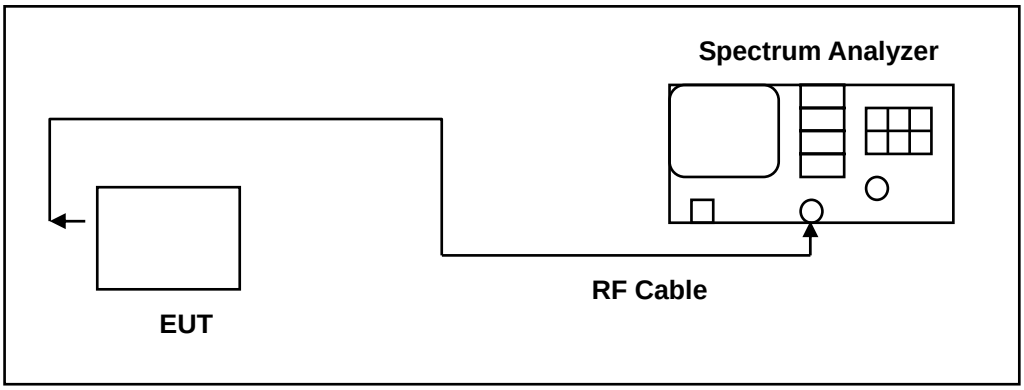
9 Out of Band Conducted Emissions Measurement

9.1. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

9.2. Test Setup



9.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(2)
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/24/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

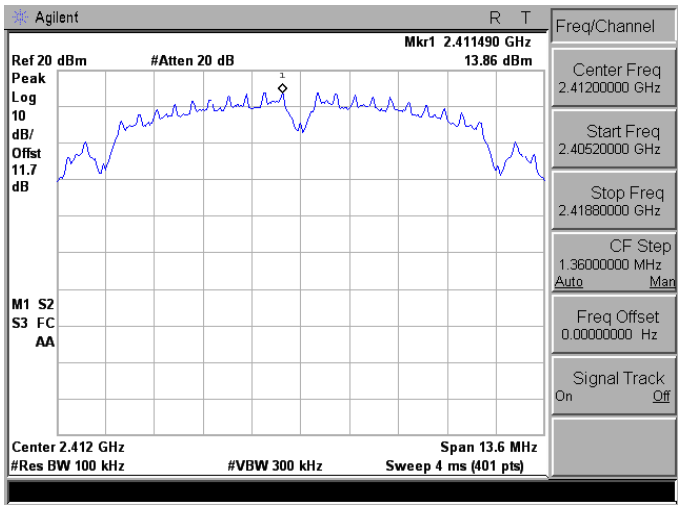
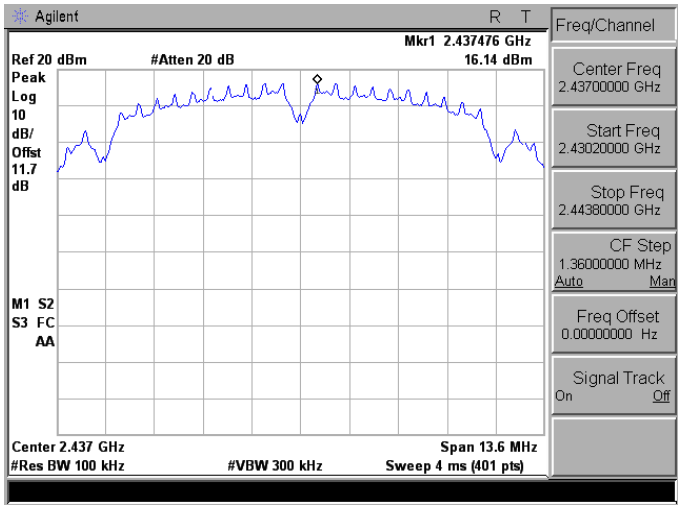
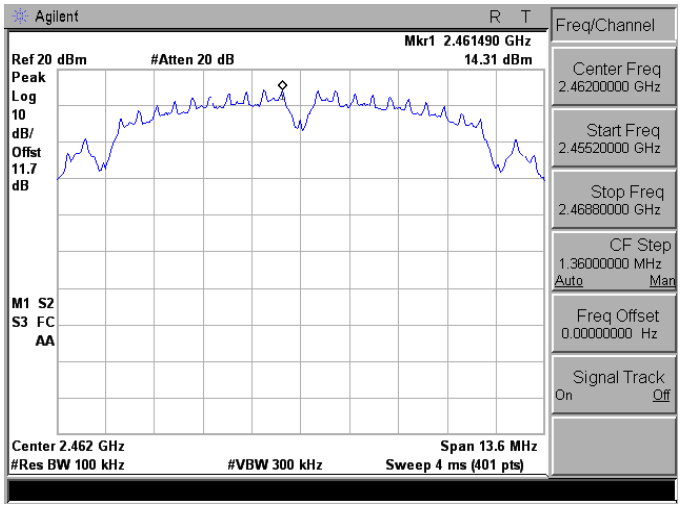
Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.
Note: N.C.R. = No Calibration Request.

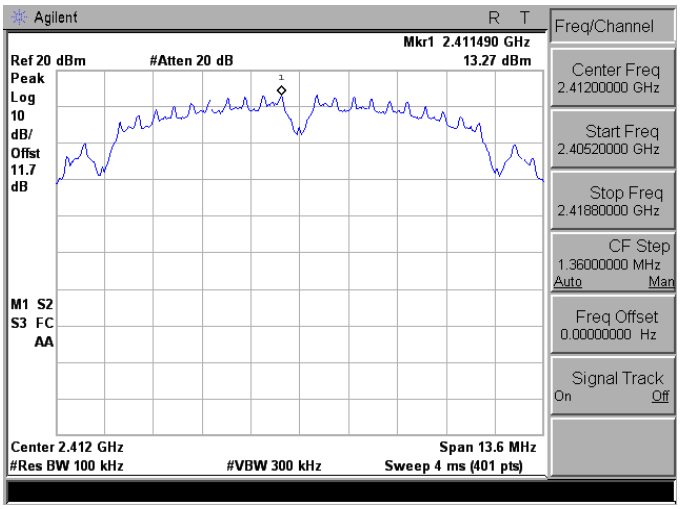
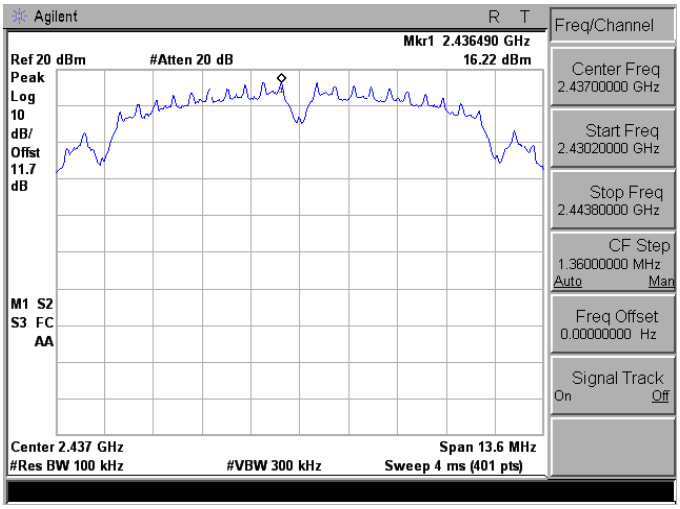
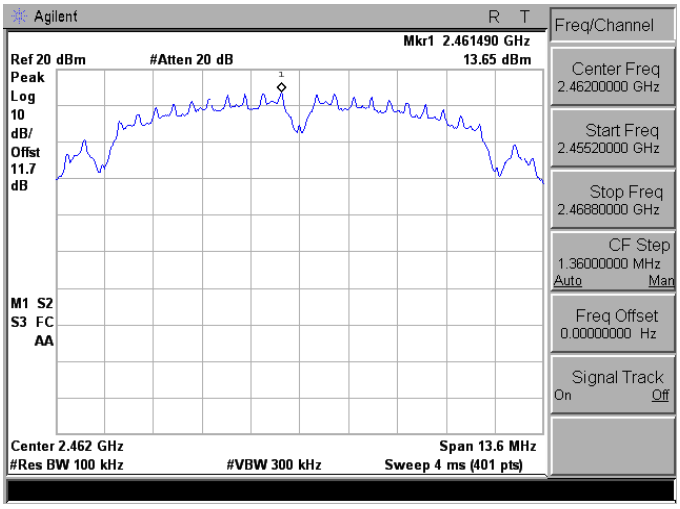
9.4. Test Procedure

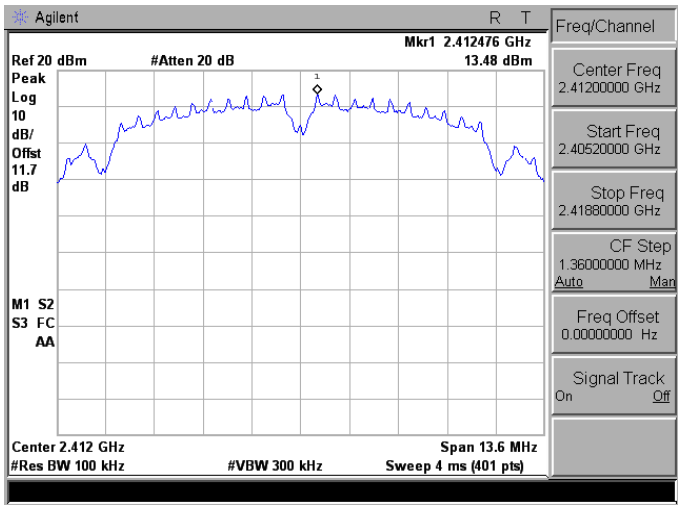
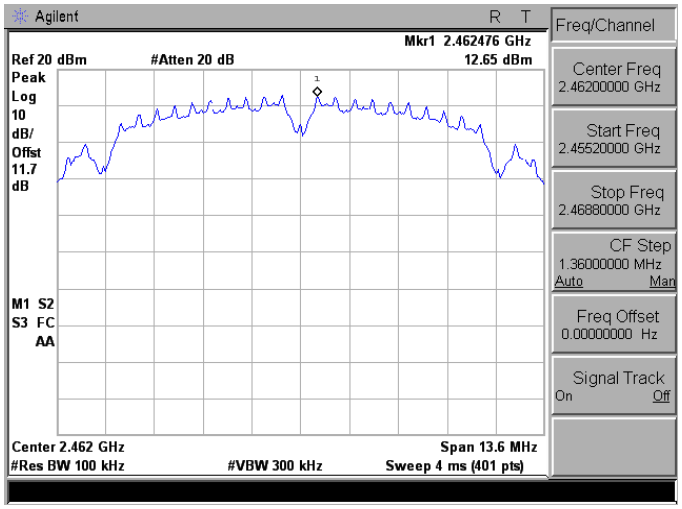
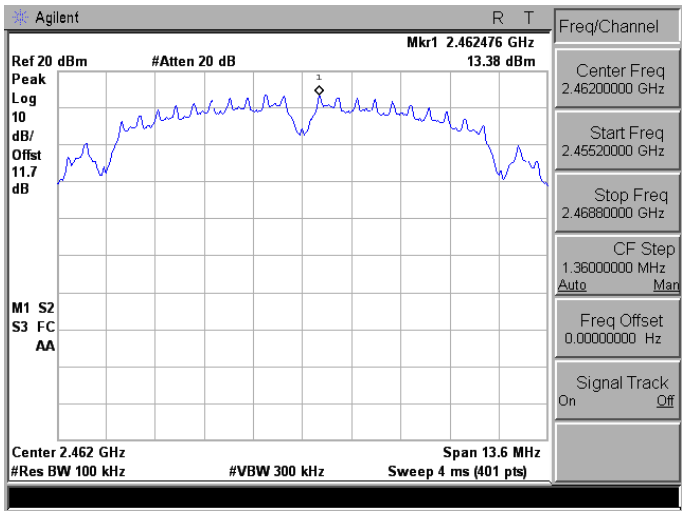
In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 30 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.
All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band.
The test was performed at 3 channels.

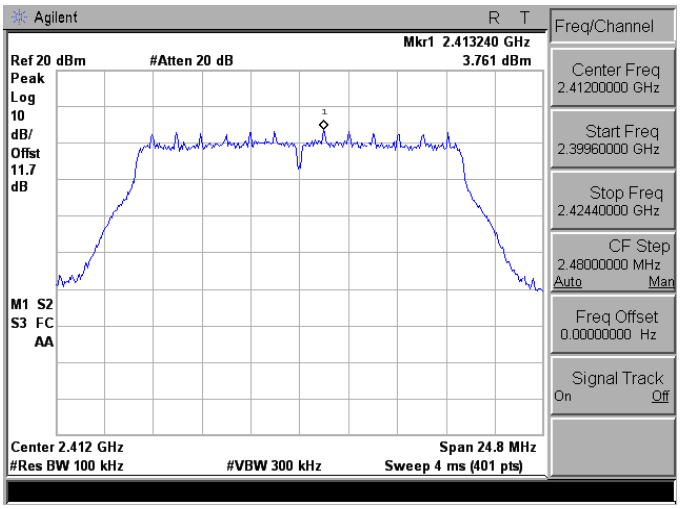
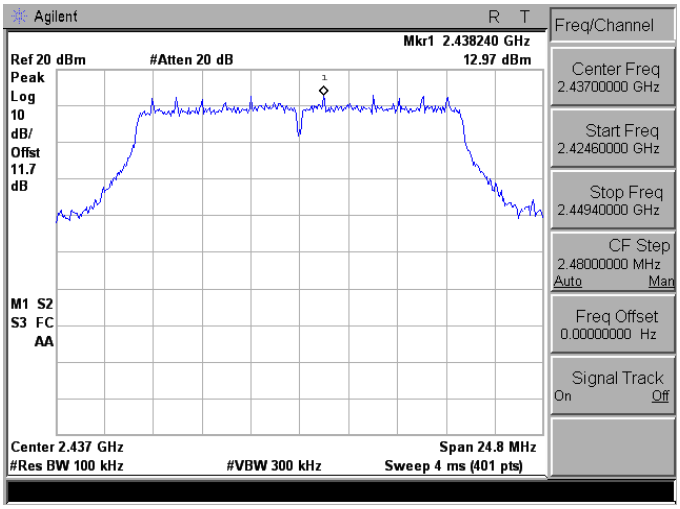
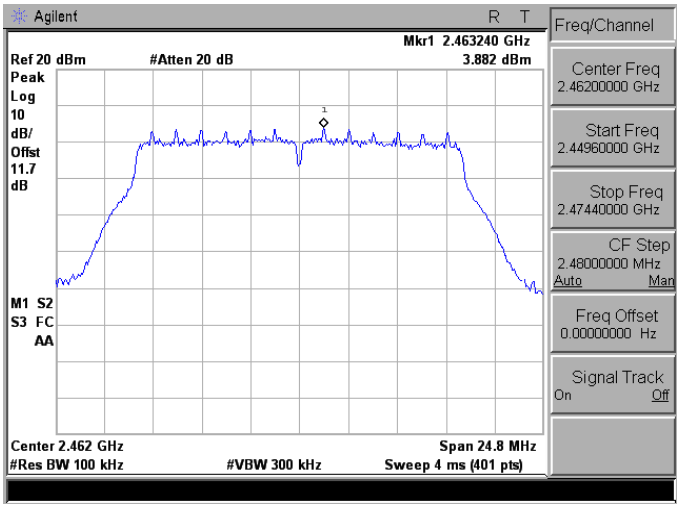
9.5. Test Graphs

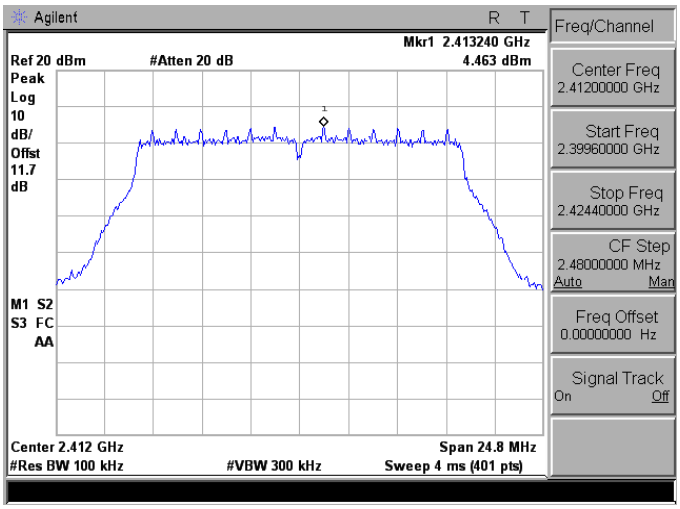
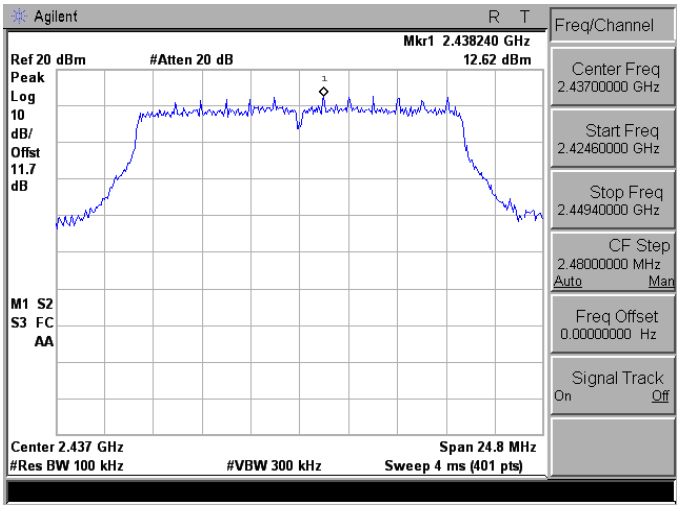
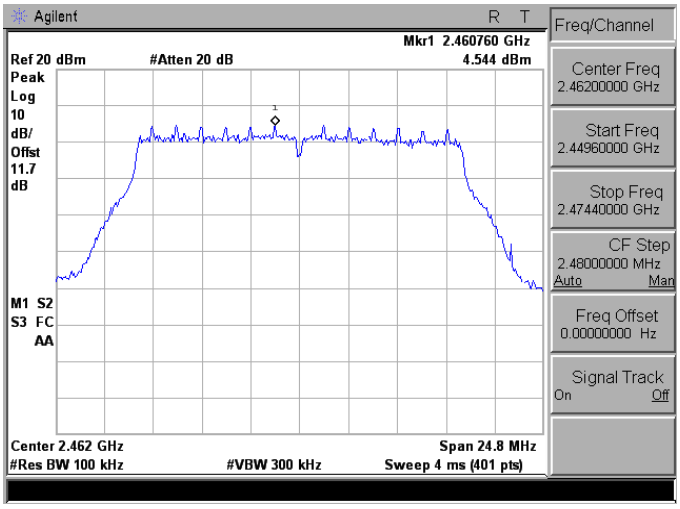
Reference level

Mode 2: IEEE 802.11b Link Mode_ANT-0	
2412	
2437	
2462	

Mode 2: IEEE 802.11b Link Mode_ANT-1	
2412	
2437	
2462	

Mode 2: IEEE 802.11b Link Mode_ANT-2	
2412	
2437	
2462	

Mode 3: IEEE 802.11g Link Mode_ANT-0	
2412	
2437	
2462	

Mode 3: IEEE 802.11g Link Mode_ANT-1	
2412	
2437	
2462	

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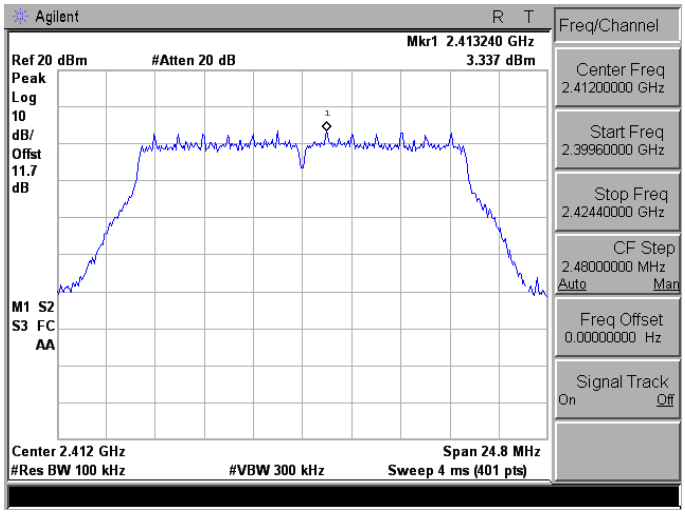
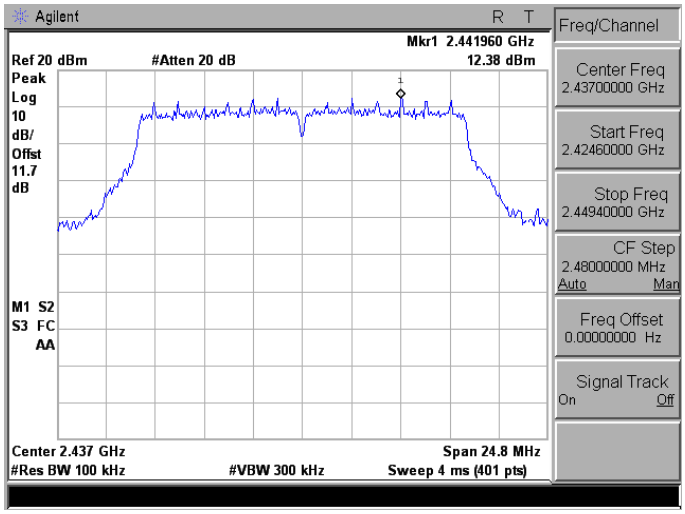
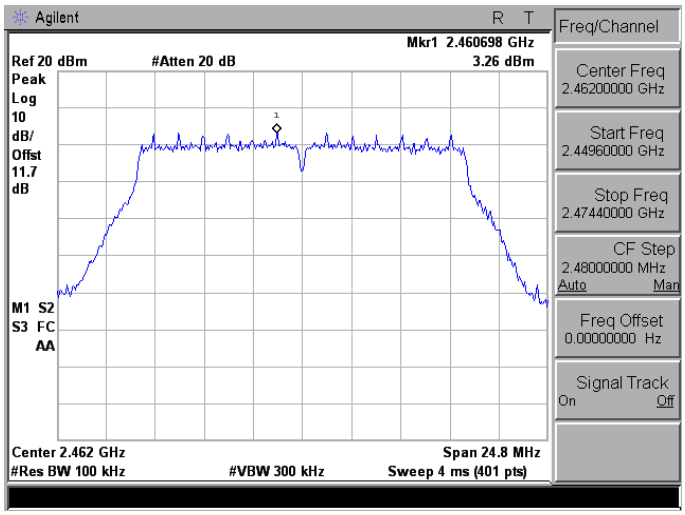
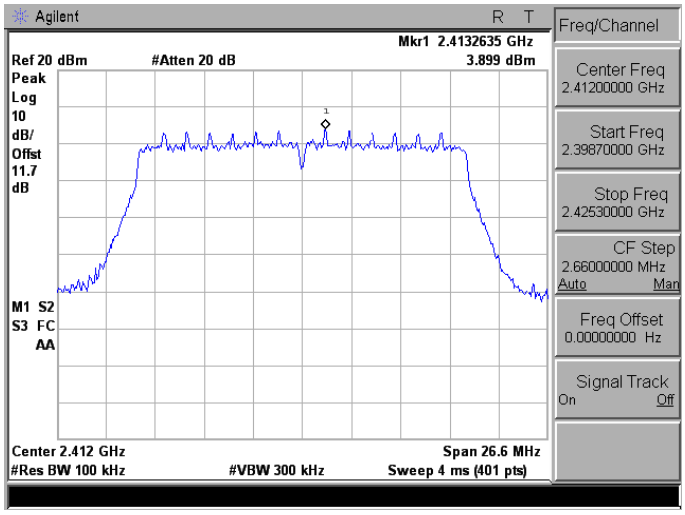
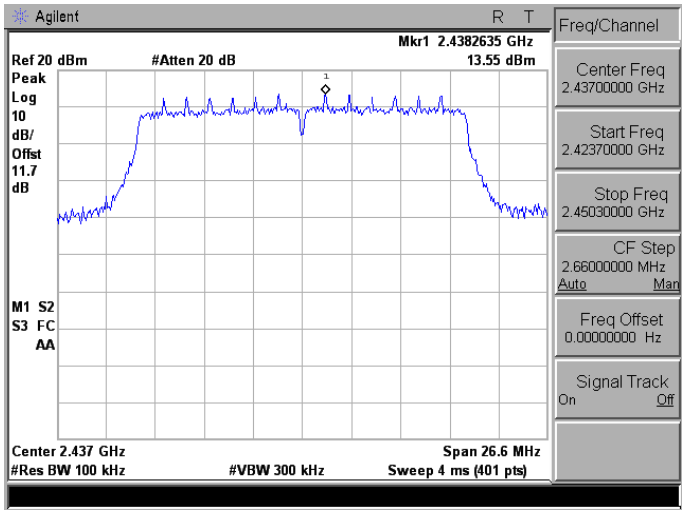
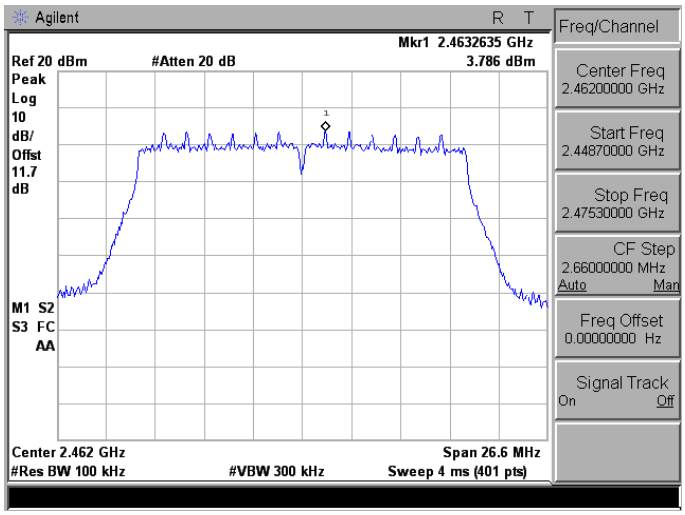
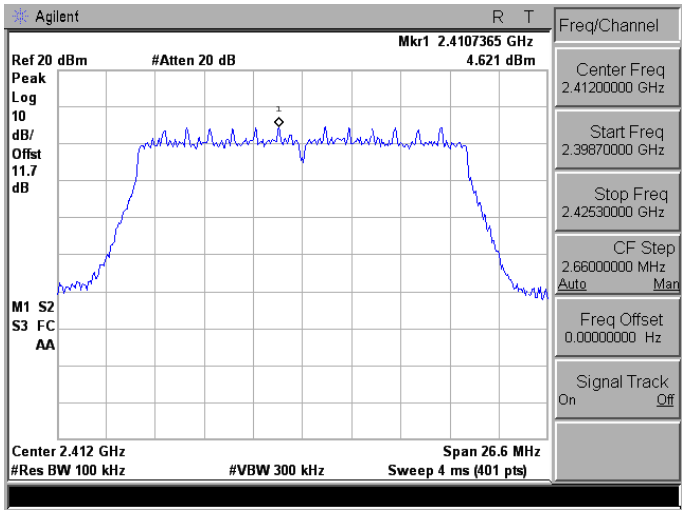
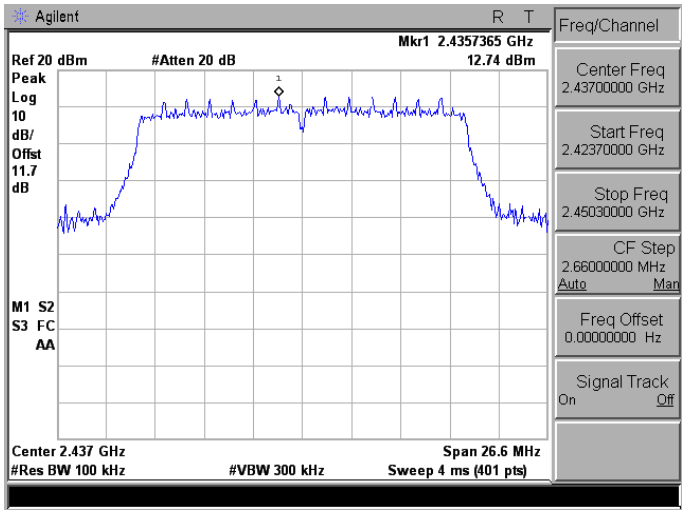
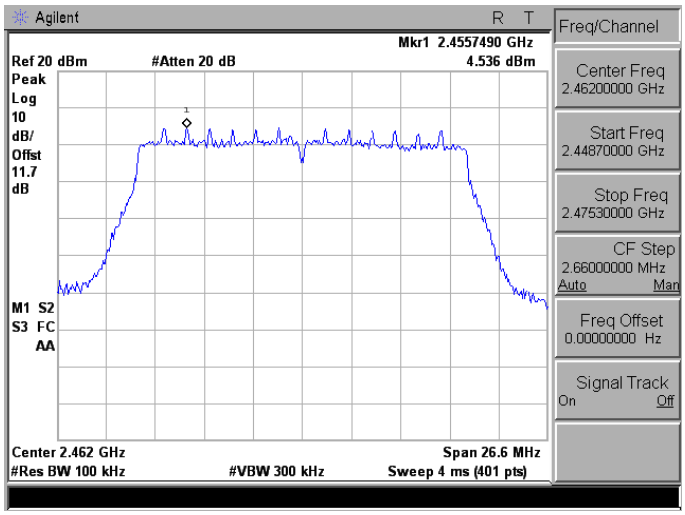
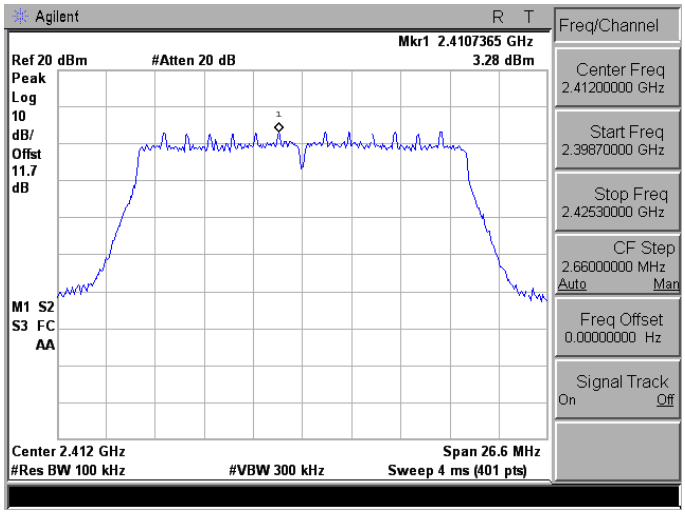
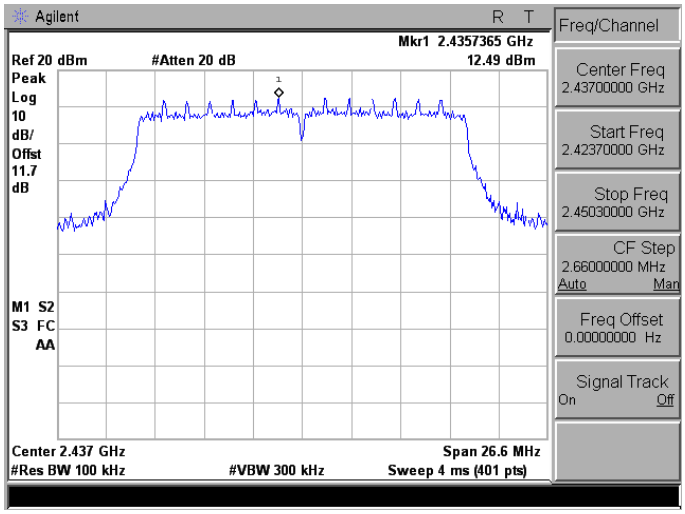
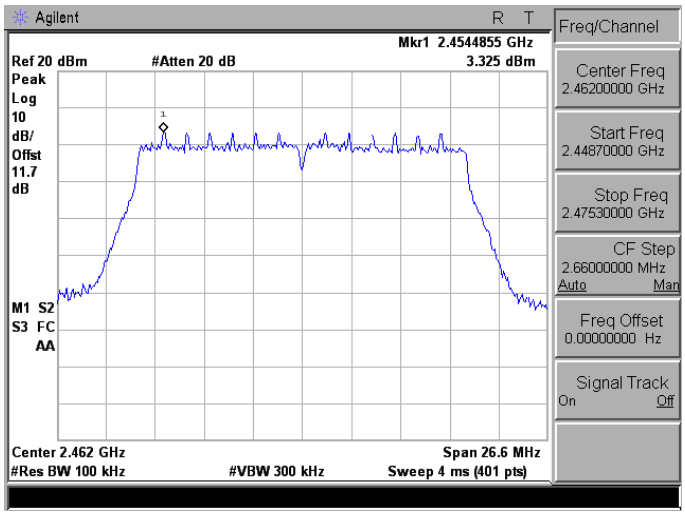
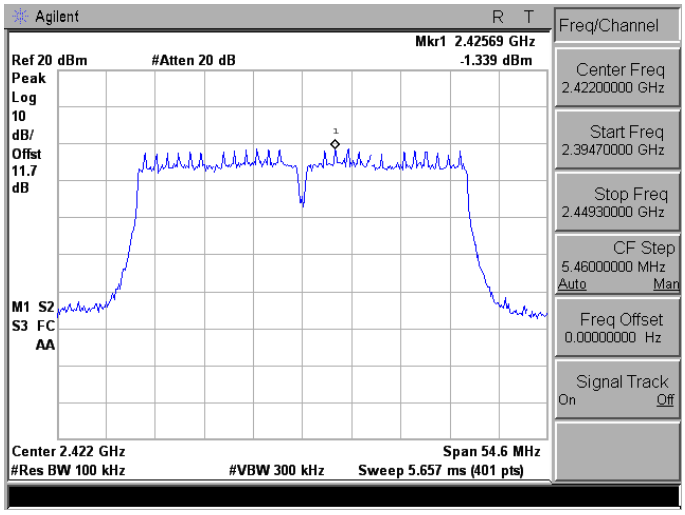
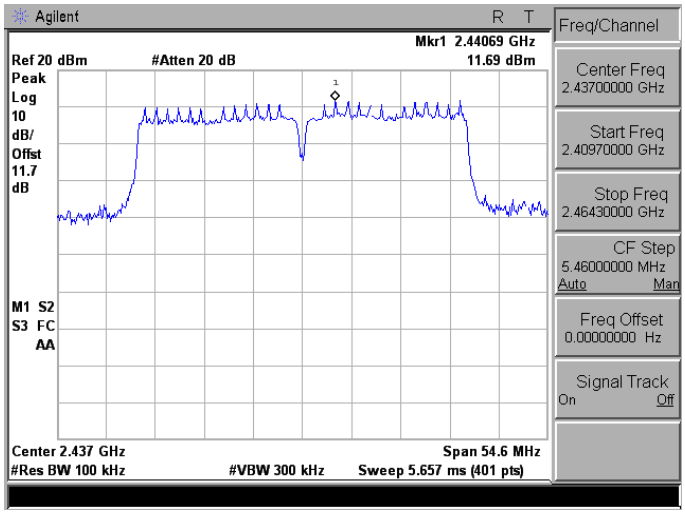
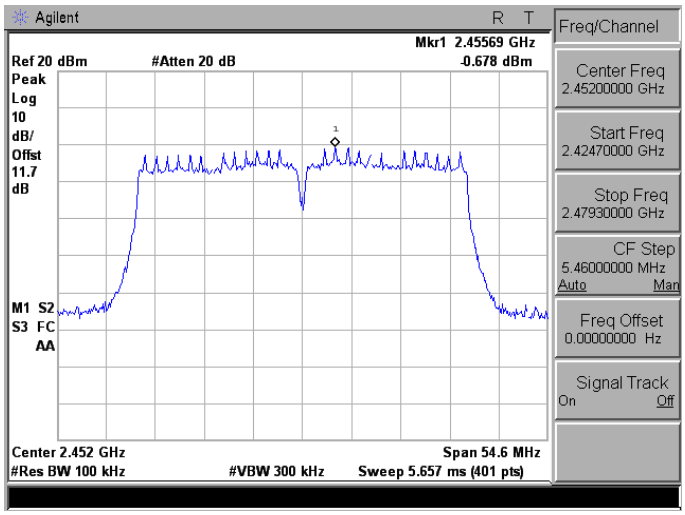
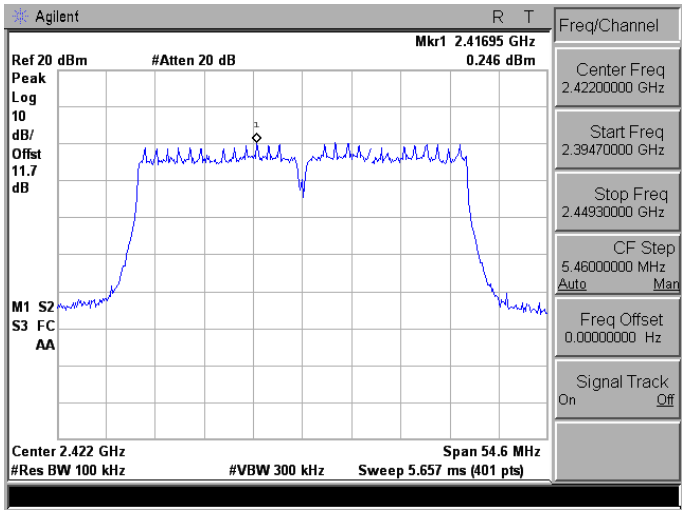
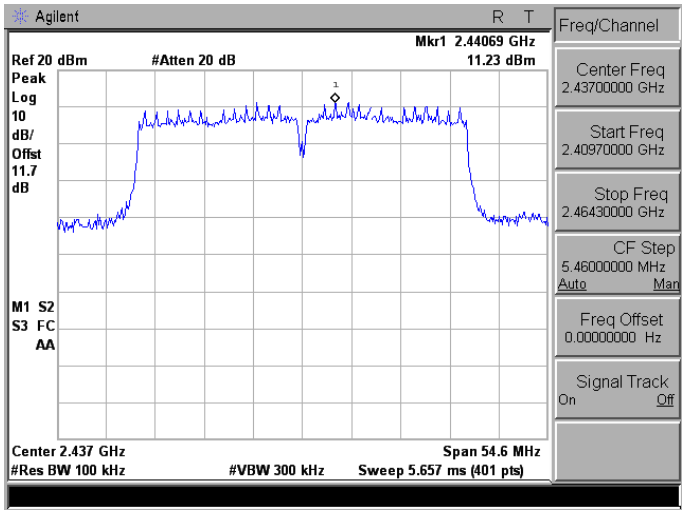
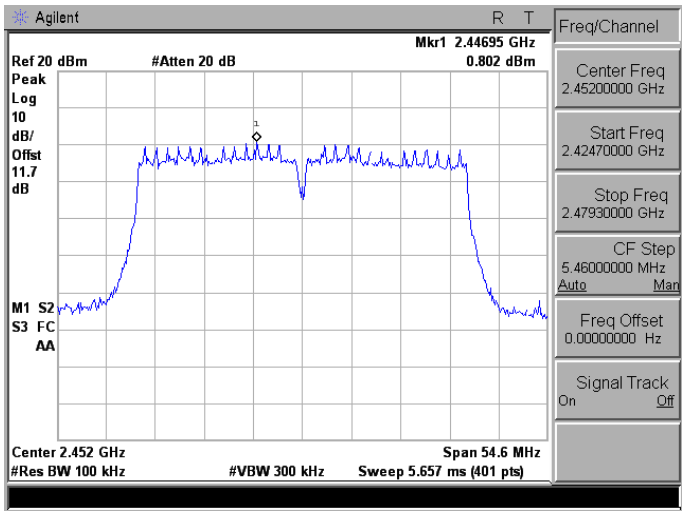
2412	
2437	
2462	

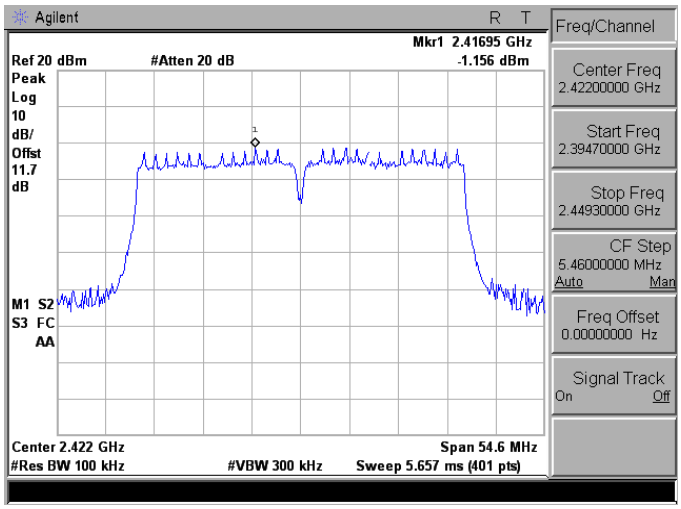
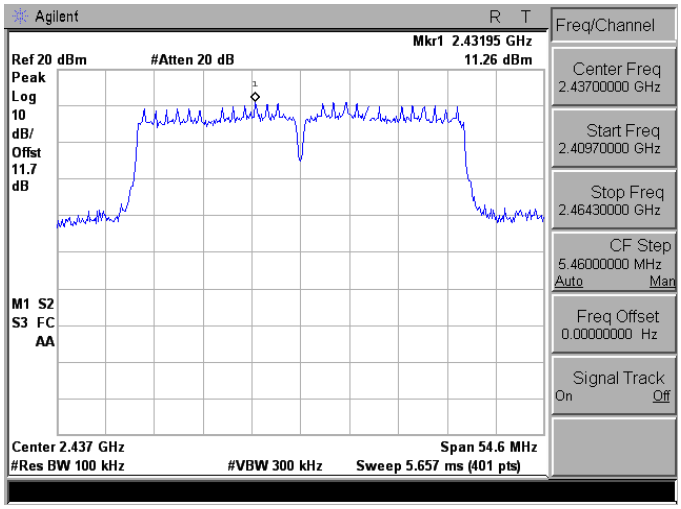
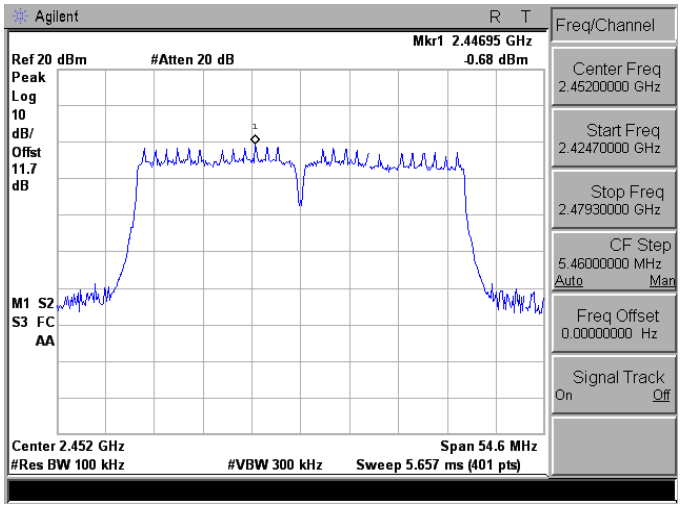
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT0	
2412	
2437	
2462	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT1	
2412	
2437	
2462	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT2	
2412	
2437	
2462	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT0	
2422	
2437	
2452	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT1	
2422	
2437	
2452	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT2	
2422	
2437	
2452	

Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-0	
5745	
5785	
5825	

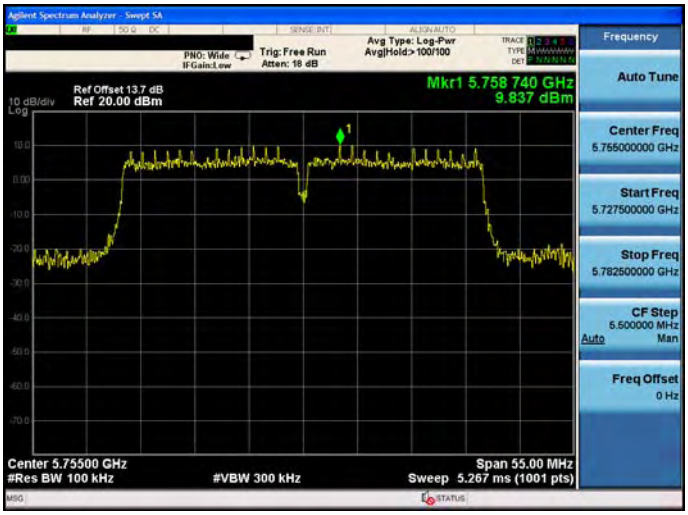
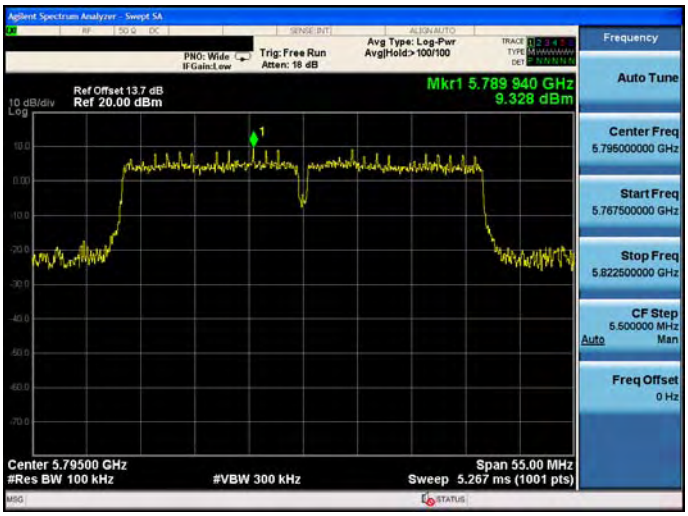
Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-1	
5745	
5785	
5825	

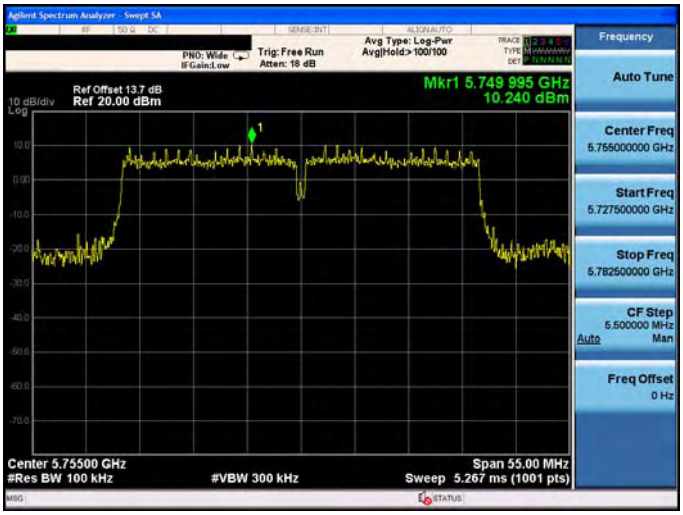
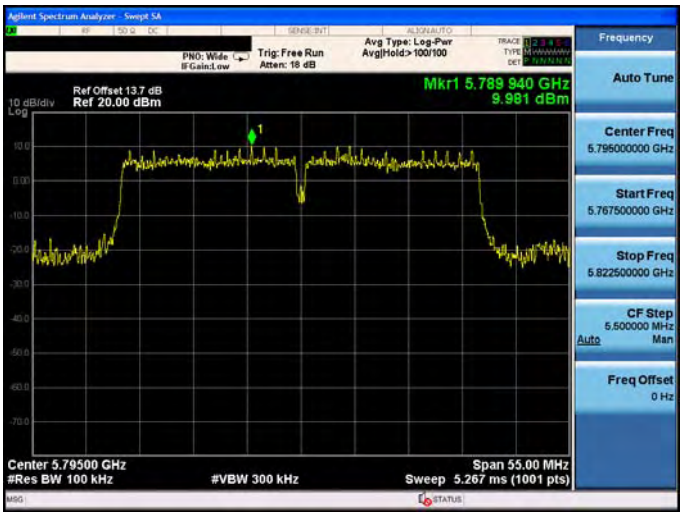
Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-2	
5745	
5785	
5825	

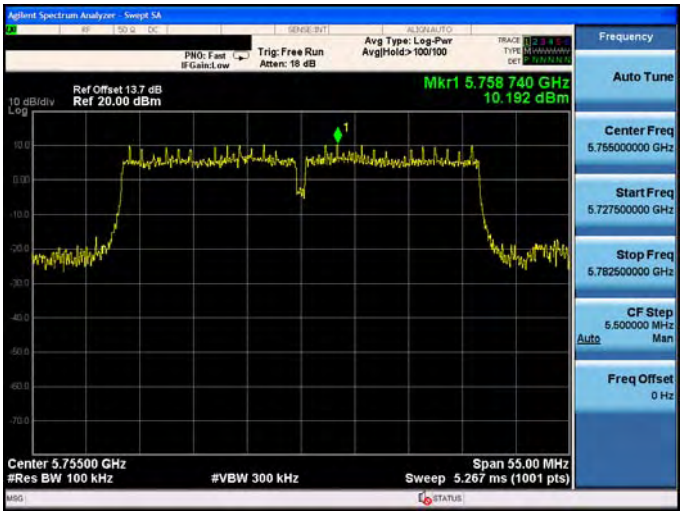
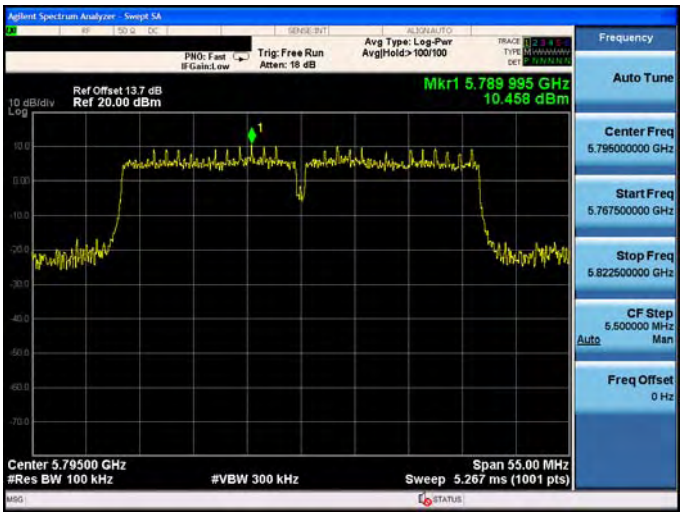
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT0	
5745	
5785	
5825	

Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT1	
5745	
5785	
5825	

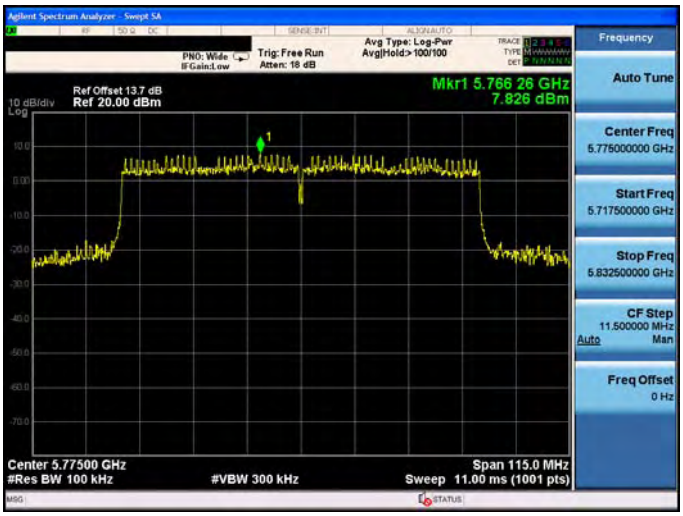
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT2	
5745	
5785	
5825	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT0	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT1	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT2	
5755	
5795	

Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT0	
5775	

Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT1	
5775	

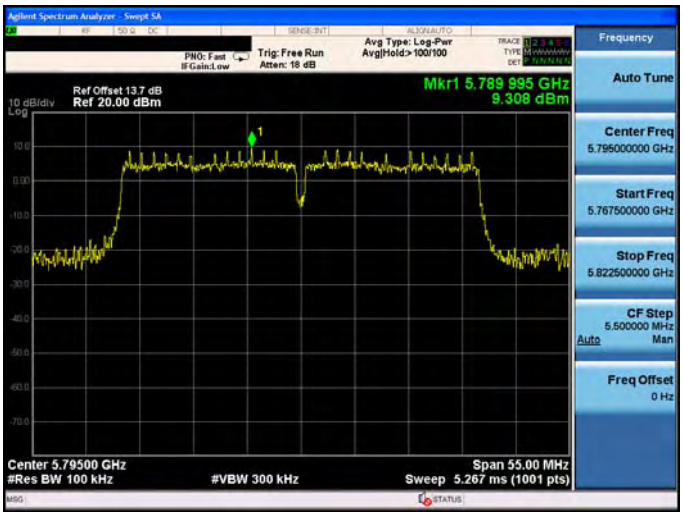
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT2	
5775	

Beamforming on

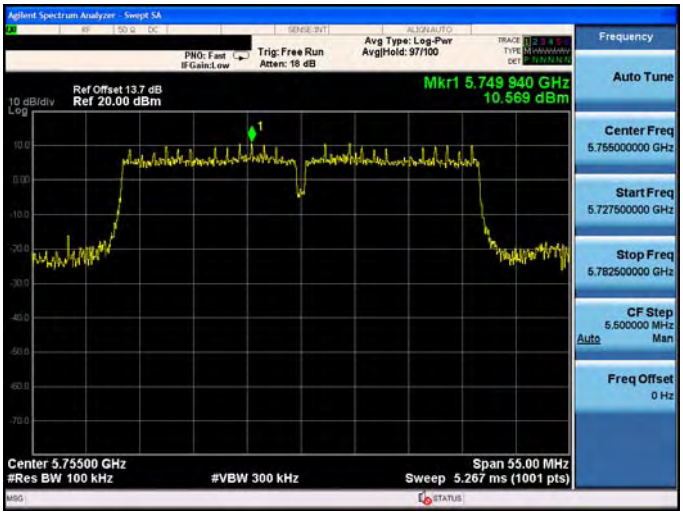
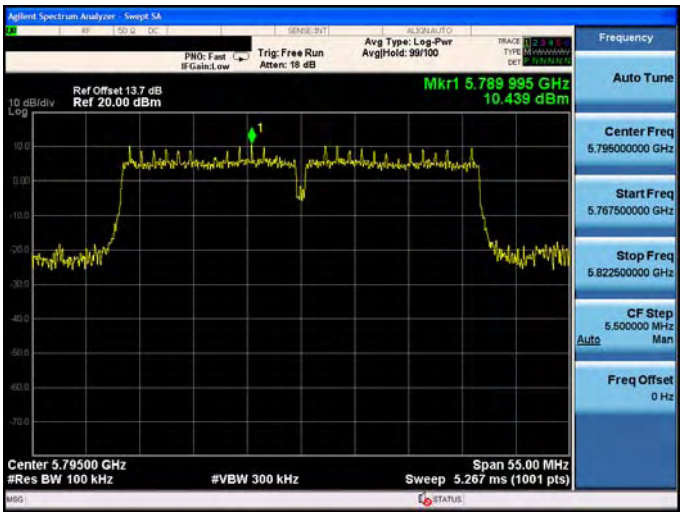
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT0	
5745	
5785	
5825	

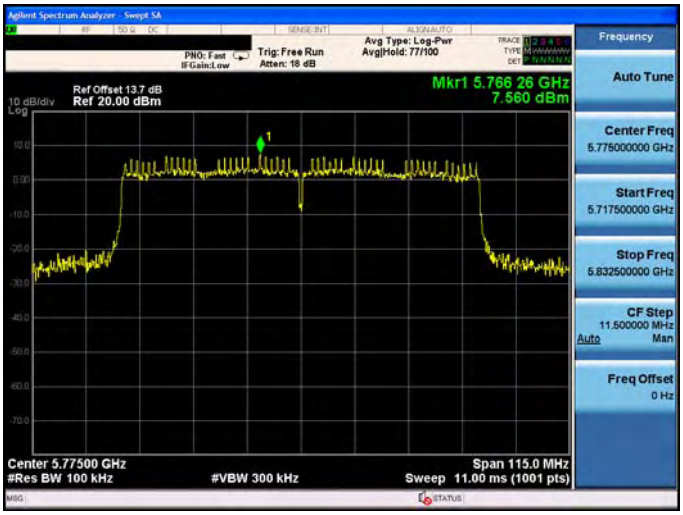
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT1	
5745	
5785	
5825	

Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT2	
5745	
5785	
5825	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT0	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT1	
5755	
5795	

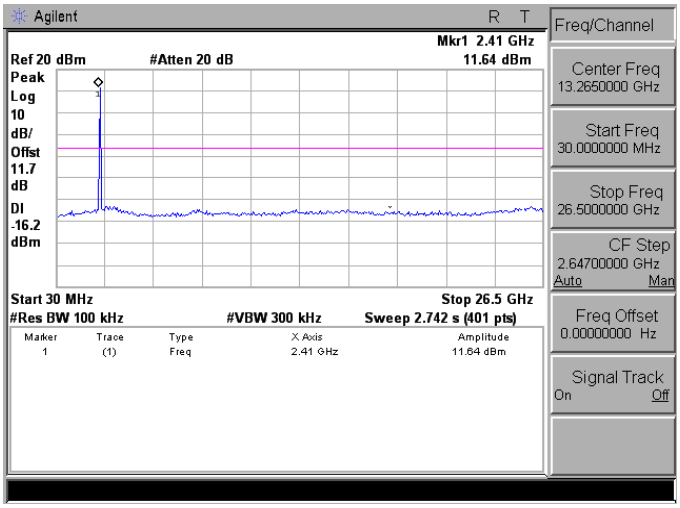
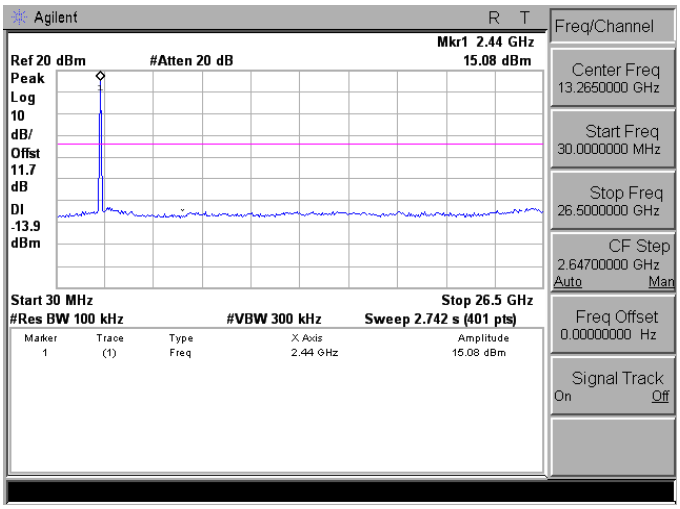
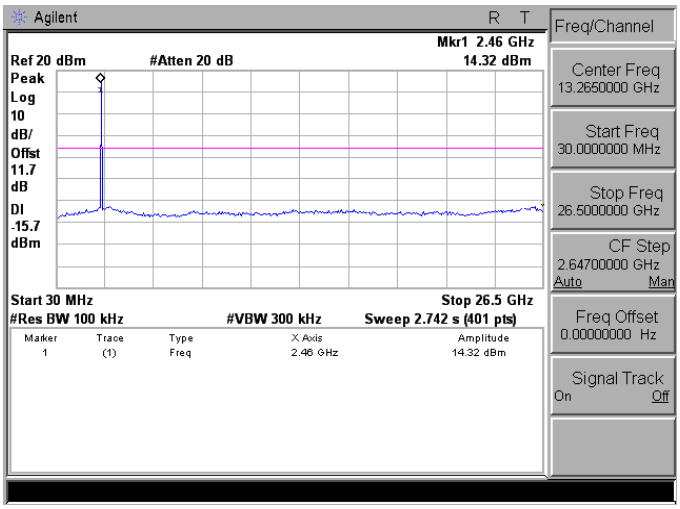
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT2	
5755	
5795	

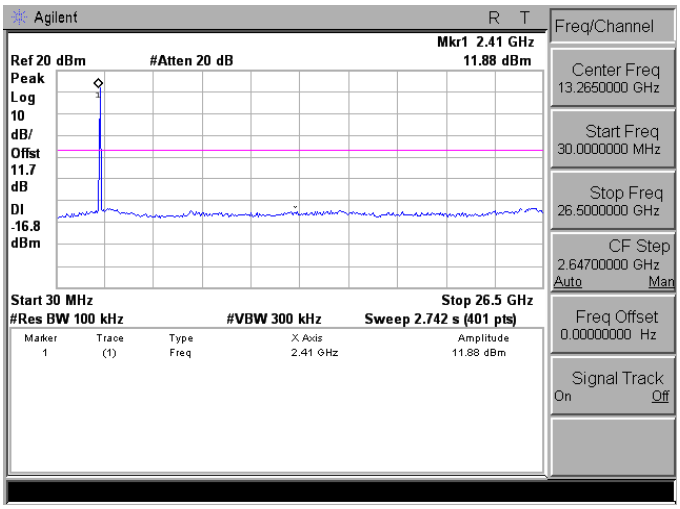
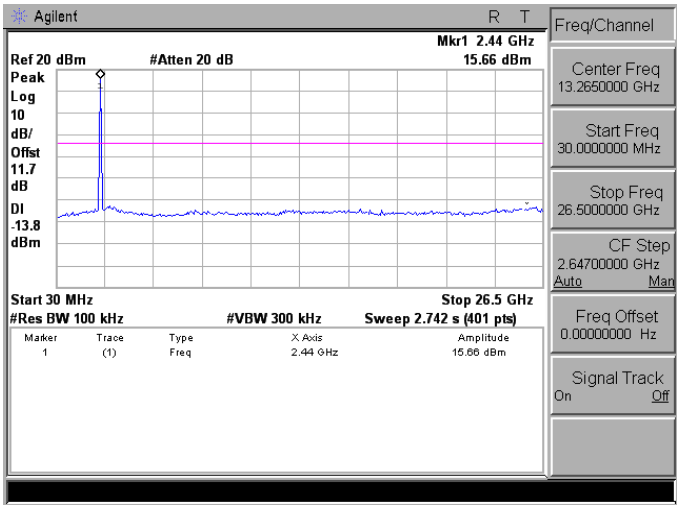
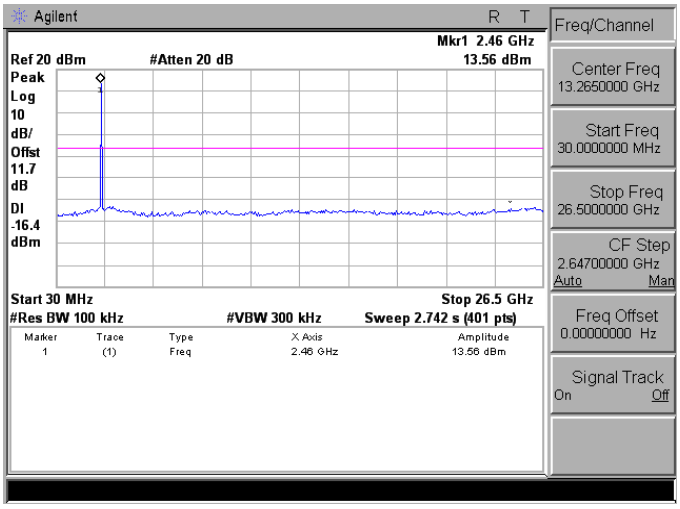
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT0	
5775	

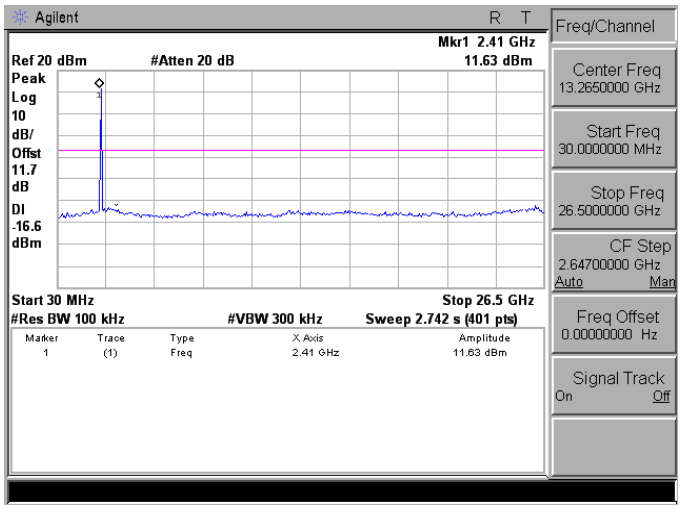
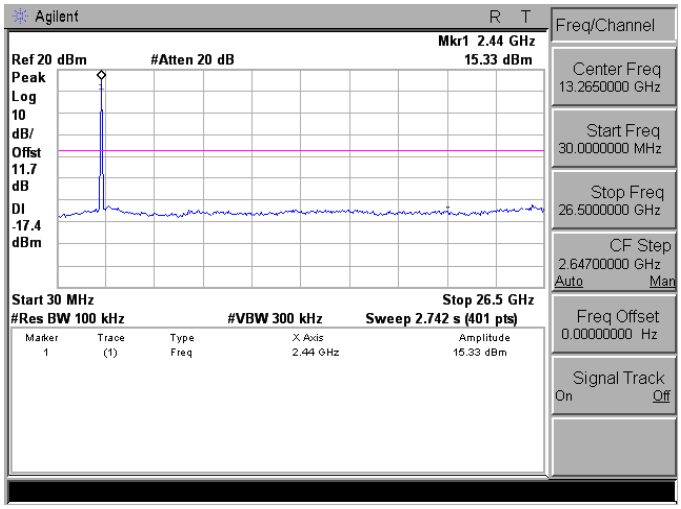
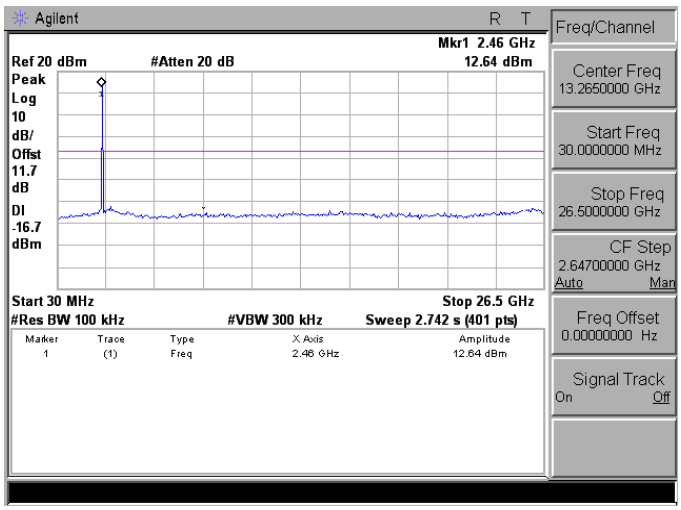
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT1	
5775	

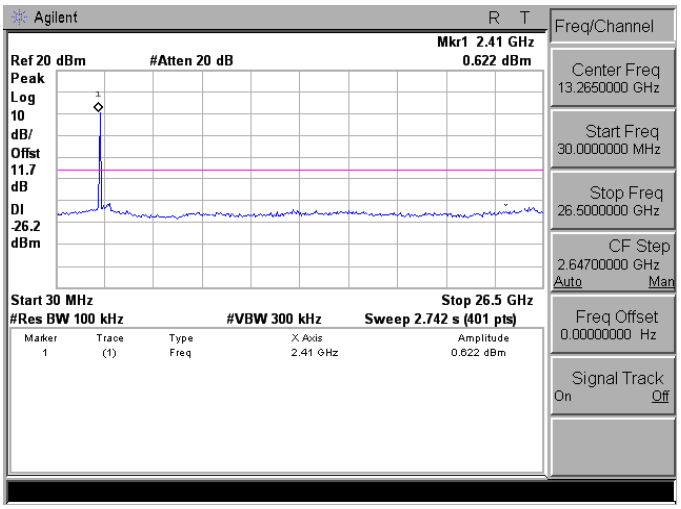
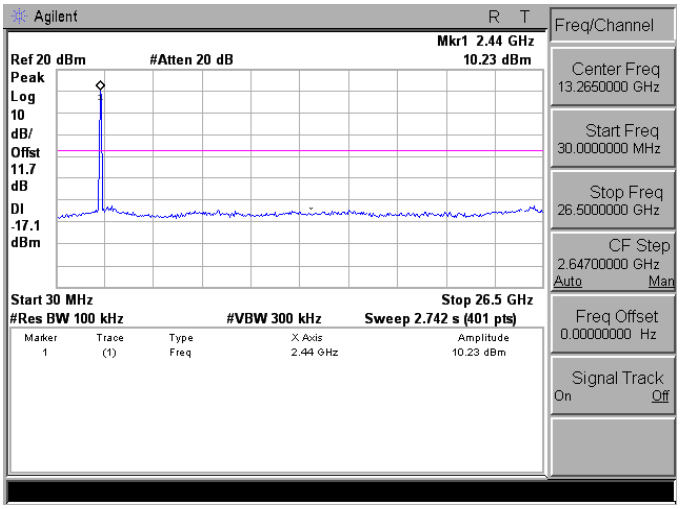
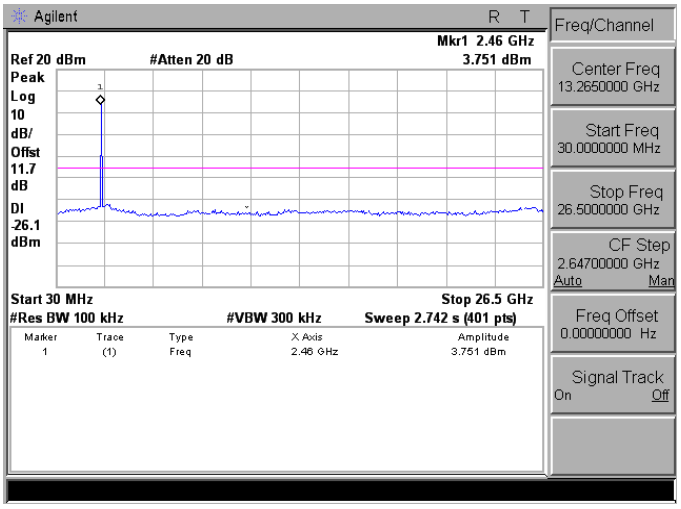
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT2	
5775	

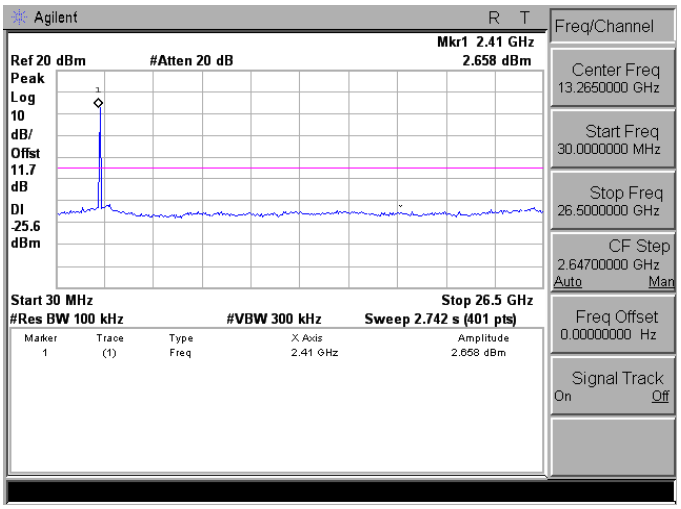
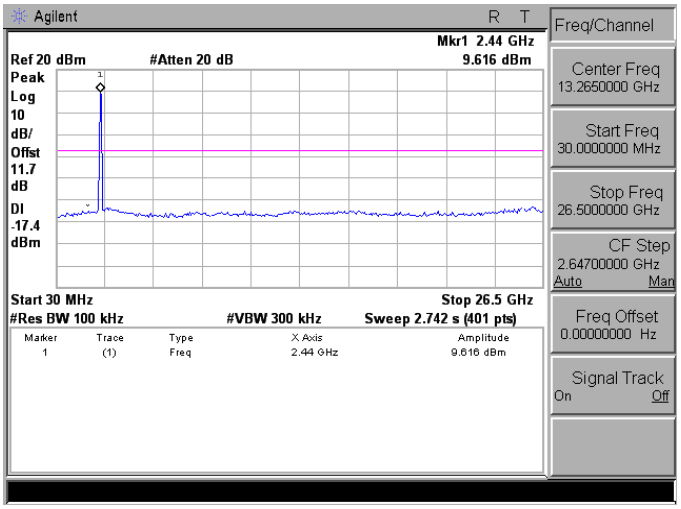
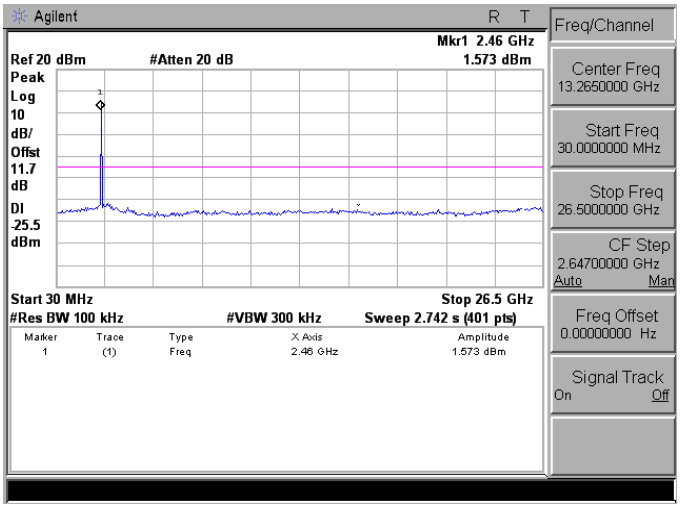
Out of Band Conducted Emissions

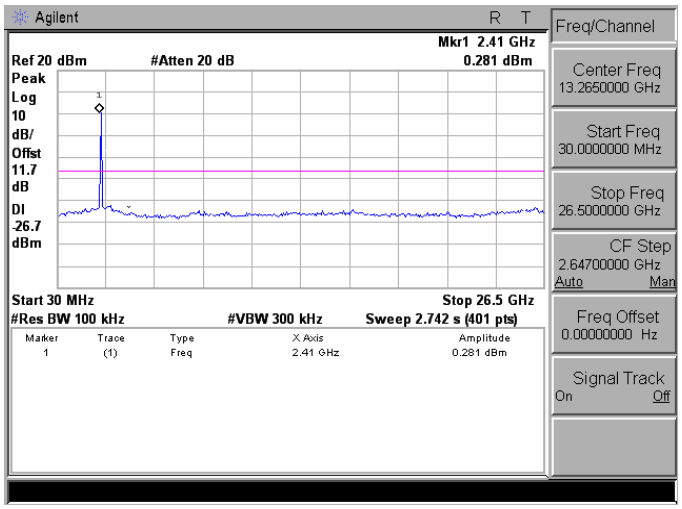
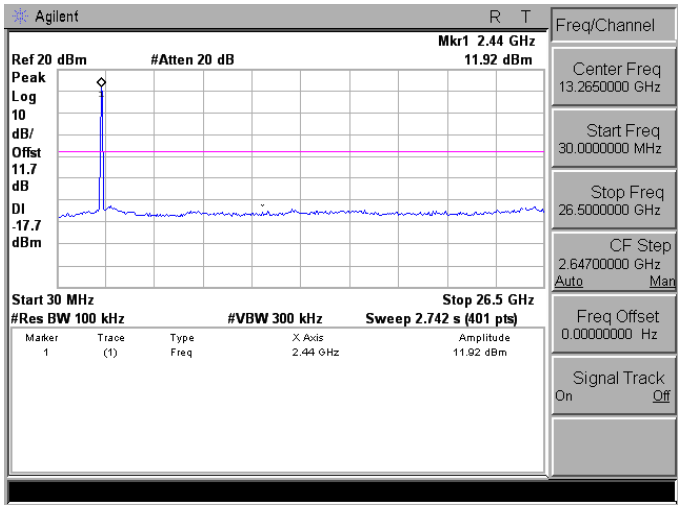
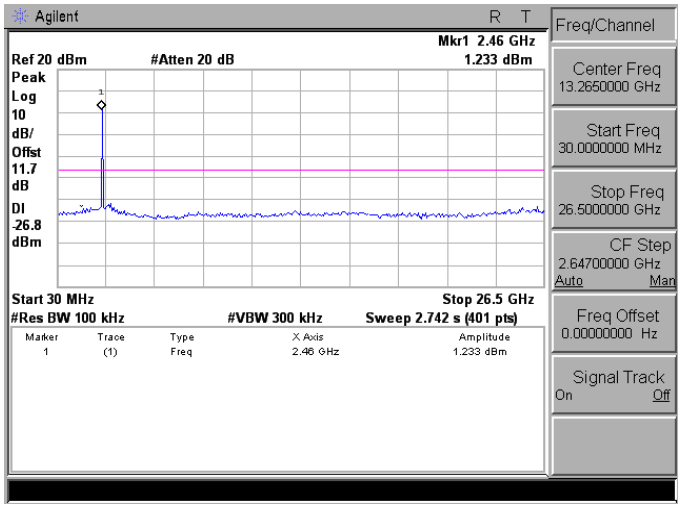
Mode 2: IEEE 802.11b Link Mode_ANT-0	
2412	
2437	
2462	

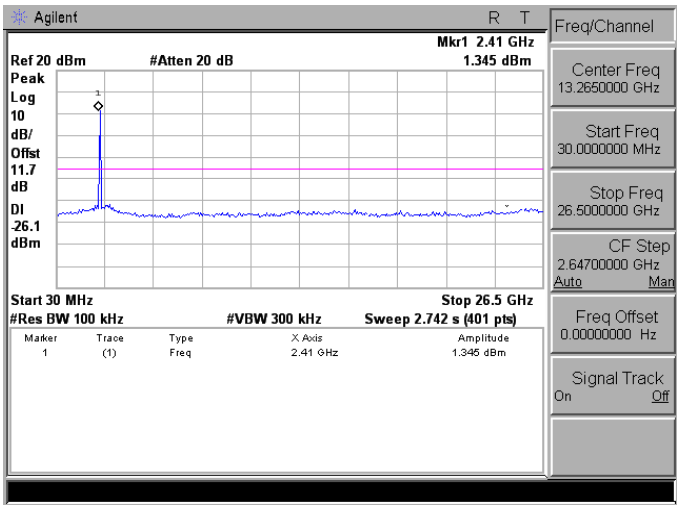
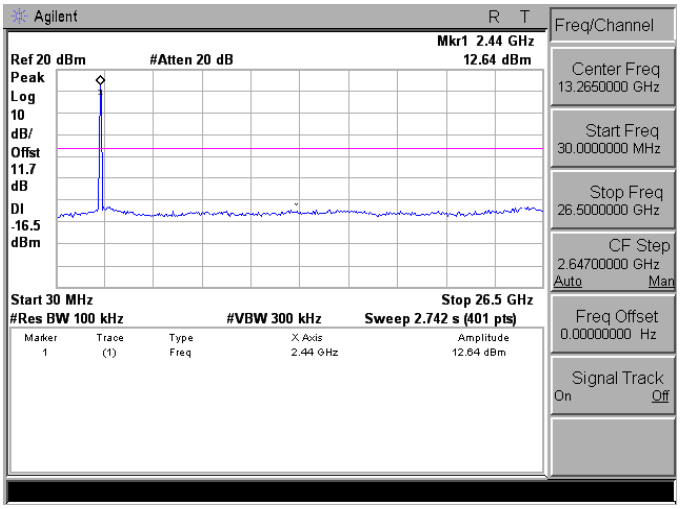
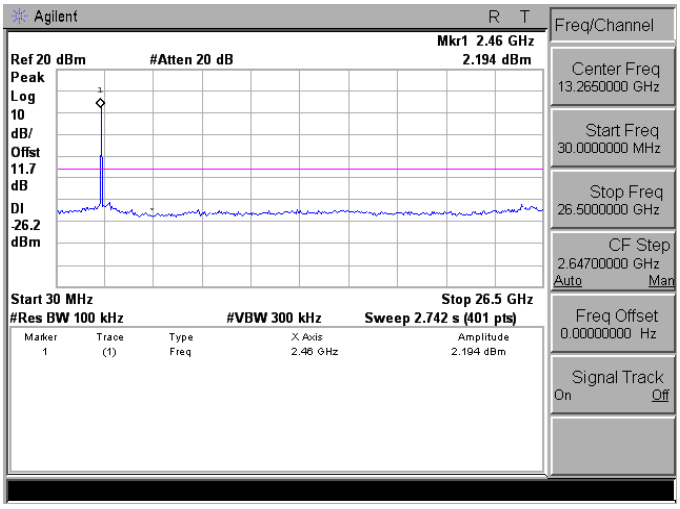
Mode 2: IEEE 802.11b Link Mode_ANT-1	
2412	
2437	
2462	

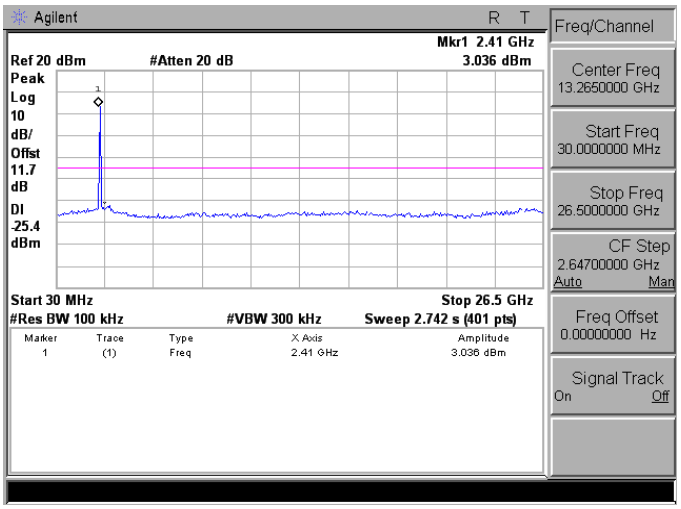
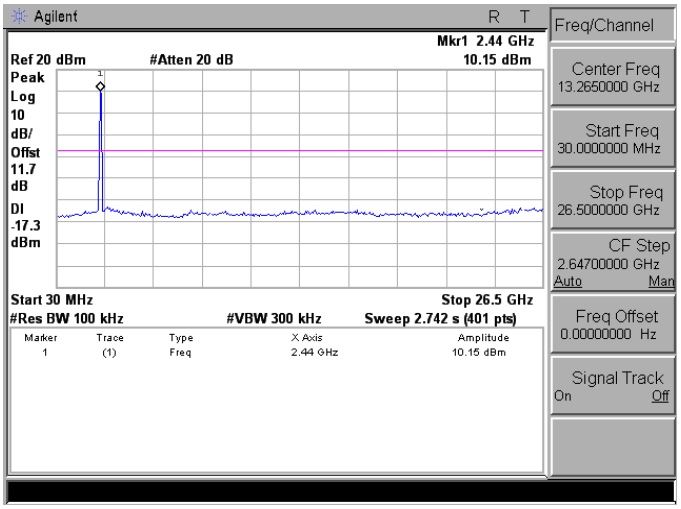
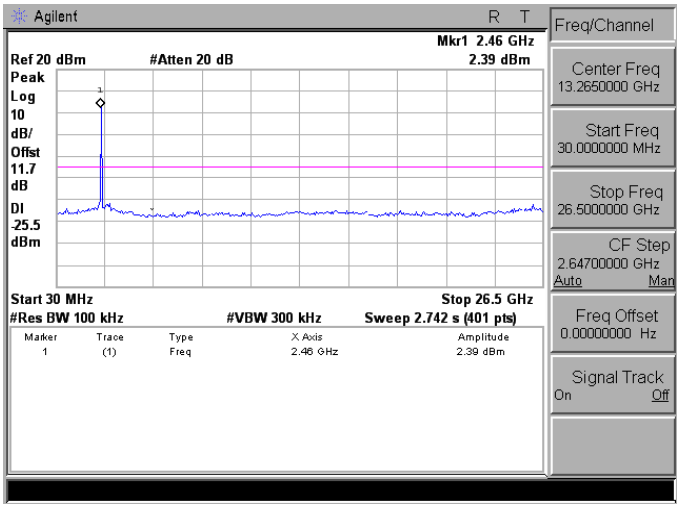
Mode 2: IEEE 802.11b Link Mode_ANT-2	
2412	
2437	
2462	

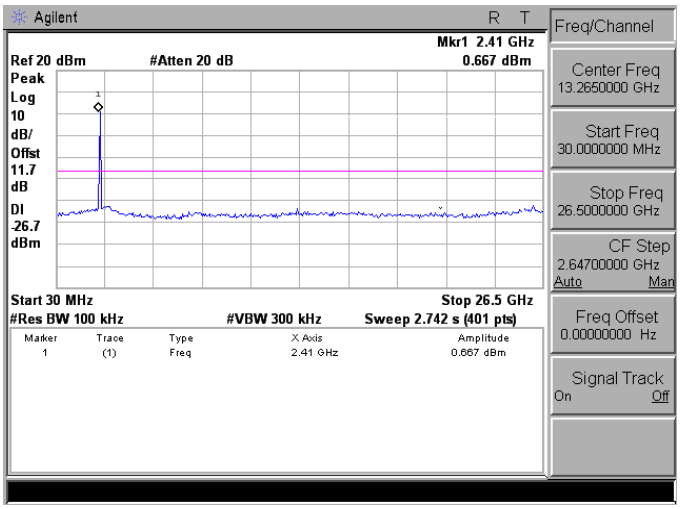
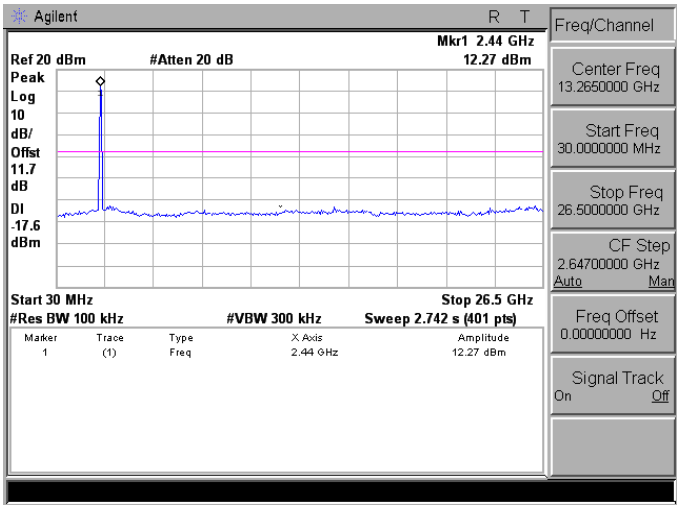
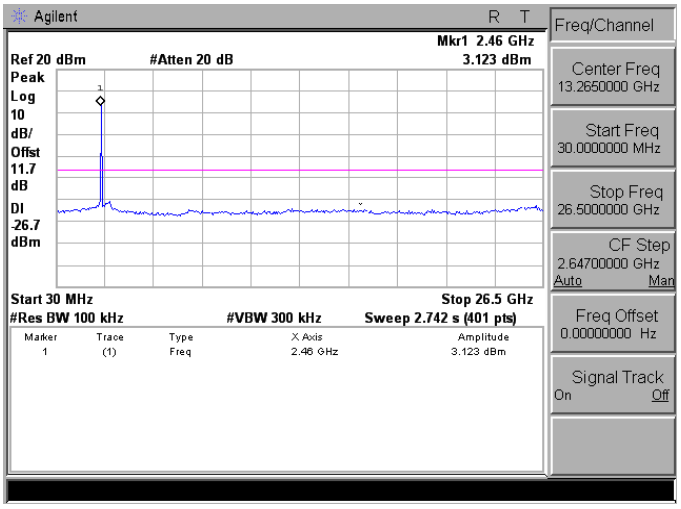
Mode 3: IEEE 802.11g Link Mode_ANT-0	
2412	
2437	
2462	

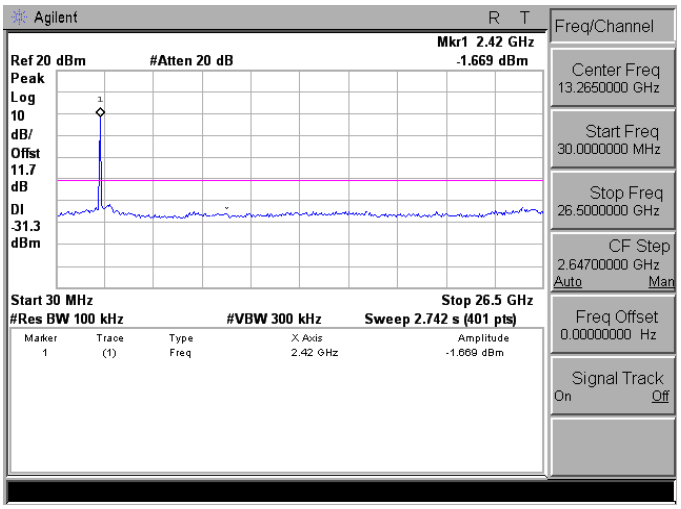
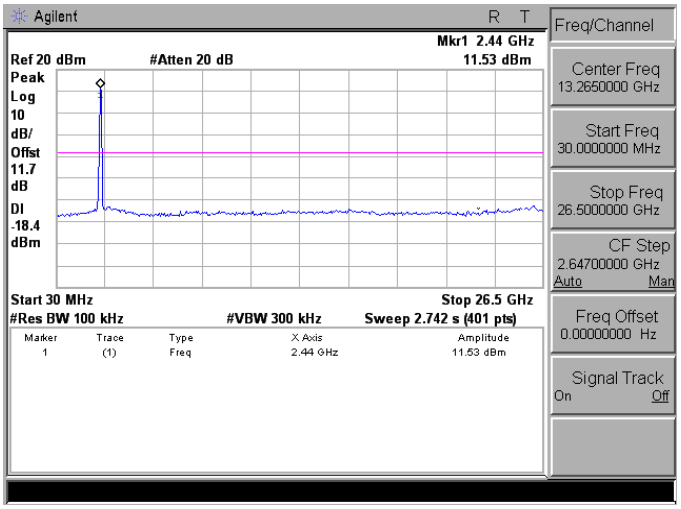
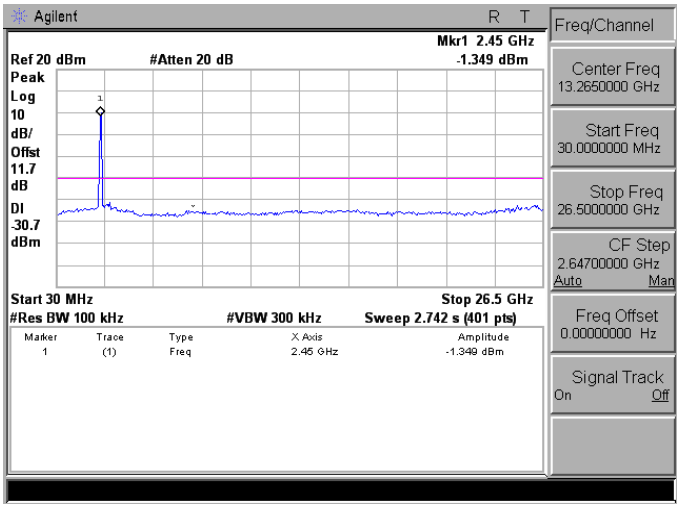
Mode 3: IEEE 802.11g Link Mode_ANT-1	
2412	
2437	
2462	

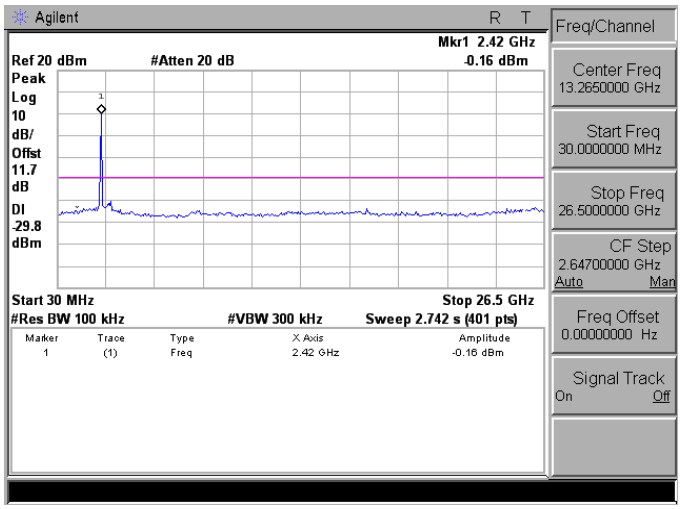
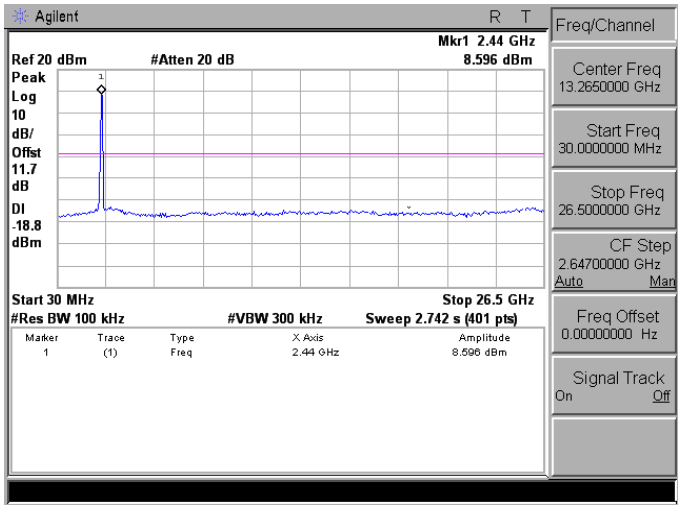
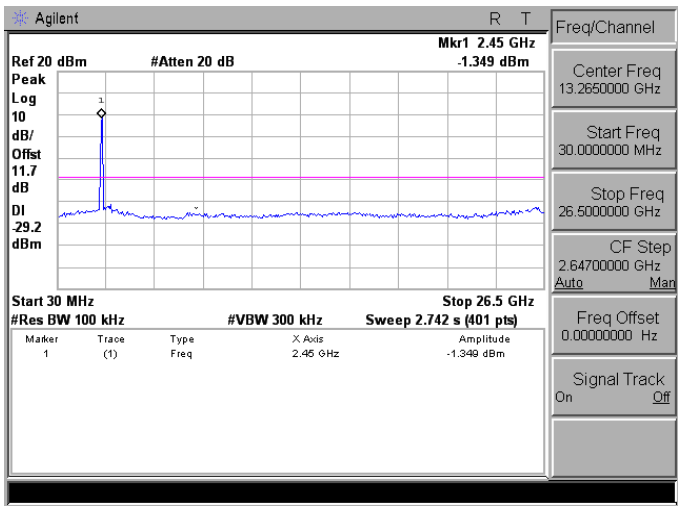
Mode 3: IEEE 802.11g Link Mode_ANT-2	
2412	
2437	
2462	

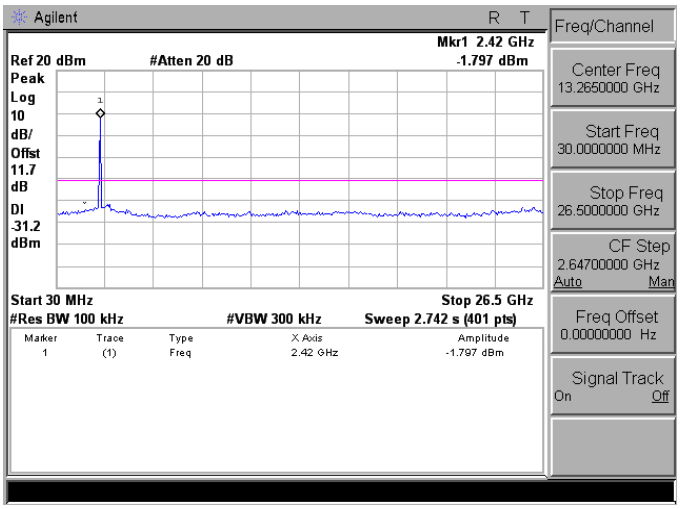
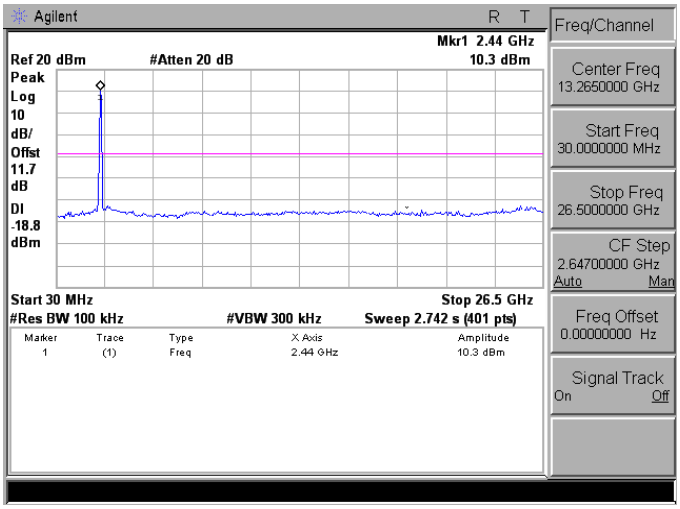
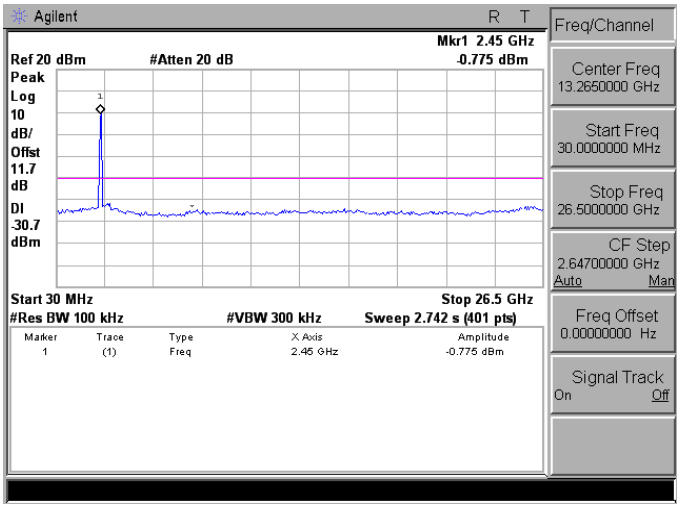
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT0	
2412	
2437	
2462	

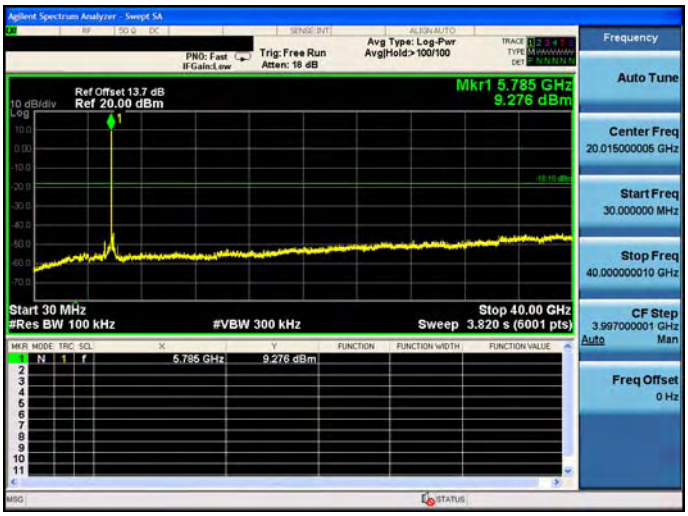
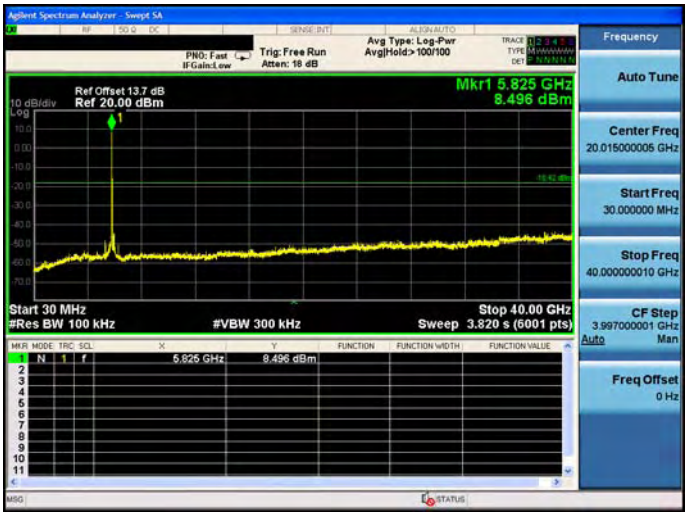
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT1	
2412	
2437	
2462	

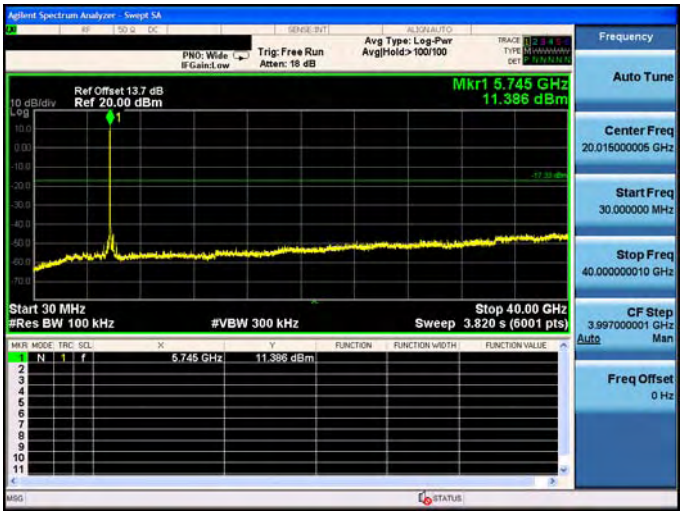
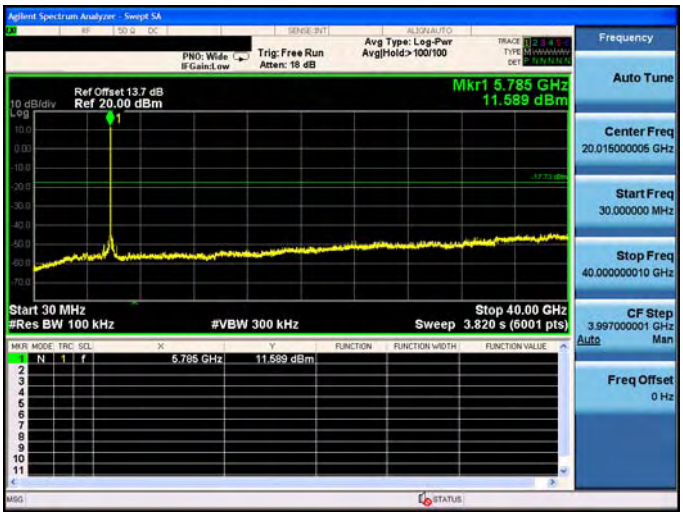
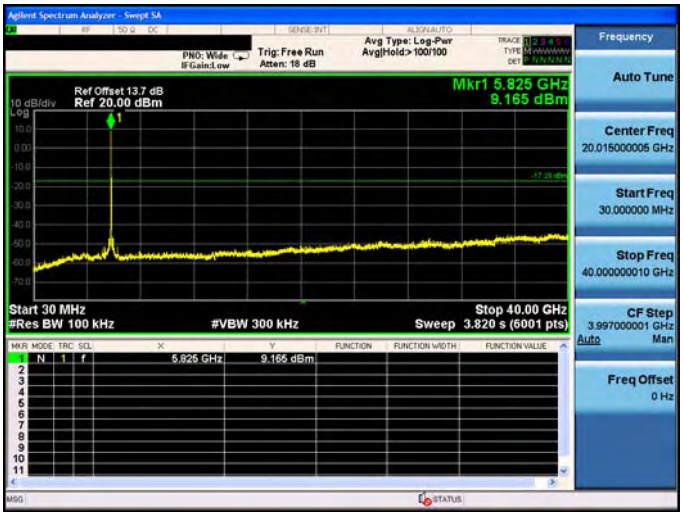
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT2	
2412	
2437	
2462	

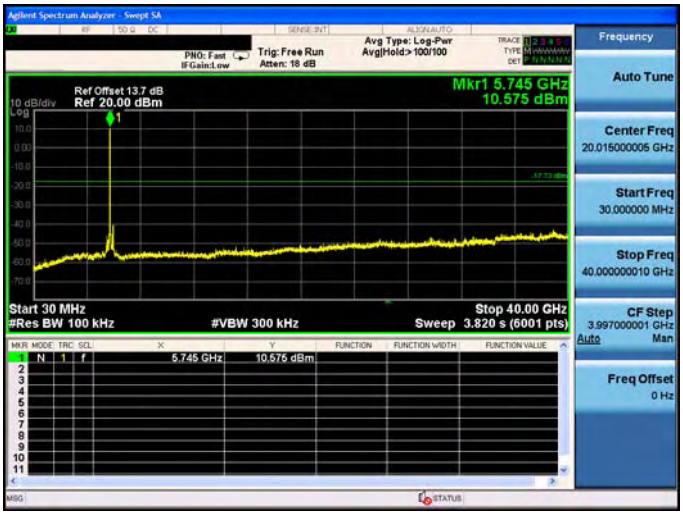
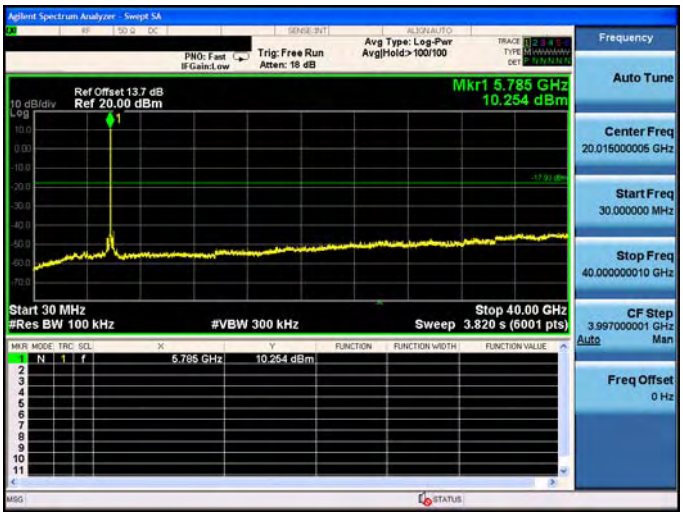
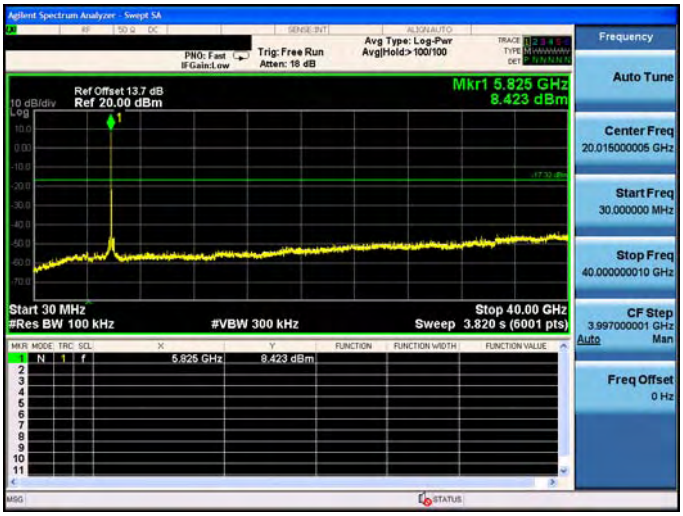
Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT0	
2422	
2437	
2452	

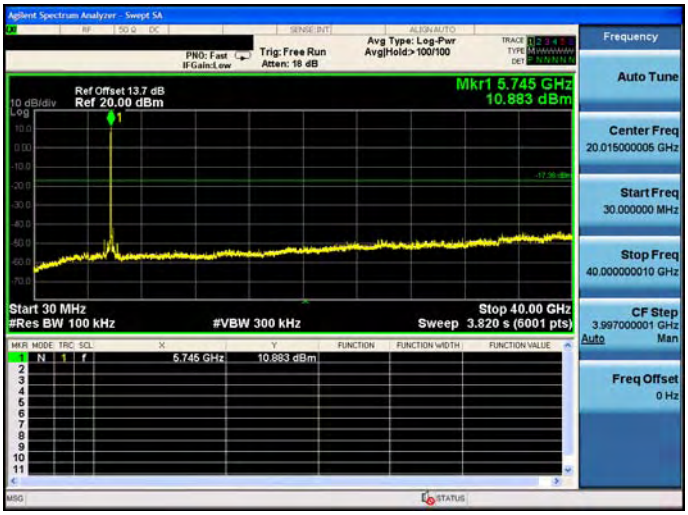
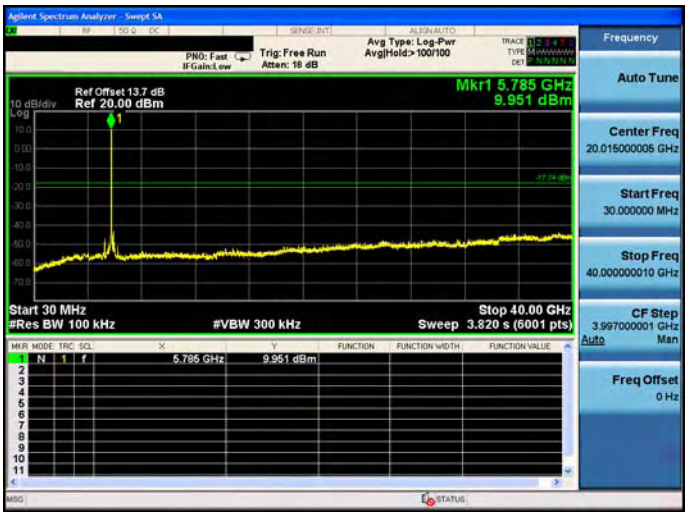
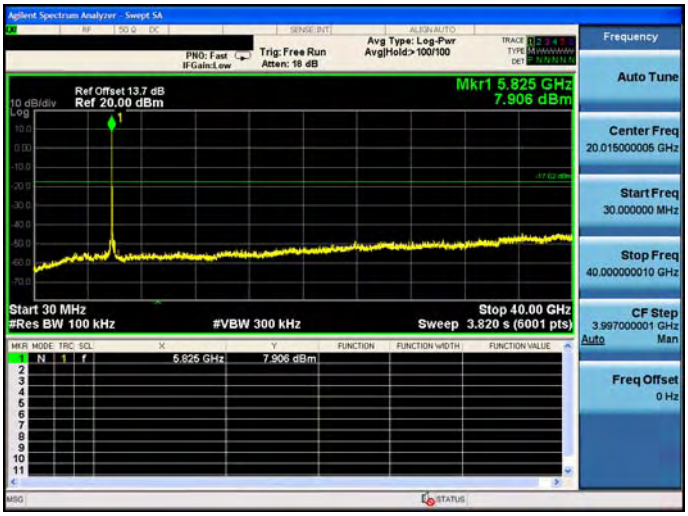
Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT1	
2422	
2437	
2452	

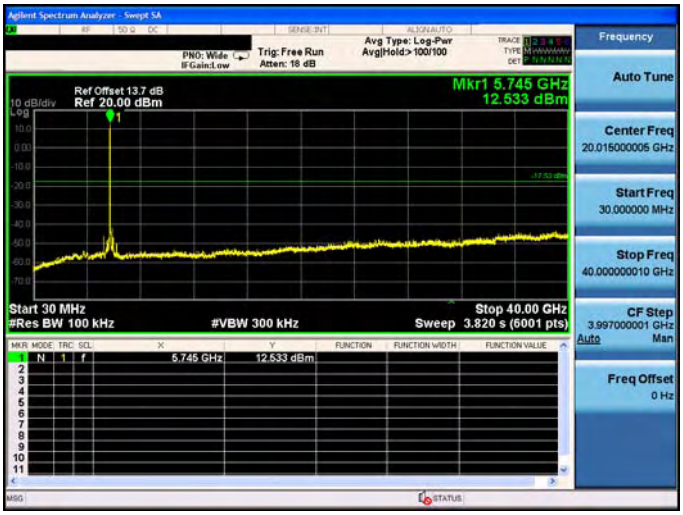
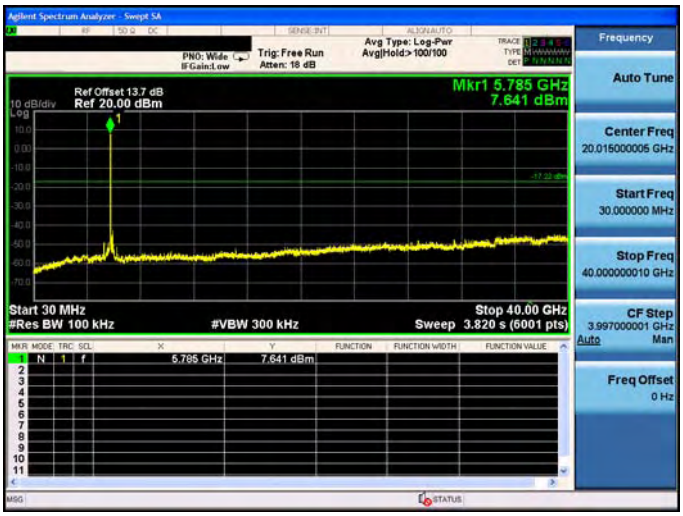
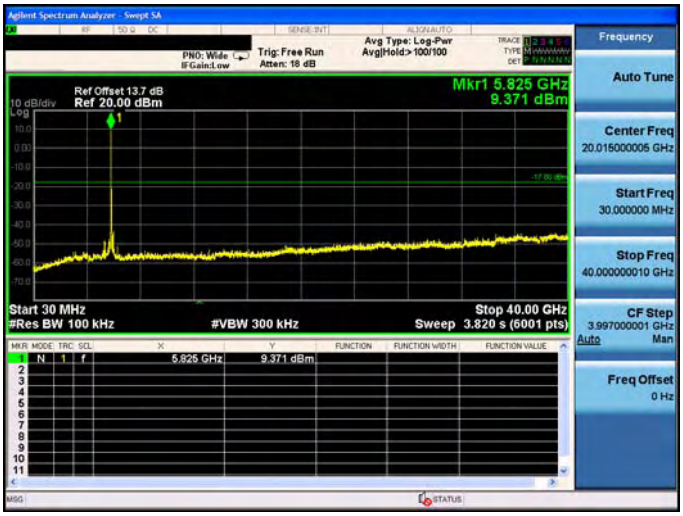
Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT2	
2422	
2437	
2452	

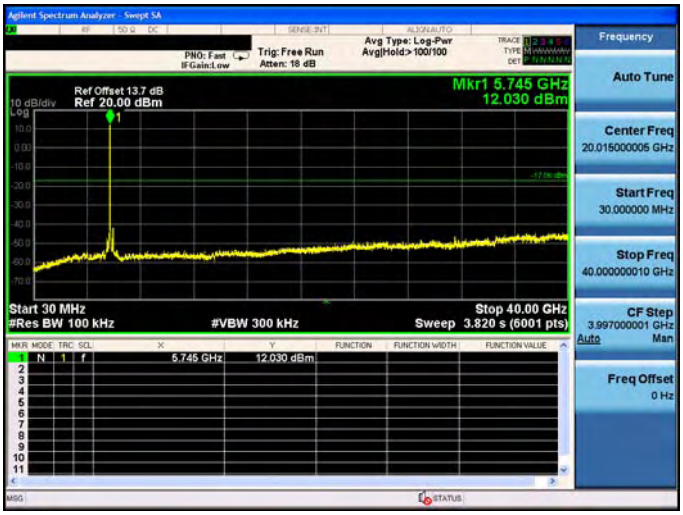
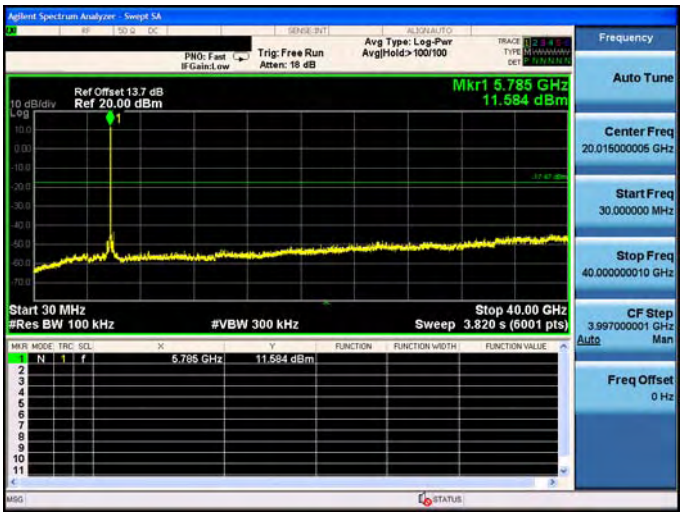
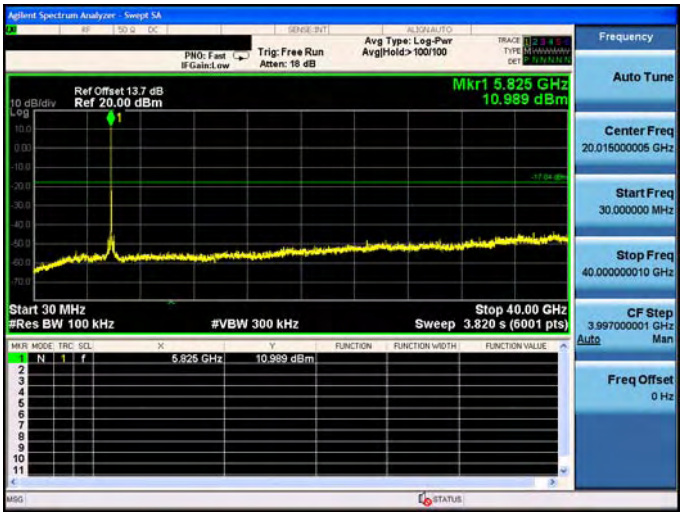
Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-0	
5745	
5785	
5825	

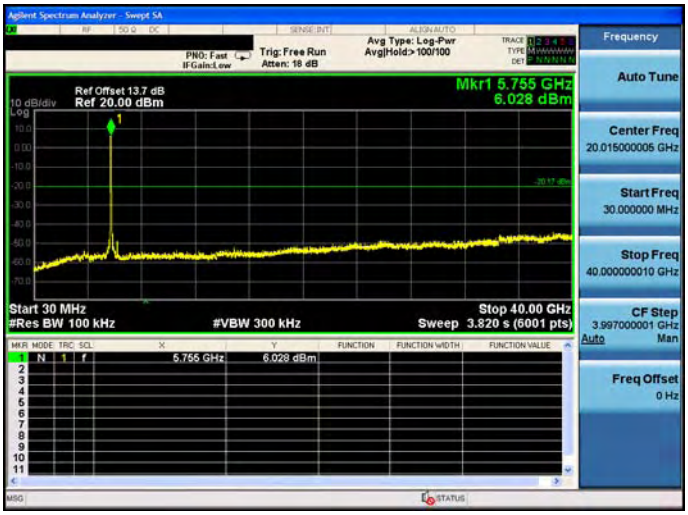
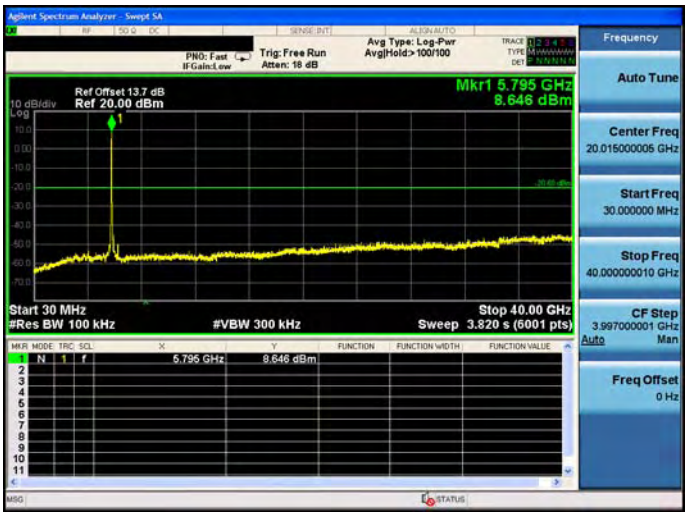
Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-1	
5745	
5785	
5825	

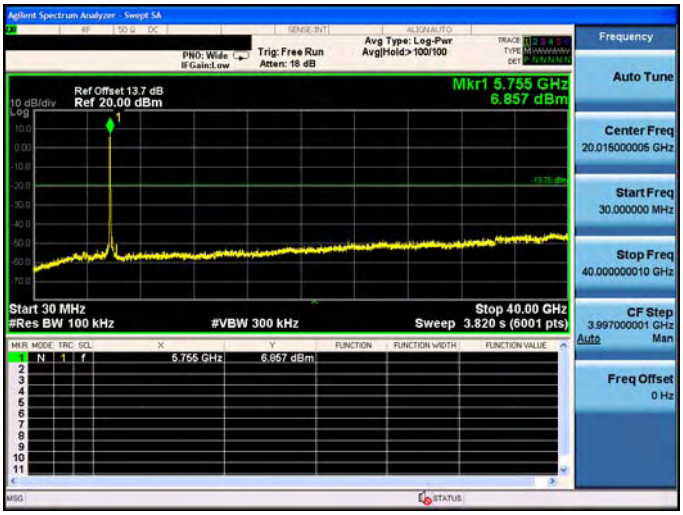
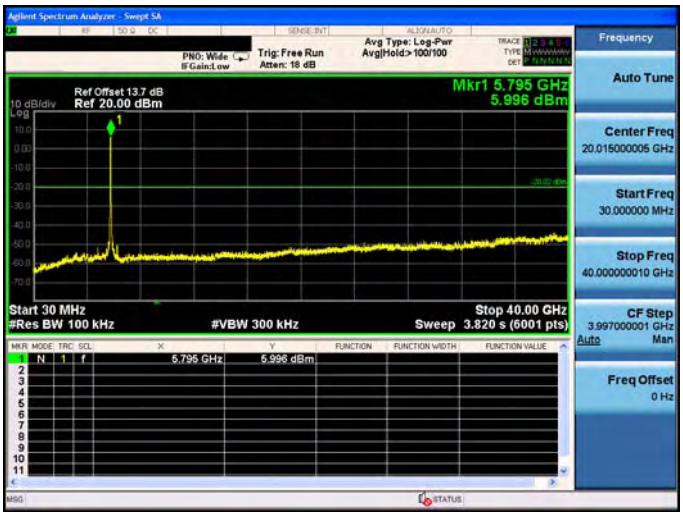
Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-2	
5745	
5785	
5825	

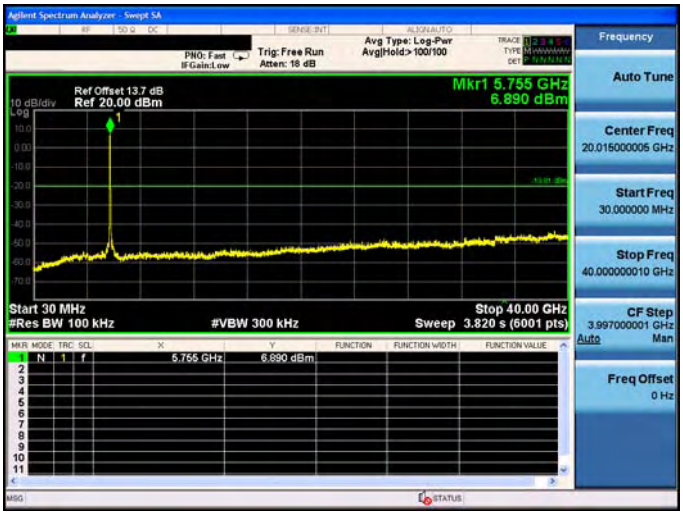
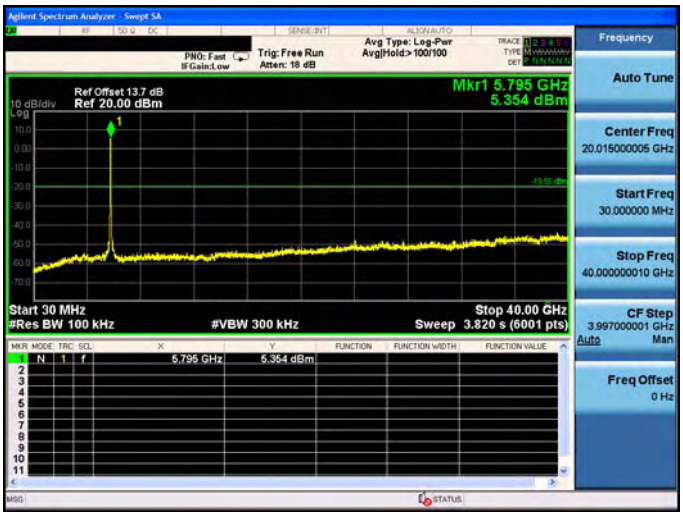
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT0	
5745	
5785	
5825	

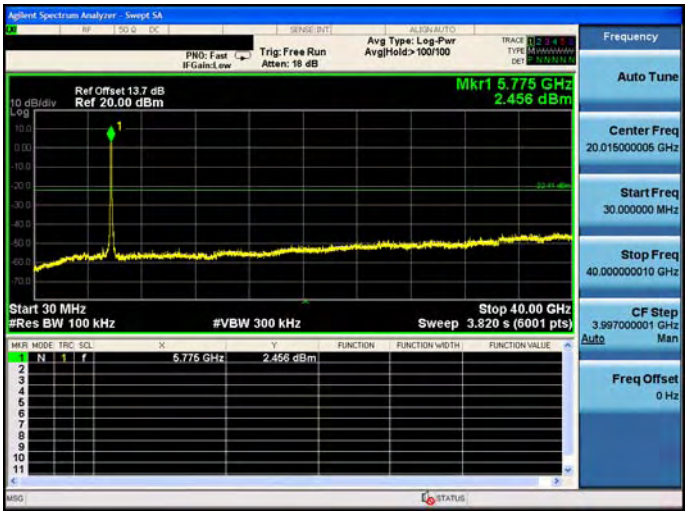
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT1	
5745	
5785	
5825	

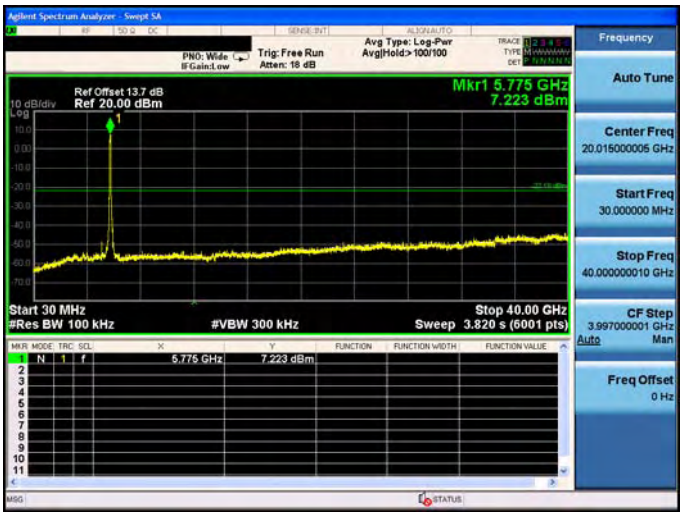
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT2	
5745	
5785	
5825	

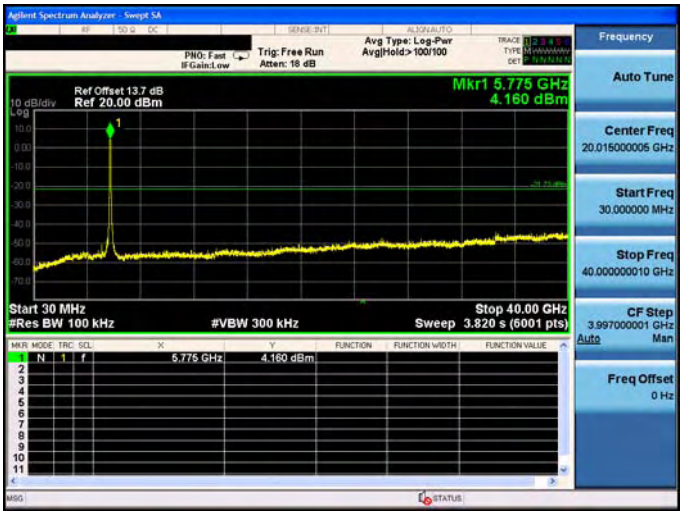
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT0	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT1	
5755	
5795	

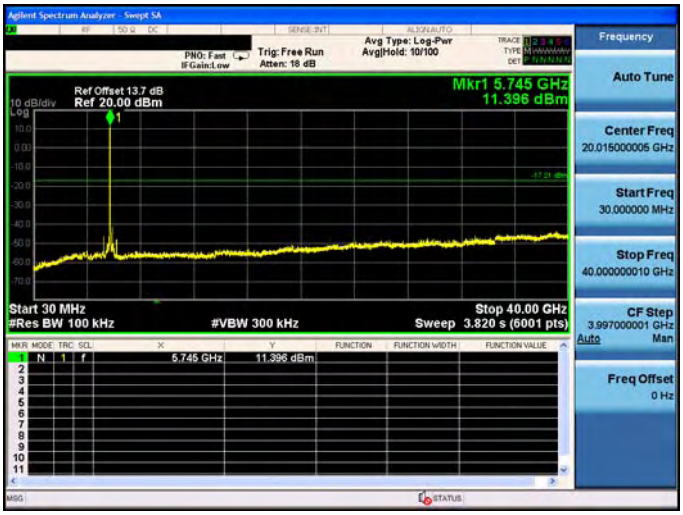
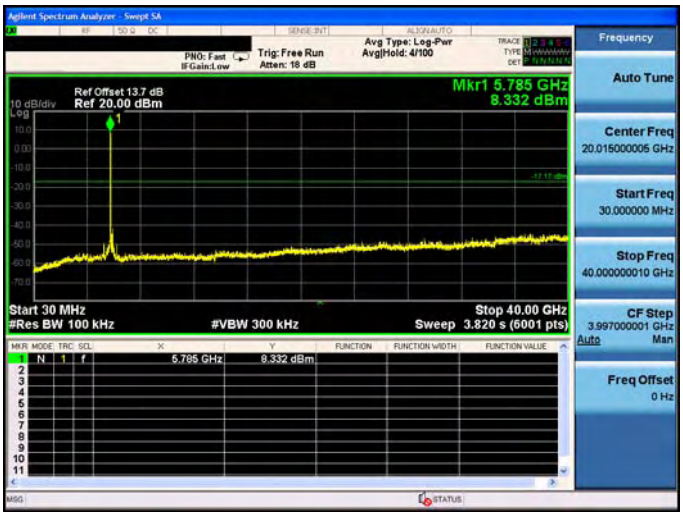
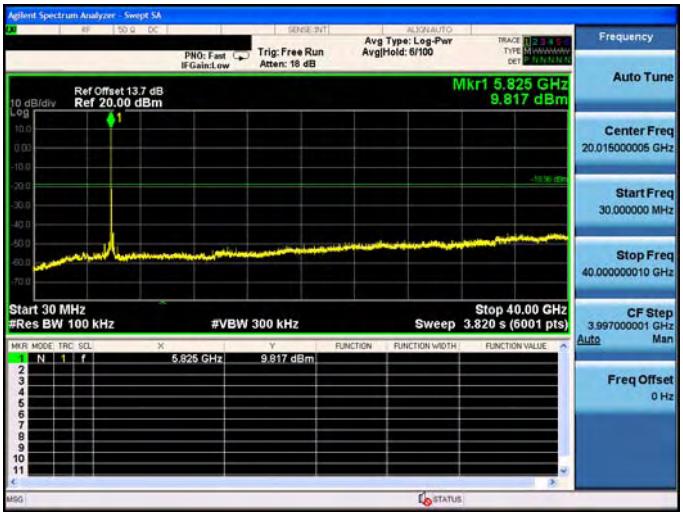
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT2	
5755	
5795	

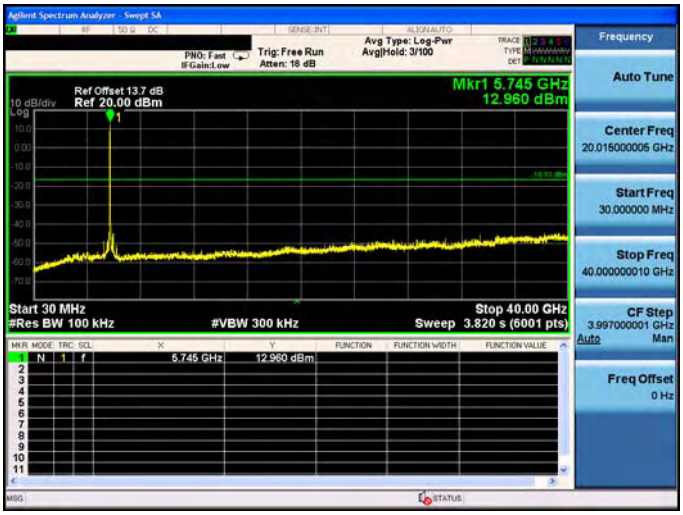
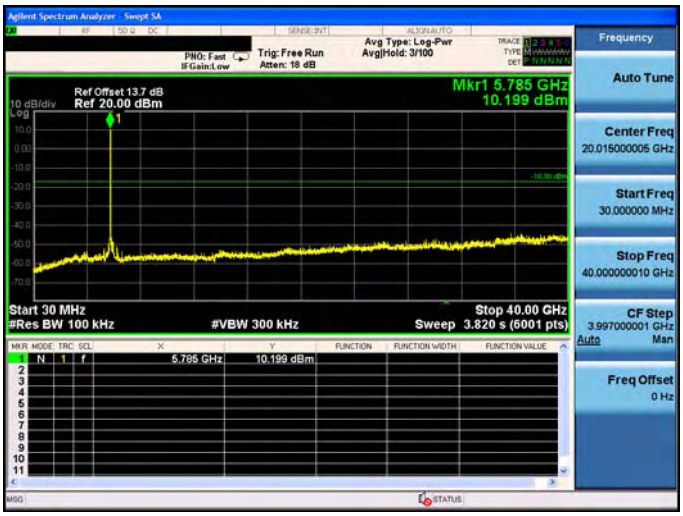
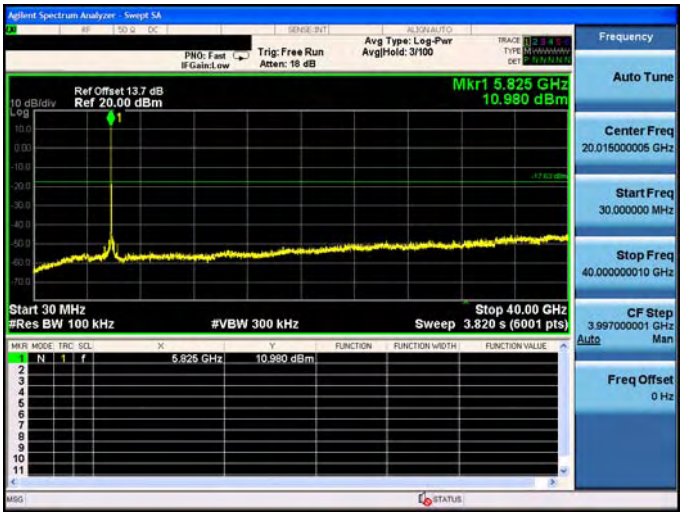
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT0	
5775	

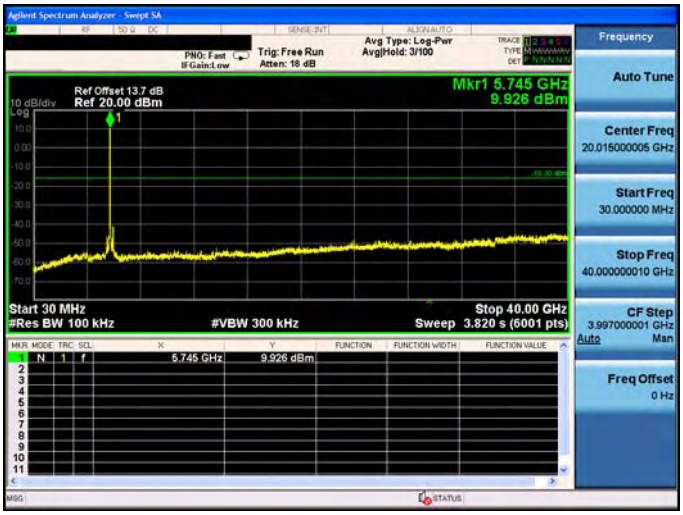
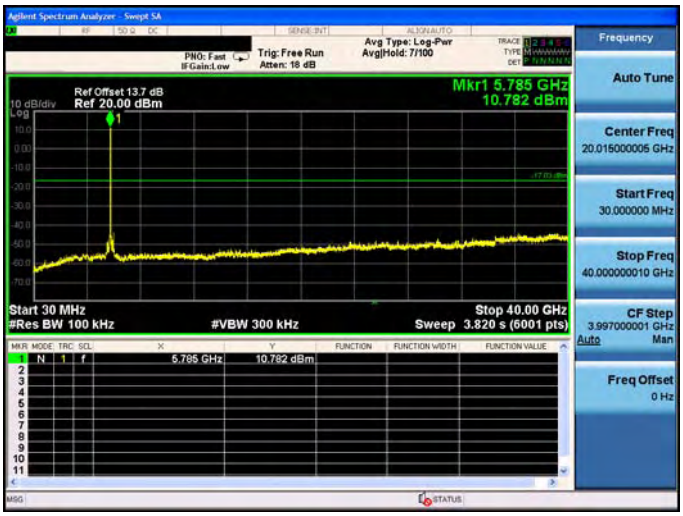
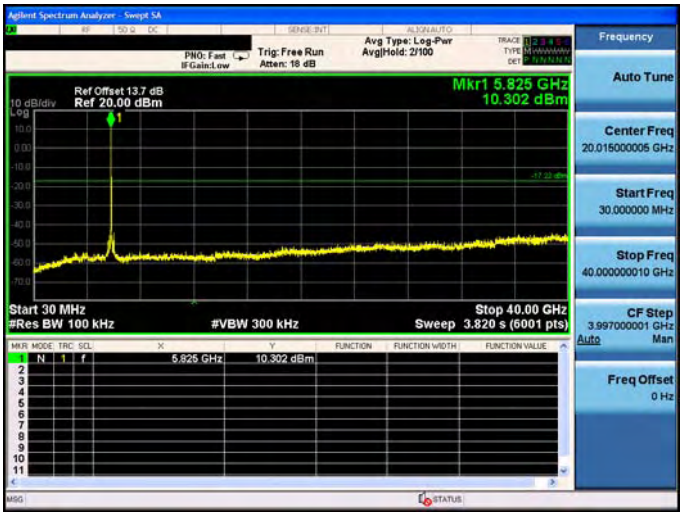
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT1	
5775	

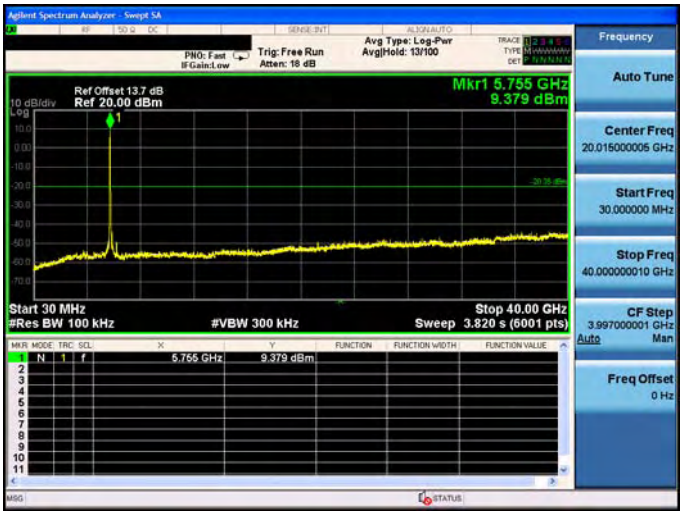
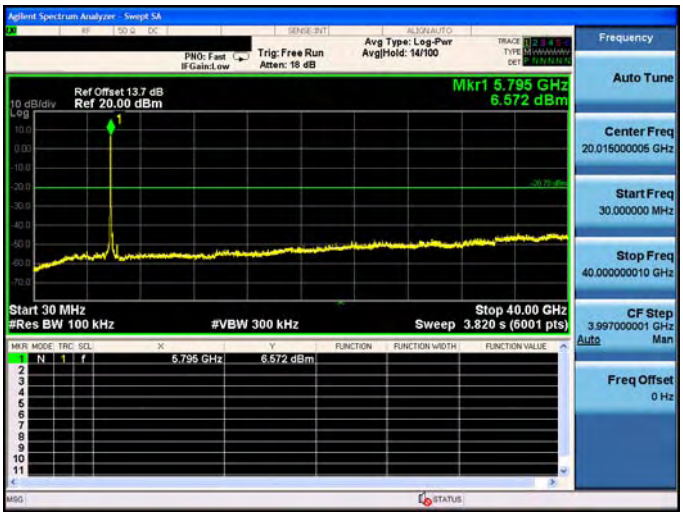
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT2	
5775	

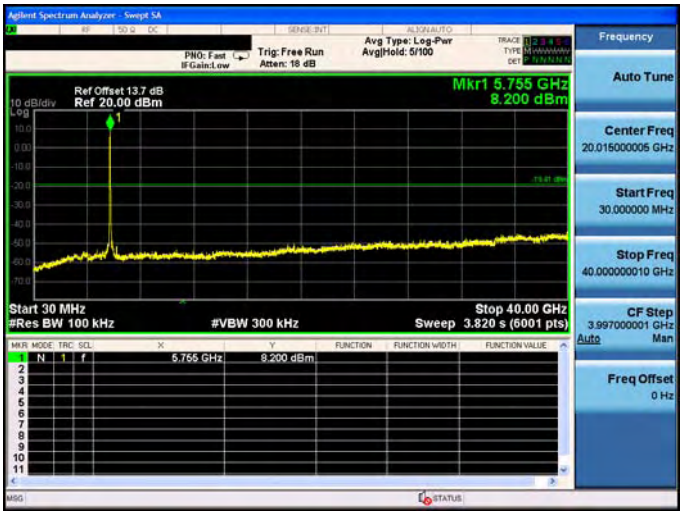
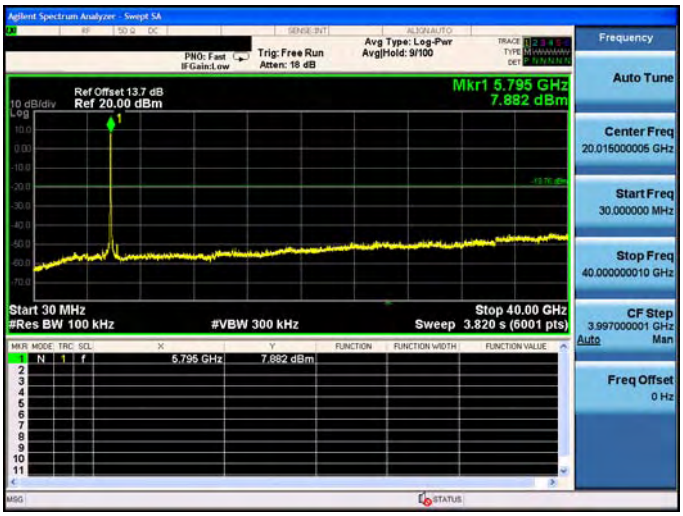
Beamforming on

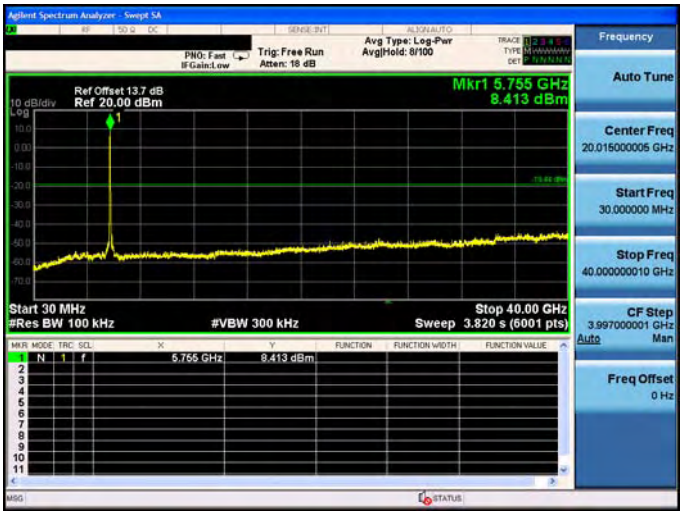
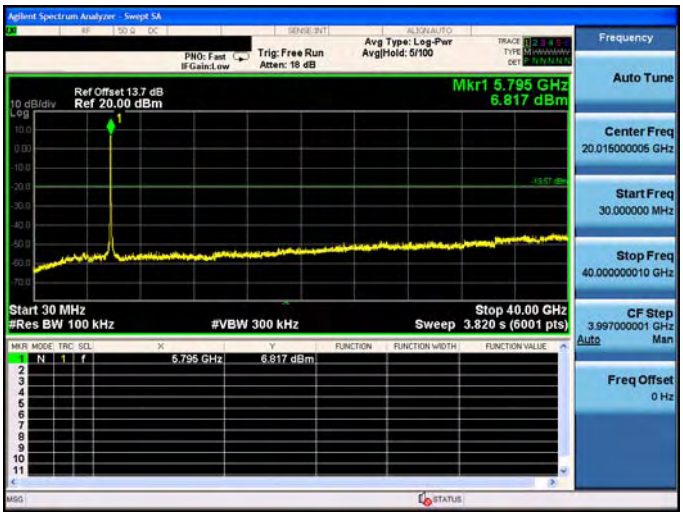
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT0	
5745	
5785	
5825	

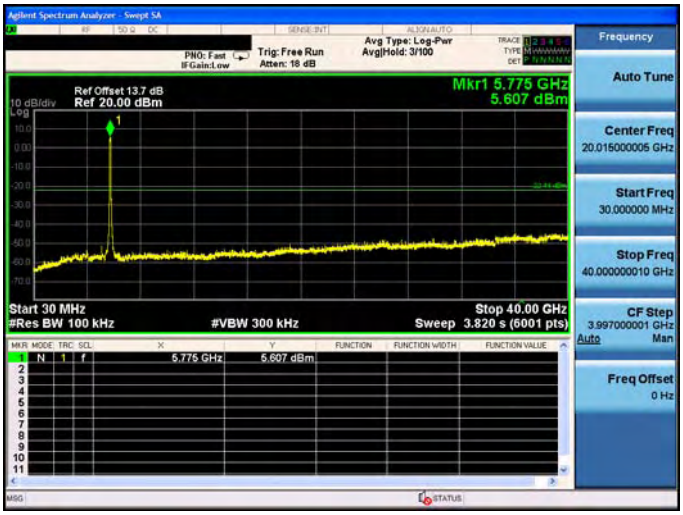
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT1	
5745	
5785	
5825	

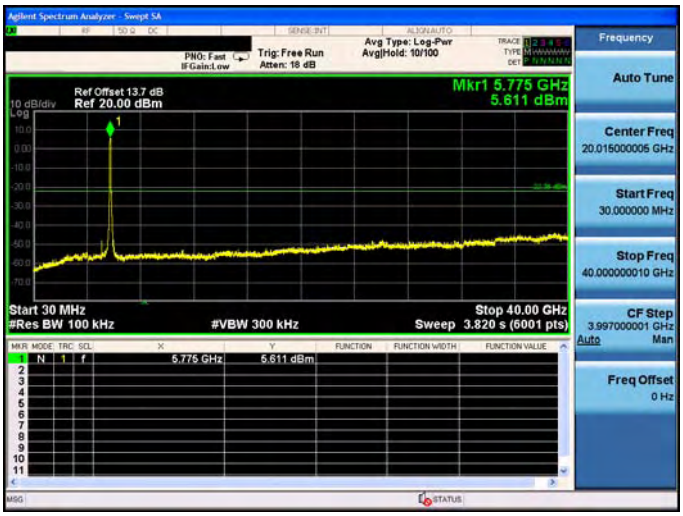
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT2	
5745	
5785	
5825	

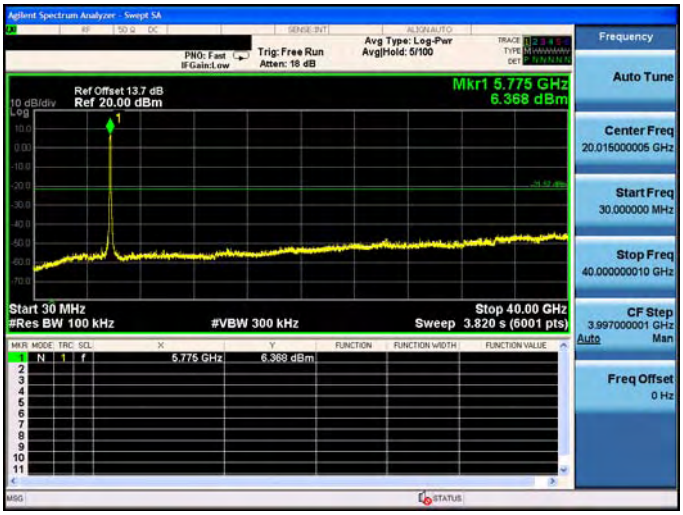
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT0	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT1	
5755	
5795	

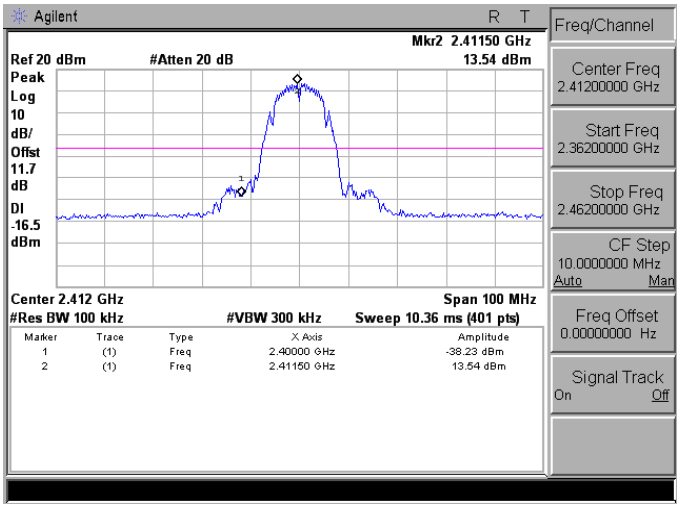
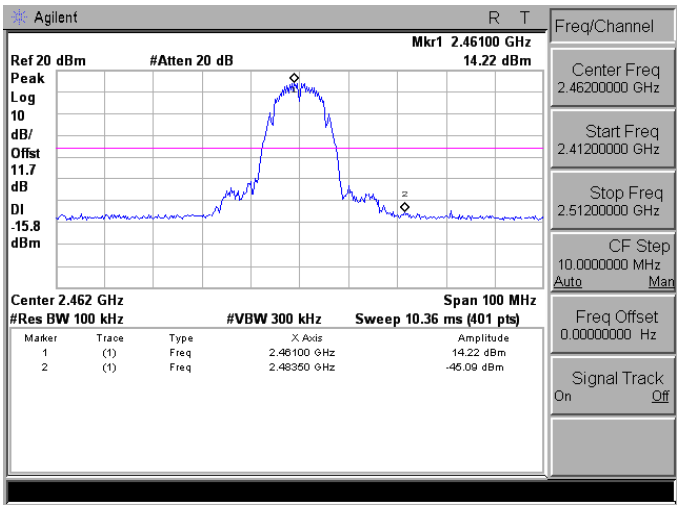
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT2	
5755	
5795	

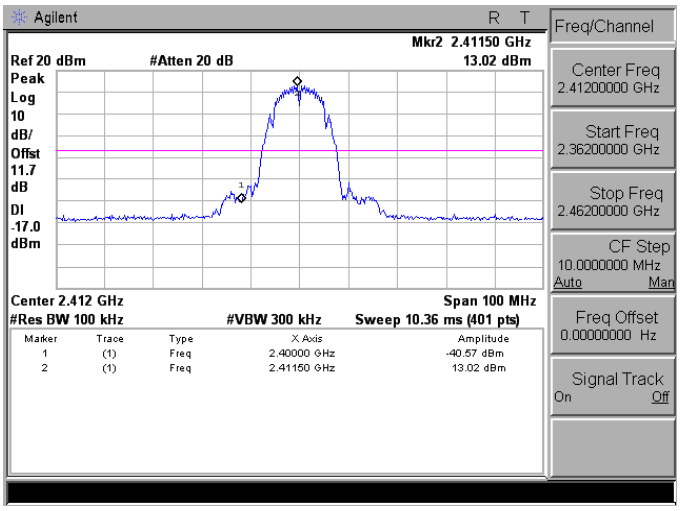
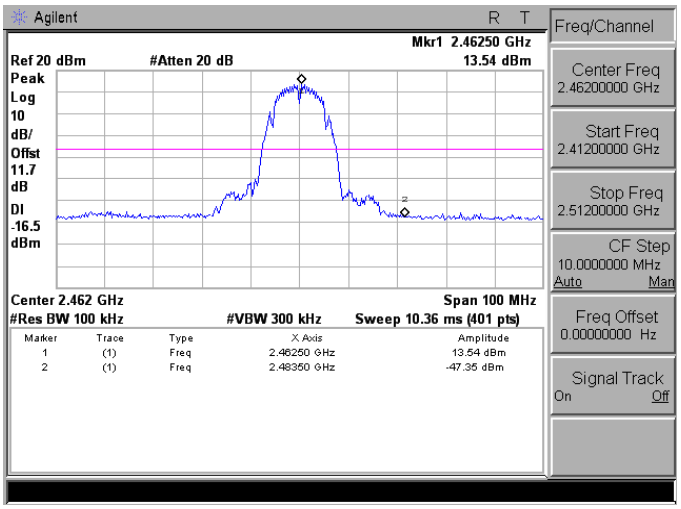
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT0	
5775	

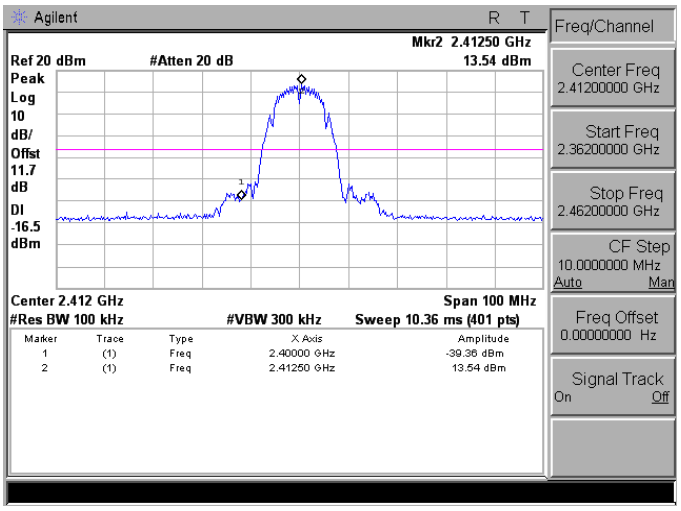
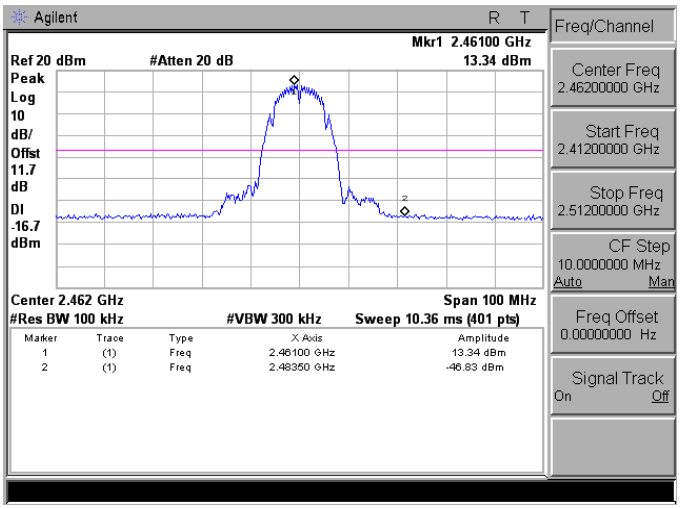
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT1	
5775	

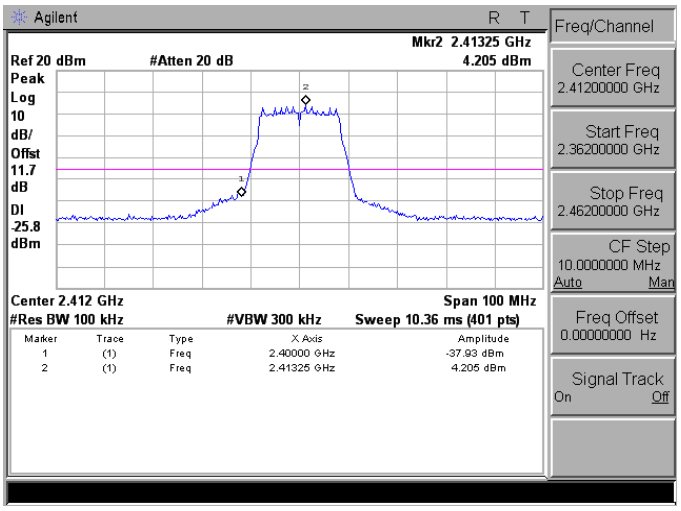
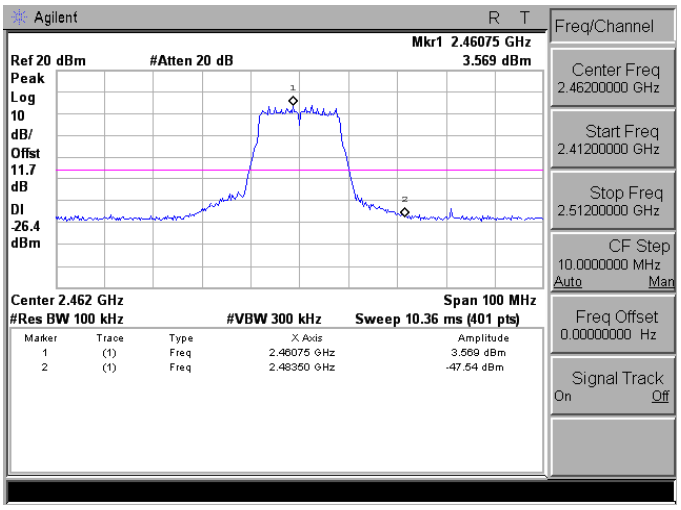
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT2	
5775	

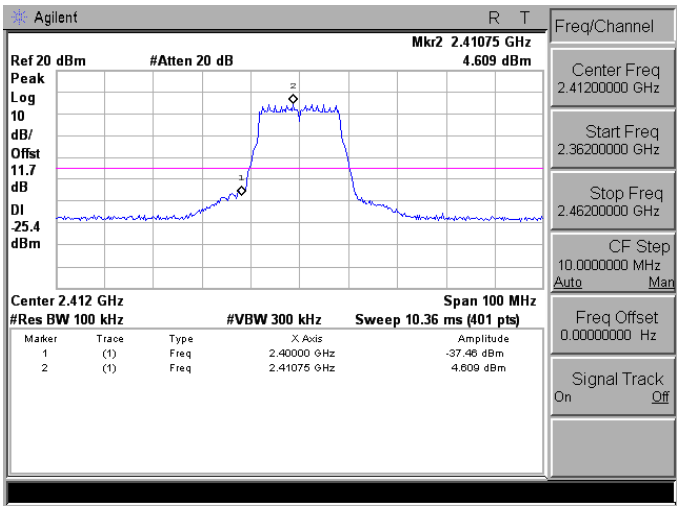
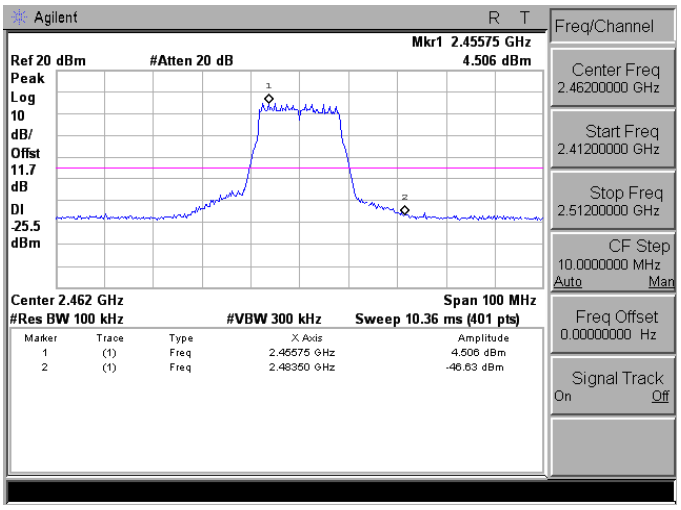
Conducted Band Edge

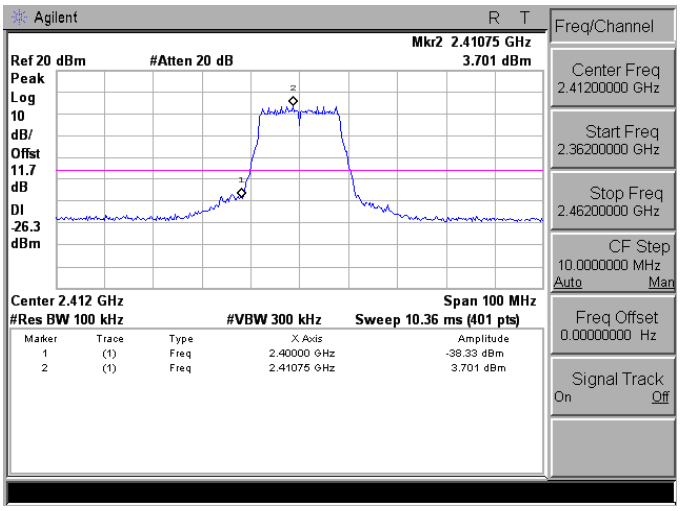
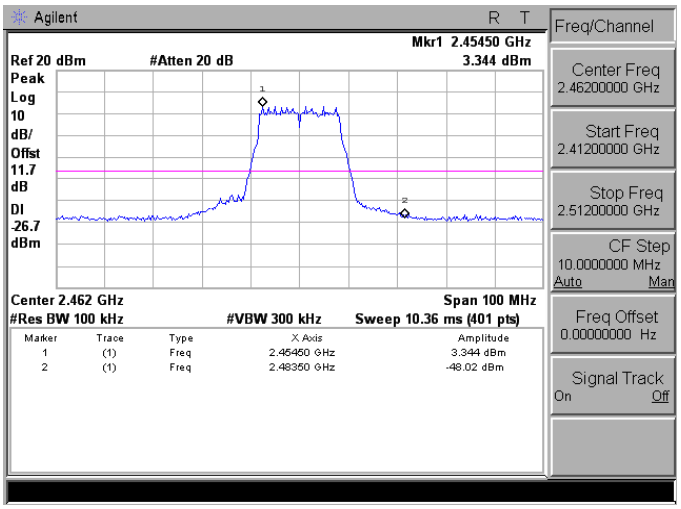
Mode 2: IEEE 802.11b Link Mode_ANT-0	
2412	
2462	

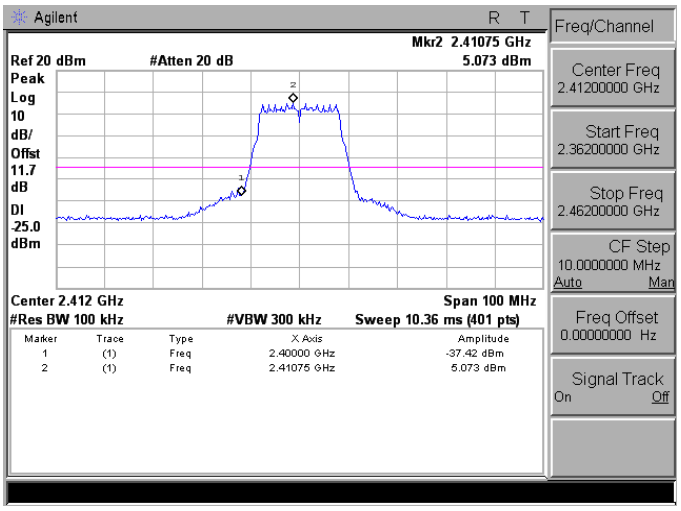
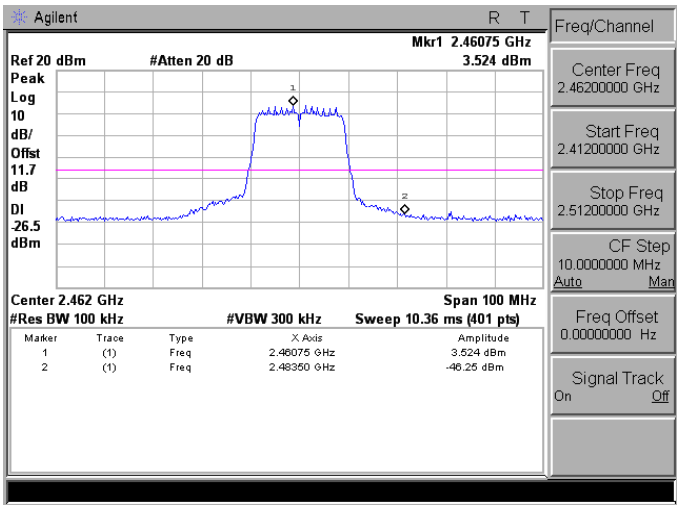
Mode 2: IEEE 802.11b Link Mode_ANT-1	
2412	
2462	

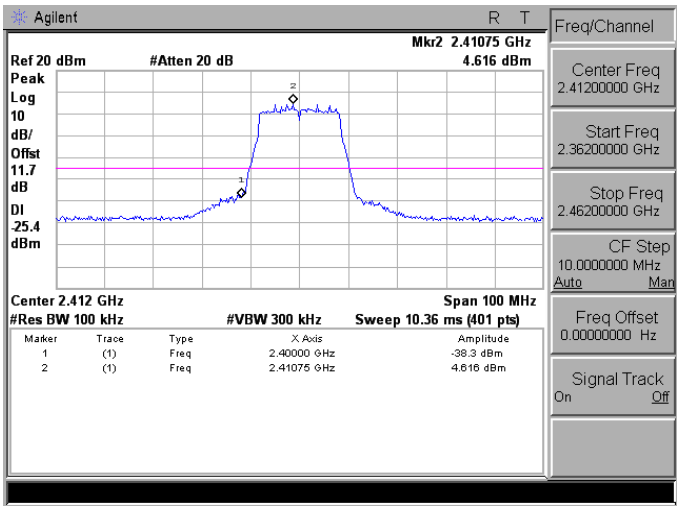
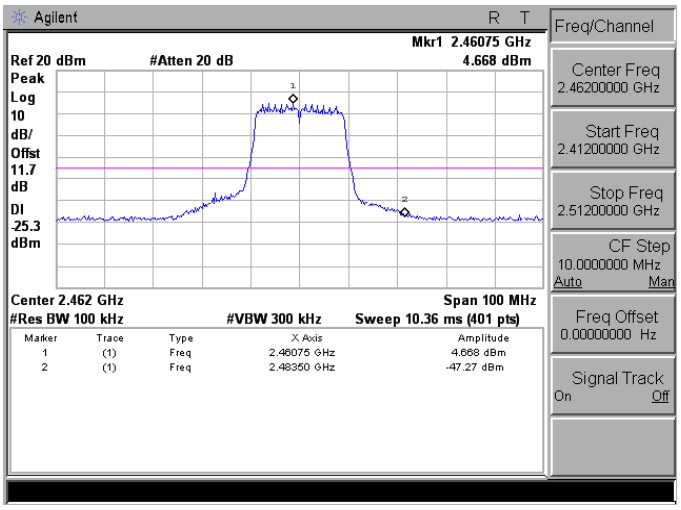
Mode 2: IEEE 802.11b Link Mode_ANT-2	
2412	
2462	

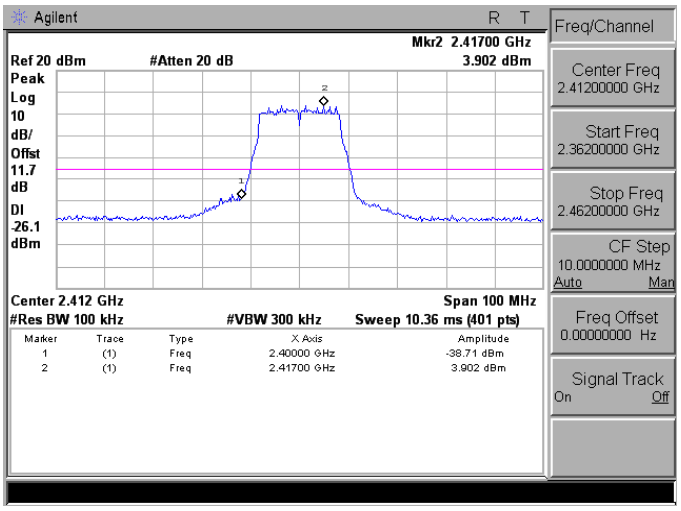
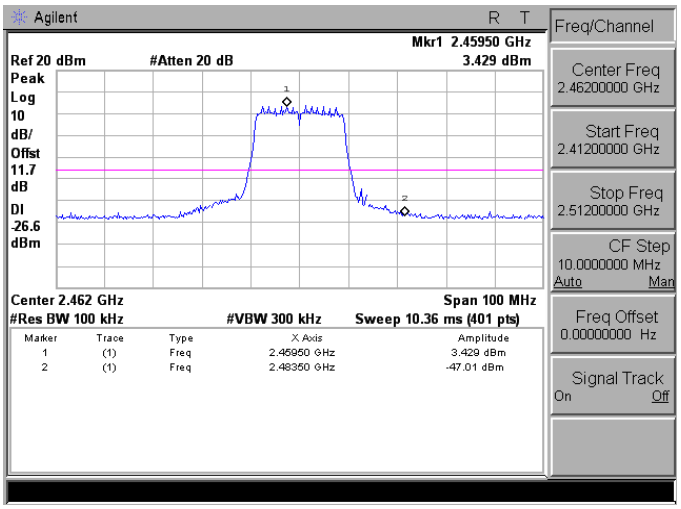
Mode 3: IEEE 802.11g Link Mode_ANT-0	
2412	
2462	

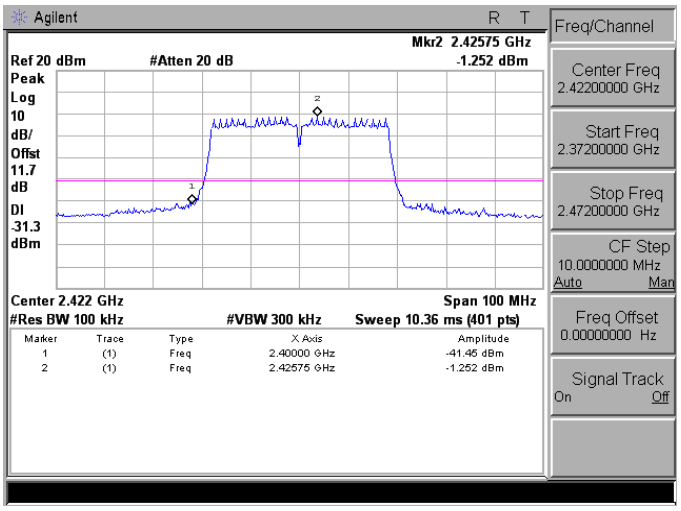
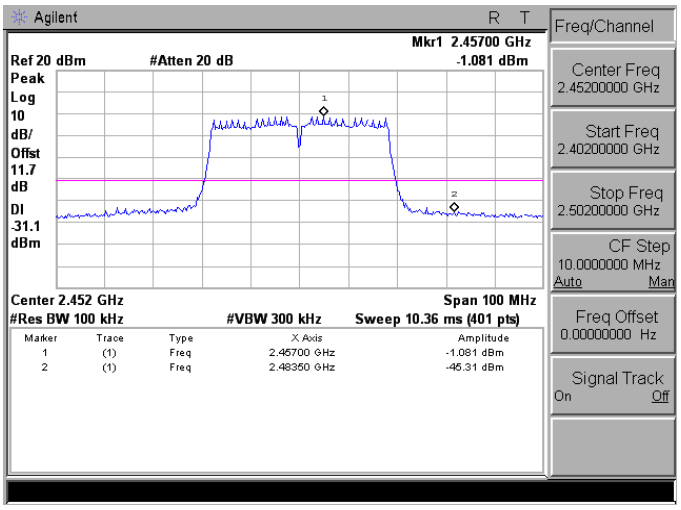
Mode 3: IEEE 802.11g Link Mode_ANT-1	
2412	
2462	

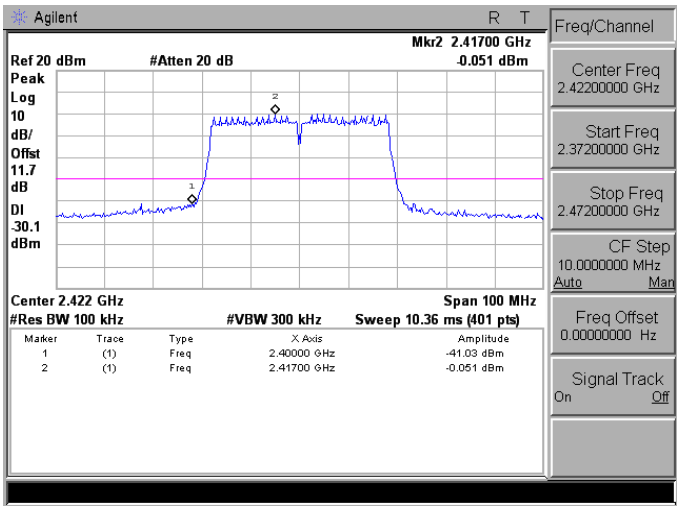
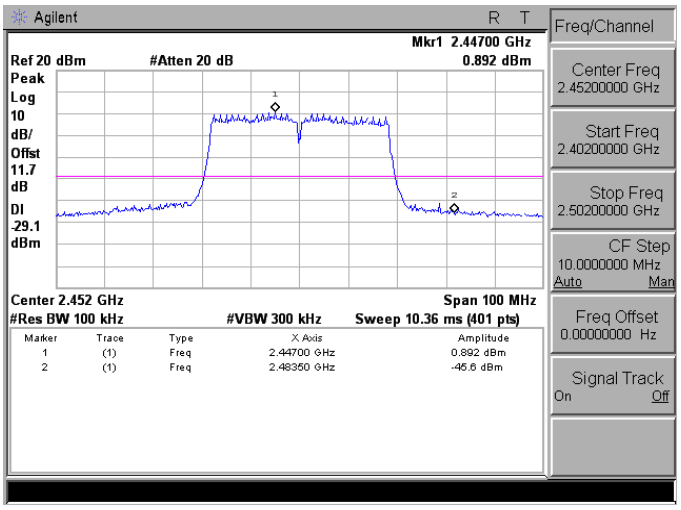
Mode 3: IEEE 802.11g Link Mode_ANT-2	
2412	
2462	

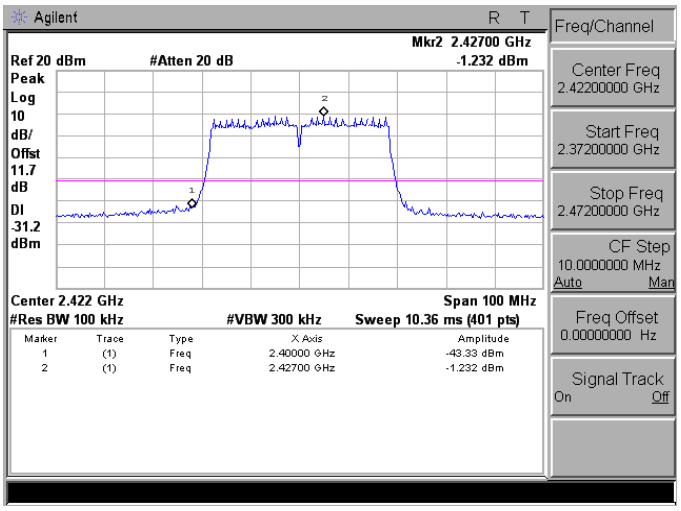
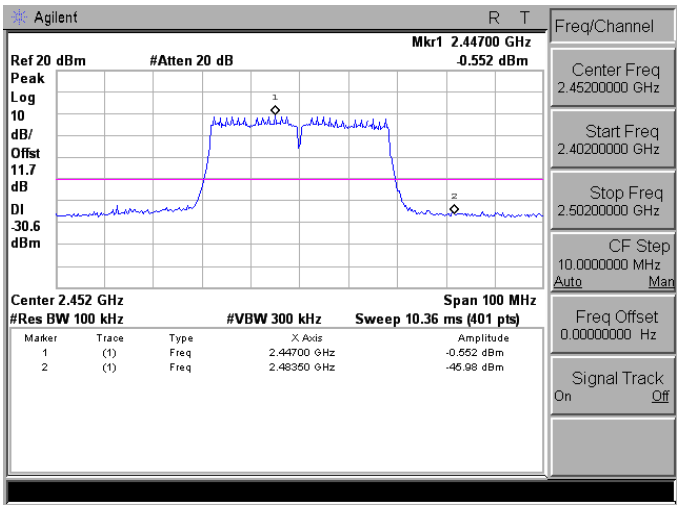
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT0	
2412	
2462	

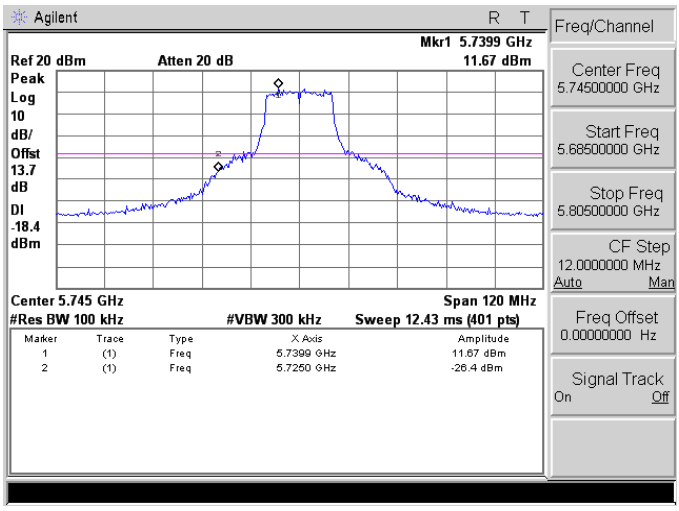
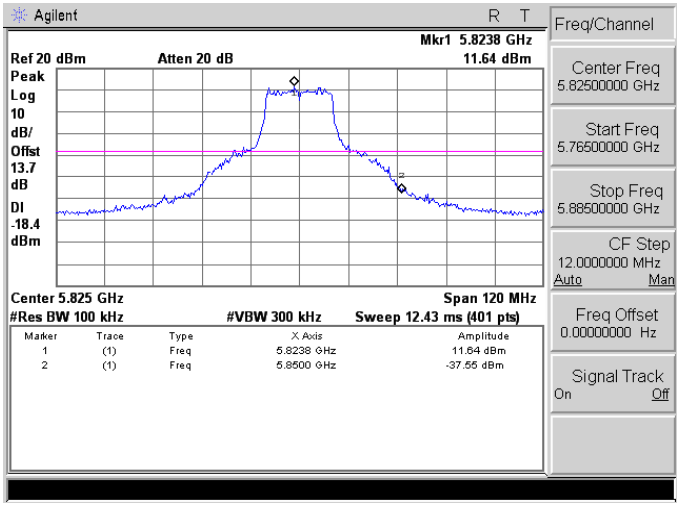
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT1	
2412	
2462	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode _ ANT2	
2412	
2462	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT0	
2422	
2452	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT1	
2422	
2452	

Mode 5: IEEE 802.11n 2.4GHz 40MHz Link Mode _ ANT2	
2422	
2452	

Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-0	
5745	
5825	

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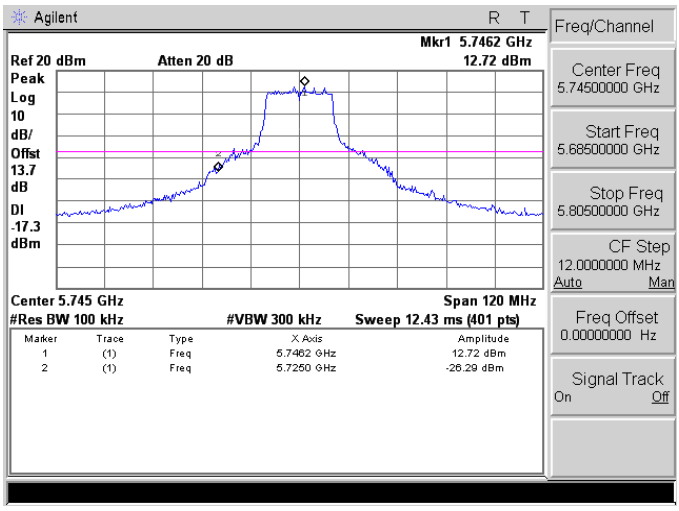
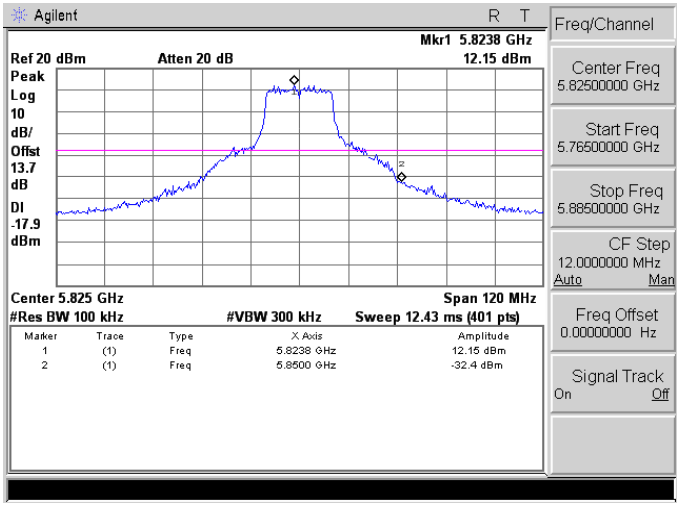
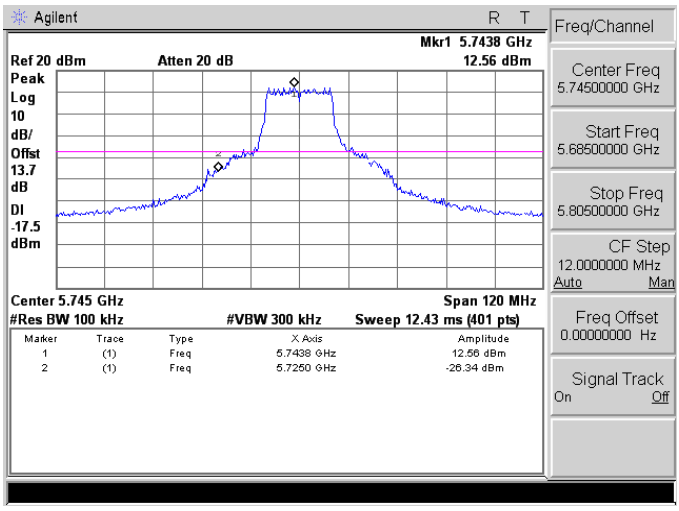
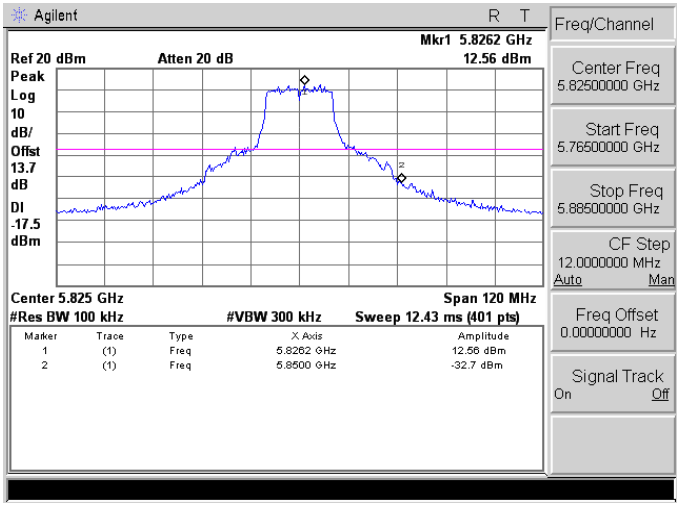
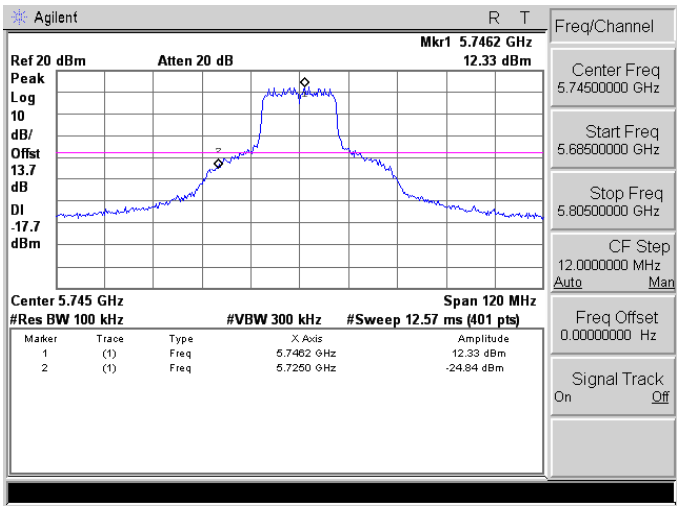
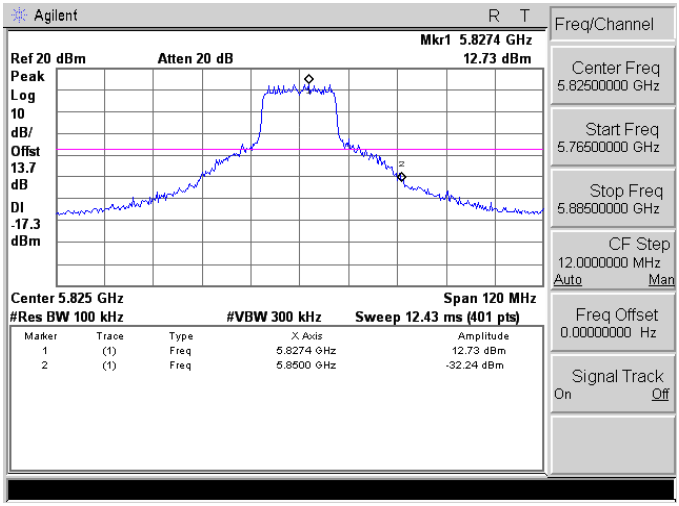
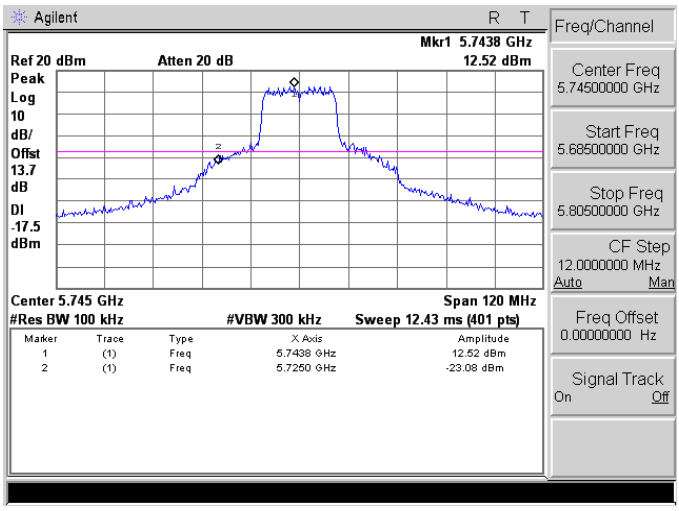
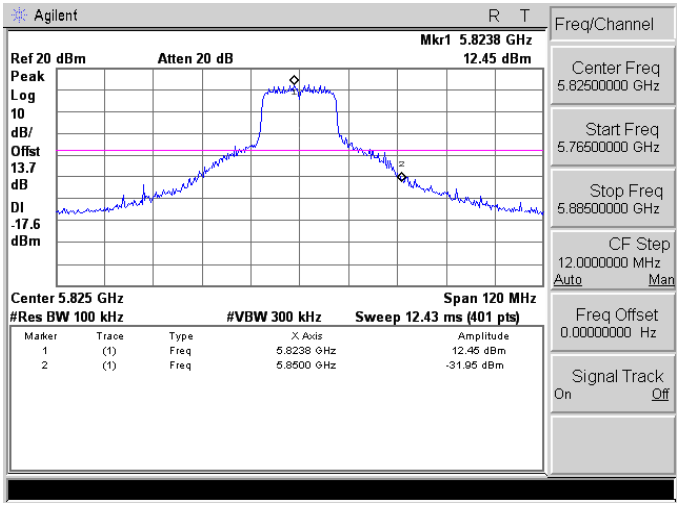
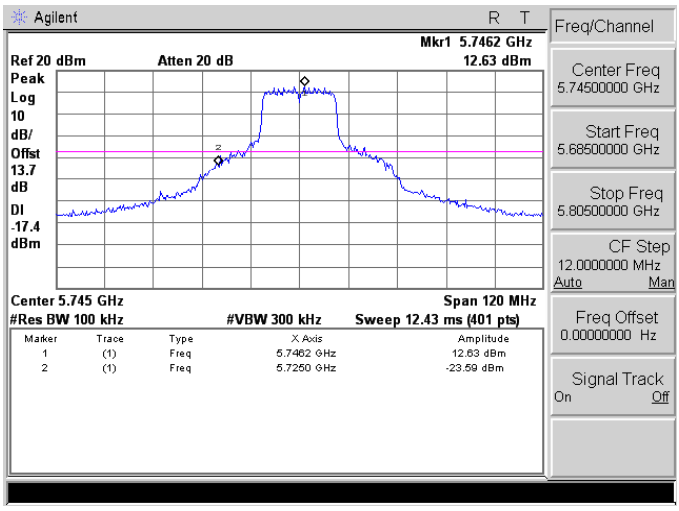
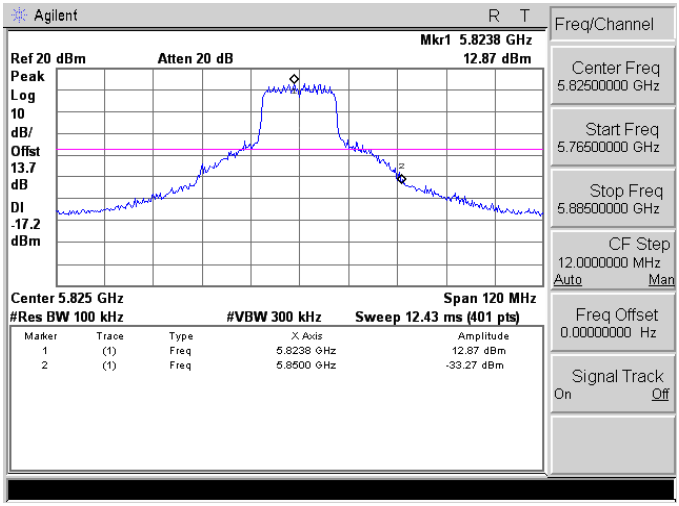
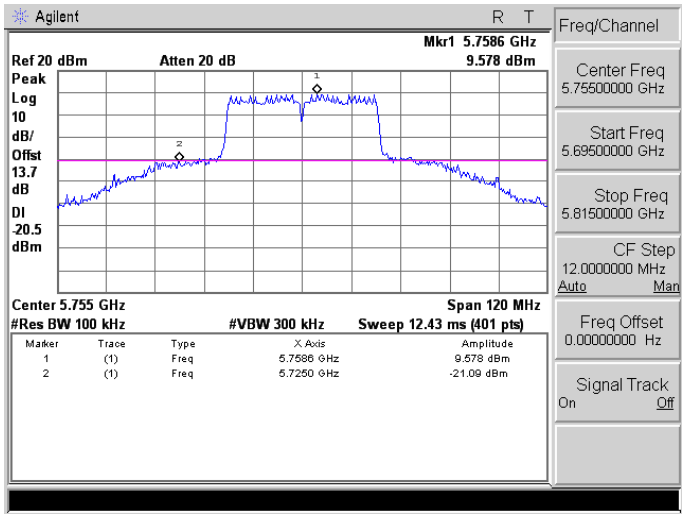
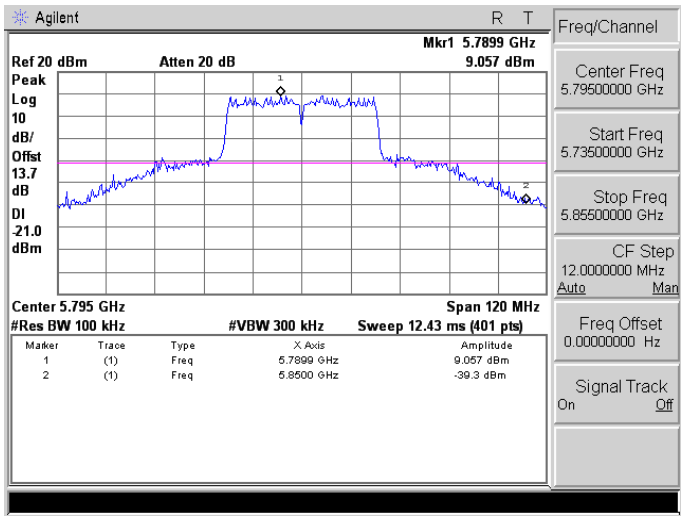
5745	
5825	

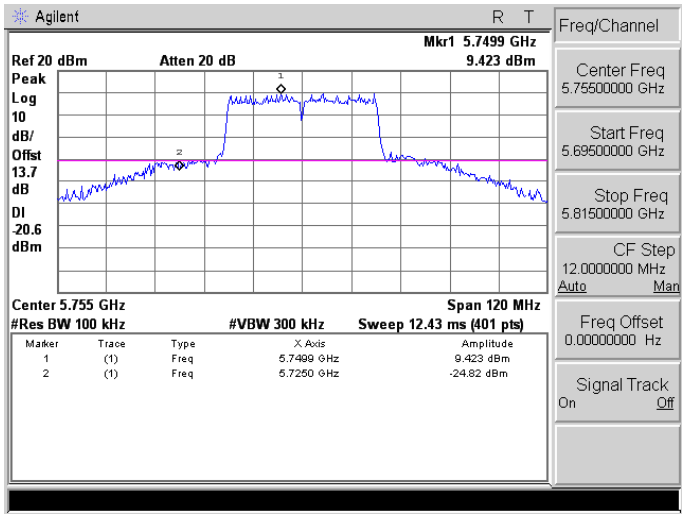
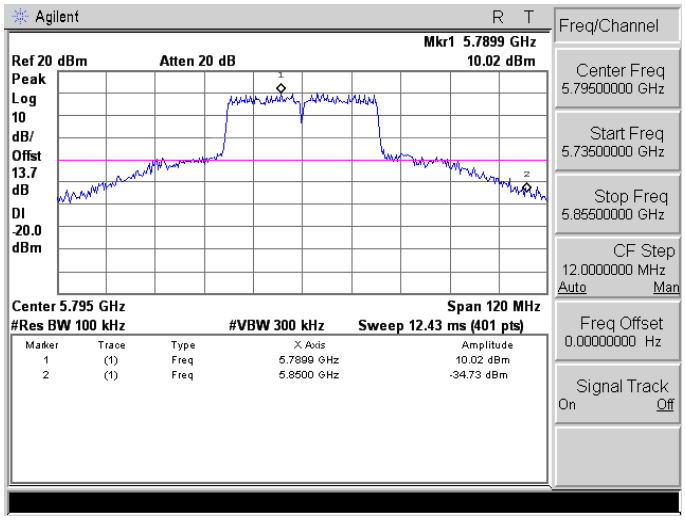
Mode 6: IEEE 802.11a U-NII Band III Link Mode_ANT-2	
5745	
5825	

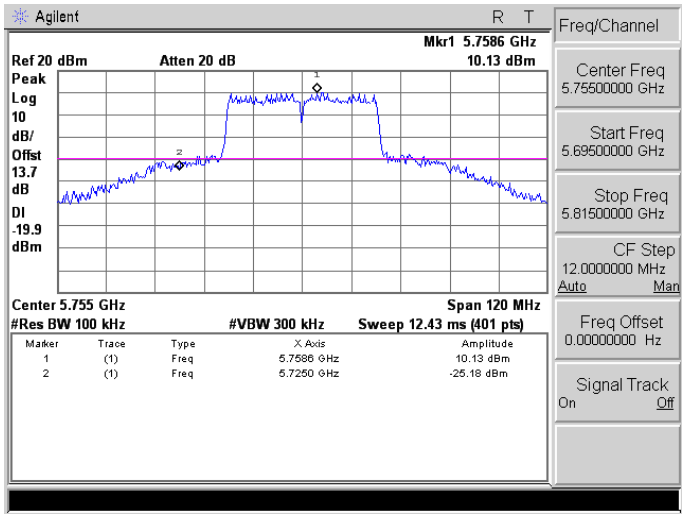
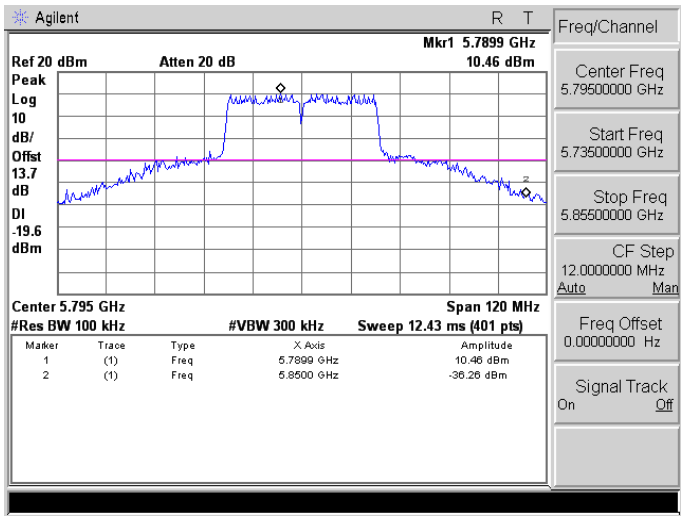
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT0	
5745	
5825	

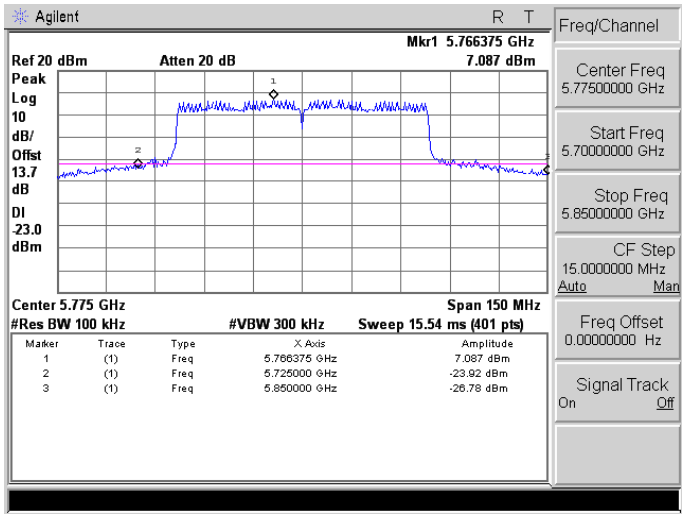
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT1	
5745	
5825	

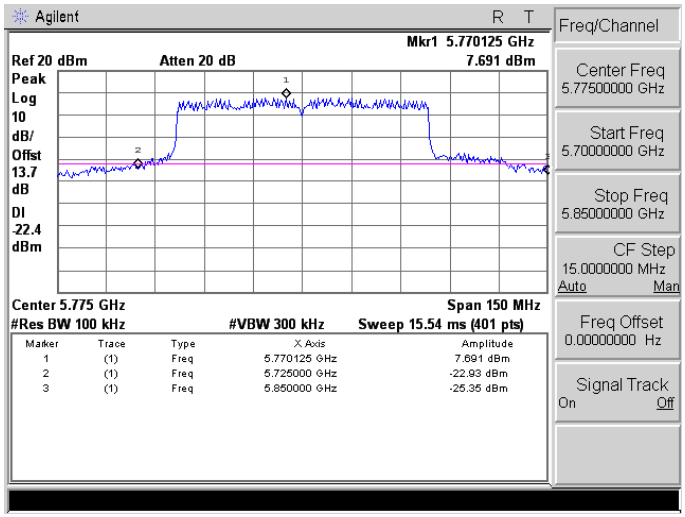
Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT2	
5745	
5825	

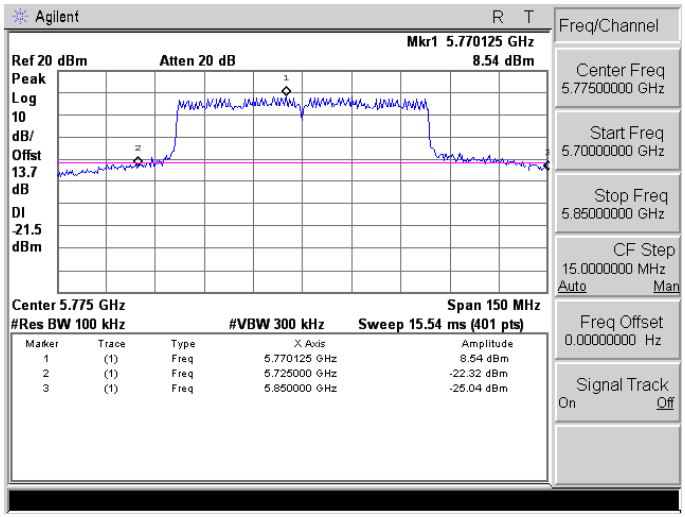
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT0	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT1	
5755	
5795	

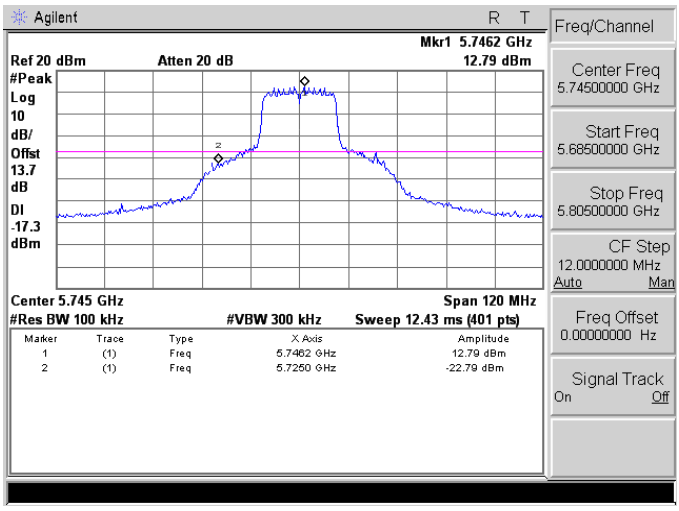
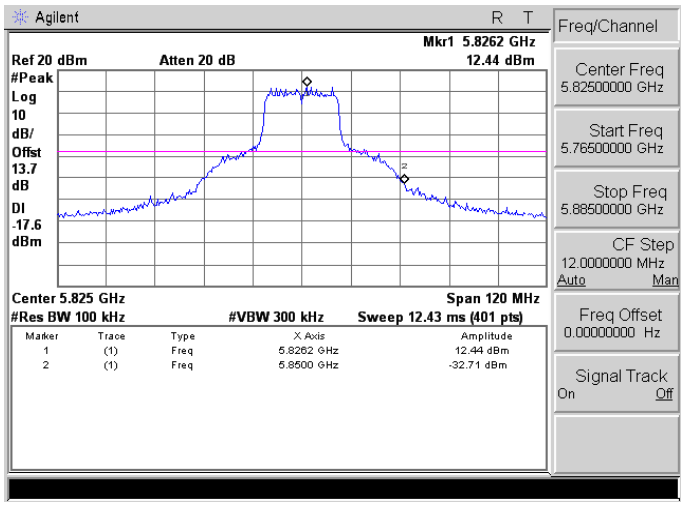
Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT2	
5755	
5795	

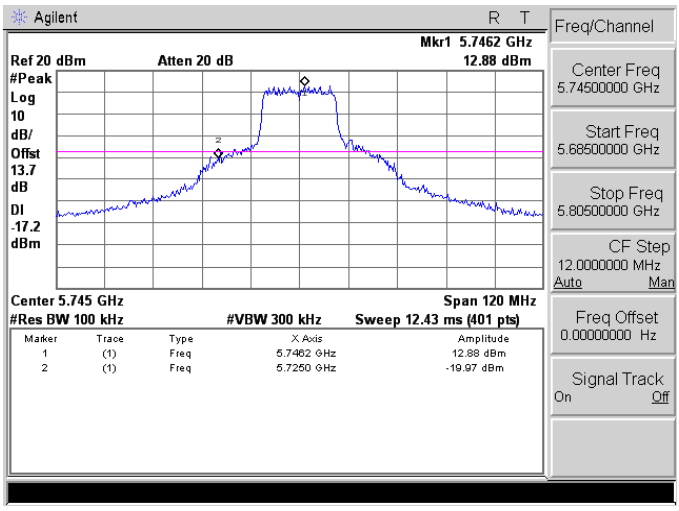
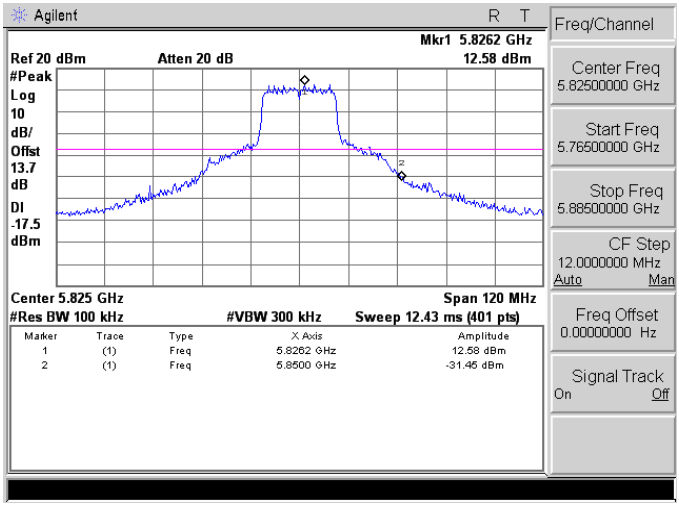
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT0	
5775	

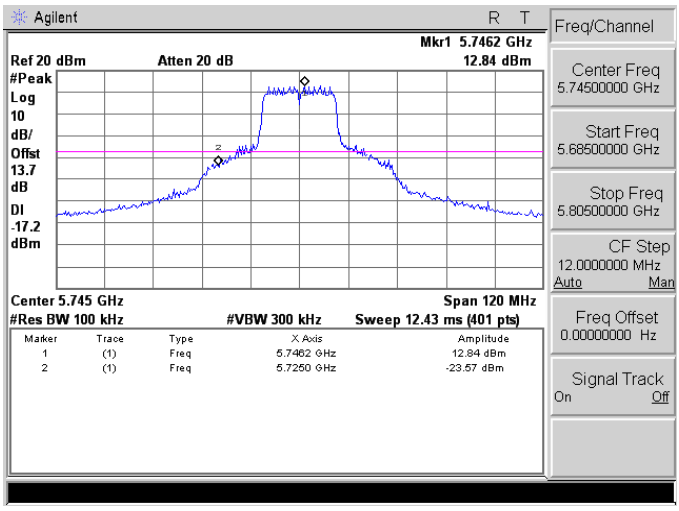
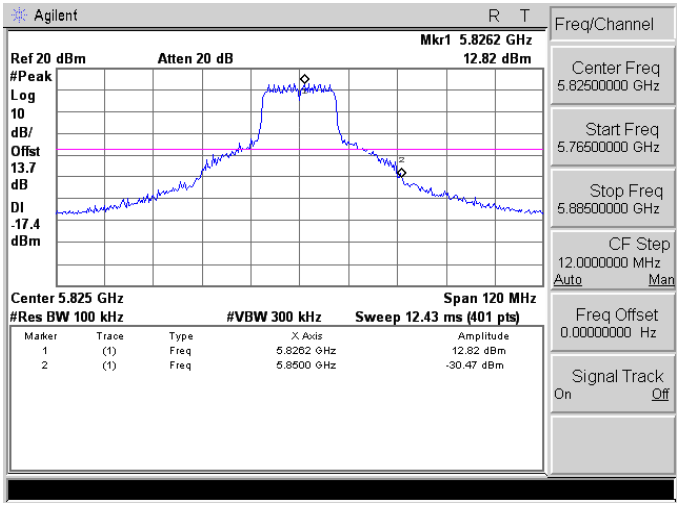
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT1	
5775	

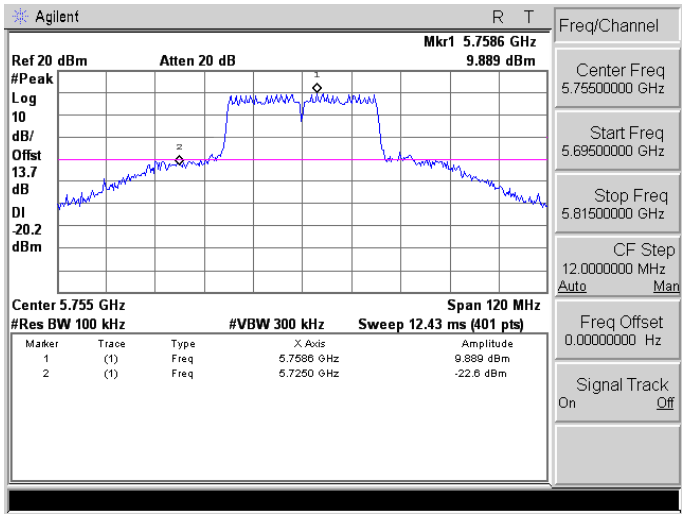
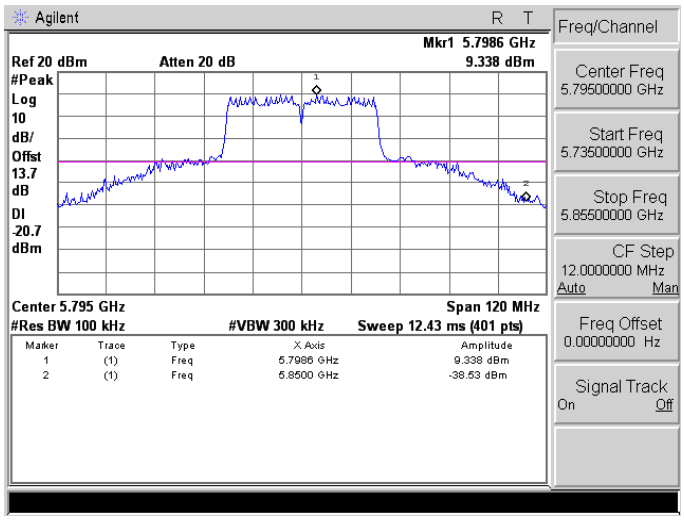
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT2	
5775	

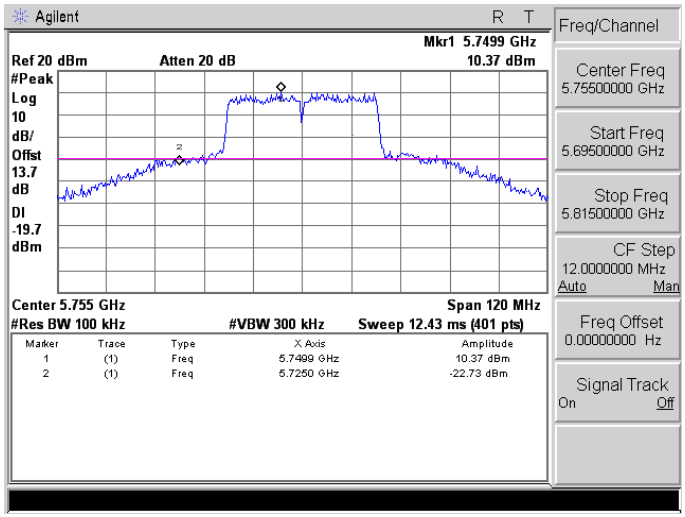
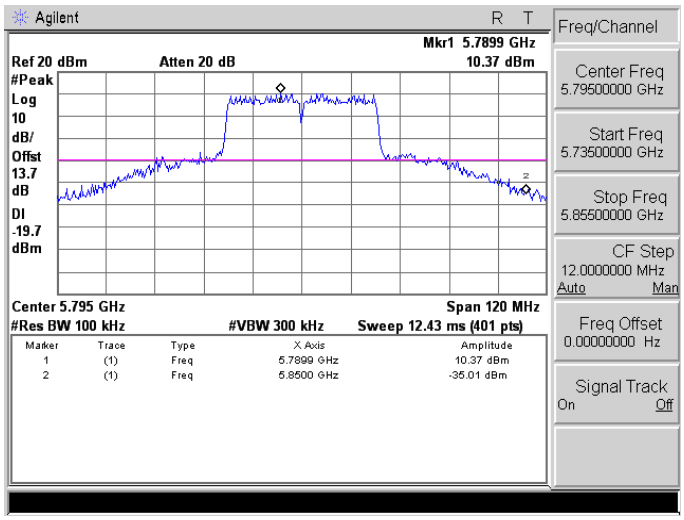
Beamforming on

Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT0	
5745	
5825	

Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT1	
5745	
5825	

Mode 7: IEEE 802.11ac U-NII Band III 20MHz Link Mode _ ANT2	
5745	
5825	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT0	
5755	
5795	

Mode 8: IEEE 802.11ac U-NII Band III 40MHz Link Mode _ ANT1	
5755	
5795	

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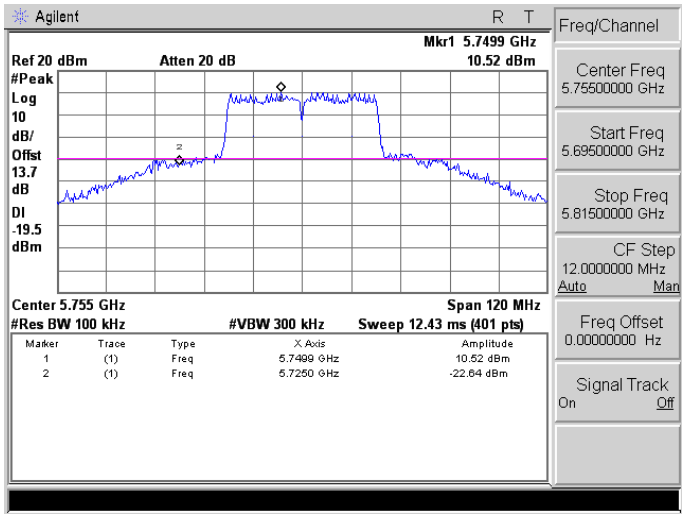
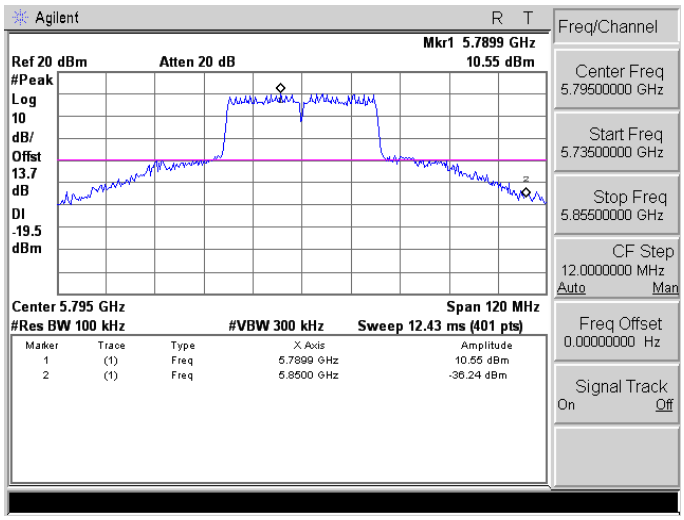
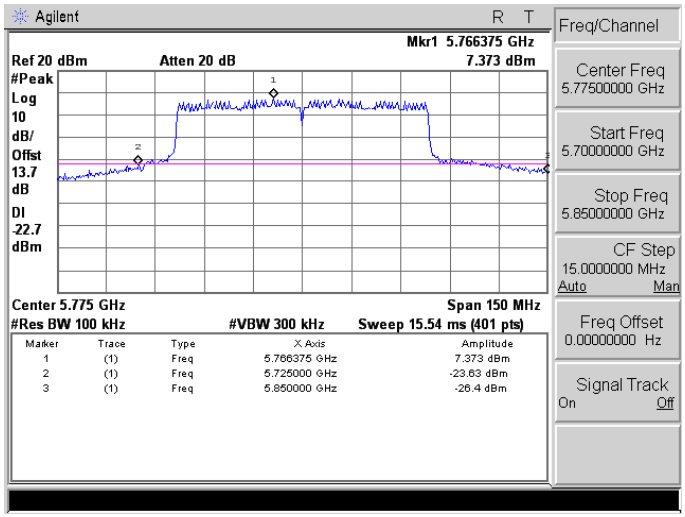
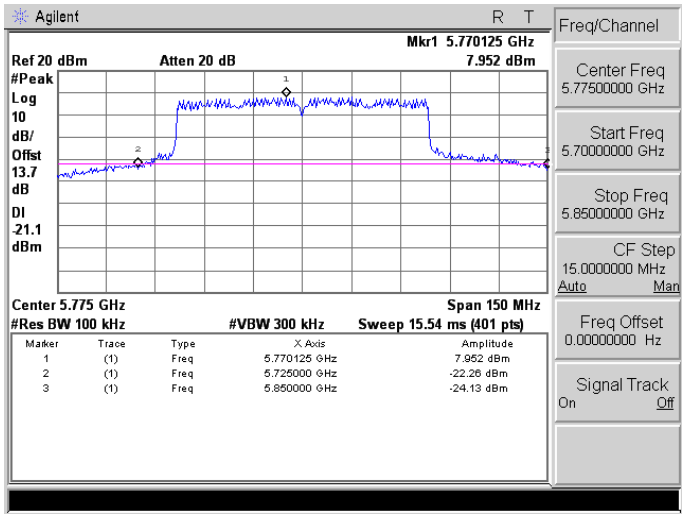
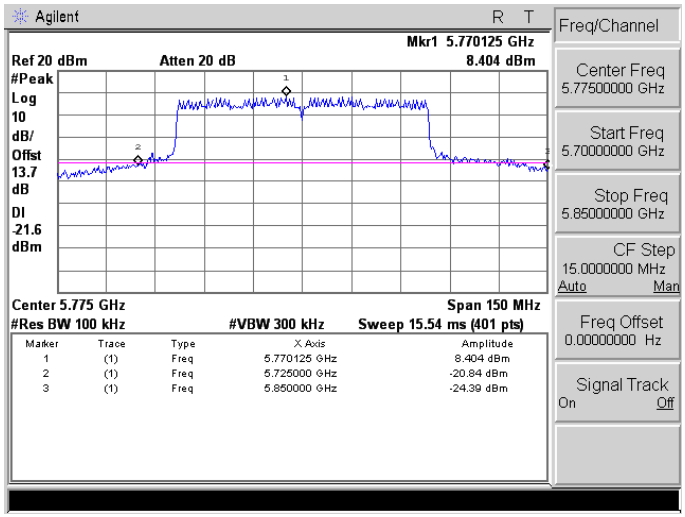
5755	
5795	

Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT0	
5775	

Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT1	
5775	

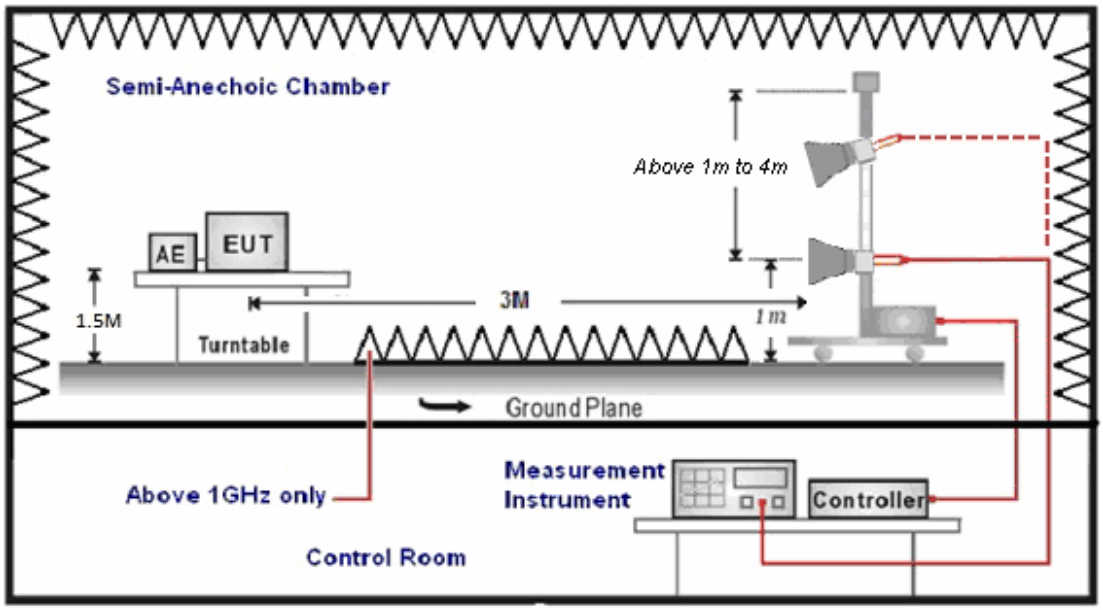
Mode 9: IEEE 802.11ac U-NII Band III 80MHz Link Mode _ ANT2	
5775	

10 Band Edges Measurement

10.1.Limit

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 30 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

10.2.Test Setup



10.3.Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/06/2015	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/06/2015	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/24/2015	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/24/2015	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/12/2015	(1)
Microwave Cable	EMCI	EMC-104-SM-SM-14000	140202	02/24/2015	(1)
Microwave Cable	EMCI	EMC104-SM-SM-600	140301	02/24/2015	(1)
Bore-sight Antenna Tower	MF	MFA-520BSN	1308243	N.C.R.	-----
Test Site	ATL	TE01	888001	08/28/2014	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.
Note: N.C.R. = No Calibration Request.

10.4. Test Procedure

The EUT tested to DTS test procedure of KDB 558074 D01 v03r03 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements when Duty cycle >0.98 / 1/T for average measurements when Duty cycle <0.98.

10.5.Test Result

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	07/01/2015
Frequency:	2412 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2387.220	57.17	4.37	61.54	74.00	-12.46	peak	H
2387.220	44.70	4.37	49.07	54.00	-4.93	AVG	H
2390.000	55.79	4.38	60.17	74.00	-13.83	peak	H
2390.000	45.17	4.38	49.55	54.00	-4.45	AVG	H
2389.310	59.62	4.38	64.00	74.00	-10.00	peak	V
2389.310	47.41	4.38	51.79	54.00	-2.21	AVG	V
2390.000	57.15	4.38	61.53	74.00	-12.47	peak	V
2390.000	47.57	4.38	51.95	54.00	-2.05	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	07/09/2015
Frequency:	2437 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2387.330	57.48	4.37	61.85	74.00	-12.15	peak	H
2387.330	45.75	4.37	50.12	54.00	-3.88	AVG	H
2390.000	56.40	4.38	60.78	74.00	-13.22	peak	H
2390.000	46.09	4.38	50.47	54.00	-3.53	AVG	H
2483.500	56.17	4.75	60.92	74.00	-13.08	peak	H
2483.500	46.27	4.75	51.02	54.00	-2.98	AVG	H
2484.420	57.60	4.75	62.35	74.00	-11.65	peak	H
2484.420	46.40	4.75	51.15	54.00	-2.85	AVG	H
2380.490	60.11	4.34	64.45	74.00	-9.55	peak	V
2380.490	48.67	4.34	53.01	54.00	-0.99	AVG	V
2390.000	58.30	4.38	62.68	74.00	-11.32	peak	V
2390.000	49.09	4.38	53.47	54.00	-0.53	AVG	V
2483.500	58.47	4.75	63.22	74.00	-10.78	peak	V
2483.500	48.92	4.75	53.67	54.00	-0.33	AVG	V
2489.550	59.12	4.77	63.89	74.00	-10.11	peak	V
2489.550	48.85	4.77	53.62	54.00	-0.38	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	07/01/2015
Frequency:	2462 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	54.80	4.75	59.55	74.00	-14.45	peak	H
2483.500	45.27	4.75	50.02	54.00	-3.98	AVG	H
2483.720	57.68	4.75	62.43	74.00	-11.57	peak	H
2483.720	45.20	4.75	49.95	54.00	-4.05	AVG	H
2483.500	58.15	4.75	62.90	74.00	-11.10	peak	V
2483.500	47.14	4.75	51.89	54.00	-2.11	AVG	V
2485.800	59.54	4.75	64.29	74.00	-9.71	peak	V
2485.800	46.35	4.75	51.10	54.00	-2.90	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	3	Date:	07/01/2015
Frequency:	2412 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2389.530	57.07	4.38	61.45	74.00	-12.55	peak	H
2389.530	45.04	4.38	49.42	54.00	-4.58	AVG	H
2390.000	56.63	4.38	61.01	74.00	-12.99	peak	H
2390.000	45.21	4.38	49.59	54.00	-4.41	AVG	H
2389.530	63.36	4.38	67.74	74.00	-6.26	peak	V
2389.530	47.54	4.38	51.92	54.00	-2.08	AVG	V
2390.000	65.58	4.38	69.96	74.00	-4.04	peak	V
2390.000	48.02	4.38	52.40	54.00	-1.60	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	3	Date:	07/01/2015
Frequency:	2437 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2377.830	57.21	4.33	61.54	74.00	-12.46	peak	H
2377.830	45.19	4.33	49.52	54.00	-4.48	AVG	H
2390.000	56.10	4.38	60.48	74.00	-13.52	peak	H
2390.000	45.43	4.38	49.81	54.00	-4.19	AVG	H
2483.500	55.95	4.75	60.70	74.00	-13.30	peak	H
2483.500	46.00	4.75	50.75	54.00	-3.25	AVG	H
2485.560	57.35	4.75	62.10	74.00	-11.90	peak	H
2485.560	45.75	4.75	50.50	54.00	-3.50	AVG	H
2388.470	65.56	4.38	69.94	74.00	-4.06	peak	V
2388.470	48.61	4.38	52.99	54.00	-1.01	AVG	V
2390.000	63.21	4.38	67.59	74.00	-6.41	peak	V
2390.000	48.69	4.38	53.07	54.00	-0.93	AVG	V
2483.500	61.02	4.75	65.77	74.00	-8.23	peak	V
2483.500	48.59	4.75	53.34	54.00	-0.66	AVG	V
2484.420	63.11	4.75	67.86	74.00	-6.14	peak	V
2484.420	48.49	4.75	53.24	54.00	-0.76	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	3	Date:	07/01/2015
Frequency:	2462 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	56.51	4.75	61.26	74.00	-12.74	peak	H
2483.500	45.85	4.75	50.60	54.00	-3.40	AVG	H
2483.800	58.92	4.75	63.67	74.00	-10.33	peak	H
2483.800	45.62	4.75	50.37	54.00	-3.63	AVG	H
2483.500	62.17	4.75	66.92	74.00	-7.08	peak	V
2483.500	48.08	4.75	52.83	54.00	-1.17	AVG	V
2484.040	61.93	4.75	66.68	74.00	-7.32	peak	V
2484.040	47.43	4.75	52.18	54.00	-1.82	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	4	Date:	07/01/2015
Frequency:	2412 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2388.760	57.11	4.38	61.49	74.00	-12.51	peak	H
2388.760	45.60	4.38	49.98	54.00	-4.02	AVG	H
2390.000	57.60	4.38	61.98	74.00	-12.02	peak	H
2390.000	45.94	4.38	50.32	54.00	-3.68	AVG	H
2388.980	64.06	4.38	68.44	74.00	-5.56	peak	V
2388.980	47.04	4.38	51.42	54.00	-2.58	AVG	V
2390.000	60.85	4.38	65.23	74.00	-8.77	peak	V
2390.000	47.76	4.38	52.14	54.00	-1.86	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	4	Date:	07/09/2015
Frequency:	2437 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2386.570	57.41	4.36	61.77	74.00	-12.23	peak	H
2386.570	45.57	4.36	49.93	54.00	-4.07	AVG	H
2390.000	56.27	4.38	60.65	74.00	-13.35	peak	H
2390.000	45.97	4.38	50.35	54.00	-3.65	AVG	H
2483.500	56.26	4.75	61.01	74.00	-12.99	peak	H
2483.500	46.07	4.75	50.82	54.00	-3.18	AVG	H
2495.820	57.96	4.79	62.75	74.00	-11.25	peak	H
2495.820	45.72	4.79	50.51	54.00	-3.49	AVG	H
2381.630	59.70	4.34	64.04	74.00	-9.96	peak	V
2381.630	48.06	4.34	52.40	54.00	-1.60	AVG	V
2390.000	58.89	4.38	63.27	74.00	-10.73	peak	V
2390.000	49.18	4.38	53.56	54.00	-0.44	AVG	V
2483.500	57.66	4.75	62.41	74.00	-11.59	peak	V
2483.500	48.50	4.75	53.25	54.00	-0.75	AVG	V
2486.510	59.19	4.75	63.94	74.00	-10.06	peak	V
2486.510	48.19	4.75	52.94	54.00	-1.06	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	4	Date:	07/01/2015
Frequency:	2462 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	56.13	4.75	60.88	74.00	-13.12	peak	H
2483.500	46.10	4.75	50.85	54.00	-3.15	AVG	H
2484.200	57.44	4.75	62.19	74.00	-11.81	peak	H
2484.200	45.78	4.75	50.53	54.00	-3.47	AVG	H
2483.500	61.10	4.75	65.85	74.00	-8.15	peak	V
2483.500	47.87	4.75	52.62	54.00	-1.38	AVG	V
2484.160	61.86	4.75	66.61	74.00	-7.39	peak	V
2484.160	47.24	4.75	51.99	54.00	-2.01	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	5	Date:	07/01/2015
Frequency:	2422 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2387.880	57.85	4.38	62.23	74.00	-11.77	peak	H
2387.880	45.29	4.38	49.67	54.00	-4.33	AVG	H
2390.000	55.76	4.38	60.14	74.00	-13.86	peak	H
2390.000	45.86	4.38	50.24	54.00	-3.76	AVG	H
2389.560	67.46	4.38	71.84	74.00	-2.16	peak	V
2389.560	47.39	4.38	51.77	54.00	-2.23	AVG	V
2390.000	64.03	4.38	68.41	74.00	-5.59	peak	V
2390.000	47.77	4.38	52.15	54.00	-1.85	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	5	Date:	07/16/2015
Frequency:	2437 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2388.850	59.81	4.38	64.19	74.00	-9.81	peak	H
2388.850	46.34	4.38	50.72	54.00	-3.28	AVG	H
2390.000	59.34	4.38	63.72	74.00	-10.28	peak	H
2390.000	46.19	4.38	50.57	54.00	-3.43	AVG	H
2483.500	57.77	4.75	62.52	74.00	-11.48	peak	H
2483.500	45.63	4.75	50.38	54.00	-3.62	AVG	H
2488.980	57.79	4.77	62.56	74.00	-11.44	peak	H
2488.980	45.19	4.77	49.96	54.00	-4.04	AVG	H
2382.580	65.79	4.35	70.14	74.00	-3.86	peak	V
2382.580	48.43	4.35	52.78	54.00	-1.22	AVG	V
2390.000	66.77	4.38	71.15	74.00	-2.85	peak	V
2390.000	49.21	4.38	53.59	54.00	-0.41	AVG	V
2483.500	64.85	4.75	69.60	74.00	-4.40	peak	V
2483.500	48.42	4.75	53.17	54.00	-0.83	AVG	V
2485.370	65.75	4.75	70.50	74.00	-3.50	peak	V
2485.370	48.30	4.75	53.05	54.00	-0.95	AVG	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	Touch P5	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	5	Date:	07/01/2015
Frequency:	2452 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	56.53	4.75	61.28	74.00	-12.72	peak	H
2483.500	46.08	4.75	50.83	54.00	-3.17	AVG	H
2484.250	59.82	4.75	64.57	74.00	-9.43	peak	H
2484.250	45.89	4.75	50.64	54.00	-3.36	AVG	H
2483.500	57.93	4.75	62.68	74.00	-11.32	peak	V
2483.500	47.74	4.75	52.49	54.00	-1.51	AVG	V
2487.650	61.69	4.76	66.45	74.00	-7.55	peak	V
2487.650	47.34	4.76	52.10	54.00	-1.90	AVG	V

11 Antenna Measurement

11.1. Limit

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

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Antenna Connector Construction

The antenna used in this product is Omni Directional Antenna . And the maximum Gain of this antenna is only 2.0 dBi.