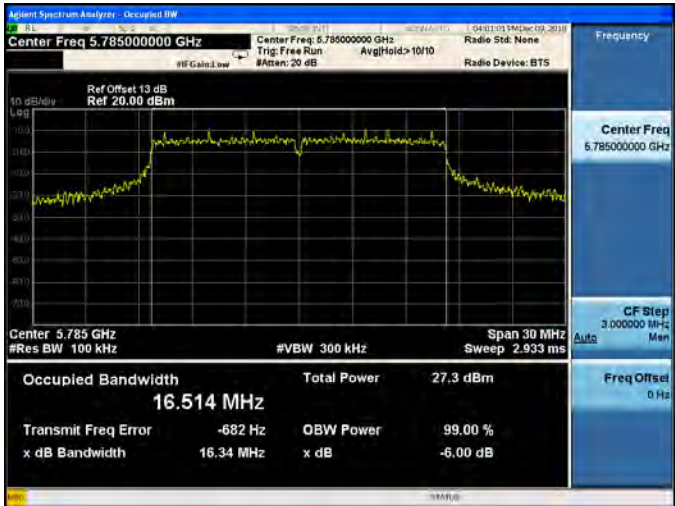
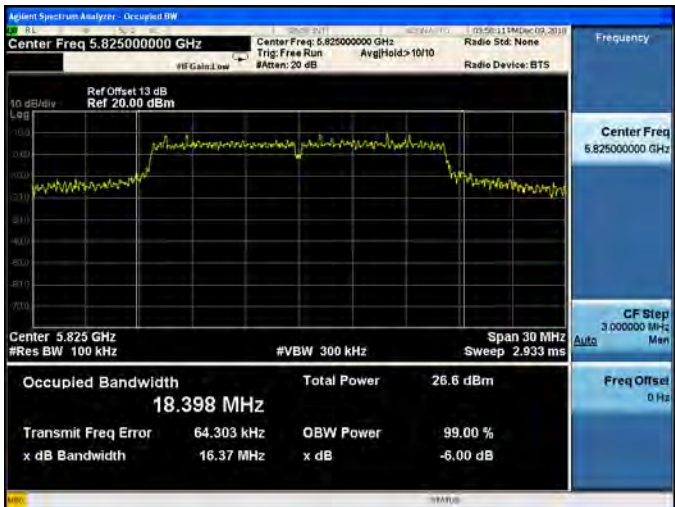
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-2	
5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.745000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.745 GHz #Res BW 100 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.767 MHz Total Power 25.6 dBm Transmit Freq Error -31.755 kHz OBW Power 99.00 % x dB Bandwidth 17.66 MHz x dB -6.00 dB Frequency Center Freq 5.745000000 GHz CF Step 3.000000 MHz Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.785000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.785 GHz #Res BW 100 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.753 MHz Total Power 24.9 dBm Transmit Freq Error -40.556 kHz OBW Power 99.00 % x dB Bandwidth 17.72 MHz x dB -6.00 dB Frequency Center Freq 5.785000000 GHz CF Step 3.000000 MHz Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.825000000 GHz Ref Offset 13 dB Ref 20.00 dBm Center 5.825 GHz #Res BW 100 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 18.287 MHz Total Power 24.8 dBm Transmit Freq Error -21.597 kHz OBW Power 99.00 % x dB Bandwidth 17.73 MHz x dB -6.00 dB Frequency Center Freq 5.825000000 GHz CF Step 3.000000 MHz Freq Offset 0 Hz



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5755 MHz	
5795 MHz	

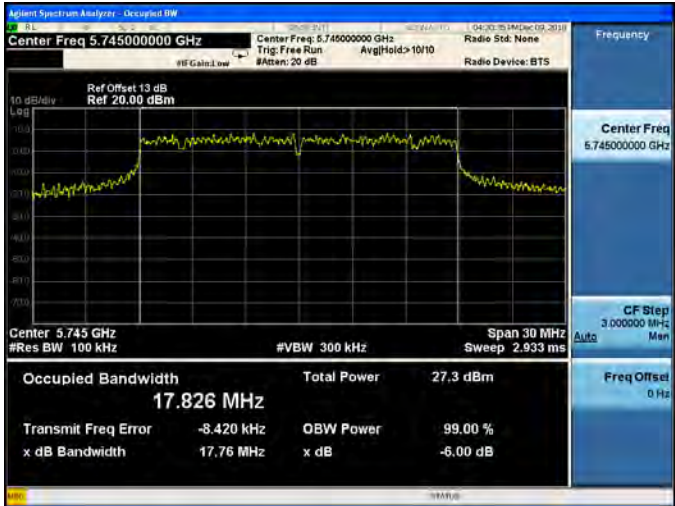
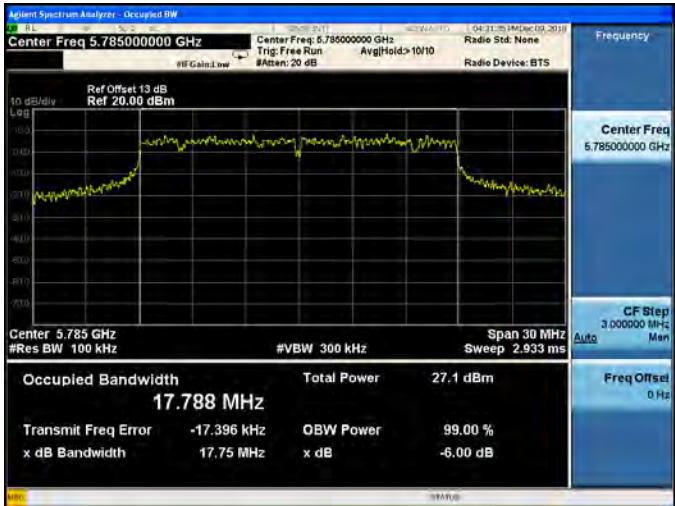
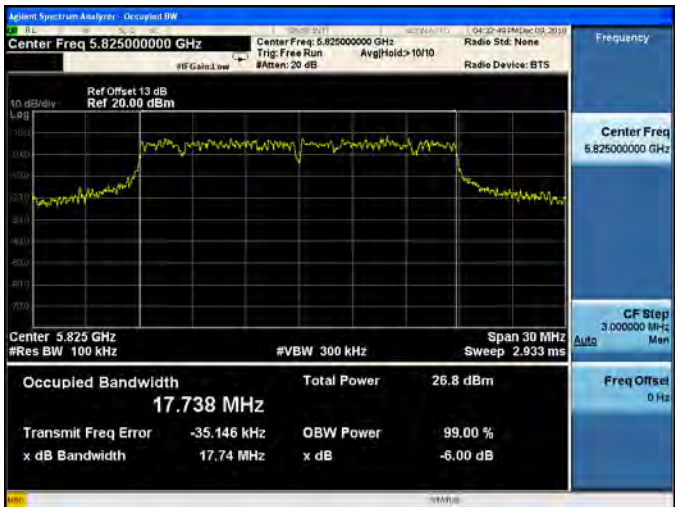




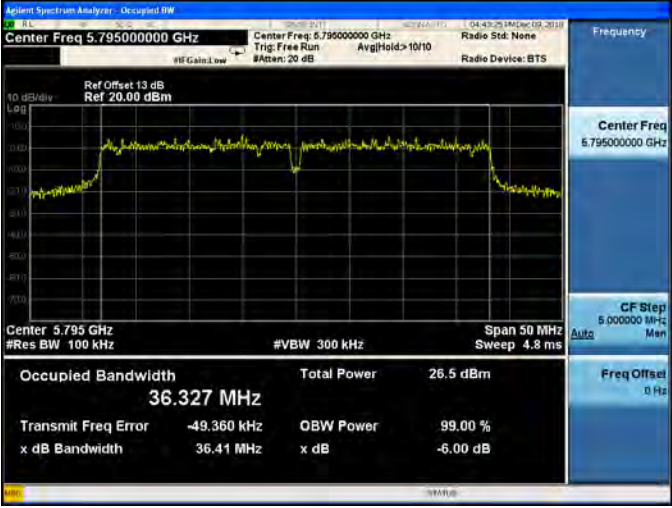
Mode 2: IEEE 802.11a Continuous TX mode_ANT-3	
5745 MHz	
5785 MHz	
5825 MHz	

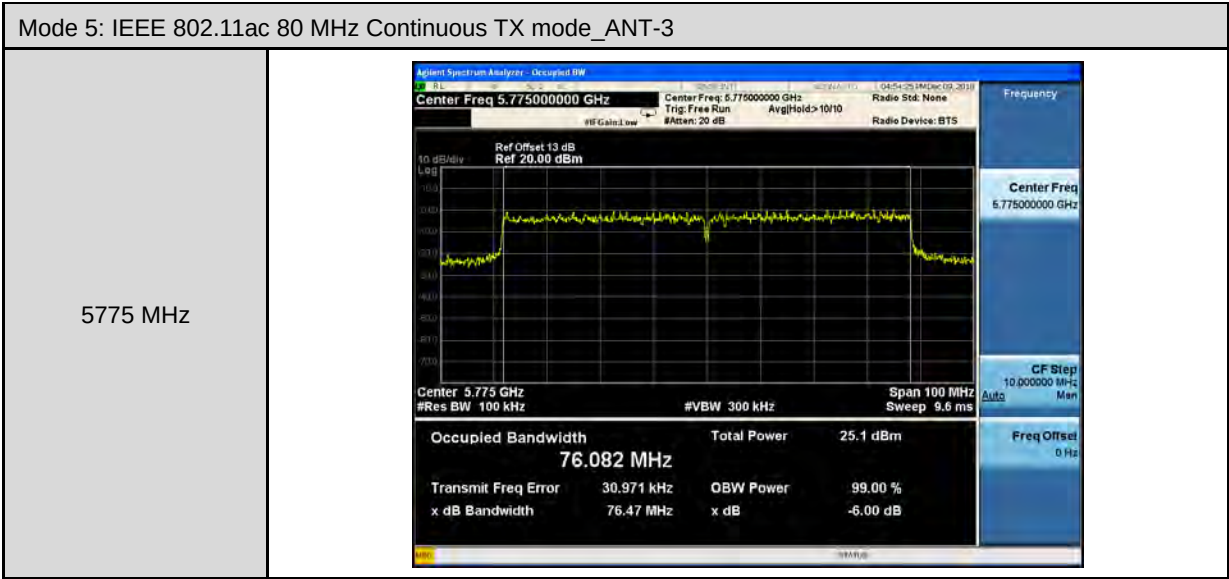


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-3

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5755 MHz	
5795 MHz	

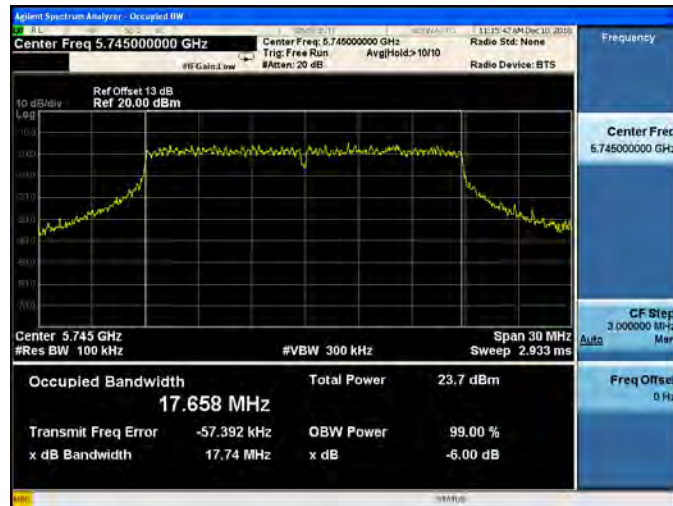




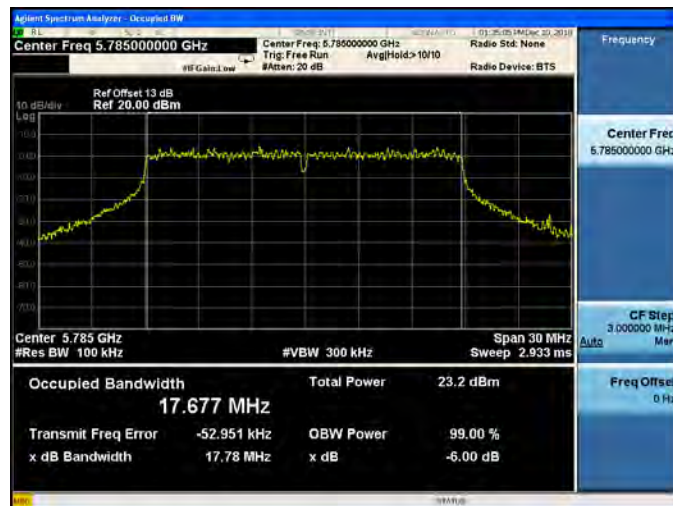
Beamforming on

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

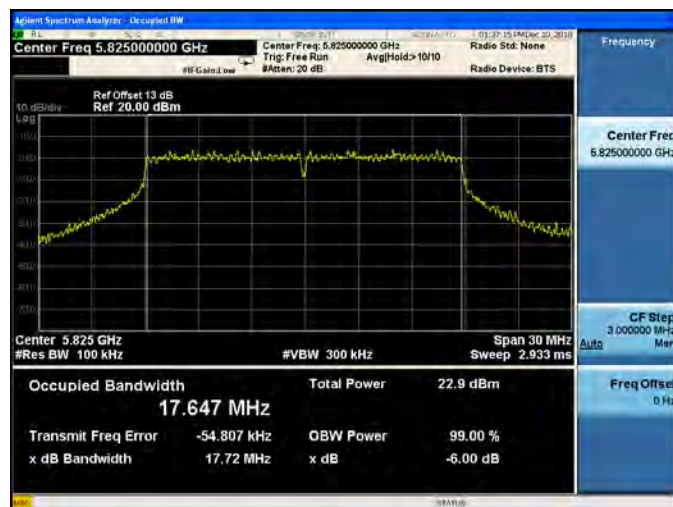
5745 MHz



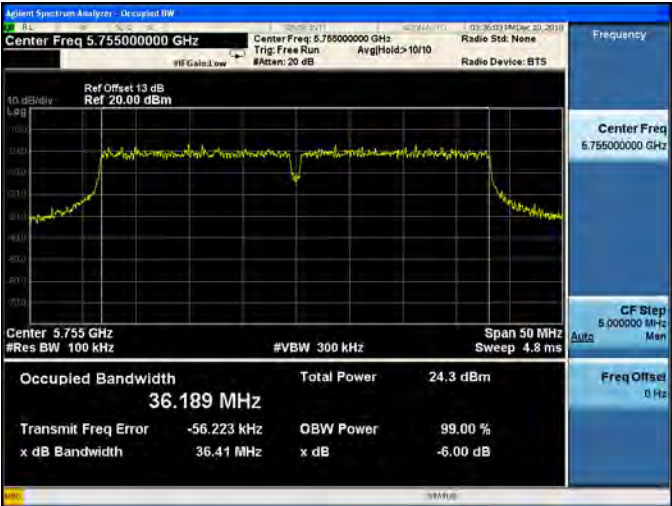
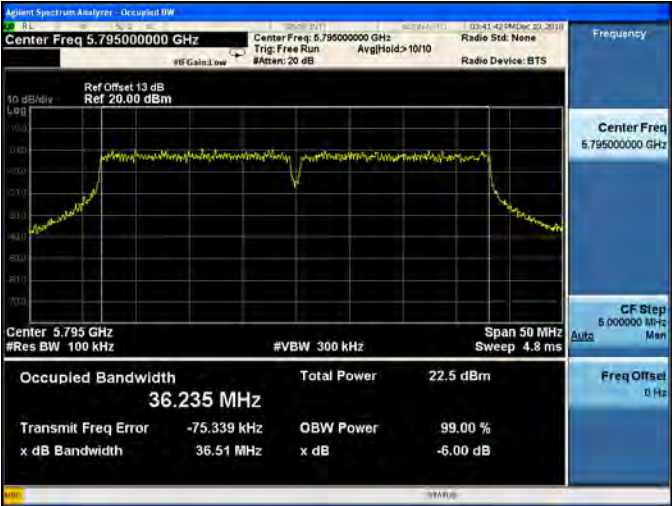
5785 MHz

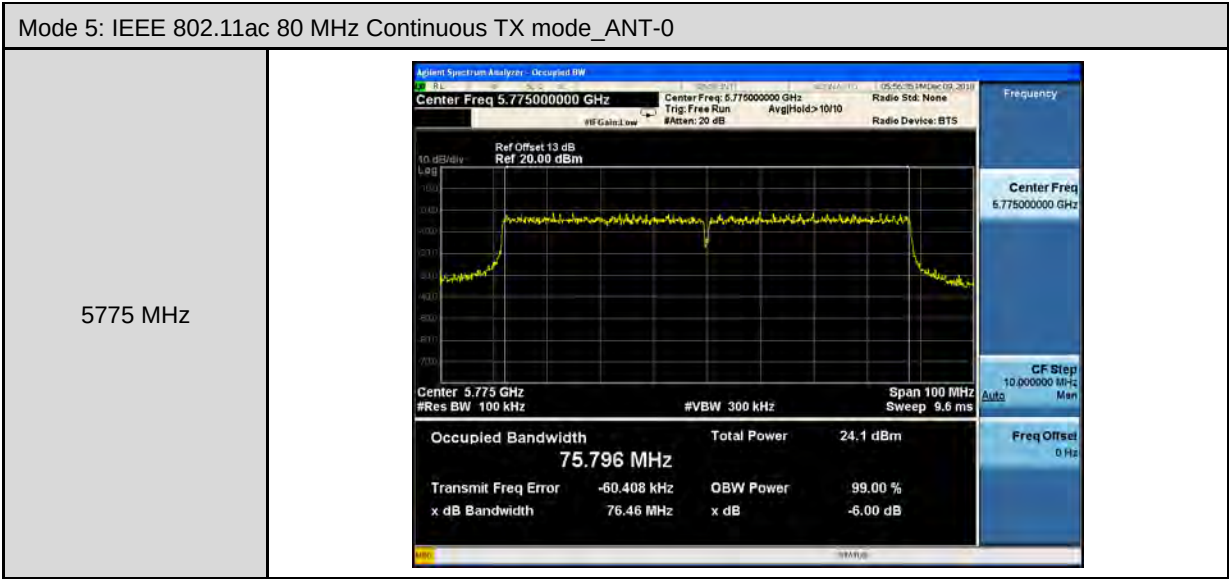


5825 MHz

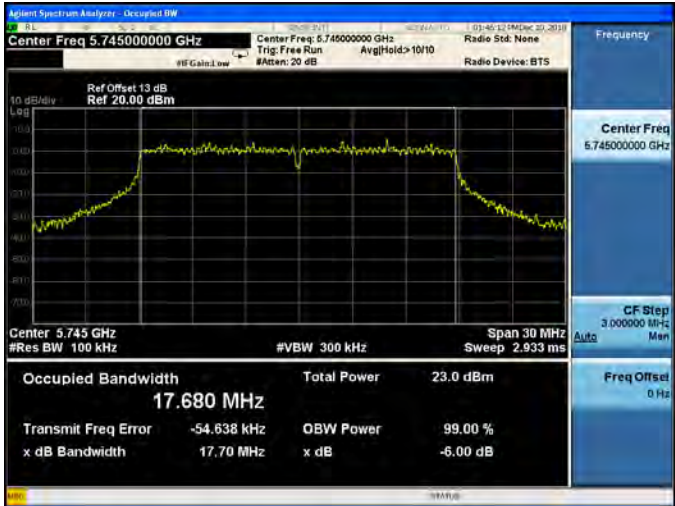
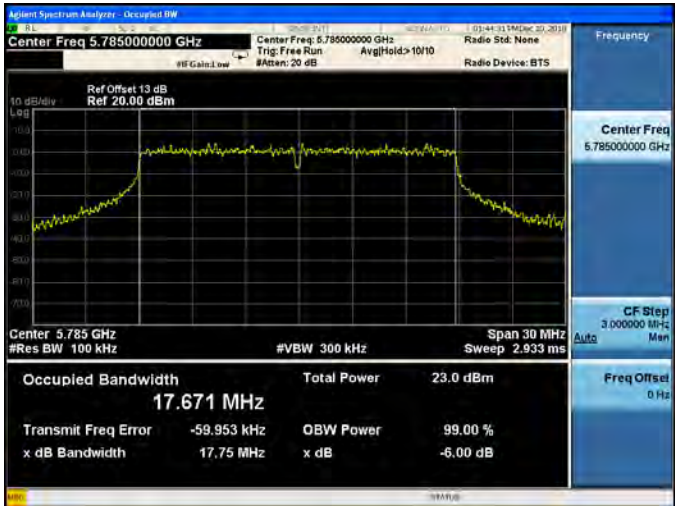




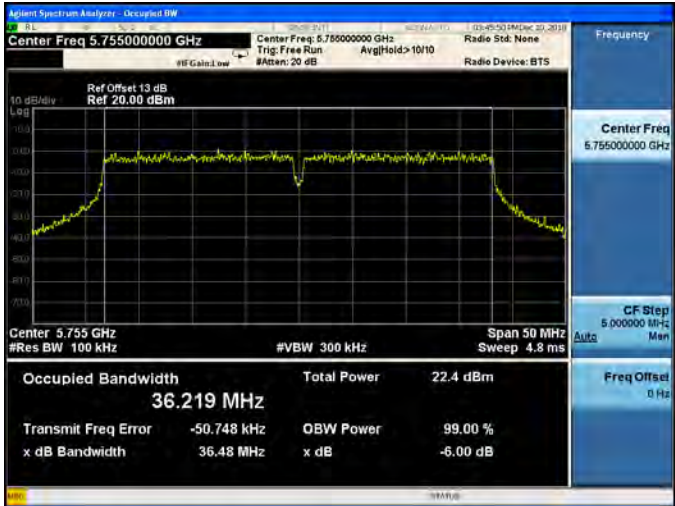
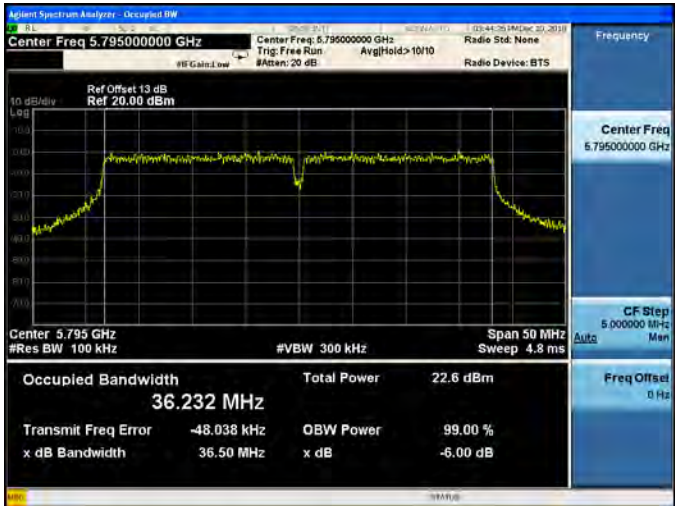
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0	
5755 MHz	 Center Freq 5.755000000 GHz Center Freq 5.755000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.189 MHz Total Power 24.3 dBm Transmit Freq Error -56.223 kHz OBW Power 99.00 % x dB Bandwidth 36.41 MHz x dB -6.00 dB Center Freq 5.755000000 GHz CF Step 5.000000 MHz Freq Offset 0 Hz
5795 MHz	 Center Freq 5.795000000 GHz Center Freq 5.795000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.795 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.235 MHz Total Power 22.5 dBm Transmit Freq Error -75.339 kHz OBW Power 99.00 % x dB Bandwidth 36.51 MHz x dB -6.00 dB Center Freq 5.795000000 GHz CF Step 5.000000 MHz Freq Offset 0 Hz

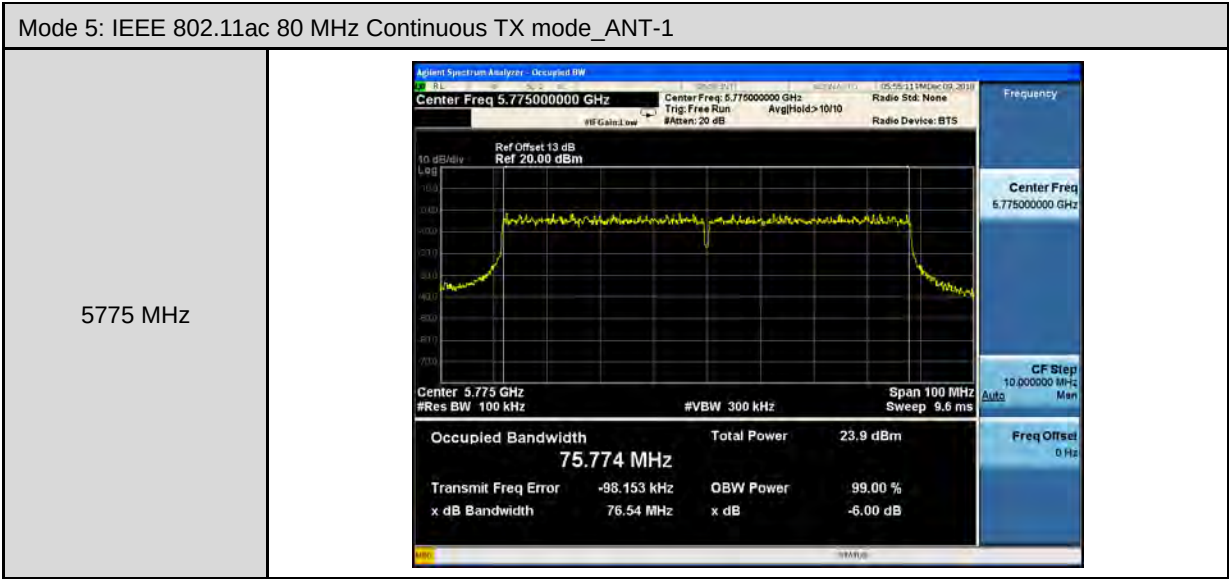




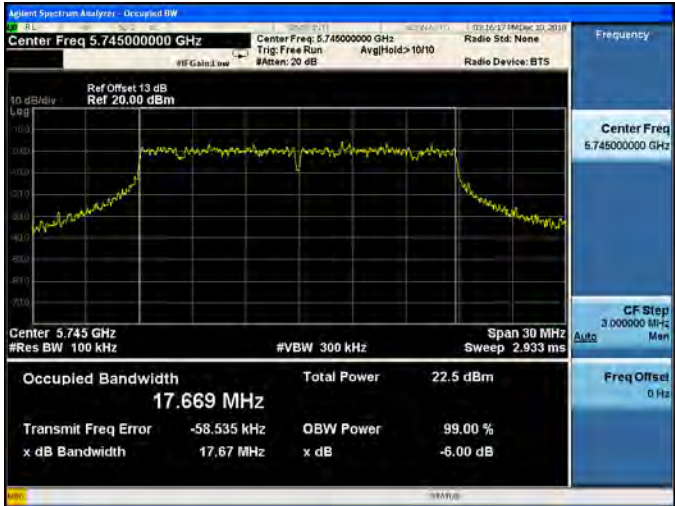
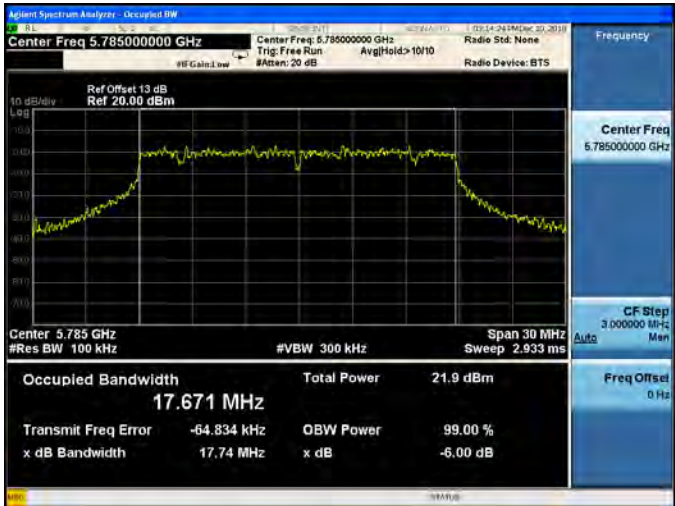
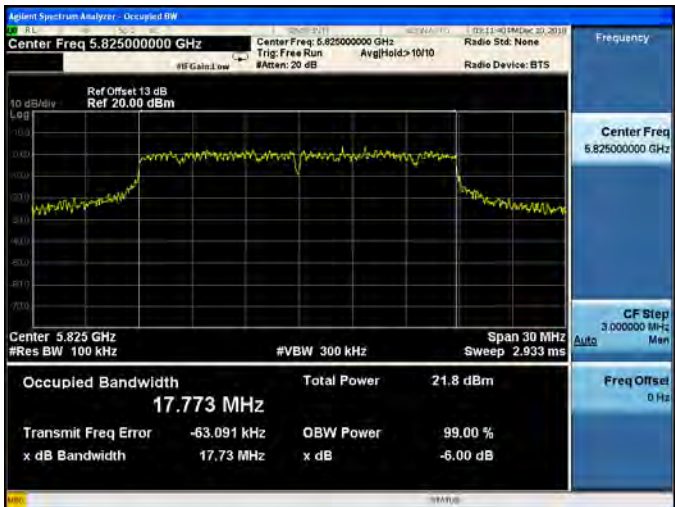
Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1	
5745 MHz	
5785 MHz	
5825 MHz	



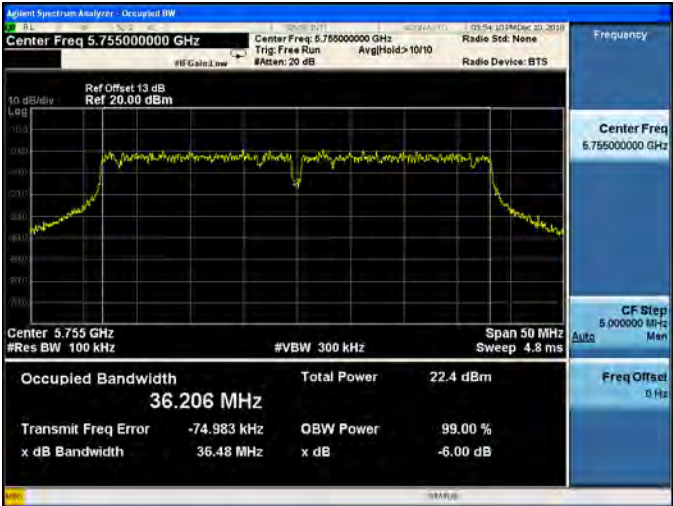
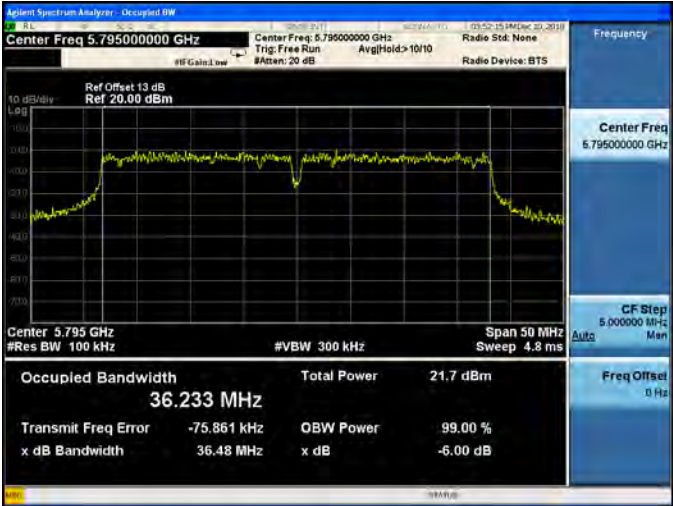
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1	
5755 MHz	
5795 MHz	

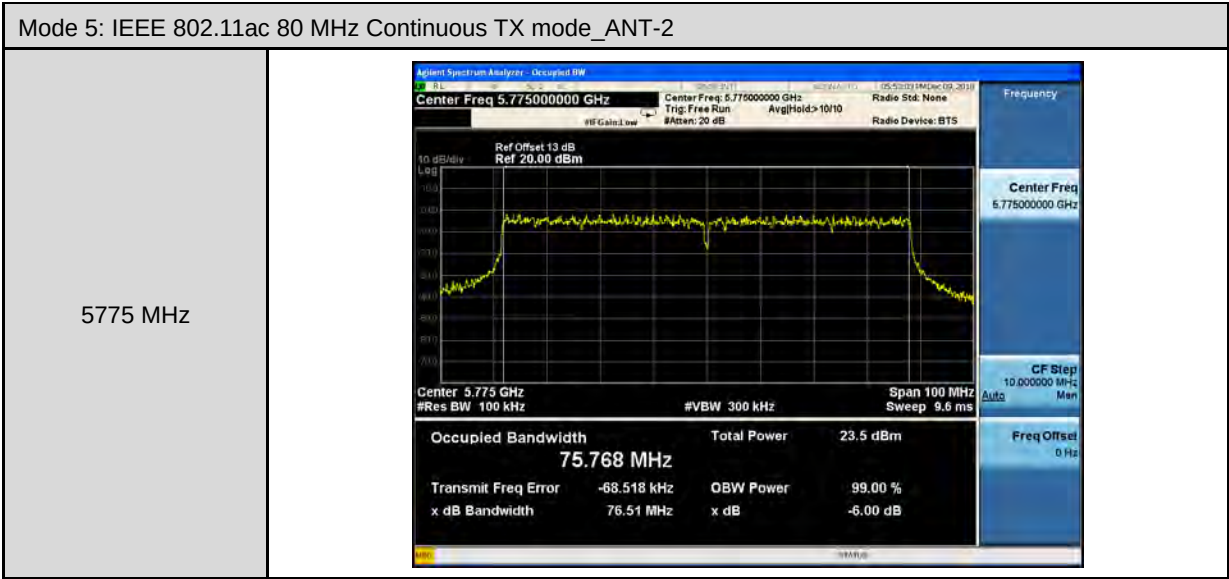




Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-2	
5745 MHz	
5785 MHz	
5825 MHz	

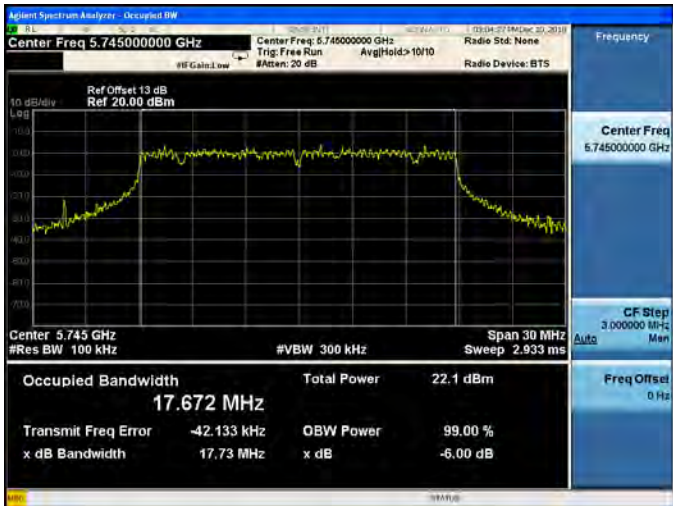
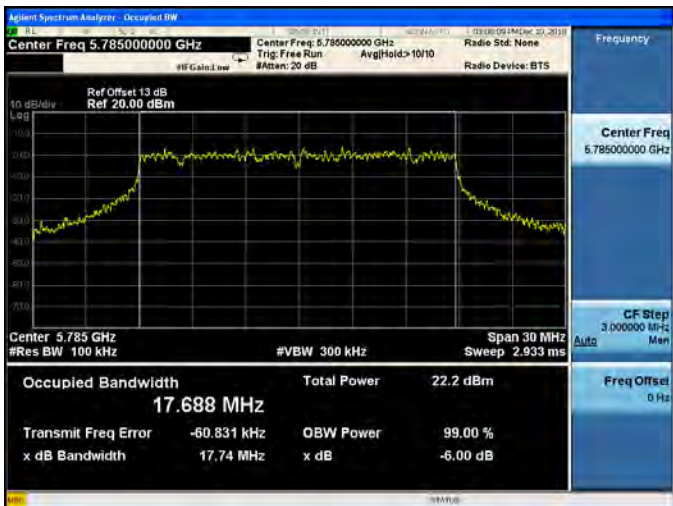
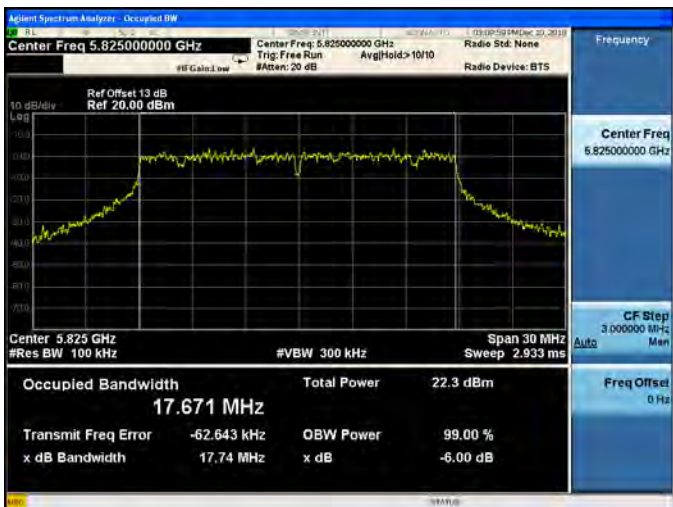


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5755 MHz	
5795 MHz	

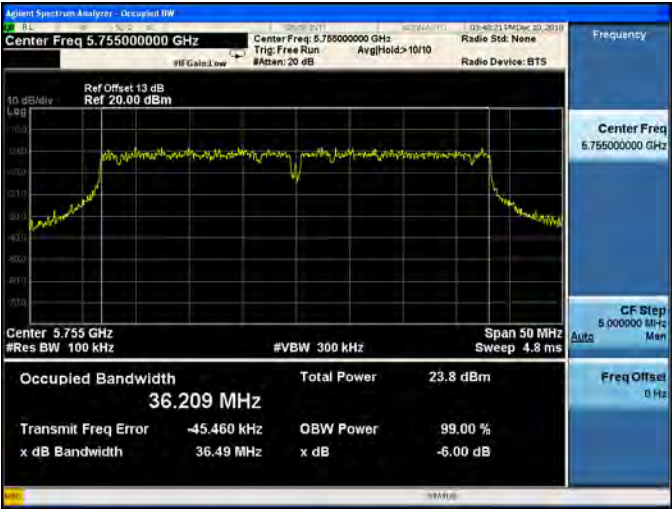
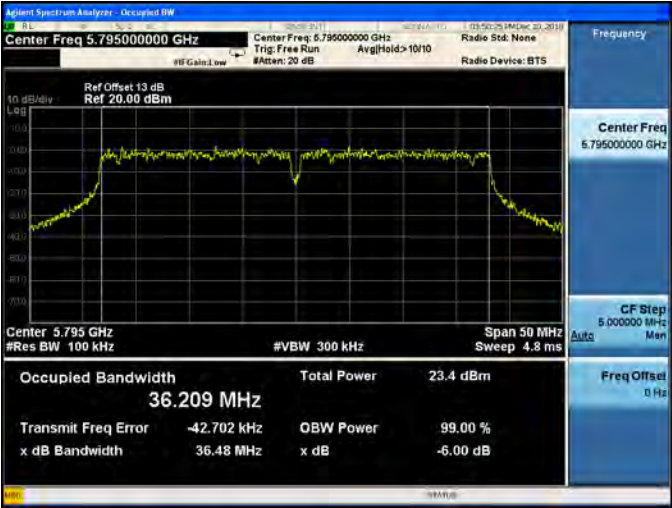


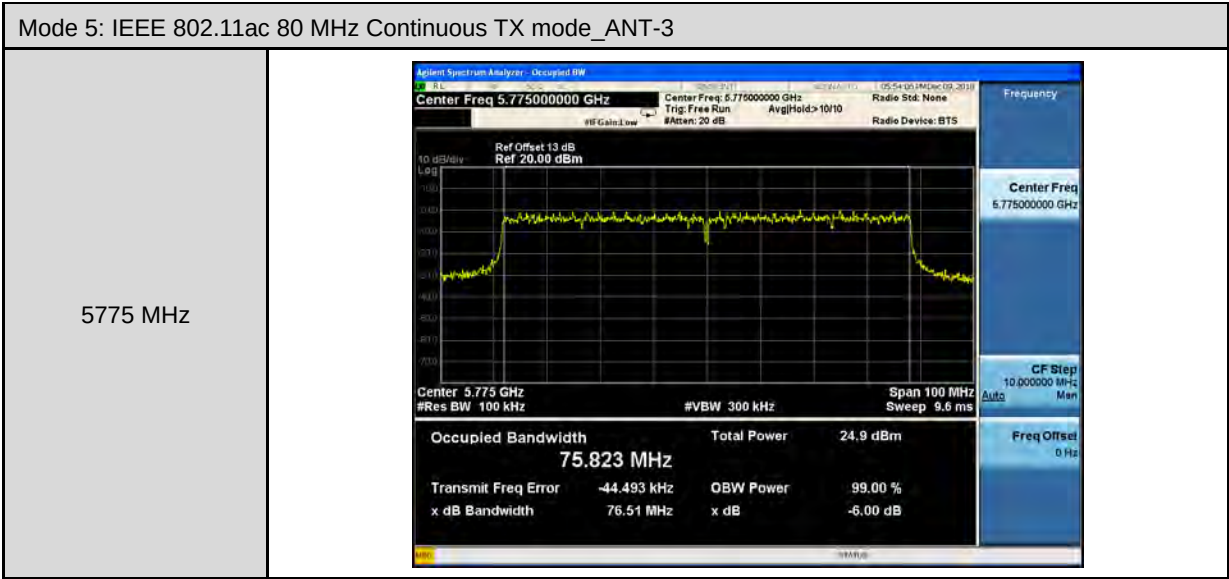


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-3

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5755 MHz	
5795 MHz	



5.6. Maximum Power Spectral Density Measurement

Test Mode	Mode 2: IEEE 802.11a link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.944	0.084	6.028	≤ 12.51
5200	5.826	0.084	5.910	
5240	5.727	0.084	5.811	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.257	0.084	6.341	≤ 12.51
5200	6.181	0.084	6.265	
5240	6.503	0.084	6.587	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.691	0.084	6.775	≤ 12.51
5200	6.811	0.084	6.895	
5240	6.446	0.084	6.530	
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.274	0.084	6.358	≤ 12.51
5200	6.141	0.084	6.225	
5240	5.639	0.084	5.723	
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5180	12.404			≤ 12.51
5200	12.359			
5240	12.201			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-0.60	0.084	6.47	≤ 24.53
5785	-1.15	0.084	5.92	
5825	-1.85	0.084	5.23	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-0.57	0.084	6.51	≤ 24.53
5785	-0.32	0.084	6.75	
5825	0.07	0.084	7.15	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-0.14	0.084	6.93	≤ 24.53
5785	-0.72	0.084	6.36	
5825	-0.70	0.084	6.37	
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	0.84	0.084	7.91	≤ 24.53
5785	0.35	0.084	7.42	
5825	-0.42	0.084	6.66	
Frequency (MHz)	ANT-0+1+2+3			Limit (dBm/500 kHz)
	Calculated (dBm/500 kHz)			
5745	13.02			≤ 24.53
5785	12.67			
5825	12.43			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	5.993	0.026	6.019	≤ 17.00
5200	5.737	0.026	5.763	
5240	5.514	0.026	5.540	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.267	0.026	6.293	≤ 17.00
5200	6.349	0.026	6.375	
5240	6.425	0.026	6.451	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.612	0.026	6.638	≤ 17.00
5200	6.302	0.026	6.328	
5240	6.551	0.026	6.577	
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	6.204	0.026	6.230	≤ 17.00
5200	5.962	0.026	5.988	
5240	5.569	0.026	5.595	
Frequency (MHz)	ANT-0+1+2+3			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	12.321			≤ 17.00
5200	12.141			
5240	12.087			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	0.49	0.026	7.51	≤ 30.00
5785	-0.95	0.026	6.07	
5825	-1.30	0.026	5.71	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-0.51	0.026	6.51	≤ 30.00
5785	-0.46	0.026	6.56	
5825	-0.54	0.026	6.47	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-1.95	0.026	5.07	≤ 30.00
5785	-2.85	0.026	4.17	
5825	-2.94	0.026	4.07	
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-0.30	0.026	6.71	≤ 30.00
5785	-0.44	0.026	6.58	
5825	-0.89	0.026	6.12	
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5745	12.56			≤ 30.00
5785	11.97			
5825	11.71			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	2.512	0.070	2.582	≤ 17.00
5230	4.352	0.070	4.422	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	3.078	0.070	3.148	≤ 17.00
5230	5.123	0.070	5.193	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	3.085	0.070	3.155	≤ 17.00
5230	4.846	0.070	4.916	
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	2.482	0.070	2.552	≤ 17.00
5230	4.234	0.070	4.304	
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5190	8.890			≤ 17.00
5230	10.745			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-3.72	0.070	3.34	≤ 30.00
5795	-4.26	0.070	2.80	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-4.23	0.070	2.83	≤ 30.00
5795	-4.37	0.070	2.69	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-6.08	0.070	0.98	≤ 30.00
5795	-6.72	0.070	0.34	
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-4.47	0.070	2.59	≤ 30.00
5795	-4.34	0.070	2.72	
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5755	8.54			≤ 30.00
5795	8.27			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-2.991	0.182	-2.809	≤ 17.00
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-2.487	0.182	-2.305	≤ 17.00
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-2.255	0.182	-2.073	≤ 17.00
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-2.940	0.182	-2.758	≤ 17.00
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	3.545			≤ 17.00

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



Test Mode	Mode 5: IEEE 802.11ac 80 MHz link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-6.75	0.182	0.42	≤ 30.00
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-7.88	0.182	-0.71	≤ 30.00
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-10.42	0.182	-3.25	≤ 30.00
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-9.46	0.182	-2.29	≤ 30.00
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5775	4.79			≤ 30.00

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-0.554	0.026	-0.528	≤ 12.51
5200	-0.740	0.026	-0.714	
5240	-0.873	0.026	-0.847	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-0.444	0.026	-0.418	≤ 12.51
5200	-0.268	0.026	-0.242	
5240	-0.479	0.026	-0.453	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-0.127	0.026	-0.101	≤ 12.51
5200	-0.346	0.026	-0.320	
5240	-0.541	0.026	-0.515	
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-0.763	0.026	-0.737	≤ 12.51
5200	-0.876	0.026	-0.850	
5240	-0.830	0.026	-0.804	
Frequency (MHz)	ANT-0+1+2+3			Limit (dBm/MHz)
	Calculated (dBm/MHz)			
5180	5.581			≤ 12.51
5200	5.497			
5240	5.369			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-2.68	0.035	4.35	≤ 24.53
5785	-3.48	0.035	3.55	
5825	-4.00	0.035	3.03	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-3.77	0.035	3.26	≤ 24.53
5785	-3.43	0.035	3.59	
5825	-3.31	0.035	3.72	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-4.27	0.035	2.75	≤ 24.53
5785	-4.80	0.035	2.22	
5825	-5.03	0.035	1.99	
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-4.49	0.035	2.53	≤ 24.53
5785	-4.42	0.035	2.61	
5825	-4.49	0.035	2.54	
Frequency (MHz)	ANT-0+1+2+3			Limit (dBm/500 kHz)
	Calculated (dBm/500 kHz)			
5745	9.29			≤ 24.53
5785	9.04			
5825	8.88			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.907	0.070	-3.837	≤ 12.51
5230	-2.452	0.070	-2.382	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.637	0.070	-3.567	≤ 12.51
5230	-1.325	0.070	-1.255	
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.671	0.070	-3.601	≤ 12.51
5230	-1.751	0.070	-1.681	
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-4.419	0.070	-4.349	≤ 12.51
5230	-2.555	0.070	-2.485	
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5190	2.193			≤ 12.51
5230	4.100			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-5.63	0.070	1.43	≤ 24.53
5795	-7.61	0.070	-0.55	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-7.67	0.070	-0.61	≤ 24.53
5795	-6.88	0.070	0.18	
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-8.37	0.070	-1.31	≤ 24.53
5795	-9.13	0.070	-2.07	
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-7.27	0.070	-0.21	≤ 24.53
5795	-7.44	0.070	-0.38	
Frequency (MHz)	ANT-0+1+2+3			Limit (dBm/500 kHz)
	Calculated (dBm/500 kHz)			
5755	5.97			≤ 24.53
5795	5.39			

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-9.532	0.182	-9.350	≤ 12.51
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-9.026	0.182	-8.844	≤ 12.51
Frequency (MHz)	ANT-2			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-8.649	0.182	-8.467	≤ 12.51
Frequency (MHz)	ANT-3			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-9.607	0.182	-9.425	≤ 12.51
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	-2.983			≤ 12.51

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 link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-10.00	0.145	-2.86	≤ 24.53
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-10.01	0.145	-2.88	≤ 24.53
Frequency (MHz)	ANT-2			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-11.33	0.145	-4.20	≤ 24.53
Frequency (MHz)	ANT-3			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5775	-9.49	0.145	-2.36	≤ 24.53
Frequency (MHz)	ANT-0+1+2+3			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5775	3.03			≤ 24.53

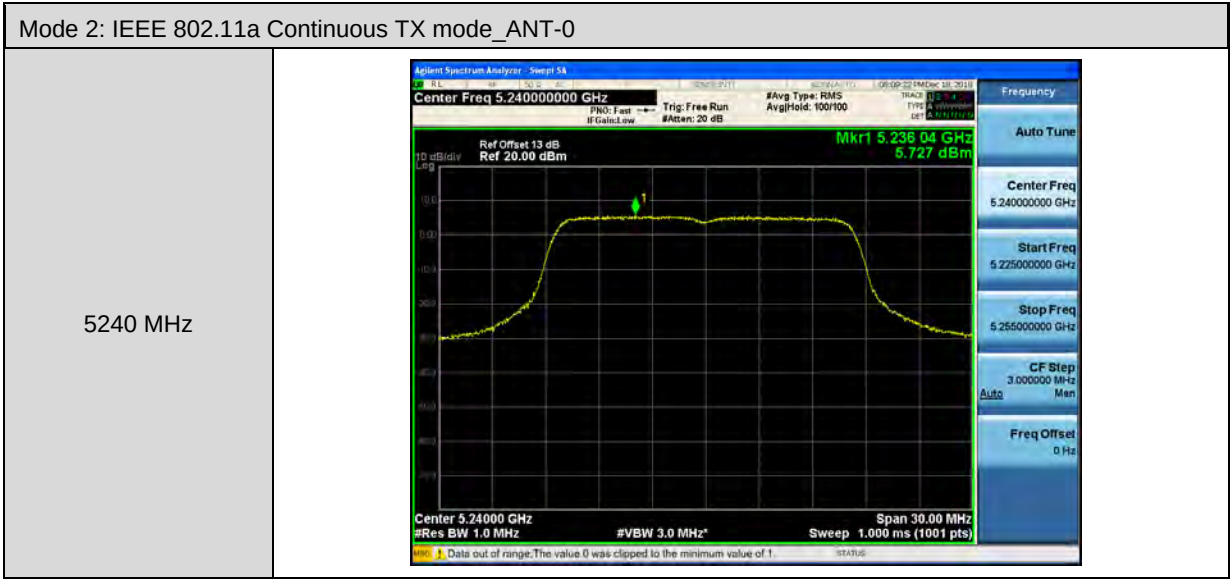
Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

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



■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ANT-0	
5180 MHz	
5200 MHz	





Mode 2: IEEE 802.11a Continuous TX mode_ANT-0

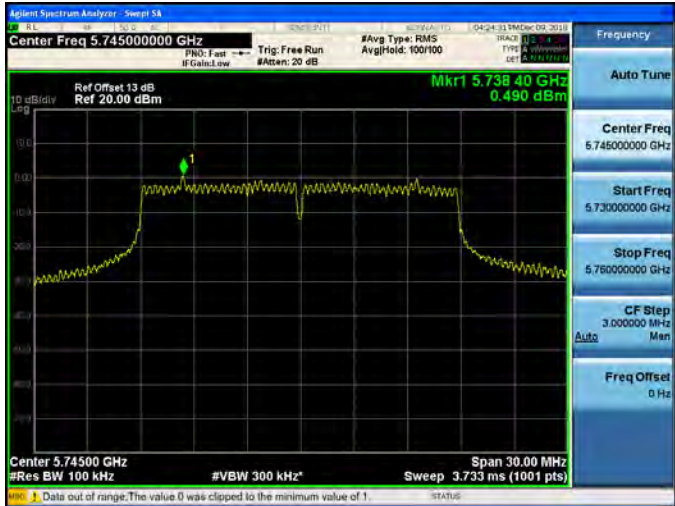
5745 MHz	
5785 MHz	
5825 MHz	



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	
5190 MHz	
5230 MHz	



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



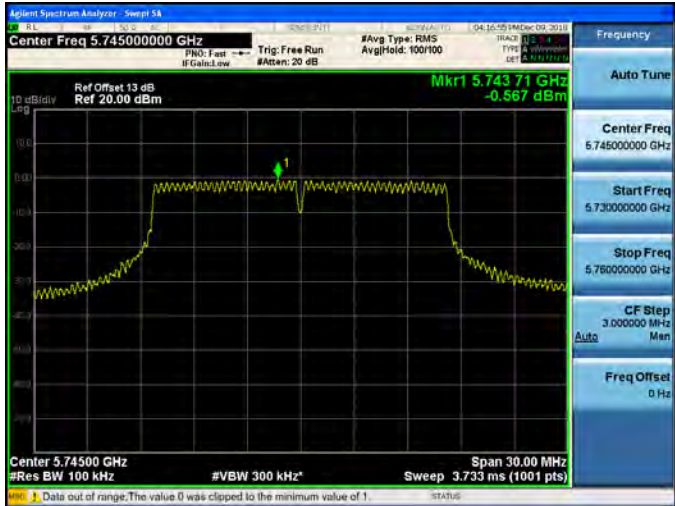
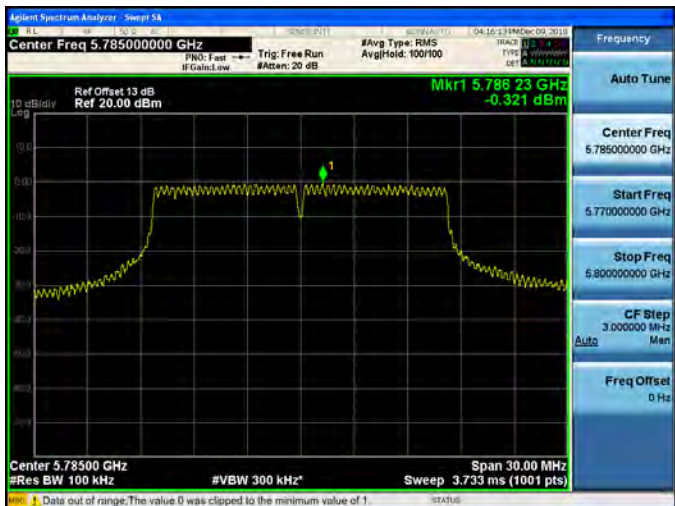
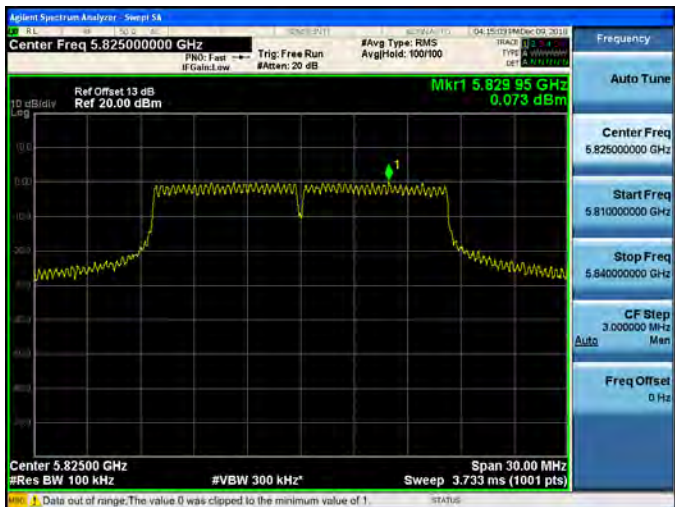


Mode 2: IEEE 802.11a Continuous TX mode_ANT-1

5180 MHz	
5200 MHz	
5240 MHz	



Mode 2: IEEE 802.11a Continuous TX mode_ANT-1

5745 MHz	
5785 MHz	
5825 MHz	

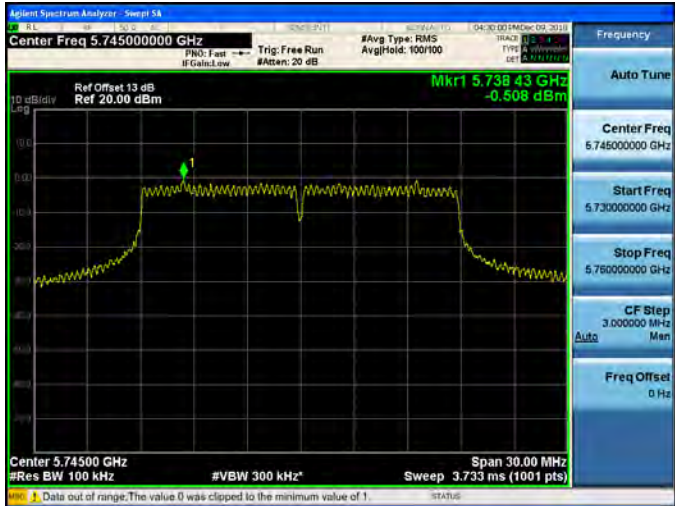
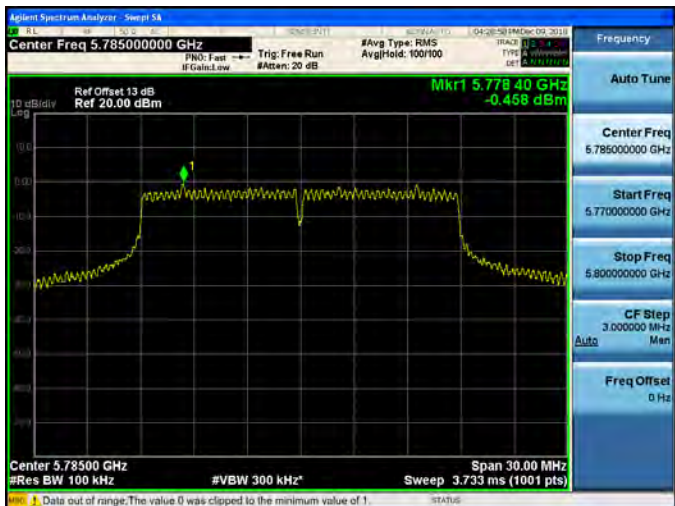


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1

5180 MHz	
5200 MHz	
5240 MHz	



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

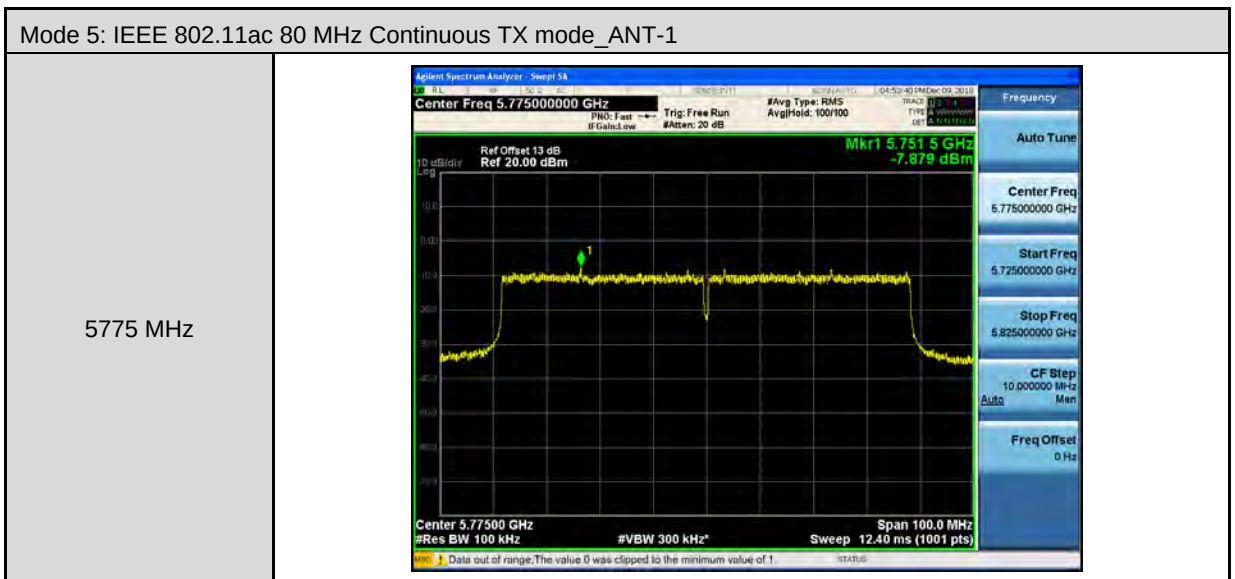
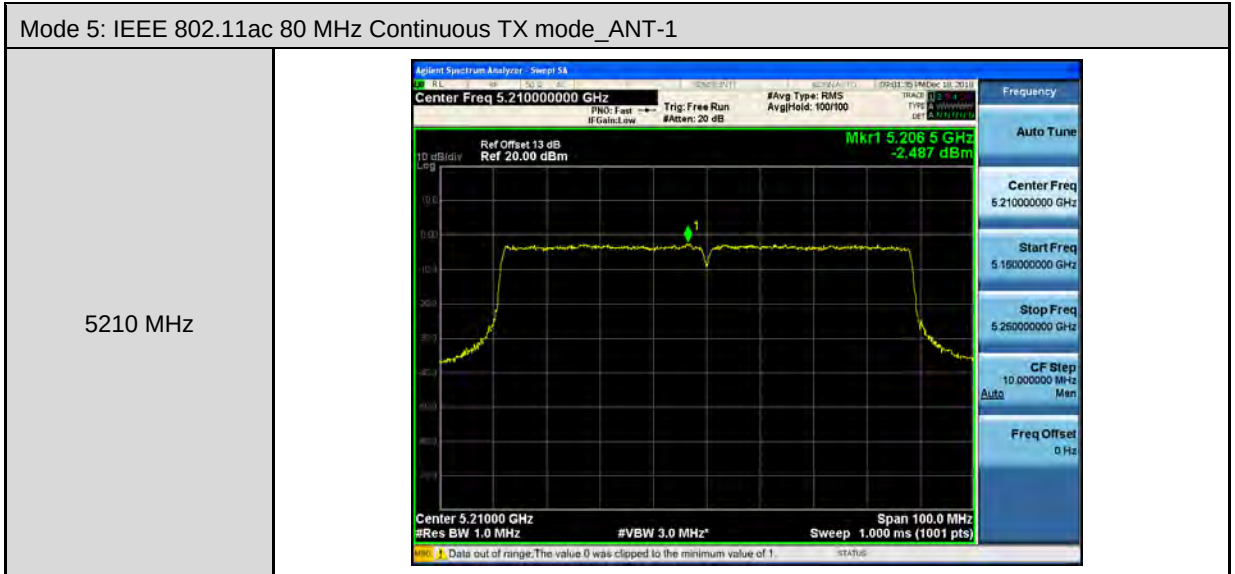
5745 MHz	
5785 MHz	
5825 MHz	



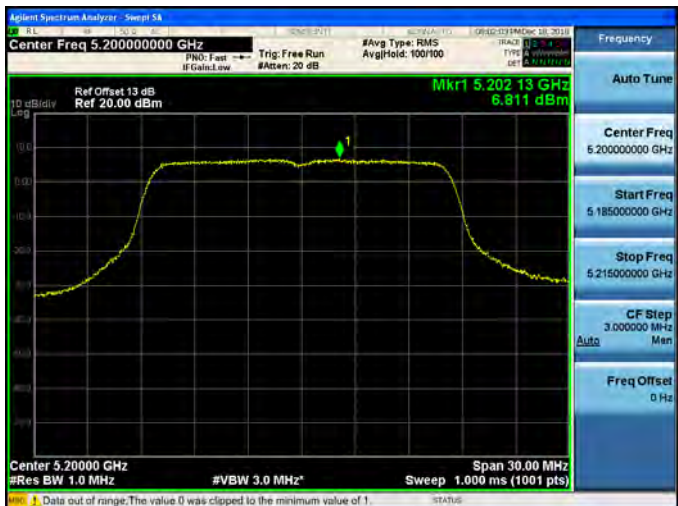
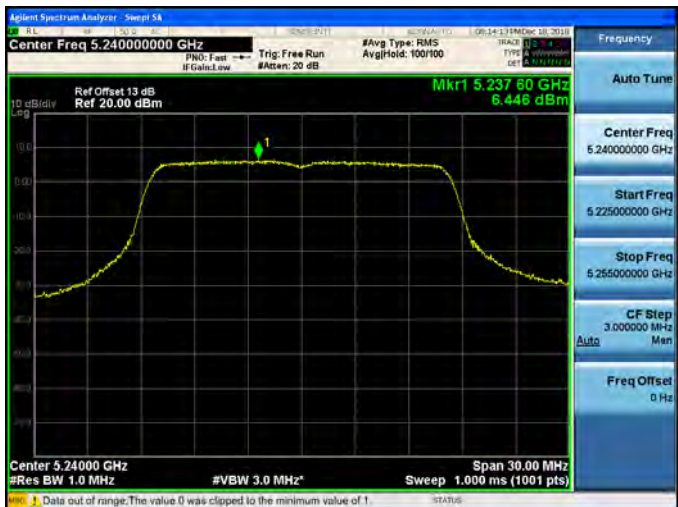
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1	
5190 MHz	
5230 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1	
5755 MHz	
5795 MHz	

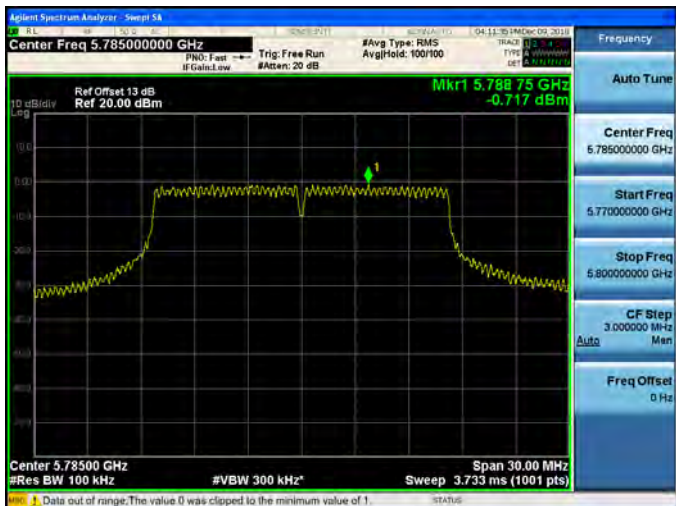
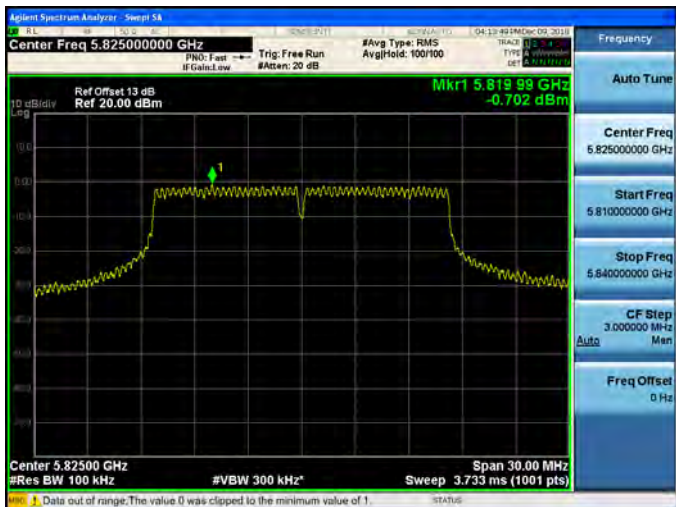




Mode 2: IEEE 802.11a Continuous TX mode_ANT-2	
5180 MHz	
5200 MHz	
5240 MHz	

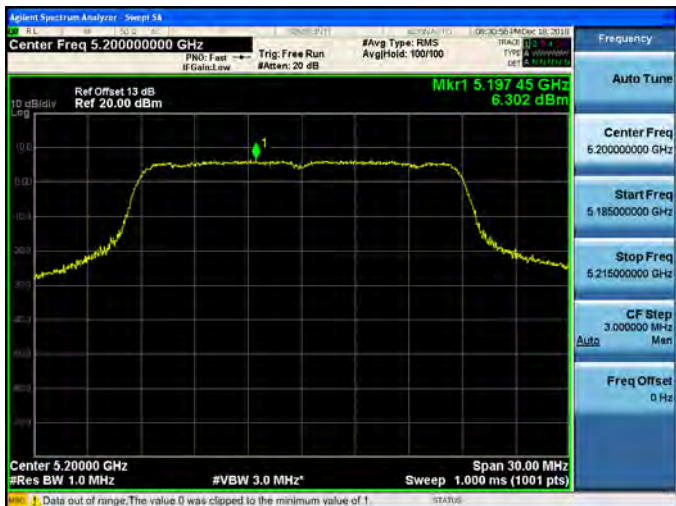
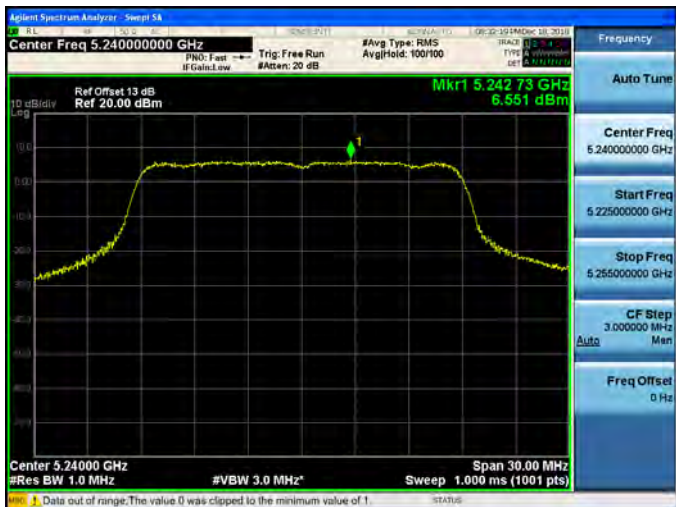


Mode 2: IEEE 802.11a Continuous TX mode_ANT-2

5745 MHz	
5785 MHz	
5825 MHz	



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

5180 MHz	
5200 MHz	
5240 MHz	



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

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5190 MHz	
5230 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5755 MHz	
5795 MHz	



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

5210 MHz



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

5775 MHz

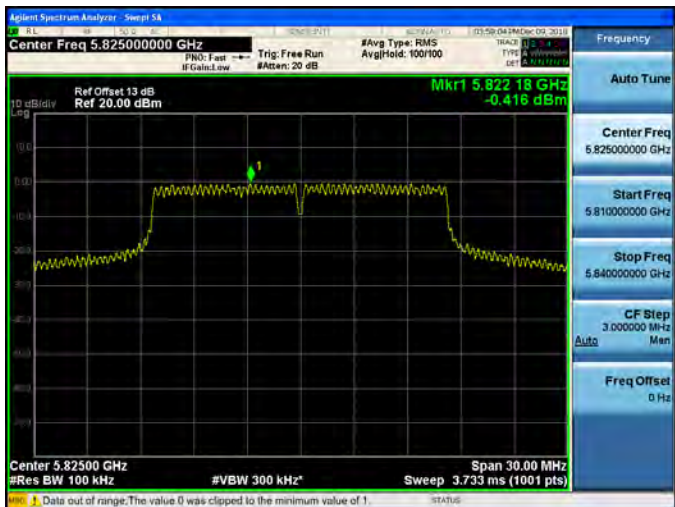




Mode 2: IEEE 802.11a Continuous TX mode_ANT-3	
5180 MHz	
5200 MHz	
5240 MHz	



Mode 2: IEEE 802.11a Continuous TX mode_ANT-3

5745 MHz	
5785 MHz	
5825 MHz	

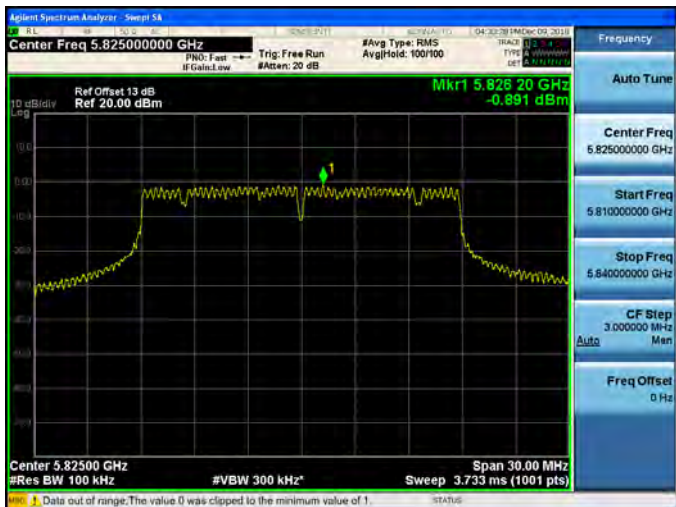


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-3

5180 MHz	
5200 MHz	
5240 MHz	



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

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5190 MHz	
5230 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5755 MHz	
5795 MHz	



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-3

5210 MHz



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-3

5775 MHz





Beamforming on

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

5180 MHz



5200 MHz

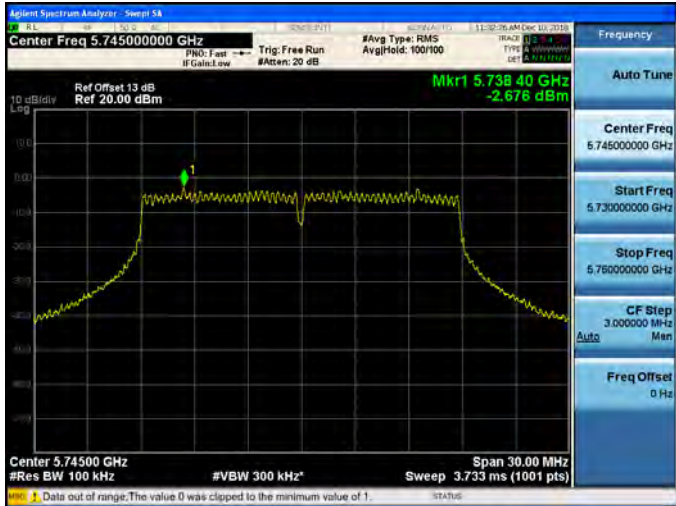
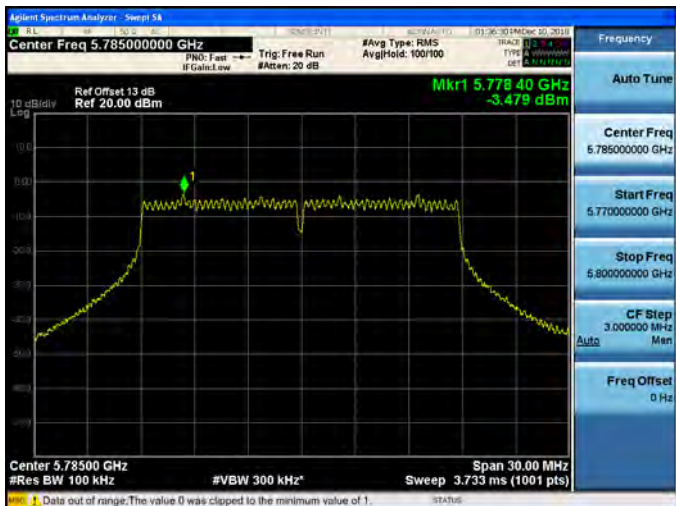
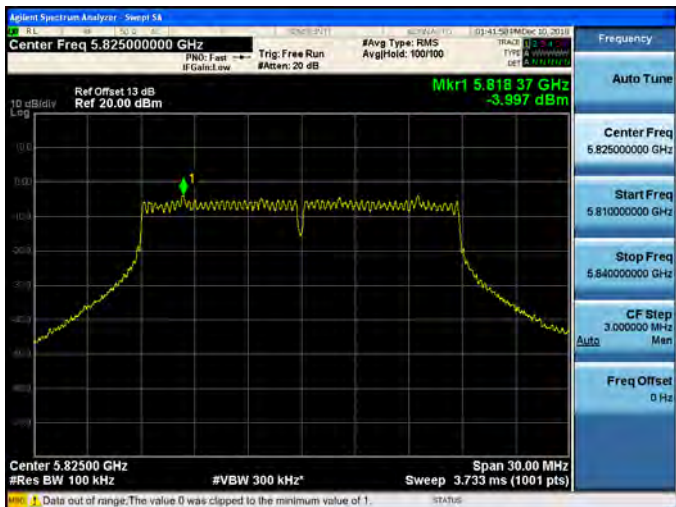


5240 MHz





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

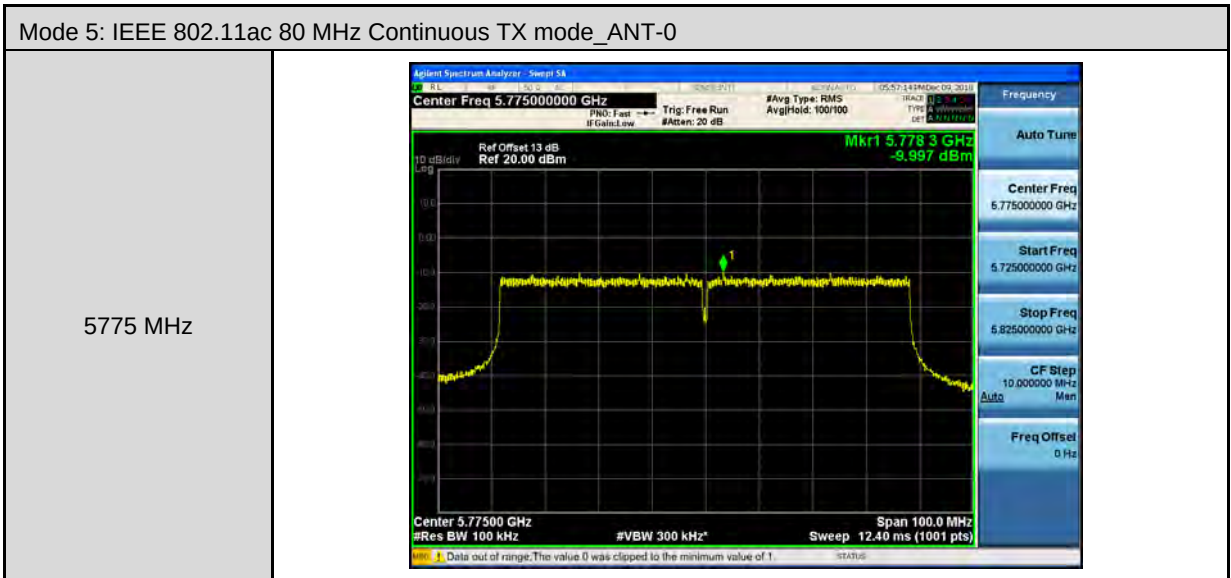
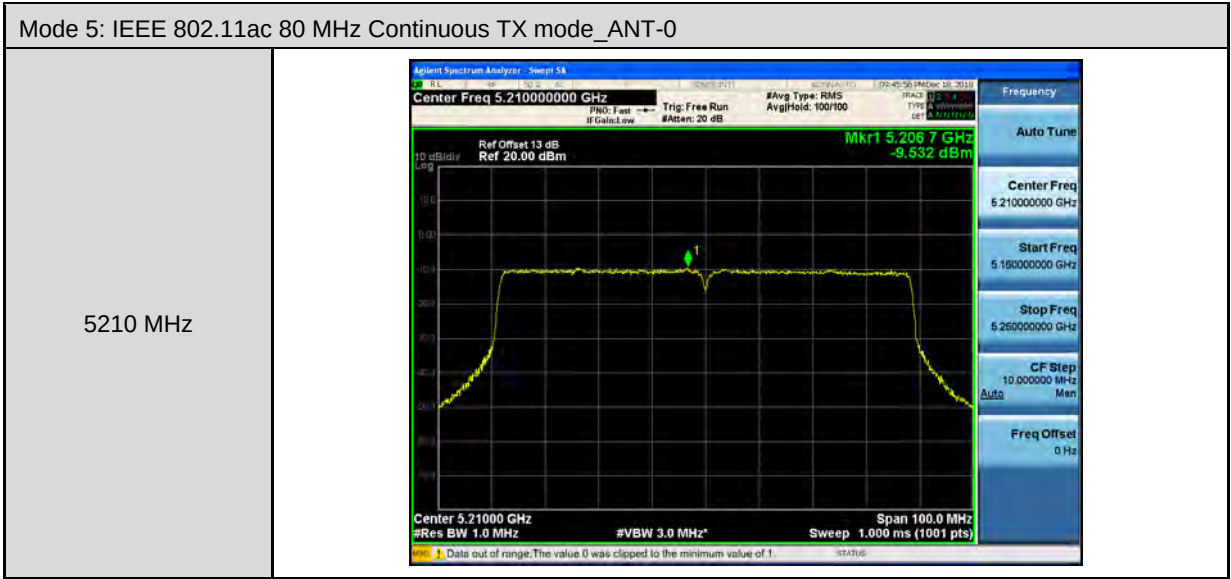
5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0	
5190 MHz	
5230 MHz	

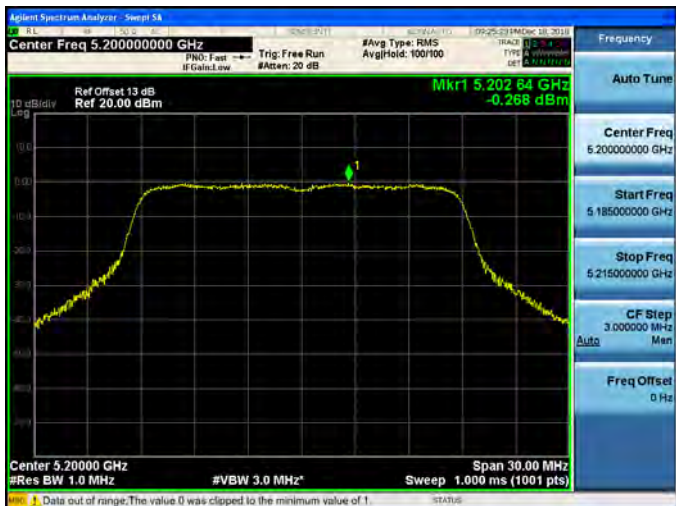
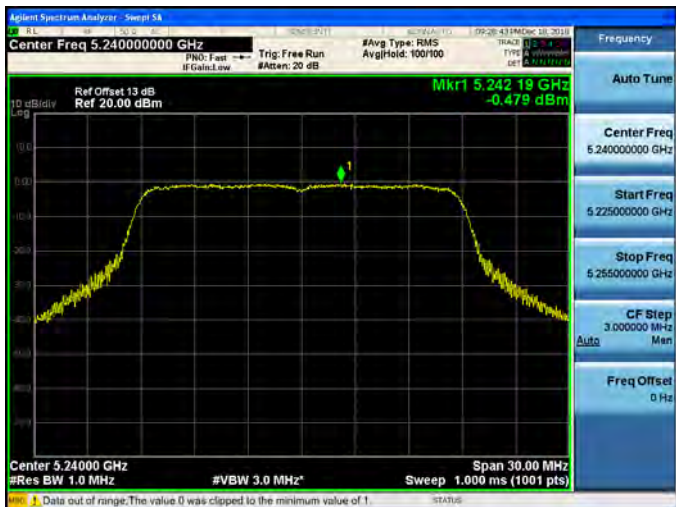


Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-0	
5755 MHz	
5795 MHz	



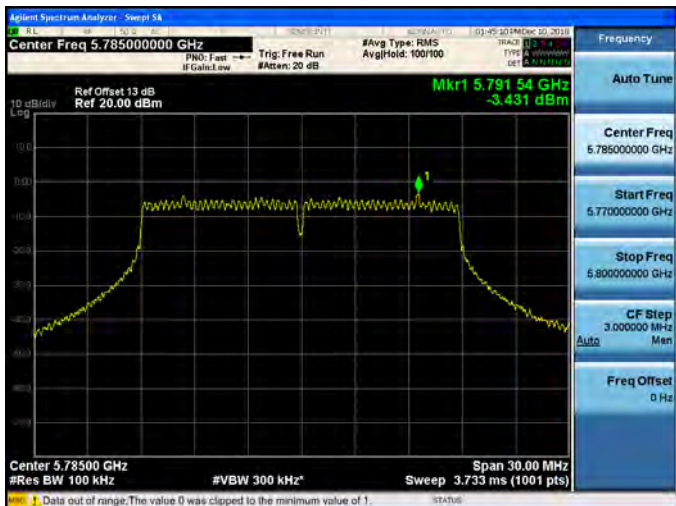
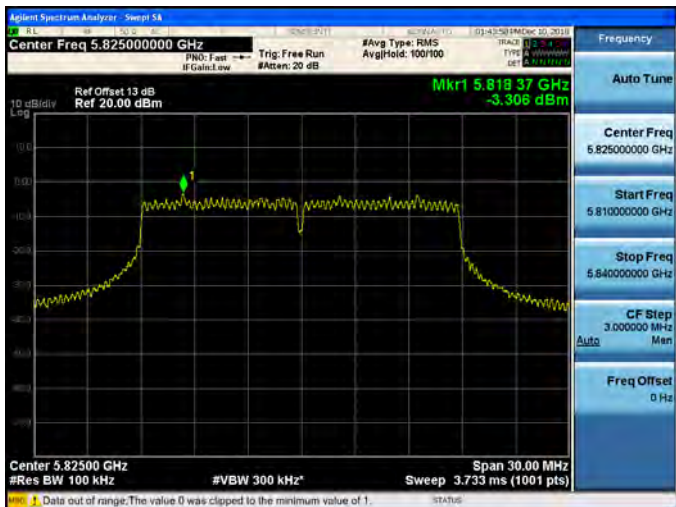


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-1

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	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-1	
5755 MHz	
5795 MHz	



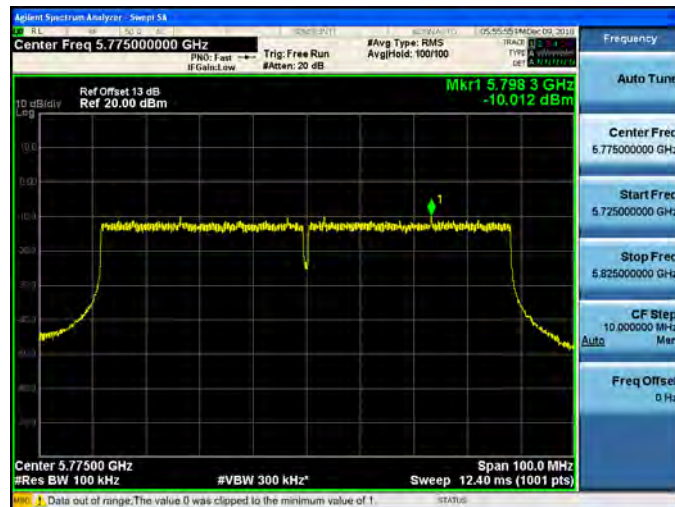
Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-1

5210 MHz



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

5775 MHz



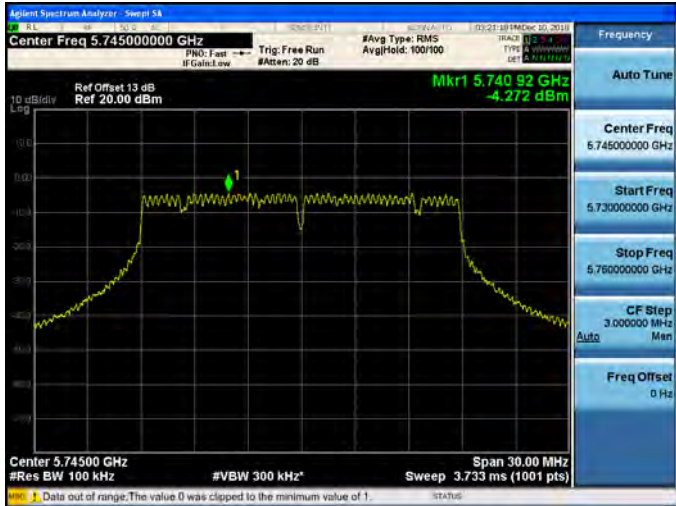
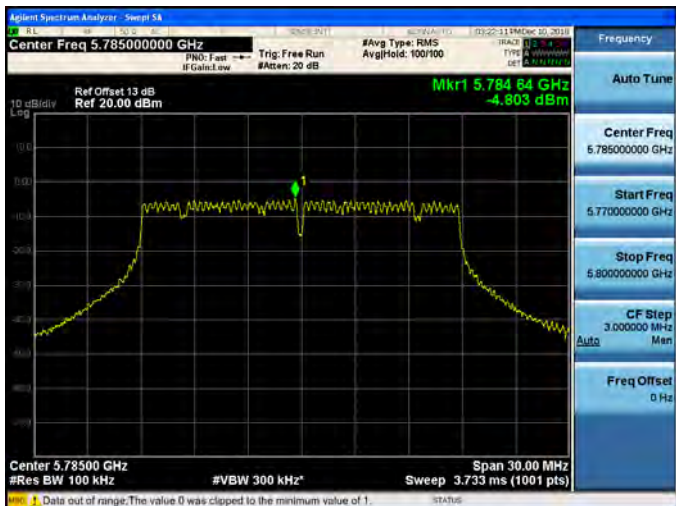
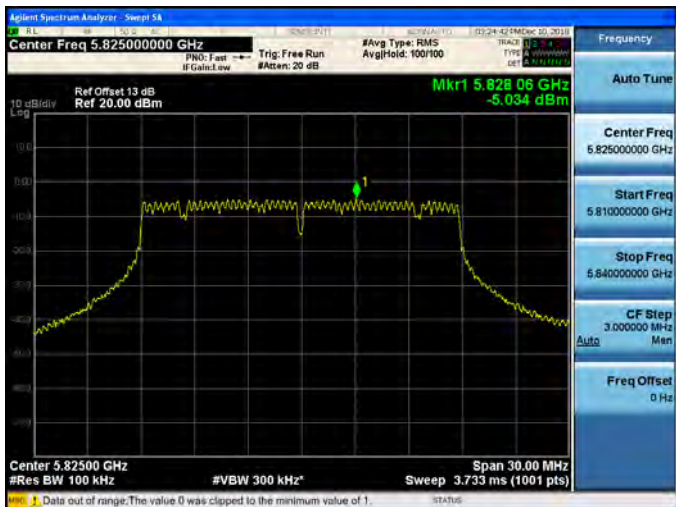


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-2

5180 MHz	
5200 MHz	
5240 MHz	



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

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5190 MHz	
5230 MHz	



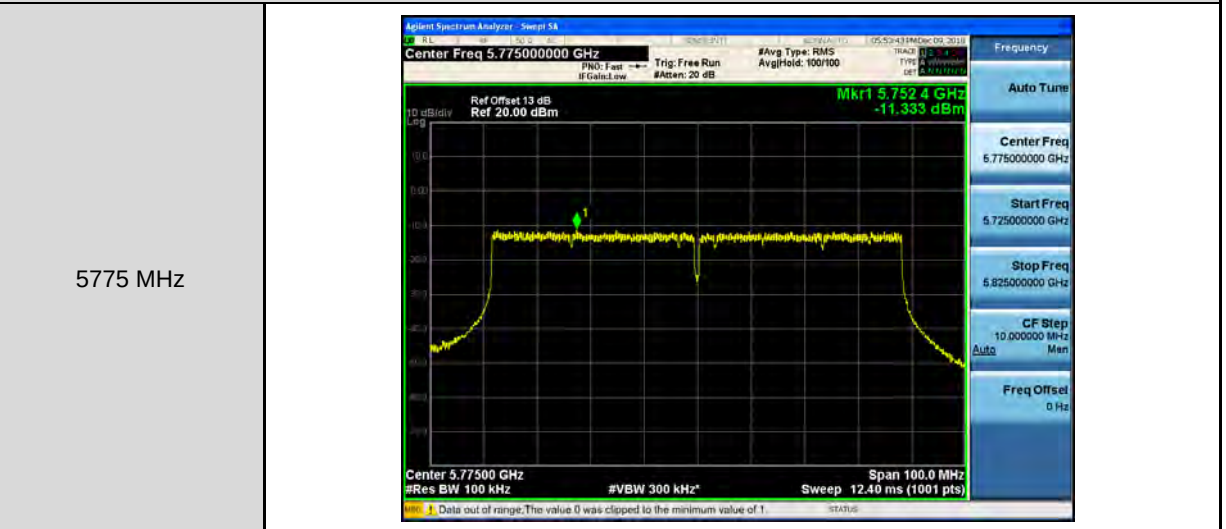
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-2	
5755 MHz	
5795 MHz	



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



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



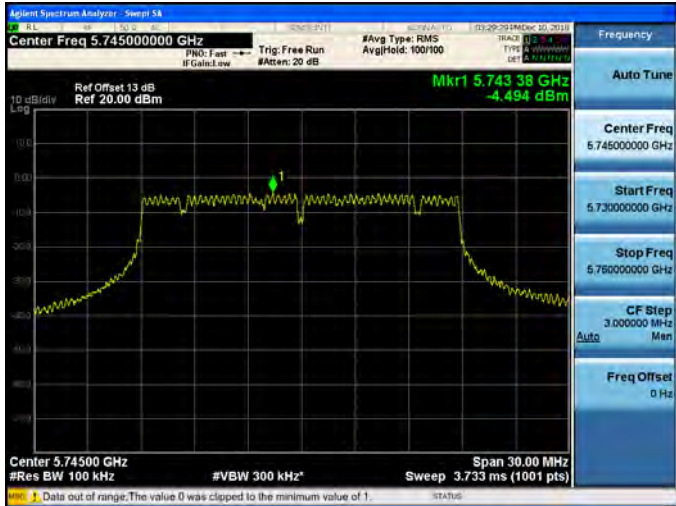
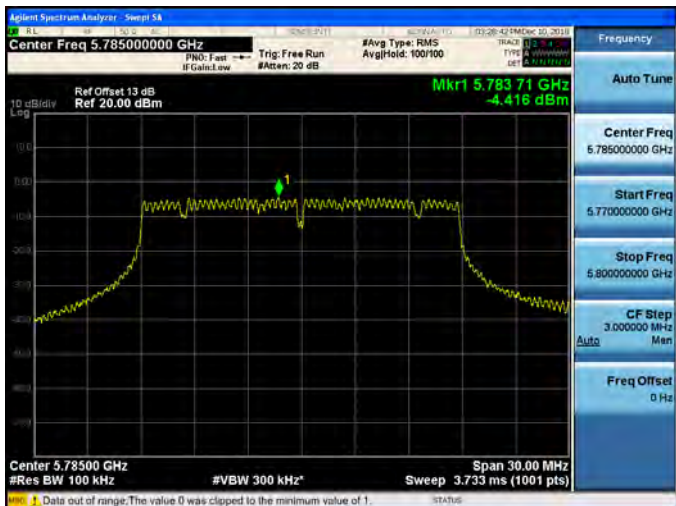
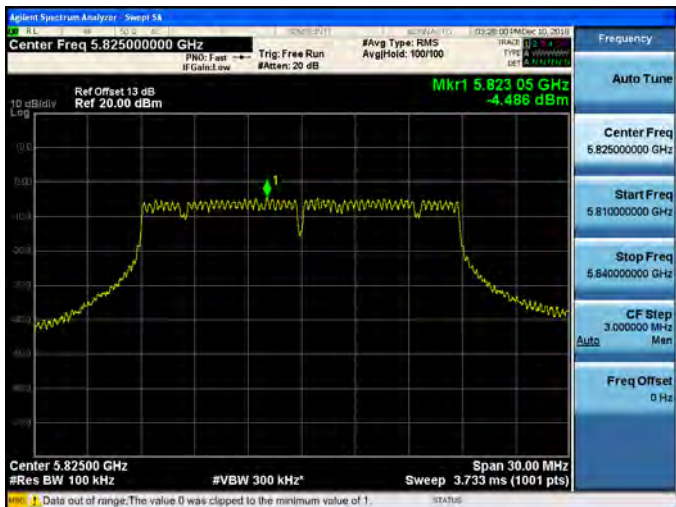


Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ANT-3

5180 MHz	
5200 MHz	
5240 MHz	



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

5745 MHz	
5785 MHz	
5825 MHz	



Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5190 MHz	
5230 MHz	



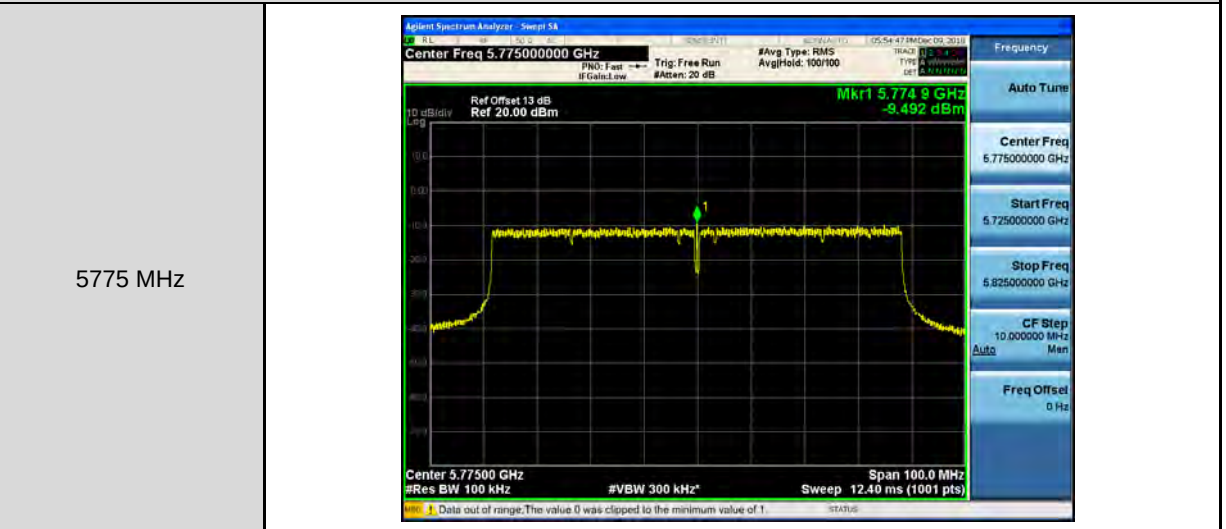
Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ANT-3	
5755 MHz	
5795 MHz	



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-3



Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ANT-3





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	5200.0419	41900	8.058	Pass
	10		5200.0346	34600	6.654	Pass
	20		5200.0195	19500	3.750	Pass
	30		5200.0043	4300	0.827	Pass
	40		5199.9946	-5400	-1.038	Pass
	50		5199.9835	-16500	-3.173	Pass
5785 MHz	0	120	5785.0409	40900	7.070	Pass
	10		5785.0362	36200	6.258	Pass
	20		5785.0214	21400	3.699	Pass
	30		5785.0096	9600	1.659	Pass
	40		5784.9975	-2500	-0.432	Pass
	50		5784.9844	-15600	-2.697	Pass

Voltage Variations

Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5200.0195	19500	3.750	Pass
		120.00	5200.0195	19500	3.750	Pass
		102.00	5200.0195	19500	3.750	Pass
5785 MHz	20	138.00	5785.0214	21400	3.699	Pass
		120.00	5785.0214	21400	3.699	Pass
		102.00	5785.0214	21400	3.699	Pass

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