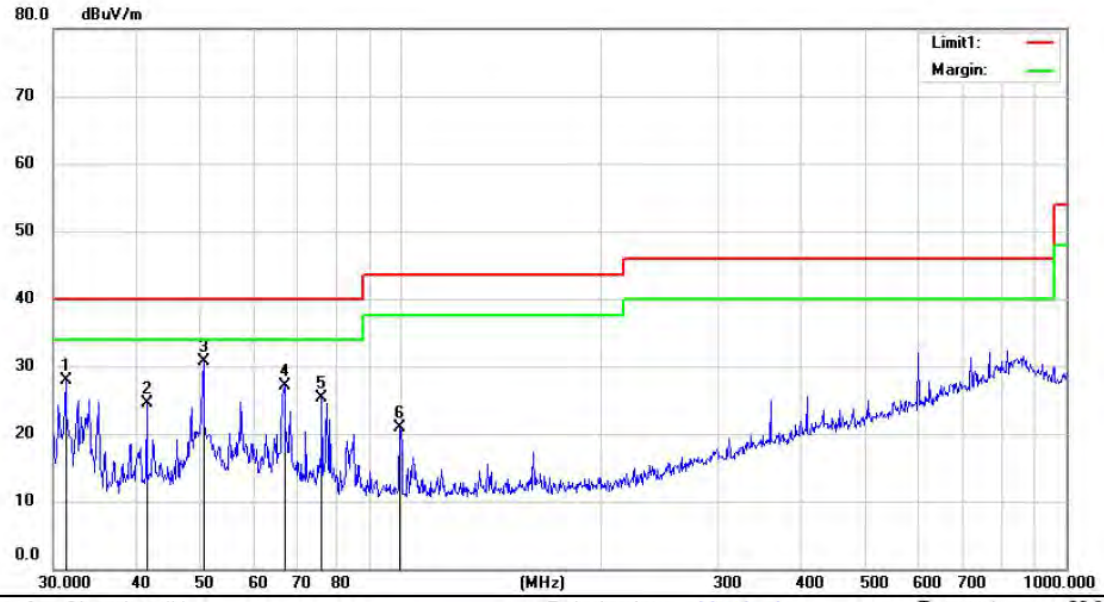
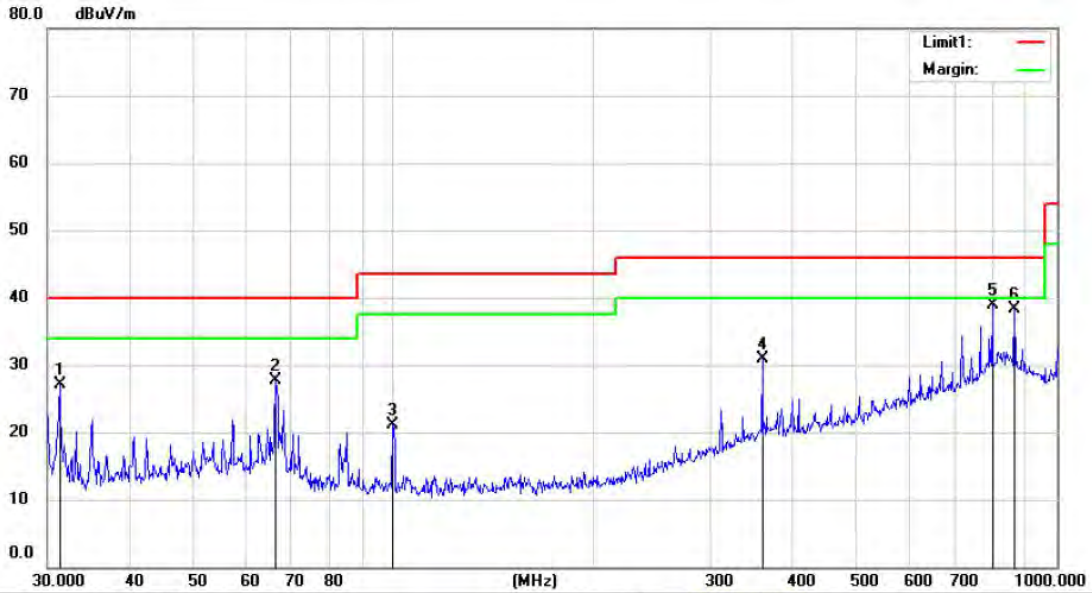
■ Spurious Emission below 1GHz (30MHz to 1GHz)
All modes have been tested, and the worst result recorded was report as below:

Test mode:	GFSK	Frequency:	Channel 0: 2412MHz



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 23.8 C

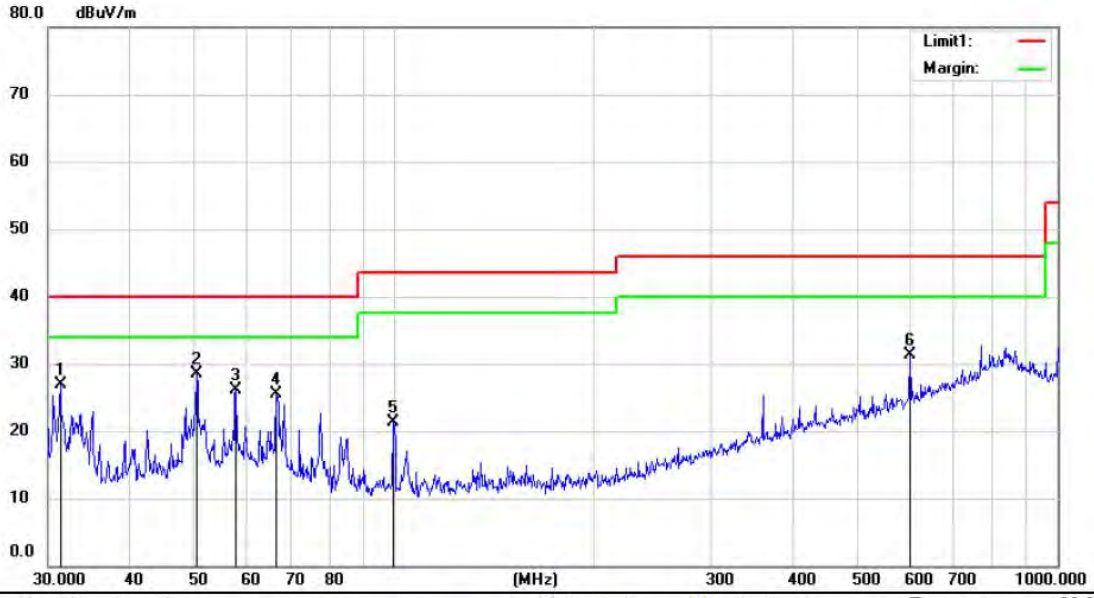
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.3442	42.47	-14.50	27.97	40.00	-12.03	QP			
2		41.4760	37.38	-12.88	24.50	40.00	-15.50	QP			
3	*	50.4090	42.57	-11.96	30.61	40.00	-9.39	QP			
4		66.8203	39.57	-12.49	27.08	40.00	-12.92	QP			
5		76.0440	39.71	-14.35	25.36	40.00	-14.64	QP			
6		99.7902	35.73	-14.76	20.97	43.50	-22.53	QP			



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 23.8 C

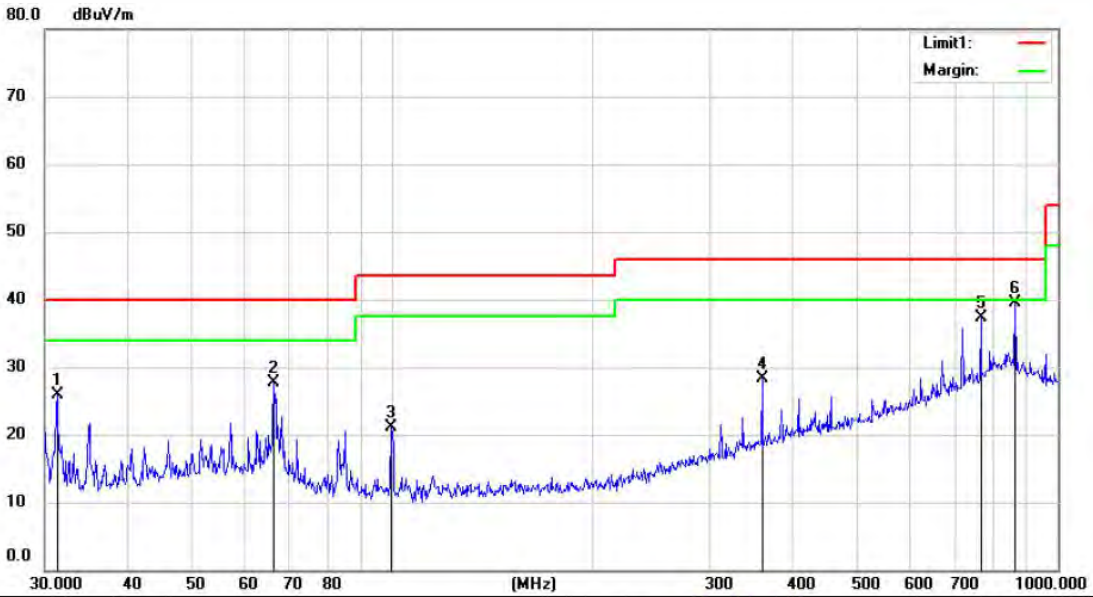
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.3305	41.70	-14.50	27.20	40.00	-12.80	QP			
2		66.3825	40.02	-12.40	27.62	40.00	-12.38	QP			
3		99.7902	35.88	-14.76	21.12	43.50	-22.38	QP			
4		360.1320	38.30	-7.44	30.86	46.00	-15.14	QP			
5	*	800.0310	36.86	1.97	38.83	46.00	-7.17	QP			
6		864.1920	36.24	2.08	38.32	46.00	-7.68	QP			

Test mode:	GFSK	Frequency:	Channel 0: 2437MHz



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 23.8 C

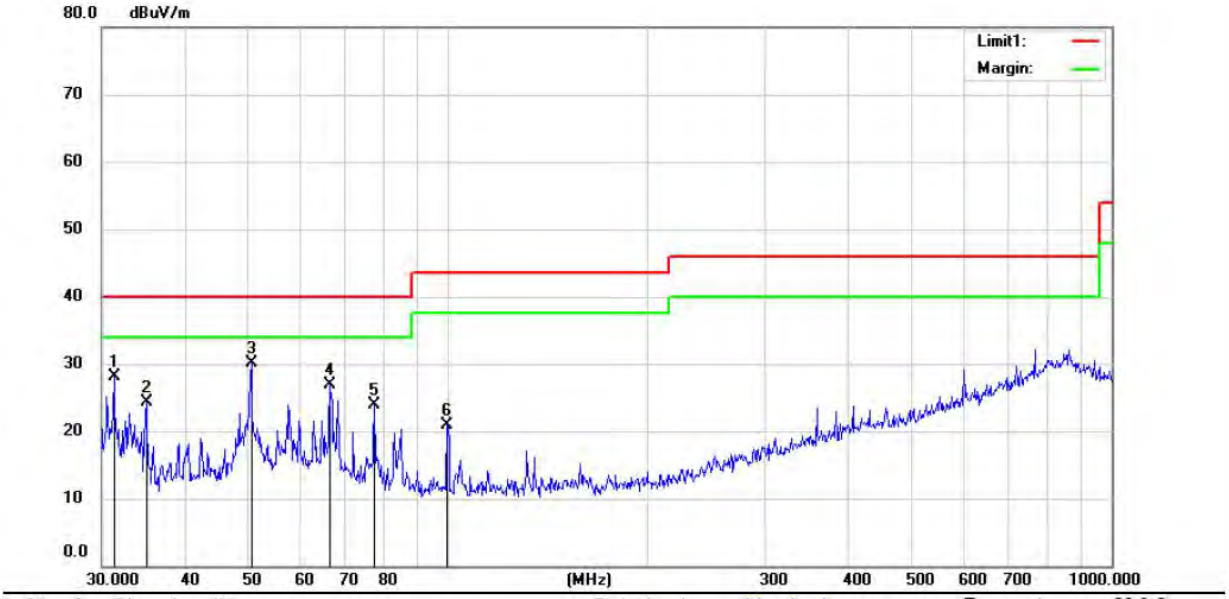
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.3442	41.45	-14.50	26.95	40.00	-13.05	QP			
2	*	50.3868	40.48	-11.96	28.52	40.00	-11.48	QP			
3		57.5940	38.20	-12.08	26.12	40.00	-13.88	QP			
4		66.3825	37.81	-12.40	25.41	40.00	-14.59	QP			
5		99.7902	36.11	-14.76	21.35	43.50	-22.15	QP			
6		600.1100	34.09	-2.84	31.25	46.00	-14.75	QP			



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 23.8 C

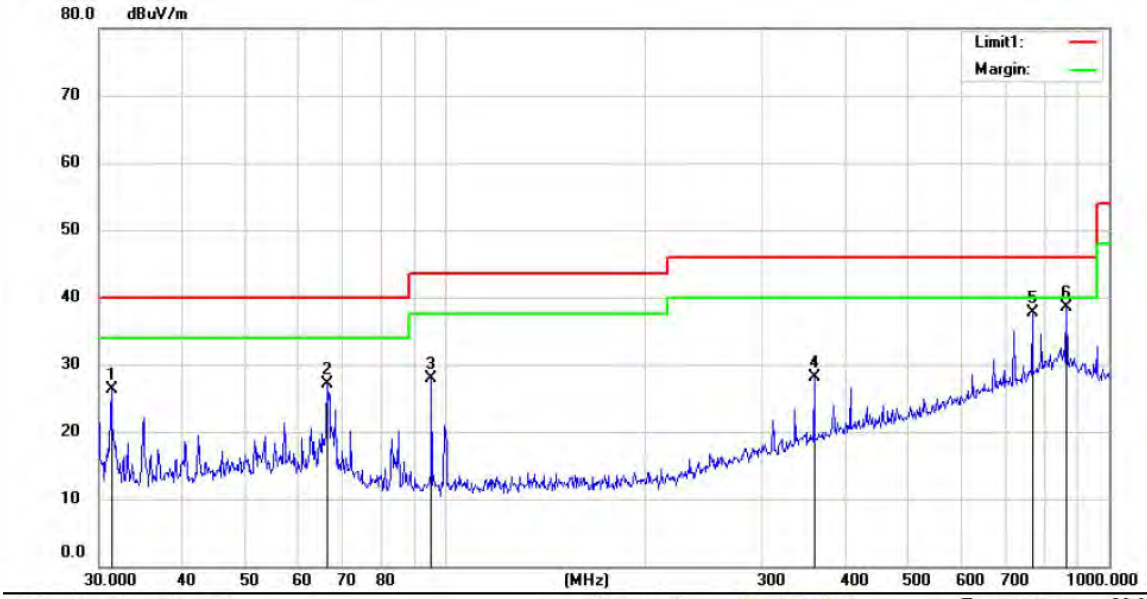
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		31.3305	40.50	-14.50	26.00	40.00	-14.00	QP			
2		66.3825	40.11	-12.40	27.71	40.00	-12.29	QP			
3		99.8340	35.85	-14.76	21.09	43.50	-22.41	QP			
4		360.1320	35.80	-7.44	28.36	46.00	-17.64	QP			
5		768.0745	36.41	0.81	37.22	46.00	-8.78	QP			
6	*	864.1920	37.43	2.08	39.51	46.00	-6.49	QP			

Test mode:	GFSK	Frequency:	Channel 0: 2462MHz



Site 3m Chamber #1 Polarization: *Vertical* Temperature: 23.8 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		31.3167	42.69	-14.50	28.19	40.00	-11.81	QP			
2		35.0202	38.05	-13.82	24.23	40.00	-15.77	QP			
3	*	50.4310	41.97	-11.96	30.01	40.00	-9.99	QP			
4		66.3825	39.33	-12.40	26.93	40.00	-13.07	QP			
5		77.4570	38.46	-14.55	23.91	40.00	-16.09	QP			
6		99.7902	35.61	-14.76	20.85	43.50	-22.65	QP			



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 23.8 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		31.3167	40.76	-14.50	26.26	40.00	-13.74	QP			
2		66.3825	39.41	-12.40	27.01	40.00	-12.99	QP			
3		95.1764	42.52	-14.64	27.88	43.50	-15.62	QP			
4		360.1320	35.57	-7.44	28.13	46.00	-17.87	QP			
5		768.0745	36.83	0.81	37.64	46.00	-8.36	QP			
6	*	864.1920	36.33	2.08	38.41	46.00	-7.59	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

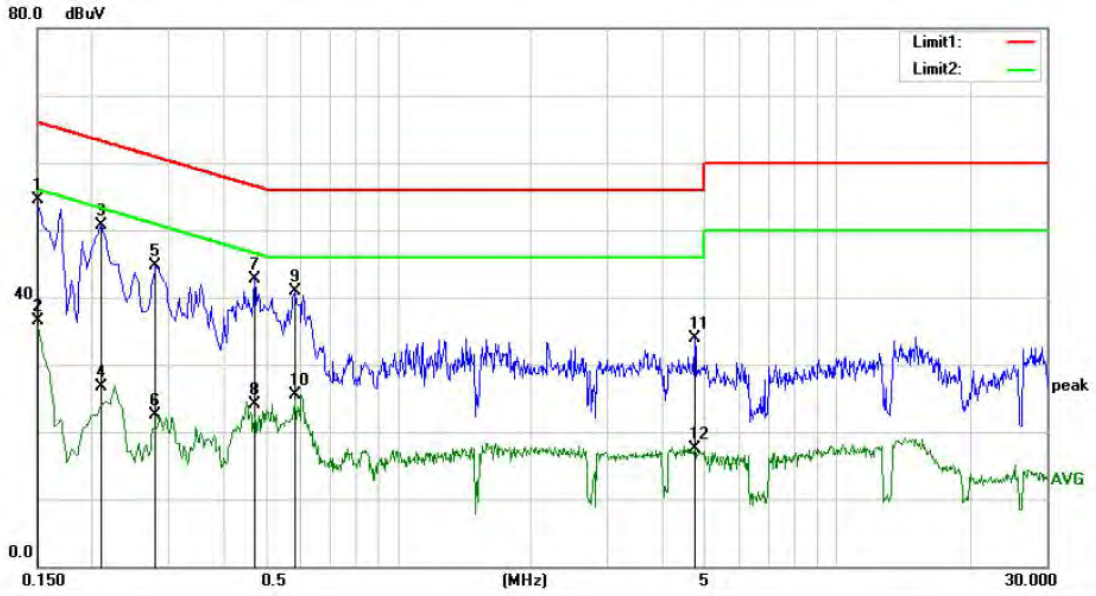
7.6.4 Test Procedure

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

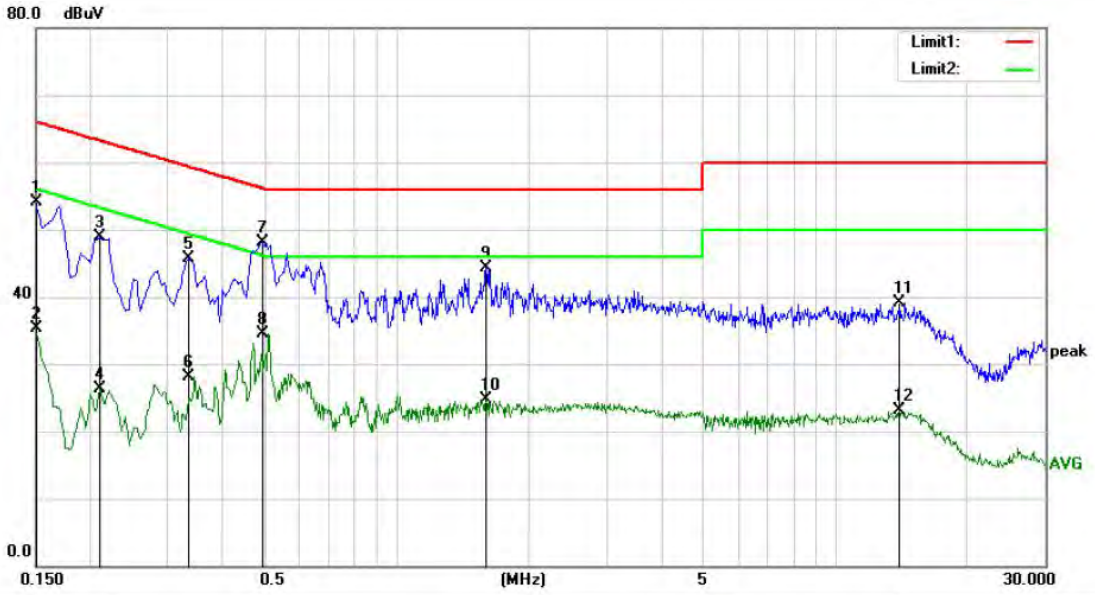
Pass

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



Site Conduction #1 Phase: N Temperature: 22.4

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	44.88	9.58	54.46	66.00	-11.54	QP	
2		0.1500	26.86	9.58	36.44	56.00	-19.56	AVG	
3		0.2100	41.30	9.41	50.71	63.21	-12.50	QP	
4		0.2100	17.39	9.41	26.80	53.21	-26.41	AVG	
5		0.2800	35.30	9.32	44.62	60.82	-16.20	QP	
6		0.2800	13.26	9.32	22.58	50.82	-28.24	AVG	
7		0.4700	33.45	9.27	42.72	56.51	-13.79	QP	
8		0.4700	14.89	9.27	24.16	46.51	-22.35	AVG	
9		0.5800	31.68	9.26	40.94	56.00	-15.06	QP	
10		0.5800	16.17	9.26	25.43	46.00	-20.57	AVG	
11		4.7250	23.90	9.92	33.82	56.00	-22.18	QP	
12		4.7250	7.52	9.92	17.44	46.00	-28.56	AVG	



Site Conduction #1 Phase: L1 Temperature: 22.4

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	44.47	9.58	54.05	66.00	-11.95	QP	
2		0.1500	25.74	9.58	35.32	56.00	-20.68	AVG	
3		0.2100	39.45	9.41	48.86	63.21	-14.35	QP	
4		0.2100	16.85	9.41	26.26	53.21	-26.95	AVG	
5		0.3350	36.48	9.30	45.78	59.33	-13.55	QP	
6		0.3350	18.72	9.30	28.02	49.33	-21.31	AVG	
7	*	0.4950	38.82	9.25	48.07	56.08	-8.01	QP	
8		0.4950	25.20	9.25	34.45	46.08	-11.63	AVG	
9		1.6000	34.40	9.92	44.32	56.00	-11.68	QP	
10		1.6000	14.70	9.92	24.62	46.00	-21.38	AVG	
11		13.9550	28.88	10.17	39.05	60.00	-20.95	QP	
12		13.9550	12.98	10.17	23.15	50.00	-26.85	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 is 4.3dBi.

☐ 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 ---