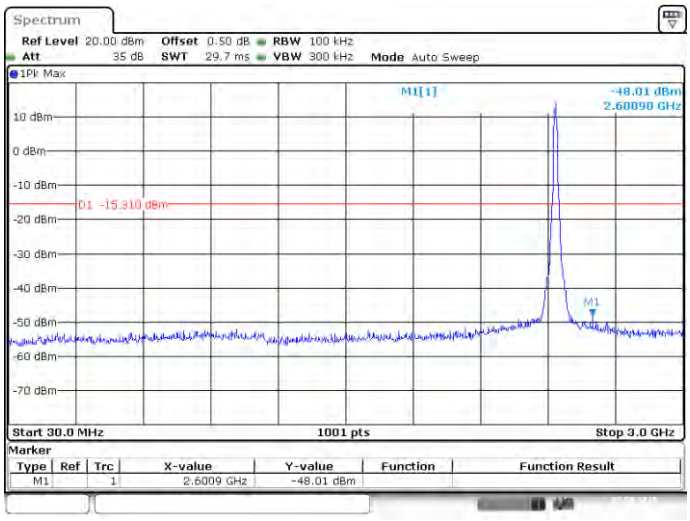
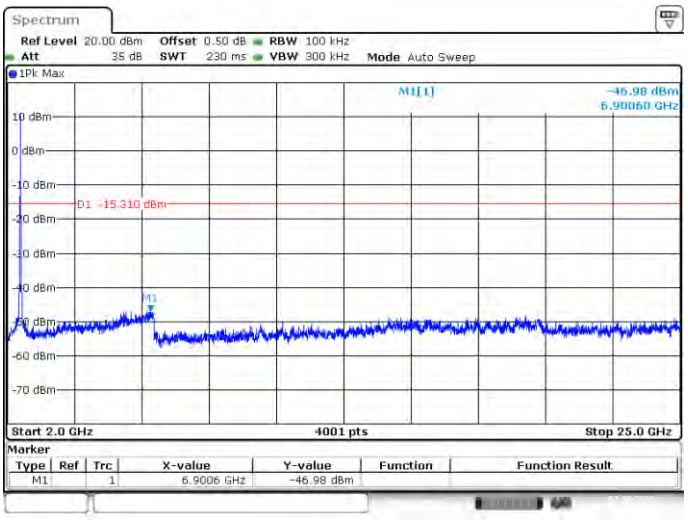
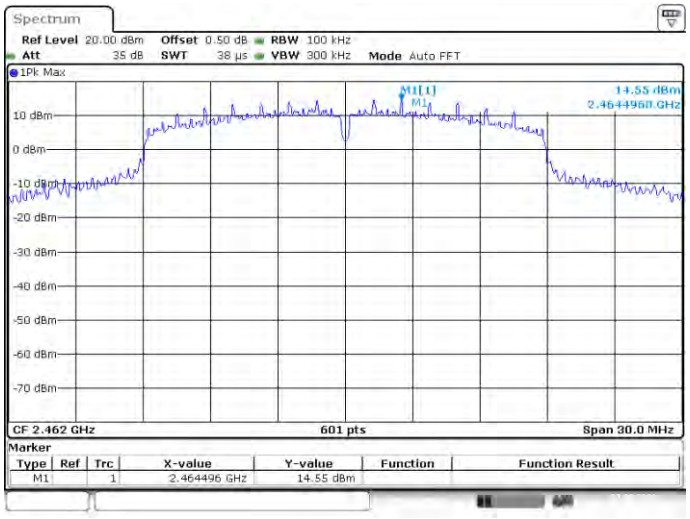
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



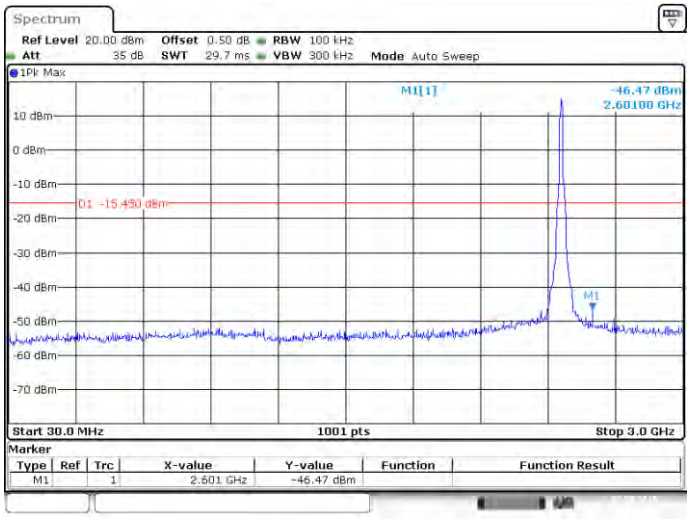
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



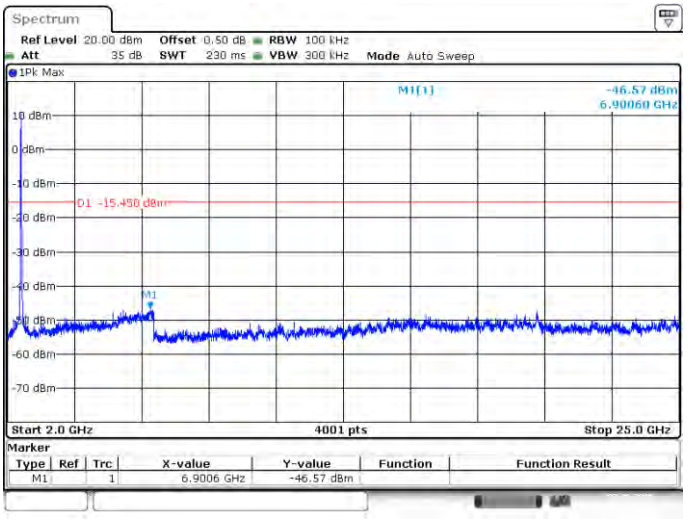
802.11n-20 MHz HIGH CHANNEL CARRIER LEVEL



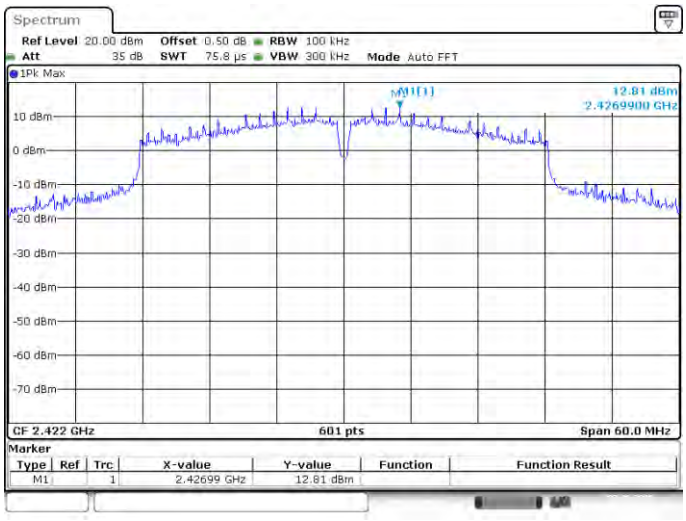
802.11n-20 MHz HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



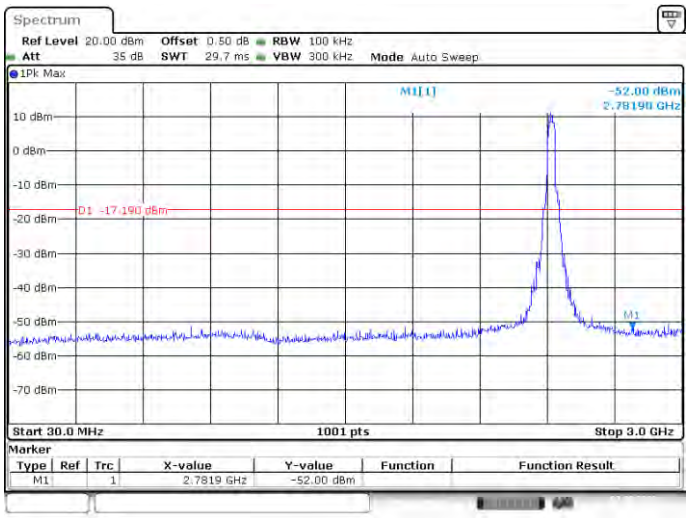
802.11n-20 MHz HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



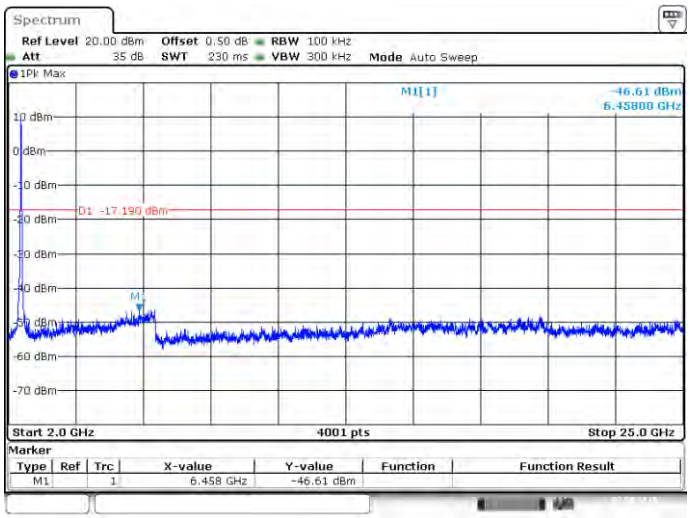
802.11n-40 LOW CHANNEL CARRIER LEVEL



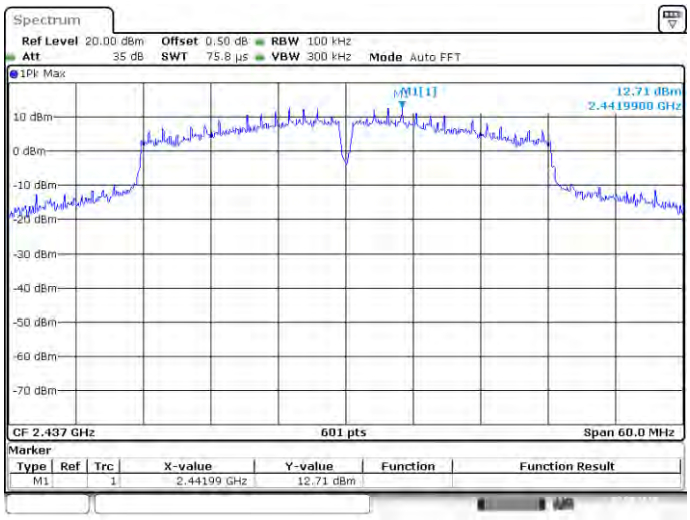
802.11n-40 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



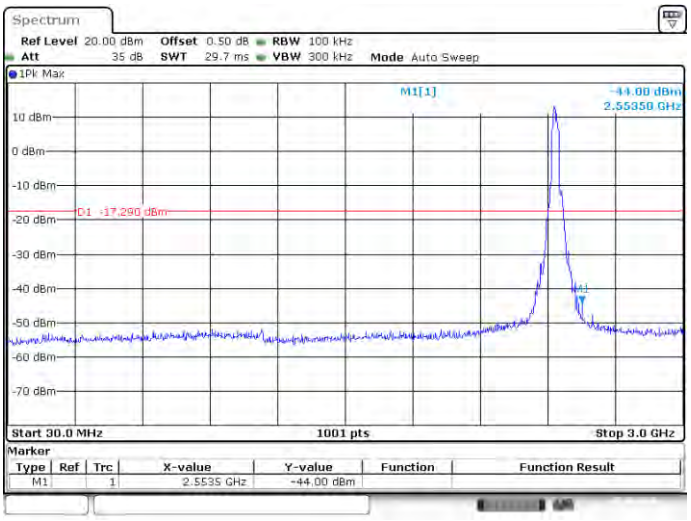
802.11n-40 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



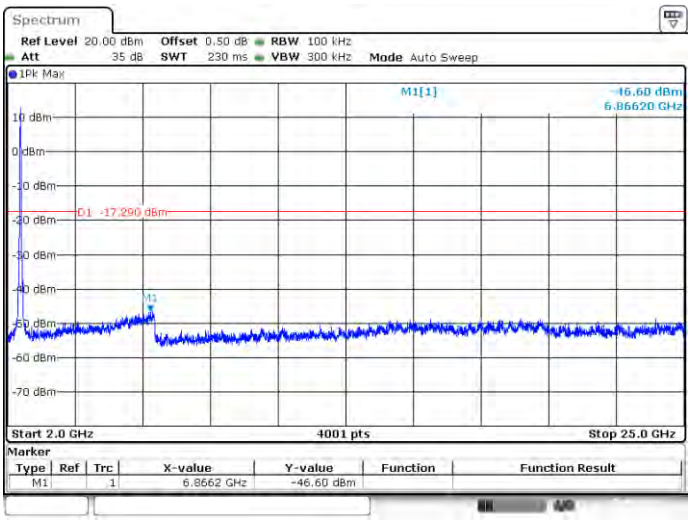
802.11n-40 MIDDLE CHANNEL CARRIER LEVEL



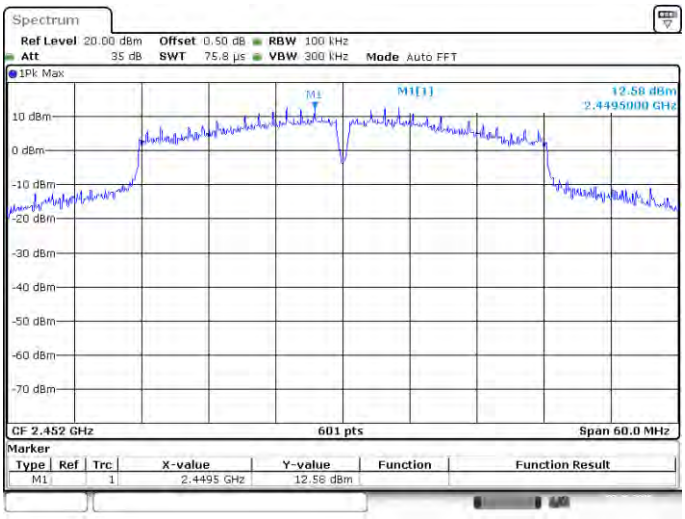
802.11n-40 MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



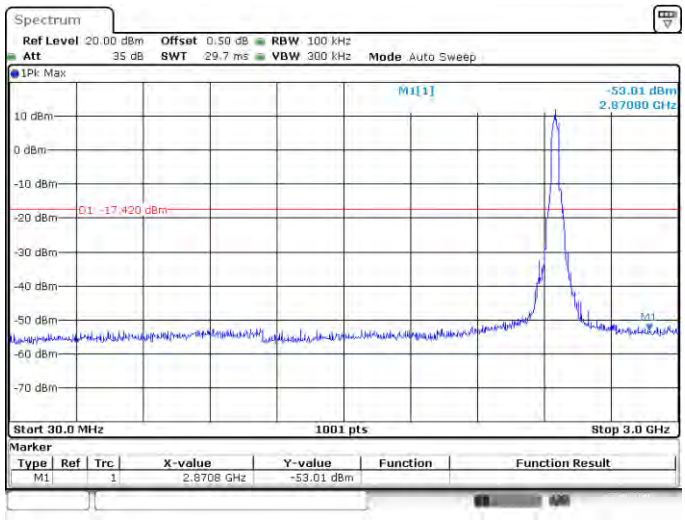
802.11n-40 MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



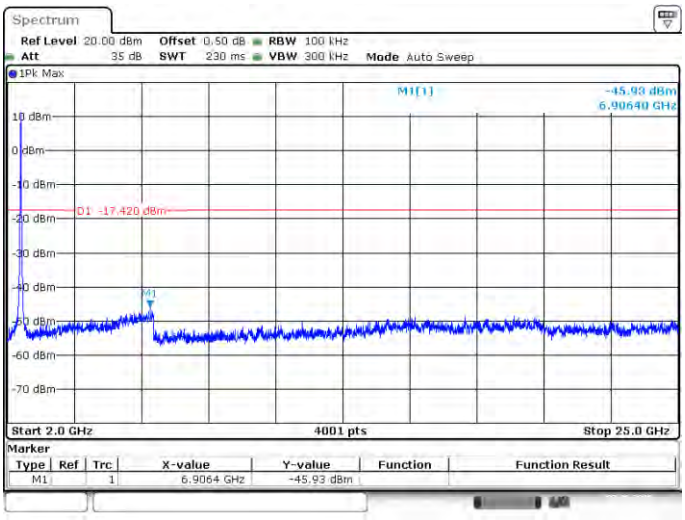
802.11n-40 HIGH CHANNEL CARRIER LEVEL



802.11n-40 HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



802.11-40 HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



A.4 Band Edge (Authorized-band band-edge)

Test Data

Note1: Emissions within a restricted band and within 2 MHz of an authorized band edge may be measured using either the marker-delta method or the integration method, which is described in 11.13.3 of ANSI C63.10, provided that the DTS bandwidth (or EBW) edge falls within 2 MHz of the band edge. Otherwise, all unwanted emissions measurements shall be performed using the standard methods.

Note2: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

802.11b Mode：

Channel	Measured Max. Band Edge Emission (dBm)			Limit (dBm)						Verdict
				Carrier Level			Calculated 30 dBc Limit			
	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	
Low Channel	-27.45	-28.23	-31.56	17.62	16.62	16.82	-12.38	-13.38	-13.18	Pass
High Channel	-37.77	-39.08	-37.72	17.34	16.57	16.80	-12.66	-13.43	-13.20	Pass

802.11g Mode：

Channel	Measured Max. Band Edge Emission (dBm)			Limit (dBm)						Verdict
				Carrier Level			Calculated 30 dBc Limit			
	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	
Low Channel	-15.10	-17.74	-16.46	15.58	14.41	14.54	-14.42	-15.59	-15.46	Pass
High Channel	-23.65	-24.86	-23.97	15.13	14.35	14.51	-14.87	-15.65	-15.49	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)			Limit (dBm)						Verdict
				Carrier Level			Calculated 30 dBc Limit			
	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	
Low Channel	-14.60	-16.74	-18.46	15.53	14.39	14.25	-14.47	-15.61	-15.75	Pass
High Channel	-20.87	-22.62	-22.86	15.14	14.46	14.55	-14.86	-15.54	-15.45	Pass

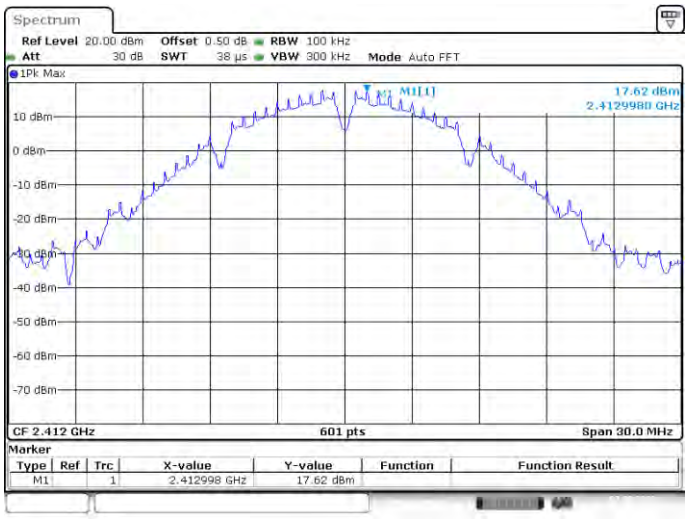
802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)			Limit (dBm)						Verdict
				Carrier Level			Calculated 30 dBc Limit			
	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	ANT 0	ANT 1	ANT 2	
Low Channel	-16.70	-18.74	-22.88	13.59	12.47	12.81	-16.41	-17.53	-17.19	Pass
High Channel	-18.63	-17.63	-19.44	13.57	13.23	12.58	-16.43	-16.77	-17.42	Pass

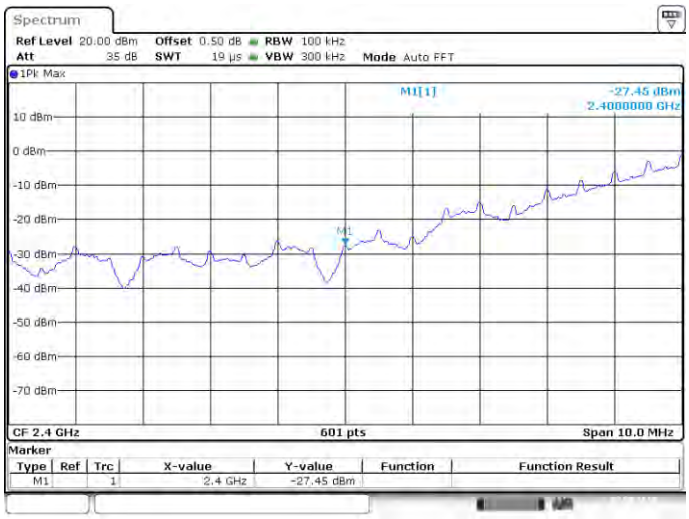
Test Plots

ANT 0

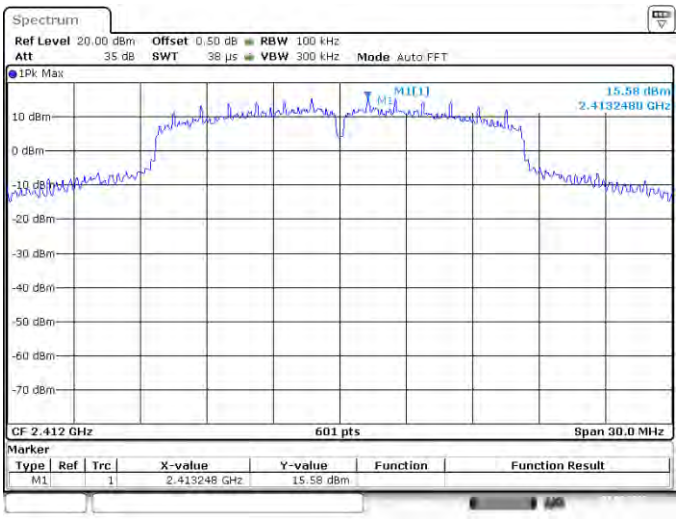
802.11b LOW CHANNEL, Carrier level



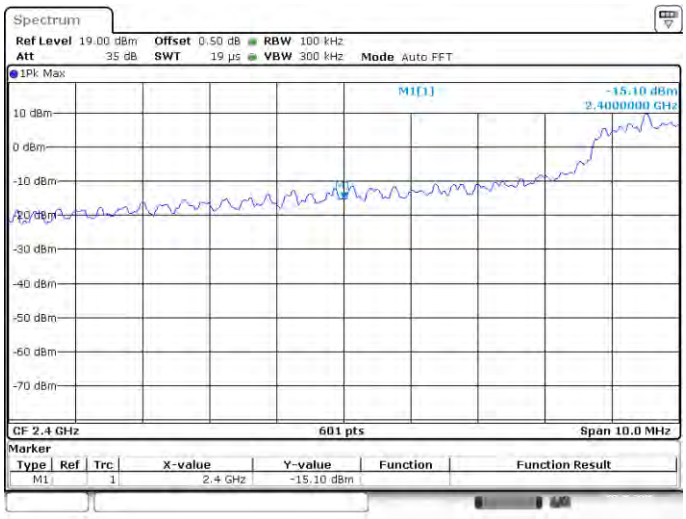
802.11b LOW CHANNEL, Band Edge



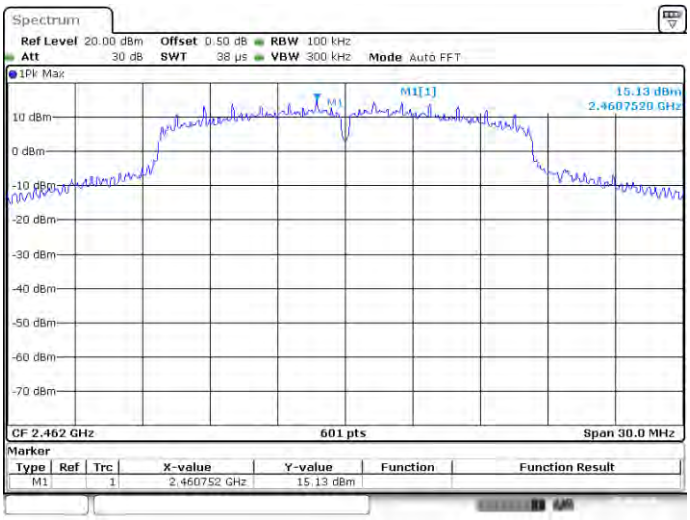
802.11g LOW CHANNEL, Carrier level



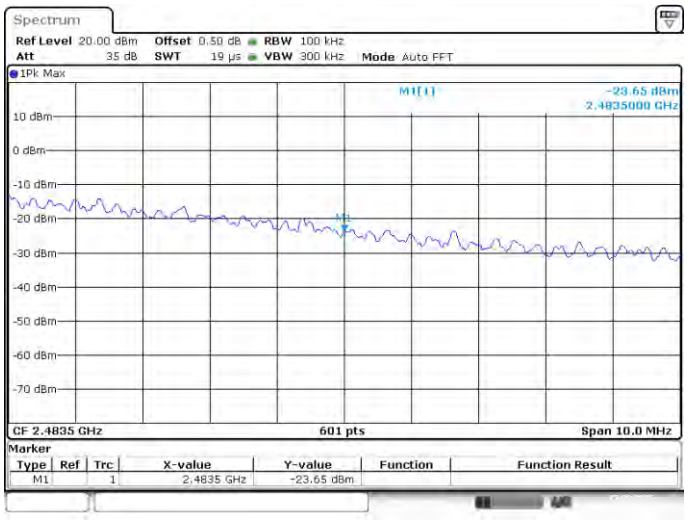
802.11g LOW CHANNEL, Band Edge



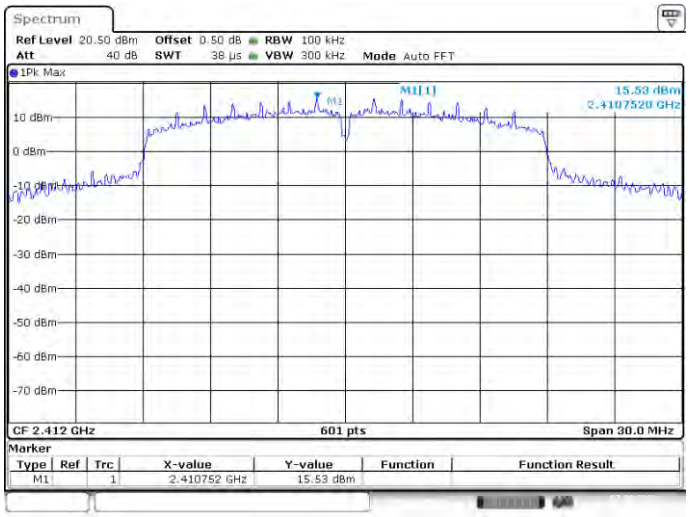
802.11g HIGH CHANNEL, Carrier level



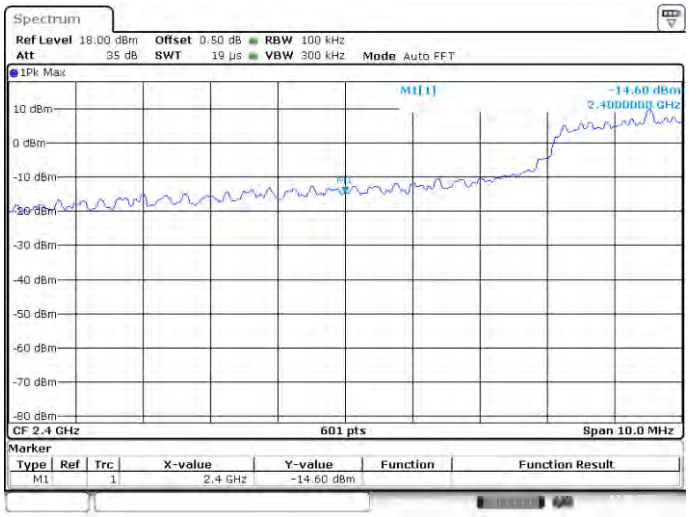
802.11g HIGH CHANNEL, Band Edge



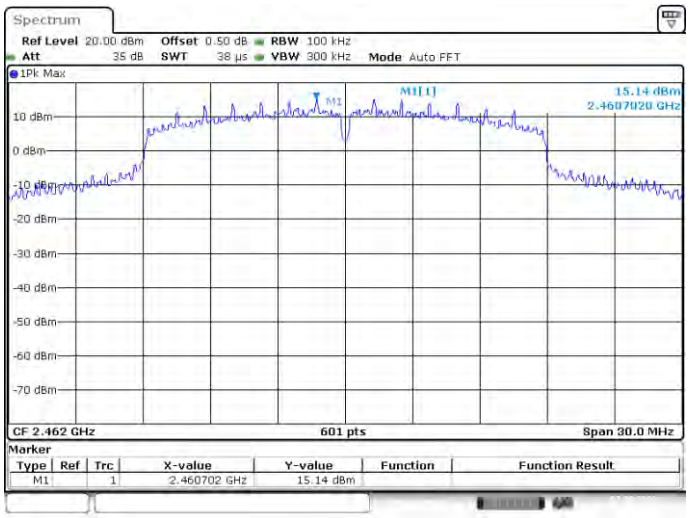
802.11n-20 LOW CHANNEL, Carrier level



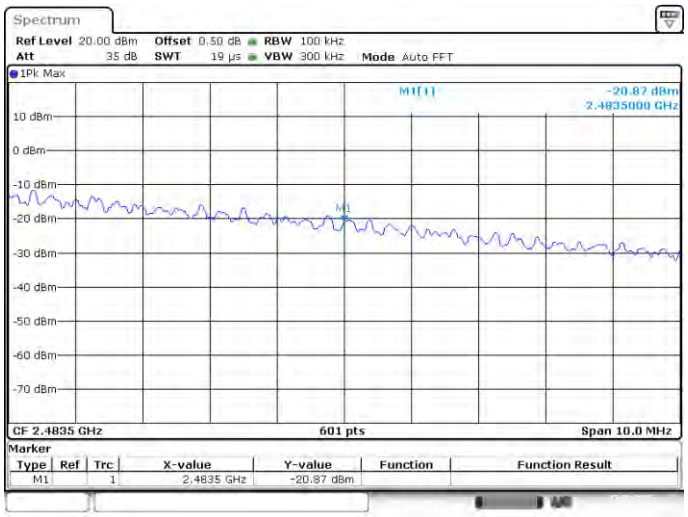
802.11n-20 LOW CHANNEL, Band Edge



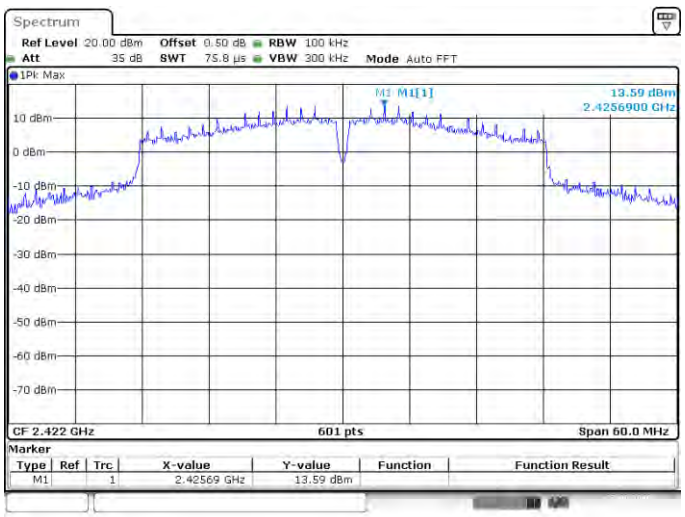
802.11n-20 HIGH CHANNEL, Carrier level



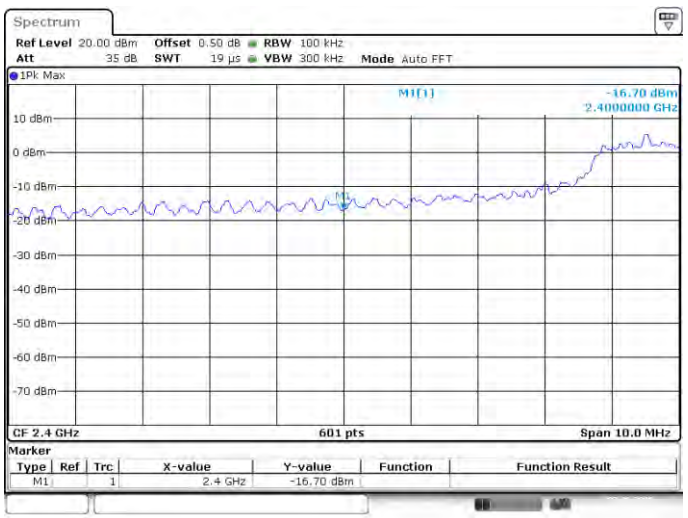
802.11n-20 HIGH CHANNEL, Band Edge



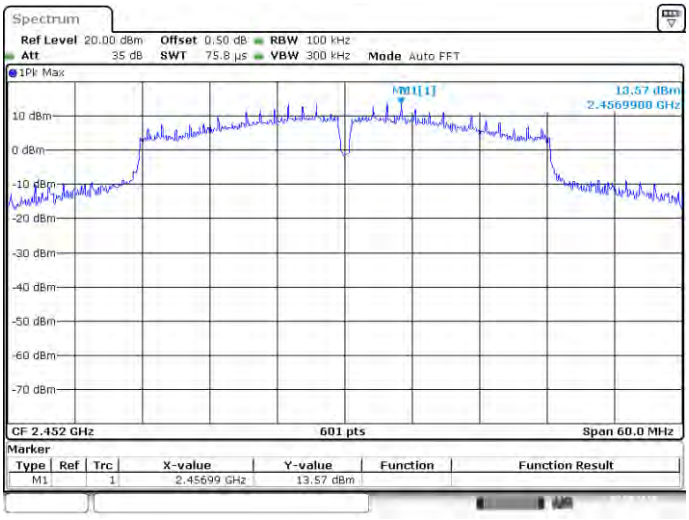
802.11n-40 MHz LOW CHANNEL, Carrier level



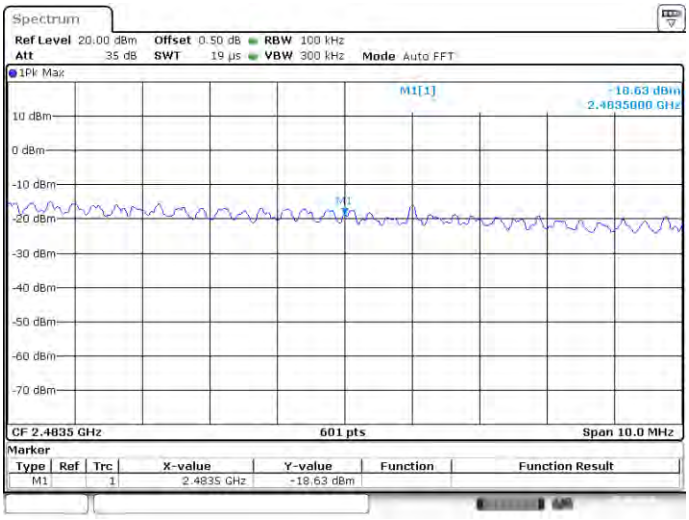
802.11n-40 MHz LOW CHANNEL, Band Edge



802.11n-40 MHz HIGH CHANNEL, Carrier level

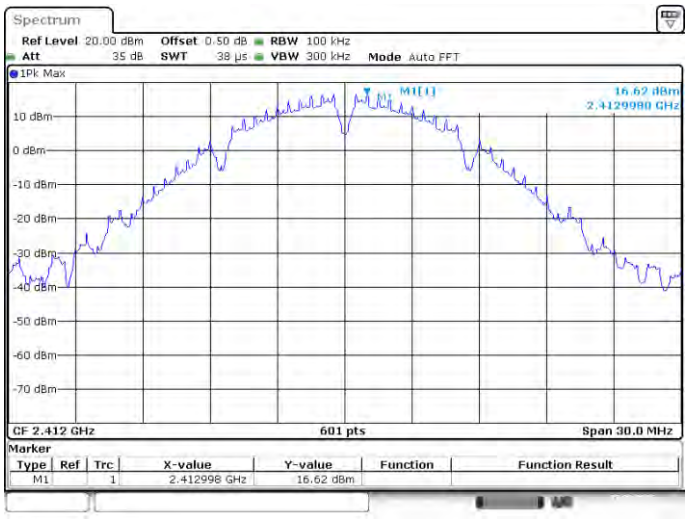


802.11n-40 MHz HIGH CHANNEL, Band Edge



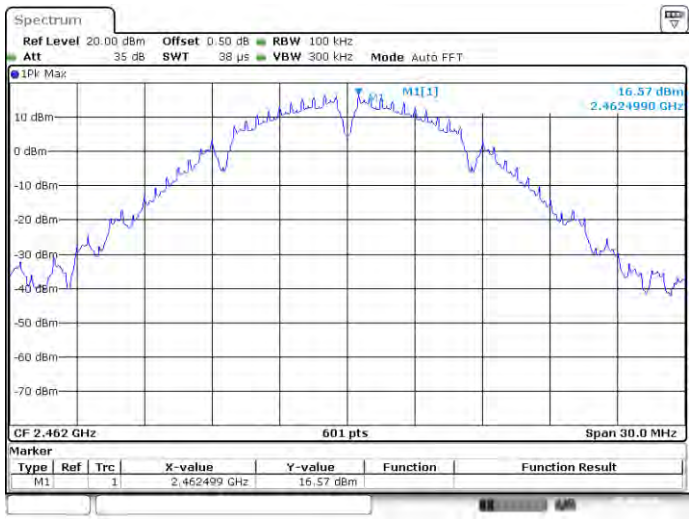
ANT 1

802.11b LOW CHANNEL, Carrier level

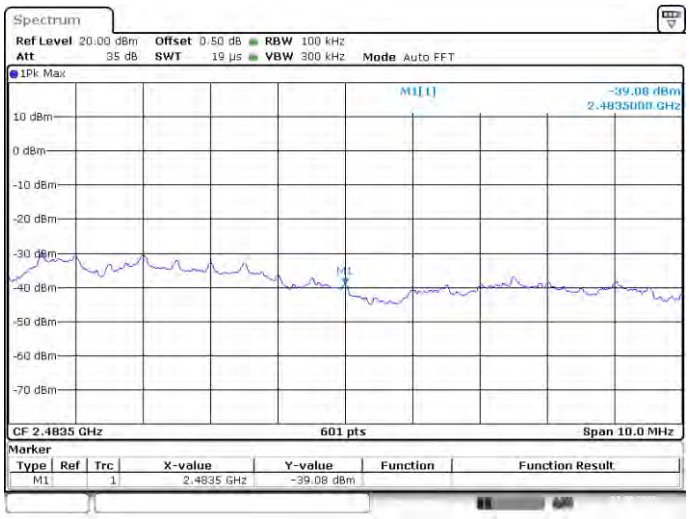


802.11b LOW CHANNEL, Band Edge

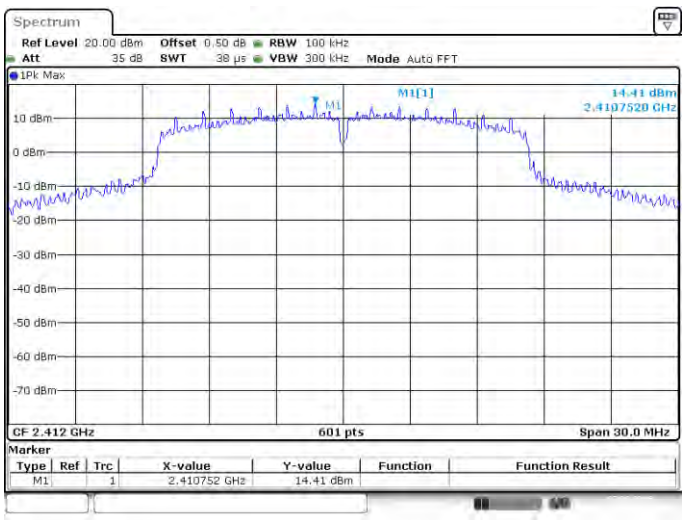
802.11b HIGH CHANNEL, Carrier level



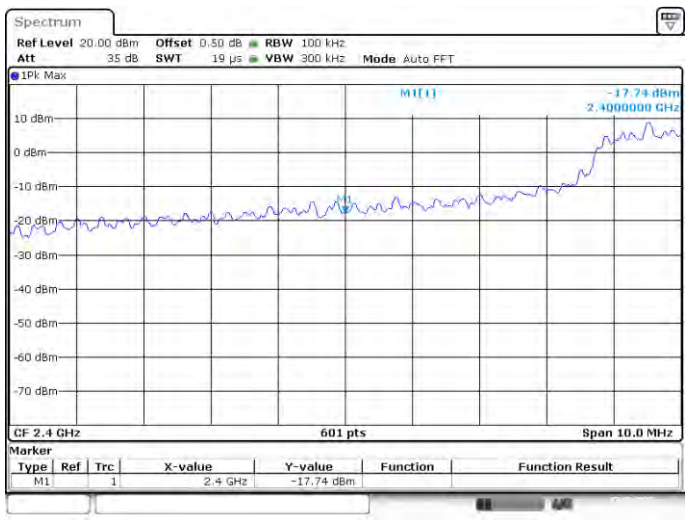
802.11b HIGH CHANNEL, Band Edge



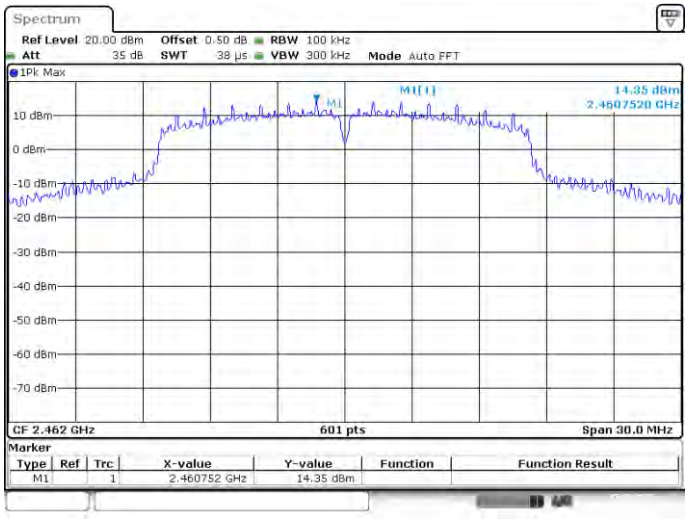
802.11g LOW CHANNEL, Carrier level



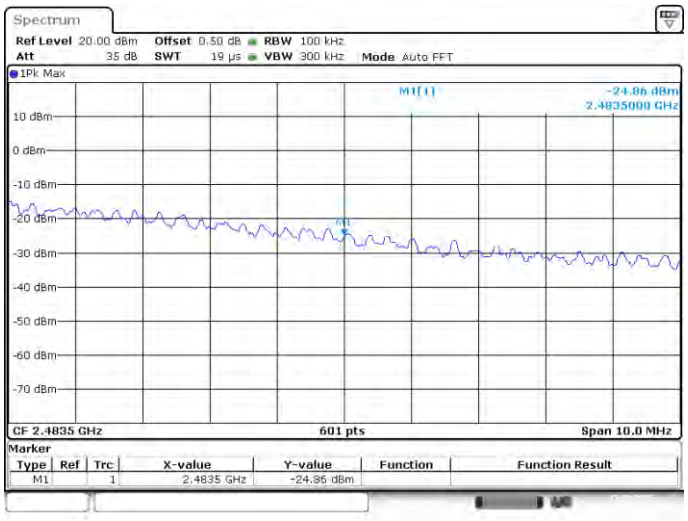
802.11g LOW CHANNEL, Band Edge



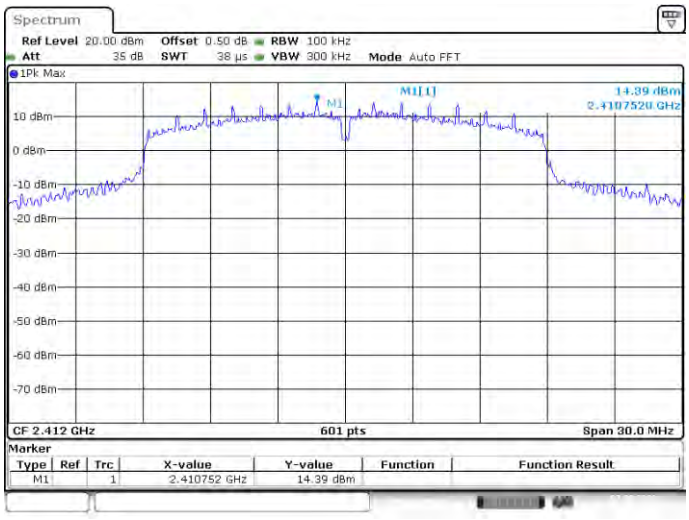
802.11g HIGH CHANNEL, Carrier level



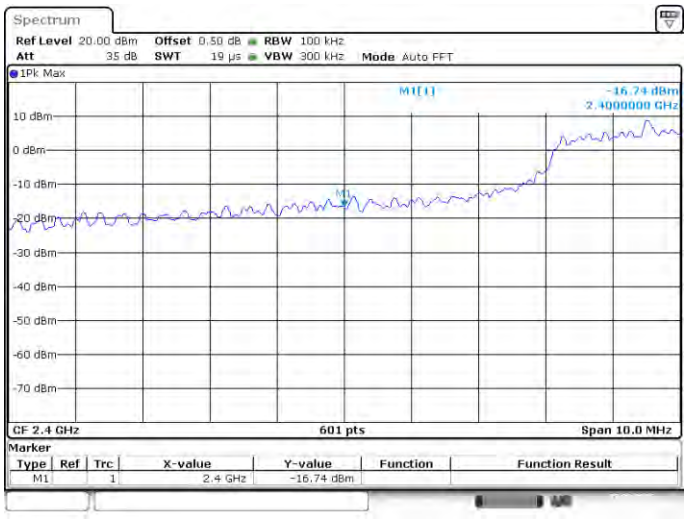
802.11g HIGH CHANNEL, Band Edge



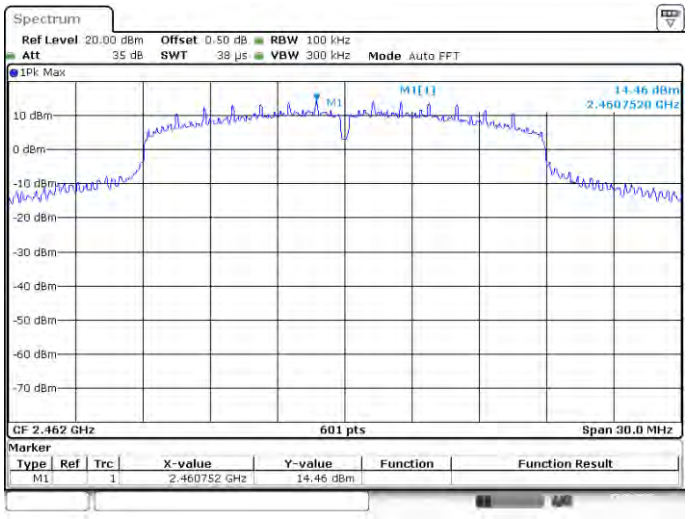
802.11n-20 LOW CHANNEL, Carrier level



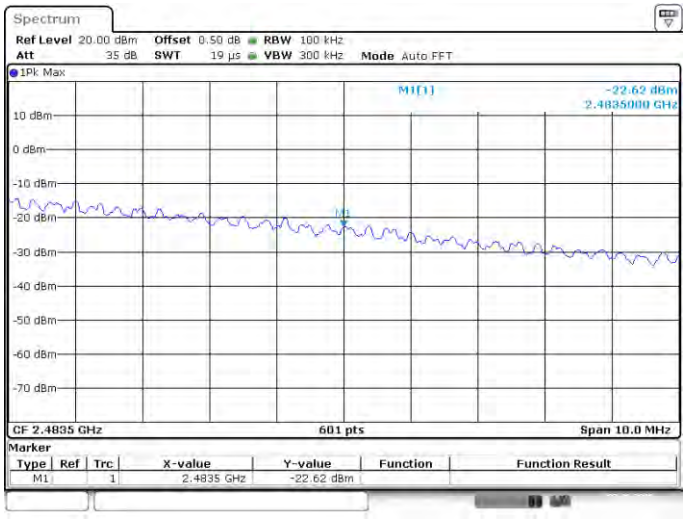
802.11n-20 LOW CHANNEL, Band Edge



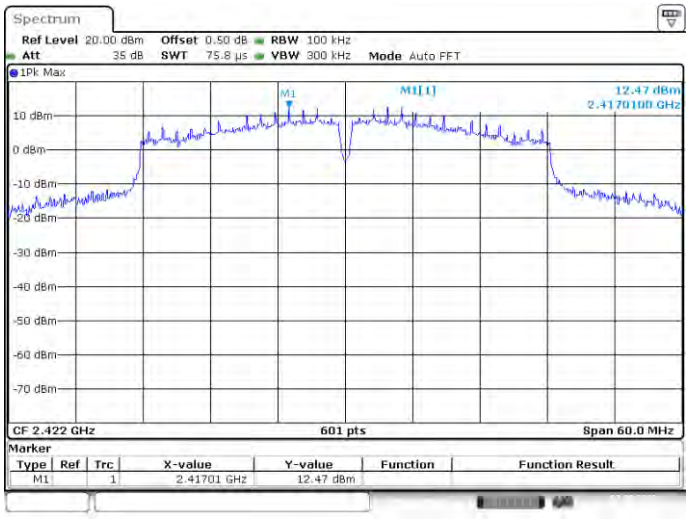
802.11n-20 HIGH CHANNEL, Carrier level



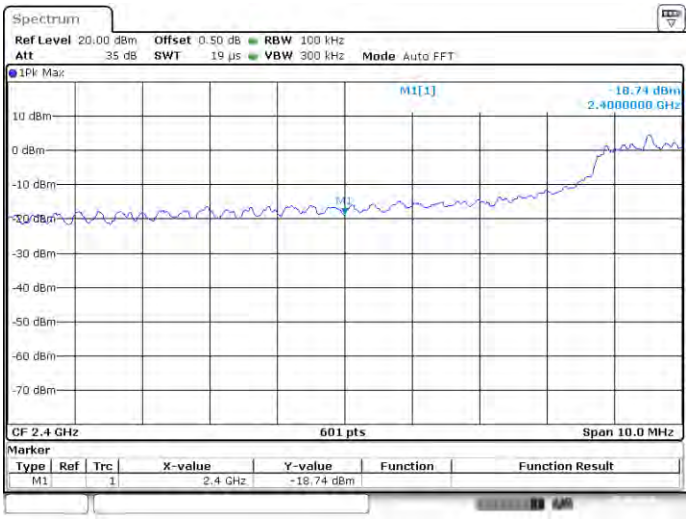
802.11n-20 HIGH CHANNEL, Band Edge



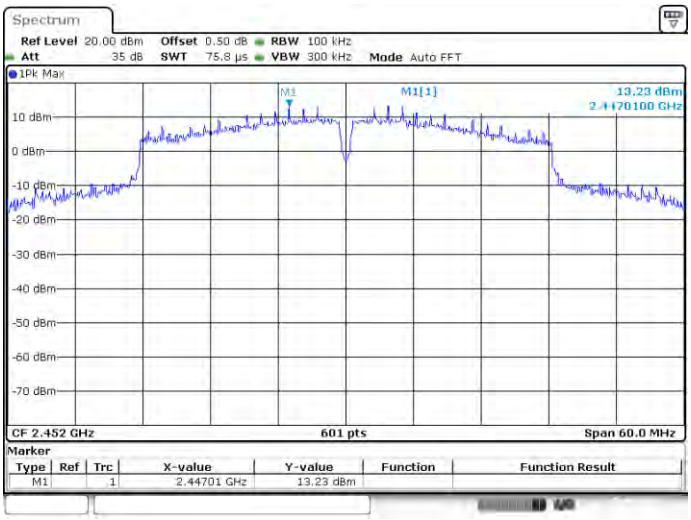
802.11n-40 MHz LOW CHANNEL, Carrier level



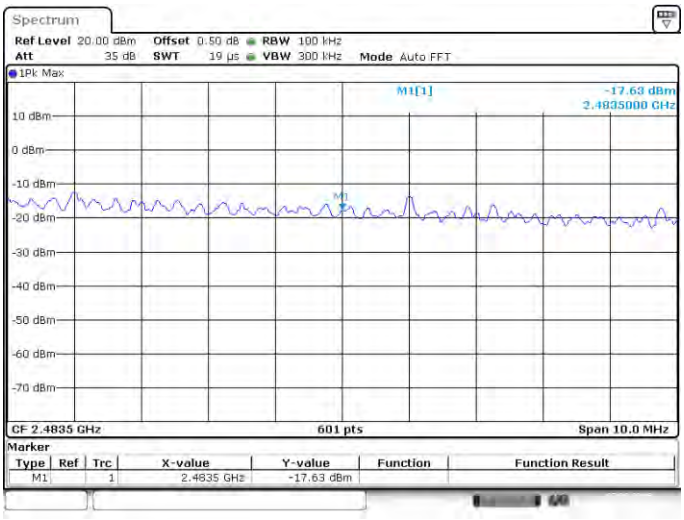
802.11n-40 MHz LOW CHANNEL, Band Edge



802.11n-40 MHz HIGH CHANNEL, Carrier level

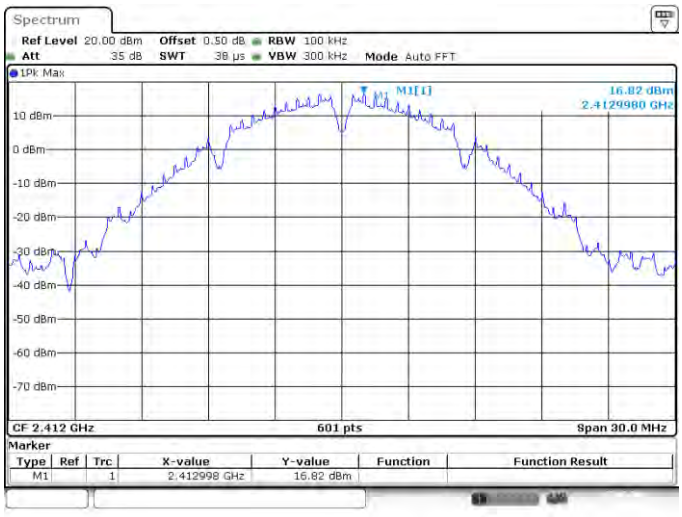


802.11n-40 MHz HIGH CHANNEL, Band Edge

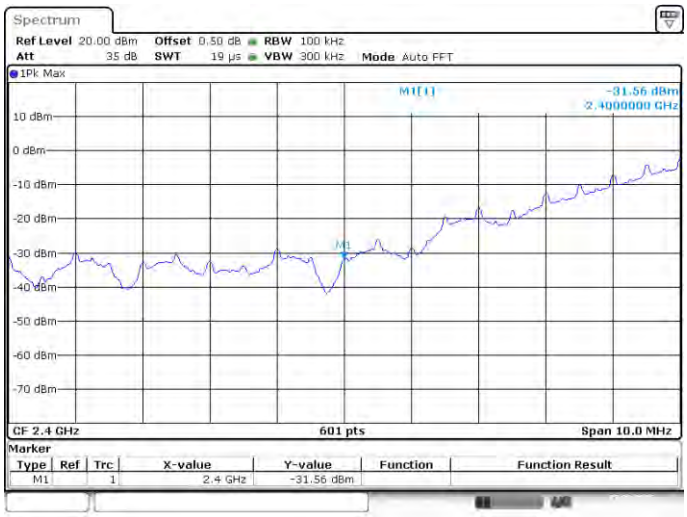


ANT 2

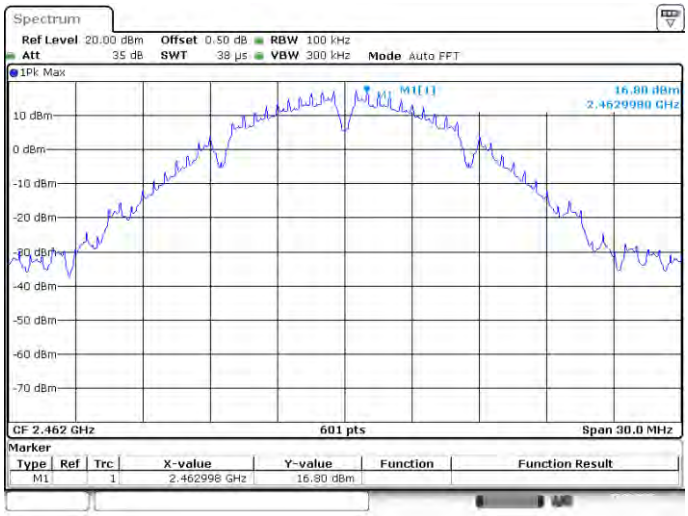
802.11b LOW CHANNEL, Carrier level



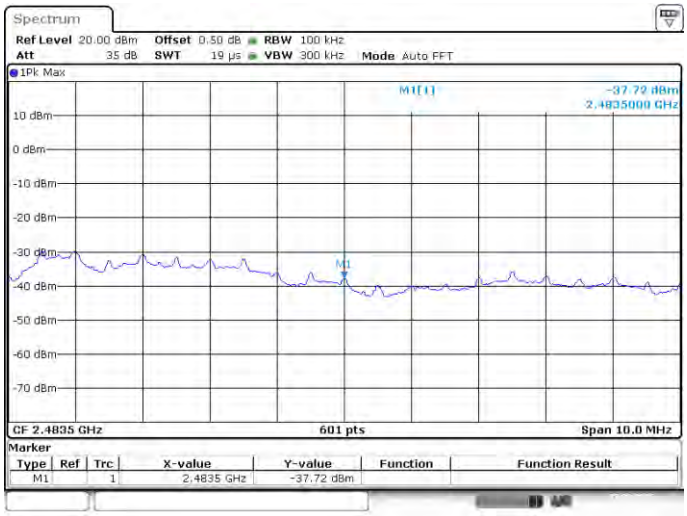
802.11b LOW CHANNEL, Band Edge



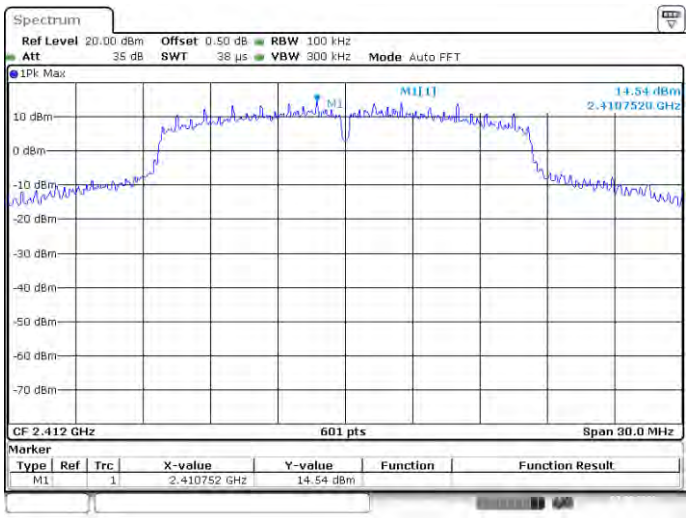
802.11b HIGH CHANNEL, Carrier level



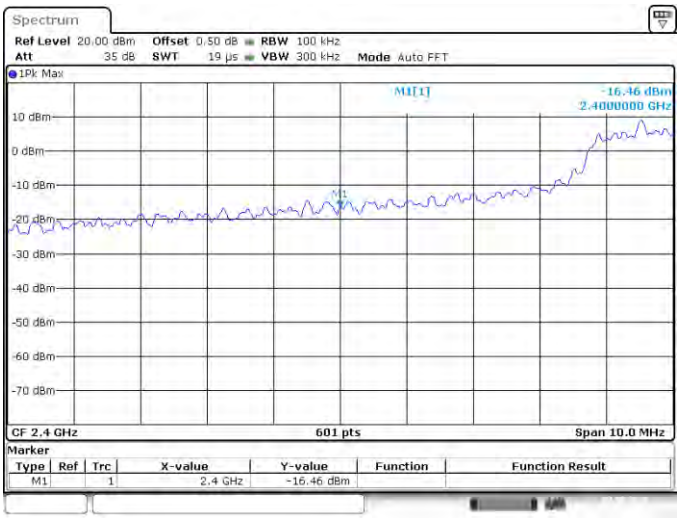
802.11b HIGH CHANNEL, Band Edge



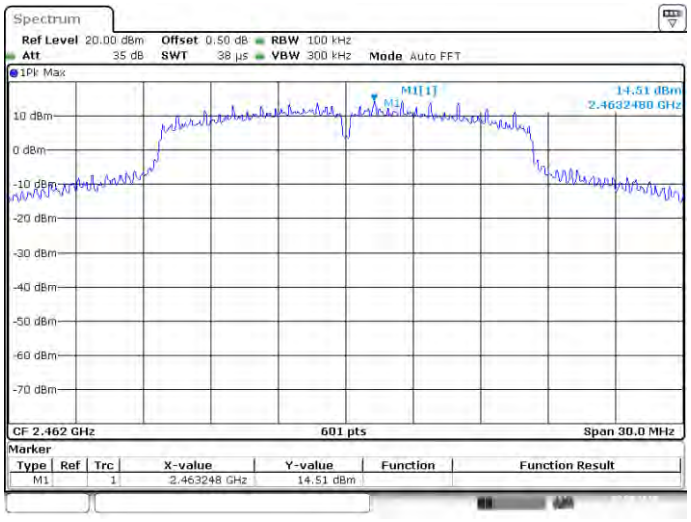
802.11g LOW CHANNEL, Carrier level



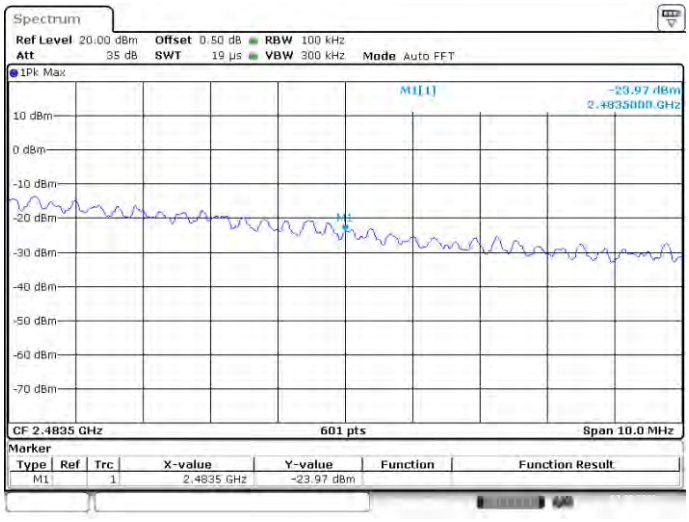
802.11g LOW CHANNEL, Band Edge



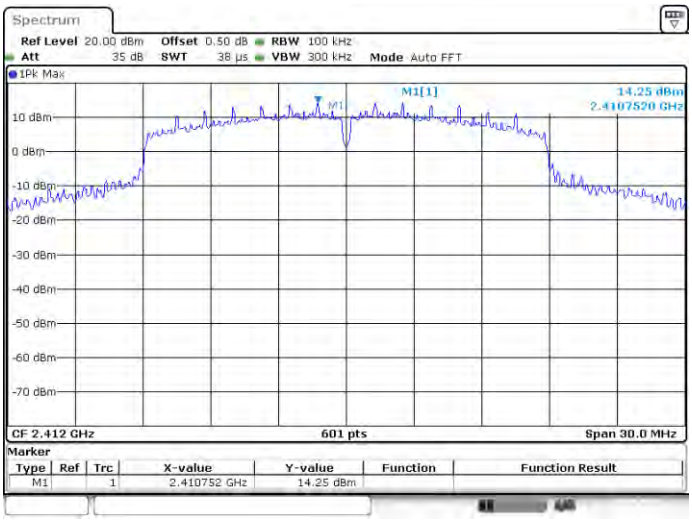
802.11g HIGH CHANNEL, Carrier level



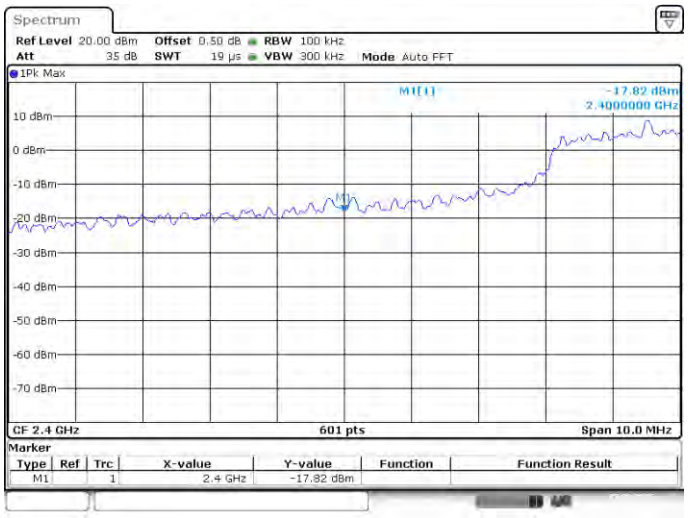
802.11g HIGH CHANNEL, Band Edge



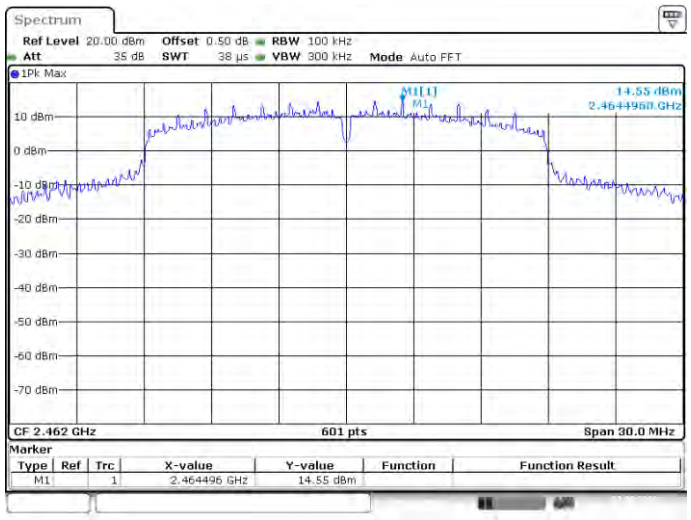
802.11n-20 LOW CHANNEL, Carrier level



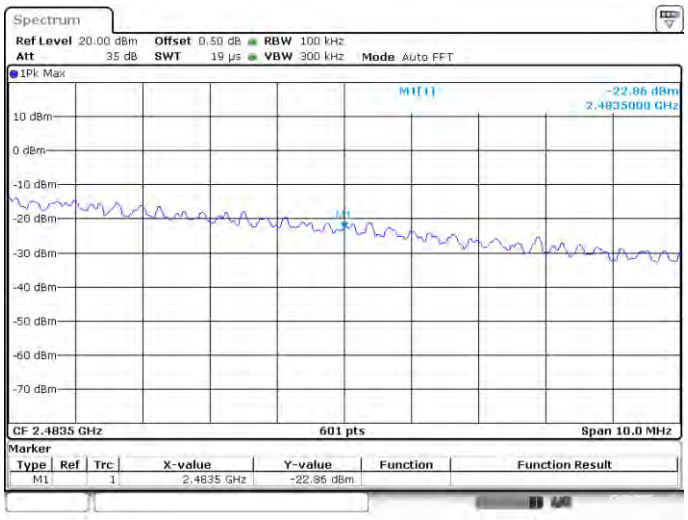
802.11n-20 LOW CHANNEL, Band Edge



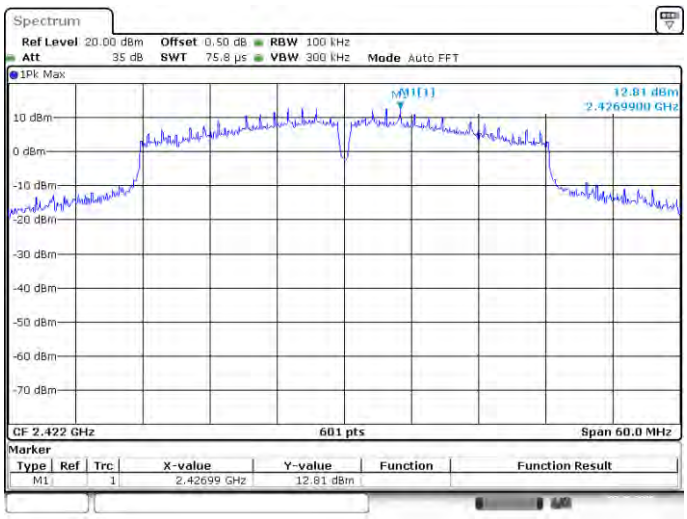
802.11n-20 HIGH CHANNEL, Carrier level



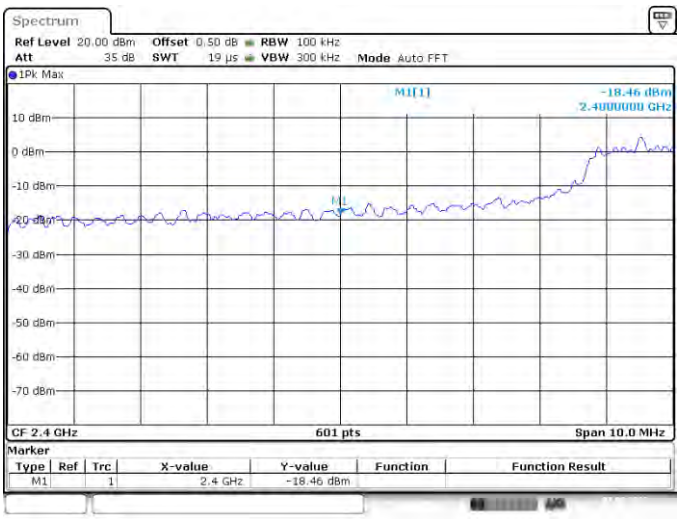
802.11n-20 HIGH CHANNEL, Band Edge



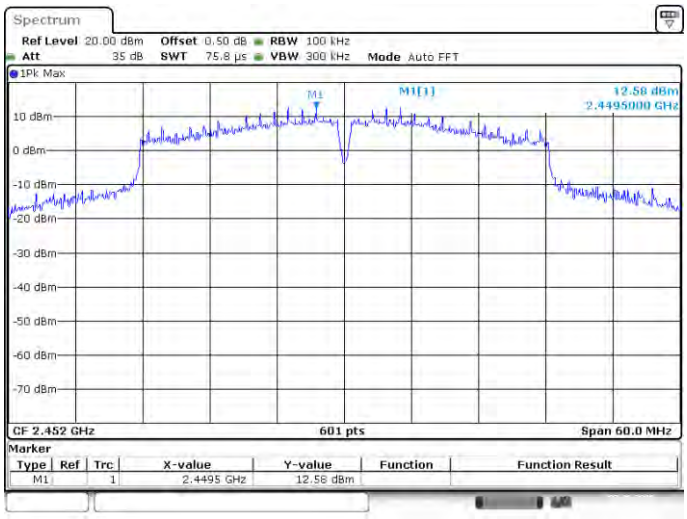
802.11n-40 MHz LOW CHANNEL, Carrier level



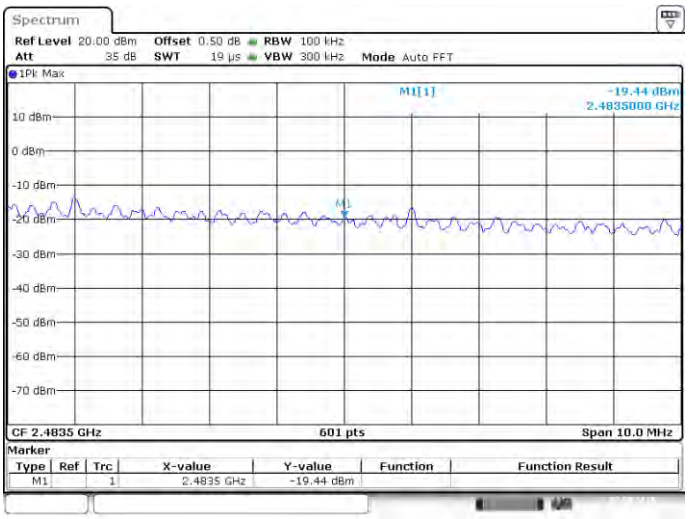
802.11n-40 MHz LOW CHANNEL, Band Edge



802.11n-40 MHz HIGH CHANNEL, Carrier level



802.11n-40 MHz HIGH CHANNEL, Band Edge

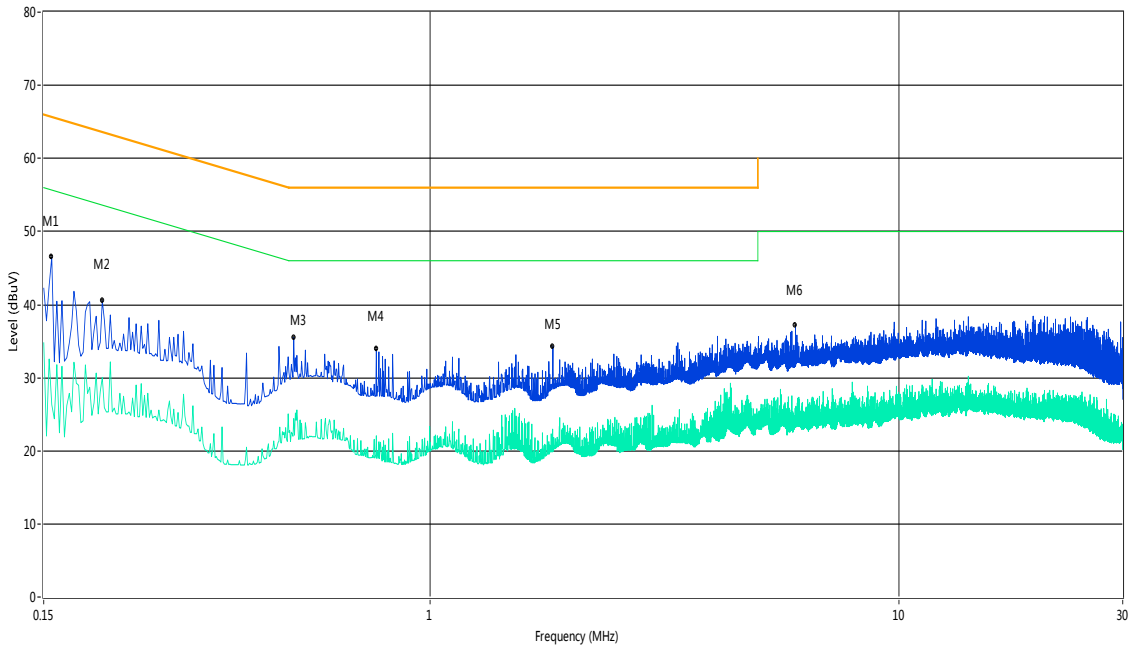


A.5 Conducted Emissions

Note 1: All configurations have been tested, only the worst configuration (802.11b High Channel) shown here.
Note 2: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

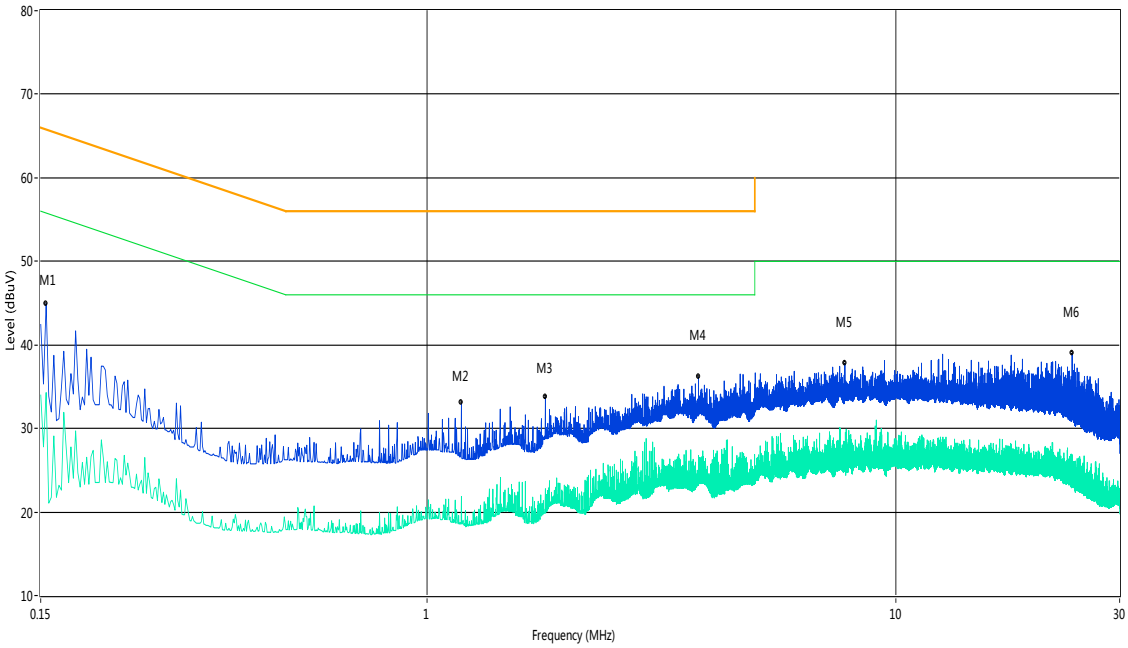
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.16	46.5	11.00	65.8	19.30	Peak	L Line	Pass
1**	0.16	26.3	11.00	55.8	29.50	AV	L Line	Pass
2	0.20	40.5	11.00	64.6	24.10	Peak	L Line	Pass
2**	0.20	30.1	11.00	54.6	24.50	AV	L Line	Pass
3	0.51	35.5	11.00	56.0	20.50	Peak	L Line	Pass
3**	0.51	24.4	11.00	46.0	21.60	AV	L Line	Pass
4	0.77	33.9	11.00	56.0	22.10	Peak	L Line	Pass
4**	0.77	22.1	11.00	46.0	23.90	AV	L Line	Pass
5	1.83	34.3	11.00	56.0	21.70	Peak	L Line	Pass
5**	1.83	21.0	11.00	46.0	25.00	AV	L Line	Pass
6	6.01	37.1	11.00	60.0	22.90	Peak	L Line	Pass
6**	6.01	24.7	11.00	50.0	25.30	AV	L Line	Pass

PHASE N



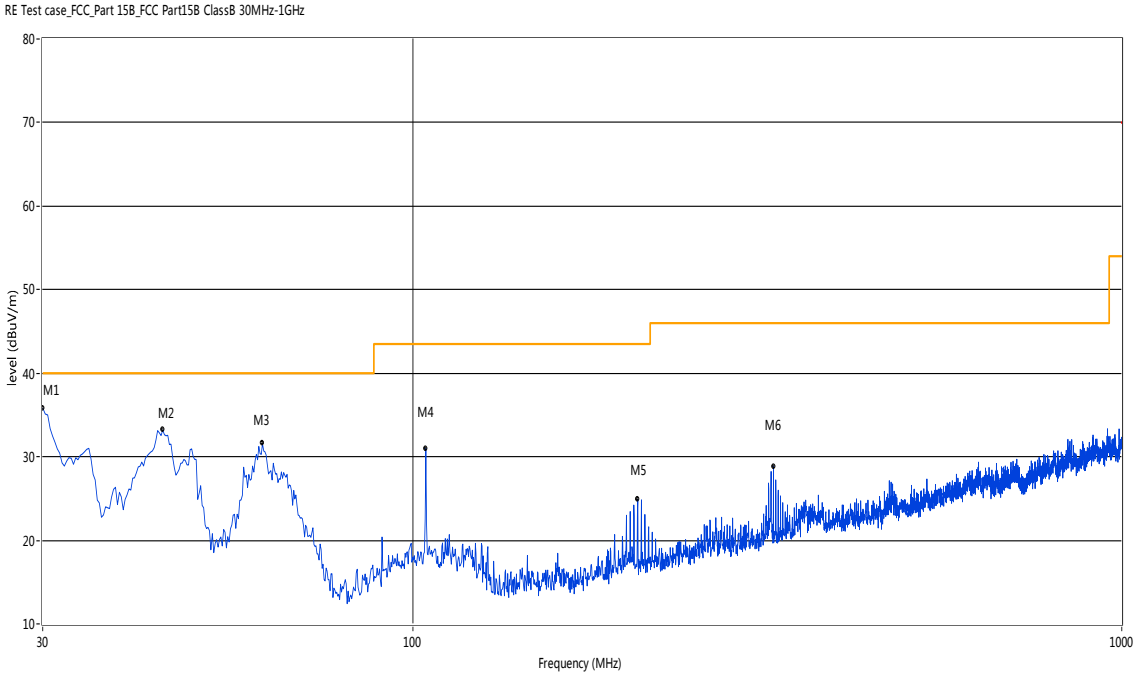
No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.15	45.0	11.00	65.9	20.90	Peak	N Line	Pass
1**	0.15	34.3	11.00	55.9	21.60	AV	N Line	Pass
2	1.18	33.0	11.00	56.0	23.00	Peak	N Line	Pass
2**	1.18	21.9	11.00	46.0	24.10	AV	N Line	Pass
3	1.79	33.8	11.00	56.0	22.20	Peak	N Line	Pass
3**	1.79	22.8	11.00	46.0	23.20	AV	N Line	Pass
4	3.79	36.2	11.00	56.0	19.80	Peak	N Line	Pass
4**	3.79	26.8	11.00	46.0	19.20	AV	N Line	Pass
5	7.78	37.8	11.00	60.0	22.20	Peak	N Line	Pass
5**	7.78	28.3	11.00	50.0	21.70	AV	N Line	Pass
6	23.75	39.0	11.00	60.0	21.00	Peak	N Line	Pass
6**	23.75	26.9	11.00	50.0	23.10	AV	N Line	Pass

A.6 Radiated Emission

Note 1: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(a) was not reported.

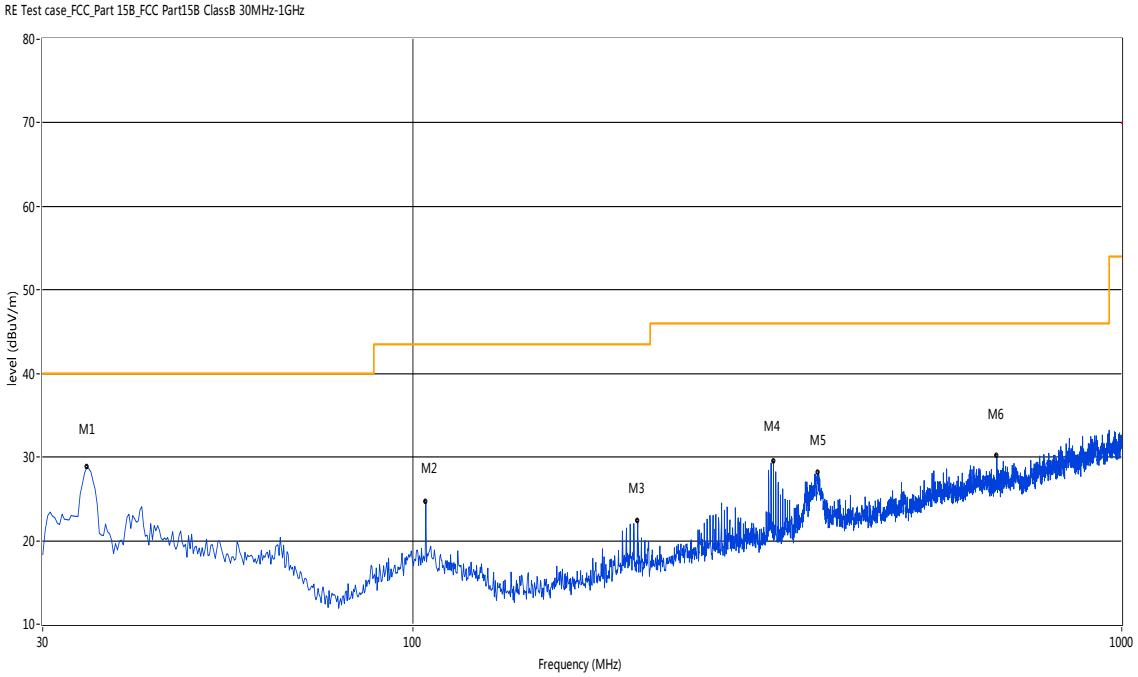
Note 2: The EUT is working in the Normal link mode below 1 GHz.

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	30.00	35.85	-21.72	40.0	4.15	Peak	73.40	100	Vertical	Pass
2	44.30	33.20	-18.82	40.0	6.80	Peak	73.40	100	Vertical	Pass
3	61.27	31.57	-20.32	40.0	8.43	Peak	360.00	100	Vertical	Pass
4	104.19	31.01	-20.30	43.5	12.49	Peak	235.10	100	Vertical	Pass
5	207.47	24.92	-20.03	43.5	18.58	Peak	359.90	100	Vertical	Pass
6	322.38	28.84	-16.94	46.0	17.16	Peak	0.30	100	Vertical	Pass

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	34.61	28.77	-21.38	40.0	11.23	Peak	360.00	100	Horizontal	Pass
2	104.19	24.63	-20.30	43.5	18.87	Peak	133.70	100	Horizontal	Pass
3	207.47	22.31	-20.03	43.5	21.19	Peak	324.90	100	Horizontal	Pass
4	322.38	29.50	-16.94	46.0	16.50	Peak	360.70	100	Horizontal	Pass
5	373.05	28.10	-15.91	46.0	17.90	Peak	279.40	100	Horizontal	Pass
6	666.40	30.14	-9.92	46.0	15.86	Peak	356.10	100	Horizontal	Pass

Test Data (1 GHz ~ 10th Harmonic)

Note 1: The marked spikes near 2400 MHz is the fundamental signal.

Note 2: Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

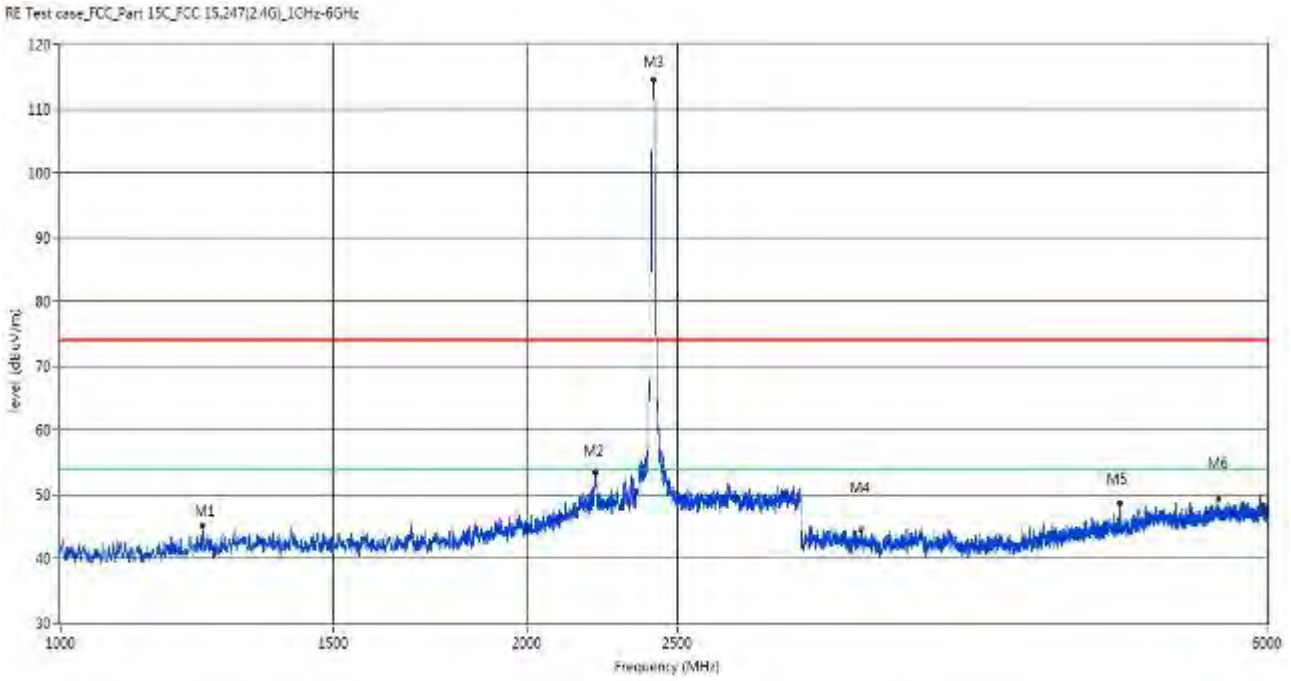
Note 3: Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Note 4: Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20 dB from the applicable limit) and considered that's already beyond the background noise floor.

Note 5: Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

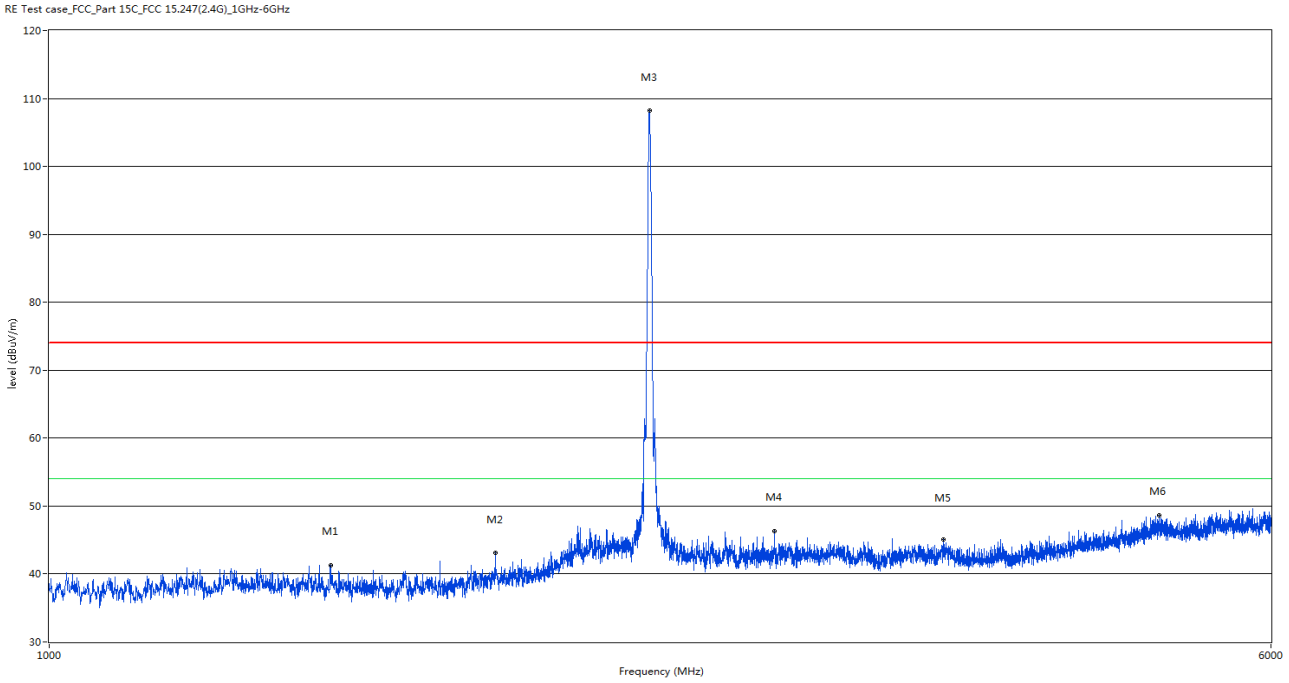
Note 6: The High frequency, which started from 6 GHz to 25 GHz, was pre-scanned and the result which Peak value is lower than AV limit line, so it was not reported.

11b LOW CHANNEL 1 GHz to 6 GHz, ANT V



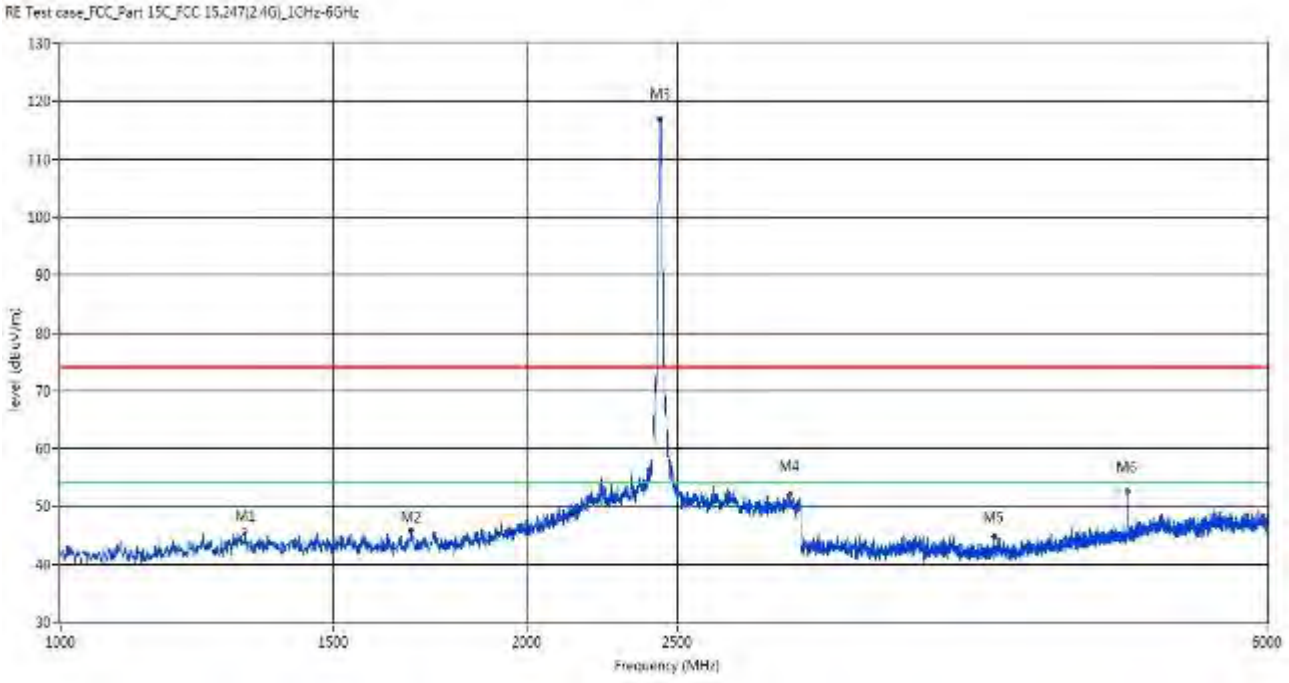
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1234.500	45.25	-1.88	74.0	28.75	Peak	73.00	100	Vertical	Pass
2	2215.000	53.44	1.07	74.0	20.56	Peak	36.00	100	Vertical	Pass
3	2411.500	114.53	1.16	74.0	-40.53	Peak	160.50	100	Vertical	N/A
4	3282.750	44.56	6.58	74.0	29.44	Peak	358.50	100	Vertical	Pass
5	4824.000	48.72	10.87	74.0	25.28	Peak	321.00	100	Vertical	Pass
6	5586.000	49.30	11.45	74.0	24.70	Peak	308.00	100	Vertical	Pass

11b LOW CHANNEL 1 GHz to 6 GHz, ANT H



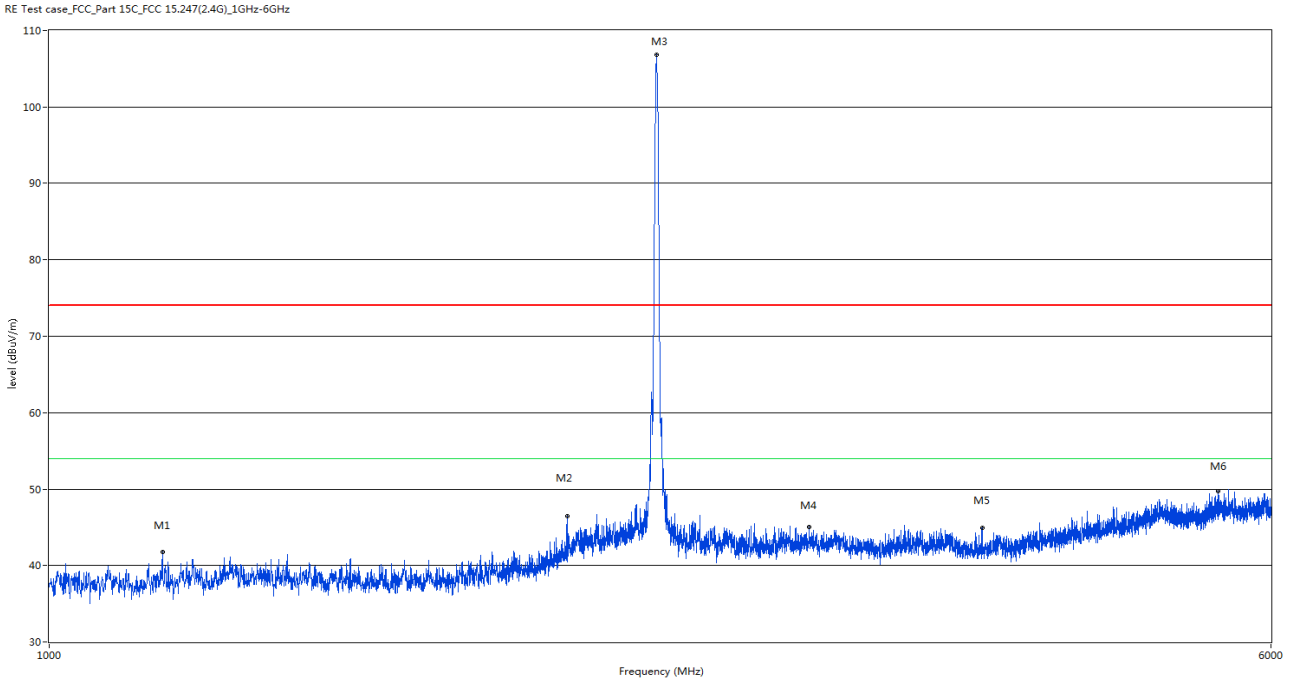
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1510.500	41.31	-2.16	74.0	32.69	Peak	189.10	100	Horizontal	Pass
2	1923.500	43.08	-0.81	74.0	30.92	Peak	303.50	100	Horizontal	Pass
3	2411.000	108.19	0.90	74.0	-34.19	Peak	70.20	100	Horizontal	N/A
4	2897.500	46.31	4.64	74.0	27.69	Peak	81.80	100	Horizontal	Pass
5	3711.750	45.11	7.73	74.0	28.89	Peak	2.50	100	Horizontal	Pass
6	5094.750	48.66	11.78	74.0	25.34	Peak	0.00	100	Horizontal	Pass

11b MIDDLE CHANNEL 1 GHz to 6 GHz, ANT V



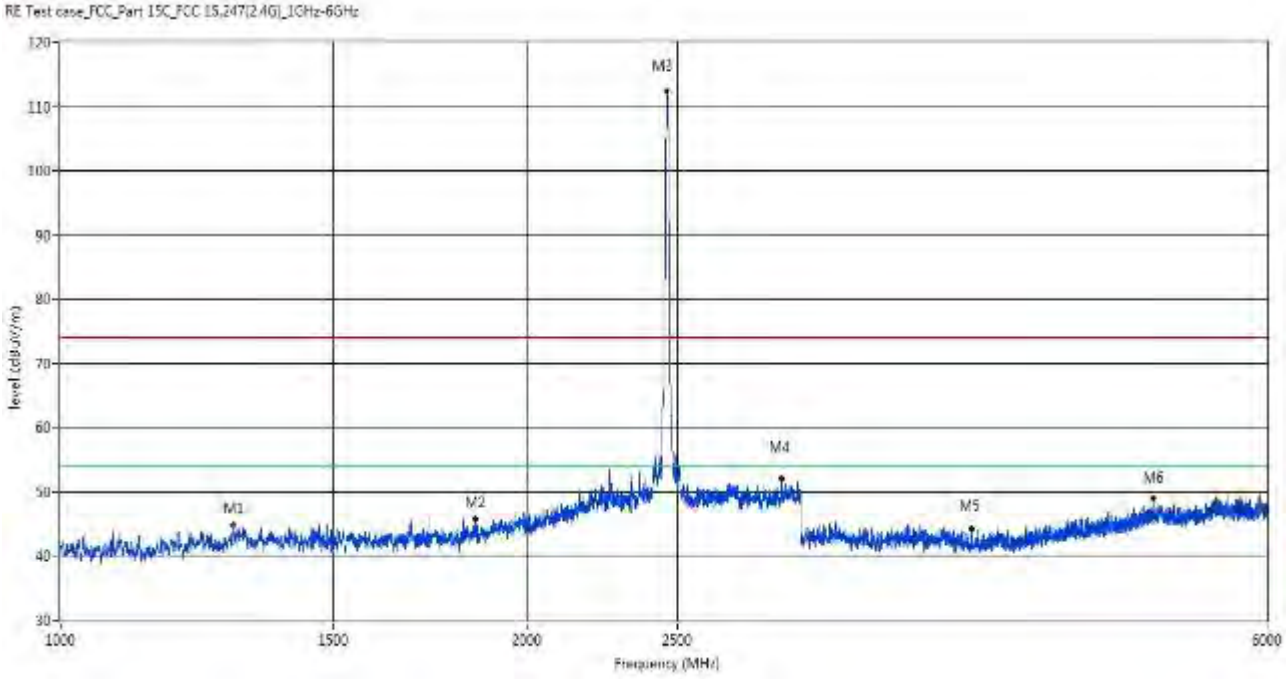
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1314.500	45.65	-2.16	74.0	28.35	Peak	356.60	200	Vertical	Pass
2	1683.500	45.84	-0.80	74.0	28.16	Peak	37.30	200	Vertical	Pass
3	2437.500	116.99	1.24	74.0	-42.99	Peak	26.30	200	Vertical	N/A
4	2954.500	51.98	3.90	74.0	22.02	Peak	49.20	100	Vertical	Pass
5	3999.000	44.74	8.57	74.0	29.26	Peak	158.80	300	Vertical	Pass
6	4873.500	52.60	10.73	74.0	21.40	Peak	242.60	300	Vertical	Pass

11b MIDDLE CHANNEL 1 GHz to 6 GHz, ANT H



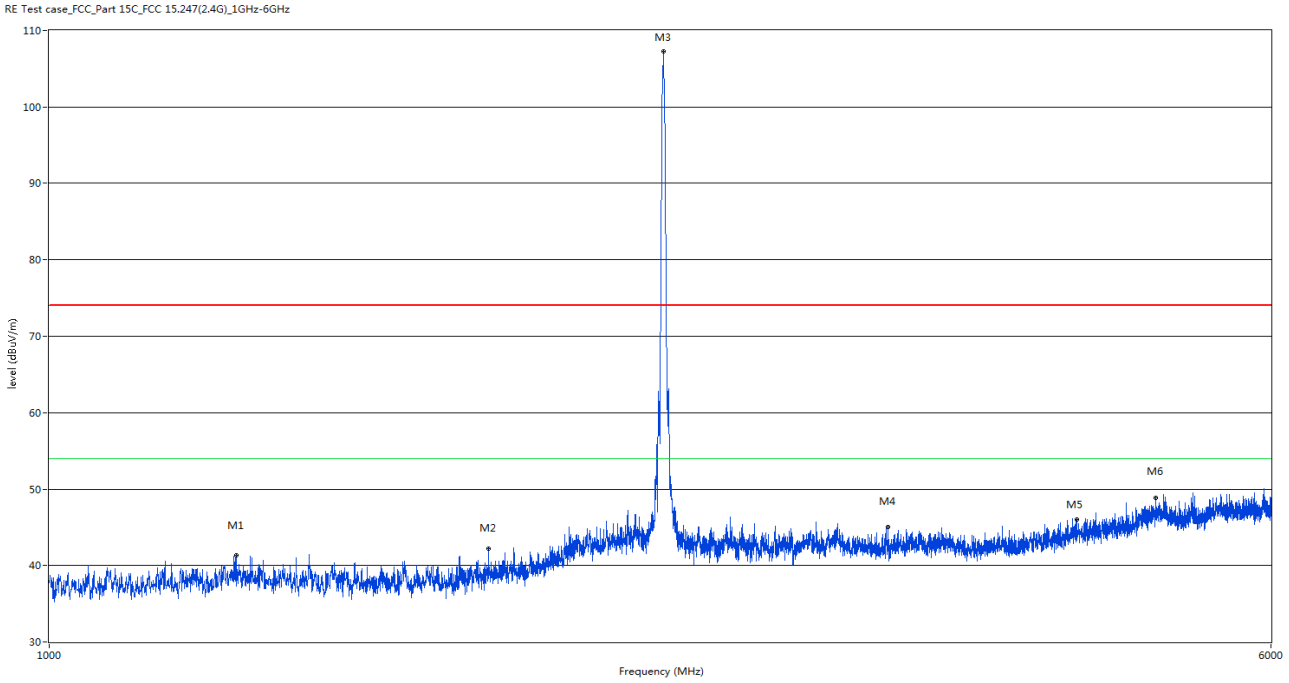
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1180.500	41.75	-2.87	74.0	32.25	Peak	358.10	100	Horizontal	Pass
2	2137.000	46.42	0.16	74.0	27.58	Peak	239.70	100	Horizontal	Pass
3	2437.500	106.88	1.24	74.0	-32.88	Peak	352.50	100	Horizontal	N/A
4	3048.750	45.08	7.06	74.0	28.92	Peak	92.20	100	Horizontal	Pass
5	3927.750	44.97	8.16	74.0	29.03	Peak	249.00	100	Horizontal	Pass
6	5553.000	49.69	11.66	74.0	24.31	Peak	237.30	100	Horizontal	Pass

11b HIGH CHANNEL 1 GHz to 6 GHz, ANT V



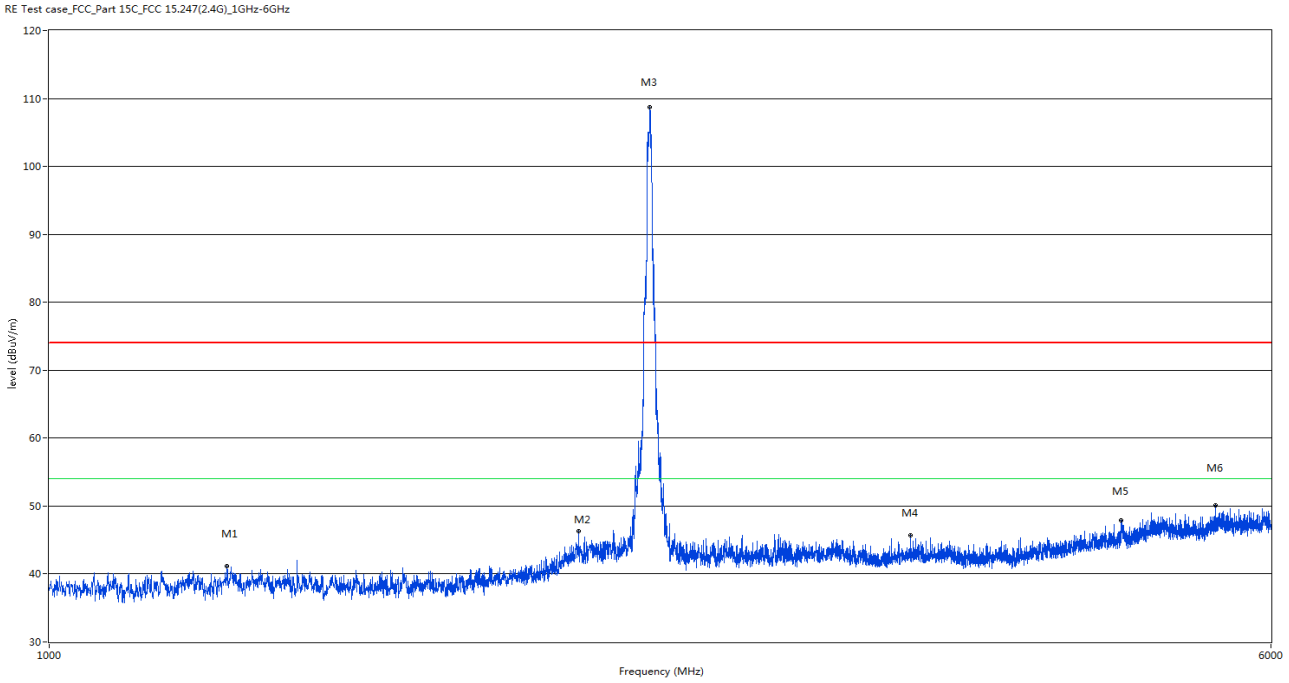
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1293.000	44.79	-1.99	74.0	29.21	Peak	0.70	100	Vertical	Pass
2	1851.500	45.79	-0.12	74.0	28.21	Peak	35.00	100	Vertical	Pass
3	2461.000	112.49	0.64	74.0	-38.49	Peak	23.70	100	Vertical	N/A
4	2916.000	52.06	4.28	74.0	21.94	Peak	171.60	100	Vertical	Pass
5	3867.750	44.21	8.28	74.0	29.79	Peak	40.30	100	Vertical	Pass
6	5064.000	49.07	11.26	74.0	24.93	Peak	146.80	100	Vertical	Pass

11b HIGH CHANNEL 1 GHz to 6 GHz, ANT H



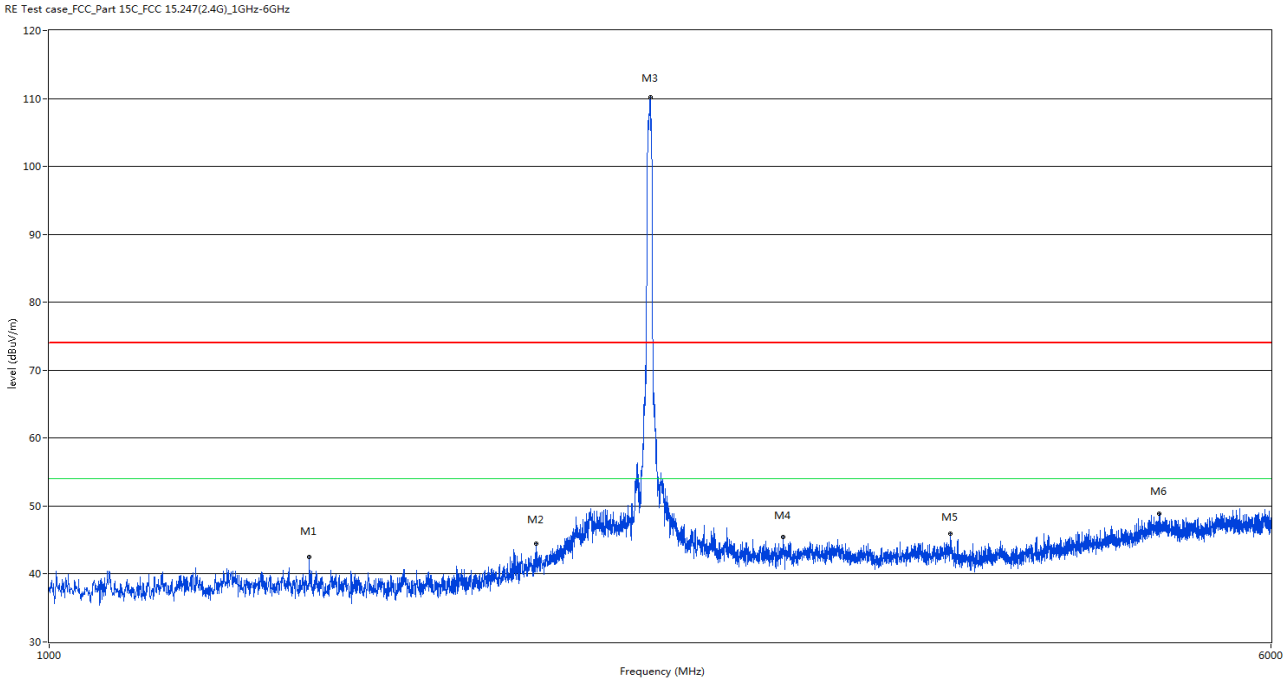
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1315.500	41.32	-2.42	74.0	32.68	Peak	80.60	100	Horizontal	Pass
2	1905.000	42.19	-0.61	74.0	31.81	Peak	80.60	100	Horizontal	Pass
3	2461.500	107.26	0.71	74.0	-33.26	Peak	284.70	100	Horizontal	N/A
4	3423.000	45.05	7.07	74.0	28.95	Peak	285.30	100	Horizontal	Pass
5	4512.750	46.01	9.91	74.0	27.99	Peak	308.70	100	Horizontal	Pass
6	5065.500	48.86	11.42	74.0	25.14	Peak	226.30	100	Horizontal	Pass

11g LOW CHANNEL 1 GHz to 6 GHz, ANT V



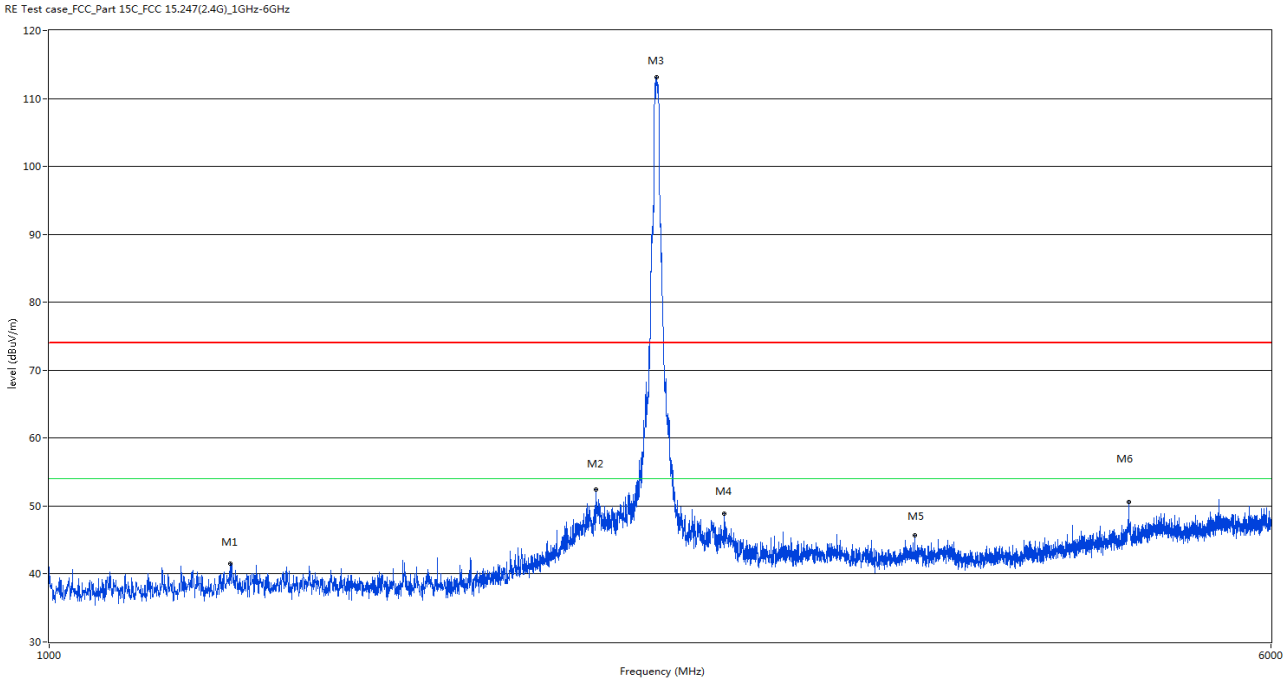
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1298.000	41.10	-1.91	74.0	32.90	Peak	204.60	100	Horizontal	Pass
2	2173.000	46.28	1.22	74.0	27.72	Peak	360.00	100	Horizontal	Pass
3	2413.500	108.73	1.81	74.0	-34.73	Peak	240.40	100	Horizontal	N/A
4	3537.000	45.76	7.23	74.0	28.24	Peak	354.50	100	Horizontal	Pass
5	4817.250	47.96	10.73	74.0	26.04	Peak	354.50	100	Horizontal	Pass
6	5533.500	50.08	12.07	74.0	23.92	Peak	212.90	100	Horizontal	Pass

11g LOW CHANNEL 1 GHz to 6 GHz, ANT H



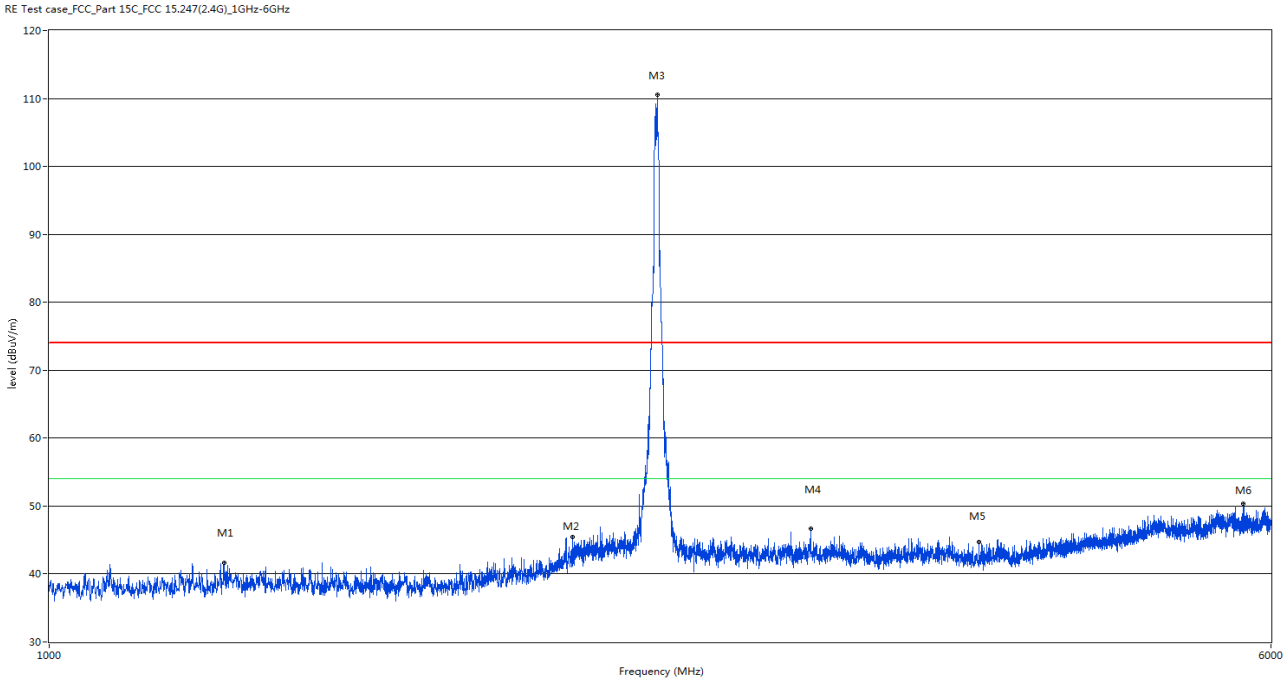
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1464.500	42.48	-1.31	74.0	31.52	Peak	312.20	100	Vertical	Pass
2	2042.000	44.44	-0.82	74.0	29.56	Peak	140.40	100	Vertical	Pass
3	2414.000	110.23	1.81	74.0	-36.23	Peak	203.80	100	Vertical	N/A
4	2933.000	45.45	4.10	74.0	28.55	Peak	348.90	100	Vertical	Pass
5	3750.000	45.88	7.77	74.0	28.12	Peak	21.30	100	Vertical	Pass
6	5091.750	48.88	11.60	74.0	25.12	Peak	335.60	100	Vertical	Pass

11g MIDDLE CHANNEL 1 GHz to 6 GHz, ANT V



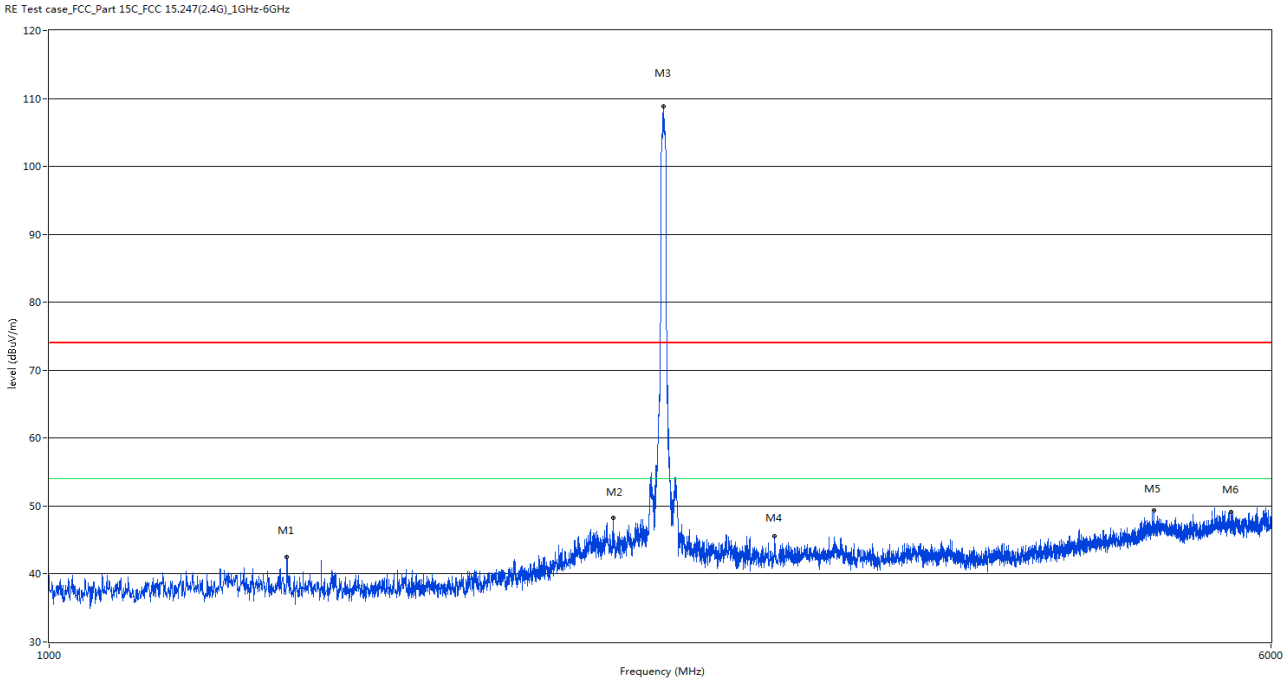
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1304.500	41.57	-1.79	74.0	32.43	Peak	149.60	100	Vertical	Pass
2	2231.000	52.48	0.95	74.0	21.52	Peak	205.60	100	Vertical	Pass
3	2437.500	113.14	1.24	74.0	-39.14	Peak	285.00	100	Vertical	N/A
4	2691.500	48.85	2.04	74.0	25.15	Peak	227.90	100	Vertical	Pass
5	3560.250	45.72	7.75	74.0	28.28	Peak	352.90	100	Vertical	Pass
6	4872.000	50.55	10.56	74.0	23.45	Peak	138.20	100	Vertical	Pass

11g MIDDLECHANNEL 1 GHz to 6 GHz, ANT H



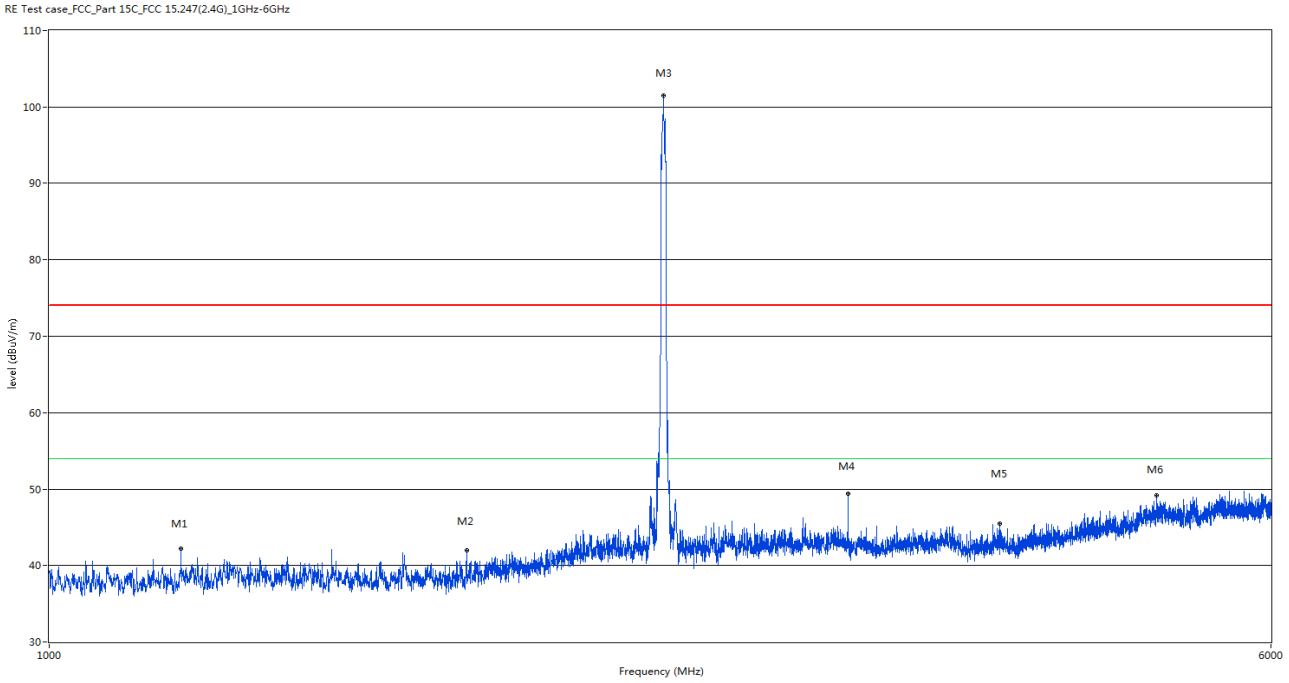
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1292.000	41.70	-1.62	74.0	32.30	Peak	295.10	100	Horizontal	Pass
2	2155.000	45.46	0.38	74.0	28.54	Peak	359.40	100	Horizontal	Pass
3	2439.500	110.56	0.14	74.0	-36.56	Peak	360.00	100	Horizontal	N/A
4	3056.250	46.71	7.10	74.0	27.29	Peak	0.00	100	Horizontal	Pass
5	3910.500	44.70	7.93	74.0	29.30	Peak	202.70	100	Horizontal	Pass
6	5764.500	50.41	11.63	74.0	23.59	Peak	358.50	100	Horizontal	Pass

11g HIGH CHANNEL 1 GHz to 6 GHz, ANT V



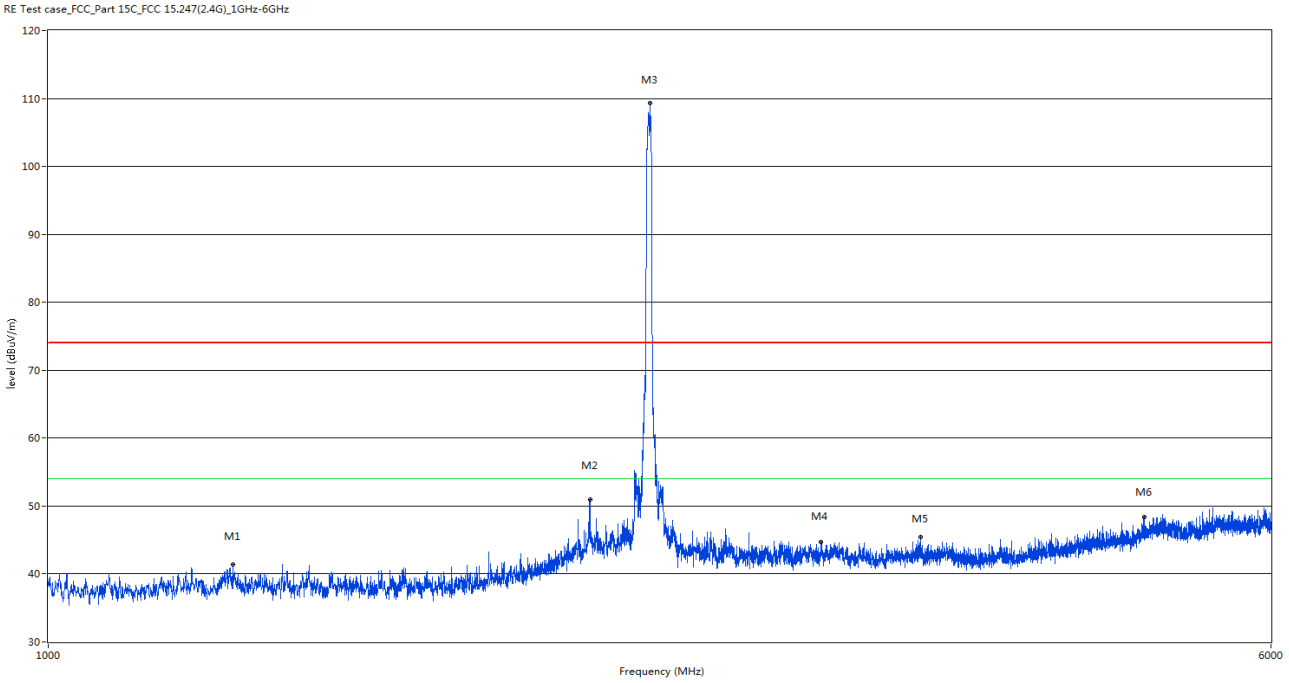
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1417.000	42.45	-2.08	74.0	31.55	Peak	81.60	100	Vertical	Pass
2	2287.500	48.21	1.77	74.0	25.79	Peak	208.00	100	Vertical	Pass
3	2461.000	108.78	0.64	74.0	-34.78	Peak	301.40	100	Vertical	N/A
4	2896.500	45.52	3.91	74.0	28.48	Peak	219.00	100	Vertical	Pass
5	5052.000	49.40	11.09	74.0	24.60	Peak	329.60	100	Vertical	Pass
6	5656.500	49.10	11.90	74.0	24.90	Peak	258.20	100	Vertical	Pass

11g HIGH CHANNEL 1 GHz to 6 GHz, ANT H



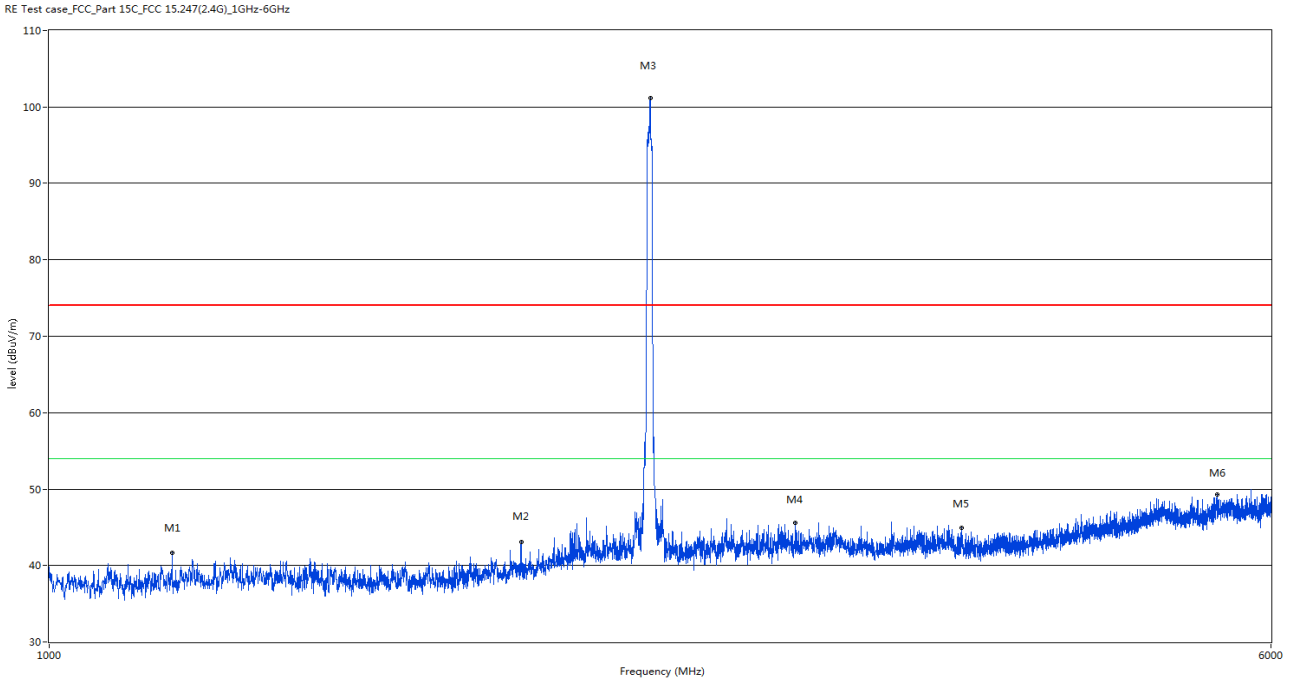
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1213.000	42.16	-2.24	74.0	31.84	Peak	221.10	100	Horizontal	Pass
2	1844.000	42.02	-1.35	74.0	31.98	Peak	103.90	100	Horizontal	Pass
3	2461.500	101.52	0.71	74.0	-27.52	Peak	360.00	100	Horizontal	N/A
4	3226.500	49.45	6.67	74.0	24.55	Peak	174.40	100	Horizontal	Pass
5	4029.750	45.44	8.76	74.0	28.56	Peak	316.60	100	Horizontal	Pass
6	5073.000	49.14	11.56	74.0	24.86	Peak	359.90	100	Horizontal	Pass

11n20 LOW CHANNEL 1 GHz to 6 GHz, ANT V



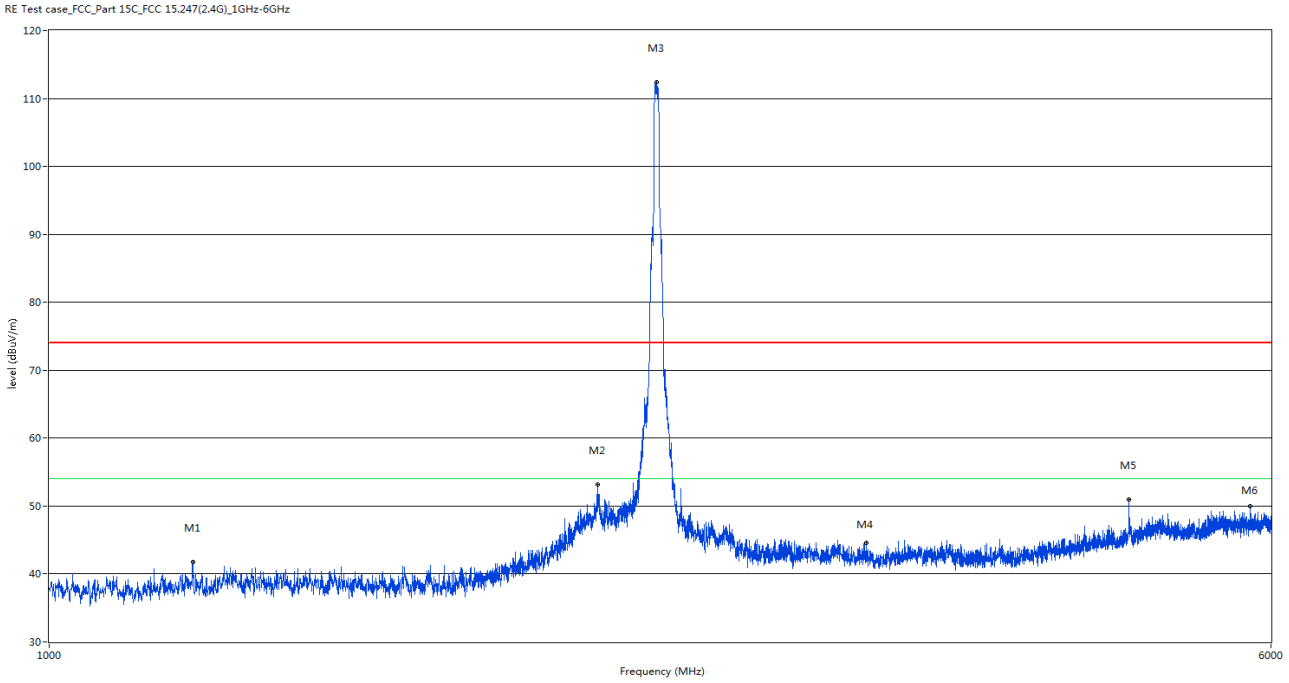
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1311.500	41.42	-2.06	74.0	32.58	Peak	175.30	100	Vertical	Pass
2	2211.500	50.95	1.57	74.0	23.05	Peak	186.70	100	Vertical	Pass
3	2415.000	109.38	1.82	74.0	-35.38	Peak	82.90	100	Vertical	N/A
4	3102.000	44.77	6.74	74.0	29.23	Peak	226.10	100	Vertical	Pass
5	3591.750	45.40	7.00	74.0	28.60	Peak	108.90	100	Vertical	Pass
6	4982.250	48.43	11.05	74.0	25.57	Peak	167.60	100	Vertical	Pass

11n20 LOW CHANNEL 1 GHz 6 25 GHz, ANT H



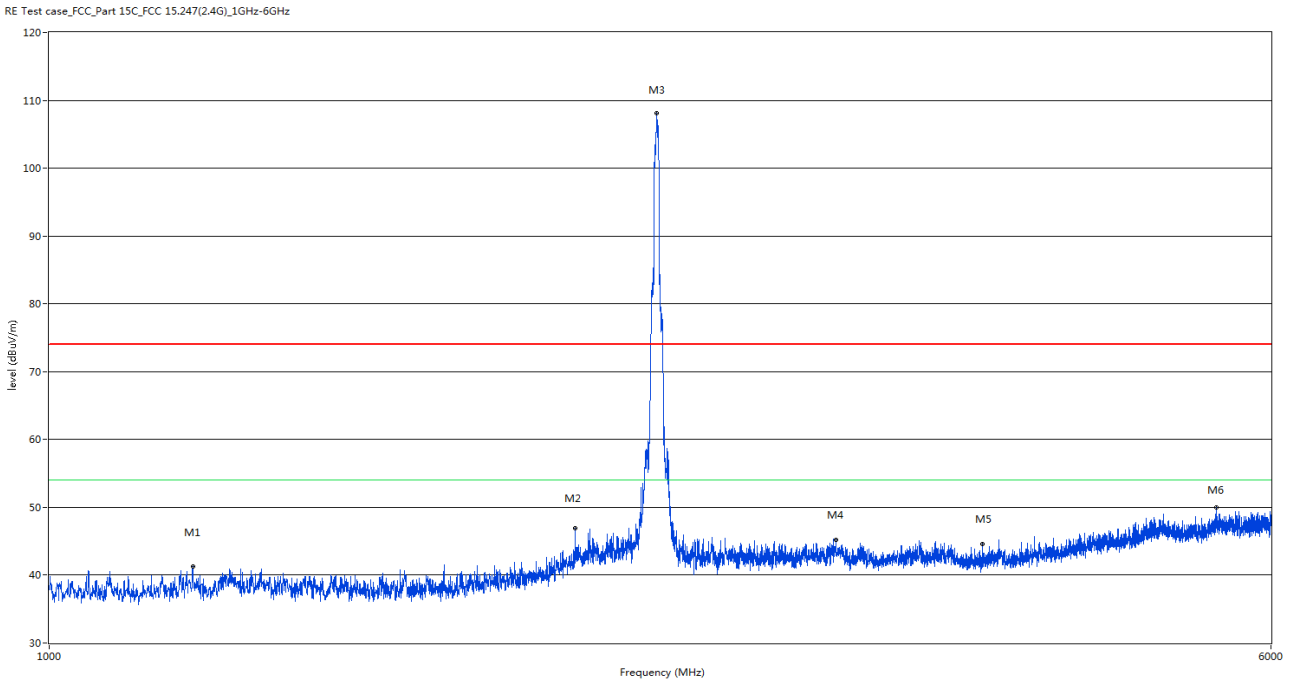
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Ve
1	1197.500	41.65	-3.58	74.0	32.35	Peak	360.00	100	Horizontal	Pa
2	1998.000	43.07	-0.05	74.0	30.93	Peak	184.00	100	Horizontal	Pa
3	2414.000	101.19	1.81	74.0	-27.19	Peak	71.00	100	Horizontal	N/
4	2988.000	45.55	3.69	74.0	28.45	Peak	24.80	100	Horizontal	Pa
5	3813.750	44.94	7.99	74.0	29.06	Peak	178.20	100	Horizontal	Pa
6	5548.500	49.24	11.61	74.0	24.76	Peak	332.30	100	Horizontal	Pa

11n20 MIDDLE CHANNEL 1 GHz to 6 GHz, ANT V



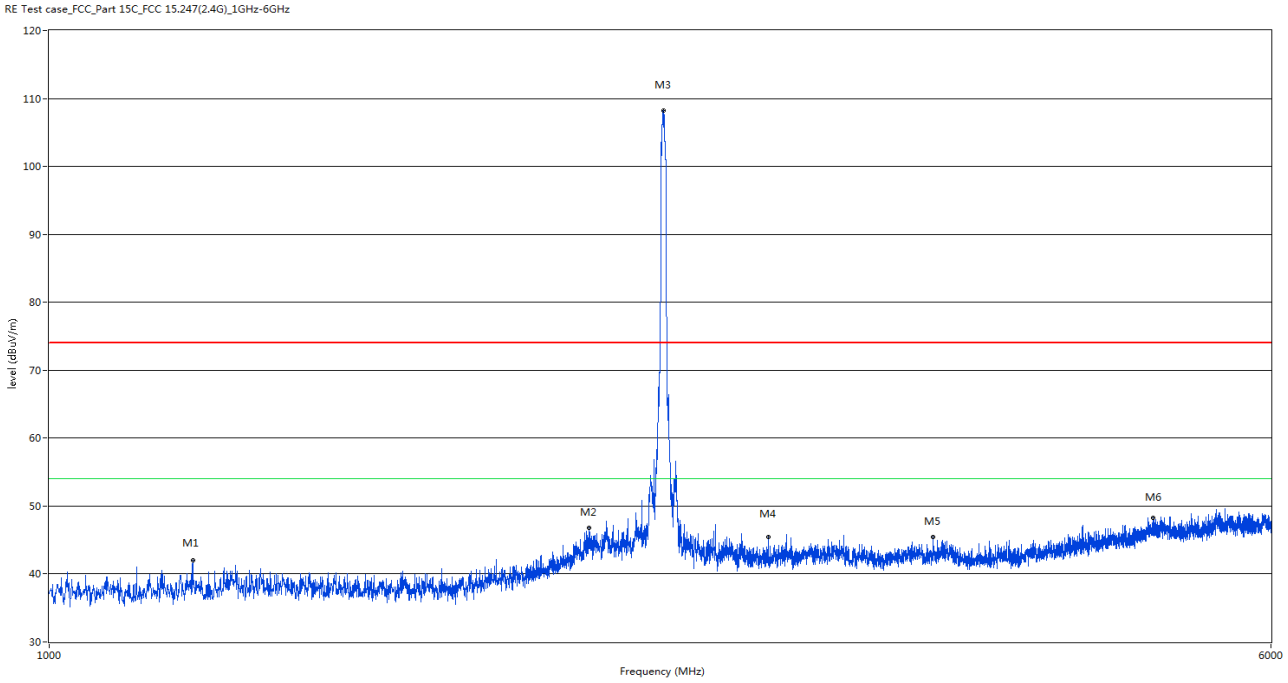
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1234.500	41.76	-1.88	74.0	32.24	Peak	249.20	100	Vertical	Pass
2	2235.500	53.17	0.86	74.0	20.83	Peak	96.30	100	Vertical	Pass
3	2437.500	112.42	1.24	74.0	-38.42	Peak	358.00	100	Vertical	N/A
4	3313.500	44.59	6.49	74.0	29.41	Peak	332.80	100	Vertical	Pass
5	4872.750	51.02	10.81	74.0	22.98	Peak	141.70	100	Vertical	Pass
6	5820.000	50.01	11.84	74.0	23.99	Peak	224.70	100	Vertical	Pass

11n20 MIDDLE CHANNEL 1 GHz to 6 GHz, ANT H



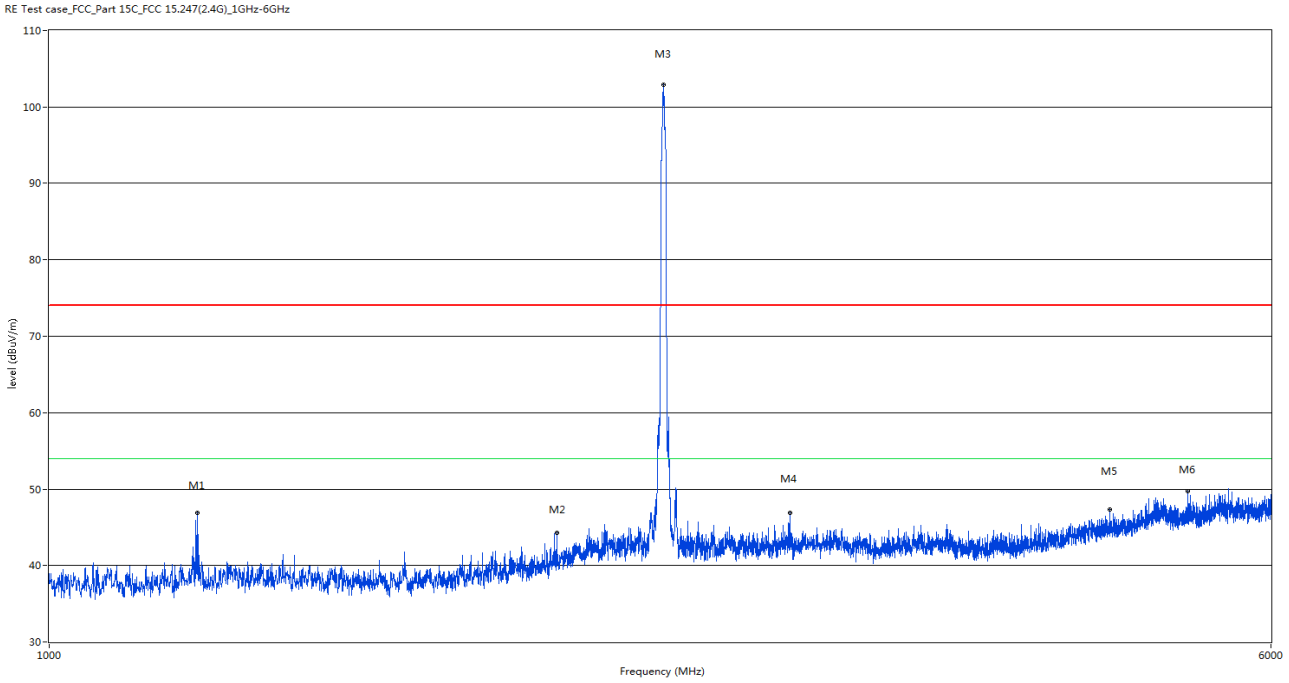
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1235.000	41.25	-1.92	74.0	32.75	Peak	263.20	100	Horizontal	Pass
2	2162.000	46.88	0.58	74.0	27.12	Peak	331.70	100	Horizontal	Pass
3	2438.500	108.15	0.60	74.0	-34.15	Peak	360.00	100	Horizontal	N/A
4	3170.250	45.25	6.45	74.0	28.75	Peak	354.30	100	Horizontal	Pass
5	3929.250	44.64	8.34	74.0	29.36	Peak	284.40	100	Horizontal	Pass
6	5541.750	50.00	12.21	74.0	24.00	Peak	260.40	100	Horizontal	Pass

11n20 HIGH CHANNEL 1 GHz to 6 GHz, ANT V



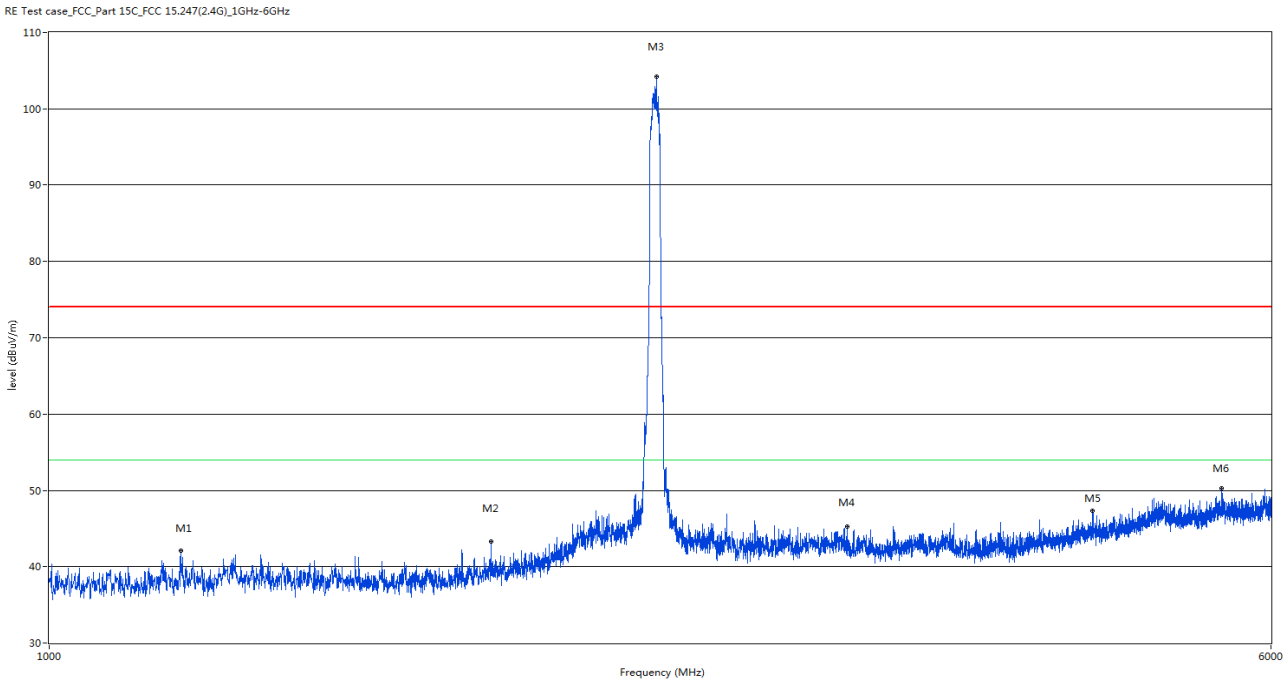
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1234.500	41.97	-1.88	74.0	32.03	Peak	25.30	100	Vertical	Pass
2	2207.000	46.74	1.20	74.0	27.26	Peak	116.40	100	Vertical	Pass
3	2461.500	108.25	0.71	74.0	-34.25	Peak	352.60	100	Vertical	N/A
4	2870.000	45.43	3.44	74.0	28.57	Peak	292.40	100	Vertical	Pass
5	3654.750	45.50	7.68	74.0	28.50	Peak	304.80	100	Vertical	Pass
6	5049.000	48.32	11.27	74.0	25.68	Peak	341.30	100	Vertical	Pass

11n20 HIGH CHANNEL 1 GHz to 6 GHz, ANT H



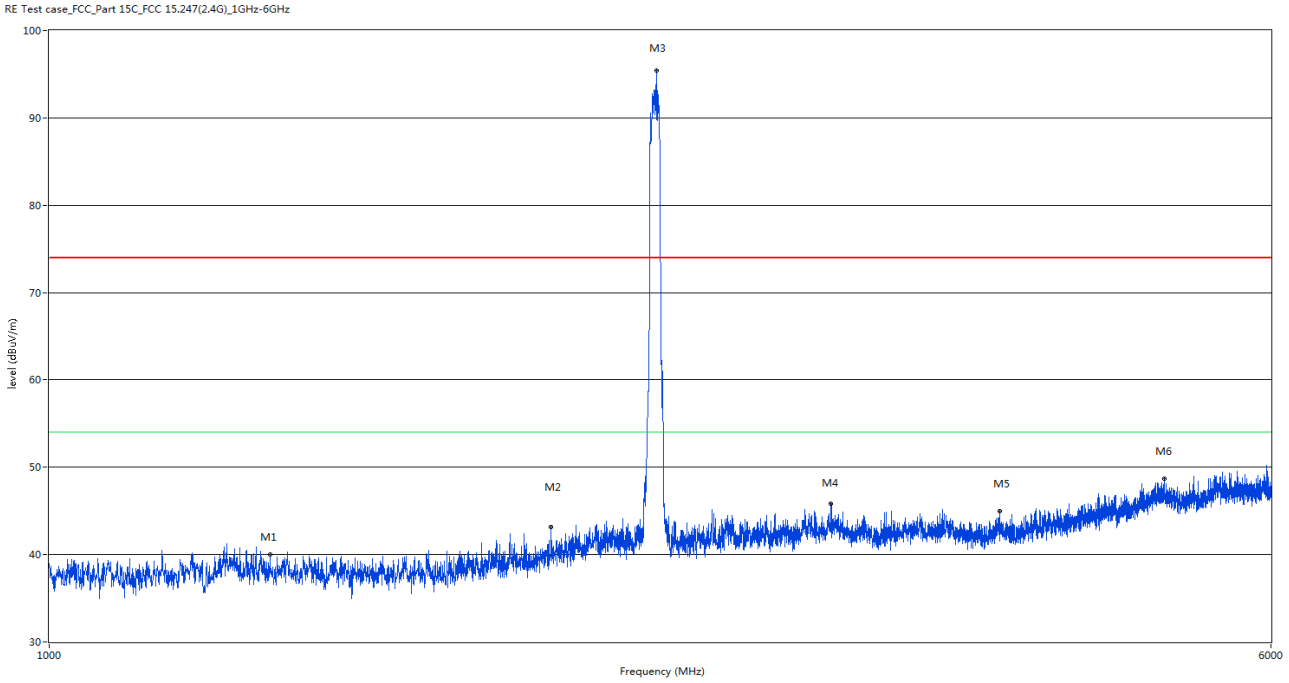
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1243.500	46.84	-2.99	74.0	27.16	Peak	240.60	100	Horizontal	Pass
2	2105.500	44.24	0.91	74.0	29.76	Peak	360.00	100	Horizontal	Pass
3	2460.500	102.97	0.49	74.0	-28.97	Peak	359.80	100	Horizontal	N/A
4	2962.000	46.89	4.19	74.0	27.11	Peak	353.30	100	Horizontal	Pass
5	4736.250	47.38	10.56	74.0	26.62	Peak	307.50	100	Horizontal	Pass
6	5309.250	49.71	11.14	74.0	24.29	Peak	359.90	100	Horizontal	Pass

11n40 LOW CHANNEL 1 GHz to 6 GHz, ANT V



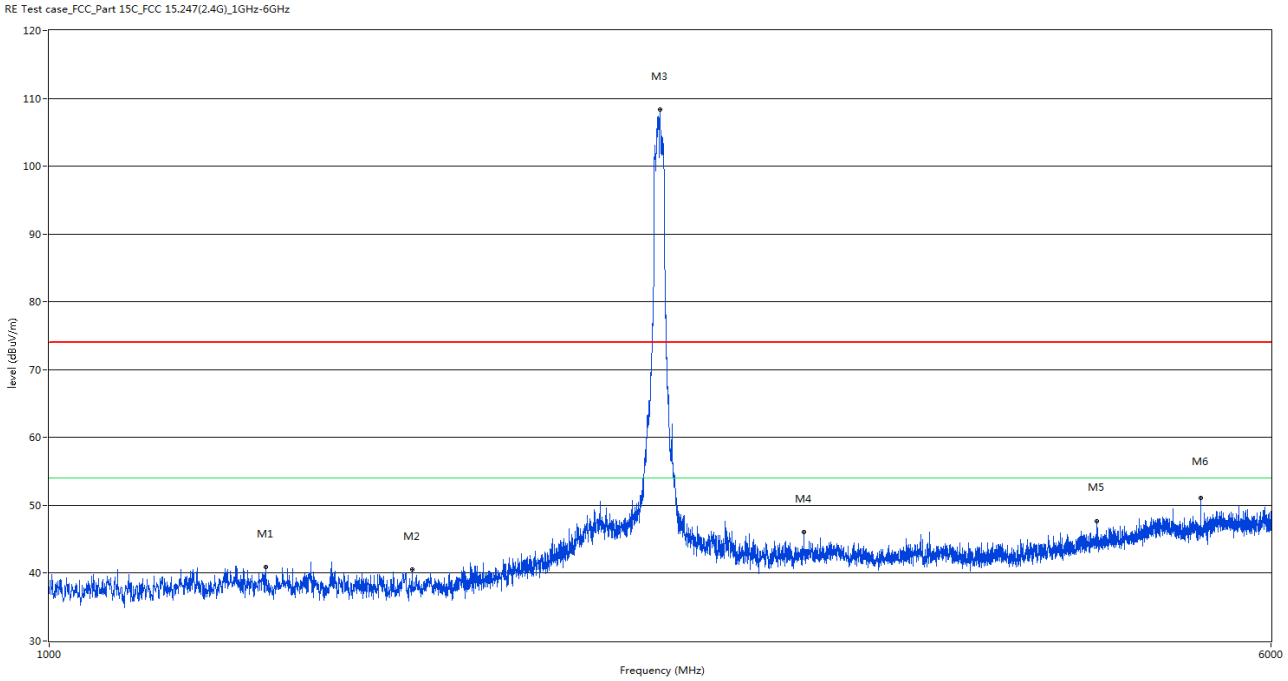
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1213.000	42.07	-2.24	74.0	31.93	Peak	305.20	100	Vertical	Pass
2	1911.500	43.28	-0.98	74.0	30.72	Peak	327.80	100	Vertical	Pass
3	2411.500	104.21	1.24	74.0	-30.21	Peak	58.40	100	Vertical	N/A
4	3221.250	45.28	6.78	74.0	28.72	Peak	202.80	100	Vertical	Pass
5	4820.750	47.29	10.10	74.0	26.71	Peak	320.80	100	Vertical	Pass
6	5581.500	50.25	11.72	74.0	23.75	Peak	261.80	100	Vertical	Pass

11n40 LOW CHANNEL 1 GHz to 6 GHz, ANT V



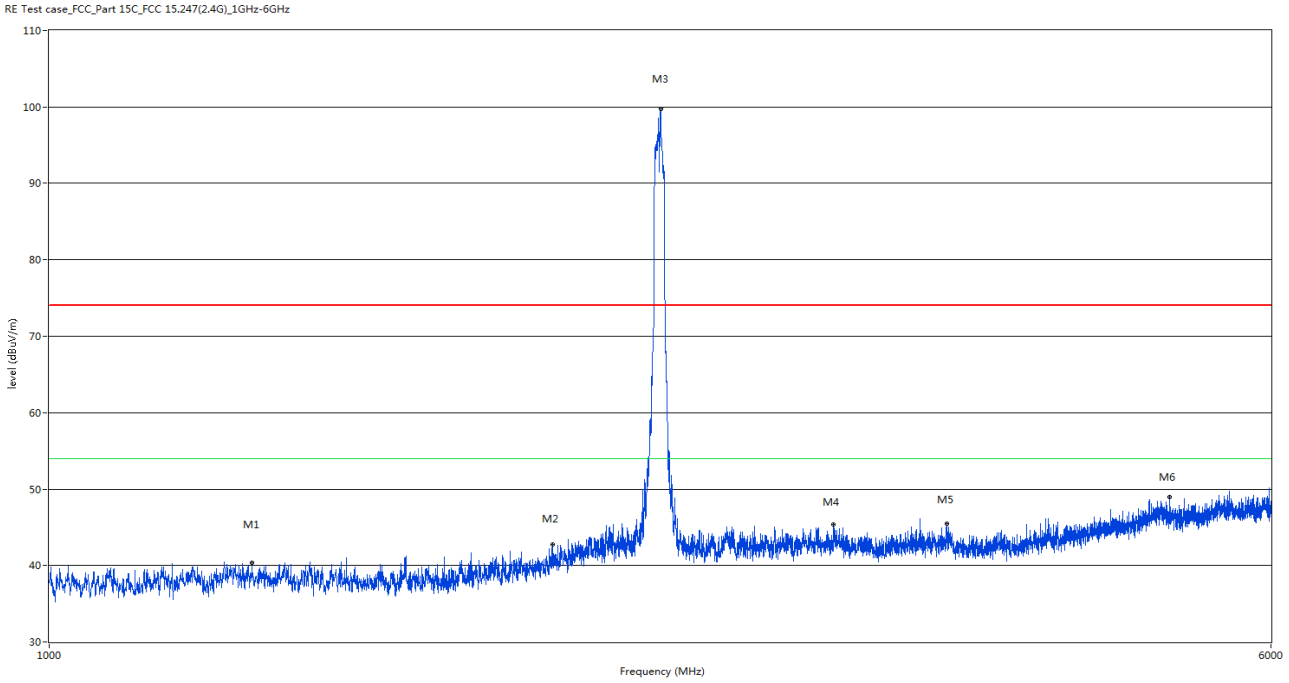
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1382.000	39.98	-3.32	74.0	34.02	Peak	172.10	100	Horizontal	Pass
2	2087.000	43.19	0.05	74.0	30.81	Peak	307.40	100	Horizontal	Pass
3	2412.000	95.47	1.07	74.0	-21.47	Peak	70.00	100	Horizontal	N/A
4	3146.250	45.81	6.60	74.0	28.19	Peak	166.50	100	Horizontal	Pass
5	4029.750	44.95	8.76	74.0	29.05	Peak	141.60	100	Horizontal	Pass
6	5133.000	48.66	11.57	74.0	25.34	Peak	0.00	100	Horizontal	Pass

11n40 MIDDLE CHANNEL 1 GHz to 6 GHz, ANT V



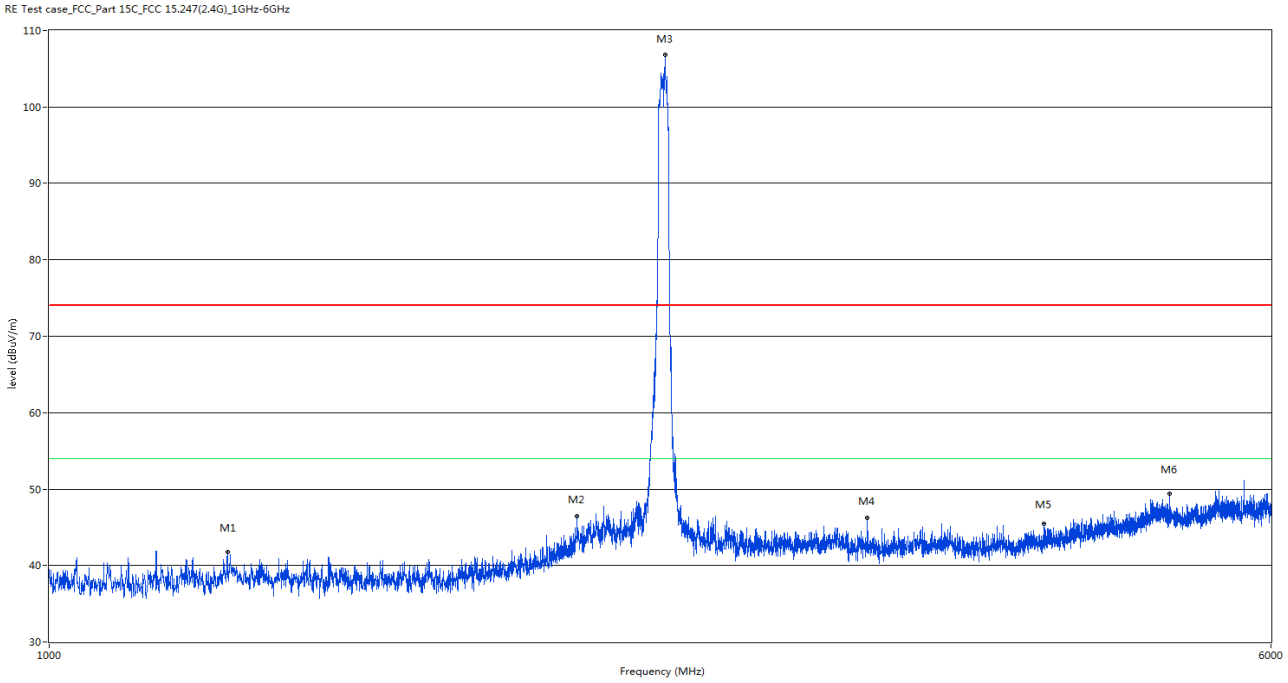
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1374.000	40.86	-2.91	74.0	33.14	Peak	358.30	100	Vertical	Pass
2	1703.500	40.60	-2.00	74.0	33.40	Peak	308.00	100	Vertical	Pass
3	2437.500	108.30	0.43	74.0	-34.30	Peak	353.30	100	Vertical	N/A
4	3024.000	46.00	7.01	74.0	28.00	Peak	55.90	100	Vertical	Pass
5	4947.000	47.66	10.07	74.0	26.34	Peak	117.10	100	Vertical	Pass
6	5415.000	51.06	11.10	74.0	22.94	Peak	224.50	100	Vertical	Pass

11n40 MIDDLE CHANNEL 1 GHz to 6 GHz, ANT H



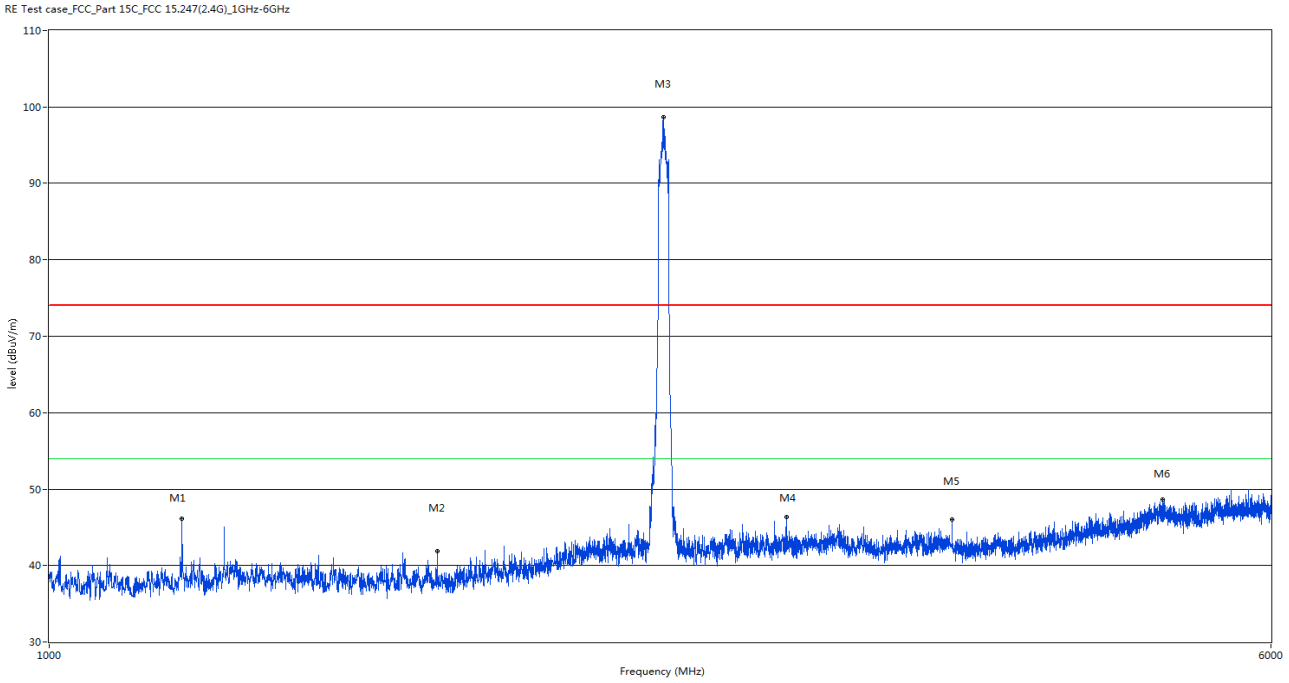
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1346.000	40.33	-2.03	74.0	33.67	Peak	216.20	100	Horizontal	Pass
2	2093.500	42.70	0.13	74.0	31.30	Peak	360.00	100	Horizontal	Pass
3	2437.500	99.76	0.77	74.0	-25.76	Peak	4.00	100	Horizontal	N/A
4	3159.750	45.37	7.00	74.0	28.63	Peak	309.70	100	Horizontal	Pass
5	3732.000	45.43	8.00	74.0	28.57	Peak	354.70	100	Horizontal	Pass
6	5172.750	48.92	11.40	74.0	25.08	Peak	214.60	100	Horizontal	Pass

11n40 HIG CHANNEL 1 GHz to 6 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1298.500	41.78	-2.02	74.0	32.22	Peak	341.50	100	Vertical	Pass
2	2169.500	46.47	0.81	74.0	27.53	Peak	205.40	100	Vertical	Pass
3	2467.500	106.88	0.55	74.0	-32.88	Peak	46.30	100	Vertical	N/A
4	3319.500	46.27	6.30	74.0	27.73	Peak	248.80	100	Vertical	Pass
5	4299.750	45.50	9.42	74.0	28.50	Peak	153.70	100	Vertical	Pass
6	5172.750	49.39	11.40	74.0	24.61	Peak	3.10	100	Vertical	Pass

11n40 HIG CHANNEL 1 GHz to 6 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1215.000	46.11	-3.42	74.0	27.89	Peak	360.00	100	Horizontal	Pass
2	1766.500	41.93	-1.97	74.0	32.07	Peak	216.40	100	Horizontal	Pass
3	2460.500	98.62	0.49	74.0	-24.62	Peak	360.00	100	Horizontal	N/A
4	2947.500	46.32	3.41	74.0	27.68	Peak	69.20	100	Horizontal	Pass
5	3759.000	45.99	8.07	74.0	28.01	Peak	238.90	100	Horizontal	Pass
6	5120.250	48.63	11.57	74.0	25.37	Peak	274.00	100	Horizontal	Pass

A.7 Band Edge (Restricted-band band-edge)

Test Data

Note 1: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

Note 2: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

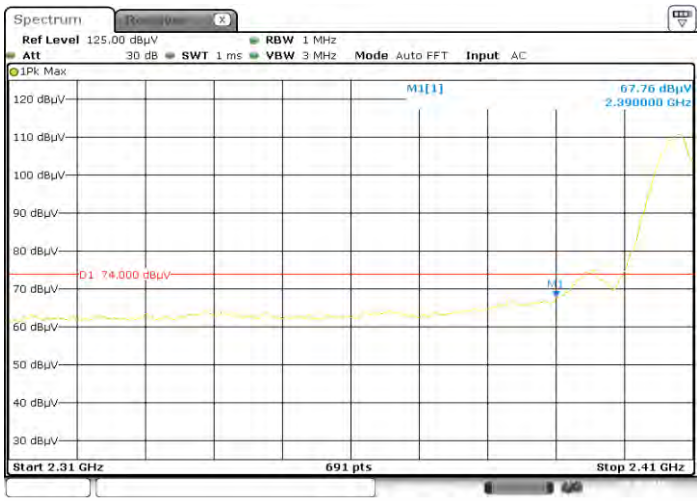
Note 3: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Test Mode	Test Channel	Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Remark	Verdict
802.11b	CH01	2390	67.76	74	6.24	PEAK	Pass
		2390	53.85	54	0.15	AVERAGE	Pass
	CH03	2390	62.80	74	11.20	PEAK	Pass
		2390	48.40	54	5.60	AVERAGE	Pass
	CH09	2483.5	61.68	74	12.32	PEAK	Pass
		2483.5	49.47	54	4.53	AVERAGE	Pass
	CH11	2483.5	64.42	74	9.58	PEAK	Pass
		2483.5	50.28	54	3.72	AVERAGE	Pass
802.11g	CH01	2390	70.72	74	3.28	PEAK	Pass
		2390	53.63	54	0.37	AVERAGE	Pass
	CH03	2390	71.25	74	2.75	PEAK	Pass
		2390	50.28	54	3.72	AVERAGE	Pass
	CH09	2483.5	69.59	74	4.41	PEAK	Pass
		2483.5	49.81	54	4.19	AVERAGE	Pass
	CH11	2483.5	72.15	74	1.85	PEAK	Pass
		2483.5	51.60	54	2.40	AVERAGE	Pass
802.11n20	CH01	2390	71.00	74	3.00	PEAK	Pass
		2390	51.09	54	2.91	AVERAGE	Pass
	CH03	2390	72.52	74	1.48	PEAK	Pass
		2390	50.41	54	3.59	AVERAGE	Pass
	CH09	2483.5	68.51	74	5.49	PEAK	Pass
		2483.5	49.61	54	4.39	AVERAGE	Pass
	CH11	2483.5	73.04	74	0.96	PEAK	Pass
		2483.5	52.70	54	1.30	AVERAGE	Pass
802.11n40	CH01	2390	71.99	74	2.01	PEAK	Pass
		2390	50.15	54	3.85	AVERAGE	Pass
	CH03	2390	69.29	74	4.71	PEAK	Pass
		2390	50.68	54	3.32	AVERAGE	Pass
	CH09	2483.5	70.44	74	3.56	PEAK	Pass

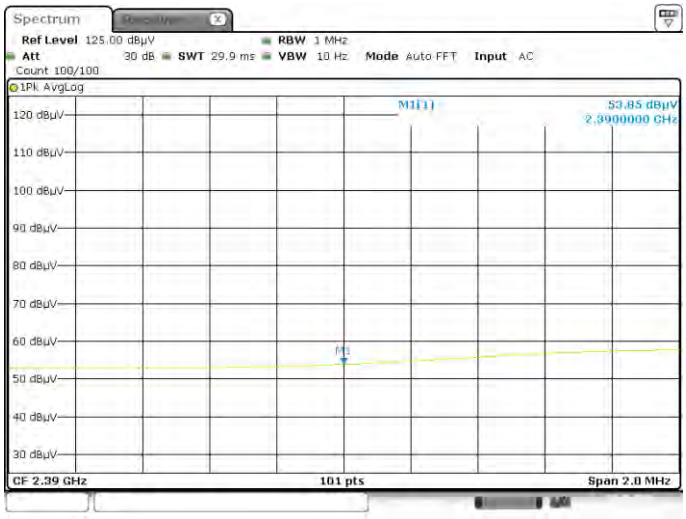
		2483.5	52.71	54	1.29	AVERAGE	Pass
	CH11	2483.5	72.35	74	1.65	PEAK	Pass
		2483.5	51.90	54	2.10	AVERAGE	Pass

802.11b Mode：

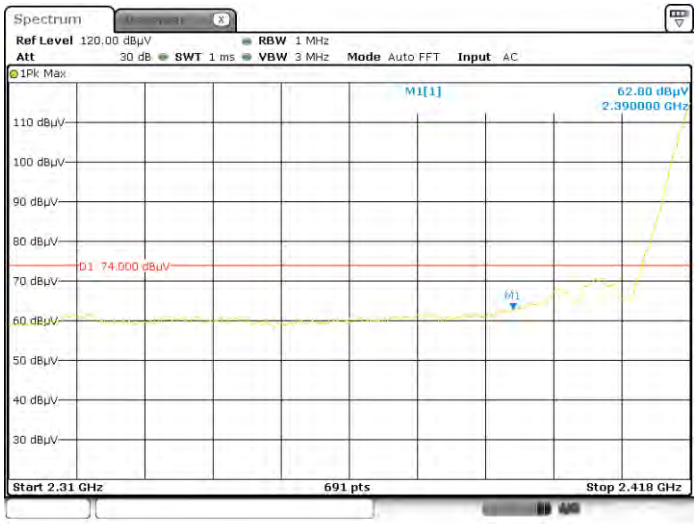
CH01 CHANNEL, PEAK



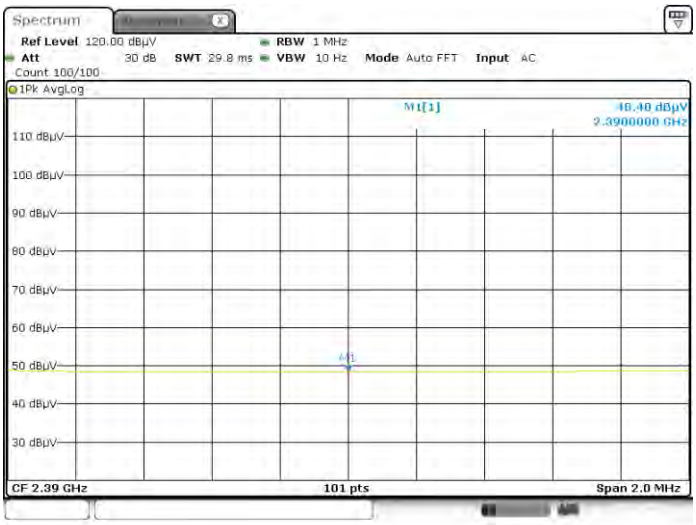
CH01 CHANNEL, AV



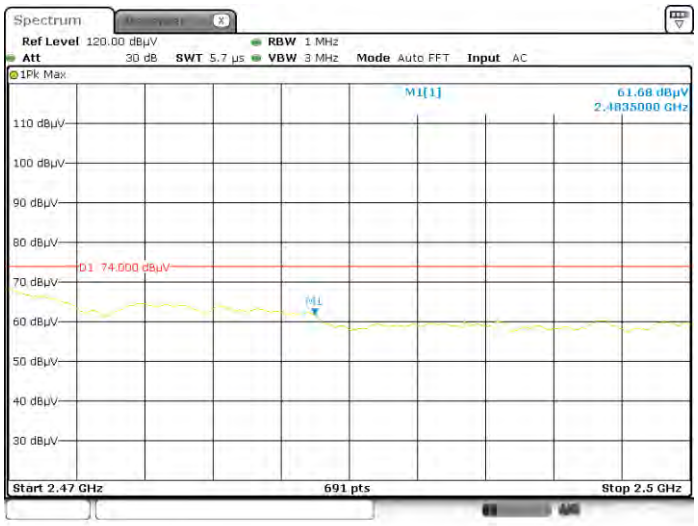
CH03 CHANNEL, PEAK



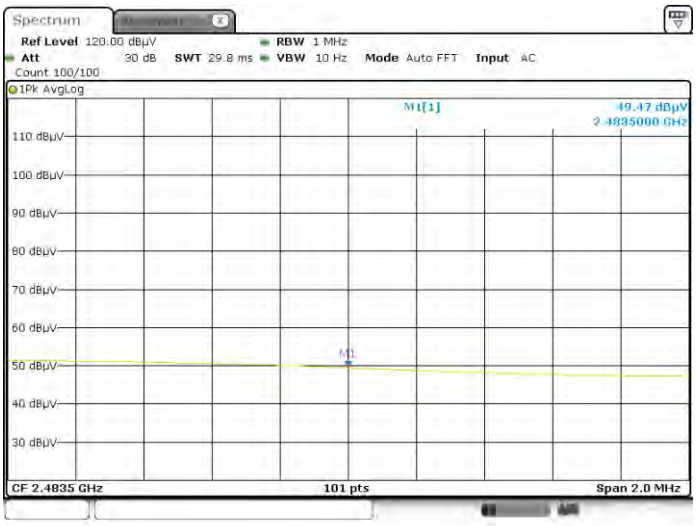
CH03 CHANNEL, AV



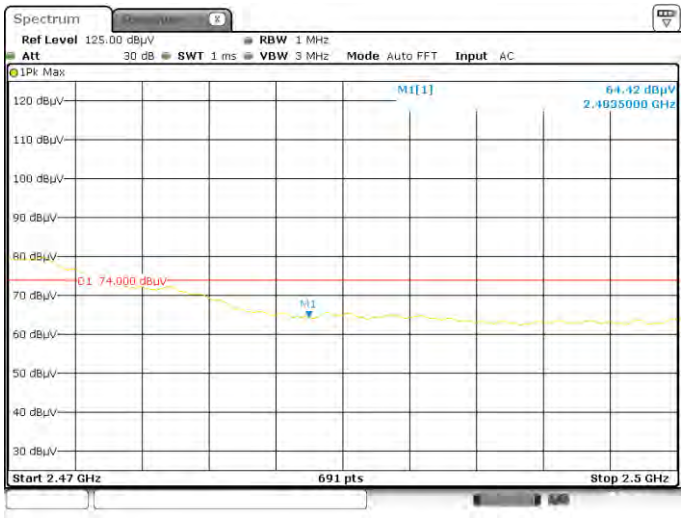
CH09 CHANNEL, PEAK



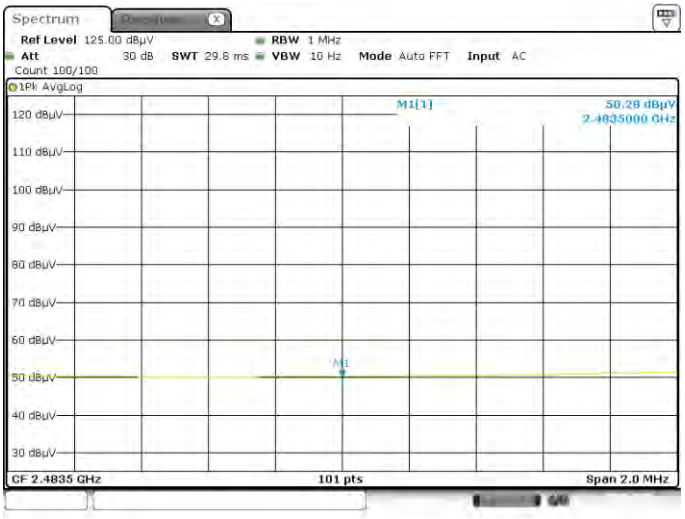
CH09 CHANNEL, AV



CH11 CHANNEL, PEAK



CH11 CHANNEL, AV



802.11g Mode：

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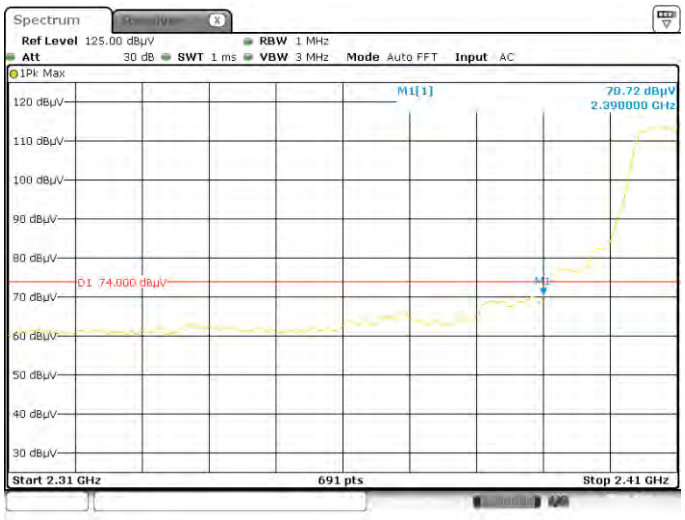

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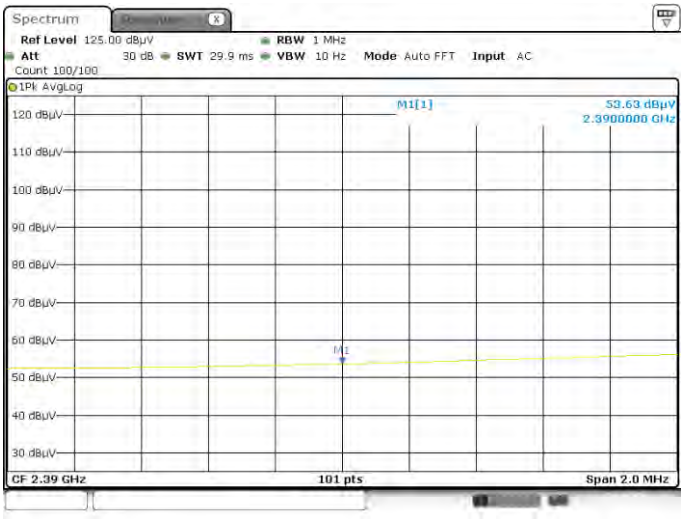

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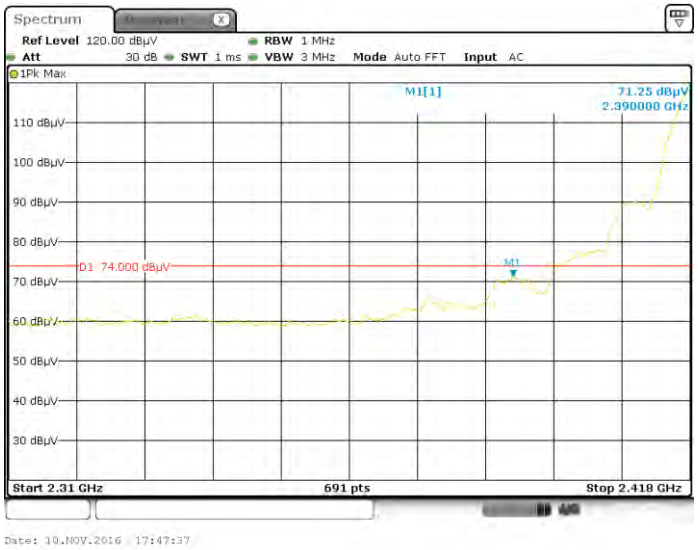

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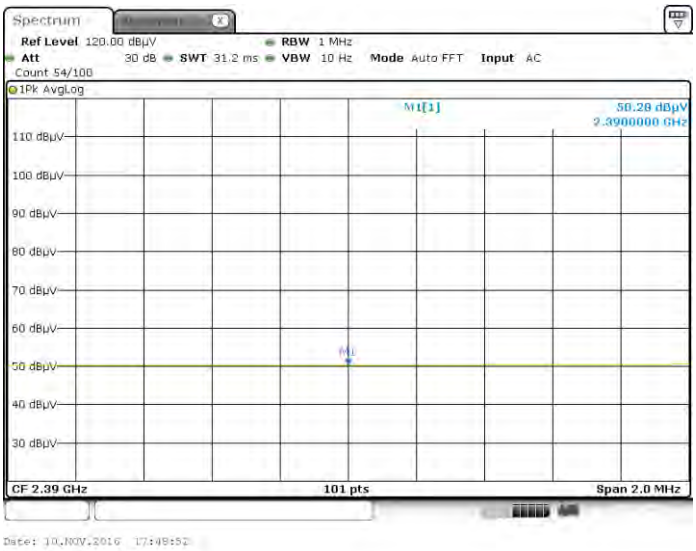

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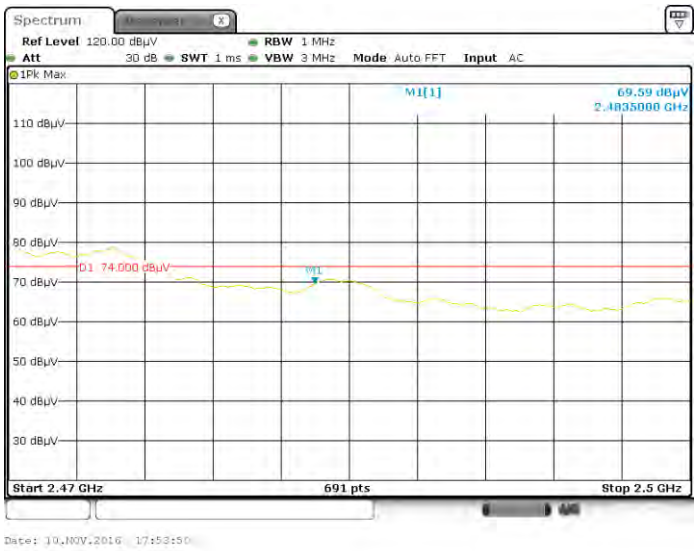

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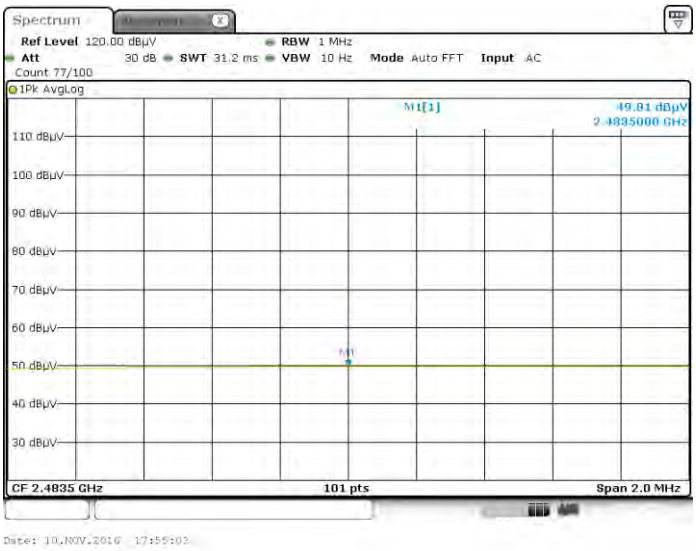

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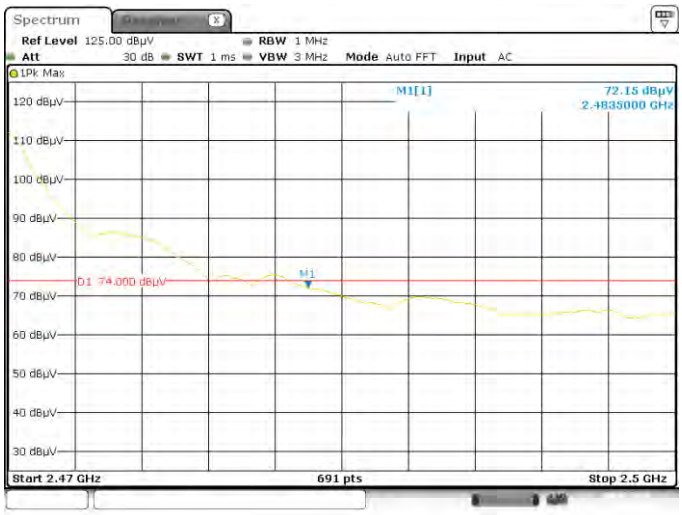
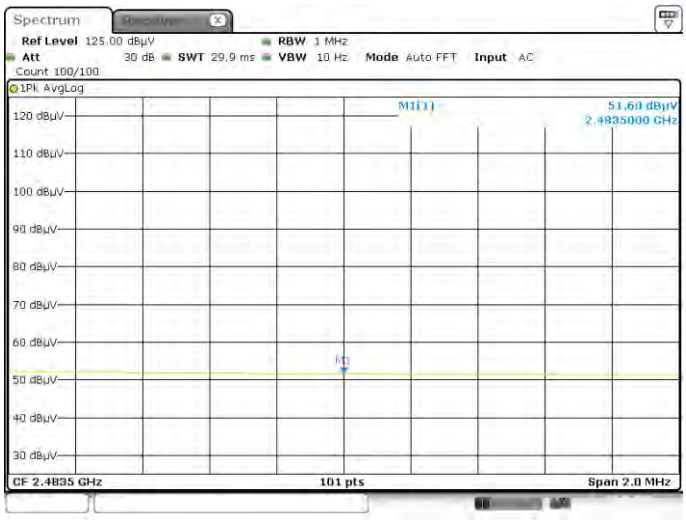


CH11 CHANNEL, AV



802.11n-20 MHz Mode：

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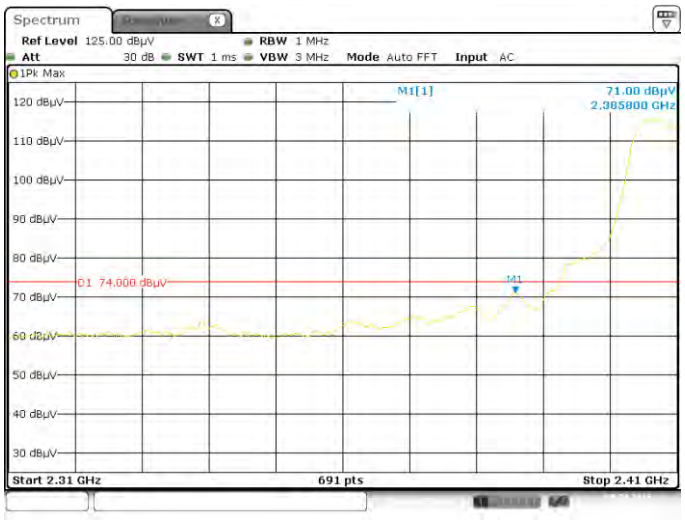
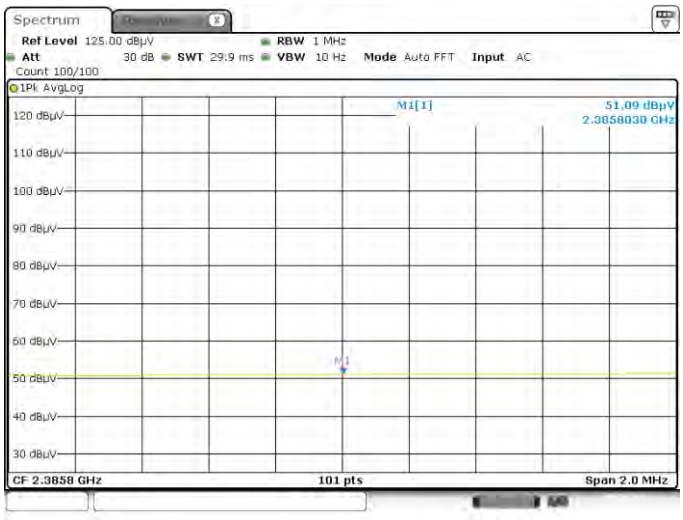


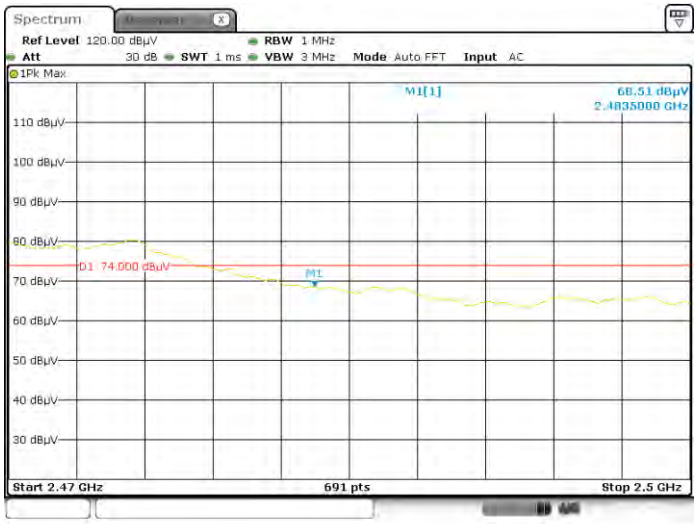
CH01 CHANNEL, AV



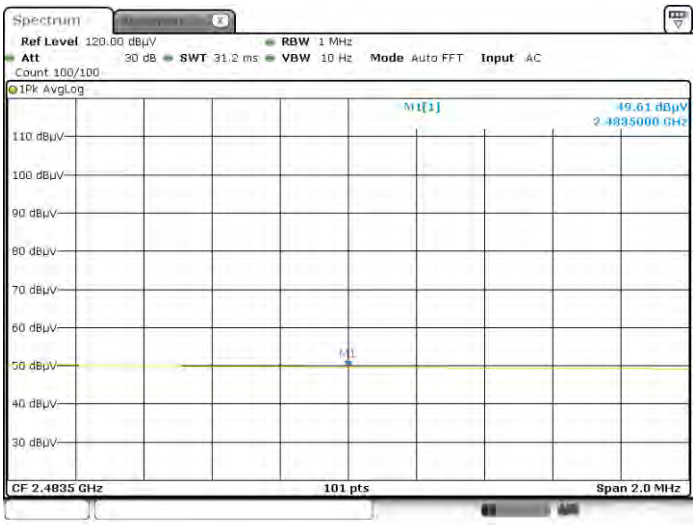
CH03 CHANNEL, PEAK

CH03 CHANNEL, AV

CH09 CHANNEL, PEAK



CH09 CHANNEL, AV



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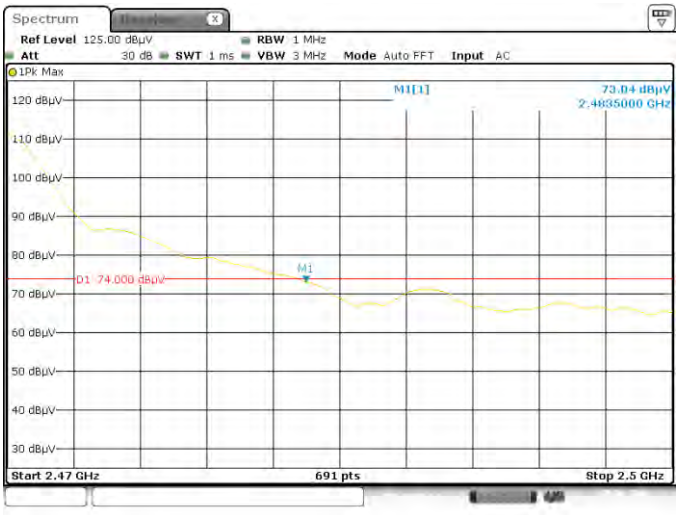
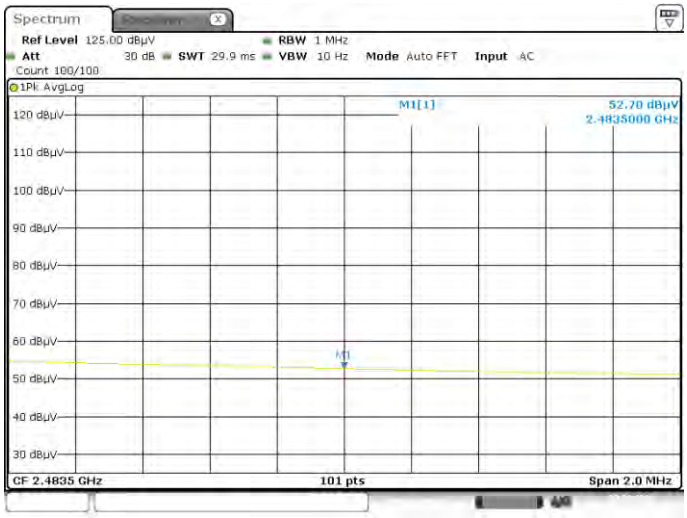
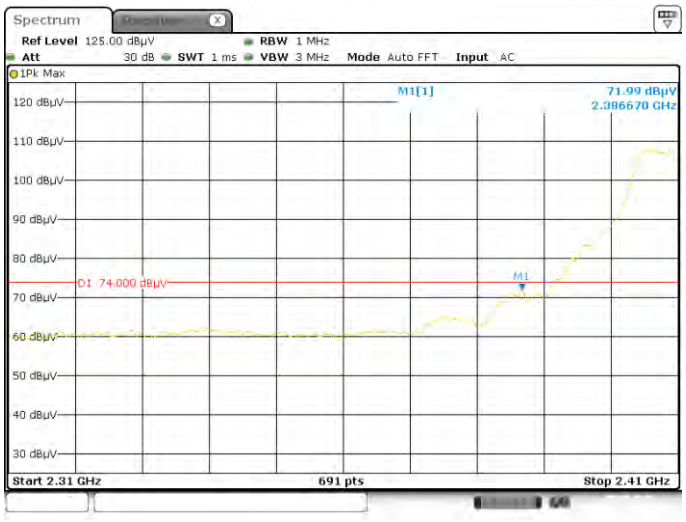


CH11 CHANNEL, AV

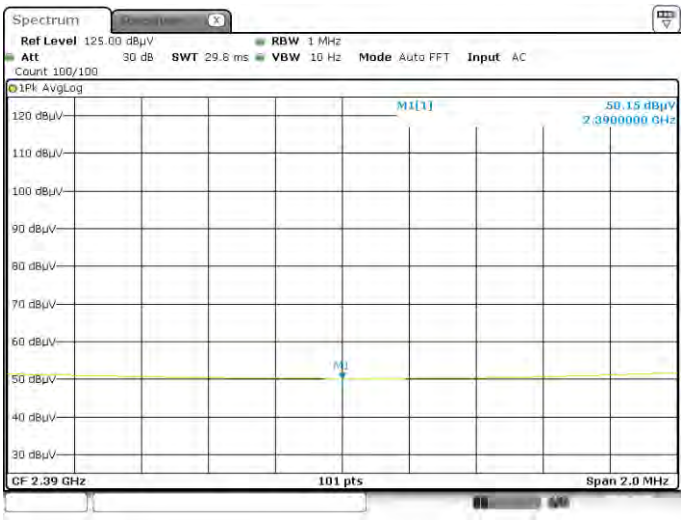


802.11n-40 MHz Mode:

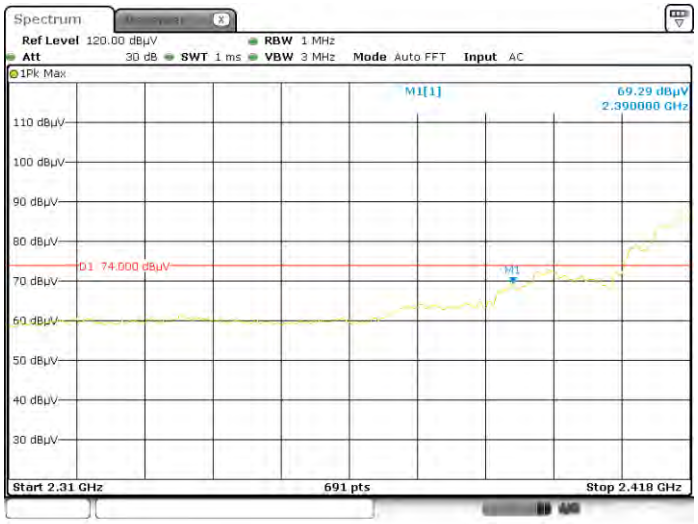
CH03 CHANNEL, PEAK



CH03 CHANNEL, AV

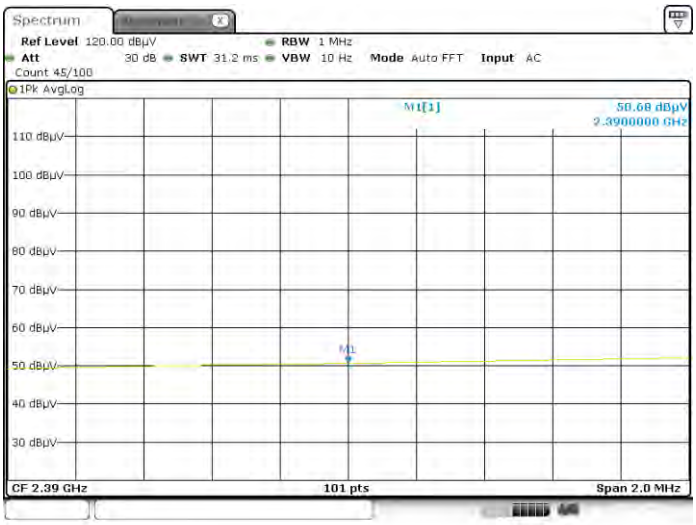


CH05 CHANNEL, PEAK



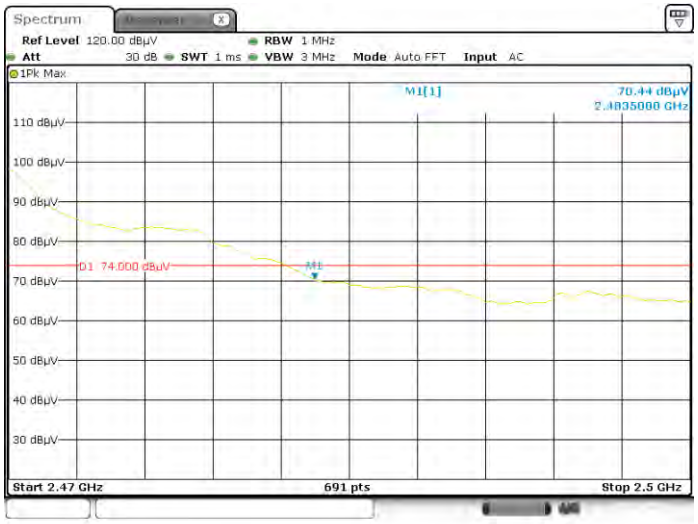
Date: 10.NOV.2016 18:20:19

CH05 CHANNEL, AV



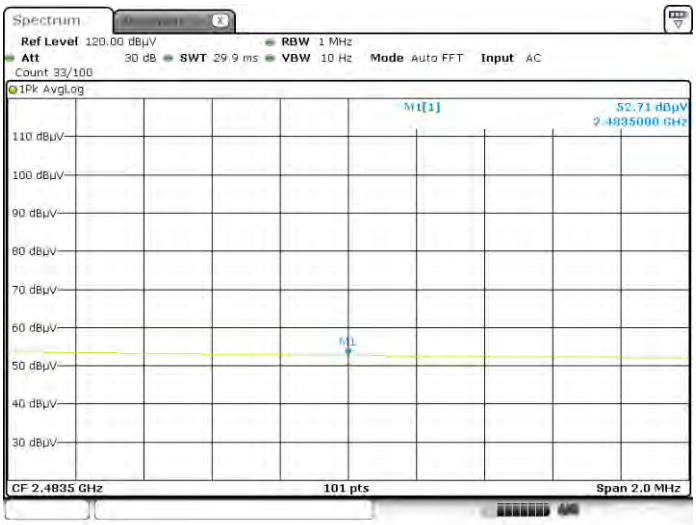
Date: 10.NOV.2016 18:21:13

CH07 CHANNEL, PEAK



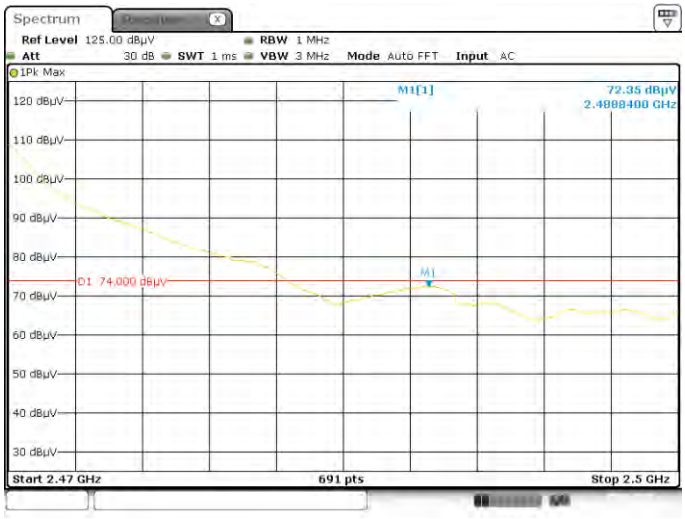
Date: 10.NOV.2016 18:25:56

CH07 CHANNEL, AV

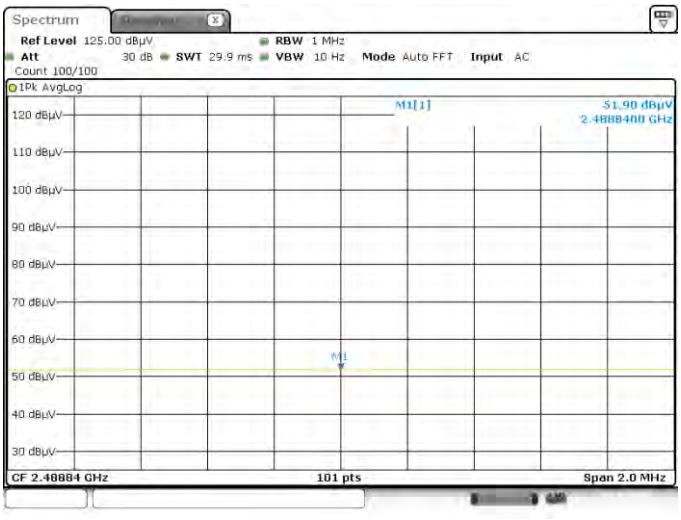


Date: 10.NOV.2016 18:27:01

CH09 CHANNEL, PEAK



CH09 CHANNEL, AV



A.8 Power Spectral Density (PSD)

Note 1: For 2.4G PSD direction gain=9.68dBi >6dBi, so limit=8–(9.63–6)=4.37dBm/MHz

Note 2: PSD =Measurement of PSD + Duty cycle factor, where duty cycle factor =10log(1/x) , x is duty cycle.

Duty Cycle

Test Mode	ANT 0+ANT 1+ ANT 2	
	Duty Cycle	Duty cycle factor
802.11b	100%	0.00
802.11g	98%	0.11
802.11n-20 MHz	97%	0.12
802.11n-40 MHz	86%	0.68

Test Data

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)			Total of PSD (dBm/3kHz)	Limit (dBm/3kHz)
	ANT 0	ANT 1	ANT 2		
Low	-9.49	-9.73	-9.54	-4.81	4.37
Middle	-6.41	-7.29	-7.11	-2.15	4.37
High	-10.30	-20.24	-10.33	-7.09	4.37

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)			Total of PSD (dBm/3kHz)	Limit (dBm/3kHz)
	ANT 0	ANT 1	ANT 2		
Low	-17.48	-17.59	-17.59	-12.78	4.37
Middle	-9.68	-9.88	-9.68	-4.98	4.37
High	-17.99	-18.33	-18.57	-13.52	4.37

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)			Total of PSD (dBm/3kHz)	Limit (dBm/3kHz)
	ANT 0	ANT 1	ANT 2		
Low	-18.67	-18.29	-17.75	-13.45	4.37
Middle	-9.89	-10.12	-10.16	-5.29	4.37
High	-17.12	-17.01	-17.49	-12.43	4.37

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)			Total of PSD (dBm/3kHz)	Limit (dBm/3kHz)
	ANT 0	ANT 1	ANT 2		
Low	-22.90	-22.61	-23.41	-18.19	4.37
Middle	-17.55	-18.32	-18.16	-13.23	4.37
High	-19.70	-19.85	-20.07	-15.10	4.37

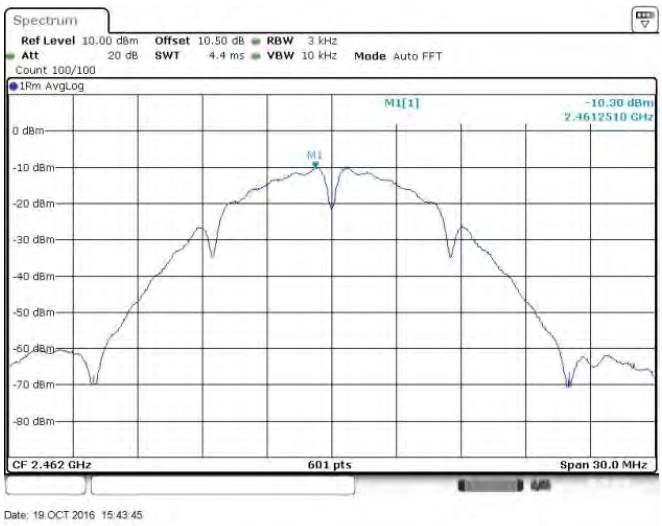
Test plots

ANT 0

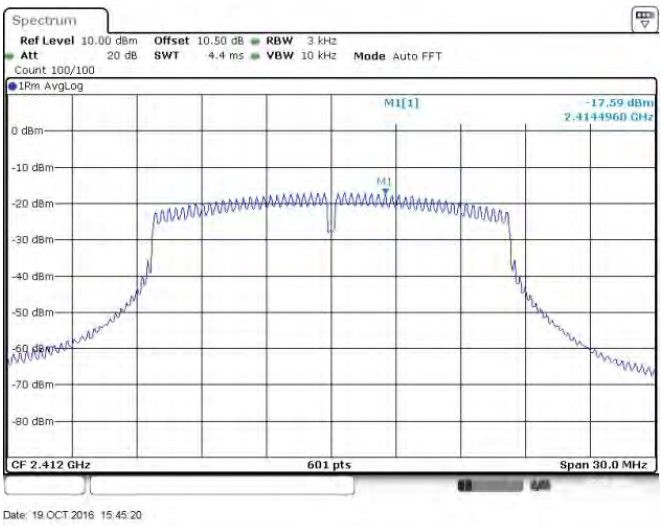
802.11b LOW CHANNEL

802.11b MIDDLE CHANNEL

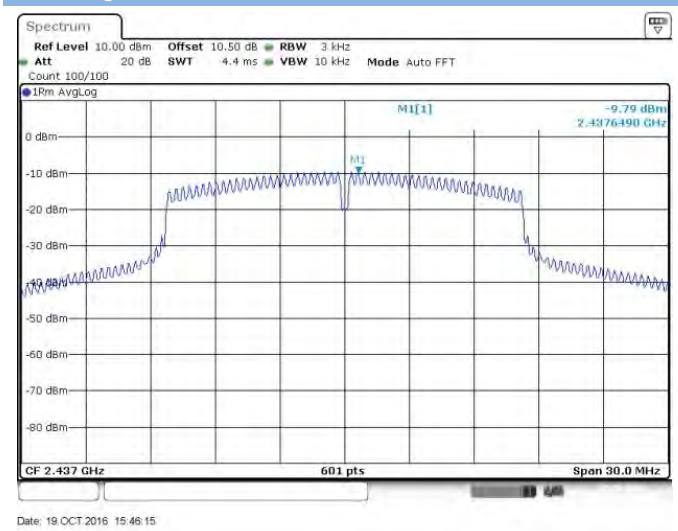
802.11b HIGH CHANNEL



802.11g LOW CHANNEL

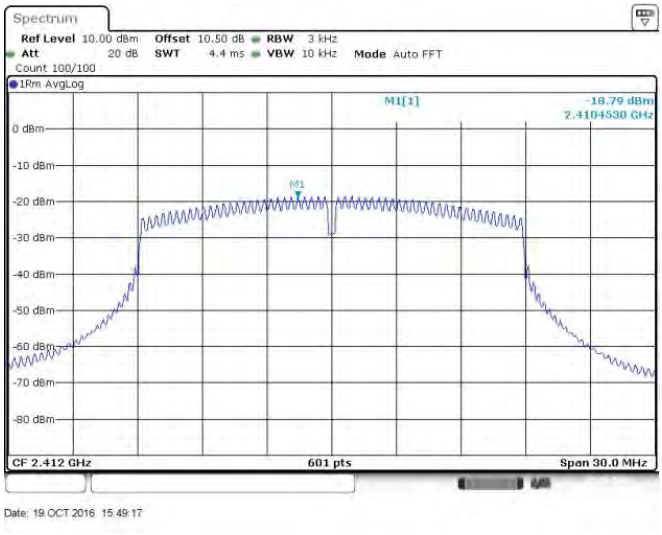


802.11g MIDDLE CHANNEL

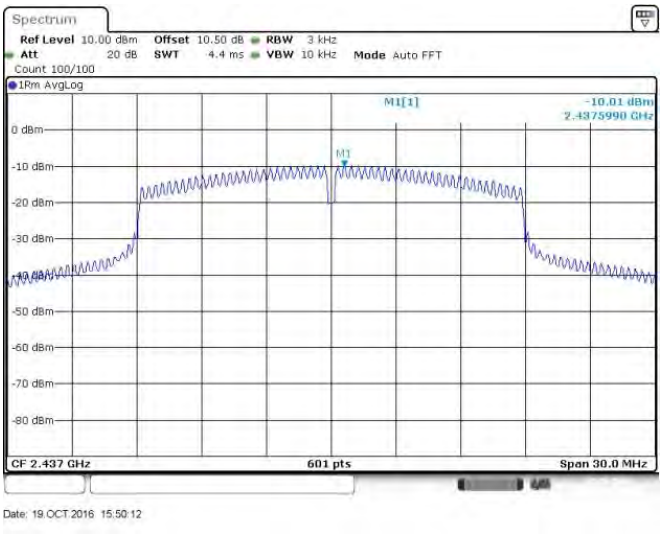


802.11g HIGH CHANNEL

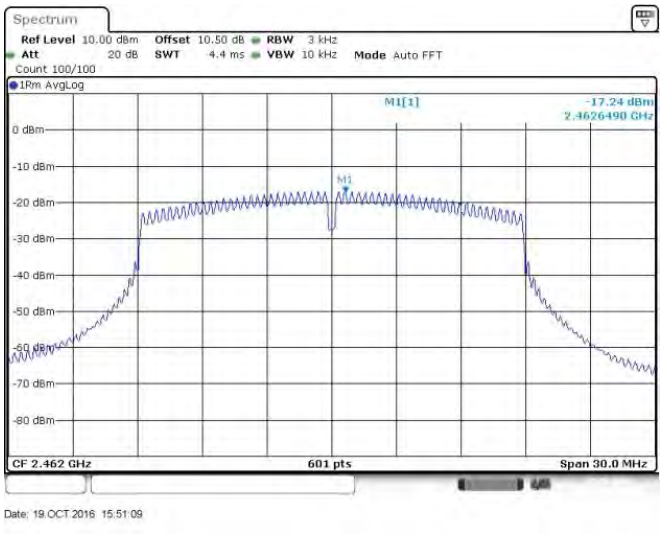
802.11n-20 MHz LOW CHANNEL



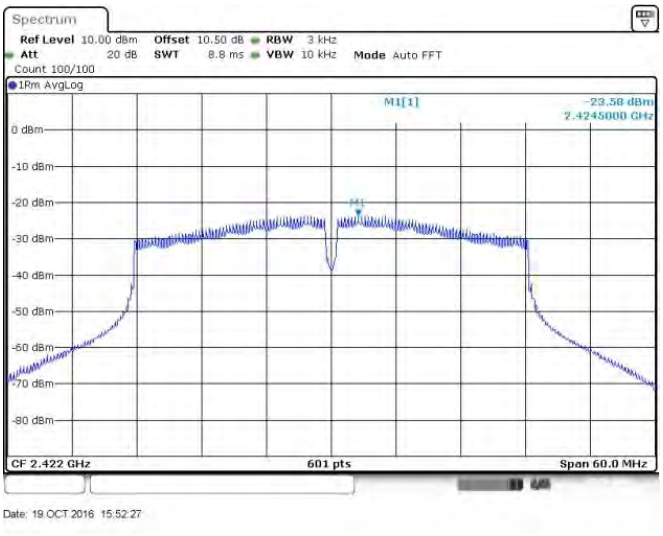
802.11 n-20 MHz MIDDLE CHANNEL



802.11n-20 MHz HIGH CHANNEL



802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL

802.11n-40 MHz HIGH CHANNEL

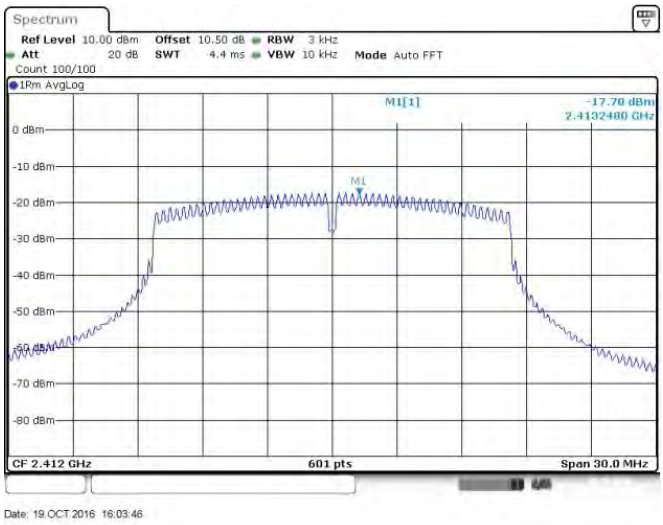
ANT 1

802.11b LOW CHANNEL

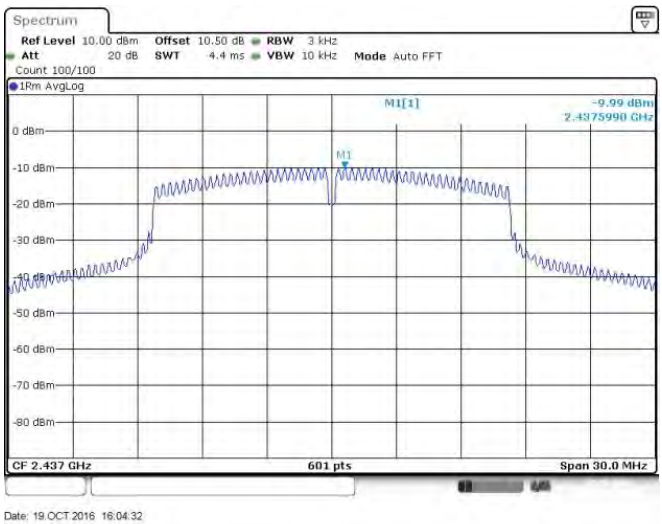
802.11b MIDDLE CHANNEL

802.11b HIGH CHANNEL

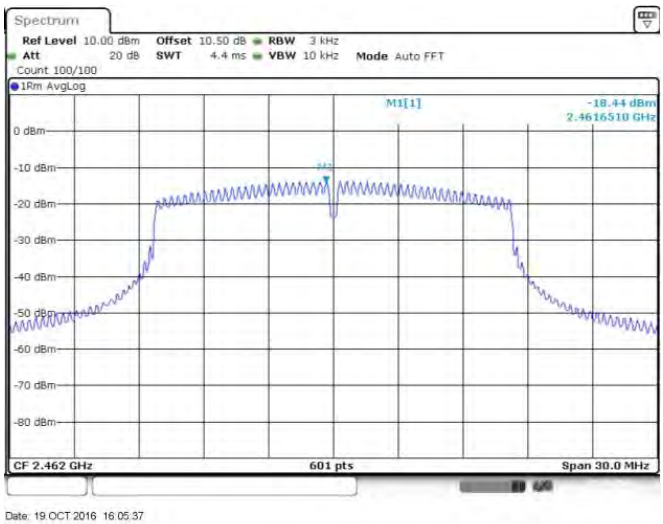
802.11g LOW CHANNEL



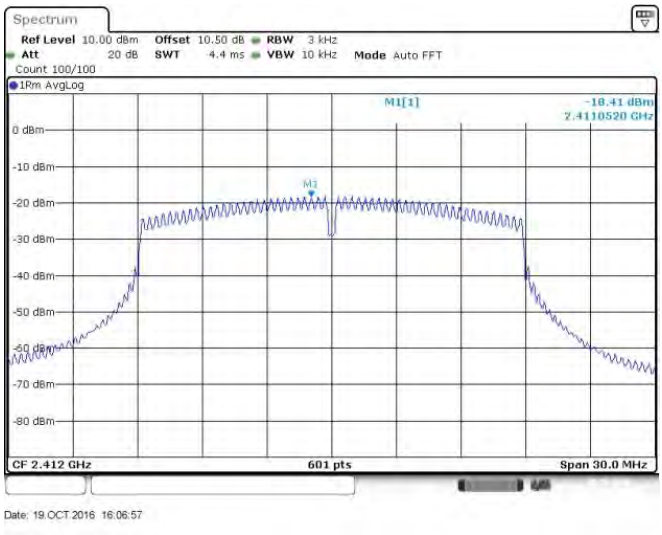
802.11g MIDDLE CHANNEL



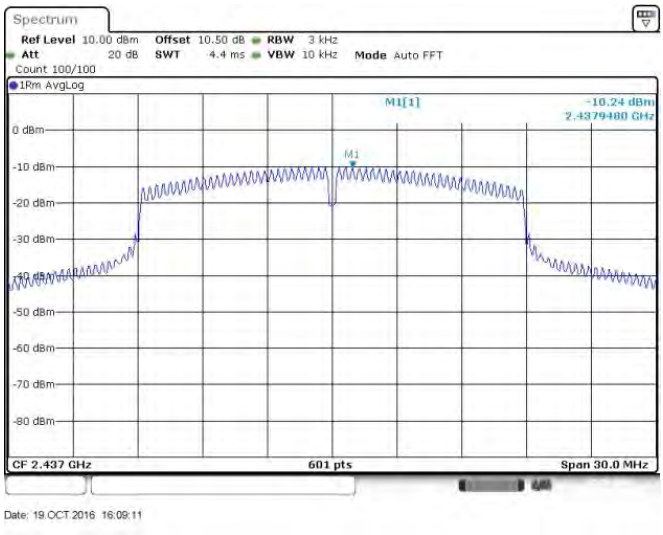
802.11g HIGH CHANNEL



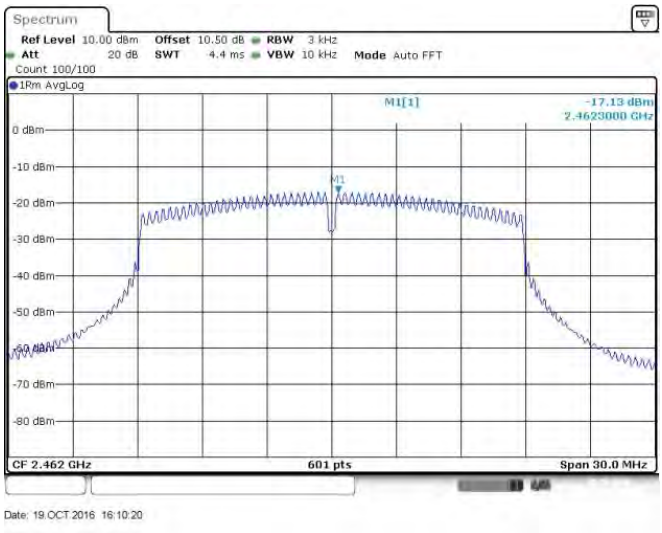
802.11n-20 MHz LOW CHANNEL



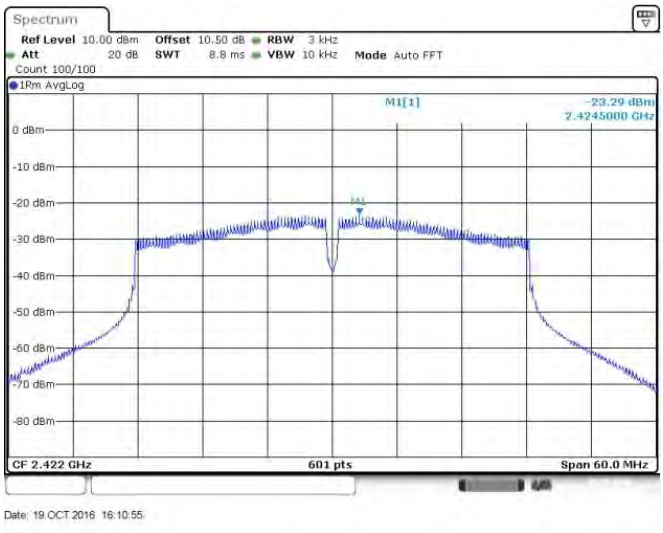
802.11 n-20 MHz MIDDLE CHANNEL



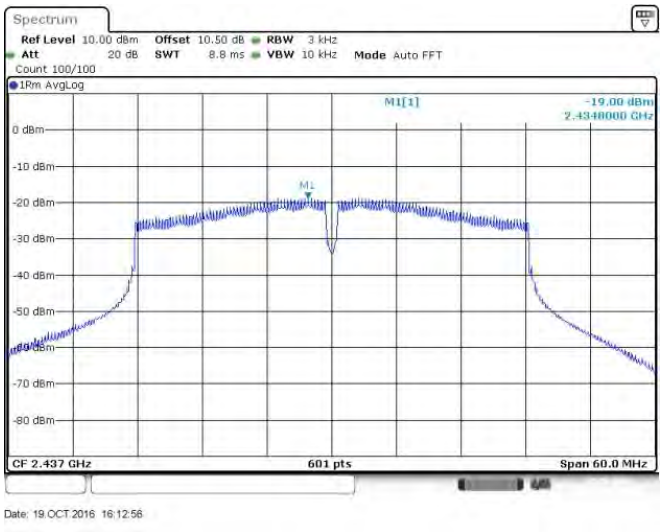
802.11n-20 MHz HIGH CHANNEL



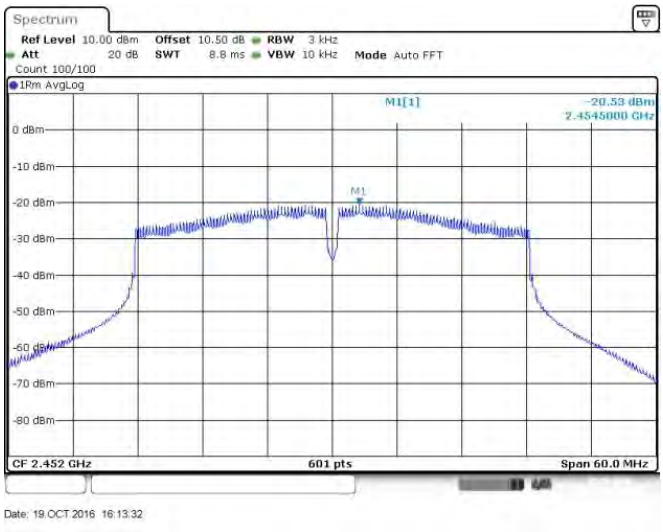
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL

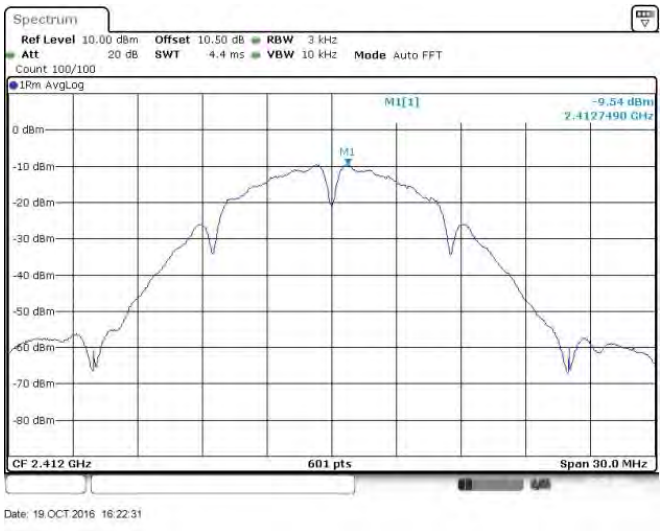


802.11n-40 MHz HIGH CHANNEL

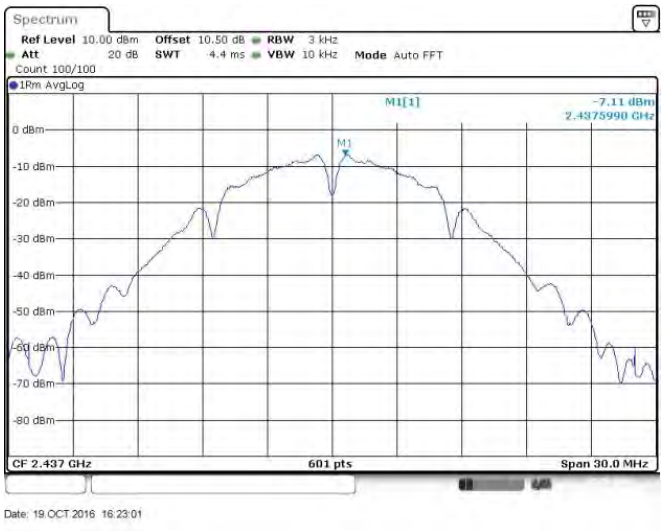


ANT 2

802.11b LOW CHANNEL

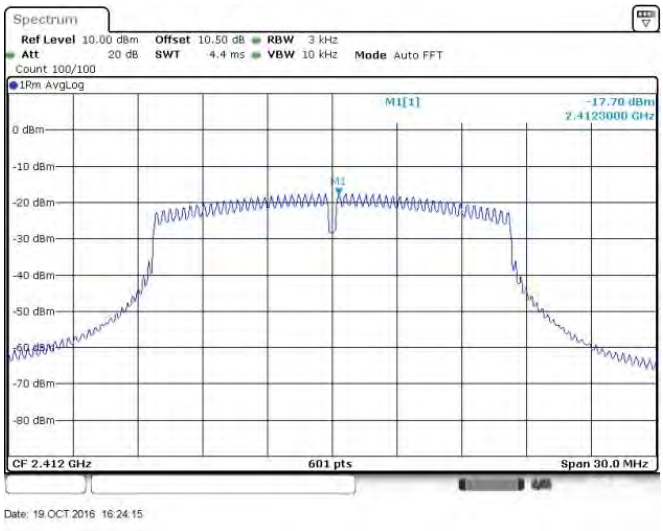


802.11b MIDDLE CHANNEL

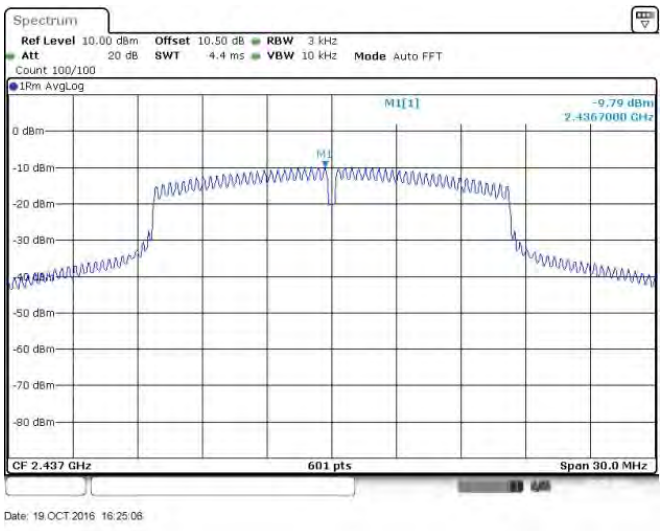


802.11b HIGH CHANNEL

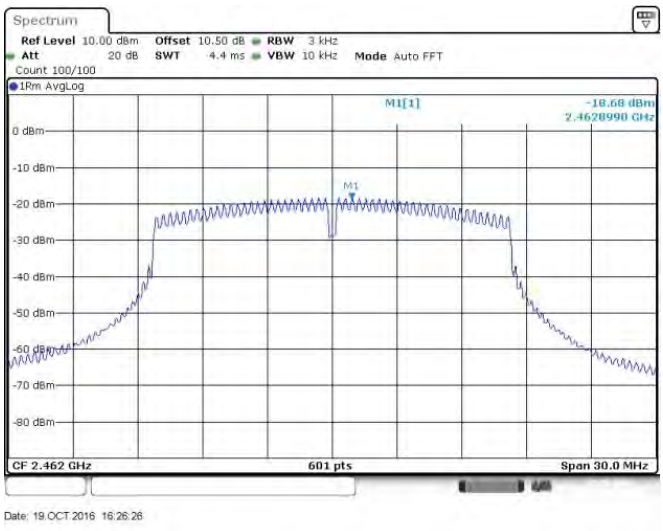
802.11g LOW CHANNEL



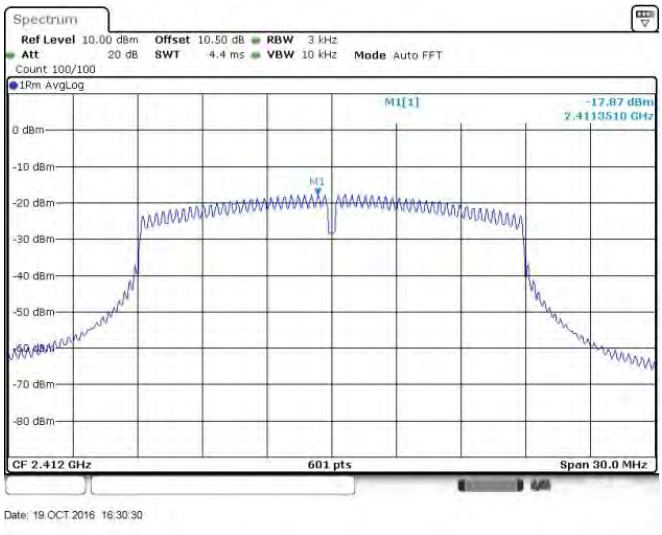
802.11g MIDDLE CHANNEL



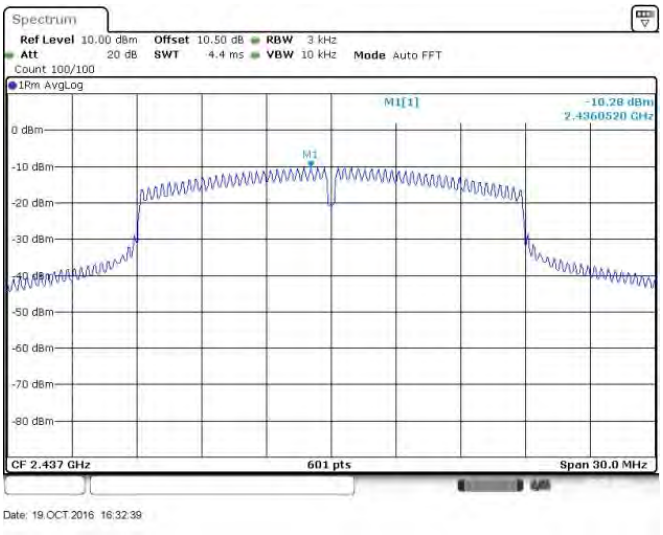
802.11g HIGH CHANNEL



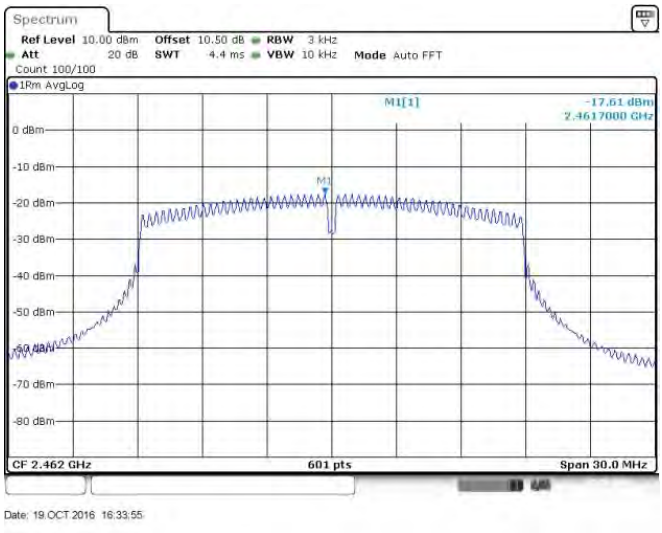
802.11n-20 MHz LOW CHANNEL



802.11 n-20 MHz MIDDLE CHANNEL

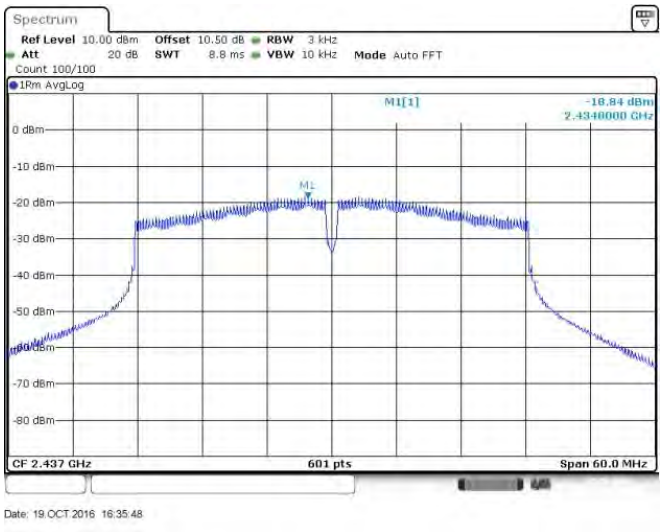


802.11n-20 MHz HIGH CHANNEL

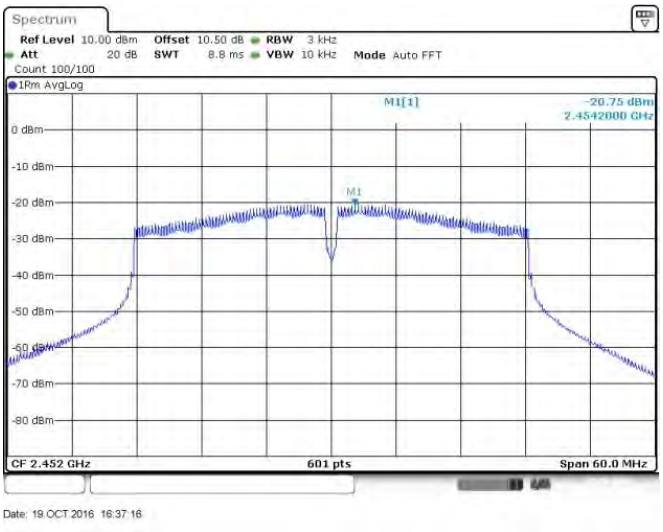


802.11n-40 MHz LOW CHANNEL

802.11n-40 MHz MIDDLE CHANNEL



802.11n-40 MHz HIGH CHANNEL



ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1680250-AR.pdf”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1680250-AW.pdf”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ1680250-AI.pdf”.

--END OF REPORT--