

Diagram 1-40 2.4G N40 2412 HOR 7G-18G

FCC CLASS B HF7.0_7G-18G_HOR

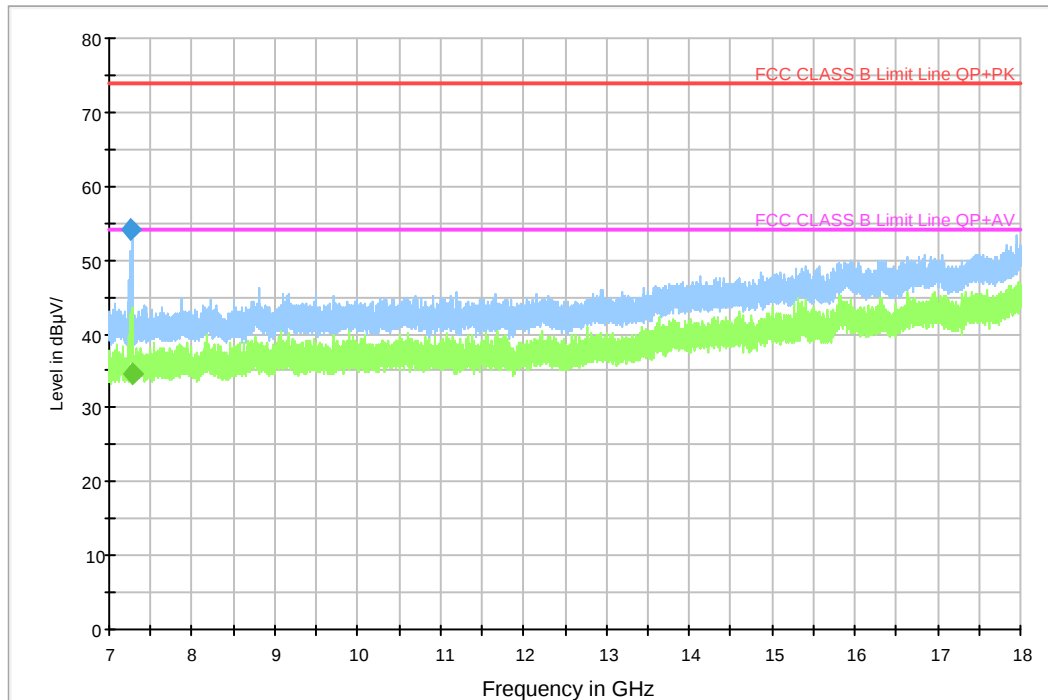


Diagram 1-41 2.4G N40 2412 VER 1G-7G

FCC CLASS B HF3.0_1G-7G_VER

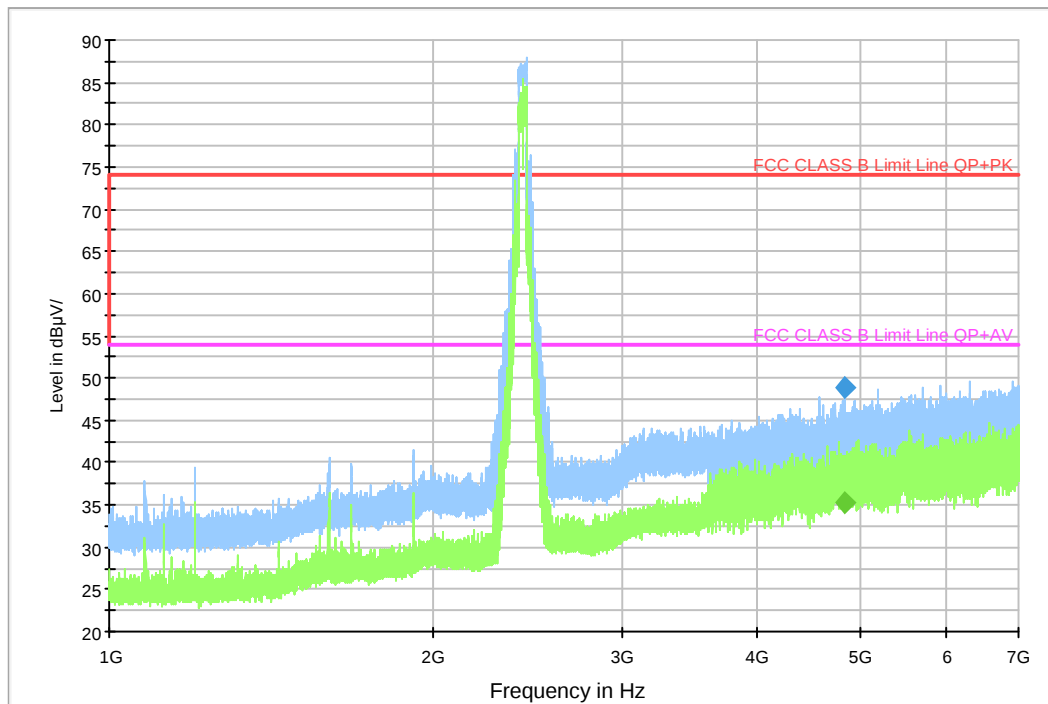
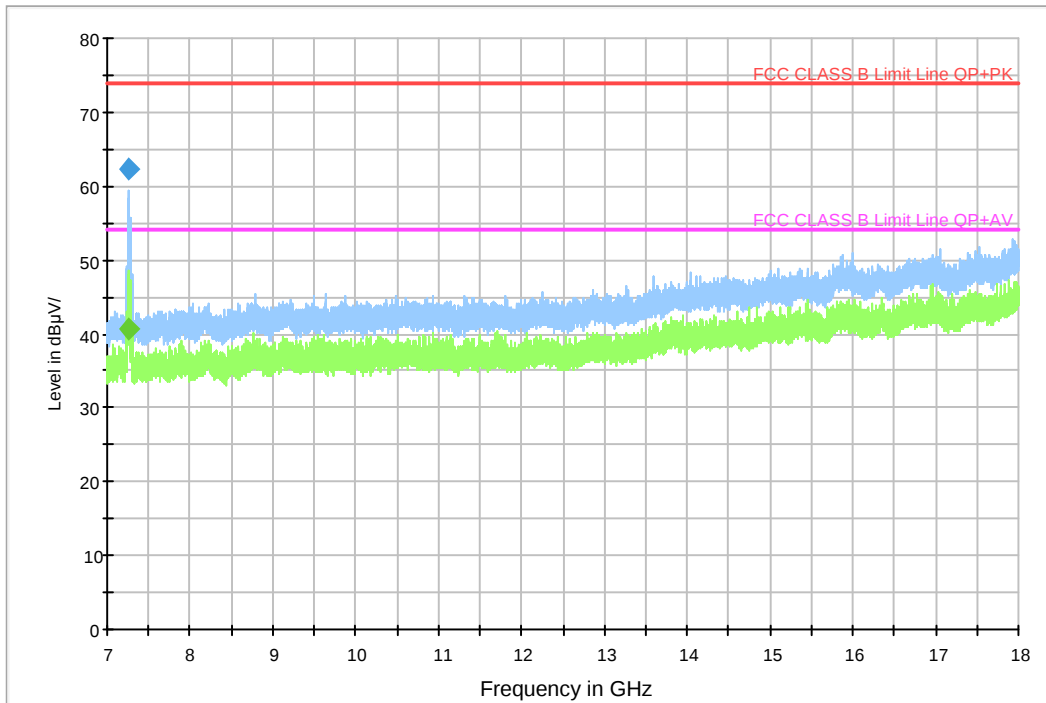


Diagram 1-42 2.4G N40 2412 VER 7G-18G

FCC CLASS B HF7.0_7G-18G_VER



Test Mode	802.11.N40-2437MHz					
Frequency (MHz)	Reading (dBμV/m)	Polarization	Margin (dB)	Limit (dBμV/m)	Detector (PK/AV)	Comment
4927.758334	48.4	H	25.6	74.0	PK	Diagram 1-43
4920.234333	36.0	H	18.0	54.0	AV	
7328.675334	49.9	H	24.1	74.0	PK	Diagram 1-44
7335.324667	32.1	H	21.9	54.0	AV	
4875.432000	48.6	V	25.4	74.0	PK	Diagram 1-45
4879.915334	35.8	V	18.2	54.0	AV	
7332.028333	58.6	V	15.4	74.0	PK	Diagram 1-46
7332.308666	36.8	V	17.2	54.0	AV	

Diagram 1-43 2.4G N40 2437 HOR 1G-7G

FCC CLASS B HF3.0_1G-7G_HOR

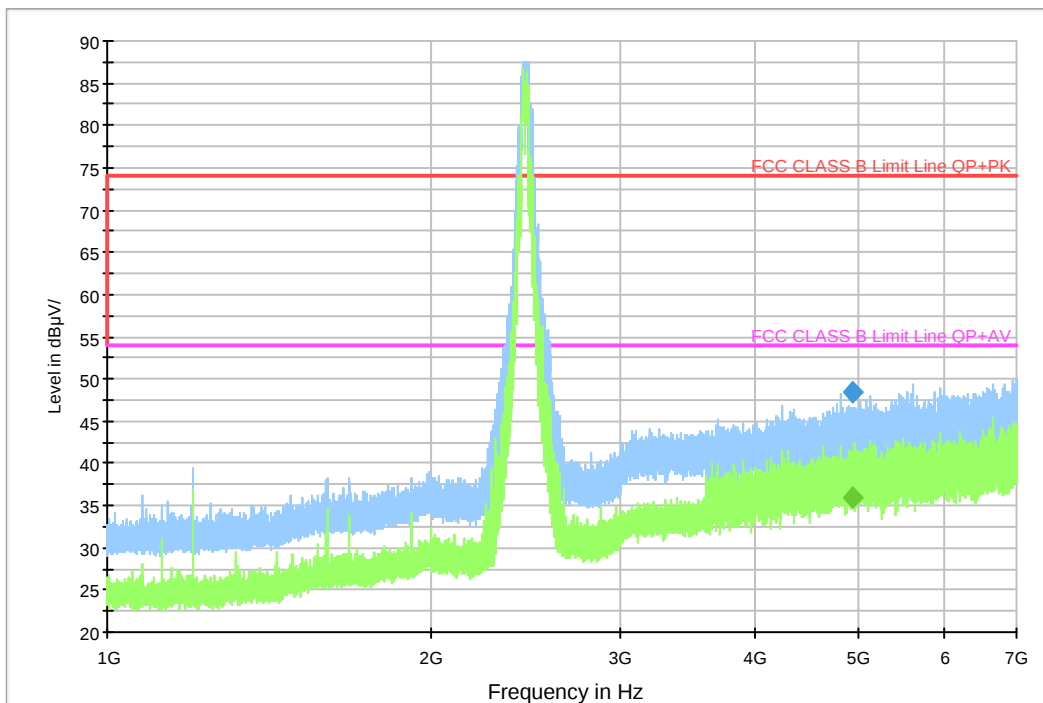


Diagram 1-44 2.4G N40 2437 HOR 7G-18G

FCC CLASS B HF7.0_7G-18G_HOR

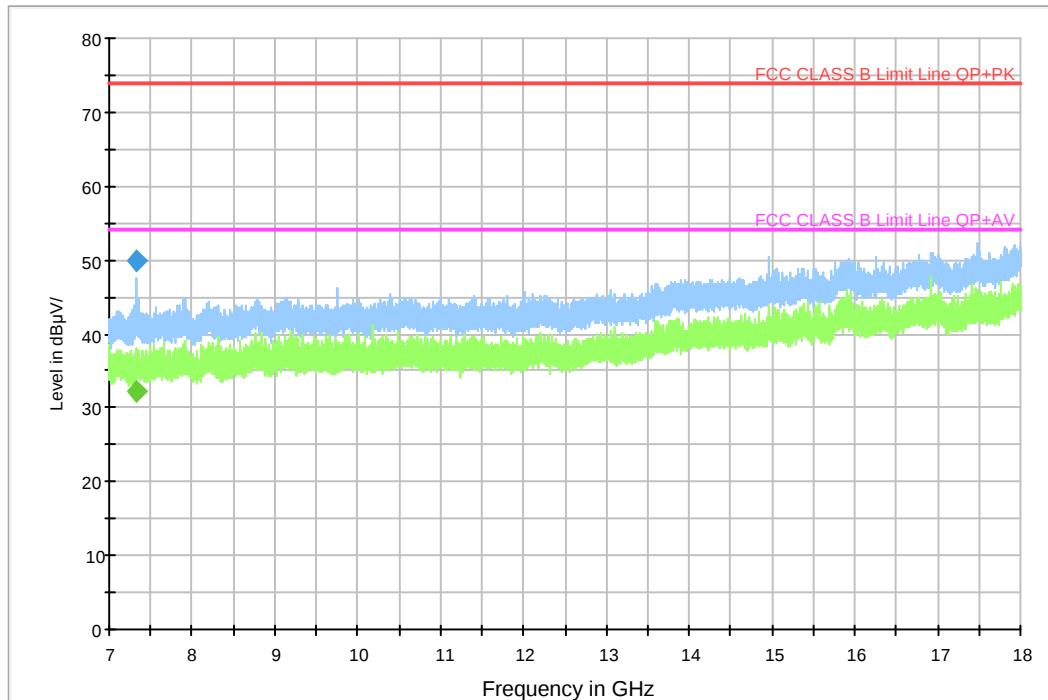


Diagram 1-45 2.4G N40 2437 VER 1G-7G

FCC CLASS B HF3.0_1G-7G_VER

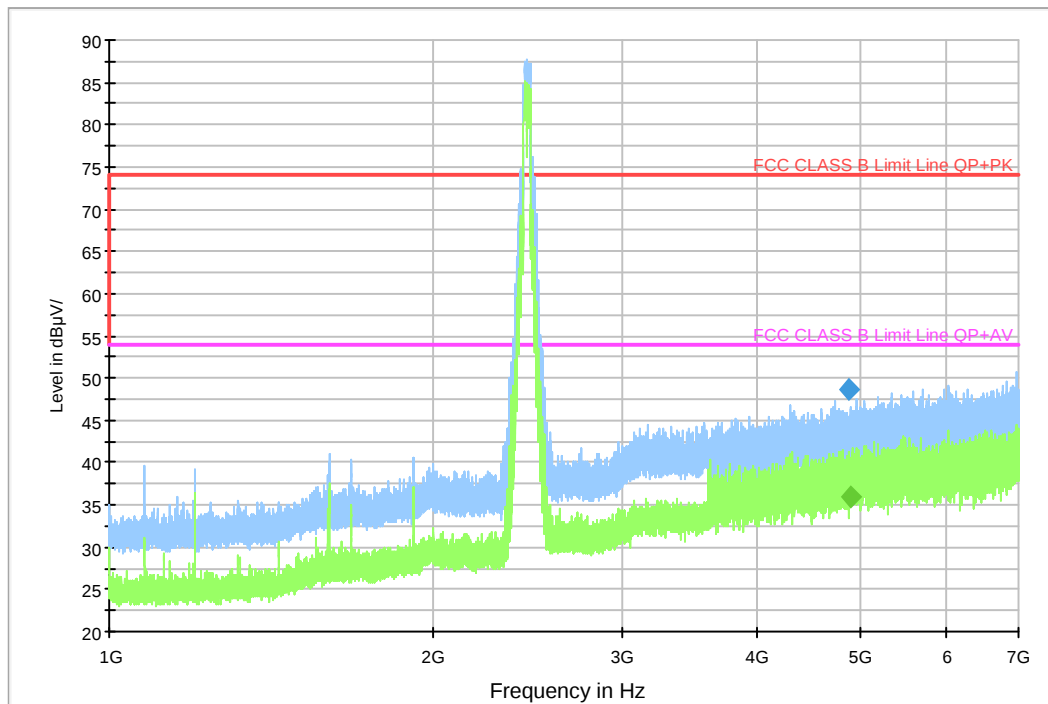
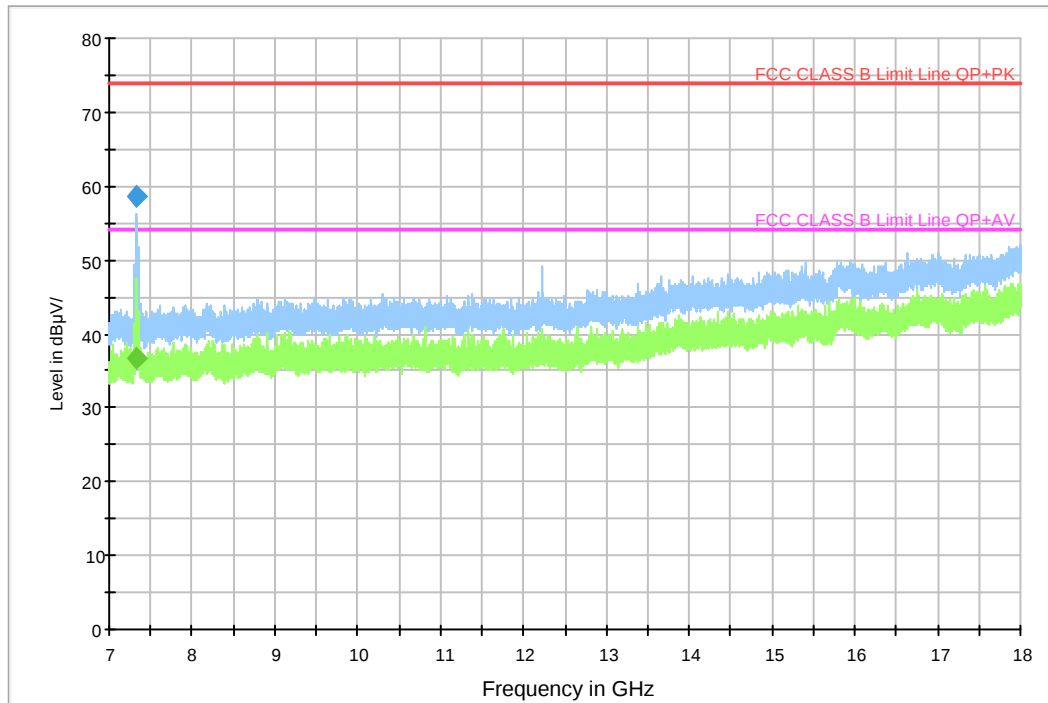


Diagram 1-46 2.4G N40 2437 VER 7G-18G

FCC CLASS B HF7.0_7G-18G_VER



Test Mode	802.11.N40-2462MHz					
Frequency (MHz)	Reading (dBμV/m)	Polarization	Margin (dB)	Limit (dBμV/m)	Detector (PK/AV)	Comment
4928.938667	48.5	H	25.5	74.0	PK	Diagram 1-47
4926.970333	35.8	H	18.2	54.0	AV	
4926.710333	48.0	V	26.0	74.0	PK	Diagram 1-49
4930.636000	35.7	V	18.3	54.0	AV	
7385.329667	50.8	V	23.2	74.0	PK	Diagram 1-50
7403.812667	33.8	V	20.2	54.0	AV	

Diagram 1-47 2.4G N40 2462 HOR 1G-7G

FCC CLASS B HF3.0_1G-7G_HOR

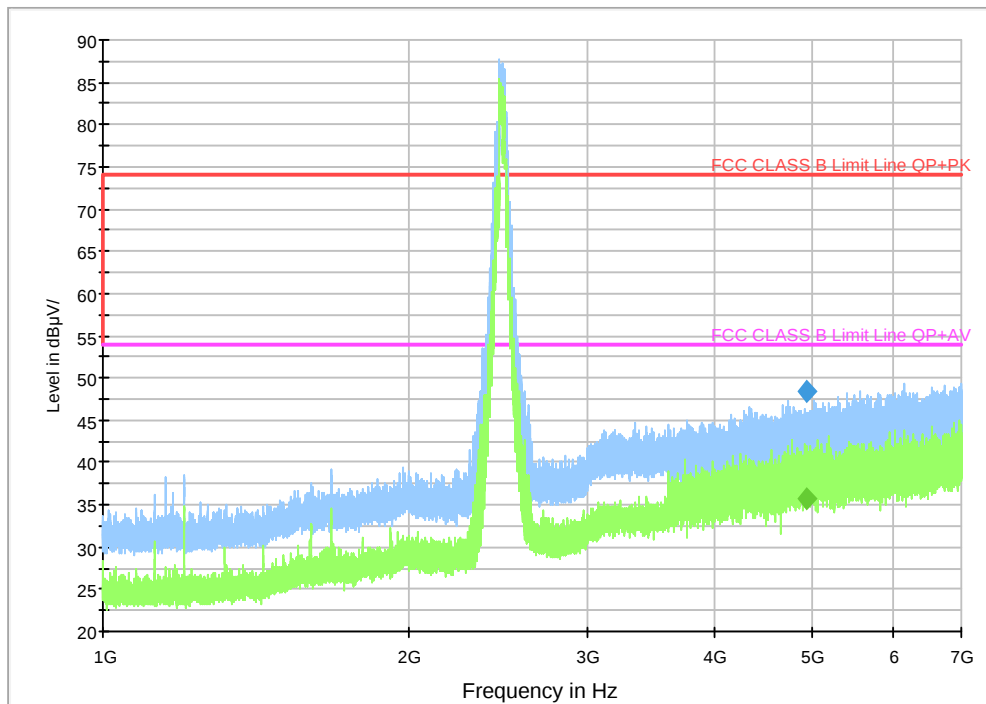


Diagram 1-48 2.4G N40 2462 HOR 7G-18G

FCC CLASS B HF7.0_7G-18G_HOR

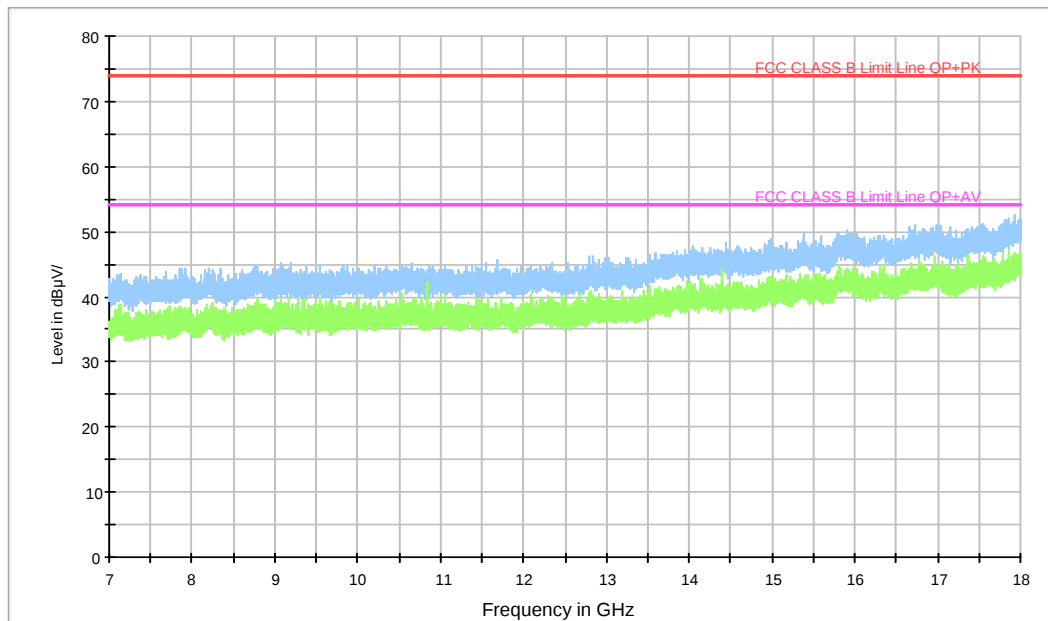


Diagram 1-49 2.4G N40 2462 VER 1G-7G

FCC CLASS B HF3.0_1G-7G_VER

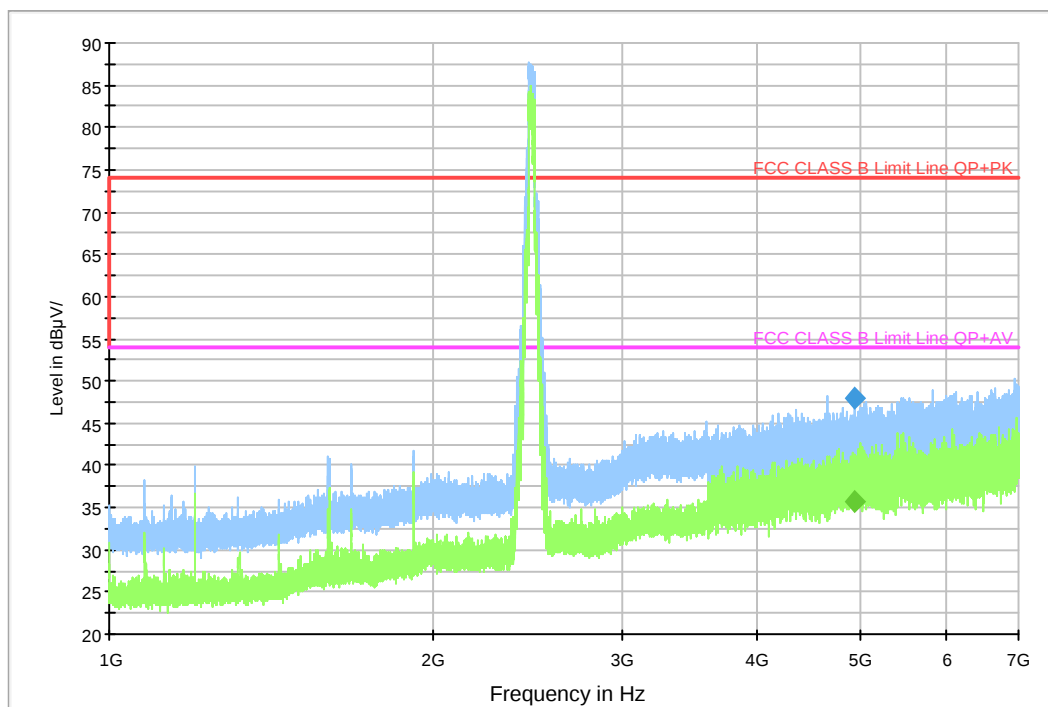
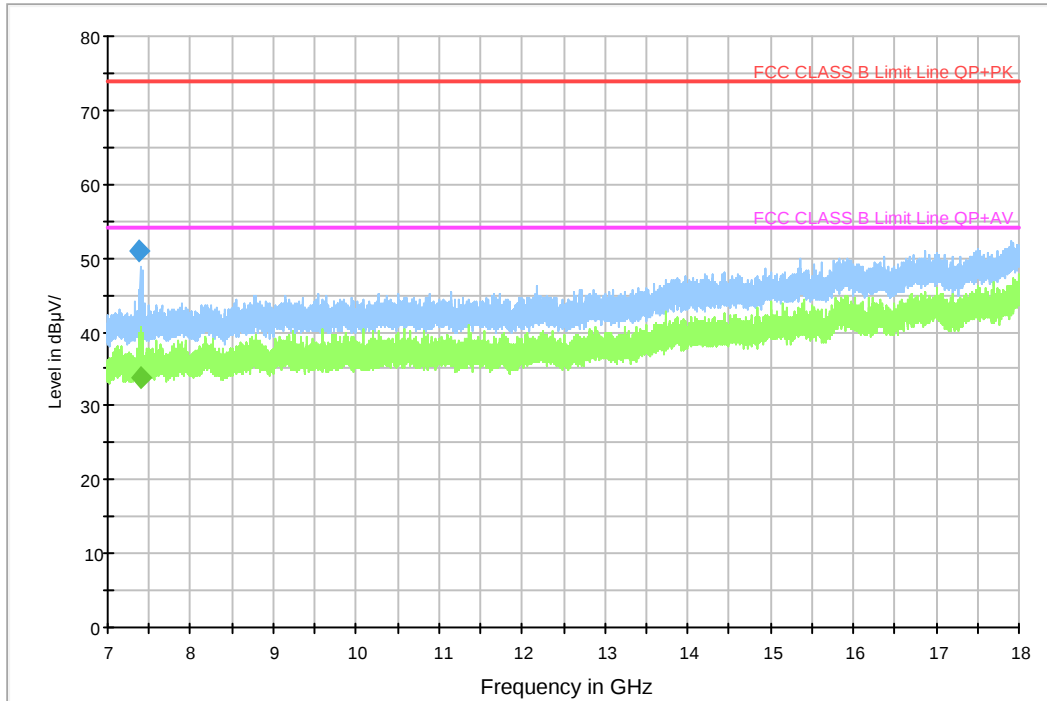


Diagram 1-50 2.4G N40 2462 VER 7G-18G

FCC CLASS B HF7.0_7G-18G_VER



BE	802.11.b					
Frequency (MHz)	Reading (dBμV/m)	DETECTOR	Polarization	Limit (dBμV/m)	margin. (dB)	Comment
2400.0060	48.6	PK	H	74	25.4	Diagram 1-51
2390.0520	31.1	PK	H	74	42.9	
2398.0180	60.8	PK	H	74	13.2	
2386.4820	46.6	PK	H	74	27.4	
2408.2380	86.0	PK*	H	--	--	
2397.0240	44.3	PK	V	74	29.7	Diagram 1-52
2390.0000	25.0	PK	V	74	49	
2400.0000	36.7	PK	V	74	37.3	
2411.22000	85.5	PK*	V	--	--	
2397.7240	45.6	AV	H	54	8.4	Diagram 1-53
2400.0000	33.4	AV	H	54	20.6	
2390.0000	30.0	AV	H	54	24	
2390.0000	25.0	AV	V	54	29	Diagram 1-54
2400.0000	36.2	AV	V	54	17.8	
2397.1080	42.3	AV	V	54	11.7	
2411.19200	84.1	AV*	V	--	--	

Diagram 1-51

FCC BAND EDGE 2.4G LOW HF1.0 PK HOR

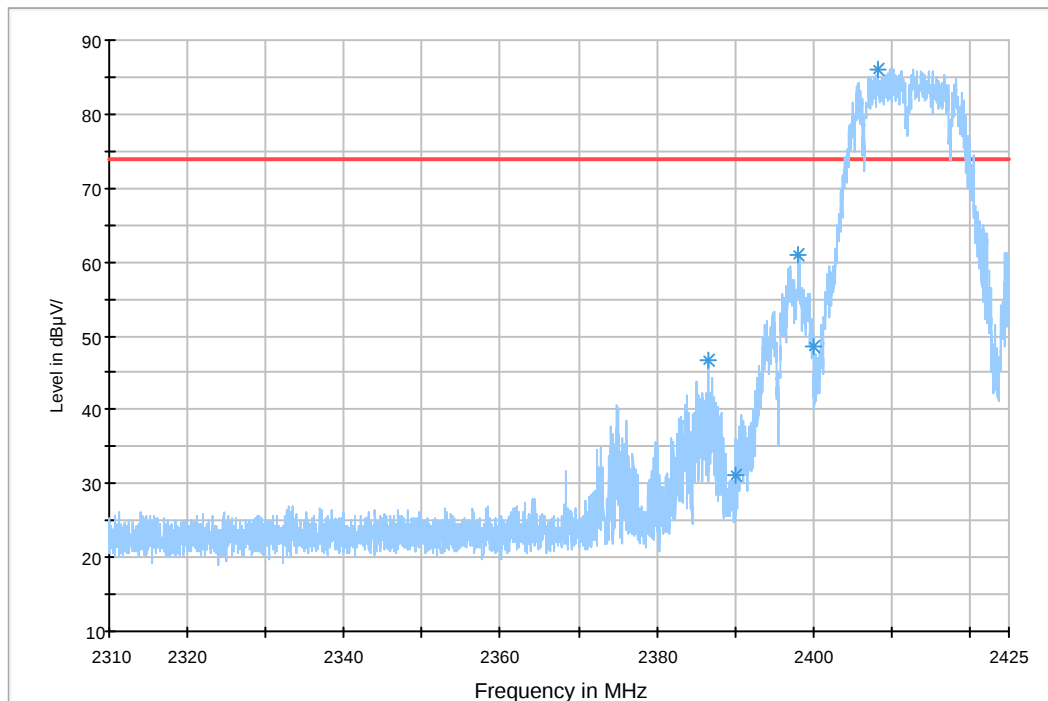


Diagram 1-52

FCC BAND EDGE 2.4G LOW HF1.0 PK VER

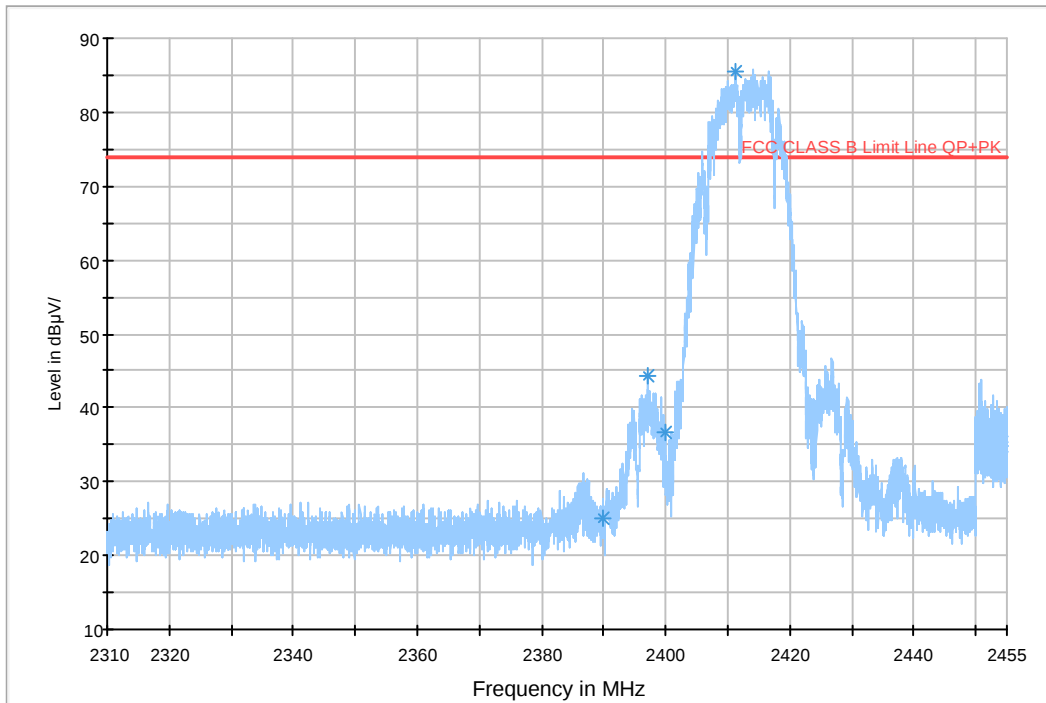


Diagram 1-53

FCC BAND EDGE 2.4G LOW HF1.0 AV HOR

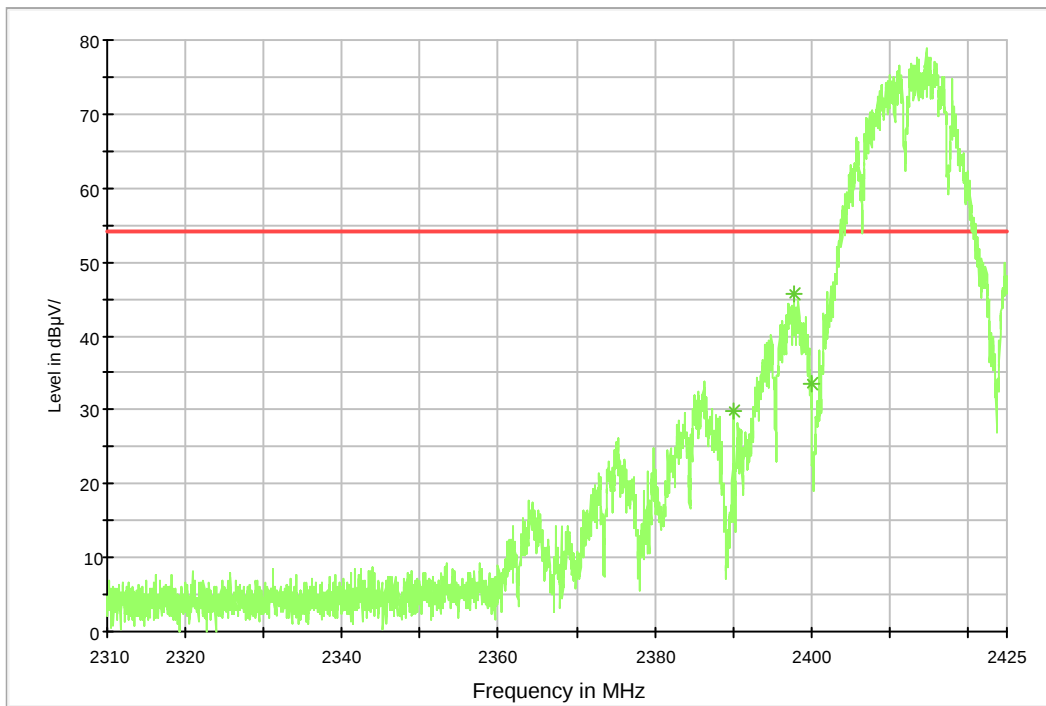
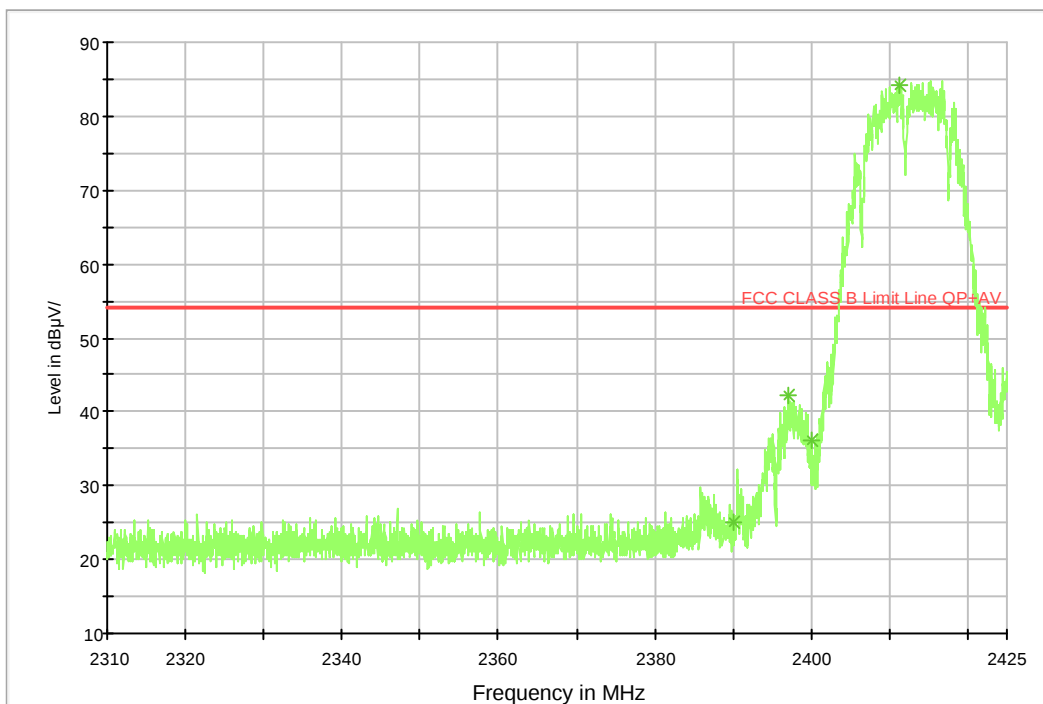


Diagram 1-54

FCC BAND EDGE 2.4G LOW HF1.0 AV VER



BE	802.11.b					
Frequency (MHz)	MaxHold (dBµV/m)	DETECTOR (dBµV/m)	Polarization	LIMIT (dBµV/m)	Margin (dB)	Comment
2459.22	85	PK*	H	--	--	Diagram 1-55
2476.952	63.7	PK	H	74	10.3	
2479.966	56.2	PK	H	74	17.8	
2459.236	85.2	PK*	V	--	--	Diagram 1-56
2477.026	58.6	PK	V	74	15.4	
2475.62	57.8	PK	V	74	16.2	
2464.498	85.4	AV*	H	--	--	Diagram 1-57
2483.934	30.4	AV	H	54	23.6	
2483.578	29	AV	H	54	25	
2459.24	86.1	AV*	V	--	--	Diagram 1-58
2483.57	32.2	AV	V	54	21.8	
2484.142	31	AV	V	54	23	

Diagram 1-55

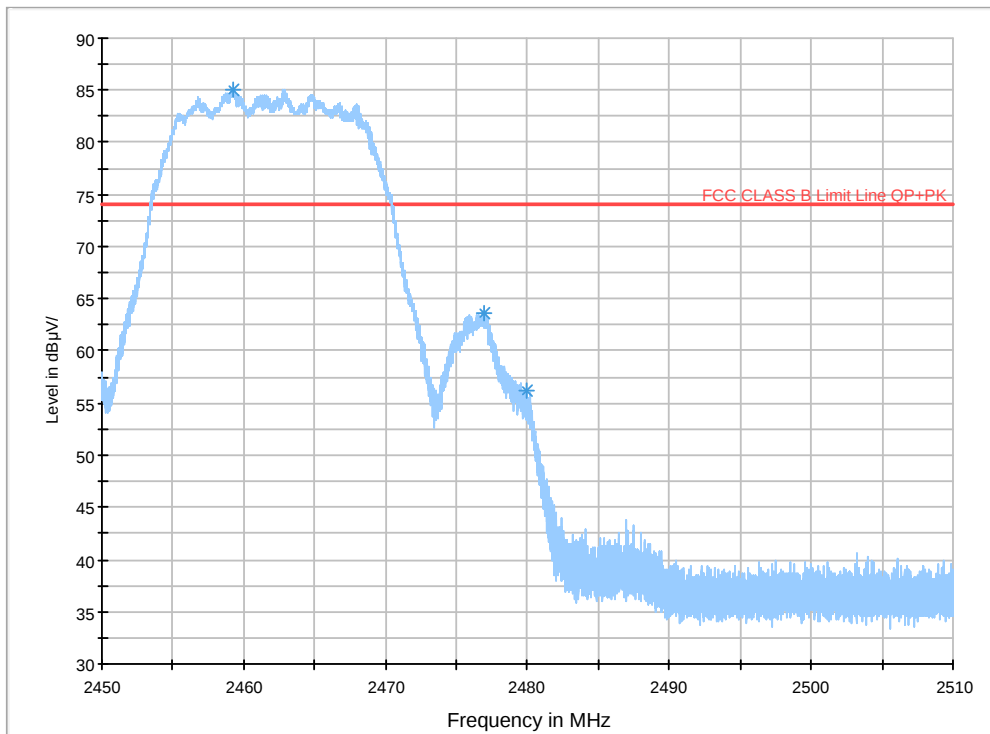


Diagram 1-56

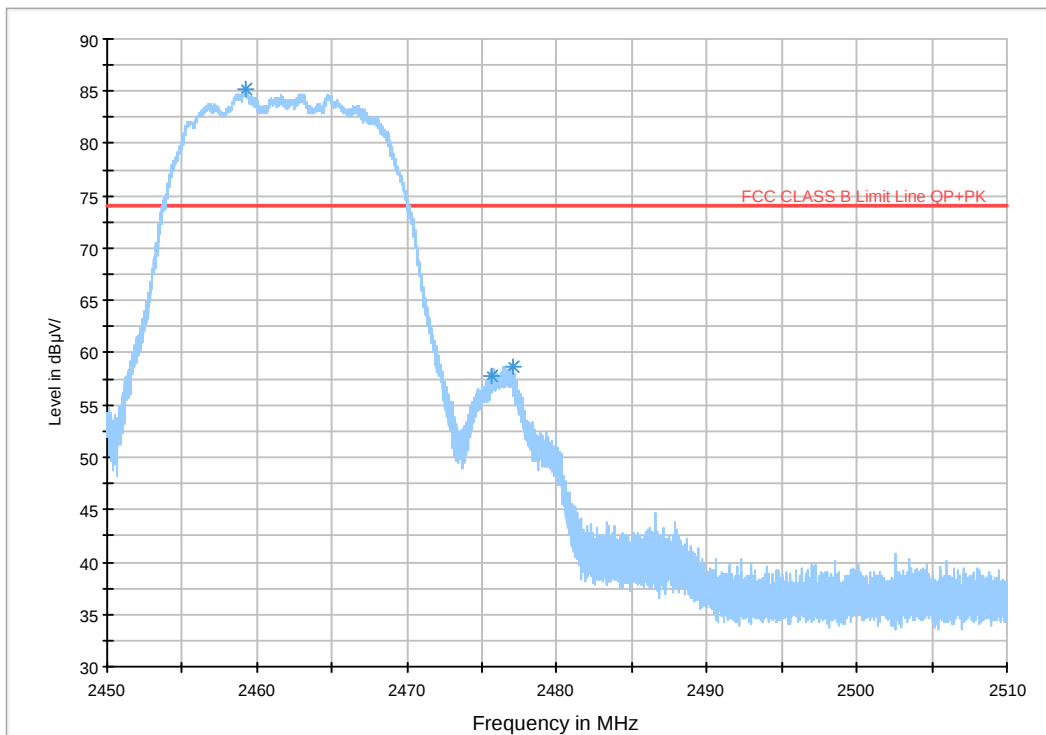


Diagram 1-57

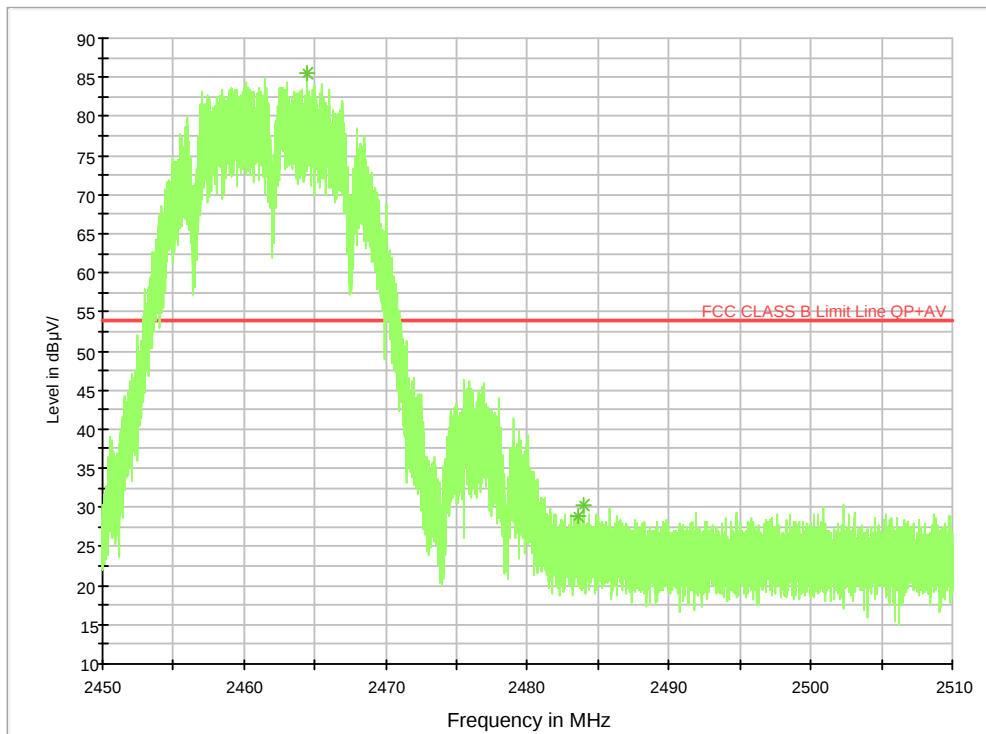
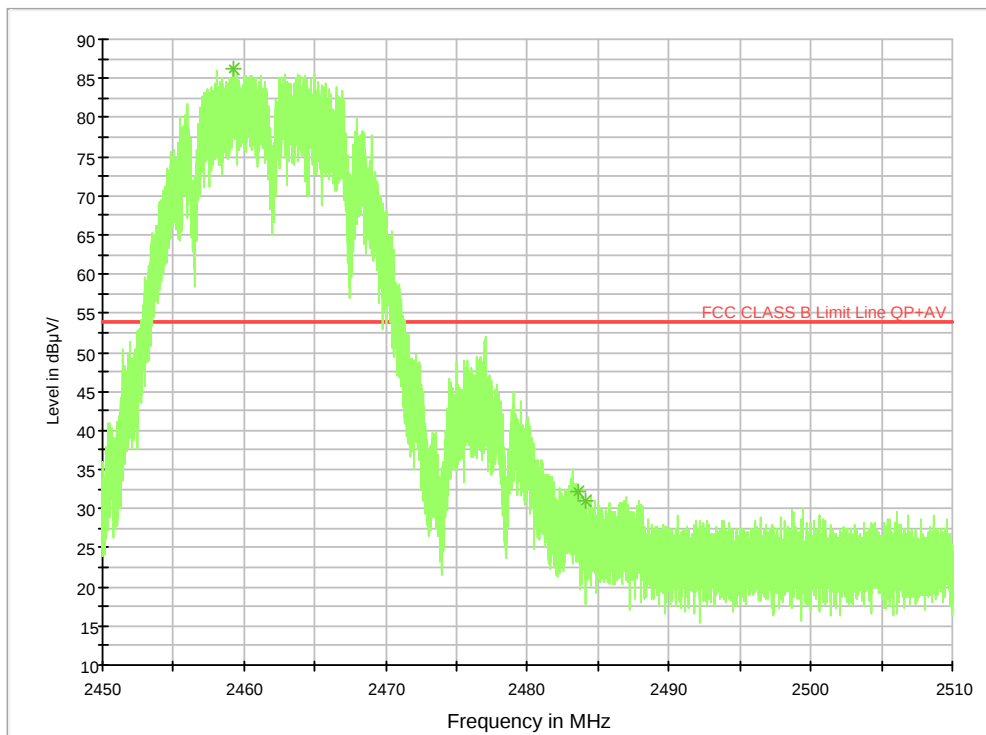


Diagram 1-58



BE	802.11.g					
Frequency (MHz)	Reading (dBμV/m)	DETECTOR	Polarization	Limit (dBμV/m)	margin (dB)	Comment
2390.000000	36.4	PK	H	74	37.6	Diagram 1-59
2400.000000	44.7	PK	H	74	29.3	
2397.052000	60.1	PK	H	74	13.9	
2411.360000	86.6	PK*	H	--	--	
2390.000000	25.0	PK	V	74	49	Diagram 1-60
2397.024000	44.3	PK	V	74	29.7	
2400.000000	36.7	PK	V	74	37.3	
2411.220000	85.5	PK*	V	--	--	
2390.000000	10.6	AV	H	54	43.4	Diagram 1-61
2400.000000	31.9	AV	H	54	22.1	
2397.377000	44.7	AV	H	54	9.3	
2412.672000	82.0	AV*	H	--	--	
2390.000000	10.9	AV	V	54	43.1	Diagram 1-62
2400.000000	11.4	AV	V	54	42.6	
2395.054000	27.2	AV	V	54	26.8	
2412.787000	73.0	AV*	V	--	--	

Diagram 1-59

FCC BAND EDGE 2.4G LOW HF1.0 PK HOR

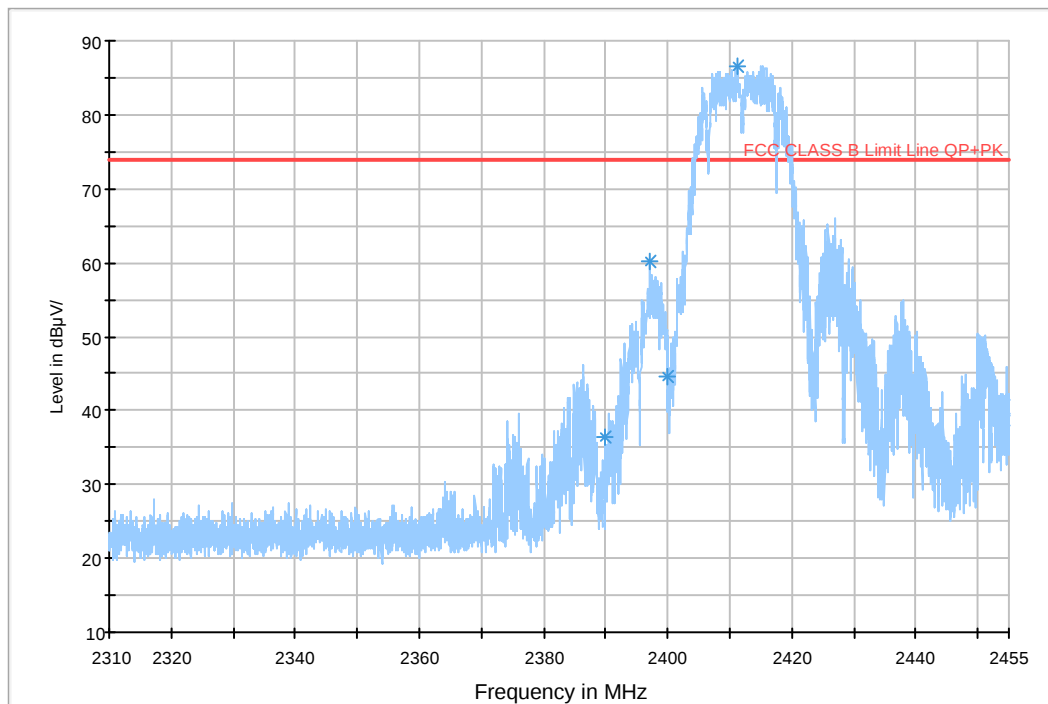


Diagram 1-60

FCC BAND EDGE 2.4G LOW HF1.0 PK VER

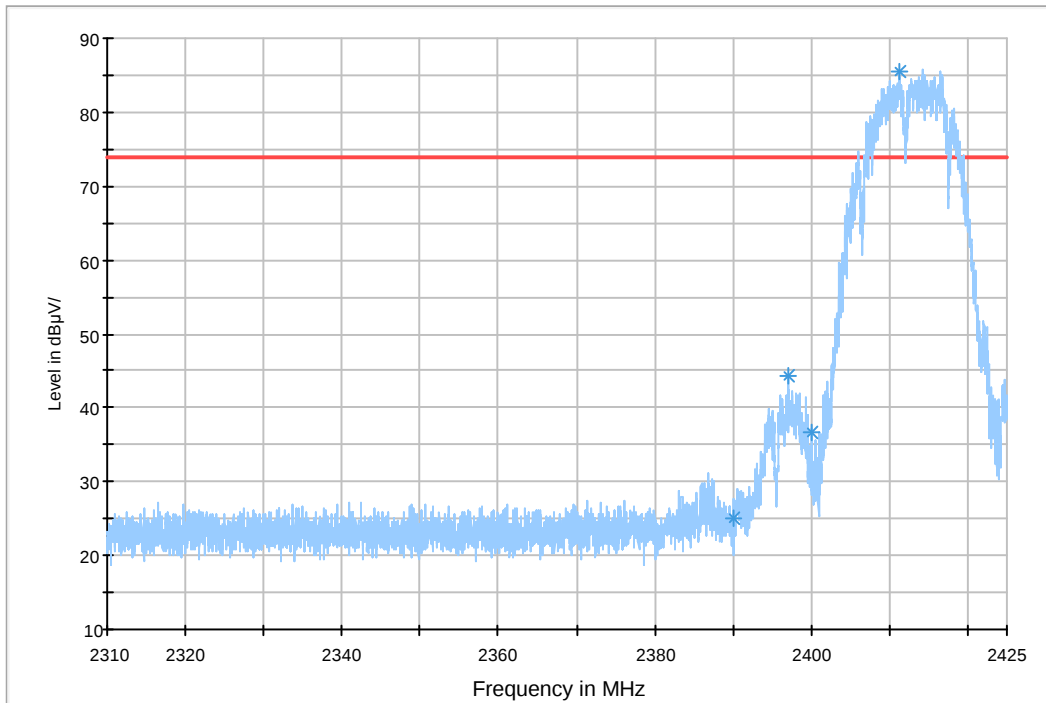


Diagram 1-61

FCC BAND EDGE 2.4G LOW HF1.0 AV HOR

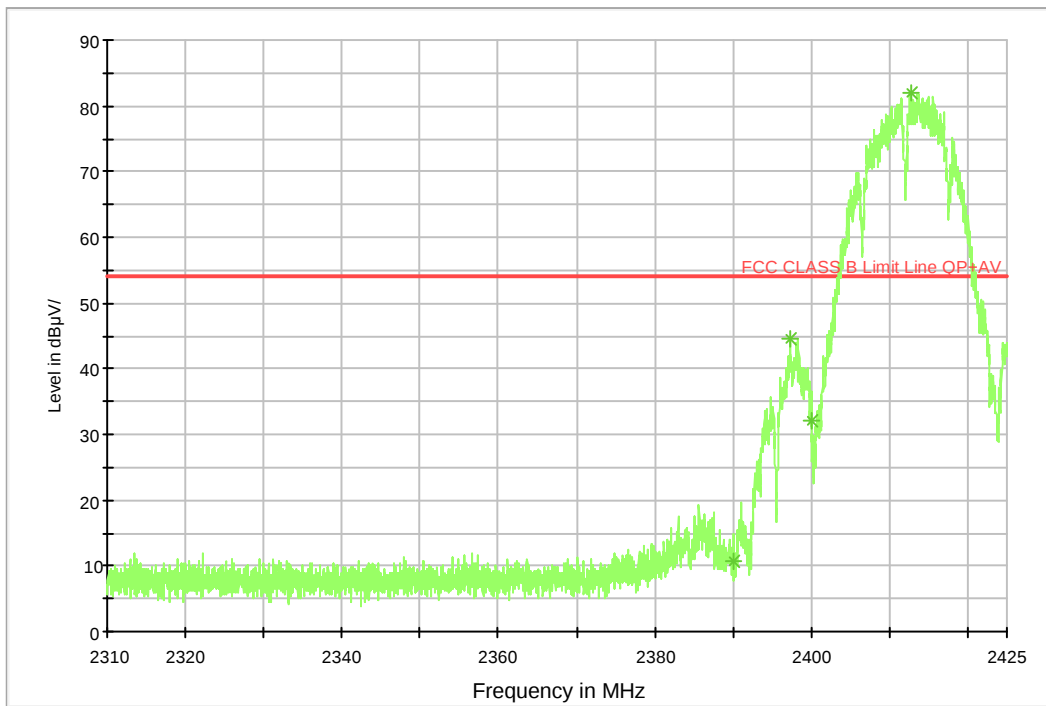
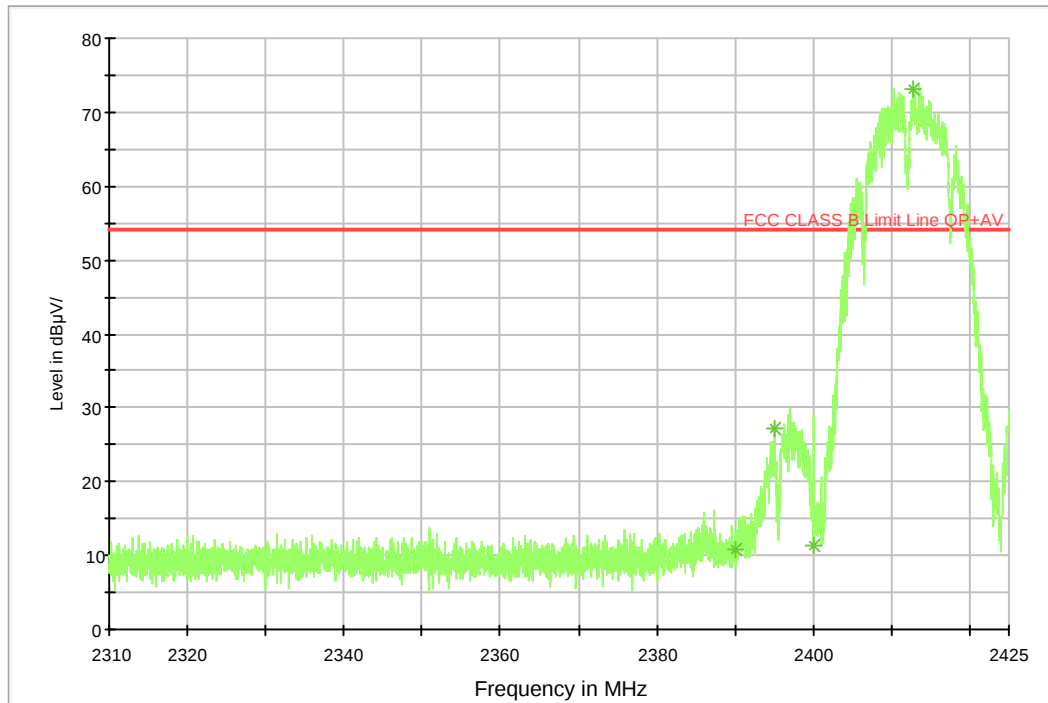


Diagram 1-62

FCC BAND EDGE 2.4G LOW HF1.0 AV VER



BE	802.11.g					
Frequency (MHz)	Reading (dBμV/m)	DETECTOR	Polarization	LIMIT (dBμV/m)	Margin (dB)	Comment
2454.270000	86.4	PK*	H	--	--	Diagram 1-63
2483.542000	48.5	PK	H	74	25.5	
2484.300000	45.3	PK	H	74	28.7	
2454.772000	87.5	PK*	V	--	--	Diagram 1-64
2483.548000	63.0	PK	V	74	11	
2483.922000	62.1	PK	V	74	11.9	
2467.028000	78.0	AV*	H	--	--	Diagram 1-65
2484.420000	28.7	AV	H	74	45.3	
2483.994000	28.1	AV	H	74	45.9	
2469.518000	80.5	AV*	V	--	--	Diagram 1-66
2483.544000	32.3	AV	V	54	21.7	
2483.900000	31.1	AV	V	54	22.9	

Diagram 1-63

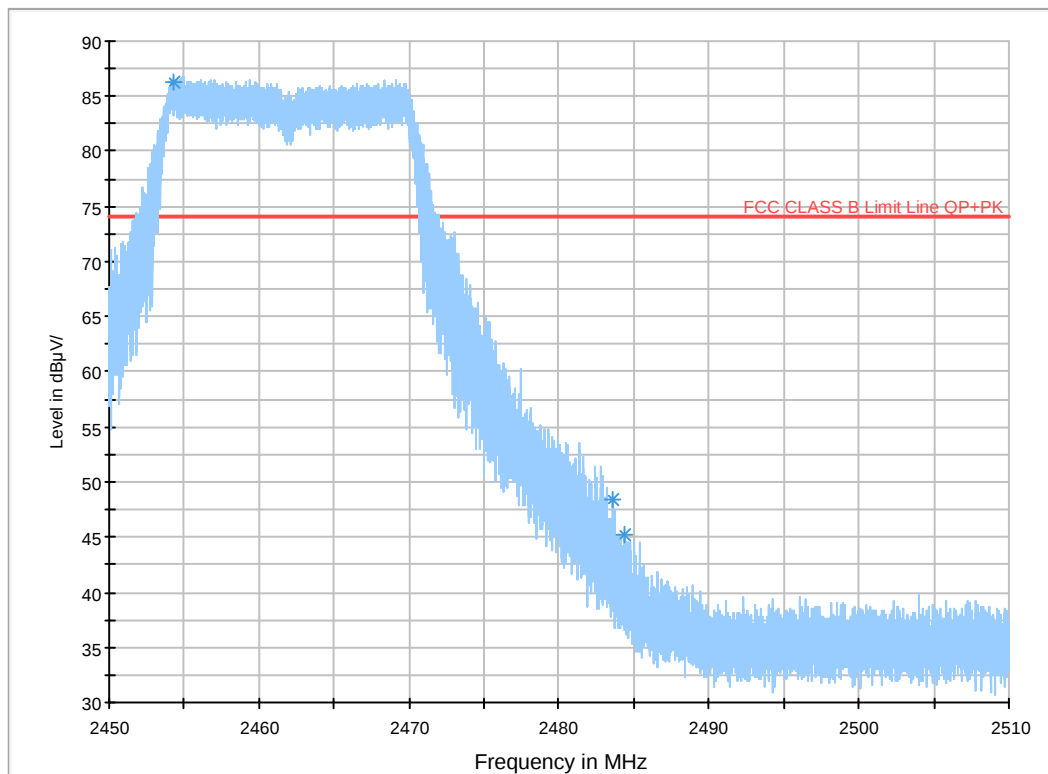


Diagram 1-64

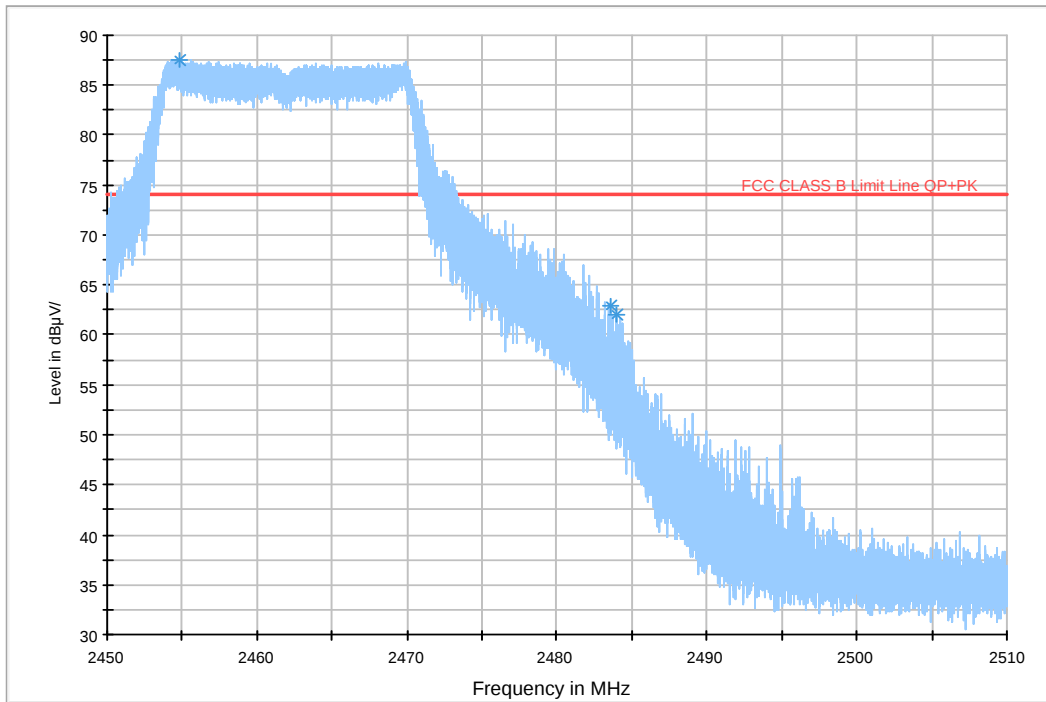


Diagram 1-65

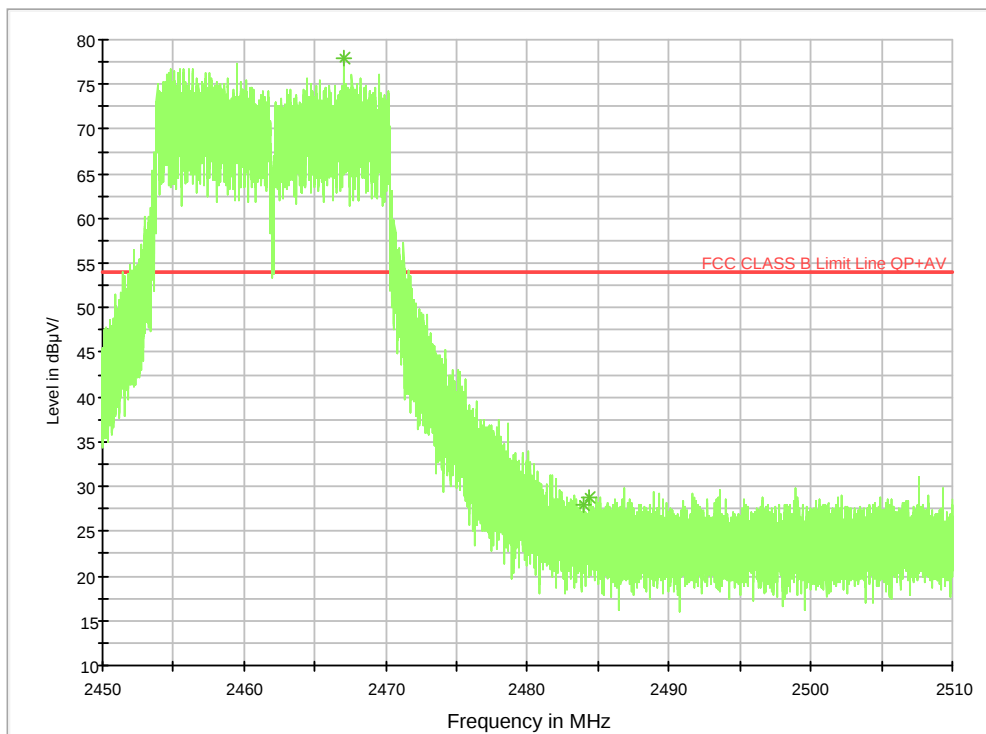
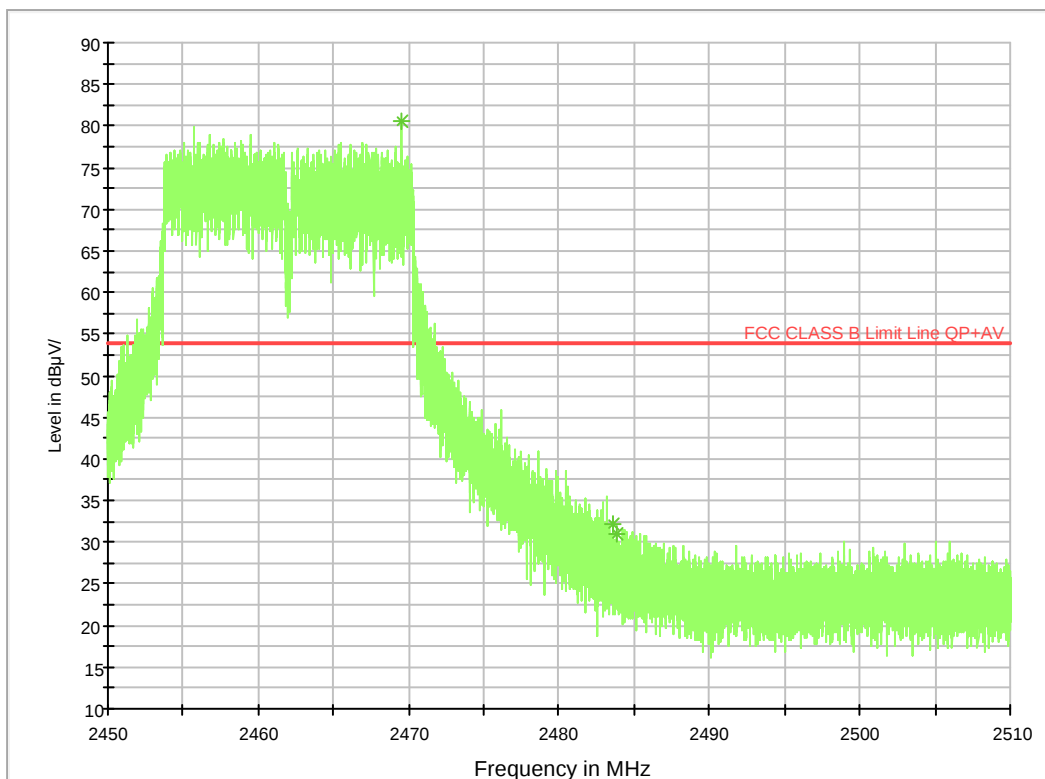


Diagram 1-66



BE	802.11.n20					
Frequency (MHz)	Reading (dBuV/m)	detector	Polarization	Limit (dBuV/m)	Margin (dB)	Comment
2390.000000	55.6	PK	H	74	18.4	Diagram 1-67
2400.000000	67.2	PK	H	74	6.8	
2405.335000	86.7	PK*	H	--	--	
2390.000000	38.7	PK	V	74	35.3	Diagram 1-68
2400.000000	65.4	PK	V	74	8.6	
2413.626500	85.9	PK*	V	--	--	
2390.000000	19.4	AV	H	54	34.6	Diagram 1-69
2400.000000	37.5	AV	H	54	16.5	
2416.674000	75.3	AV*	H	--	--	
2390.000000	11.6	AV	V	54	42.4	Diagram 1-70
2400.000000	30.9	AV	V	54	23.1	
2418.905000	70.1	AV*	V	--	--	

Diagram 1-67

FCC BAND EDGE 2.4G LOW HF1.0 PK HOR

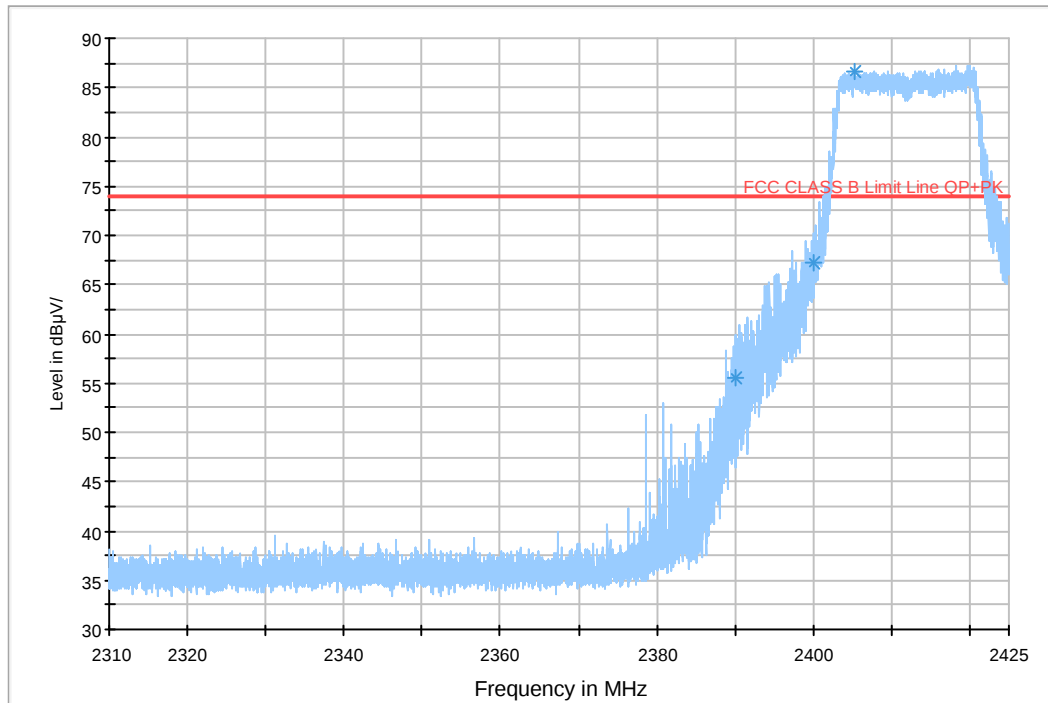


Diagram 1-68

FCC BAND EDGE 2.4G LOW HF1.0 PK VER

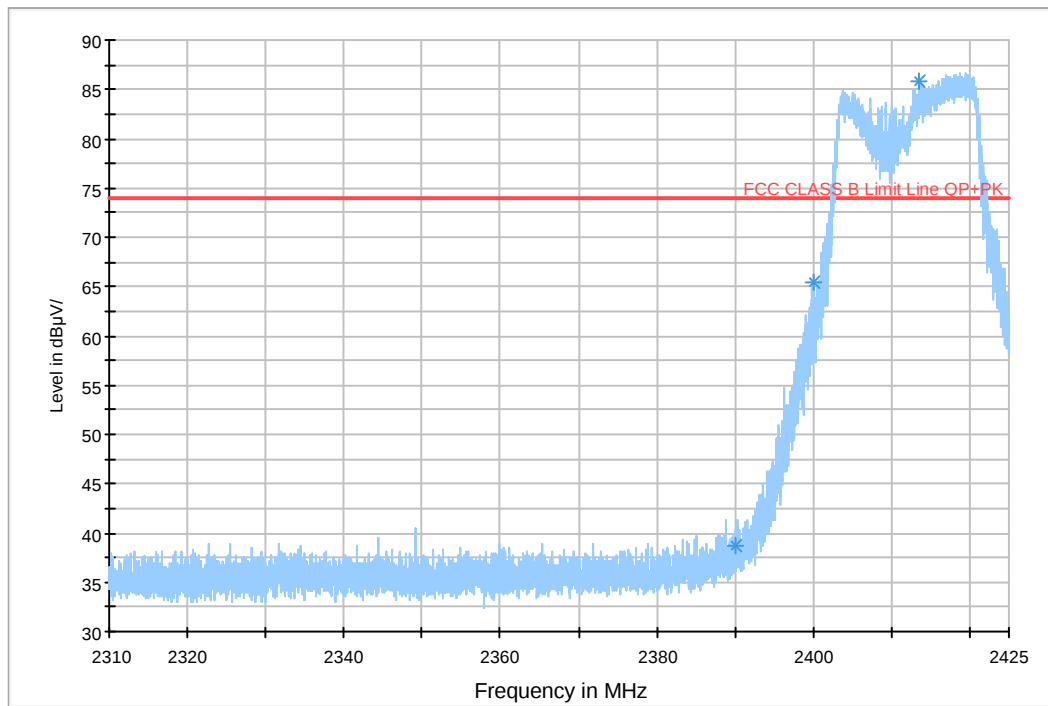


Diagram 1-69

FCC BAND EDGE 2.4G LOW HF1.0 AV HOR

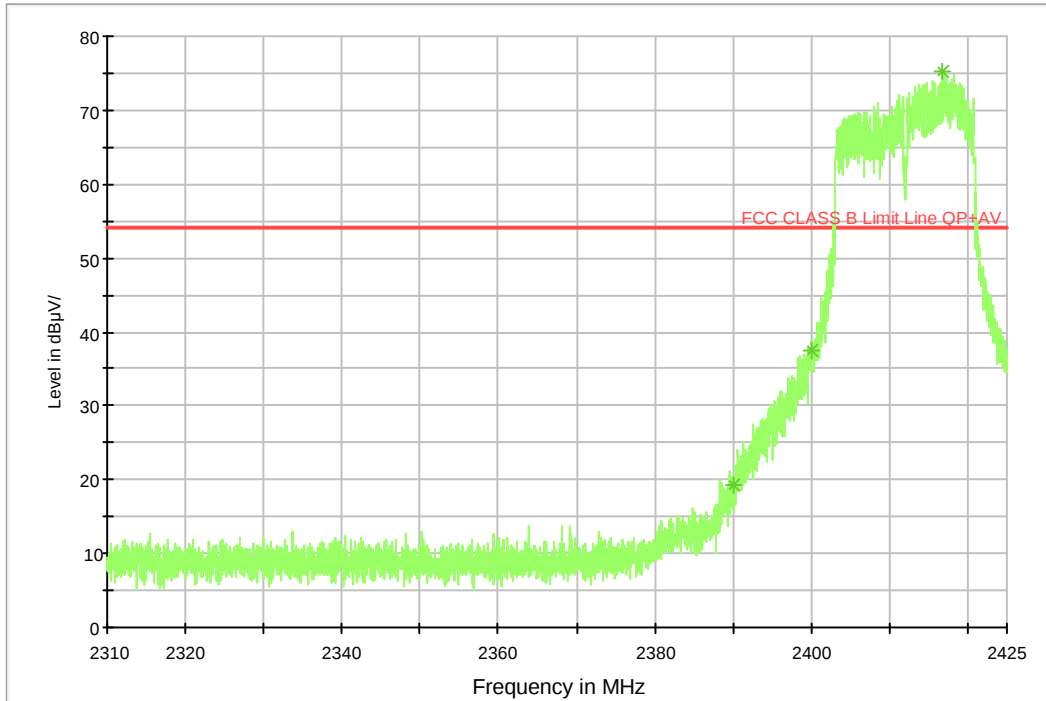
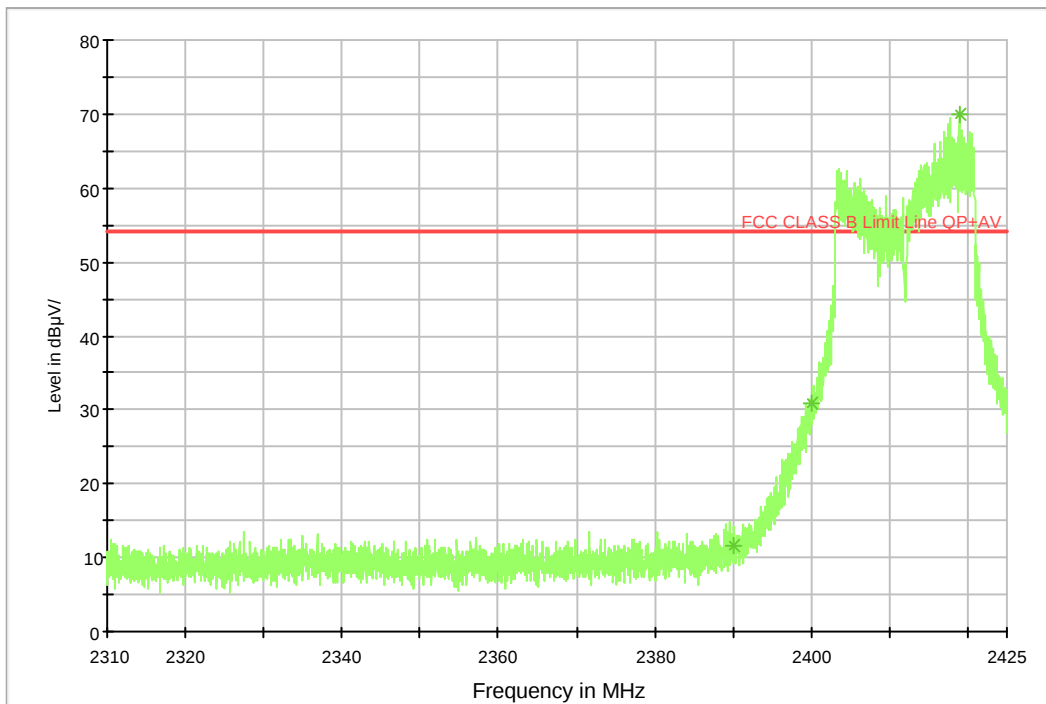


Diagram 1-70

FCC BAND EDGE 2.4G LOW HF1.0 AV VER



BE	802.11.n20					
Frequency (MHz)	MaxHold (dBμV/m)	DETECTOR (dBμV/m)	Polarization	LIMIT (dBμV/m)	Margin (dB)	Comment
2453.506000	87.3	PK*	H	--	--	Diagram 1-71
2483.600000	62.5	PK	H	74	11.5	
2483.880000	61.9	PK	H	74	12.1	
2453.964000	87.6	PK*	V	--	--	Diagram 1-72
2483.526000	67.6	PK	V	74	6.4	
2483.822000	64.2	PK	V	74	9.8	
2456.676000	78.5	AV*	H	--	--	Diagram 1-73
2483.674000	31.0	AV	H	54	23	
2484.482000	31.8	AV	H	54	22.2	
2464.488000	83.4	AV*	V	--	--	Diagram 1-74
2483.808000	36.5	AV	V	54	17.5	
2484.232000	35.2	AV	V	54	18.8	

Diagram 1-71

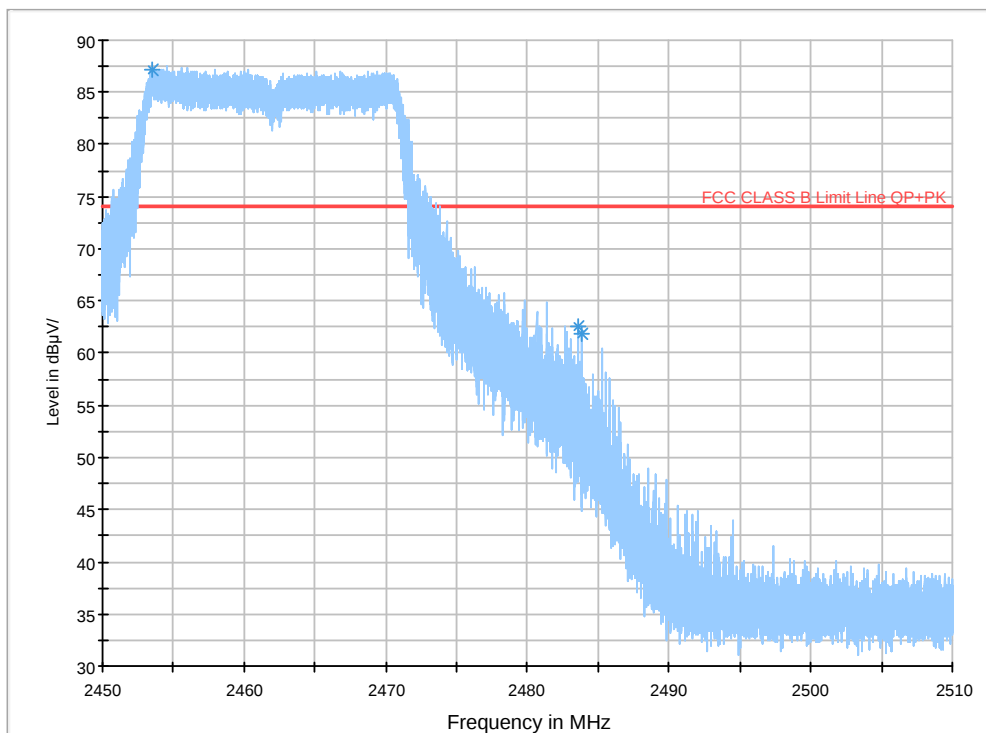


Diagram 1-72

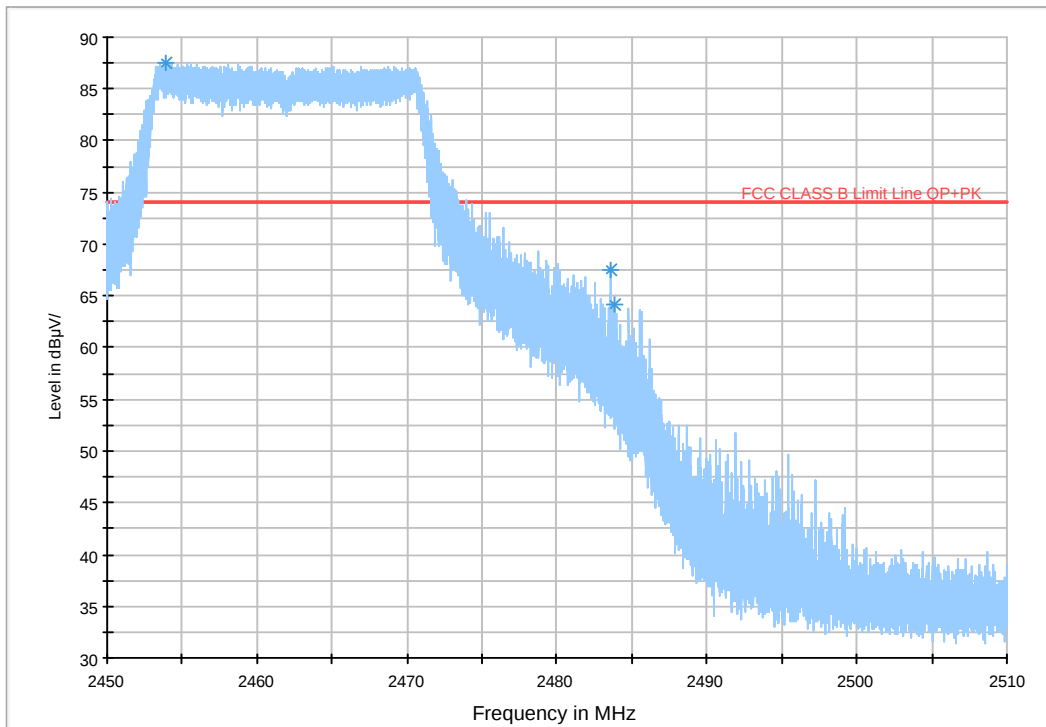


Diagram 1-73

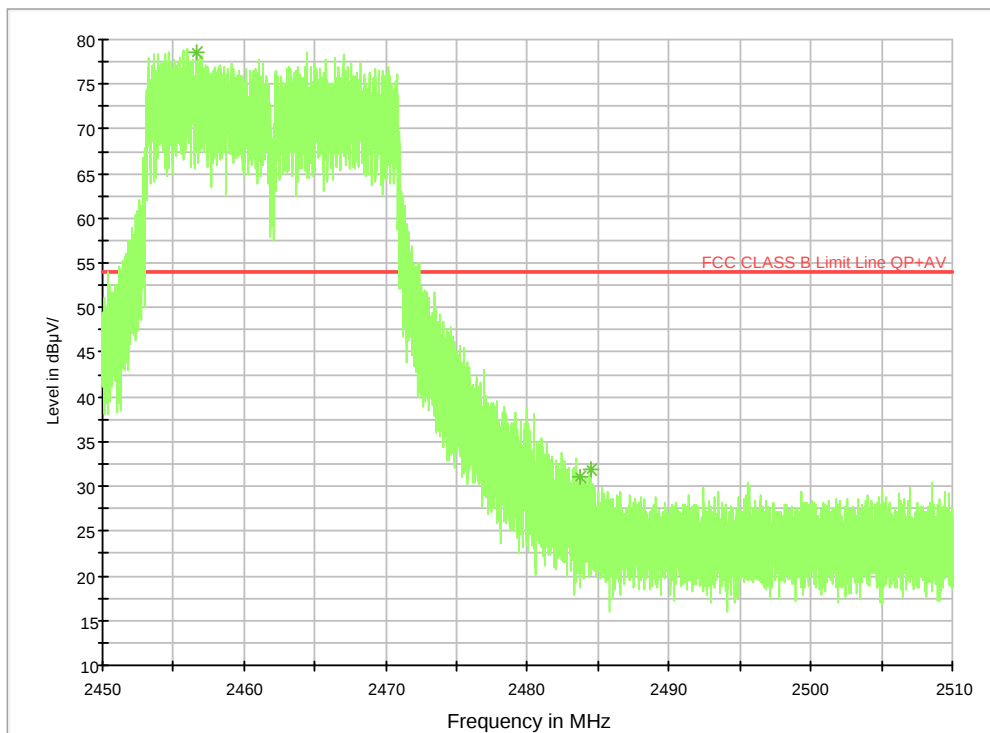
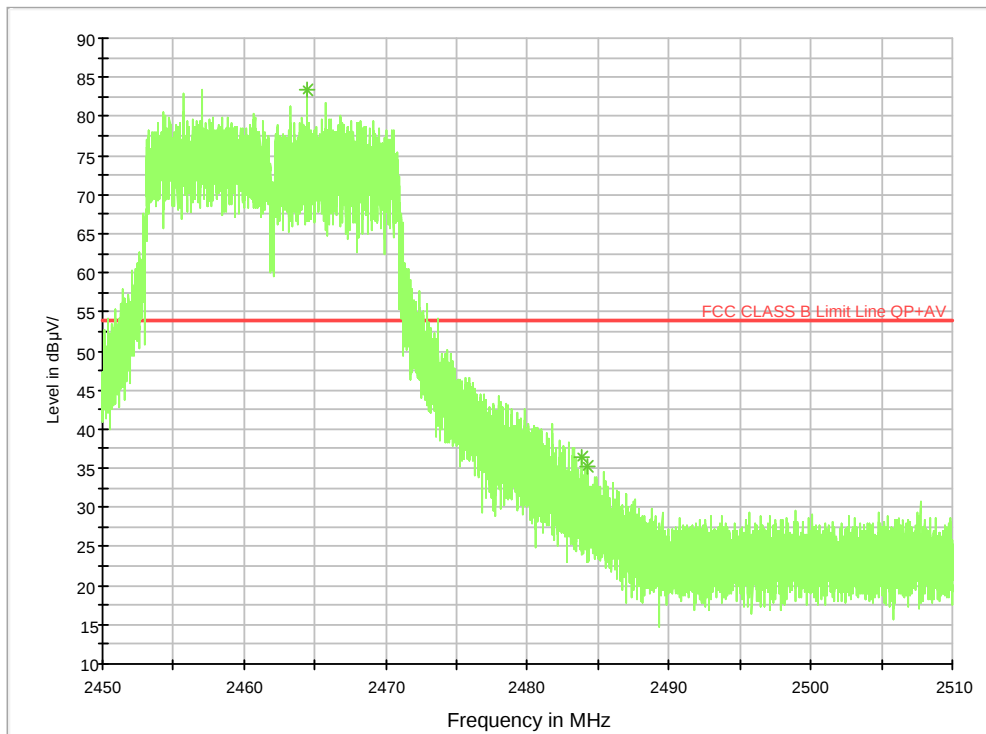


Diagram 1-74



BE	802.11.n40					
Frequency (MHz)	Reading (dBuV/m)	detector	Polarization	Limit (dBuV/m)	Margin (dB)	Comment
2390.000000	59.3	PK	H	74	14.7	Diagram 1-75
2400.000000	65.3	PK	H	74	8.7	
2419.732000	86.6	PK*	H	--	--	
2386.650000	65.1	PK	H	74	8.9	
2390.000000	46.0	PK	V	74	28	Diagram 1-76
2400.000000	63.8	PK	V	74	10.2	
2419.774000	85.8	PK*	V	--	--	
2385.138000	47.7	PK	V	74	26.3	
2389.996000	43.4	AV	H	54	10.6	Diagram 1-77
2399.516000	52.7	AV	H	54	1.3	
2387.616000	51.3	AV	H	54	2.7	
2410.072000	81.9	AV*	H	--	--	
2390.000000	36.8	AV	V	54	17.2	Diagram 1-78
2400.000000	49.1	AV	V	54	4.9	
2419.312000	80.2	AV*	V	--	--	

Diagram 1-75

FCC BAND EDGE 2.4G LOW HF1.0 PK HOR

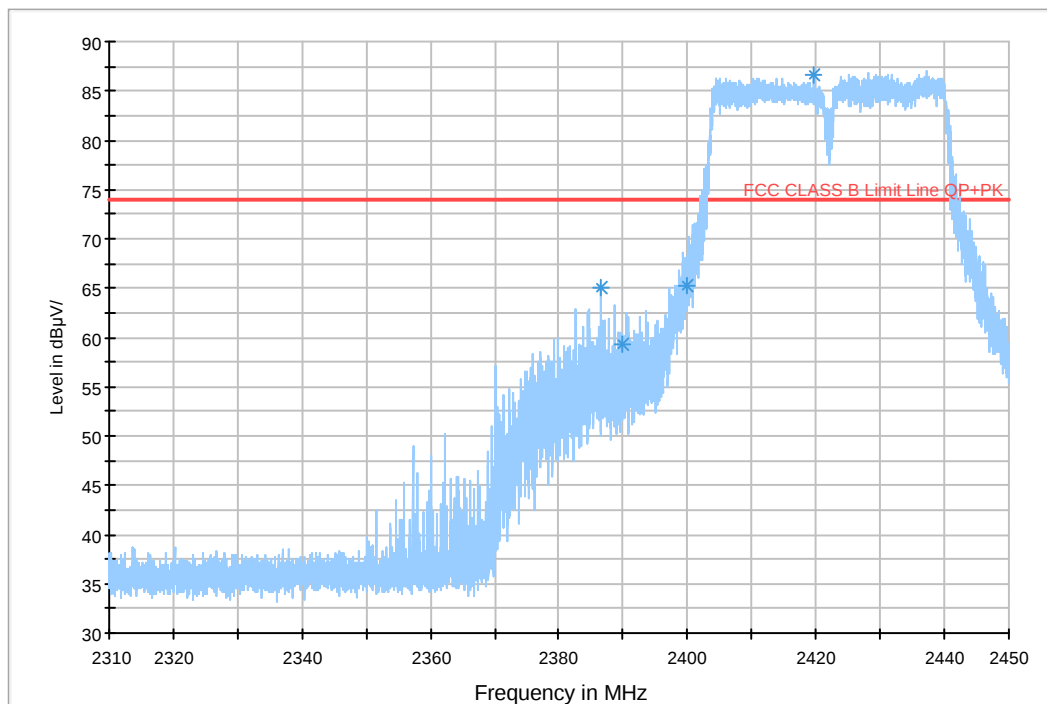


Diagram 1-76

FCC BAND EDGE 2.4G LOW HF1.0 PK VER

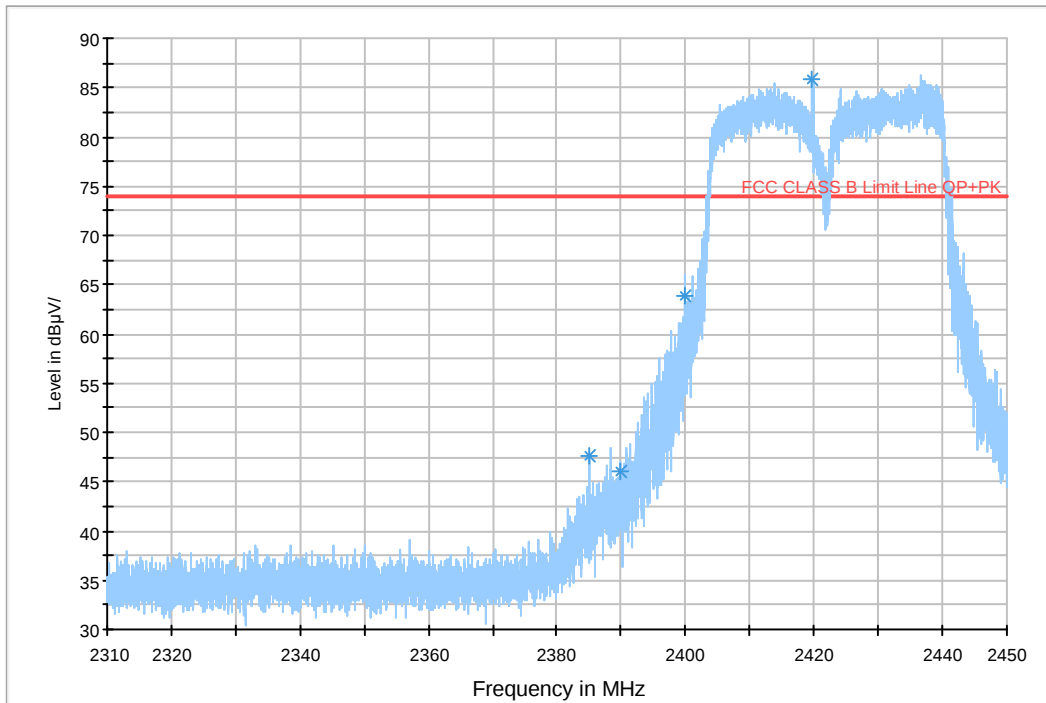
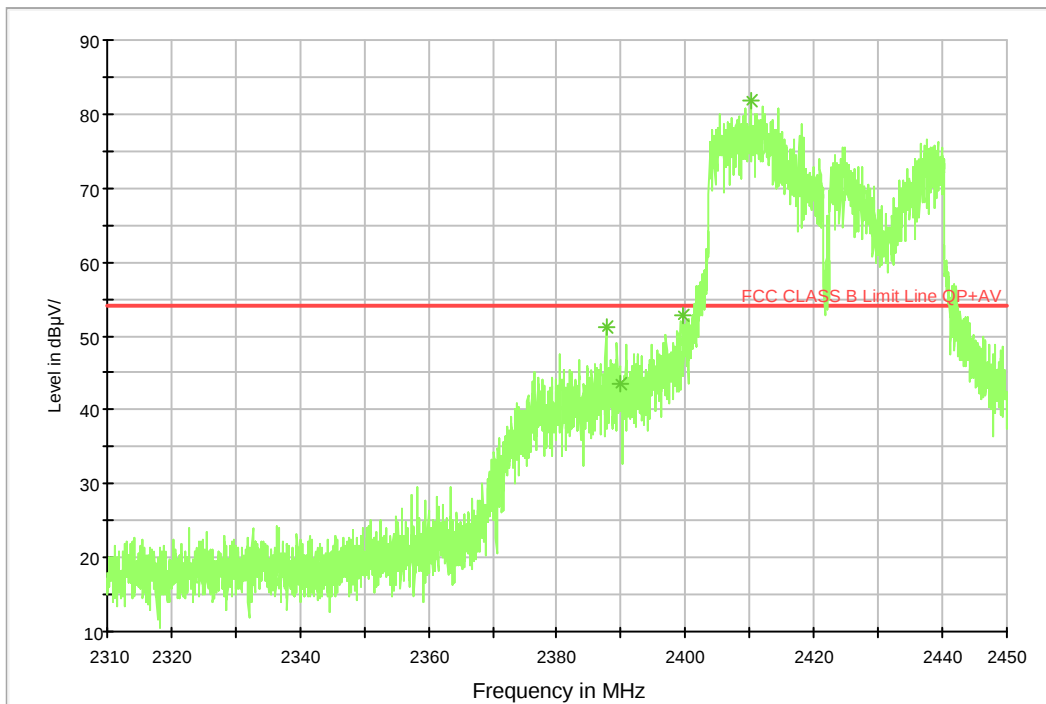
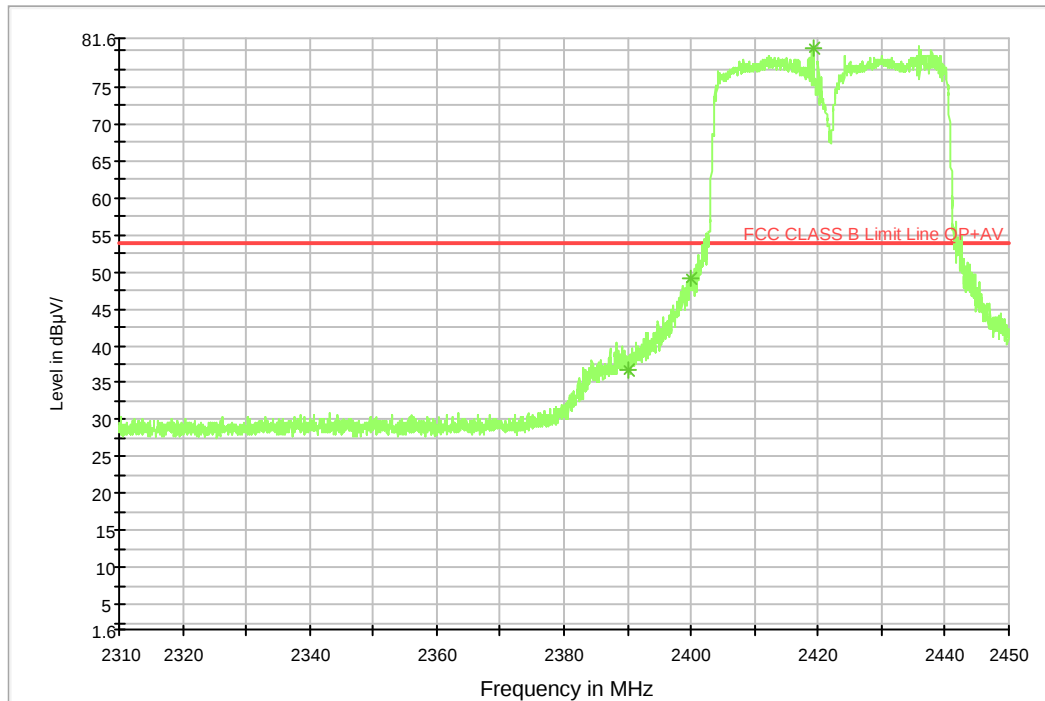


Diagram 1-77

FCC BAND EDGE 2.4G LOW HF1.0 AV HOR



FCC BAND EDGE 2.4G LOW HF1.0 AV VER



BE	802.11.n40					
Frequency (MHz)	MaxHold (dBμV/m)	DETECTOR	Polarization	LIMIT (dBμV/m)	Margin (dB)	Comment
2483.500000	53.0	PK	H	74	21	Diagram 1-79
2486.984000	61.5	PK	H	74	12.5	
2449.860000	87.3	PK*	H	--	--	
2483.500000	45.6	PK	V	74	28.4	Diagram 1-80
2448.145500	85.8	PK*	V	--	--	
2447.000000	85.0	AV*	H	--	--	Diagram 1-81
2483.504000	41.6	AV	H	54	12.4	
2484.488000	46.9	AV	H	54	7.1	
2437.015000	79.9	AV*	V	--	--	Diagram 1-82
2483.500000	25.9	AV	V	54	28.1	
2488.544000	33.6	AV	V	54	20.4	

Diagram 1-79

FCC BAND EDGE 2.4G HIGH HF1.0 PK HOR

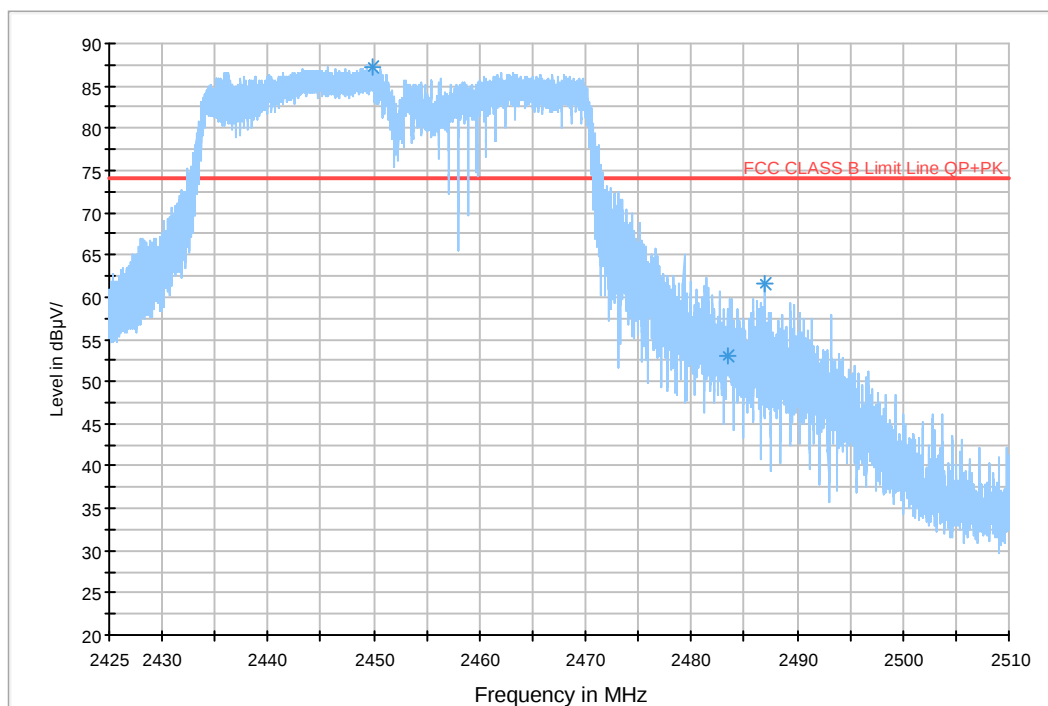


Diagram 1-80

FCC BAND EDGE 2.4G HIGH HF1.0 PK VER

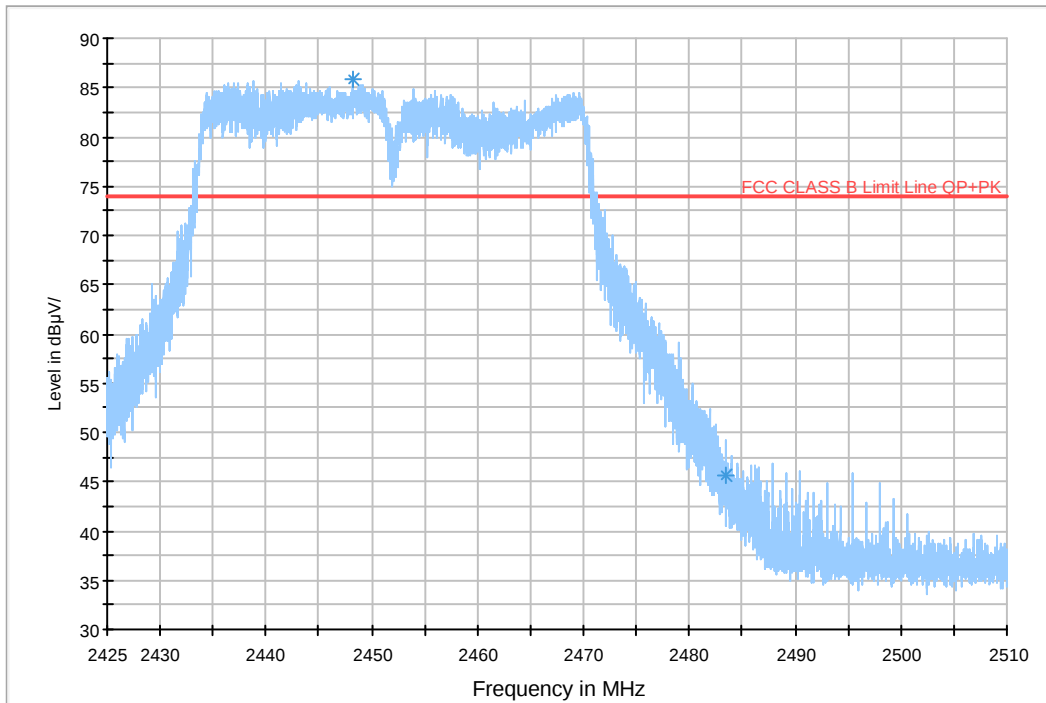


Diagram 1-81

FCC BAND EDGE 2.4G HIGH HF1.0 AV HOR

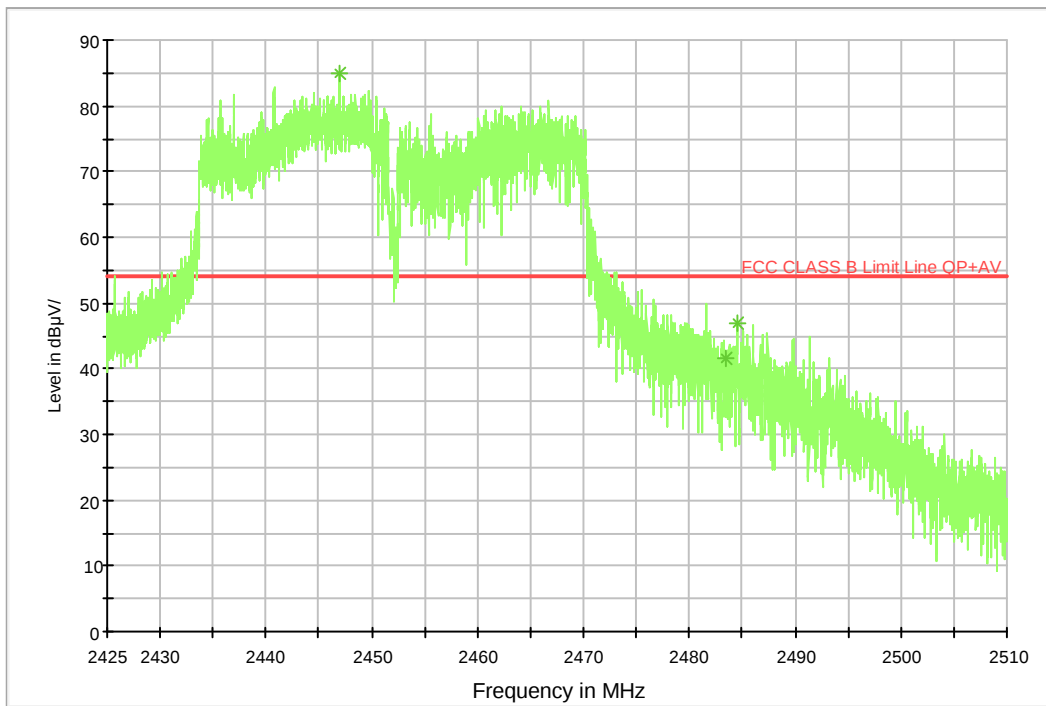
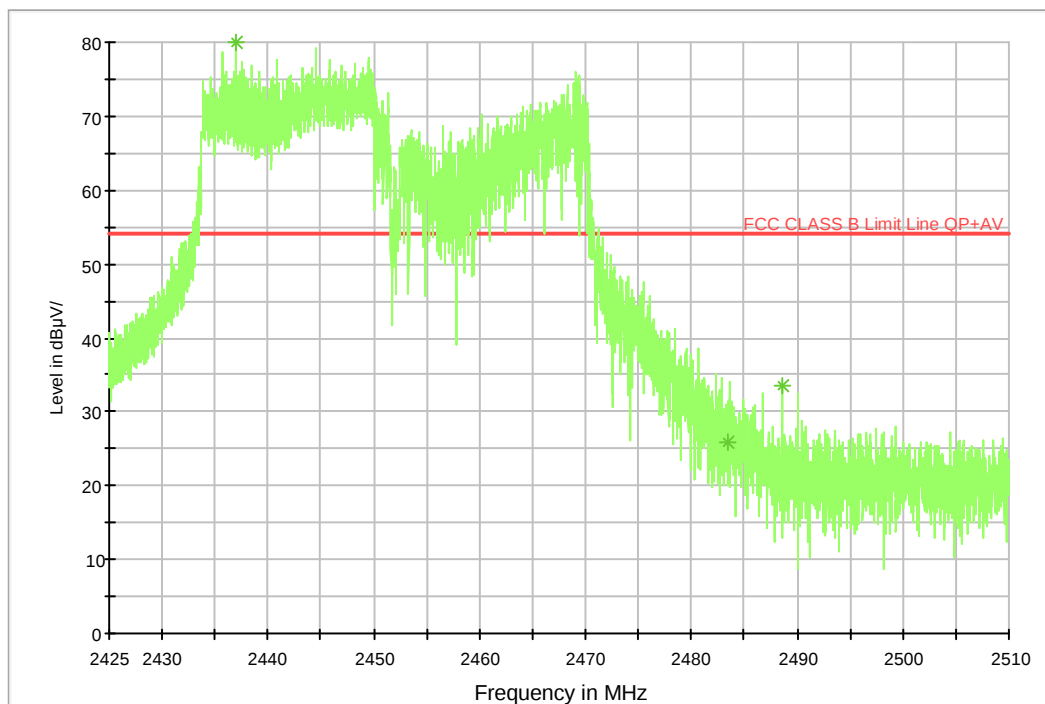


Diagram 1-82

FCC BAND EDGE 2.4G HIGH HF1.0 AV VER



8 6dB EMISSION BANDWIDTH

8.1 Applicable Standard: FCC §15.247(a)

Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands, The minimum 6dB bandwidth shall be at least 500kHz

8.2 Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9020A	MY48011941	2012-6-17	2013-6-17

***statement of traceability:**ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

8.3 Test Procedure

The transmitter output was connected to a spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 300 KHz VBW. The 6dB bandwidth is defined as the total spectrum with the power of which is lower than peak power for 6dB.

Detector = Peak, Trace mode = max hold, Sweep = auto couple.

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

8.4 Environmental Conditions

Temperature:	20 ° C
Relative Humidity:	53%
ATM Pressure:	1009mbar

8.5 Test Result: pass

Mode	Channel	Antenna Port	6dB bandwidth(MHz)	Limit (kHz)	Test Data	Result
802.11.b	CH LOW	Port 1	10.07	500	Diagram 8-1	Pass
		Port 2	10.11	500		Pass
	CH MID	Port 1	10.11	500	Diagram 8-2	Pass
		Port 2	10.13	500		Pass
	CH HIGH	Port 1	10.13	500	Diagram 8-3	Pass
		Port 2	10.13	500		Pass
802.11.g	CH LOW	Port 1	16.38	500	Diagram 8-4	Pass
		Port 2	16.38	500		Pass
	CH MID	Port 1	16.36	500	Diagram 8-5	Pass
		Port 2	16.37	500		Pass
	CH HIGH	Port 1	16.39	500	Diagram 8-6	Pass
		Port 2	16.39	500		Pass
802.11.n. HT20	CH LOW	Port 1	17.60	500	Diagram 8-7	Pass
		Port 2	17.63	500		Pass
	CH MID	Port 1	17.35	500	Diagram 8-8	Pass
		Port 2	17.35	500		Pass
	CH HIGH	Port 1	17.63	500	Diagram 8-9	Pass
		Port 2	17.66	500		Pass
802.11.n. HT40	CH LOW	Port 1	35.78	500	Diagram 8-10	Pass
		Port 2	35.79	500		Pass
	CH MID	Port 1	35.74	500	Diagram 8-11	Pass
		Port 2	36.04	500		Pass
	CH HIGH	Port 1	36.11	500	Diagram 8-12	Pass
		Port 2	36.13	500		Pass

Please refer to following plots.

Diagram 8-1

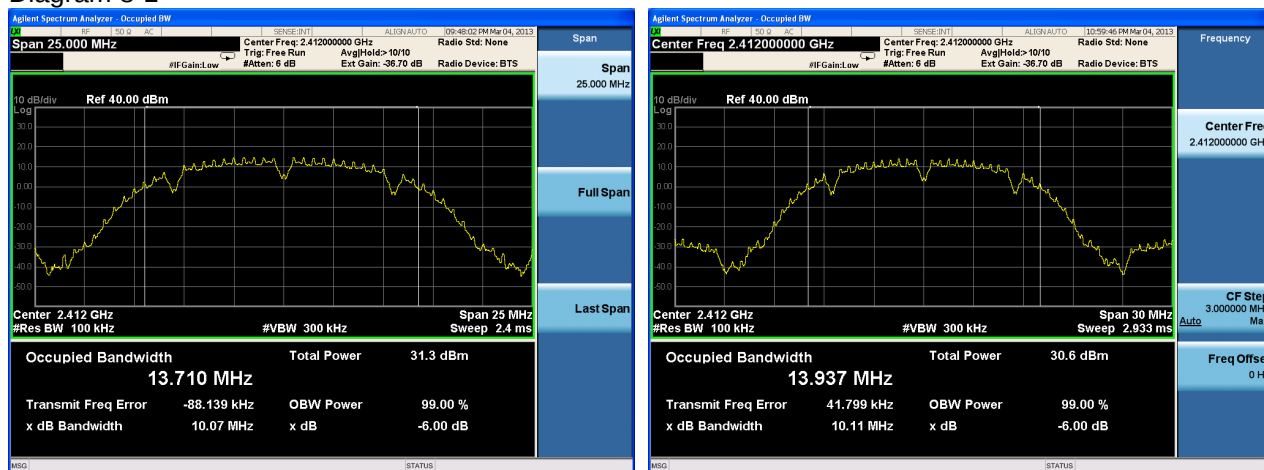


Diagram 8-2

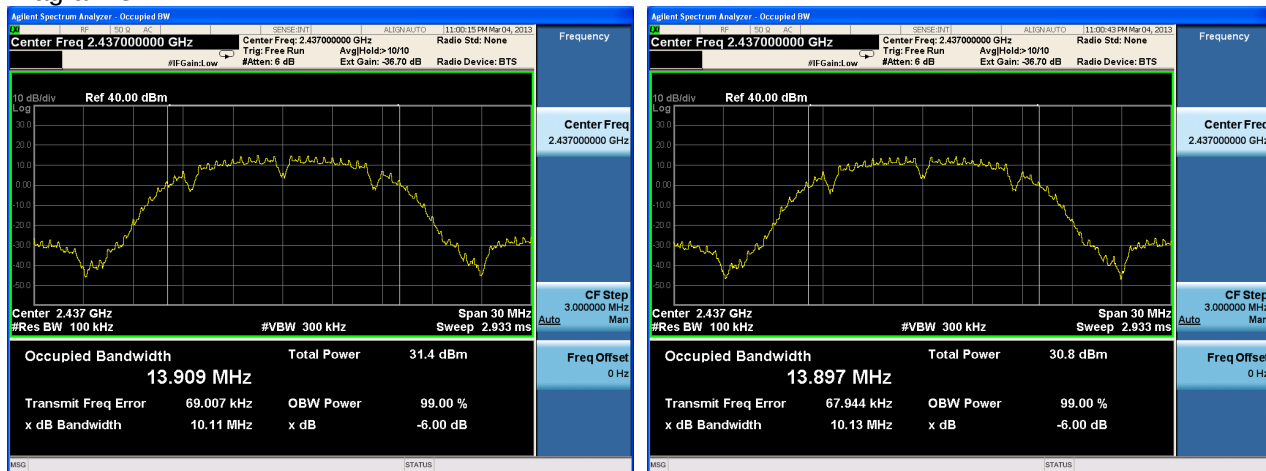


Diagram 8-3

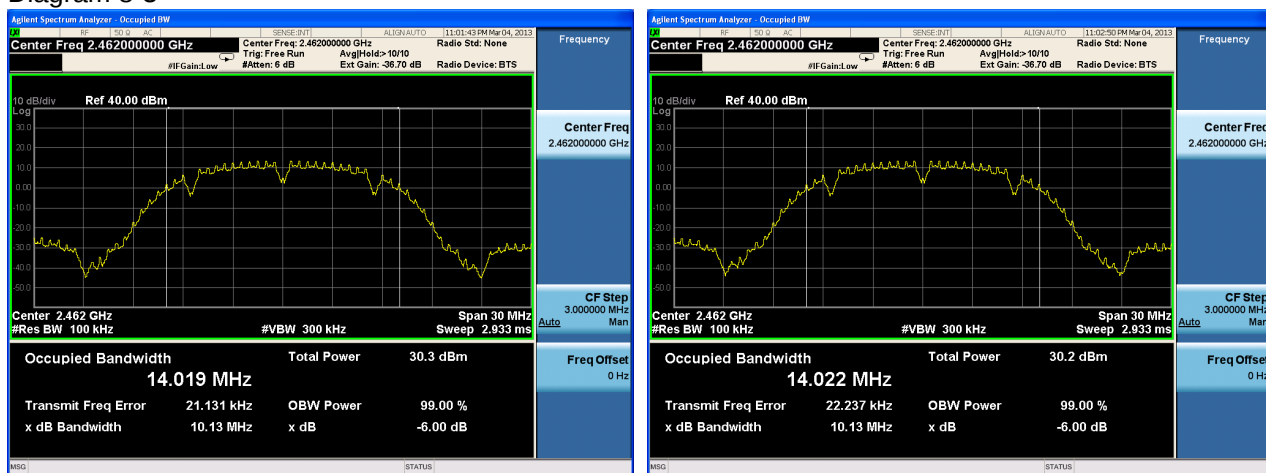


Diagram 8-4

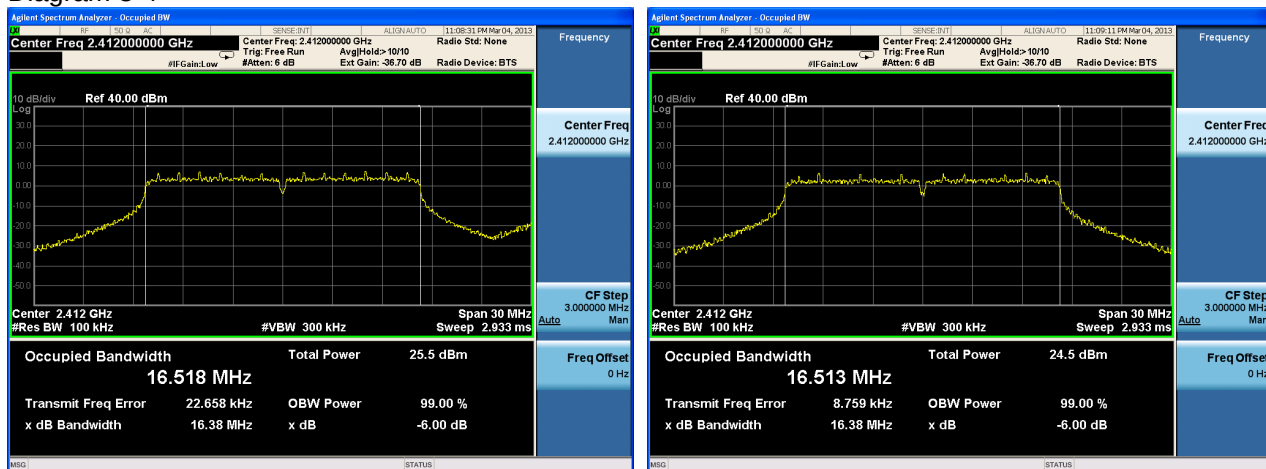


Diagram 8-5

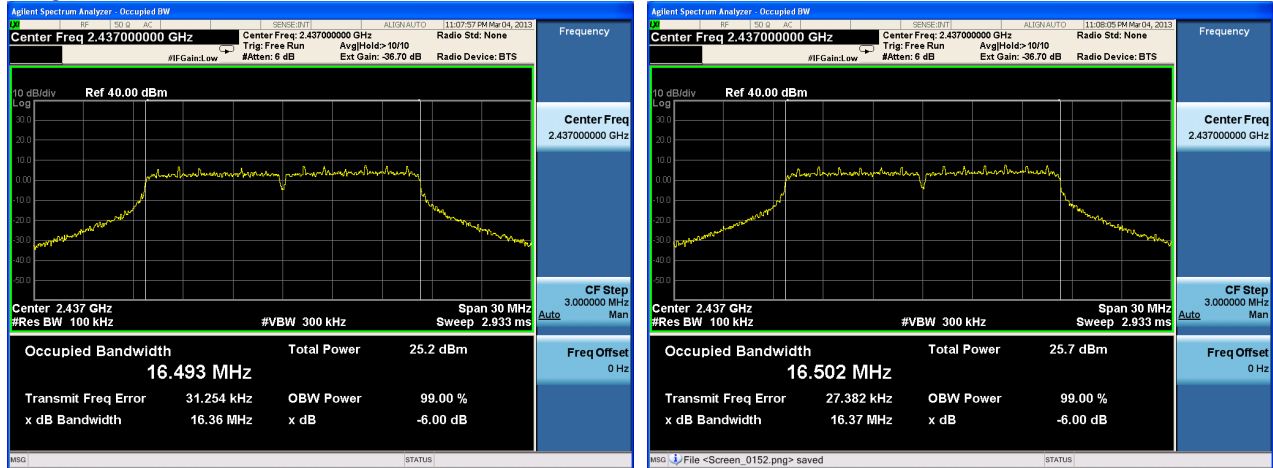


Diagram 8-6

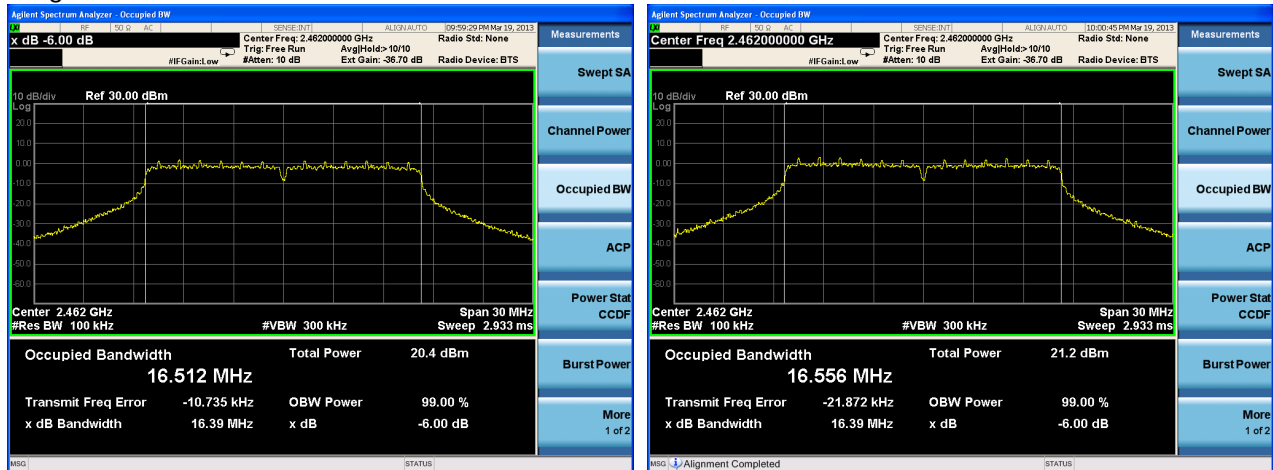


Diagram 8-7

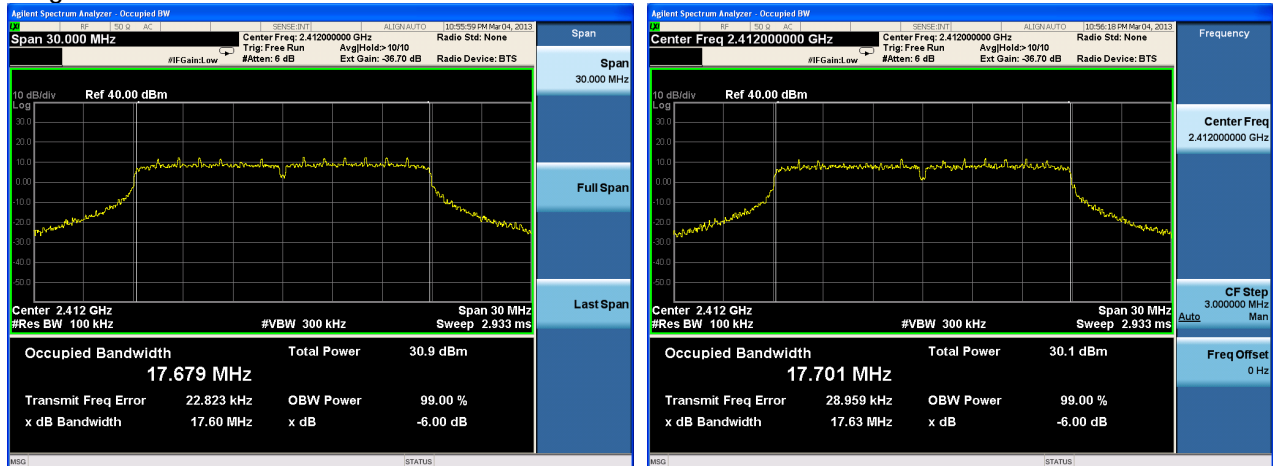


Diagram 8-8

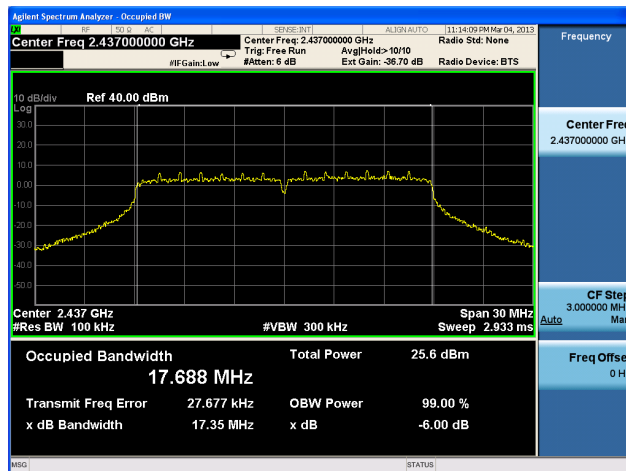
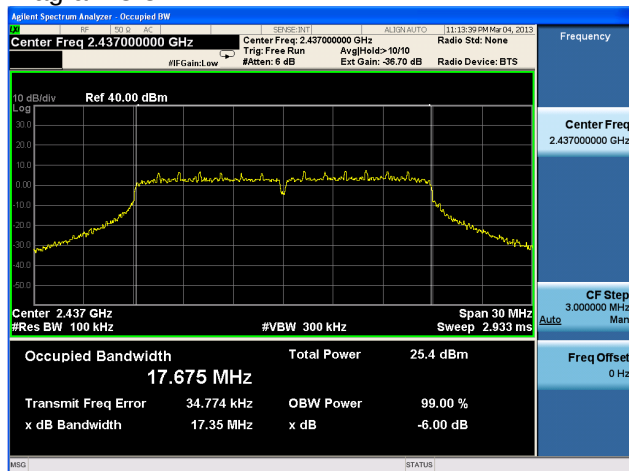


Diagram 8-9

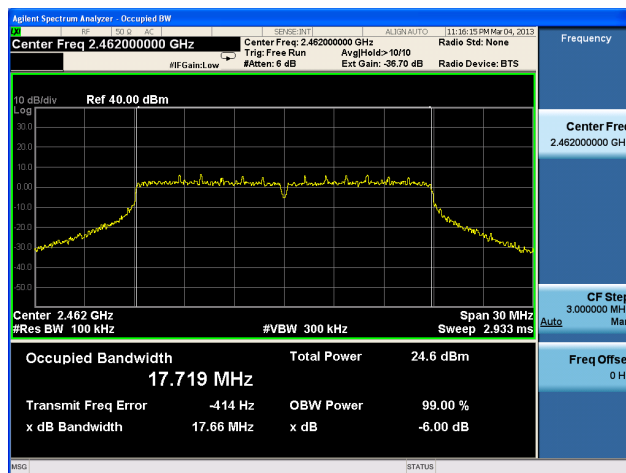
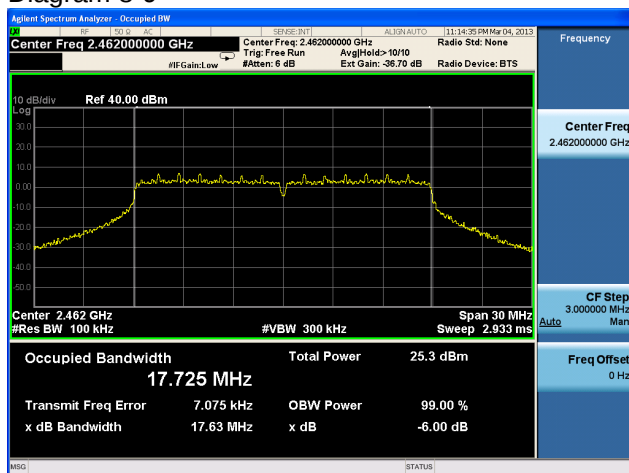


Diagram 8-10

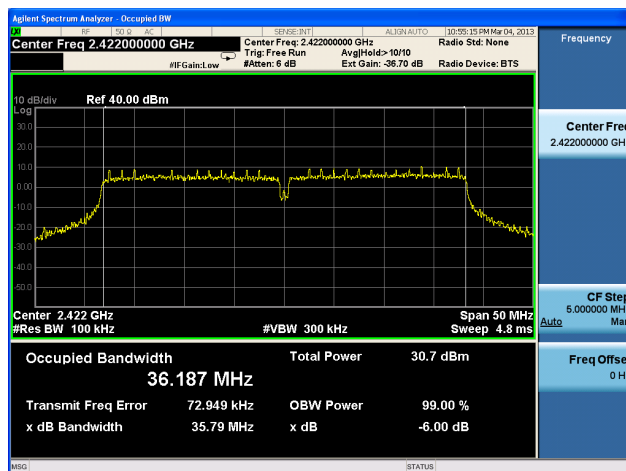
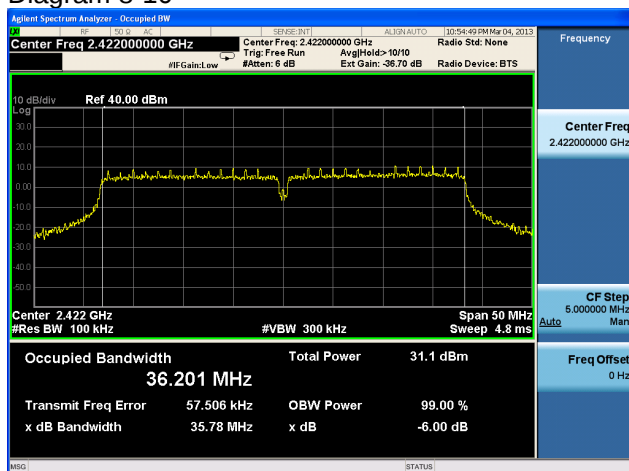


Diagram 8-11

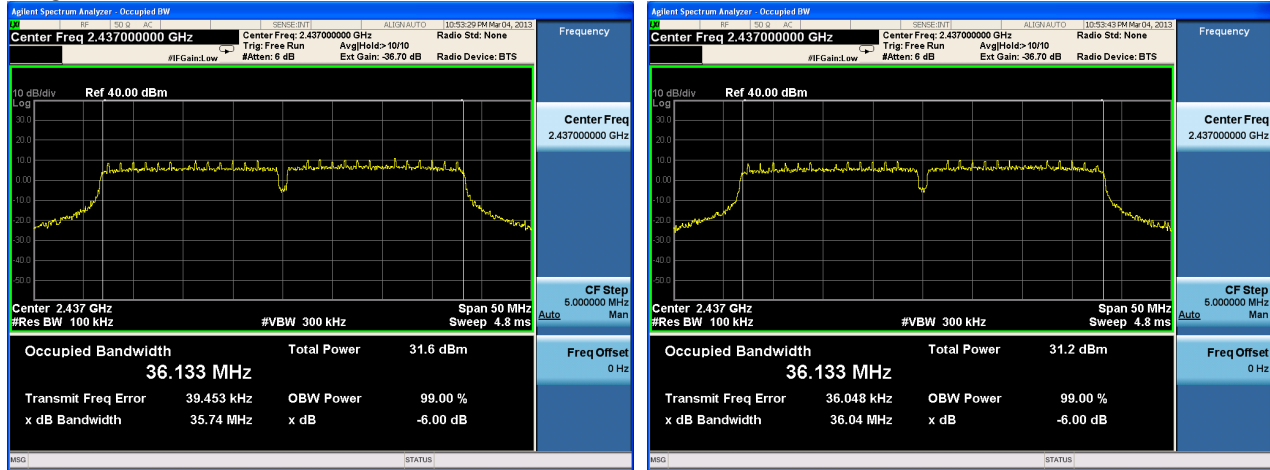
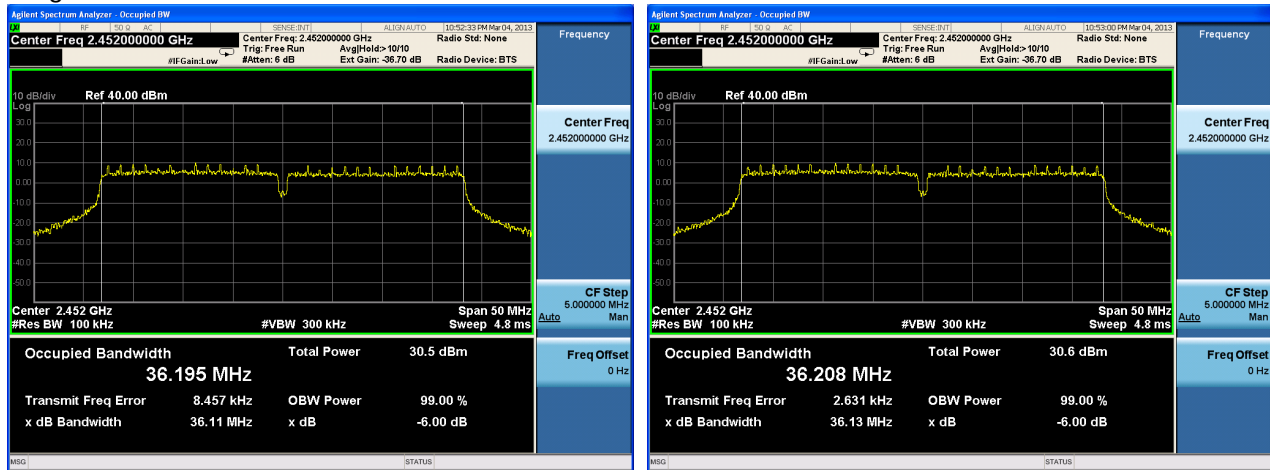


Diagram 8-12



9 MAXIMUM PEAK OUTPUT POWER

9.1 Applicable Standard: FCC §15.247

According to FCC§15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g. alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

9.2 Test Equipment List and Details

Manufacturer	Description	Model	Calibration Date	Calibration Due Date
ANRITSU	Power Meter	ML2495A	2012-6-17	2013-6-17
ANRITSU	Pulse Power Sensor	MA2411B	2013-2-28	2014-2-28

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

9.3 Test Procedure

The antenna power of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

9.4 Test Data Environmental Conditions

Temperature:	20 °C
Relative Humidity:	53%
ATM Pressure:	1009mbar

9.5 Test Result: Pass

And according to FCC47CFR section 15.247(b), if the transmitting antennas of directional gain greater



than 6dBi are used, the power shall be reduced by the amount in dB than the directional gain of the antenna exceeds 6dBi, the applicable output power limit shall be calculated as follows:

$$P_{\text{Out}} = 30 - \text{Floor}(G_{\text{Tx}} - 6) = 30 - (13.5 - 6) = 22.5$$

where:

P_{Out} = maximum conducted output power in dBm,

G_{Tx} = the maximum transmitting antenna directional gain in dBi.

Mode	Channel	Antenna Port	Power (dBm)	Total Power (dBm)	Limit (dBm)	Result
802.11.b	CH LOW	Port 1	16.12	19.04	22.5	Pass
		Port 2	15.94			Pass
	CH MID	Port 1	16.42	19.16	22.5	Pass
		Port 2	15.86			Pass
	CH HIGH	Port 1	15.72	18.54	22.5	Pass
		Port 2	15.34			Pass
802.11.g	CH LOW	Port 1	15.49	18.58	22.5	Pass
		Port 2	15.65			Pass
	CH MID	Port 1	15.67	18.71	22.5	Pass
		Port 2	15.73			Pass
	CH HIGH	Port 1	15.86	18.73	22.5	Pass
		Port 2	15.57			Pass
802.11.n. HT20	CH LOW	Port 1	16.21	19.06	22.5	Pass
		Port 2	15.89			Pass
	CH MID	Port 1	15.67	18.48	22.5	Pass
		Port 2	15.26			Pass
	CH HIGH	Port 1	15.44	18.39	22.5	Pass
		Port 2	15.32			Pass
802.11.n. HT40	CH LOW	Port 1	16.34	19.54	22.5	Pass
		Port 2	16.72			Pass
	CH MID	Port 1	16.86	19.91	22.5	Pass
		Port 2	16.93			Pass
	CH HIGH	Port 1	16.52	19.43	22.5	Pass
		Port 2	16.31			Pass

10 100kHz BANDWIDTH OF FREQUENCY BAND EDGE

10.1 Applicable Standard: FCC § 15.247(d)

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

10.2 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9020A	MY48011941	2012-6-17	2013-6-17

***statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

10.3 Test Procedure

Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range. The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency, the spurious emissions more than 20 dB below the permissible value are not reported.

RBW =100kHz, VBW=300kHz; Detector = Peak, Trace mode = max hold

10.4 Environmental Conditions

Normal condition:	25° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

10.5 Test Result: pass

Mode	Port	Channel	Test Data	Test Result
802.11.b	Port 1	CH LOW	Diagram 10-1	Pass
		CH MID	Diagram 10-2	Pass
		CH HIGH	Diagram 10-3	Pass
	Port 2	CH LOW	Diagram 10-4	Pass
		CH MID	Diagram 10-5	Pass
		CH HIGH	Diagram 10-6	Pass
802.11.g	Port 1	CH LOW	Diagram 10-7	Pass
		CH MID	Diagram 10-8	Pass
		CH HIGH	Diagram 10-9	Pass
	Port 2	CH LOW	Diagram 10-10	Pass
		CH MID	Diagram 10-11	Pass
		CH HIGH	Diagram 10-12	Pass
802.11.n20	Port 1	CH LOW	Diagram 10-13	Pass
		CH MID	Diagram 10-14	Pass
		CH HIGH	Diagram 10-15	Pass
	Port 2	CH LOW	Diagram 10-16	Pass
		CH MID	Diagram 10-17	Pass
		CH HIGH	Diagram 10-18	Pass
802.11.n40	Port 1	CH LOW	Diagram 10-19	Pass
		CH MID	Diagram 10-20	Pass
		CH HIGH	Diagram 10-21	Pass
	Port 2	CH LOW	Diagram 10-22	Pass
		CH MID	Diagram 10-23	Pass
		CH HIGH	Diagram 10-24	Pass

Please refer to following plots.

Diagram 10-1



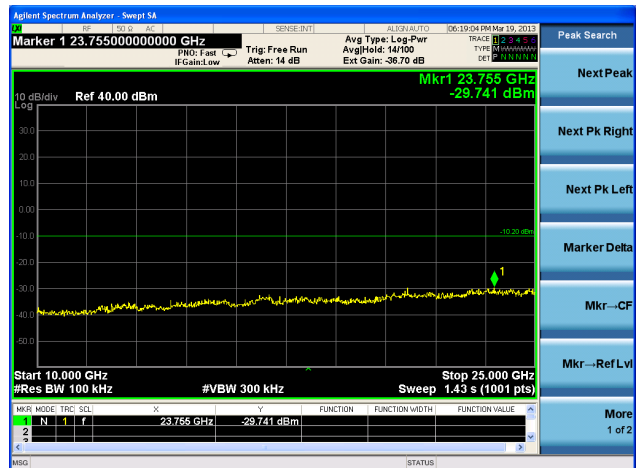
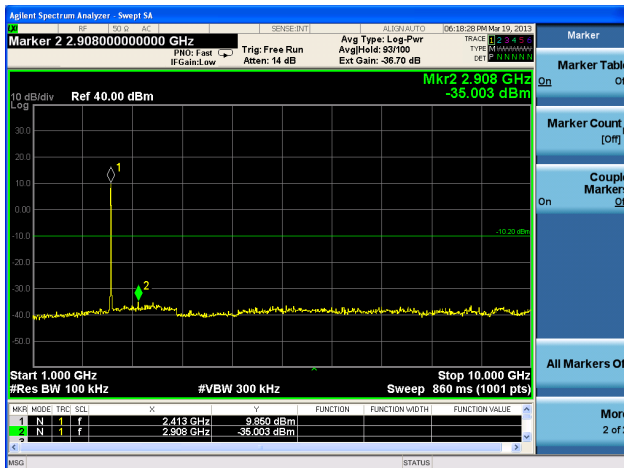


Diagram 10-2

