Chip 2：

All the chips and antennas were tested, only the worst chip 2 and antenna 1 were described in the table.

PSD(Power Spectral Density) RBW=100kHz				
Test Model	☒ 802.11b	☐ 802.11g	☐ 802.11n(HT20)	☐ 802.11n(HT40)
	☒ Channel 1: 2412MHz	☐ Channel 3: 2422MHz		

Unwanted Emissions in non-restricted frequency bands				
Test Model	☒ 802.11b	☐ 802.11g	☐ 802.11n(HT20)	☐ 802.11n(HT40)
	☒ Channel 1: 2412MHz	☐ Channel 3: 2422MHz		

Band edge				
Test Model	☒802.11b	☐802.11g	☐802.11n(HT20)	☐802.11n(HT40)
☒Channel 1: 2412MHz	☐Channel 3: 2422MHz			

PSD(Power Spectral Density) RBW=100kHz				
Test Model	☒802.11b	☐802.11g	☐802.11n(HT20)	☐802.11n(HT40)
Channel 6: 2437MHz				

Unwanted Emissions In Non-Restricted Frequency Bands				
Test Model	☒802.11b	☐802.11g	☐802.11n(HT20)	☐802.11n(HT40)

Channel 6: 2437MHz

PSD(Power Spectral Density) RBW=100kHz				
Test Model	☒802.11b	☐802.11g	☐802.11n(HT20)	☐802.11n(HT40)

☒Channel 11: 2462MHz ☐Channel 9: 2452MHz

Unwanted Emissions In Non-Restricted Frequency Bands				
Test Model	☒ 802.11b	☐ 802.11g	☐ 802.11n(HT20)	☐ 802.11n(HT40)
☒ Channel 11: 2462MHz	☐ Channel 9: 2452MHz			

Band edge				
Test Model	☒ 802.11b	☐ 802.11g	☐ 802.11n(HT20)	☐ 802.11n(HT40)
☒ Channel 11: 2462MHz	☐ Channel 9: 2452MHz			

7.5 RADIATED EMISSION

7.5.1 Applicable Standard

According to FCC Part 15.247(d) and 15.209 and KDB 558074 D01 15.247 Meas Guidance v05r02

7.5.2 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 Part15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	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	(2)
13.36-13.41			

According to FCC Part15.205 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

7.5.3 Test Configuration

Test according to clause 6.2 radio frequency test setup

7.5.4 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 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 ≥ 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 ≥ 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 ≥ 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.
Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a “duty cycle correction factor”, derived from 20log(dwell time/100 ms), in an effort to demonstrate compliance with the limit. Submit this data.
Repeat above procedures until all frequency measured was complete.

7.5.5 Test Results

Temperature:	26° C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

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

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
Distance extrapolation factor =40log(Specific distance/ test distance)(dB);
Limit line=Specific limits(dBuV) + distance extrapolation factor

■ Spurious Emission Above 1GHz(1GHz to 25GHz)
All modes have been tested, and the worst result recorded was report as below:

Chip 1 ANT2:

Test mode: 802.11 b Frequency: Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11799.86	V	56.19	74.00	-17.81	peak
11799.86	V	39.60	54.00	-14.40	AVG
15263.67	V	58.30	74.00	-15.70	peak
15263.67	V	41.60	54.00	-12.40	AVG
18000.00	V	65.86	74.00	-8.14	peak
18000	V	48.20	54.00	-5.80	AVG
11964.71	H	56.20	74.00	-17.80	peak
11964.71	H	38.90	54.00	-15.10	AVG
14582.29	H	58.06	74.00	-15.94	peak
14582.29	H	41.50	54.00	-12.50	AVG
17821.40	H	65.59	74.00	-8.41	peak
17821.4	H	48.60	54.00	-5.40	AVG

Test mode: 802.11 b Frequency: Channel 6: 2437MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11399.26	V	56.19	74.00	-17.81	peak
11399.26	V	39.80	54.00	-14.20	AVG
13949.46	V	57.80	74.00	-16.20	peak
13949.46	V	41.40	54.00	-12.60	AVG
17942.86	V	65.54	74.00	-8.46	peak
17942.86	V	48.30	54.00	-5.70	AVG
12051.48	H	56.70	74.00	-17.30	peak
12051.48	H	40.20	54.00	-13.80	AVG
14420.92	H	57.85	74.00	-16.15	peak
14420.92	H	41.60	54.00	-12.40	AVG
17896.24	H	65.69	74.00	-8.31	peak
17896.24	H	47.30	54.00	-6.70	AVG

Test mode: 802.11 b Frequency: Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11983.75	V	56.75	74.00	-17.25	peak
11983.75	V	40.30	54.00	-13.70	AVG
14811.68	V	57.98	74.00	-16.02	peak
14811.68	V	41.80	54.00	-12.20	AVG
17842.01	V	65.88	74.00	-8.12	peak
17842.01	V	48.20	54.00	-5.80	AVG
11112.97	H	56.88	74.00	-17.12	peak
11112.97	H	40.20	54.00	-13.80	AVG
14867.44	H	57.96	74.00	-16.04	peak
14867.44	H	41.30	54.00	-12.70	AVG
17940.26	H	65.65	74.00	-8.35	peak
17940.26	H	47.60	54.00	-6.40	AVG

Chip 2 ANT2:

Test mode:	802.11 b	Frequency:	Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11741.250	V	56.06	74.00	-17.94	peak
11742.190	V	39.44	54.00	-14.56	AVG
15264.950	V	58.27	74.00	-15.73	peak
15266.880	V	41.58	54.00	-12.42	AVG
17002.890	V	65.75	74.00	-8.25	peak
17009.780	V	48.01	54.00	-5.99	AVG
11976.400	H	56.12	74.00	-17.88	peak
11967.270	H	38.69	54.00	-15.31	AVG
14583.650	H	57.90	74.00	-16.1	peak
14585.170	H	41.36	54.00	-12.64	AVG
17813.960	H	65.51	74.00	-8.49	peak
17813.180	H	48.47	54.00	-5.53	AVG

Test mode:	802.11 b	Frequency:	Channel 6: 2437MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11400.650	V	56.19	74.00	-17.94	peak
11401.590	V	39.80	54.00	-14.36	AVG
13950.740	V	57.80	74.00	-16.23	peak
13952.670	V	41.40	54.00	-12.62	AVG
17945.750	V	65.54	74.00	-8.57	peak
17952.640	V	48.30	54.00	-5.89	AVG
12063.170	H	56.70	74.00	-17.38	peak
12054.040	H	40.20	54.00	-14.01	AVG
14422.280	H	57.85	74.00	-16.31	peak
14423.800	H	41.60	54.00	-12.54	AVG
17898.800	H	65.69	74.00	-8.39	peak
17898.020	H	47.30	54.00	-6.83	AVG

Test mode:	802.11 b	Frequency:	Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
11985.140	V	56.62	74.00	-17.38	peak
11986.080	V	40.14	54.00	-13.86	AVG
14812.960	V	57.95	74.00	-16.05	peak
14814.890	V	41.78	54.00	-12.22	AVG
17844.900	V	65.77	74.00	-8.23	peak
17851.790	V	48.01	54.00	-5.99	AVG
11124.660	H	56.80	74.00	-17.2	peak
11115.530	H	39.99	54.00	-14.01	AVG
14868.800	H	57.80	74.00	-16.2	peak
14870.320	H	41.16	54.00	-12.84	AVG
17942.820	H	65.57	74.00	-8.43	peak
17942.040	H	47.47	54.00	-6.53	AVG

MIMO:

Test mode:	802.11 b	Frequency:	Channel 1: 2412MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4825.677	V	55.51	74.00	-18.49	peak
4826.617	V	37.99	54.00	-16.01	AVG
9677.433	V	51.36	74.00	-22.64	peak
9679.363	V	33.94	54.00	-20.06	AVG
17844.900	V	64.67	74.00	-9.33	peak
17851.790	V	46.64	54.00	-7.36	AVG
4835.977	H	52.97	74.00	-21.03	peak
4826.847	H	34.94	54.00	-19.06	AVG
9366.584	H	50.49	74.00	-23.51	peak
9368.104	H	32.55	54.00	-21.45	AVG
17875.540	H	63.79	74.00	-10.21	peak
17874.760	H	45.50	54.00	-8.5	AVG

Test mode:	802.11 b	Frequency:	Channel 6: 2437MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4875.433	V	54.11	74.00	-19.89	peak
4876.373	V	36.19	54.00	-17.81	AVG
9992.908	V	51.73	74.00	-22.27	peak
9994.838	V	33.66	54.00	-20.34	AVG
17819.140	V	64.39	74.00	-9.61	peak
17826.030	V	48.17	54.00	-5.83	AVG
4885.733	H	52.80	74.00	-21.2	peak
4876.603	H	34.08	54.00	-19.92	AVG
9353.059	H	50.17	74.00	-23.83	peak
9354.579	H	32.70	54.00	-21.3	AVG
17811.080	H	63.83	74.00	-10.17	peak
17810.300	H	45.75	54.00	-8.25	AVG

Test mode:	802.11 b	Frequency:	Channel 11: 2462MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4925.702	V	52.35	74.00	-21.65	peak
4926.642	V	34.09	54.00	-19.91	AVG
9727.906	V	51.88	74.00	-22.12	peak
9729.836	V	33.56	54.00	-20.44	AVG
17995.080	V	63.95	74.00	-10.05	peak
18001.970	V	46.09	54.00	-7.91	AVG
4936.002	H	51.39	74.00	-22.61	peak
4926.872	H	33.57	54.00	-20.43	AVG
9680.310	H	50.95	74.00	-23.05	peak
9681.830	H	33.53	54.00	-20.47	AVG
17808.510	H	63.60	74.00	-10.4	peak
17807.730	H	45.70	54.00	-8.30	AVG

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

■ Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz
All modes have been tested, and the worst result recorded was report as below:

Test mode: 802.11n(20MHz) Frequency: Channel 1: 2412MHz

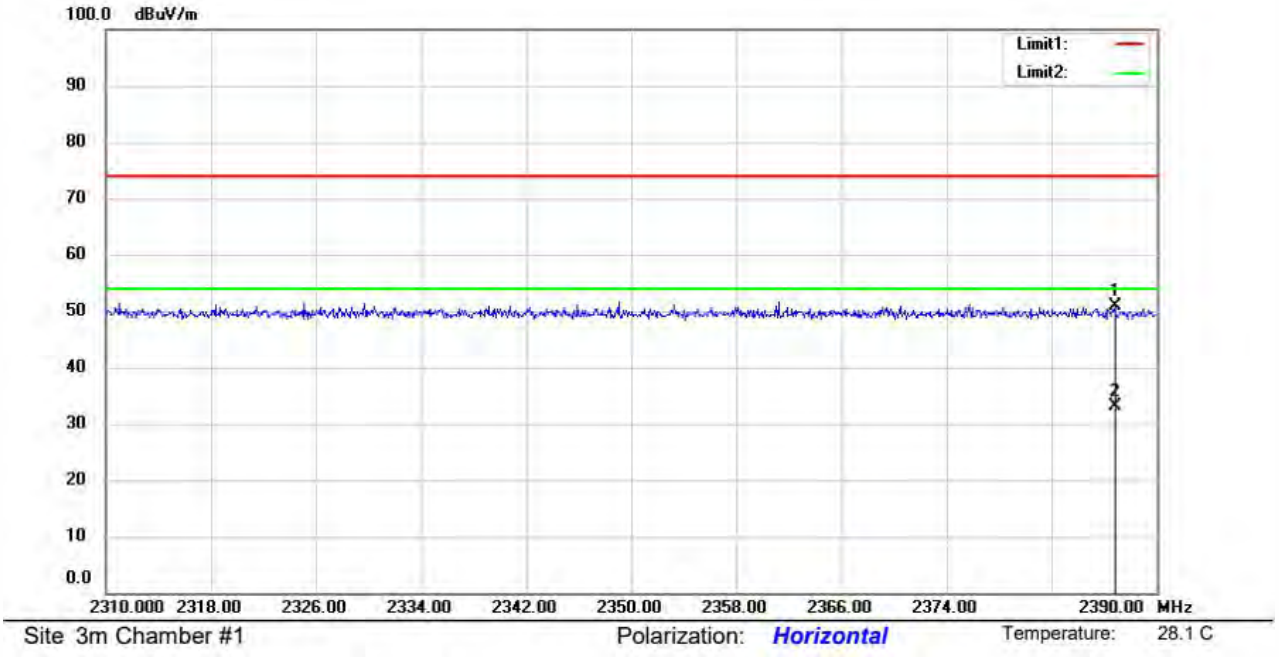
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2385.996	V	49.91	74.00	-24.09	peak
2385.996	V	33.20	54.00	-20.80	AVG
2386.856	H	50.93	74.00	-23.07	peak
2386.856	H	33.20	54.00	-20.80	AVG

Test mode: 802.11n(20MHz) Frequency: Channel 11: 2462MHz

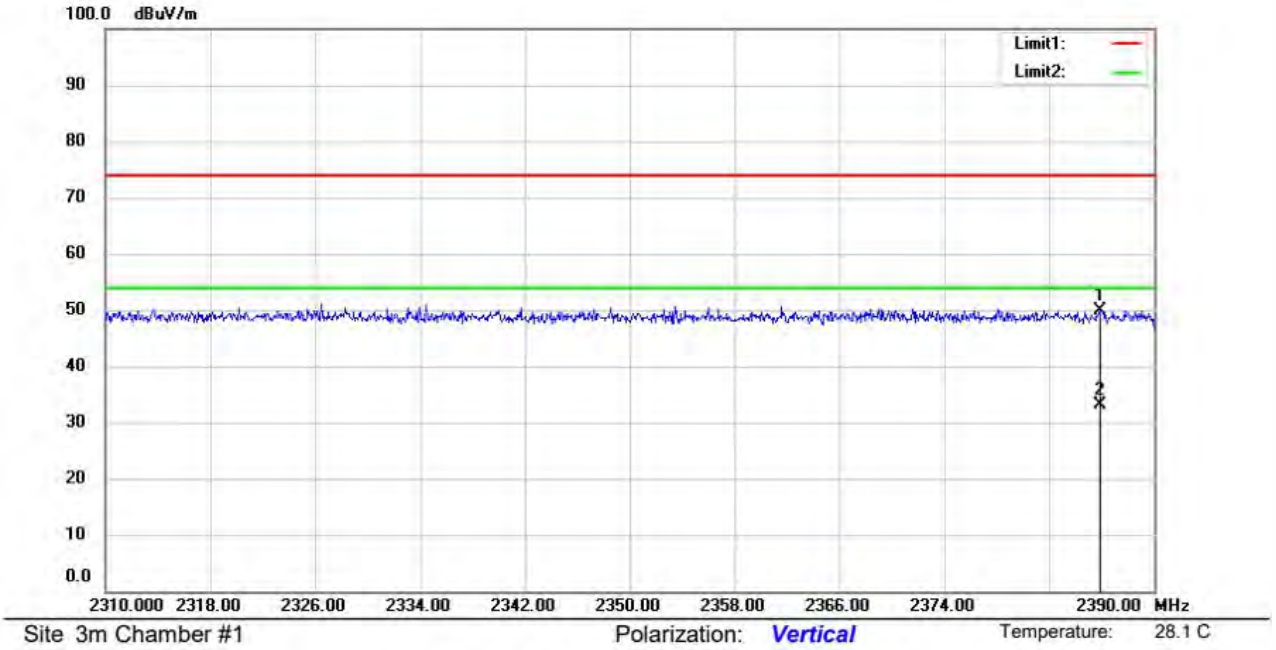
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2484.140	V	54.28	74.00	-19.72	peak
2484.14	V	36.80	54.00	-17.20	AVG
2483.837	H	55.89	74.00	-18.11	peak
2483.837	H	39.20	54.00	-14.80	AVG

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp
(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

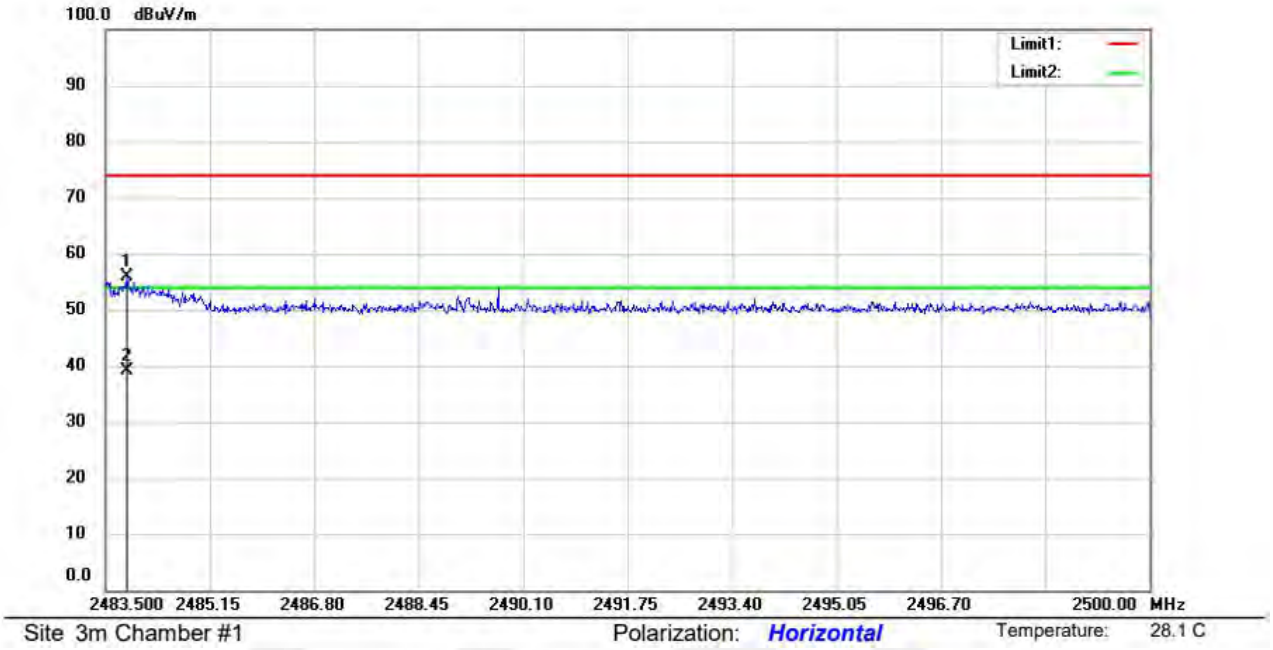
Spurious Emission in Restricted Band 2310-2390MHz				
Test Model	☐ 802.11b	☐ 802.11g	☒ 802.11n(HT20)	☐ 802.11n(HT40)
	☒ Channel 1: 2412MHz	☐ Channel 3: 2422MHz		Polarity: H
	VBW=3MHz		Test By: HYD	



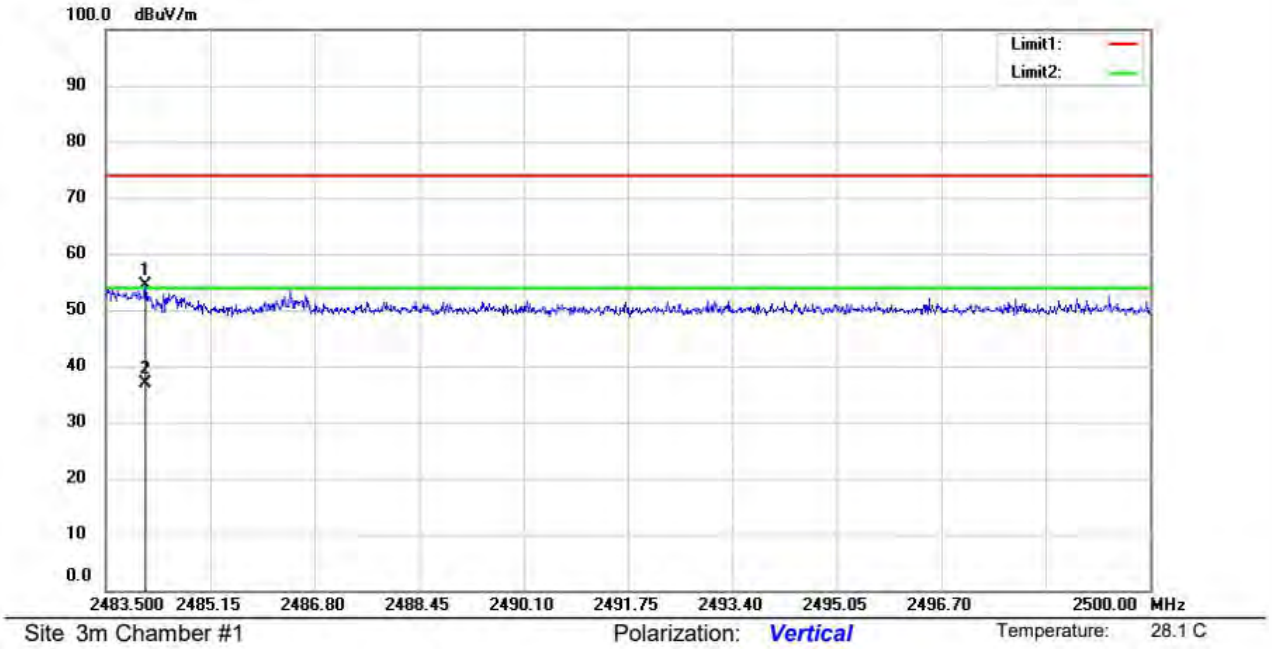
Spurious Emission in Restricted Band 2310-2390MHz				
Test Model	☐ 802.11b	☐ 802.11g	☒ 802.11n(HT20)	☐ 802.11n(HT40)
	☒ Channel 1: 2412MHz	☐ Channel 3: 2422MHz		Polarity: V
	VBW=3MHz		Test By: HYD	



Test Model	Spurious Emission in Restricted Band 2483.5-2500MHz ☐ 802.11b ☐ 802.11g ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ Channel 11: 2462MHz ☐ Channel 9: 2452MHz Polarity: H VBW=3MHz Test By: HYD

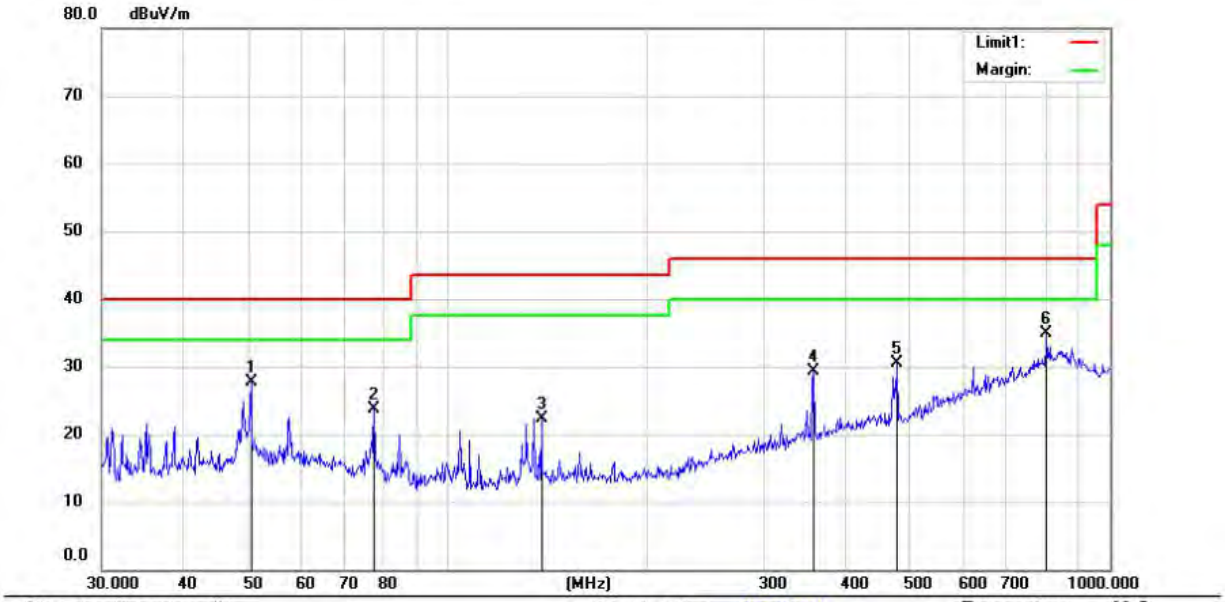


Test Model	Spurious Emission in Restricted Band2483.5-2500MHz ☐ 802.11b ☐ 802.11g ☒ 802.11n(HT20) ☐ 802.11n(HT40) ☒ Channel 11: 2462MHz ☐ Channel 9: 2452MHz Polarity: V VBW=3MHz Test By: HYD



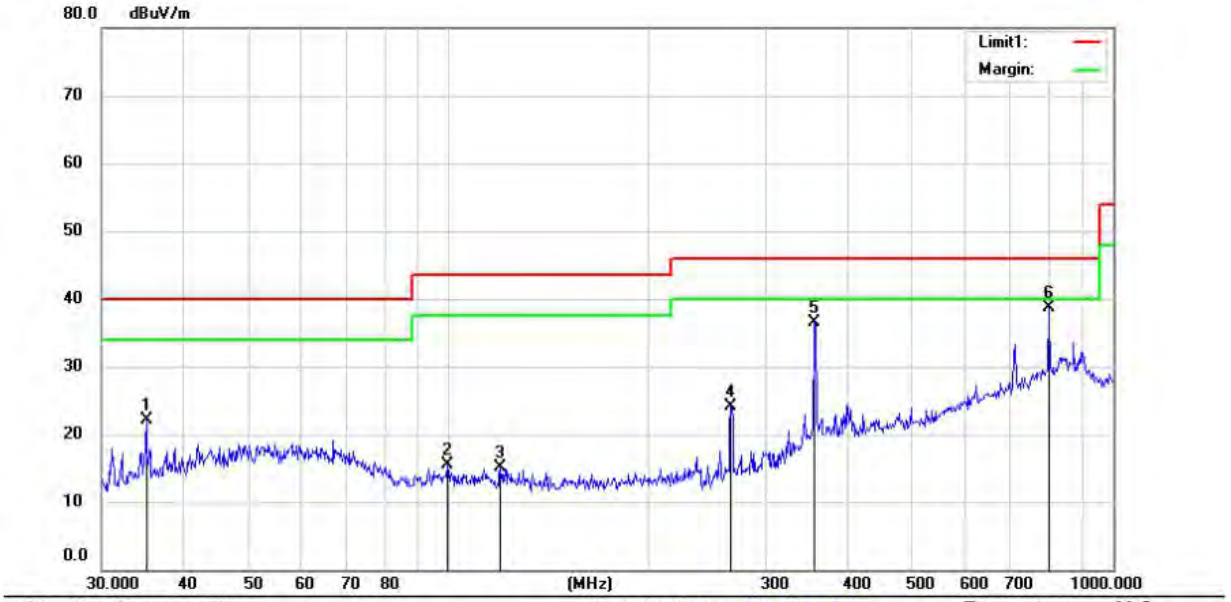
■ Spurious Emission below 1GHz (30MHz to 1GHz)
All modes have been tested, and the worst result recorded was report as below:

Test mode:	GFSK	Frequency:	Channel 0: 2412MHz



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 22 C

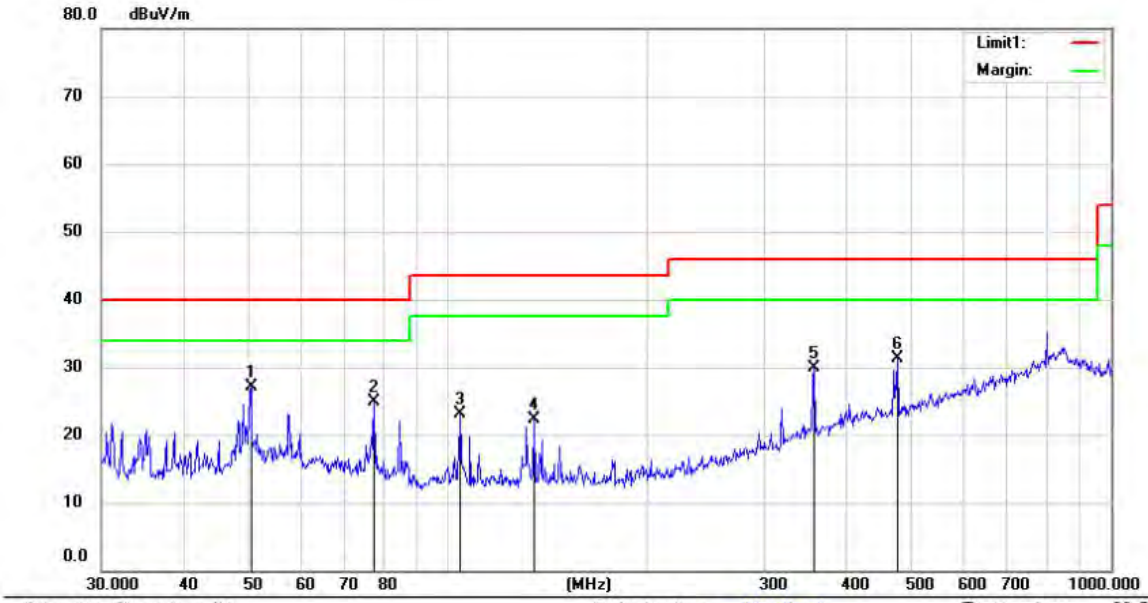
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		50.4090	39.70	-11.96	27.74	40.00	-12.26	QP			
2		77.3890	38.33	-14.54	23.79	40.00	-16.21	QP			
3		138.5694	36.67	-14.37	22.30	43.50	-21.20	QP			
4		356.6757	36.72	-7.51	29.21	46.00	-16.79	QP			
5		477.1693	36.12	-5.53	30.59	46.00	-15.41	QP			
6	*	802.4895	32.98	1.92	34.90	46.00	-11.10	QP			



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 22 C

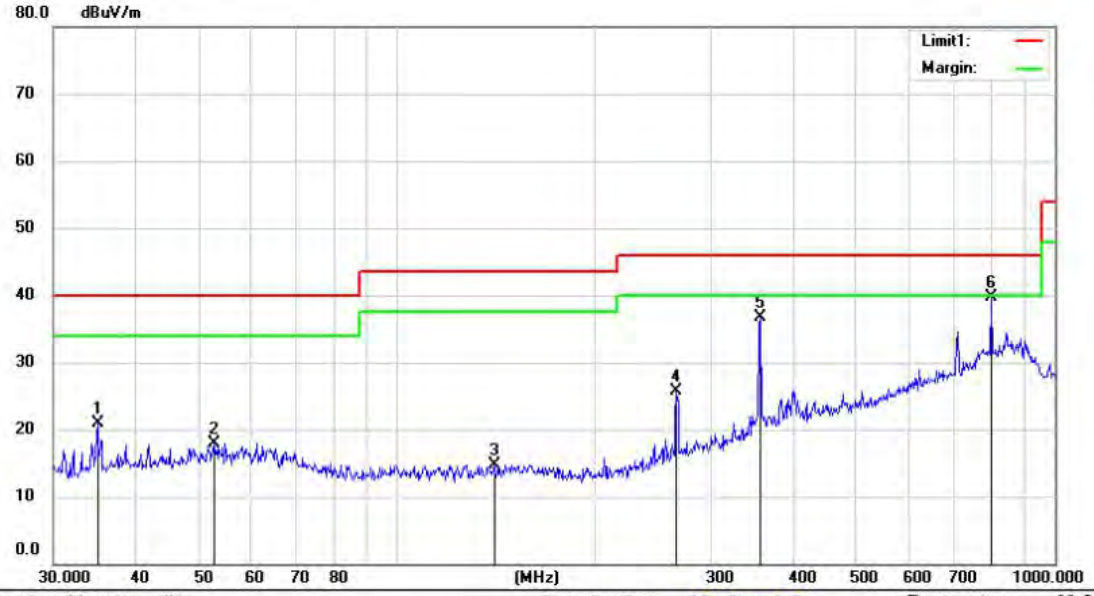
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		35.0048	36.01	-13.83	22.18	40.00	-17.82	QP			
2		99.7900	30.25	-14.76	15.49	43.50	-28.01	QP			
3		119.4360	29.53	-14.33	15.20	43.50	-28.30	QP			
4		266.3752	34.72	-10.68	24.04	46.00	-21.96	QP			
5		356.5194	43.96	-7.51	36.45	46.00	-9.55	QP			
6	*	799.6803	36.69	1.96	38.65	46.00	-7.35	QP			

Test mode:	GFSK	Frequency:	Channel 0: 2437MHz



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 22 C

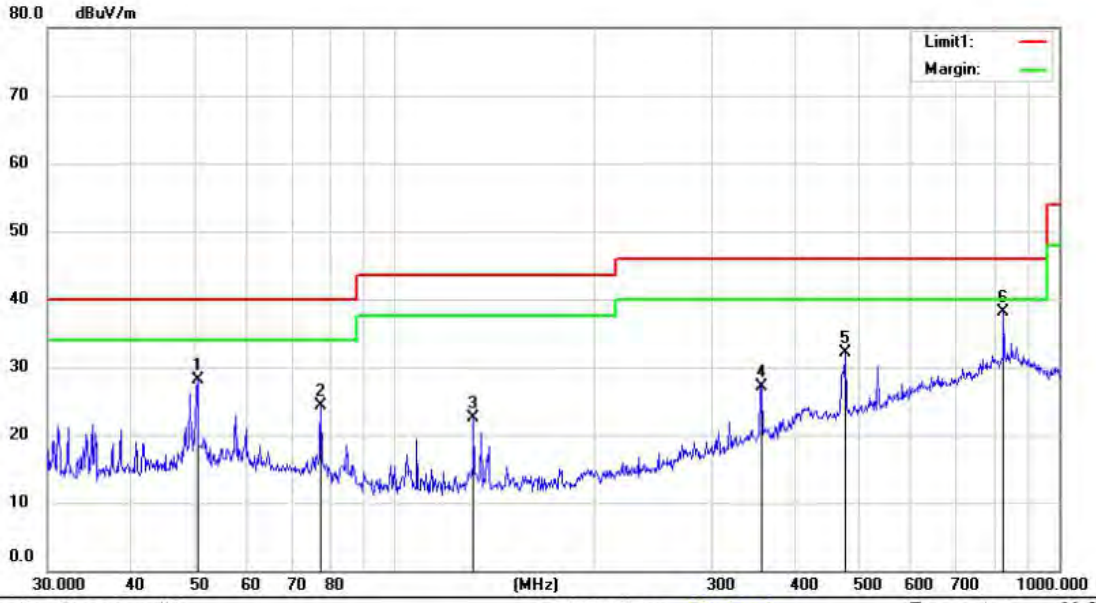
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	50.4090	39.01	-11.96	27.05	40.00	-12.95	QP			
2		77.3890	39.50	-14.54	24.96	40.00	-15.04	QP			
3		104.4444	37.50	-14.36	23.14	43.50	-20.36	QP			
4		135.0318	36.53	-14.19	22.34	43.50	-21.16	QP			
5		356.6757	37.32	-7.51	29.81	46.00	-16.19	QP			
6		477.1693	36.92	-5.53	31.39	46.00	-14.61	QP			



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 22 C

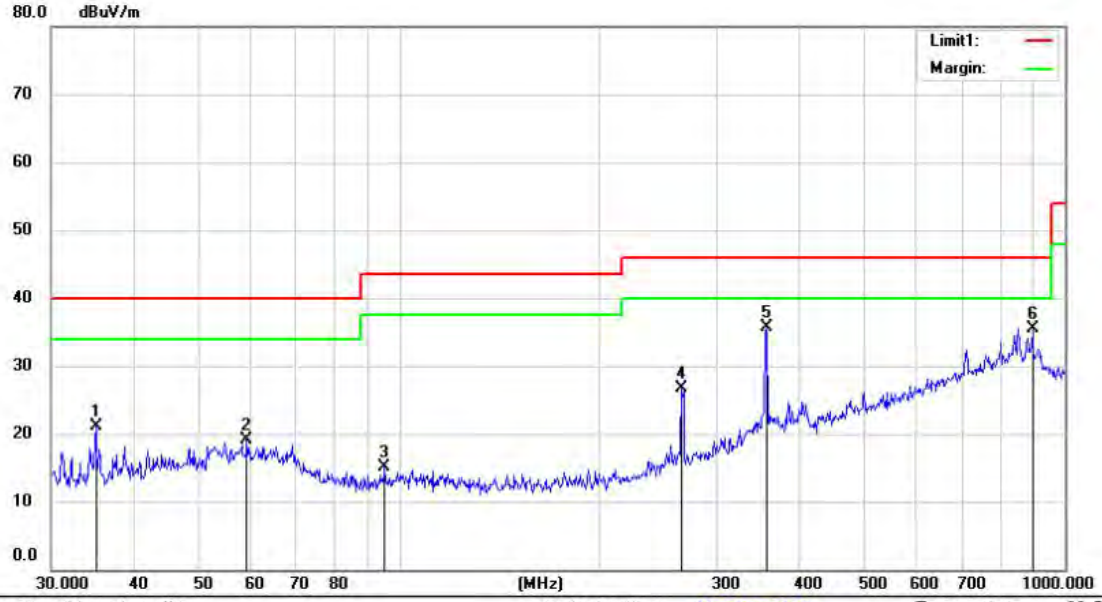
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		35.0200	34.68	-13.82	20.86	40.00	-19.14	QP			
2		52.7368	29.84	-11.84	18.00	40.00	-22.00	QP			
3		140.7116	29.09	-14.41	14.68	43.50	-28.82	QP			
4		266.3752	36.46	-10.68	25.78	46.00	-20.22	QP			
5		356.8321	44.24	-7.51	36.73	46.00	-9.27	QP			
6	*	799.6803	37.77	1.96	39.73	46.00	-6.27	QP			

Test mode:	GFSK	Frequency:	Channel 0: 2462MHz



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 22 C

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		50.4310	40.06	-11.96	28.10	40.00	-11.90	QP			
2		77.4568	38.89	-14.55	24.34	40.00	-15.66	QP			
3		131.4692	36.80	-14.23	22.57	43.50	-20.93	QP			
4		356.6757	34.59	-7.51	27.08	46.00	-18.92	QP			
5		477.3783	37.67	-5.52	32.15	46.00	-13.85	QP			
6	*	826.0438	35.84	2.26	38.10	46.00	-7.90	QP			



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 22 C

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		35.0200	34.92	-13.82	21.10	40.00	-18.90	QP			
2		59.0767	31.10	-12.04	19.06	40.00	-20.94	QP			
3		95.1346	29.74	-14.64	15.10	43.50	-28.40	QP			
4		266.4920	37.31	-10.67	26.64	46.00	-19.36	QP			
5	*	356.6757	43.27	-7.51	35.76	46.00	-10.24	QP			
6		895.0326	34.18	1.39	35.57	46.00	-10.43	QP			

7.6 CONDUCTED EMISSION TEST

7.6.1 Applicable Standard

According to IC RSS-Gen 8.8

7.6.2 Conformance Limit

FCC Part 15, Subpart B, Class B

Conducted Emission Limit		
Frequency(MHz)	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.		

7.6.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

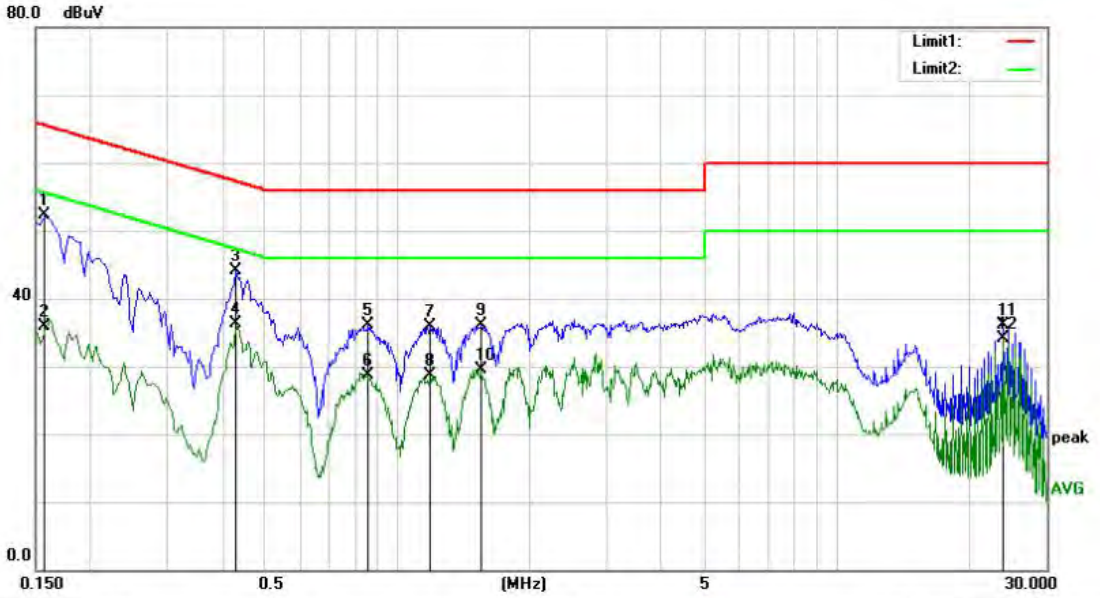
7.6.4 Test Procedure

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.

7.6.5 Test Results

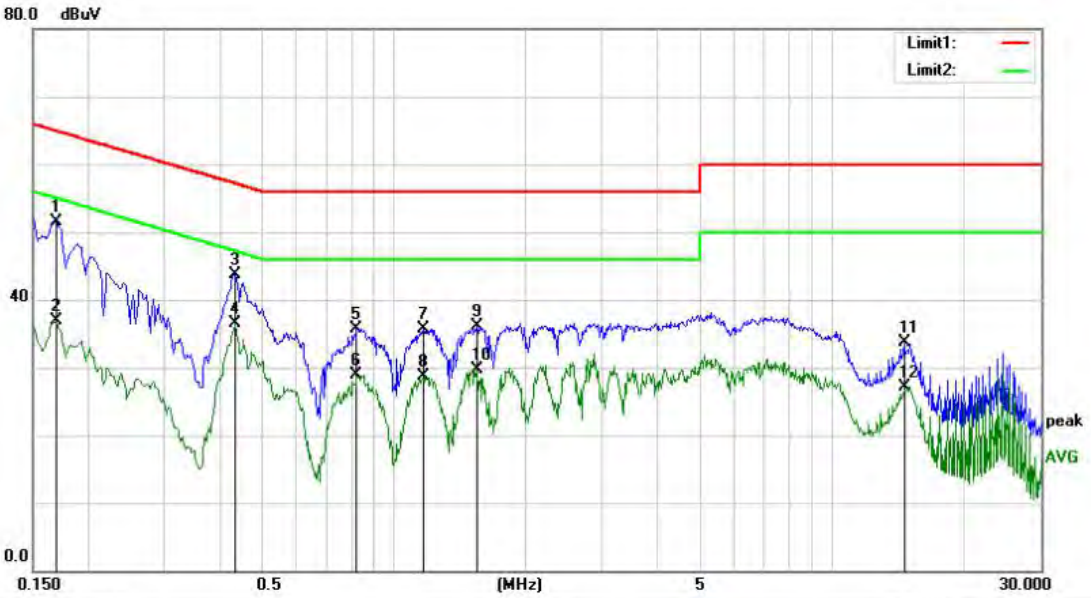
Pass

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



Site Conduction #2 Phase: L1 Temperature: 26

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1580	41.73	10.48	52.21	65.48	-13.27	QP	
2		0.1580	25.40	10.48	35.88	55.57	-19.69	AVG	
3		0.4300	33.71	10.37	44.08	57.24	-13.16	QP	
4	*	0.4300	25.96	10.37	36.33	47.25	-10.92	AVG	
5		0.8580	25.65	10.38	36.03	56.00	-19.97	QP	
6		0.8580	18.34	10.38	28.72	46.00	-17.28	AVG	
7		1.1860	25.43	10.40	35.83	56.00	-20.17	QP	
8		1.1860	18.23	10.40	28.63	46.00	-17.37	AVG	
9		1.5540	25.75	10.37	36.12	56.00	-19.88	QP	
10		1.5540	19.20	10.37	29.57	46.00	-16.43	AVG	
11		23.7940	25.19	10.84	36.03	60.00	-23.97	QP	
12		23.7940	23.20	10.84	34.04	50.00	-15.96	AVG	



Site Conduction #2 Phase: N Temperature: 26

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1700	41.04	10.46	51.50	64.88	-13.38	QP	
2		0.1700	26.48	10.46	36.94	54.96	-18.02	AVG	
3		0.4340	33.42	10.37	43.79	57.17	-13.38	QP	
4	*	0.4340	26.20	10.37	36.57	47.18	-10.61	AVG	
5		0.8260	25.39	10.38	35.77	56.00	-20.23	QP	
6		0.8260	18.44	10.38	28.82	46.00	-17.18	AVG	
7		1.1660	25.22	10.40	35.62	56.00	-20.38	QP	
8		1.1660	18.39	10.40	28.79	46.00	-17.21	AVG	
9		1.5460	25.82	10.37	36.19	56.00	-19.81	QP	
10		1.5460	19.41	10.37	29.78	46.00	-16.22	AVG	
11		14.5980	23.02	10.71	33.73	60.00	-26.27	QP	
12		14.5980	16.45	10.71	27.16	50.00	-22.84	AVG	

7.7 ANTENNA APPLICATION

7.7.1 Antenna Requirement

Standard	Requirement
FCC CRF Part15.203	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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217,§15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 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.

7.7.2 Result

PASS

The EUT is integrated antenna, the antenna gain as below:
Chip 1: ANT1: 1.6dBi
Chip 1: ANT2: 2.3dBi
Chip 2: ANT1: 0.9dBi
Chip 2: ANT2: 3.6dBi

☐ Antenna uses 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)

Which in accordance to section 15.203, please refer to the internal photos.

Detail of factor for radiated emission:

Frequency(MHz)	Ant_F(dB)	Cab_L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

--- End of Report ---