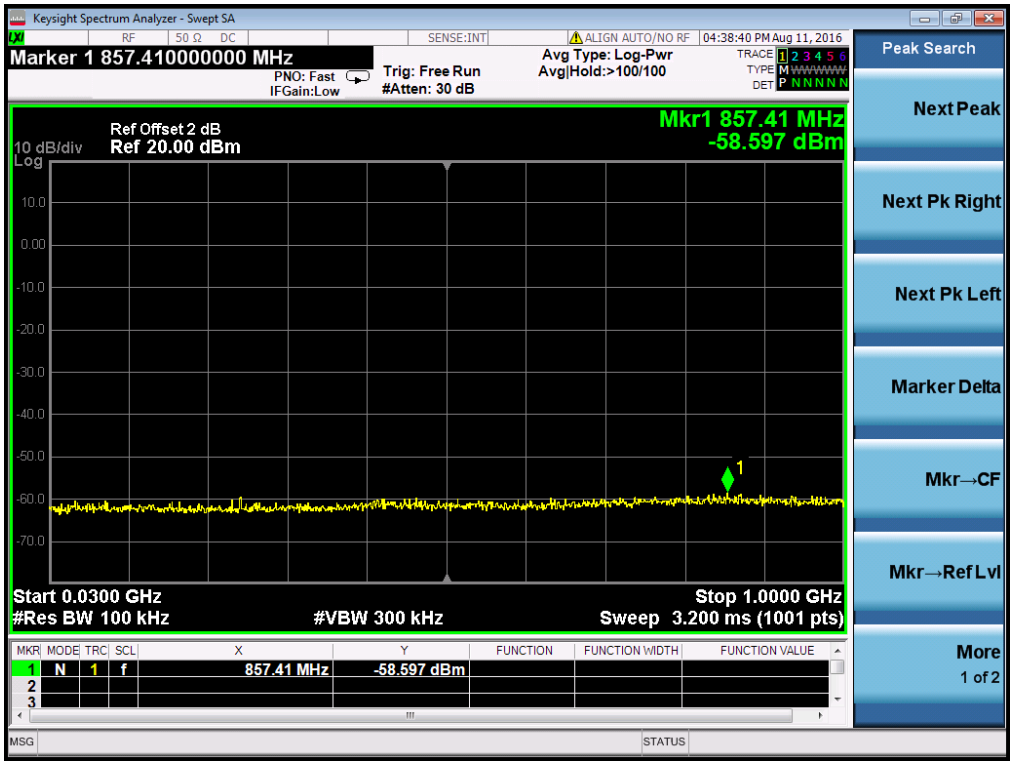
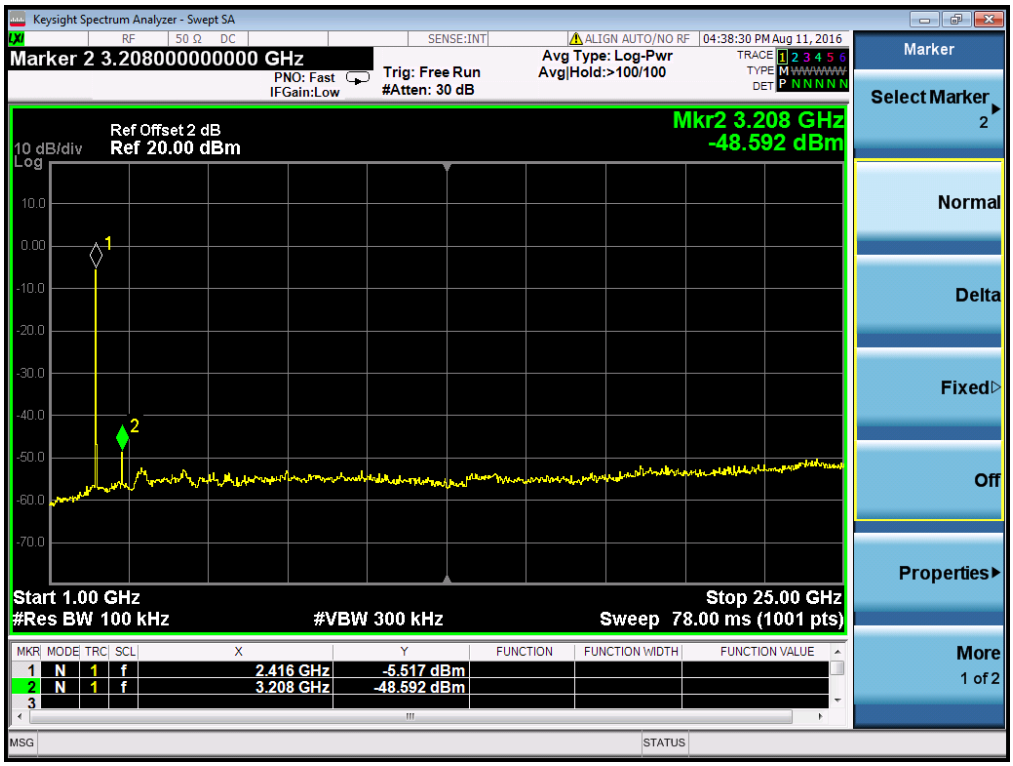
802.11g - Conducted Spurious Emission Plot on channel 1

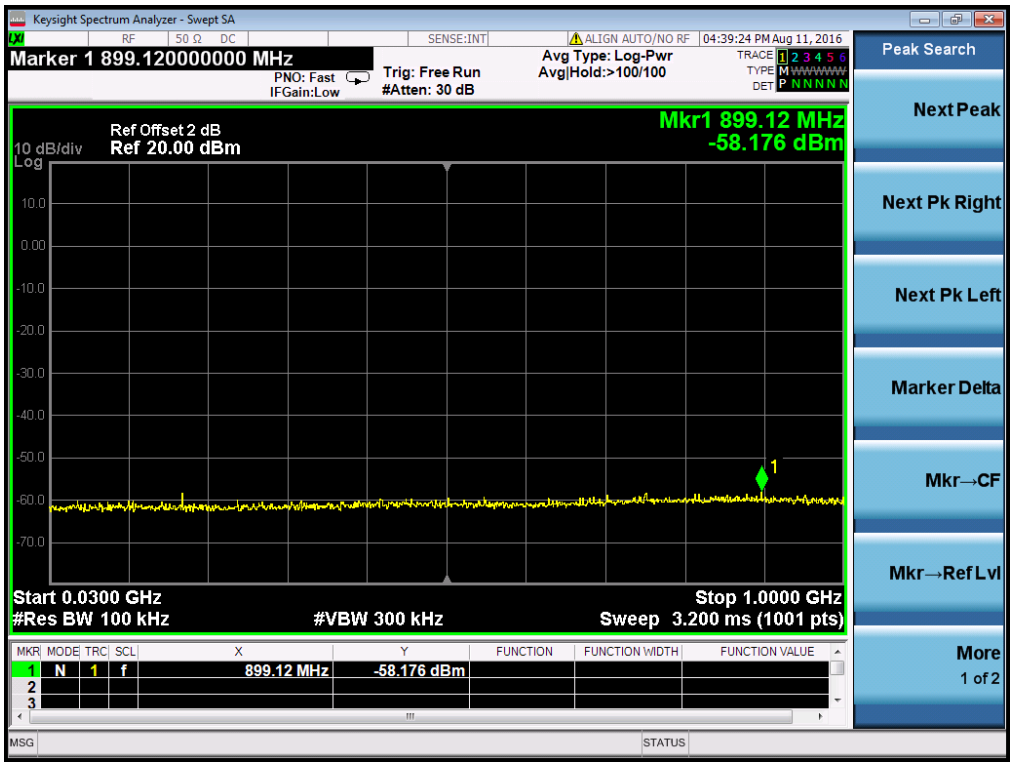


Channel = 1, 30MHz to 1GHz

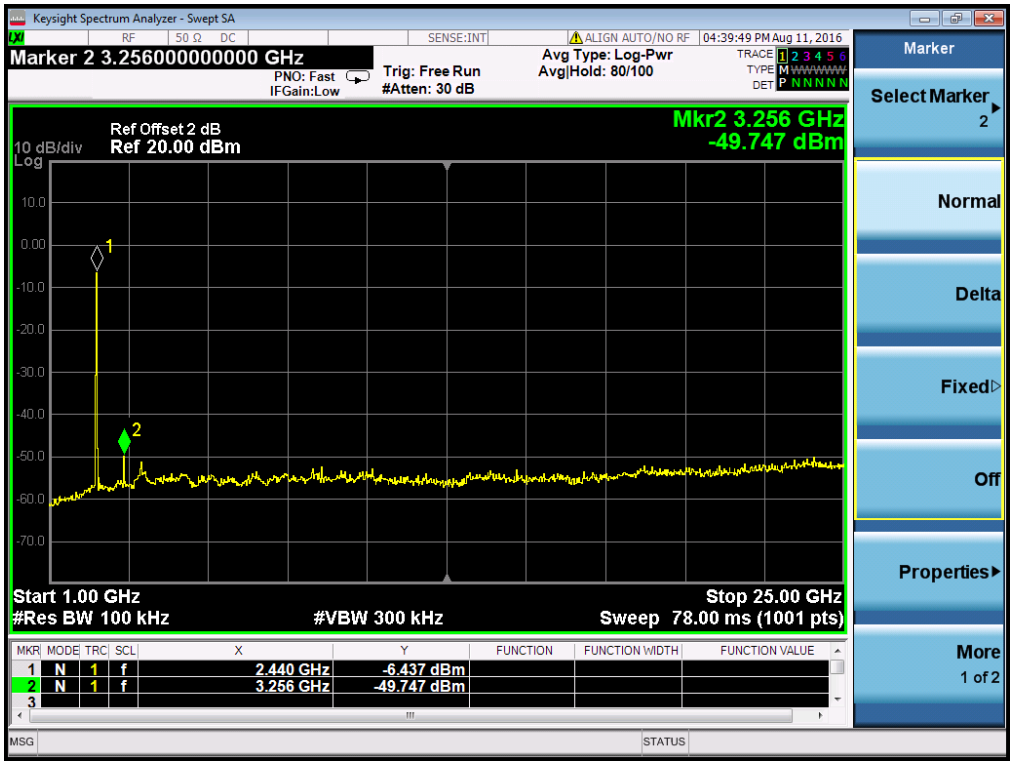


Channel = 1, 1GHz to 25GHz

802.11g - Conducted Spurious Emission Plot on channel 6

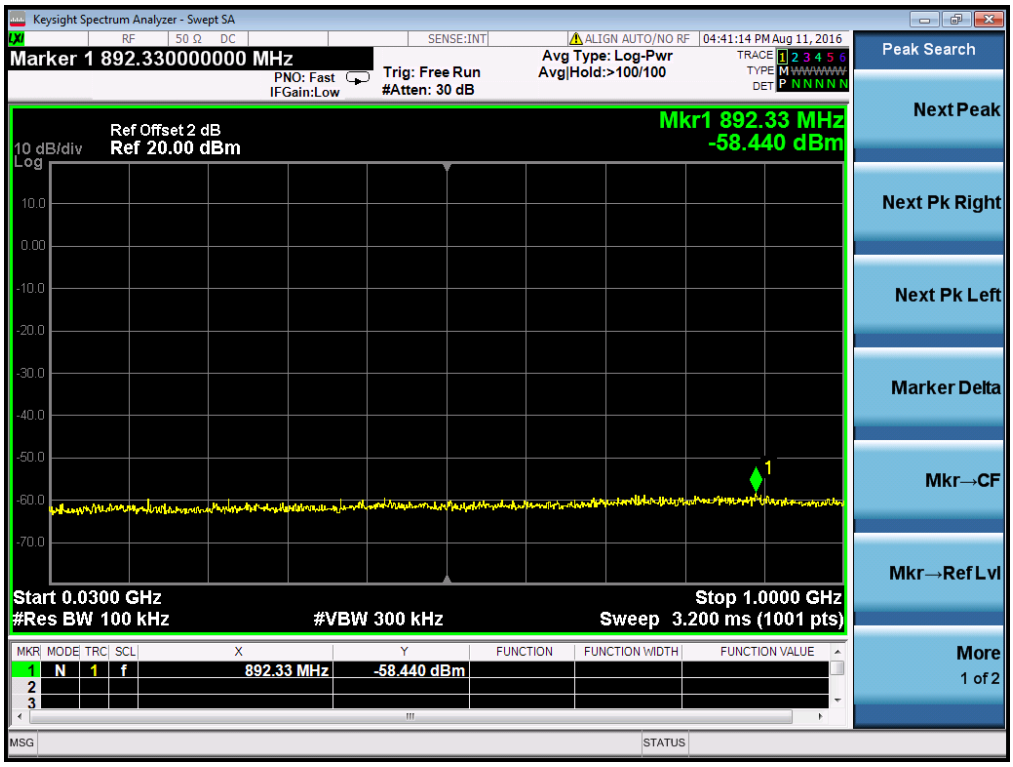


Channel = 6, 30MHz to 1GHz

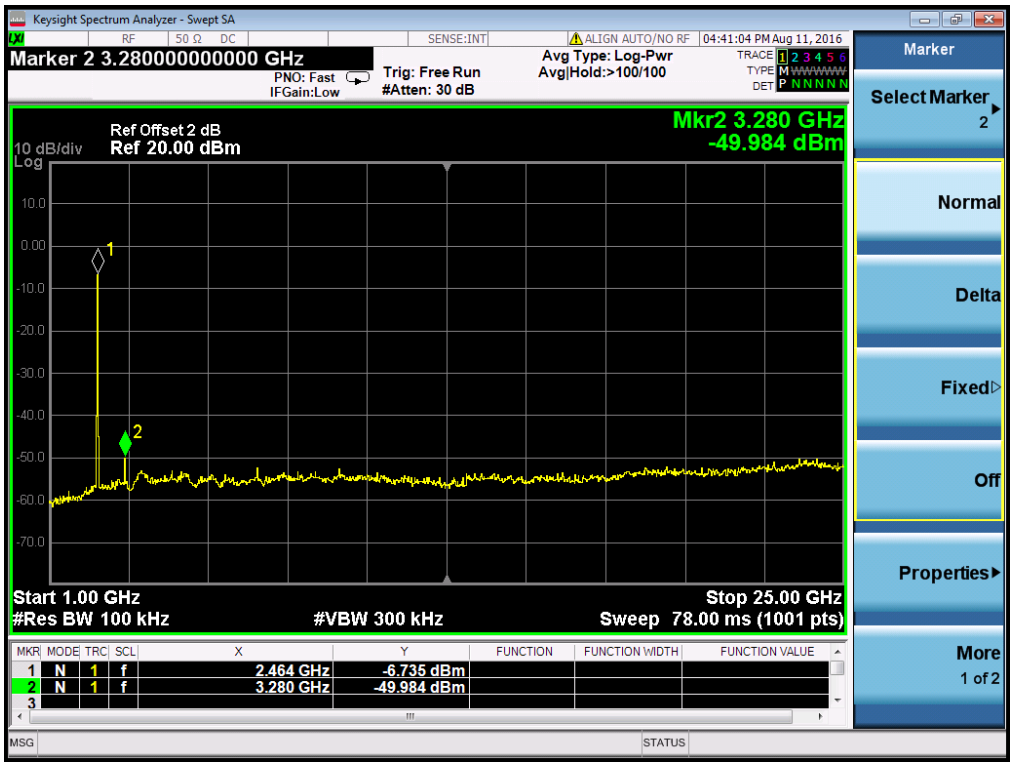


Channel = 6, 1GHz to 25GHz

802.11g - Conducted Spurious Emission Plot on channel 11

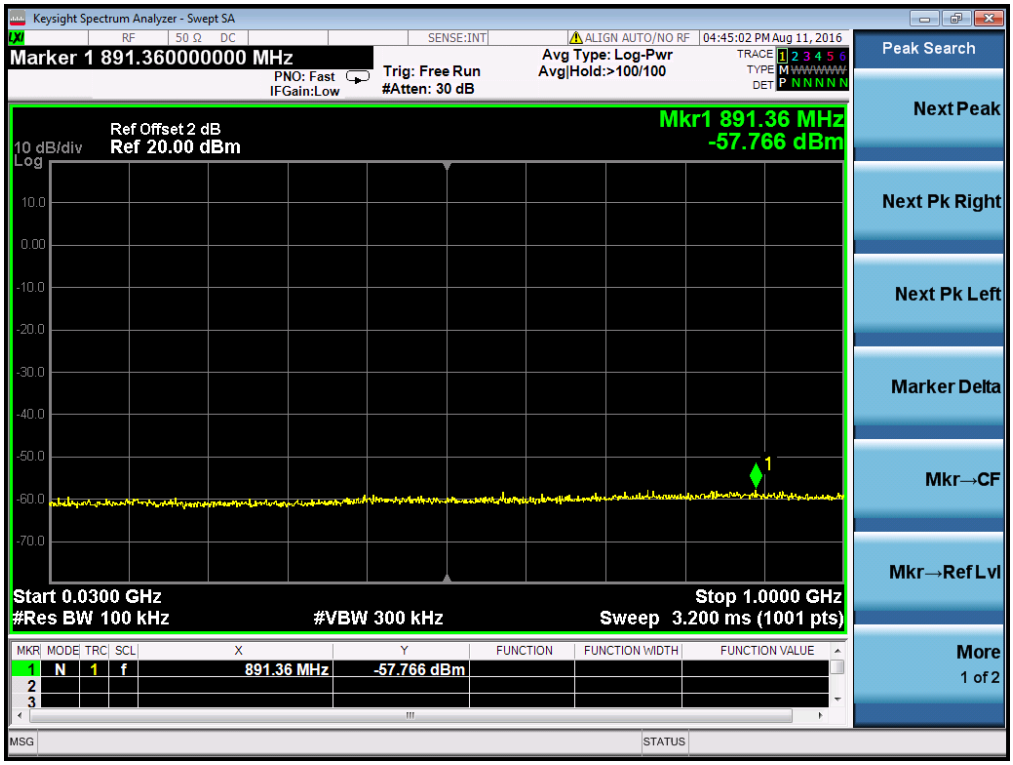


Channel = 11, 30MHz to 25GHz

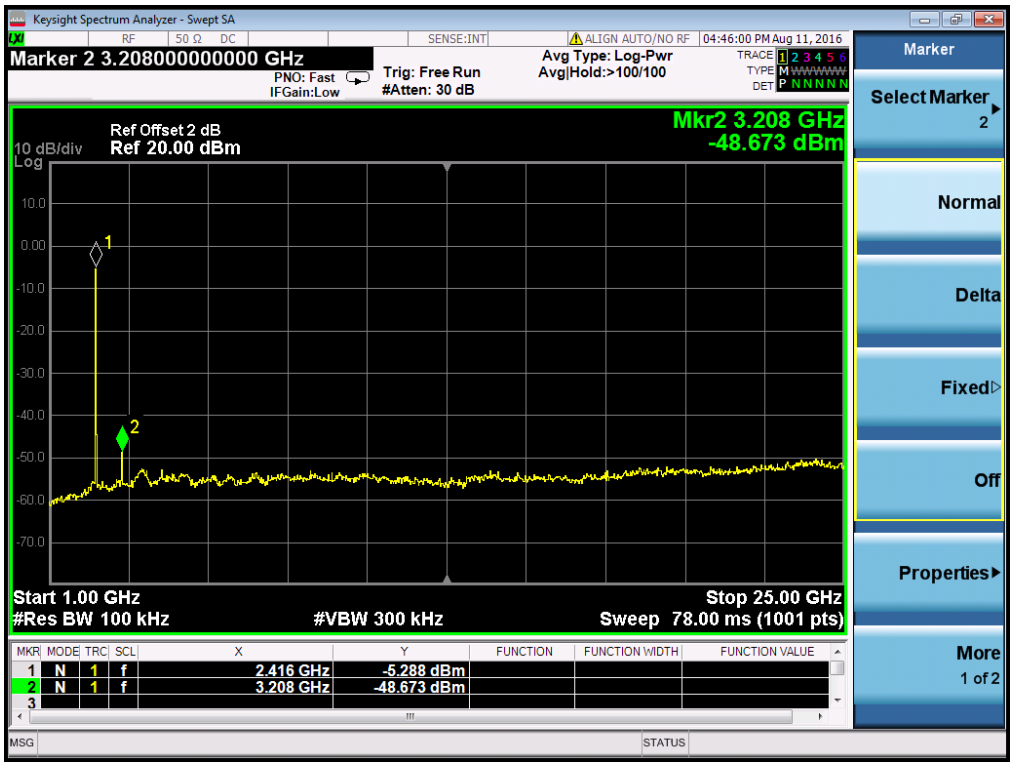


Channel = 11, 30MHz to 25GHz

802.11n20 - Conducted Spurious Emission Plot on channel 1

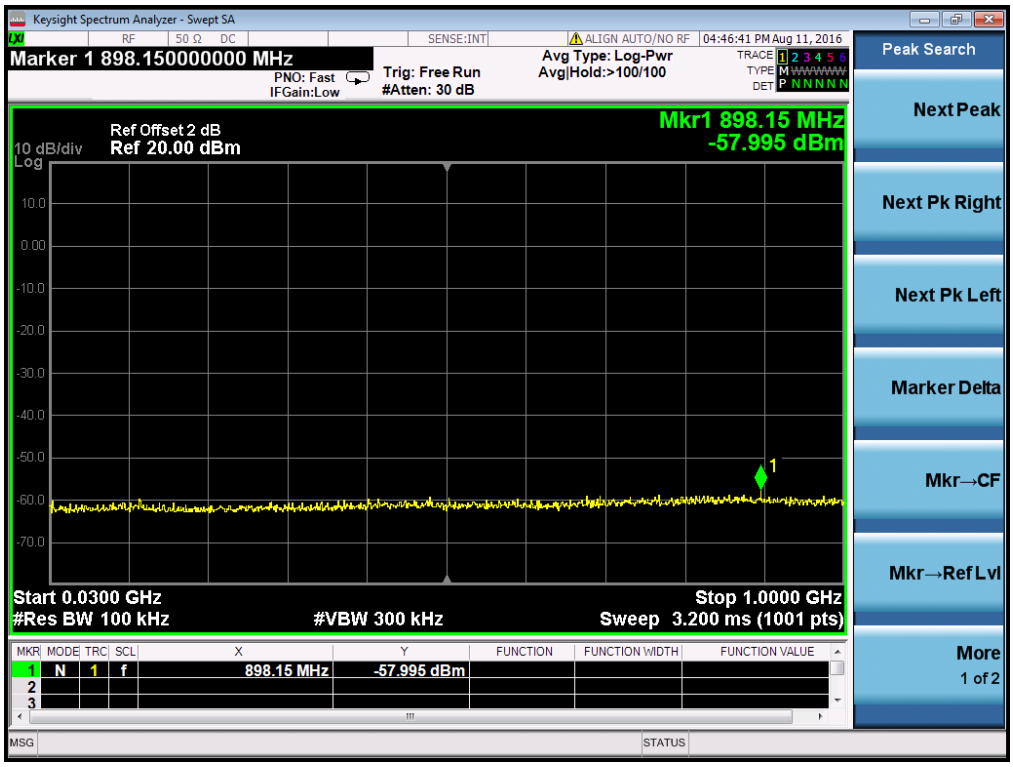


Channel = 1, 30MHz to 1GHz

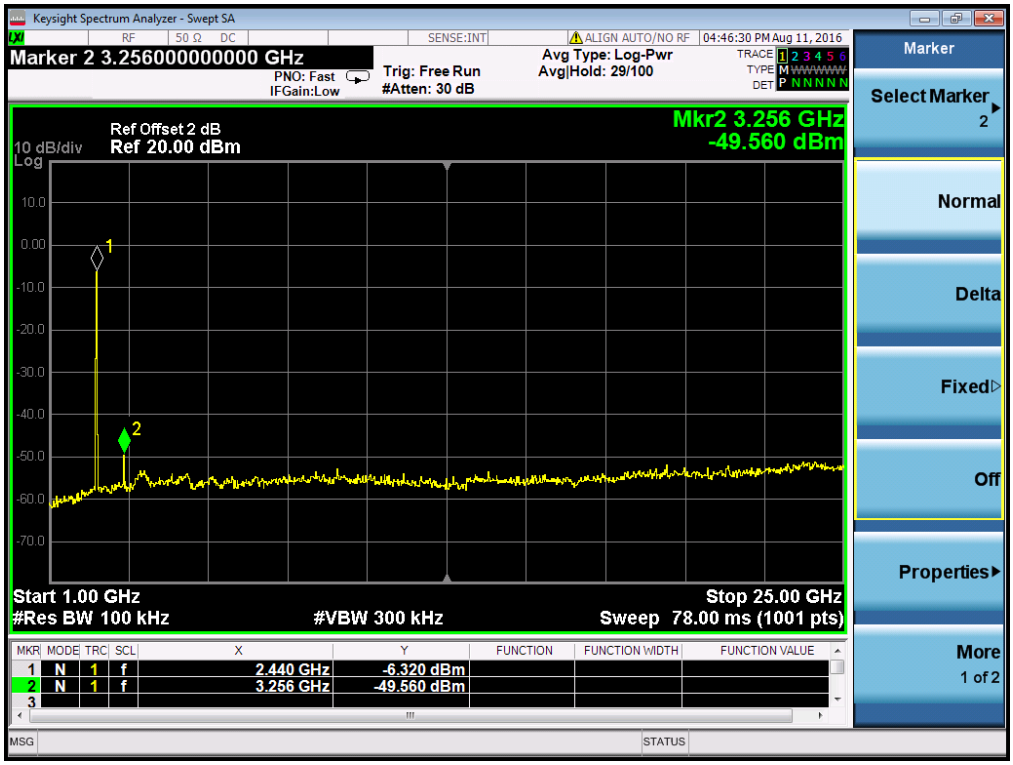


Channel = 1, 1GHz to 25GHz

802.11n20 - Conducted Spurious Emission Plot on channel 6

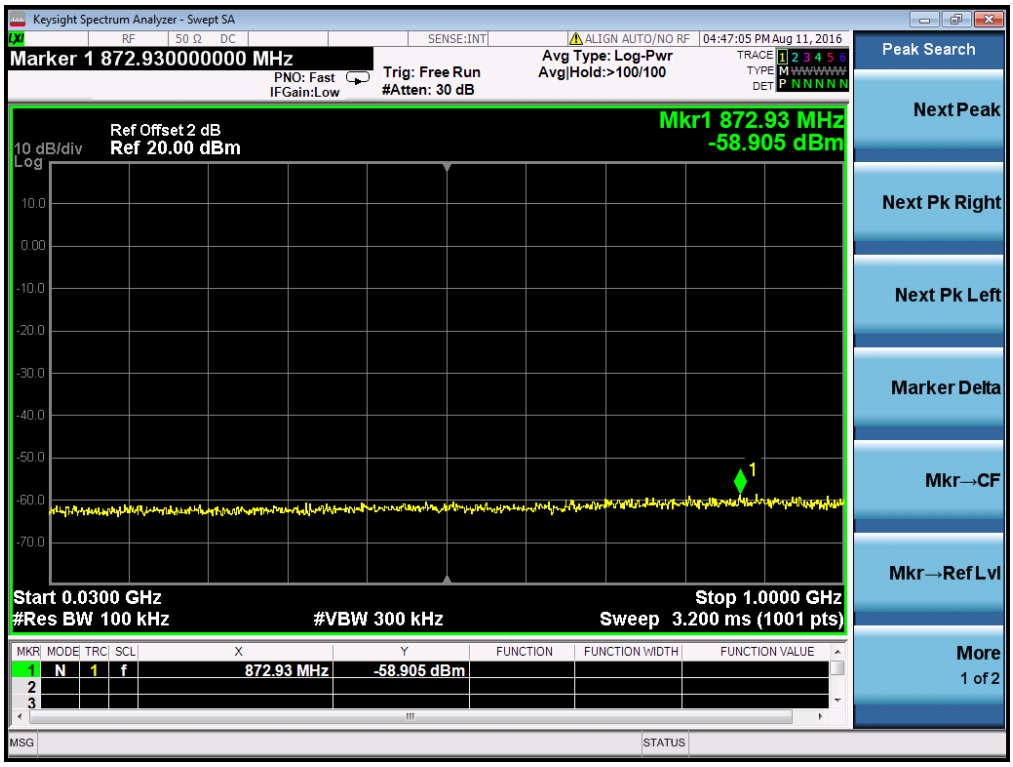


Channel = 6, 30MHz to 1GHz

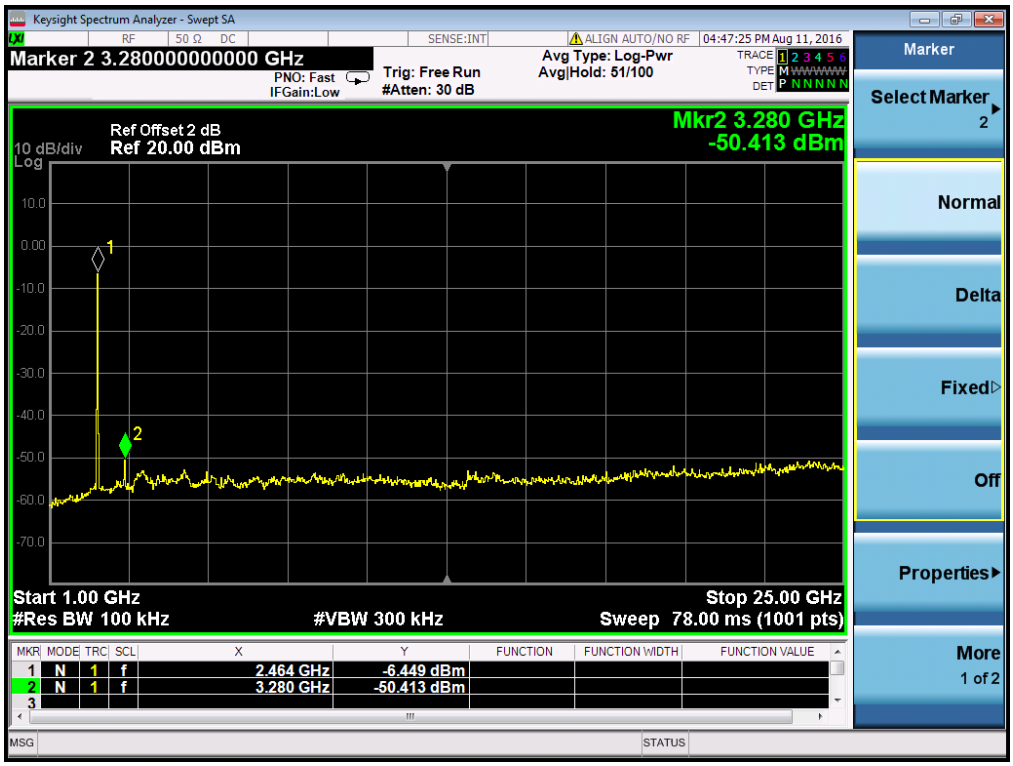


Channel = 6, 1GHz to 25GHz

802.11n20 - Conducted Spurious Emission Plot on channel 11

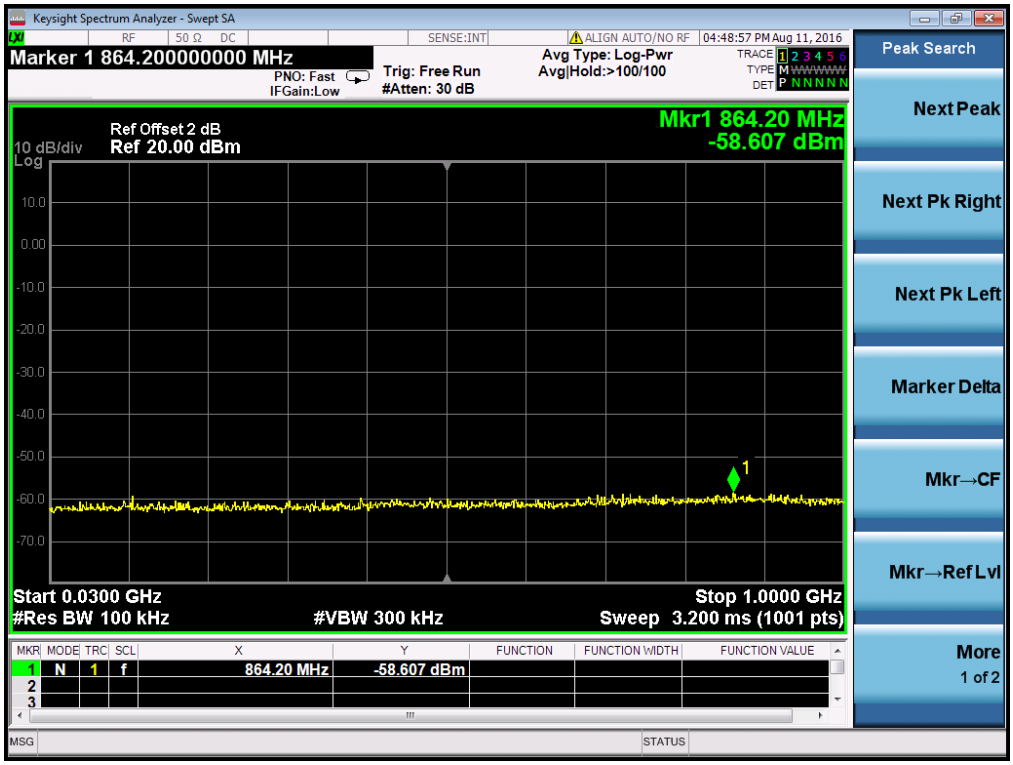


Channel = 11, 30MHz to 25GHz

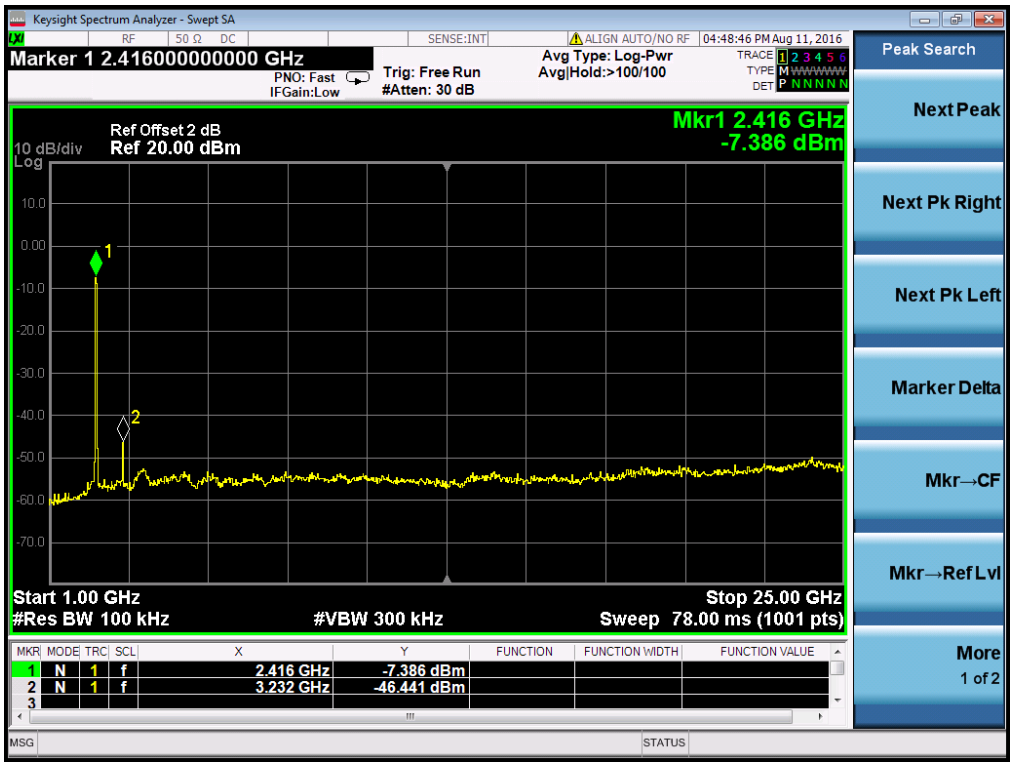


Channel = 11, 30MHz to 25GHz

802.11n40 - Conducted Spurious Emission Plot on channel 3

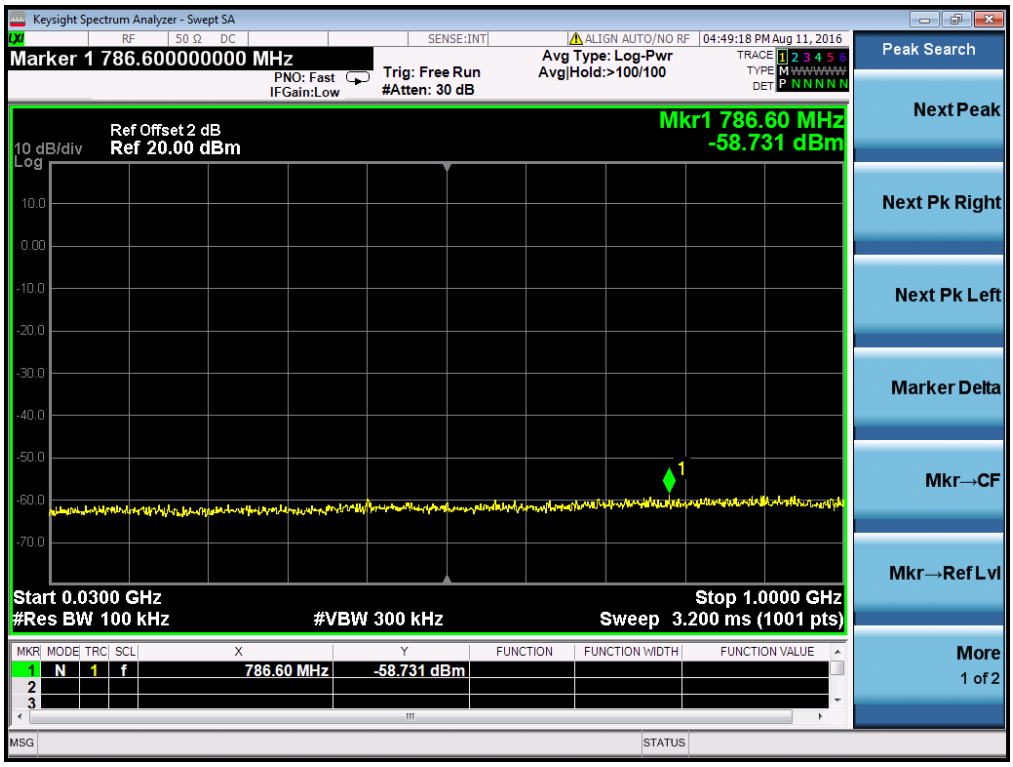


Channel = 3, 30MHz to 1GHz

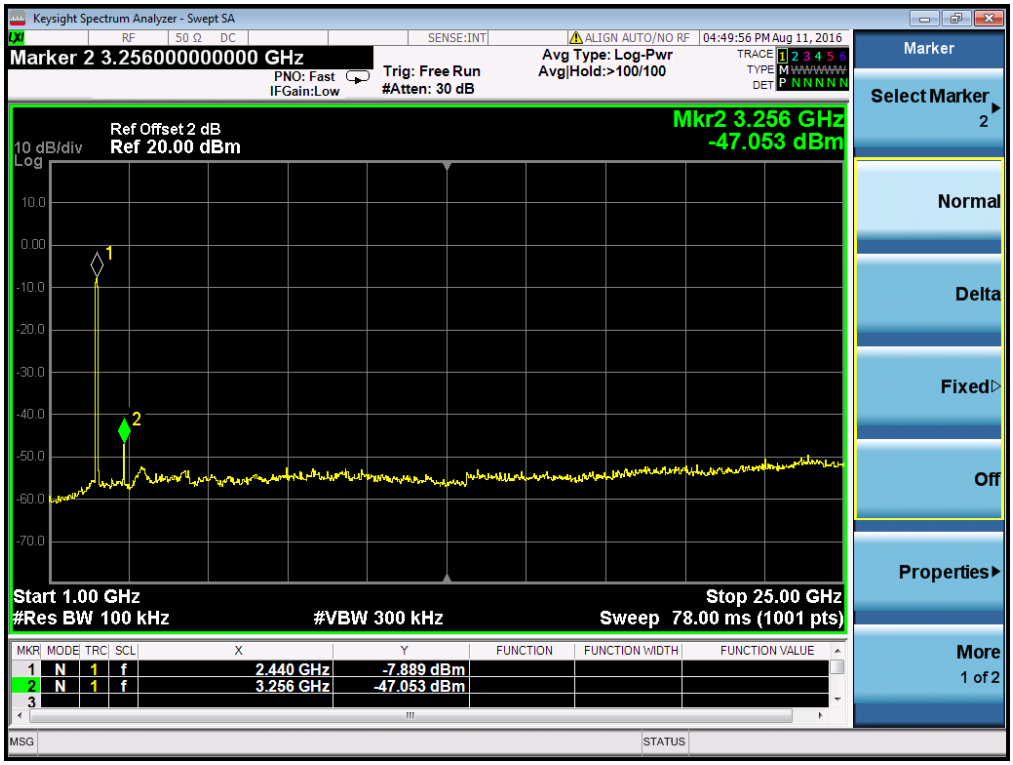


Channel = 3, 1GHz to 25GHz

802.11n40 - Conducted Spurious Emission Plot on channel 6

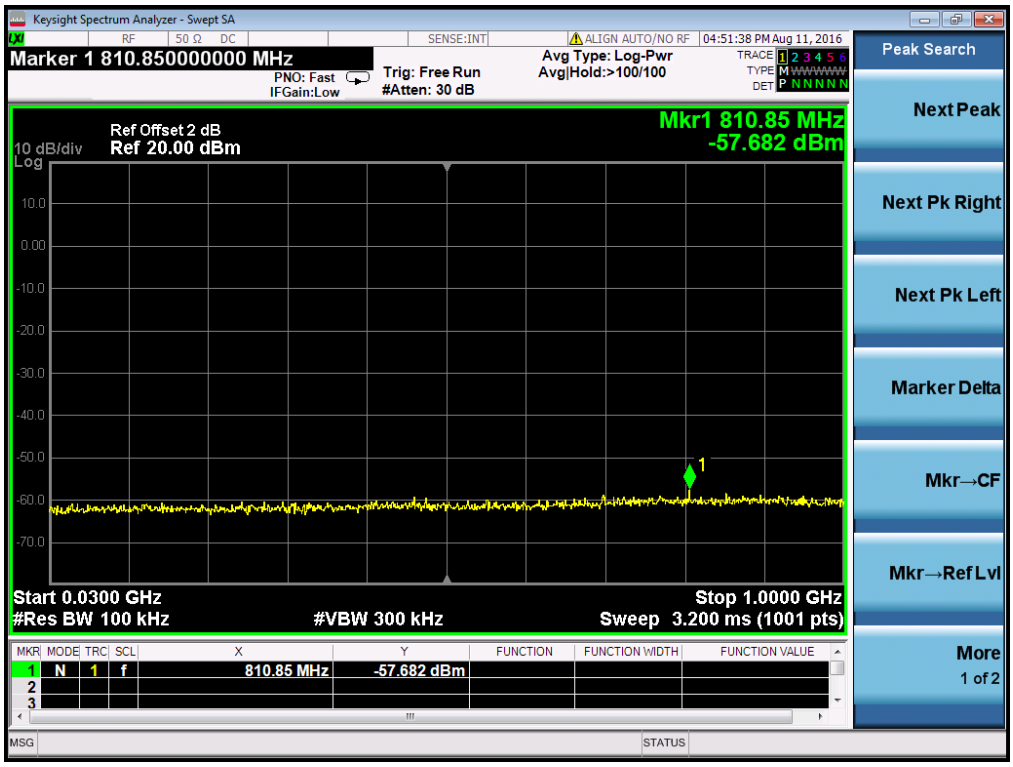


Channel = 6, 30MHz to 1GHz

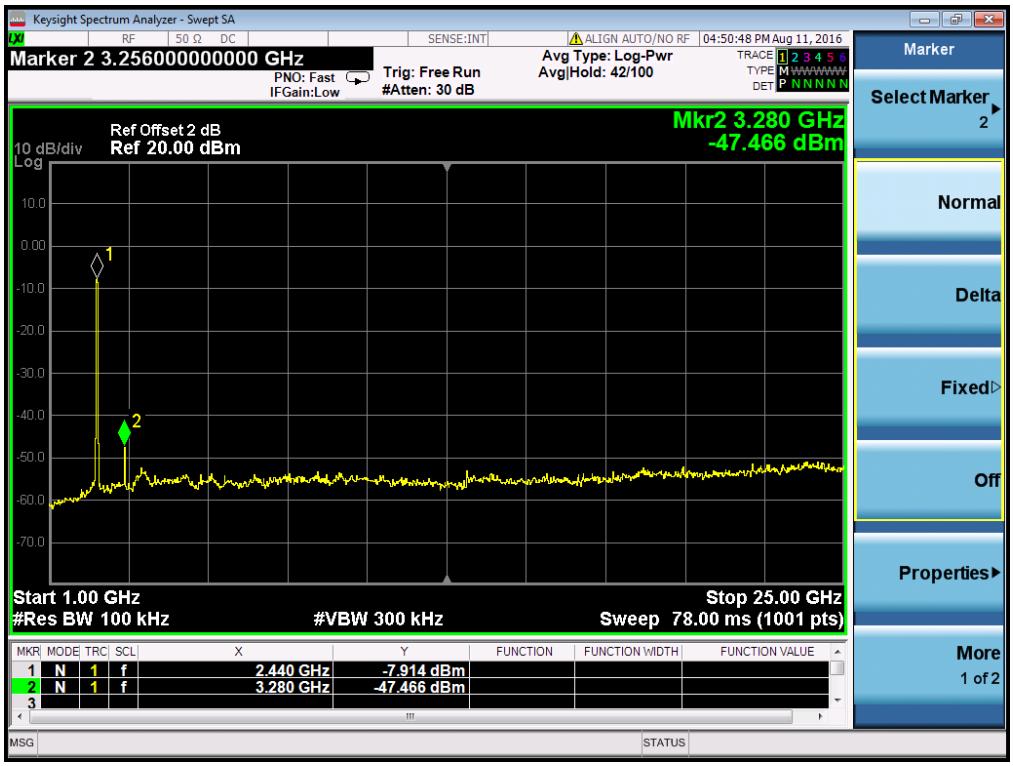


Channel = 6, 1GHz to 25GHz

802.11n40 - Conducted Spurious Emission Plot on channel 9



Channel = 9, 30MHz to 25GHz



Channel = 9, 30MHz to 25GHz

2.5. Power spectral density (PSD)

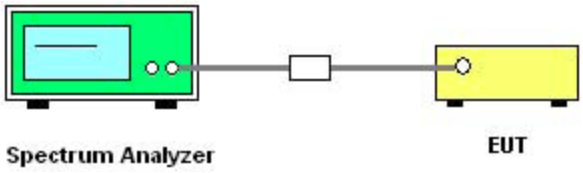
2.5.1. Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB558074 D01 v03r05.

2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.

4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)

5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.

6. Measure and record the results in the test report.

7. The Measured power density (dBm)/ 100kHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

2.5.5. Test Results of Power spectral density

802.11b mode				
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)		Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1		
2412	-11.098	-12.895	8	PASS
2437	-10.651	-12.949	8	PASS
2462	-10.557	-12.680	8	PASS

802.11g mode				
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)		Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1		
2412	-14.355	-11.937	8	PASS
2437	-14.548	-11.909	8	PASS
2462	-14.137	-11.399	8	PASS

802.11n20 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)			Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1	Total		
2412	-14.129	-11.993	-9.92	8	PASS
2437	-13.576	-10.944	-9.05	8	PASS
2462	-14.064	-11.236	-9.41	8	PASS

802.11n40 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)			Limit (dBm/3kHz)	Result
	Antenna 0	Antenna 1	Total		
2422	-14.702	-12.087	-10.19	8	PASS
2437	-16.588	-12.213	-10.86	8	PASS
2452	-14.527	-12.471	-10.37	8	PASS

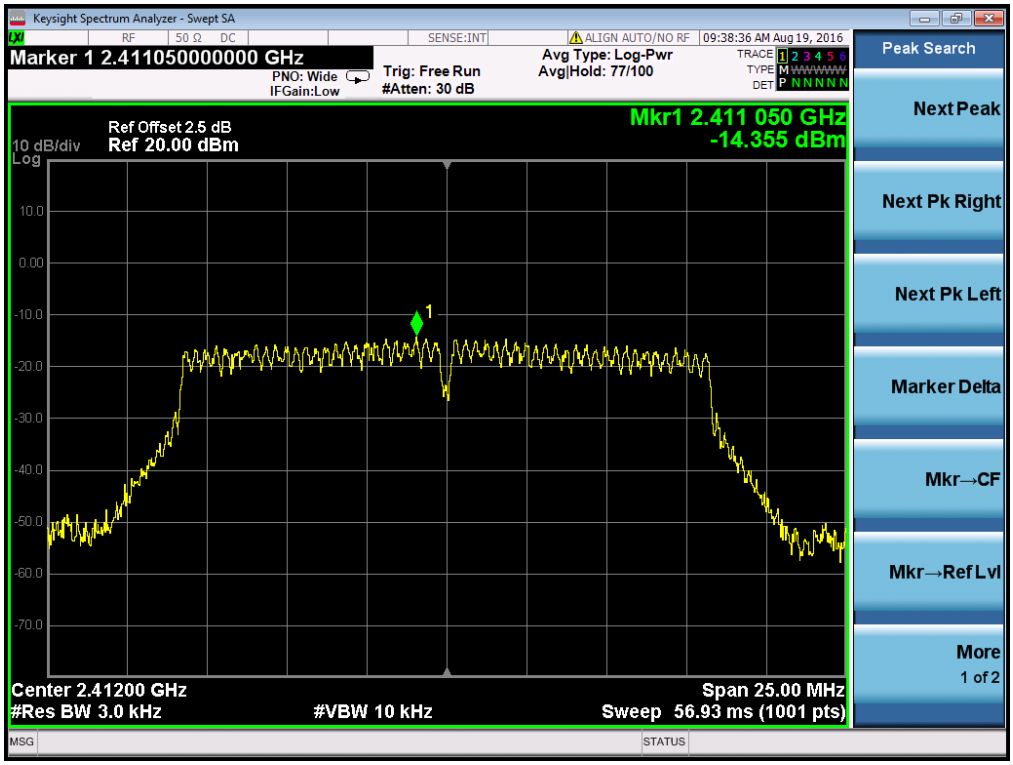
2.5.6. Test Results (plots) of Power spectral density

Antenna 0 - 802.11b - Channel 1

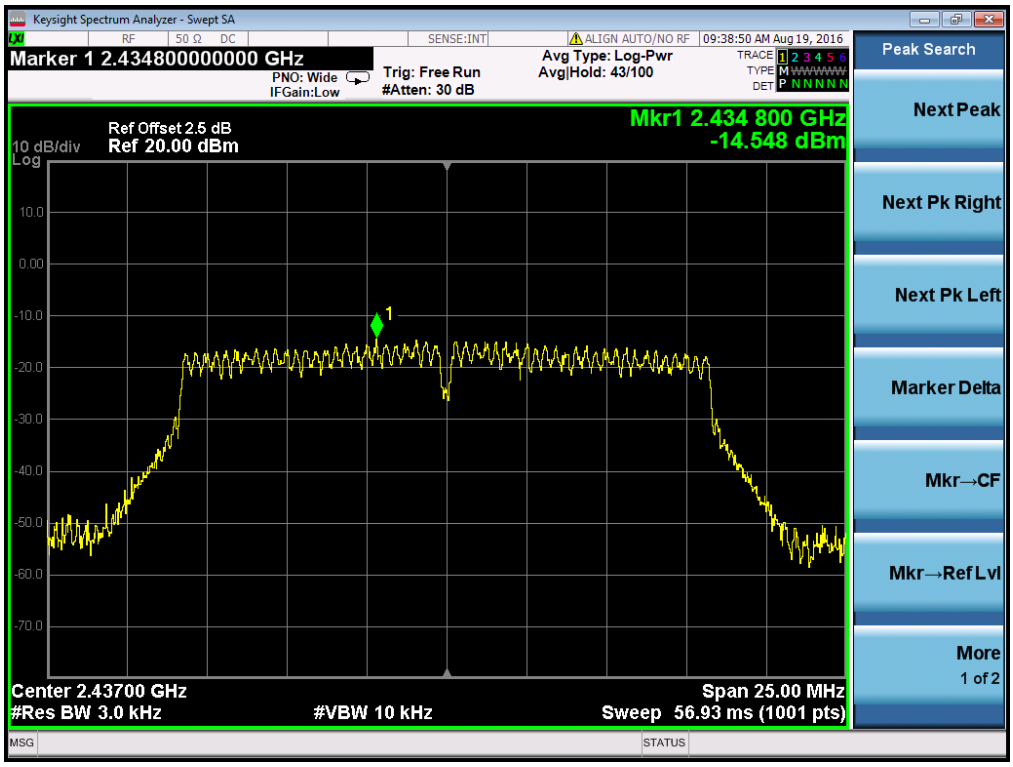
Antenna 0 - 802.11b - Channel 6

Antenna 0 - 802.11b - Channel 11

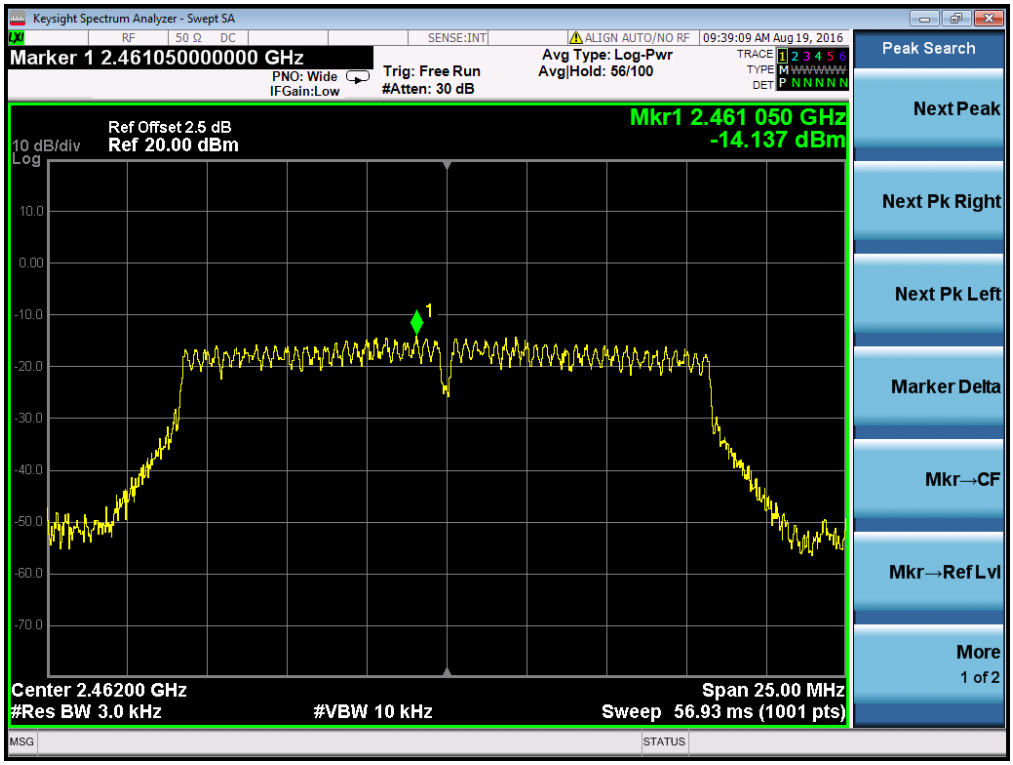
Antenna 0 - 802.11g - Channel 1



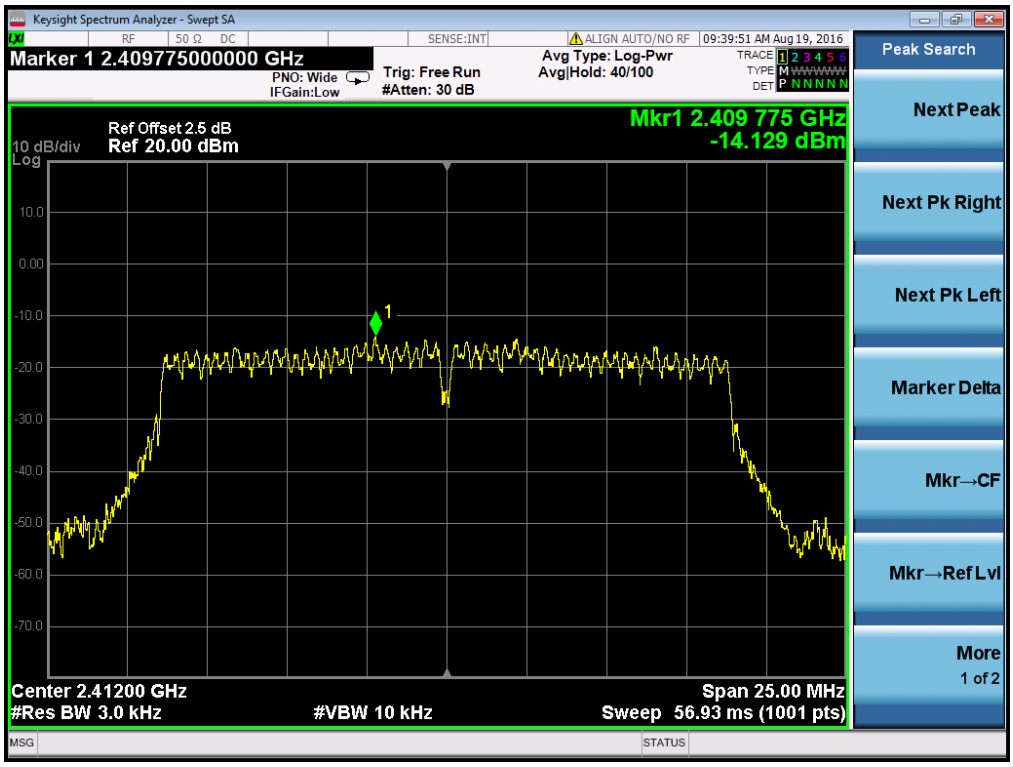
Antenna 0 - 802.11g - Channel 6



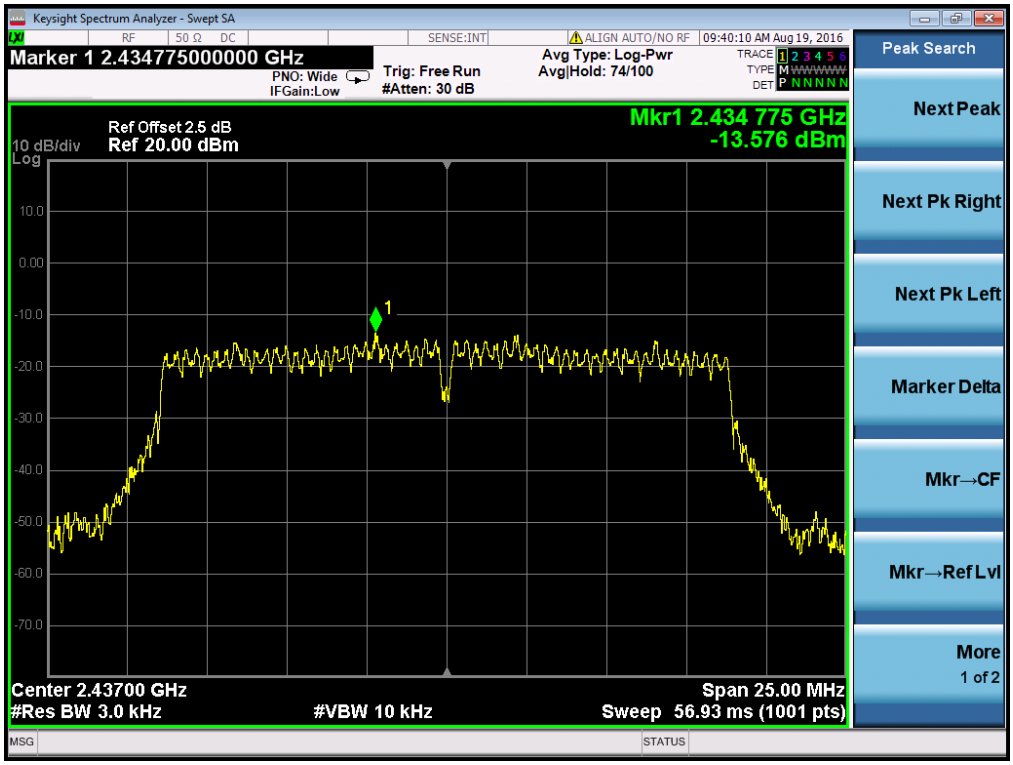
Antenna 0 - 802.11g - Channel 11



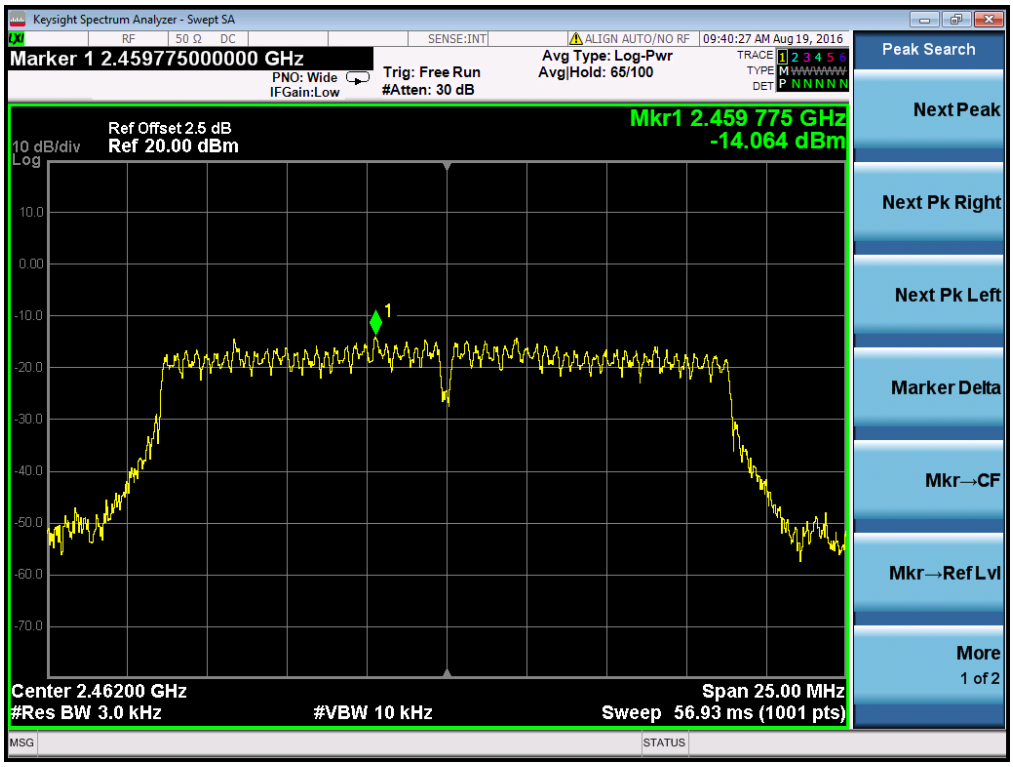
Antenna 0 - 802.11n20 - Channel 1



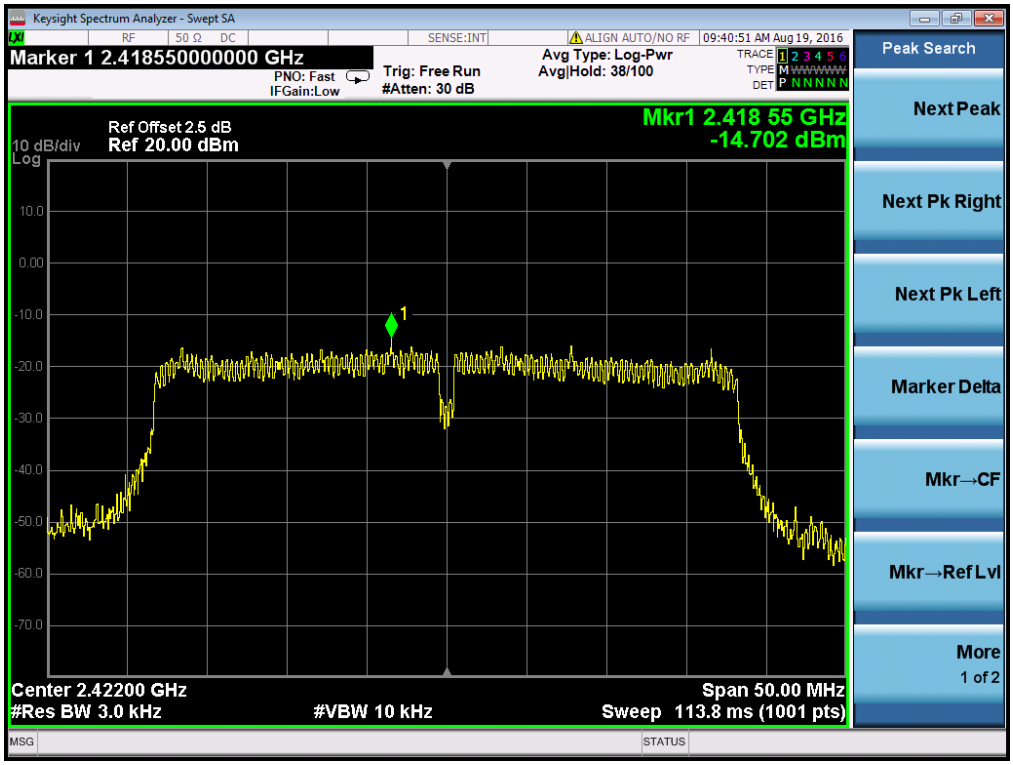
Antenna 0 - 802.11n20 - Channel 6



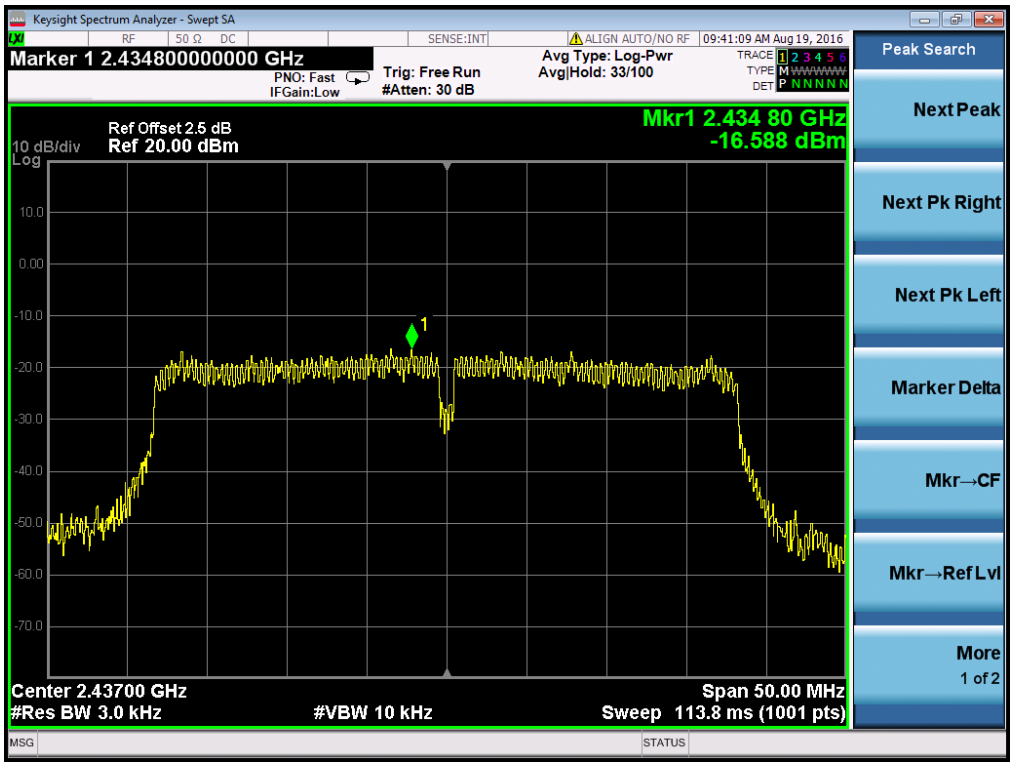
Antenna 0 - 802.11n20 - Channel 11



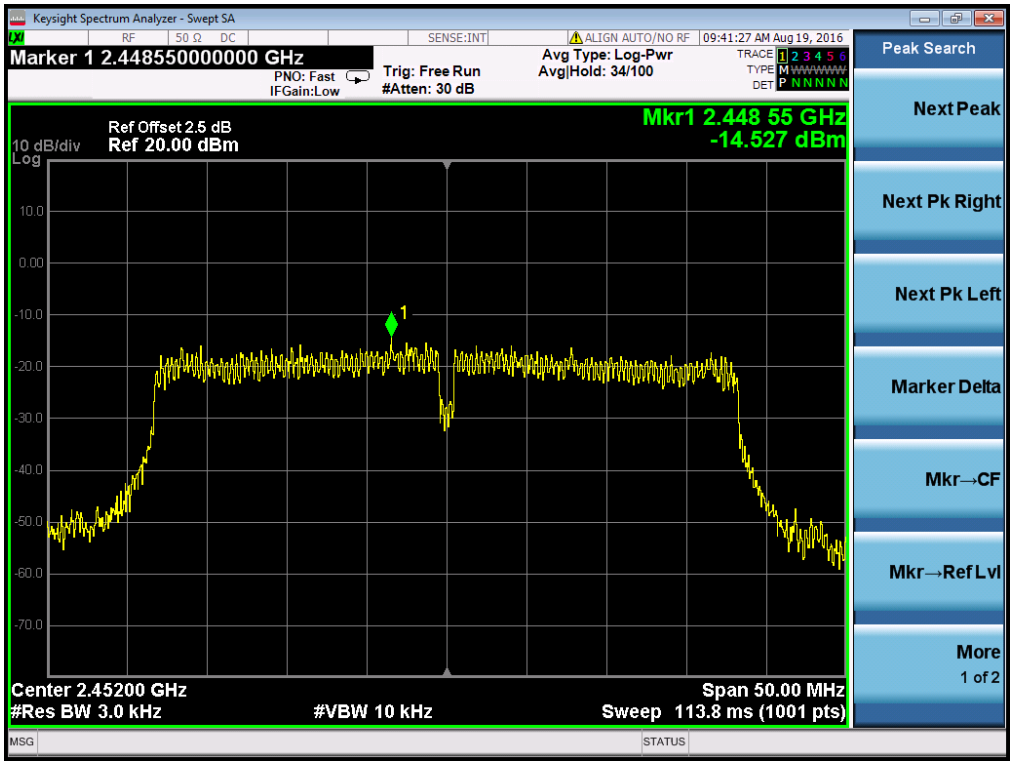
Antenna 0 - 802.11n40 - Channel 3



Antenna 0 - 802.11n40 - Channel 6



Antenna 0 - 802.11n40 - Channel 9

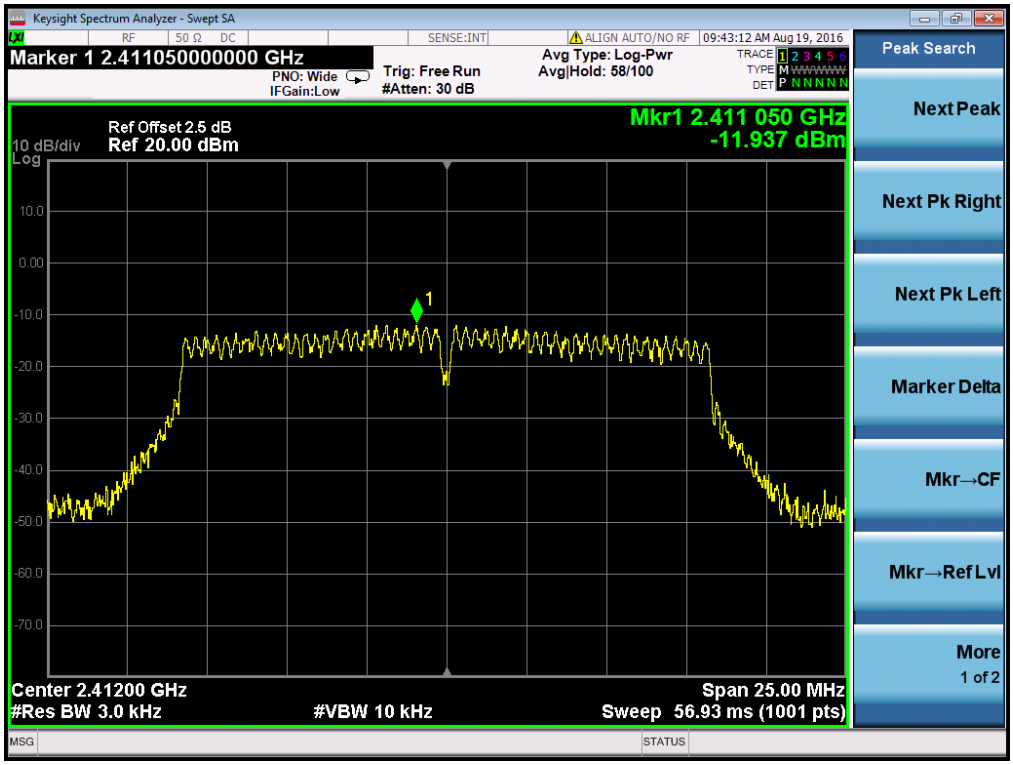


Antenna 1 - 802.11b - Channel 1

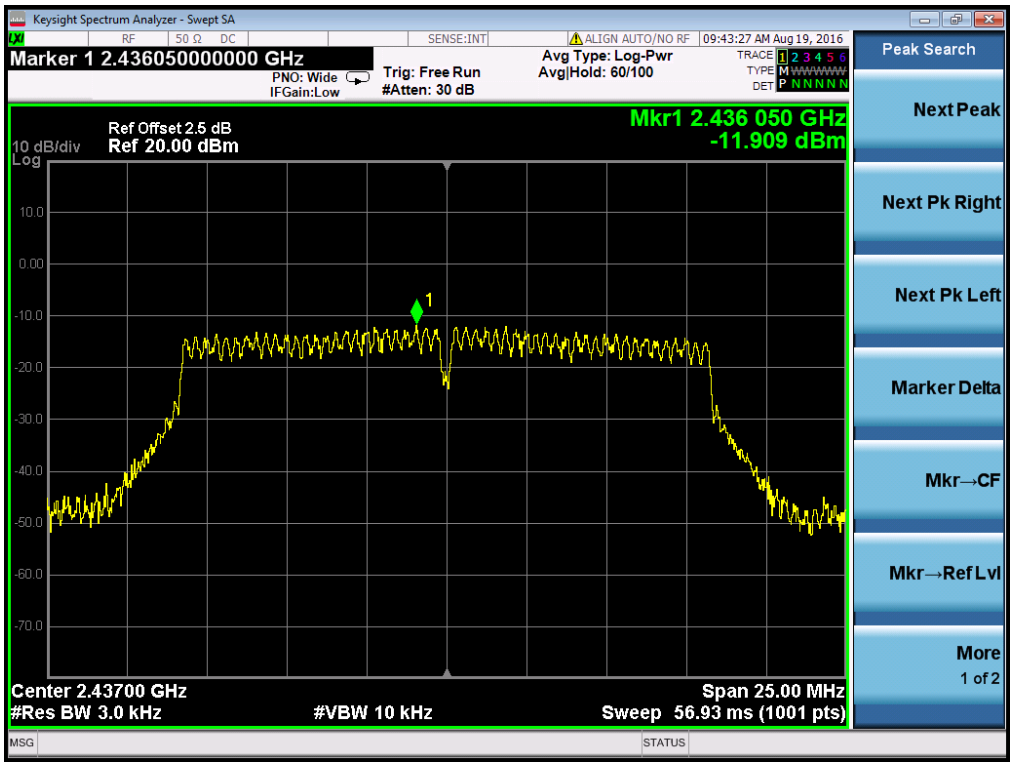
Antenna 1 - 802.11b - Channel 6

Antenna 1 - 802.11b - Channel 11

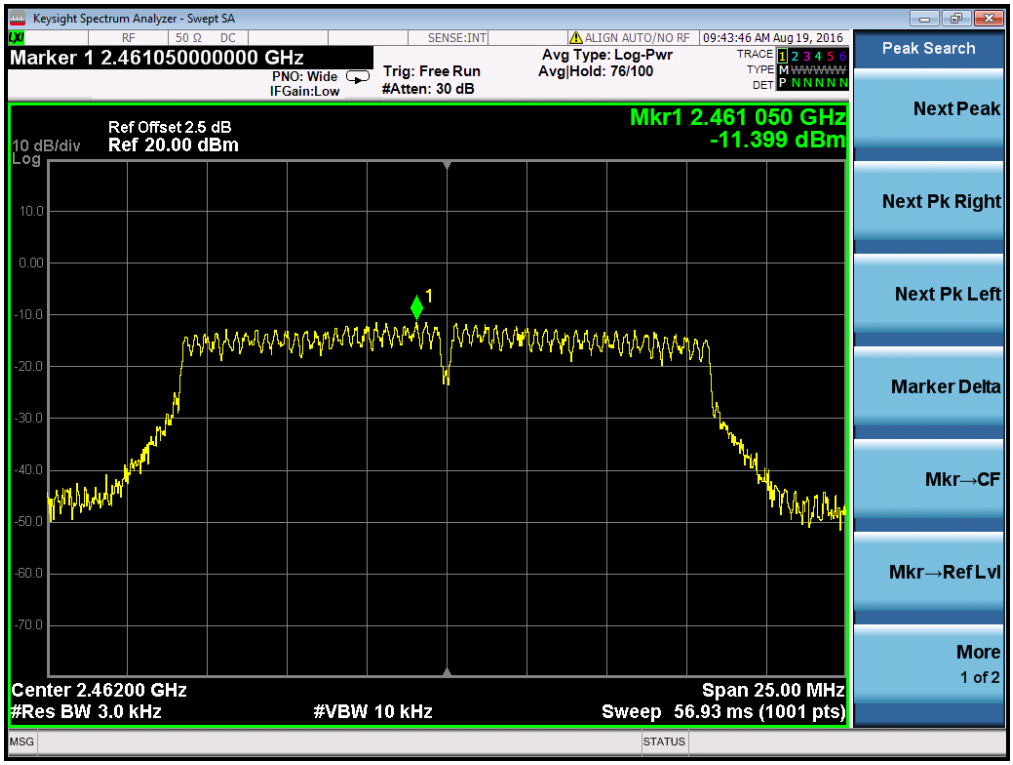
Antenna 1 - 802.11g - Channel 1



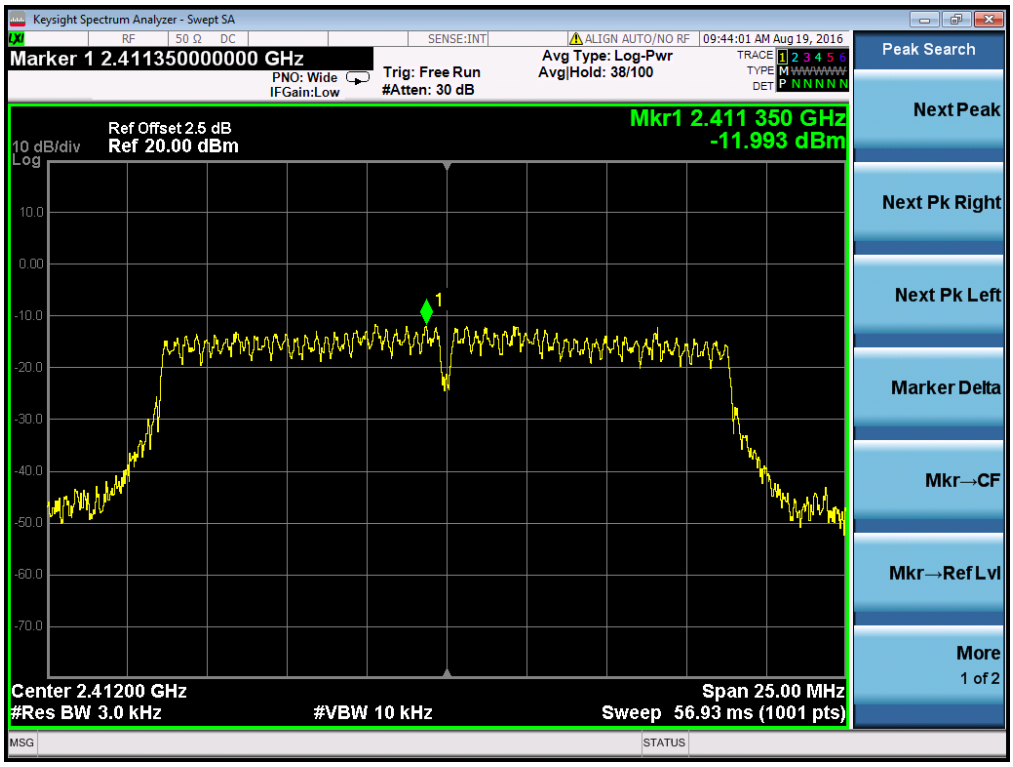
Antenna 1 - 802.11g - Channel 6



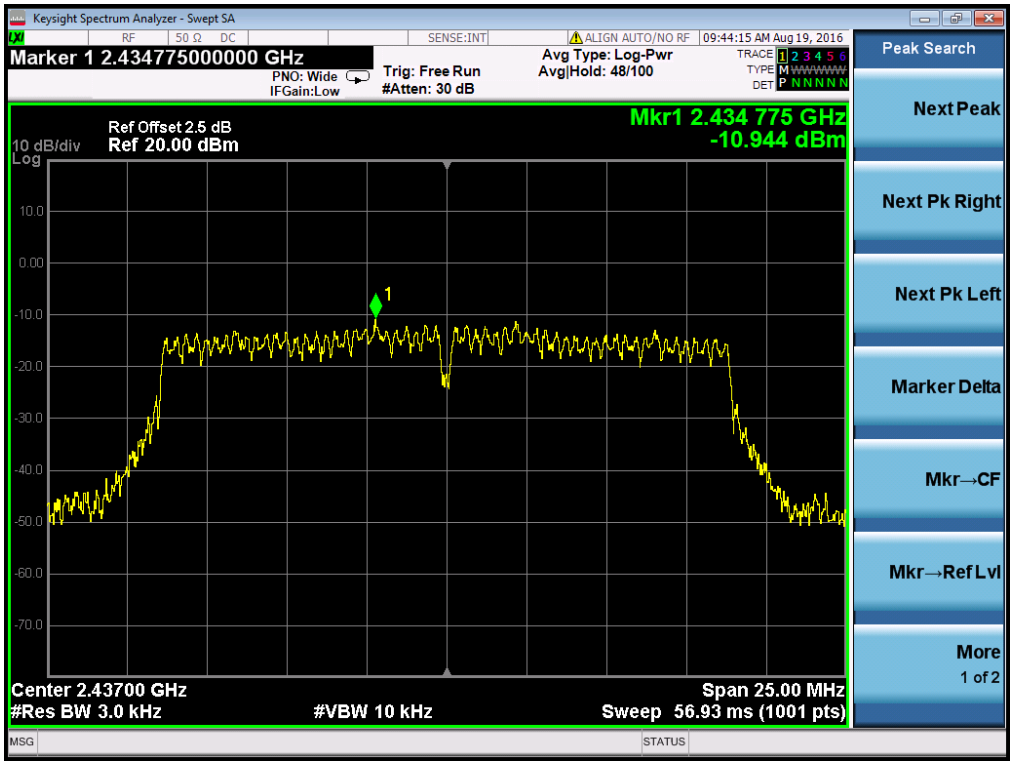
Antenna 1 - 802.11g - Channel 11



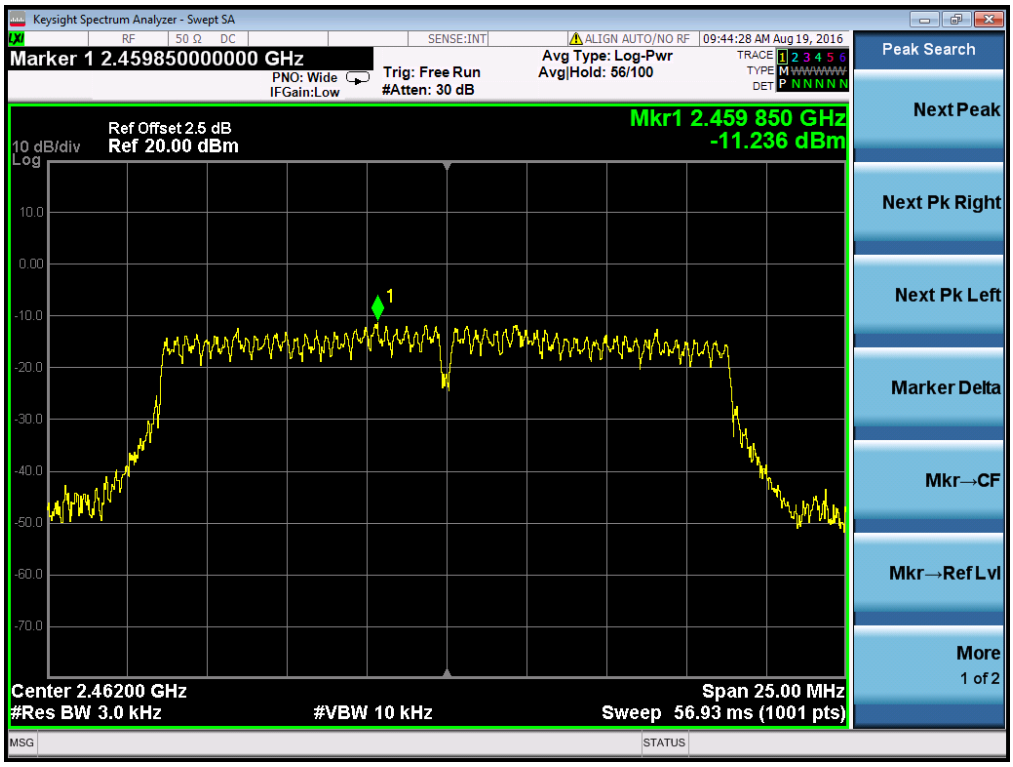
Antenna 1 - 802.11n20 - Channel 1



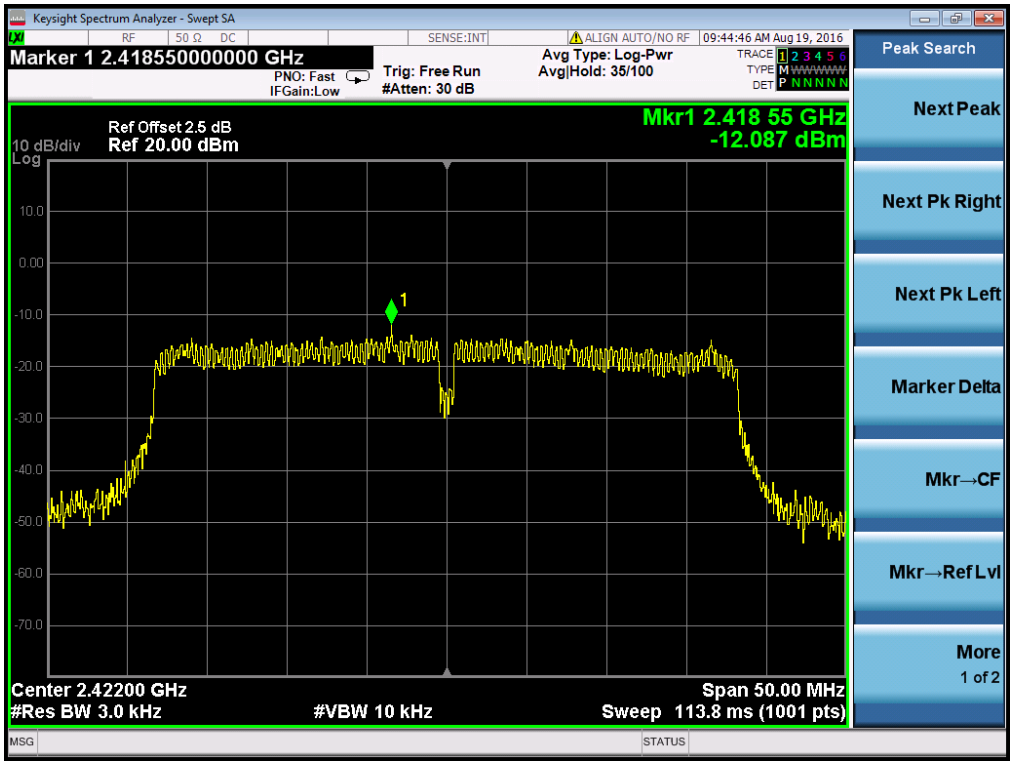
Antenna 1 - 802.11n20 - Channel 6



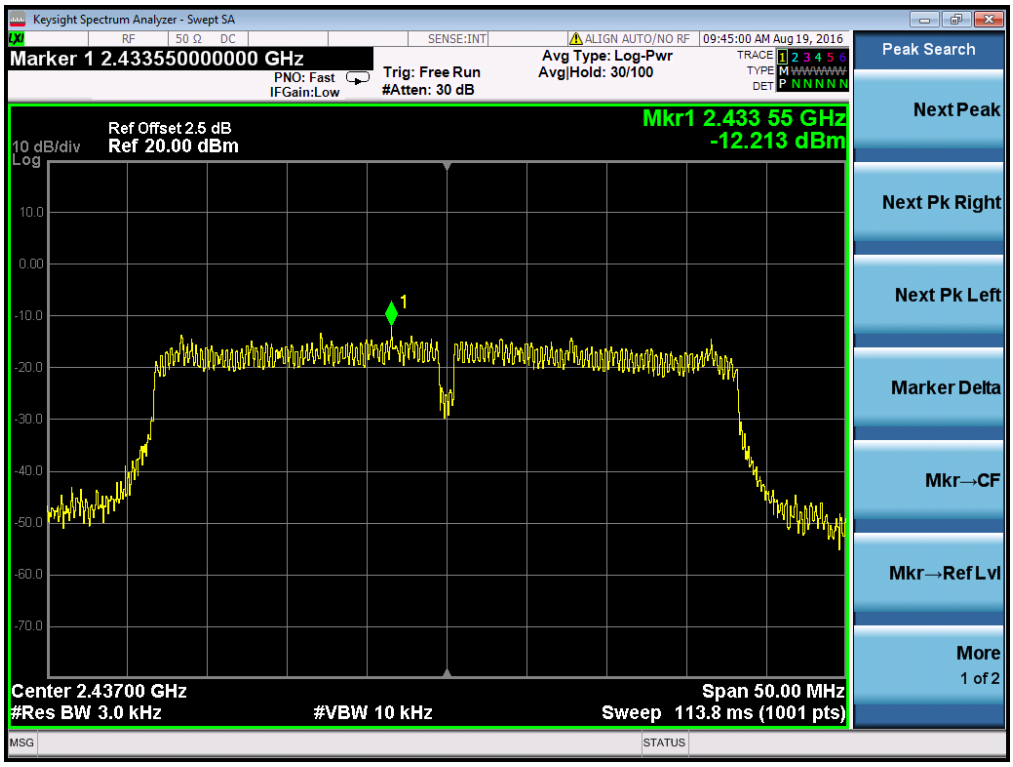
Antenna 1 - 802.11n20 - Channel 11



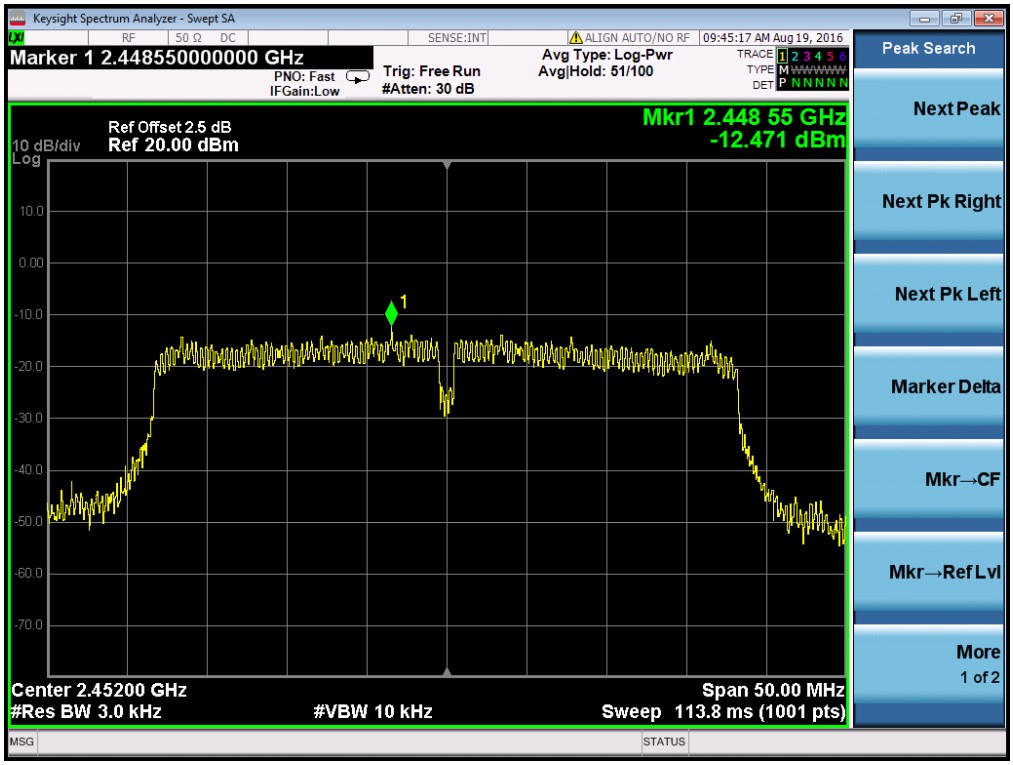
Antenna 1 - 802.11n40 - Channel 3



Antenna 1 - 802.11n40 - Channel 6



Antenna 1 - 802.11n40 - Channel 9



2.6. Radiated Band Edge and Spurious Emission

2.6.1. Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Note: Wireless charger configuration was evaluated.

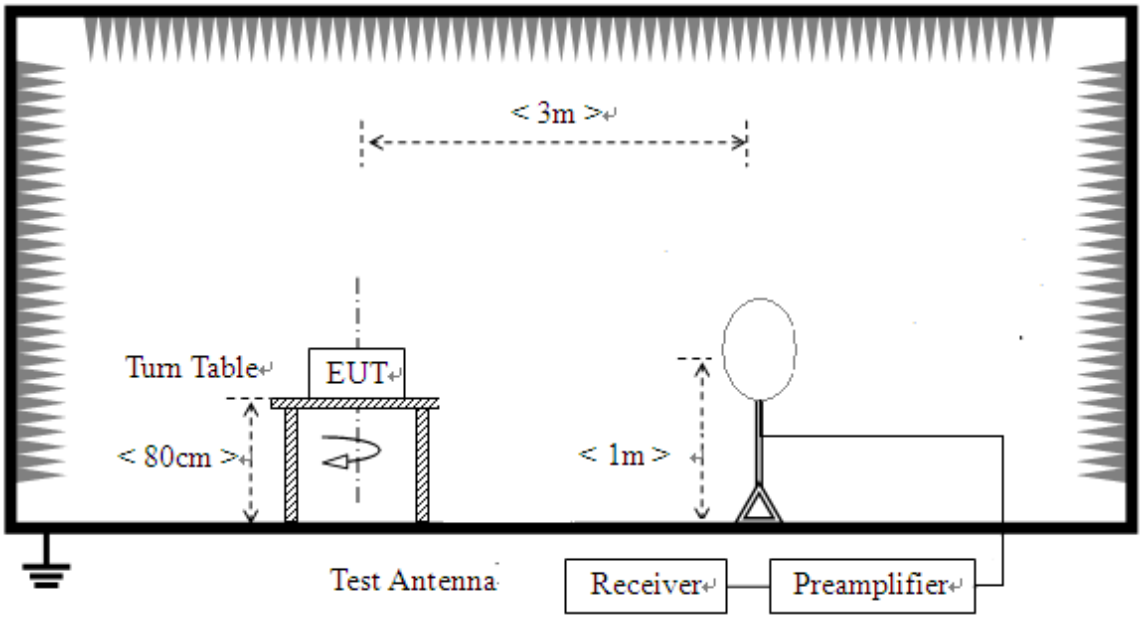
Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

2.6.2. Measuring Instruments

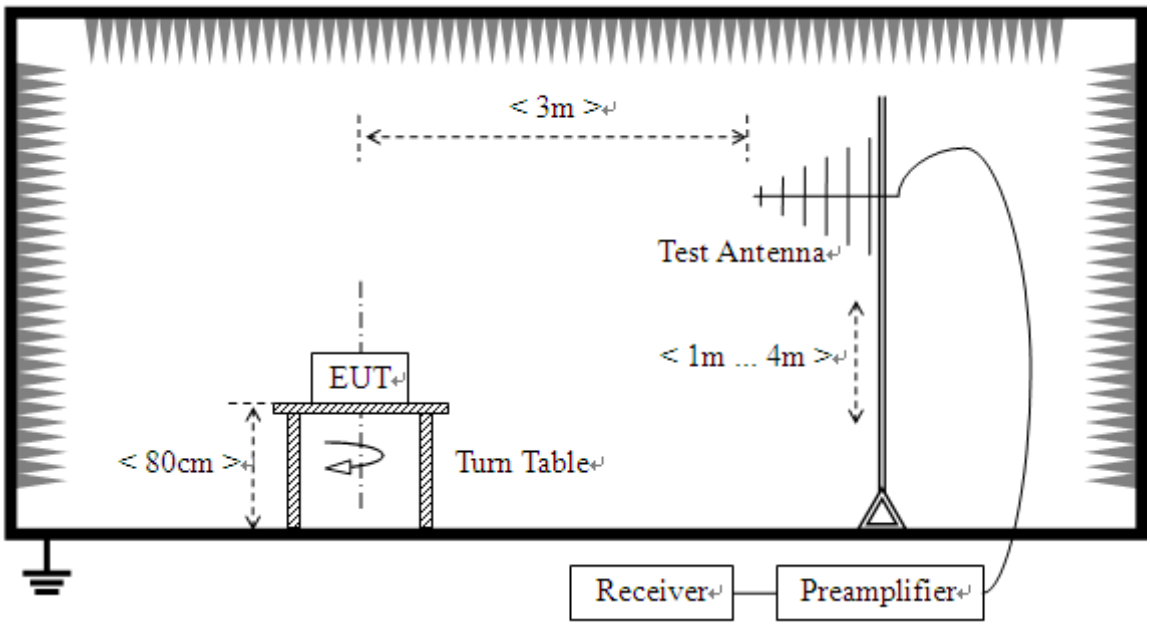
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

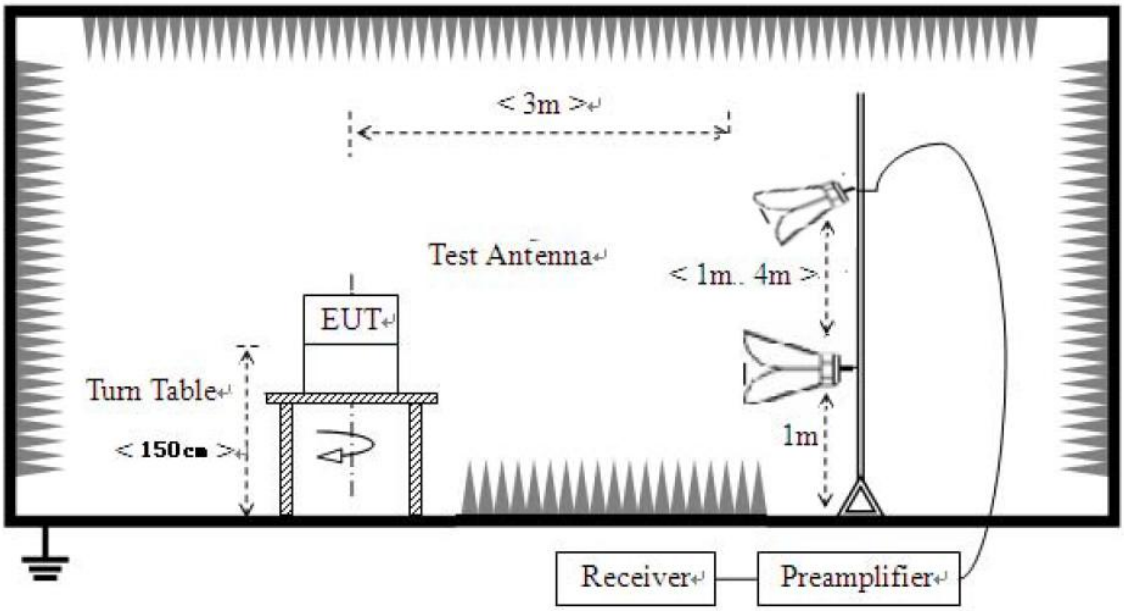
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.6.4. Test Procedures

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported.
   Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

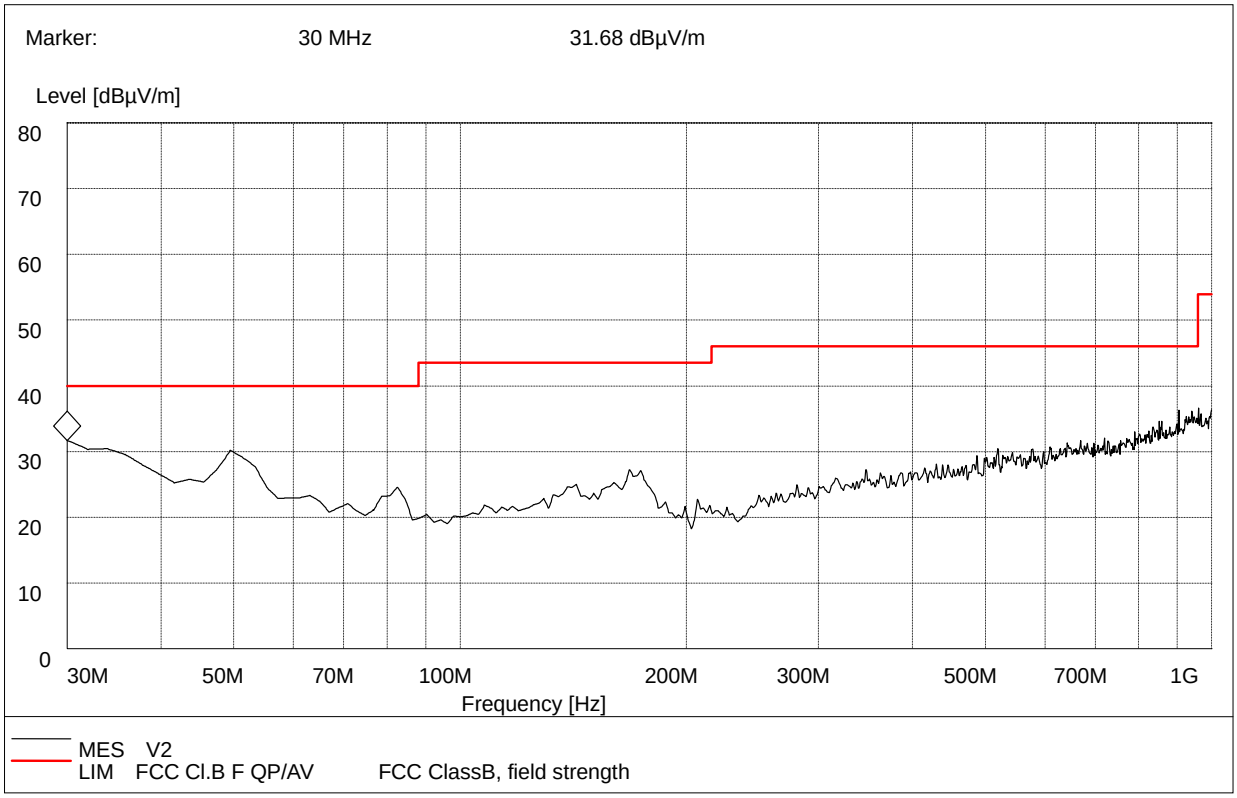
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.

2.6.5. Test Results of Radiated Band Edge and Spurious Emission

For 9 kHz to 30MHz

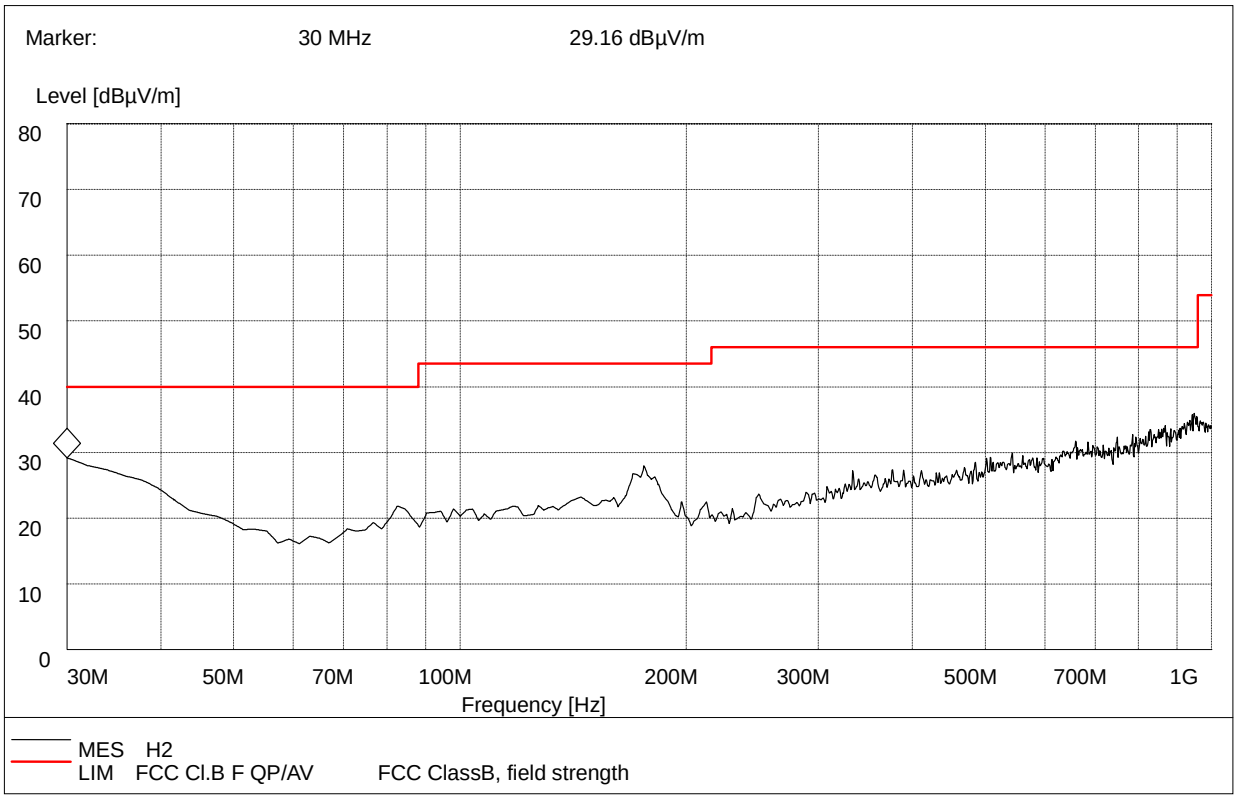
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

For 30MHz to 1000 MHz



30MHz to 1GHz, Antenna Vertical

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµV/m)	Antenna	Verdict
30.00	31.68	120.000	100.0	40.00	Vertical	Pass



30MHz to 1GHz, Antenna Horizontal

Frequency (MHz)	QuasiPeak (dBµ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµ V/m)	Antenna	Verdict
30.00	29.16	120.000	100.0	40.00	Horizontal	Pass

For 1GHz to 25 GHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11b_2412MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	48.65	PK	74.00	-25.35	1.50 H	18	47.35	1.3
2	2390.00	37.59	AV	54.00	-16.41	1.50 H	18	36.29	1.3
3	*2412.00	105.84	PK	/	/	1.50 H	18	103.84	2
4	*2412.00	92.96	AV	/	/	1.50 H	18	90.96	2
5	4824.00	49.26	PK	74.00	-24.74	1.50 H	0	42.86	6.4
6	4824.00	36.83	AV	54.00	-17.17	1.50 H	0	30.43	6.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11b_2412MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	49.55	PK	74.00	-24.45	1.50 V	22	48.25	1.3
2	2390.00	38.74	AV	54.00	-15.26	1.50 V	22	37.44	1.3
3	*2412.00	106.10	PK	/	/	1.50 V	22	104.1	2
4	*2412.00	94.87	AV	/	/	1.50 V	22	92.87	2
5	4824.00	48.75	PK	74.00	-25.25	1.50 V	0	42.35	6.4
6	4824.00	36.84	AV	54.00	-17.16	1.50 V	0	30.44	6.4

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11b_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	107.46	PK	/	/	1.50 H	20	105.36	2.1
2	*2437.00	96.41	AV	/	/	1.50 H	20	94.31	2.1
3	4874.00	48.23	PK	74.00	-25.77	1.50 H	0	41.73	6.5
4	4874.00	36.91	AV	54.00	-17.09	1.50 H	0	30.41	6.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11b_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	108.27	PK	/	/	1.50 V	25	106.17	2.1
2	*2437.00	97.24	AV	/	/	1.50 V	25	95.14	2.1
3	4874.00	49.04	PK	74.00	-24.96	1.50 V	0	42.54	6.5
4	4874.00	36.90	AV	54.00	-17.1	1.50 V	0	30.4	6.5

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11b_2462MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2462.00	108.10	PK	/	/	1.50 H	28	105.8	2.3
2	*2462.00	95.23	AV	/	/	1.50 H	28	92.93	2.3
3	2483.50	48.51	PK	74.00	-25.49	1.50 H	28	45.91	2.6
4	2483.50	36.78	AV	54.00	-17.22	1.50 H	28	34.18	2.6
5	4924.00	48.77	PK	74.00	-25.23	1.50 H	0	42.07	6.7
6	4924.00	37.05	AV	54.00	-16.95	1.50 H	0	30.35	6.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11b_2462MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2462.00	107.96	PK	/	/	1.50 V	30	105.66	2.3
2	*2462.00	94.82	AV	/	/	1.50 V	30	92.52	2.3
3	2483.50	49.36	PK	74.00	-24.64	1.50 V	30	46.76	2.6
4	2483.50	37.36	AV	54.00	-16.64	1.50 V	30	34.76	2.6
5	4924.00	49.17	PK	74.00	-24.83	1.50 V	0	42.47	6.7
6	4924.00	37.43	AV	54.00	-16.57	1.50 V	0	30.73	6.7

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11g_2412MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	49.82	PK	74.0	-24.18	1.50 H	32	48.52	1.3
2	2390.00	38.74	AV	54.0	-15.26	1.50 H	32	37.44	1.3
3	*2412.00	105.87	PK	/	/	1.50 H	32	103.87	2
4	*2412.00	94.82	AV	/	/	1.50 H	32	92.82	2
5	4824.00	50.77	PK	74.00	-23.23	1.50 H	0	44.37	6.4
6	4824.00	38.83	AV	54.00	-15.17	1.50 H	0	32.43	6.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11g_2412MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	47.07	PK	74.0	-26.93	1.50 V	35	45.77	1.3
2	2390.00	37.76	AV	54.0	-16.24	1.50 V	35	36.46	1.3
3	*2412.00	106.80	PK	/	/	1.50 V	35	104.8	2
4	*2412.00	93.66	AV	/	/	1.50 V	35	91.66	2
5	4824.00	51.16	PK	74.00	-22.84	1.50 V	0	44.76	6.4
6	4824.00	38.95	AV	54.00	-15.05	1.50 V	0	32.55	6.4

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11g_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	105.41	PK	/	/	1.50 H	21	103.31	2.1
2	*2437.00	93.33	AV	/	/	1.50 H	21	91.23	2.1
3	4874.00	50.64	PK	74.00	-23.36	1.50 H	0	44.14	6.5
4	4874.00	38.89	AV	54.00	-15.11	1.50 H	0	32.39	6.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11g_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	106.34	PK	/	/	1.50 V	17	104.24	2.1
2	*2437.00	95.26	AV	/	/	1.50 V	17	93.16	2.1
3	4874.00	49.33	PK	74.00	-24.67	1.50 V	0	42.83	6.5
4	4874.00	38.21	AV	54.00	-15.79	1.50 V	0	31.71	6.5

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11g_2462MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2462.00	106.97	PK	/	/	1.50 H	24	104.67	2.3
2	*2462.00	94.85	AV	/	/	1.50 H	24	92.55	2.3
3	2483.50	49.07	PK	74.0	-24.93	1.50 H	24	46.47	2.6
4	2483.50	37.36	AV	54.0	-16.64	1.50 H	24	34.76	2.6
5	4924.00	49.79	PK	74.0	-24.21	1.50 H	0	43.09	6.7
6	4924.00	38.05	AV	54.0	-15.95	1.50 H	0	31.35	6.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11g_2462MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2462.00	104.25	PK	/	/	1.50 V	21	101.95	2.3
2	*2462.00	93.42	AV	/	/	1.50 V	21	91.12	2.3
3	2483.50	53.00	PK	74.0	-21.00	1.50 V	21	50.40	2.6
4	2483.50	38.28	AV	54.0	-15.72	1.50 V	21	35.68	2.6
5	4924.00	51.04	PK	74.0	-22.96	1.50 V	0	44.34	6.7
6	4924.00	39.13	AV	54.0	-14.87	1.50 V	0	32.43	6.7

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_2412MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	49.76	PK	74.00	-24.24	1.50 H	30	48.46	1.3
2	2390.00	38.65	AV	54.00	-15.35	1.50 H	30	37.35	1.3
3	*2412.00	106.62	PK	/	/	1.50 H	30	104.62	2
4	*2412.00	95.84	AV	/	/	1.50 H	30	93.84	2
5	4824.00	51.37	PK	74.00	-22.63	1.50 H	0	44.97	6.4
6	4824.00	38.74	AV	54.00	-15.26	1.50 H	0	32.34	6.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_2412MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	48.24	PK	74.00	-25.76	1.50 V	28	46.94	1.3
2	2390.00	37.51	AV	54.00	-16.49	1.50 V	28	36.21	1.3
3	*2412.00	105.29	PK	/	/	1.50 V	28	103.29	2
4	*2412.00	94.68	AV	/	/	1.50 V	28	92.68	2
5	4824.00	50.81	PK	74.00	-23.19	1.50 V	0	44.41	6.4
6	4824.00	38.14	AV	54.00	-15.86	1.50 V	0	31.74	6.4

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	106.82	PK	/	/	1.50 H	24	104.72	2.1
2	*2437.00	94.74	AV	/	/	1.50 H	24	92.64	2.1
3	4874.00	51.63	PK	74.00	-22.37	1.50 H	0	45.13	6.5
4	4874.00	38.85	AV	54.00	-15.15	1.50 H	0	32.35	6.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	106.75	PK	/	/	1.50 V	28	104.65	2.1
2	*2437.00	94.52	AV	/	/	1.50 V	28	92.42	2.1
3	4874.00	50.57	PK	74.00	-23.43	1.50 V	0	44.07	6.5
4	4874.00	37.96	AV	54.00	-16.04	1.50V	0	31.46	6.5

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_2462MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2462.00	105.73	PK	/	/	1.50 H	31	103.43	2.3
2	*2462.00	94.14	AV	/	/	1.50 H	31	91.84	2.3
3	2483.50	48.96	PK	74.00	-25.04	1.50 H	31	46.36	2.6
4	2483.50	37.67	AV	54.00	-16.33	1.50 H	31	35.07	2.6
5	4924.00	51.24	PK	74.00	-22.76	1.50 H	0	44.54	6.7
6	4924.00	38.63	AV	54.00	-15.37	1.50 H	0	31.93	6.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_2462MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2462.00	106.18	PK	/	/	1.50 V	32	103.88	2.3
2	*2462.00	94.26	AV	/	/	1.50 V	32	91.96	2.3
3	2483.50	49.08	PK	74.00	-24.92	1.50 V	32	46.48	2.6
4	2483.50	38.65	AV	54.00	-15.35	1.50 V	32	36.05	2.6
5	4924.00	50.37	PK	74.00	-23.63	1.50 V	0	43.67	6.7
6	4924.00	38.05	AV	54.00	-15.95	1.50 V	0	31.35	6.7

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_2422MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	48.34	PK	74.0	-25.66	1.50 H	33	47.04	1.3
2	2390.00	36.29	AV	54.0	-17.71	1.50 H	33	34.99	1.3
3	*2422.00	104.07	PK	/	/	1.50 H	33	102.07	2
4	*2422.00	89.44	AV	/	/	1.50 H	33	87.44	2
5	4844.00	49.55	PK	74.00	-24.45	1.50 H	0	43.15	6.4
6	4844.00	37.84	AV	54.00	-16.16	1.50 H	0	31.44	6.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_2422MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	2390.00	49.68	PK	74.0	-24.32	1.50 V	28	48.38	1.3
2	2390.00	37.02	AV	54.0	-16.98	1.50 V	28	35.72	1.3
3	*2422.00	103.73	PK	/	/	1.50 V	28	101.73	2
4	*2422.00	90.32	AV	/	/	1.50 V	28	88.32	2
5	4844.00	49.37	PK	74.00	-24.63	1.50 V	0	42.97	6.4
6	4844.00	39.25	AV	54.00	-14.75	1.50 V	0	32.85	6.4

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	102.84	PK	/	/	1.50 H	12	100.74	2.1
2	*2437.00	89.18	AV	/	/	1.50 H	12	87.08	2.1
3	4874.00	49.64	PK	74.00	-24.36	1.50 H	0	43.14	6.5
4	4874.00	38.29	AV	54.00	-15.71	1.50 H	0	31.79	6.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_2437MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2437.00	103.29	PK	/	/	1.50 V	16	101.19	2.1
2	*2437.00	90.88	AV	/	/	1.50 V	16	88.78	2.1
3	4874.00	48.33	PK	74.00	-25.67	1.50 V	0	41.83	6.5
4	4874.00	37.90	AV	54.00	-16.1	1.50 V	0	31.4	6.5

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_2452MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2452.00	104.40	PK	/	/	1.50 H	31	102.1	2.3
2	*2452.00	90.20	AV	/	/	1.50 H	31	87.9	2.3
3	2483.50	55.31	PK	74.0	-18.69	1.50 H	31	52.71	2.6
4	2483.50	38.71	AV	54.0	-15.29	1.50 H	31	36.11	2.6
5	4904.00	49.17	PK	74.0	-24.83	1.50 H	0	42.47	6.7
6	4904.00	37.42	AV	54.0	-16.58	1.50 H	0	30.72	6.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_2452MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	*2452.00	102.71	PK	/	/	1.50 V	35	100.41	2.3
2	*2452.00	90.44	AV	/	/	1.50 V	35	88.14	2.3
3	2483.50	56.47	PK	74.0	-17.53	1.50 V	35	53.87	2.6
4	2483.50	39.94	AV	54.0	-14.06	1.50 V	35	37.34	2.6
5	4904.00	48.88	PK	74.0	-25.12	1.50 V	0	42.18	6.7
6	4904.00	37.42	AV	54.0	-16.58	1.50 V	0	30.72	6.7

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) − Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level − Limit value
5. " * ": Fundamental frequency.

2.7. Conducted Emission

2.7.1. Limit of Conducted Emission

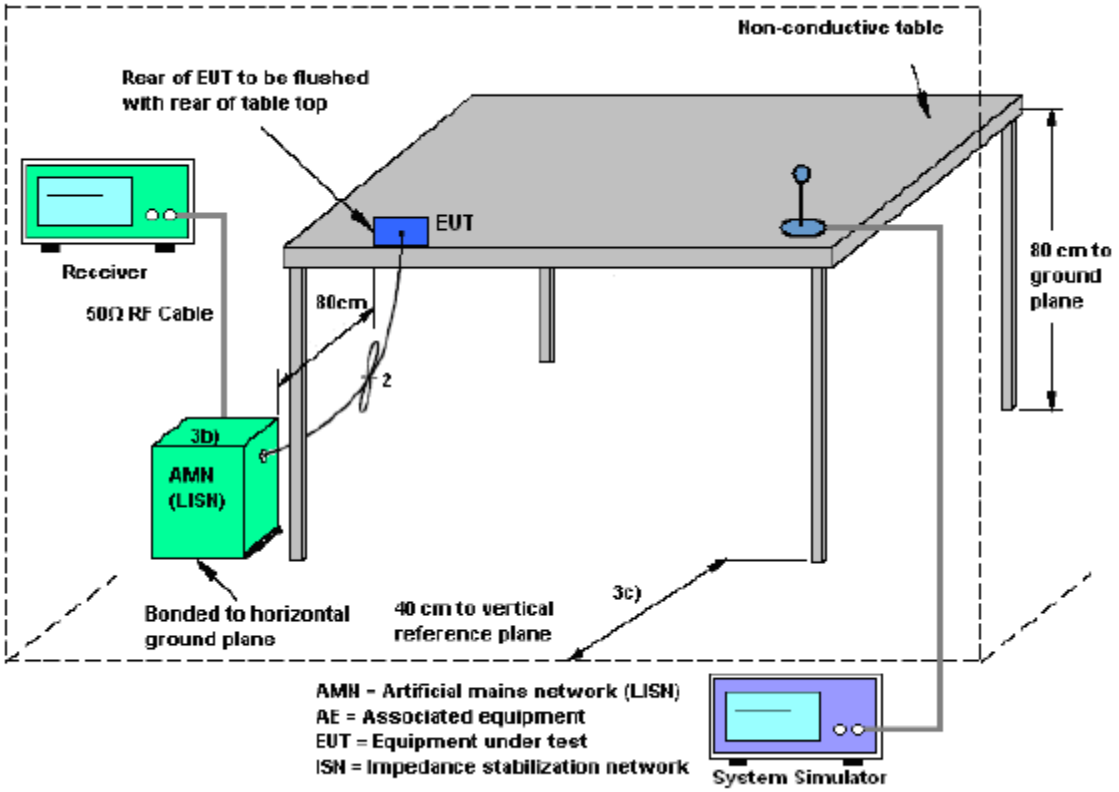
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup



2.7.4. Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

2.7.5. Test Results of Conducted Emission

The EUT is a module，this test item is not applicable.

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI TEST RECEIVER	RS	ESI 26	100009	2015/11/02
2	RF TEST PANEL	RS	TS / RSP	335015/ 0017	N/A
3	EMI TEST SOFTWARE	RS	ESK1	N/A	N/A
4	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2015/11/08
5	HORN ANTENNA	ShwarzBeck	9120D	1011	2015/11/08
6	Loop Antenna	RS	HZ-9	838622\013	2015/11/08
7	Pre-amplifer	ShwarzBeck	BBV 9743	9743-0022	2015/11/02
8	TURNTABLE	MATURO	TT2.0	N/A	N/A
9	ANTENNA MAST	MATURO	TAM-4.0-P	N/A	N/A
10	EMI TEST SOFTWARE	Audix	E3	N/A	N/A
11	Test cable	Siva Cables Italy	RG 58A/U	W14.02	2015/12/05
12	Climate Chamber	ESPEC	EL-10KA	05107008	2015/11/02
13	Spectrum Analyzer	Kysight	N9030A	ATO-67098	2016/07/19
14	Power Meter	RS	NRP2	1020.1809.02	2016.06.02
15	Power Sensor	RS	NRP-Z81	823.3618.03	2016.06.02
16	SMA Antenna Connector	ARTHUR-YANG	2244-N1TG1	N/A	N/A

4. Uncertainty of Evaluation

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	3.39dB
Radiated emissions	30MHz~1000MHz	4.24dB
	1G~18GHz	5.16dB
	18G~40GHz	5.64dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

** END OF REPORT **