5.3. Maximum Conducted Output Power

Model Number	DWA-181		
Test Item	Maximum Conducted Output Power		
Test Mode	Mode 2: IEEE 802.11a Link Mode		
Date of Test	07/29/2016		

Frequency (MHz)	Data Rate	ANT-0		FCC Limit (dBm)
		Max. Outup Power		
		(dBm)	(W)	
5180	6 M	14.70	0.030	≤ 24
5200		**15.08**	**0.032**	
5220		14.96	0.031	
5240		14.66	0.029	
5745		13.67	0.023	≤ 30
5765		**14.32**	**0.027**	
5785		14.21	0.026	
5805		13.99	0.025	
5825		14.27	0.027	
5180	54 M	14.65	0.029	≤ 24
5200		15.04	0.032	
5220		14.91	0.031	
5240		14.63	0.029	
5745		13.63	0.023	≤ 30
5765		14.28	0.027	
5785		14.17	0.026	
5805		13.95	0.025	
5825		14.23	0.026	

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

Model Number	DWA-181						
Test Item	Maximum Conducted Output Power						
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Link Mode						
Date of Test	07/29/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	13 M	13.58	0.023	13.77	0.024	16.69	0.047	≤ 24
5200		13.53	0.023	15.43	0.035	**17.59**	**0.057**	
5220		13.75	0.024	15.27	0.034	17.59	0.057	
5240		13.65	0.023	15.20	0.033	17.50	0.056	
5745		14.24	0.027	13.55	0.023	16.92	0.049	≤ 30
5765		14.19	0.026	13.94	0.025	**17.08**	**0.051**	
5785		14.12	0.026	13.87	0.024	17.01	0.050	
5805		14.30	0.027	13.79	0.024	17.06	0.051	
5825		14.03	0.025	13.74	0.024	16.90	0.049	
5180	156 M	13.56	0.023	13.72	0.024	16.65	0.046	≤ 24
5200		13.50	0.022	15.38	0.035	17.55	0.057	
5220		13.71	0.023	15.23	0.033	17.55	0.057	
5240		13.63	0.023	15.18	0.033	17.48	0.056	
5745		14.21	0.026	13.52	0.022	16.89	0.049	≤ 30
5765		14.16	0.026	13.92	0.025	17.05	0.051	
5785		14.10	0.026	13.82	0.024	16.97	0.050	
5805		14.26	0.027	13.77	0.024	17.03	0.051	
5825		13.98	0.025	13.69	0.023	16.85	0.048	

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

Model Number	DWA-181						
Test Item	Maximum Conducted Output Power						
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Link Mode						
Date of Test	07/29/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27 M	13.39	0.022	13.48	0.022	16.45	0.044	≤ 24
5230		14.22	0.026	14.11	0.026	**17.18**	**0.052**	
5755		14.23	0.026	14.33	0.027	**17.29**	**0.054**	≤ 30
5795		14.34	0.027	14.22	0.026	17.29	0.054	
5190	360 M	13.33	0.022	13.46	0.022	16.41	0.044	≤ 24
5230		14.20	0.026	14.06	0.025	17.14	0.052	
5755		14.20	0.026	14.28	0.027	17.25	0.053	≤ 30
5755		14.30	0.027	14.19	0.026	17.26	0.053	

Model Number	DWA-181						
Test Item	Maximum Conducted Output Power						
Test Mode	Mode 5: IEEE 802.11ac 80 MHz Link Mode						
Date of Test	07/29/2016						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6 M	13.06	0.020	13.15	0.021	**16.12**	**0.041**	≤ 24
5775		12.68	0.019	13.33	0.022	**16.03**	**0.040**	≤ 30
5210	780 M	13.04	0.020	13.10	0.020	16.08	0.041	≤ 24
5775		12.67	0.018	13.30	0.021	16.01	0.040	≤ 30

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

Model Number	DWA-181
Test Item	Maximum Conducted Output Power
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Link Mode
Date of Test	07/29/2016

Beamforming on								
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	13 M	13.22	0.021	13.17	0.021	16.21	0.042	≤ 24
5200		14.65	0.029	14.21	0.026	**17.45**	**0.056**	
5220		14.14	0.026	14.13	0.026	17.15	0.052	
5240		14.15	0.026	14.12	0.026	17.15	0.052	
5745		14.20	0.026	13.96	0.025	17.09	0.051	≤ 30
5765		14.36	0.027	14.22	0.026	17.30	0.054	
5785		14.39	0.027	14.26	0.027	**17.34**	**0.054**	
5805		14.43	0.028	13.57	0.023	17.03	0.050	
5825		14.01	0.025	12.62	0.018	16.38	0.043	
5180	156 M	13.20	0.021	13.13	0.021	16.18	0.041	≤ 24
5200		14.60	0.029	14.14	0.026	17.39	0.055	
5220		14.10	0.026	14.08	0.026	17.10	0.051	
5240		14.09	0.026	14.07	0.026	17.09	0.051	
5745		14.17	0.026	13.94	0.025	17.07	0.051	≤ 30
5765		14.33	0.027	14.13	0.026	17.24	0.053	
5785		14.34	0.027	14.21	0.026	17.29	0.054	
5805		14.38	0.027	13.51	0.022	16.98	0.050	
5825		13.99	0.025	12.60	0.018	16.36	0.043	

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

Model Number	DWA-181						
Test Item	Maximum Conducted Output Power						
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Link Mode						
Date of Test	07/29/2016						
Beamforming on							
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27 M	11.82	0.015	11.03	0.013	14.45	0.028	≤ 24
5230		14.24	0.027	13.61	0.023	**16.95**	**0.050**	
5755		14.01	0.025	13.91	0.025	**16.97**	**0.050**	≤ 30
5795		14.04	0.025	13.60	0.023	16.84	0.048	
5190	360 M	11.81	0.015	11.00	0.013	14.43	0.028	≤ 24
5230		14.20	0.026	13.57	0.023	16.91	0.049	
5755		13.99	0.025	13.88	0.024	16.95	0.049	≤ 30
5755		14.00	0.025	13.52	0.022	16.78	0.048	

Model Number	DWA-181						
Test Item	Maximum Conducted Output Power						
Test Mode	Mode 5: IEEE 802.11ac 80 MHz Link Mode						
Date of Test	07/29/2016						
Beamforming on							
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6 M	10.25	0.011	10.18	0.010	**13.23**	**0.021**	≤ 24
5775		14.24	0.027	13.53	0.023	**16.91**	**0.049**	≤ 30
5210	780 M	10.23	0.011	10.10	0.010	13.18	0.021	≤ 24
5775		14.18	0.026	13.50	0.022	16.86	0.049	≤ 30

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

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

Model Number	DWA-181
Test Item	26 dB RF Bandwidth Measurement
Test Mode	Mode 2: IEEE 802.11a Link Mode
Date of Test	09/04/2016
Frequency (MHz)	ANT-0
	26 dB Bandwidth (MHz)
5180	24.180
5200	23.300
5240	24.510

Model Number	DWA-181	
Test Item	26 dB RF Bandwidth Measurement	
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	ANT-0	Ant-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
5180	23.090	22.960
5200	24.860	24.730
5240	24.860	25.000

Model Number	DWA-181	
Test Item	26 dB RF Bandwidth Measurement	
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	ANT-0	Ant-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
5190	46.340	46.140
5230	49.860	49.870

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

Model Number	DWA-181	
Test Item	26 dB RF Bandwidth Measurement	
Test Mode	Mode 5: IEEE 802.11ac 80 MHz Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	ANT-0	Ant-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
5210	84.850	79.870

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

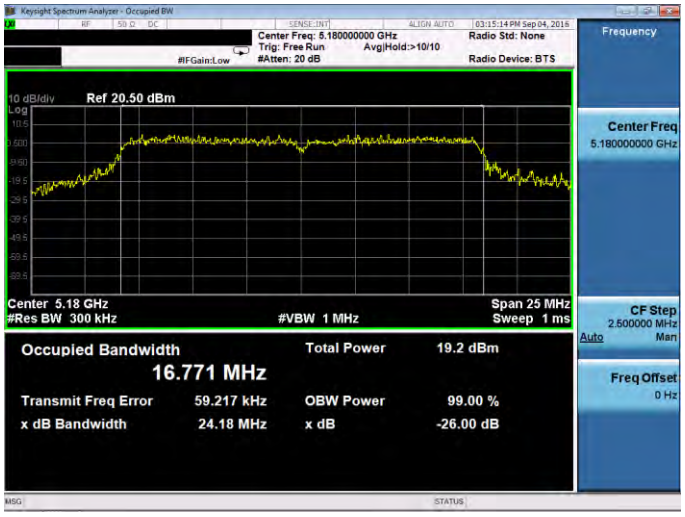
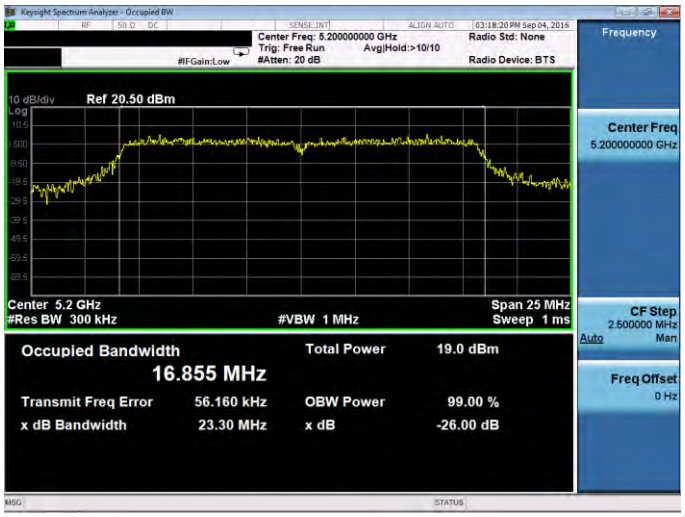
Model Number	DWA-181	
Test Item	26 dB RF Bandwidth Measurement	
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Link Mode	
Date of Test	10/10/2016	
Beamforming on		
Frequency (MHz)	ANT-0	Ant-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
5180	24.950	24.340
5200	24.220	24.100
5240	25.000	24.670

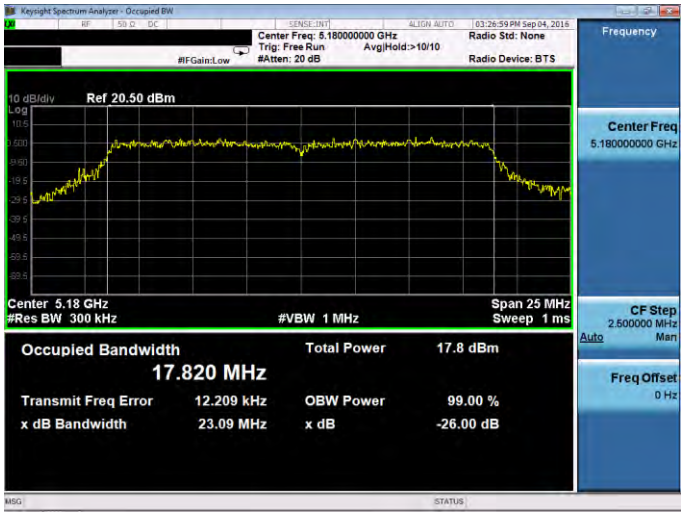
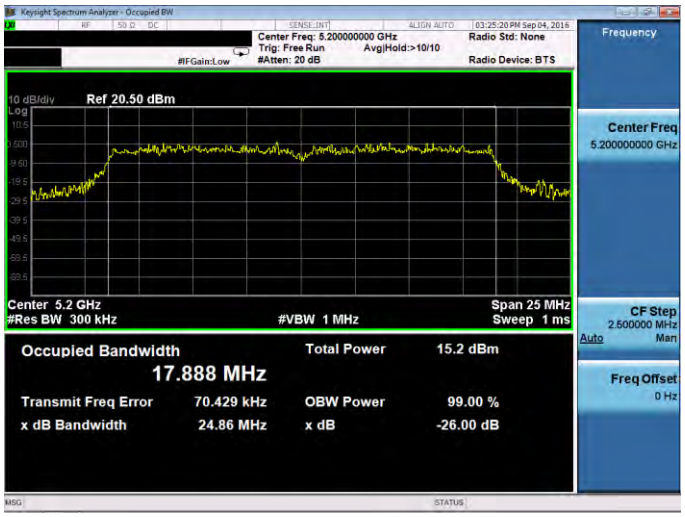
Model Number	DWA-181	
Test Item	26 dB RF Bandwidth Measurement	
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Link Mode	
Date of Test	10/10/2016	
Beamforming on		
Frequency (MHz)	ANT-0	Ant-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
5190	46.720	43.220
5230	49.210	50.000

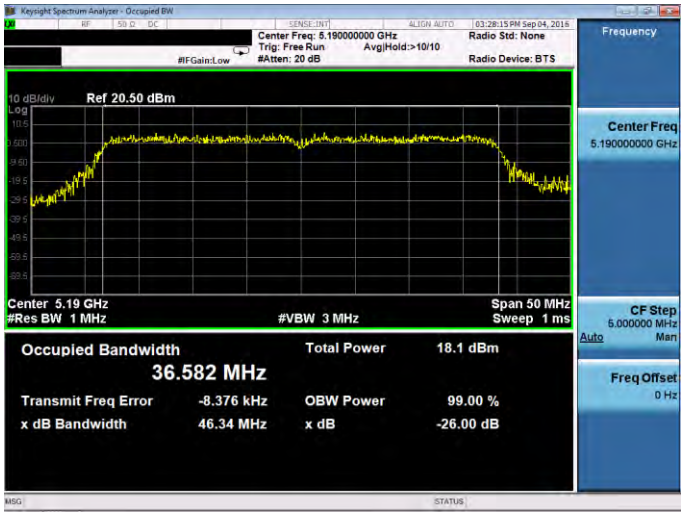
Model Number	DWA-181	
Test Item	26 dB RF Bandwidth Measurement	
Test Mode	Mode 5: IEEE 802.11ac 80 MHz Link Mode	
Date of Test	10/10/2016	
Beamforming on		
Frequency (MHz)	ANT-0	Ant-1
	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)
5210	80.660	79.310

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

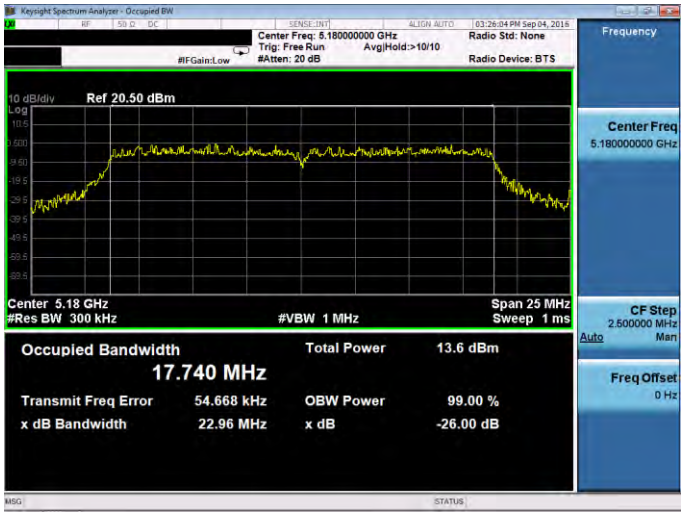
■ **Test Graphs**

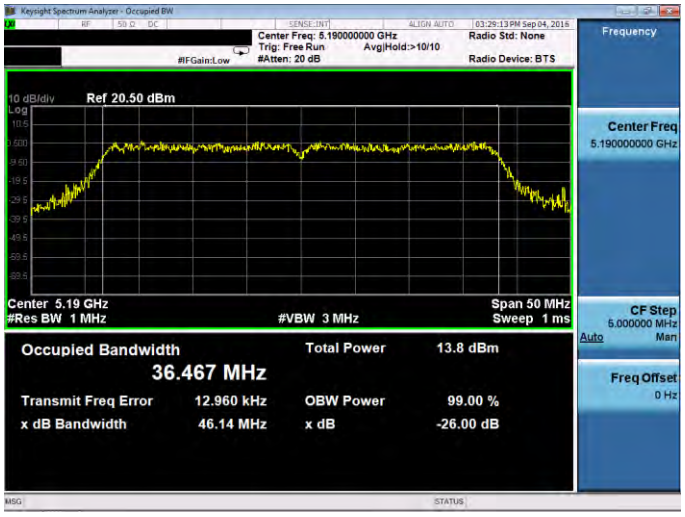
Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode_ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-0	
5190 MHz	
5230 MHz	

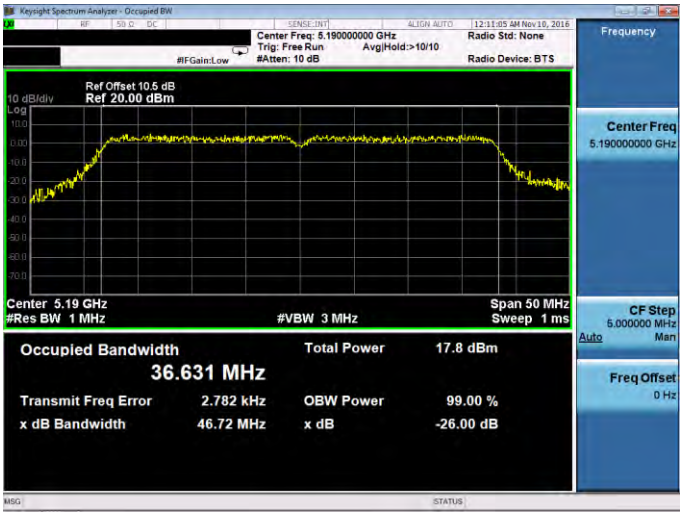
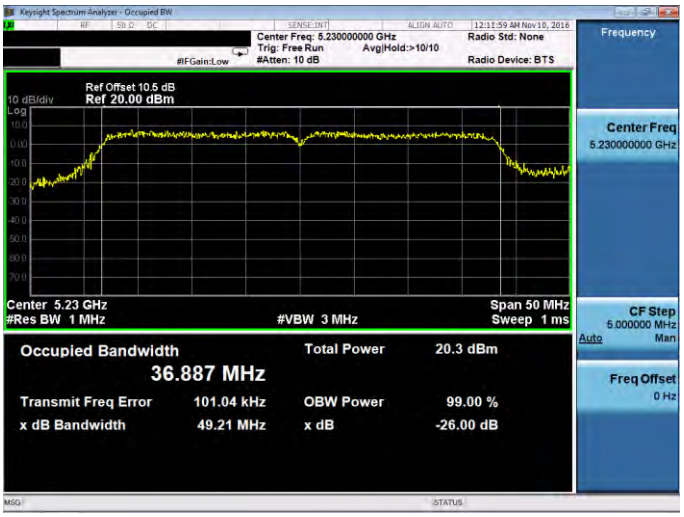
Mode 5: IEEE 802.11ac 80 MHz Link Mode_ ANT-0	
5210 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode_ ANT-1	
5180 MHz	
5200 MHz	
5240 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-1	
5190 MHz	
5230 MHz	

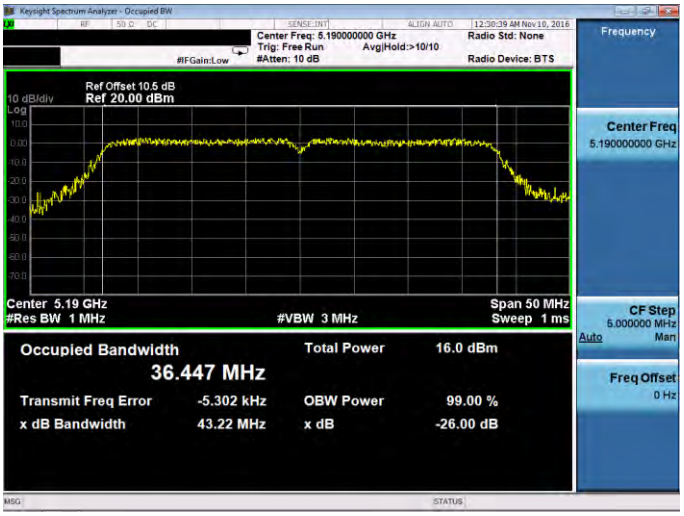
Mode 5: IEEE 802.11ac 80 MHz Link Mode_ ANT-1	
5210 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode_ ANT-0	
Beamforming on	
5180 MHz	
5200 MHz	
5240 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-0	
Beamforming on	
5190 MHz	
5230 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode_ ANT-0	
Beamforming on	
5210 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode_ ANT-1	
Beamforming on	
5180 MHz	
5200 MHz	
5240 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-1	
Beamforming on	
5190 MHz	
5230 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode_ ANT-1	
Beamforming on	
5210 MHz	

5.5. 6 dB RF Bandwidth Measurement

Model Number	DWA-181	
Test Item	6 dB RF Bandwidth	
Test Mode	Mode 2: IEEE 802.11a Link Mode	
Date of Test	09/04/2016	
Frequency (MHz)	6 dB Bandwidth (kHz)	Limit (kHz)
	ANT-0	
5745	16350	> 500
5785	16410	> 500
5825	15720	> 500

Model Number	DWA-181		
Test Item	6 dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6 dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	17570	17200	> 500
5785	17600	16960	> 500
5825	17580	17550	> 500

Model Number	DWA-181		
Test Item	6 dB RF Bandwidth		
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6 dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5755	36060	35150	> 500
5795	36020	35720	> 500

Model Number	DWA-181		
Test Item	6 dB RF Bandwidth		
Test Mode	Mode 5: IEEE 802.11ac 80 MHz Link Mode		
Date of Test	09/04/2016		
Frequency (MHz)	6 dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5775	72720	75100	> 500

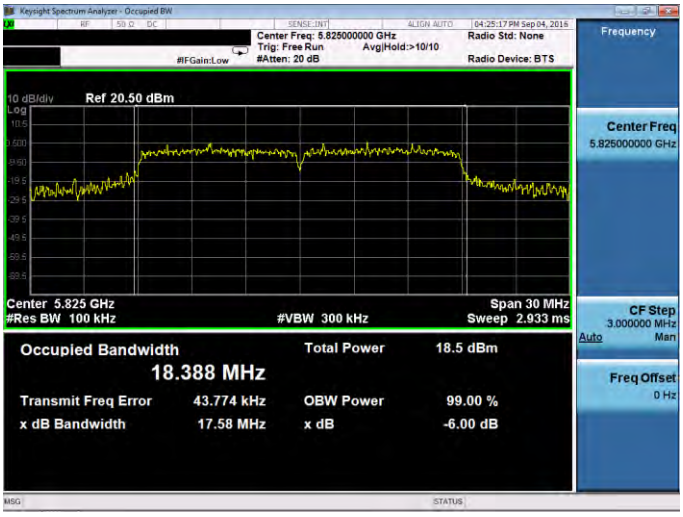
Model Number	DWA-181		
Test Item	6 dB RF Bandwidth		
Test Mode	Mode 3: IEEE 802.11ac 20 MHz Link Mode		
Date of Test	10/10/2016		
Beamforming on			
Frequency (MHz)	6 dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5745	16910	17050	> 500
5785	17300	17560	> 500
5825	16300	17300	> 500

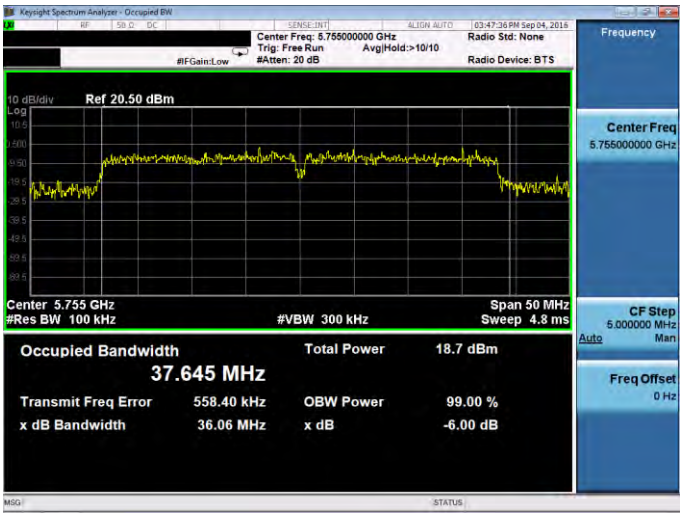
Model Number	DWA-181		
Test Item	6 dB RF Bandwidth		
Test Mode	Mode 4: IEEE 802.11ac 40 MHz Link Mode		
Date of Test	10/10/2016		
Beamforming on			
Frequency (MHz)	6 dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5755	35100	35500	> 500
5795	35220	35570	> 500

Model Number	DWA-181		
Test Item	6 dB RF Bandwidth		
Test Mode	Mode 5: IEEE 802.11ac 80 MHz Link Mode		
Date of Test	10/10/2016		
Beamforming on			
Frequency (MHz)	6 dB Bandwidth (kHz)		Limit (kHz)
	ANT-0	ANT-1	
5775	75180	75070	> 500

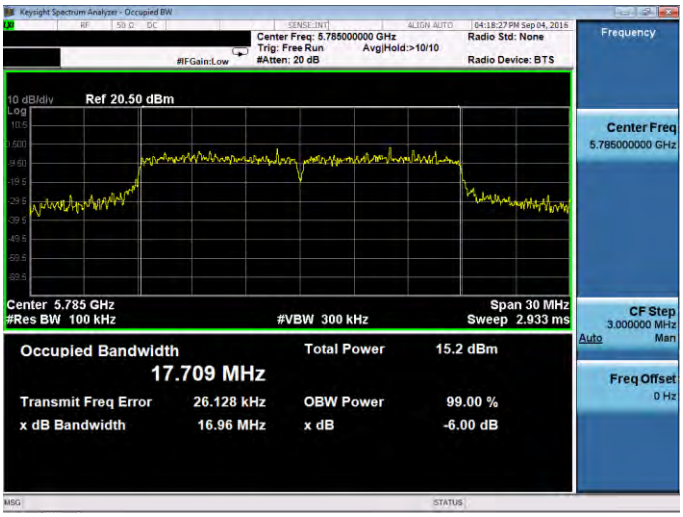
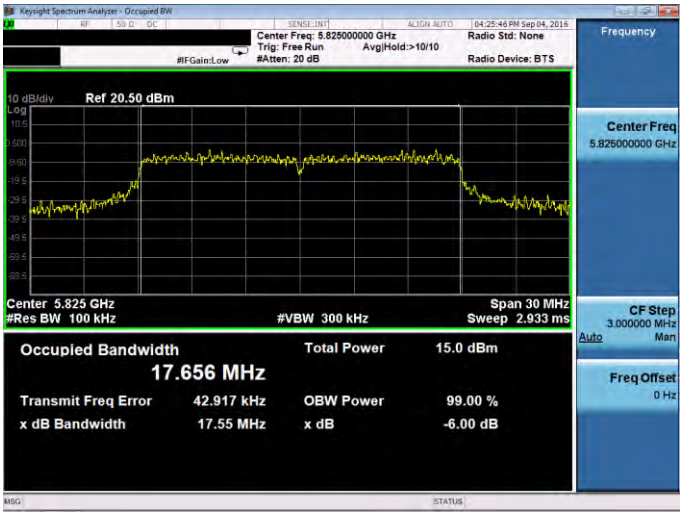
■ **Test Graphs**

Mode 2: IEEE 802.11a Link Mode_ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	

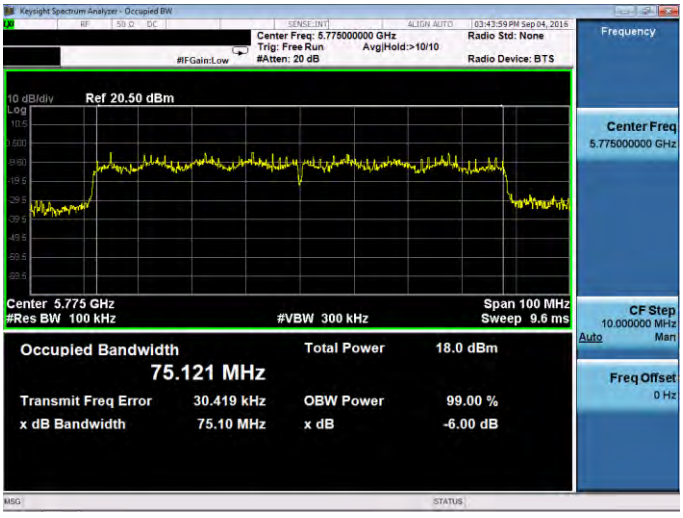
Mode 3: IEEE 802.11ac 20 MHz Link Mode_ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	

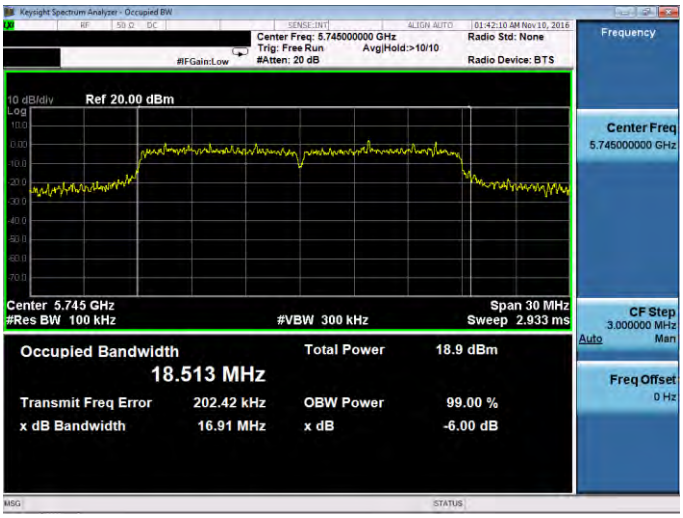
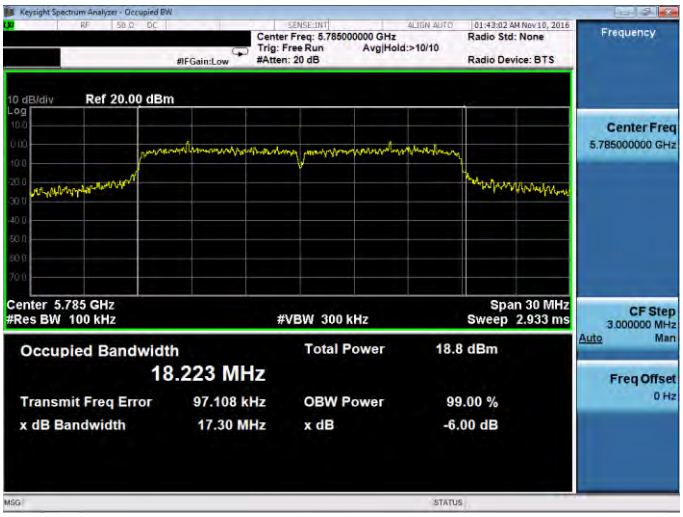
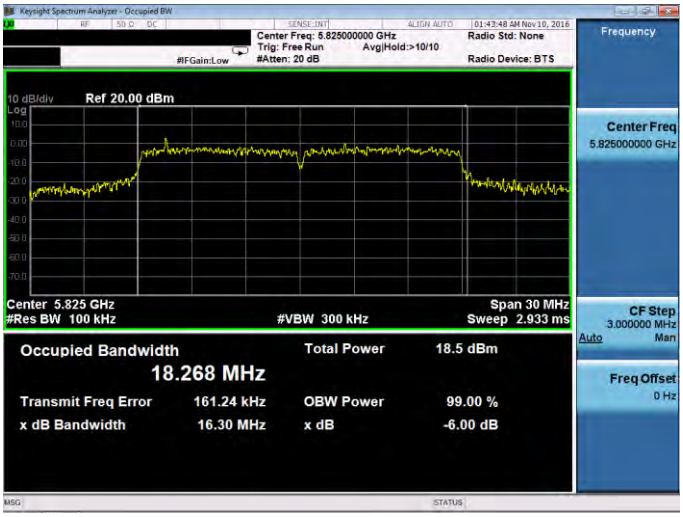
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ANT-0	
5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode_ANT-0	
5775 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode_ANT-1	
5745 MHz	
5785 MHz	
5825 MHz	

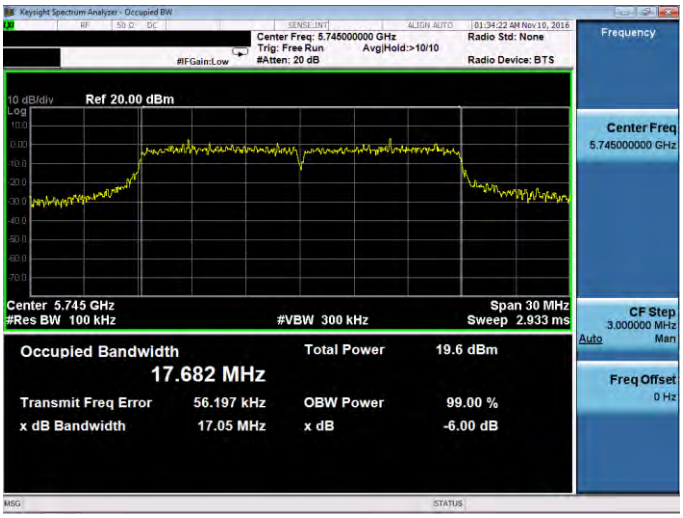
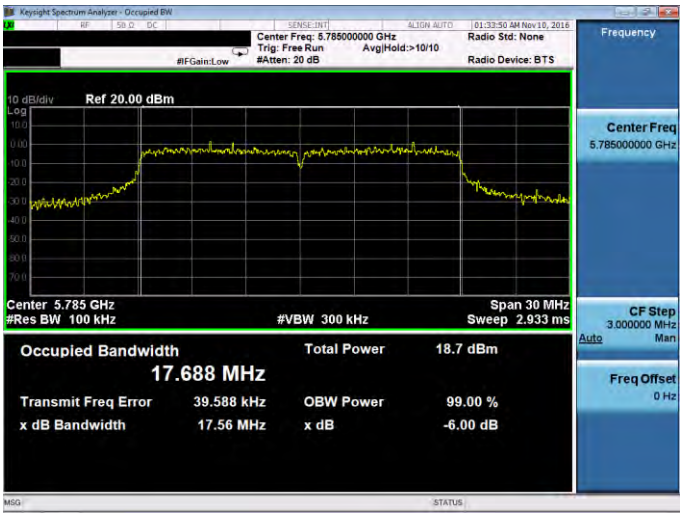
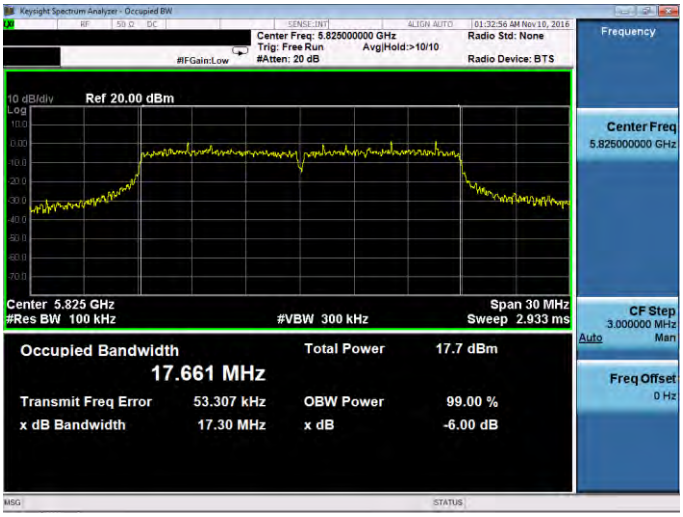
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ANT-1	
5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode_ANT-1	
5775 MHz	

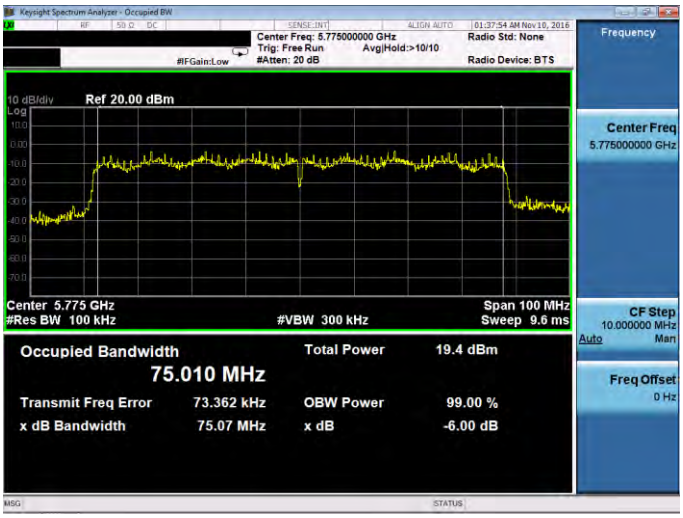
Mode 3: IEEE 802.11ac 20 MHz Link Mode_ANT-0	
Beamforming on	
5745 MHz	
5785 MHz	
5825 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ANT-0	
Beamforming on	
5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode_ANT-0	
Beamforming on	
5775 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode_ANT-1	
Beamforming on	
5745 MHz	
5785 MHz	
5825 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ANT-1	
Beamforming on	
5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode_ANT-1	
Beamforming on	
5775 MHz	

5.6. Maximum Power Spectral Density Measurement

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	2.509	0.305	2.814	< 11
5200	1.975	0.305	2.280	
5240	2.312	0.305	2.617	

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

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-8.30	0.305	-1.00	< 30
5785	-8.83	0.305	-1.54	
5825	-9.25	0.305	-1.95	

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)

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20 MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	1.892	0.717	2.609	< 11
5200	2.329	0.717	3.046	
5240	0.982	0.717	1.699	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-2.214	0.717	-1.497	< 11
5200	-1.313	0.717	-0.596	
5240	1.984	0.717	2.701	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5180	4.034			< 11
5200	4.606			
5240	5.239			

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

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20 MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-6.67	0.717	1.03	< 30
5785	-6.84	0.717	0.87	
5825	-6.59	0.717	1.12	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-8.74	0.717	-1.03	< 30
5785	-9.61	0.717	-1.90	
5825	-11.52	0.717	-3.81	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5745	3.13			< 30
5785	2.71			
5825	2.33			

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)

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40 MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-7.292	0.473	-6.819	< 11
5230	-6.462	0.473	-5.989	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.935	0.473	-3.462	< 11
5230	-4.394	0.473	-3.921	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5190	-1.813			< 11
5230	-1.822			

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

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40 MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-15.34	0.473	-7.88	< 30
5795	-6.06	0.473	1.41	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-15.16	0.473	-7.69	< 30
5795	-10.14	0.473	-2.67	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5755	-4.77			< 30
5795	2.84			

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)

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80 MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.327	1.753	-5.574	< 11
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-7.929	1.753	-6.176	< 11
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	-2.854			< 11

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

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80 MHz link mode			
Date of Test	09/04/2016			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/MHz)
5775	-7.80	1.753	0.95	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/MHz)
5775	-14.76	1.753	-6.02	< 30
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500 kHz)			Limit (dBm/MHz)
5775	1.74			< 30

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)

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20 MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	0.365	0.120	0.485	< 11
5200	1.527	0.120	1.647	
5240	1.654	0.120	1.774	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	0.861	0.120	0.981	< 11
5200	1.004	0.120	1.124	
5240	1.349	0.120	1.469	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5180	3.750			< 11
5200	4.404			
5240	4.635			

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

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11ac 20 MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-6.85	0.120	0.26	< 30
5785	-6.62	0.120	0.49	
5825	-7.27	0.120	-0.16	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5745	-7.48	0.120	-0.37	< 30
5785	-6.69	0.120	0.42	
5825	-8.55	0.120	-1.44	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5745	2.97			< 30
5785	3.47			
5825	2.26			

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)

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40 MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-3.539	0.964	-2.575	< 11
5230	-1.019	0.964	-0.055	
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-5.321	0.964	-4.357	< 11
5230	-1.974	0.964	-1.010	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5190	-0.365			< 11
5230	2.504			

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

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11ac 40 MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-10.65	0.964	-2.70	< 30
5795	-11.72	0.964	-3.76	
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/500 kHz)
5755	-9.80	0.964	-1.85	< 30
5795	-11.13	0.964	-3.17	
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500 kHz)			Limit (dBm/500 kHz)
5755	0.76			< 30
5795	-0.45			

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)

Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80 MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-8.300	1.769	-6.531	< 11
Frequency (MHz)	ANT-1			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5210	-9.225	1.769	-7.456	< 11
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/MHz)			Limit (dBm/MHz)
5210	-3.959			< 11

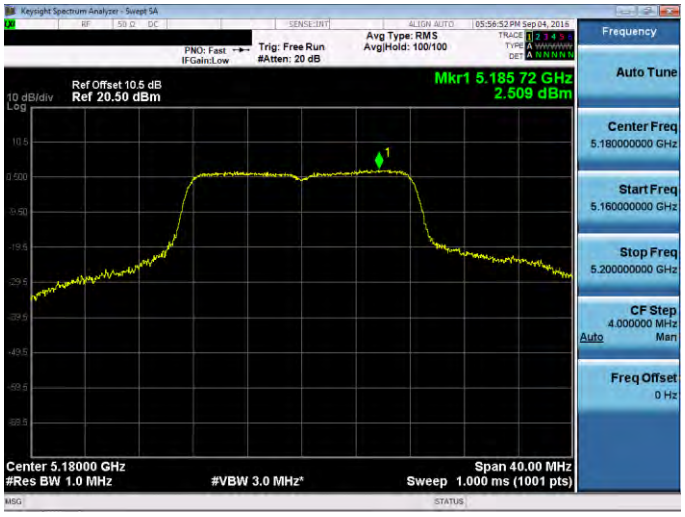
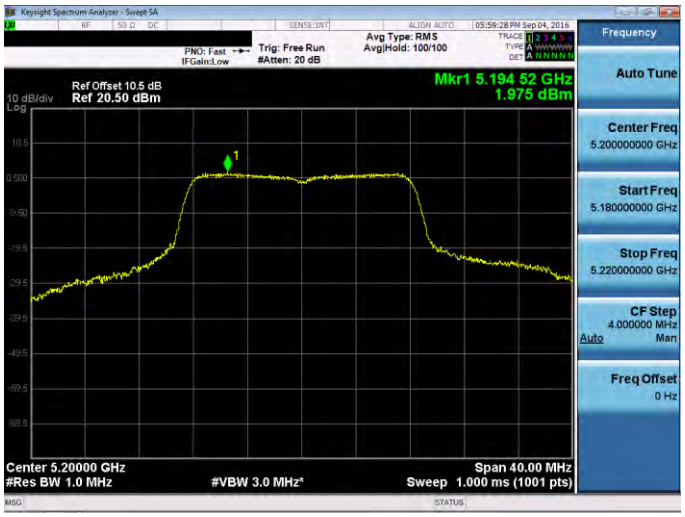
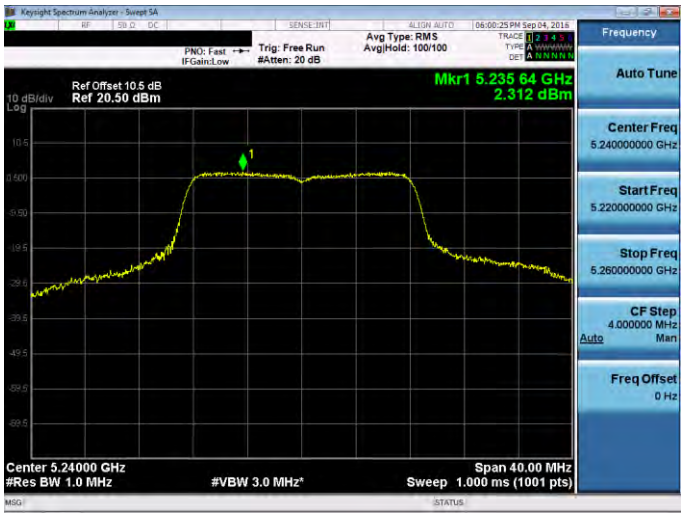
Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

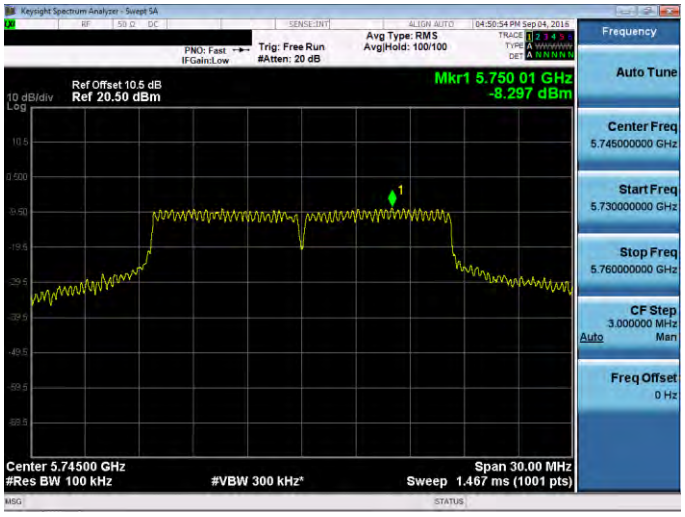
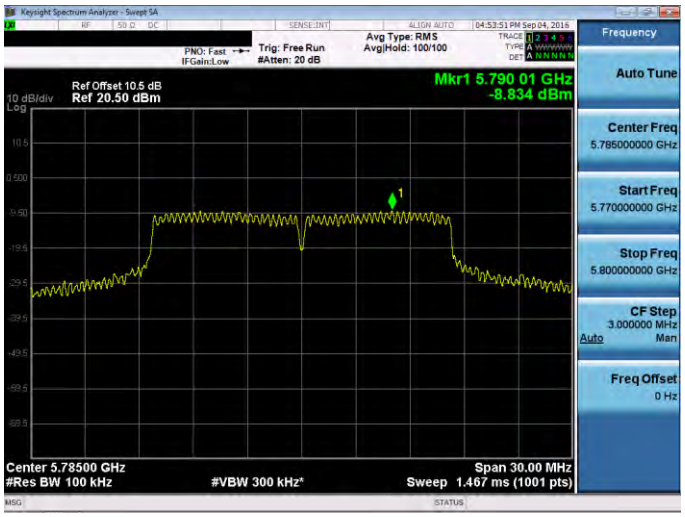
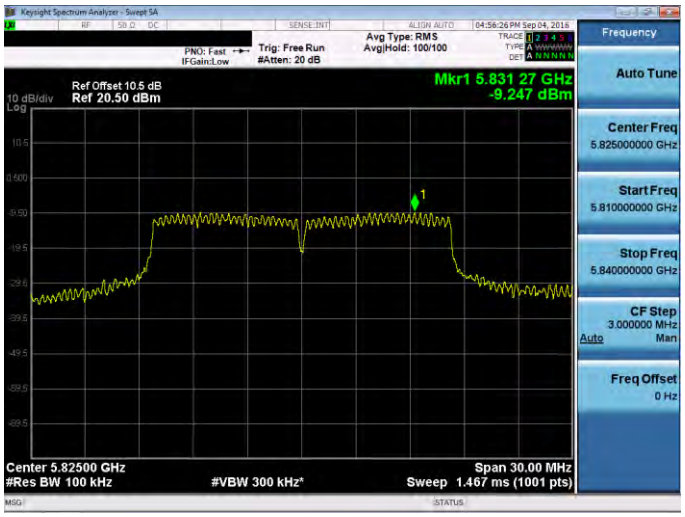
Model Number	DWA-181			
Test Item	Conducted power spectral density			
Test Mode	Mode 5: IEEE 802.11ac 80 MHz link mode			
Date of Test	09/04/2016			
Beamforming on				
Frequency (MHz)	ANT-0			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/MHz)
5775	-12.33	1.769	-3.57	< 30
Frequency (MHz)	ANT-1			
	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Limit (dBm/MHz)
5775	-12.16	1.769	-3.40	< 30
Frequency (MHz)	ANT-0+1			
	Calculated (dBm/500 kHz)			Limit (dBm/MHz)
5775	-0.47			< 30

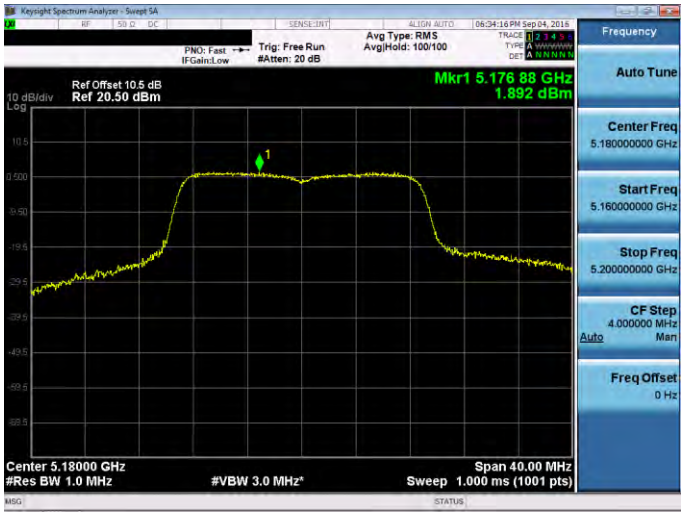
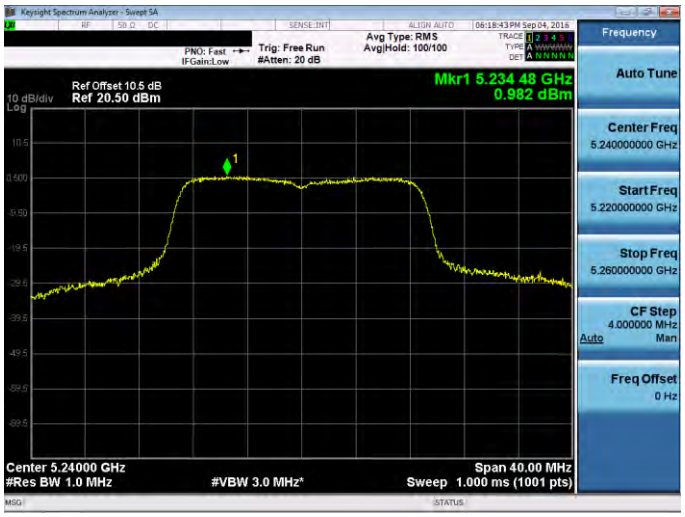
Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

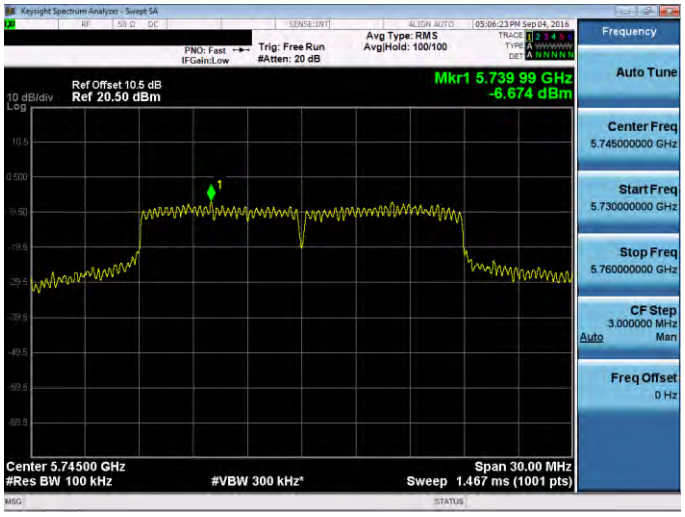
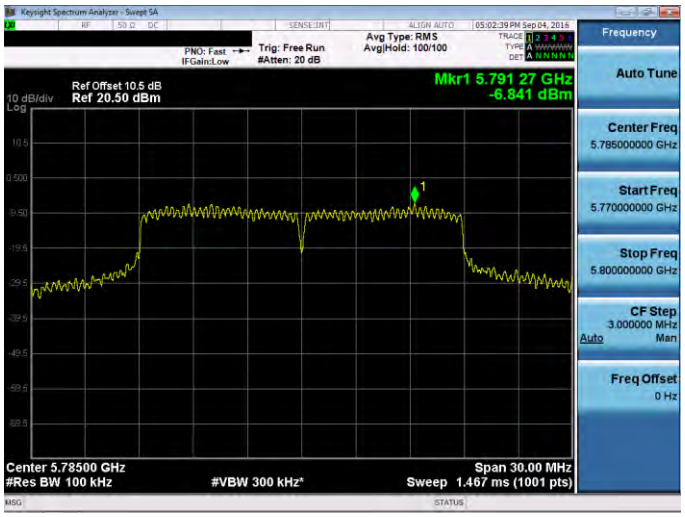
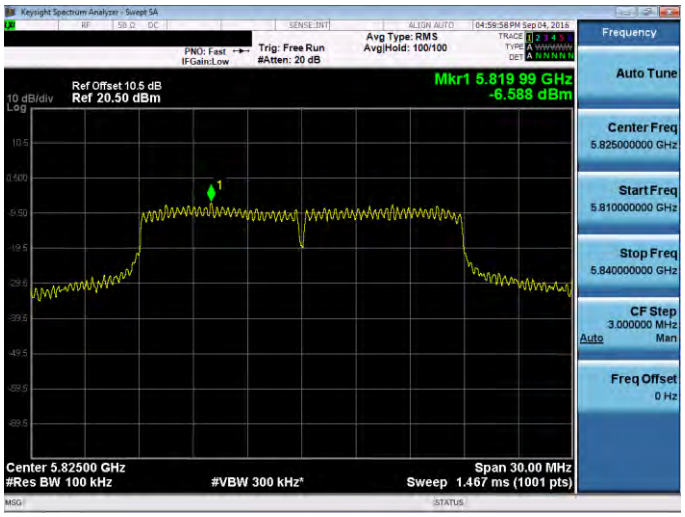
Conversion ratio = 10*Log(500 k/100 k)

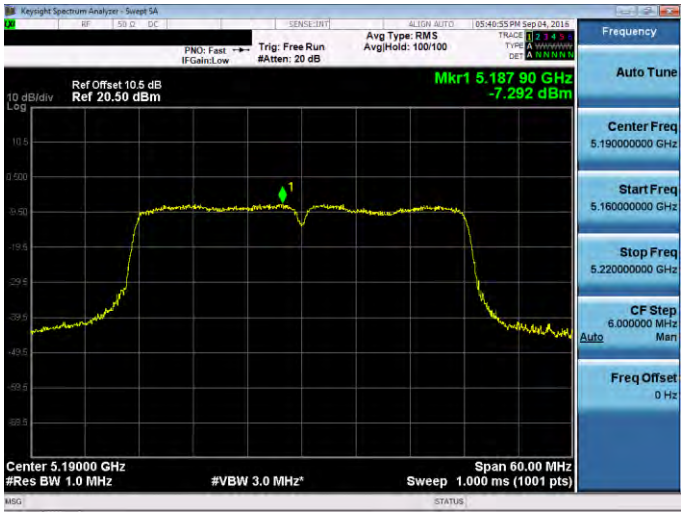
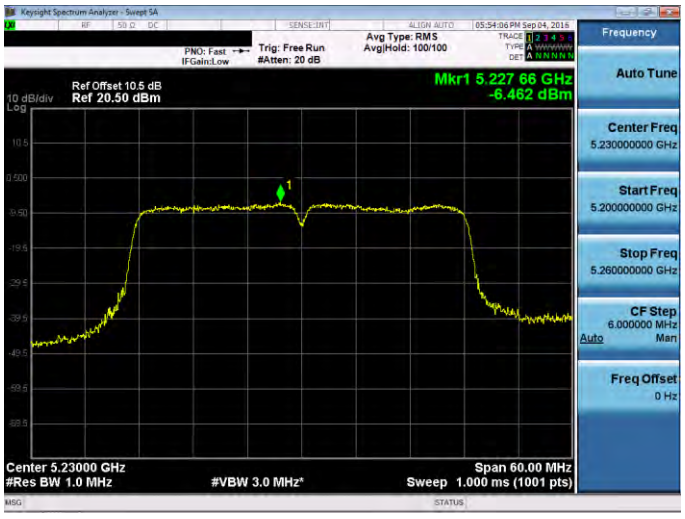
■ **Test Graphs**

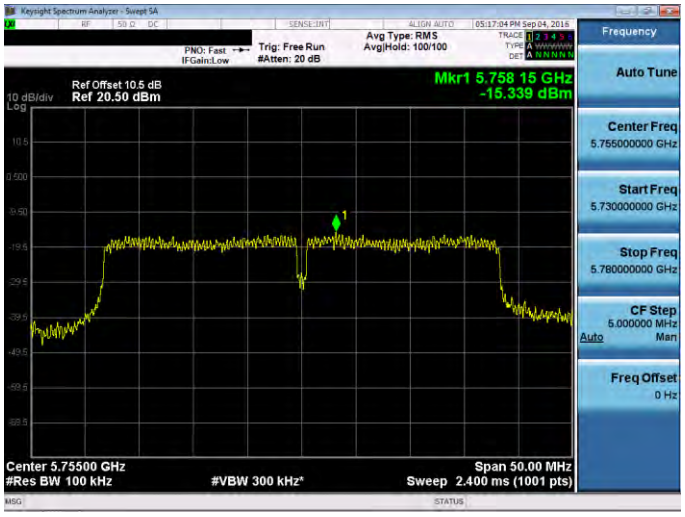
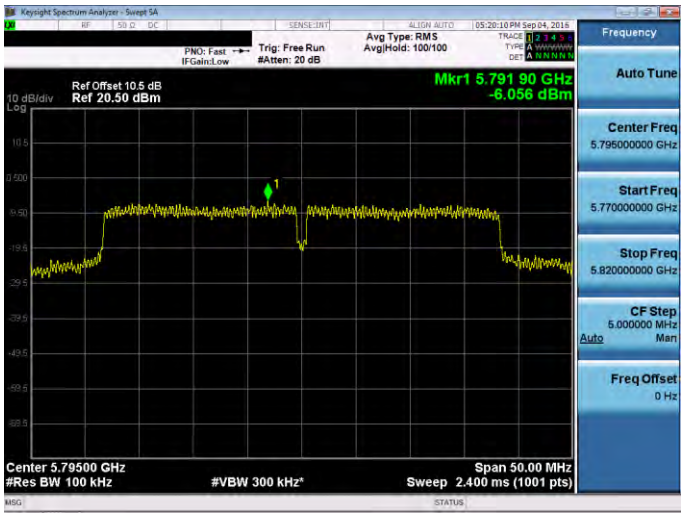
Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	

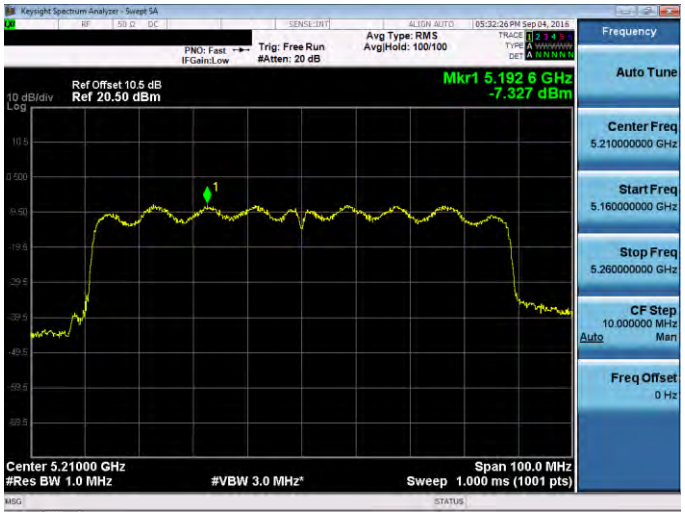
Mode 2: IEEE 802.11a Link Mode_ ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	

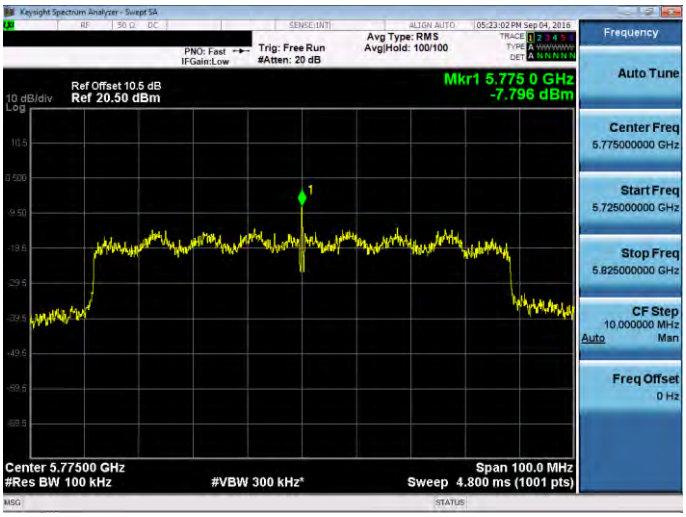
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	

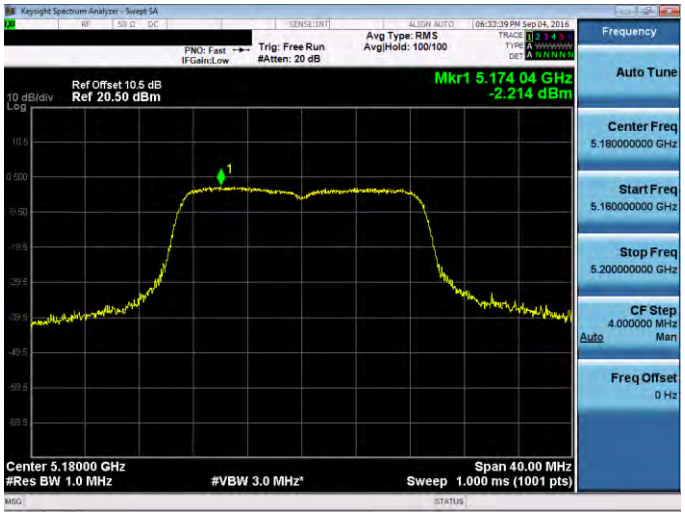
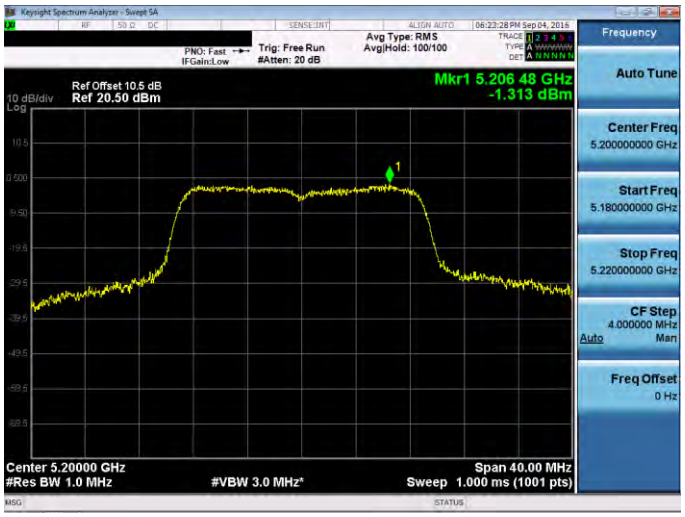
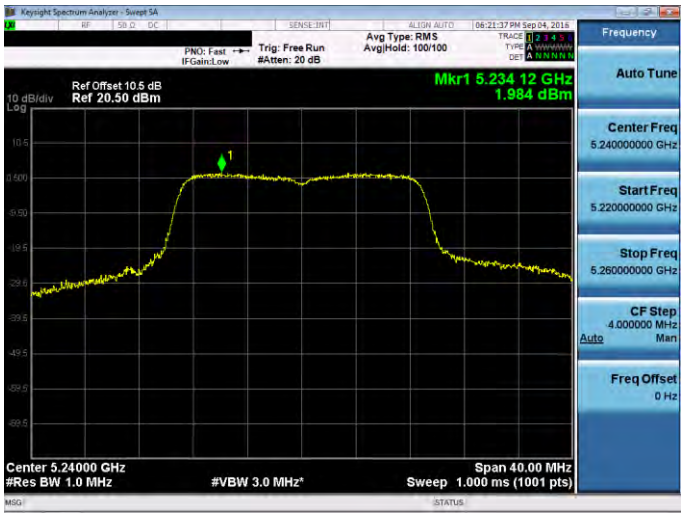
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-0	
5745 MHz	
5785 MHz	
5825 MHz	

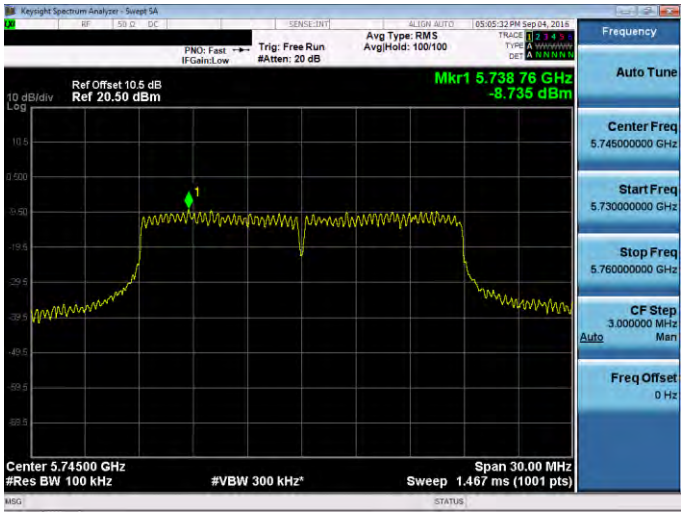
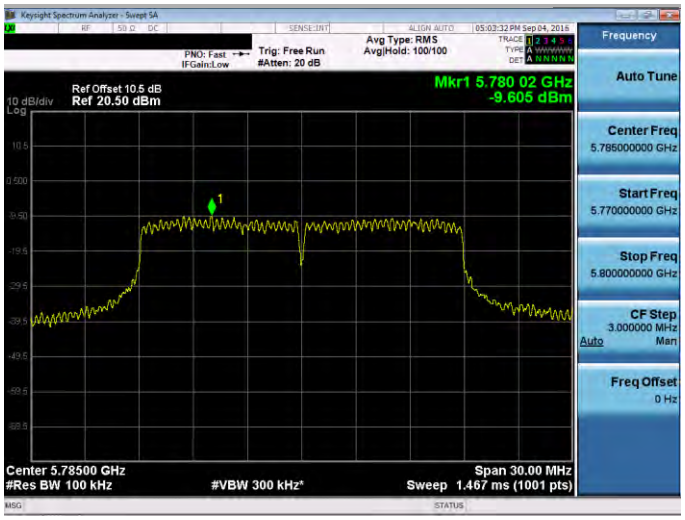
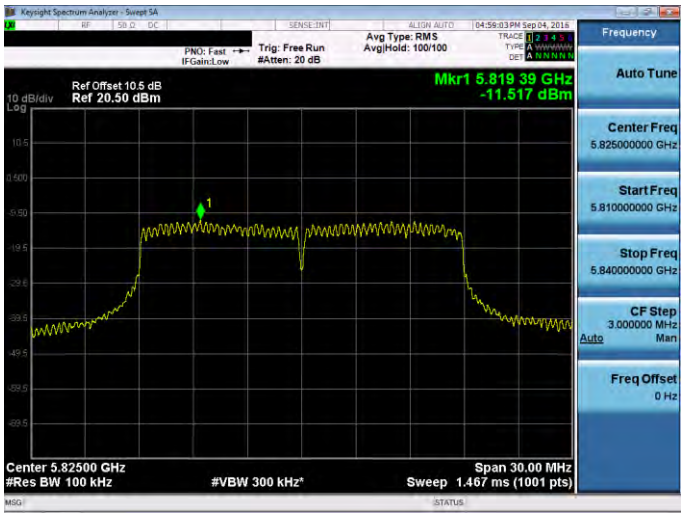
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-0	
5190 MHz	
5230 MHz	

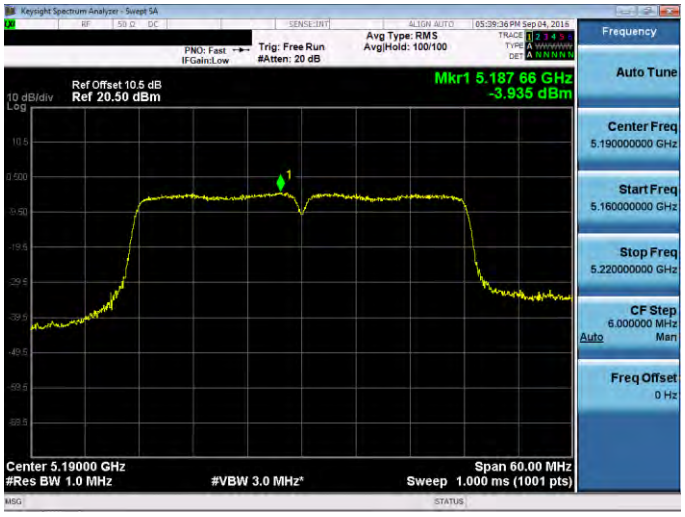
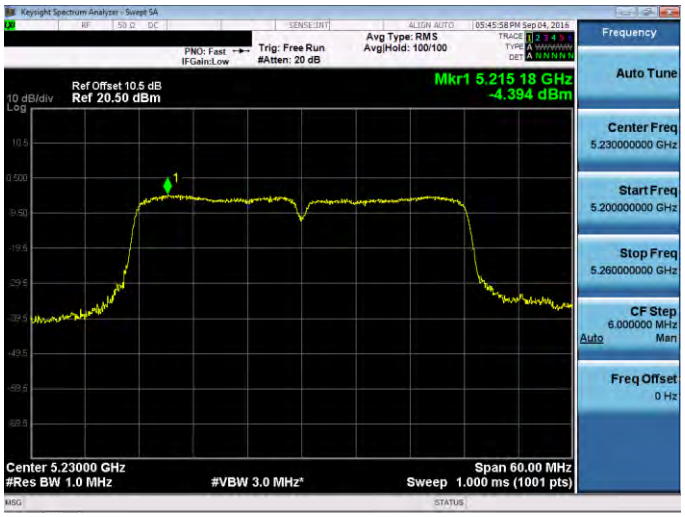
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-0	
5755 MHz	
5795 MHz	

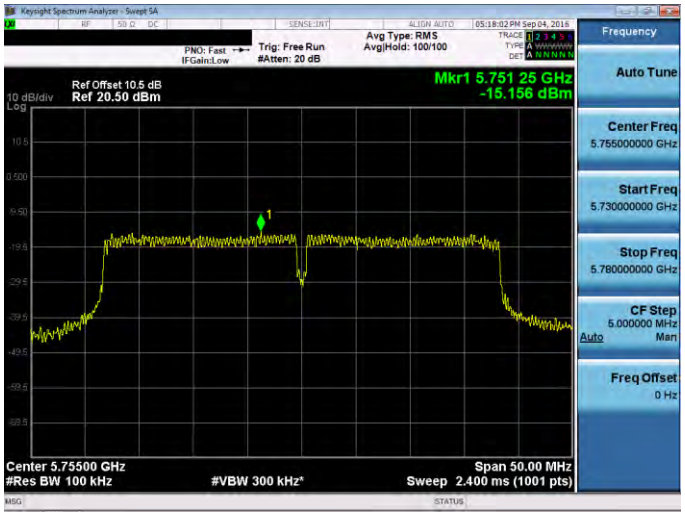
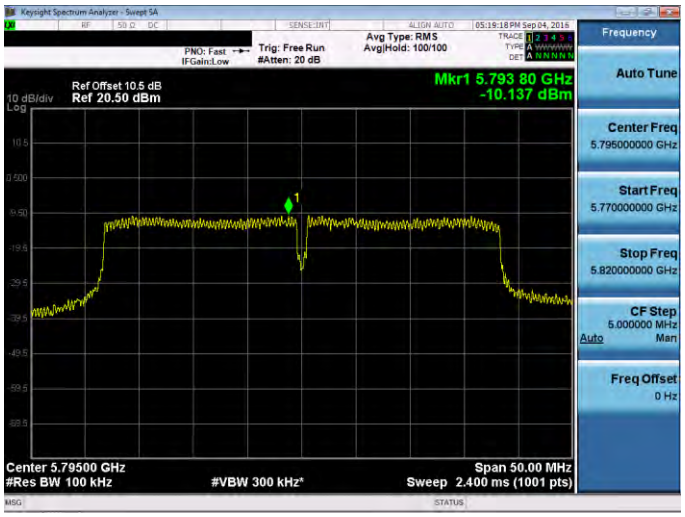
Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-0	
5210 MHz	

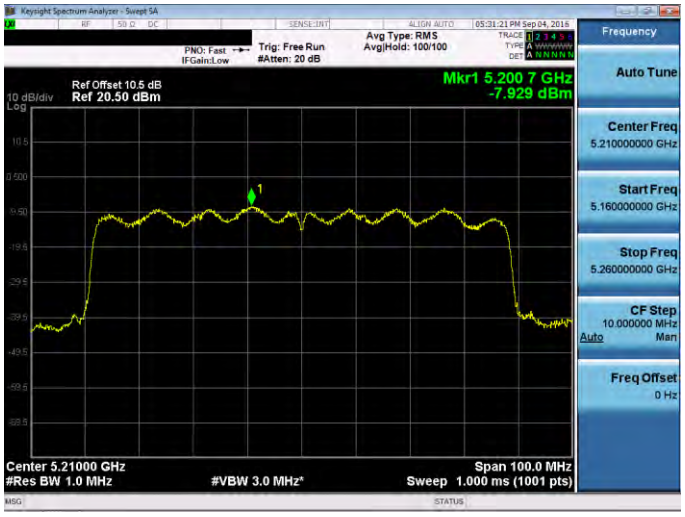
Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-0	
5775 MHz	

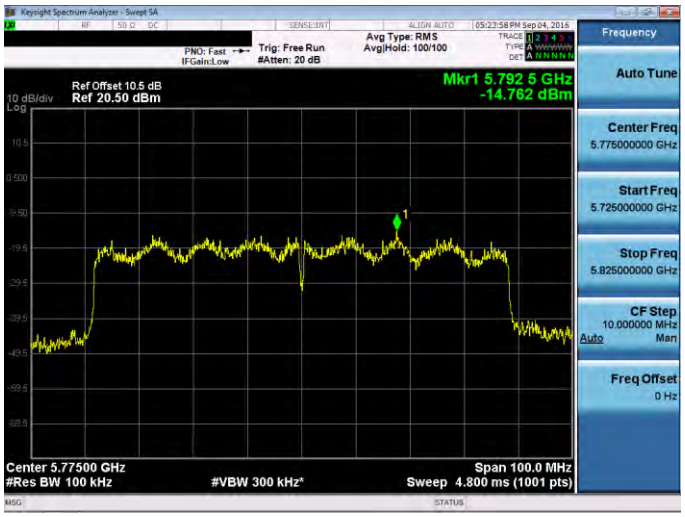
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-1	
5180 MHz	
5200 MHz	
5240 MHz	

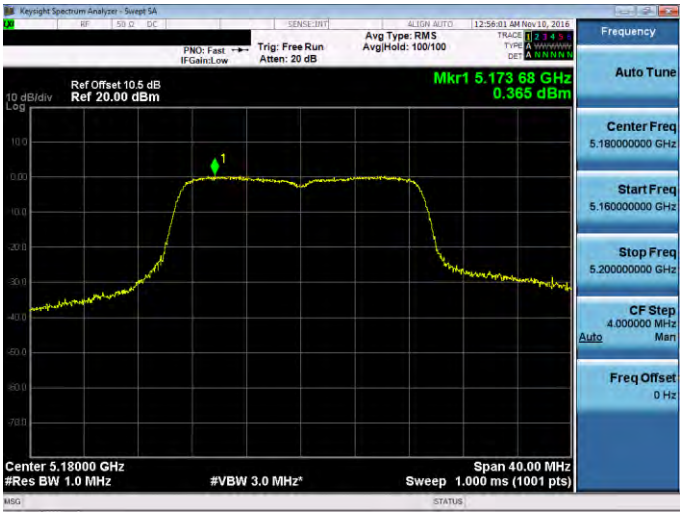
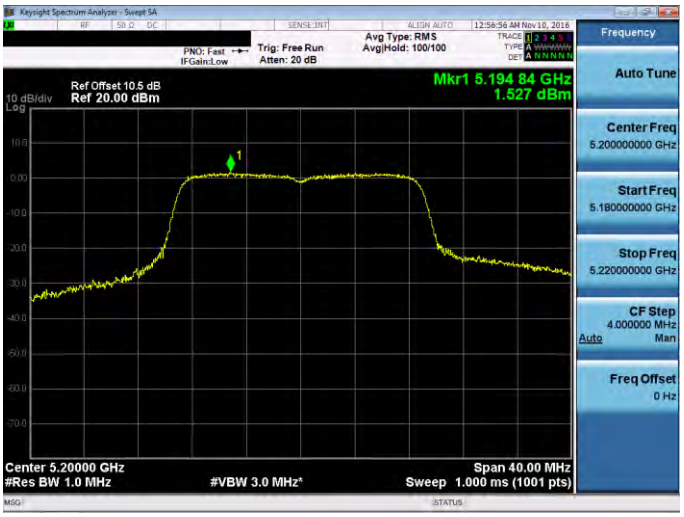
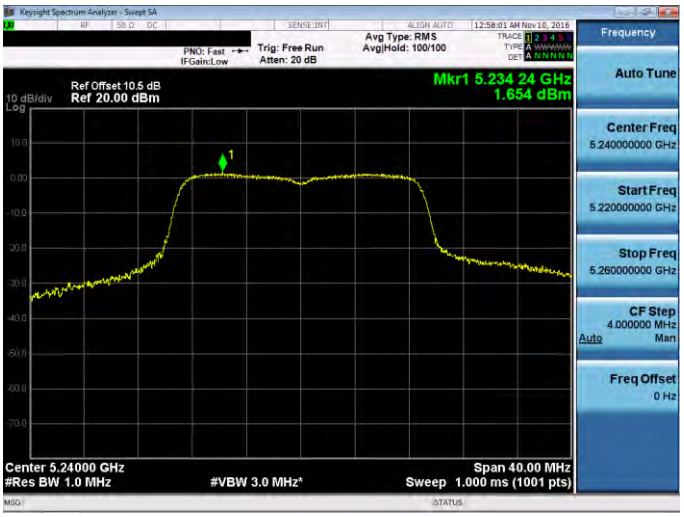
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-1	
5745 MHz	
5785 MHz	
5825 MHz	

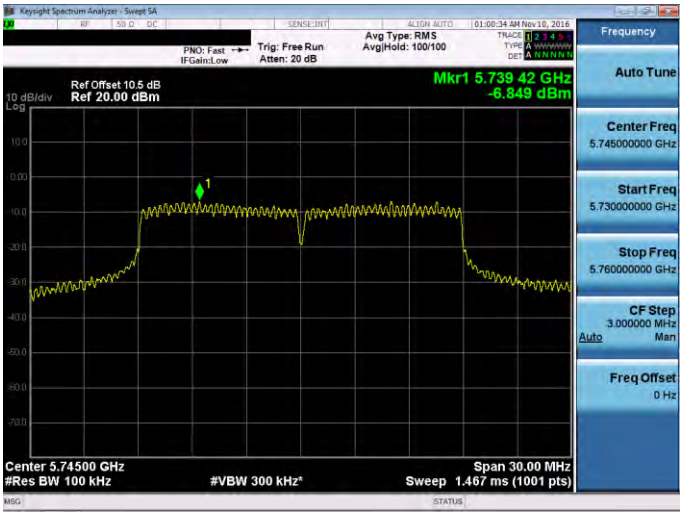
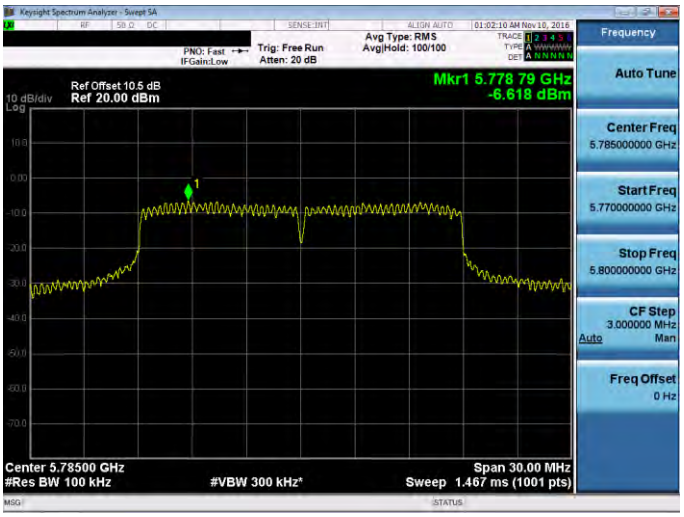
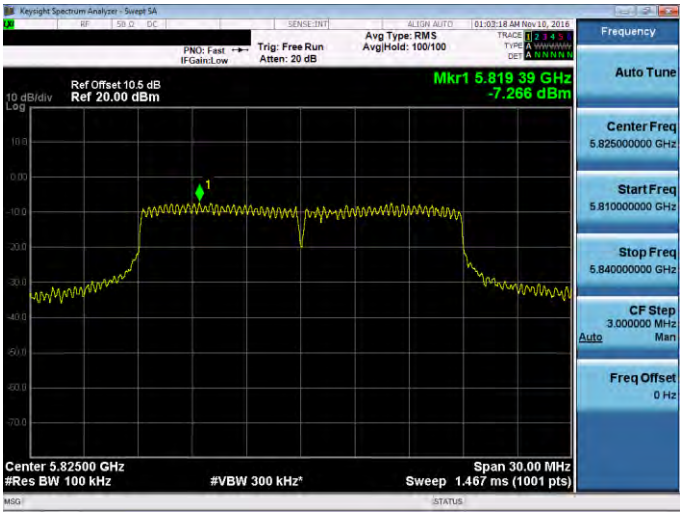
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-1	
5190 MHz	
5230 MHz	

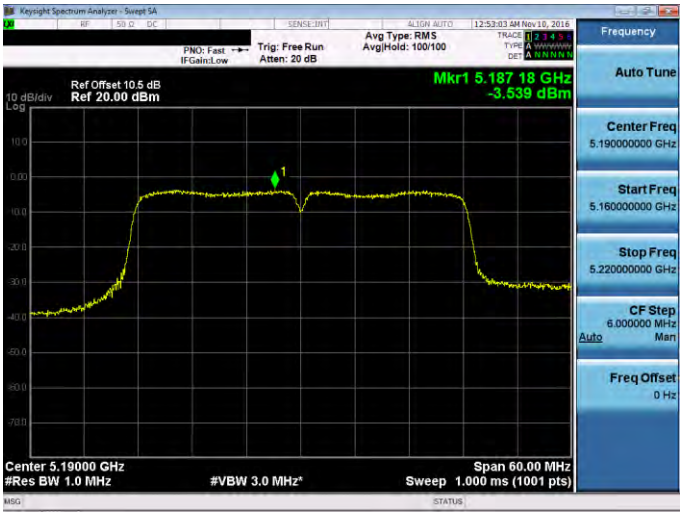
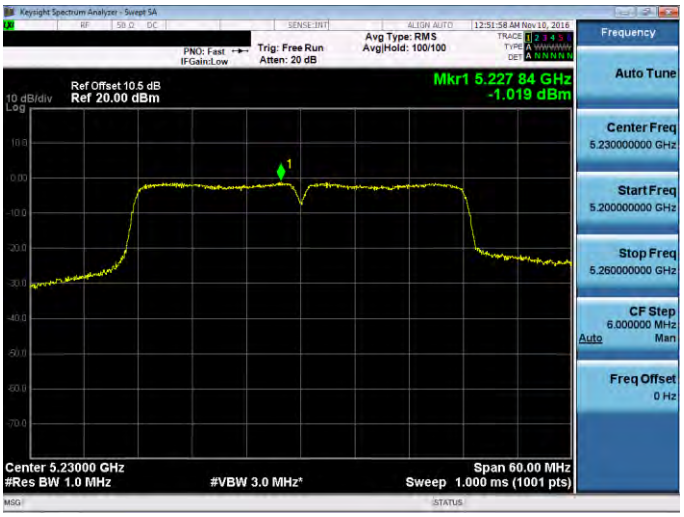
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-1	
5755 MHz	
5795 MHz	

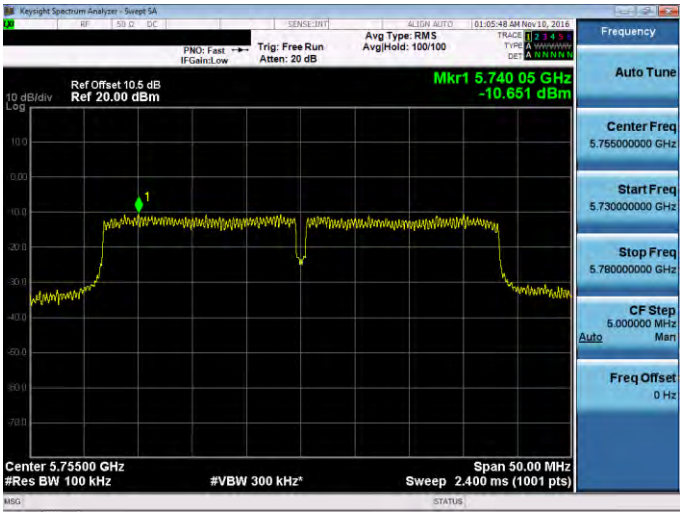
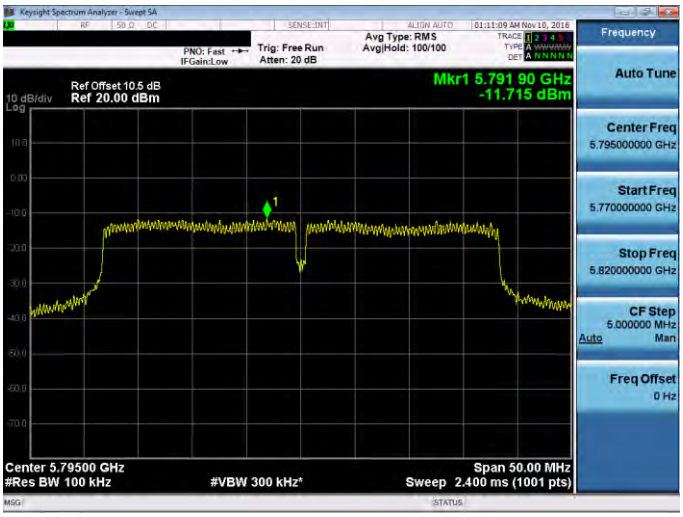
Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-1	
5210 MHz	

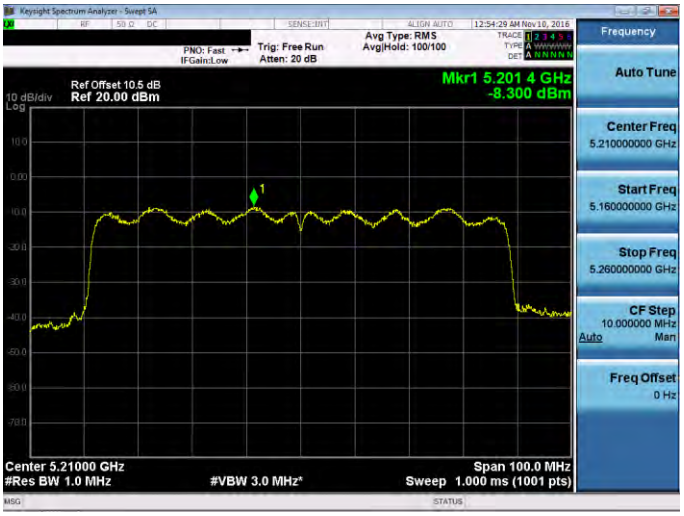
Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-1	
5775 MHz	

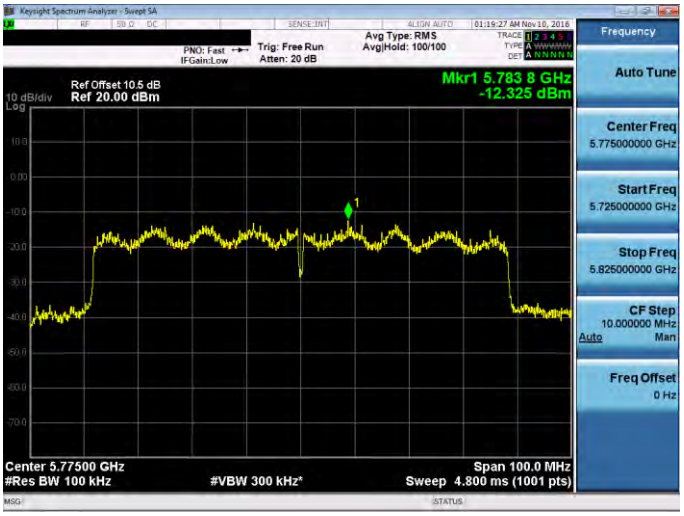
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-0	
Beamforming on	
5180 MHz	
5200 MHz	
5240 MHz	

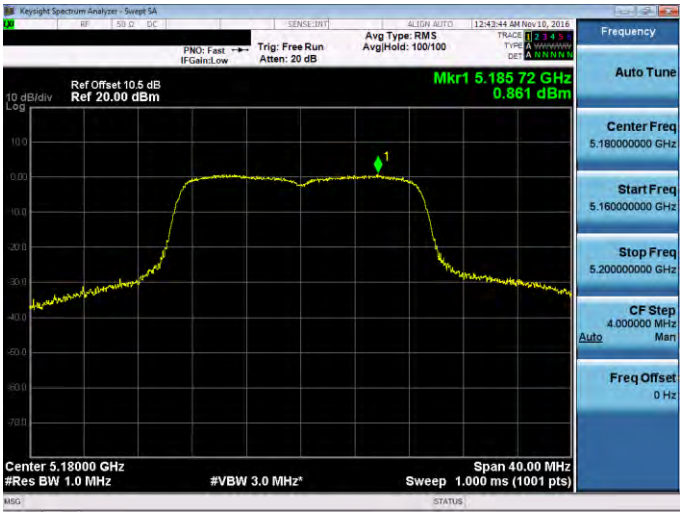
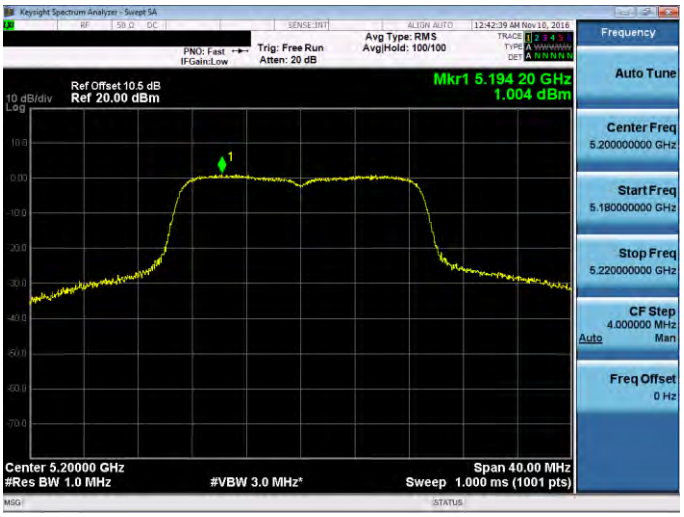
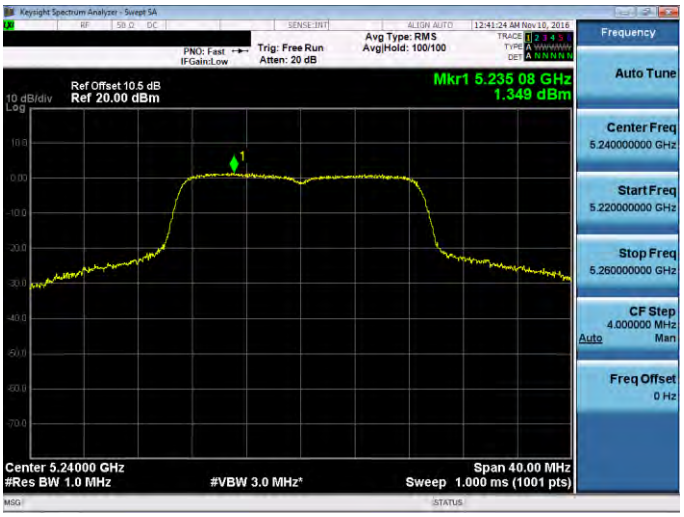
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-0	
Beamforming on	
5745 MHz	
5785 MHz	
5825 MHz	

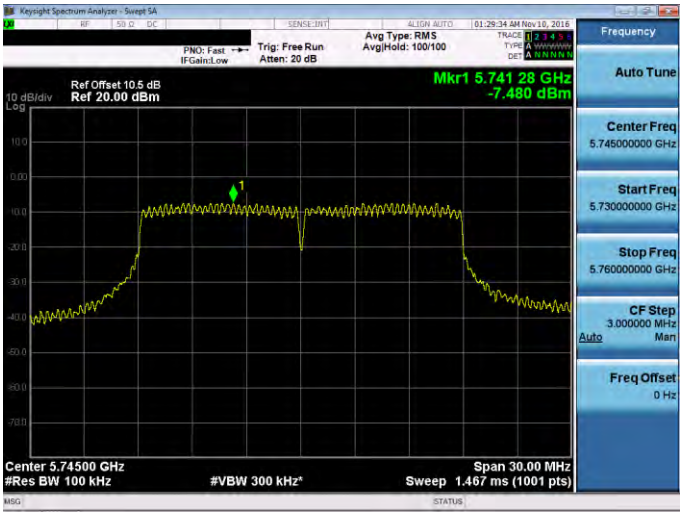
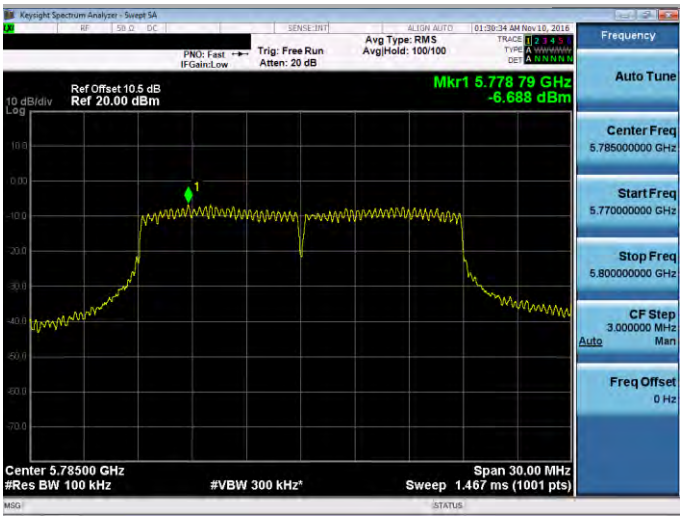
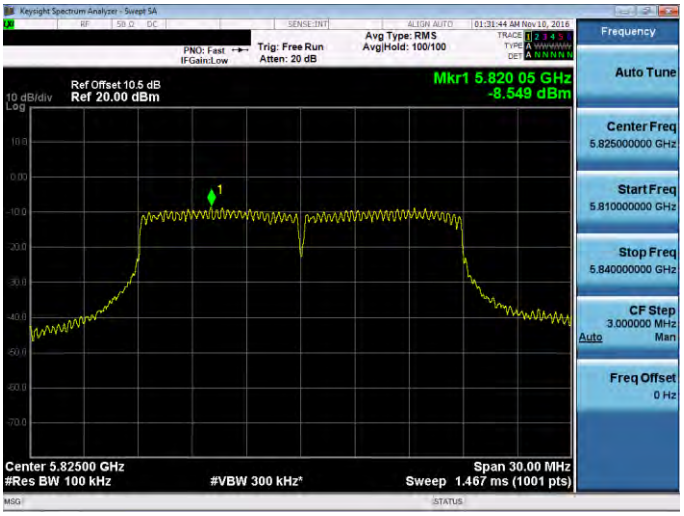
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-0	
Beamforming on	
5190 MHz	
5230 MHz	

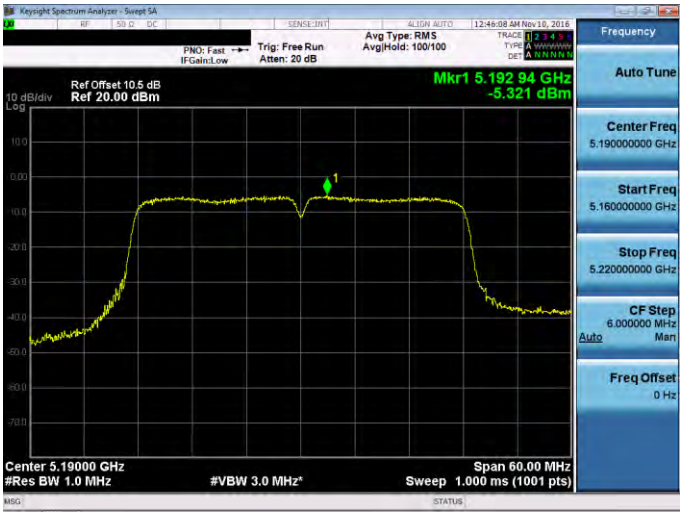
Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-0	
Beamforming on	
5755 MHz	
5795 MHz	

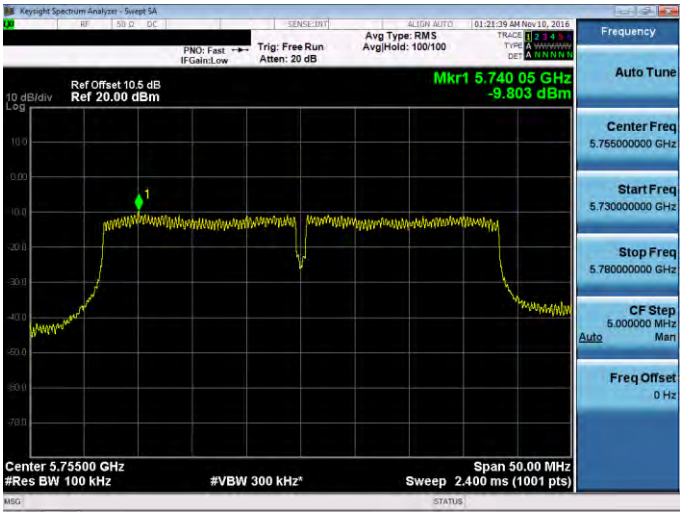
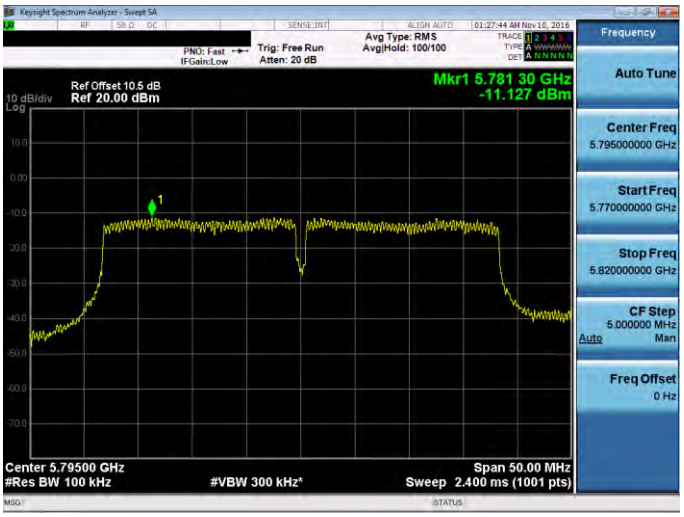
Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-0	
Beamforming on	
5210 MHz	

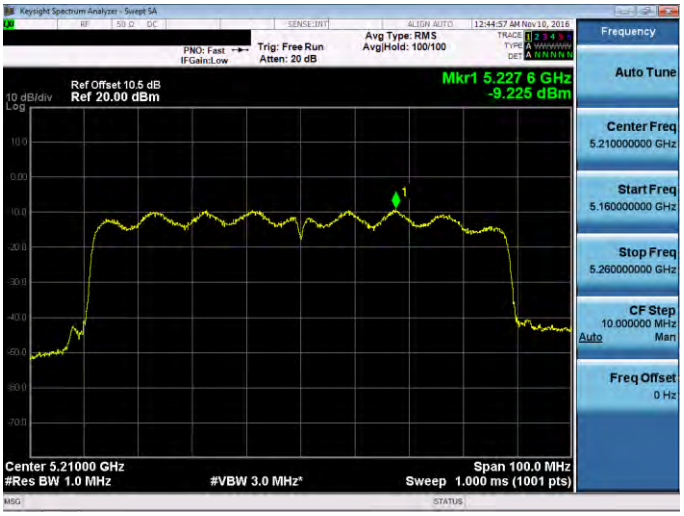
Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-0	
Beamforming on	
5775 MHz	

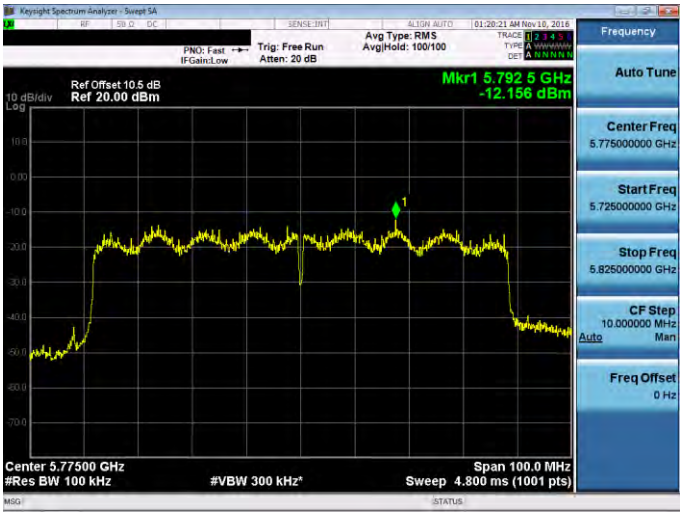
Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-1	
Beamforming on	
5180 MHz	
5200 MHz	
5240 MHz	

Mode 3: IEEE 802.11ac 20 MHz Link Mode _ ANT-1	
Beamforming on	
5745 MHz	
5785 MHz	
5825 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-1	
Beamforming on	
5190 MHz	
5230 MHz	

Mode 4: IEEE 802.11ac 40 MHz Link Mode_ ANT-1	
Beamforming on	
5755 MHz	
5795 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-1	
Beamforming on	
5210 MHz	

Mode 5: IEEE 802.11ac 80 MHz Link Mode _ ANT-1	
Beamforming on	
5775 MHz	

5.7. Frequency Stability Measurement

Temperature Variations

Model Number	DWA-181					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5200.0103	10300	1.981	Pass
	10		5200.0102	10200	1.962	Pass
	20		5200.0096	9600	1.846	Pass
	30		5200.0018	1800	0.346	Pass
	40		5200.0082	8200	1.577	Pass
5785 MHz	0	120	5785.0233	23300	4.028	Pass
	10		5785.0175	17500	3.025	Pass
	20		5785.0144	14400	2.489	Pass
	30		5785.0097	9700	1.677	Pass
	40		5785.0104	10400	1.798	Pass

Voltage Variations

Model Number	DWA-181					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5200.0182	18200	3.500	Pass
		120.00	5200.0096	9600	1.846	Pass
		102.00	5200.0046	4600	0.885	Pass
5785 MHz	20	138.00	5785.0162	16200	2.800	Pass
		120.00	5785.0144	14400	2.489	Pass
		102.00	5785.0057	5700	0.985	Pass

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

Temperature Variations

Model Number	DWA-181					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Beamforming on						
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	120	5200.0103	10300	1.981	Pass
	10		5200.0102	10200	1.962	Pass
	20		5200.0096	9600	1.846	Pass
	30		5200.0018	1800	0.346	Pass
	40		5200.0082	8200	1.577	Pass
5785 MHz	0	120	5785.0233	23300	4.028	Pass
	10		5785.0175	17500	3.025	Pass
	20		5785.0144	14400	2.489	Pass
	30		5785.0097	9700	1.677	Pass
	40		5785.0104	10400	1.798	Pass

Voltage Variations

Model Number	DWA-181					
Test Item	Frequency Stability					
Date of Test	07/29/2016					
Beamforming on						
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	138.00	5200.0182	18200	3.500	Pass
		120.00	5200.0096	9600	1.846	Pass
		102.00	5200.0046	4600	0.885	Pass
5785 MHz	20	138.00	5785.0162	16200	2.800	Pass
		120.00	5785.0144	14400	2.489	Pass
		102.00	5785.0057	5700	0.985	Pass

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