

## 5.10 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2013 Section 11.12		
Test Site:	Measurement Distance: 3m or 10m (Semi-Anechoic Chamber)		
Limit:	Frequency	Limit (dBuV/m @3m)	Remark
	30MHz-88MHz	40.0	Quasi-peak Value
	88MHz-216MHz	43.5	Quasi-peak Value
	216MHz-960MHz	46.0	Quasi-peak Value
	960MHz-1GHz	54.0	Quasi-peak Value
	Above 1GHz	54.0	Average Value
		74.0	Peak Value
Test Setup:			

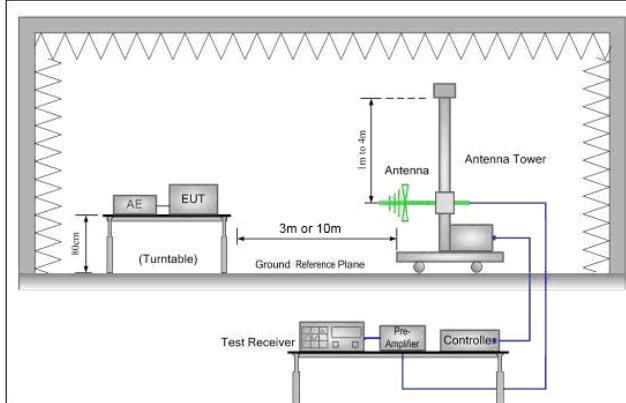


Figure 1. 30MHz to 1GHz

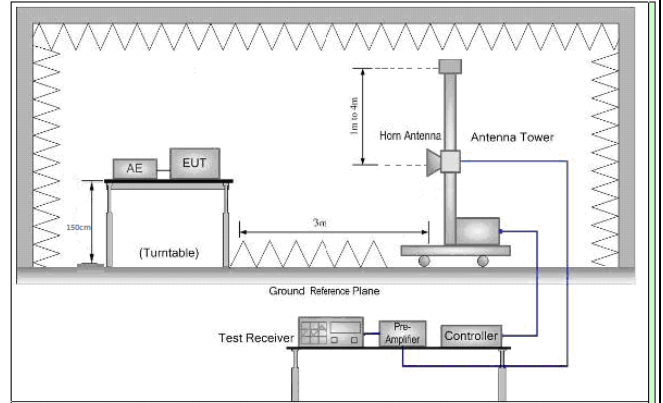


Figure 2. Above 1 GHz

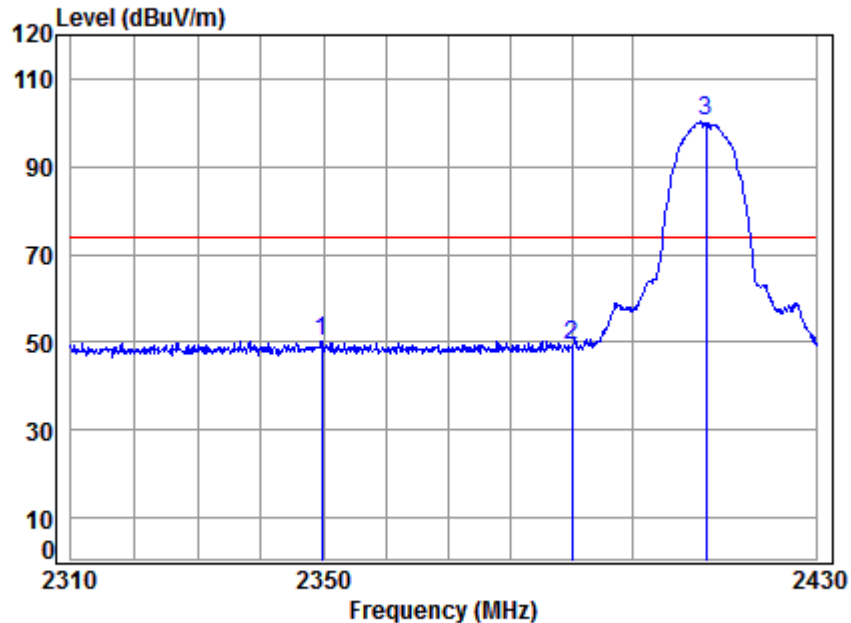


Test Procedure:	<ul style="list-style-type: none"><li>a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li><li>d. The antenna height 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.</li><li>e. 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.</li><li>f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li><li>g. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</li><li>h. Test the EUT in the lowest channel , the Highest channel</li><li>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.</li><li>j. Repeat above procedures until all frequencies measured was complete.</li></ul>
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Charge + Transmitting mode.
Final Test Mode:	Pretest the EUT at Charge +Transmitting mode. Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20); 13.5Mbps of rate is the worst case of 802.11n(HT40). Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



Test plot as follows:

Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Peak	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2349.763	5.42	28.45	41.86	58.38	50.39	74.00	-23.61	peak
2	2390.000	5.47	28.52	41.87	57.05	49.17	74.00	-24.83	peak
3 pp	2412.000	5.50	28.56	41.88	107.99	100.17	74.00	26.17	peak

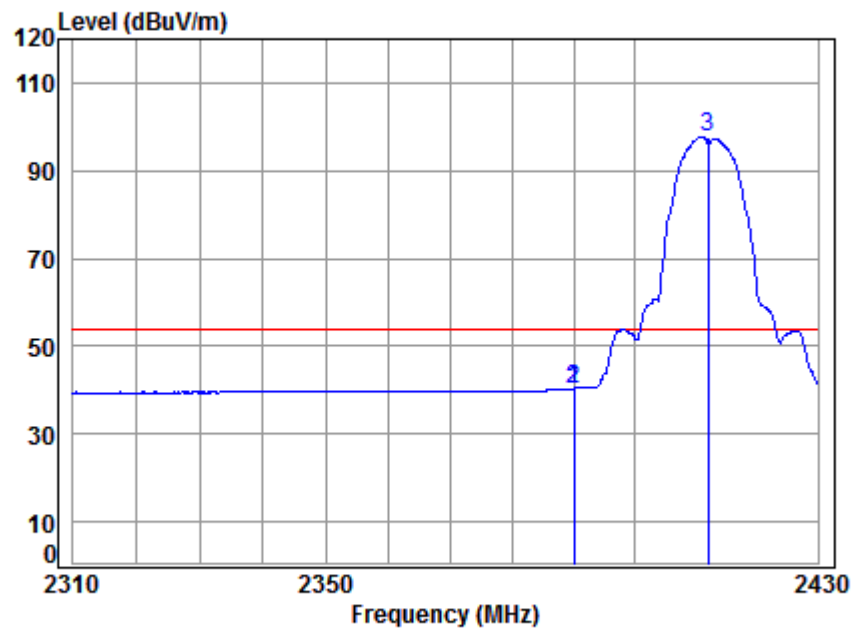


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Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Average	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.968	5.47	28.52	41.87	48.21	40.33	54.00	-13.67	Average
2	2390.000	5.47	28.52	41.87	48.21	40.33	54.00	-13.67	Average
3 pp	2412.000	5.50	28.56	41.88	105.69	97.87	54.00	43.87	Average

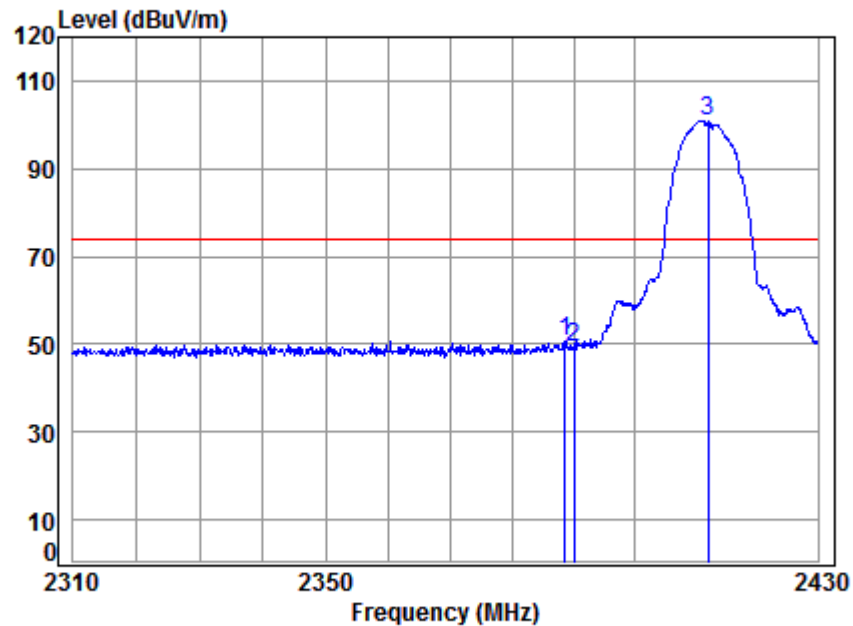


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Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Peak	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2388.516	5.47	28.52	41.87	58.71	50.83	74.00	-23.17	peak
2	2390.000	5.47	28.52	41.87	57.03	49.15	74.00	-24.85	peak
3 pp	2412.000	5.50	28.56	41.88	108.88	101.06	74.00	27.06	peak

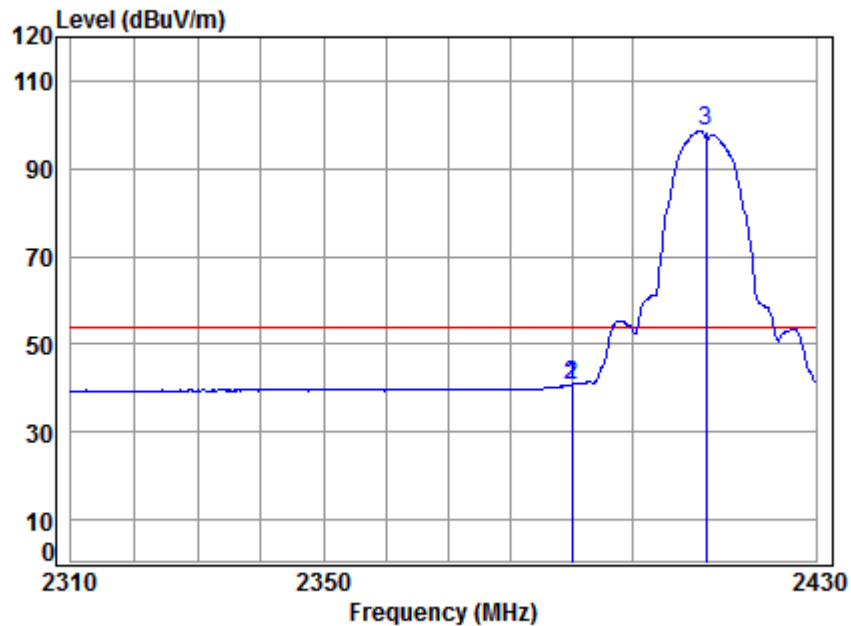


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Worse case mode:	802.11b	Test channel:	Lowest	Remark:	Average	Horizontal
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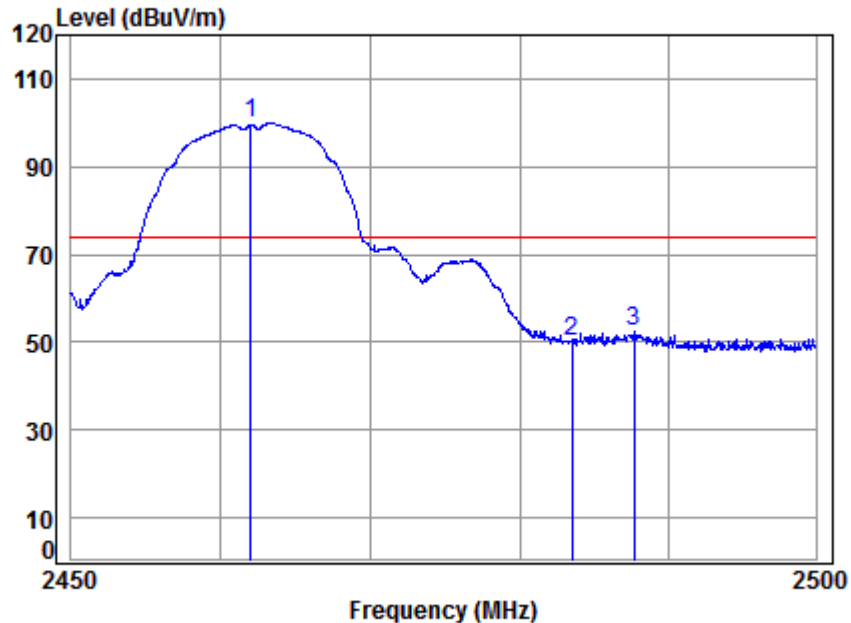


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.968	5.47	28.52	41.87	48.64	40.76	54.00	-13.24	Average
2	2390.000	5.47	28.52	41.87	48.64	40.76	54.00	-13.24	Average
3 pp	2412.000	5.50	28.56	41.88	106.45	98.63	54.00	44.63	Average



Worse case mode:	802.11b	Test channel:	Highest	Remark:	Peak	Vertical
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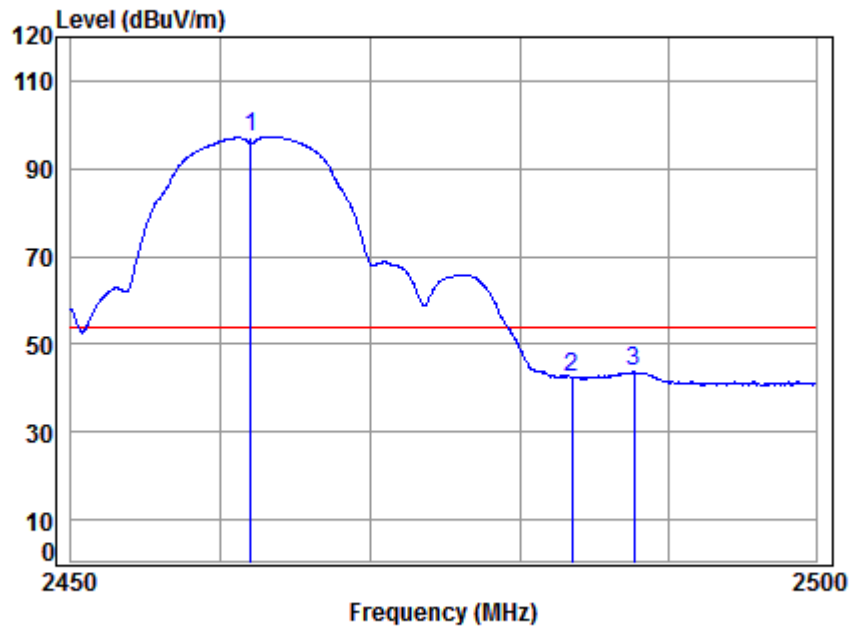


Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	pp 2462.000	5.57	28.64	41.90	107.52	99.83	74.00	25.83 peak
2	2483.500	5.60	28.67	41.91	57.93	50.29	74.00	-23.71 peak
3	2487.707	5.60	28.68	41.91	59.98	52.35	74.00	-21.65 peak



Worse case mode:	802.11b	Test channel:	Highest	Remark:	Average	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2462.000	5.57	28.64	41.90	105.10	97.41	54.00	43.41	Average
2	2483.500	5.60	28.67	41.91	50.12	42.48	54.00	-11.52	Average
3	2487.700	5.60	28.68	41.91	51.35	43.72	54.00	-10.28	Average



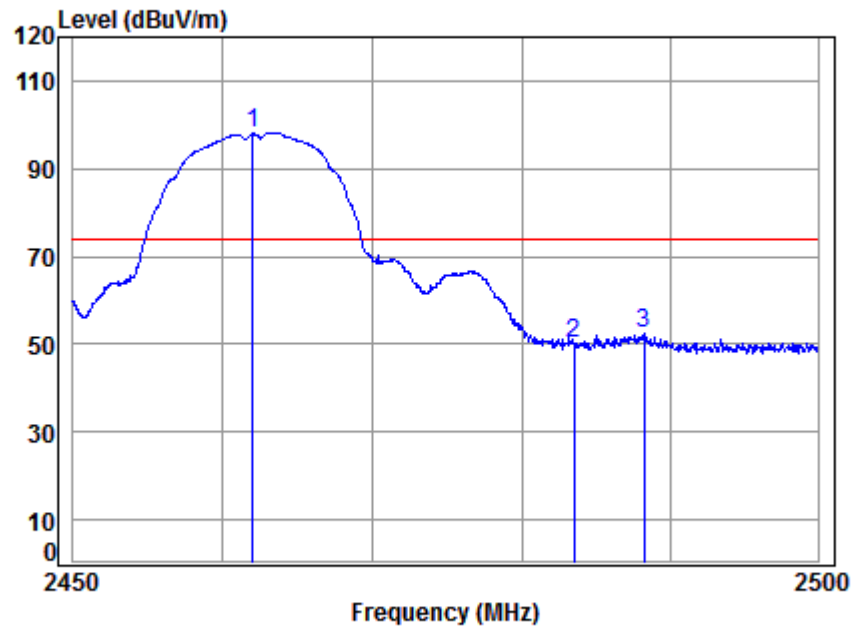


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Worse case mode:	802.11b	Test channel:	Highest	Remark:	Peak	Horizontal
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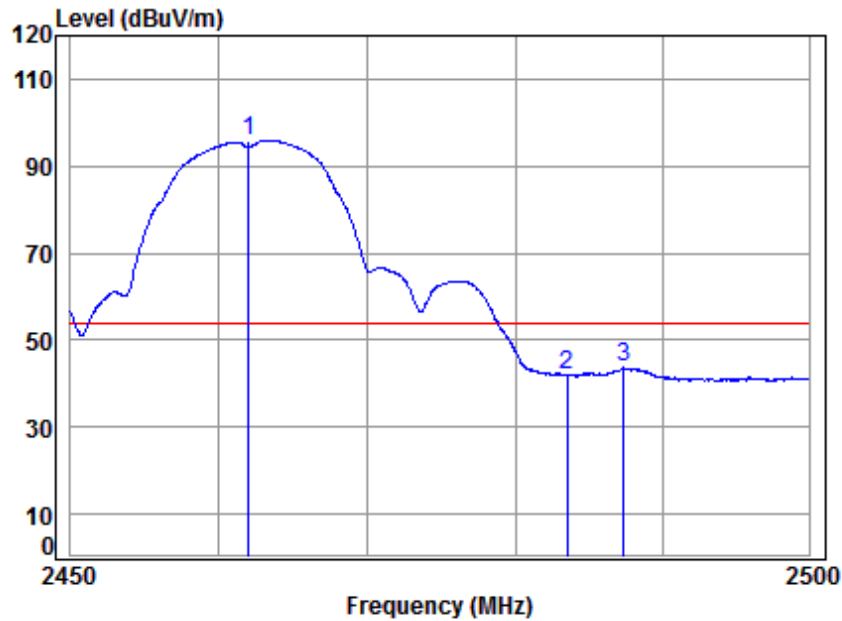


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	2462.000	5.57	28.64	41.90	105.98	98.29	74.00	24.29 peak
2	2483.500	5.60	28.67	41.91	57.92	50.28	74.00	-23.72 peak
3	2488.260	5.60	28.68	41.91	60.03	52.40	74.00	-21.60 peak



Worse case mode:	802.11b	Test channel:	Highest	Remark:	Average	Horizontal
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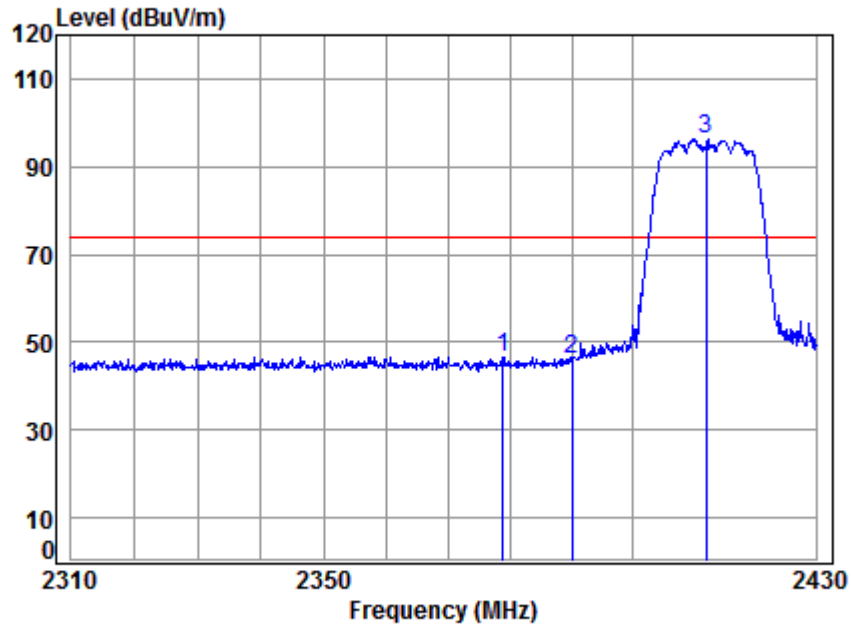


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11B  
Antenna : ANT1

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2462.000	5.57	28.64	41.90	103.72	96.03	54.00	42.03	Average
2	2483.500	5.60	28.67	41.91	49.69	42.05	54.00	-11.95	Average
3	2487.355	5.60	28.68	41.91	51.21	43.58	54.00	-10.42	Average



Worse case mode:	802.11g_CDD	Test channel:	Lowest	Remark:	Peak	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2378.859	5.46	28.50	41.87	54.54	46.63	74.00	-27.37	peak
2	2390.000	5.47	28.52	41.87	53.90	46.02	74.00	-27.98	peak
3 pp	2412.000	5.50	28.56	41.88	103.95	96.13	74.00	22.13	peak

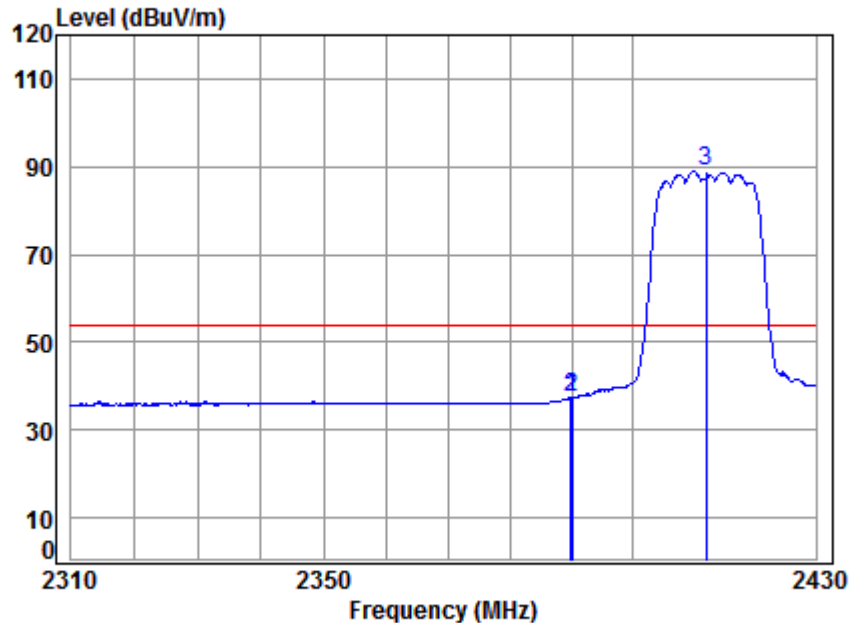


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Worse case mode:	802.11g_CDD	Test channel:	Lowest	Remark:	Average	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.847	5.47	28.52	41.87	45.14	37.26	54.00	-16.74	Average
2	2390.000	5.47	28.52	41.87	45.14	37.26	54.00	-16.74	Average
3 pp	2412.000	5.50	28.56	41.88	96.66	88.84	54.00	34.84	Average

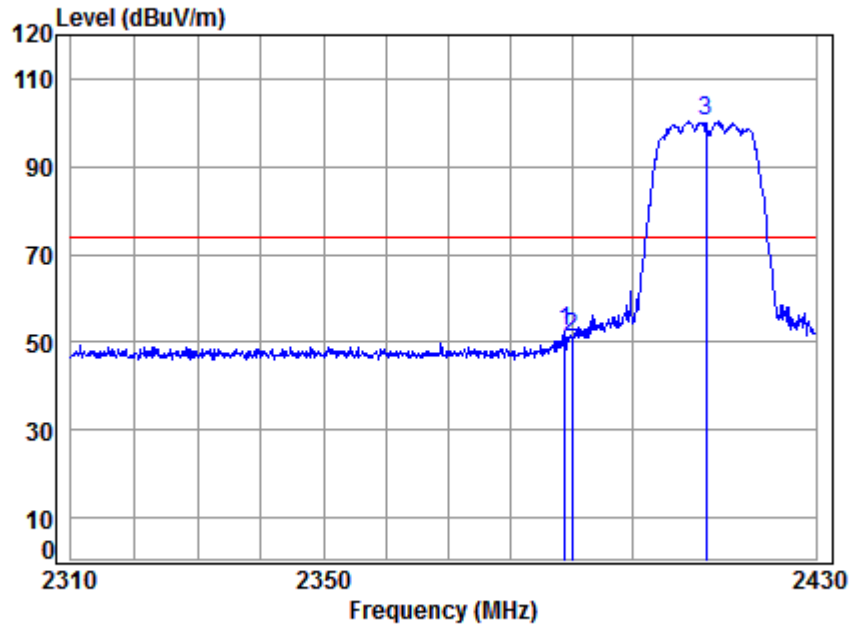


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Worse case mode:	802.11g_CDD	Test channel:	Lowest	Remark:	Peak	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2388.879	5.47	28.52	41.87	60.41	52.53	74.00	-21.47	peak
2	2390.000	5.47	28.52	41.87	58.90	51.02	74.00	-22.98	peak
3 pp	2412.000	5.50	28.56	41.88	108.38	100.56	74.00	26.56	peak

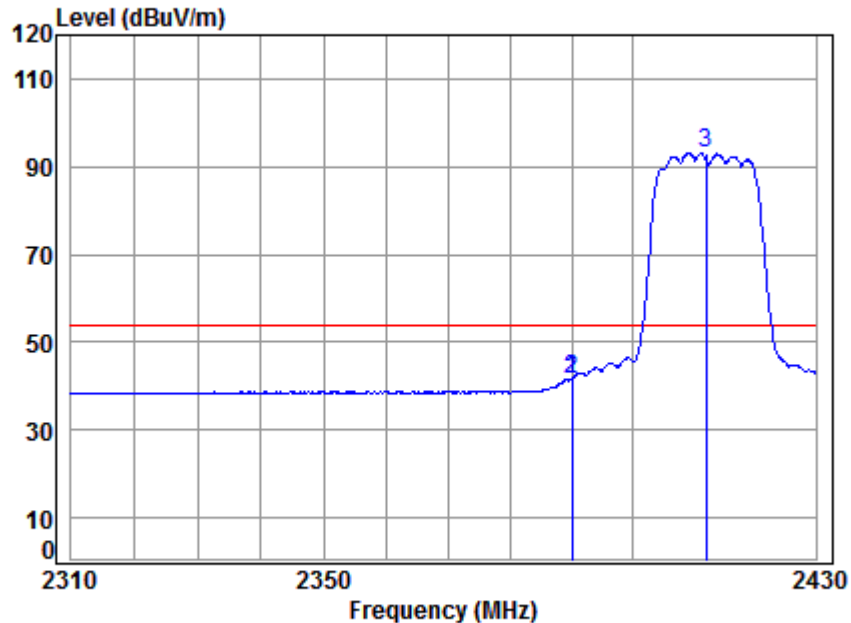


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Worse case mode:	802.11g_CDD	Test channel:	Lowest	Remark:	Average	Horizontal
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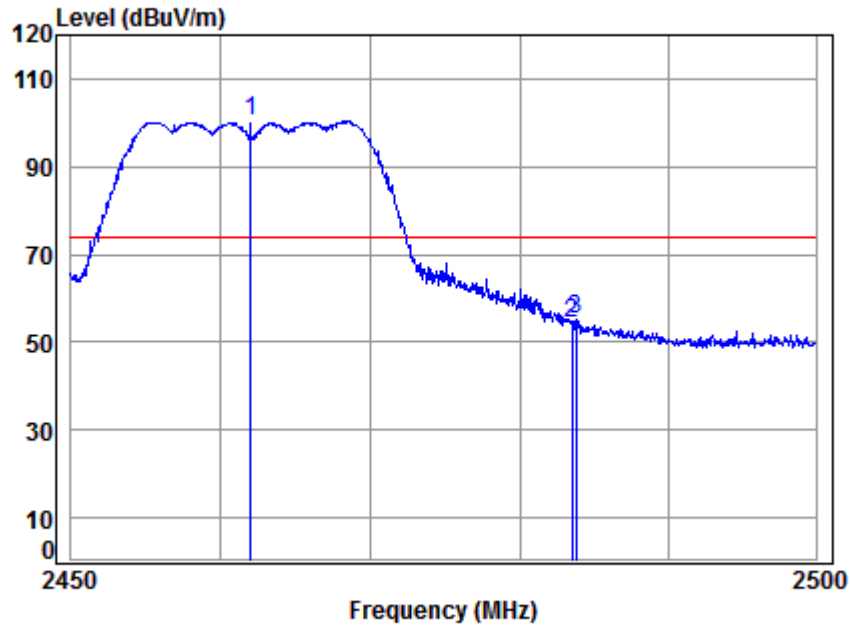


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.968	5.47	28.52	41.87	49.45	41.57	54.00	-12.43	Average
2	2390.000	5.47	28.52	41.87	49.45	41.57	54.00	-12.43	Average
3 pp	2412.000	5.50	28.56	41.88	100.79	92.97	54.00	38.97	Average



Worse case mode:	802.11g_CDD	Test channel:	Highest	Remark:	Peak	Vertical
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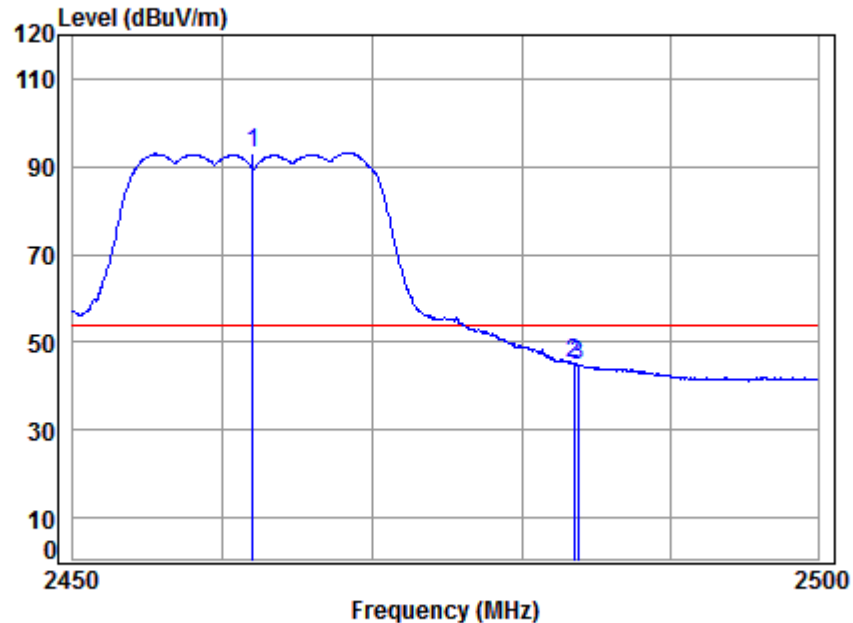


Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	pp 2462.000	5.57	28.64	41.90	108.06	100.37	74.00	26.37 peak
2	2483.500	5.60	28.67	41.91	61.97	54.33	74.00	-19.67 peak
3	2483.790	5.60	28.67	41.91	62.87	55.23	74.00	-18.77 peak



Worse case mode:	802.11g_CDD	Test channel:	Highest	Remark:	Average	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	2462.000	5.57	28.64	41.90	100.81	93.12	54.00	39.12 Average
2	2483.500	5.60	28.67	41.91	52.88	45.24	54.00	-8.76 Average
3	2483.790	5.60	28.67	41.91	52.49	44.85	54.00	-9.15 Average



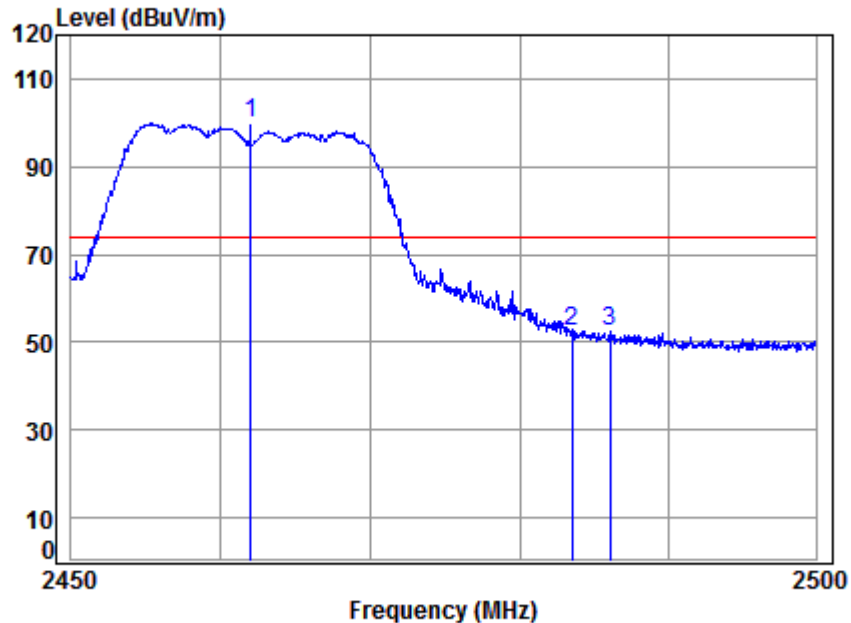


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Worse case mode:	802.11g_CDD	Test channel:	Highest	Remark:	Peak	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	pp 2462.000	5.57	28.64	41.90	107.48	99.79	74.00	25.79 peak
2	2483.500	5.60	28.67	41.91	60.30	52.66	74.00	-21.34 peak
3	2486.099	5.60	28.68	41.91	60.10	52.47	74.00	-21.53 peak

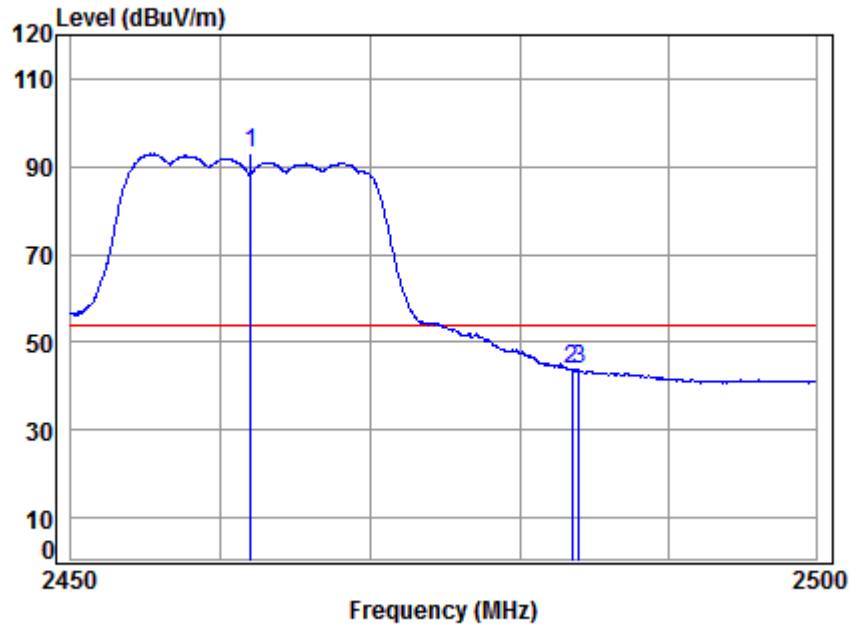


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Worse case mode:	802.11g_CDD	Test channel:	Highest	Remark:	Average	Horizontal
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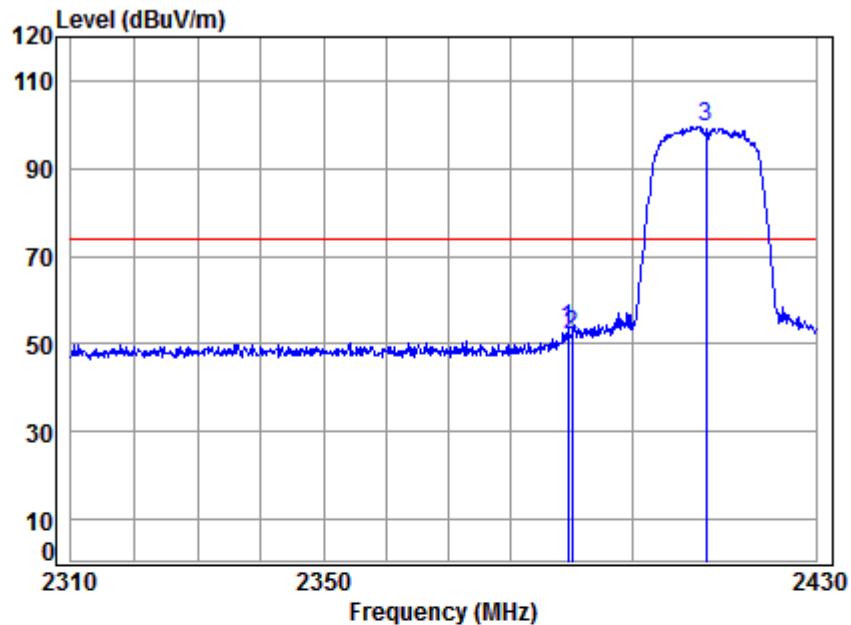


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11G  
Antenna : CDD

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	2462.000	5.57	28.64	41.90	100.71	93.02	54.00	39.02 Average
2	2483.500	5.60	28.67	41.91	51.33	43.69	54.00	-10.31 Average
3	2483.990	5.60	28.67	41.91	51.48	43.84	54.00	-10.16 Average



Worse case mode:	802.11n(HT20)_MIMO	Test channel:	Lowest	Remark:	Peak	Vertical
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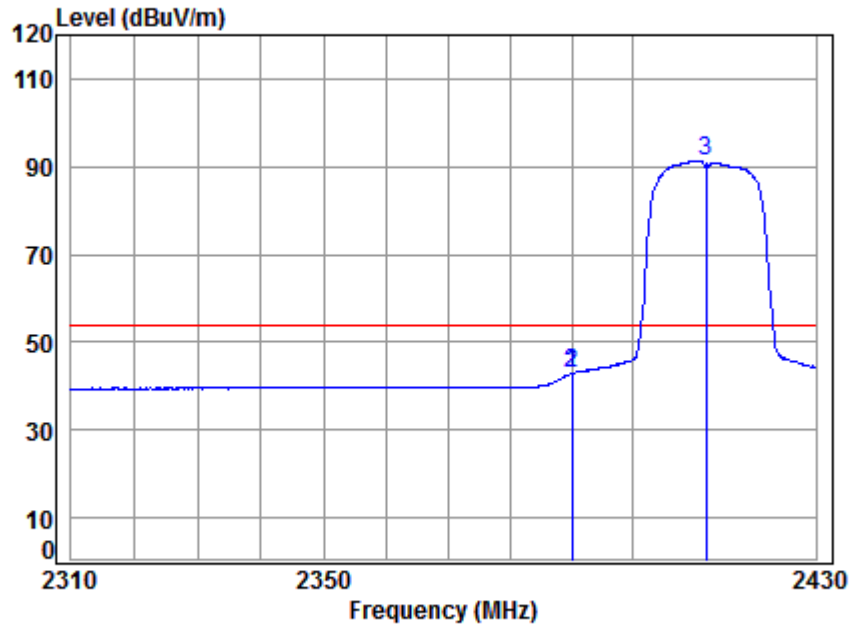


Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.363	5.47	28.52	41.87	61.35	53.47	74.00	-20.53	peak
2	2390.000	5.47	28.52	41.87	59.83	51.95	74.00	-22.05	peak
3 pp	2412.000	5.50	28.56	41.88	107.43	99.61	74.00	25.61	peak



Worse case mode:	802.11n(HT20)_MIMO	Test channel:	Lowest	Remark:	Average	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2389.968	5.47	28.52	41.87	50.81	42.93	54.00	-11.07 Average
2	2390.000	5.47	28.52	41.87	50.81	42.93	54.00	-11.07 Average
3 pp	2412.000	5.50	28.56	41.88	99.23	91.41	54.00	37.41 Average

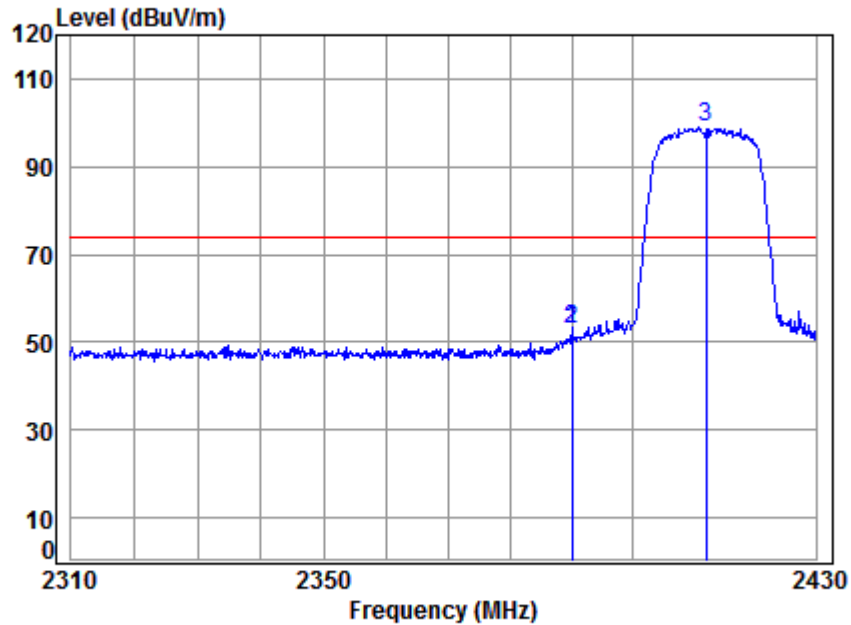


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Worse case mode:	802.11n(HT20)_MIMO	Test channel:	Lowest	Remark:	Peak	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2389.968	5.47	28.52	41.87	60.90	53.02	74.00	-20.98 peak
2	2390.000	5.47	28.52	41.87	60.90	53.02	74.00	-20.98 peak
3 pp	2412.000	5.50	28.56	41.88	106.74	98.92	74.00	24.92 peak

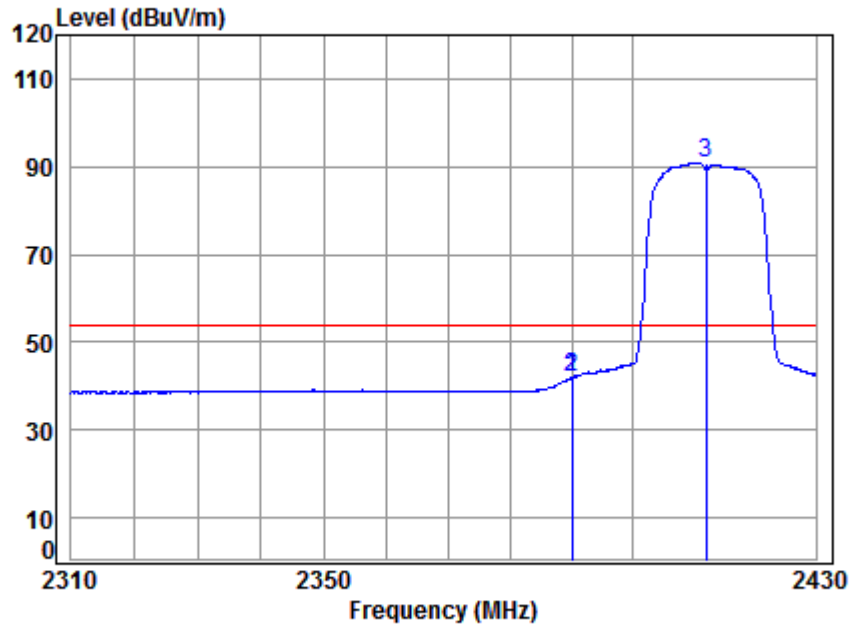


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Worse case mode:	802.11n(HT20)_MIMO	Test channel:	Lowest	Remark:	Average	Horizontal
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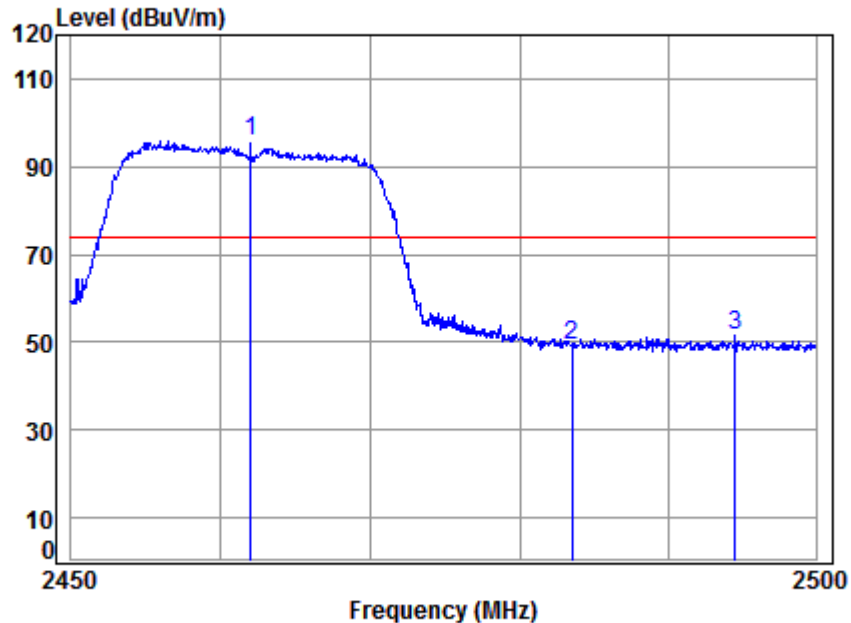


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2412 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2389.968	5.47	28.52	41.87	49.73	41.85	54.00	-12.15 Average
2	2390.000	5.47	28.52	41.87	49.73	41.85	54.00	-12.15 Average
3 pp	2412.000	5.50	28.56	41.88	98.81	90.99	54.00	36.99 Average



Worse case mode:	802.11n(HT20) MIMO	Test channel:	Highest	Remark:	Peak	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 2462.000	5.57	28.64	41.90	103.37	95.68	74.00	21.68	peak
2	2483.500	5.60	28.67	41.91	56.72	49.08	74.00	-24.92	peak
3	2494.551	5.61	28.69	41.92	59.34	51.72	74.00	-22.28	peak

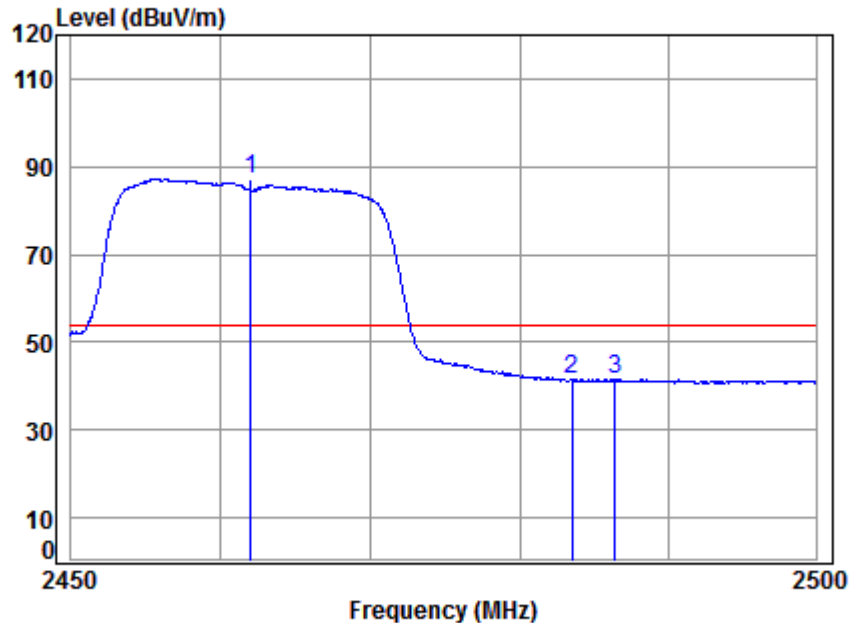


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Worse case mode:	802.11n(HT20) _MIMO	Test channel:	Highest	Remark:	Average	Vertical
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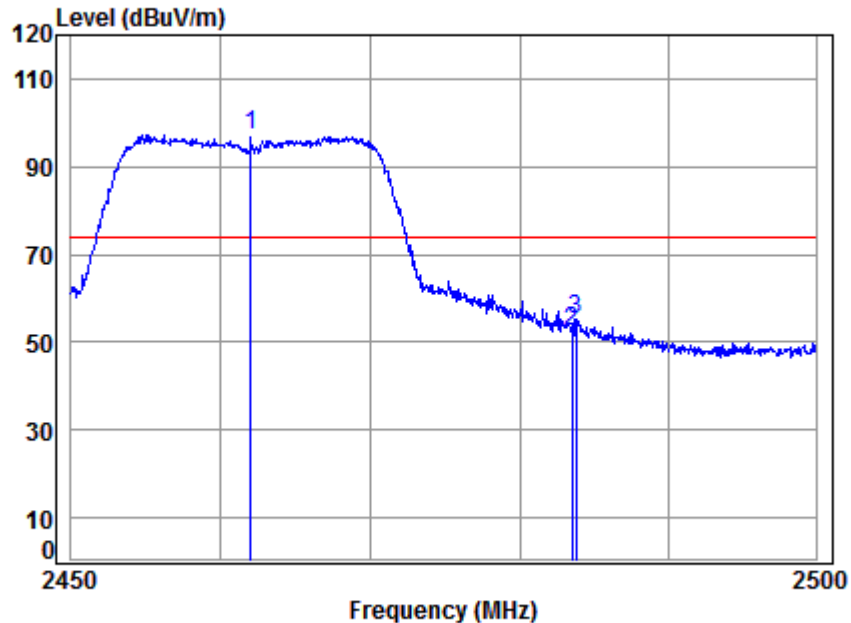
Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2462.000	5.57	28.64	41.90	95.02	87.33	54.00	33.33	Average
2	2483.500	5.60	28.67	41.91	48.95	41.31	54.00	-12.69	Average
3	2486.450	5.60	28.68	41.91	49.14	41.51	54.00	-12.49	Average





Worse case mode:	802.11n(HT20) _MIMO	Test channel:	Highest	Remark:	Peak	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2462.000	5.57	28.64	41.90	105.01	97.32	74.00	23.32	peak
2	2483.500	5.60	28.67	41.91	60.11	52.47	74.00	-21.53	peak
3	2483.790	5.60	28.67	41.91	62.86	55.22	74.00	-18.78	peak

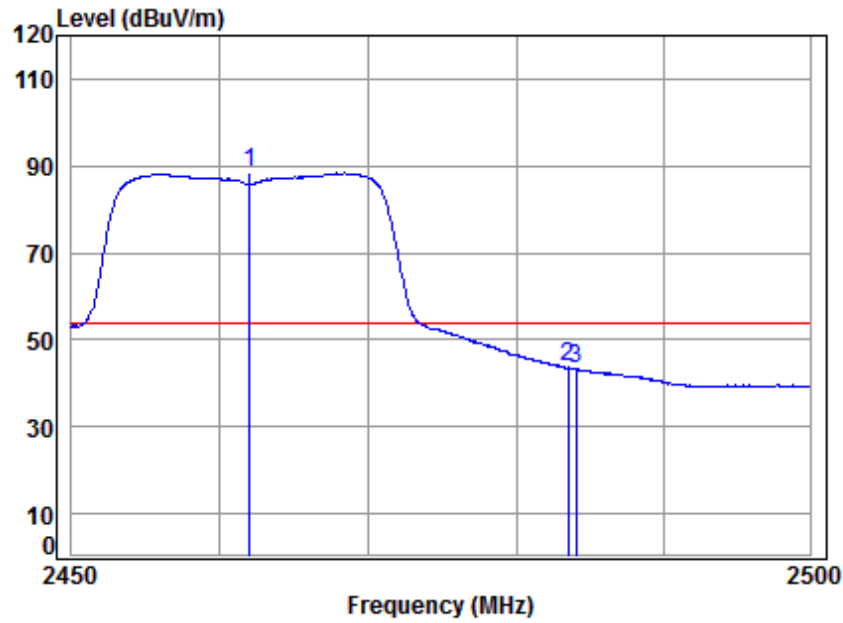


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Worse case mode:	802.11n(HT20) MIMO	Test channel:	Highest	Remark:	Average	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2462 Band edge  
Note : 2.4G WiFi 11N 20  
Antenna : MIMO

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	2462.000	5.57	28.64	41.90	96.03	88.34	54.00	34.34 Average
2	2483.500	5.60	28.67	41.91	51.25	43.61	54.00	-10.39 Average
3	2484.041	5.60	28.67	41.91	51.04	43.40	54.00	-10.60 Average

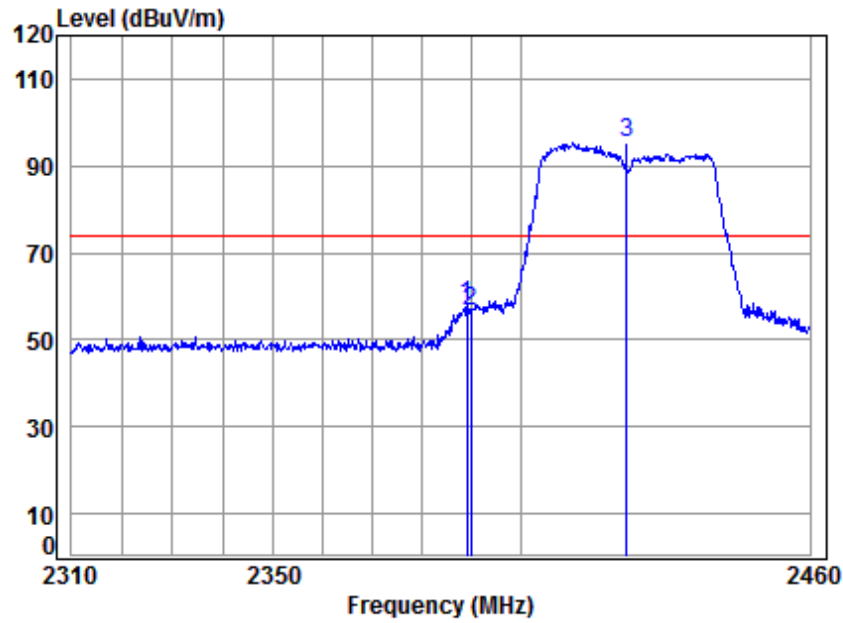


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Worse case mode:	802.11n(HT40) _MIMO	Test channel:	Lowest	Remark:	Peak	Vertical
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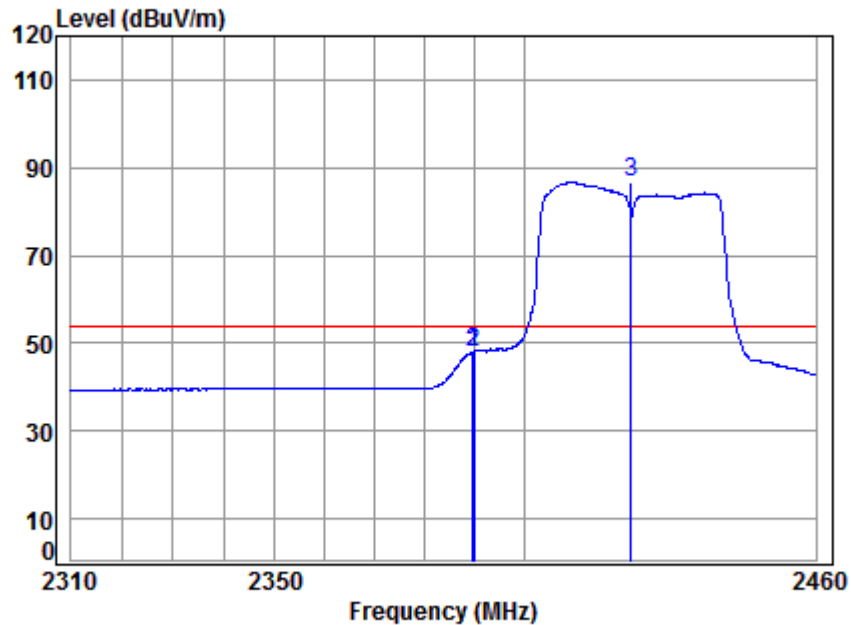


Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2422 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2389.226	5.47	28.52	41.87	65.80	57.92	74.00	-16.08 peak
2	2390.000	5.47	28.52	41.87	64.45	56.57	74.00	-17.43 peak
3 pp	2422.000	5.52	28.57	41.89	102.99	95.19	74.00	21.19 peak



Worse case mode:	802.11n(HT40) MIMO	Test channel:	Lowest	Remark:	Average	Vertical
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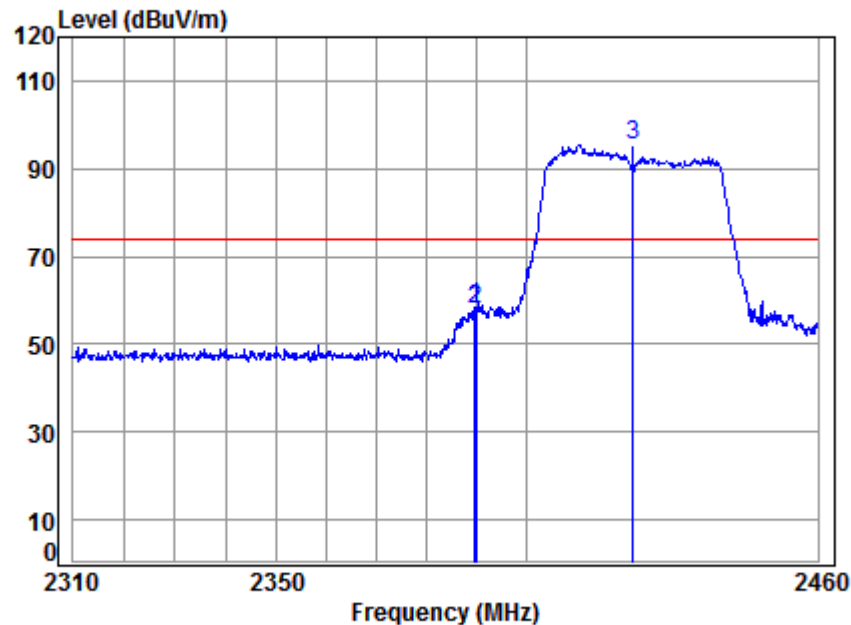


Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2422 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.827	5.47	28.52	41.87	55.91	48.03	54.00	-5.97	Average
2	2390.000	5.47	28.52	41.87	55.96	48.08	54.00	-5.92	Average
3 pp	2422.000	5.52	28.57	41.89	94.53	86.73	54.00	32.73	Average



Worse case mode:	802.11n(HT40) _MIMO	Test channel:	Lowest	Remark:	Peak	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2422 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.827	5.47	28.52	41.87	66.27	58.39	74.00	-15.61	peak
2	2390.000	5.47	28.52	41.87	65.93	58.05	74.00	-15.95	peak
3 pp	2422.000	5.52	28.57	41.89	103.19	95.39	74.00	21.39	peak

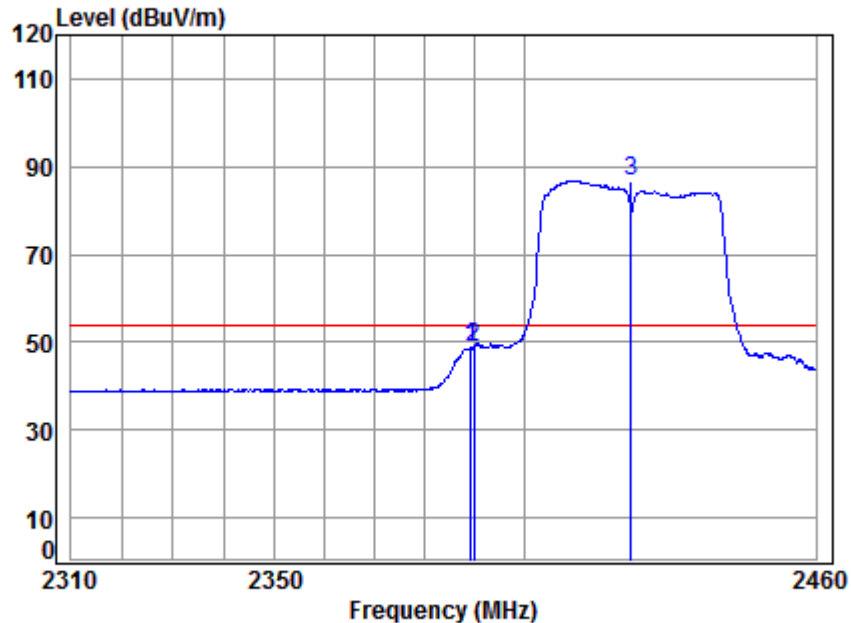


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Worse case mode:	802.11n(HT40) MIMO	Test channel:	Lowest	Remark:	Average	Horizontal
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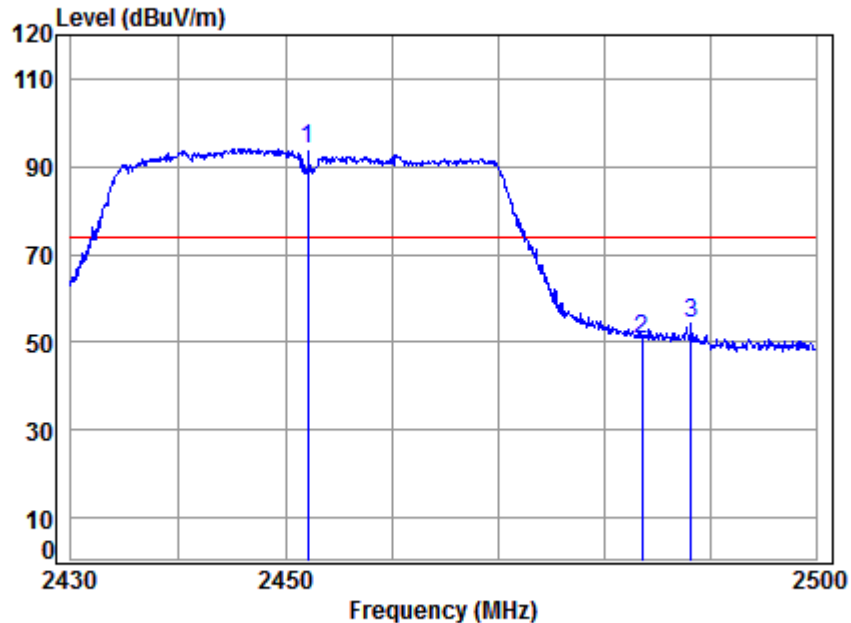


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2422 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2389.376	5.47	28.52	41.87	56.84	48.96	54.00	-5.04	Average
2	2390.000	5.47	28.52	41.87	56.64	48.76	54.00	-5.24	Average
3 pp	2422.000	5.52	28.57	41.89	94.63	86.83	54.00	32.83	Average



Worse case mode:	802.11n(HT40) _MIMO	Test channel:	Highest	Remark:	Peak	Vertical
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Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2452 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2452.000	5.56	28.62	41.90	101.79	94.07	74.00	20.07	peak
2	2483.500	5.60	28.67	41.91	58.37	50.73	74.00	-23.27	peak
3	2488.171	5.60	28.68	41.91	62.12	54.49	74.00	-19.51	peak

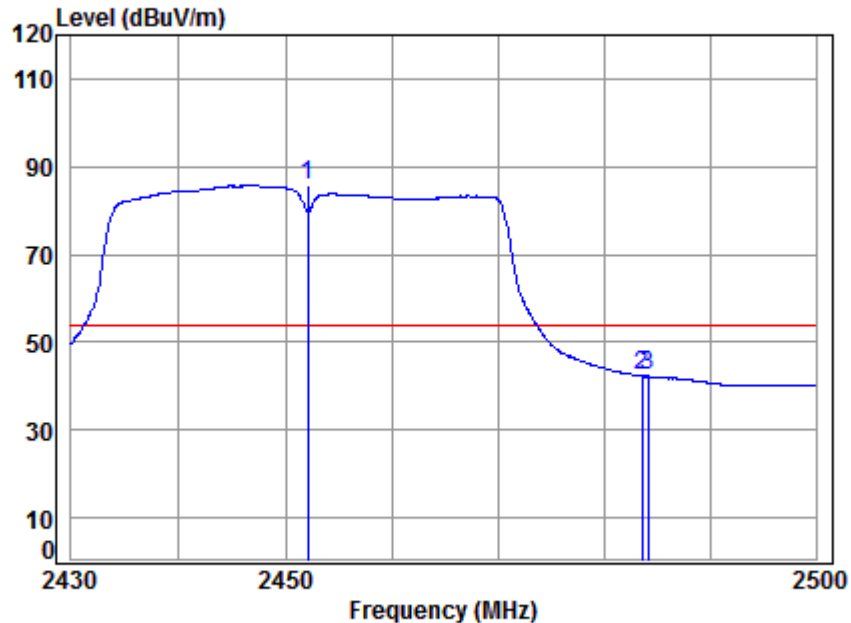


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Worse case mode:	802.11n(HT40) _MIMO	Test channel:	Highest	Remark:	Average	Vertical
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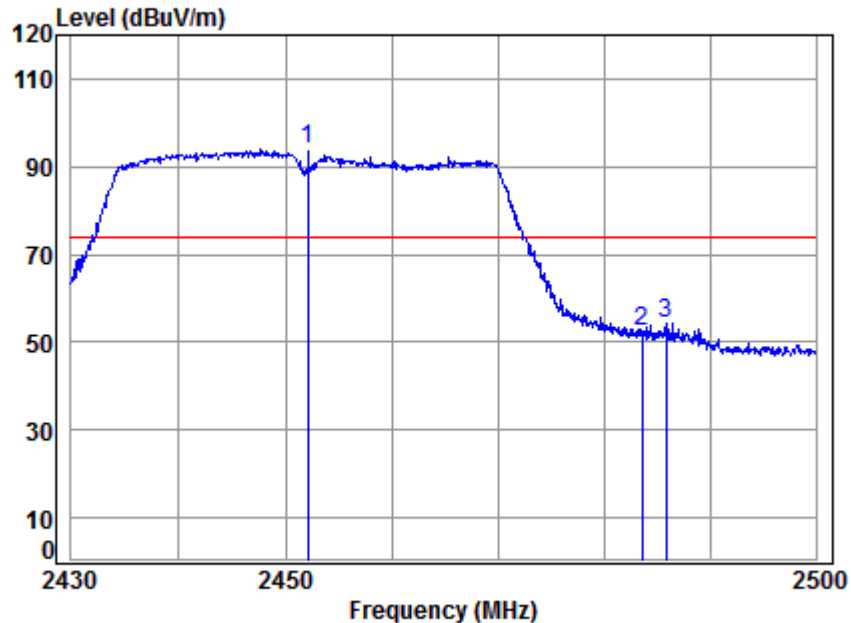
Site : chamber  
Condition: 3m VERTICAL  
Job No : 06549RG  
Mode : 2452 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	2452.000	5.56	28.62	41.90	93.48	85.76	54.00	31.76	Average
2	2483.500	5.60	28.67	41.91	50.01	42.37	54.00	-11.63	Average
3	2484.076	5.60	28.67	41.91	50.08	42.44	54.00	-11.56	Average





Worse mode:	case	802.11n(HT40)_MIMO	Test channel:	Highest	Remark:	Peak	Horizontal
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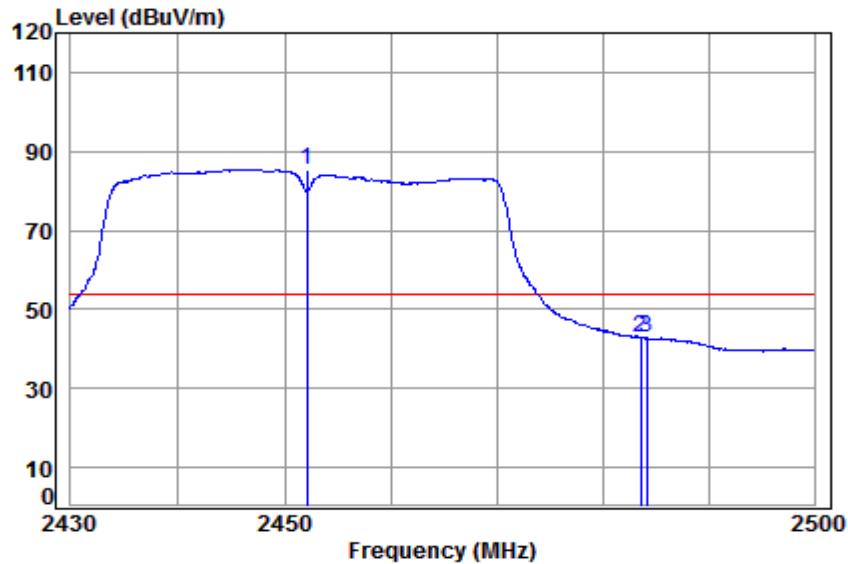


Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2452 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 2452.000	5.56	28.62	41.90	101.92	94.20	74.00	20.20	peak
2	2483.500	5.60	28.67	41.91	60.19	52.55	74.00	-21.45	peak
3	2485.770	5.60	28.68	41.91	61.89	54.26	74.00	-19.74	peak



Worse case mode:	802.11n(HT40) _MIMO	Test channel:	Highest	Remark:	Average	Horizontal
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Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 06549RG  
Mode : 2452 Band edge  
Note : 2.4G WiFi 11N 40  
Antenna : MIMO

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	2452.000	5.56	28.62	41.90	93.23	85.51	54.00	31.51 Average
2	2483.500	5.60	28.67	41.91	50.48	42.84	54.00	-11.16 Average
3	2484.076	5.60	28.67	41.91	50.53	42.89	54.00	-11.11 Average

**Note:**

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

All Modes have been tested, but only the worst case data displayed in this report.



## **6 Photographs - EUT Constructional Details**

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1807006549RG.

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The End