

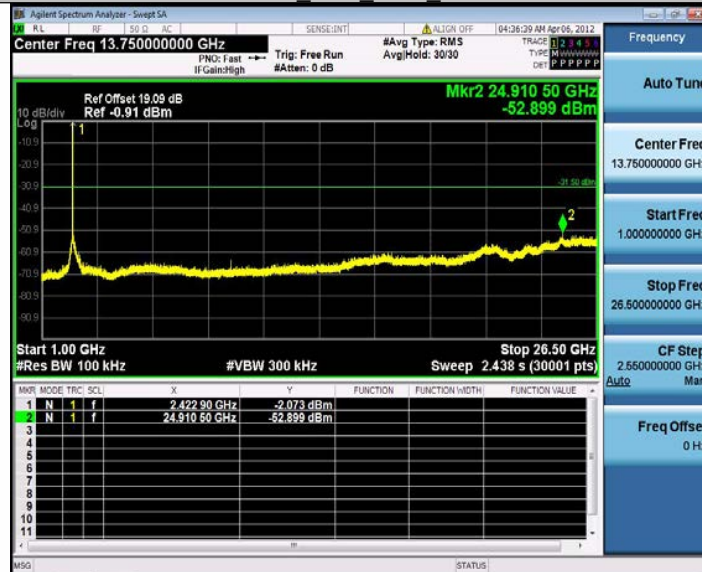
11AX40MIMO_Ant2_2422_0~Reference



11AX40MIMO_Ant2_2422_30~1000



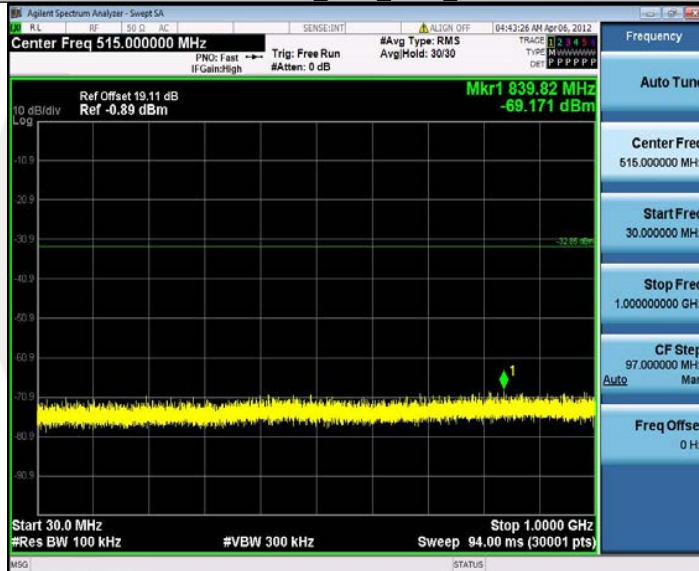
11AX40MIMO_Ant2_2422_1000~26500



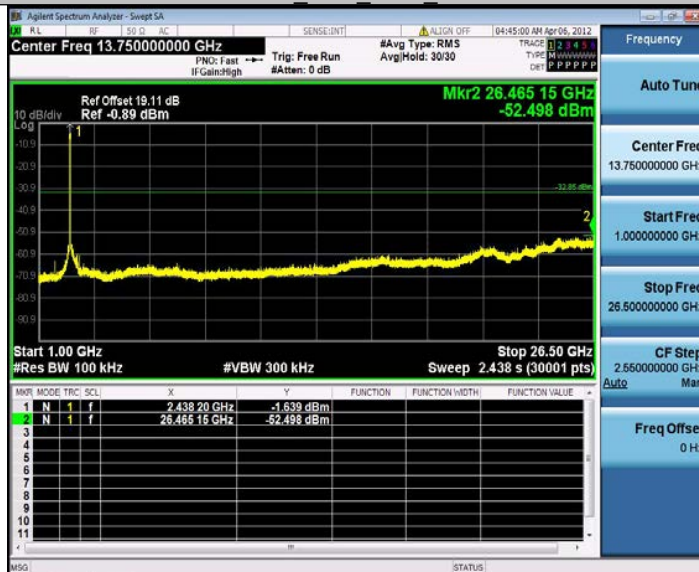
11AX40MIMO_Ant1_2437_0~Reference



11AX40MIMO_Ant1_2437_30~1000



11AX40MIMO_Ant1_2437_1000~26500



11AX40MIMO_Ant2_2437_0~Reference



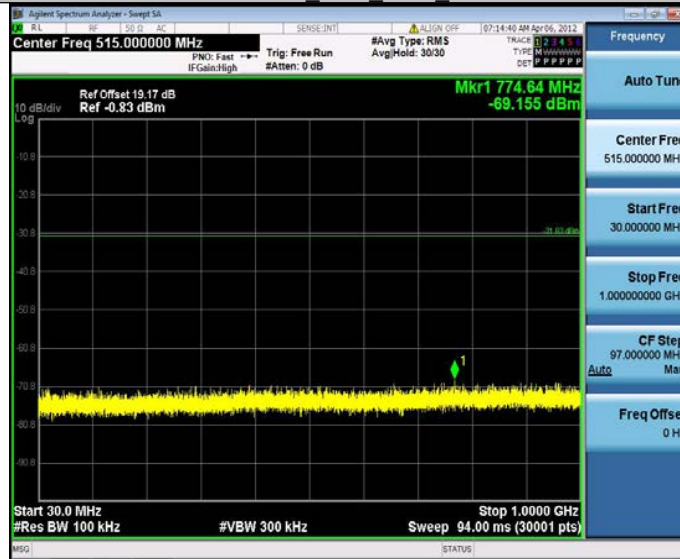
11AX40MIMO_Ant2_2437_30~1000



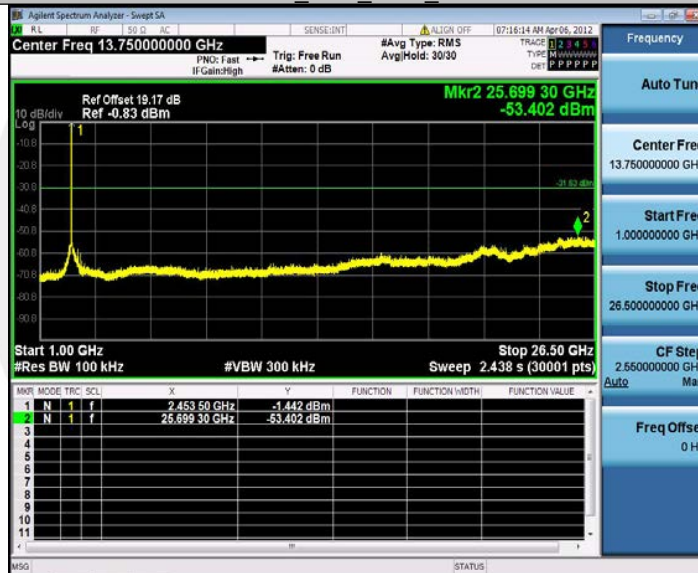
11AX40MIMO_Ant1_2452_0~Reference



11AX40MIMO_Ant1_2452_30~1000



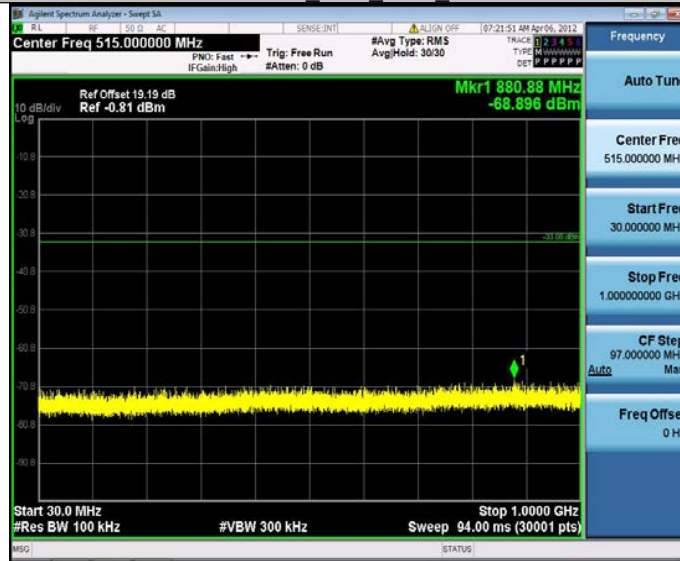
11AX40MIMO_Ant1_2452_1000~26500



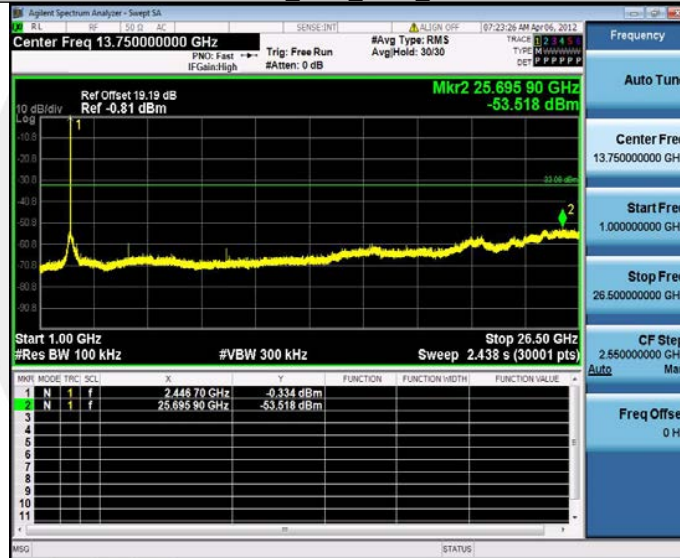
11AX40MIMO_Ant2_2452_0~Reference



11AX40MIMO_Ant2_2452_30~1000



11AX40MIMO_Ant2_2452_1000~26500



8.7 RADIATED SPURIOUS EMISSION

8.7.1 Applicable Standard

According to FCC Part 15.247(d), 15.205, 15.209

According to RSS-Gen and RSS-247

According to 558074 D01 15.247 Meas Guidance v05r02 Section 8.6

According to ANSI C63.10 Section 11.12

8.7.2 Conformance Limit

According to FCC Part 15.247(d): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

According to FCC Part 15.205 the level of any transmitter spurious emission in Restricted bands shall not exceed the level of the emission specified in the following table

Restricted Frequency (MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

8.7.3 Test Configuration

Test according to clause 7.2 radio frequency test setup

8.7.4 Test Procedure

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

For Above 1GHz:

The EUT was placed on a turn table which is 1.5m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For average measurements the resolution bandwidth of spectrum analyzer is 1 MHz with the video bandwidth is $\geq 1/T$ with peak detector.

For Below 1GHz:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 100 kHz for

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 30MHz:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 9kHz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 150KHz:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 200Hz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

Follow the guidelines in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit. Submit this data.

8.7.5 Test Results

Temperature:	25° C
Relative Humidity:	60%
ATM Pressure:	1011 mbar
Test Engineer:	CZF

■ Spurious Emission below 30MHz(9KHz to 30MHz)

For Spurious Emission below 30MHz (9KHz to 30MHz), was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

■ Spurious Emission Above 1GHz(1GHz to 25GHz)

All the antenna(Antenna 1&2) and modes(802.11b/g/n/ax) have been tested and the worst(Antenna 1&2, 802.11n(HT20)) result recorded was report as below:

Test mode: 802.11n(HT20) Frequency: Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
9796.87	V	58.12	-0.40	57.72	74.00	16.28	Peak
13241.2	V	55.29	5.51	60.80	74.00	13.20	Peak
17619.3	V	52.1	12.37	64.47	74.00	9.53	Peak
9796.875	V	39.26	-0.40	38.86	54.00	15.14	Avg
13241.25	V	35.13	5.51	40.64	54.00	13.36	Avg
17619.37	V	33.84	12.37	46.21	54.00	7.79	Avg
9879.37	H	56.47	0.17	56.64	74.00	17.36	Peak
12433.1	H	53.15	5.95	59.10	74.00	14.90	Peak
17645.6	H	52.65	11.29	63.94	74.00	10.06	Peak
9879.375	H	39.26	0.17	39.43	54.00	14.57	Avg
12433.12	H	35.16	5.95	41.11	54.00	12.89	Avg
17645.62	H	33.18	11.29	44.47	54.00	9.53	Avg

Note: (1) Peak RBW = 1 MHz, VBW $\geq 3 \times$ RBW, Detector = Peak;
 (2) Avg RBW = 1 MHz, VBW = $1/T_{on}$, Detector = Peak, where: T_{on} is transmit duration;
 (3) Corrected Reading = Reading Level + Correct Factor;
 (4) Correct Factor = Ant_F + Cab_L - Preamp;
 (5) Margin = Limit - Corrected Reading;

Test mode: 802.11n(HT20) Frequency: Channel 6: 2437MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
10087.5	V	56.74	1.15	57.89	74.00	16.11	Peak
12421.8	V	53.27	6.15	59.42	74.00	14.58	Peak
17034.3	V	55.02	10.29	65.31	74.00	8.69	Peak
10087.5	V	39.26	1.15	40.41	54.00	13.59	Avg
12421.87	V	35.18	6.15	41.33	54.00	12.67	Avg
17034.37	V	33.47	10.29	43.76	54.00	10.24	Avg
10106.2	H	56.61	1.33	57.94	74.00	16.06	Peak
13216.8	H	53.99	6.38	60.37	74.00	13.63	Peak
16966.8	H	53.85	9.68	63.53	74.00	10.47	Peak
10106.25	H	39.26	1.33	40.59	54.00	13.41	Avg
13216.87	H	35.13	6.38	41.51	54.00	12.49	Avg
16966.87	H	33.47	9.68	43.15	54.00	10.85	Avg

Note: (1) Peak RBW = 1 MHz, VBW $\geq 3 \times$ RBW, Detector = Peak;
 (2) Avg RBW = 1 MHz, VBW = $1/T_{on}$, Detector = Peak, where: T_{on} is transmit duration;
 (3) Corrected Reading = Reading Level + Correct Factor;
 (4) Correct Factor = Ant_F + Cab_L - Preamp;
 (5) Margin = Limit - Corrected Reading;

Test mode: 802.11n(HT20) Frequency: Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
10057.5	V	57.33	0.68	58.01	74.00	15.99	Peak
13188.7	V	53.25	6.82	60.07	74.00	13.93	Peak
17520	V	55.84	9.93	65.77	74.00	8.23	Peak
10057.5	V	39.26	0.68	39.94	54.00	14.06	Avg
13188.75	V	35.18	6.82	42.00	54.00	12.00	Avg
17520	V	33.84	9.93	43.77	54.00	10.23	Avg
11514.3	H	57.2	3.53	60.73	74.00	13.27	Peak
13192.5	H	54.24	6.88	61.12	74.00	12.88	Peak
17011.8	H	53.19	10.99	64.18	74.00	9.82	Peak
11514.37	H	39.26	3.53	42.79	54.00	11.21	Avg
13192.5	H	35.18	6.88	42.06	54.00	11.94	Avg
17011.87	H	33.84	10.99	44.83	54.00	9.17	Avg

Note:

- (1) Peak RBW = 1 MHz, VBW $\geq 3 \times$ RBW, Detector = Peak;
- (2) Avg RBW = 1 MHz, VBW = $1/T_{on}$, Detector = Peak, where: T_{on} is transmit duration;
- (3) Corrected Reading = Reading Level + Correct Factor;
- (4) Correct Factor = Ant_F + Cab_L - Preamp;
- (5) Margin = Limit - Corrected Reading;

■ Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz

All the antenna(Antenna 1&2) and modes(802.11b/g/n/ax) have been tested and the worst(Antenna 1&2, 802.11n(HT20)) result recorded was report as below:

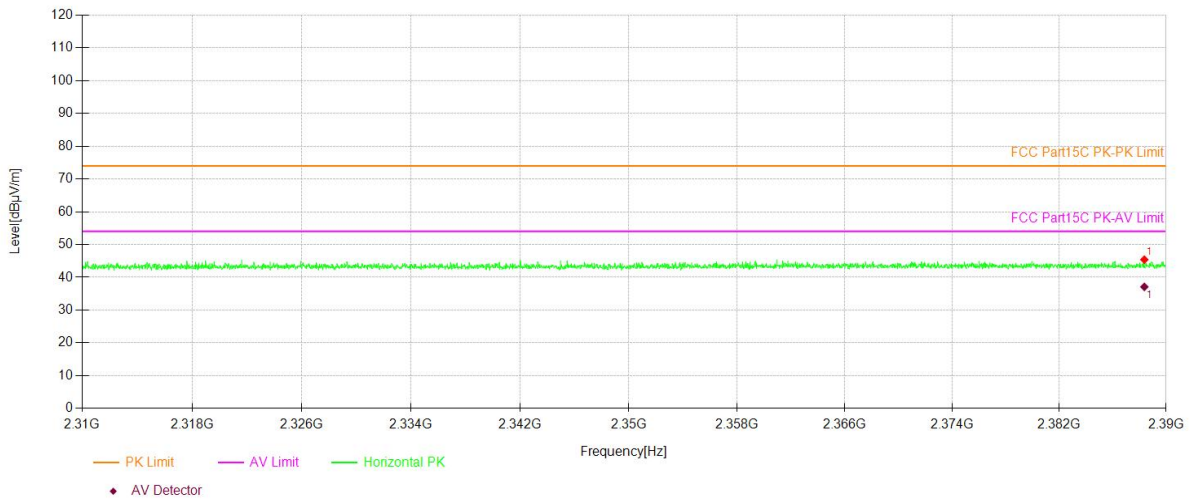
Test mode: 802.11n(HT20) Frequency: Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
2385.57	V	15.43	30.77	46.20	74.00	27.80	Peak
2385.57	V	6.24	30.77	37.01	54.00	16.99	Avg
2388.37	H	14.62	30.77	45.39	74.00	28.61	Peak
2388.37	H	6.32	30.77	37.09	54.00	16.91	Avg
Note: (1) Peak RBW = 1 MHz, VBW $\geq 3 \times$ RBW, Detector = Peak; (2) Avg RBW = 1 MHz, VBW $\geq 3 \times$ RBW, Detector = RMS; (3) Corrected Reading = Reading Level + Correct Factor; (4) Correct Factor = Ant_F + Cab_L - Preamp; (5) Margin = Limit - Corrected Reading;							

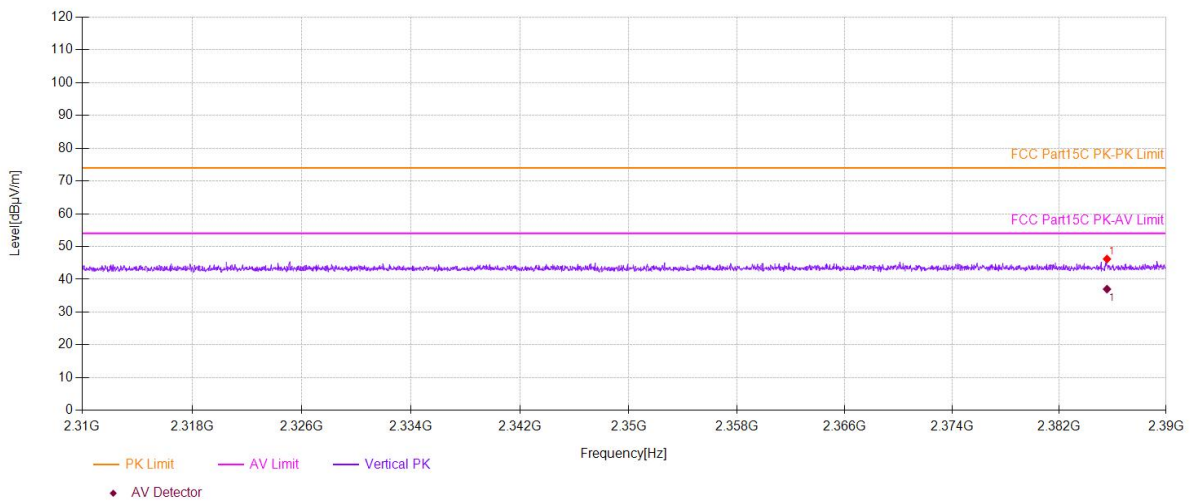
Test mode: 802.11n(HT20) Frequency: Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
2485.86	V	15.12	31.05	46.17	74.00	27.83	Peak
2485.86	V	7.23	31.05	38.28	54.00	15.72	Avg
2485.53	H	16.29	31.05	47.34	74.00	26.66	Peak
2485.53	H	7.26	31.05	38.31	54.00	15.69	Avg
Note: (1) Peak RBW = 1 MHz, VBW $\geq 3 \times$ RBW, Detector = Peak; (2) Avg RBW = 1 MHz, VBW = $1/T_{on}$, Detector = Peak, where: T_{on} is transmit duration; (3) Corrected Reading = Reading Level + Correct Factor; (4) Correct Factor = Ant_F + Cab_L - Preamp; (5) Margin = Limit - Corrected Reading;							

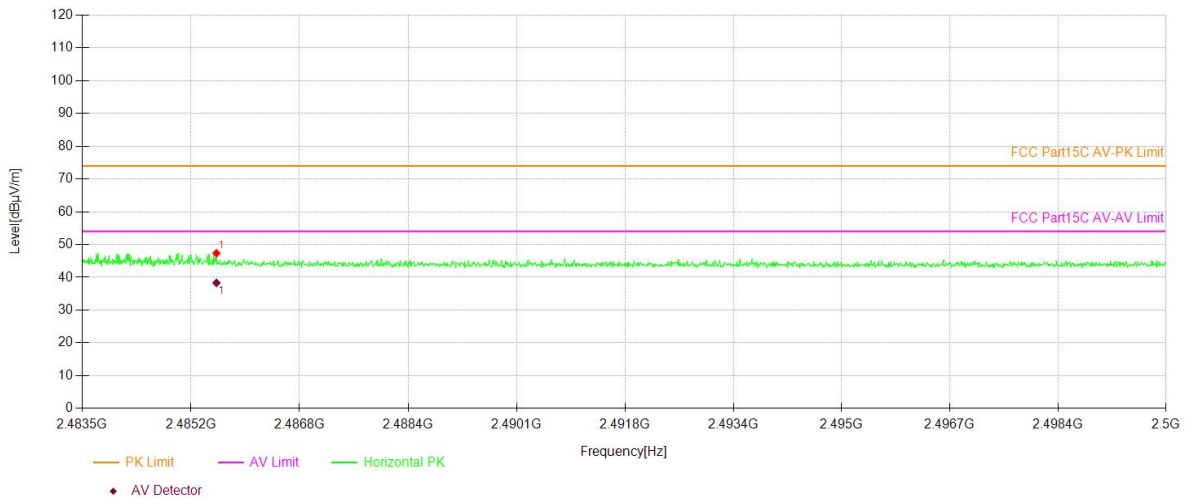
Test Model: 802.11n(HT20) Spurious Emission in Restricted Band 2310-2390MHz Channel 1: 2412MHz Polarity: H



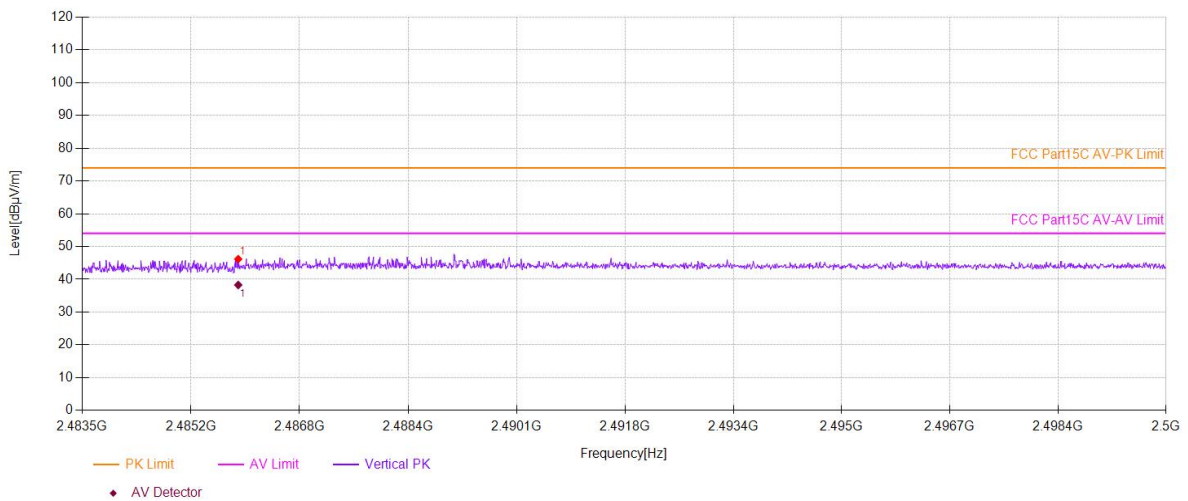
Test Model: 802.11n(HT20) Spurious Emission in Restricted Band 2310-2390MHz Channel 1: 2412MHz Polarity: V



Test Model 802.11n(HT20) **Spurious Emission in Restricted Band 2483.5-2500MHz**
Channel 11: 2462MHz **Polarity: H**



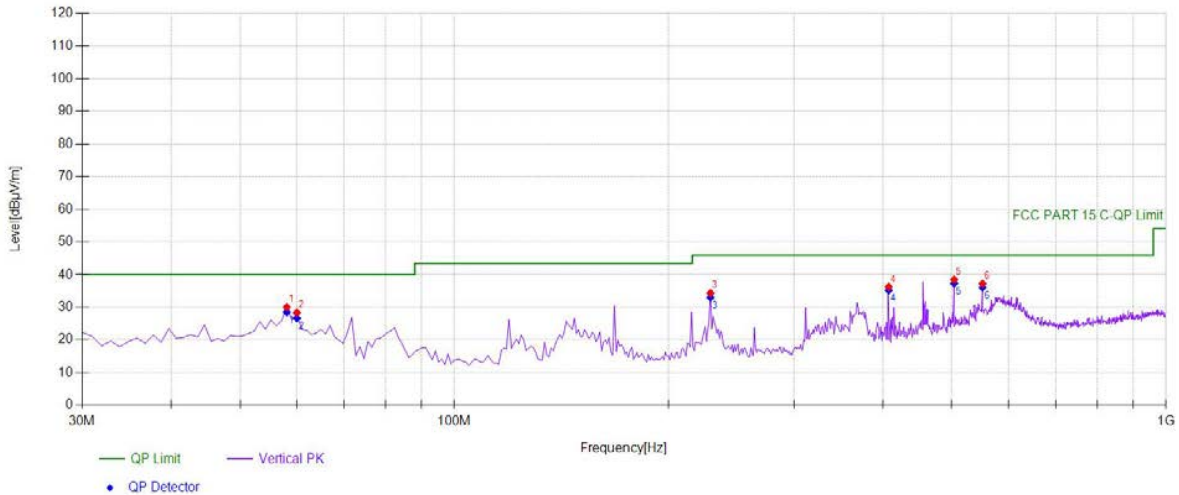
Test Model 802.11n(HT20) **Spurious Emission in Restricted Band 2483.5-2500MHz**
Channel 11: 2462MHz **Polarity: V**



■ Spurious Emission below 1GHz (30MHz to 1GHz)

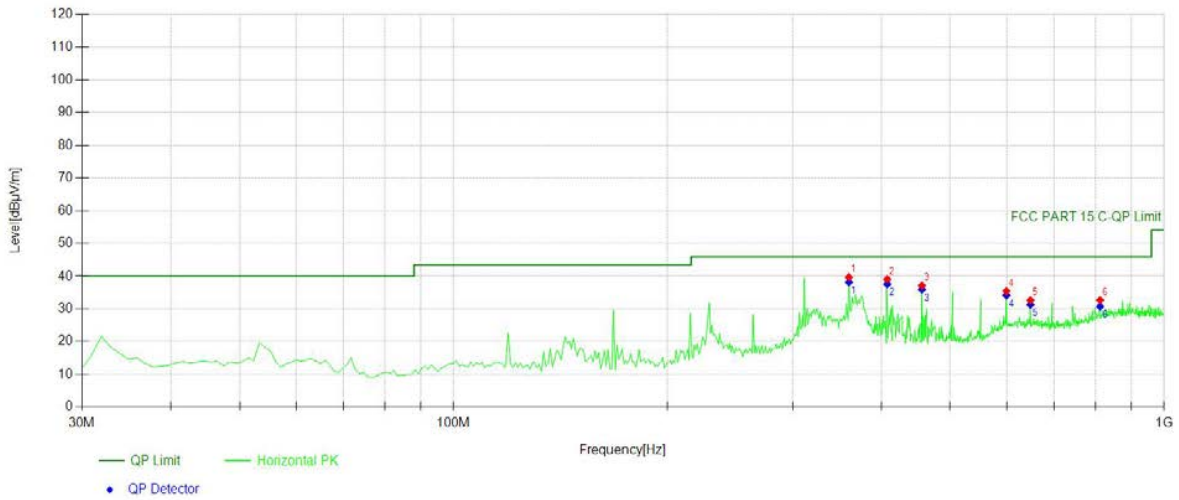
All the antenna(Antenna 1&2) and modes(802.11b/g/n/ax) have been tested and the worst(Antenna 1, 802.11b) result recorded was report as below:

Mode:	11B 2412
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Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	58.1582	48.33	-18.30	30.03	PK	40.00	9.97	Vertical
2	60.1001	46.91	-18.56	28.35	PK	40.00	11.65	Vertical
3	229.049	50.60	-16.24	34.36	PK	46.00	11.64	Vertical
4	407.707	48.03	-11.78	36.25	PK	46.00	9.75	Vertical
5	503.833	48.25	-9.77	38.48	PK	46.00	7.52	Vertical
6	552.382	46.41	-9.16	37.25	PK	46.00	8.75	Vertical

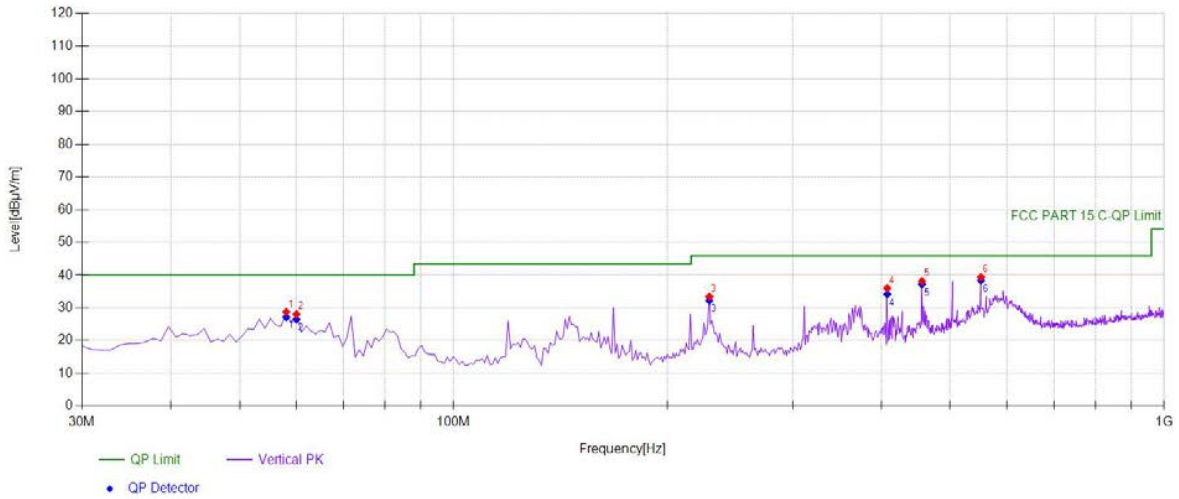
Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	58.1582	-18.30	28.48	40.00	11.52
2	60.1001	-18.56	26.63	40.00	13.37
3	229.049	-16.24	33.00	46.00	13.00
4	407.7077	-11.78	35.25	46.00	10.75
5	503.8338	-9.77	37.32	46.00	8.68
6	552.3824	-9.16	36.09	46.00	9.91



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	360.130	53.15	-13.43	39.72	PK	46.00	6.28	Horizontal
2	407.707	50.87	-11.78	39.09	PK	46.00	6.91	Horizontal
3	456.256	48.19	-11.07	37.12	PK	46.00	8.88	Horizontal
4	599.96	42.56	-7.14	35.42	PK	46.00	10.58	Horizontal
5	648.508	38.82	-6.22	32.60	PK	46.00	13.40	Horizontal
6	812.602	36.99	-4.33	32.66	PK	46.00	13.34	Horizontal

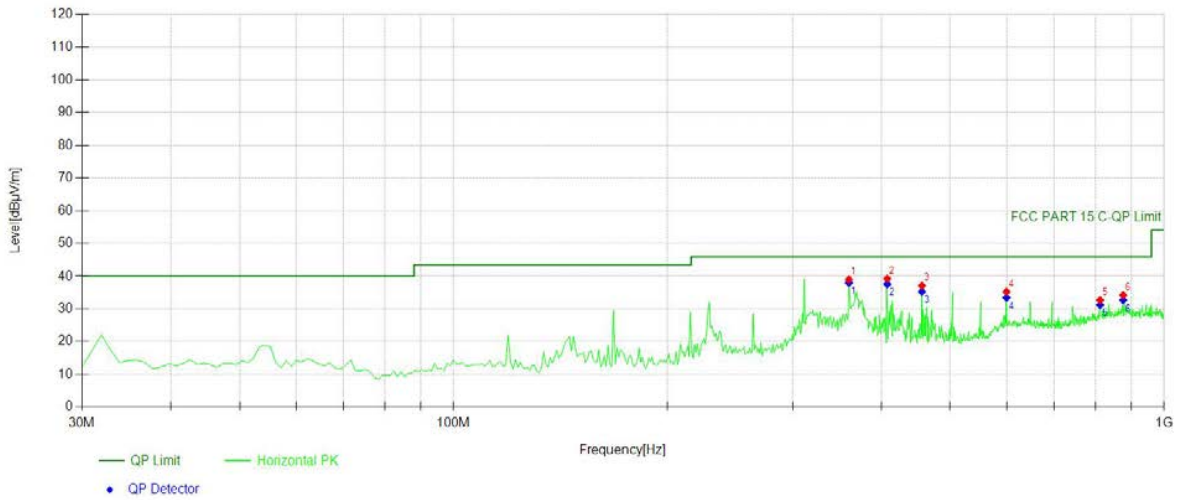
Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	360.1301	-13.43	38.22	46.00	7.78
2	407.7077	-11.78	37.59	46.00	8.41
3	456.2563	-11.07	35.98	46.00	10.02
4	599.96	-7.14	34.12	46.00	11.88
5	648.5085	-6.22	31.30	46.00	14.70
6	812.6026	-4.33	30.72	46.00	15.28

Mode: 11B 2437



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	58.1582	47.01	-18.30	28.71	PK	40.00	11.29	Vertical
2	60.1001	46.58	-18.56	28.02	PK	40.00	11.98	Vertical
3	229.049	49.69	-16.24	33.45	PK	46.00	12.55	Vertical
4	407.707	47.81	-11.78	36.03	PK	46.00	9.97	Vertical
5	456.256	49.28	-11.07	38.21	PK	46.00	7.79	Vertical
6	552.382	48.57	-9.16	39.41	PK	46.00	6.59	Vertical

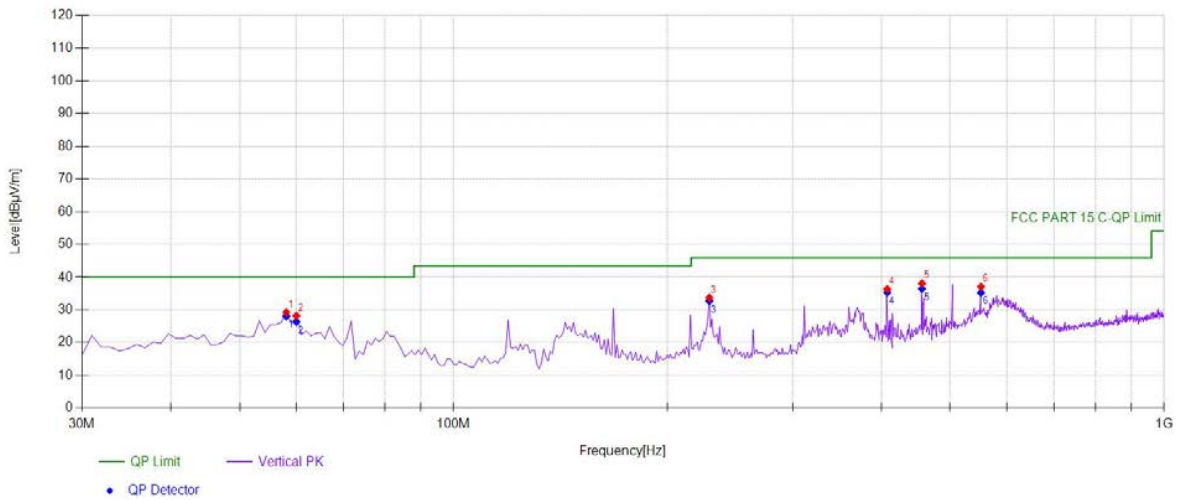
Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	58.1582	-18.30	27.15	40.00	12.85
2	60.1001	-18.56	26.46	40.00	13.54
3	229.049	-16.24	32.25	46.00	13.75
4	407.7077	-11.78	34.19	46.00	11.81
5	456.2563	-11.07	37.20	46.00	8.80
6	552.3824	-9.16	38.40	46.00	7.60



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	360.130	52.45	-13.43	39.02	PK	46.00	6.98	Horizontal
2	407.707	51.02	-11.78	39.24	PK	46.00	6.76	Horizontal
3	456.256	48.18	-11.07	37.11	PK	46.00	8.89	Horizontal
4	599.96	42.41	-7.14	35.27	PK	46.00	10.73	Horizontal
5	812.602	37.01	-4.33	32.68	PK	46.00	13.32	Horizontal
6	875.715	37.37	-3.19	34.18	PK	46.00	11.82	Horizontal

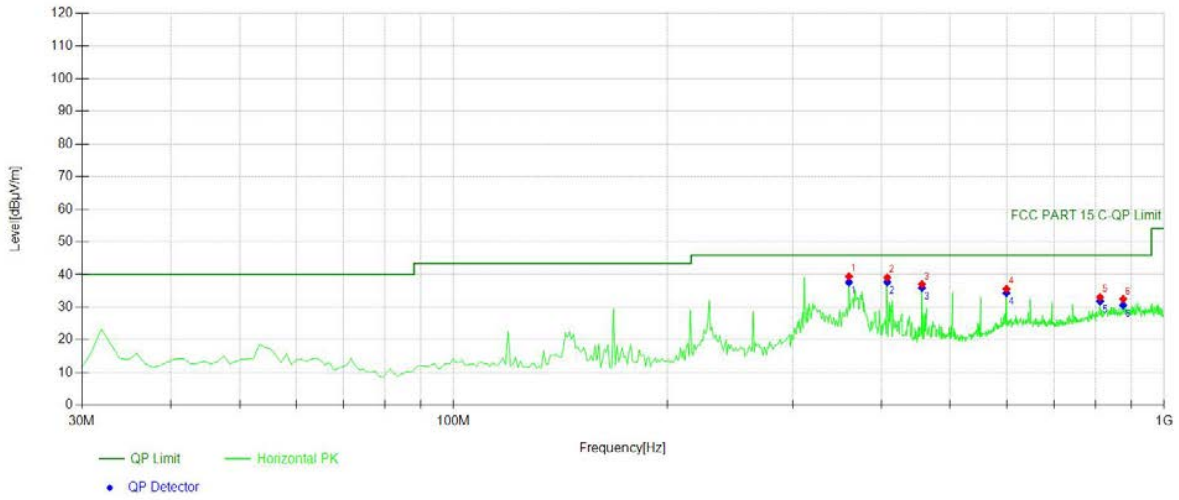
Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	360.1301	-13.43	37.99	46.00	8.01
2	407.7077	-11.78	37.56	46.00	8.44
3	456.2563	-11.07	35.27	46.00	10.73
4	599.96	-7.14	33.43	46.00	12.57
5	812.6026	-4.33	31.20	46.00	14.80
6	875.7157	-3.19	32.70	46.00	13.30

Mode:	11B 2462
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Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	58.1582	47.53	-18.30	29.23	PK	40.00	10.77	Vertical
2	60.1001	46.72	-18.56	28.16	PK	40.00	11.84	Vertical
3	229.049	49.97	-16.24	33.73	PK	46.00	12.27	Vertical
4	407.707	48.14	-11.78	36.36	PK	46.00	9.64	Vertical
5	456.256	49.17	-11.07	38.10	PK	46.00	7.90	Vertical
6	552.382	46.25	-9.16	37.09	PK	46.00	8.91	Vertical

Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	58.1582	-18.30	28.02	40.00	11.98
2	60.1001	-18.56	26.31	40.00	13.69
3	229.049	-16.24	32.71	46.00	13.29
4	407.7077	-11.78	35.34	46.00	10.66
5	456.2563	-11.07	36.44	46.00	9.56
6	552.3824	-9.16	35.27	46.00	10.73



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB/m]	Level [dBµV/m]	Detector	Limit [dBµV/m]	Margin [dB]	Polarity
1	360.130	52.88	-13.43	39.45	PK	46.00	6.55	Horizontal
2	407.707	50.90	-11.78	39.12	PK	46.00	6.88	Horizontal
3	456.256	48.13	-11.07	37.06	PK	46.00	8.94	Horizontal
4	599.96	42.76	-7.14	35.62	PK	46.00	10.38	Horizontal
5	812.602	37.39	-4.33	33.06	PK	46.00	12.94	Horizontal
6	875.715	35.70	-3.19	32.51	PK	46.00	13.49	Horizontal

Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]
1	360.1301	-13.43	37.65	46.00	8.35
2	407.7077	-11.78	37.68	46.00	8.32
3	456.2563	-11.07	35.98	46.00	10.02
4	599.96	-7.14	34.38	46.00	11.62
5	812.6026	-4.33	31.82	46.00	14.18
6	875.7157	-3.19	30.63	46.00	15.37

8.8 CONDUCTED EMISSION TEST

8.8.1 Applicable Standard

According to FCC Part 15.207(a)

According to RSS-Gen 8.8

8.8.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

8.8.3 Test Configuration

Test according to clause 7.3 conducted emission test setup

8.8.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.

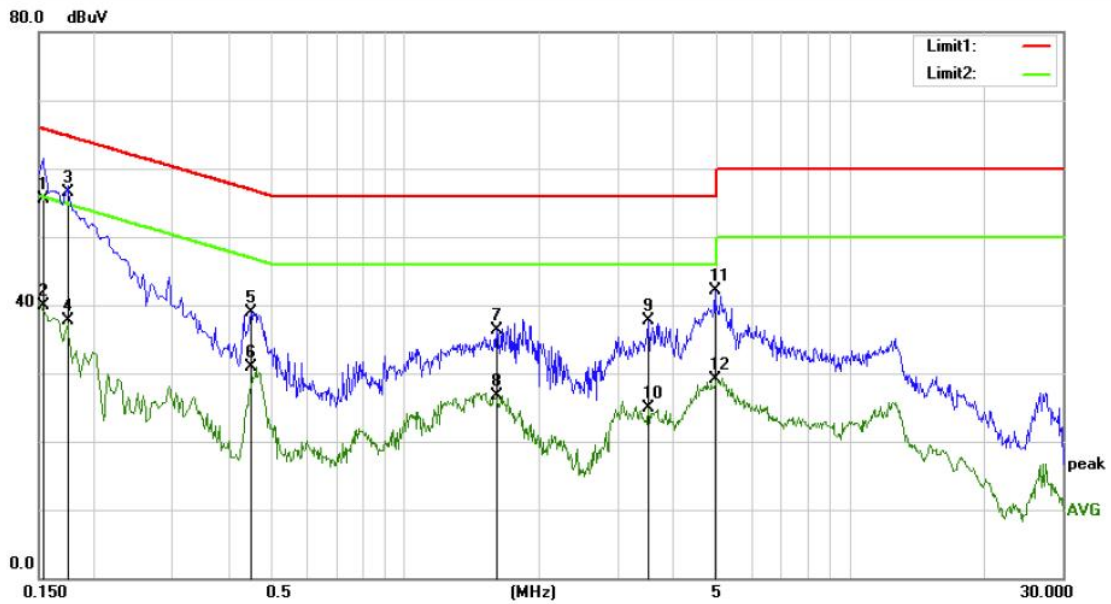
Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Repeat above procedures until all frequency measured were complete.

8.8.5 Test Results

Pass

The AC120V &240V voltage have been tested, and the worst result recorded was report as below:



Site Conduction #1

Phase: **L1**

Temperature: 20.8

Limit: (CE)FCC PART 15 class B_QP

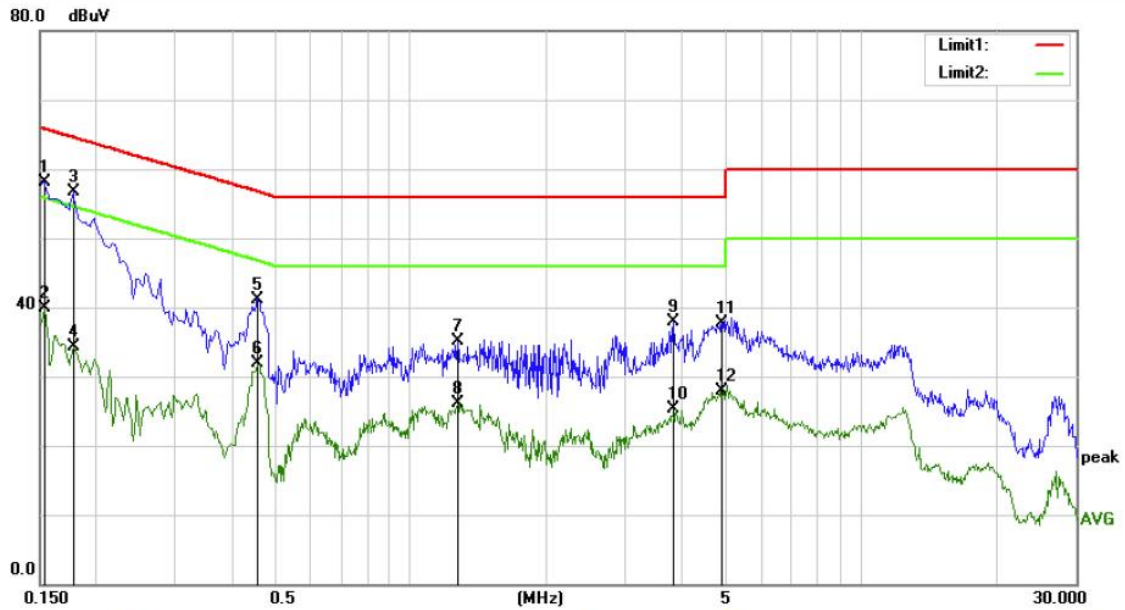
Power: AC 120V/60Hz

Humidity: 61 %

Mode: WIFI

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1540	45.94	9.56	55.50	65.78	-10.28	QP	
2		0.1540	30.43	9.56	39.99	55.78	-15.79	AVG	
3	*	0.1750	46.79	9.81	56.60	64.72	-8.12	QP	
4		0.1750	27.91	9.81	37.72	54.72	-17.00	AVG	
5		0.4500	29.18	9.75	38.93	56.88	-17.95	QP	
6		0.4500	21.09	9.75	30.84	46.88	-16.04	AVG	
7		1.6100	26.59	9.76	36.35	56.00	-19.65	QP	
8		1.6100	16.98	9.76	26.74	46.00	-19.26	AVG	
9		3.5220	27.87	9.80	37.67	56.00	-18.33	QP	
10		3.5220	15.05	9.80	24.85	46.00	-21.15	AVG	
11		4.9620	32.30	9.87	42.17	56.00	-13.83	QP	
12		4.9620	19.25	9.87	29.12	46.00	-16.88	AVG	



Site Conduction #1 Phase: **N** Temperature: 20.8
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 61 %
 Mode: WIFI
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1540	48.52	9.56	58.08	65.78	-7.70	QP	
2		0.1540	30.36	9.56	39.92	55.78	-15.86	AVG	
3		0.1780	46.88	9.84	56.72	64.58	-7.86	QP	
4		0.1780	24.46	9.84	34.30	54.58	-20.28	AVG	
5		0.4580	31.47	9.73	41.20	56.73	-15.53	QP	
6		0.4580	22.08	9.73	31.81	46.73	-14.92	AVG	
7		1.2740	25.24	9.81	35.05	56.00	-20.95	QP	
8		1.2740	16.30	9.81	26.11	46.00	-19.89	AVG	
9		3.8300	28.11	9.81	37.92	56.00	-18.08	QP	
10		3.8300	15.41	9.81	25.22	46.00	-20.78	AVG	
11		4.9100	27.75	9.87	37.62	56.00	-18.38	QP	
12		4.9100	18.11	9.87	27.98	46.00	-18.02	AVG	

8.9 ANTENNA APPLICATION

8.9.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203	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 shall be considered sufficient to comply with the provisions of this section. 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.
FCC 47 CFR Part 15.247 (b)	If transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
RSS-Gen Section 6.8	The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.
RSS-247 Section 5.4	If the transmitter employs an antenna system that emits multiple directional beams, but does not emit multiple directional beams simultaneously, the total output power conducted to the array or arrays that comprise the device (i.e. the sum of the power supplied to all antennas, antenna elements, staves, etc., and summed across all carriers or frequency channels) shall not exceed the applicable output power limit. However, the total conducted output power shall be reduced by 1 dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6 dBi. The directional antenna gain shall be computed as the sum of 10 log (number of array elements or staves) plus the directional gain of the element or stave having the highest gain.

8.9.2 Result

PASS.

- Note:
- Antenna use a permanently attached antenna which is not replaceable.
 - Not using a standard antenna jack or electrical connector for antenna replacement
 - The antenna has to be professionally installed (please provide method of installation)

Please refer to the attached document Internal Photos to show the antenna connector.

----- END OF REPORT -----