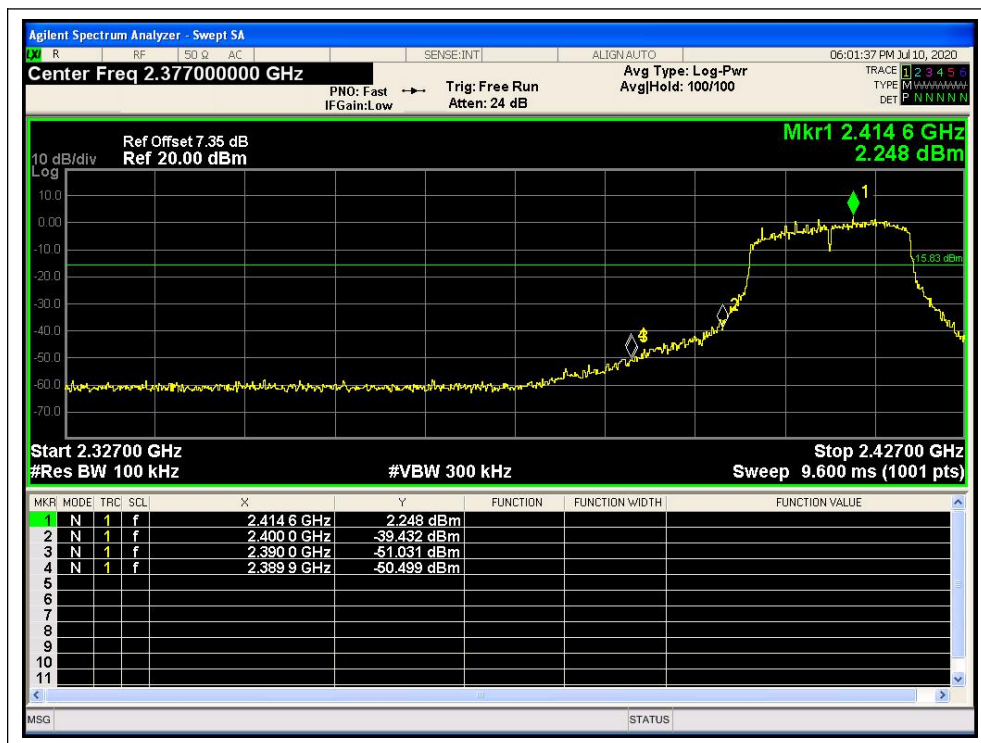
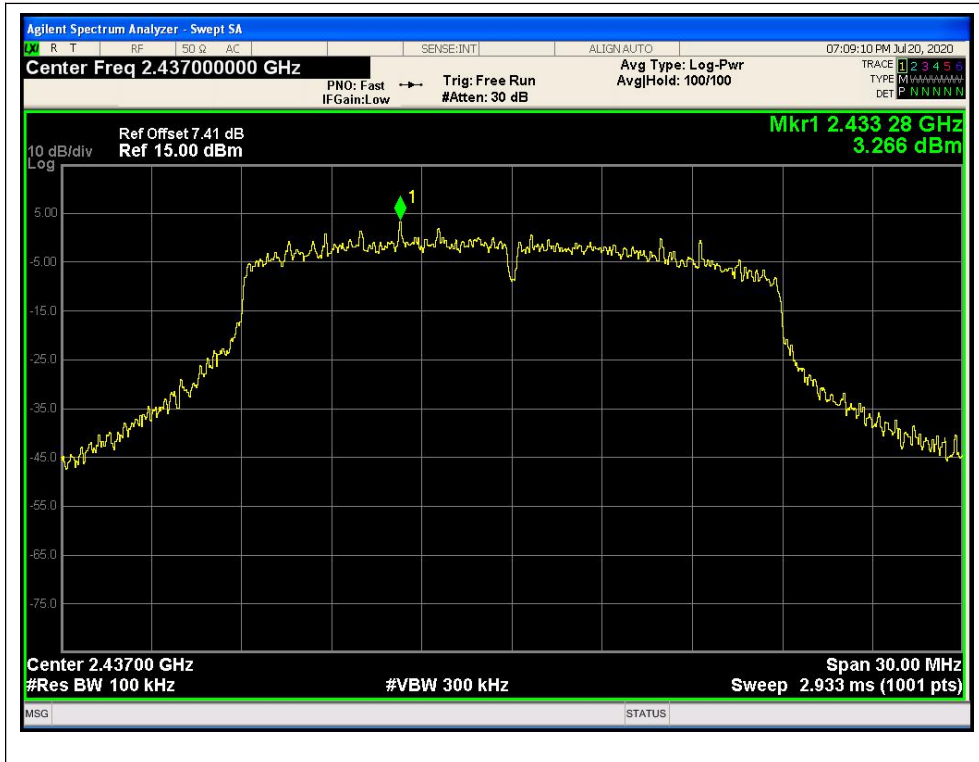


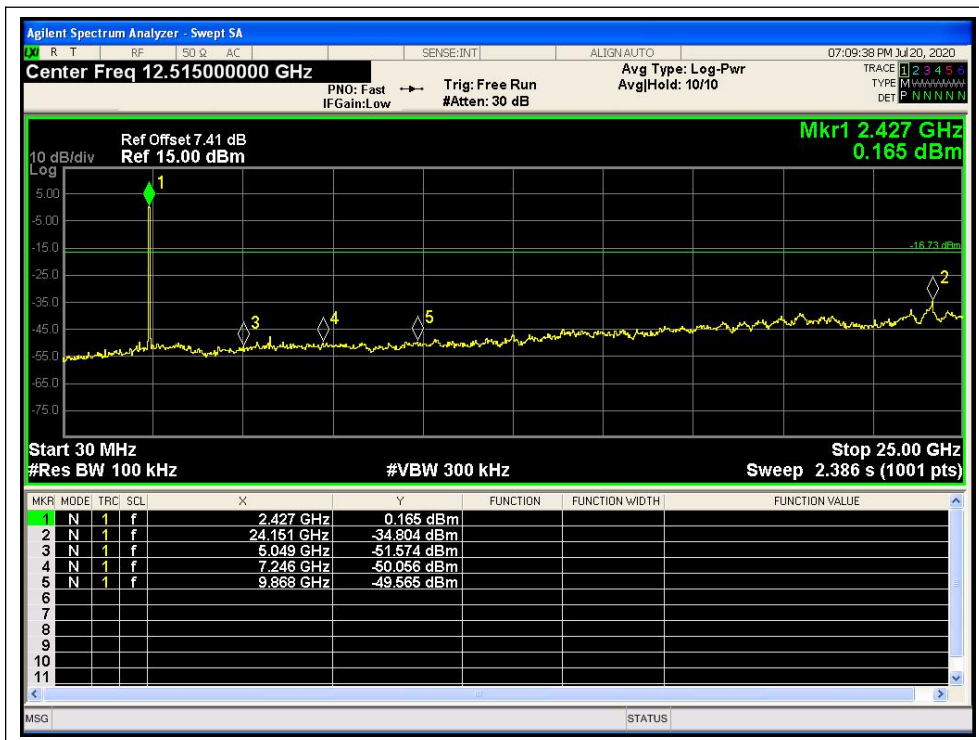
(802.11 HT20, Band Edge @ Channel = 1 peak power)



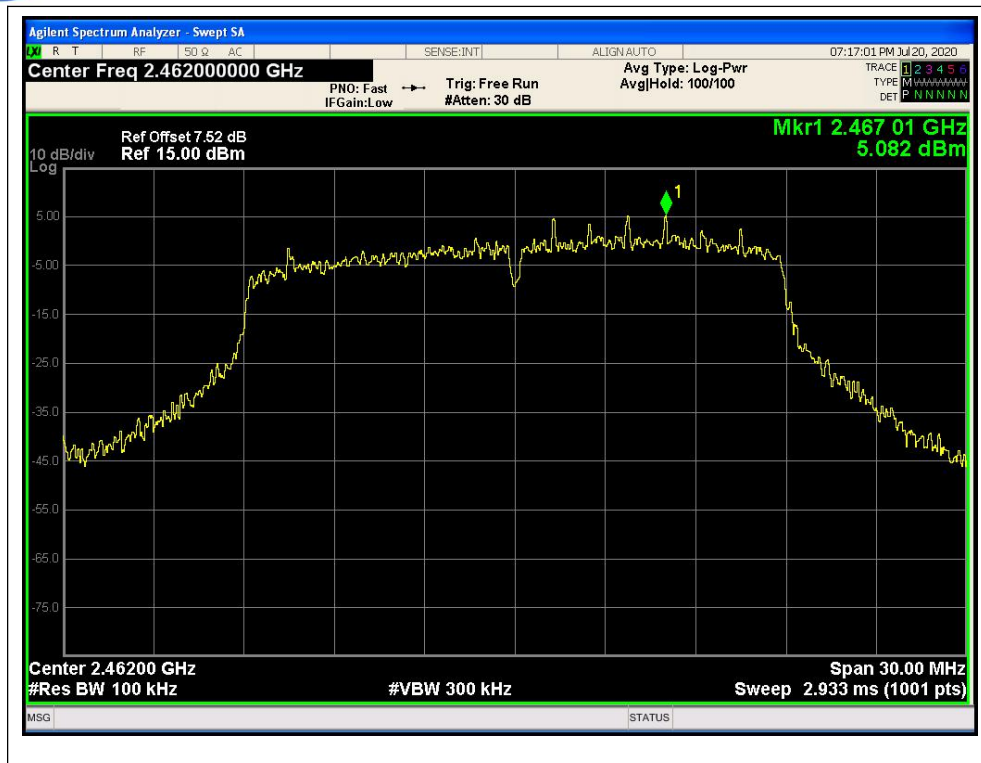
(802.11 HT20, Band Edge @ Channel = 1)



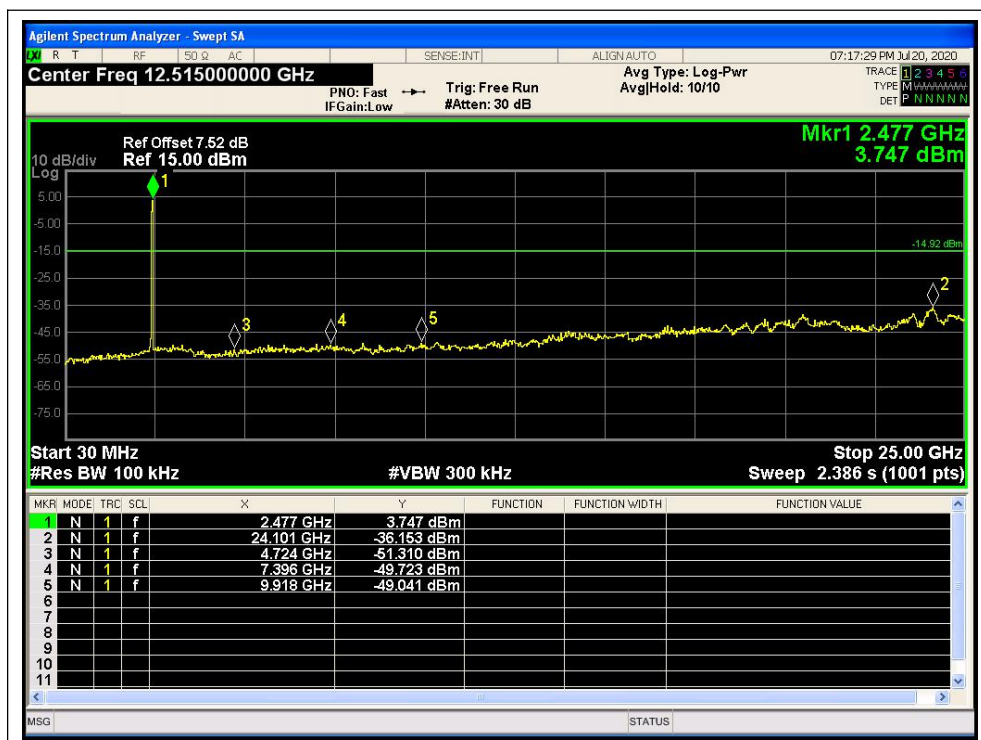
(802.11 HT20, Channel = 6, 30MHz to 25GHz peak power)



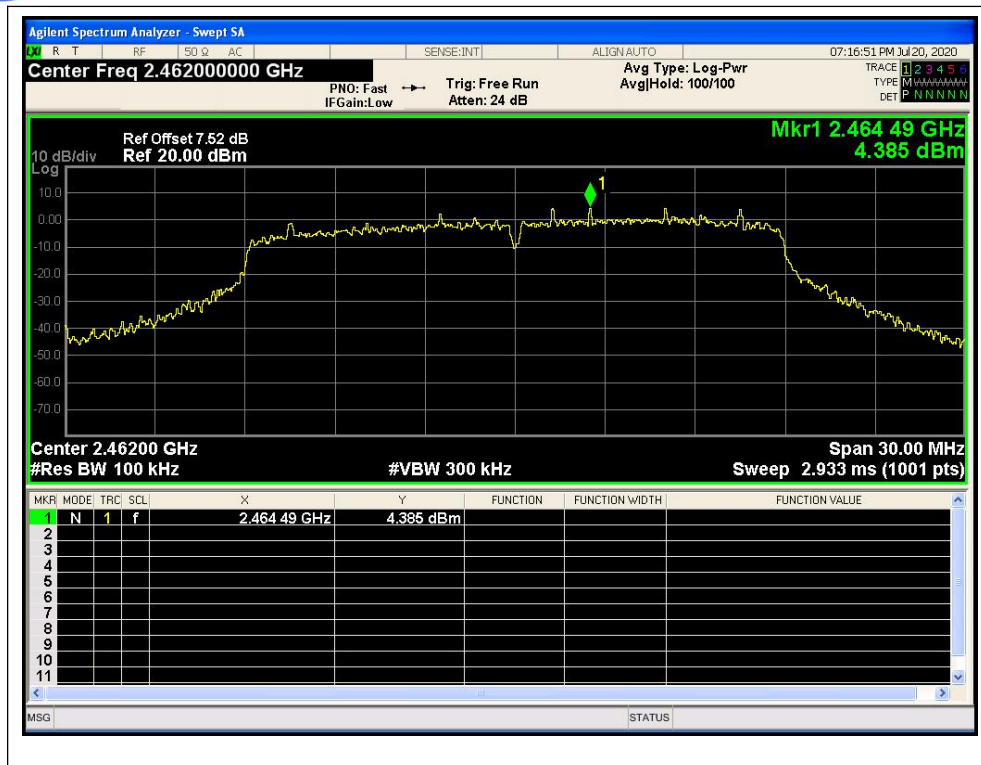
(802.11 HT20, Channel = 6, 30MHz to 25GHz)



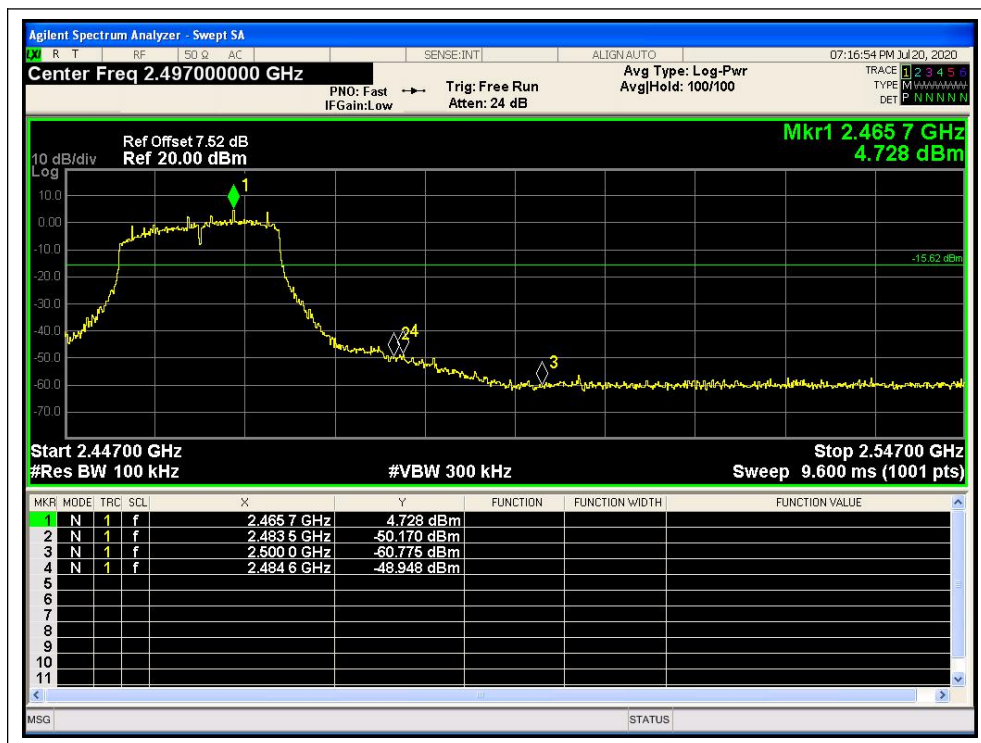
(802.11 HT20, Channel = 11, 30MHz to 25GHz peak power)



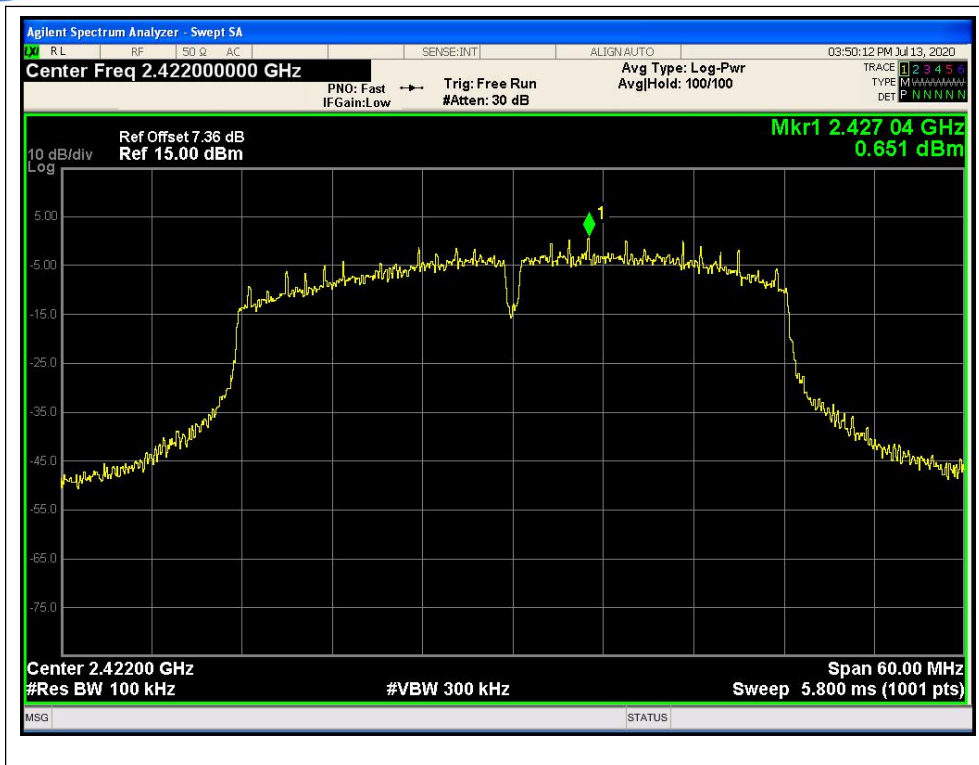
(802.11 HT20, Channel = 11, 30MHz to 25GHz)



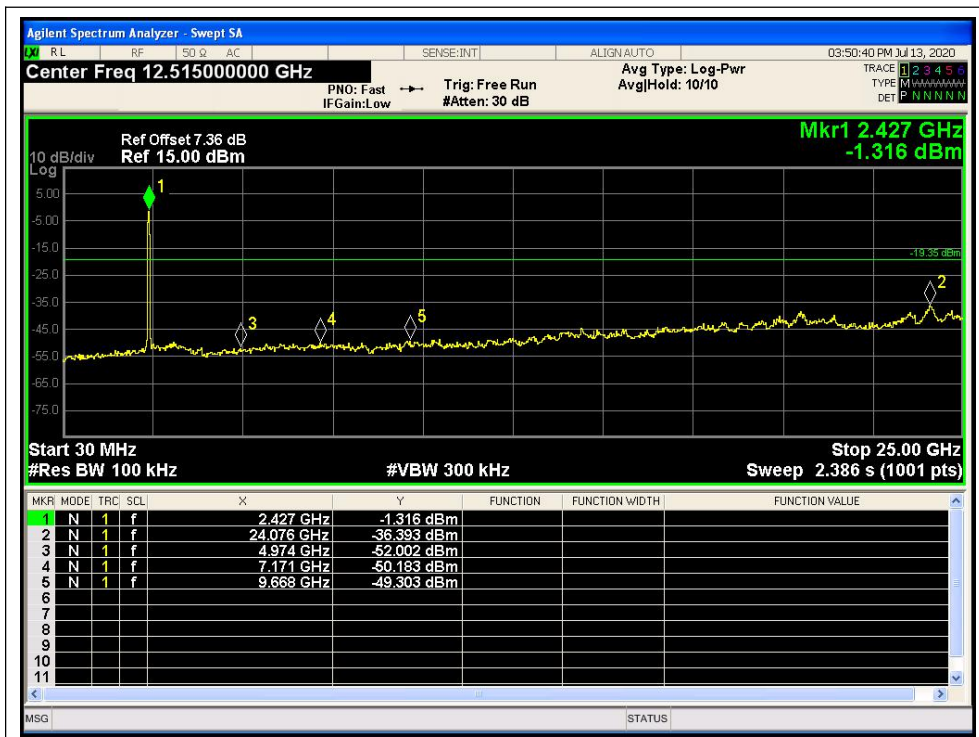
(802.11 HT20, Band Edge @ Channel = 11 peak power)



(802.11 HT20, Band Edge @ Channel = 11)



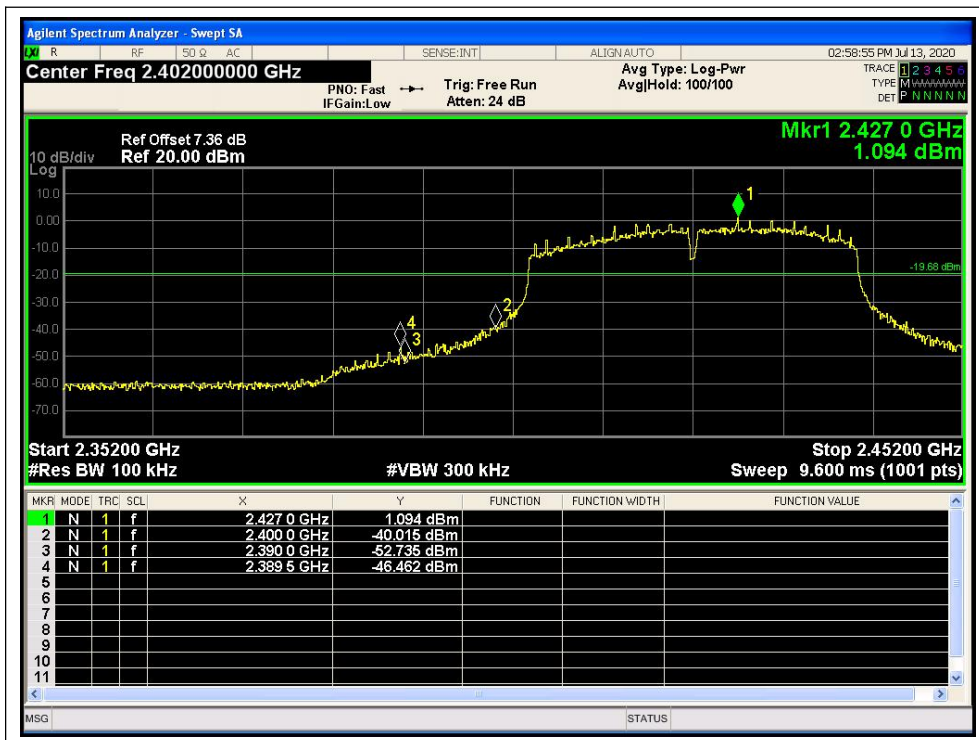
(802.11 HT40, Channel = 3, 30MHz to 25GHz peak power)



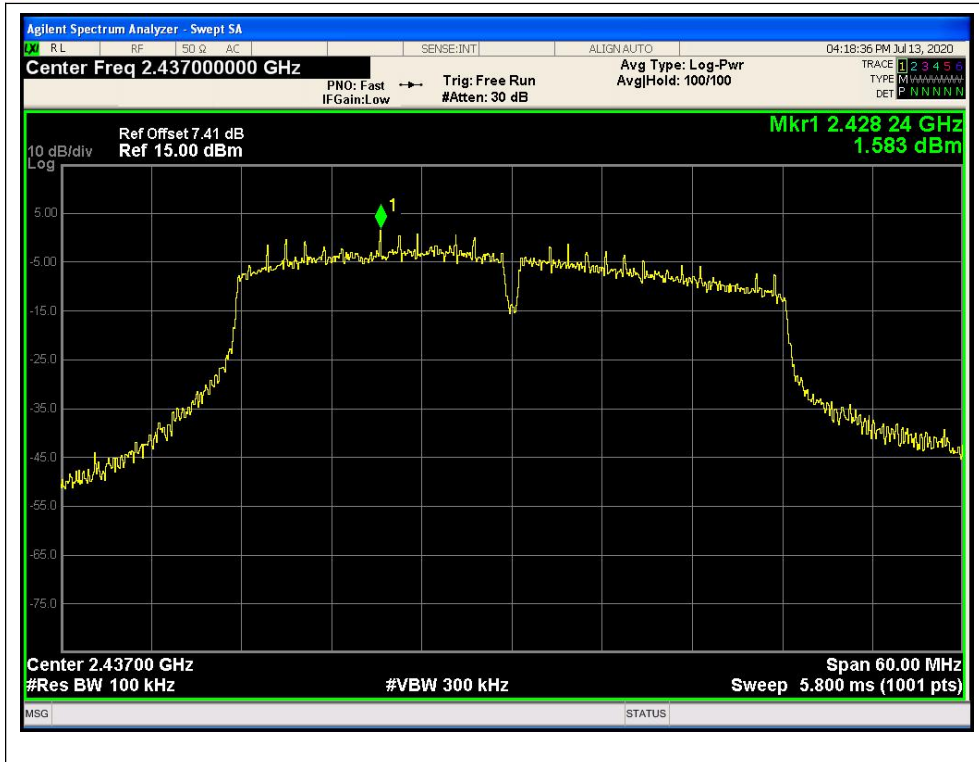
(802.11 HT40, Channel = 3, 30MHz to 25GHz)



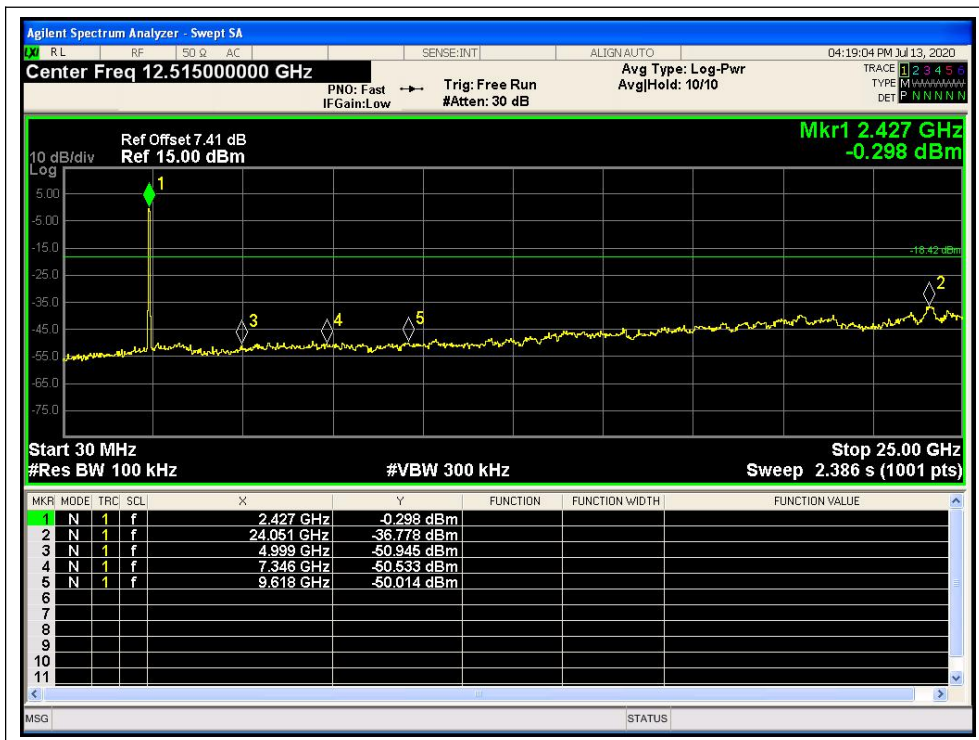
(802.11 HT40, Band Edge @ Channel = 3)



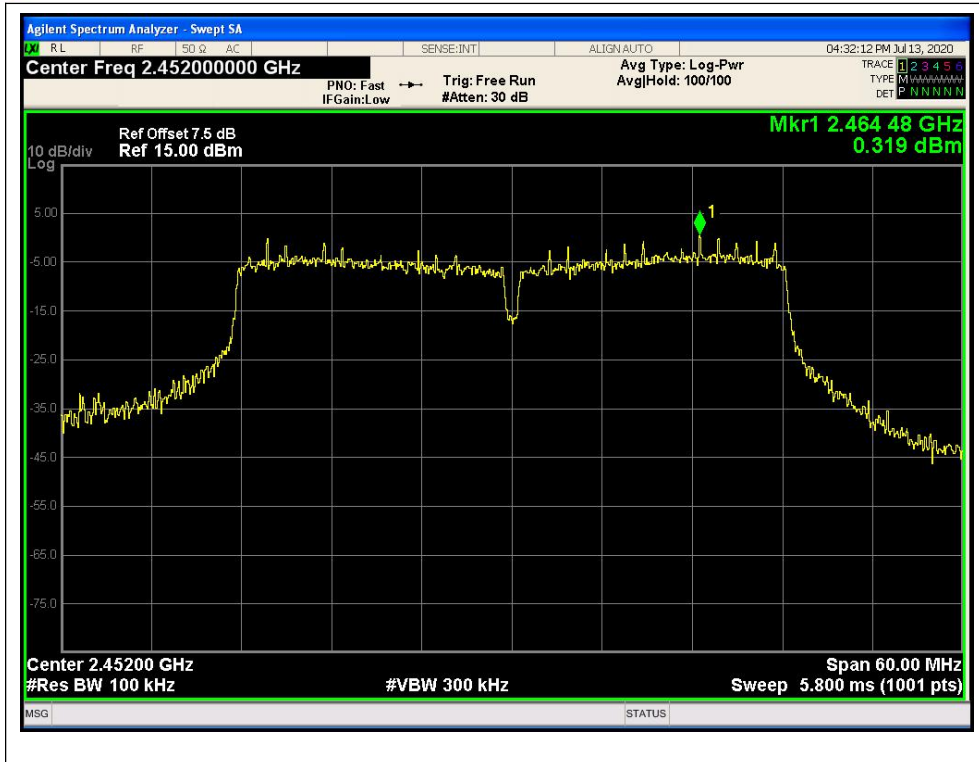
(802.11 HT40, Band Edge @ Channel = 3)



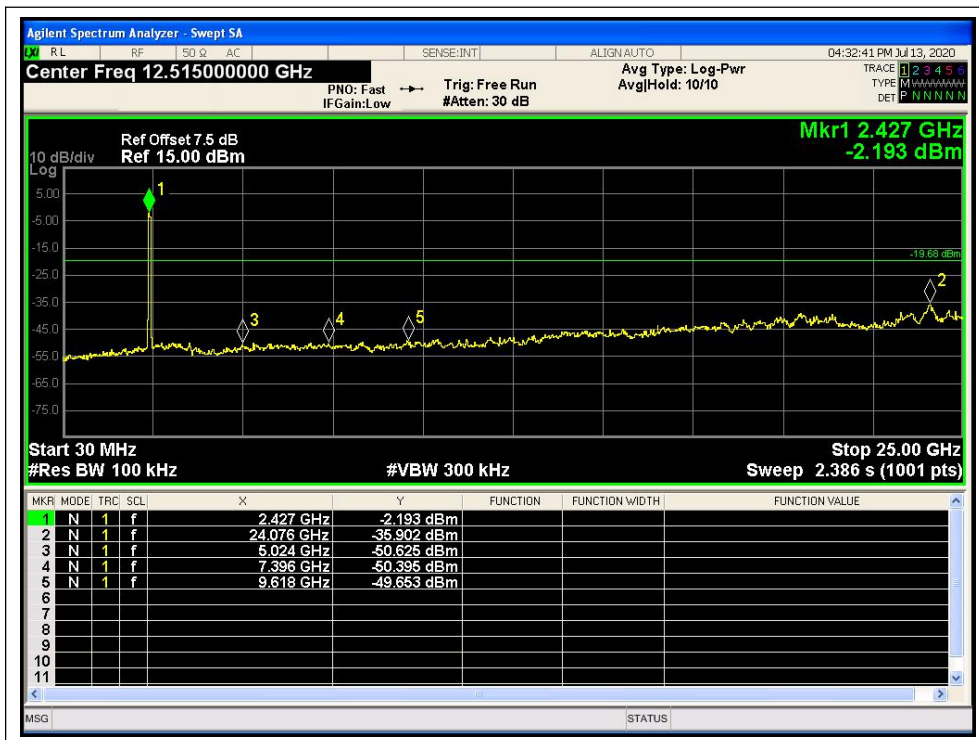
(802.11 HT40, Channel = 6, 30MHz to 25GHz peak power)



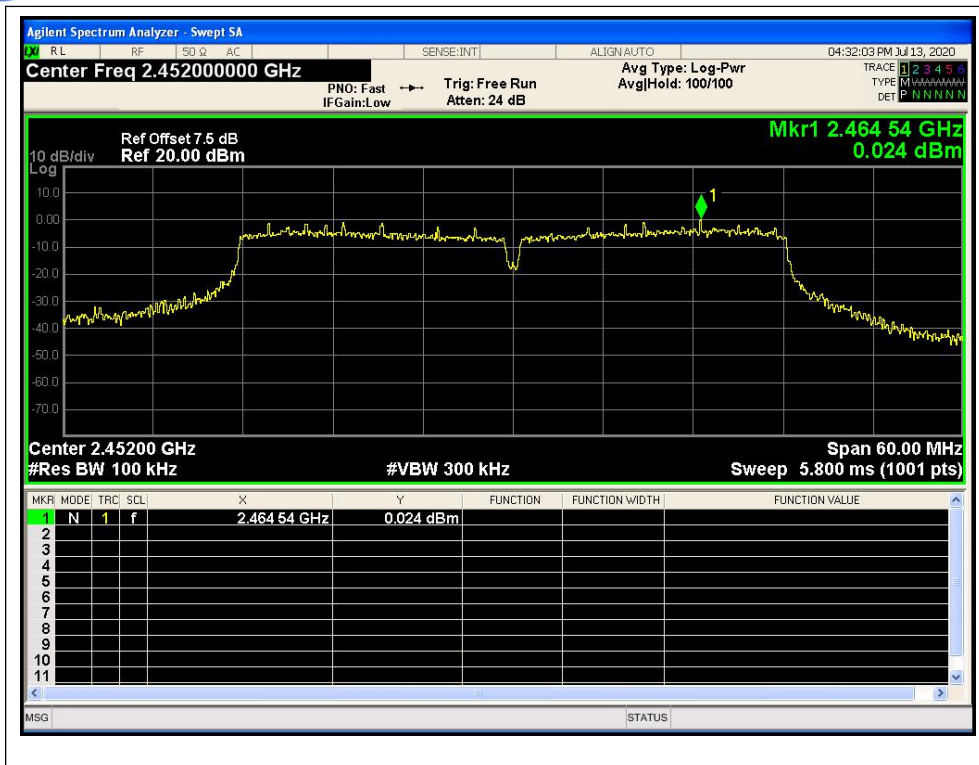
(802.11 HT40, Channel = 6, 30MHz to 25GHz)



(802.11 HT40, Channel = 9, 30MHz to 25GHz peak power)



(802.11 HT40, Channel = 9, 30MHz to 25GHz)



(802.11 HT40, Band Edge @ Channel = 9 peak power)



(802.11 HT40, Band Edge @ Channel = 9)

2.5. Power spectral density (PSD)

2.5.1. Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

2.5.2. Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

KDB 558074 D01 v05r02 Section 10.2 was used in order to prove compliance.

B. Equipments List:

Please refer ANNEX B(4).



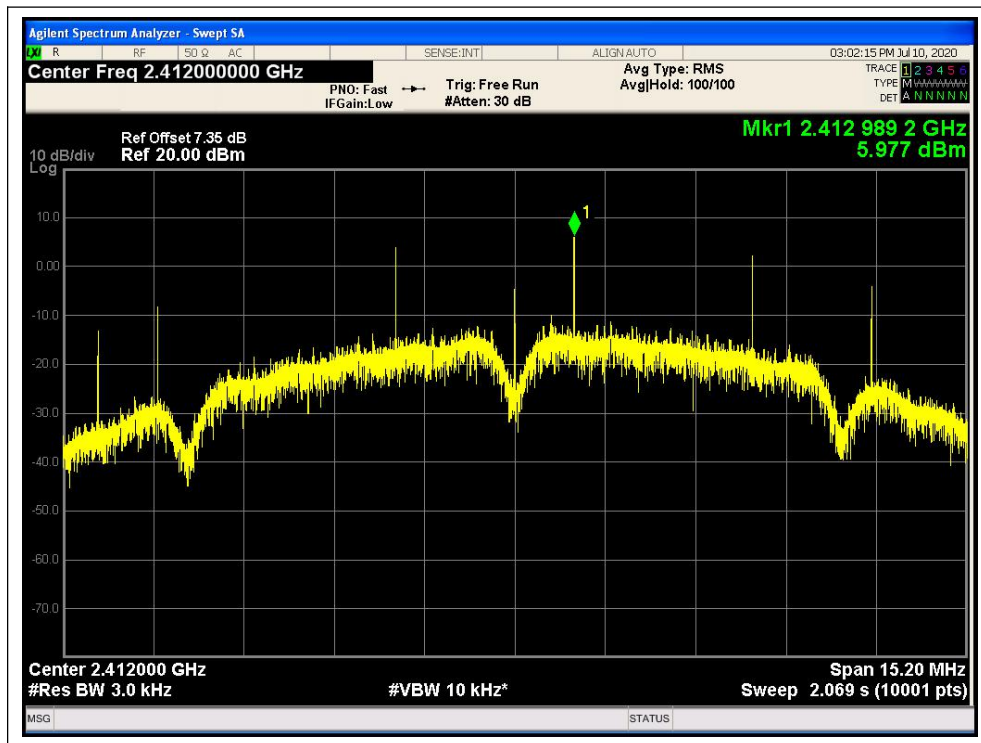
2.5.3. Test Result

802.11b Test mode

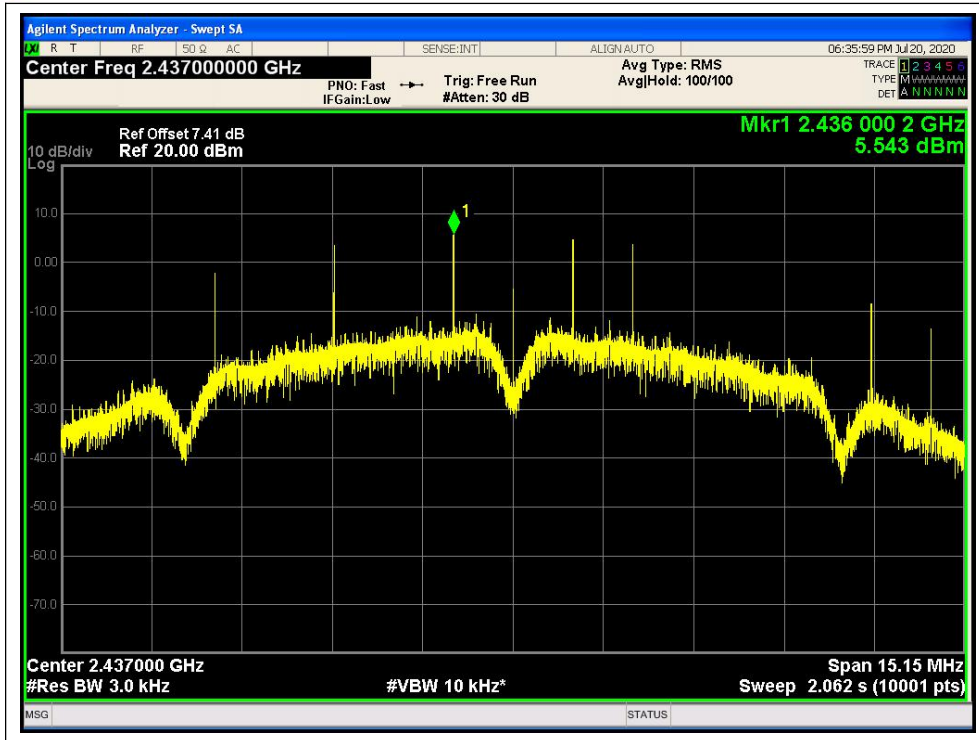
A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	5.977	8	PASS
6	2437	5.543	8	PASS
11	2462	5.015	8	PASS

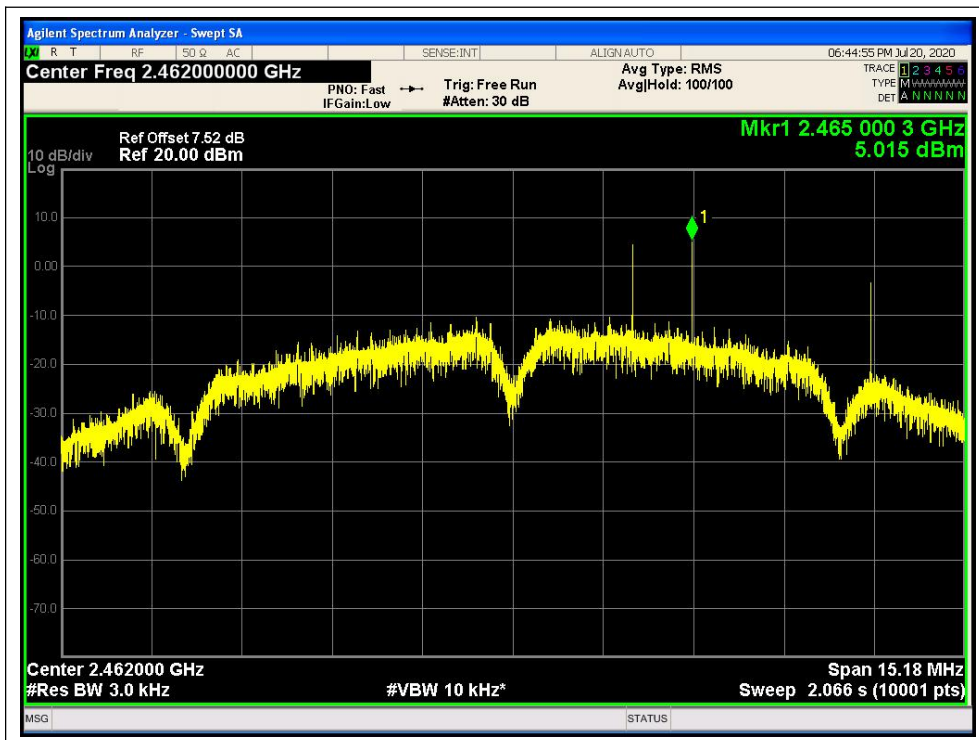
B. Test Plots:



(Channel = 1, 802.11b)



(Channel = 6, 802.11b)



(Channel = 11, 802.11b)

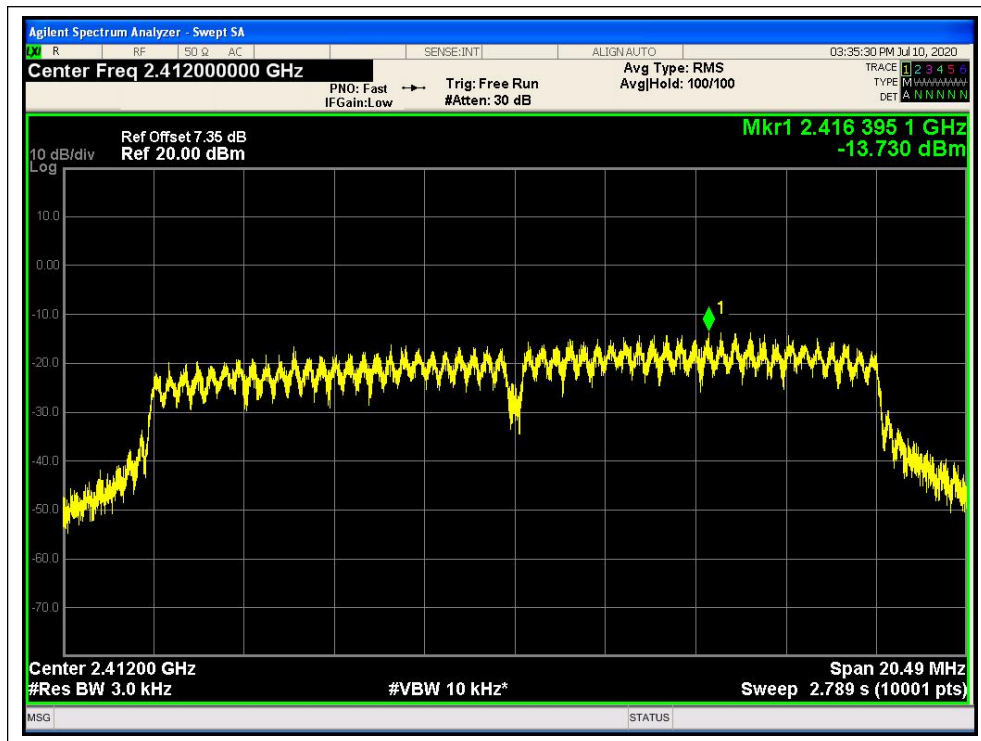


802.11g Test mode

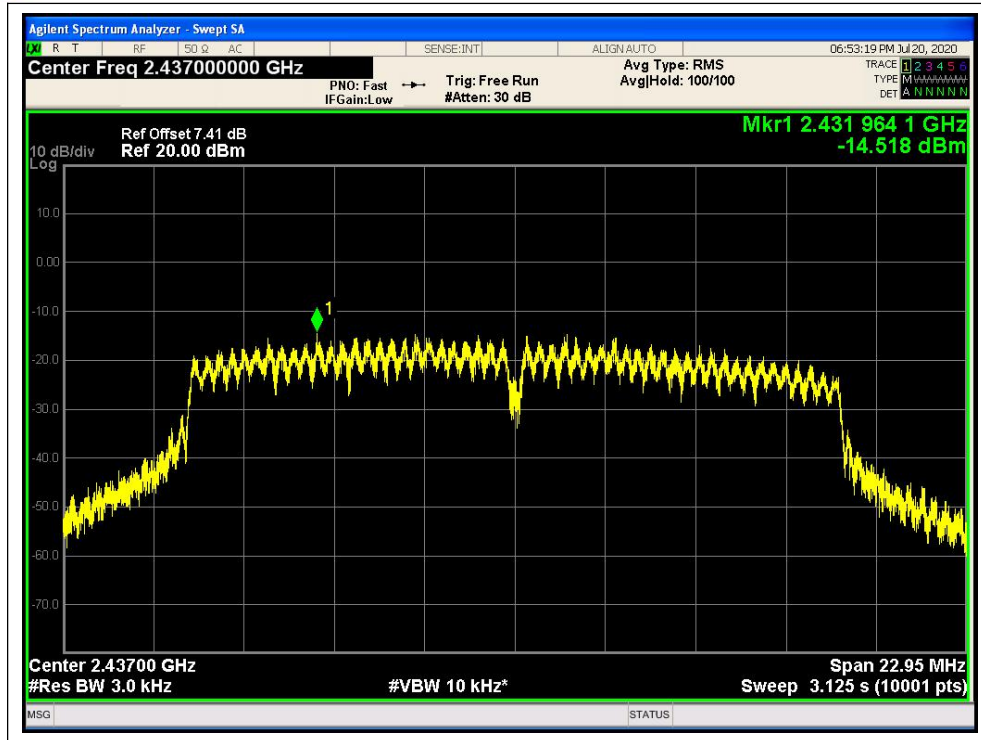
A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-13.730	8	PASS
6	2437	-14.518	8	PASS
11	2462	-13.507	8	PASS

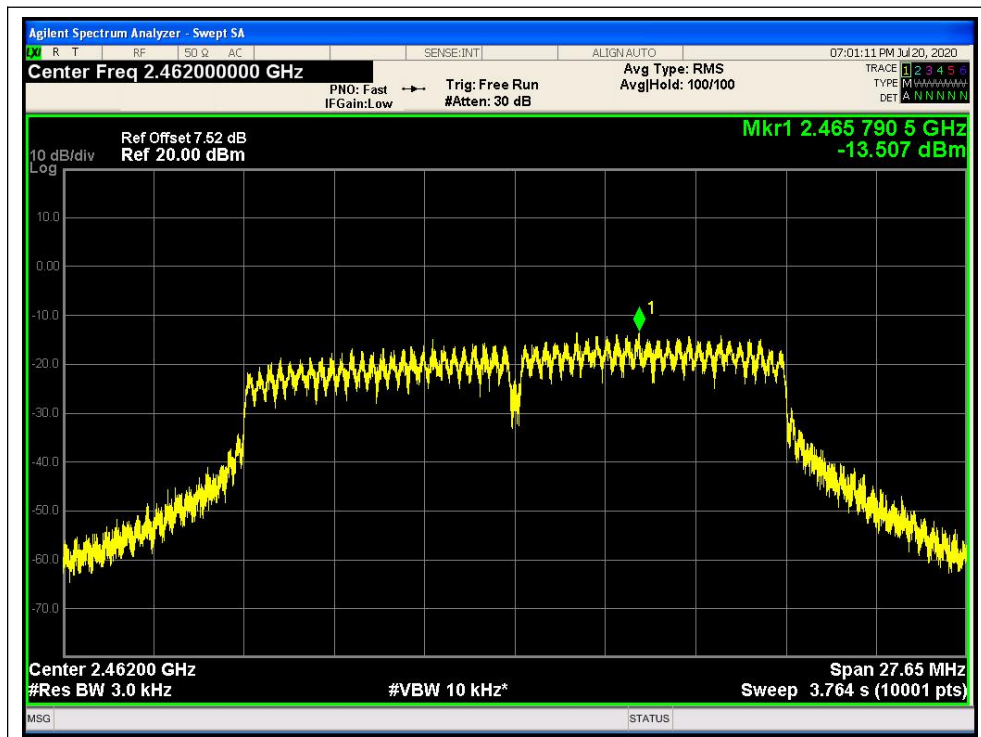
B. Test Plots:



(Channel = 1, 802.11g)



(Channel = 6, 802.11g)



(Channel = 11, 802.11g)

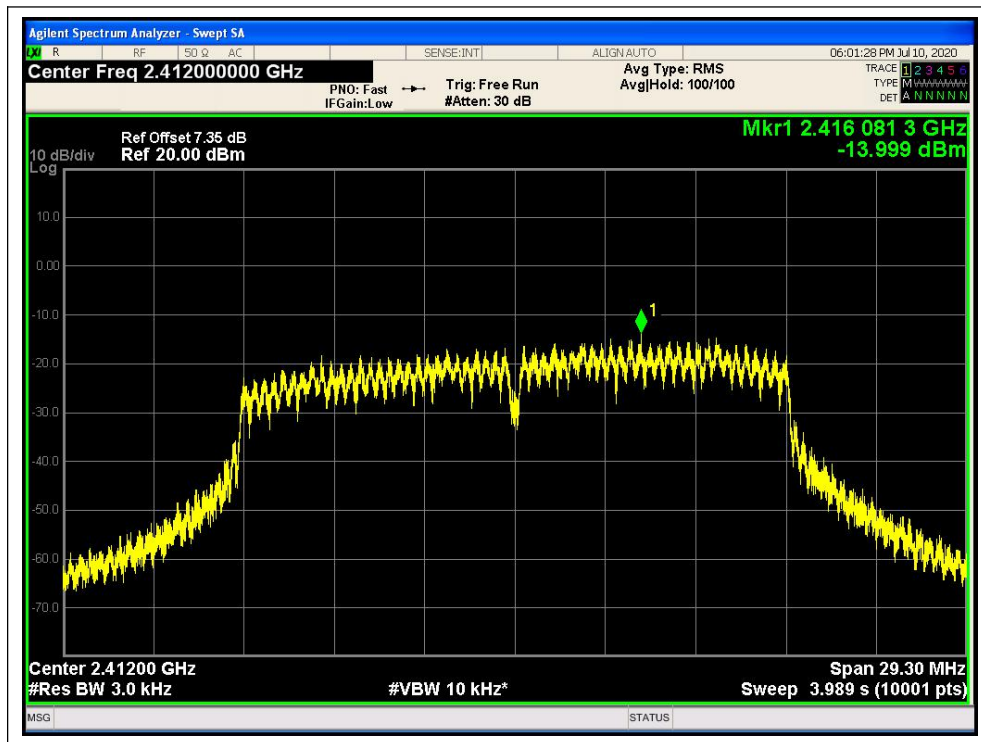


802.11n-20MHz Test mode

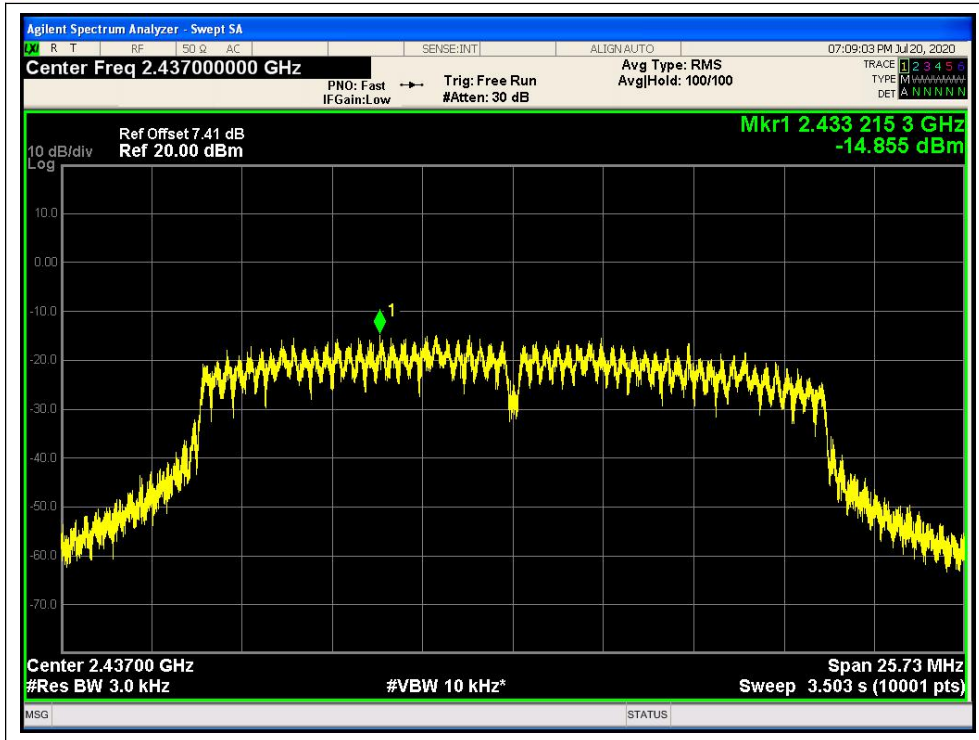
A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-13.999	8	PASS
6	2437	-14.855	8	PASS
11	2462	-13.323	8	PASS

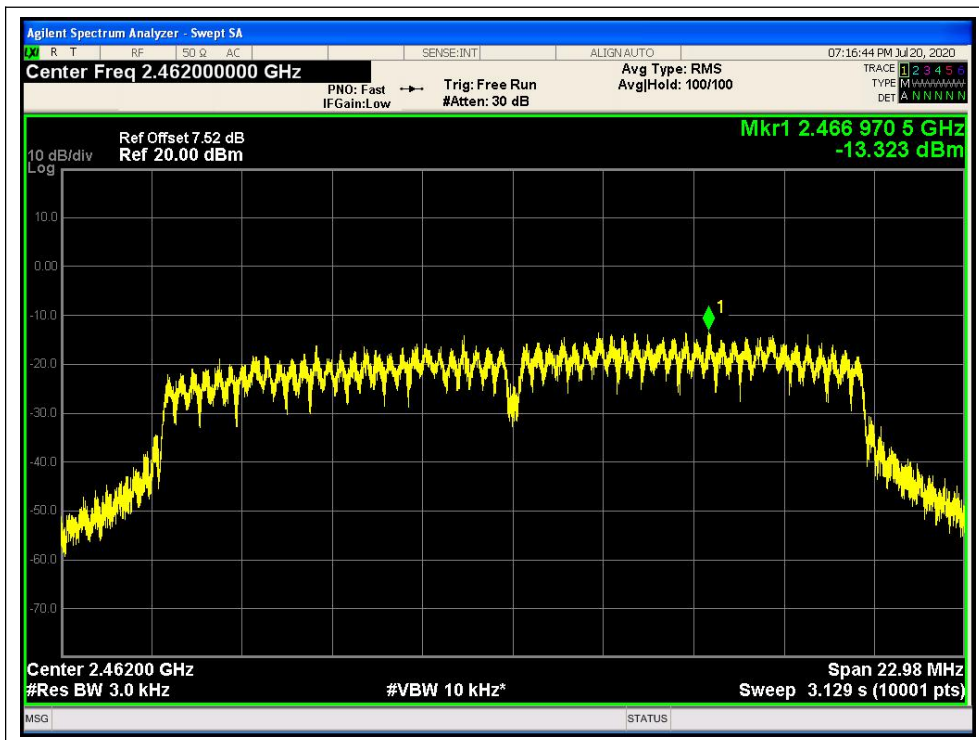
B. Test Plots:



(Channel = 1, 802.11n-20MHz)



(Channel = 6, 802.11n-20MHz)



(Channel = 11, 802.11n-20MHz)

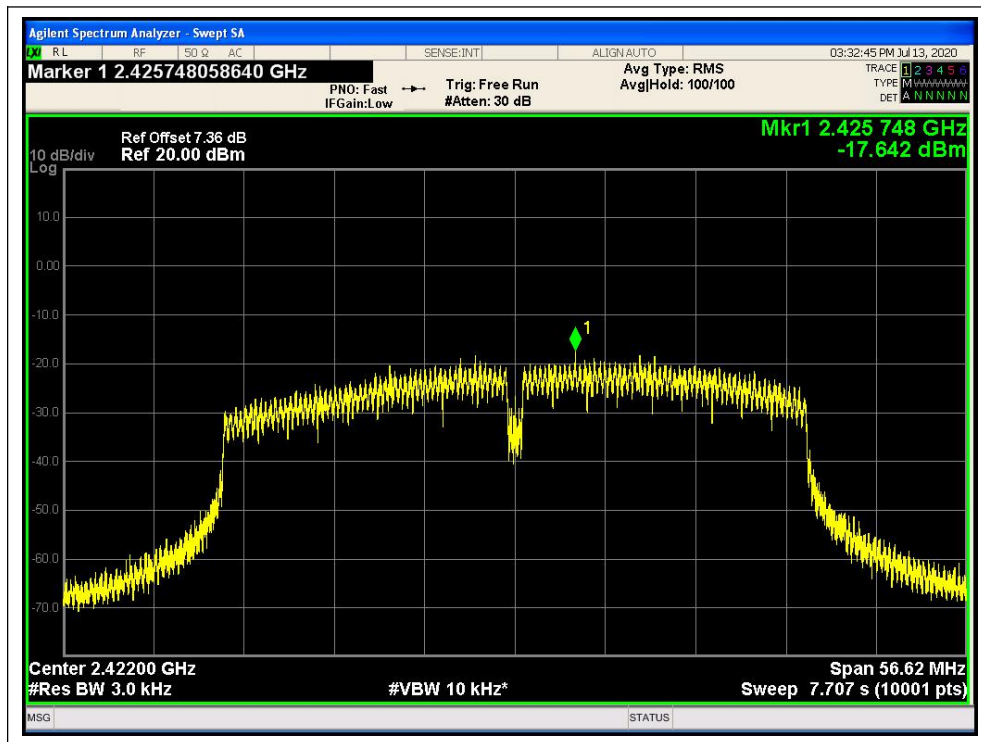


802.11n-40MHz Test mode

A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
3	2422	-17.642	8	PASS
6	2437	-16.999	8	PASS
9	2452	-20.004	8	PASS

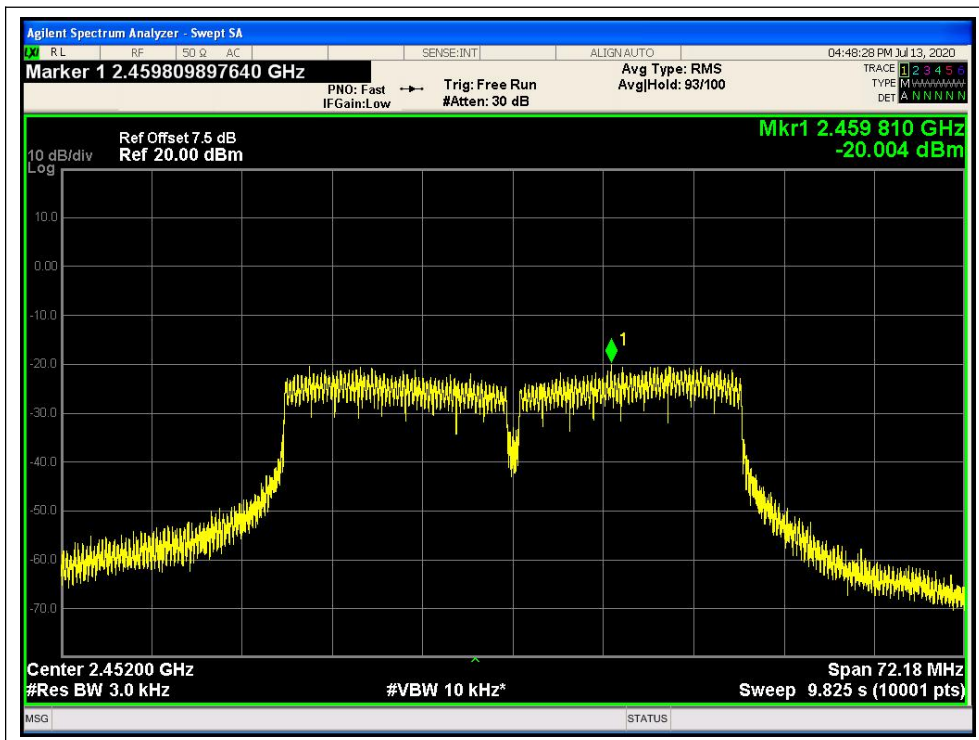
B. Test Plots:



(Channel = 3, 802.11n-40MHz)



(Channel = 6, 802.11n-40MHz)



(Channel = 9, 802.11n-40MHz)

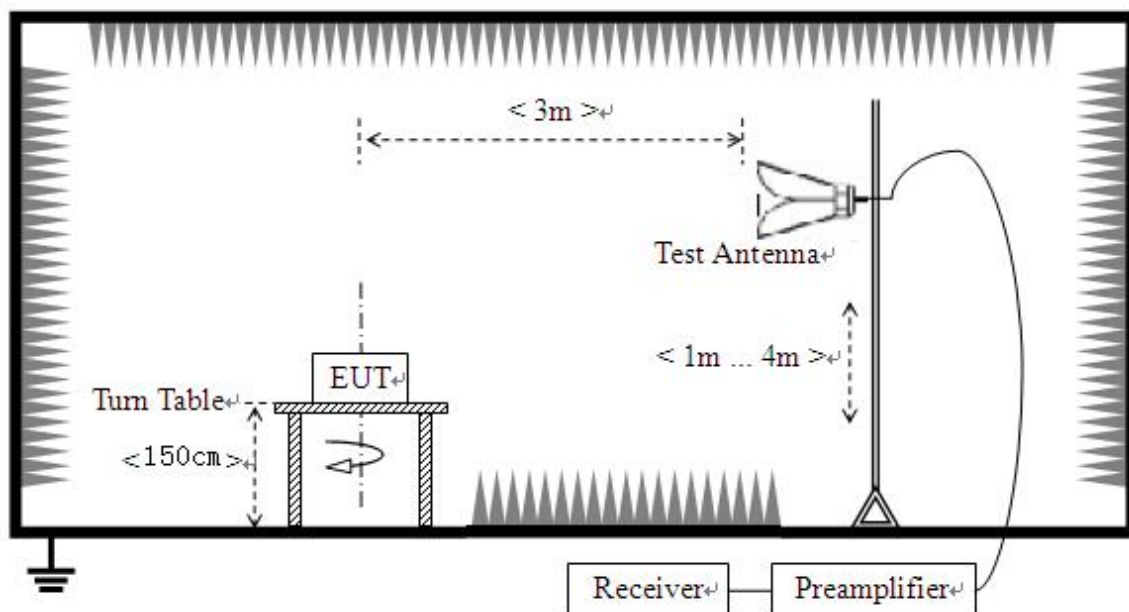
2.6. Restricted Frequency Bands

2.6.1. Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

2.6.2. Test Description

A. Test Setup



The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

KDB 558074 D01 v05r02 Section 12.1 was used in order to prove compliance.



For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of 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.
- d. 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.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasipeak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

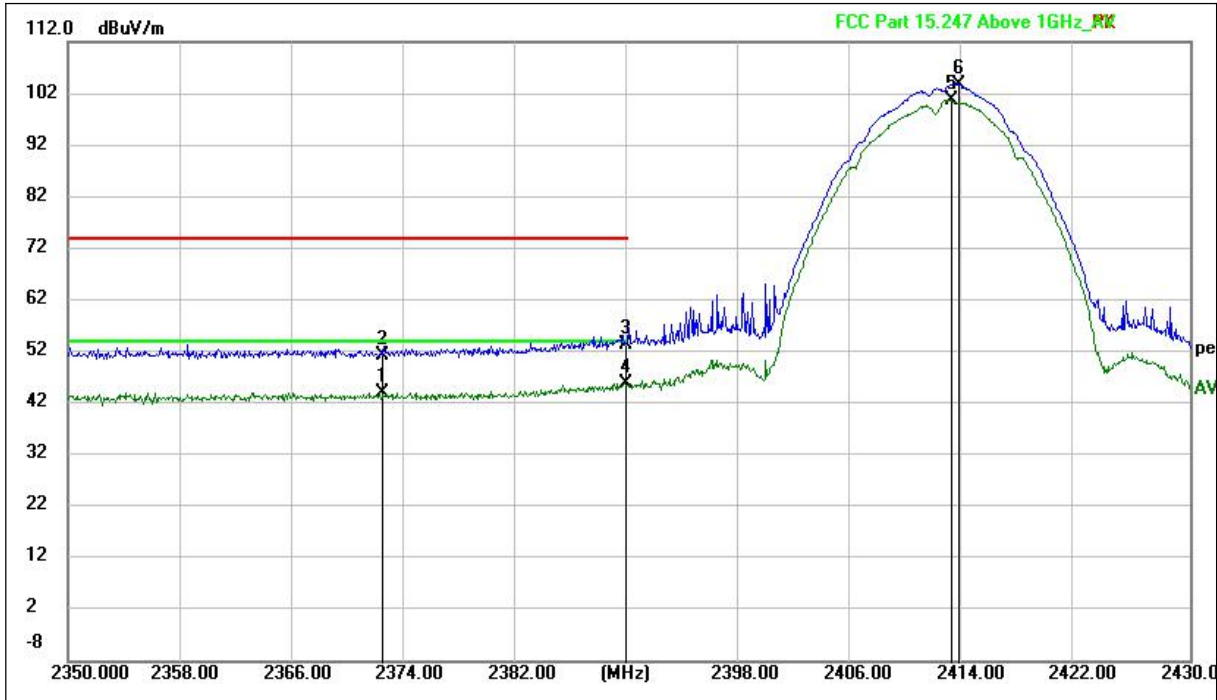
B. Equipments List:

Please refer ANNEX B(4).



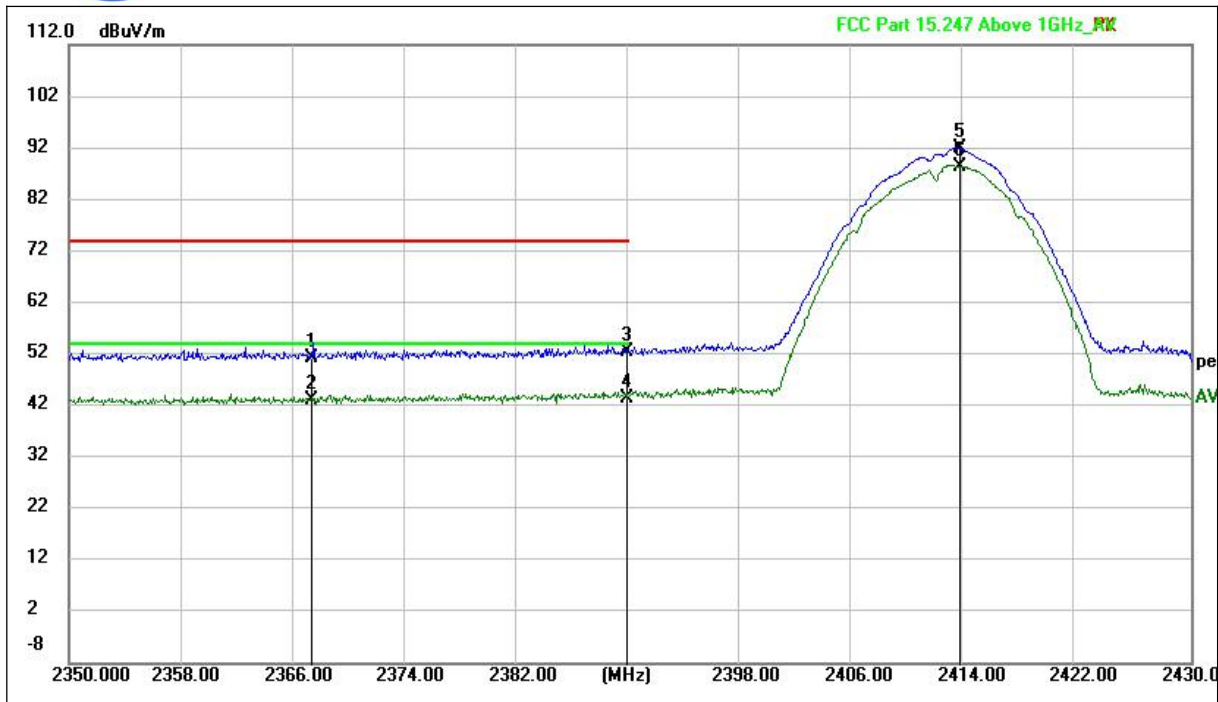
2.6.3. Test Result

802.11b Test mode



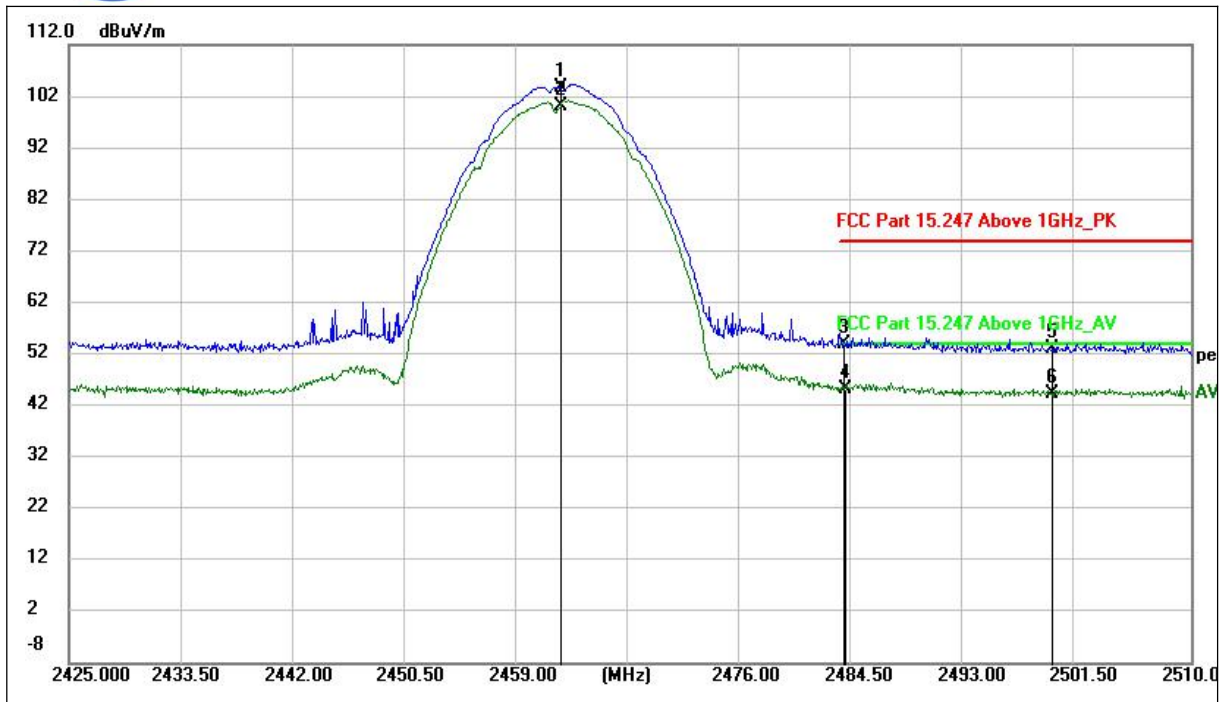
(802.11b _2412MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2372.344	13.81	30.17	43.98	54.00	-10.02	AVG	PASS
2372.476	21.16	30.17	51.33	74.00	-22.67	peak	PASS
2389.736	22.40	30.94	53.34	74.00	-20.66	peak	PASS
2389.736	14.83	30.94	45.77	54.00	-8.23	AVG	PASS
2412.960	69.71	31.02	100.73	N/A	N/A	AVG	N/A
2413.508	72.79	30.99	103.78	N/A	N/A	peak	N/A



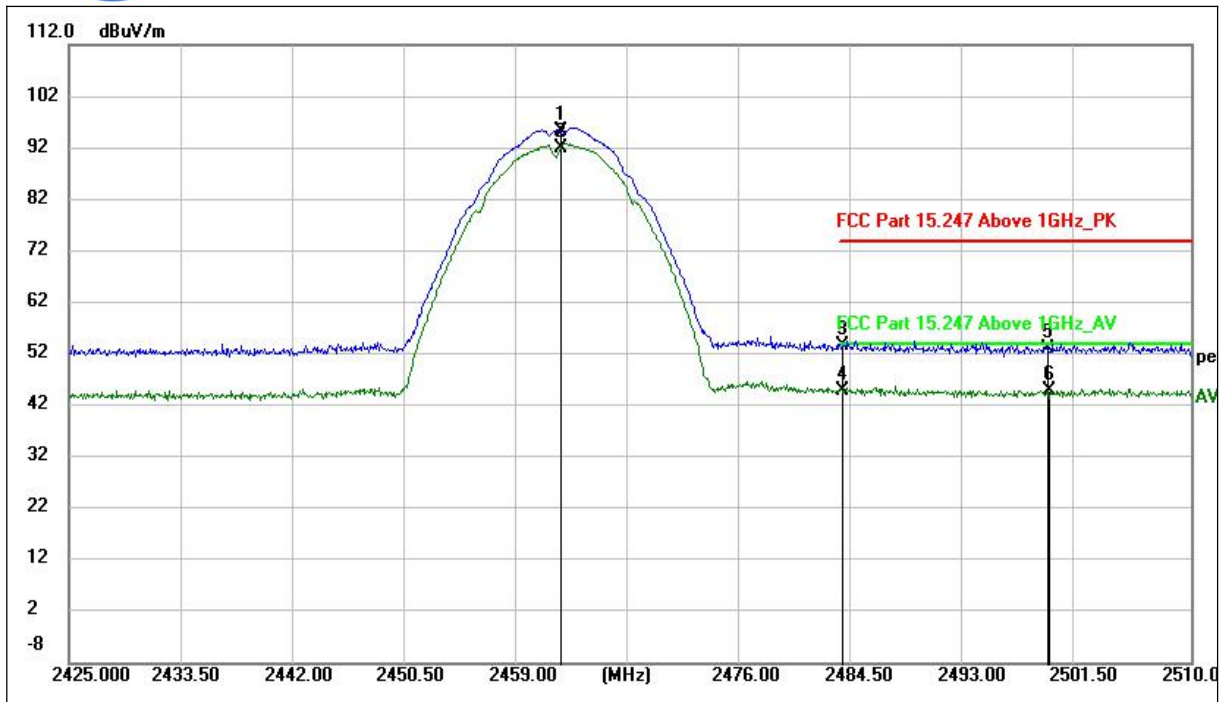
(802.11b _2412MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2367.268	11.00	40.11	51.11	74.00	-22.89	peak	PASS
2367.268	2.88	40.11	42.99	54.00	-11.01	AVG	PASS
2389.820	11.52	40.95	52.47	74.00	-21.53	peak	PASS
2389.820	2.53	40.95	43.48	54.00	-10.52	AVG	PASS
2413.464	50.86	41.05	91.91	N/A	N/A	peak	N/A
2413.464	47.32	41.05	88.37	N/A	N/A	AVG	N/A



(802.11b_2462MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2462.307	62.05	41.51	103.56	N/A	N/A	peak	N/A
2462.307	58.71	41.51	100.22	N/A	N/A	AVG	N/A
2483.680	12.07	41.76	53.83	74.00	-20.17	peak	PASS
2483.765	3.49	41.76	45.25	54.00	-8.75	AVG	PASS
2499.519	11.44	41.48	52.92	74.00	-21.08	peak	PASS
2499.519	2.83	41.48	44.31	54.00	-9.69	AVG	PASS

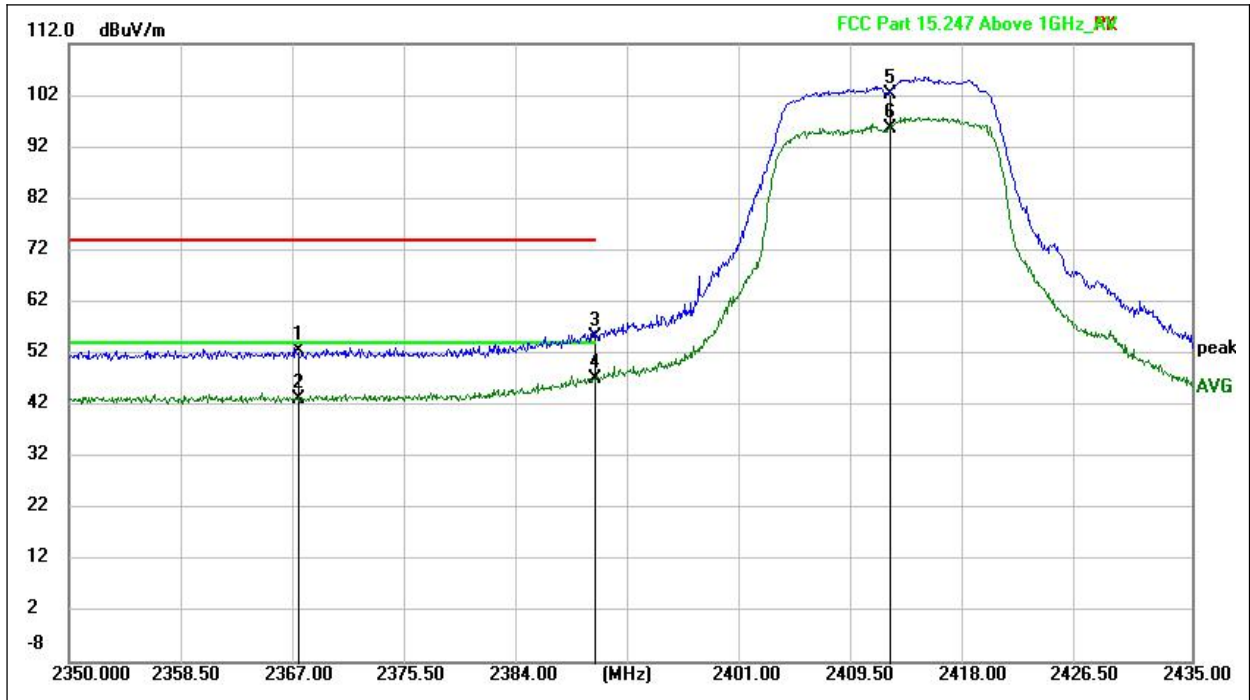


(802.11b_2462MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2462.217	53.87	41.50	95.37	N/A	N/A	peak	N/A
2462.298	50.33	41.51	91.84	N/A	N/A	AVG	N/A
2483.608	12.00	41.77	53.77	74.00	-20.23	peak	PASS
2483.608	3.06	41.77	44.83	54.00	-9.17	AVG	PASS
2499.039	11.61	41.47	53.08	74.00	-20.92	peak	PASS
2499.252	3.47	41.47	44.94	54.00	-9.06	AVG	PASS

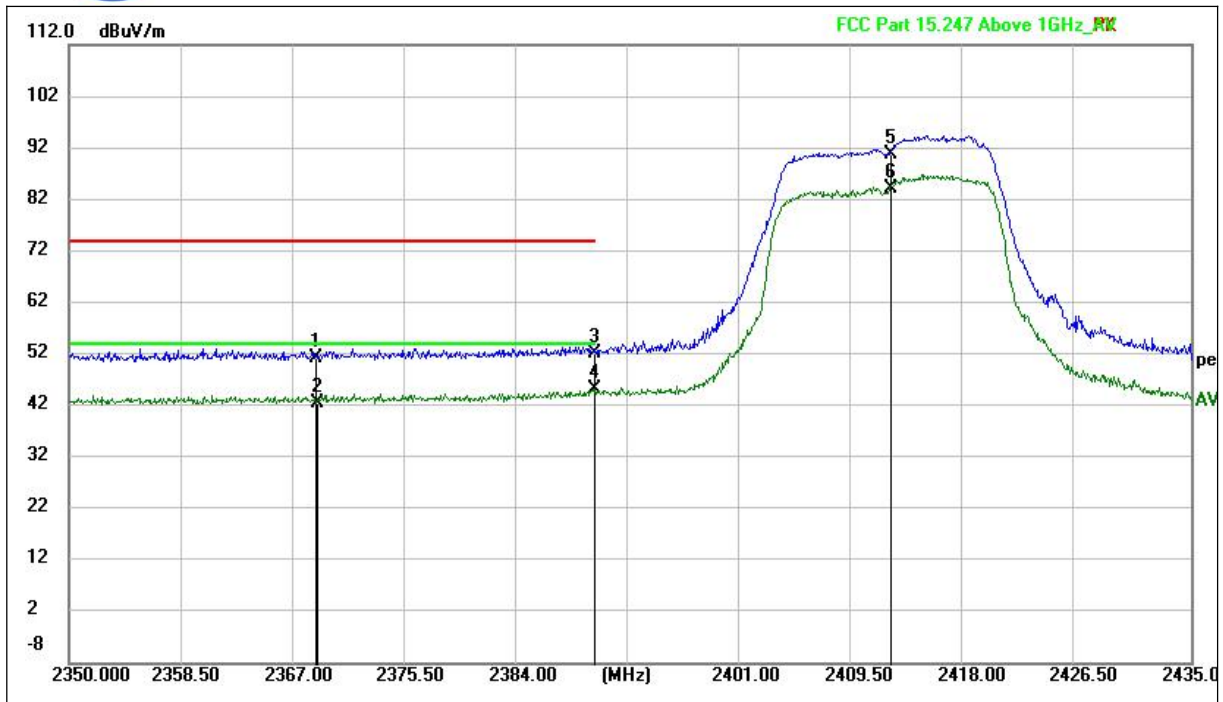


802.11g Test mode



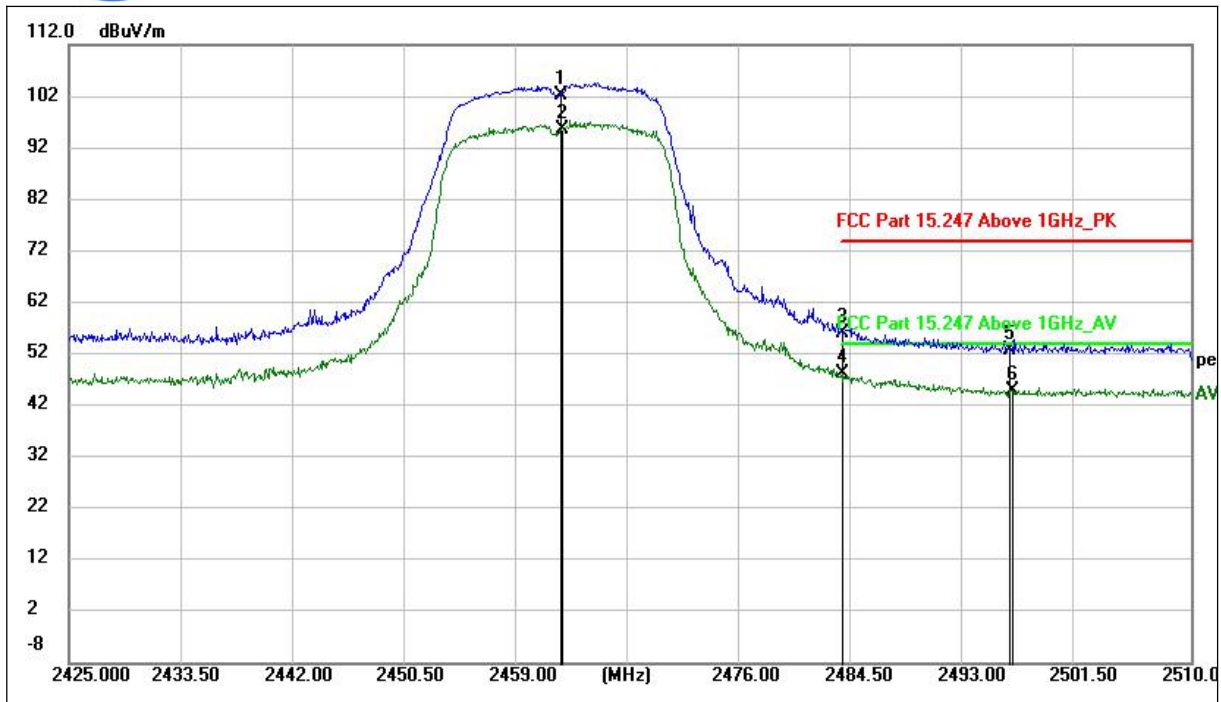
(802.11g_2412MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2367.259	12.33	40.11	52.44	74.00	-21.56	peak	PASS
2367.310	2.99	40.11	43.10	54.00	-10.90	AVG	PASS
2389.840	14.21	40.95	55.16	74.00	-18.84	peak	PASS
2389.840	6.00	40.95	46.95	54.00	-7.05	AVG	PASS
2412.182	61.21	41.12	102.33	N/A	N/A	peak	N/A
2412.182	54.47	41.12	95.59	N/A	N/A	AVG	N/A



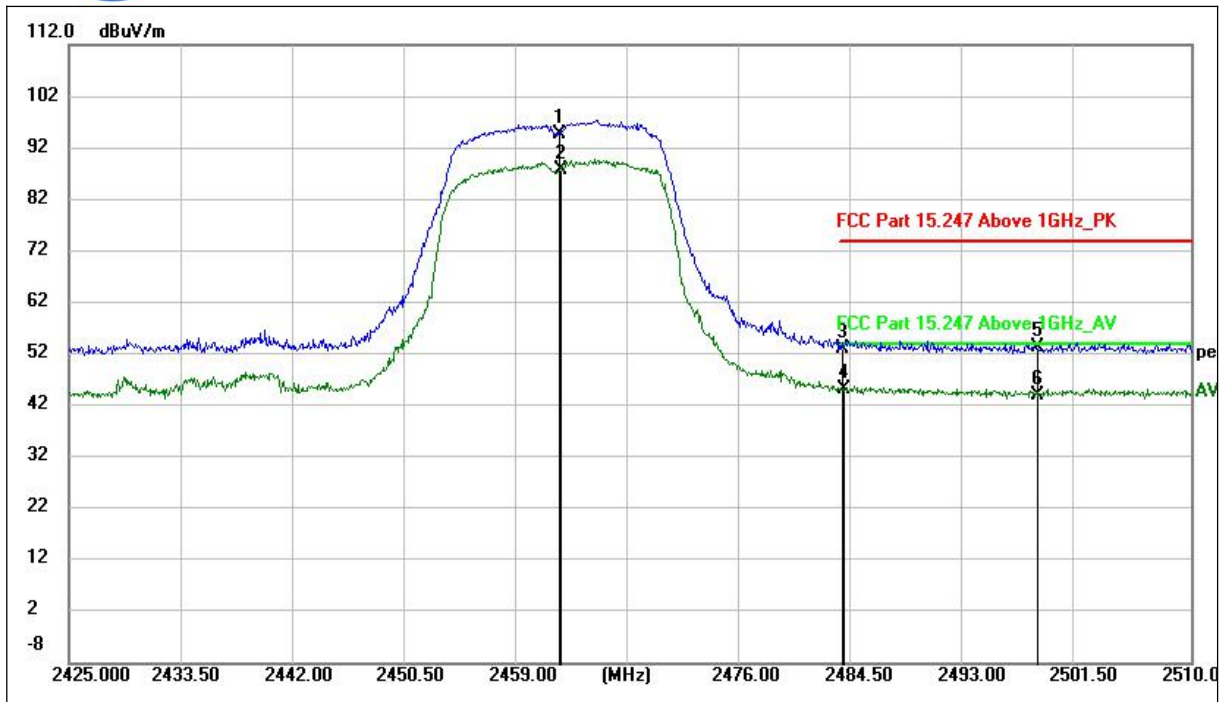
(802.11g _2412MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2368.670	11.22	40.13	51.35	74.00	-22.65	peak	PASS
2368.772	2.52	40.13	42.65	54.00	-11.35	AVG	PASS
2389.729	11.36	40.94	52.30	74.00	-21.70	peak	PASS
2389.729	4.16	40.94	45.10	54.00	-8.90	AVG	PASS
2412.254	49.49	41.12	90.61	N/A	N/A	peak	N/A
2412.254	43.03	41.12	84.15	N/A	N/A	AVG	N/A



(802.11g_2462MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2462.238	60.69	41.50	102.19	N/A	N/A	peak	N/A
2462.319	53.94	41.51	95.45	N/A	N/A	AVG	N/A
2483.612	14.30	41.77	56.07	74.00	-17.93	peak	PASS
2483.612	6.36	41.77	48.13	54.00	-5.87	AVG	PASS
2496.264	11.36	41.45	52.81	74.00	-21.19	peak	PASS
2496.409	3.37	41.45	44.82	54.00	-9.18	AVG	PASS

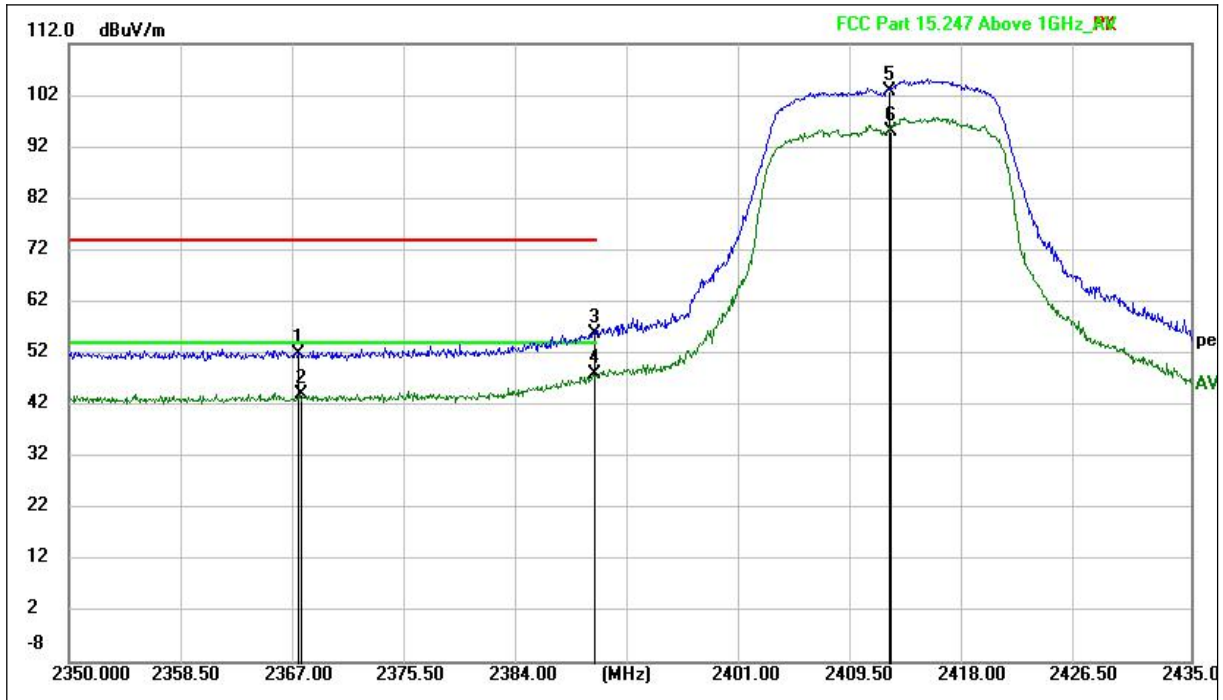


(802.11g _2462MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Det.	Verdict
2462.137	53.05	41.49	94.54	N/A	N/A	peak	N/A
2462.234	46.17	41.50	87.67	N/A	N/A	AVG	N/A
2483.557	11.41	41.76	53.17	74.00	-20.83	peak	PASS
2483.671	3.38	41.76	45.14	54.00	-8.86	AVG	PASS
2498.376	11.76	41.47	53.23	74.00	-20.77	peak	PASS
2498.436	2.59	41.47	44.06	54.00	-9.94	AVG	PASS

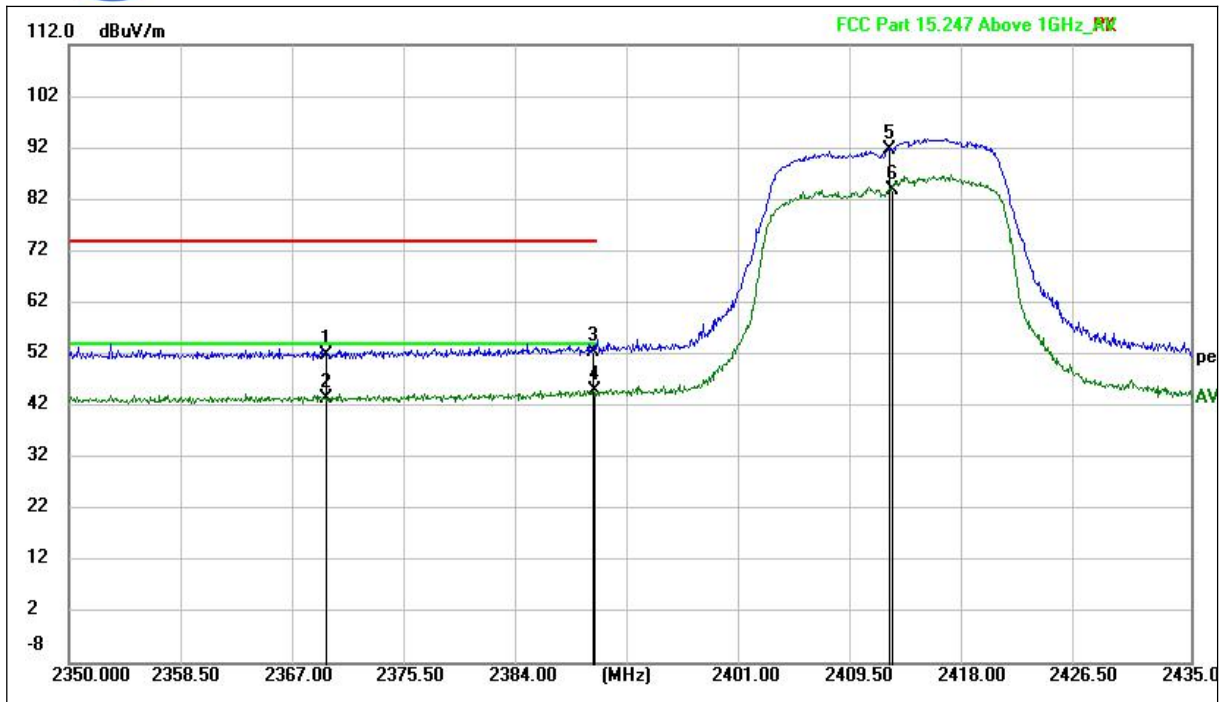


802.11n-20MHz Test mode



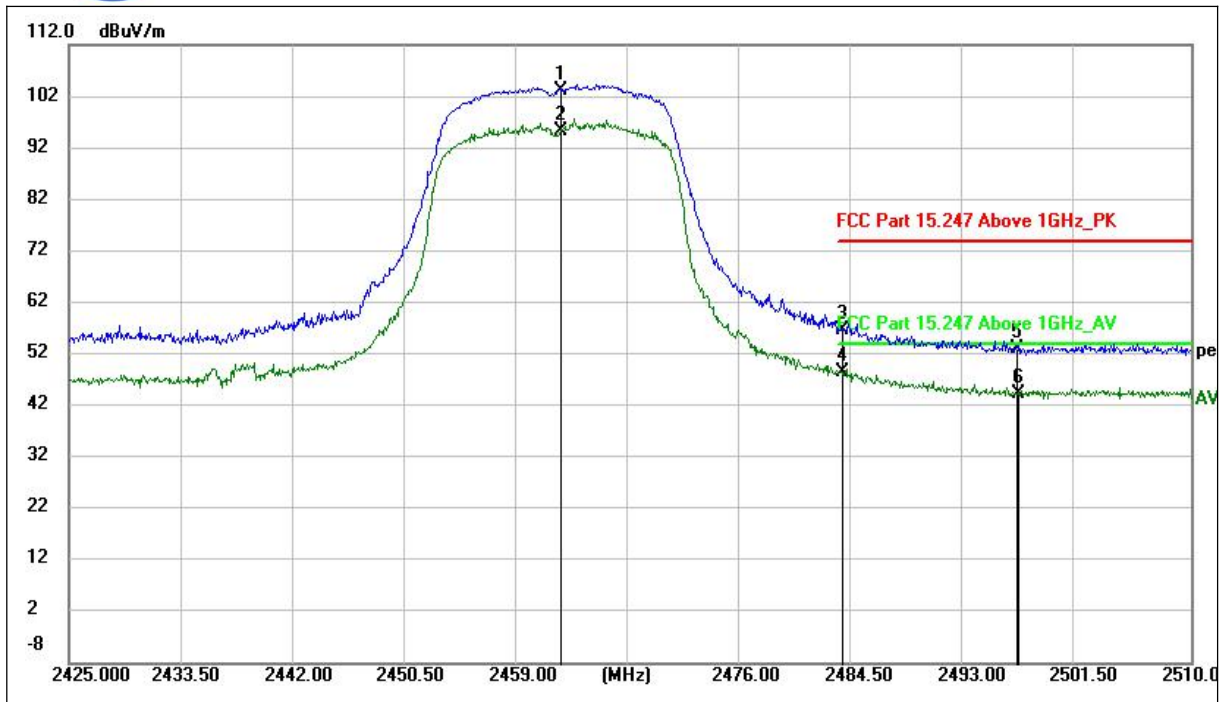
(802.11n_20M_2412MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2367.421	11.63	40.11	51.74	74.00	-22.26	peak	PASS
2367.570	3.80	40.13	43.93	54.00	-10.07	AVG	PASS
2389.818	14.71	40.95	55.66	74.00	-18.34	peak	PASS
2389.818	7.06	40.95	48.01	54.00	-5.99	AVG	PASS
2412.088	61.58	41.13	102.71	N/A	N/A	peak	N/A
2412.224	53.74	41.12	94.86	N/A	N/A	AVG	N/A



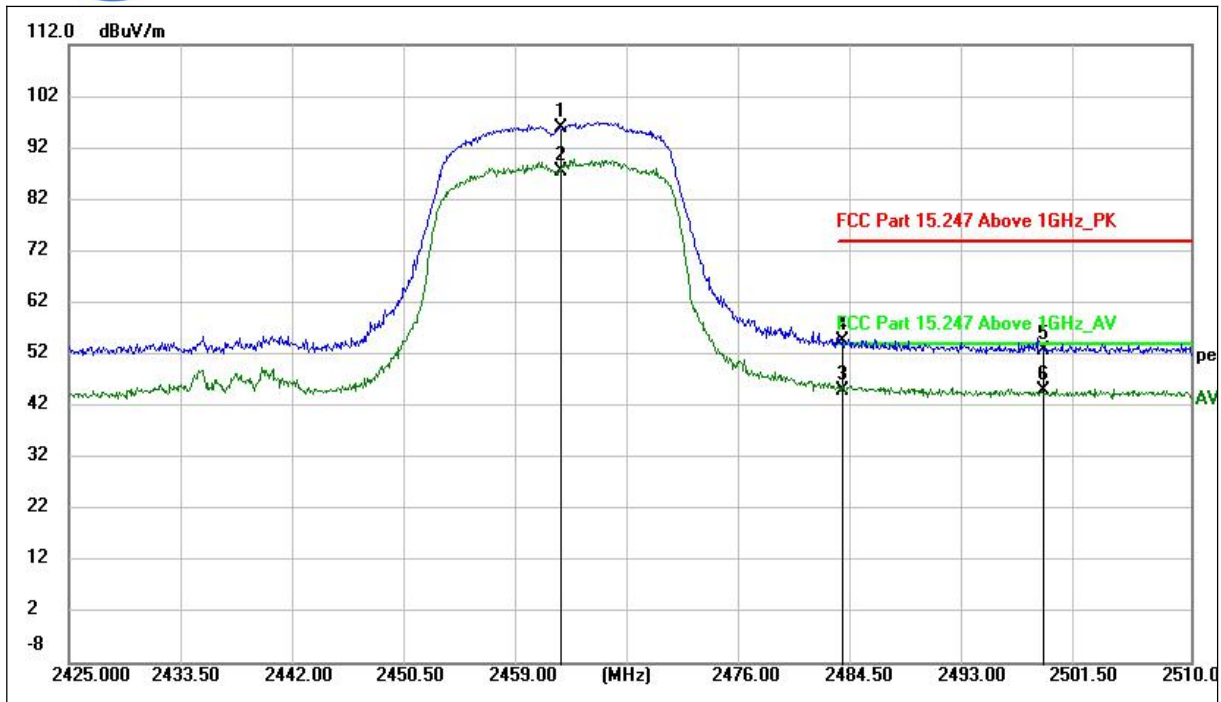
(802.11n_20M_2412MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2369.384	11.84	40.14	51.98	74.00	-22.02	peak	PASS
2369.384	3.20	40.14	43.34	54.00	-10.66	AVG	PASS
2389.695	11.64	40.94	52.58	74.00	-21.42	peak	PASS
2389.793	3.96	40.94	44.90	54.00	-9.10	AVG	PASS
2412.186	50.65	41.12	91.77	N/A	N/A	peak	N/A
2412.390	42.73	41.11	83.84	N/A	N/A	AVG	N/A



(802.11n_20M_2462MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2462.171	61.51	41.50	103.01	N/A	N/A	peak	N/A
2462.311	53.65	41.51	95.16	N/A	N/A	AVG	N/A
2483.501	14.98	41.76	56.74	74.00	-17.26	peak	PASS
2483.629	6.77	41.77	48.54	54.00	-5.46	AVG	PASS
2496.825	11.51	41.46	52.97	74.00	-21.03	peak	PASS
2496.893	2.74	41.46	44.20	54.00	-9.80	AVG	PASS

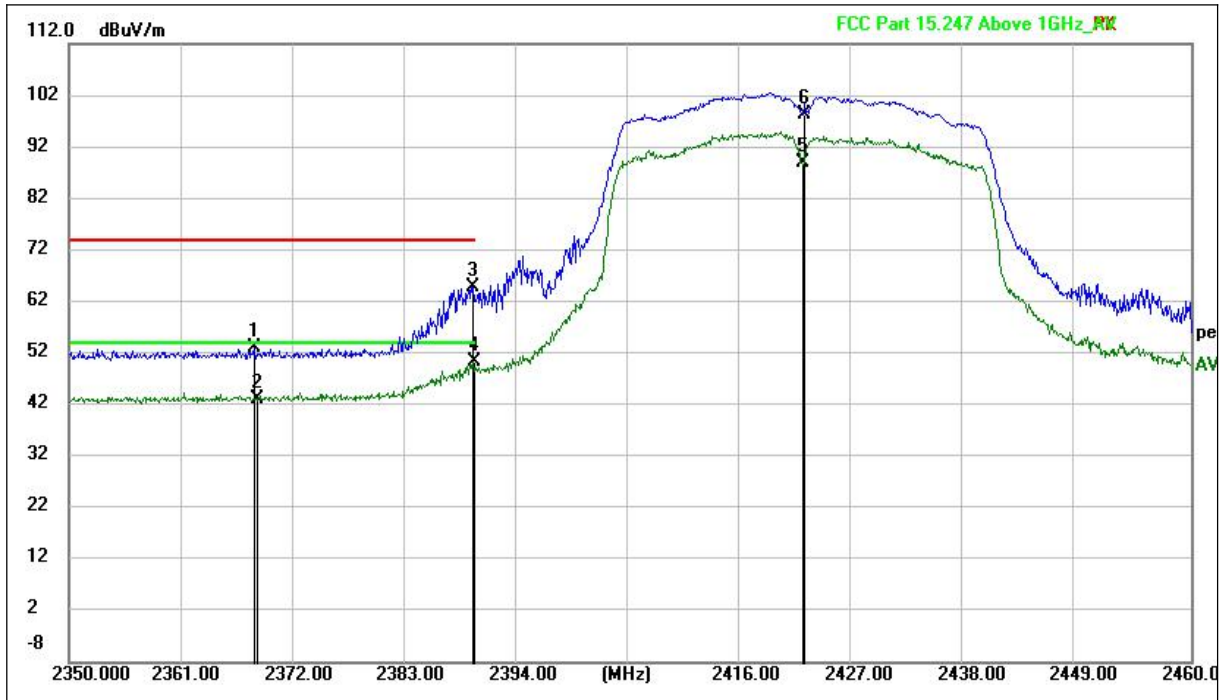


(802.11n_20M_2462MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2462.183	54.41	41.50	95.91	N/A	N/A	peak	N/A
2462.183	45.99	41.50	87.49	N/A	N/A	AVG	N/A
2483.565	3.28	41.76	45.04	54.00	-8.96	AVG	PASS
2483.608	12.71	41.77	54.48	74.00	-19.52	peak	PASS
2498.708	11.27	41.47	52.74	74.00	-21.26	peak	PASS
2498.827	3.40	41.47	44.87	54.00	-9.13	AVG	PASS

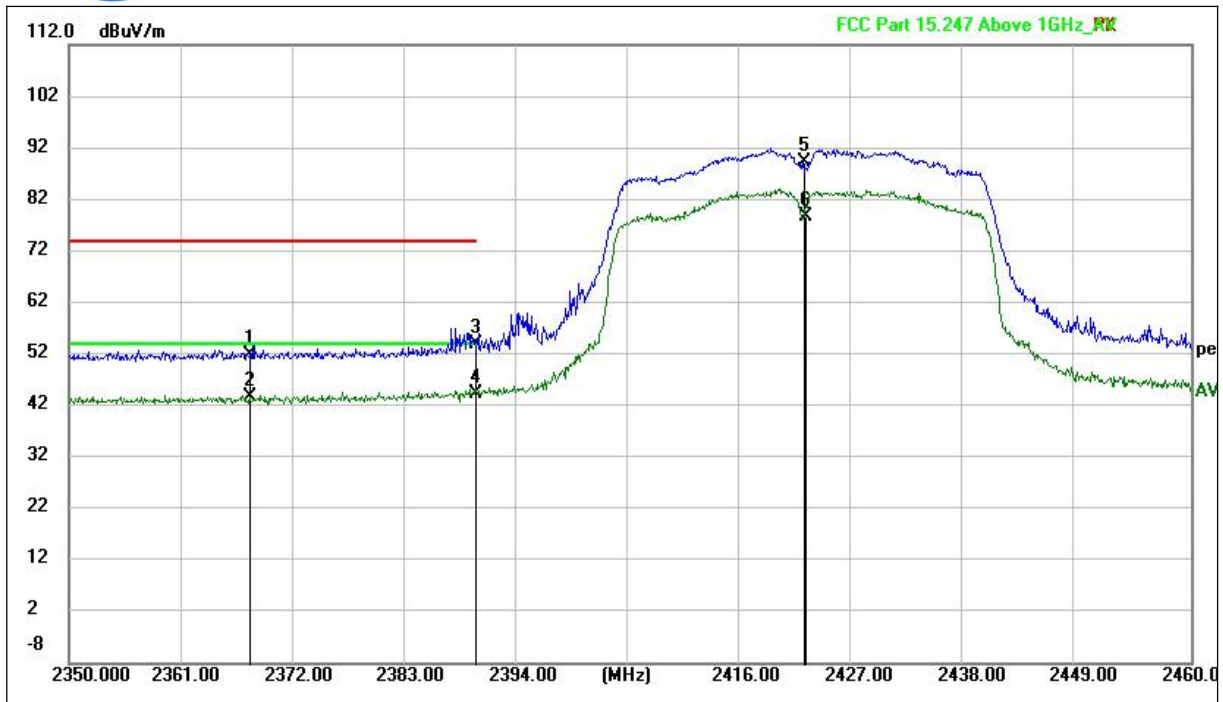


802.11n-40MHz Test mode



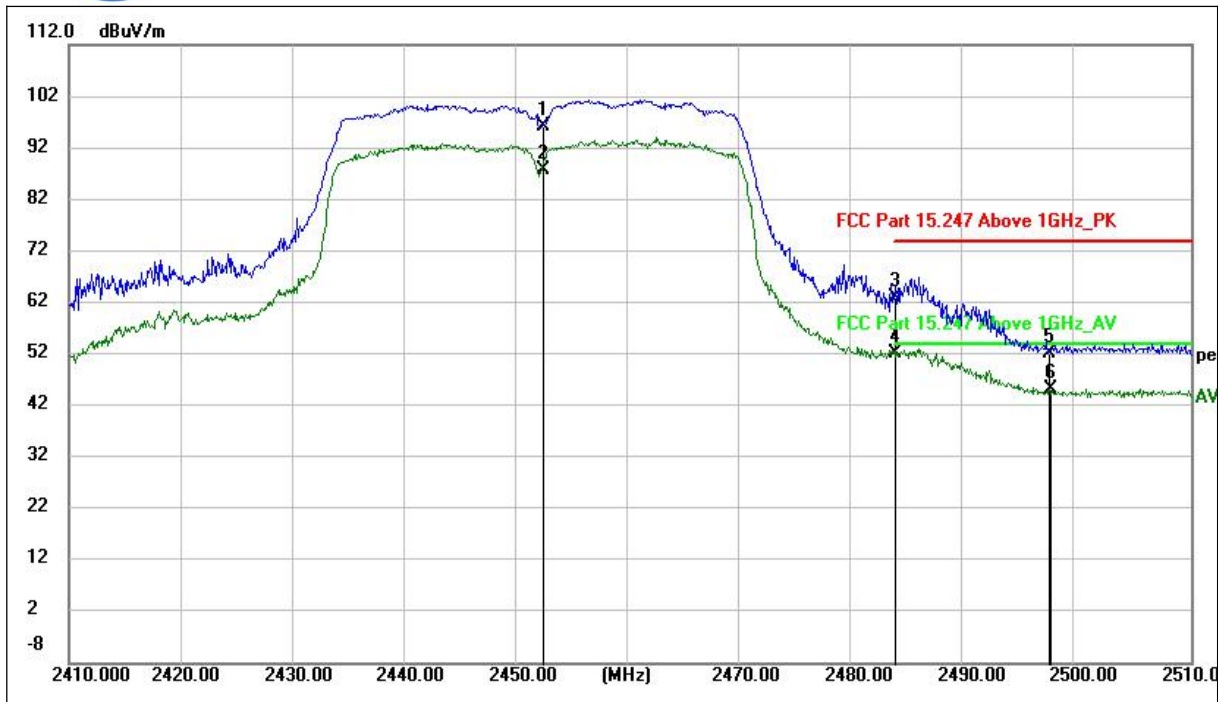
(802.11n_40M_2422MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2368.177	12.79	40.13	52.92	74.00	-21.08	peak	PASS
2368.436	3.00	40.13	43.13	54.00	-10.87	AVG	PASS
2389.495	23.85	40.92	64.77	74.00	-9.23	peak	PASS
2389.655	9.29	40.93	50.22	54.00	-3.78	AVG	PASS
2421.929	48.23	40.76	88.99	N/A	N/A	AVG	N/A
2422.044	57.46	40.76	98.22	N/A	N/A	peak	N/A



(802.11n_40M_2422MHz, Antenna Vertical)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2367.776	11.81	40.13	51.94	74.00	-22.06	peak	PASS
2367.776	3.45	40.13	43.58	54.00	-10.42	AVG	PASS
2389.886	12.89	40.95	53.84	74.00	-20.16	peak	PASS
2389.886	3.50	40.95	44.45	54.00	-9.55	AVG	PASS
2422.094	48.46	40.76	89.22	N/A	N/A	peak	N/A
2422.171	37.94	40.76	78.70	N/A	N/A	AVG	N/A



(802.11n_40M_2452MHz, Antenna Horizontal)

Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Verdict
2452.275	55.20	41.12	96.32	N/A	N/A	peak	N/A
2452.275	46.70	41.12	87.82	N/A	N/A	AVG	N/A
2483.630	21.27	41.77	63.04	74.00	-10.96	peak	PASS
2483.630	10.49	41.77	52.26	54.00	-1.74	AVG	PASS
2497.355	10.75	41.46	52.21	74.00	-21.79	peak	PASS
2497.460	3.81	41.46	45.27	54.00	-8.73	AVG	PASS