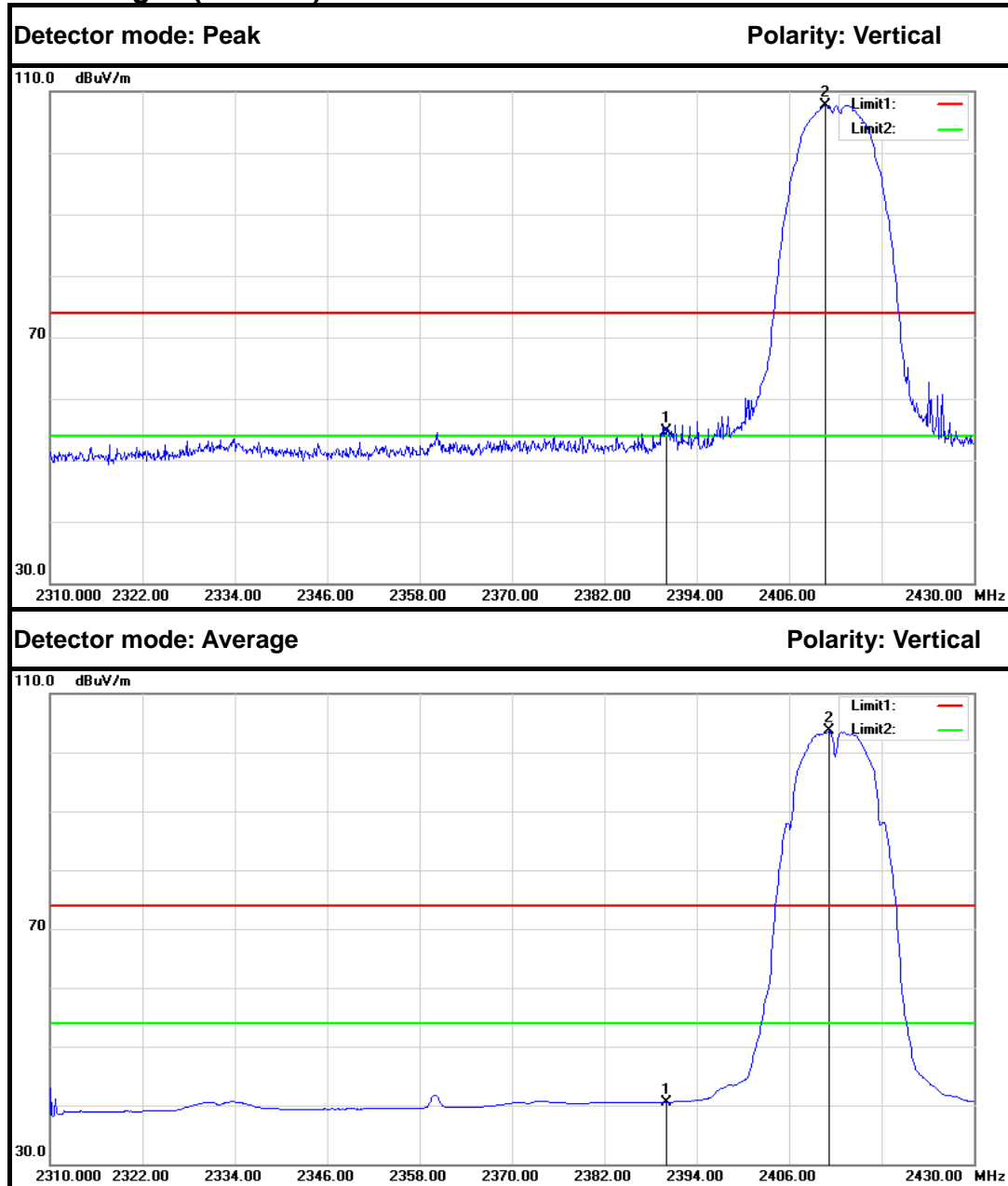


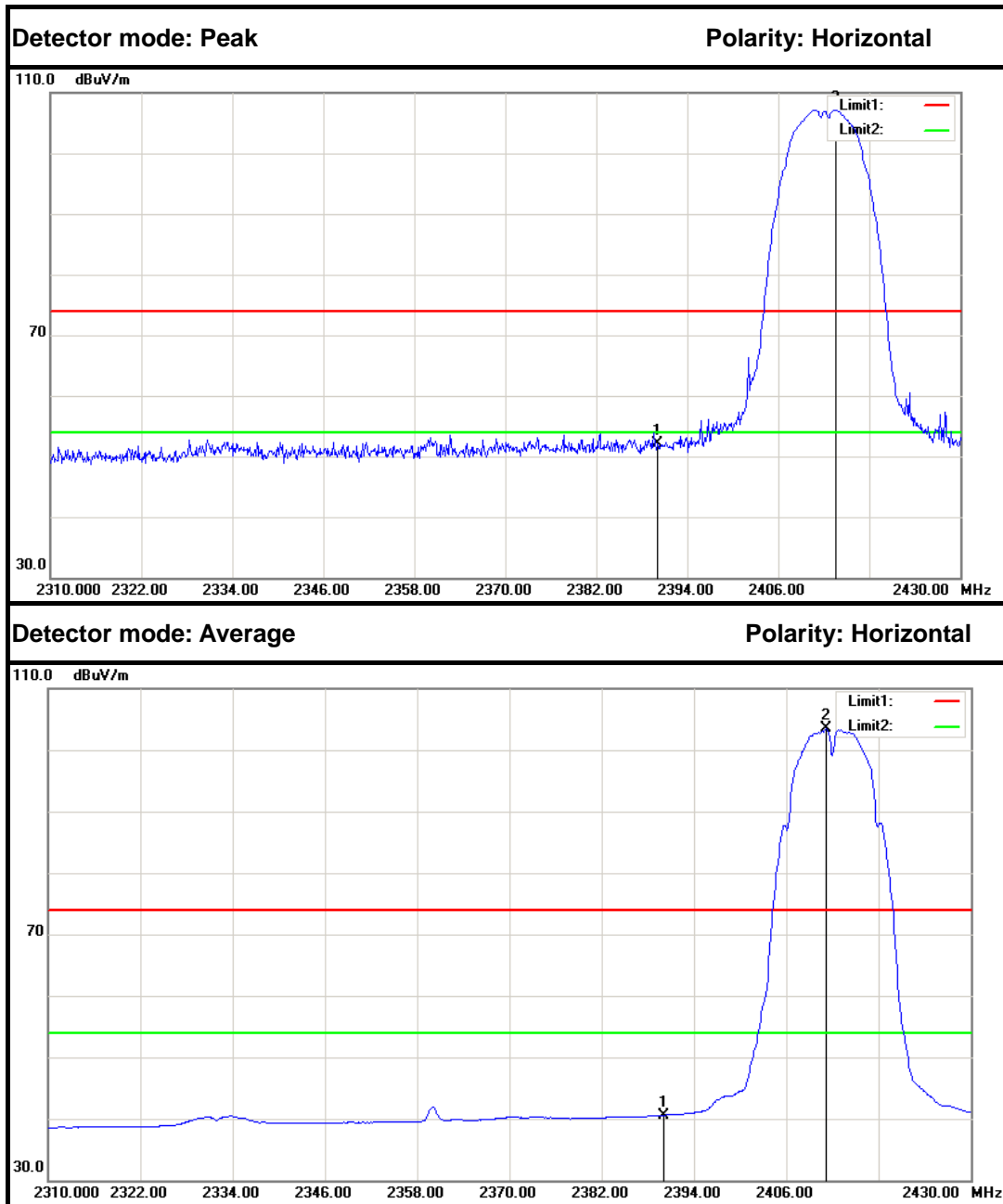
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2460.650	101.01	-2.48	98.53	---	---	Peak	Horizontal
2.	2483.500	51.59	-2.35	49.24	74.00	-24.76	Peak	Horizontal
1.	2461.250	97.43	-2.47	94.96	---	---	Average	Horizontal
2.	2483.500	41.37	-2.35	39.02	54.00	-14.98	Average	Horizontal



IEEE 802.11b mode (Antenna 1)  
Band Edges (CH Low)



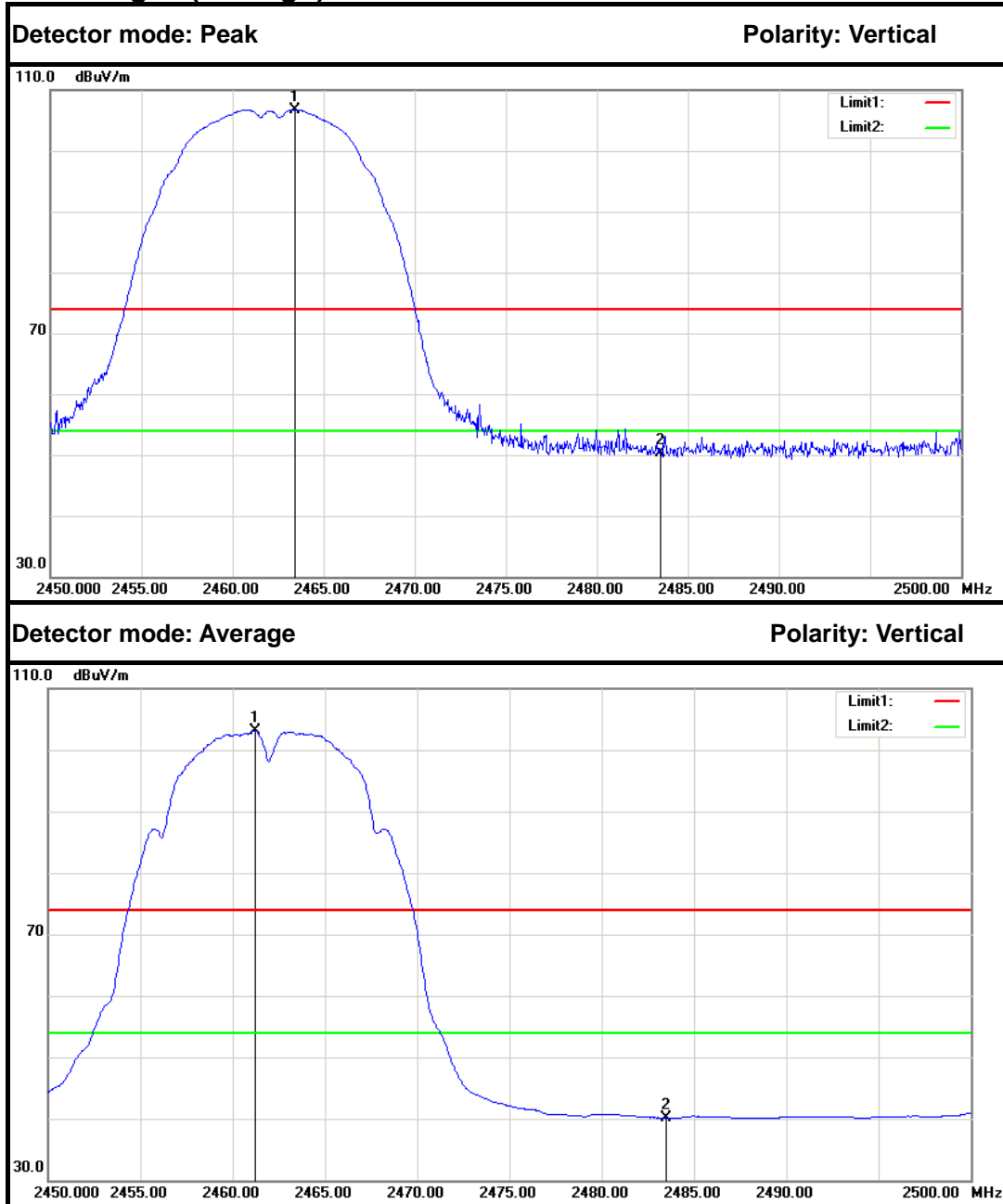
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	57.63	-2.86	54.77	74.00	-19.23	Peak	Vertical
2.	2410.680	110.48	-2.75	107.73	---	---	Peak	Vertical
1.	2390.000	43.41	-2.86	40.55	54.00	-13.45	Average	Vertical
2.	2411.160	106.47	-2.75	103.72	---	---	Average	Vertical



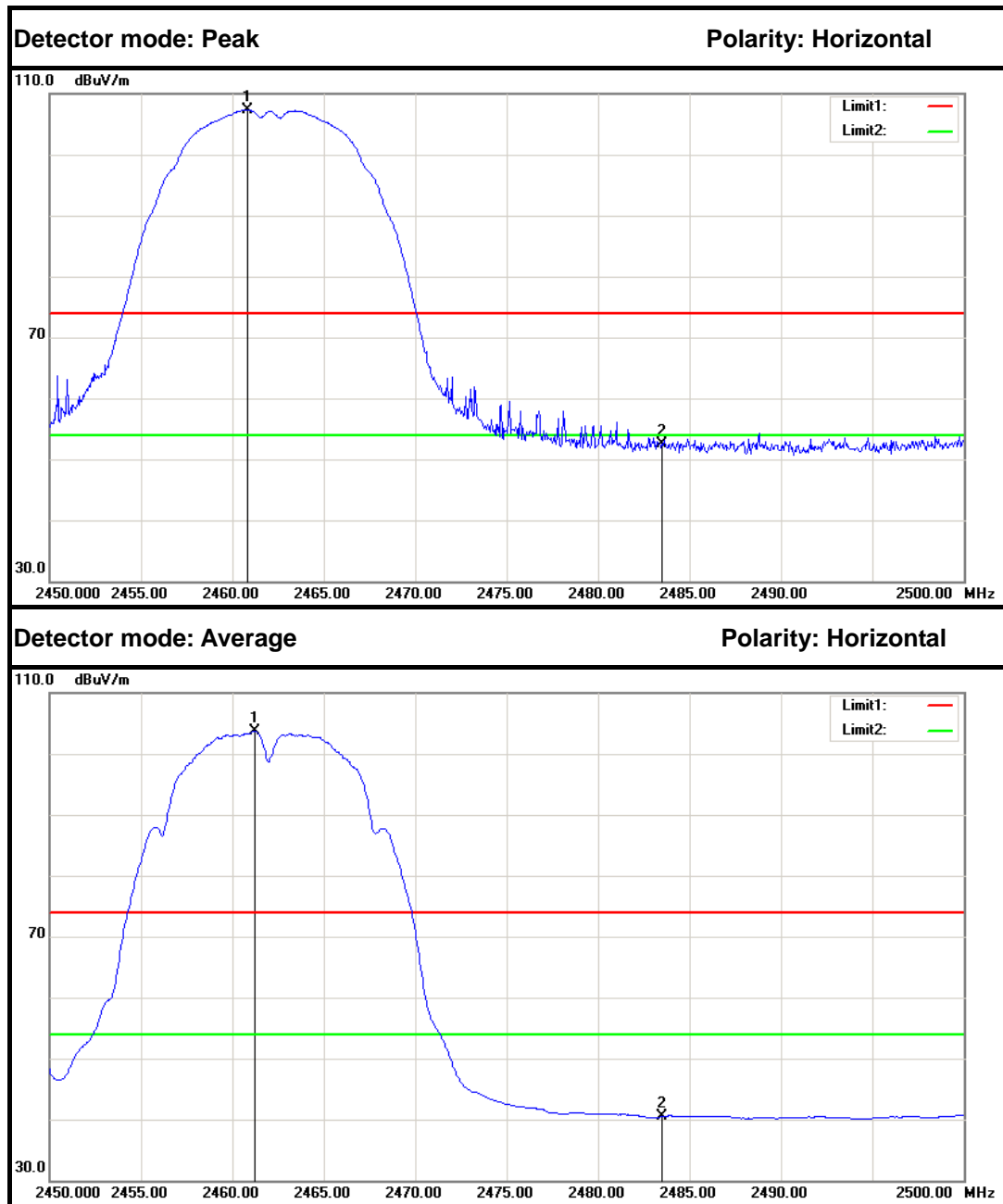
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	54.97	-2.86	52.11	74.00	-21.89	Peak	Horizontal
2.	2413.560	109.86	-2.73	107.13	---	---	Peak	Horizontal
1.	2390.000	43.38	-2.86	40.52	54.00	-13.48	Average	Horizontal
2.	2411.160	106.20	-2.75	103.45	---	---	Average	Horizontal



### Band Edges (CH High)



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2463.400	109.24	-2.46	106.78	---	---	Peak	Vertical
2.	2483.500	52.63	-2.35	50.28	74.00	-23.72	Peak	Vertical
1.	2461.250	105.58	-2.47	103.11	---	---	Average	Vertical
2.	2483.500	42.54	-2.35	40.19	54.00	-13.81	Average	Vertical

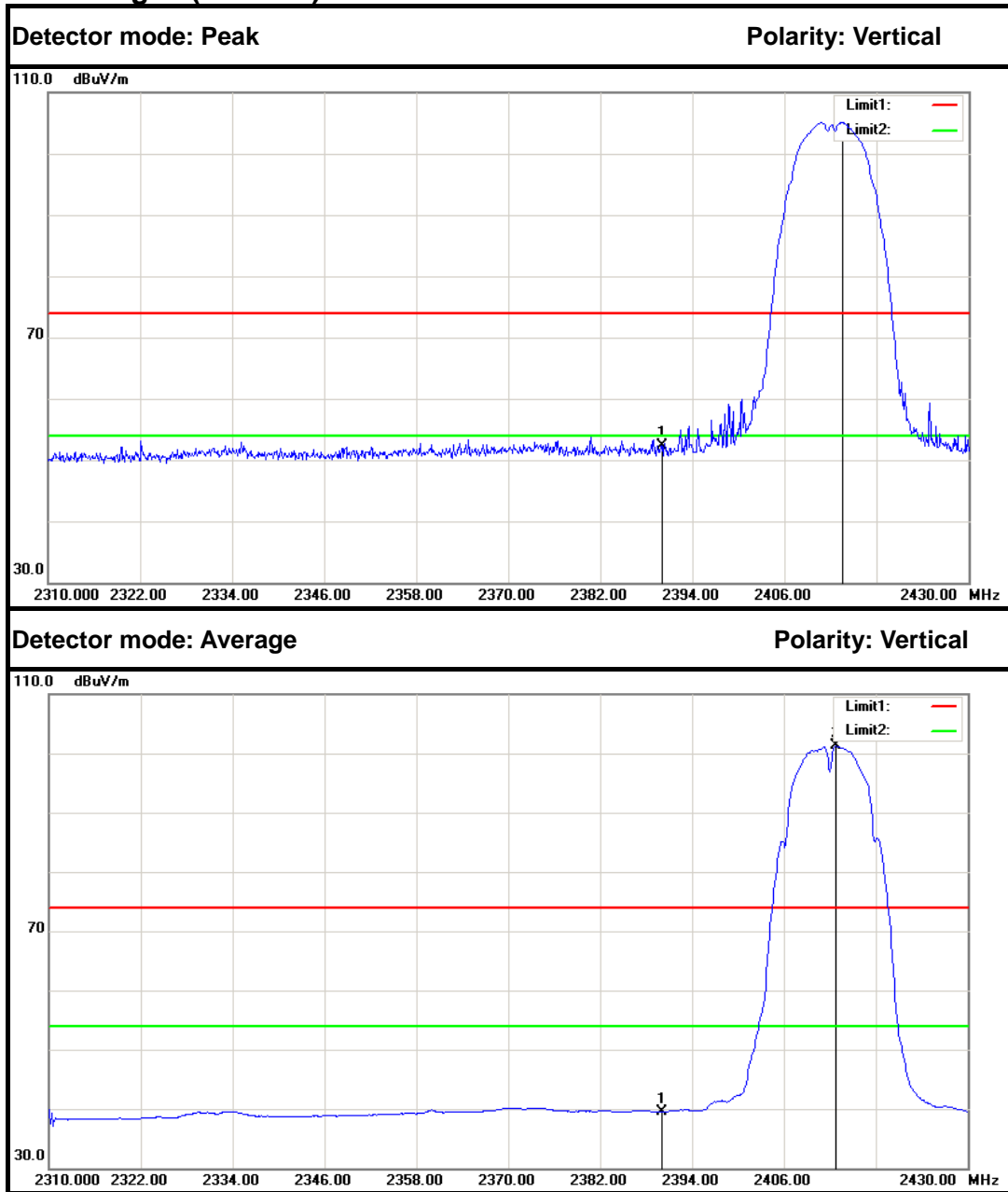


No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2460.850	109.76	-2.47	107.29	---	---	Peak	Horizontal
2.	2483.500	54.84	-2.35	52.49	74.00	-21.51	Peak	Horizontal
1.	2461.200	106.18	-2.47	103.71	---	---	Average	Horizontal
2.	2483.500	42.84	-2.35	40.49	54.00	-13.51	Average	Horizontal

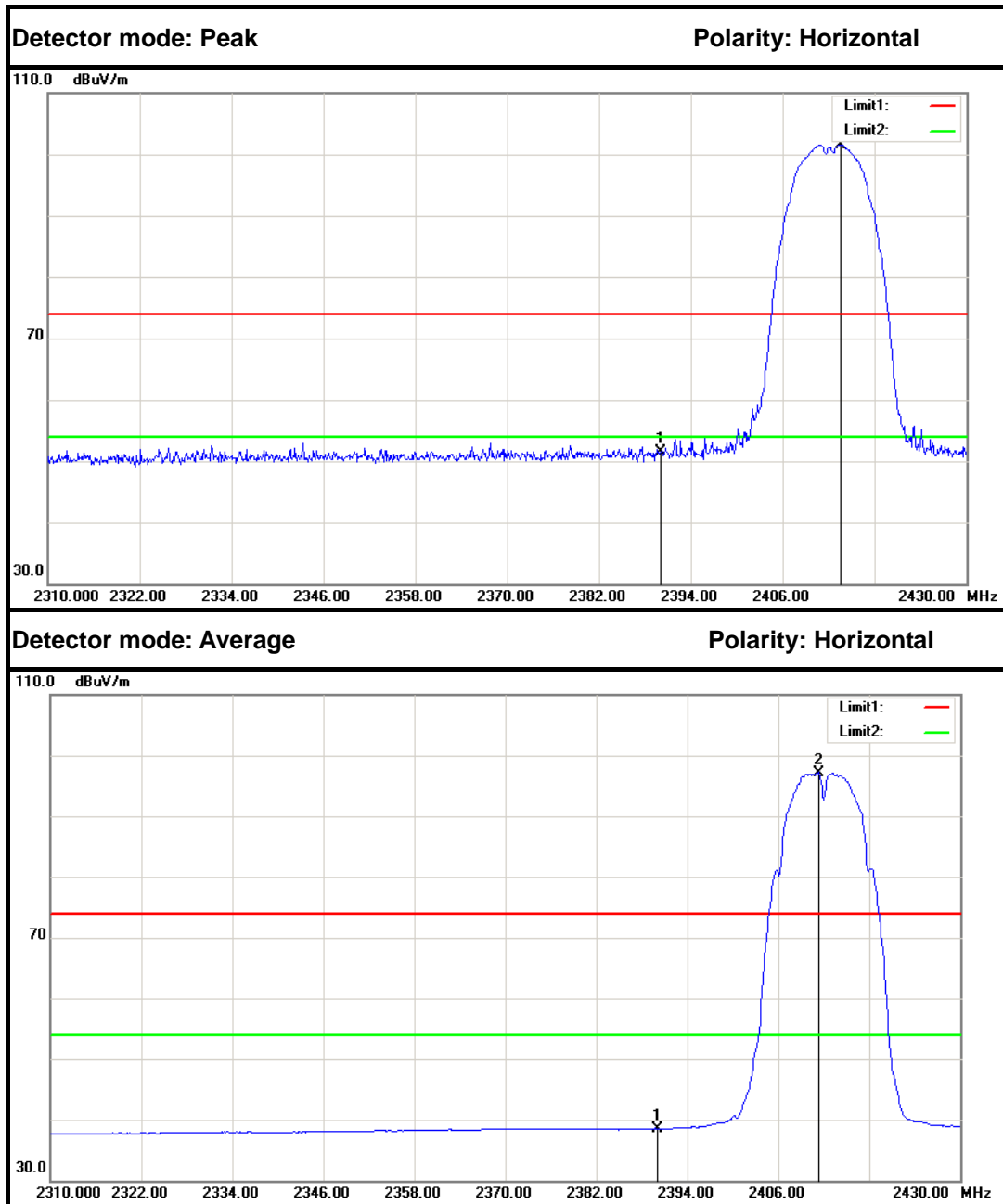


IEEE 802.11b mode (Antenna 2)

Band Edges (CH Low)



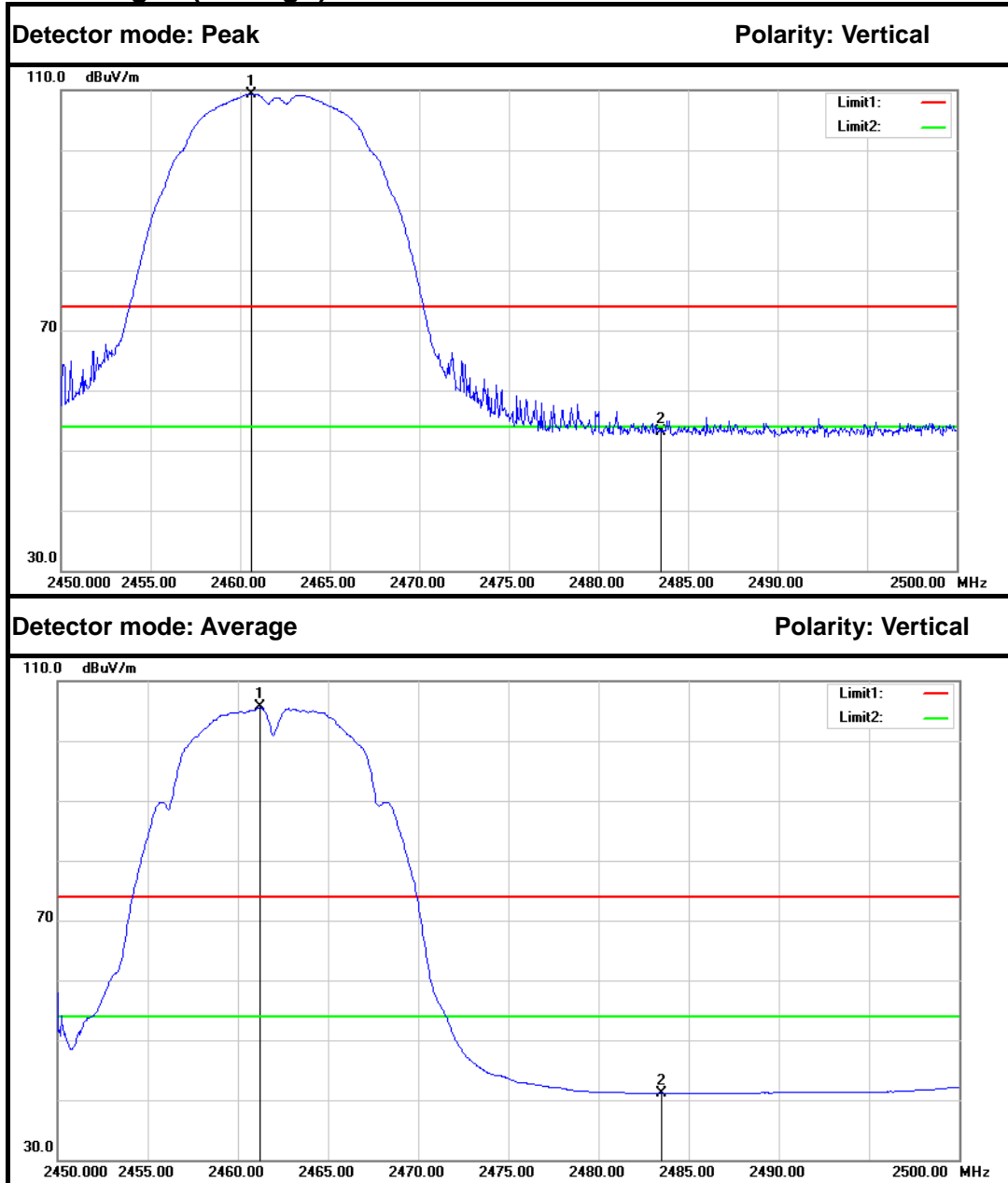
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	55.06	-2.86	52.20	74.00	-21.80	Peak	Vertical
2.	2413.560	107.79	-2.73	105.06	---	---	Peak	Vertical
1.	2390.000	42.30	-2.86	39.44	54.00	-14.56	Average	Vertical
2.	2412.840	104.00	-2.74	101.26	---	---	Average	Vertical



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	54.30	-2.86	51.44	74.00	-22.56	Peak	Horizontal
2.	2413.560	104.31	-2.73	101.58	---	---	Peak	Horizontal
1.	2390.000	41.45	-2.86	38.59	54.00	-15.41	Average	Horizontal
2.	2411.280	99.95	-2.75	97.20	---	---	Average	Horizontal

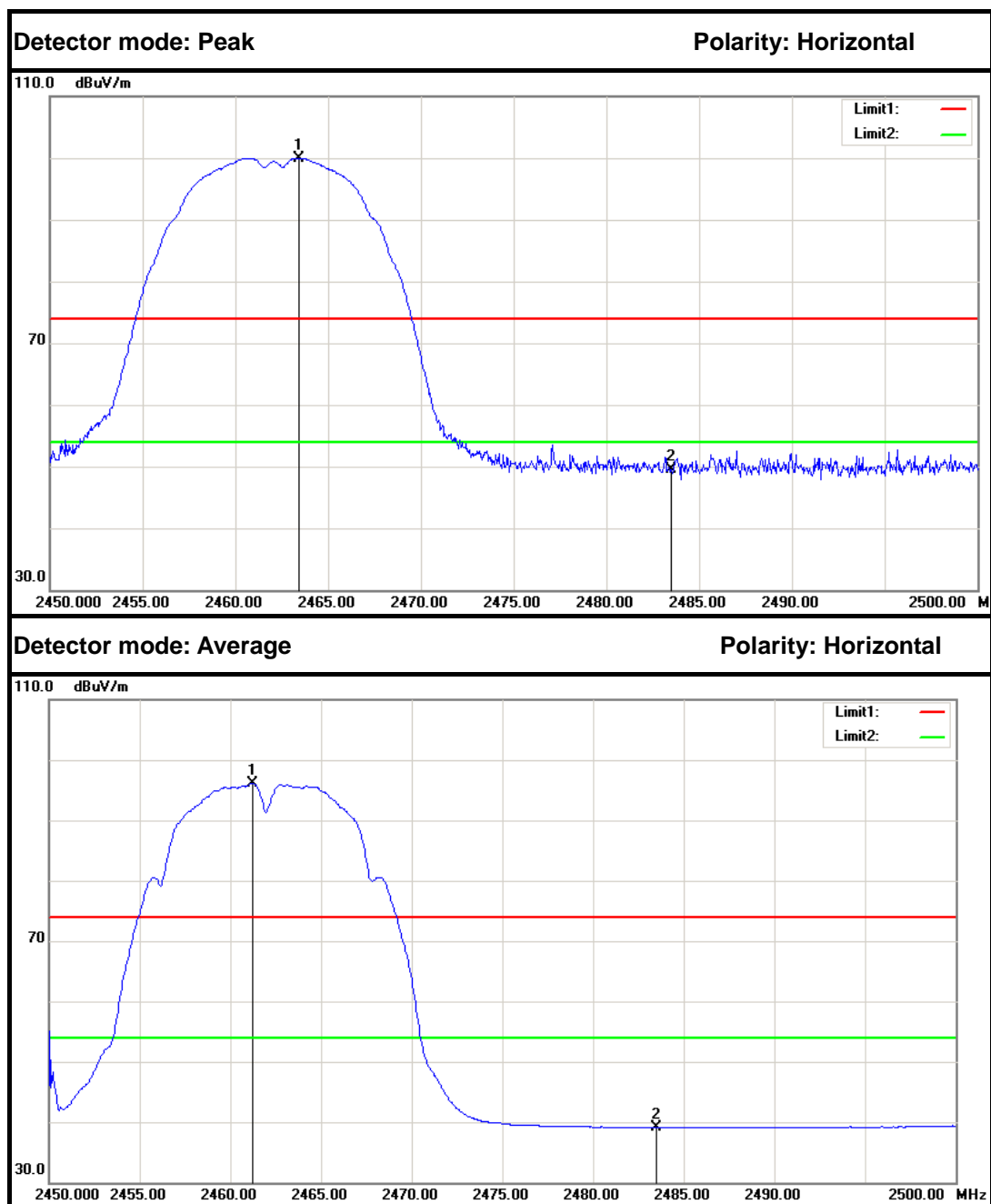


### Band Edges (CH High)



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2460.600	111.82	-2.48	109.34	---	---	Peak	Vertical
2.	2483.500	55.39	-2.35	53.04	74.00	-20.96	Peak	Vertical
1.	2461.250	108.13	-2.47	105.66	---	---	Average	Vertical
2.	2483.500	43.50	-2.35	41.15	54.00	-12.85	Average	Vertical

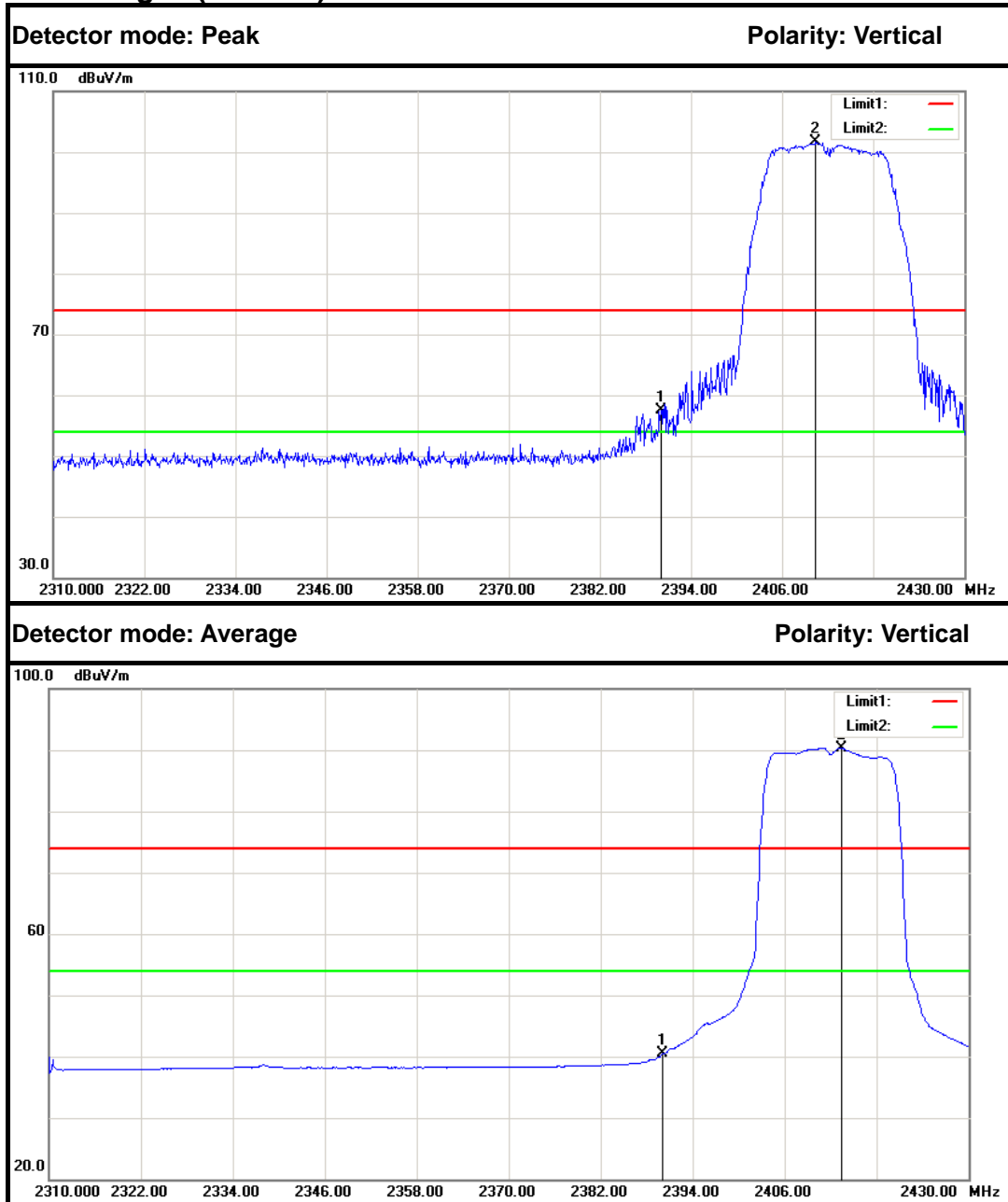




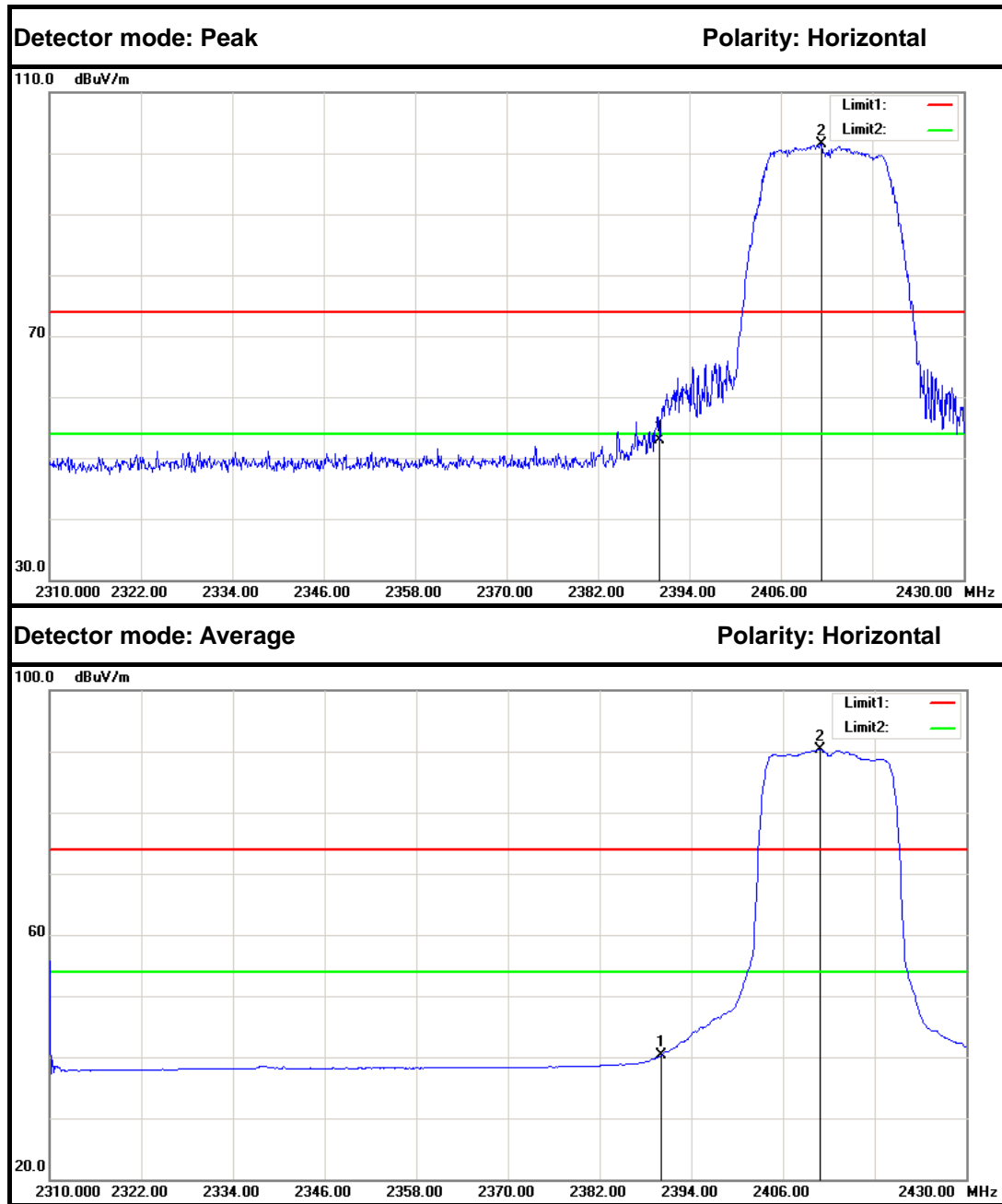
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2463.400	102.45	-2.46	99.99	---	---	Peak	Horizontal
2.	2483.500	51.77	-2.35	49.42	74.00	-24.58	Peak	Horizontal
1.	2461.200	98.54	-2.47	96.07	---	---	Average	Horizontal
2.	2483.500	41.47	-2.35	39.12	54.00	-14.88	Average	Horizontal



IEEE 802.11g mode (Antenna 0)  
Band Edges (CH Low)



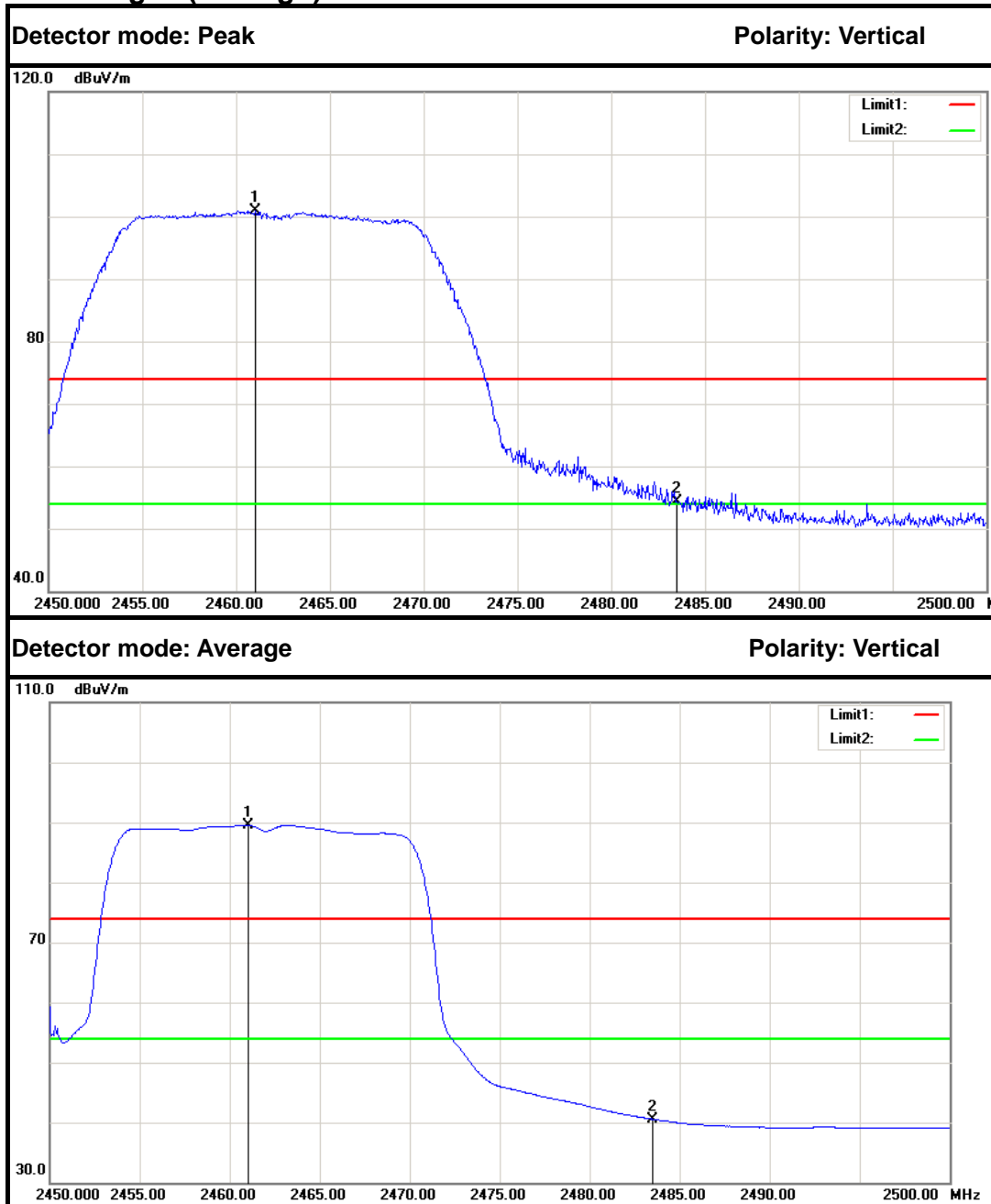
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	2390.000	60.40	-2.86	57.54	74.00	-16.46	Peak	Vertical
2	2410.440	104.36	-2.75	101.61	---	---	Peak	Vertical
1.	2390.000	43.29	-2.86	40.43	54.00	-13.57	Average	Vertical
2.	2413.440	93.11	-2.73	90.38	---	---	Average	Vertical



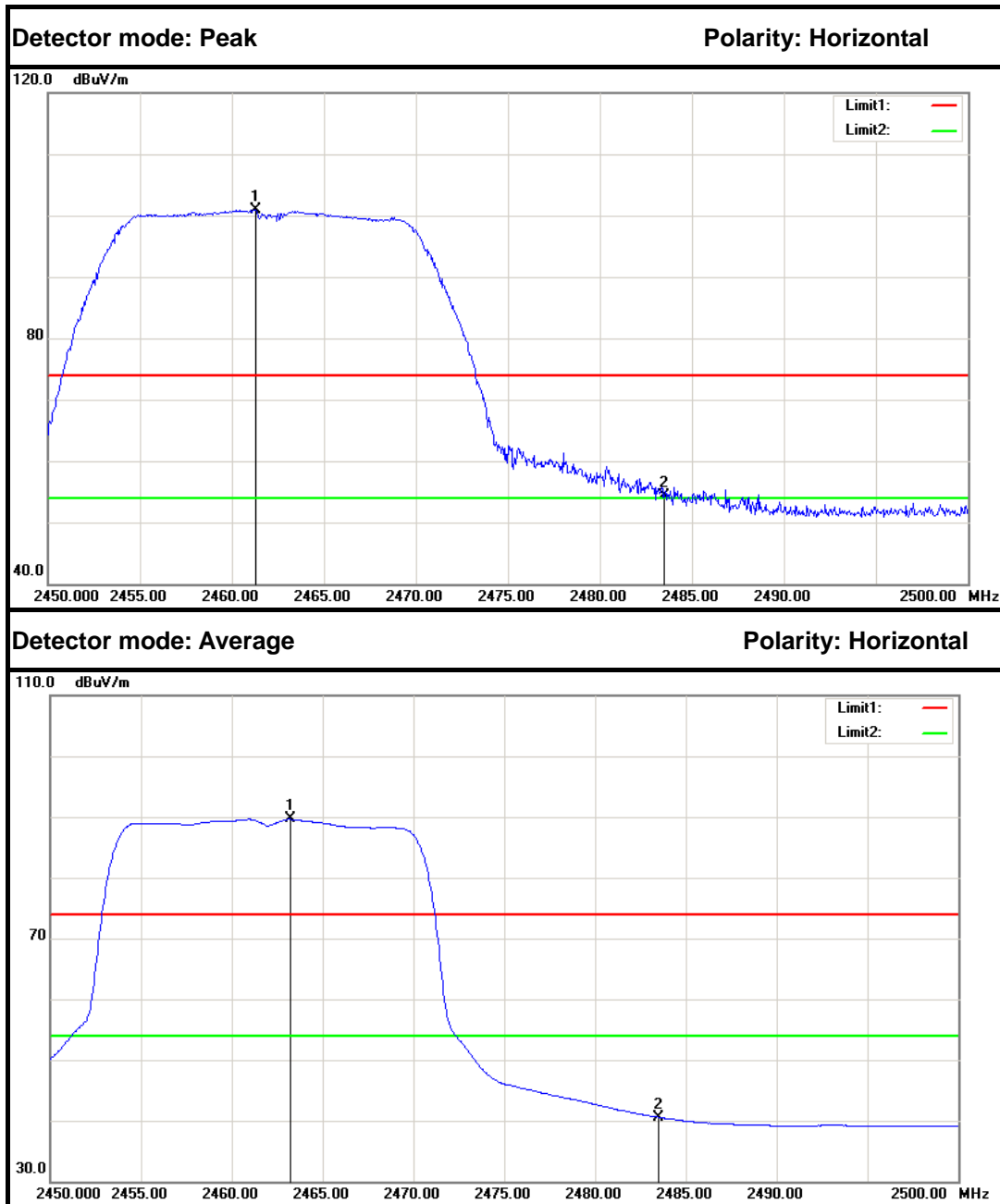
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	55.83	-2.86	52.97	74.00	-21.03	Peak	Horizontal
2.	2411.280	104.27	-2.75	101.52	---	---	Peak	Horizontal
1.	2390.000	43.09	-2.86	40.23	54.00	-13.77	Average	Horizontal
2.	2410.920	93.13	-2.75	90.38	---	---	Average	Horizontal



### Band Edges (CH High)



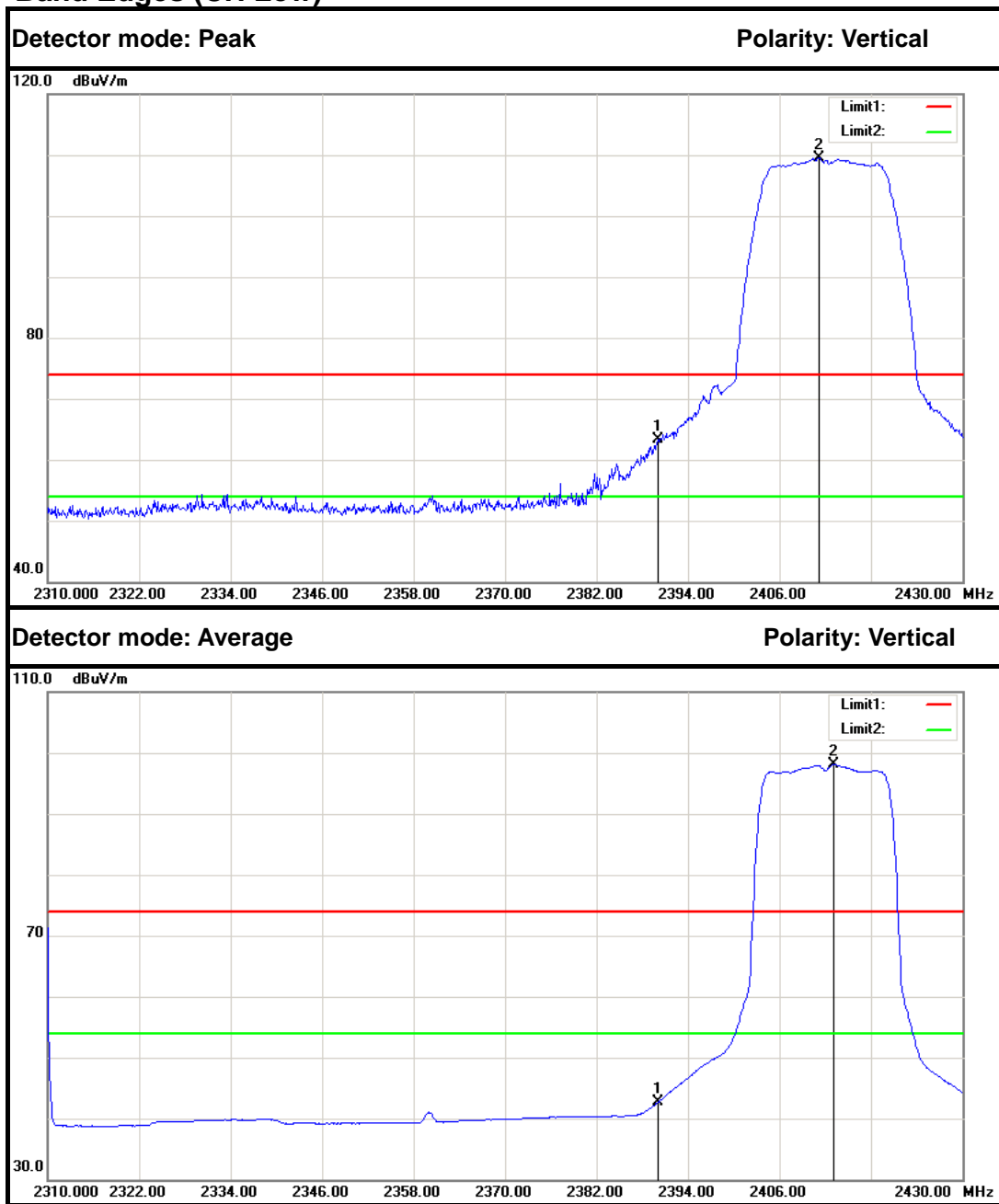
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2461.050	103.30	-2.47	100.83	---	---	Peak	Vertical
2.	2483.500	56.58	-2.35	54.23	74.00	-19.77	Peak	Vertical
1.	2461.000	92.04	-2.47	89.57	---	---	Average	Vertical
2.	2483.500	42.92	-2.35	40.57	54.00	-13.43	Average	Vertical



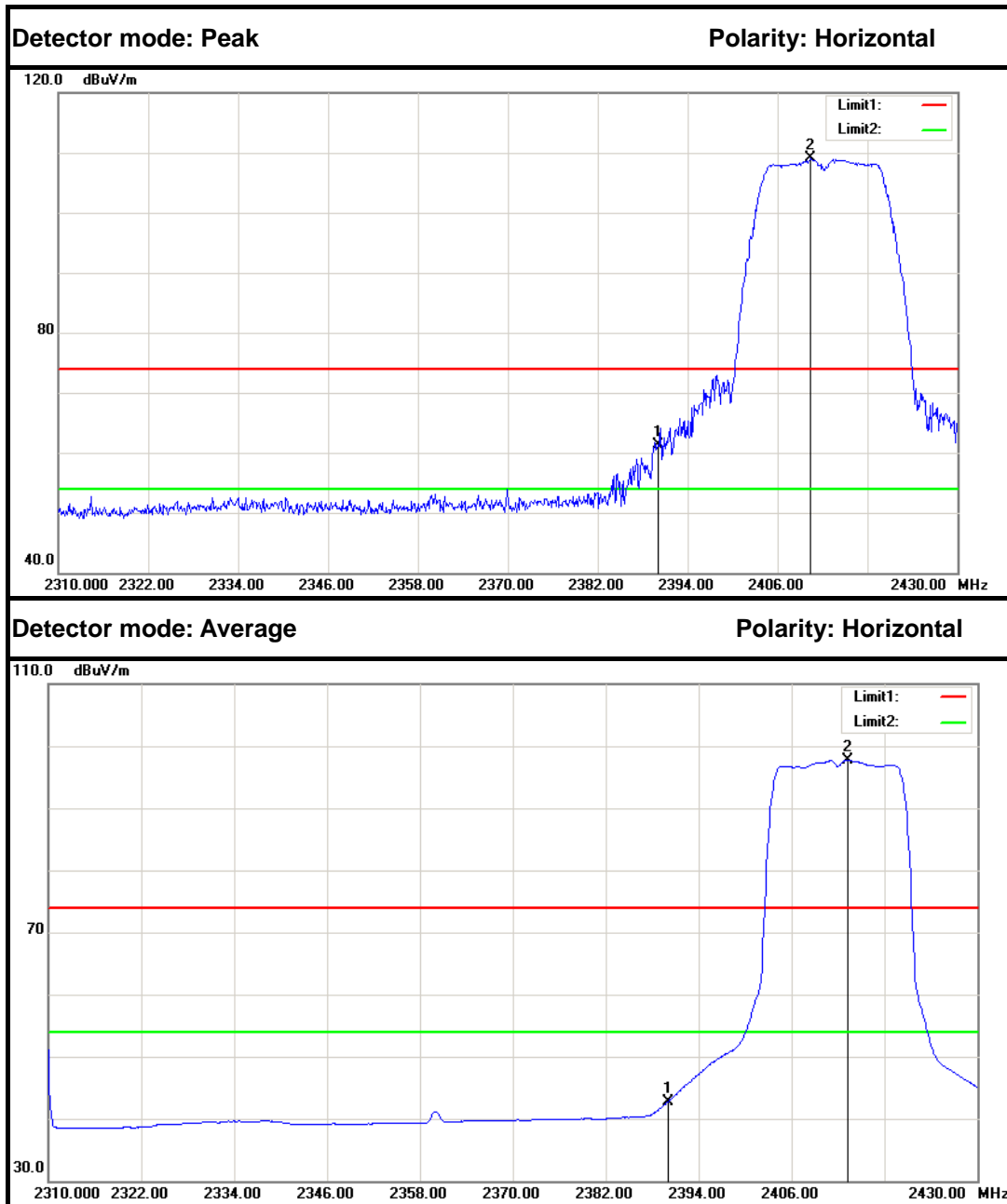
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2461.300	103.43	-2.47	100.96	---	---	Peak	Horizontal
2.	2483.500	56.55	-2.35	54.20	74.00	-19.80	Peak	Horizontal
1.	2463.200	92.07	-2.46	89.61	---	---	Average	Horizontal
2.	2483.500	42.92	-2.35	40.57	54.00	-13.43	Average	Horizontal



IEEE 802.11g mode (Antenna 1)  
Band Edges (CH Low)



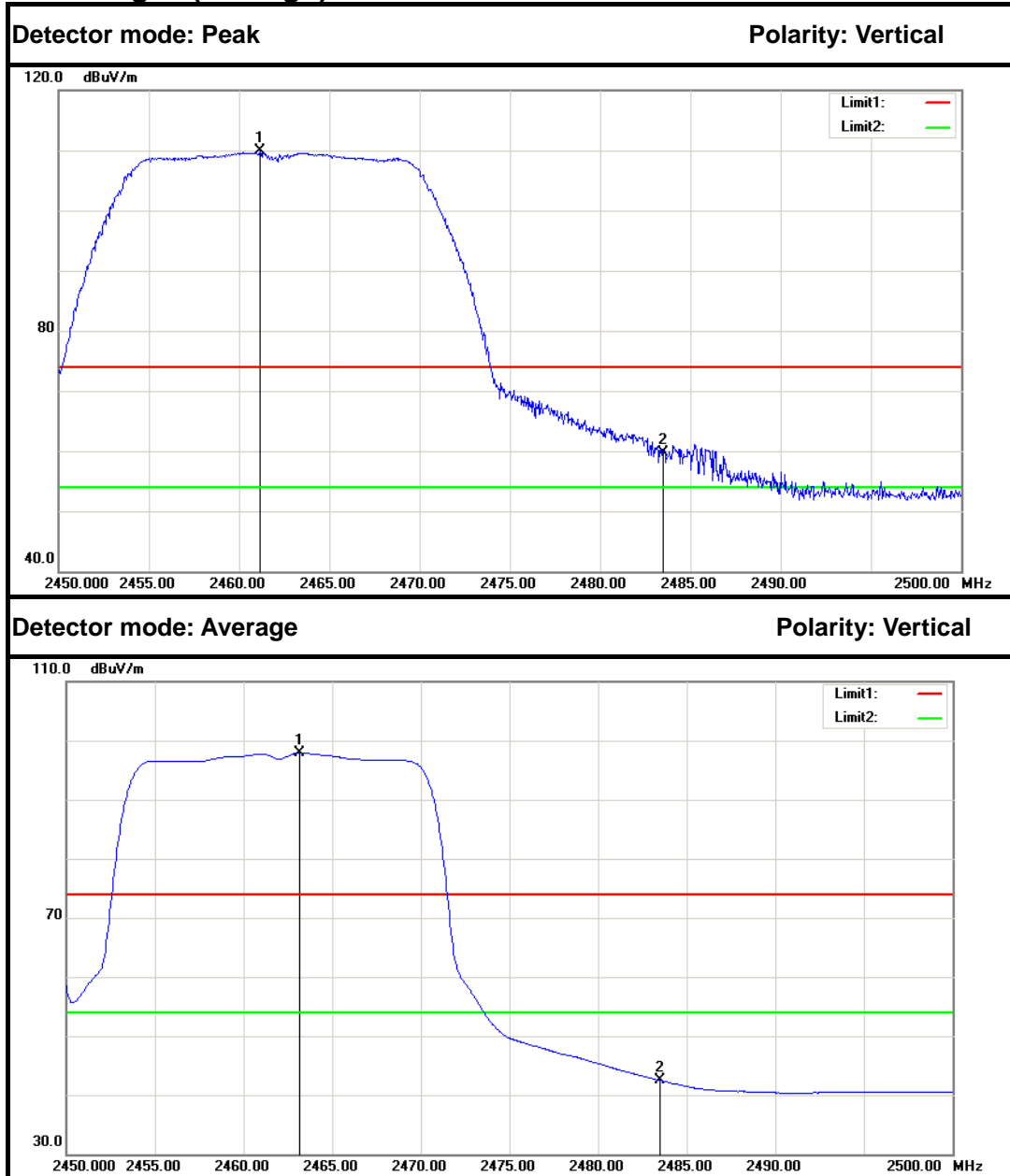
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	66.15	-2.86	63.29	74.00	-10.71	Peak	Vertical
2.	2411.160	112.26	-2.75	109.51	---	---	Peak	Vertical
1.	2390.000	45.51	-2.86	42.65	54.00	-11.35	Average	Vertical
2.	2413.080	100.79	-2.74	98.05	---	---	Average	Vertical



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	64.12	-2.86	61.26	74.00	-12.74	Peak	Horizontal
2.	2410.440	111.77	-2.75	109.02	---	---	Peak	Horizontal
1.	2390.000	45.62	-2.86	42.76	54.00	-11.24	Average	Horizontal
2.	2413.200	100.53	-2.74	97.79	---	---	Average	Horizontal

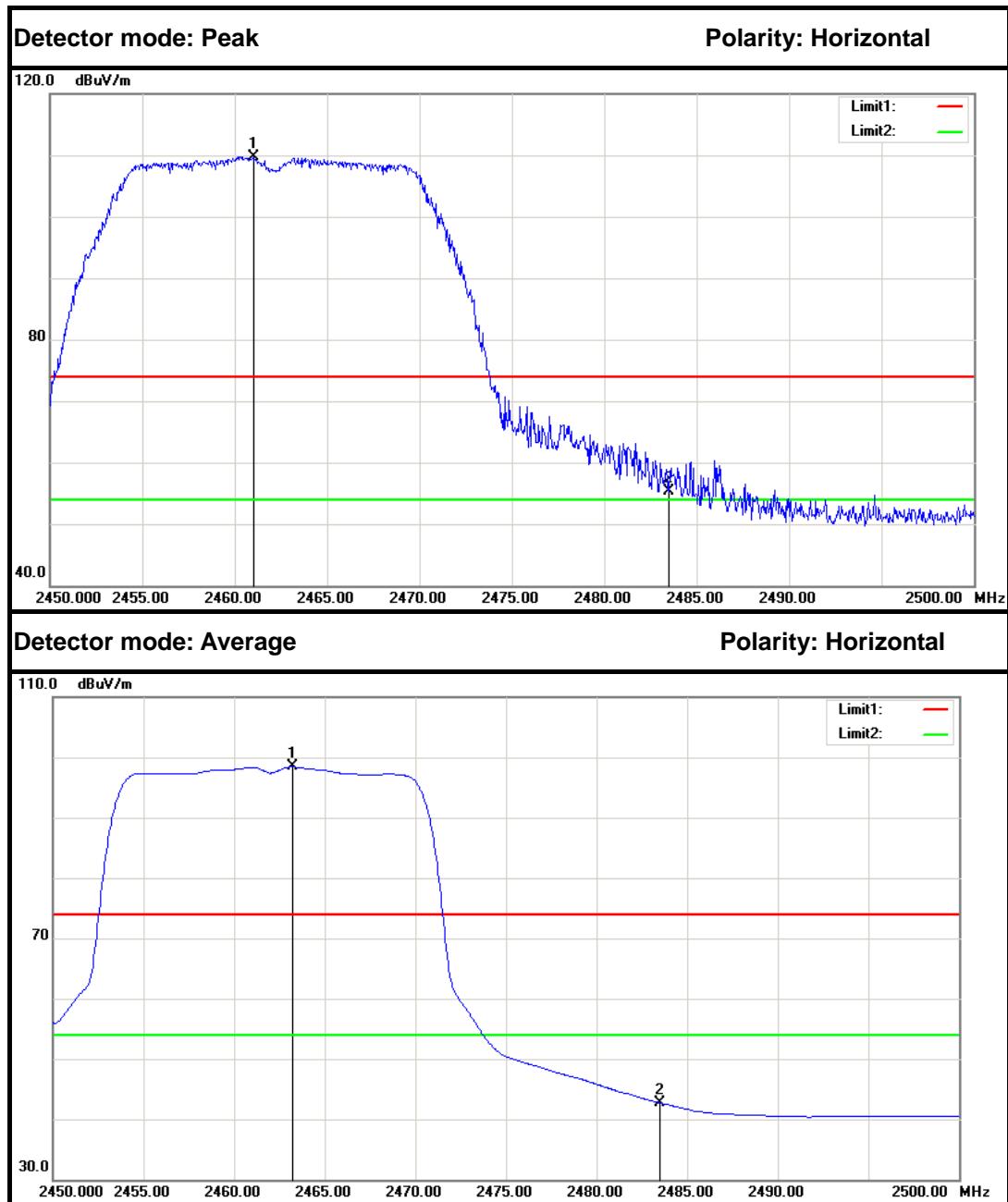


### Band Edges (CH High)



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2461.150	112.31	-2.47	109.84	---	---	Peak	Vertical
2.	2483.500	61.98	-2.35	59.63	74.00	-14.37	Peak	Vertical
1.	2463.150	100.40	-2.46	97.94	---	---	Average	Vertical
2.	2483.500	44.80	-2.35	42.45	54.00	-11.55	Average	Vertical

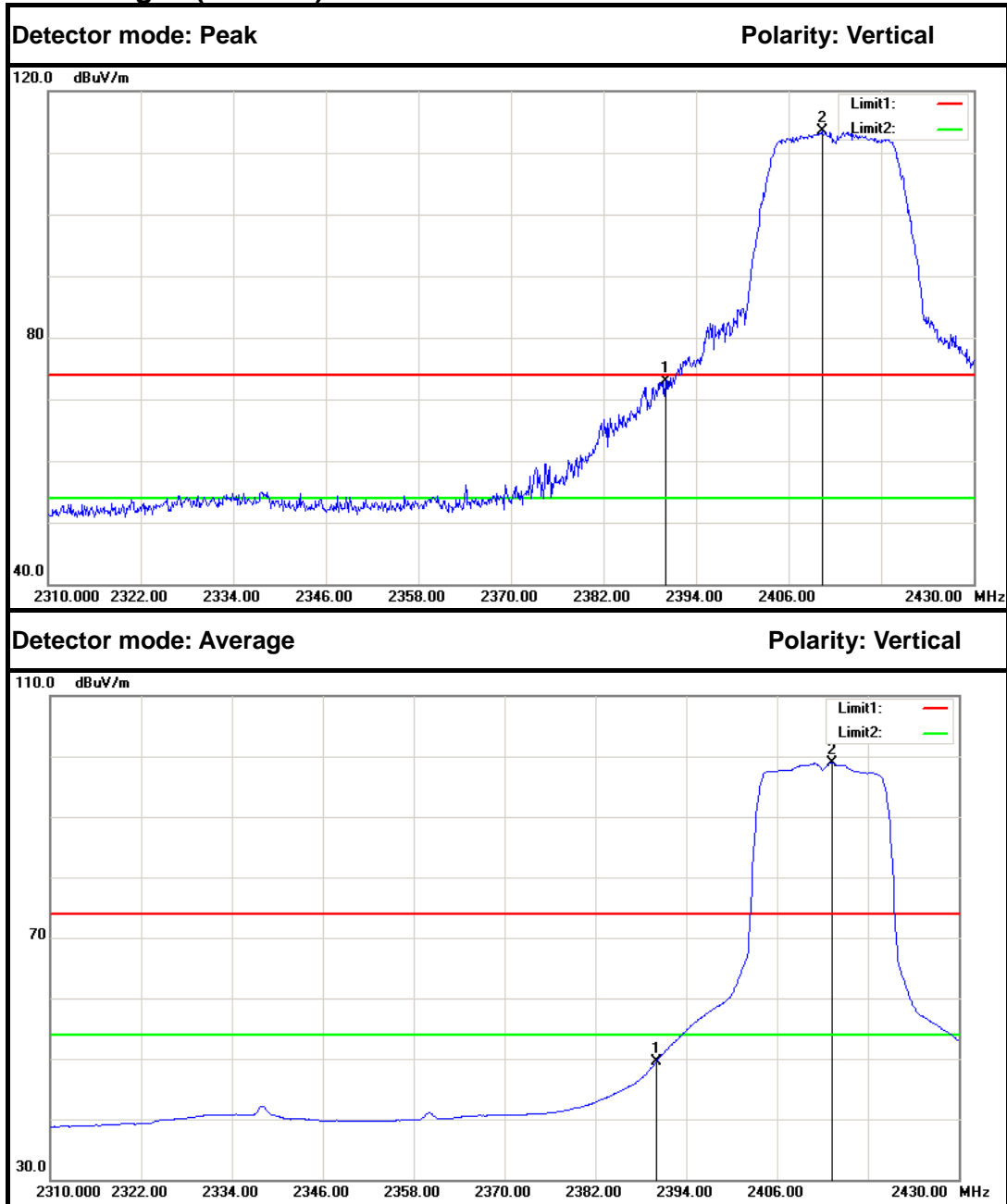




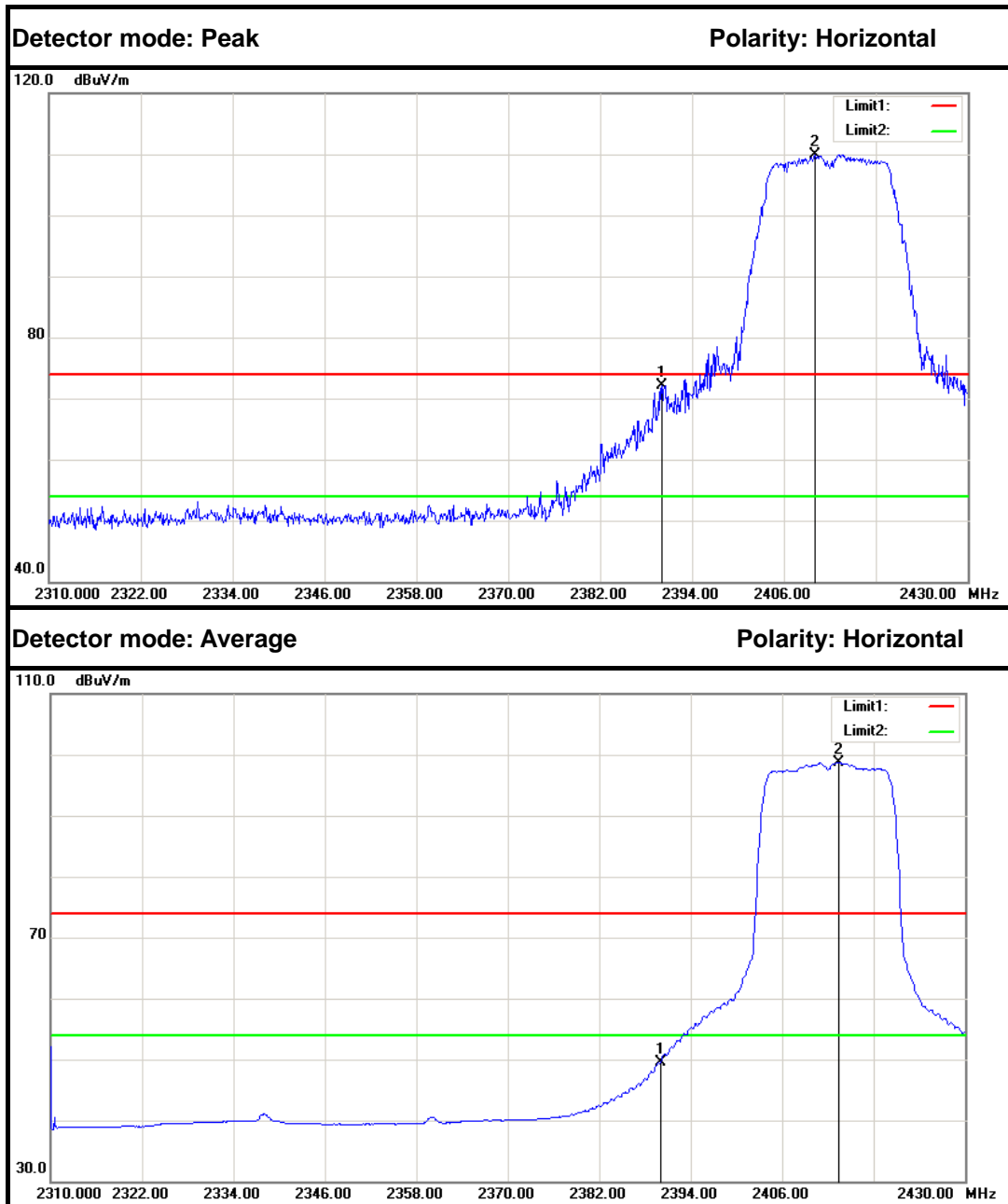
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2461.000	112.22	-2.47	109.75	---	---	Peak	Horizontal
2.	2483.500	57.64	-2.35	55.29	74.00	-18.71	Peak	Horizontal
1.	2463.200	100.88	-2.46	98.42	---	---	Average	Horizontal
2.	2483.500	45.07	-2.35	42.72	54.00	-11.28	Average	Horizontal



IEEE 802.11g mode (Antenna 2)  
Band Edges (CH Low)



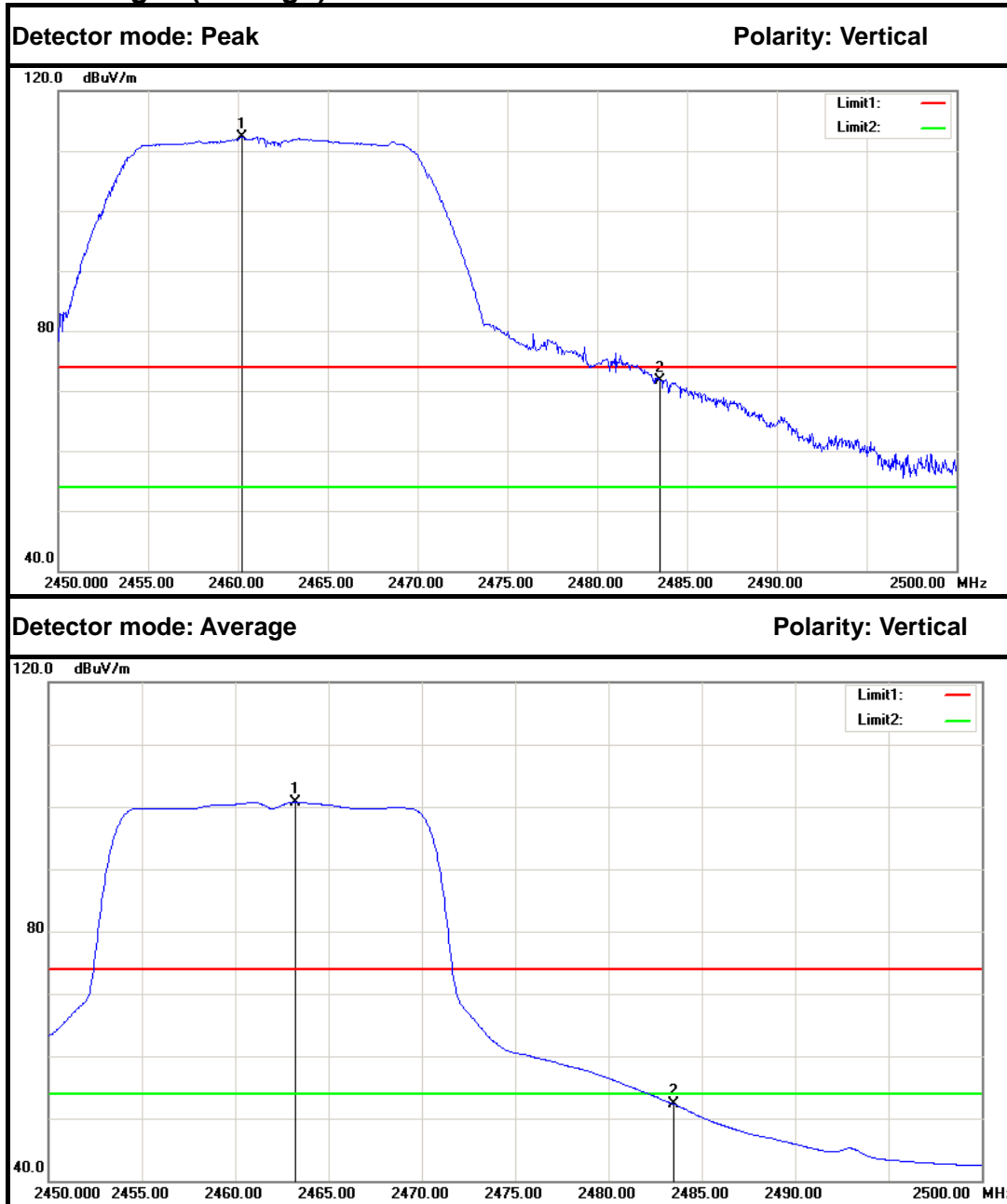
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	75.83	-2.86	72.97	74.00	-1.03	Peak	Vertical
2.	2410.320	116.22	-2.75	113.47	---	---	Peak	Vertical
1.	2390.000	52.41	-2.86	49.55	54.00	-4.45	Average	Vertical
2.	2413.200	101.59	-2.74	98.85	---	---	Average	Vertical



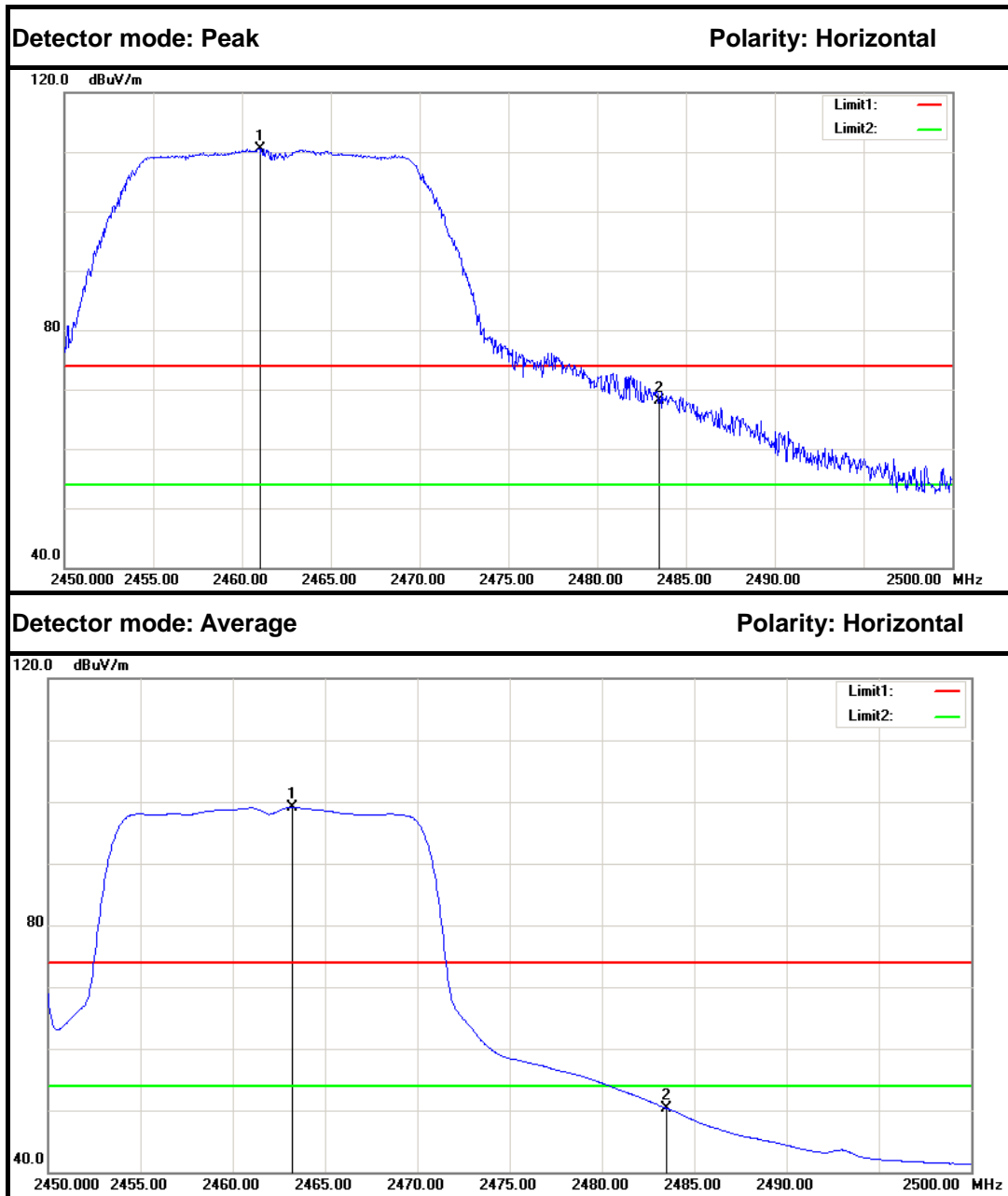
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	74.95	-2.86	72.09	74.00	-1.91	Peak	Horizontal
2.	2410.080	112.74	-2.75	109.99	---	---	Peak	Horizontal
1.	2390.000	52.32	-2.86	49.46	54.00	-4.54	Average	Horizontal
2.	2413.440	101.50	-2.73	98.77	---	---	Average	Horizontal



### Band Edges (CH High)



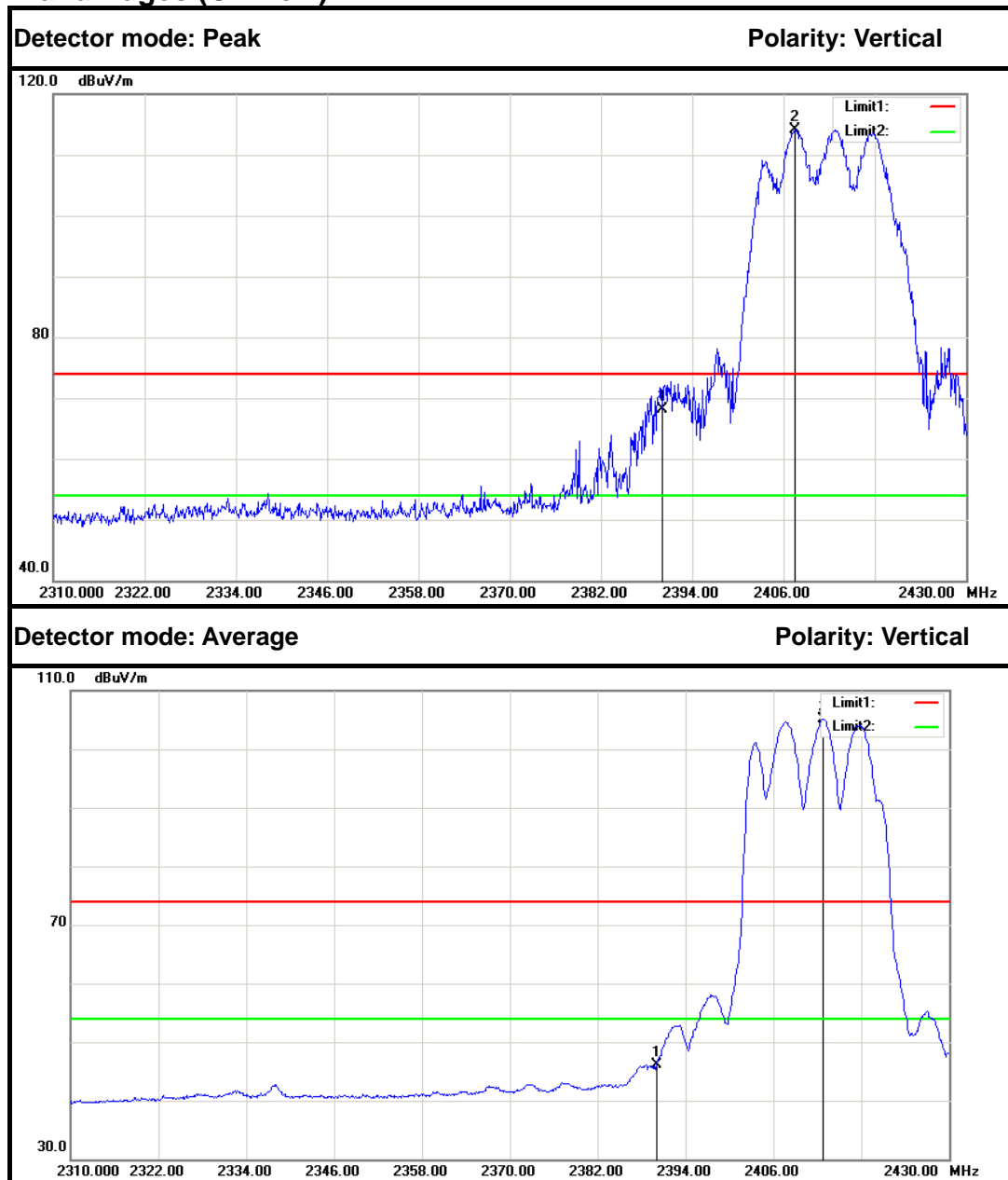
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2460.200	114.74	-2.48	112.26	---	---	Peak	Vertical
2.	2483.500	74.10	-2.35	71.75	74.00	-2.25	Peak	Vertical
1.	2463.200	103.26	-2.46	100.80	---	---	Average	Vertical
2.	2483.500	54.63	-2.35	52.28	54.00	-1.72	Average	Vertical



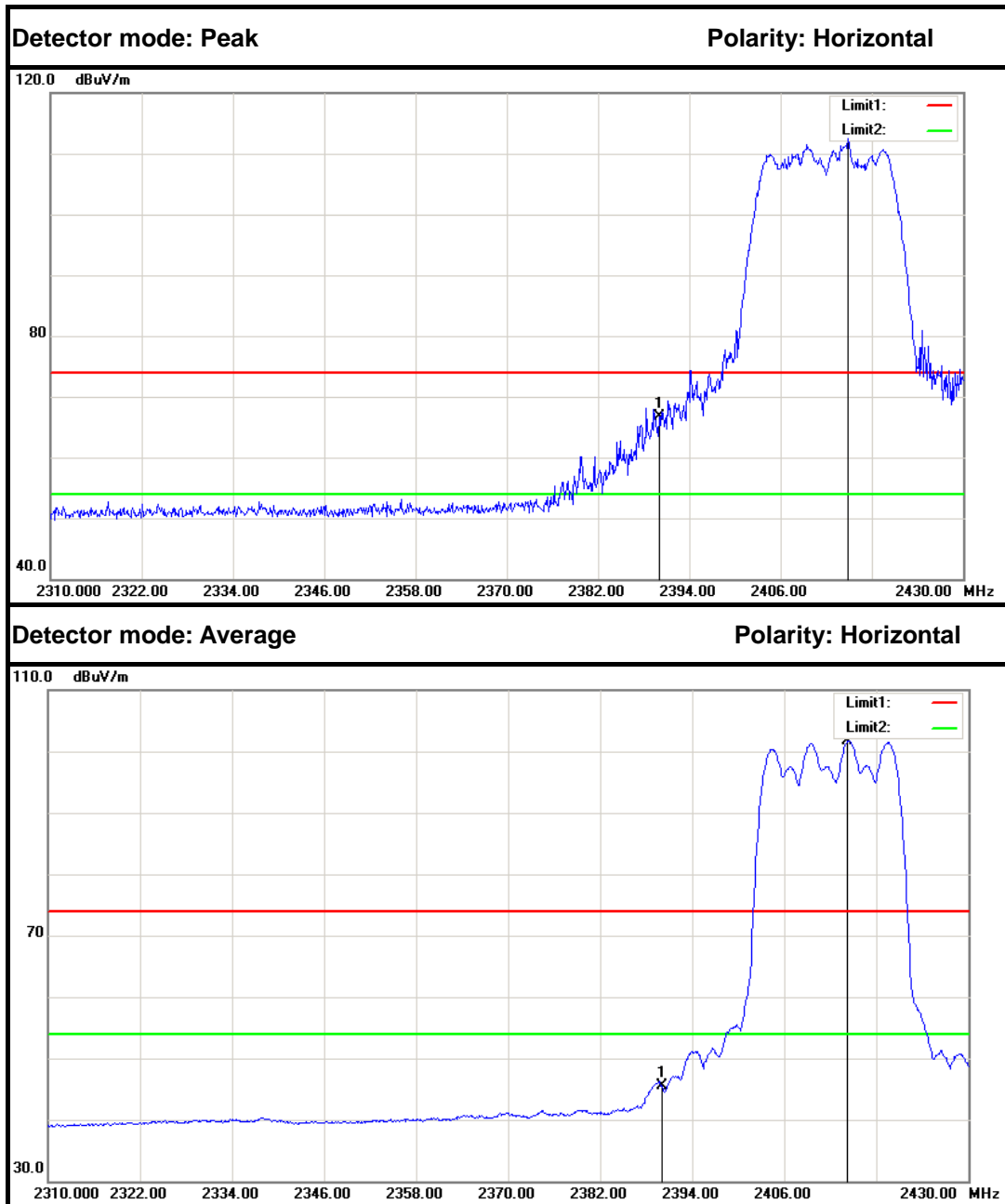
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2461.000	112.95	-2.47	110.48	---	---	Peak	Horizontal
2.	2483.500	70.45	-2.35	68.10	74.00	-5.90	Peak	Horizontal
1.	2463.200	101.59	-2.46	99.13	---	---	Average	Horizontal
2.	2483.500	52.69	-2.35	50.34	54.00	-3.66	Average	Horizontal



IEEE 802.11n HT20 MHz mode (Combine with Antenna 0 and Antenna 1 and Antenna 2)  
Band Edges (CH Low)



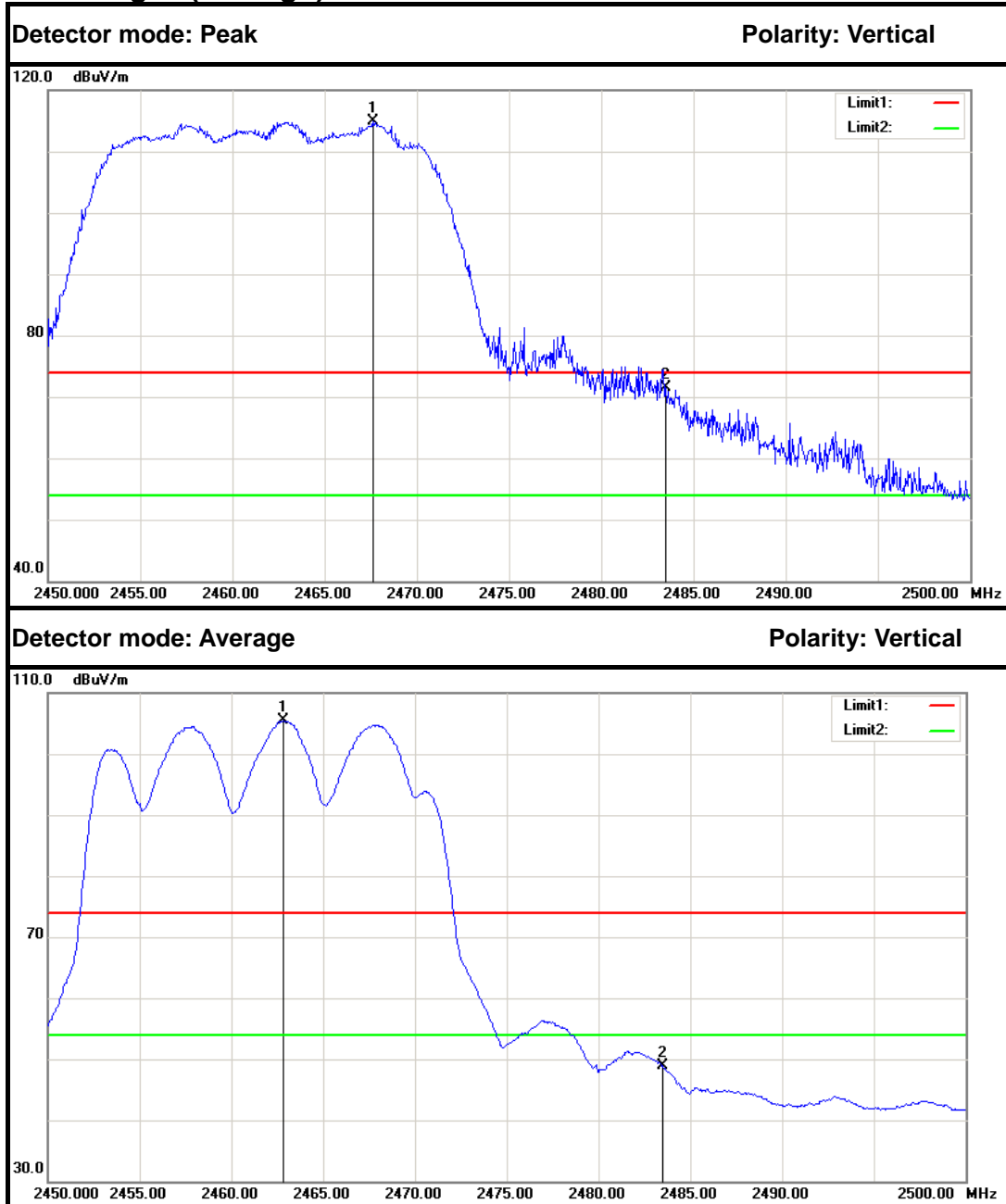
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	70.92	-2.86	68.06	74.00	-5.94	Peak	Vertical
2.	2407.440	116.96	-2.77	114.19	---	---	Peak	Vertical
1.	2390.000	48.94	-2.86	46.08	54.00	-7.92	Average	Vertical
2.	2412.840	107.85	-2.74	105.11	---	---	Average	Vertical



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	69.49	-2.86	66.63	74.00	-7.37	Peak	Horizontal
2.	2414.880	115.22	-2.73	112.49	---	---	Peak	Horizontal
1.	2390.000	48.45	-2.86	45.59	54.00	-8.41	Average	Horizontal
2.	2414.280	104.42	-2.73	101.69	---	---	Average	Horizontal

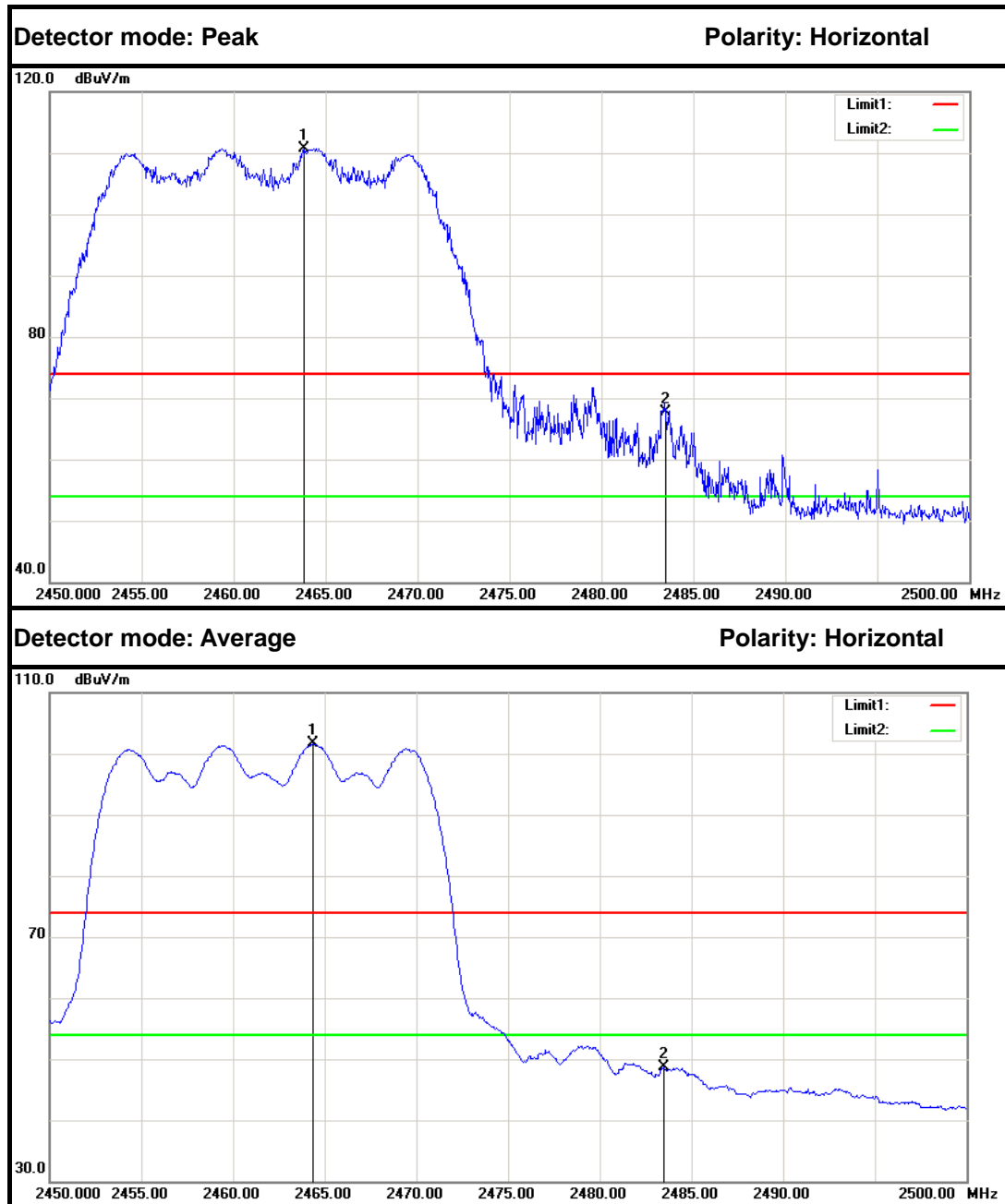


### Band Edges (CH High)



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2467.600	117.33	-2.44	114.89	---	---	Peak	Vertical
2.	2483.500	73.94	-2.35	71.59	74.00	-2.41	Peak	Vertical
1.	2462.850	107.94	-2.46	105.48	---	---	Average	Vertical
2.	2483.500	51.16	-2.35	48.81	54.00	-5.19	Average	Vertical

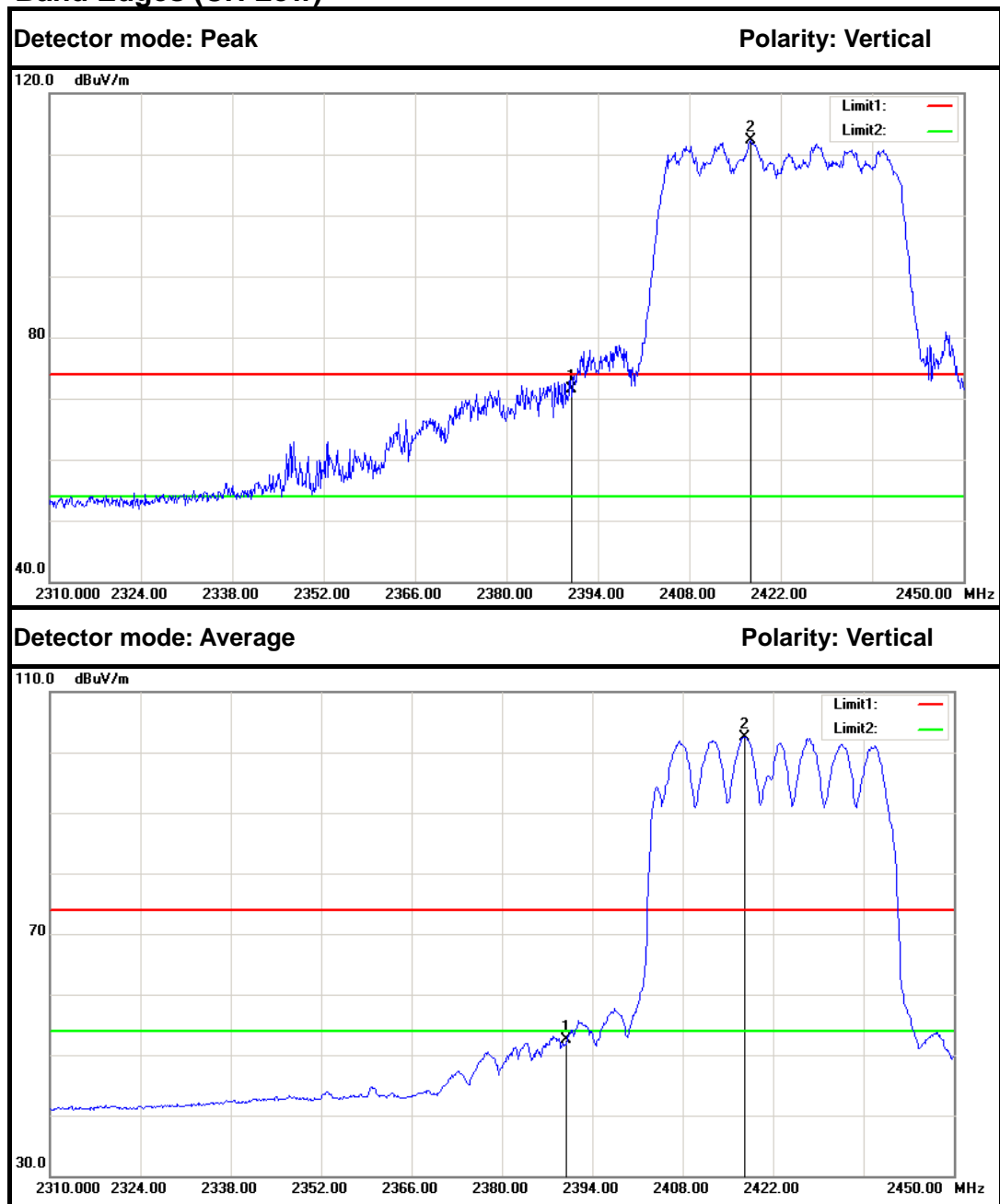




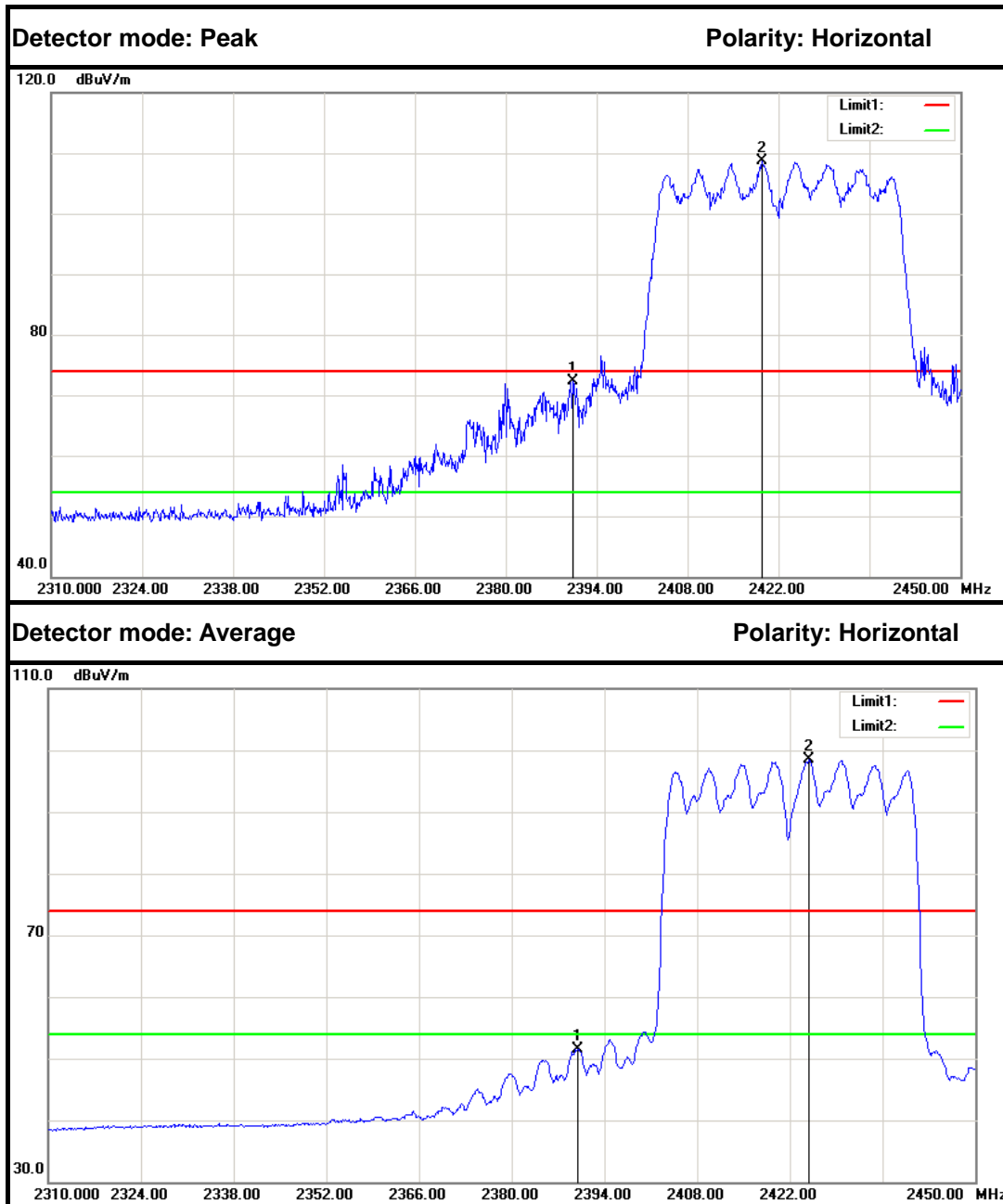
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2463.800	113.21	-2.46	110.75	---	---	Peak	Horizontal
2.	2483.500	69.98	-2.35	67.63	74.00	-6.37	Peak	Horizontal
1.	2464.350	104.08	-2.46	101.62	---	---	Average	Horizontal
2.	2483.500	50.96	-2.35	48.61	54.00	-5.39	Average	Horizontal



IEEE 802.11n HT40 MHz mode (Combine with Antenna 0 and Antenna 1 and Antenna 2)  
Band Edges (CH Low)



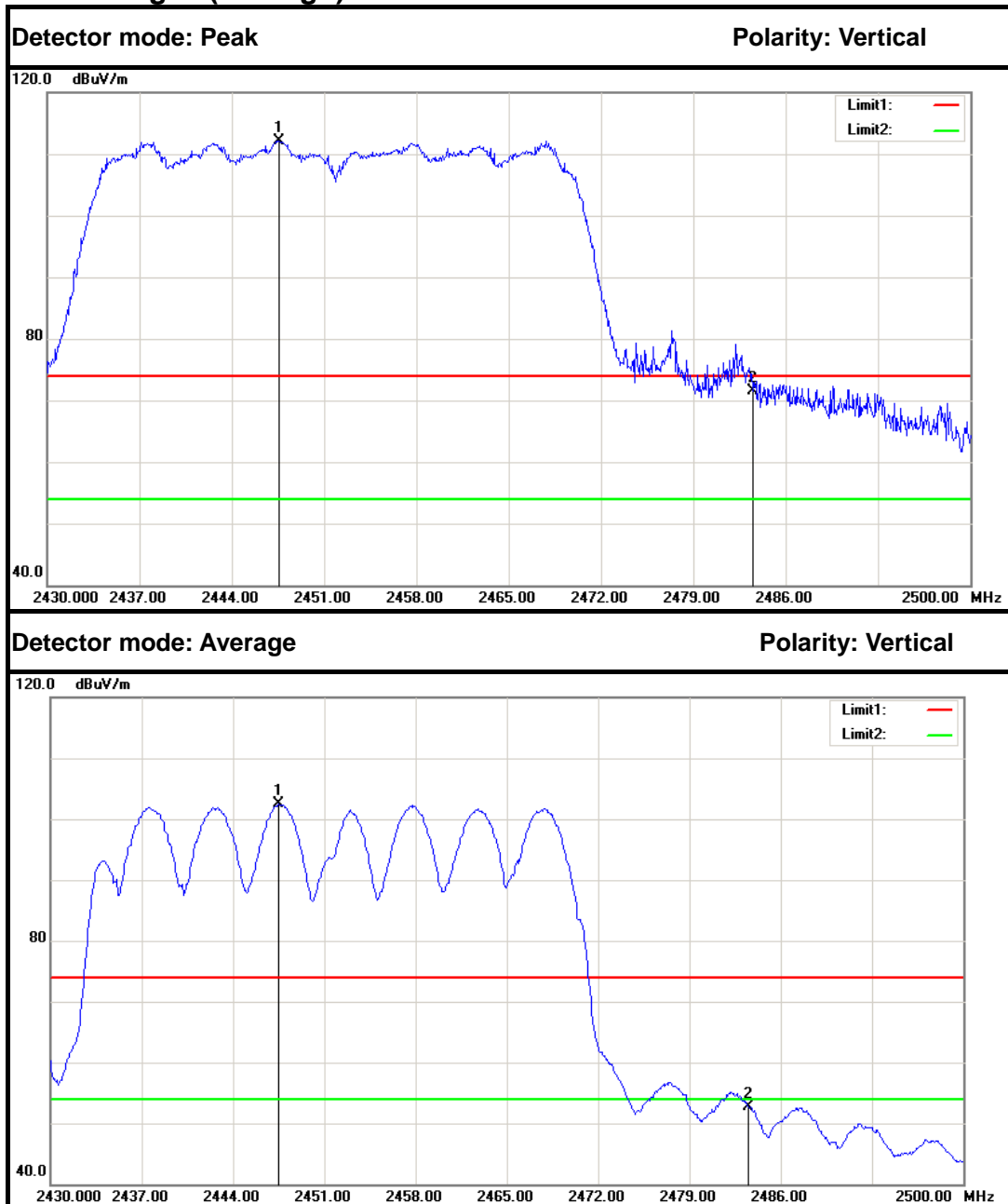
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	74.42	-2.86	71.56	74.00	-2.44	Peak	Vertical
2.	2417.380	115.05	-2.71	112.34	---	---	Peak	Vertical
1.	2390.000	55.39	-2.86	52.53	54.00	-1.47	Average	Vertical
2.	2417.660	105.30	-2.71	102.59	---	---	Average	Vertical



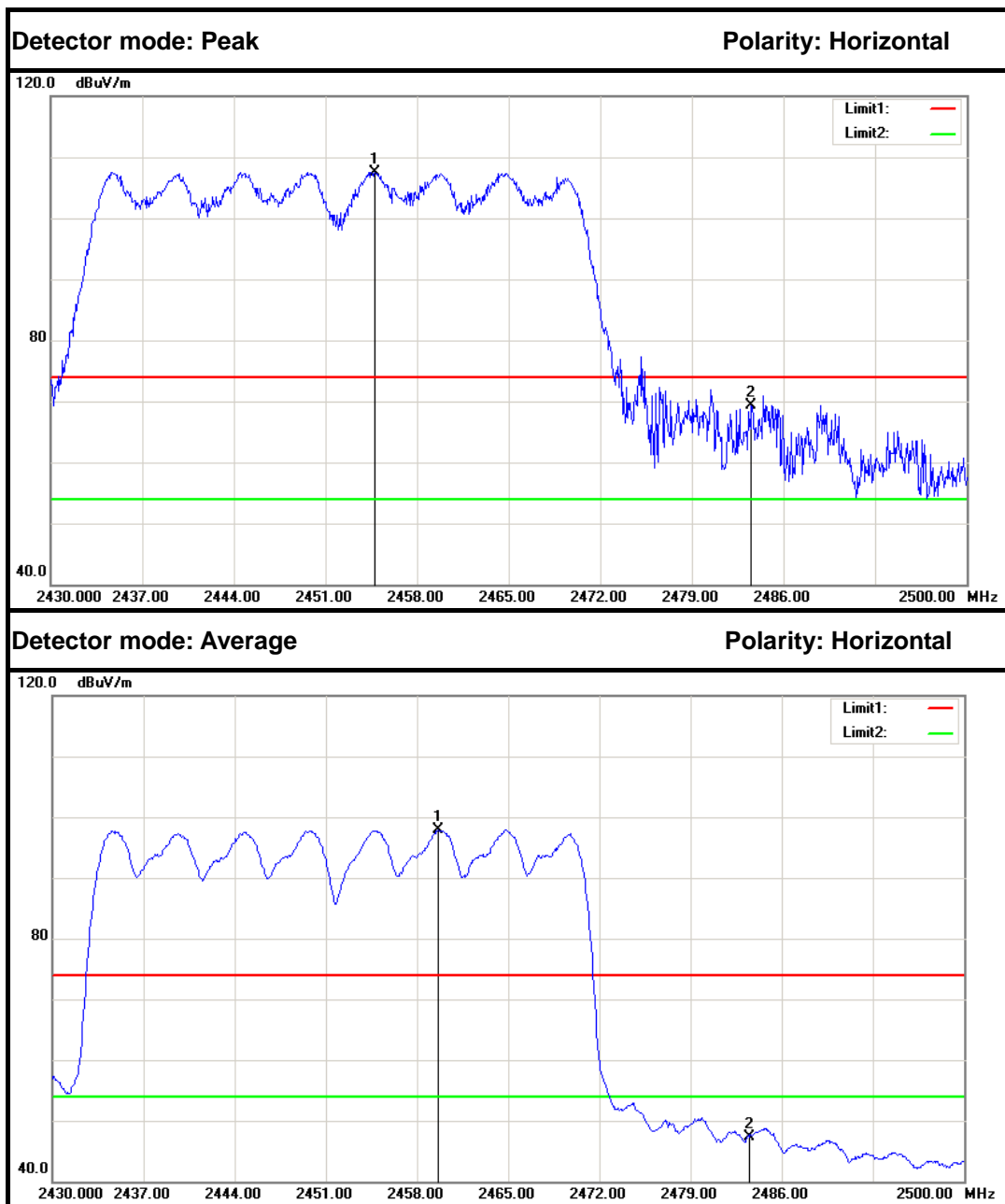
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.360	75.08	-2.86	72.22	74.00	-1.78	Peak	Horizontal
2.	2419.480	111.43	-2.70	108.73	---	---	Peak	Horizontal
1.	2390.000	54.34	-2.86	51.48	54.00	-2.52	Average	Horizontal
2.	2424.940	101.11	-2.67	98.44	---	---	Average	Horizontal



### Band Edges (CH High)



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2447.570	114.67	-2.55	112.12	---	---	Peak	Vertical
2.	2483.500	73.89	-2.35	71.54	74.00	-2.46	Peak	Vertical
1.	2447.500	104.98	-2.55	102.43	---	---	Average	Vertical
2.	2483.500	55.07	-2.35	52.72	54.00	-1.28	Average	Vertical



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2454.780	110.09	-2.51	107.58	---	---	Peak	Horizontal
2.	2483.500	71.63	-2.35	69.28	74.00	-4.72	Peak	Horizontal
1.	2459.610	100.39	-2.48	97.91	---	---	Average	Horizontal
2.	2483.500	49.67	-2.35	47.32	54.00	-6.68	Average	Horizontal



## 7.7. PEAK POWER SPECTRAL DENSITY MEASUREMENT

### 7.7.1. LIMITS

According to §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

According to §15.247(f), the digital modulation operation of the hybrid system, with the frequency hopping turned off, shall comply with the power density requirements of paragraph (d) of this section.

### 7.7.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	N9010A	MY52221469	02/21/2017	02/20/2018

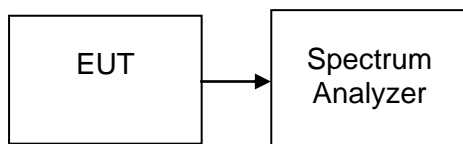
### 7.7.3. TEST PROCEDURES (please refer to measurement standard)

§15.247(e) specifies a conducted power spectral density (PSD) limit of 8 dBm in any 3 kHz band segment within the fundamental EBW during any time interval of continuous transmission. The same method as used to determine the conducted output power shall be used to determine the power spectral density (i.e., if peak-detected fundamental power was measured then use the peak PSD procedure and if average fundamental power was measured then use the average PSD procedure).

### 10.2 Method PKPSD (peak PSD)

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{RBW}$ .
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 7.7.4. TEST SETUP





## 7.7.5. TEST RESULTS

*No non-compliance noted*

### Test Data

#### **Test mode: IEEE 802.11b (Antenna 0)**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-4.68	8	PASS
Mid	2437	-3.60		PASS
High	2462	-4.33		PASS

#### **Test mode: IEEE 802.11b (Antenna 1)**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-5.27	8	PASS
Mid	2437	-4.81		PASS
High	2462	-5.01		PASS

#### **Test mode: IEEE 802.11b (Antenna 2)**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-4.24	8	PASS
Mid	2437	-4.91		PASS
High	2462	-4.37		PASS

#### **Test mode: IEEE 802.11g (Antenna 0)**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-6.82	8	PASS
Mid	2437	-7.03		PASS
High	2462	-6.31		PASS

#### **Test mode: IEEE 802.11g (Antenna 1)**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-6.70	8	PASS
Mid	2437	-6.85		PASS
High	2462	-6.85		PASS

**Test mode: IEEE 802.11g (Antenna 2)**

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Test Result
Low	2412	-7.13	8	PASS
Mid	2437	-6.87		PASS
High	2462	-6.71		PASS

**Test mode: IEEE 802.11n HT20 MHz (Combine with Antenna 0 and Antenna 1 and Antenna 2)**

Channel	Frequency (MHz)	PPSD (dBm)				Limit (dBm)	Test Result
		Antenna 0	Antenna 1	Antenna 2	Total		
Low	2412	-8.28	-9.55	-8.77	-4.06	6.23	PASS
Mid	2437	-9.02	-9.20	-8.68	-5.83		PASS
High	2462	-9.69	-8.12	-9.14	-6.40		PASS

**Test mode: IEEE 802.11n HT40 MHz (Combine with Antenna 0 and Antenna 1 and Antenna 2)**

Channel	Frequency (MHz)	PPSD (dBm)				Limit (dBm)	Test Result
		Antenna 0	Antenna 1	Antenna 2	Total		
Low	2422	-11.20	-9.73	-10.46	-5.65	6.23	PASS
Mid	2437	-10.85	-10.60	-11.45	-7.71		PASS
High	2452	-10.42	-11.32	-9.68	-7.84		PASS

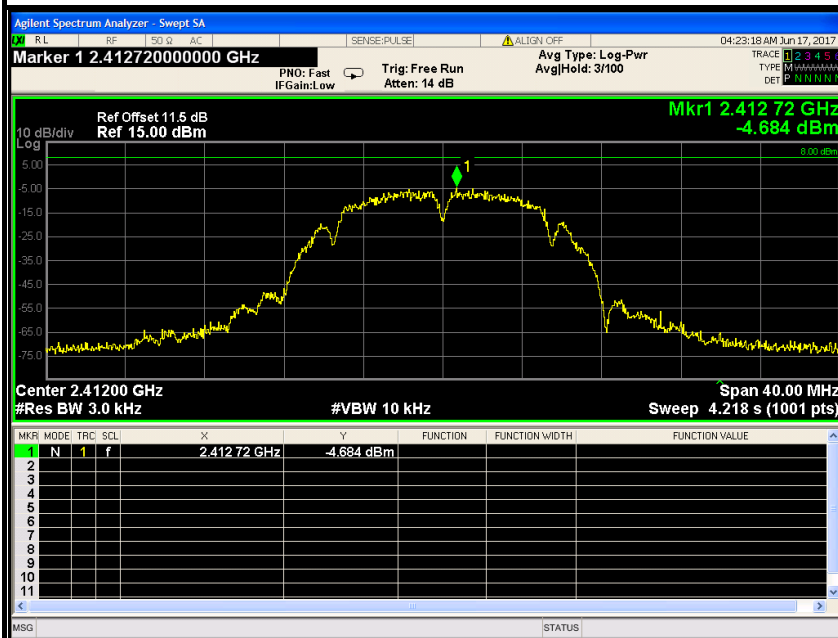




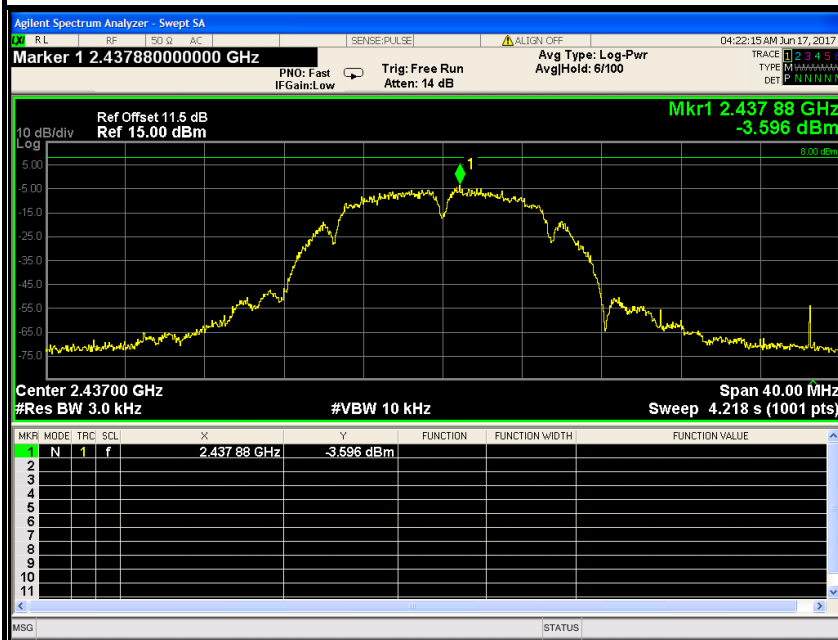
## Test Plot

### IEEE 802.11b mode (Antenna 0)

#### PPSD (CH Low)

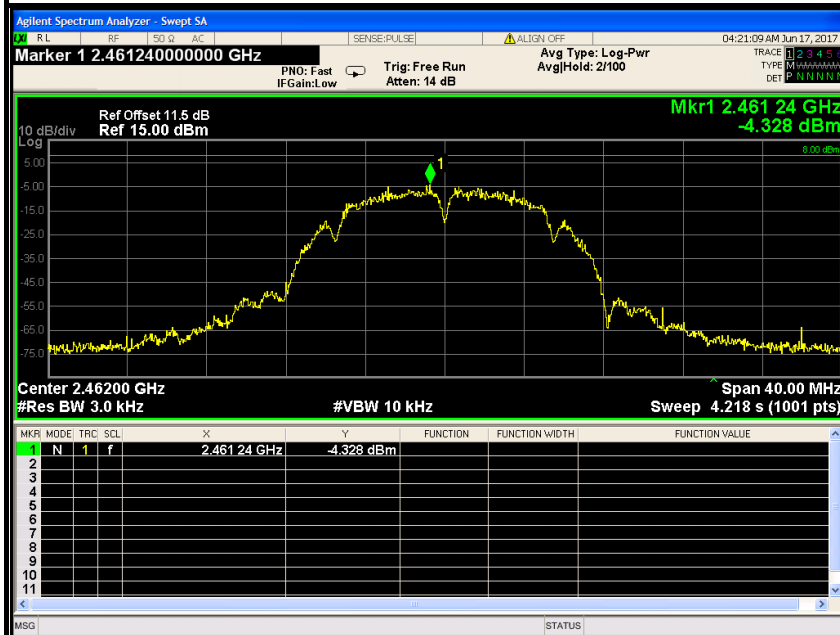


#### PPSD (CH Mid)





## PPSD (CH High)



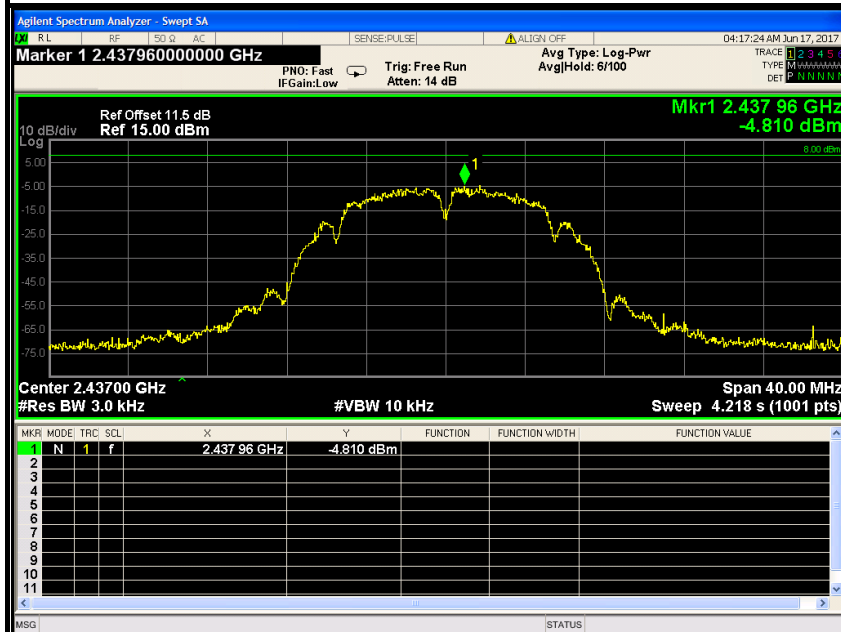
## IEEE 802.11b mode (Antenna 1)

## PPSD (CH Low)

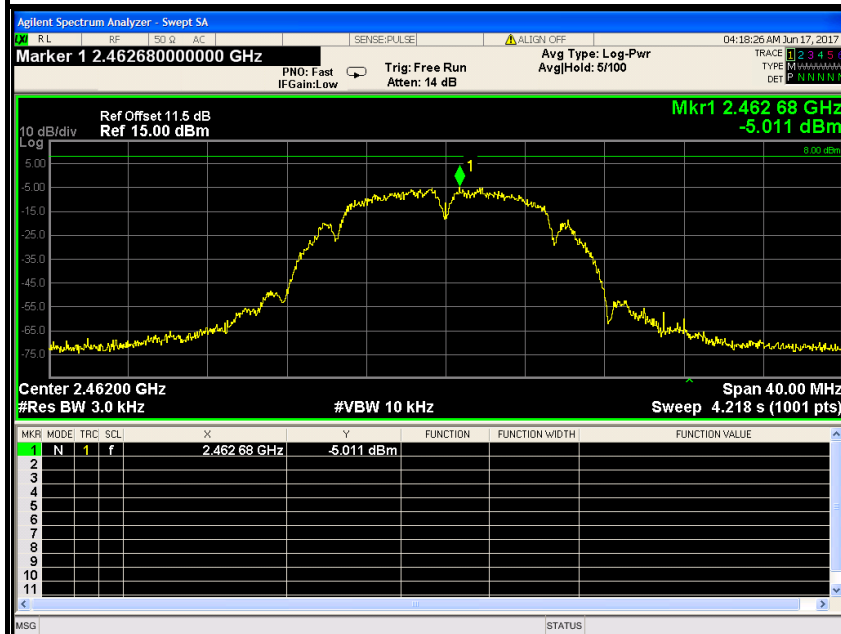




## PPSD (CH Mid)



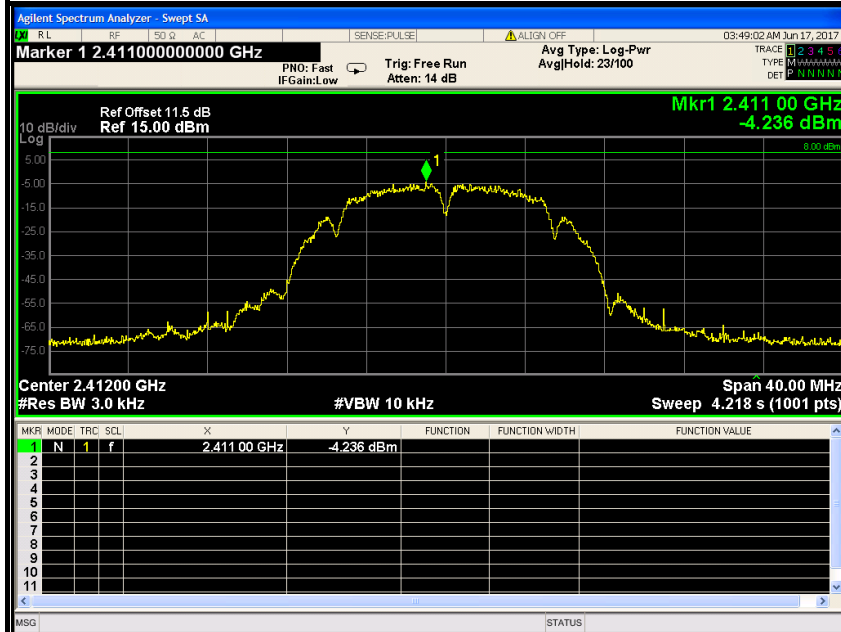
## PPSD (CH High)



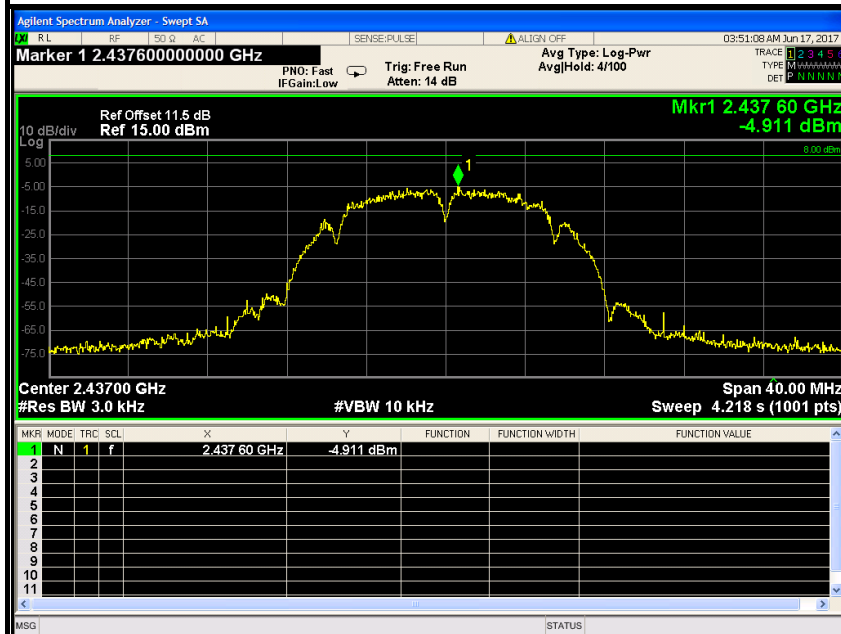


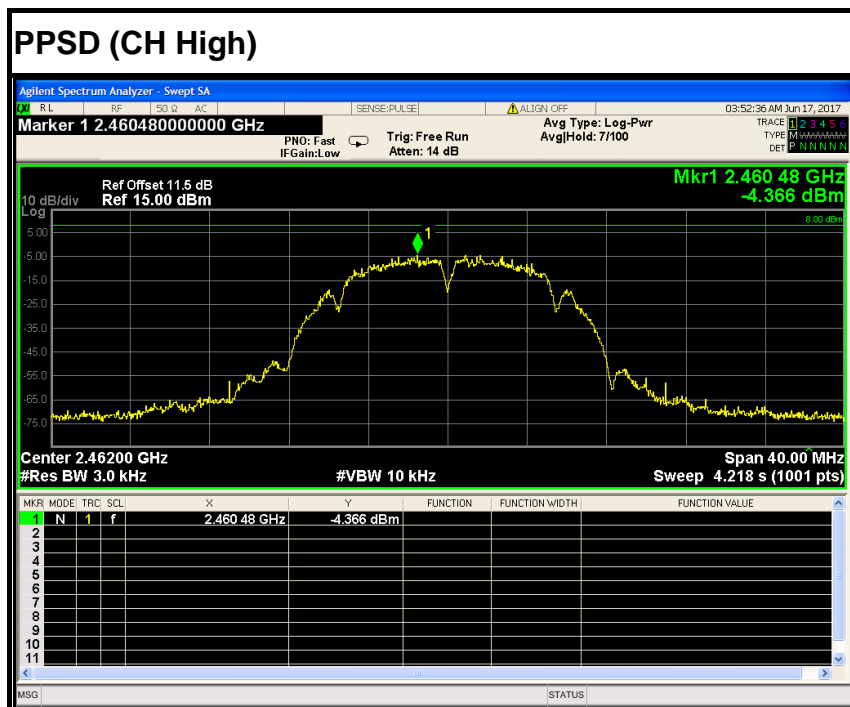
## IEEE 802.11b mode (Antenna 2)

### PPSD (CH Low)



### PPSD (CH Mid)

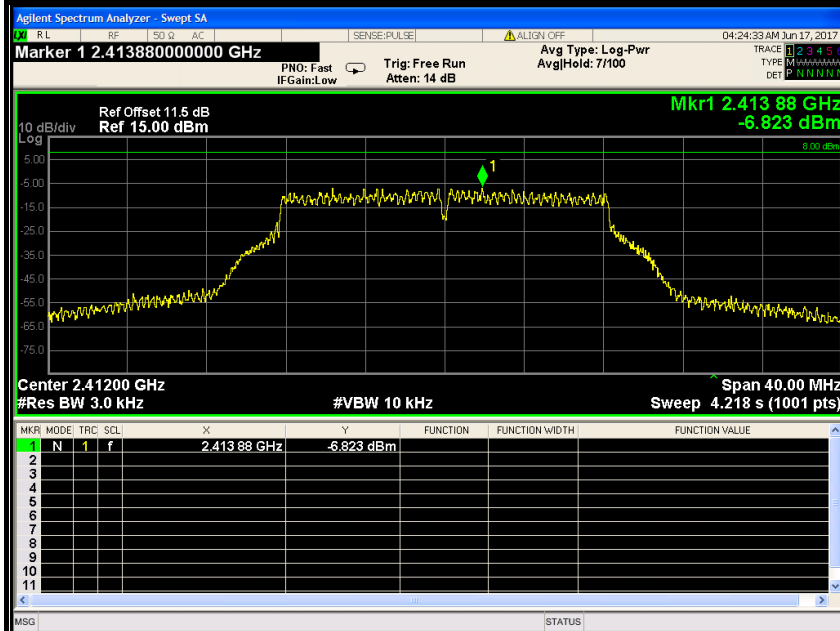




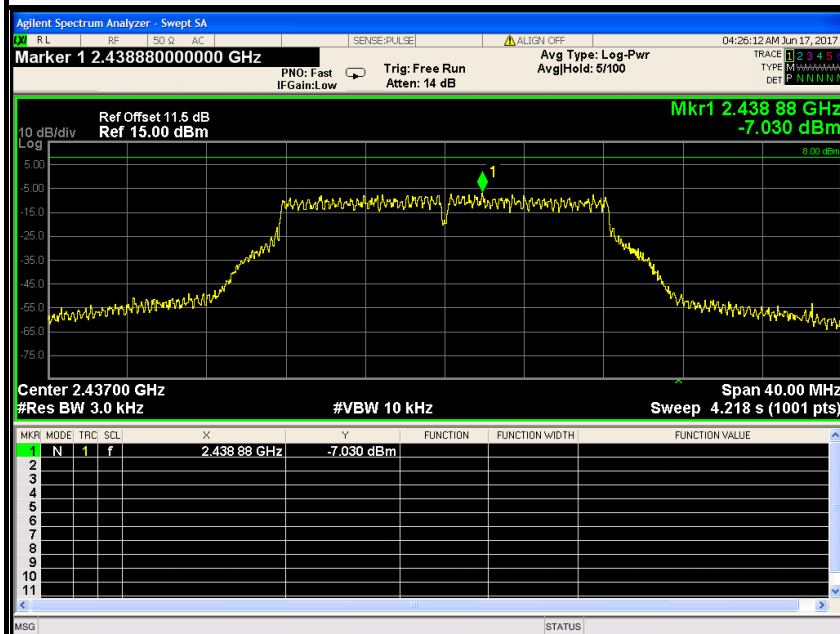


## IEEE 802.11g mode (Antenna 0)

## PPSD (CH Low)

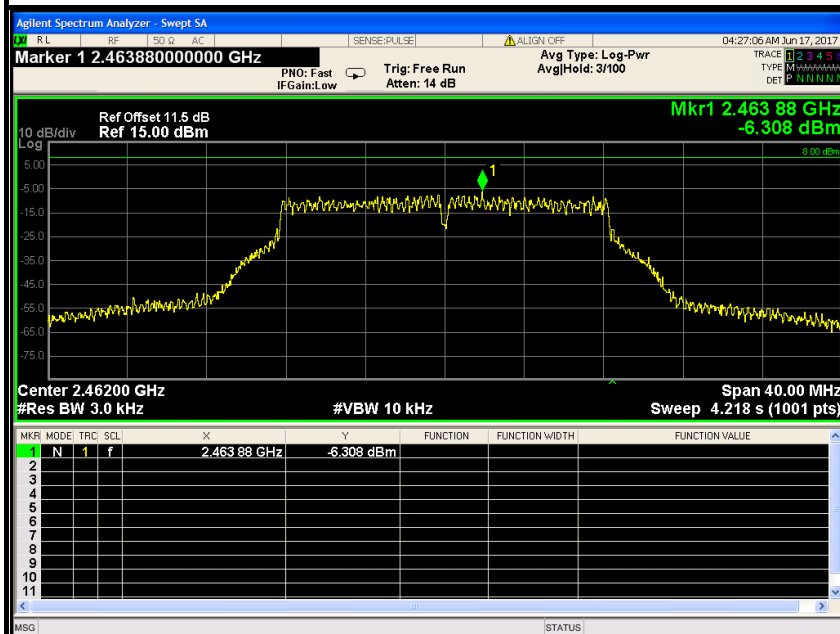


## PPSD (CH Mid)



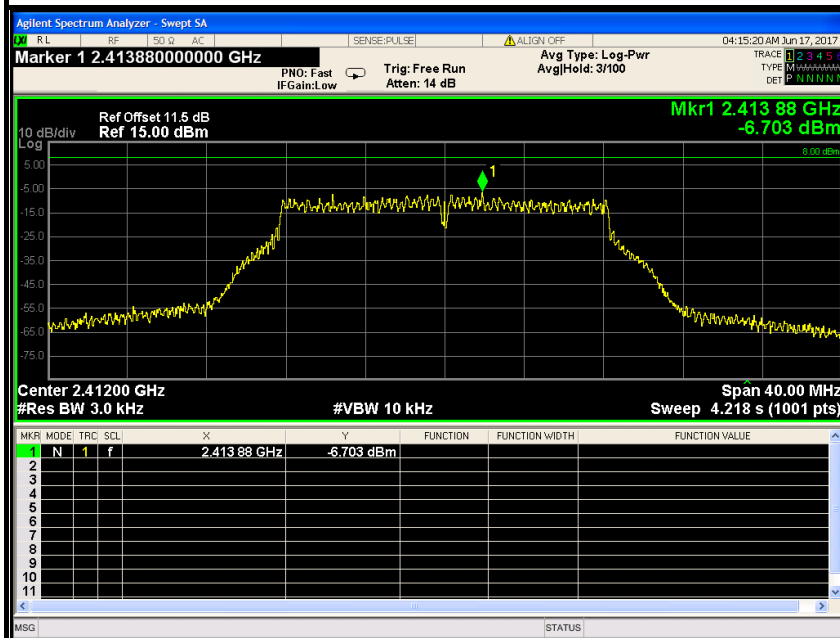


## PPSD (CH High)



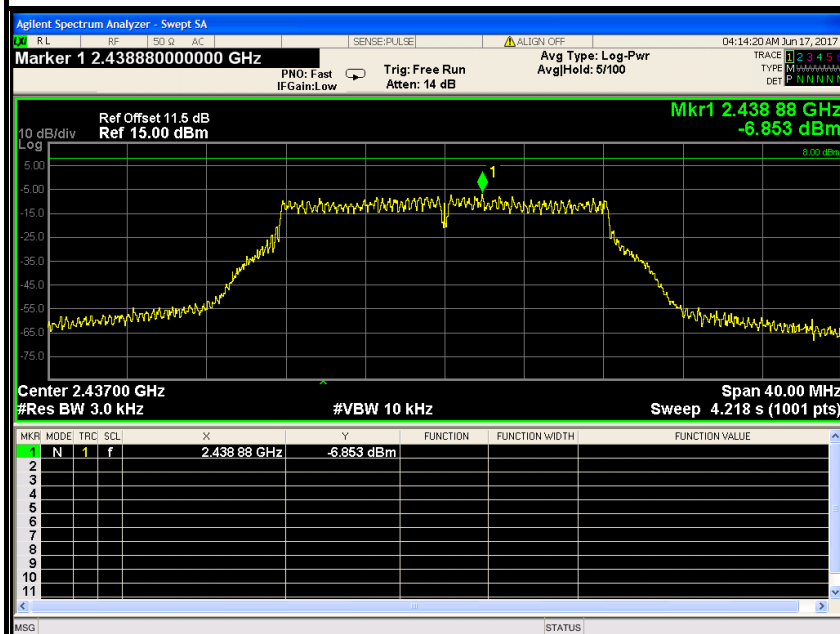
## IEEE 802.11g mode (Antenna 1)

## PPSD (CH Low)

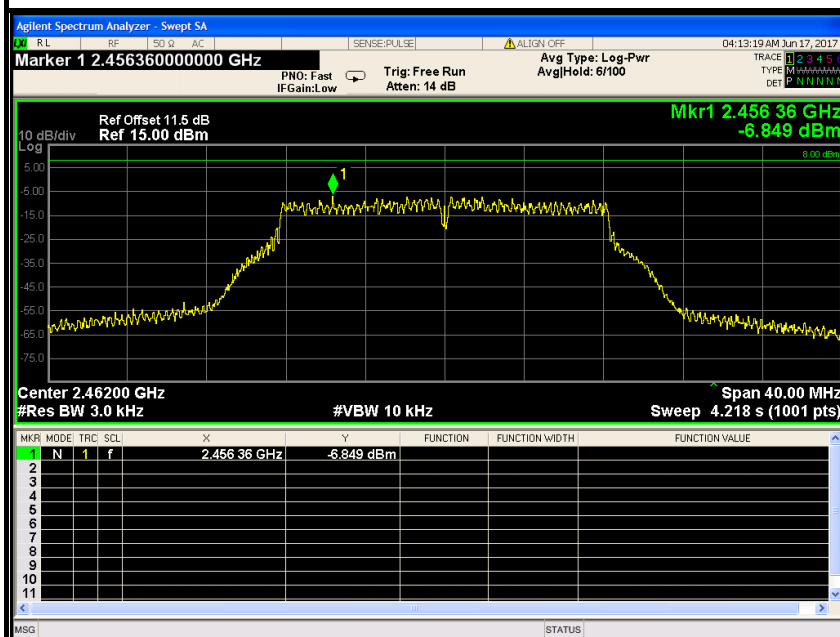




## PPSD (CH Mid)



## PPSD (CH High)

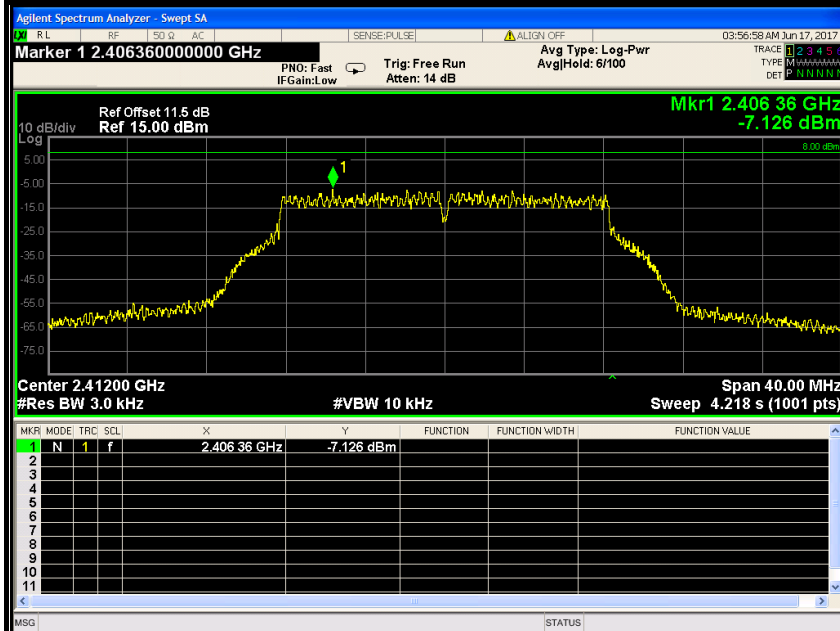




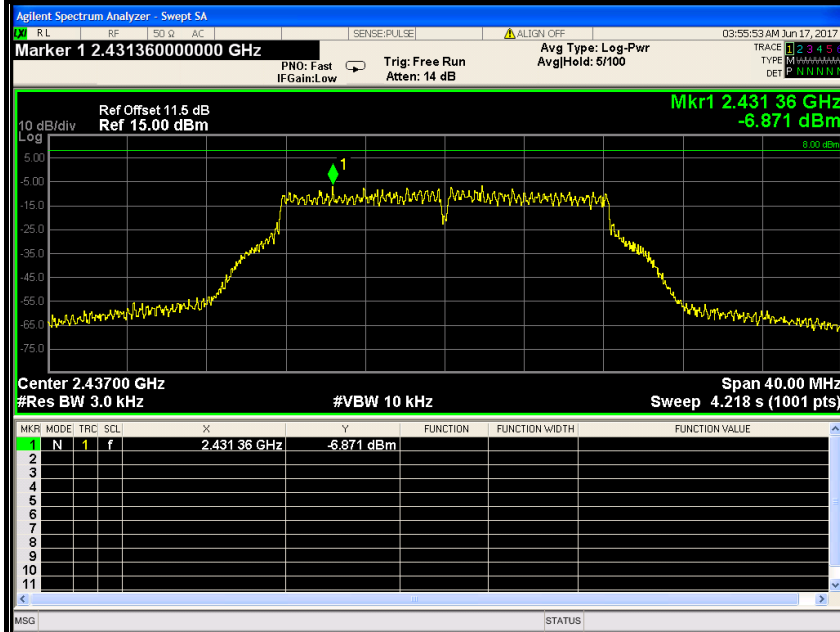


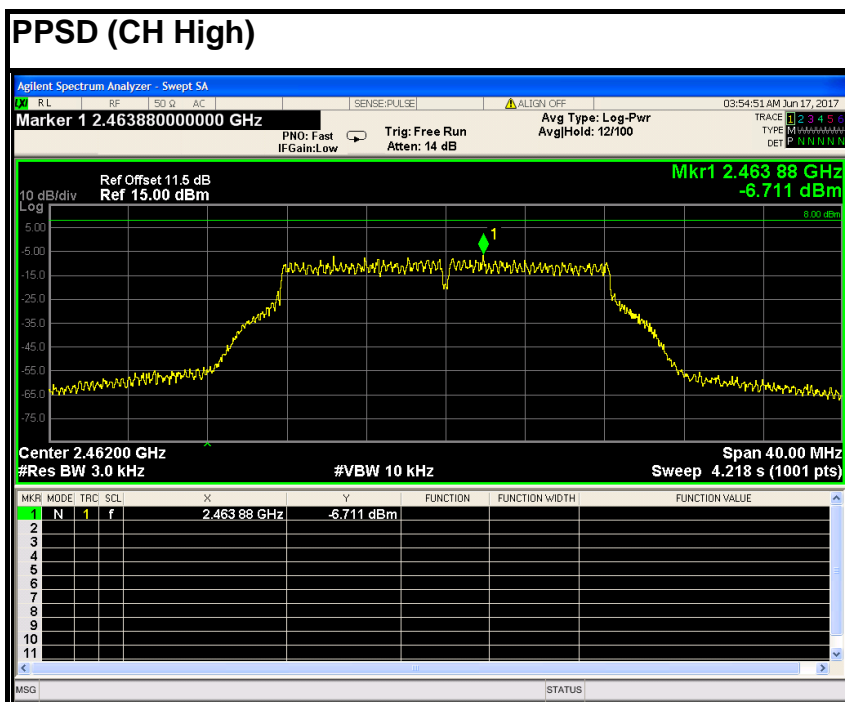
## IEEE 802.11g mode (Antenna 2)

### PPSD (CH Low)



### PPSD (CH Mid)

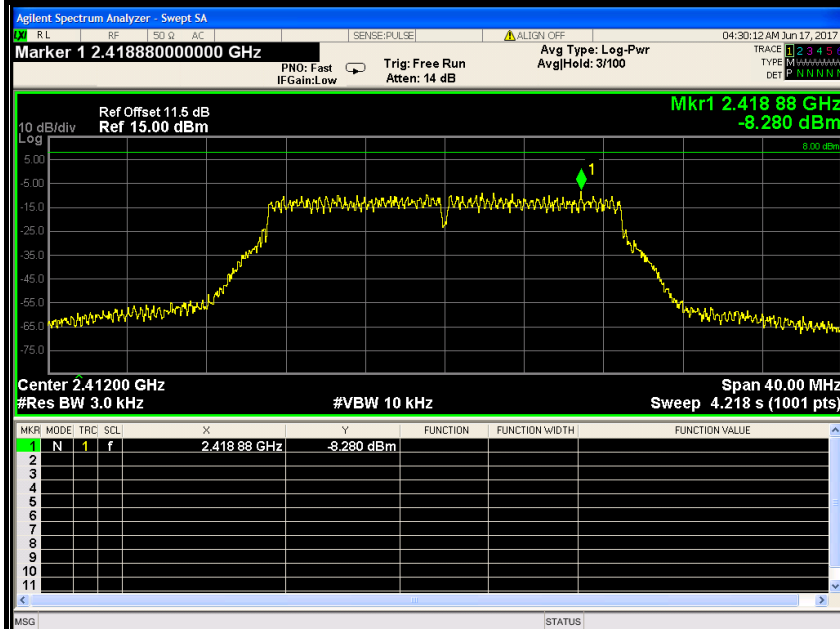




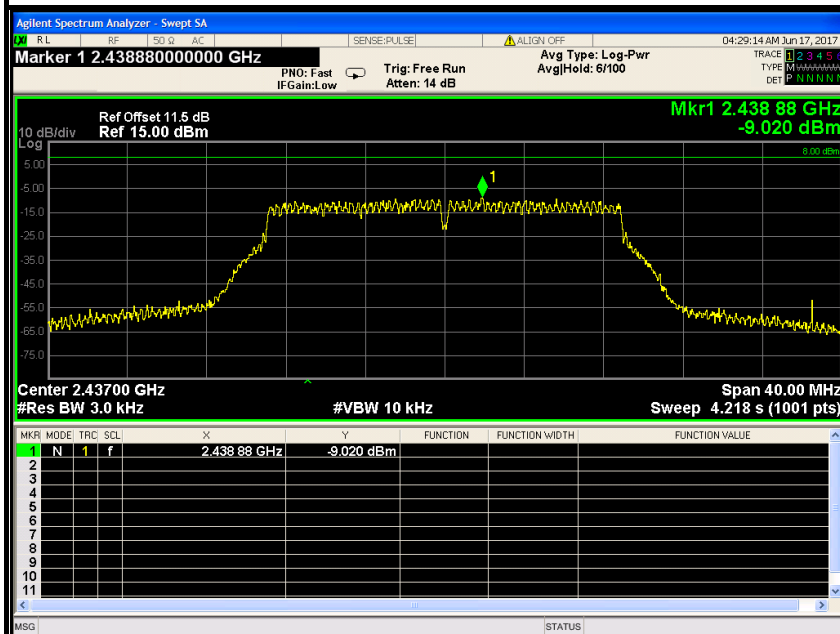


IEEE 802.11n HT20 MHz mode (Antenna 0)

PPSD (CH Low)

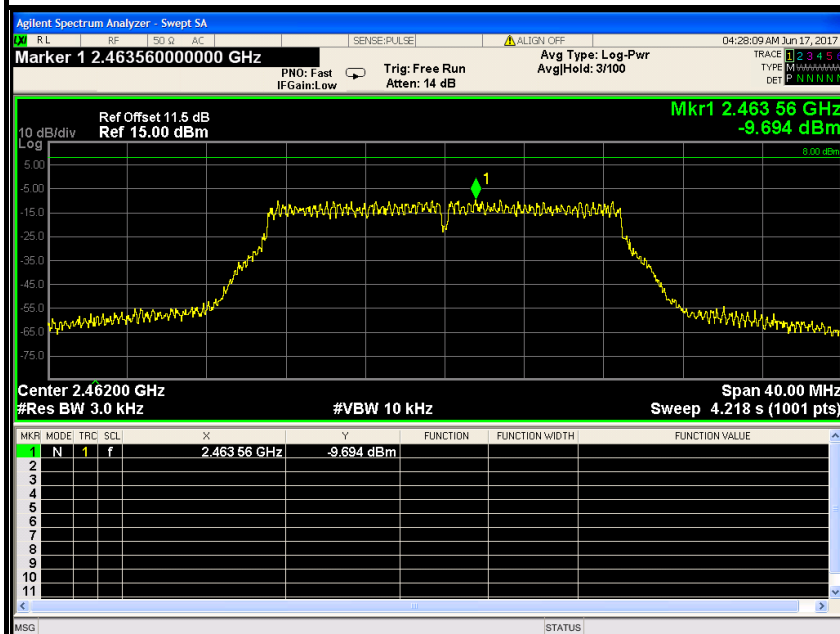


PPSD (CH Mid)



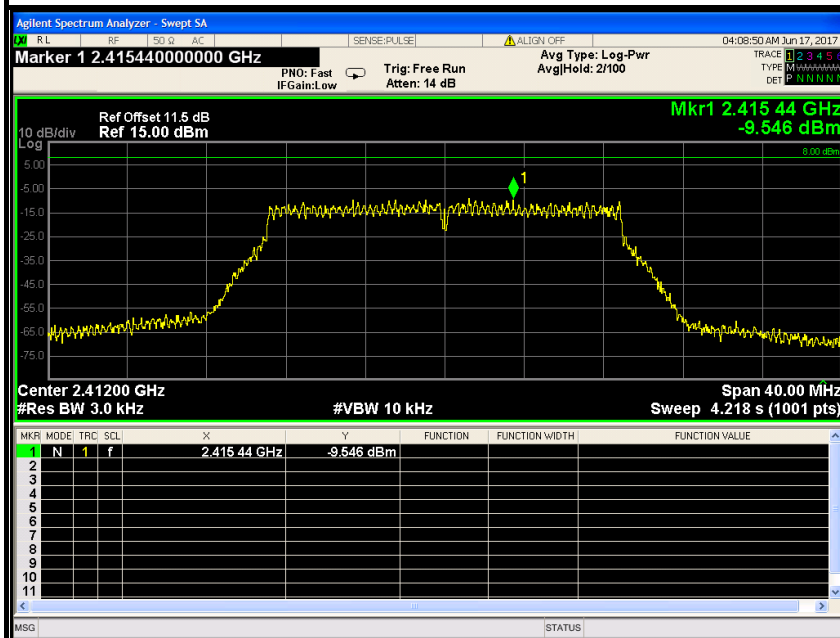


## PPSD (CH High)



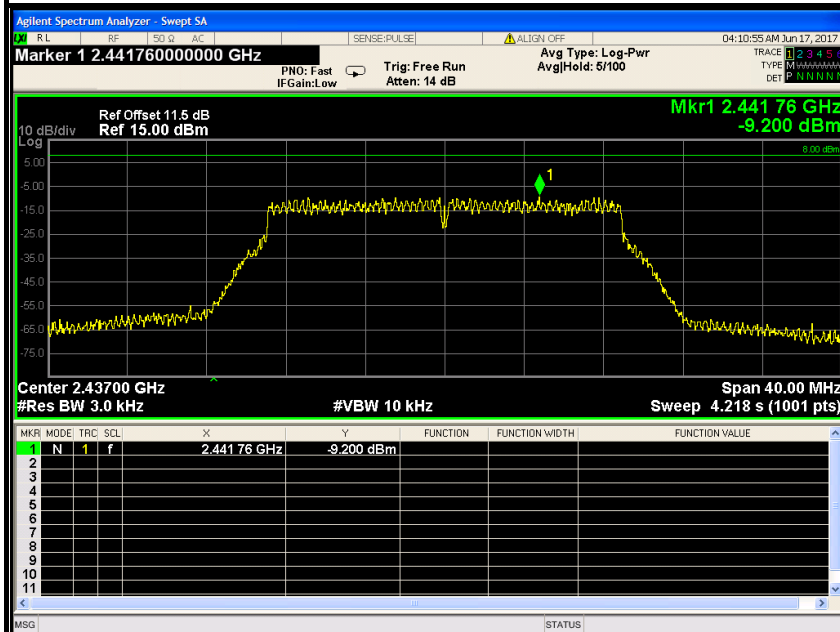
## IEEE 802.11n HT20 MHz mode (Antenna 1)

## PPSD (CH Low)

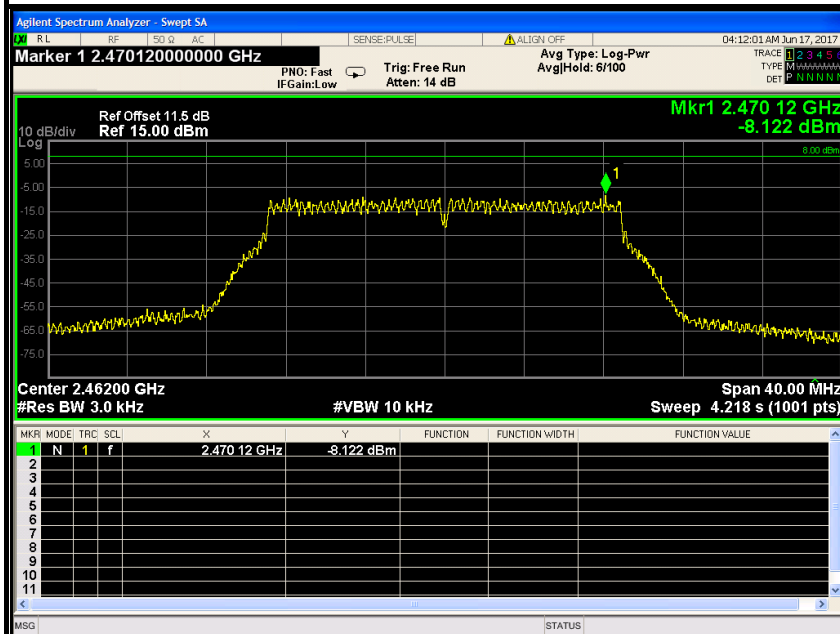




### PPSD (CH Mid)



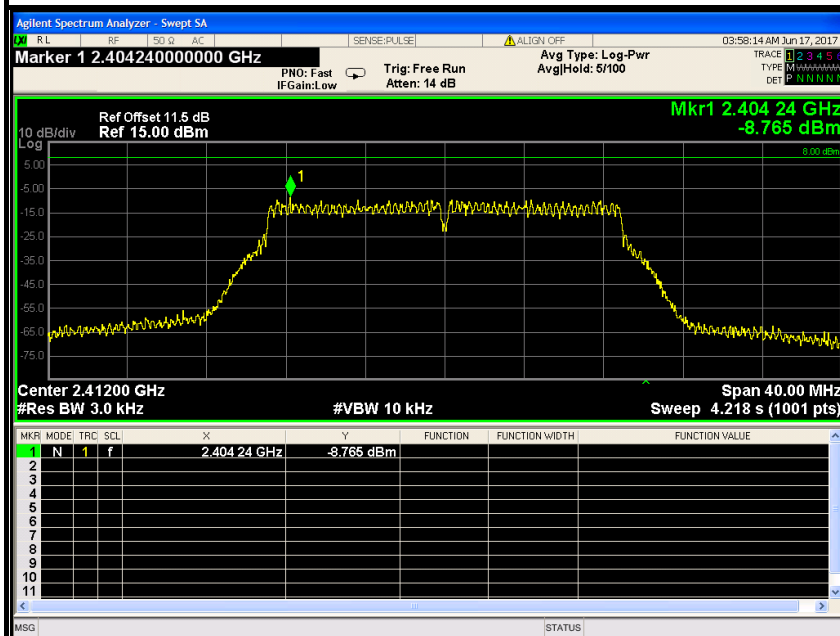
### PPSD (CH High)



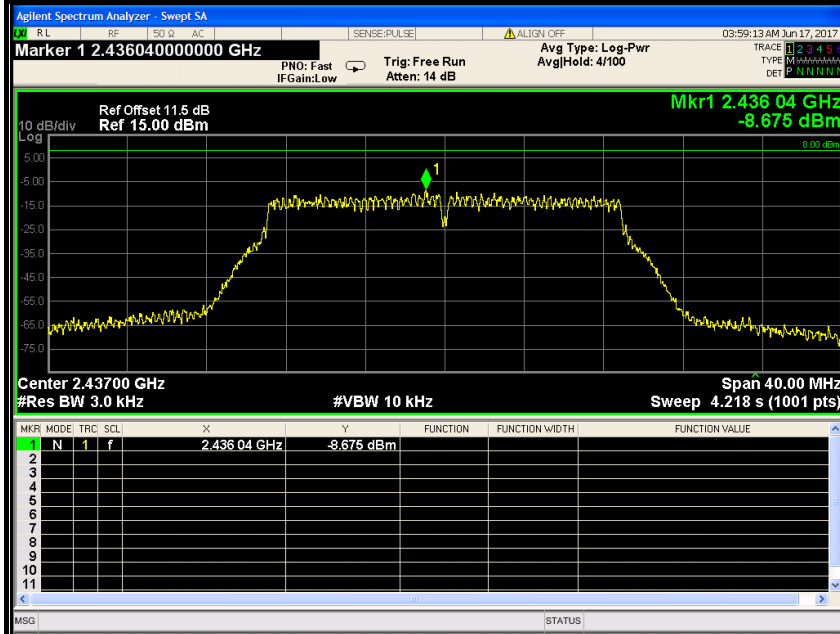


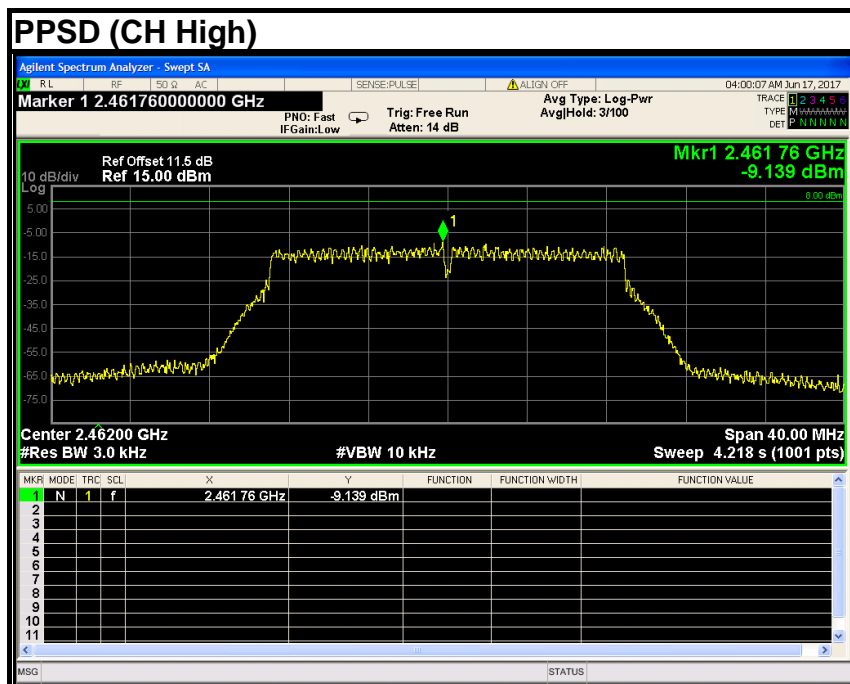
## IEEE 802.11n HT20 MHz mode (Antenna 2)

## PPSD (CH Low)



## PPSD (CH Mid)

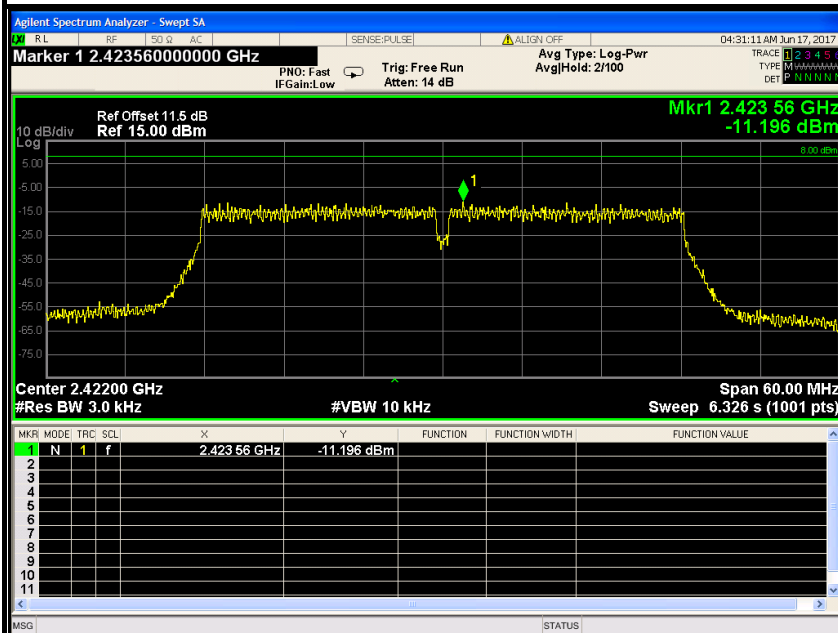




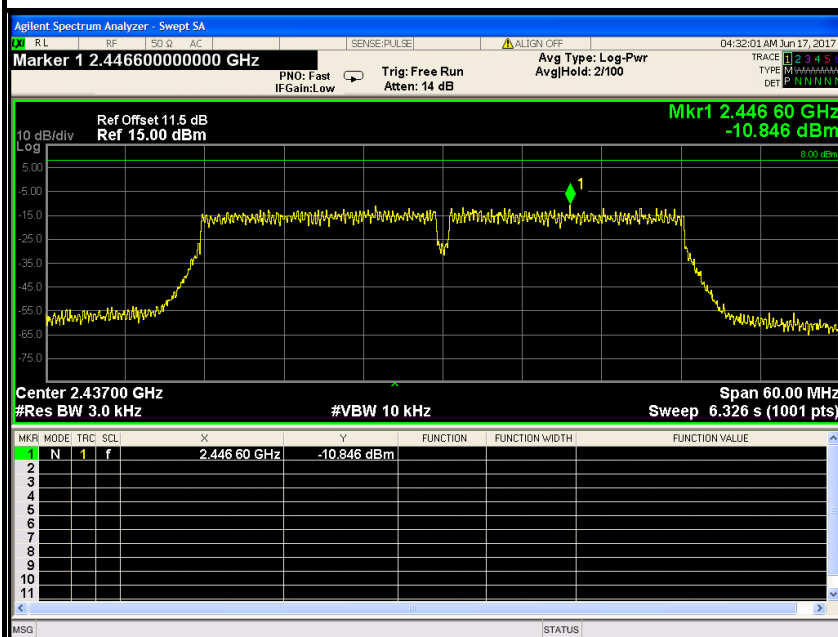


## IEEE 802.11n HT40 MHz mode (Antenna 0)

## PPSD (CH Low)



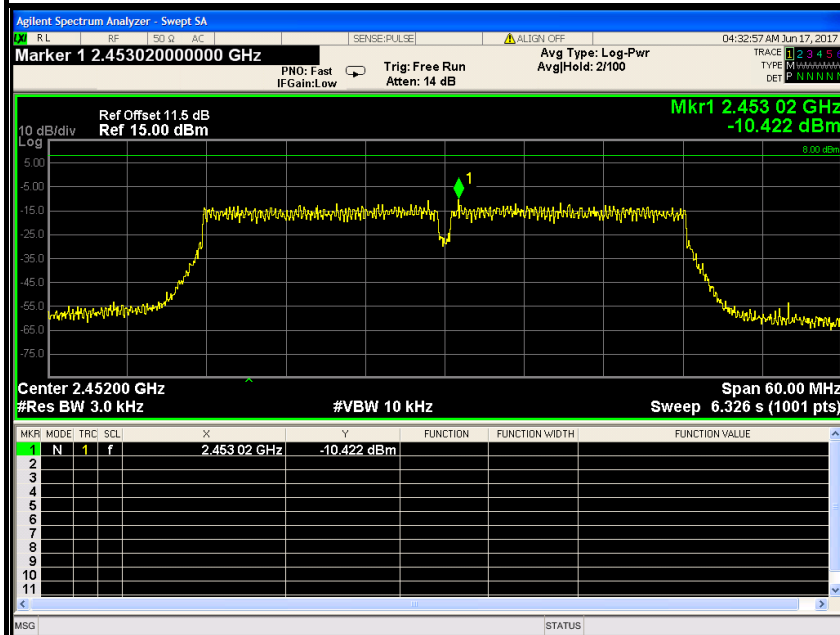
## PPSD (CH Mid)





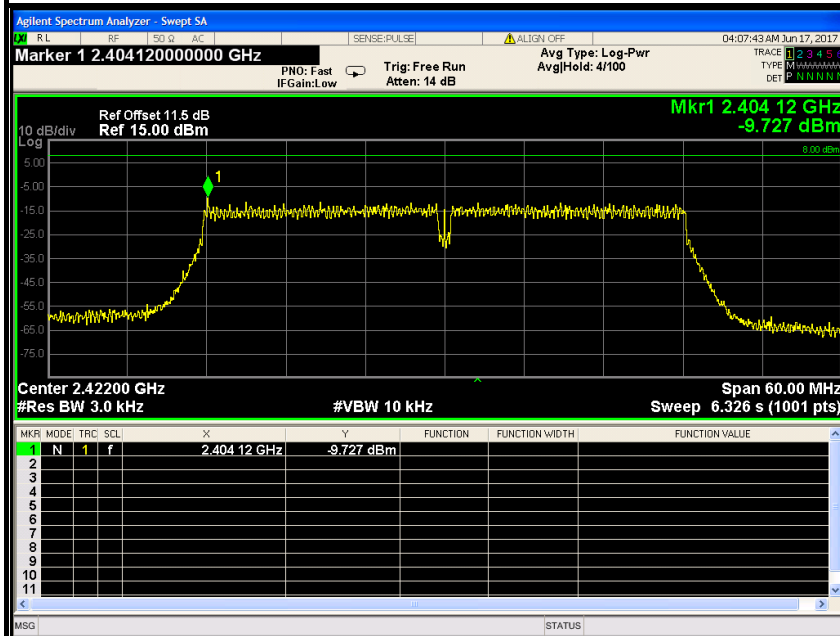


## PPSD (CH High)



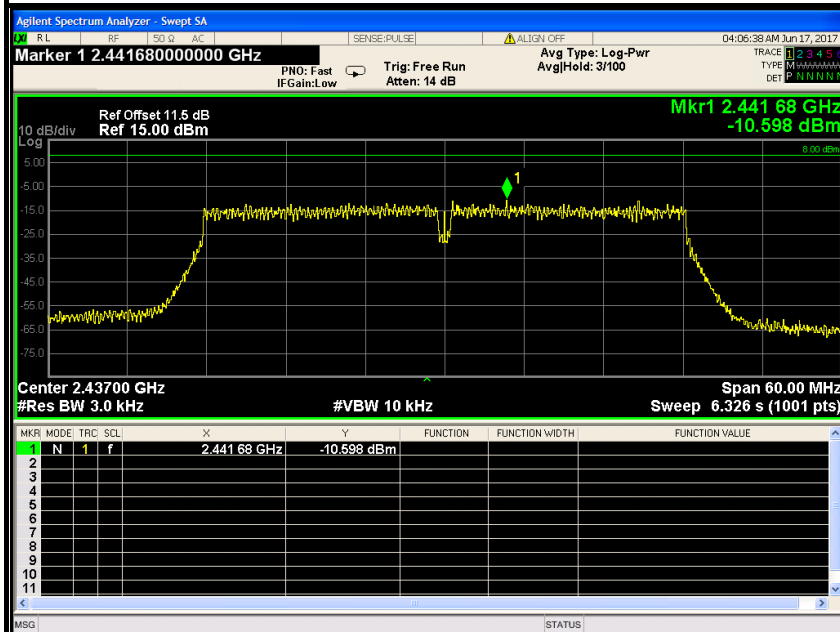
## IEEE 802.11n HT40 MHz mode (Antenna 1)

## PPSD (CH Low)

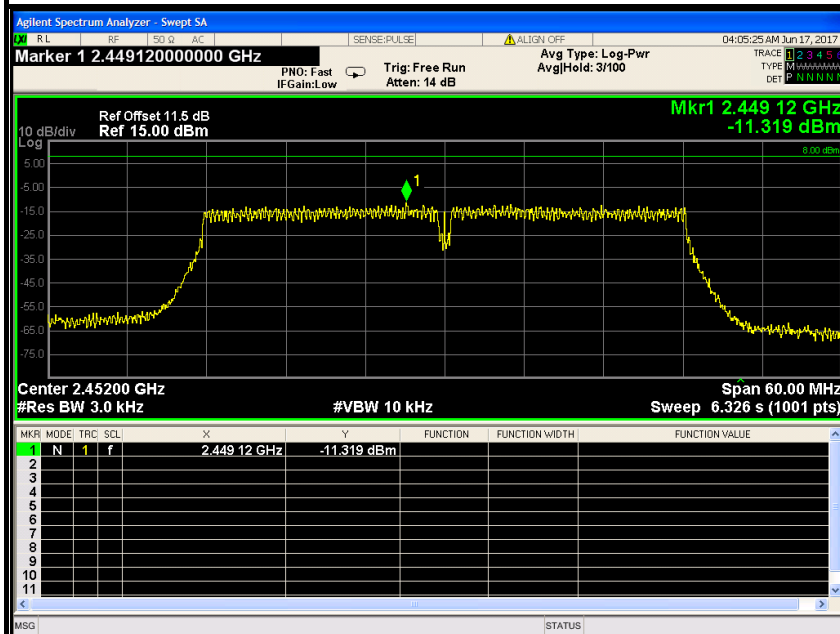




### PPSD (CH Mid)



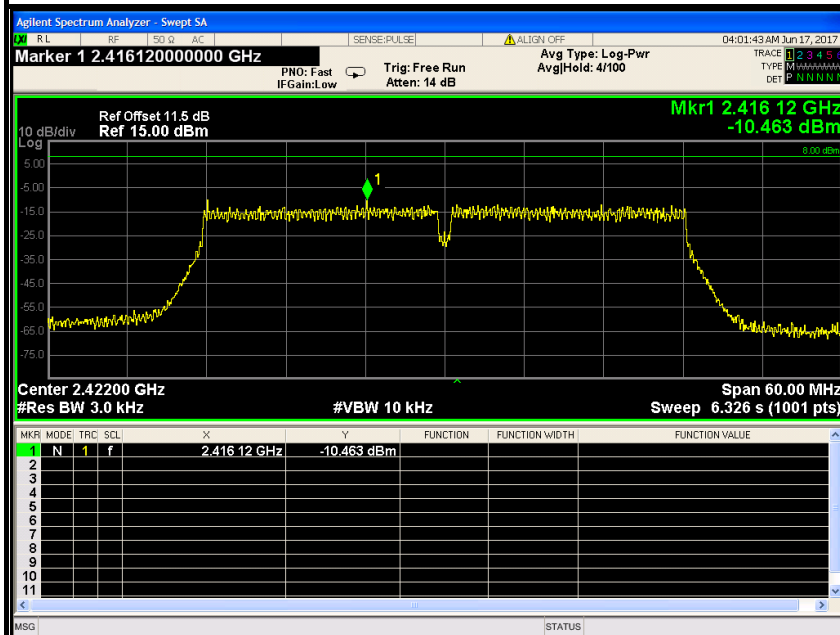
### PPSD (CH High)



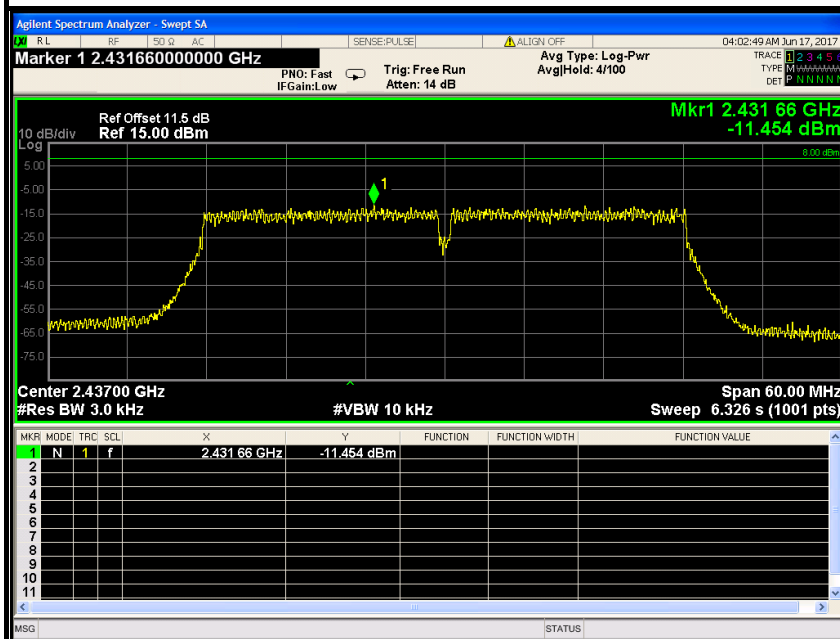


## IEEE 802.11n HT40 MHz mode (Antenna 2)

## PPSD (CH Low)



## PPSD (CH Mid)





## PPSD (CH High)

