

### 11G\_Ant1\_High\_2462



### 11N20SISO\_Ant1\_Low\_2412



### 11N20SISO\_Ant1\_High\_2462



### 11N40SISO Ant1 Low 2422



### 11N40SISO Ant1 High 2452



### 11A20SISO Ant1 Low 2412



### 11AX20SISO\_Ant1\_High\_2462



### 11AX40SISO\_Ant1\_Low\_2422

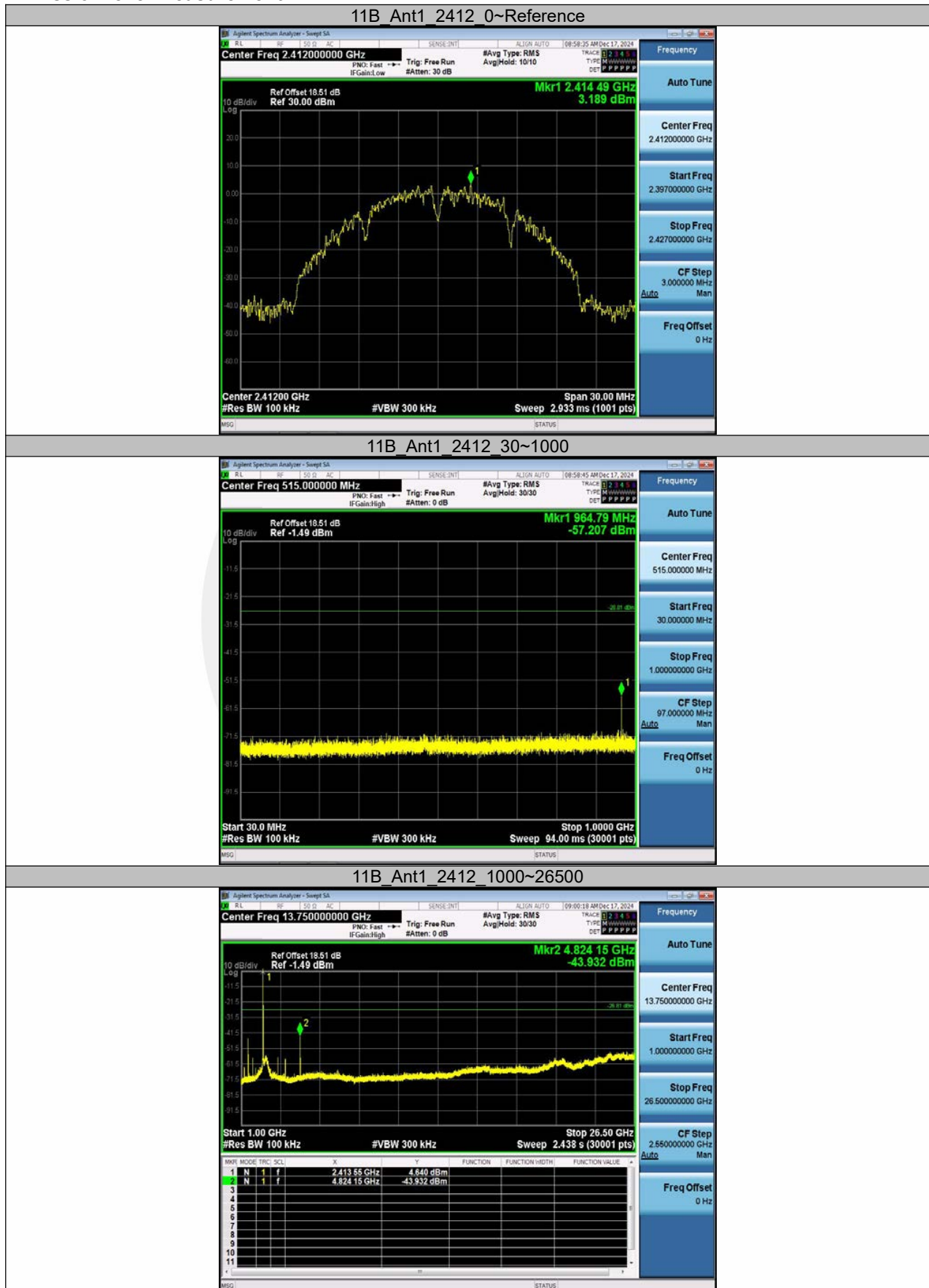


### 11AX40SISO\_Ant1\_High\_2452





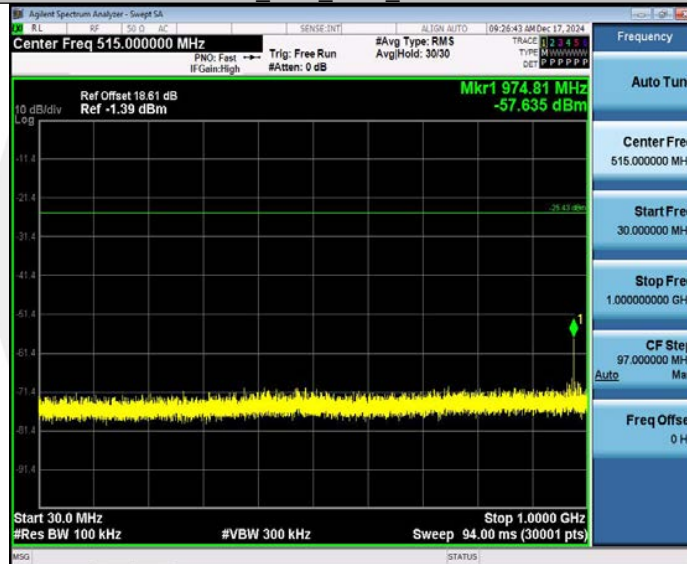
## Emission level measurement



11B Ant1 2437 0~Reference



11B Ant1 2437 30~1000



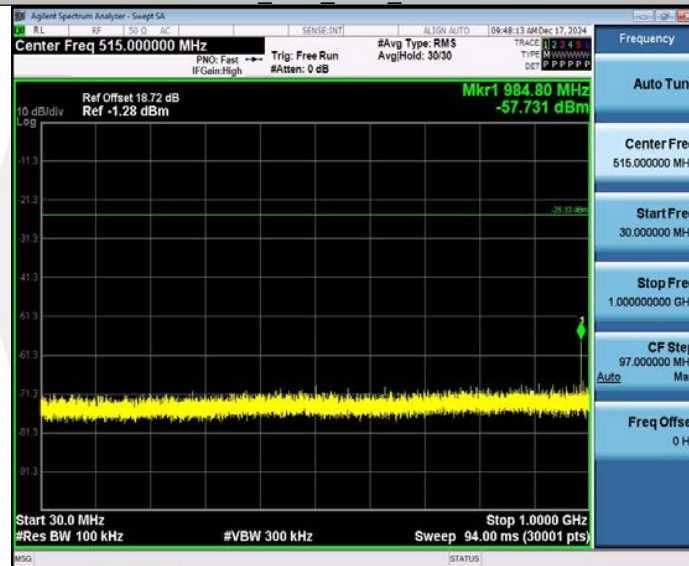
11B Ant1 2437 1000~26500



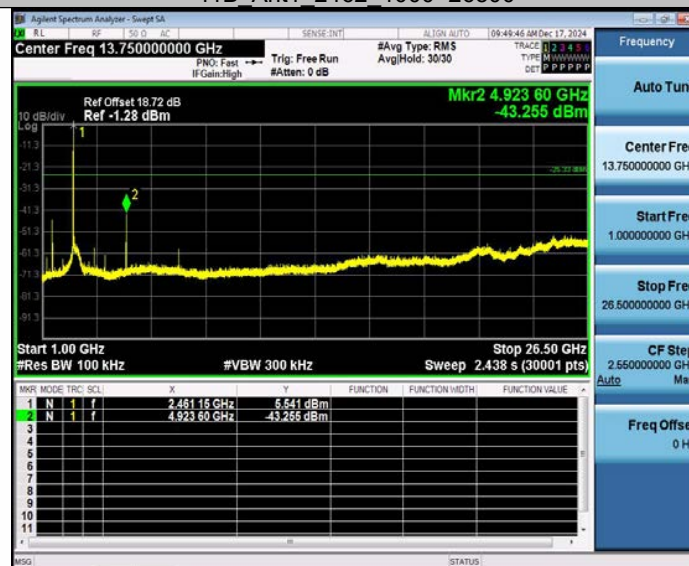
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11B Ant1 2462 30~1000



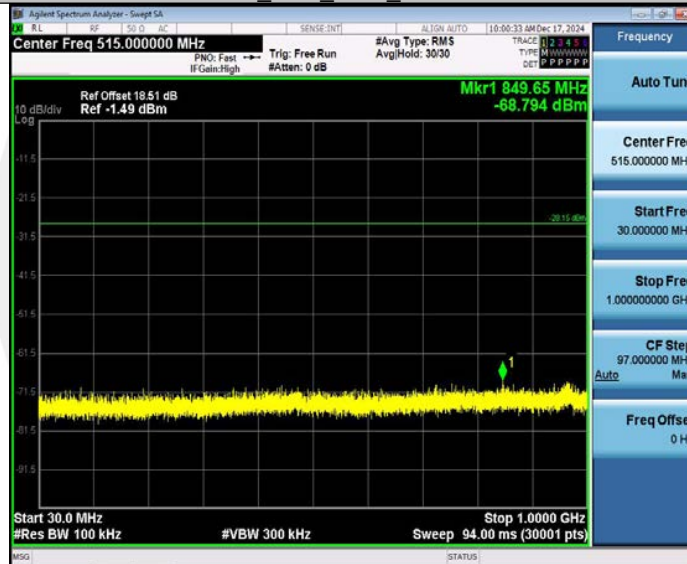
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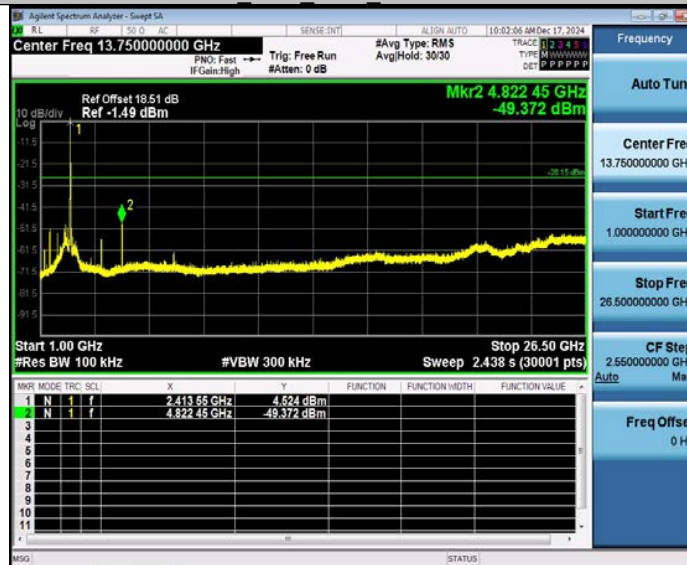
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11G Ant1 2412 30~1000

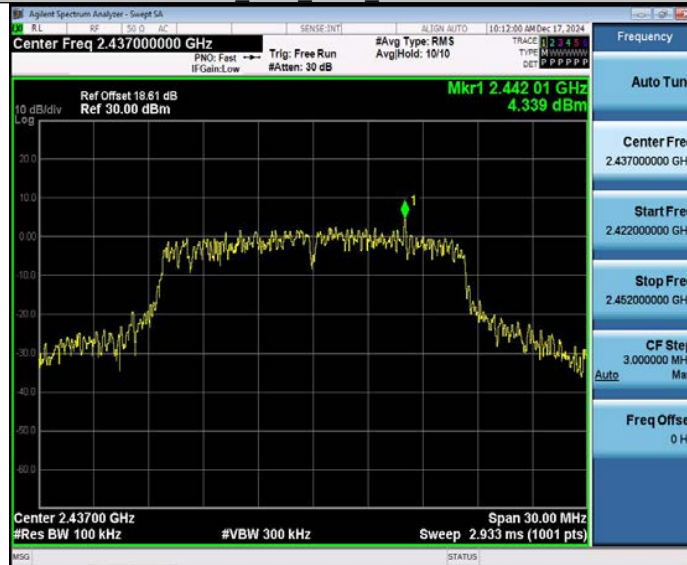


11G Ant1 2412 1000~26500





11G Ant1 2437 0~Reference



11G Ant1 2437 30~1000



11G Ant1 2437 1000~26500

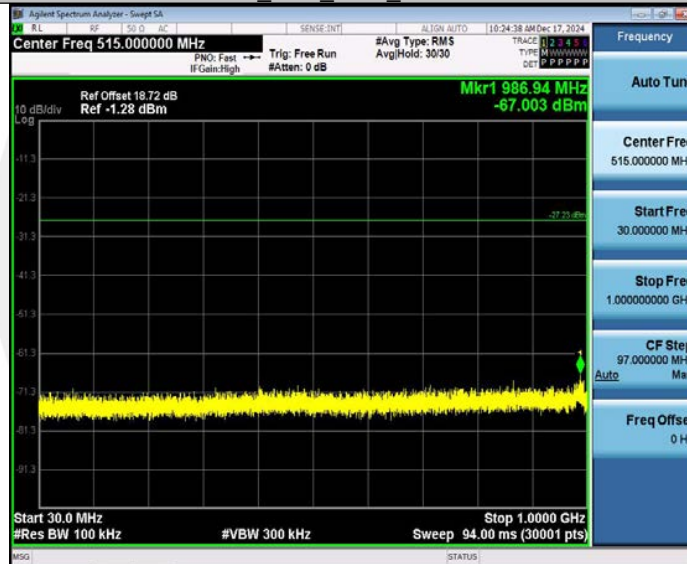




11G Ant1 2462 0~Reference



11G Ant1 2462 30~1000



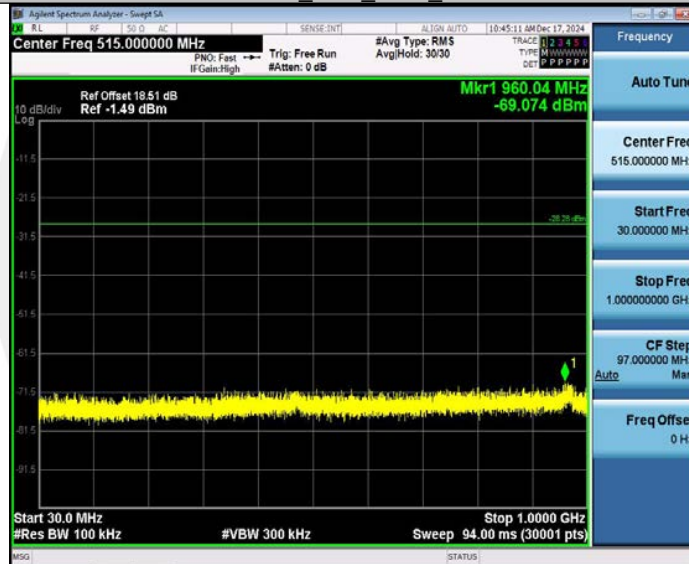
11G Ant1 2462 1000~26500



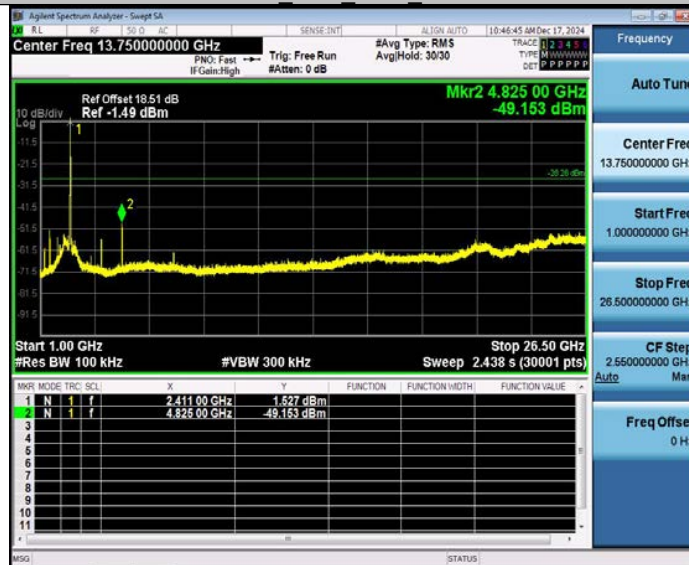
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11N20SISO\_Ant1\_2412\_30~1000



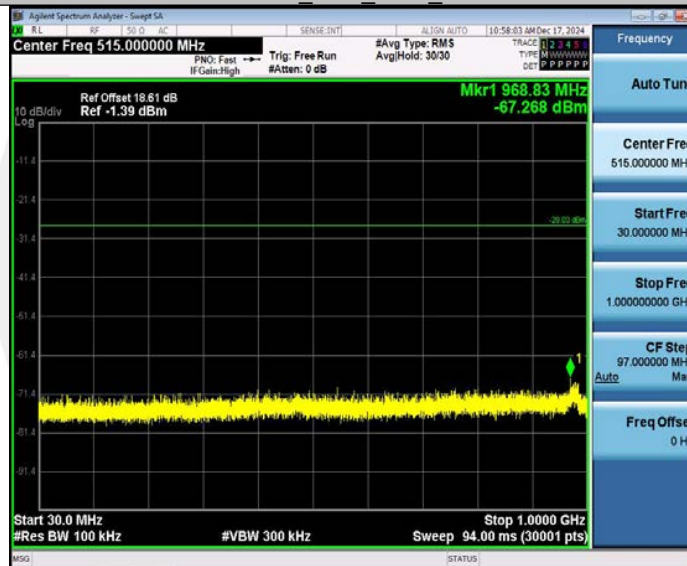
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11N20SISO\_Ant1\_2437\_0~Reference



11N20SISO\_Ant1\_2437\_30~1000



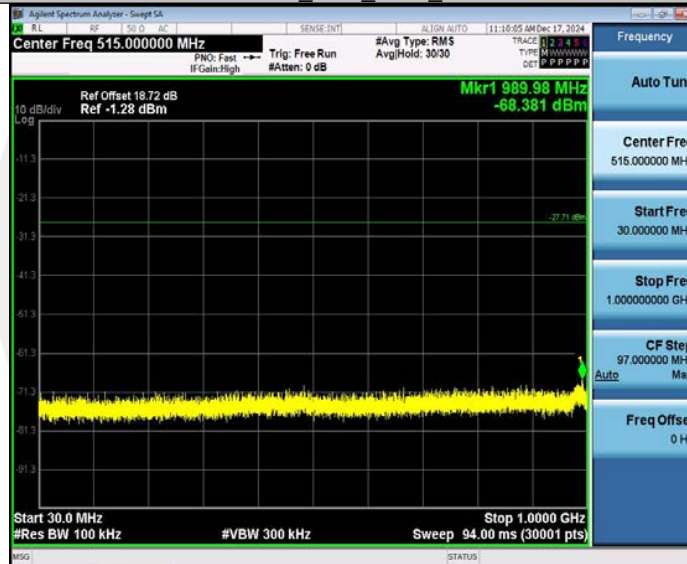
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11N20SISO\_Ant1\_2462\_0~Reference



11N20SISO\_Ant1\_2462\_30~1000



11N20SISO\_Ant1\_2462\_1000~26500





11N40SISO\_Ant1\_2422\_0~Reference



11N40SISO\_Ant1\_2422\_30~1000



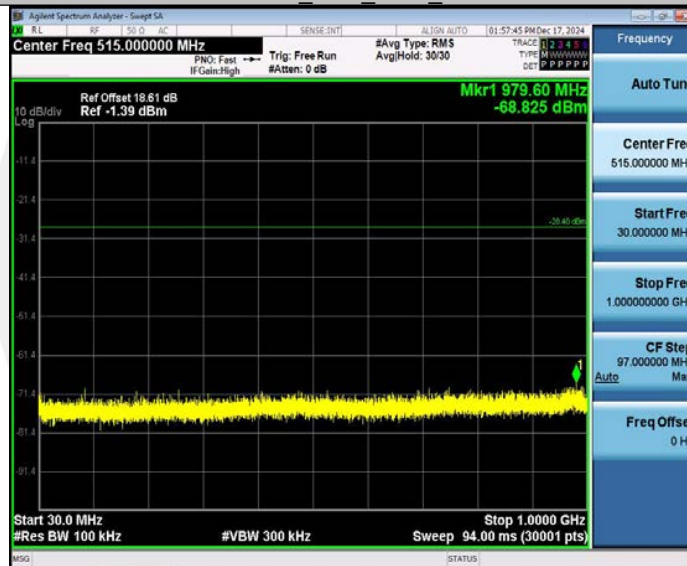
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11N40SISO\_Ant1\_2437\_30~1000



11N40SISO\_Ant1\_2437\_1000~26500



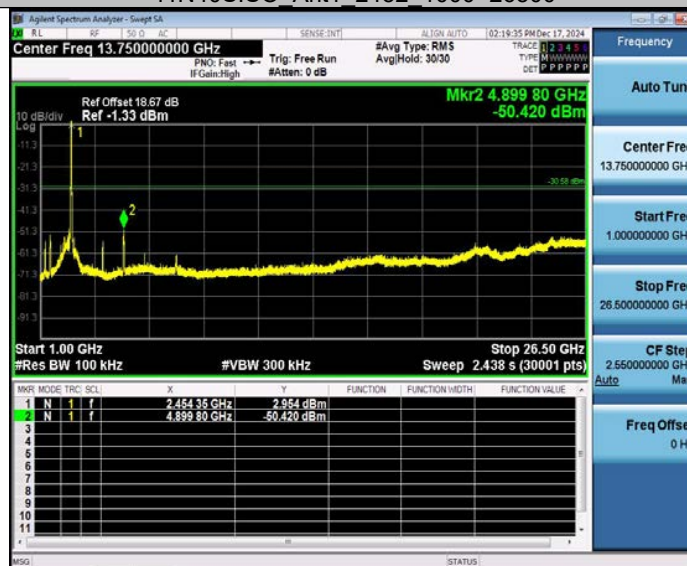
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11N40SISO\_Ant1\_2452\_30~1000



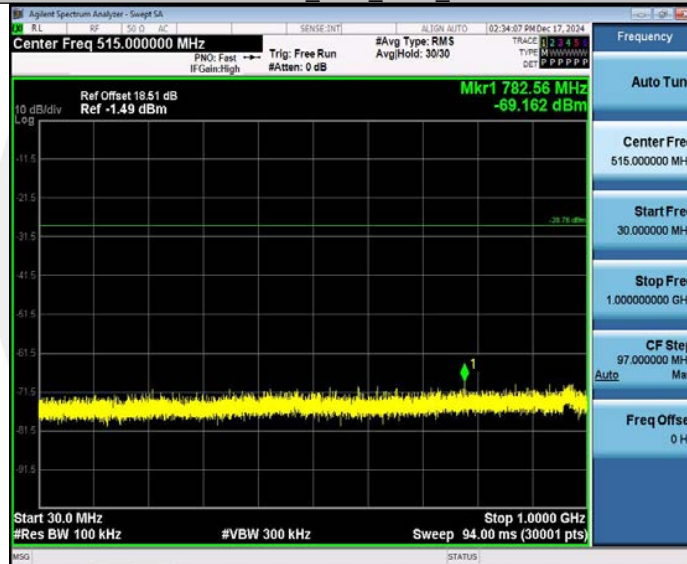
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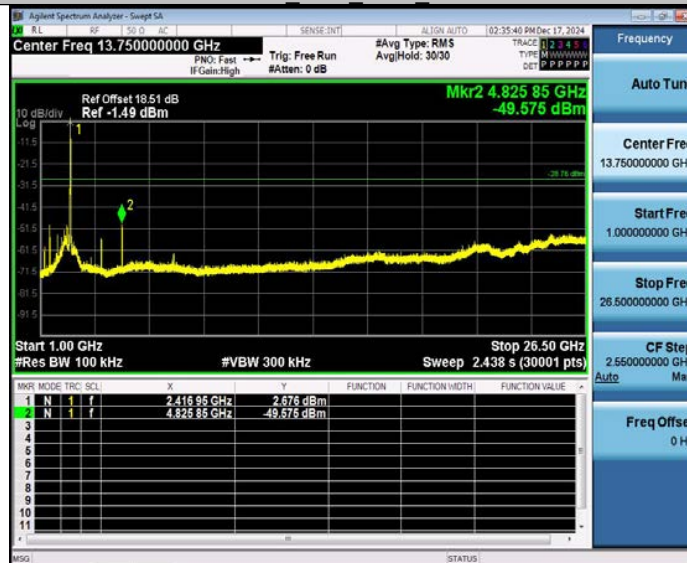
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11AX20SISO\_Ant1\_2412\_30~1000



11AX20SISO\_Ant1\_2412\_1000~26500

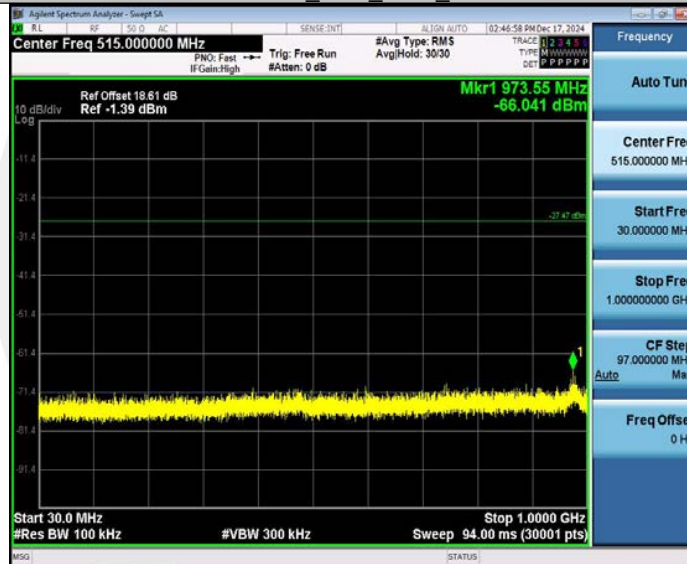




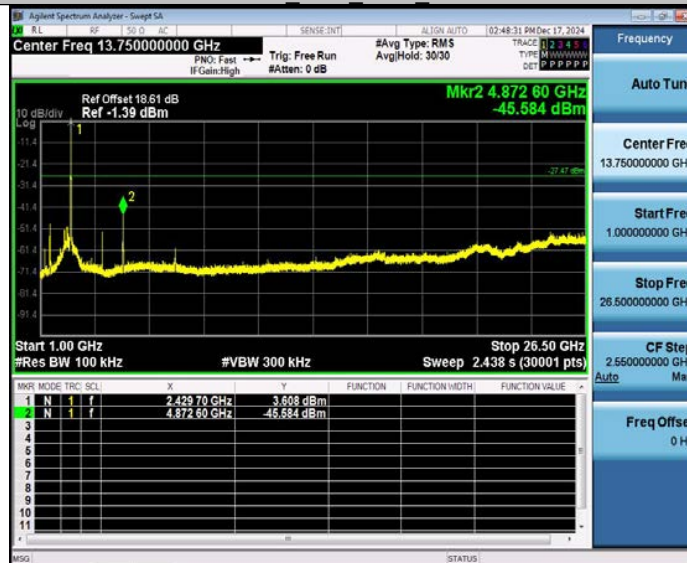
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11AX20SISO\_Ant1\_2437\_30~1000



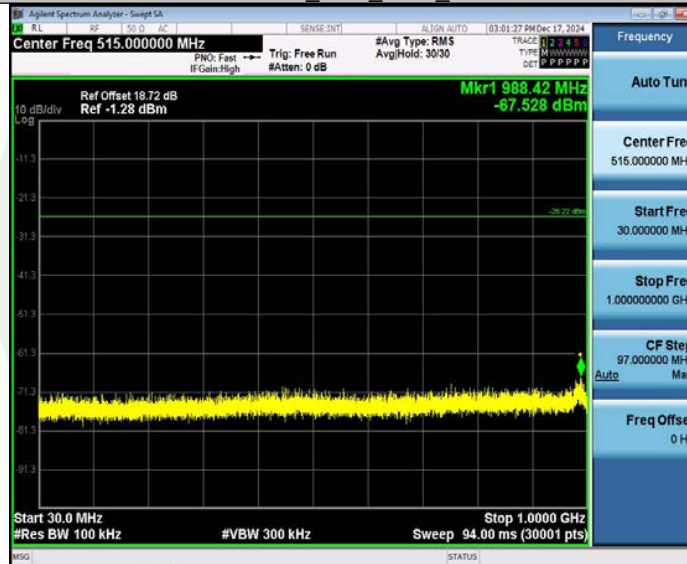
11AX20SISO\_Ant1\_2437\_1000~26500



11AX20SISO\_Ant1\_2462\_0~Reference



11AX20SISO\_Ant1\_2462\_30~1000



11AX20SISO\_Ant1\_2462\_1000~26500



11AX40SISO\_Ant1\_2422\_0~Reference



11AX40SISO\_Ant1\_2422\_30~1000



11AX40SISO\_Ant1\_2422\_1000~26500



11AX40SISO\_Ant1\_2437\_0~Reference



11AX40SISO\_Ant1\_2437\_30~1000



11AX40SISO\_Ant1\_2437\_1000~26500

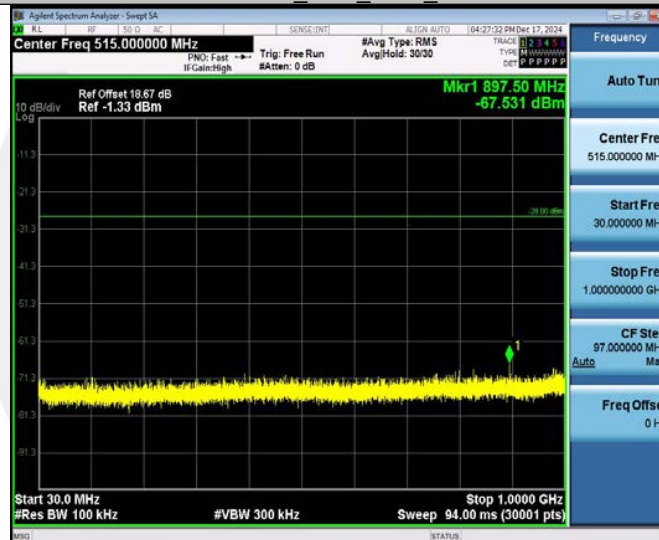




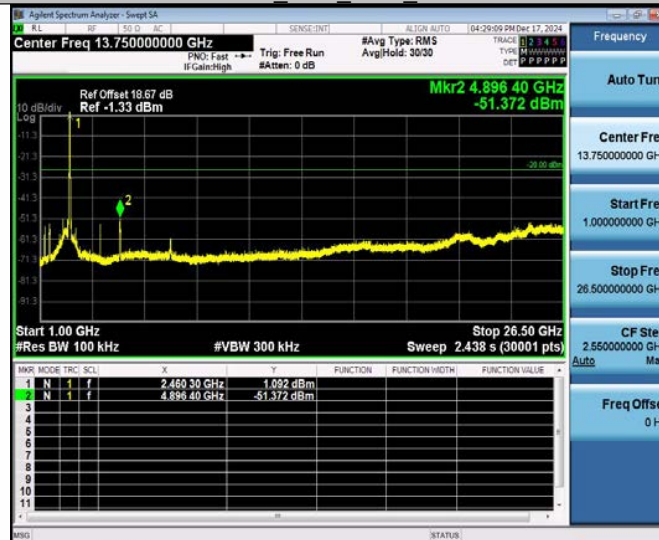
### 11AX40SISO\_Ant1\_2452\_0~Reference



### 11AX40SISO\_Ant1\_2452\_30~1000



### 11AX40SISO\_Ant1\_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) and modes(802.11b/g/n/ax) have been tested and the worst(Antenna 1, 802.11b) result recorded was report as below:

Test mode: 802.11b 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
6924.37	V	59.02	-4.02	55.00	74.00	19.00	Peak
9883.12	V	57.66	3.84	61.50	74.00	12.50	Peak
12631.8	V	52.37	9.79	62.16	74.00	11.84	Peak
6924.37	V	42.86	-4.02	38.84	54.00	15.16	Avg
9883.12	V	38.42	3.84	42.26	54.00	11.74	Avg
12631.8	V	35.33	9.79	45.12	54.00	8.88	Avg
4824.37	H	60.41	-12.80	47.61	74.00	26.39	Peak
9898.12	H	57.44	4.32	61.76	74.00	12.24	Peak
12581.2	H	52.81	9.65	62.46	74.00	11.54	Peak
4824.37	H	50.86	-12.80	38.06	54.00	15.94	Avg
9898.12	H	38.96	4.32	43.28	54.00	10.72	Avg
12581.2	H	35.1	9.65	44.75	54.00	9.25	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: 802.11b 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
7820.62	V	60.17	-3.46	56.71	74.00	17.29	Peak
9952.5	V	57.98	4.08	62.06	74.00	11.94	Peak
12586.8	V	53.27	9.76	63.03	74.00	10.97	Peak
7820.62	V	42.76	-3.46	39.30	54.00	14.70	Avg
9952.5	V	38.96	4.08	43.04	54.00	10.96	Avg
12586.8	V	35.24	9.76	45.00	54.00	9.00	Avg
4873.12	H	63.89	-12.59	51.30	74.00	22.70	Peak
9901.87	H	57.13	4.37	61.50	74.00	12.50	Peak
12573.7	H	52.73	9.51	62.24	74.00	11.76	Peak
4873.94	H	61.91	-12.59	49.32	54.00	4.68	Avg
9901.87	H	38.46	4.37	42.83	54.00	11.17	Avg
12573.7	H	35.93	9.51	45.44	54.00	8.56	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: 802.11b 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
4923.75	V	60.78	-12.36	48.42	74.00	25.58	Peak
9911.25	V	57.55	4.31	61.86	74.00	12.14	Avg
12588.7	V	52.65	9.79	62.44	74.00	11.56	Peak
4923.75	V	59.12	-12.36	46.76	54.00	7.24	Avg
9911.25	V	38.69	4.31	43.00	54.00	11.00	Peak
12588.7	V	35.73	9.79	45.52	54.00	8.48	Avg
4923.75	H	66.45	-12.36	54.09	74.00	19.91	Avg
9896.25	H	57.35	4.26	61.61	74.00	12.39	Peak
12633.7	H	53.33	9.78	63.11	74.00	10.89	Avg
4923.98	H	66.25	-12.36	53.89	54.00	0.11	Peak
9896.25	H	38.49	4.26	42.75	54.00	11.25	Avg
12633.7	H	35.73	9.78	45.51	54.00	8.49	Peak
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:

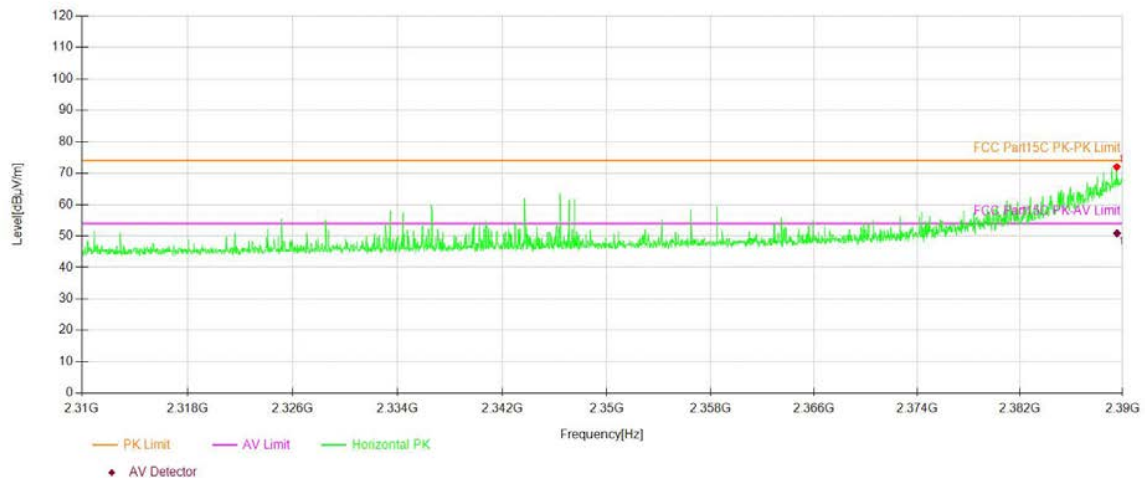
Test mode: 802.11n(HT20) Frequency: Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
2390	V	33.64	31.34	64.98	74.00	9.02	Peak
2389.96	V	17.51	31.34	48.85	54.00	5.15	Avg
2389.54	H	40.64	31.34	71.98	74.00	2.02	Peak
2389.56	H	19.55	31.34	50.89	54.00	3.11	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;							

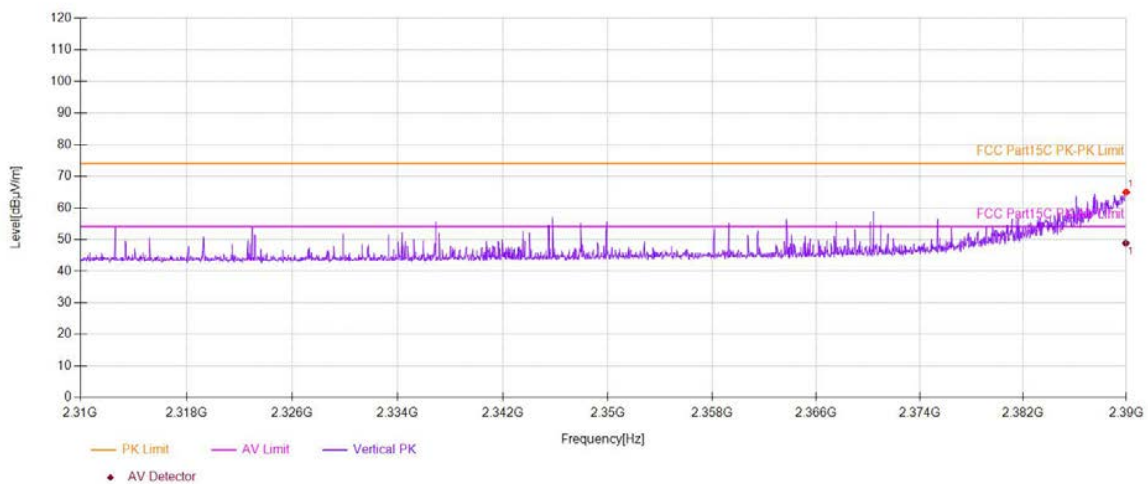
Test mode: 802.11n(HT20) Frequency: Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Reading Level (dBuV/m)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit 3m (dBuV/m)	Margin (dB)	Remark
2484.07	V	36.82	31.70	68.52	74.00	5.48	Peak
2484.03	V	15.08	31.70	46.78	54.00	7.22	Avg
2483.65	H	38.14	31.69	69.83	74.00	4.17	Peak
2483.62	H	17.76	31.69	49.45	54.00	4.55	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;							

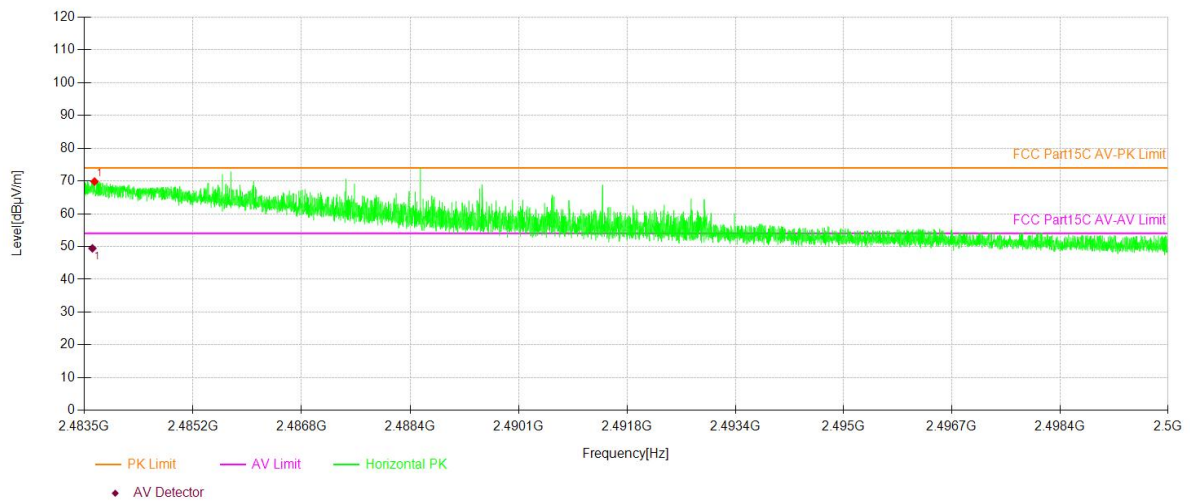
Test Model 802.11n(HT20) Spurious Emission in Restricted Band 2310-2390MHz  
Channel 1: 2412MHz Polarity: H



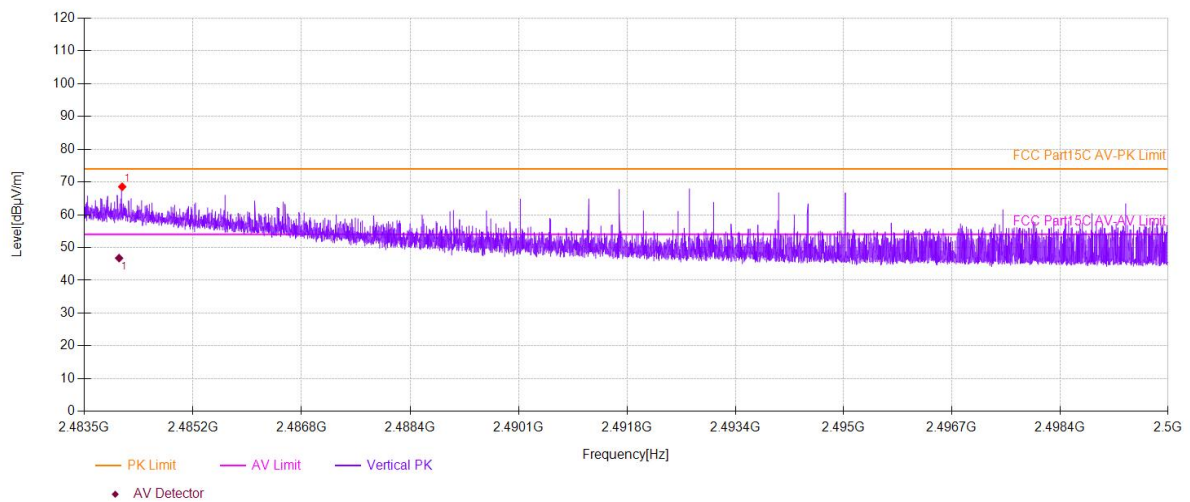
Test Model 802.11n(HT20) Spurious Emission in Restricted Band 2310-2390MHz  
Channel 1: 2412MHz Polarity: V



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

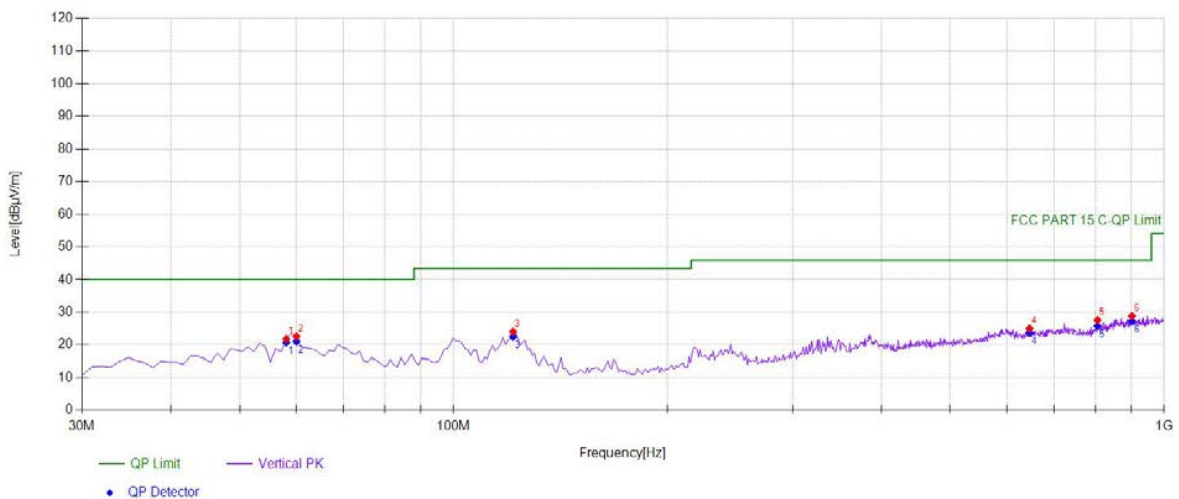




■ Spurious Emission below 1GHz (30MHz to 1GHz)

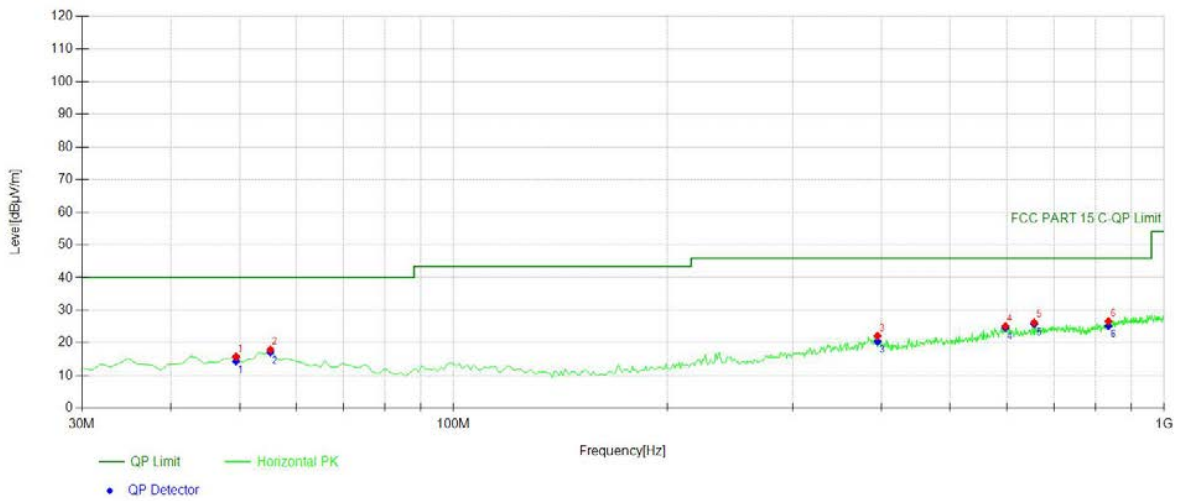
All the antenna(Antenna 1&2) and modes(802.11b/g/n/ax) have been tested and the worst(Antenna 1, 802.11b) result recorded was report as below:

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	38.93	-17.20	21.73	PK	40.00	18.27	Vertical
2	60.1001	40.00	-17.46	22.54	PK	40.00	17.46	Vertical
3	121.271	42.71	-18.72	23.99	PK	43.50	19.51	Vertical
4	646.566	32.30	-7.32	24.98	PK	46.00	21.02	Vertical
5	805.805	33.00	-5.40	27.60	PK	46.00	18.40	Vertical
6	900.961	32.12	-3.29	28.83	PK	46.00	17.17	Vertical

Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	58.1582	-17.20	20.75	40.00	19.25
2	60.1001	-17.46	21.02	40.00	18.98
3	121.2713	-18.72	22.47	43.50	21.03
4	646.5666	-7.32	23.71	46.00	22.29
5	805.8058	-5.40	25.79	46.00	20.21
6	900.961	-3.29	27.26	46.00	18.74



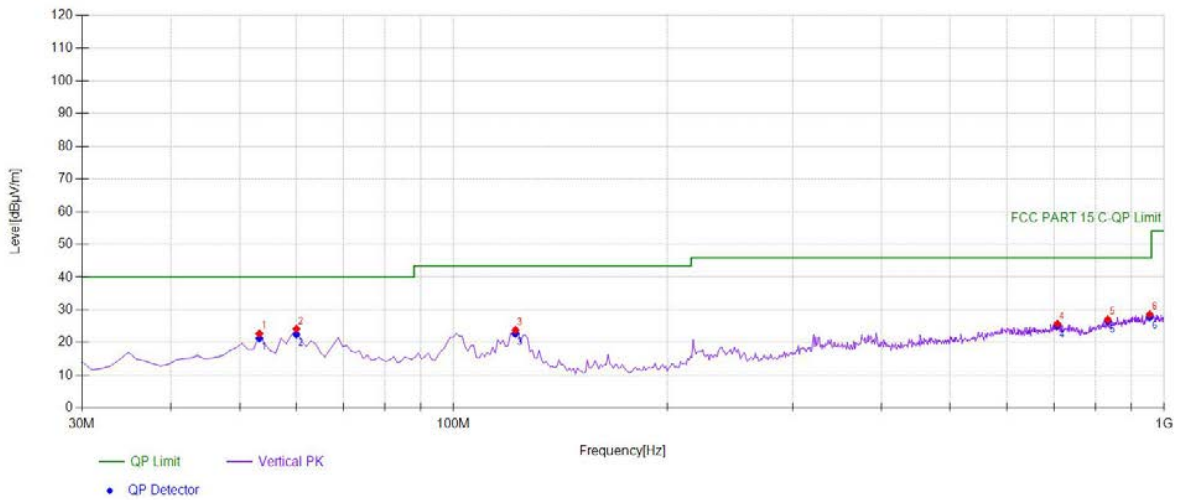
#### Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	49.4194	31.95	-16.17	15.78	PK	40.00	24.22	Horizontal
2	55.2452	34.67	-16.80	17.87	PK	40.00	22.13	Horizontal
3	395.085	33.51	-11.40	22.11	PK	46.00	23.89	Horizontal
4	598.018	31.63	-6.53	25.10	PK	46.00	20.90	Horizontal
5	656.276	33.31	-7.08	26.23	PK	46.00	19.77	Horizontal
6	834.934	31.42	-4.80	26.62	PK	46.00	19.38	Horizontal

#### Final Data List

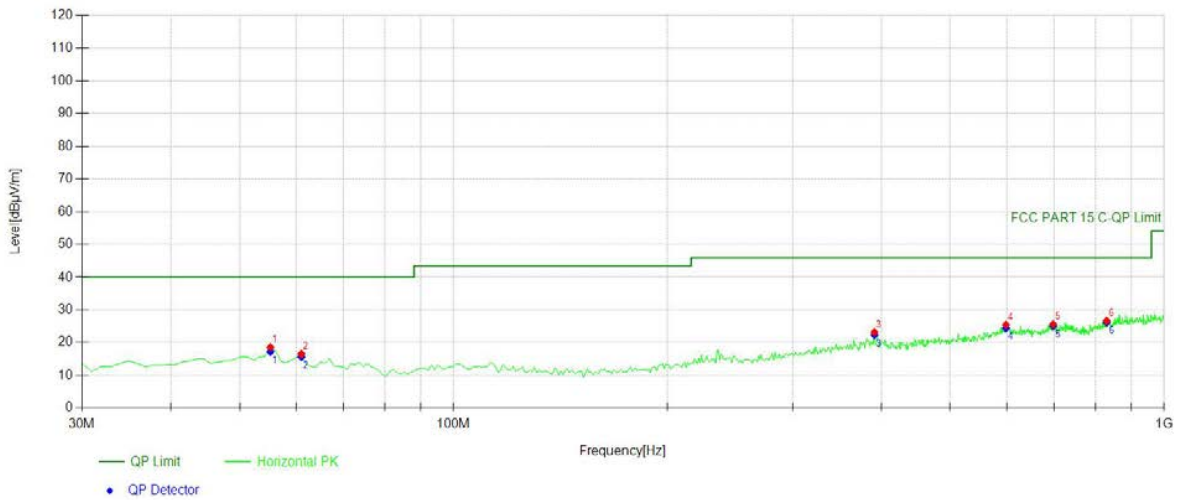
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	49.4194	-16.17	14.45	40.00	25.55
2	55.2452	-16.80	17.08	40.00	22.92
3	395.0851	-11.40	20.35	46.00	25.65
4	598.018	-6.53	24.60	46.00	21.40
5	656.2763	-7.08	25.73	46.00	20.27
6	834.9349	-4.80	25.16	46.00	20.84

Mode:	11B 2437
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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	53.3033	39.22	-16.54	22.68	PK	40.00	17.32	Vertical
2	60.1001	41.58	-17.46	24.12	PK	40.00	15.88	Vertical
3	122.242	42.59	-18.78	23.81	PK	43.50	19.69	Vertical
4	707.737	31.79	-6.12	25.67	PK	46.00	20.33	Vertical
5	832.993	31.87	-4.86	27.01	PK	46.00	18.99	Vertical
6	954.364	31.34	-2.75	28.59	PK	46.00	17.41	Vertical

Final Data List					
NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	53.3033	-16.54	21.27	40.00	18.73
2	60.1001	-17.46	22.46	40.00	17.54
3	122.2422	-18.78	22.69	43.50	20.81
4	707.7377	-6.12	25.09	46.00	20.91
5	832.993	-4.86	26.43	46.00	19.57
6	954.3644	-2.75	27.76	46.00	18.24



#### Suspected Data List

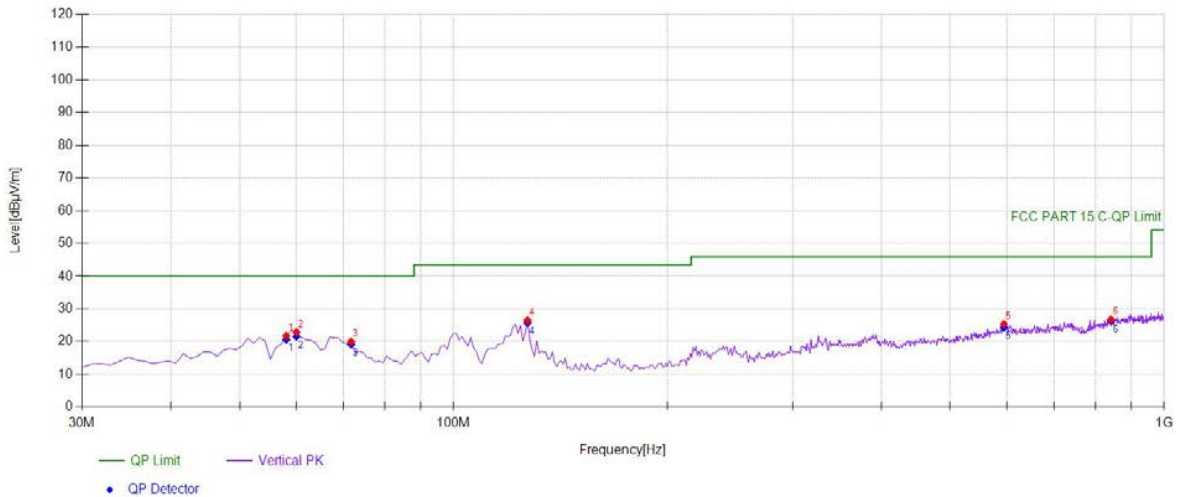
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	55.2452	35.32	-16.80	18.52	PK	40.00	21.48	Horizontal
2	61.0711	34.07	-17.58	16.49	PK	40.00	23.51	Horizontal
3	391.201	34.62	-11.49	23.13	PK	46.00	22.87	Horizontal
4	598.989	31.89	-6.48	25.41	PK	46.00	20.59	Horizontal
5	698.028	31.81	-6.26	25.55	PK	46.00	20.45	Horizontal
6	830.080	31.60	-4.94	26.66	PK	46.00	19.34	Horizontal

#### Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	55.2452	-16.80	17.16	40.00	22.84
2	61.0711	-17.58	15.67	40.00	24.33
3	391.2012	-11.49	22.31	46.00	23.69
4	598.989	-6.48	24.35	46.00	21.65
5	698.028	-6.26	25.02	46.00	20.98
6	830.0801	-4.94	26.13	46.00	19.87



Mode:	11B 2462
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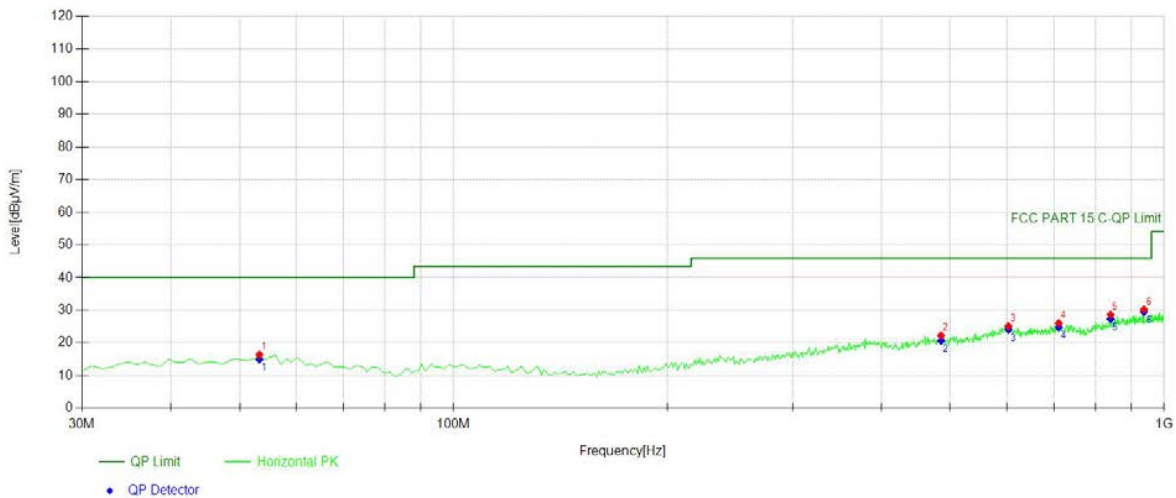


#### Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	58.1582	38.88	-17.20	21.68	PK	40.00	18.32	Vertical
2	60.1001	40.34	-17.46	22.88	PK	40.00	17.12	Vertical
3	71.7518	38.98	-19.05	19.93	PK	40.00	20.07	Vertical
4	127.097	45.56	-19.09	26.47	PK	43.50	17.03	Vertical
5	595.105	32.04	-6.69	25.35	PK	46.00	20.65	Vertical
6	841.731	31.33	-4.58	26.75	PK	46.00	19.25	Vertical

#### Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	58.1582	-17.20	20.58	40.00	19.42
2	60.1001	-17.46	21.53	40.00	18.47
3	71.7518	-19.05	19.12	40.00	20.88
4	127.0971	-19.09	25.66	43.50	17.84
5	595.1051	-6.69	24.29	46.00	21.71
6	841.7317	-4.58	26.23	46.00	19.77



#### Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	53.3033	32.90	-16.54	16.36	PK	40.00	23.64	Horizontal
2	485.385	32.34	-10.13	22.21	PK	46.00	23.79	Horizontal
3	603.843	31.69	-6.58	25.11	PK	46.00	20.89	Horizontal
4	710.650	32.13	-6.10	26.03	PK	46.00	19.97	Horizontal
5	840.760	33.23	-4.63	28.60	PK	46.00	17.40	Horizontal
6	936.886	33.68	-3.45	30.23	PK	46.00	15.77	Horizontal

#### Final Data List

NO.	Freq. [MHz]	Factor [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]
1	53.3033	-16.54	15.02	40.00	24.98
2	485.3854	-10.13	20.62	46.00	25.38
3	603.8438	-6.58	24.06	46.00	21.94
4	710.6507	-6.10	24.74	46.00	21.26
5	840.7608	-4.63	27.31	46.00	18.69
6	936.8869	-3.45	29.47	46.00	16.53

## 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

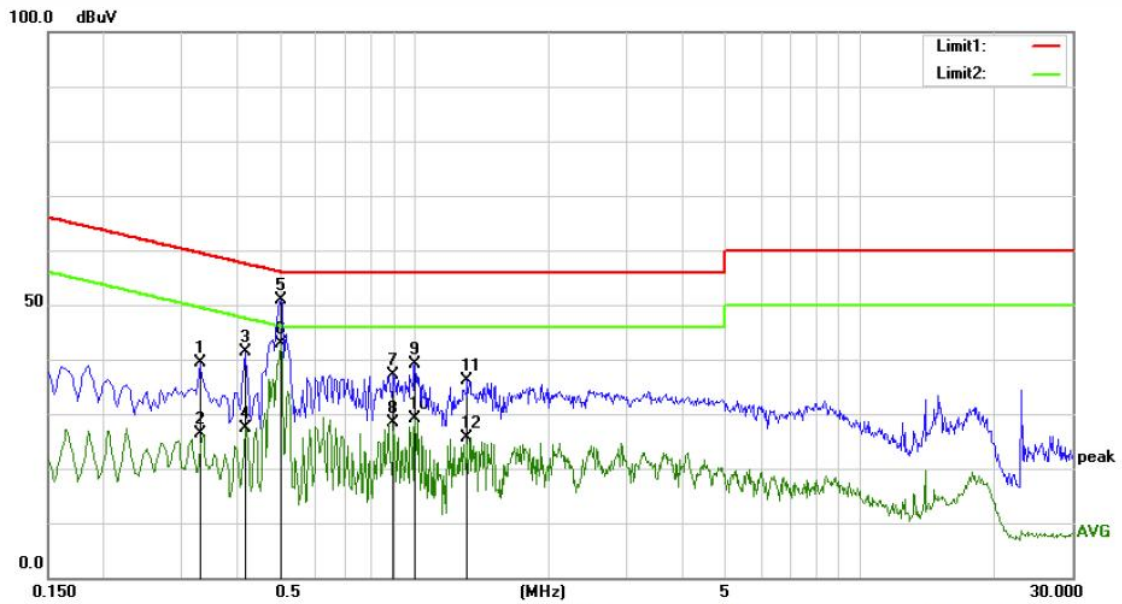
### 8.8.4 Test Procedure

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 2#

Phase: **N**

Temperature: 23.3

Limit: (CE)FCC PART 15 class B\_QP

Power: AC 120V/60Hz

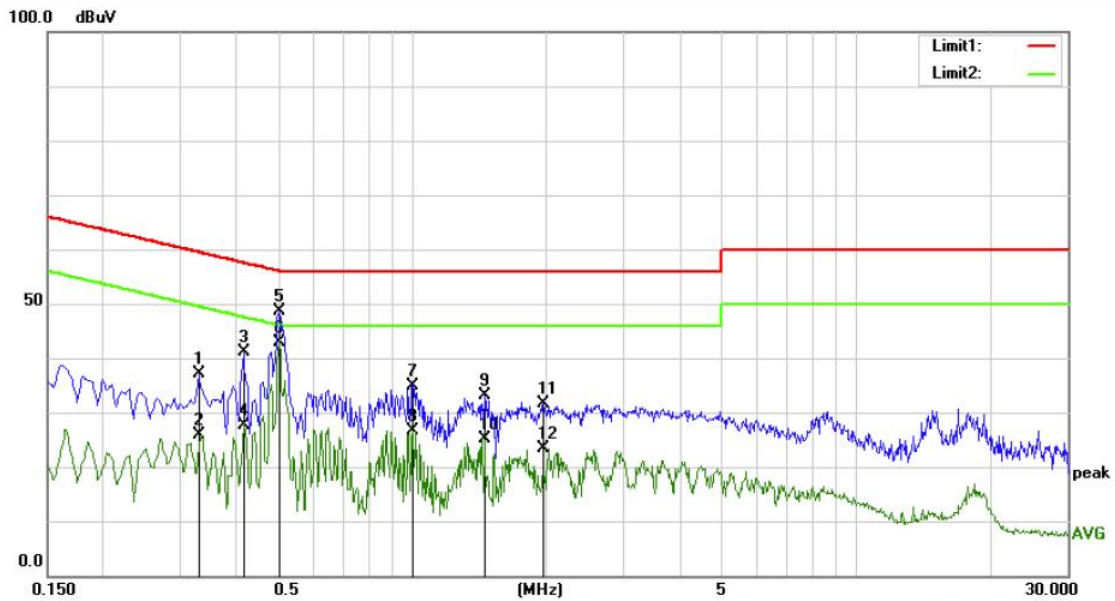
Humidity: 41 %

Mode: WIFI

Note:

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	0.3300	28.64	10.65	39.29	59.45	-20.16	QP	
2	0.3300	15.84	10.65	26.49	49.45	-22.96	AVG	
3	0.4150	30.82	10.66	41.48	57.55	-16.07	QP	
4	0.4150	16.61	10.66	27.27	47.55	-20.28	AVG	
5	0.5000	40.33	10.66	50.99	56.00	-5.01	QP	
6 *	0.5000	32.26	10.66	42.92	46.00	-3.08	AVG	
7	0.8950	26.58	10.67	37.25	56.00	-18.75	QP	
8	0.8950	17.63	10.67	28.30	46.00	-17.70	AVG	
9	1.0000	28.34	10.68	39.02	56.00	-16.98	QP	
10	1.0000	18.43	10.68	29.11	46.00	-16.89	AVG	
11	1.3150	25.37	10.67	36.04	56.00	-19.96	QP	
12	1.3150	15.01	10.67	25.68	46.00	-20.32	AVG	





Site Conduction 2#

Phase: **L1**

Temperature: 23.3

Limit: (CE)FCC PART 15 class B\_QP

Power: AC 120V/60Hz

Humidity: 41 %

Mode: WIFI

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.3300	26.40	10.65	37.05	59.45	-22.40	QP	
2		0.3300	15.31	10.65	25.96	49.45	-23.49	AVG	
3		0.4150	30.44	10.66	41.10	57.55	-16.45	QP	
4		0.4150	16.90	10.66	27.56	47.55	-19.99	AVG	
5		0.5000	38.04	10.66	48.70	56.00	-7.30	QP	
6	*	0.5000	32.31	10.66	42.97	46.00	-3.03	AVG	
7		1.0000	24.32	10.68	35.00	56.00	-21.00	QP	
8		1.0000	15.96	10.68	26.64	46.00	-19.36	AVG	
9		1.4600	22.41	10.66	33.07	56.00	-22.93	QP	
10		1.4600	14.38	10.66	25.04	46.00	-20.96	AVG	
11		1.9700	21.00	10.65	31.65	56.00	-24.35	QP	
12		1.9700	12.70	10.65	23.35	46.00	-22.65	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 -----