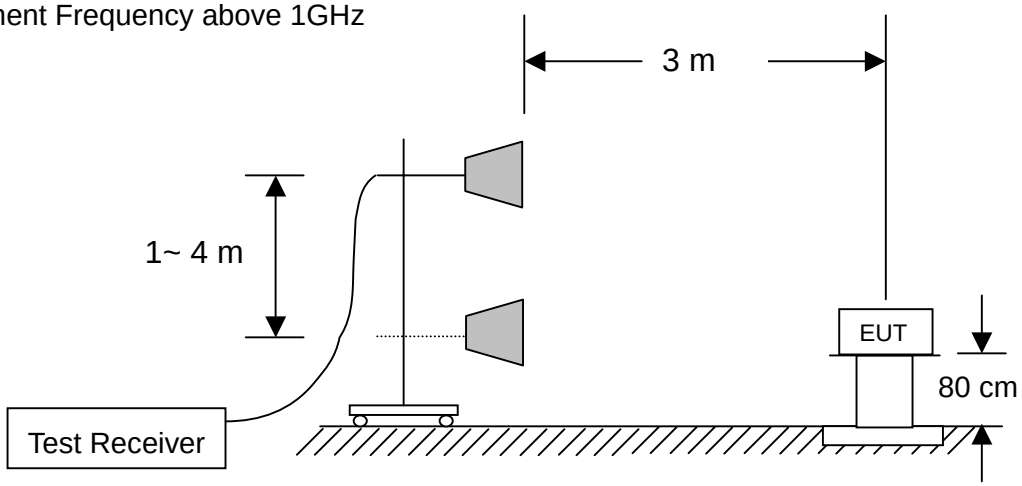
7 Emission on the Band Edge test

7.1 Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

7.2 Configuration of Measurement

Measurement Frequency above 1GHz



7.3 Test Procedure

The EUT was setup to ANSI C63.4, 2003; tested to DTS test procedure of Oct 2002 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW =1M, VBW= RBW for peak, and VBW=10Hz for average.
The EUT for testing is arranged on a wooden turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meter and down to 1 meter.

7.4 Test Result

PASS.
The final test data is shown on as following pages.

Band edge

Single Tx

802.11b Chain A					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	63.34	74	-10.66
		AV	52.84	54	-1.16
11	2483.5~2500	PK	60.34	74	-13.66
		AV	50.34	54	-3.66

802.11b Chain B					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	60.51	74	-13.49
		AV	49.34	54	-4.66
11	2483.5~2500	PK	56.34	74	-17.66
		AV	45.01	54	-8.99

802.11b Chain C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	56.51	74	-17.49
		AV	45.18	54	-8.82
11	2483.5~2500	PK	55.84	74	-18.16
		AV	44.34	54	-9.66

802.11g Chain A					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	70.34	74	-3.66
		AV	52.51	54	-1.49
11	2483.5~2500	PK	65.18	74	-8.82
		AV	47.34	54	-6.66

802.11g Chain B					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	72.34	74	-1.66
		AV	53.68	54	-0.32
11	2483.5~2500	PK	71.18	74	-2.82
		AV	50.84	54	-3.16

802.11g Chain C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	67.84	74	-6.16
		AV	50.68	54	-3.32
11	2483.5~2500	PK	68.84	74	-5.16
		AV	48.84	54	-5.16

802.11n (HT20) Chain A					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	73.18	74	-0.82
		AV	53.01	54	-0.99
11	2483.5~2500	PK	70.68	74	-3.32
		AV	50.68	54	-3.32

802.11n (HT20) Chain B					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	68.18	74	-5.82
		AV	50.84	54	-3.16
11	2483.5~2500	PK	65.84	74	-8.16
		AV	47.51	54	-6.49

802.11n (HT20) Chain C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	71.18	74	-2.82
		AV	51.51	54	-2.49
11	2483.5~2500	PK	69.18	74	-4.82
		AV	48.18	54	-5.82

802.11n (HT40) Chain A					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	64.84	74	-9.16
		AV	52.18	54	-1.82
9	2483.5~2500	PK	59.01	74	-14.99
		AV	47.34	54	-6.66

802.11n (HT40) Chain B					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	69.68	74	-4.32
		AV	51.34	54	-2.66
9	2483.5~2500	PK	66.84	74	-7.16
		AV	49.34	54	-4.66

802.11n (HT40) Chain C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	72.01	74	-1.99
		AV	53.34	54	-0.66
9	2483.5~2500	PK	67.34	74	-6.66
		AV	49.01	54	-4.99

Dual Tx

802.11n (HT20) Chain A+B					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	67.68	74	-6.32
		AV	52.18	54	-1.82
11	2483.5~2500	PK	61.51	74	-12.49
		AV	47.34	54	-6.66

802.11n (HT20) Chain B+C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	67.84	74	-6.16
		AV	52.51	54	-1.49
11	2483.5~2500	PK	65.34	74	-8.66
		AV	48.84	54	-5.16

802.11n (HT20) Chain A+C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	66.18	74	-7.82
		AV	52.68	54	-1.32
11	2483.5~2500	PK	65.51	74	-8.49
		AV	48.34	54	-5.66

802.11n (HT40) Chain A+B					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	69.67	74	-4.33
		AV	52.84	54	-1.16
9	2483.5~2500	PK	63.67	74	-10.33
		AV	47.34	54	-6.66

802.11n (HT40) Chain B+C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dBμV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	72.84	74	-1.16
		AV	53.67	54	-0.33
9	2483.5~2500	PK	63.17	74	-10.83
		AV	48.00	54	-6.00

802.11n (HT40) Chain A+C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dBμV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	71.17	74	-2.83
		AV	52.00	54	-2.00
9	2483.5~2500	PK	64.00	74	-10.00
		AV	47.67	54	-6.33

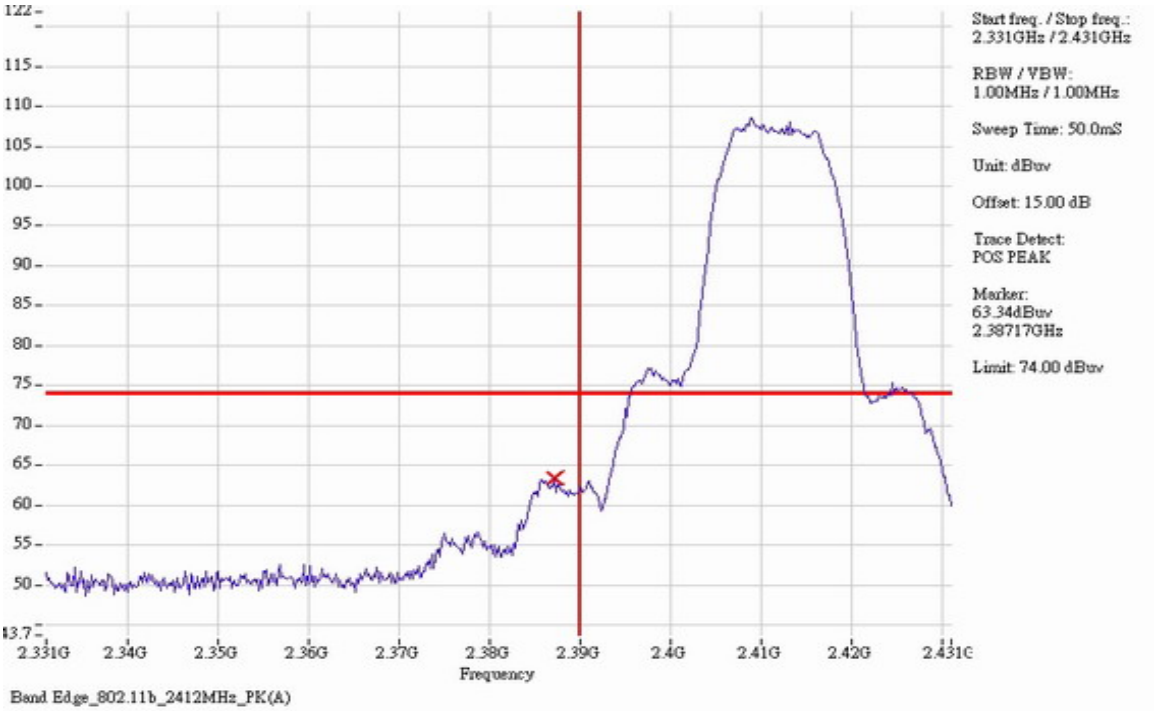
Triple Tx

802.11n (HT20) Chain A+B+C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
1	2310~2390	PK	66.84	74	-7.16
		AV	50.84	54	-3.16
11	2483.5~2500	PK	60.00	74	-14.00
		AV	46.00	54	-8.00

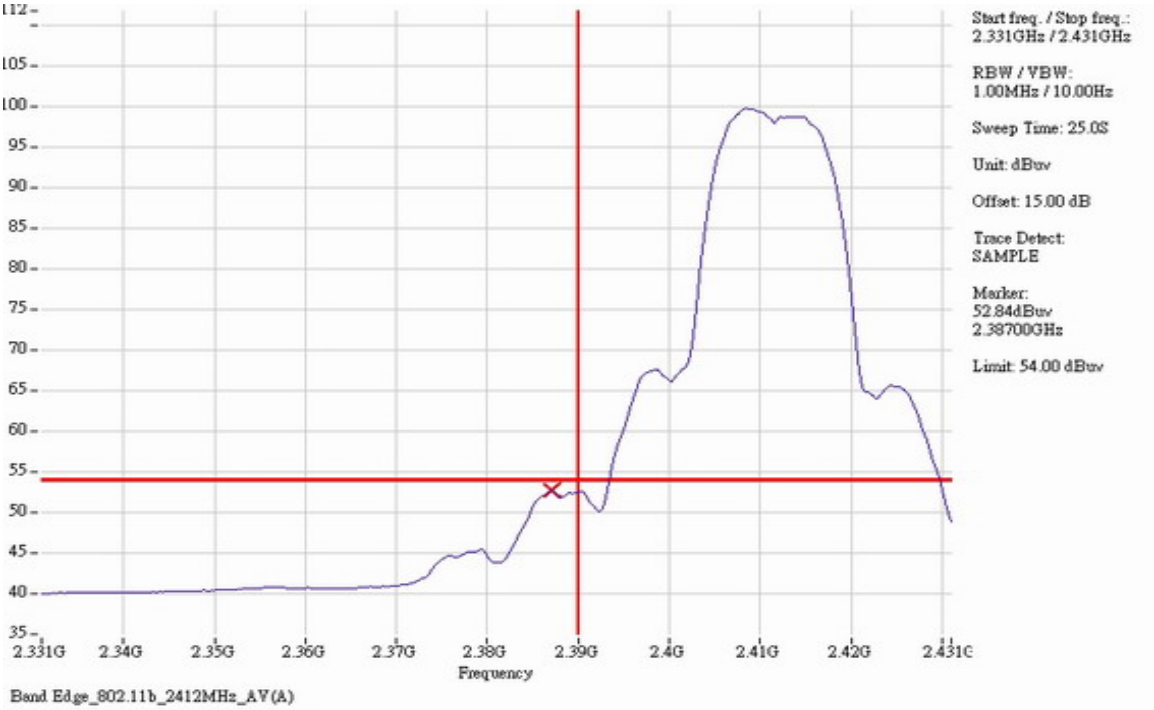
802.11n (HT40) Chain A+B+C					
CH	**Restrict Freq. Band (MHz)**	**Detector Mode**	**Maximum level (dB μV/m)**	**Limit (dBm)**	**Margin (dB)**
3	2310~2390	PK	68.17	74	-5.83
		AV	48.84	54	-5.16
9	2483.5~2500	PK	71.00	74	-3.00
		AV	52.00	54	-2.00

Single Tx

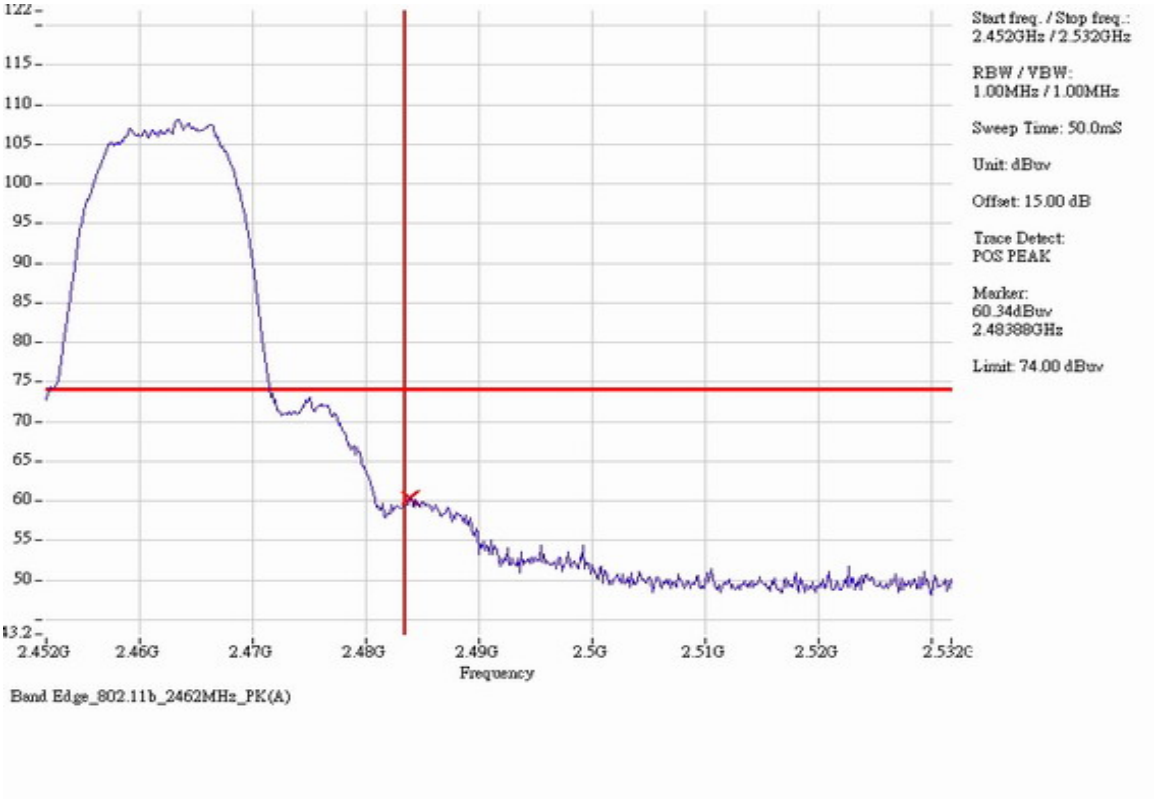
802.11b Chain A CH1 PK



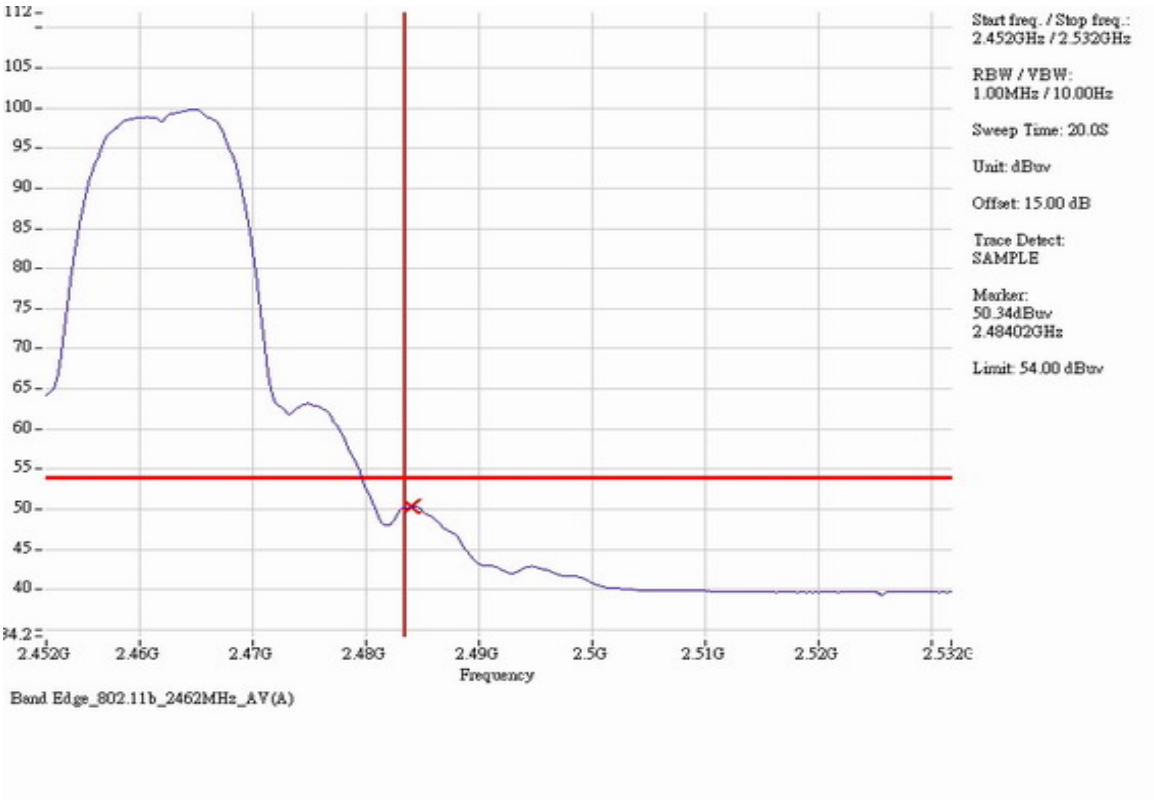
802.11b Chain A CH1 AV



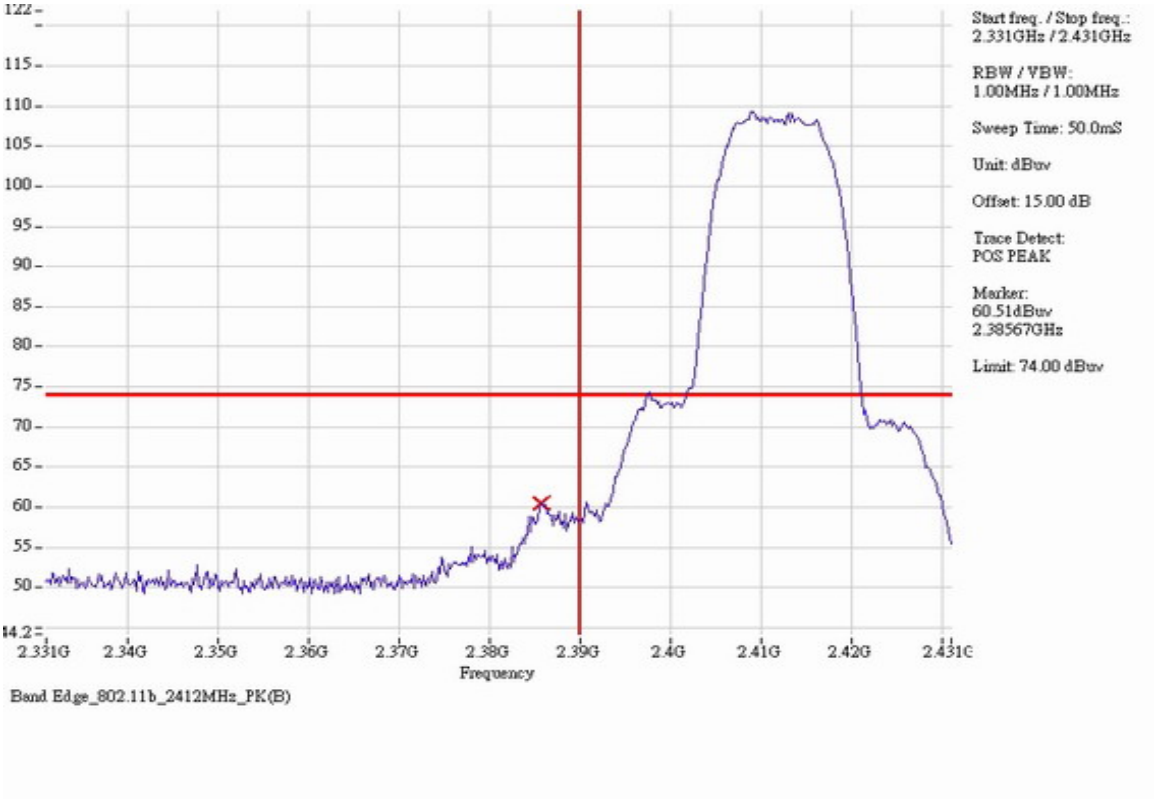
802.11b Chain A CH11 PK



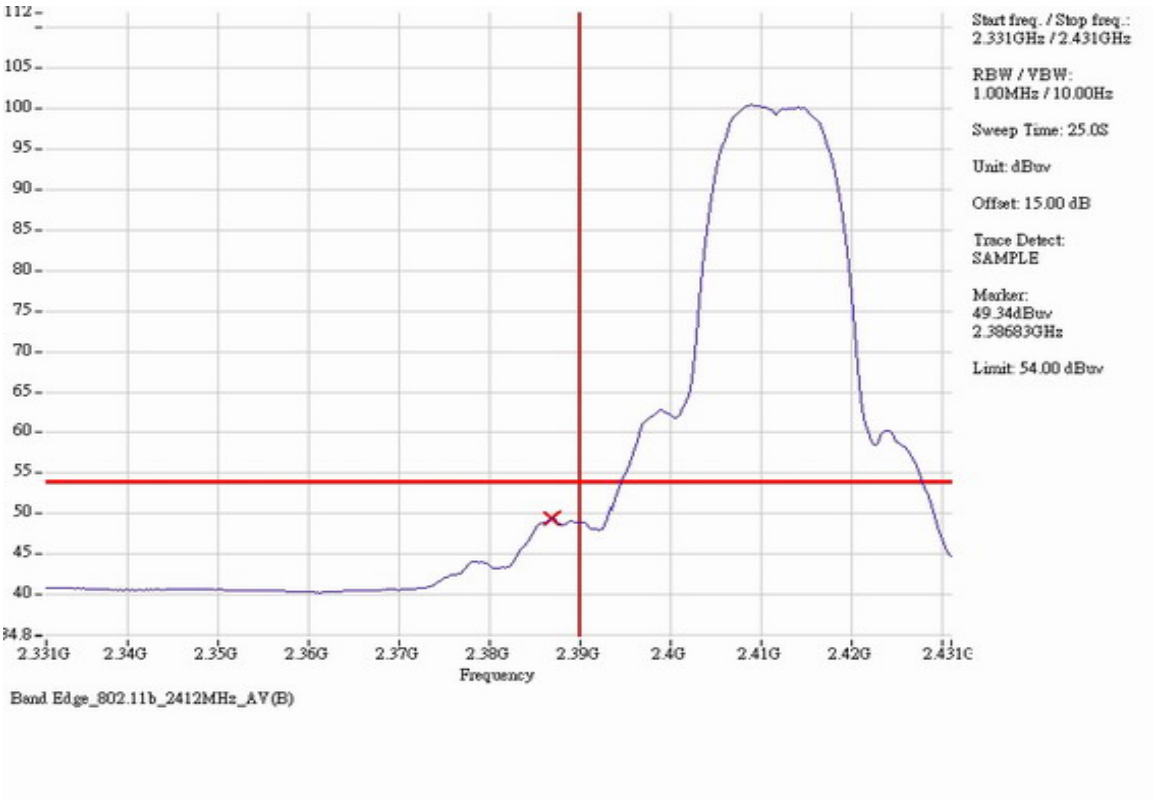
802.11b Chain A CH11 AV



802.11b Chain B CH1 PK



802.11b Chain B CH1 AV



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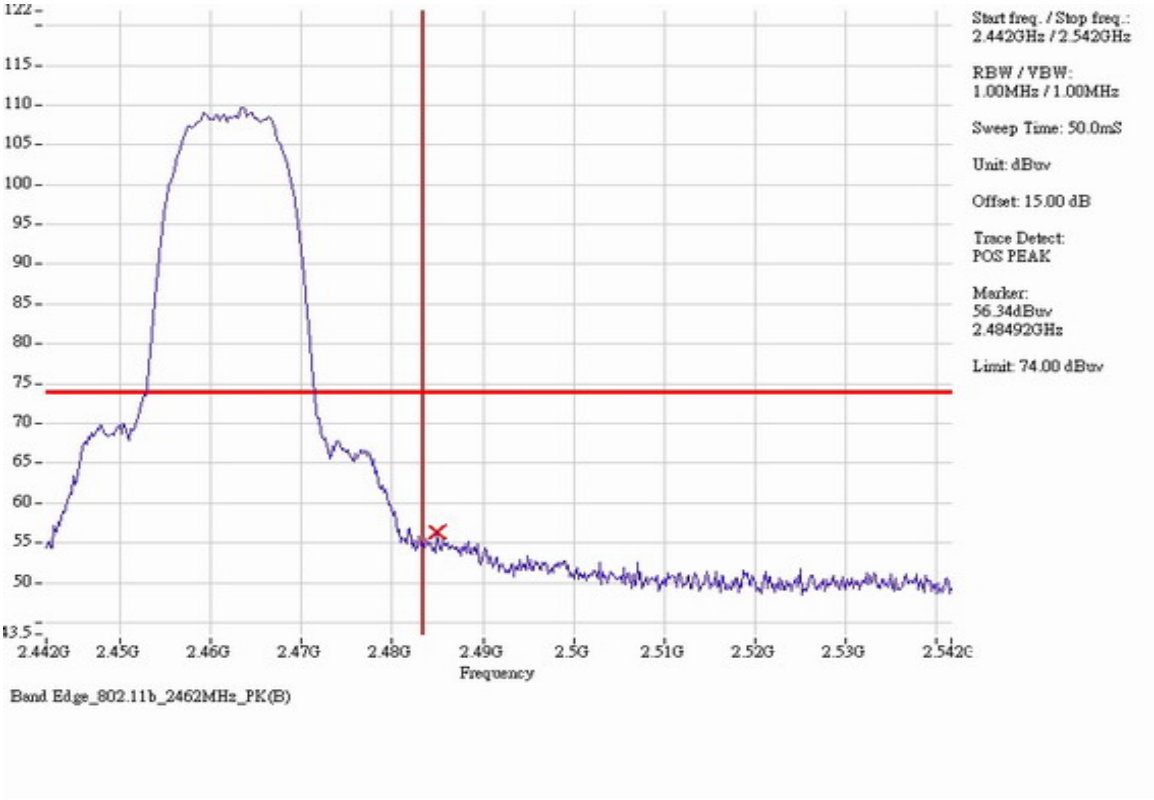

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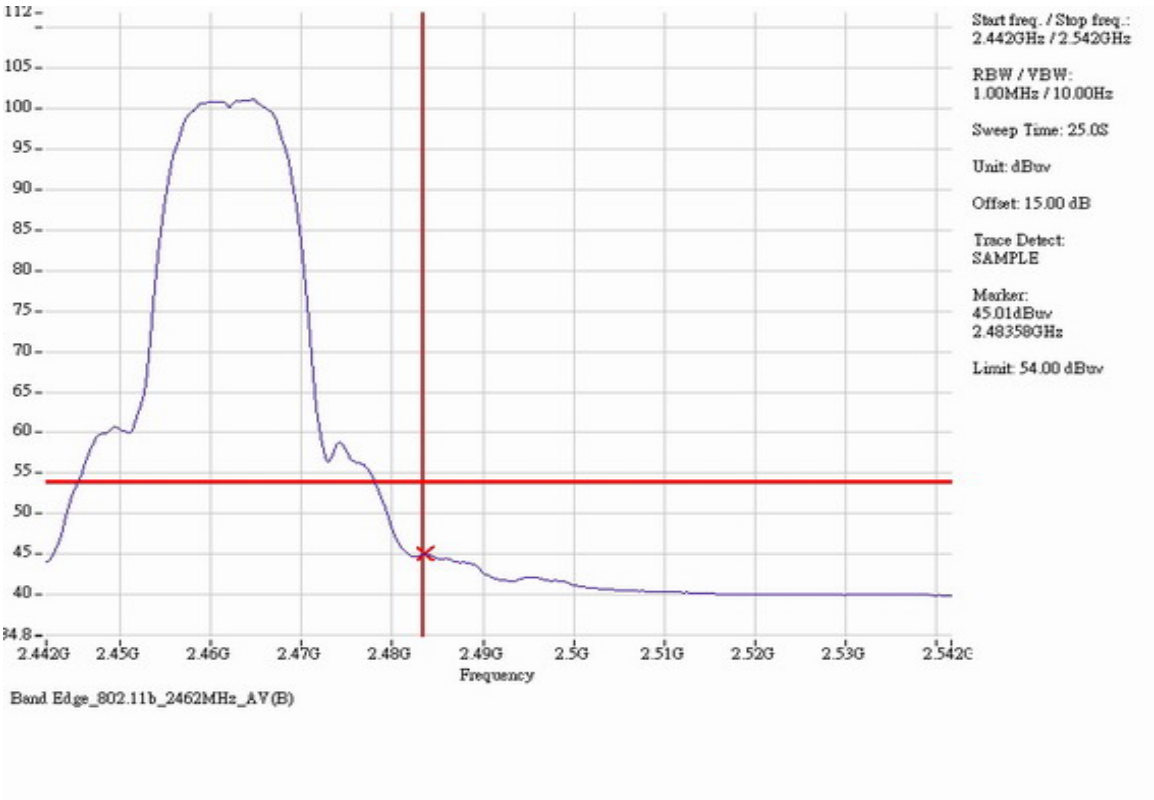
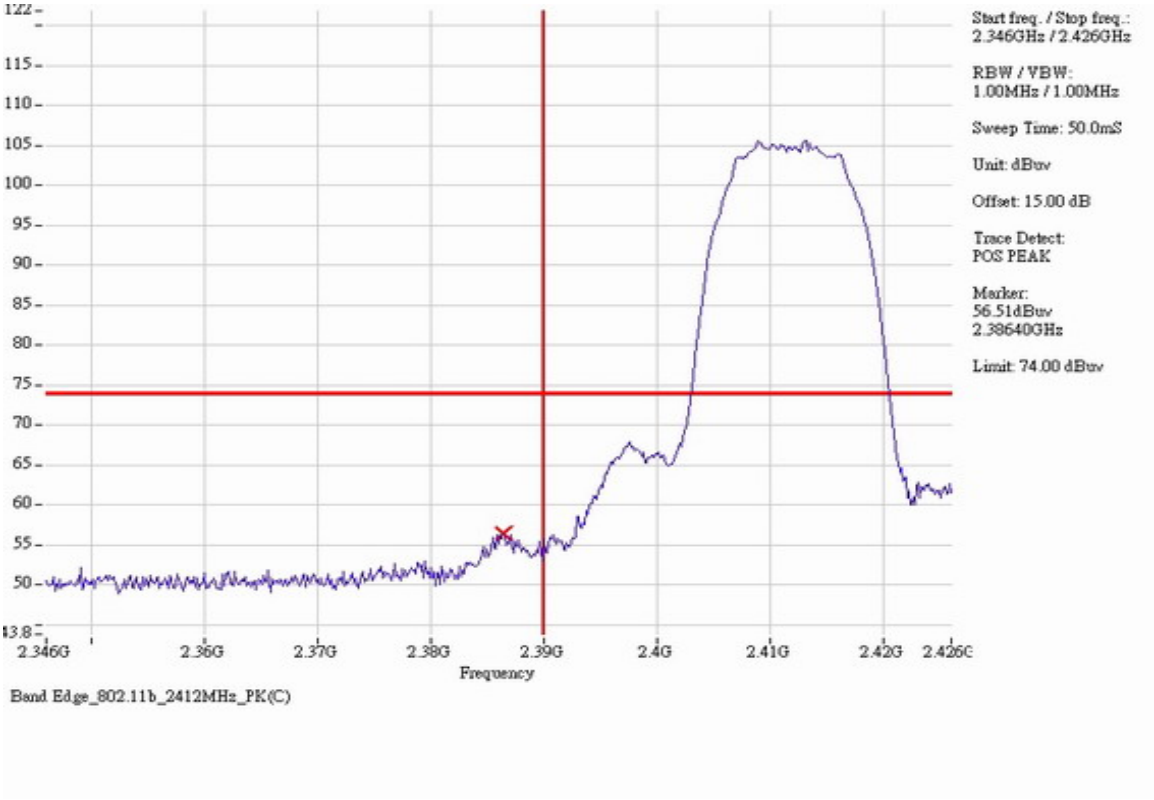


802.11b Chain C CH1 PK



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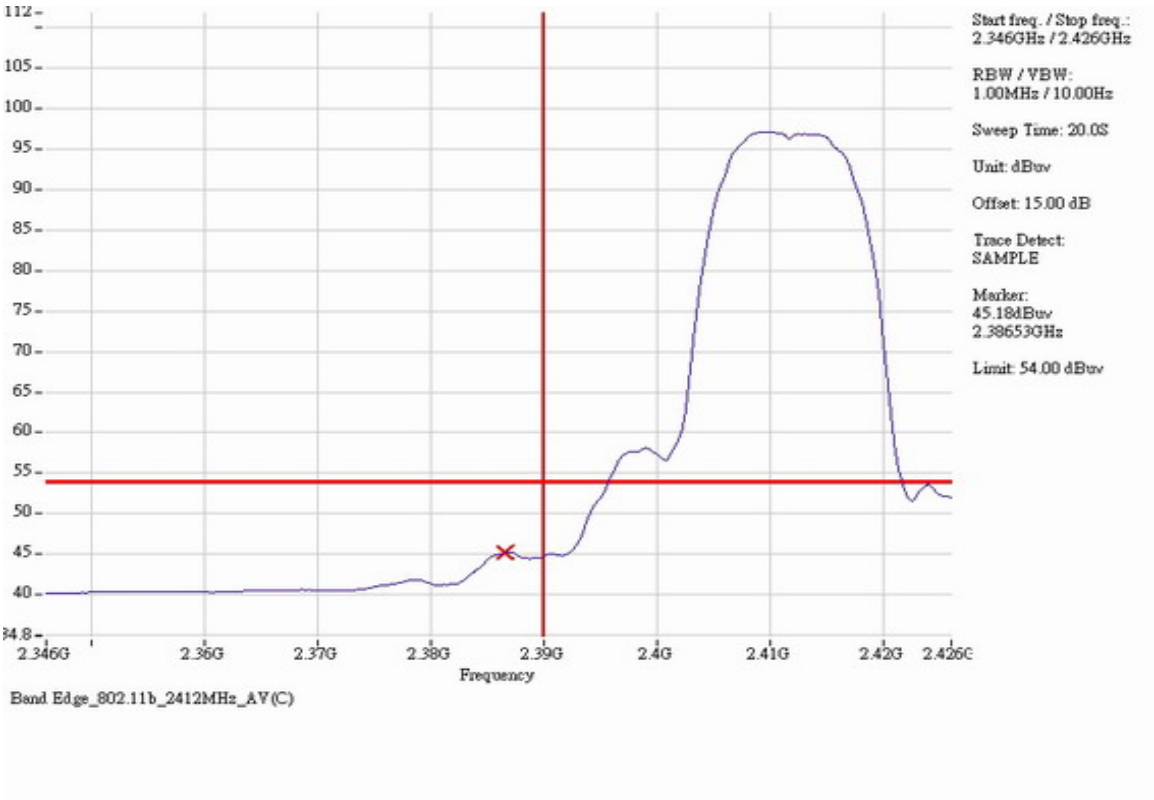
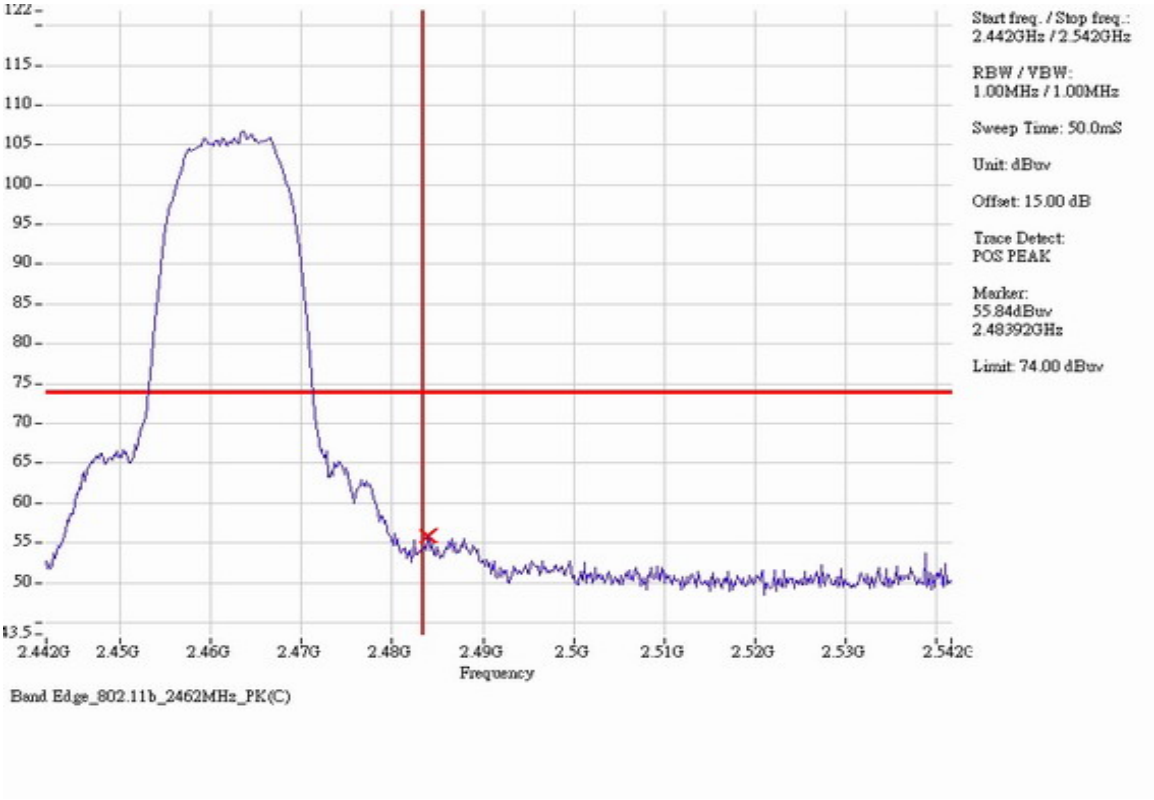
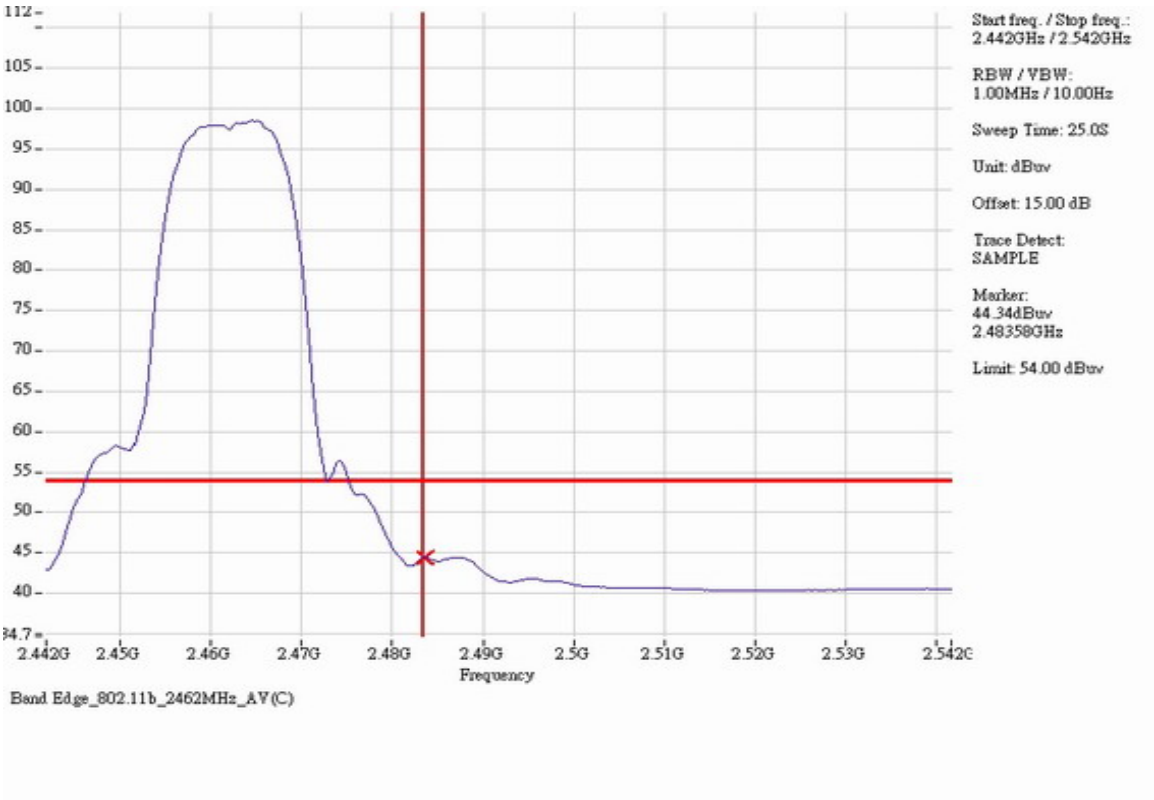


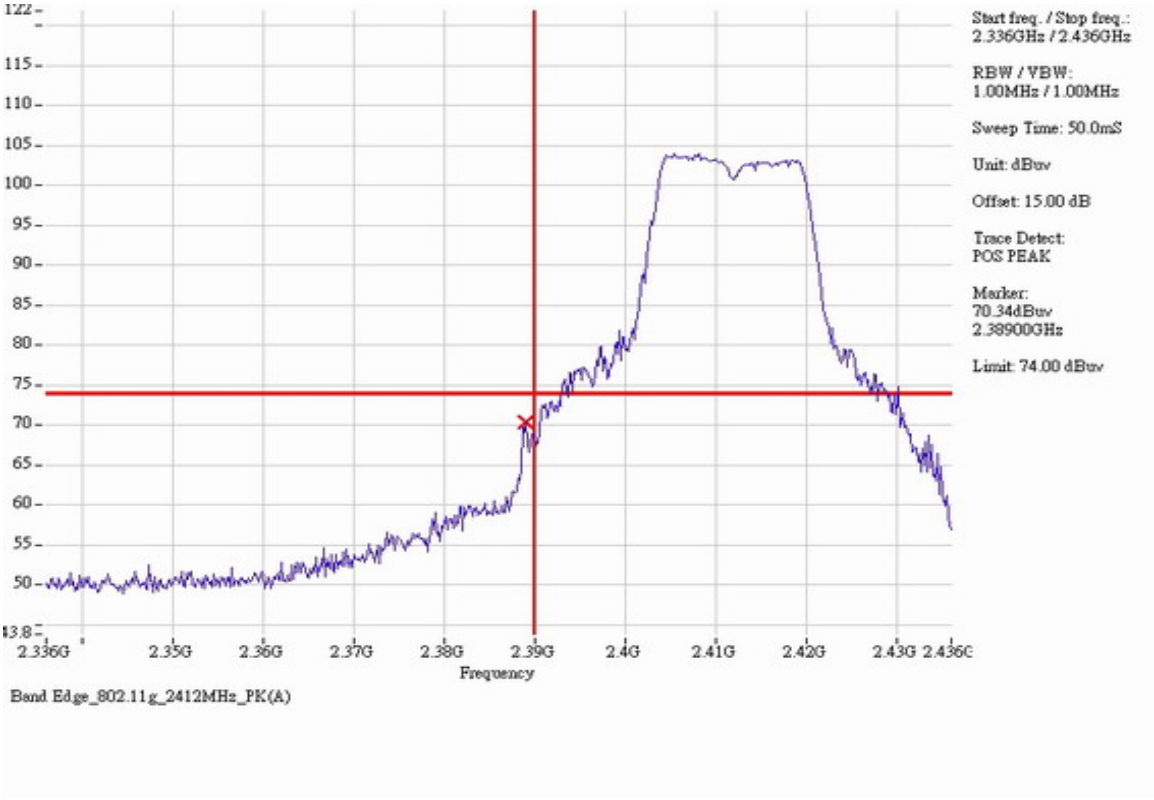
802.11b Chain C CH11 PK



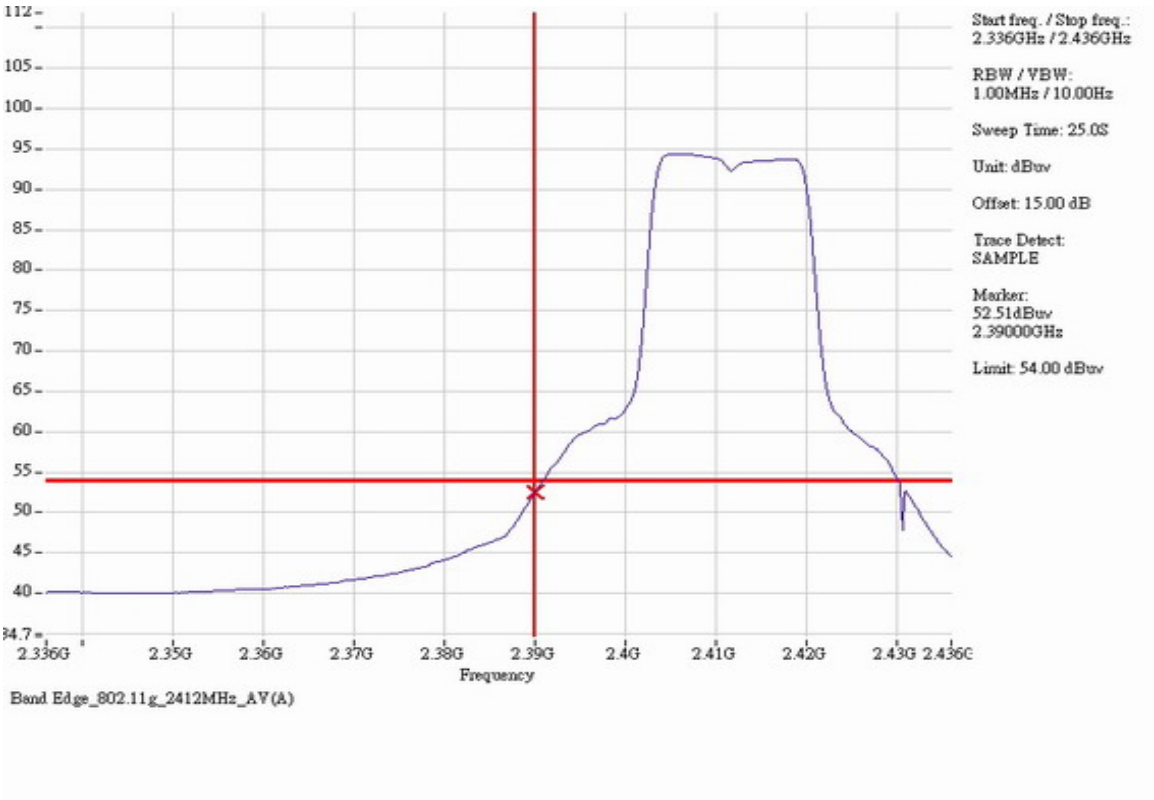
802.11b Chain C CH11 AV



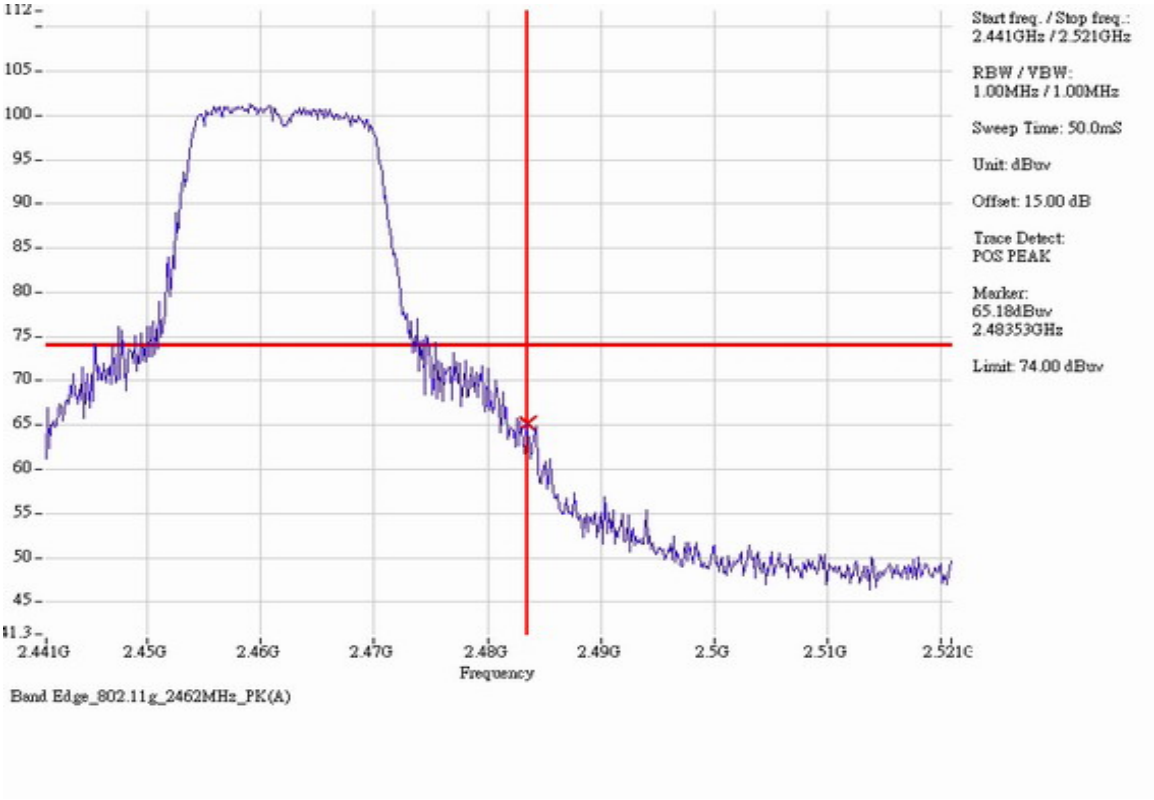
802.11g Chain A CH1 PK



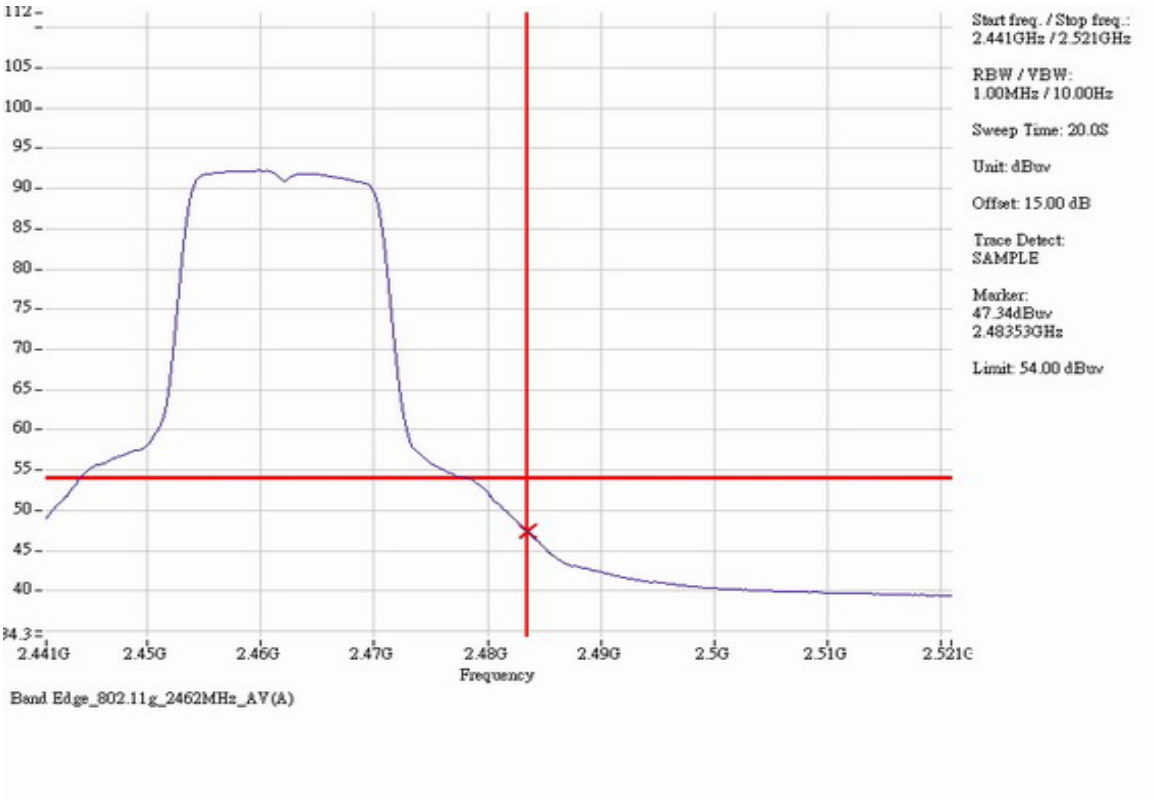
802.11g Chain A CH1 AV



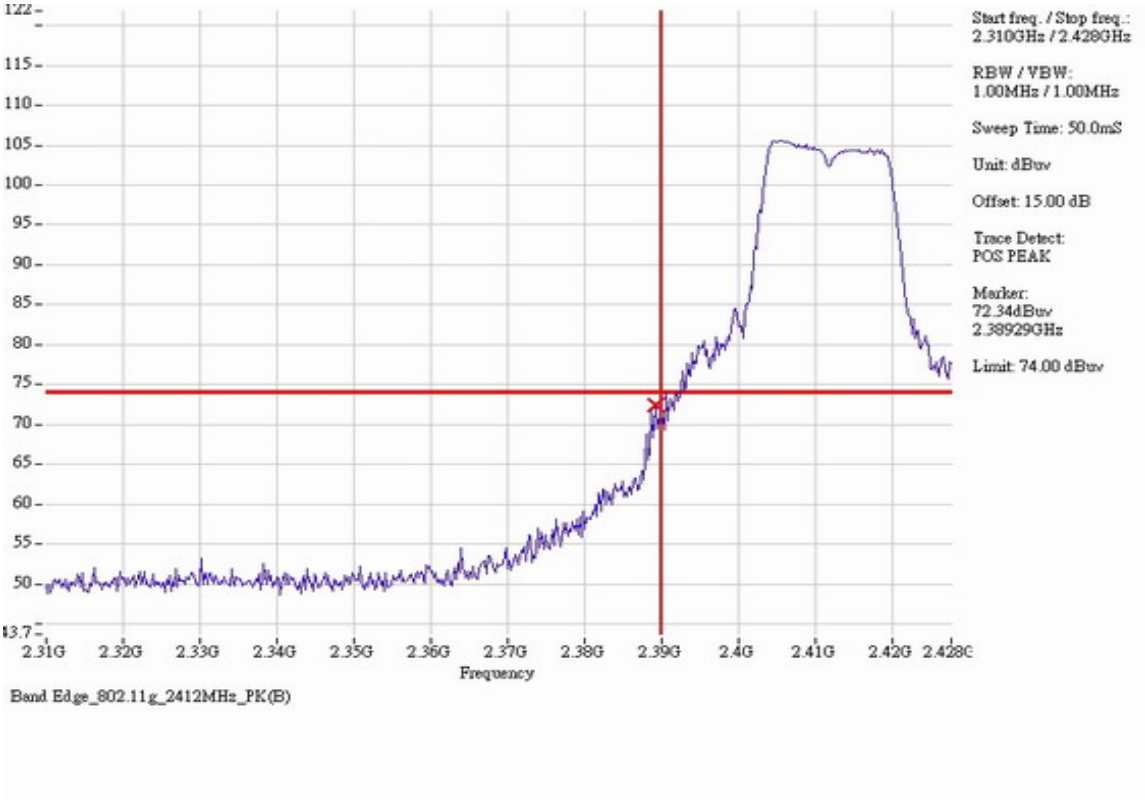
802.11g Chain A CH11 PK



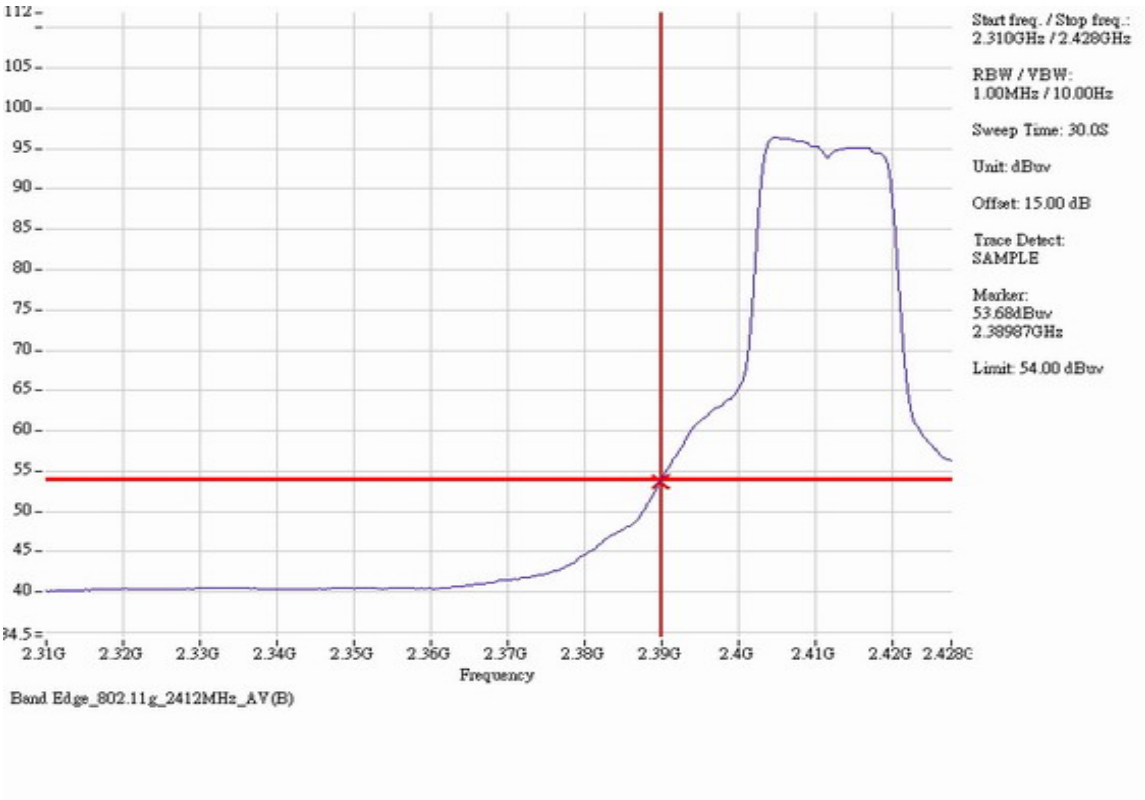
802.11g Chain A CH11 AV



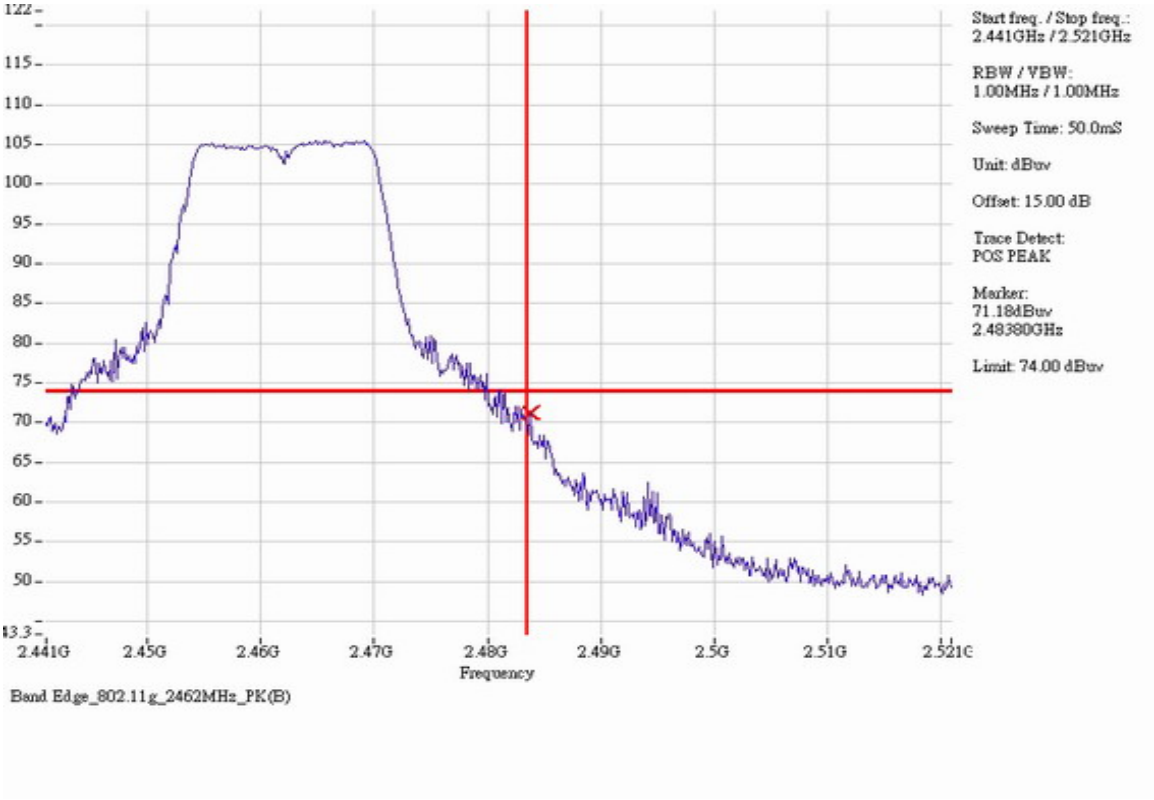
802.11g Chain B CH1 PK



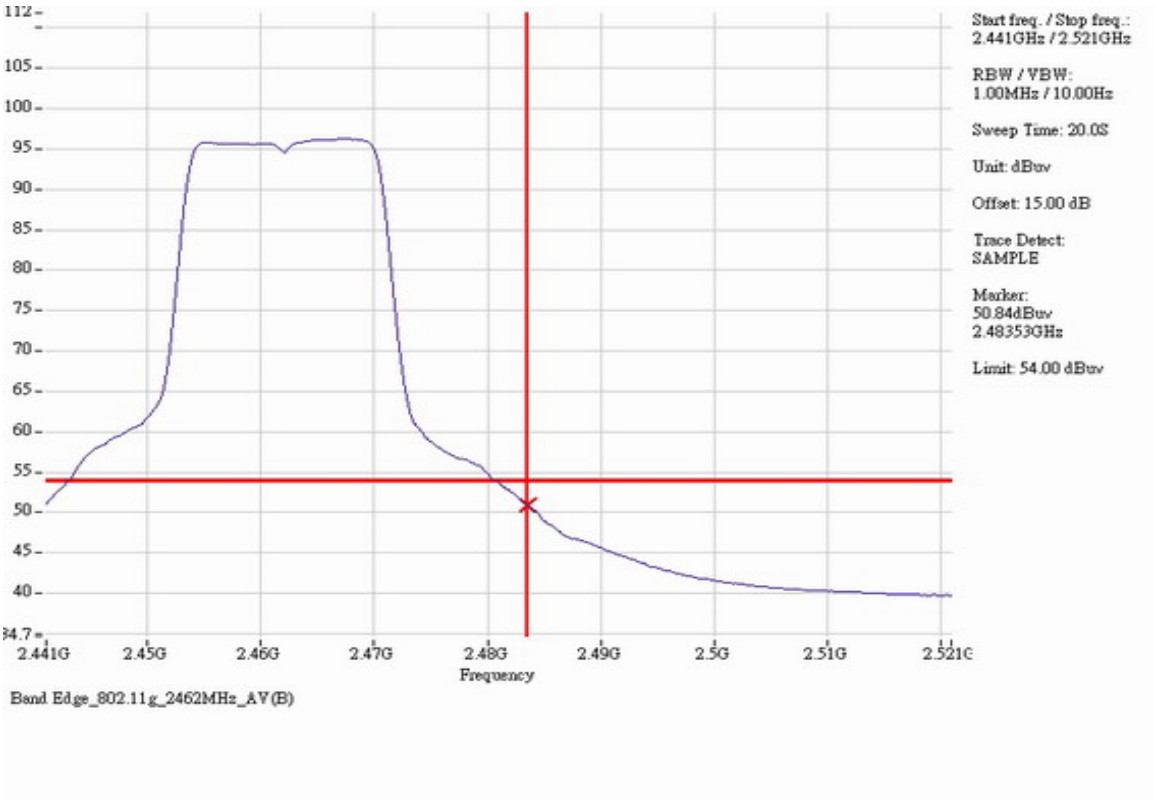
802.11g Chain B CH1 AV



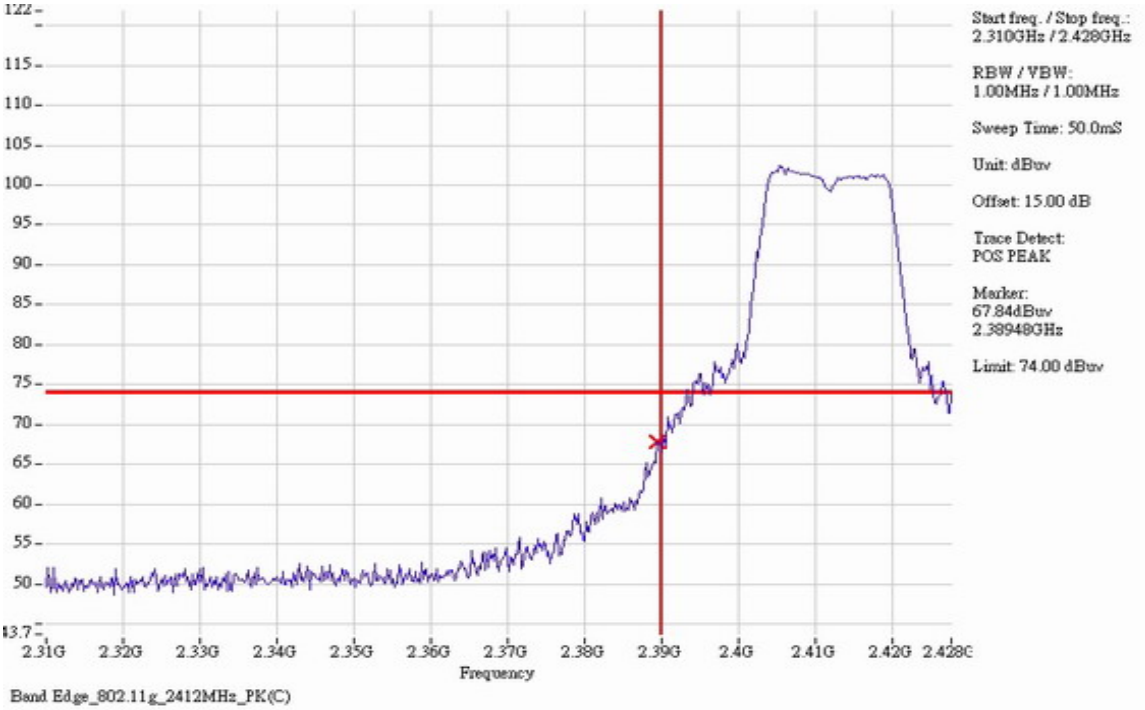
802.11g Chain B CH11 PK



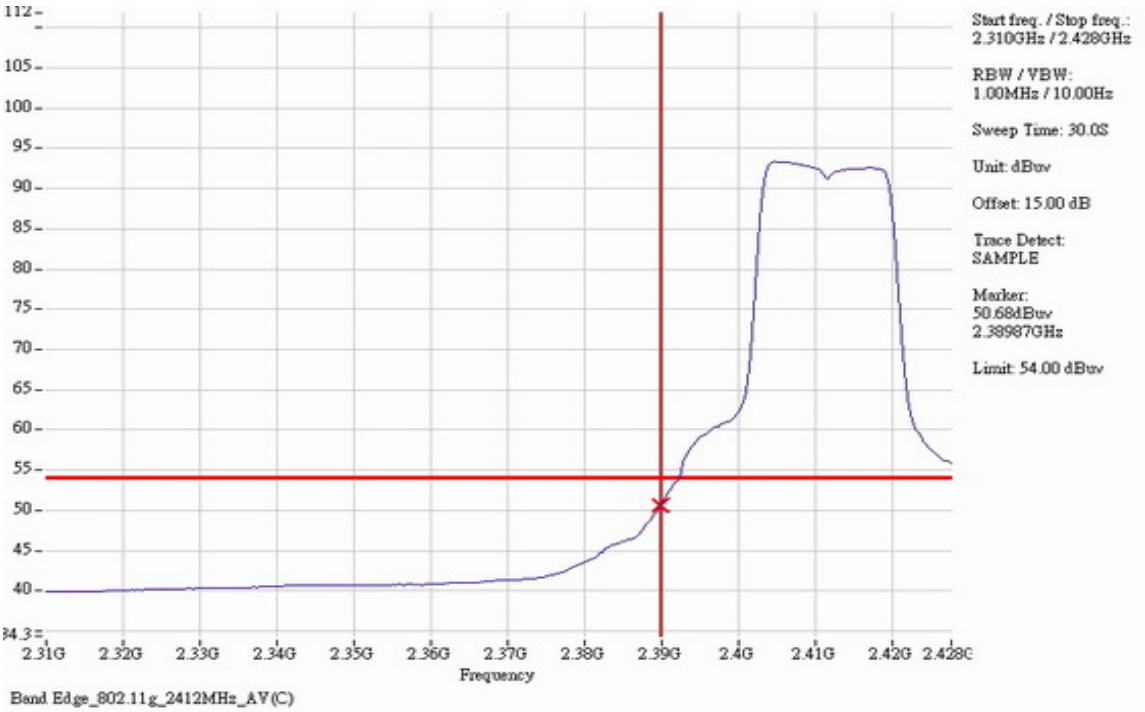
802.11g Chain B CH11 AV



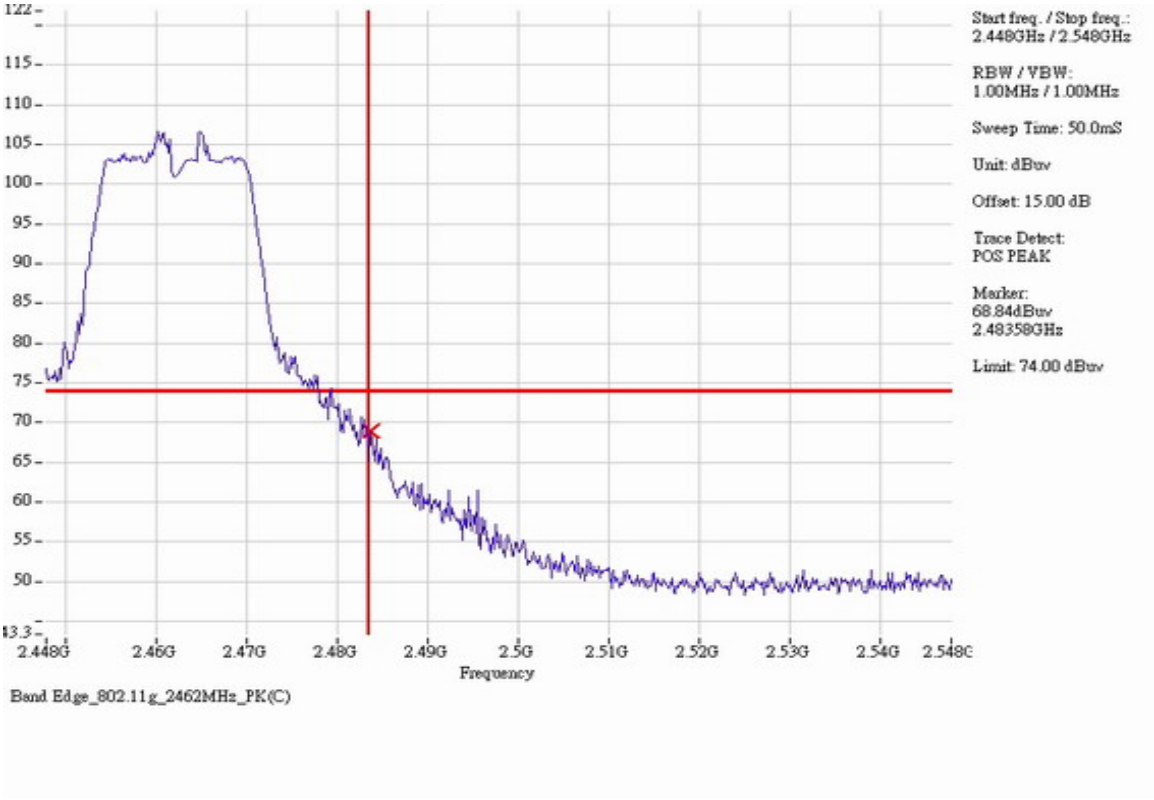
802.11g Chain C CH1 PK



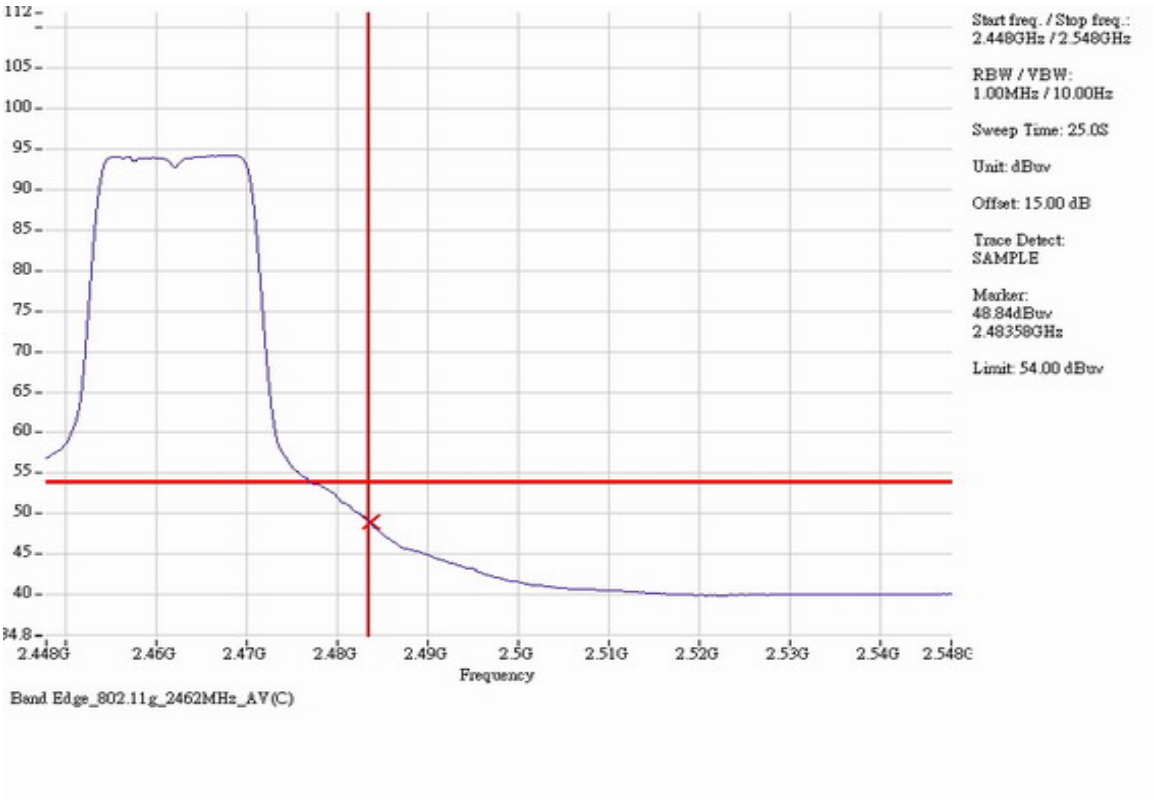
802.11g Chain C CH1 AV



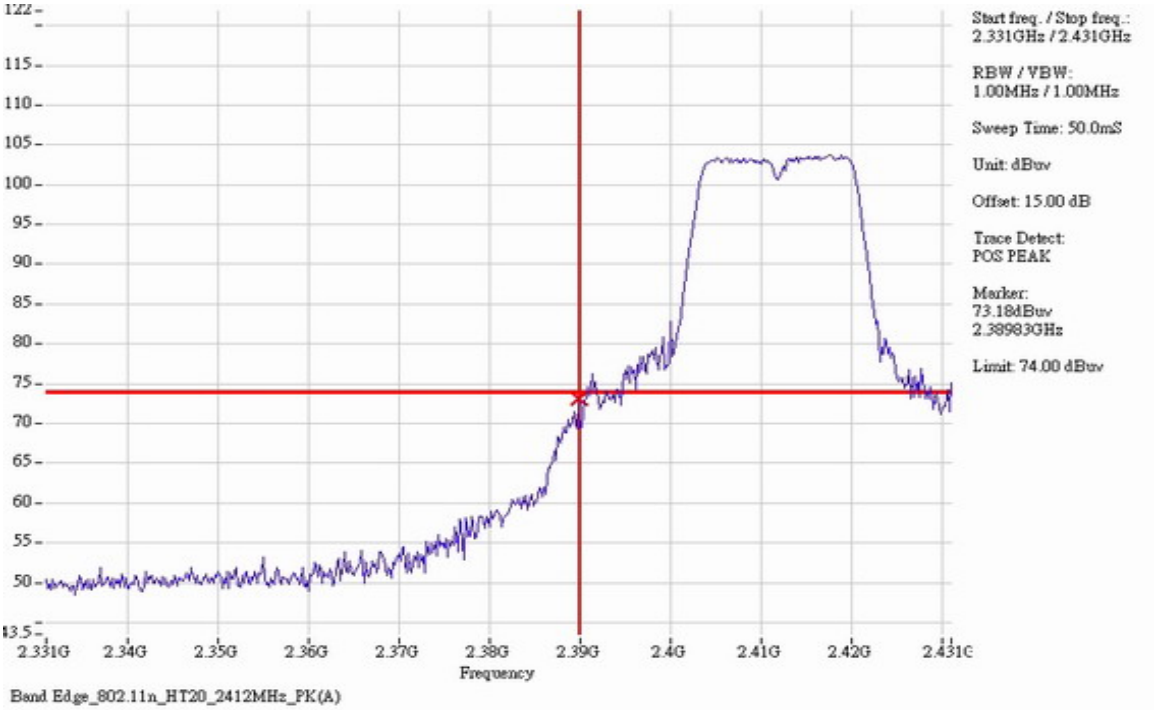
802.11g Chain C CH11 PK



802.11g Chain C CH11 AV

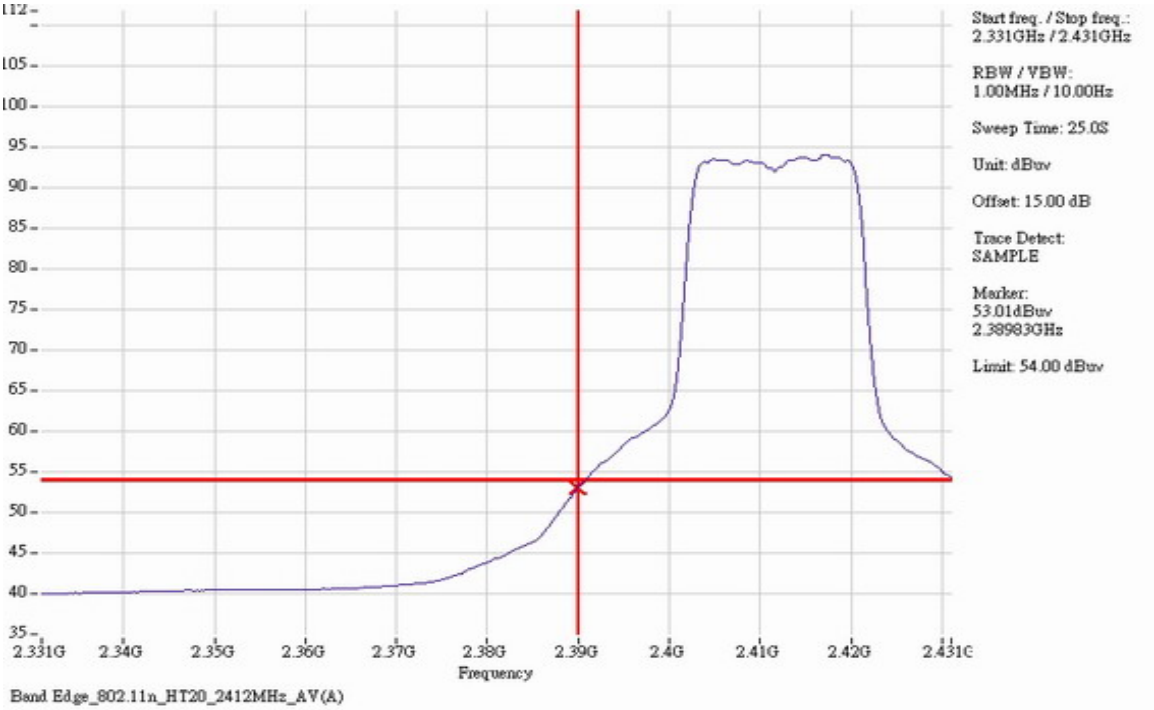


802.11n (HT20) Chain A CH1 PK



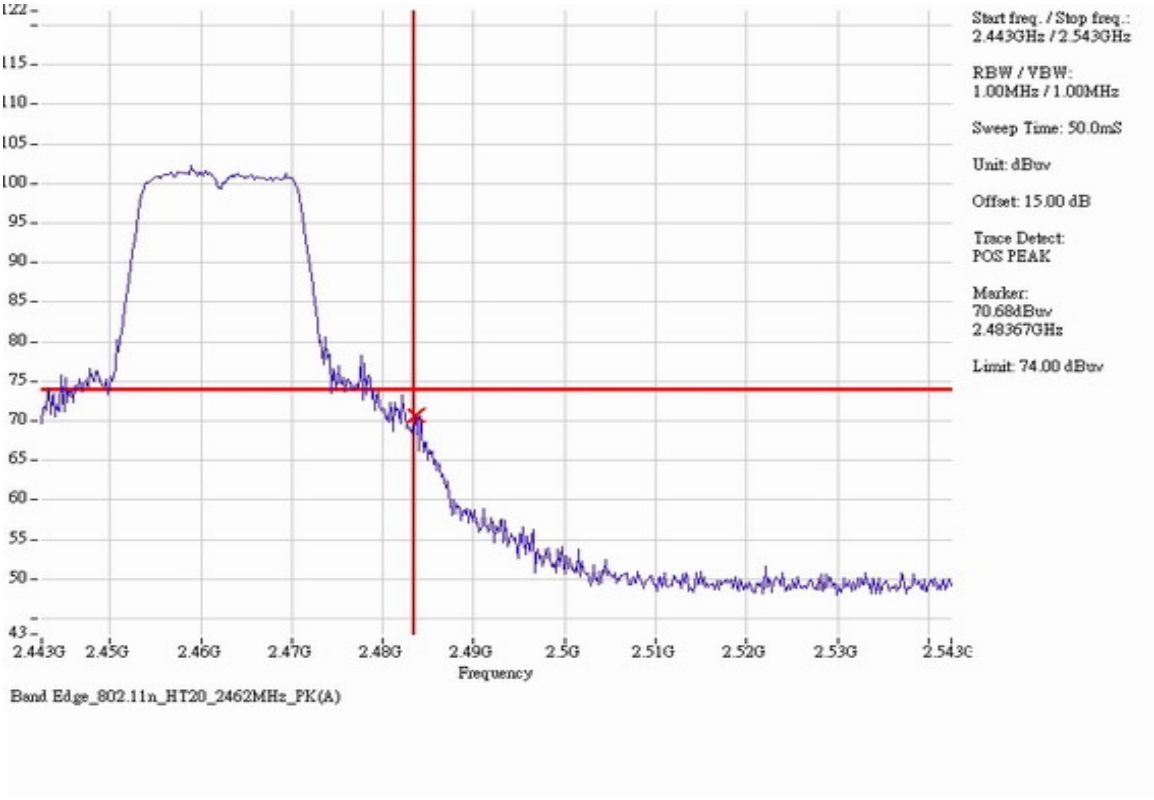
Band Edge_802.11n_HT20_2412MHz_PK(A)

802.11n (HT20) Chain A CH1 AV

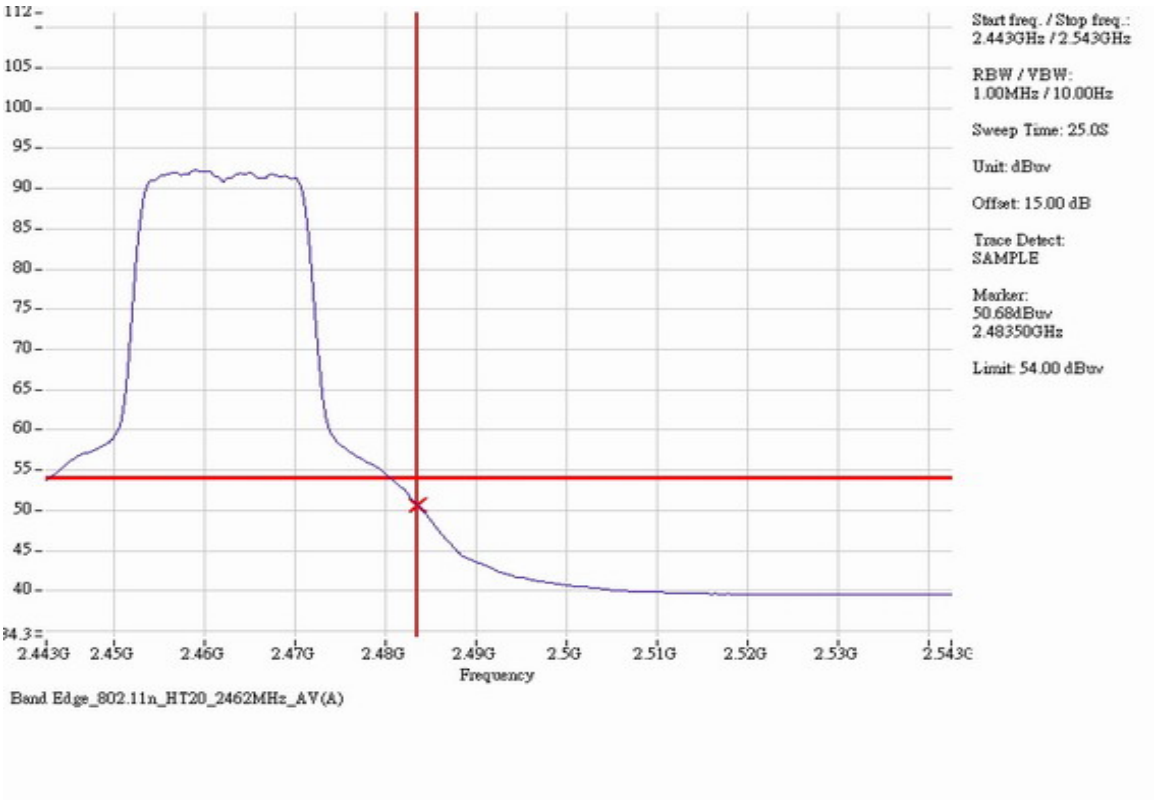


Band Edge_802.11n_HT20_2412MHz_AV(A)

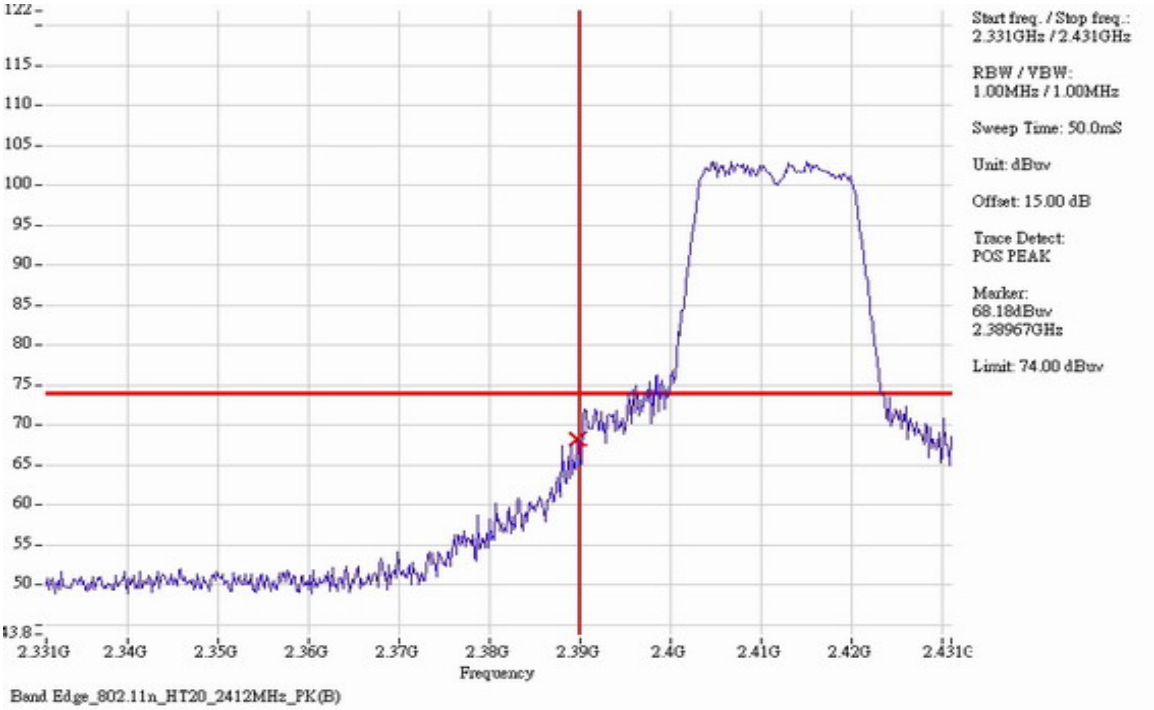
802.11n (HT20) Chain A CH11 PK



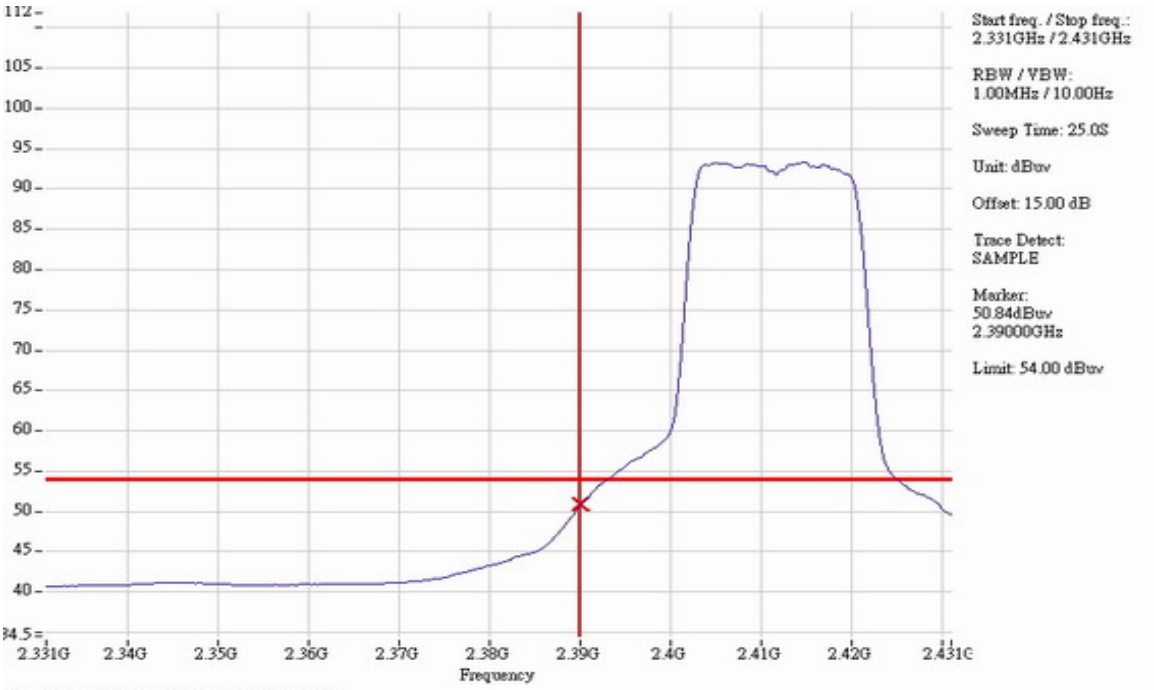
802.11n (HT20) Chain A CH11 AV



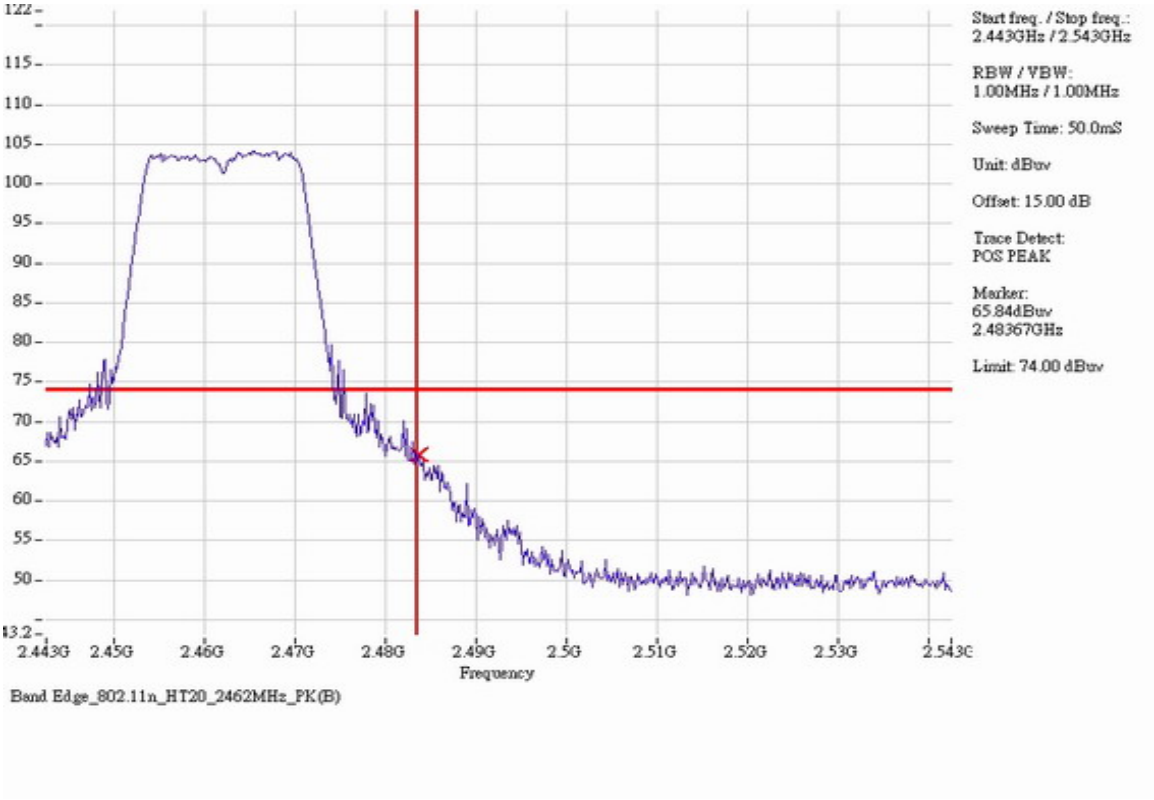
802.11n (HT20) Chain B CH1 PK



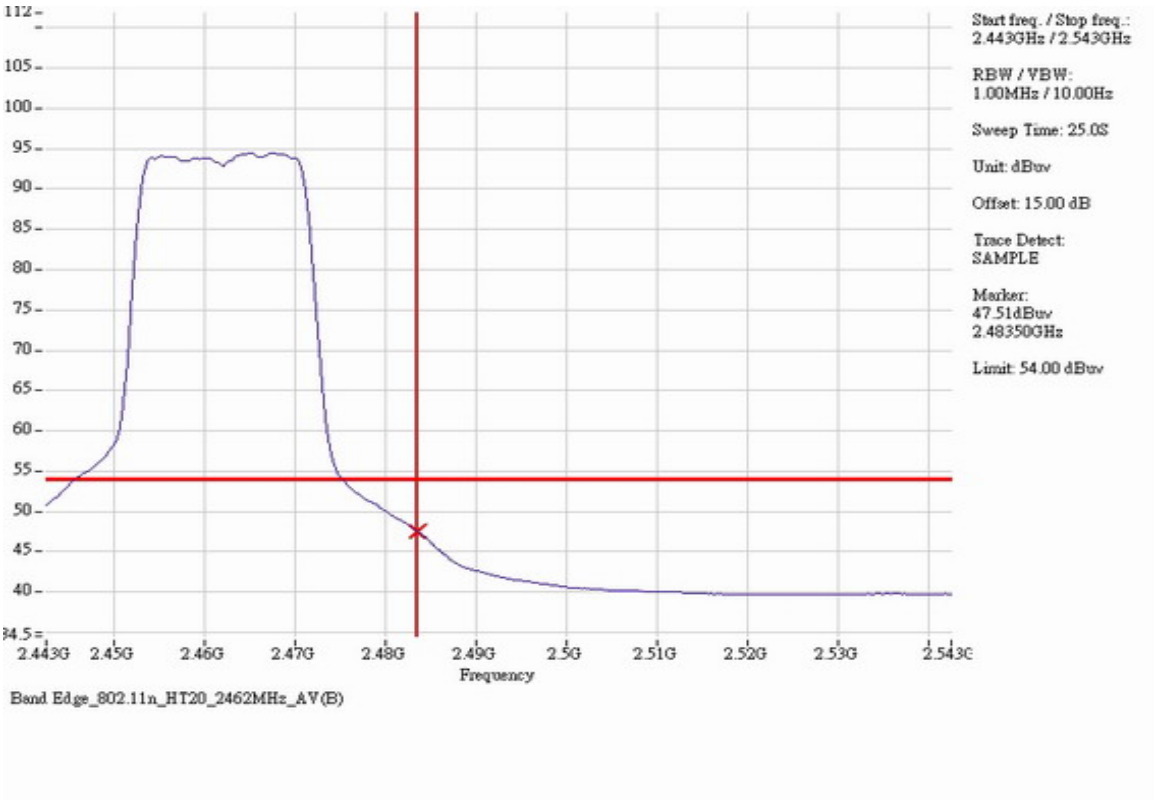
802.11n (HT20) Chain B CH1 AV



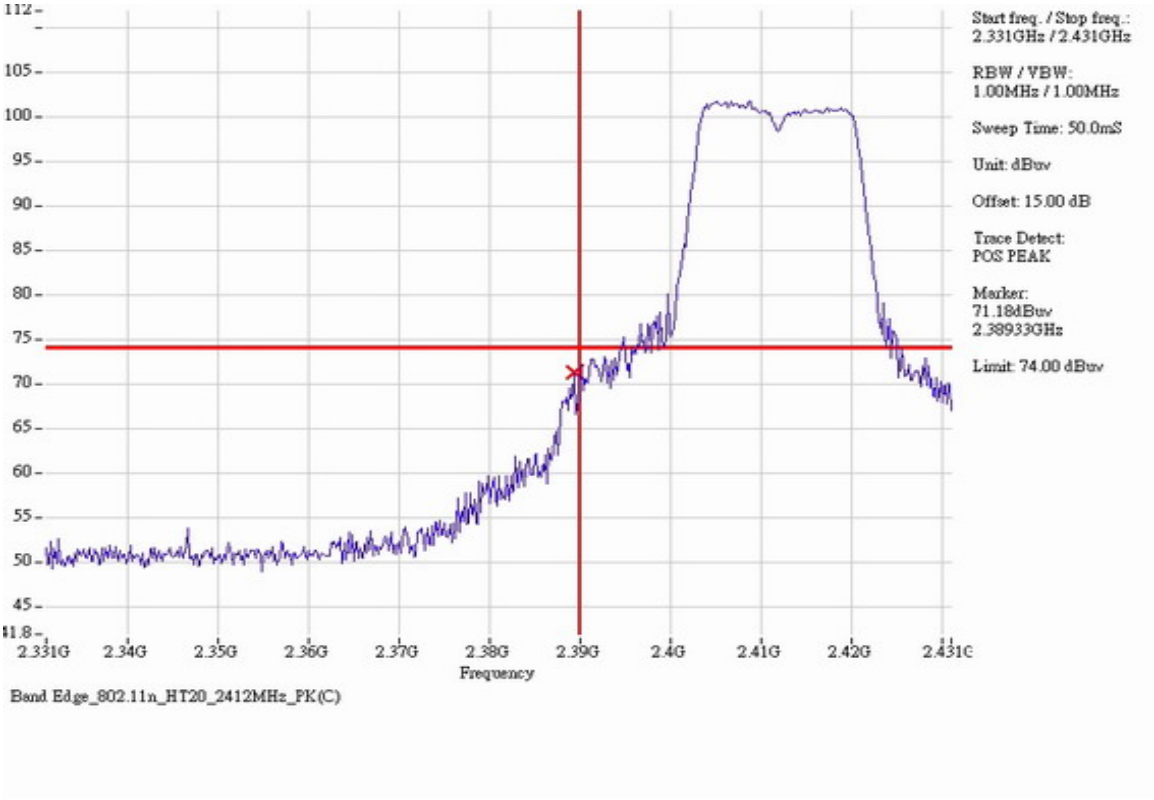
802.11n (HT20) Chain B CH11 PK



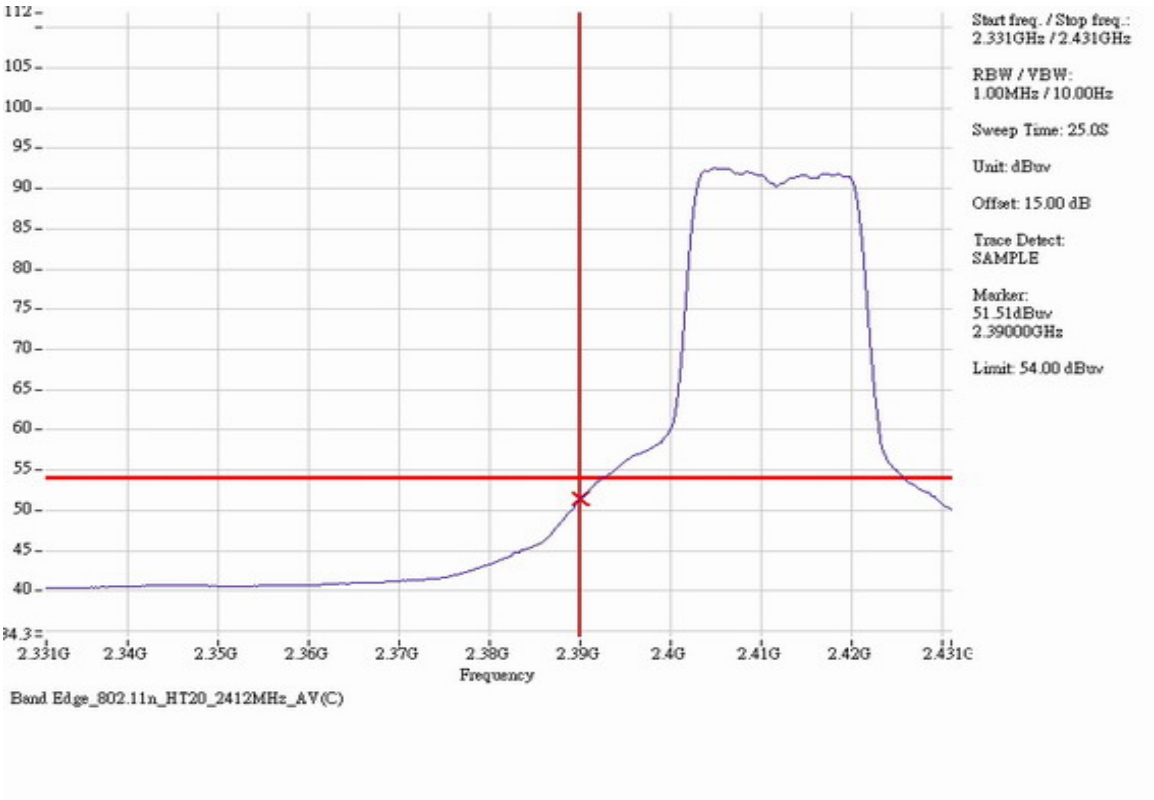
802.11n (HT20) Chain B CH11 AV



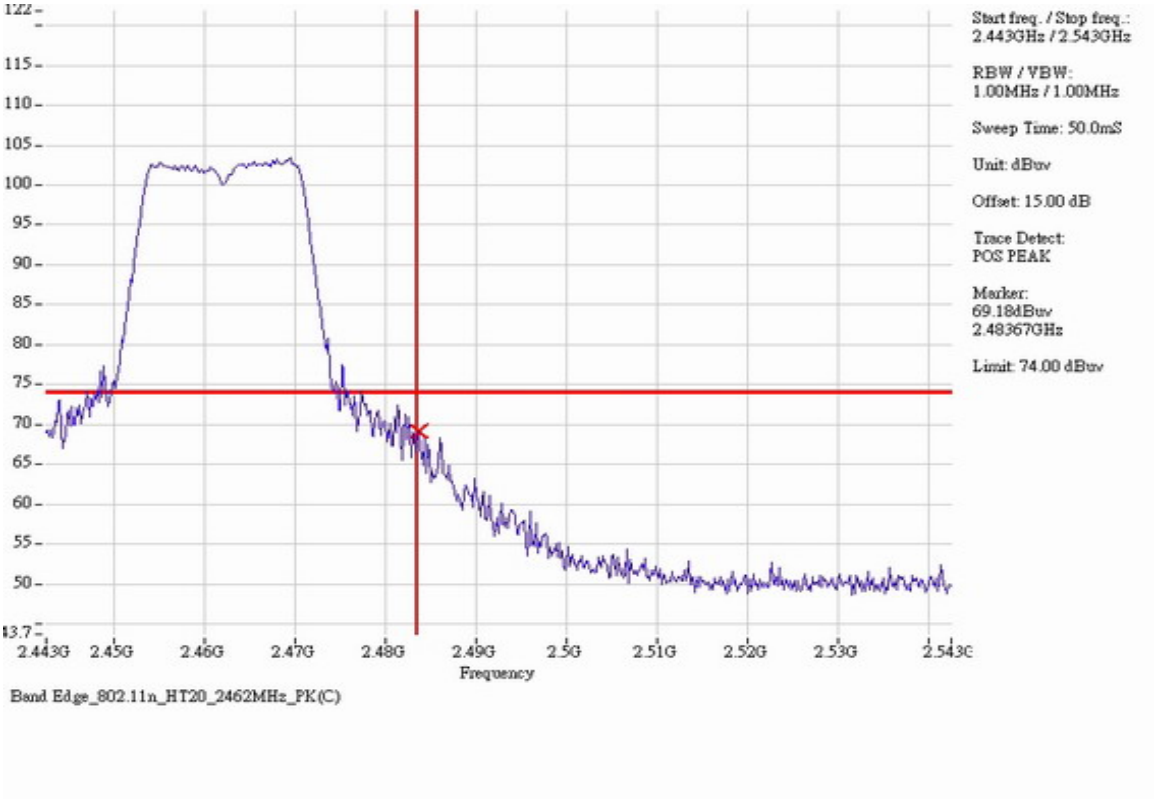
802.11n (HT20) Chain C CH1 PK



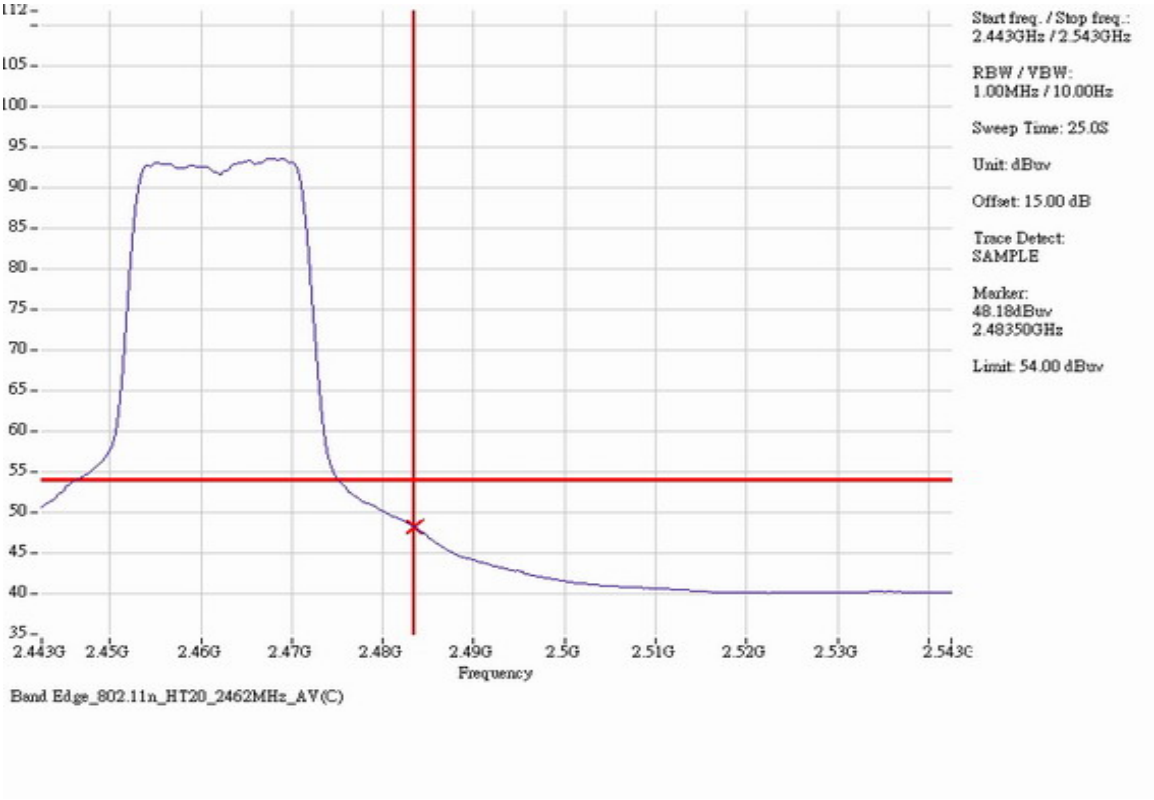
802.11n (HT20) Chain C CH1 AV



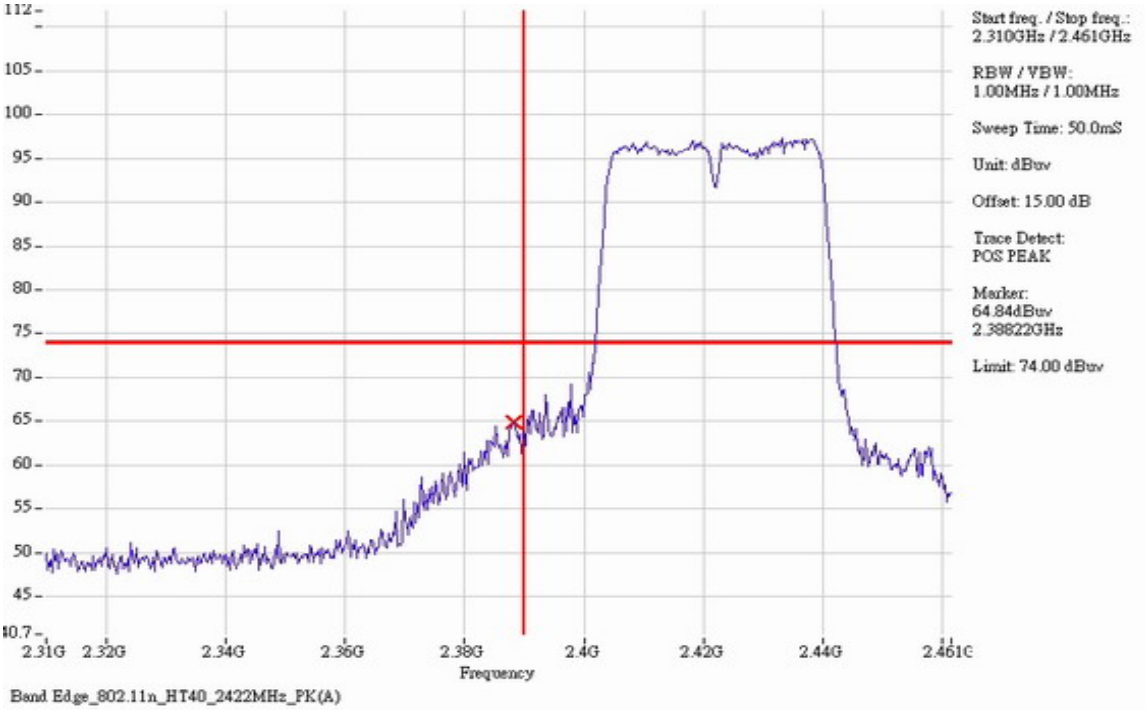
802.11n (HT20) Chain C CH11 PK



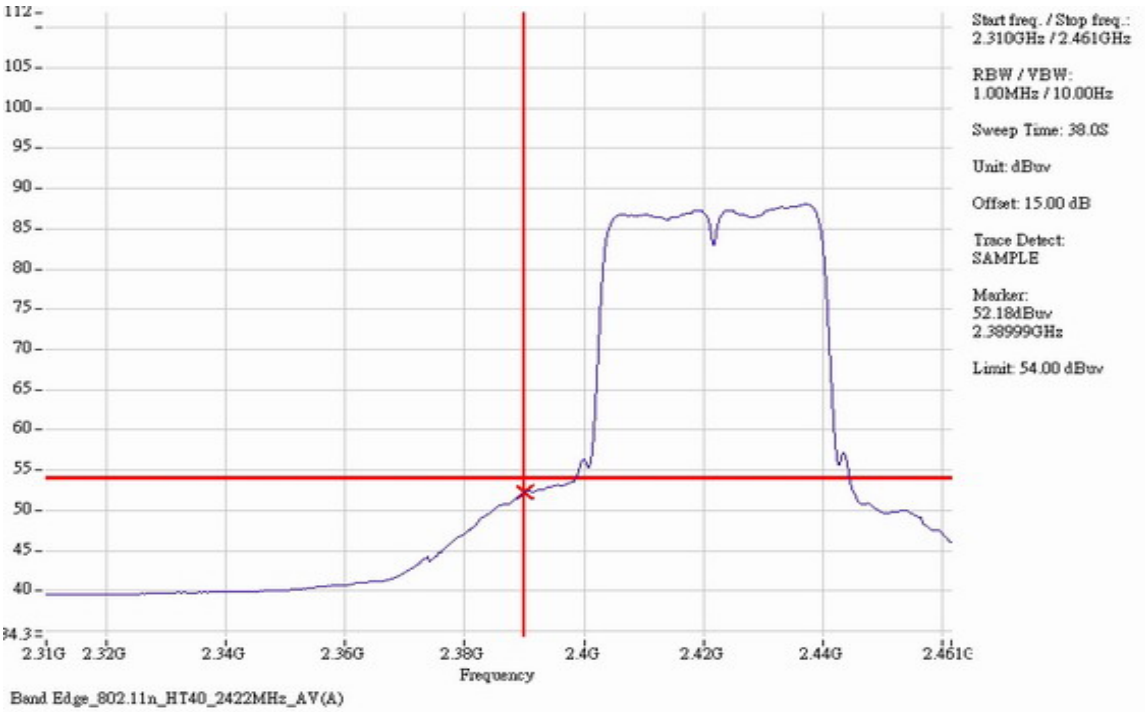
802.11n (HT20) Chain C CH11 AV



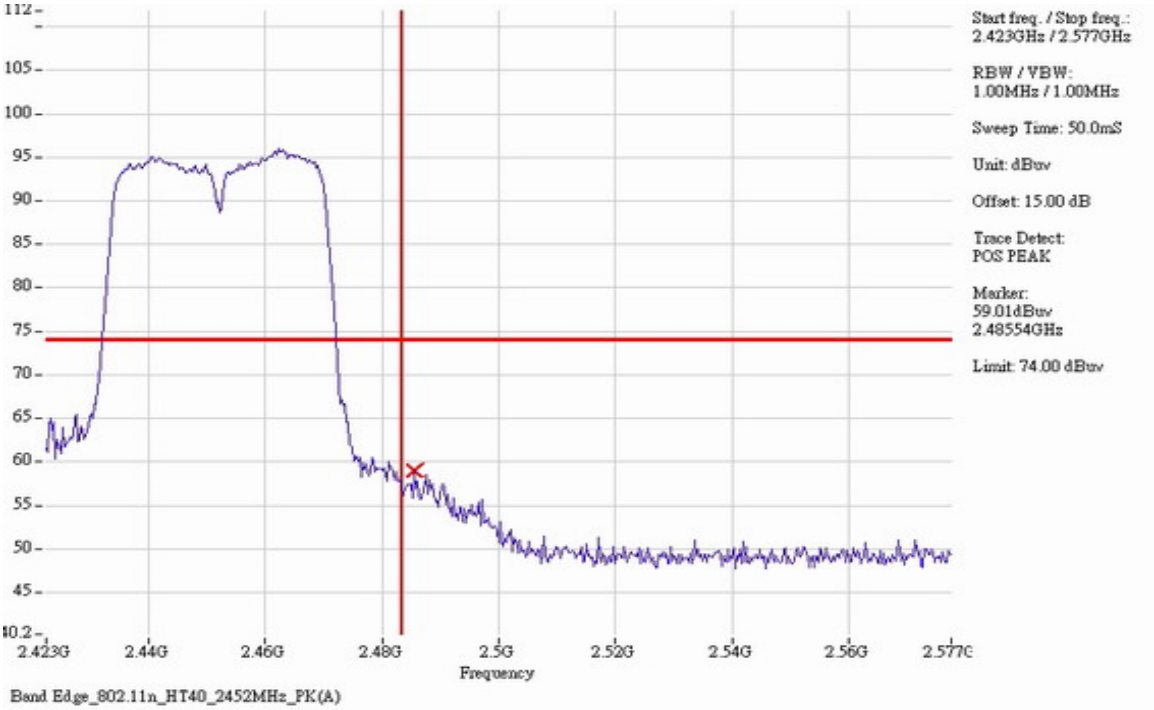
802.11n (HT40) Chain A CH3 PK



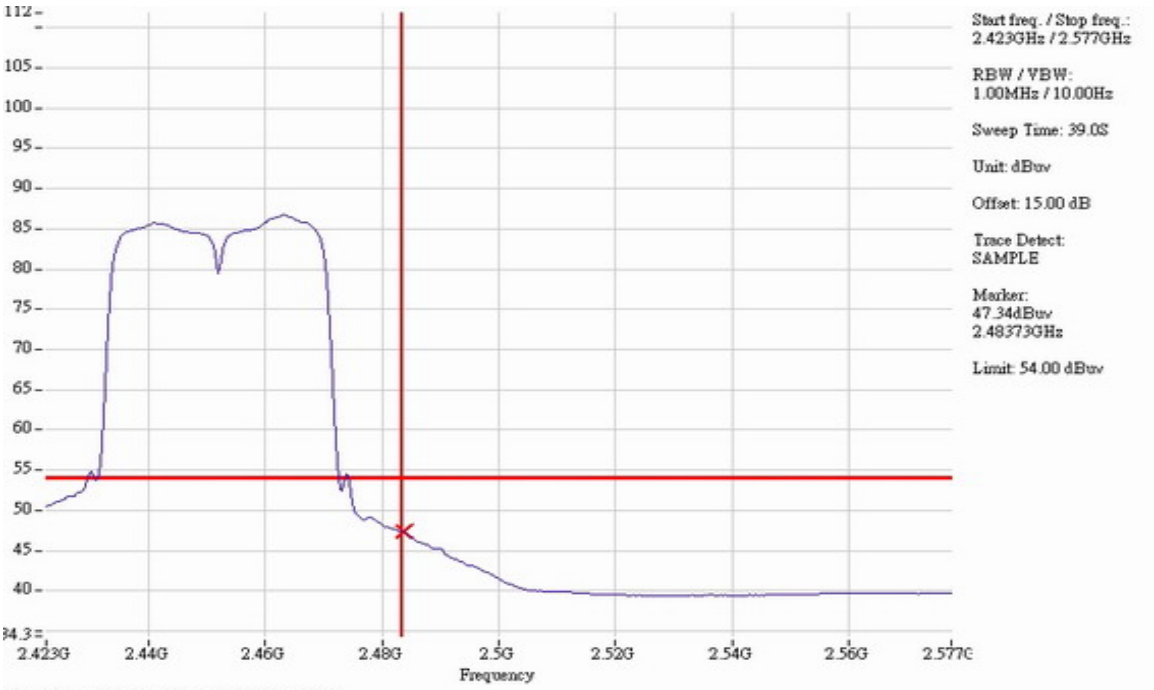
802.11n (HT40) Chain A CH3 AV



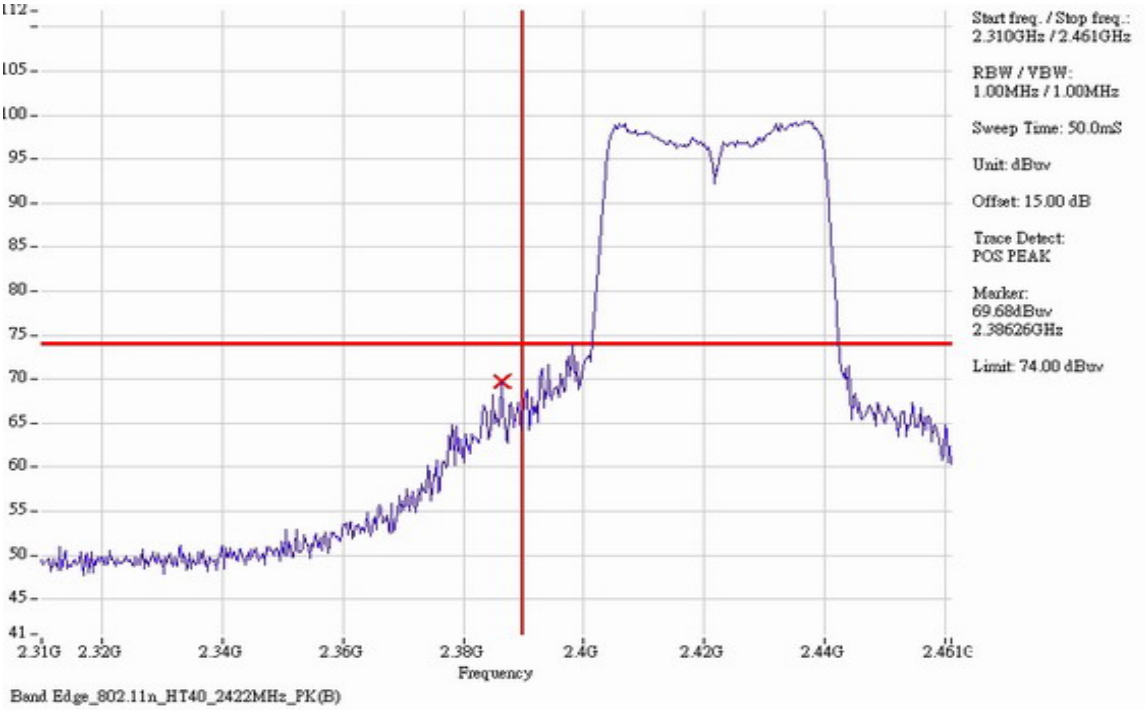
802.11n (HT40) Chain A CH9 PK



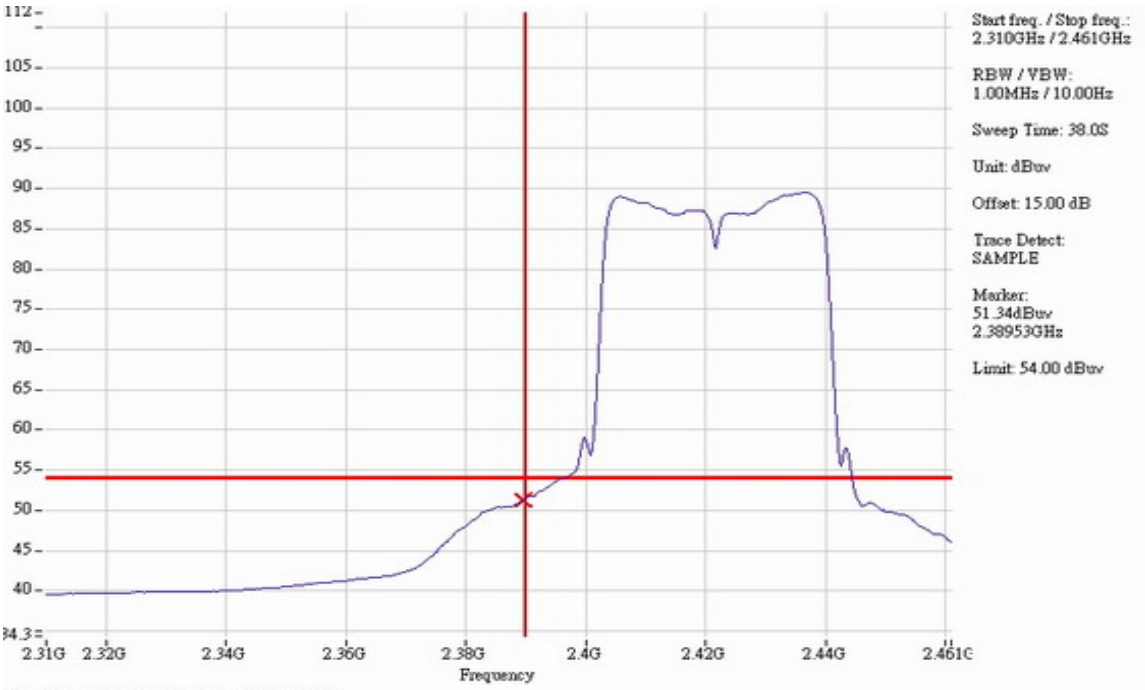
802.11n (HT40) Chain A CH9 AV



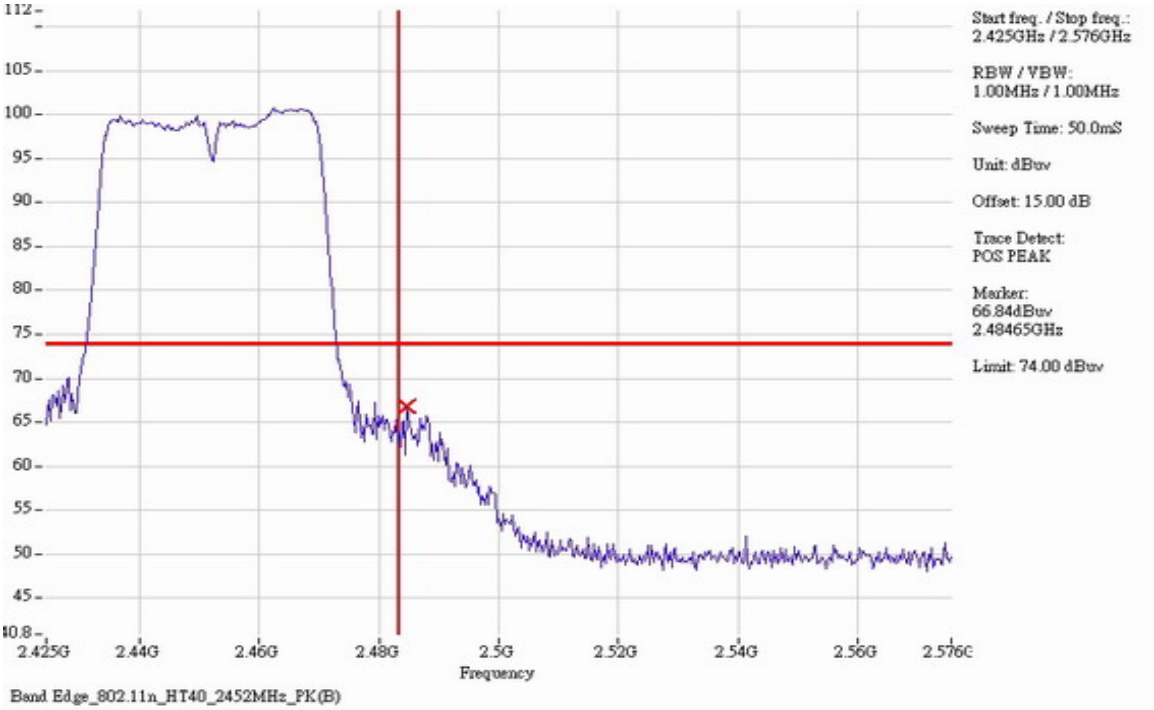
802.11n (HT40) Chain B CH3 PK



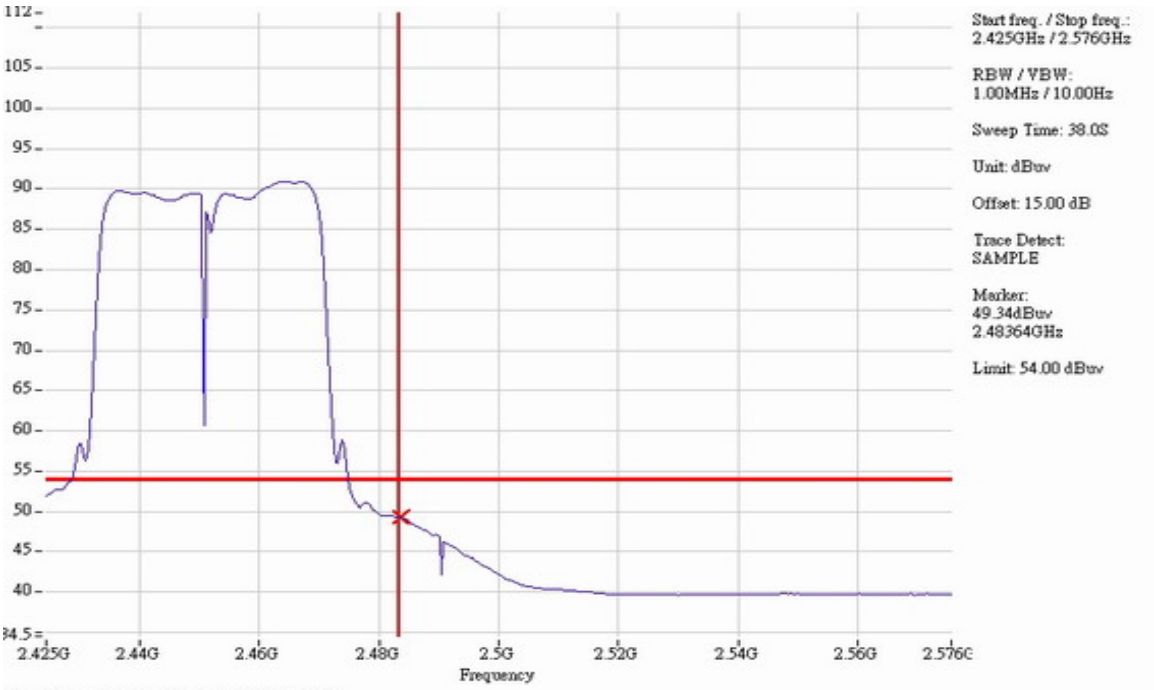
802.11n (HT40) Chain B CH3 AV



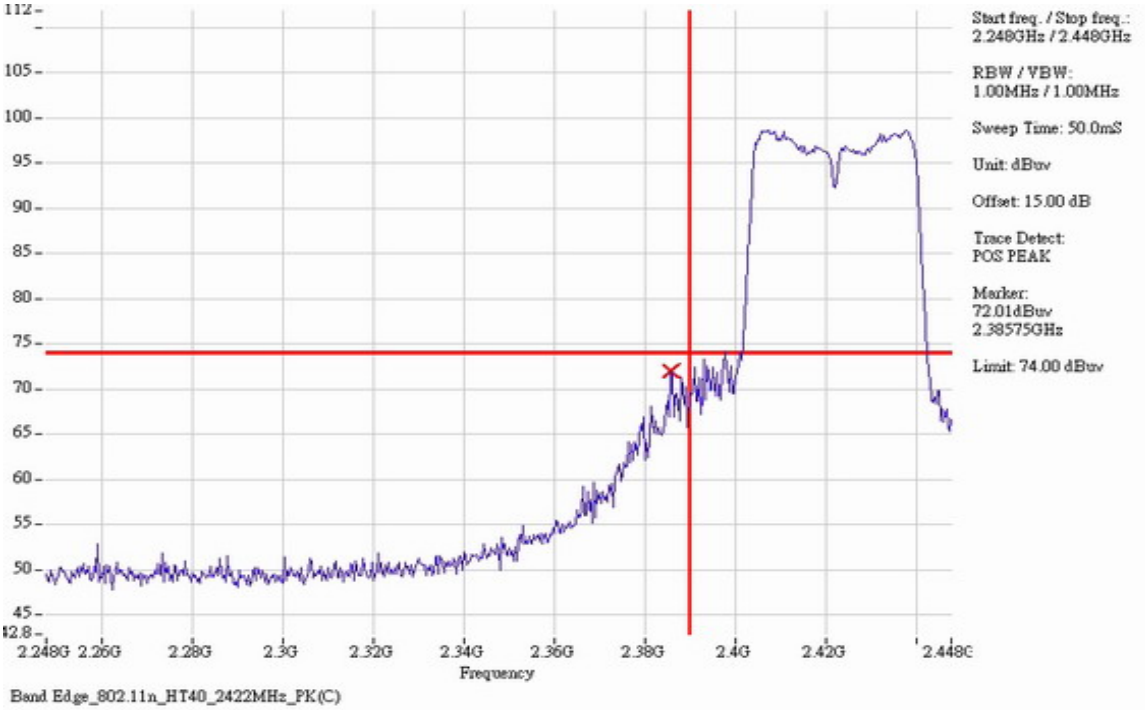
802.11n (HT40) Chain B CH9 PK



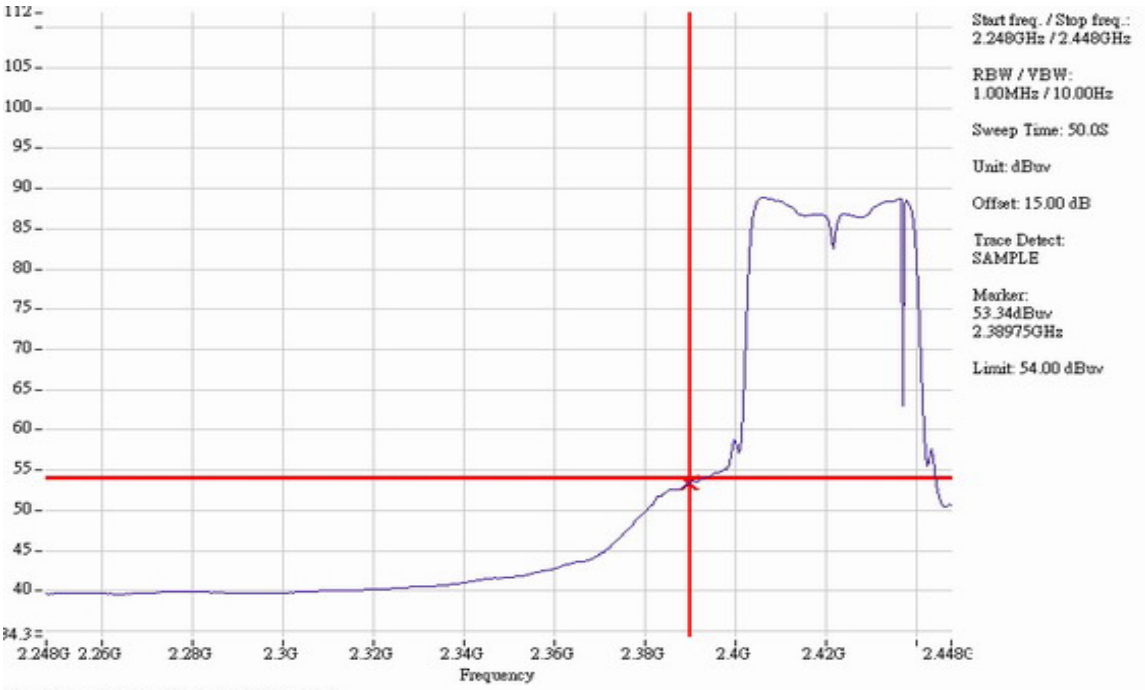
802.11n (HT40) Chain B CH9 AV



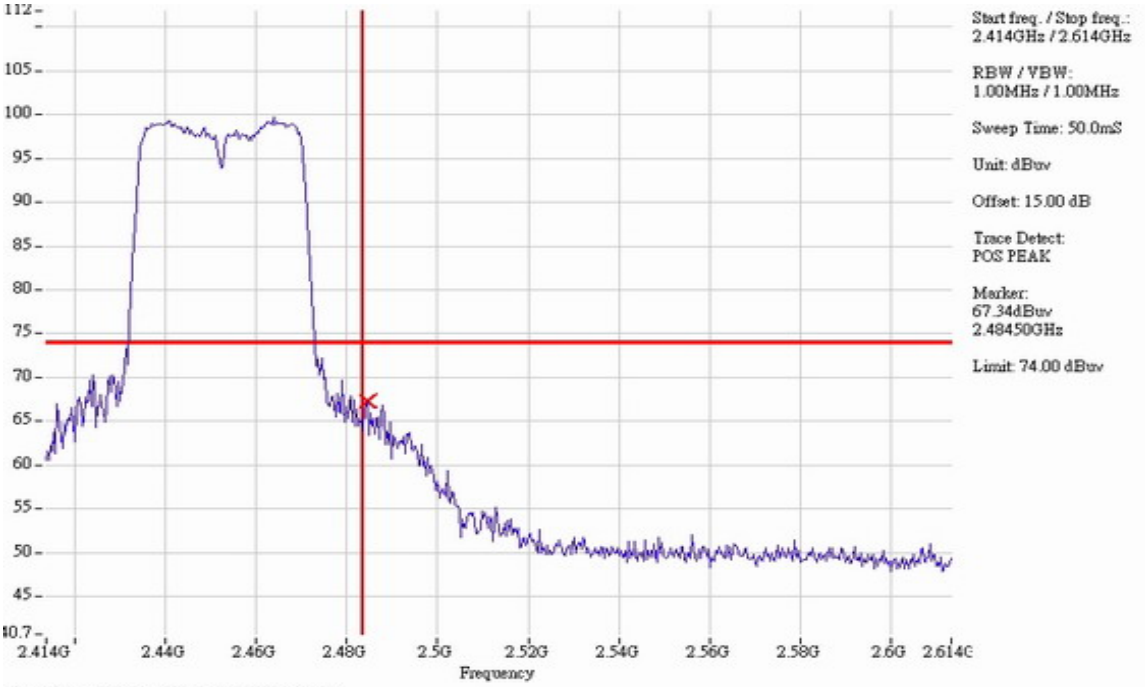
802.11n (HT40) Chain C CH3 PK



802.11n (HT40) Chain C CH3 AV

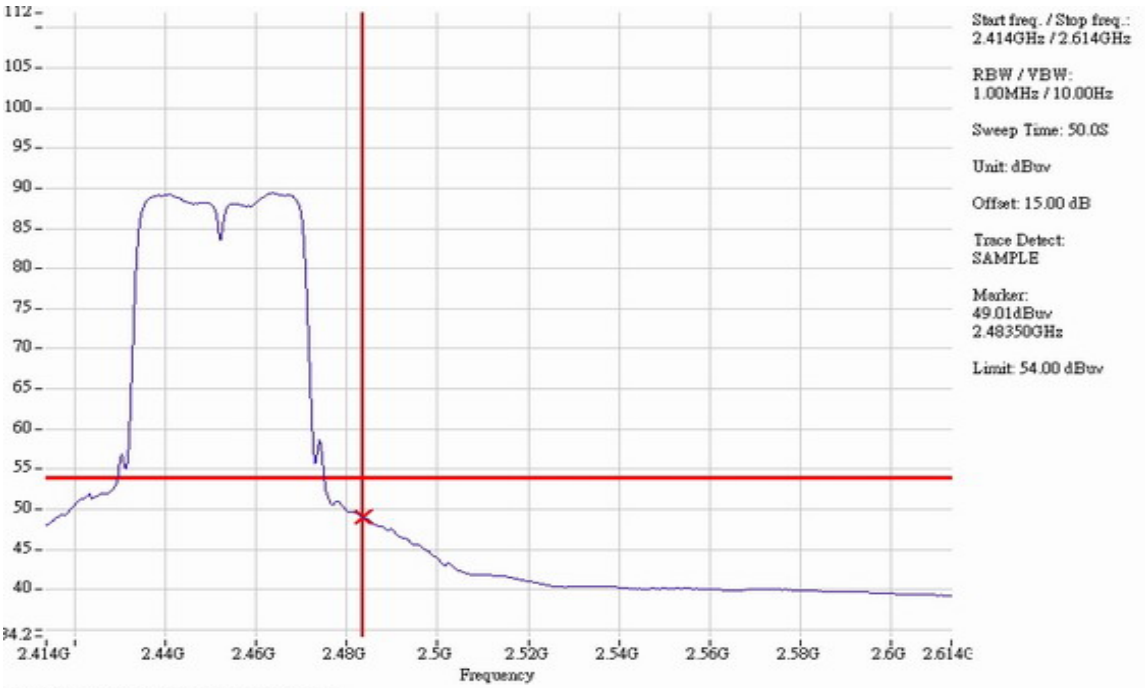


802.11n (HT40) Chain C CH9 PK



Band Edge_802.11n_HT40_2452MHz_PK(C)

802.11n (HT40) Chain C CH9 AV



Band Edge_802.11n_HT40_2452MHz_AV(C)