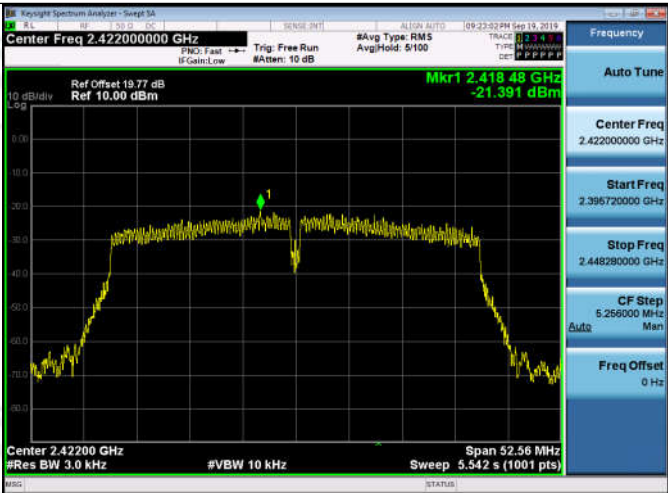
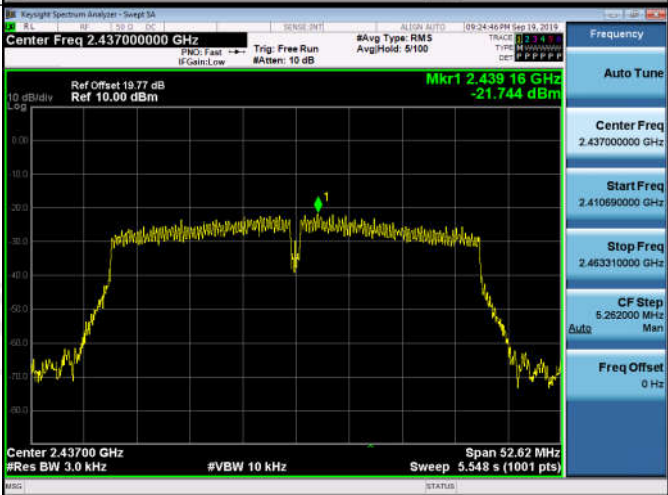
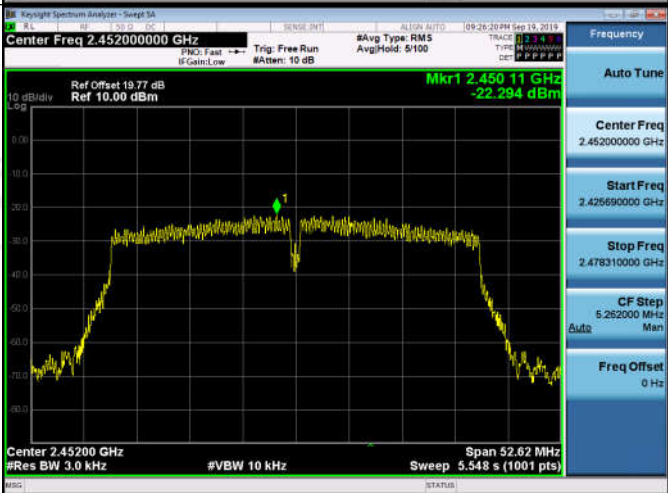






11N40SISO/LCH	
11N40SISO/MCH	
11N40SISO/HCH	

Appendix F): Antenna Requirement

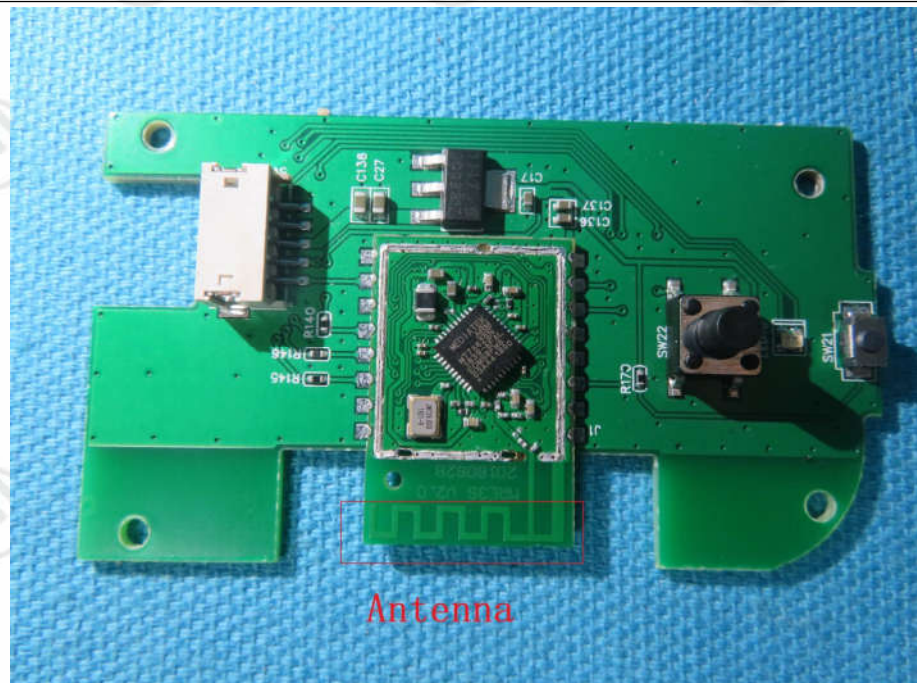
15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.5 dBi

Appendix G): AC Power Line Conducted Emission

Test Procedure:	Test frequency range :150KHz-30MHz 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.															
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr> <tr> <th>Quasi-peak</th><th>Average</th></tr> </thead> <tbody> <tr> <td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr> <tr> <td>0.5-5</td><td>56</td><td>46</td></tr> <tr> <td>5-30</td><td>60</td><td>50</td></tr> </tbody> </table> * The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE : The lower limit is applicable at the transition frequency		Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)															
	Quasi-peak	Average														
0.15-0.5	66 to 56*	56 to 46*														
0.5-5	56	46														
5-30	60	50														

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

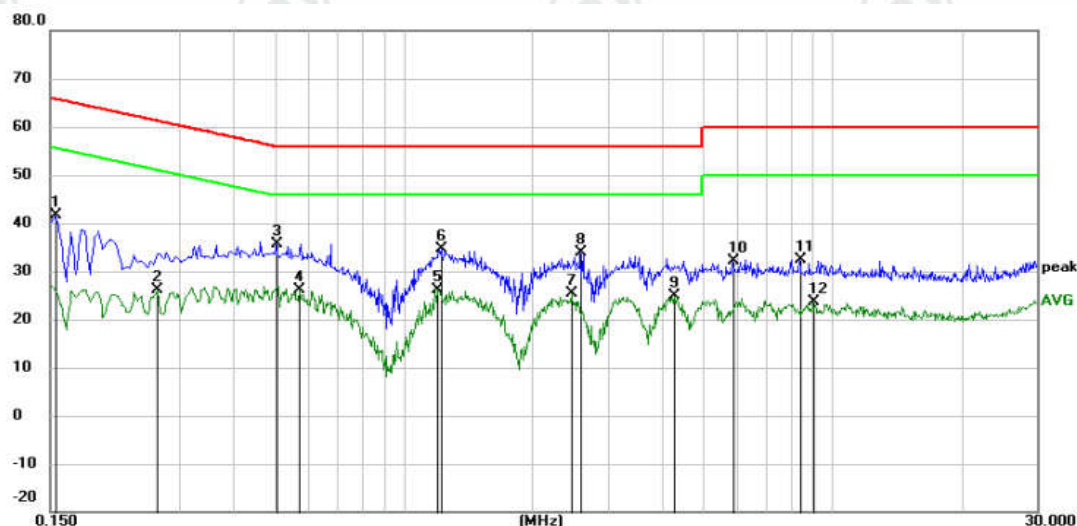
Product : Smart Wi-Fi Wall Switch

Model/Type reference : MSS510

Temperature : 21°C

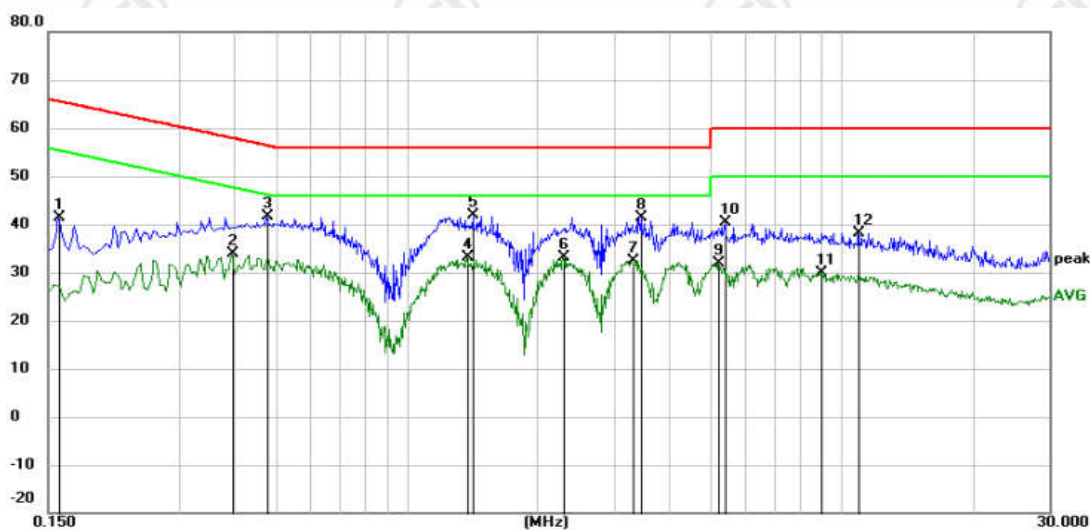
Humidity : 51%

Live line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1545	31.59	9.98	41.57	65.75	-24.18	peak	
2		0.2670	16.15	10.07	26.22	51.21	-24.99	AVG	
3		0.5055	25.64	10.01	35.65	56.00	-20.35	peak	
4	*	0.5730	15.98	10.09	26.07	46.00	-19.93	AVG	
5		1.2030	16.14	9.89	26.03	46.00	-19.97	AVG	
6		1.2255	24.86	9.89	34.75	56.00	-21.25	peak	
7		2.4630	15.52	9.83	25.35	46.00	-20.65	AVG	
8		2.5845	24.11	9.83	33.94	56.00	-22.06	peak	
9		4.2720	14.94	9.83	24.77	46.00	-21.23	AVG	
10		5.8380	22.39	9.84	32.23	60.00	-27.77	peak	
11		8.3850	22.58	9.90	32.48	60.00	-27.52	peak	
12		9.0510	13.66	9.93	23.59	50.00	-26.41	AVG	

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1590	31.50	9.98	41.48	65.52	-24.04	peak	
2		0.3975	23.81	10.00	33.81	47.91	-14.10	AVG	
3		0.4785	31.58	10.00	41.58	56.37	-14.79	peak	
4		1.3740	23.20	9.88	33.08	46.00	-12.92	AVG	
5		1.4235	32.00	9.88	41.88	56.00	-14.12	peak	
6	*	2.2920	23.33	9.83	33.16	46.00	-12.84	AVG	
7		3.3045	22.58	9.83	32.41	46.00	-13.59	AVG	
8		3.4575	31.66	9.83	41.49	56.00	-14.51	peak	
9		5.1945	22.15	9.83	31.98	50.00	-18.02	AVG	
10		5.4015	30.48	9.83	40.31	60.00	-19.69	peak	
11		8.9925	19.86	9.92	29.78	50.00	-20.22	AVG	
12		10.9455	28.27	9.96	38.23	60.00	-21.77	peak	

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

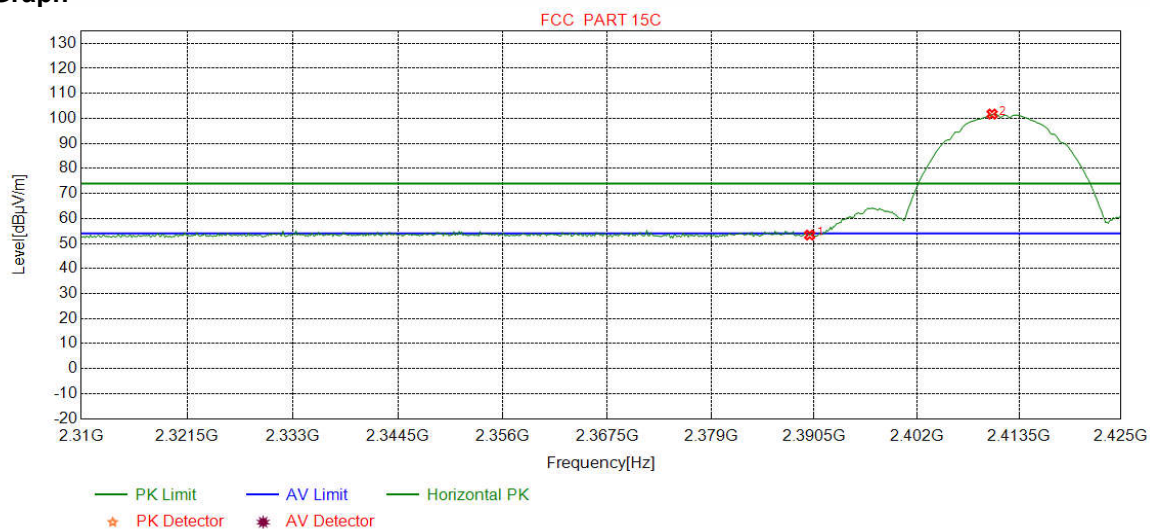
Appendix H): Restricted bands around fundamental frequency (Radiated)

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	Below 1GHz test procedure as below: - The EUT was placed on the top of a rotating table 0.8 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. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - 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. - 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 was turned from 0 degrees to 360 degrees to find the maximum reading. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - 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 Above 1GHz test procedure as below: - Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter). - Test the EUT in the lowest channel , the Highest channel - 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. - Repeat above procedures until all frequencies measured was complete.				
Limit:	Frequency	Limit (dBμV/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 plot as follows:

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	PK		

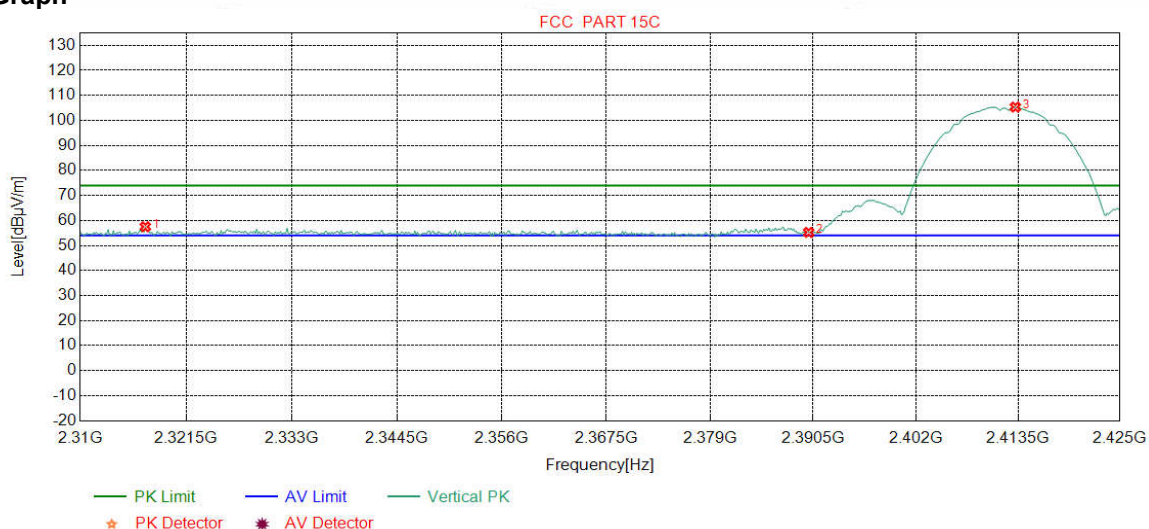
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.19	53.37	74.00	20.63	Pass	Horizontal
2	2410.4631	32.27	13.35	-42.43	98.54	101.73	74.00	-27.73	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	PK		

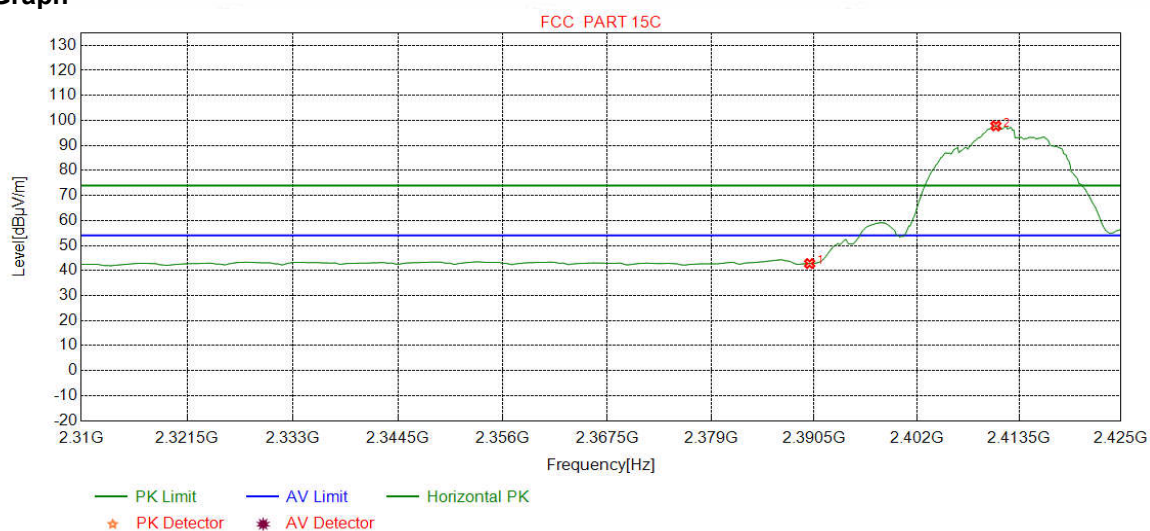
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2317.0526	32.14	13.42	-42.47	54.41	57.50	74.00	16.50	Pass	Vertical
2	2390.0000	32.25	13.37	-42.44	52.07	55.25	74.00	18.75	Pass	Vertical
3	2413.1977	32.28	13.36	-42.43	102.12	105.33	74.00	-31.33	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	AV		

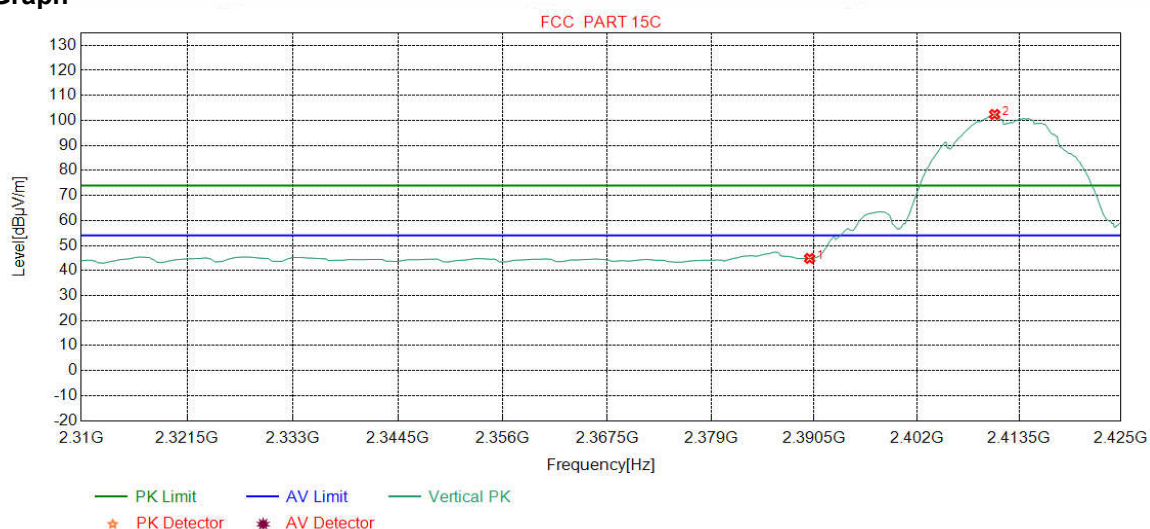
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.61	42.79	54.00	11.21	Pass	Horizontal
2	2410.8949	32.28	13.35	-42.43	94.59	97.79	54.00	-43.79	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	AV		

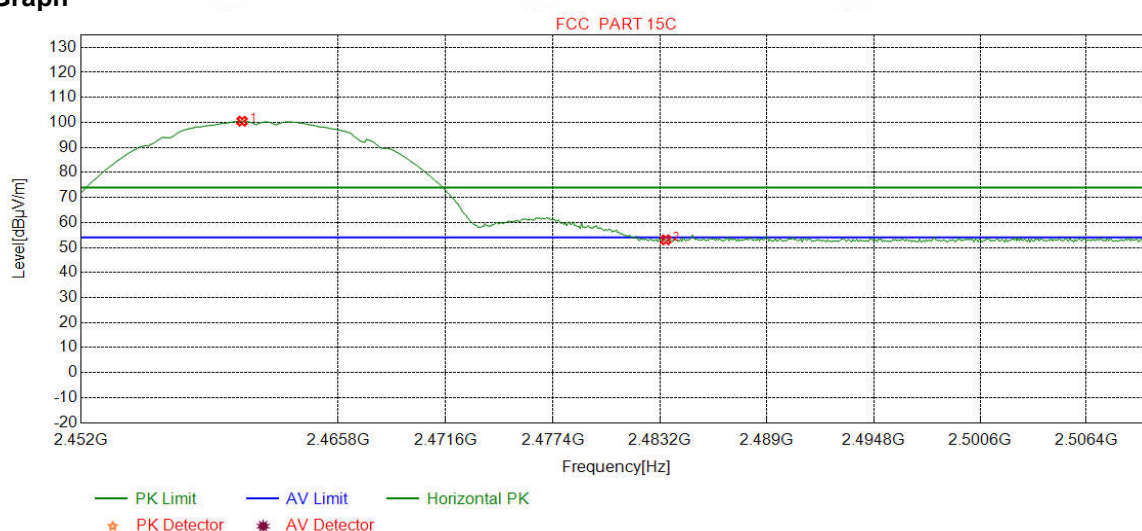
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	41.66	44.84	54.00	9.16	Pass	Vertical
2	2410.7509	32.28	13.35	-42.43	99.18	102.38	54.00	-48.38	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	PK		

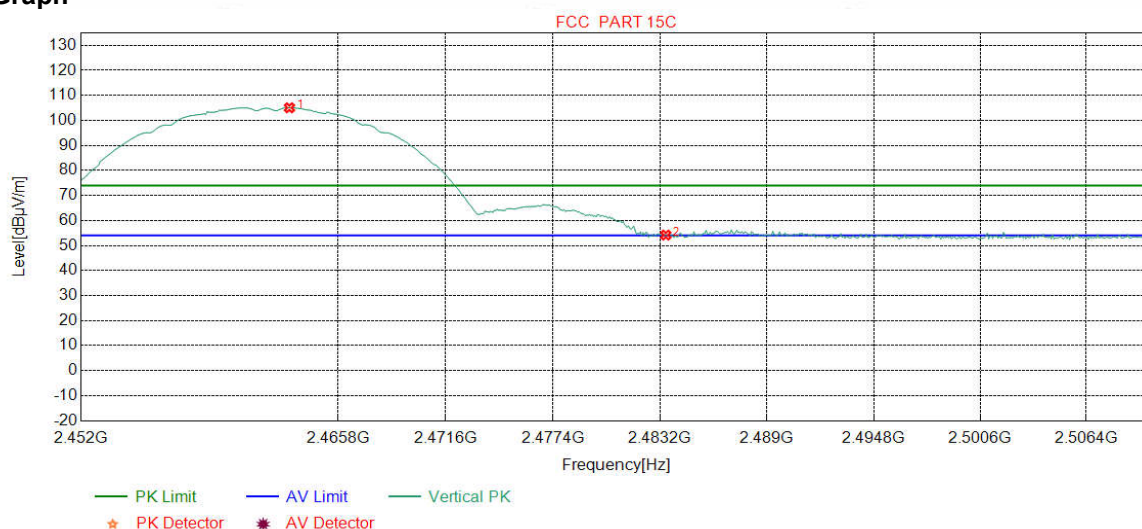
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2460.6383	32.34	13.48	-42.40	97.06	100.48	74.00	-26.48	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.70	53.06	74.00	20.94	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	PK		

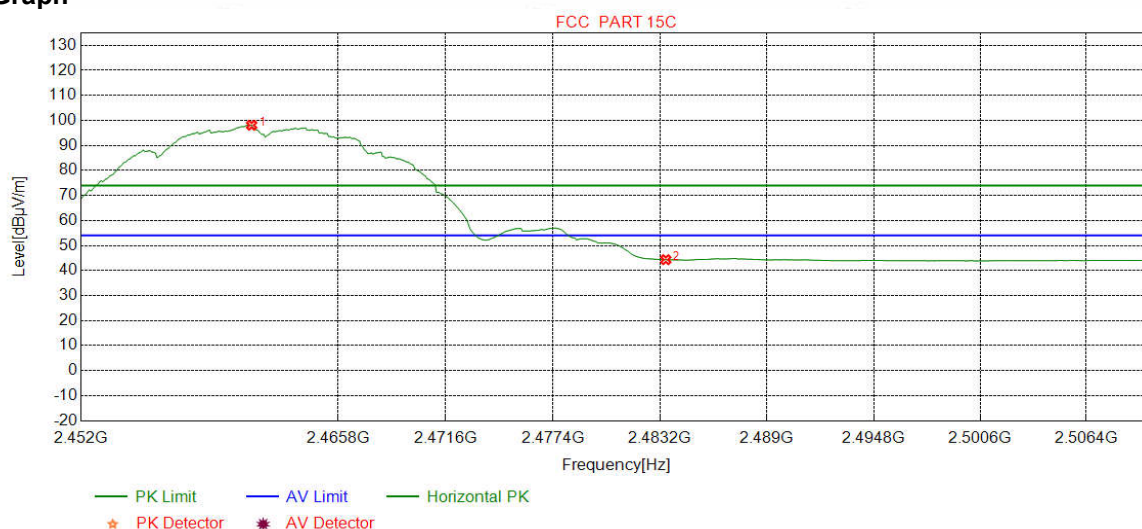
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2463.1790	32.35	13.47	-42.41	101.64	105.05	74.00	-31.05	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	50.81	54.17	74.00	19.83	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	AV		

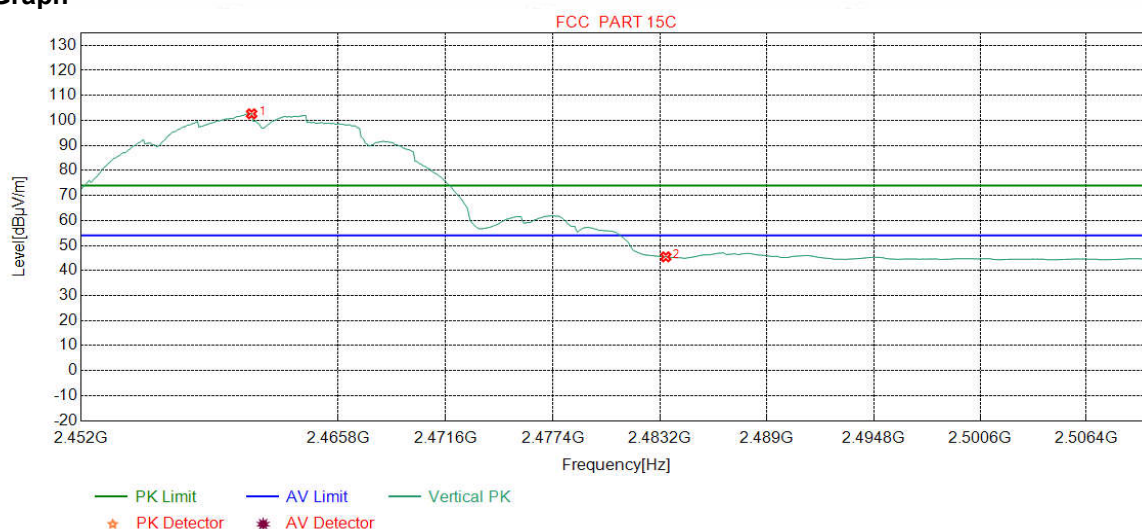
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2461.1464	32.35	13.48	-42.41	94.66	98.08	54.00	-44.08	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	40.98	44.34	54.00	9.66	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	AV		

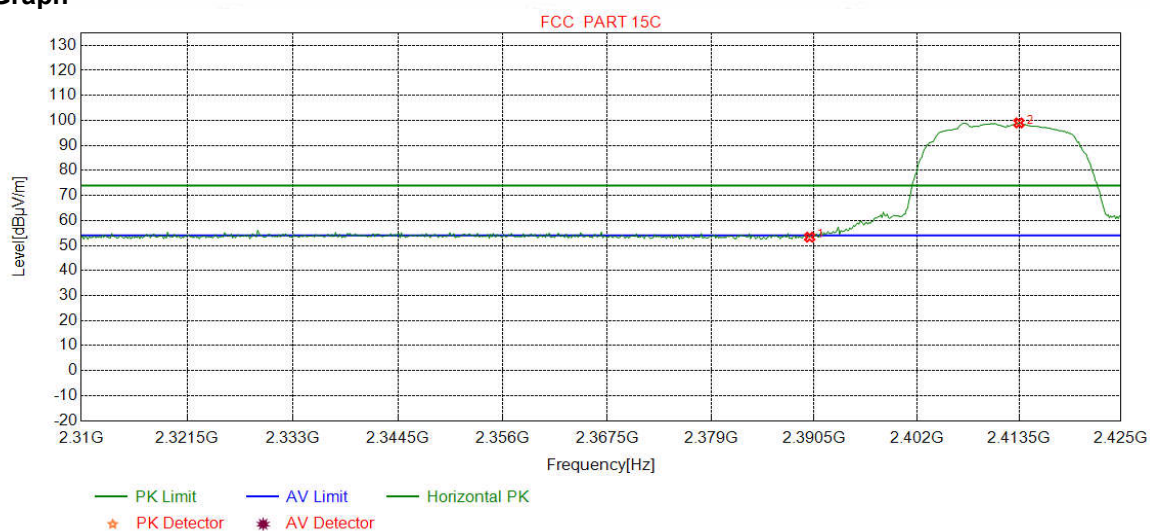
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2461.1464	32.35	13.48	-42.41	99.21	102.63	54.00	-48.63	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	42.12	45.48	54.00	8.52	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	PK		

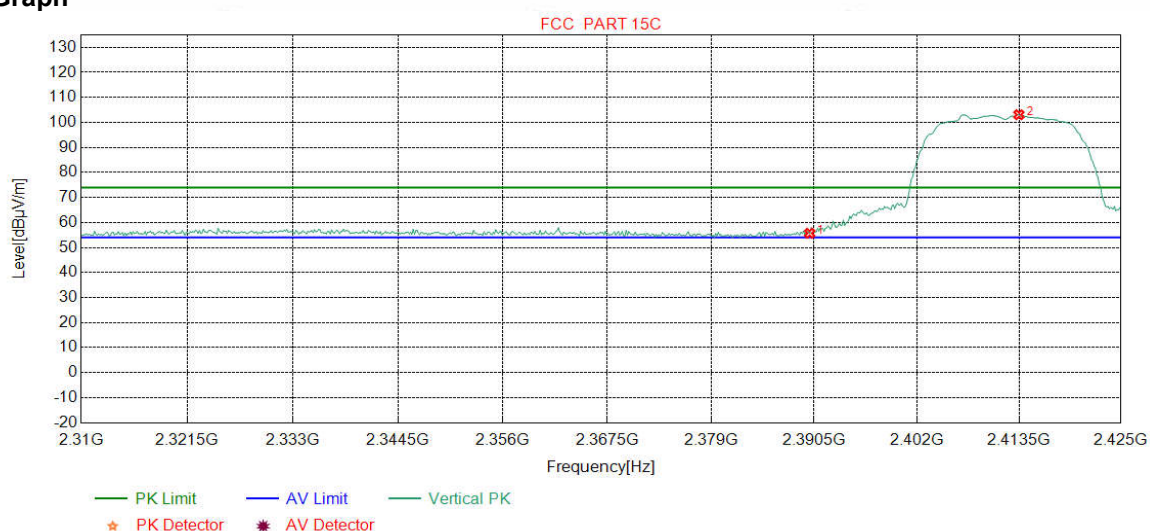
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.15	53.33	74.00	20.67	Pass	Horizontal
2	2413.4856	32.28	13.36	-42.43	95.78	98.99	74.00	-24.99	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	PK		

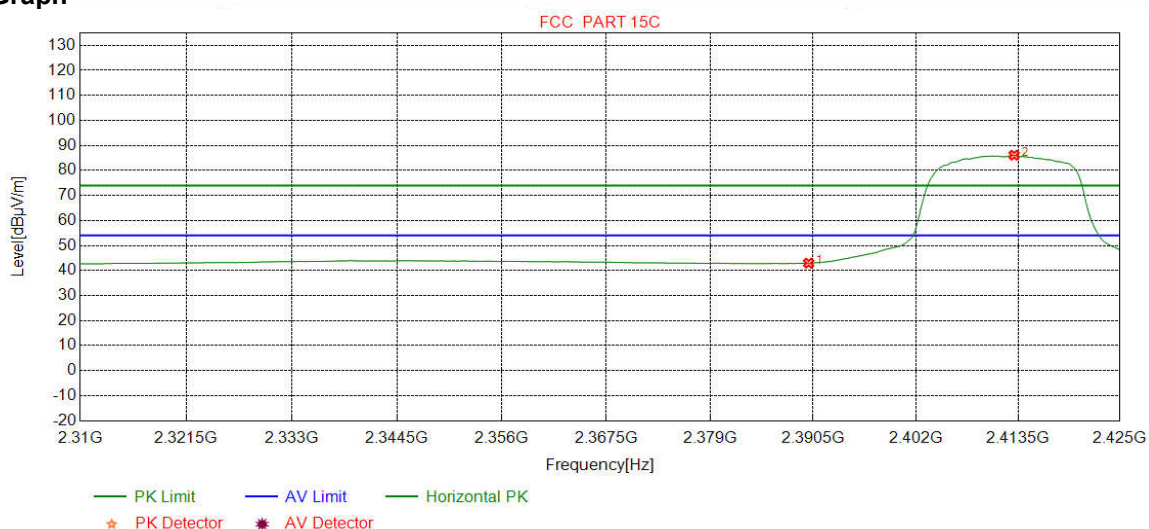
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	52.51	55.69	74.00	18.31	Pass	Vertical
2	2413.4856	32.28	13.36	-42.43	99.86	103.07	74.00	-29.07	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	AV		

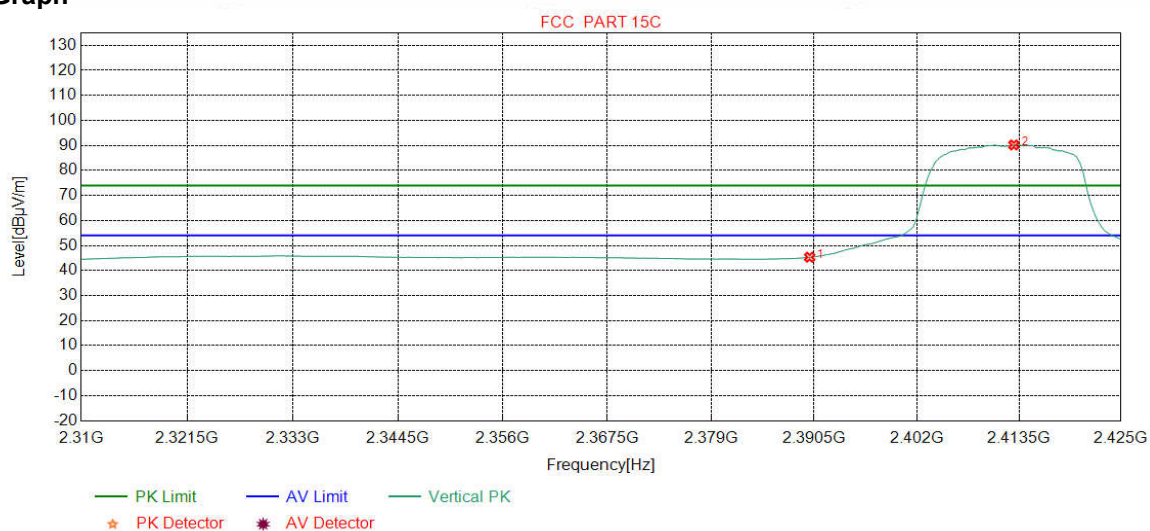
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.77	42.95	54.00	11.05	Pass	Horizontal
2	2413.0538	32.28	13.36	-42.43	82.88	86.09	54.00	-32.09	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	AV		

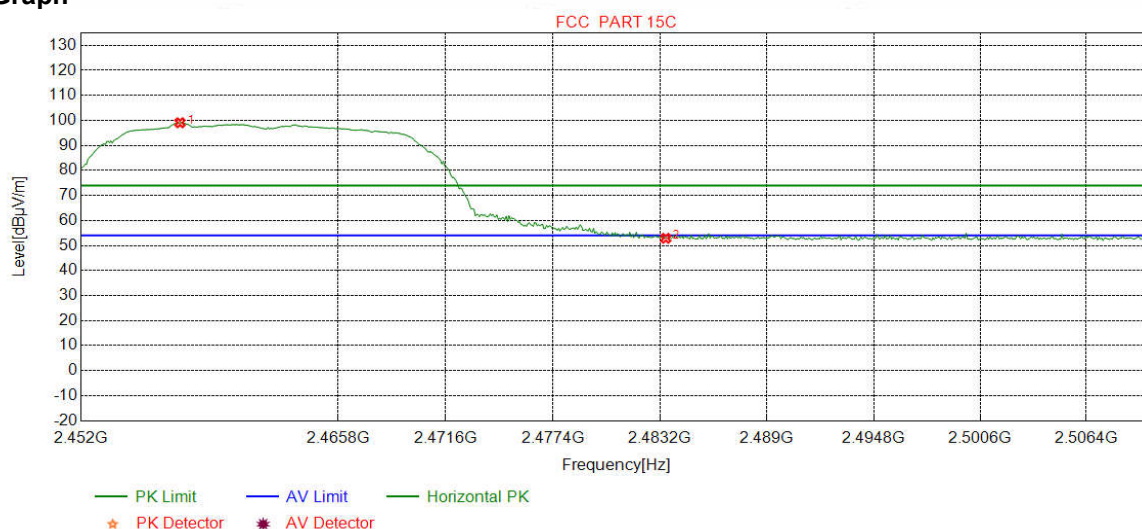
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	42.13	45.31	54.00	8.69	Pass	Vertical
2	2412.9099	32.28	13.36	-42.43	86.99	90.20	54.00	-36.20	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	PK		

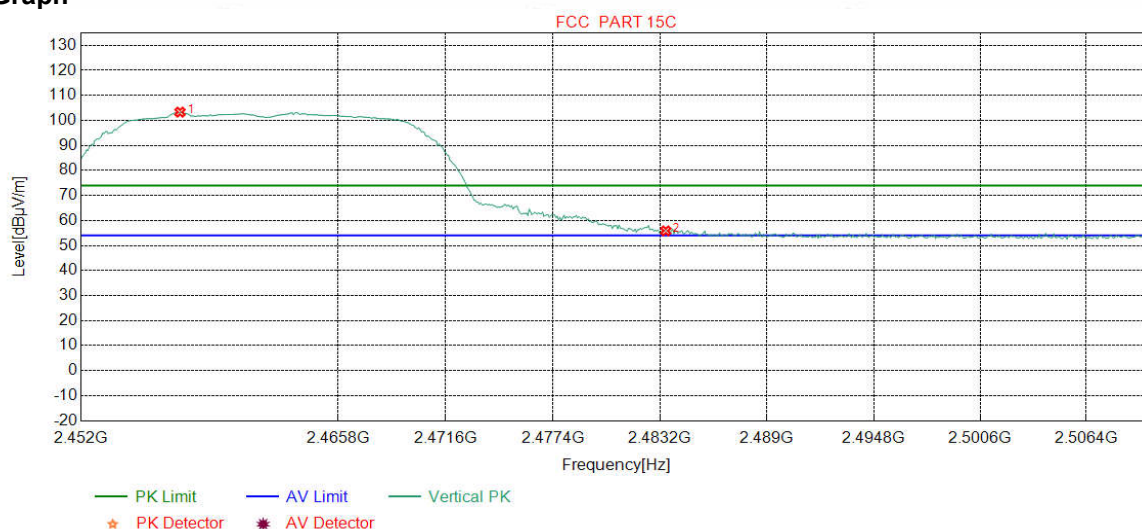
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2457.2991	32.34	13.50	-42.41	95.63	99.06	74.00	-25.06	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.52	52.88	74.00	21.12	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	PK		

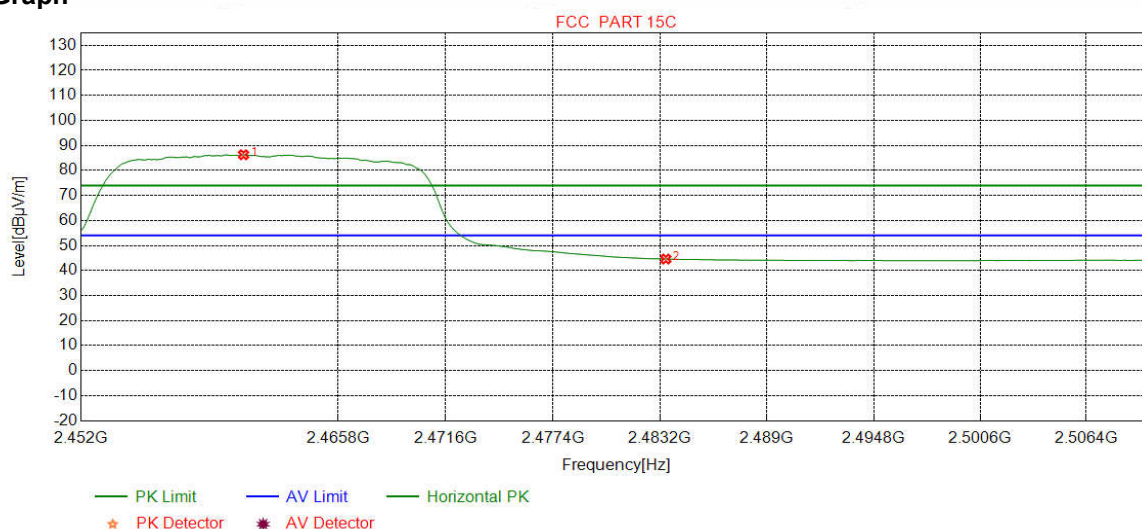
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2457.2991	32.34	13.50	-42.41	99.88	103.31	74.00	-29.31	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	52.48	55.84	74.00	18.16	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	AV		

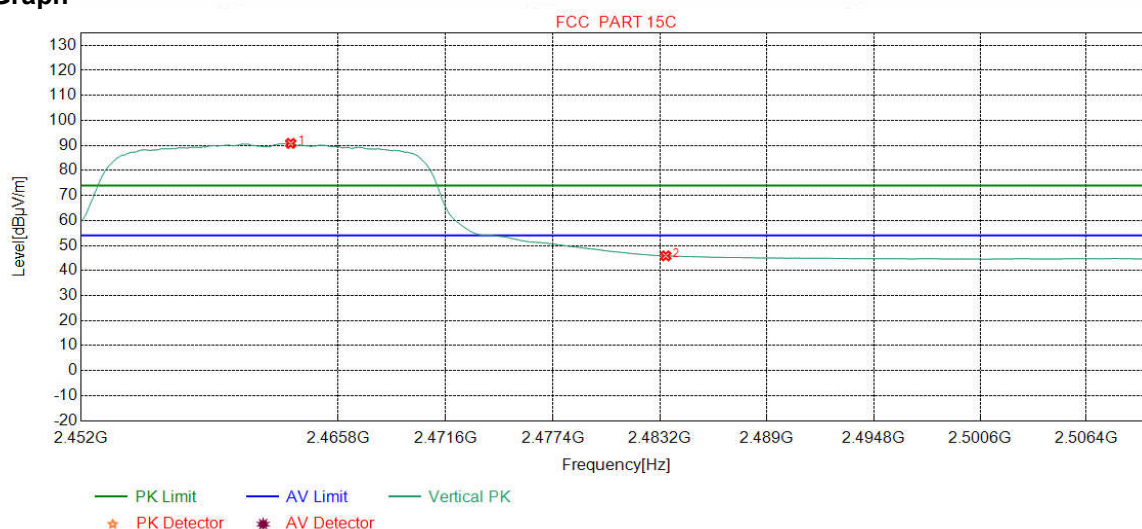
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2460.7109	32.34	13.48	-42.40	82.85	86.27	54.00	-32.27	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	41.23	44.59	54.00	9.41	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	AV		

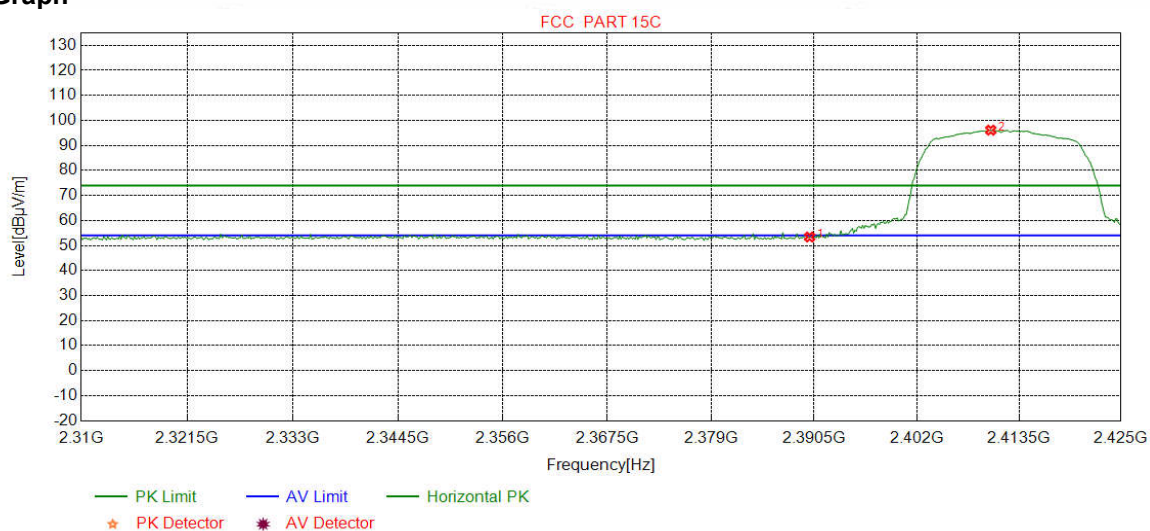
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2463.2516	32.35	13.47	-42.41	87.40	90.81	54.00	-36.81	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	42.50	45.86	54.00	8.14	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	PK		

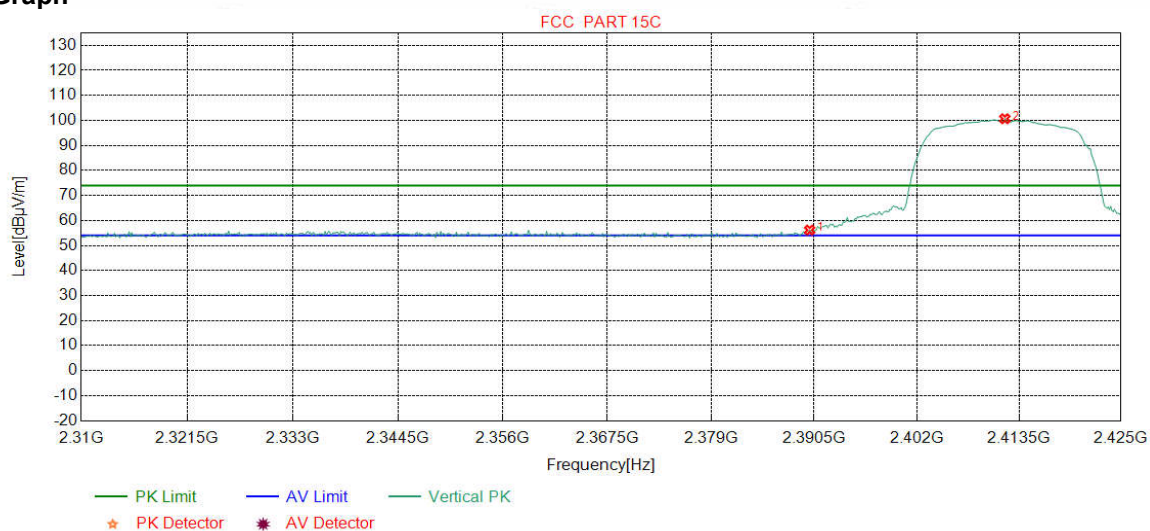
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.21	53.39	74.00	20.61	Pass	Horizontal
2	2410.3191	32.27	13.35	-42.43	92.91	96.10	74.00	-22.10	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	PK		

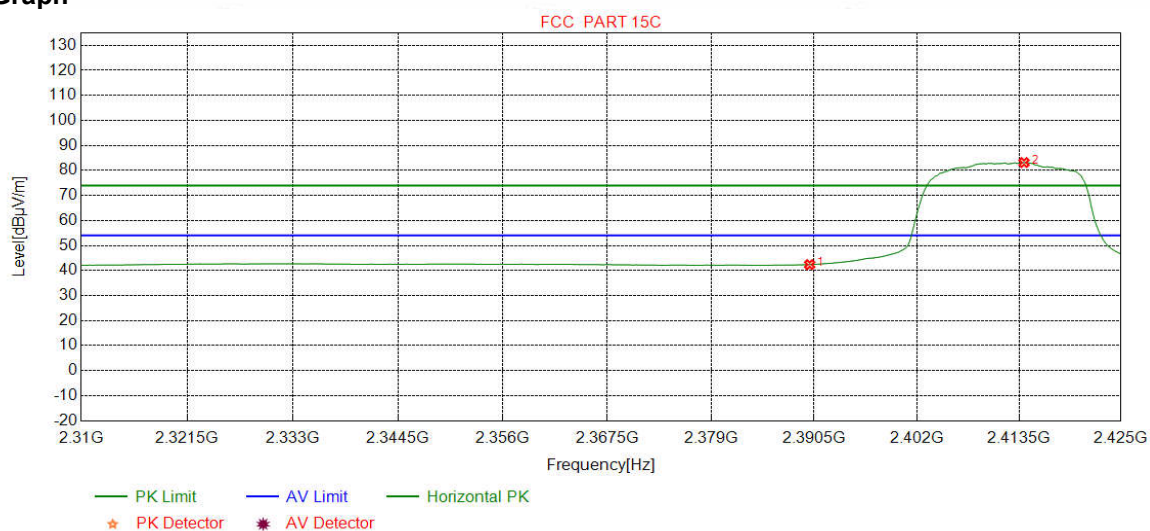
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	52.98	56.16	74.00	17.84	Pass	Vertical
2	2411.9024	32.28	13.35	-42.43	97.46	100.66	74.00	-26.66	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	AV		

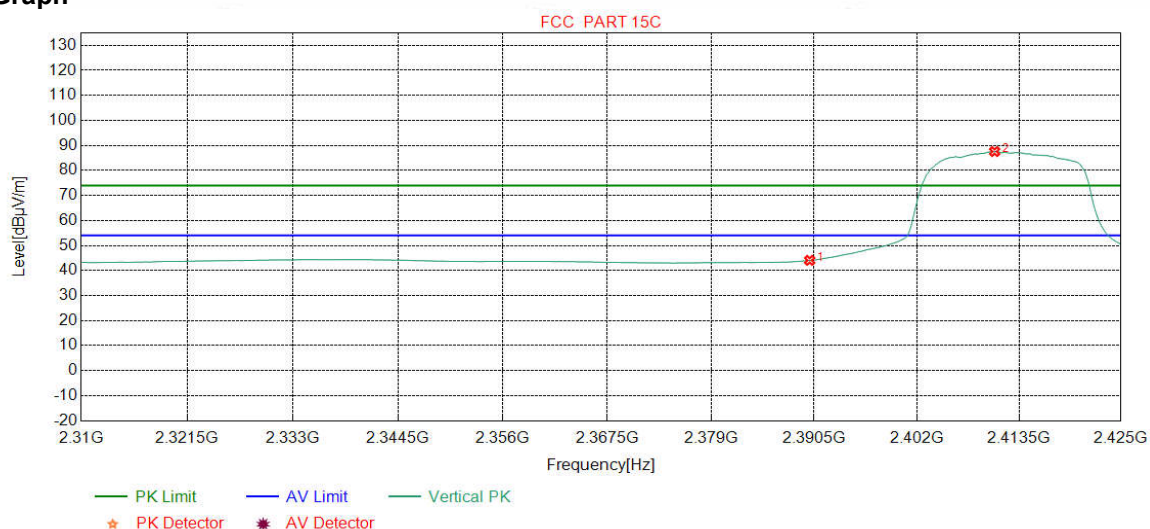
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.18	42.36	54.00	11.64	Pass	Horizontal
2	2414.0613	32.28	13.36	-42.42	79.93	83.15	54.00	-29.15	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	AV		

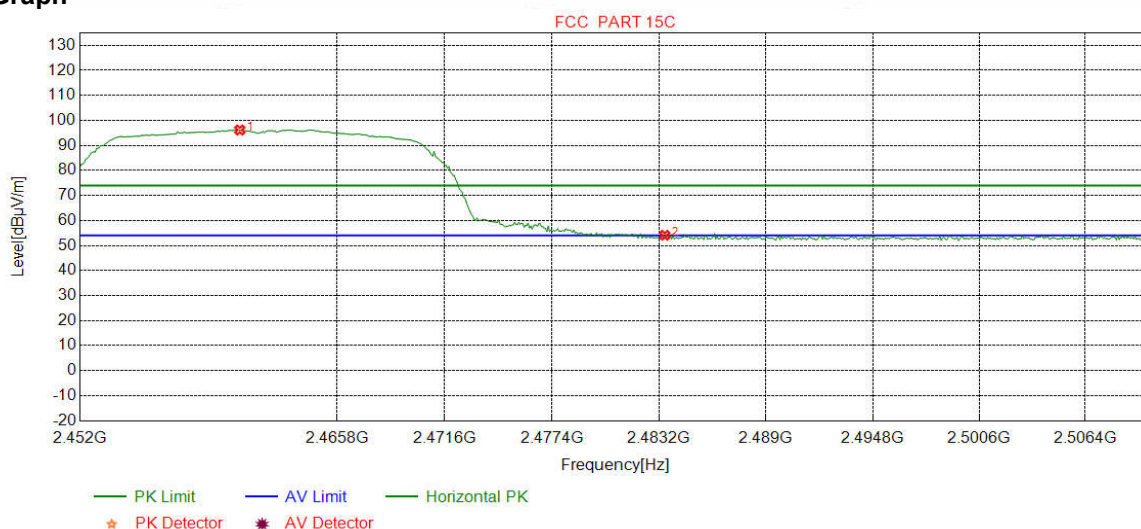
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	40.88	44.06	54.00	9.94	Pass	Vertical
2	2410.7509	32.28	13.35	-42.43	84.35	87.55	54.00	-33.55	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	PK		

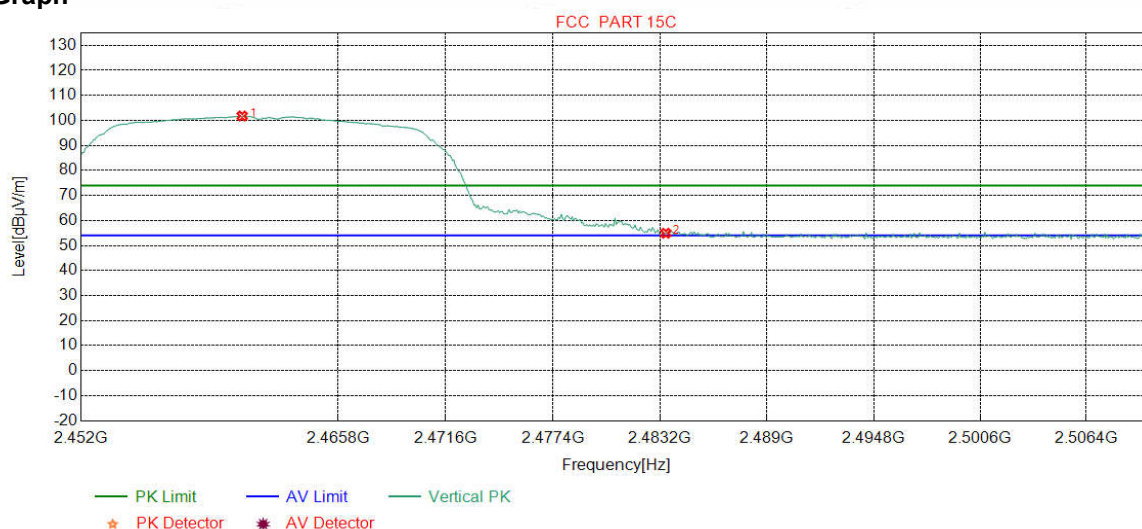
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2460.5657	32.34	13.48	-42.40	92.75	96.17	74.00	-22.17	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	50.74	54.10	74.00	19.90	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	PK		

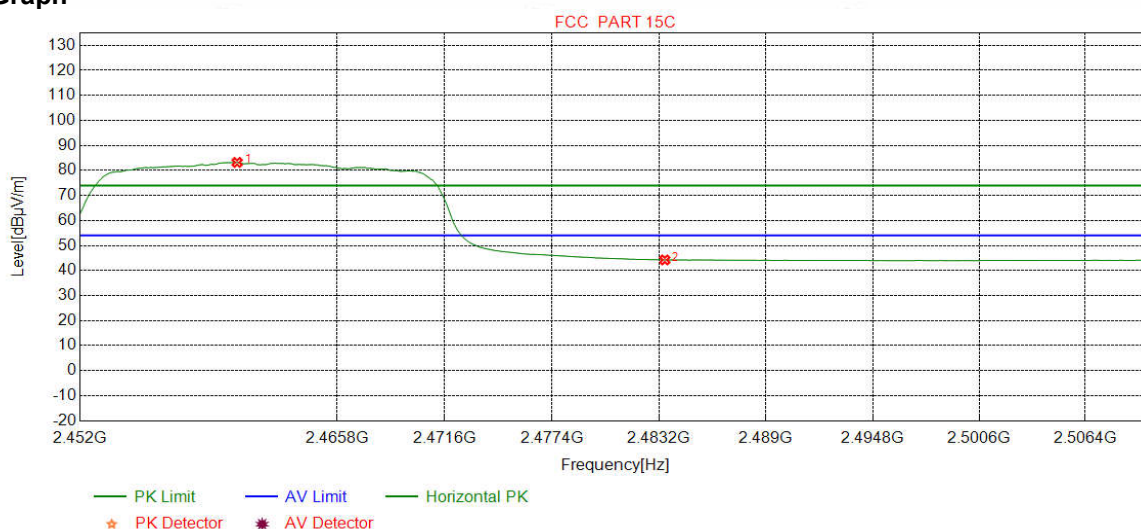
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2460.6383	32.34	13.48	-42.40	98.33	101.75	74.00	-27.75	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	51.55	54.91	74.00	19.09	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	AV		

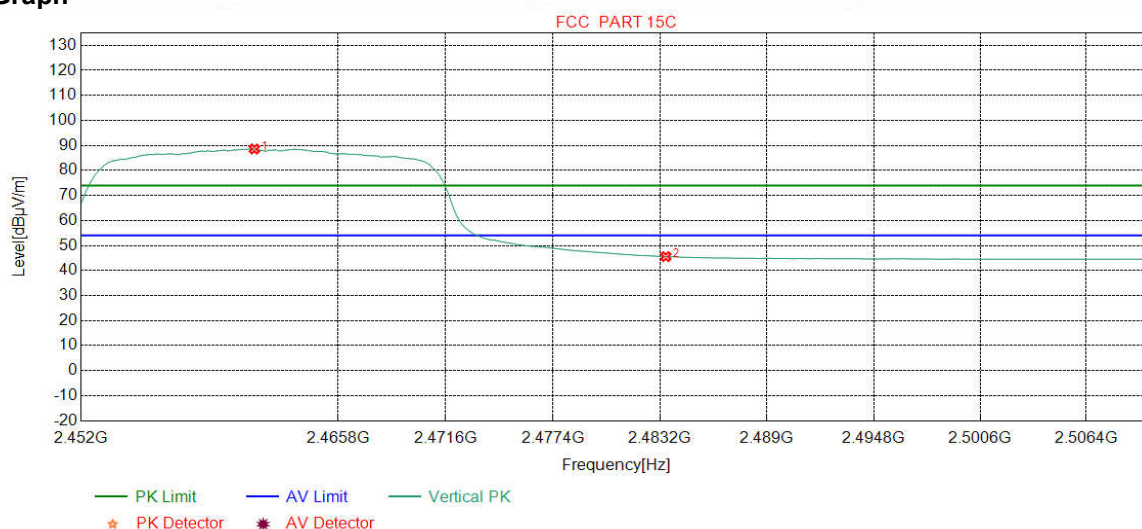
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2460.4205	32.34	13.48	-42.40	79.78	83.20	54.00	-29.20	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	40.89	44.25	54.00	9.75	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	AV		

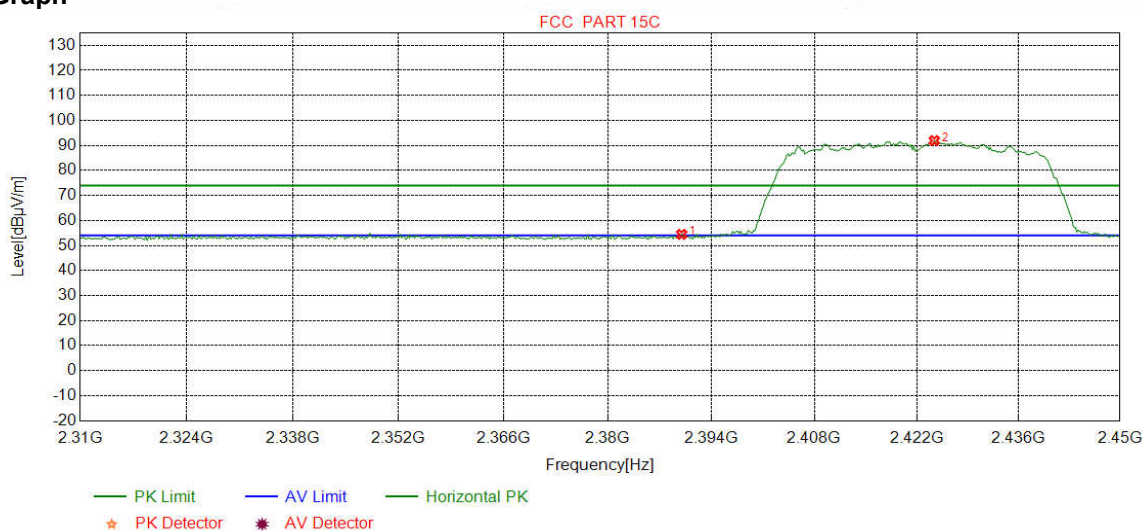
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2461.2916	32.35	13.48	-42.41	85.16	88.58	54.00	-34.58	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	42.21	45.57	54.00	8.43	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	PK		

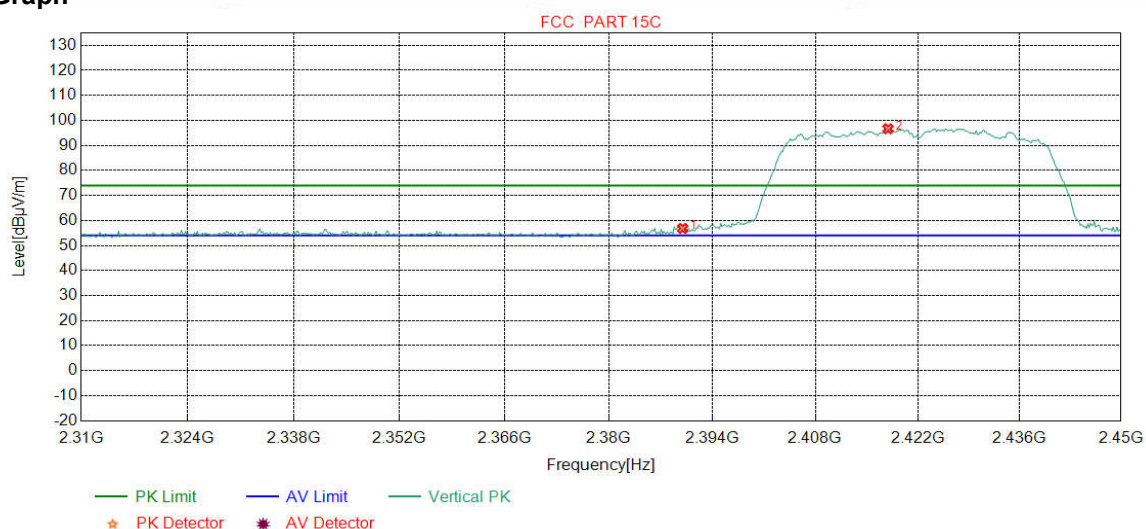
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.29	54.47	74.00	19.53	Pass	Horizontal
2	2424.4180	32.29	13.41	-42.42	88.66	91.94	74.00	-17.94	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	PK		

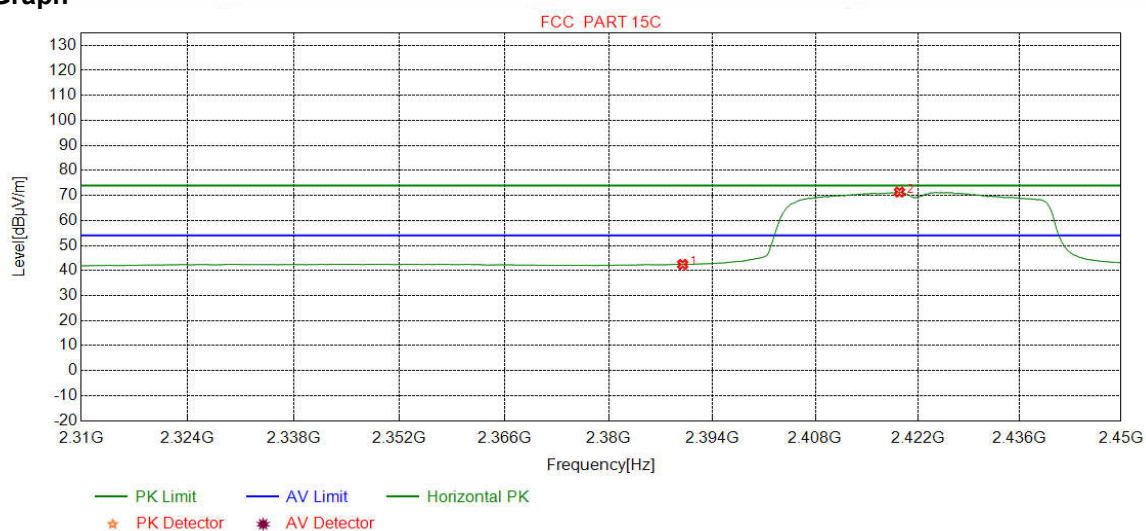
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	53.66	56.84	74.00	17.16	Pass	Vertical
2	2417.9349	32.29	13.38	-42.43	93.44	96.68	74.00	-22.68	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	AV		

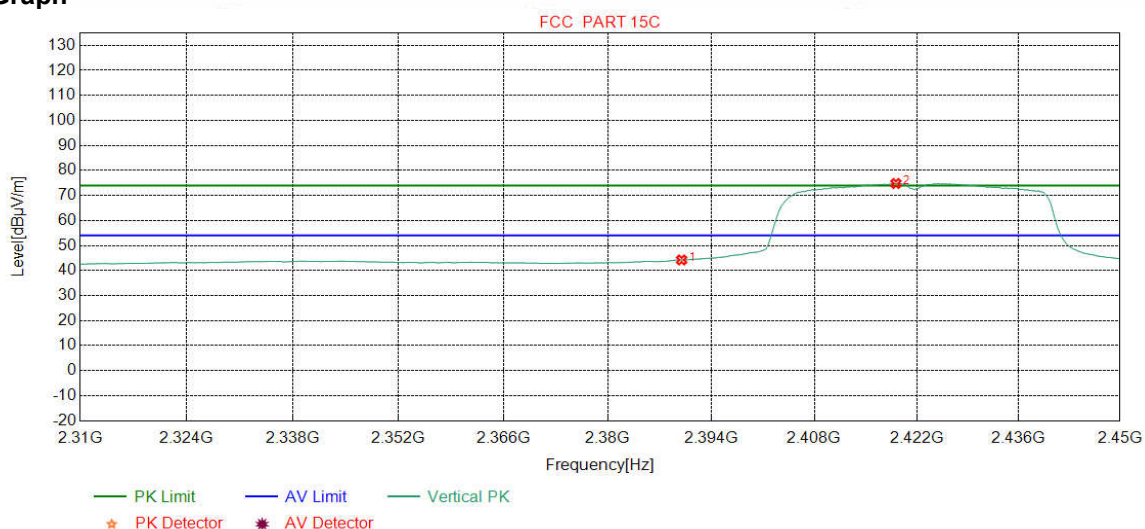
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.28	42.46	54.00	11.54	Pass	Horizontal
2	2419.5119	32.29	13.39	-42.43	68.08	71.33	54.00	-17.33	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2422
Remark:	AV		

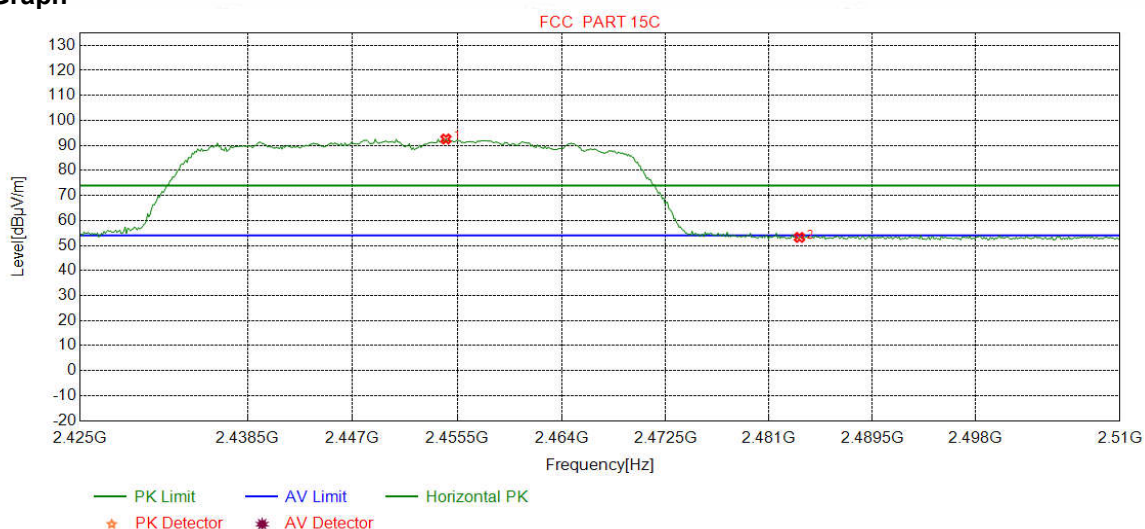
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	41.05	44.23	54.00	9.77	Pass	Vertical
2	2419.1615	32.29	13.39	-42.43	71.54	74.79	54.00	-20.79	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	PK		

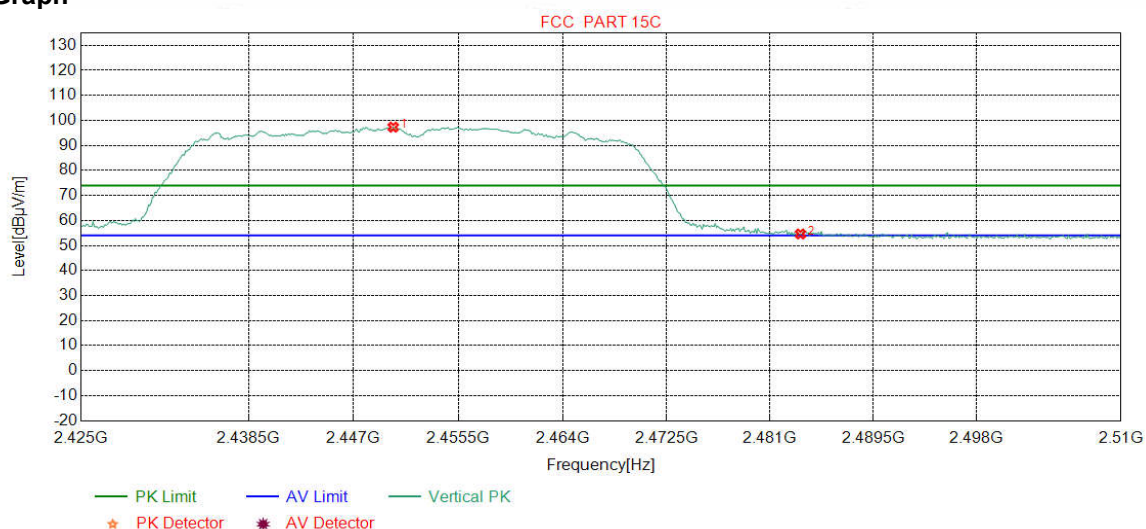
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2454.5745	32.34	13.51	-42.41	89.13	92.57	74.00	-18.57	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.87	53.23	74.00	20.77	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	PK		

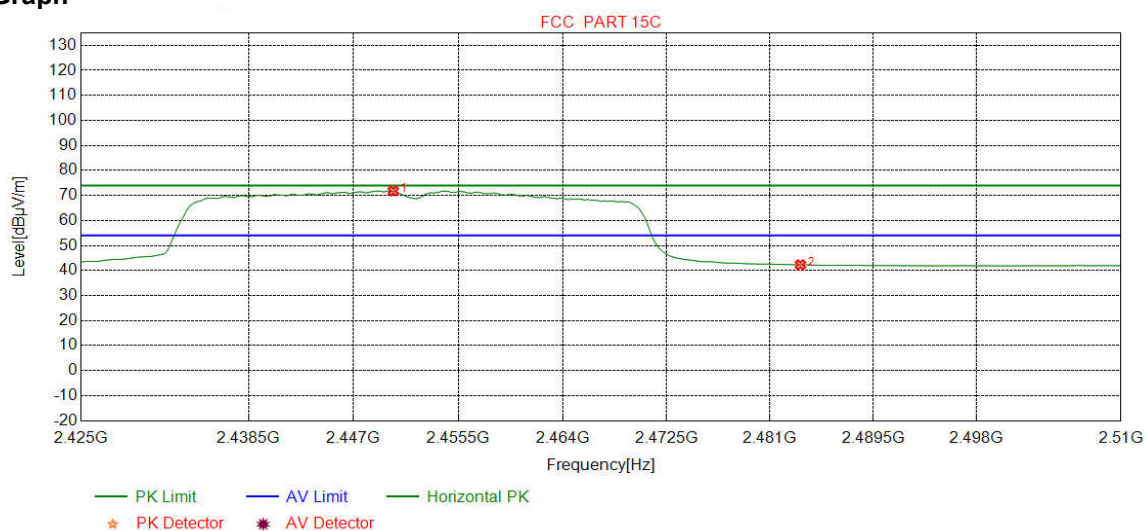
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2450.2128	32.33	13.53	-42.41	93.86	97.31	74.00	-23.31	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	51.24	54.60	74.00	19.40	Pass	Vertical

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	AV		

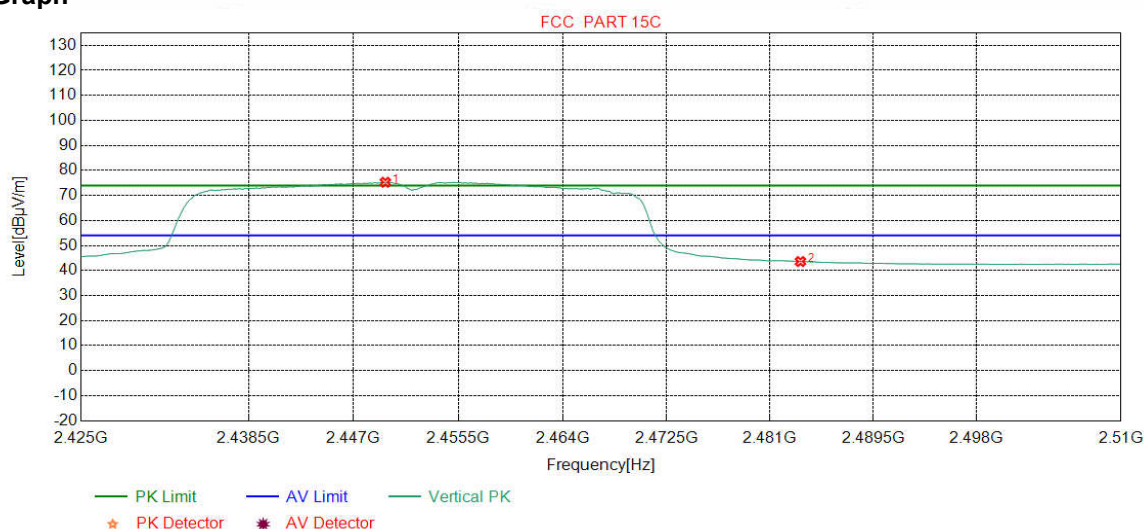
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2450.2128	32.33	13.53	-42.41	68.34	71.79	54.00	-17.79	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	38.94	42.30	54.00	11.70	Pass	Horizontal

Mode:	802.11 n(HT40) (13.5Mbps)	Channel:	2452
Remark:	AV		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	2449.5745	32.33	13.53	-42.41	71.83	75.28	54.00	-21.28	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	40.23	43.59	54.00	10.41	Pass	Vertical

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps 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), and then Only the worst case is recorded in the report.

2) 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 - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

Appendix I): Radiated Spurious Emissions

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter)..

h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel

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.

j. Repeat above procedures until all frequencies measured was complete.

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Radiated Spurious Emissions test Data:

Product : Smart Wi-Fi Wall Switch **Model/Type reference** : MSS510
Temperature : 24℃ **Humidity** : 54%

Radiated Emission below 1GHz

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	39.4099	12.11	0.71	-32.11	52.35	33.06	40.00	6.94	Pass	H
2	59.9760	11.60	0.90	-32.04	54.58	35.04	40.00	4.96	Pass	H
3	204.0354	11.00	1.69	-31.94	52.11	32.86	43.50	10.64	Pass	H
4	299.9780	13.20	2.06	-31.85	51.65	35.06	46.00	10.94	Pass	H
5	372.0562	14.79	2.30	-31.88	51.12	36.33	46.00	9.67	Pass	H
6	480.0280	16.68	2.61	-31.90	47.66	35.05	46.00	10.95	Pass	H
7	39.5070	12.14	0.71	-32.11	51.26	32.00	40.00	8.00	Pass	V
8	79.4749	7.20	1.04	-32.07	63.00	39.17	40.00	0.83	Pass	V
9	179.9770	9.00	1.58	-31.99	57.45	36.04	43.50	7.46	Pass	V
10	324.0364	13.73	2.14	-31.81	53.12	37.18	46.00	8.82	Pass	V
11	372.0562	14.79	2.30	-31.88	54.63	39.84	46.00	6.16	Pass	V
12	480.0280	16.68	2.61	-31.90	50.18	37.57	46.00	8.43	Pass	V

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	62.6923	10.90	0.91	-32.04	55.54	35.31	40.00	4.69	Pass	H
2	74.7215	8.10	1.01	-32.06	60.41	37.46	40.00	2.54	Pass	H
3	108.0928	10.92	1.23	-32.07	53.35	33.43	43.50	10.07	Pass	H
4	208.8859	11.13	1.71	-31.94	51.37	32.27	43.50	11.23	Pass	H
5	300.0750	13.20	2.06	-31.85	52.52	35.93	46.00	10.07	Pass	H
6	383.9884	15.05	2.33	-31.86	51.32	36.84	46.00	9.16	Pass	H
7	50.5661	13.11	0.80	-32.11	53.08	34.88	40.00	5.12	Pass	V
8	72.8783	8.45	0.98	-32.05	60.69	38.07	40.00	1.93	Pass	V
9	204.0354	11.00	1.69	-31.94	56.80	37.55	43.50	5.95	Pass	V
10	299.9780	13.20	2.06	-31.85	53.94	37.35	46.00	8.65	Pass	V
11	383.9884	15.05	2.33	-31.86	55.41	40.93	46.00	5.07	Pass	V
12	480.0280	16.68	2.61	-31.90	52.01	39.40	46.00	6.60	Pass	V

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	75.6916	7.92	1.01	-32.06	60.82	37.69	40.00	2.31	Pass	H
2	117.5028	9.62	1.29	-32.07	56.78	35.62	43.50	7.88	Pass	H
3	204.0354	11.00	1.69	-31.94	49.62	30.37	43.50	13.13	Pass	H
4	299.9780	13.20	2.06	-31.85	52.19	35.60	46.00	10.40	Pass	H
5	372.0562	14.79	2.30	-31.88	52.46	37.67	46.00	8.33	Pass	H
6	480.0280	16.68	2.61	-31.90	48.74	36.13	46.00	9.87	Pass	H
7	53.3793	12.66	0.83	-32.10	54.27	35.66	40.00	4.34	Pass	V
8	79.4749	7.20	1.04	-32.07	63.12	39.29	40.00	0.71	Pass	V
9	125.7486	8.34	1.32	-32.05	58.94	36.55	43.50	6.95	Pass	V
10	227.9968	11.63	1.79	-31.92	53.21	34.71	46.00	11.29	Pass	V
11	383.9884	15.05	2.33	-31.86	55.33	40.85	46.00	5.15	Pass	V
12	792.1082	20.81	3.37	-31.98	34.54	26.74	46.00	19.26	Pass	V

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	47.8498	13.20	0.78	-32.12	51.58	33.44	40.00	6.56	Pass	H
2	74.6245	8.12	1.01	-32.06	62.18	39.25	40.00	0.75	Pass	H
3	204.0354	11.00	1.69	-31.94	51.27	32.02	43.50	11.48	Pass	H
4	299.9780	13.20	2.06	-31.85	52.46	35.87	46.00	10.13	Pass	H
5	372.0562	14.79	2.30	-31.88	52.42	37.63	46.00	8.37	Pass	H
6	480.0280	16.68	2.61	-31.90	49.10	36.49	46.00	9.51	Pass	H
7	60.8491	11.38	0.90	-32.04	57.85	38.09	40.00	1.91	Pass	V
8	77.5348	7.57	1.03	-32.07	62.67	39.20	40.00	0.80	Pass	V
9	123.1293	8.73	1.31	-32.05	61.38	39.37	43.50	4.13	Pass	V
10	324.0364	13.73	2.14	-31.81	53.81	37.87	46.00	8.13	Pass	V
11	383.9884	15.05	2.33	-31.86	56.11	41.63	46.00	4.37	Pass	V
12	480.0280	16.68	2.61	-31.90	50.39	37.78	46.00	8.22	Pass	V

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	47.9468	13.20	0.78	-32.12	52.20	34.06	40.00	5.94	Pass	H
2	74.7215	8.10	1.01	-32.06	61.39	38.44	40.00	1.56	Pass	H
3	208.8859	11.13	1.71	-31.94	50.44	31.34	43.50	12.16	Pass	H
4	299.9780	13.20	2.06	-31.85	52.16	35.57	46.00	10.43	Pass	H
5	372.0562	14.79	2.30	-31.88	52.29	37.50	46.00	8.50	Pass	H
6	480.0280	16.68	2.61	-31.90	48.38	35.77	46.00	10.23	Pass	H
7	50.5661	13.11	0.80	-32.11	56.29	38.09	40.00	1.91	Pass	V
8	59.8790	11.62	0.90	-32.04	57.81	38.29	40.00	1.71	Pass	V
9	77.5348	7.57	1.03	-32.07	62.85	39.38	40.00	0.62	Pass	V
10	324.0364	13.73	2.14	-31.81	53.67	37.73	46.00	8.27	Pass	V
11	383.9884	15.05	2.33	-31.86	55.87	41.39	46.00	4.61	Pass	V
12	912.1092	22.17	3.61	-31.46	39.82	34.14	46.00	11.86	Pass	V

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	75.6916	7.92	1.01	-32.06	62.67	39.54	40.00	0.46	Pass	H
2	120.0250	9.20	1.30	-32.07	58.55	36.98	43.50	6.52	Pass	H
3	299.9780	13.20	2.06	-31.85	52.74	36.15	46.00	9.85	Pass	H
4	372.0562	14.79	2.30	-31.88	52.18	37.39	46.00	8.61	Pass	H
5	480.0280	16.68	2.61	-31.90	48.84	36.23	46.00	9.77	Pass	H
6	879.7080	21.86	3.55	-31.66	37.24	30.99	46.00	15.01	Pass	H
7	50.5661	13.11	0.80	-32.11	54.67	36.47	40.00	3.53	Pass	V
8	74.7215	8.10	1.01	-32.06	62.59	39.64	40.00	0.36	Pass	V
9	204.0354	11.00	1.69	-31.94	56.85	37.60	43.50	5.90	Pass	V
10	324.0364	13.73	2.14	-31.81	54.23	38.29	46.00	7.71	Pass	V
11	372.0562	14.79	2.30	-31.88	54.46	39.67	46.00	6.33	Pass	V
12	480.0280	16.68	2.61	-31.90	50.33	37.72	46.00	8.28	Pass	V

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	51.5362	12.95	0.98	-32.10	53.63	35.46	40.00	4.54	Pass	H
2	78.4078	7.40	1.25	-32.07	63.20	39.78	40.00	0.22	Pass	H
3	142.5313	7.29	1.70	-32.00	60.55	37.54	43.50	5.96	Pass	H
4	299.9780	13.20	2.50	-31.85	51.66	35.51	46.00	10.49	Pass	H
5	383.9884	15.05	2.86	-31.86	53.43	39.48	46.00	6.52	Pass	H
6	480.0280	16.68	3.19	-31.90	46.74	34.71	46.00	11.29	Pass	H
7	53.4763	12.64	1.00	-32.09	53.44	34.99	40.00	5.01	Pass	V
8	74.9155	8.07	1.24	-32.06	62.39	39.64	40.00	0.36	Pass	V
9	104.4064	10.96	1.45	-32.07	56.83	37.17	43.50	6.33	Pass	V
10	324.0364	13.73	2.60	-31.80	45.30	29.83	46.00	16.17	Pass	V
11	383.9884	15.05	2.86	-31.86	48.49	34.54	46.00	11.46	Pass	V
12	480.0280	16.68	3.19	-31.90	47.00	34.97	46.00	11.03	Pass	V

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	69.1919	9.21	1.18	-32.05	61.22	39.56	40.00	0.44	Pass	H
2	140.6881	7.22	1.68	-31.98	60.85	37.77	43.50	5.73	Pass	H
3	324.0364	13.73	2.60	-31.80	50.97	35.50	46.00	10.50	Pass	H
4	372.0562	14.79	2.79	-31.88	53.83	39.53	46.00	6.47	Pass	H
5	480.0280	16.68	3.19	-31.90	46.32	34.29	46.00	11.71	Pass	H
6	852.0602	21.52	4.30	-31.74	35.51	29.59	46.00	16.41	Pass	H
7	72.8783	8.45	1.22	-32.05	62.00	39.62	40.00	0.38	Pass	V
8	105.3765	10.95	1.45	-32.07	56.88	37.21	43.50	6.29	Pass	V
9	208.8859	11.13	2.07	-31.94	48.80	30.06	43.50	13.44	Pass	V
10	383.9884	15.05	2.86	-31.86	50.04	36.09	46.00	9.91	Pass	V
11	480.0280	16.68	3.19	-31.90	47.73	35.70	46.00	10.30	Pass	V
12	844.9785	21.44	4.27	-31.82	37.43	31.32	46.00	14.68	Pass	V

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	54.2524	12.52	1.00	-32.08	52.86	34.30	40.00	5.70	Pass	H
2	84.0344	8.03	1.31	-32.08	62.26	39.52	40.00	0.48	Pass	H
3	141.6582	7.26	1.69	-32.00	60.30	37.25	43.50	6.25	Pass	H
4	299.9780	13.20	2.50	-31.85	50.74	34.59	46.00	11.41	Pass	H
5	383.9884	15.05	2.86	-31.86	53.02	39.07	46.00	6.93	Pass	H
6	480.0280	16.68	3.19	-31.90	45.24	33.21	46.00	12.79	Pass	H
7	77.5348	7.57	1.25	-32.07	62.85	39.60	40.00	0.40	Pass	V
8	128.5619	7.92	1.62	-32.03	55.64	33.15	43.50	10.35	Pass	V
9	324.0364	13.73	2.60	-31.80	44.60	29.13	46.00	16.87	Pass	V
10	372.0562	14.79	2.79	-31.88	47.86	33.56	46.00	12.44	Pass	V
11	480.0280	16.68	3.19	-31.90	45.83	33.80	46.00	12.20	Pass	V
12	875.0515	21.80	4.37	-31.69	34.21	28.69	46.00	17.31	Pass	V

Mode:		802.11 n (HT40) (13.5Mbps)				Channel:		2422		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	71.0351	8.80	0.96	-32.05	61.99	39.70	40.00	0.30	Pass	H
2	107.9958	10.92	1.23	-32.07	56.14	36.22	43.50	7.28	Pass	H
3	204.0354	11.00	1.69	-31.94	52.87	33.62	43.50	9.88	Pass	H
4	299.9780	13.20	2.06	-31.85	51.18	34.59	46.00	11.41	Pass	H
5	372.0562	14.79	2.30	-31.88	52.60	37.81	46.00	8.19	Pass	H
6	480.0280	16.68	2.61	-31.90	45.05	32.44	46.00	13.56	Pass	H
7	78.5049	7.38	1.03	-32.06	62.76	39.11	40.00	0.89	Pass	V
8	104.4064	10.96	1.20	-32.07	54.41	34.50	43.50	9.00	Pass	V
9	203.8414	11.00	1.69	-31.94	46.90	27.65	43.50	15.85	Pass	V
10	324.0364	13.73	2.14	-31.81	45.38	29.44	46.00	16.56	Pass	V
11	383.9884	15.05	2.33	-31.86	48.41	33.93	46.00	12.07	Pass	V
12	480.0280	16.68	2.61	-31.90	46.33	33.72	46.00	12.28	Pass	V

Mode:		802.11 n (HT40) (13.5Mbps)				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	72.0052	8.62	0.97	-32.05	62.03	39.57	40.00	0.43	Pass	H
2	95.9666	10.35	1.13	-32.07	55.75	35.16	43.50	8.34	Pass	H
3	148.0608	7.48	1.44	-32.01	57.64	34.55	43.50	8.95	Pass	H
4	299.9780	13.20	2.06	-31.85	50.74	34.15	46.00	11.85	Pass	H
5	383.9884	15.05	2.33	-31.86	52.62	38.14	46.00	7.86	Pass	H
6	420.0760	15.72	2.45	-31.84	49.92	36.25	46.00	9.75	Pass	H
7	52.4092	12.81	0.82	-32.10	53.28	34.81	40.00	5.19	Pass	V
8	75.6916	7.92	1.01	-32.06	62.44	39.31	40.00	0.69	Pass	V
9	124.8755	8.47	1.31	-32.04	55.94	33.68	43.50	9.82	Pass	V
10	299.9780	13.20	2.06	-31.85	47.22	30.63	46.00	15.37	Pass	V
11	372.0562	14.79	2.30	-31.88	49.24	34.45	46.00	11.55	Pass	V
12	467.9988	16.49	2.58	-31.87	43.96	31.16	46.00	14.84	Pass	V

Mode:		802.11 n (HT40) (13.5Mbps)				Channel:		2452		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	72.0052	8.62	0.97	-32.05	61.97	39.51	40.00	0.49	Pass	H
2	96.0636	10.37	1.13	-32.07	57.49	36.92	43.50	6.58	Pass	H
3	157.3737	7.81	1.46	-31.99	58.97	36.25	43.50	7.25	Pass	H
4	299.9780	13.20	2.06	-31.85	51.86	35.27	46.00	10.73	Pass	H
5	372.0562	14.79	2.30	-31.88	53.74	38.95	46.00	7.05	Pass	H
6	480.0280	16.68	2.61	-31.90	43.76	31.15	46.00	14.85	Pass	H
7	58.9089	11.77	0.89	-32.05	55.22	35.83	40.00	4.17	Pass	V
8	74.7215	8.10	1.01	-32.06	61.83	38.88	40.00	1.12	Pass	V
9	276.0166	12.72	1.98	-31.91	48.75	31.54	46.00	14.46	Pass	V
10	372.0562	14.79	2.30	-31.88	51.87	37.08	46.00	8.92	Pass	V
11	467.9988	16.49	2.58	-31.87	45.57	32.77	46.00	13.23	Pass	V
12	875.1485	21.80	3.55	-31.70	36.16	29.81	46.00	16.19	Pass	V

Transmitter Emission above 1GHz

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2412			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1795.0795	30.35	3.31	-42.71	56.01	46.96	74.00	27.04	Pass	H	Peak
2	4824.0000	34.50	4.61	-40.65	40.31	38.77	74.00	35.23	Pass	H	Peak
3	7236.0000	36.34	5.79	-40.99	42.07	43.21	74.00	30.79	Pass	H	Peak
4	9648.0000	37.66	6.72	-40.73	40.57	44.22	74.00	29.78	Pass	H	Peak
5	11679.5786	39.04	7.47	-41.32	43.60	48.79	74.00	25.21	Pass	H	Peak
6	17462.9642	42.66	10.99	-43.68	42.06	52.03	74.00	21.97	Pass	H	Peak
7	1599.6600	29.06	3.07	-42.90	57.70	46.93	74.00	27.07	Pass	V	Peak
8	4824.0000	34.50	4.61	-40.65	41.96	40.42	74.00	33.58	Pass	V	Peak
9	7236.0000	36.34	5.79	-40.99	42.44	43.58	74.00	30.42	Pass	V	Peak
10	9648.0000	37.66	6.72	-40.73	40.77	44.42	74.00	29.58	Pass	V	Peak
11	12622.6415	39.60	8.25	-41.26	40.23	46.82	74.00	27.18	Pass	V	Peak
12	17020.9347	42.22	10.89	-43.27	41.79	51.63	74.00	22.37	Pass	V	Peak

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1792.8793	30.33	3.31	-42.71	55.33	46.26	74.00	27.74	Pass	H	Peak
2	4874.0000	34.50	4.78	-40.61	41.91	40.58	74.00	33.42	Pass	H	Peak
3	7311.0000	36.41	5.85	-40.93	44.07	45.40	74.00	28.60	Pass	H	Peak
4	9748.0000	37.70	6.77	-40.63	39.90	43.74	74.00	30.26	Pass	H	Peak
5	13765.7177	39.56	8.36	-41.23	40.77	47.46	74.00	26.54	Pass	H	Peak
6	17047.9365	42.25	11.24	-43.29	41.00	51.20	74.00	22.80	Pass	H	Peak
7	1597.4597	29.04	3.07	-42.89	57.35	46.57	74.00	27.43	Pass	V	Peak
8	2992.5993	33.19	4.53	-42.13	55.04	50.63	74.00	23.37	Pass	V	Peak
9	4874.0000	34.50	4.78	-40.61	42.87	41.54	74.00	32.46	Pass	V	Peak
10	7311.0000	36.41	5.85	-40.93	45.73	47.06	74.00	26.94	Pass	V	Peak
11	9748.0000	37.70	6.77	-40.63	39.38	43.22	74.00	30.78	Pass	V	Peak
12	14449.7633	40.15	9.02	-42.16	40.65	47.66	74.00	26.34	Pass	V	Peak

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2462			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1796.4796	30.36	3.31	-42.71	56.55	47.51	74.00	26.49	Pass	H	Peak
2	4924.0000	34.50	4.85	-40.56	43.97	42.76	74.00	31.24	Pass	H	Peak
3	7386.0000	36.49	5.85	-40.87	42.92	44.39	74.00	29.61	Pass	H	Peak
4	9848.0000	37.74	6.83	-40.54	39.18	43.21	74.00	30.79	Pass	H	Peak
5	14366.7578	40.07	8.65	-42.01	42.07	48.78	74.00	25.22	Pass	H	Peak
6	17017.9345	42.22	10.85	-43.27	42.12	51.92	74.00	22.08	Pass	H	Peak
7	1599.4599	29.06	3.07	-42.90	59.57	48.80	74.00	25.20	Pass	V	Peak
8	4924.0000	34.50	4.85	-40.56	45.43	44.22	74.00	29.78	Pass	V	Peak
9	7386.0000	36.49	5.85	-40.87	45.30	46.77	74.00	27.23	Pass	V	Peak
10	9848.0000	37.74	6.83	-40.54	38.64	42.67	74.00	31.33	Pass	V	Peak
11	14243.7496	39.94	8.59	-41.75	41.61	48.39	74.00	25.61	Pass	V	Peak
12	17068.9379	42.27	11.04	-43.31	41.37	51.37	74.00	22.63	Pass	V	Peak

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2412			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1594.0594	29.02	3.07	-42.89	56.33	45.53	74.00	28.47	Pass	H	Peak
2	4824.0000	34.50	4.61	-40.65	41.17	39.63	74.00	34.37	Pass	H	Peak
3	7236.0000	36.34	5.79	-40.99	42.99	44.13	74.00	29.87	Pass	H	Peak
4	9648.0000	37.66	6.72	-40.73	39.08	42.73	74.00	31.27	Pass	H	Peak
5	13831.7221	39.60	8.38	-41.24	39.19	45.93	74.00	28.07	Pass	H	Peak
6	17472.9649	42.67	10.94	-43.69	41.50	51.42	74.00	22.58	Pass	H	Peak
7	1596.8597	29.04	3.07	-42.90	57.58	46.79	74.00	27.21	Pass	V	Peak
8	4824.0000	34.50	4.61	-40.65	42.60	41.06	74.00	32.94	Pass	V	Peak
9	7236.0000	36.34	5.79	-40.99	43.77	44.91	74.00	29.09	Pass	V	Peak
10	9648.0000	37.66	6.72	-40.73	38.83	42.48	74.00	31.52	Pass	V	Peak
11	14444.7630	40.14	8.98	-42.14	40.19	47.17	74.00	26.83	Pass	V	Peak
12	17532.9689	42.67	11.33	-43.68	42.50	52.82	74.00	21.18	Pass	V	Peak

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1595.0595	29.03	3.07	-42.90	53.29	42.49	74.00	31.51	Pass	H	Peak
2	4874.0000	34.50	4.78	-40.61	41.66	40.33	74.00	33.67	Pass	H	Peak
3	7311.0000	36.41	5.85	-40.93	41.70	43.03	74.00	30.97	Pass	H	Peak
4	9748.0000	37.70	6.77	-40.63	39.67	43.51	74.00	30.49	Pass	H	Peak
5	14351.7568	40.05	8.63	-41.97	40.33	47.04	74.00	26.96	Pass	H	Peak
6	17522.9682	42.68	11.17	-43.69	40.99	51.15	74.00	22.85	Pass	H	Peak
7	1599.8600	29.06	3.07	-42.90	58.53	47.76	74.00	26.24	Pass	V	Peak
8	2995.5996	33.19	4.54	-42.12	53.23	48.84	74.00	25.16	Pass	V	Peak
9	4874.0000	34.50	4.78	-40.61	41.50	40.17	74.00	33.83	Pass	V	Peak
10	7311.0000	36.41	5.85	-40.93	42.76	44.09	74.00	29.91	Pass	V	Peak
11	9748.0000	37.70	6.77	-40.63	38.44	42.28	74.00	31.72	Pass	V	Peak
12	14959.7973	40.38	9.05	-42.31	40.40	47.52	74.00	26.48	Pass	V	Peak

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2462			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1670.4670	29.53	3.16	-42.73	50.89	40.85	74.00	33.15	Pass	H	Peak
2	4924.0000	34.50	4.85	-40.56	41.97	40.76	74.00	33.24	Pass	H	Peak
3	7386.0000	36.49	5.85	-40.87	43.02	44.49	74.00	29.51	Pass	H	Peak
4	9848.0000	37.74	6.83	-40.54	38.60	42.63	74.00	31.37	Pass	H	Peak
5	13157.6772	39.54	7.87	-41.56	39.22	45.07	74.00	28.93	Pass	H	Peak
6	17006.9338	42.21	10.70	-43.26	41.38	51.03	74.00	22.97	Pass	H	Peak
7	1594.2594	29.02	3.07	-42.89	59.46	48.66	74.00	25.34	Pass	V	Peak
8	4924.0000	34.50	4.85	-40.56	42.62	41.41	74.00	32.59	Pass	V	Peak
9	7386.0000	36.49	5.85	-40.87	42.46	43.93	74.00	30.07	Pass	V	Peak
10	9848.0000	37.74	6.83	-40.54	39.34	43.37	74.00	30.63	Pass	V	Peak
11	12565.6377	39.60	7.93	-41.19	39.91	46.25	74.00	27.75	Pass	V	Peak
12	17521.9681	42.68	11.16	-43.70	41.38	51.52	74.00	22.48	Pass	V	Peak

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2412			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1593.6594	29.02	3.06	-42.88	53.38	42.58	74.00	31.42	Pass	H	Peak
2	4824.0000	34.50	4.61	-40.65	40.96	39.42	74.00	34.58	Pass	H	Peak
3	7236.0000	36.34	5.79	-40.99	41.39	42.53	74.00	31.47	Pass	H	Peak
4	9648.0000	37.66	6.72	-40.73	36.45	40.10	74.00	33.90	Pass	H	Peak
5	13655.7104	39.49	8.16	-41.20	37.34	43.79	74.00	30.21	Pass	H	Peak
6	17468.9646	42.67	10.96	-43.69	41.77	51.71	74.00	22.29	Pass	H	Peak
7	1595.2595	29.03	3.07	-42.89	58.33	47.54	74.00	26.46	Pass	V	Peak
8	4824.0000	34.50	4.61	-40.65	41.02	39.48	74.00	34.52	Pass	V	Peak
9	7236.0000	36.34	5.79	-40.99	42.15	43.29	74.00	30.71	Pass	V	Peak
10	9648.0000	37.66	6.72	-40.73	36.93	40.58	74.00	33.42	Pass	V	Peak
11	13147.6765	39.54	7.87	-41.56	38.44	44.29	74.00	29.71	Pass	V	Peak
12	17544.9697	42.66	11.52	-43.67	40.81	51.32	74.00	22.68	Pass	V	Peak

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1796.8797	30.36	3.31	-42.70	51.17	42.14	74.00	31.86	Pass	H	Peak
2	4874.0000	34.50	4.78	-40.61	41.65	40.32	74.00	33.68	Pass	H	Peak
3	7311.0000	36.41	5.85	-40.93	42.49	43.82	74.00	30.18	Pass	H	Peak
4	9748.0000	37.70	6.77	-40.63	37.23	41.07	74.00	32.93	Pass	H	Peak
5	14316.7545	40.02	8.62	-41.90	38.74	45.48	74.00	28.52	Pass	H	Peak
6	17554.9703	42.66	11.51	-43.67	40.75	51.25	74.00	22.75	Pass	H	Peak
7	1598.6599	29.05	3.07	-42.90	57.82	47.04	74.00	26.96	Pass	V	Peak
8	4874.0000	34.50	4.78	-40.61	41.85	40.52	74.00	33.48	Pass	V	Peak
9	7311.0000	36.41	5.85	-40.93	41.58	42.91	74.00	31.09	Pass	V	Peak
10	9748.0000	37.70	6.77	-40.63	37.34	41.18	74.00	32.82	Pass	V	Peak
11	14355.7571	40.06	8.64	-41.99	38.75	45.46	74.00	28.54	Pass	V	Peak
12	17017.9345	42.22	10.85	-43.27	41.54	51.34	74.00	22.66	Pass	V	Peak

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2462			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1599.6600	29.06	3.07	-42.90	52.71	41.94	74.00	32.06	Pass	H	Peak
2	4924.0000	34.50	4.85	-40.56	41.97	40.76	74.00	33.24	Pass	H	Peak
3	7386.0000	36.49	5.85	-40.87	41.92	43.39	74.00	30.61	Pass	H	Peak
4	9848.0000	37.74	6.83	-40.54	36.99	41.02	74.00	32.98	Pass	H	Peak
5	14292.7529	39.99	8.61	-41.85	39.45	46.20	74.00	27.80	Pass	H	Peak
6	17469.9647	42.67	10.95	-43.69	41.33	51.26	74.00	22.74	Pass	H	Peak
7	1598.8599	29.05	3.07	-42.90	59.70	48.92	74.00	25.08	Pass	V	Peak
8	4924.0000	34.50	4.85	-40.56	42.87	41.66	74.00	32.34	Pass	V	Peak
9	7386.0000	36.49	5.85	-40.87	42.41	43.88	74.00	30.12	Pass	V	Peak
10	9848.0000	37.74	6.83	-40.54	36.39	40.42	74.00	33.58	Pass	V	Peak
11	13157.6772	39.54	7.87	-41.56	38.29	44.14	74.00	29.86	Pass	V	Peak
12	16969.9313	42.21	10.59	-43.28	40.91	50.43	74.00	23.57	Pass	V	Peak

Mode:		802.11 n (HT40) (13.5Mbps)				Channel:		2422			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1599.4599	29.06	3.07	-42.90	53.53	42.76	74.00	31.24	Pass	H	Peak
2	4844.0000	34.50	4.66	-40.62	40.56	39.10	74.00	34.90	Pass	H	Peak
3	7266.0000	36.37	5.80	-40.97	41.99	43.19	74.00	30.81	Pass	H	Peak
4	9688.0000	37.68	6.62	-40.69	37.41	41.02	74.00	32.98	Pass	H	Peak
5	13166.6778	39.53	7.87	-41.55	36.88	42.73	74.00	31.27	Pass	H	Peak
6	17048.9366	42.25	11.26	-43.30	41.47	51.68	74.00	22.32	Pass	H	Peak
7	1599.2599	29.06	3.07	-42.90	58.65	47.88	74.00	26.12	Pass	V	Peak
8	4844.0000	34.50	4.66	-40.62	40.13	38.67	74.00	35.33	Pass	V	Peak
9	7266.0000	36.37	5.80	-40.97	41.75	42.95	74.00	31.05	Pass	V	Peak
10	9688.0000	37.68	6.62	-40.69	37.04	40.65	74.00	33.35	Pass	V	Peak
11	13580.7054	39.45	8.13	-41.18	37.98	44.38	74.00	29.62	Pass	V	Peak
12	17471.9648	42.67	10.94	-43.69	41.13	51.05	74.00	22.95	Pass	V	Peak

Mode:		802.11 n (HT40) (13.5Mbps)				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1684.0684	29.61	3.18	-42.69	51.37	41.47	74.00	32.53	Pass	H	Peak
2	4874.0000	34.50	4.78	-40.61	41.41	40.08	74.00	33.92	Pass	H	Peak
3	7311.0000	36.41	5.85	-40.93	42.07	43.40	74.00	30.60	Pass	H	Peak
4	9748.0000	37.70	6.77	-40.63	37.49	41.33	74.00	32.67	Pass	H	Peak
5	13778.7186	39.57	8.40	-41.23	37.89	44.63	74.00	29.37	Pass	H	Peak
6	17514.9677	42.69	11.05	-43.71	41.66	51.69	74.00	22.31	Pass	H	Peak
7	1595.6596	29.03	3.07	-42.89	57.53	46.74	74.00	27.26	Pass	V	Peak
8	4874.0000	34.50	4.78	-40.61	42.49	41.16	74.00	32.84	Pass	V	Peak
9	7311.0000	36.41	5.85	-40.93	42.07	43.40	74.00	30.60	Pass	V	Peak
10	9748.0000	37.70	6.77	-40.63	37.36	41.20	74.00	32.80	Pass	V	Peak
11	12627.6418	39.60	8.23	-41.26	36.31	42.88	74.00	31.12	Pass	V	Peak
12	17458.9639	42.66	11.01	-43.69	41.94	51.92	74.00	22.08	Pass	V	Peak

Mode:		802.11 n (HT40) (13.5Mbps)				Channel:		2452			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1597.8598	29.05	3.07	-42.90	54.86	44.08	74.00	29.92	Pass	H	Peak
2	4904.0000	34.50	4.88	-40.58	42.27	41.07	74.00	32.93	Pass	H	Peak
3	7356.0000	36.46	5.85	-40.89	42.17	43.59	74.00	30.41	Pass	H	Peak
4	9808.0000	37.72	6.59	-40.57	37.03	40.77	74.00	33.23	Pass	H	Peak
5	12871.6581	39.60	7.97	-41.58	37.99	43.98	74.00	30.02	Pass	H	Peak
6	17539.9693	42.67	11.44	-43.68	42.22	52.65	74.00	21.35	Pass	H	Peak
7	1397.6398	28.30	2.90	-42.69	57.37	45.88	74.00	28.12	Pass	V	Peak
8	4904.0000	34.50	4.88	-40.58	41.54	40.34	74.00	33.66	Pass	V	Peak
9	7356.0000	36.46	5.85	-40.89	41.64	43.06	74.00	30.94	Pass	V	Peak
10	9808.0000	37.72	6.59	-40.57	35.78	39.52	74.00	34.48	Pass	V	Peak
11	12982.6655	39.60	8.27	-41.71	37.27	43.43	74.00	30.57	Pass	V	Peak
12	17501.9668	42.70	10.84	-43.72	41.32	51.14	74.00	22.86	Pass	V	Peak

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps 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), and then Only the worst case is recorded in the report.

2) 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 - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.