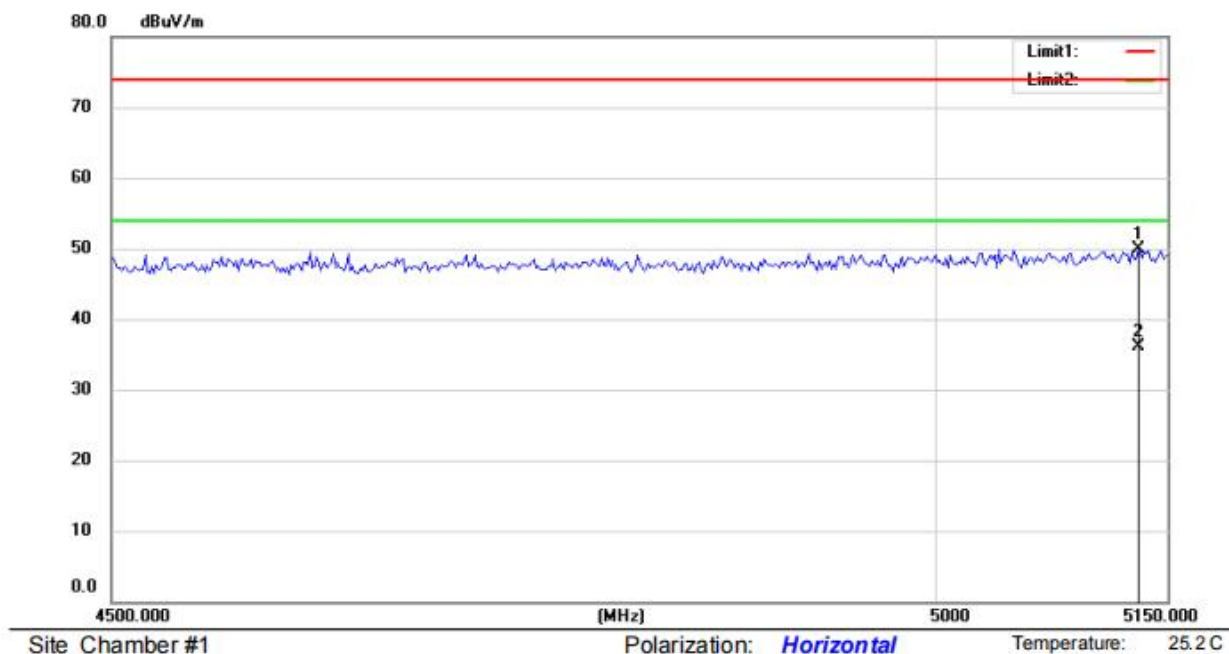
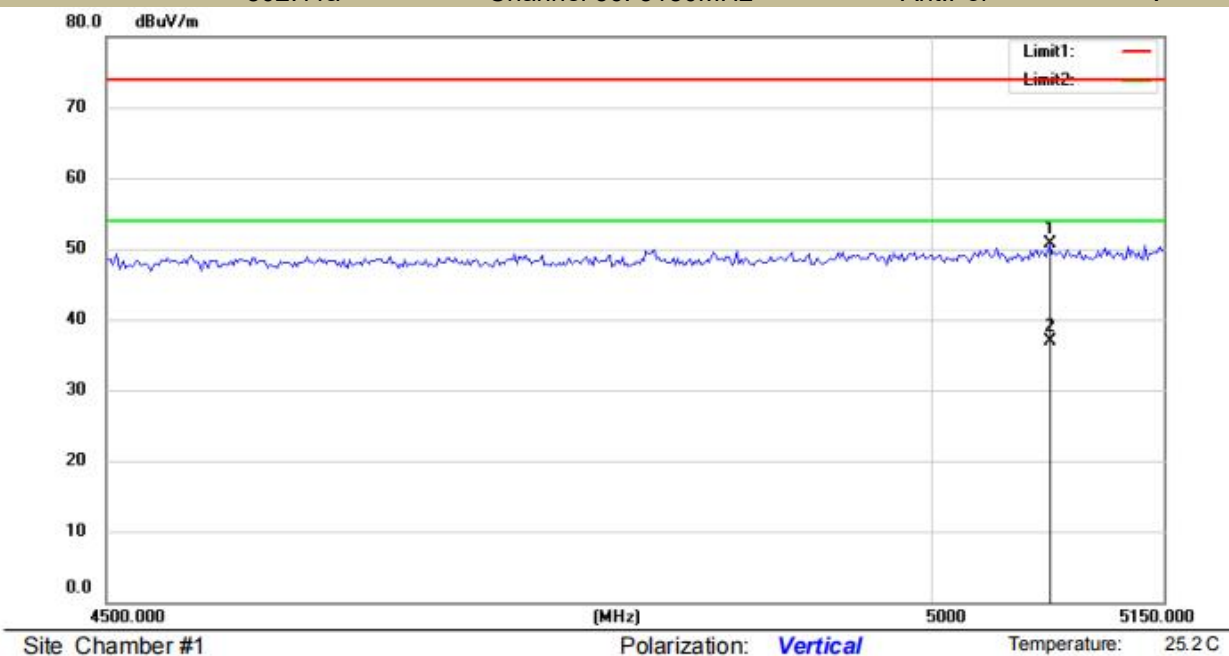


U-NII - 1
 Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
 802.11a Channel 36: 5180MHz Ant.Pol H

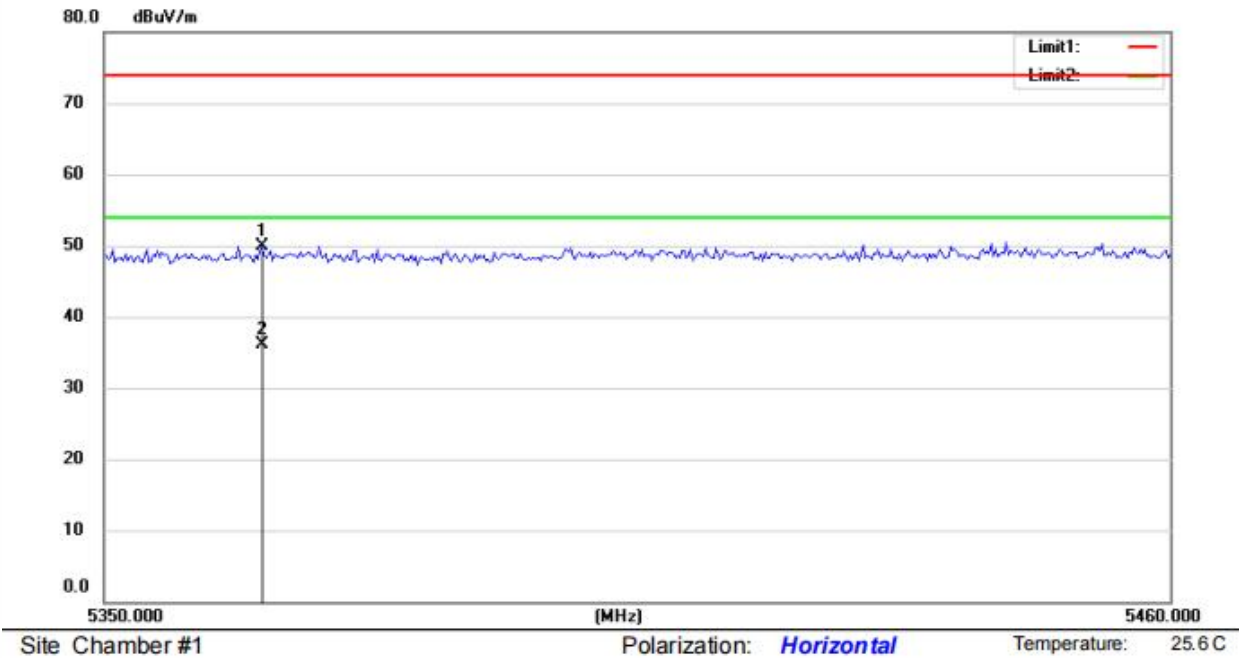


U-NII - 1
 Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
 802.11a Channel 36: 5180MHz Ant.Pol V



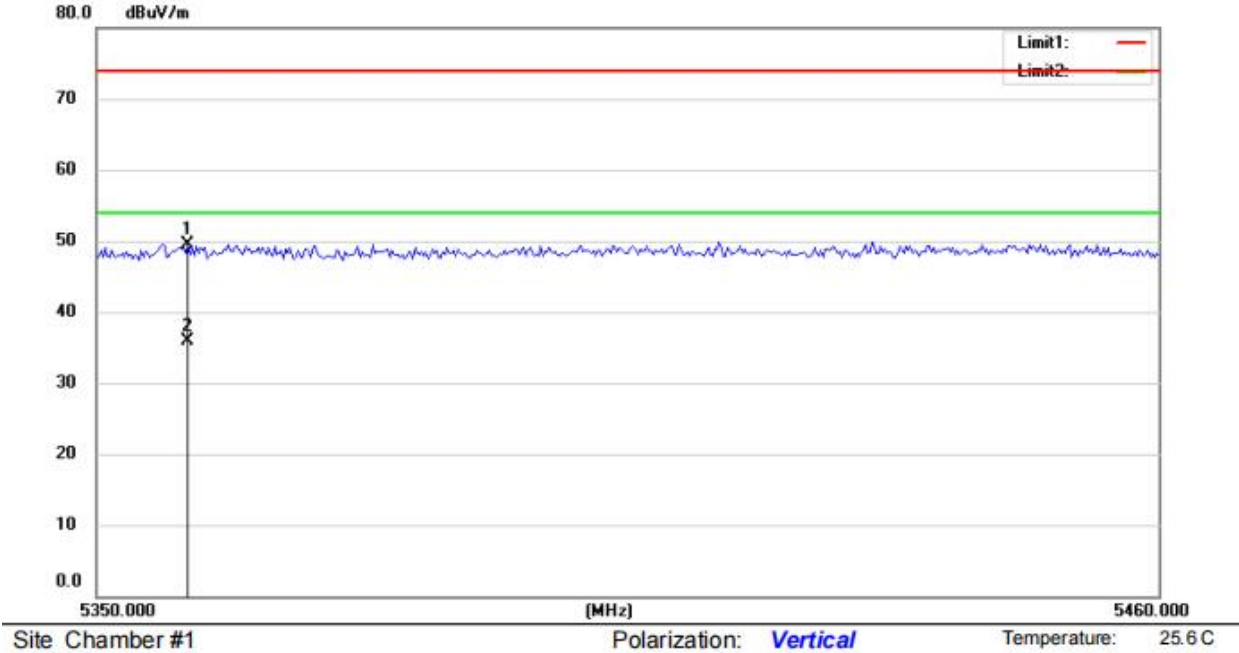
U-NII - 1

Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	802.11a	Channel 48: 5240MHz	Ant.Pol
			H



U-NII - 1

Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	802.11a	Channel 48: 5240MHz	Ant.Pol
			V



■ For Undesirable radiated Spurious Emission in U-NII -3

● Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

All the antenna(Antenna 1) and modes(802.11a/n) has been tested and the worst(Antenna 1, 802.11a) result recorded was report as below:

Test mode: 802.11a Frequency: Channel 149: 5745MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
11185.22	V	60.76	-34.47	-27	-7.47
14839.42	V	55.64	-39.59	-27	-12.59
17752.34	V	56.67	-38.56	-27	-11.56
11827.37	H	56.63	-38.6	-27	-11.6
14539.76	H	59.06	-36.17	-27	-9.17
17625.49	H	56.41	-38.82	-27	-11.82

Test mode: 802.11a Frequency: Channel 157: 5785MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
12257.68	V	58.21	-37.02	-27	-10.02
13942.77	V	60.80	-34.43	-27	-7.43
17658.36	V	60.55	-34.68	-27	-7.68
11732.38	H	57.08	-38.15	-27	-11.15
15446.27	H	58.95	-36.28	-27	-9.28
17720.43	H	59.35	-35.88	-27	-8.88

Test mode: 802.11a Frequency: Channel 165: 5825MHz

Freq. (MHz)	Ant.Pol.	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
11735.85	V	56.84	-38.39	-27	-11.39
14639.45	V	58.45	-36.78	-27	-9.78
17430.22	V	55.50	-39.73	-27	-12.73
11842.53	H	55.24	-39.99	-27	-12.99
14529.64	H	60.52	-34.71	-27	-7.71
17483.35	H	60.34	-34.89	-27	-7.89

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) $EIRP[dBm] = E[dBuV/m] + 20 \log(d[meters]) - 104.77$
 d is the measurement distance in 3 meters

Test mode: 802.11a Frequency: Channel 149: 5745MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
7936.00	V	55.98	42.09	74.00	54.00	-18.02	-11.91
10520.00	V	55.85	41.99	74.00	54.00	-18.15	-12.01
13410.00	V	55.41	41.58	74.00	54.00	-18.59	-12.42
7800.00	H	55.88	41.99	74.00	54.00	-18.12	-12.01
9874.00	H	55.69	41.93	74.00	54.00	-18.31	-12.07
13240.00	H	55.34	41.59	74.00	54.00	-18.66	-12.41

Test mode: 802.11a Frequency: Channel 157: 5785MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
7698.00	V	55.41	41.64	74.00	54.00	-18.59	-12.36
9908.00	V	56.21	42.42	74.00	54.00	-17.79	-11.58
13750.00	V	55.43	41.65	74.00	54.00	-18.57	-12.35
7664.00	H	55.77	41.93	74.00	54.00	-18.23	-12.07
10656.00	H	56.11	42.30	74.00	54.00	-17.89	-11.70
13138.00	H	55.45	41.62	74.00	54.00	-18.55	-12.38

Test mode:: 802.11a Frequency: Channel 165: 5825MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
8140.00	V	55.62	41.79	74.00	54.00	-18.38	-12.21
10656.00	V	55.45	41.63	74.00	54.00	-18.55	-12.37
14294.00	V	54.90	41.09	74.00	54.00	-19.10	-12.91
7664.00	H	56.09	42.30	74.00	54.00	-17.91	-11.70
10078.00	H	55.92	42.13	74.00	54.00	-18.08	-11.87
13784.00	H	55.99	42.16	74.00	54.00	-18.01	-11.84

- 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.

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

All the antenna(Antenna 1) and modes(802.11a/n) has been tested and the worst(Antenna 1, 802.11a) result recorded was report as below:

Test mode: 802.11a Frequency: Channel 149: 5745MHz

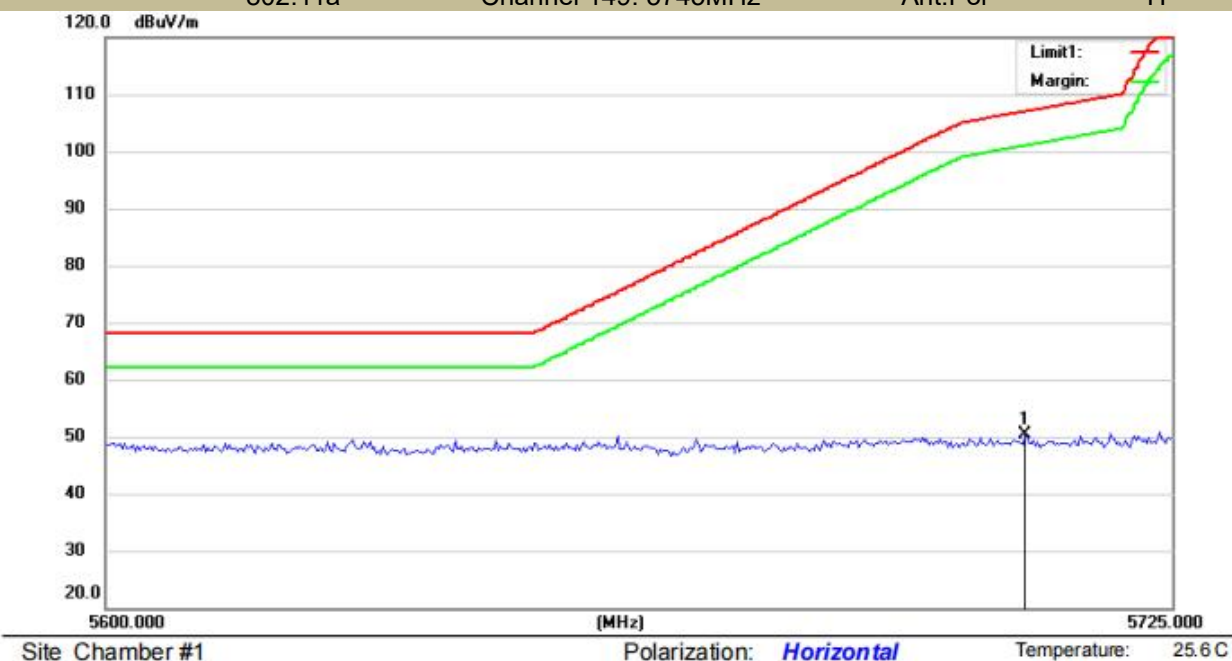
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5707.750	H	50.33	-44.9	10.36	Pass
5702.250	V	50.71	-44.52	11.81	Pass

Test mode: 802.11a Frequency: Channel 165: 5825MHz

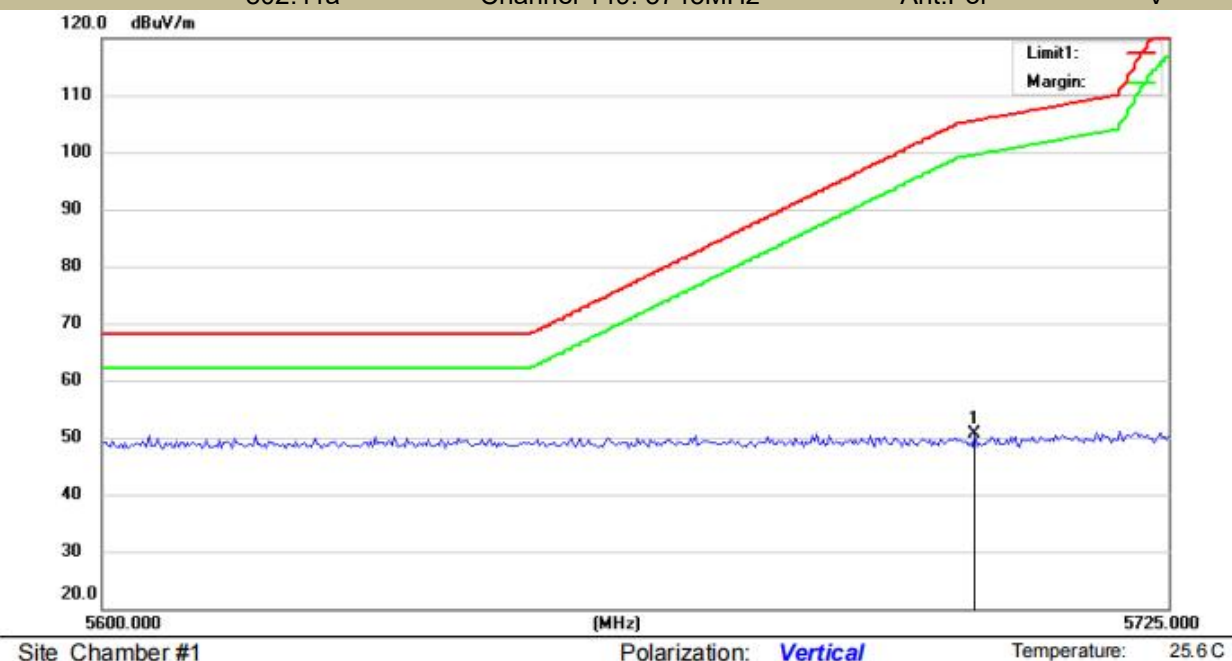
Freq. (MHz)	Ant.Pol.	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5855.250	H	50.35	-44.88	14.71	Pass
5862.500	V	50.57	-44.66	12.89	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) $EIRP[dBm] = E[dBuV/m] + 20 \log(d[meters]) - 104.77$
 d is the measurement distance in 3 meters

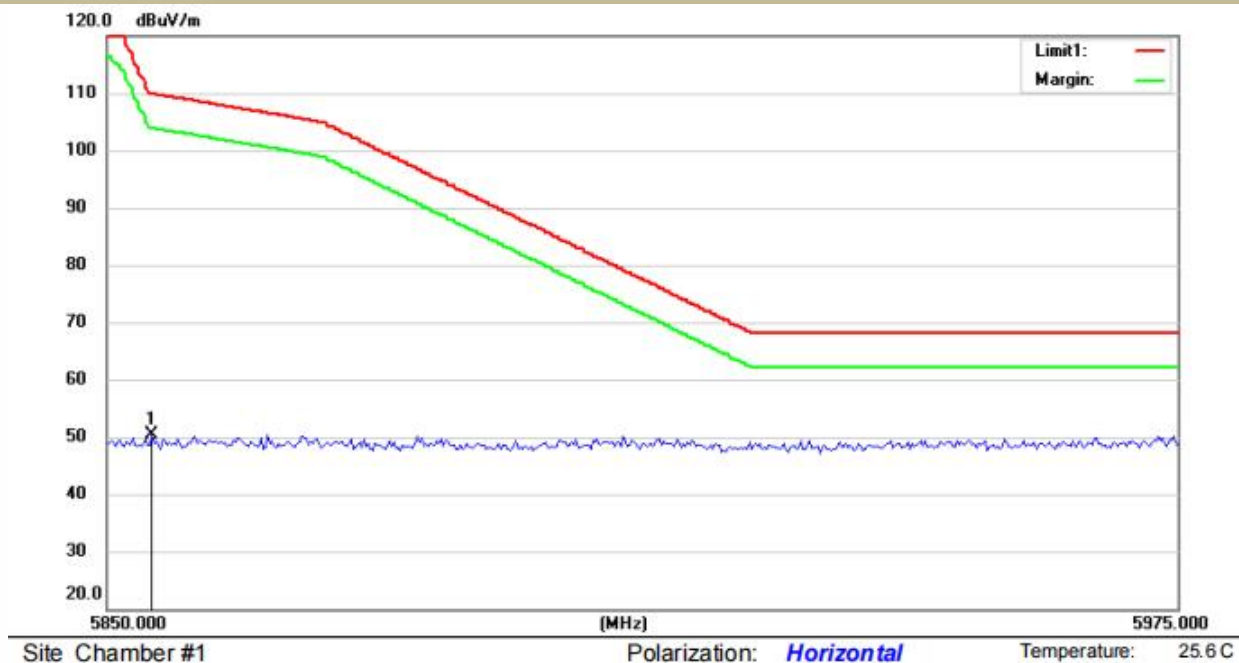
U-NII -3
 Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
 802.11a Channel 149: 5745MHz Ant.Pol H



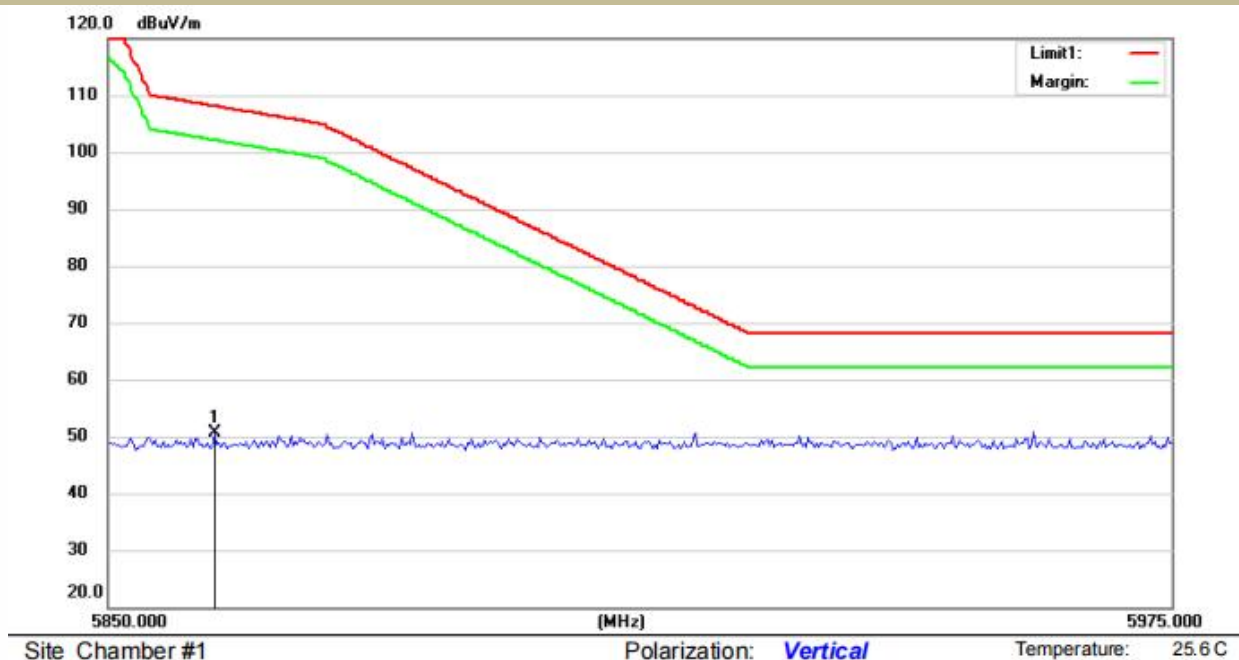
U-NII -3
 Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
 802.11a Channel 149: 5745MHz Ant.Pol V



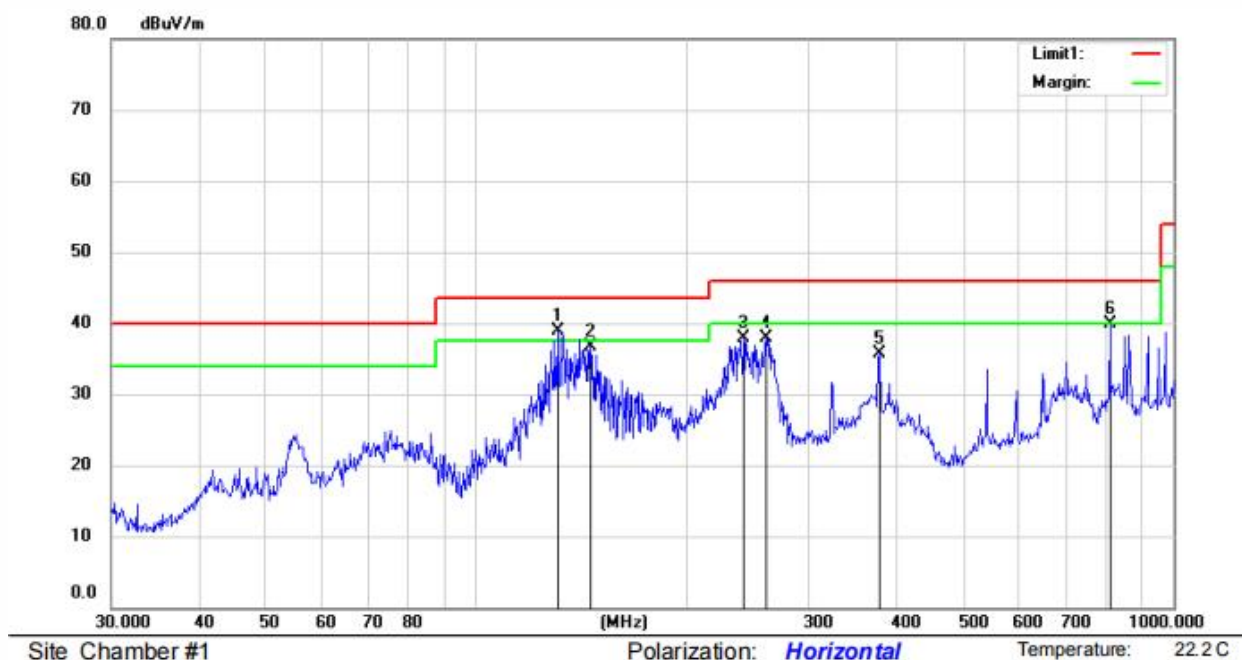
U-NII -3
 Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
 802.11a Channel 165: 5825MHz Ant.Pol H



U-NII -3
 Test Model Undesirable radiated Undesirable radiated Spurious Emission in Band Edge
 802.11a Channel 165: 5825MHz Ant.Pol V



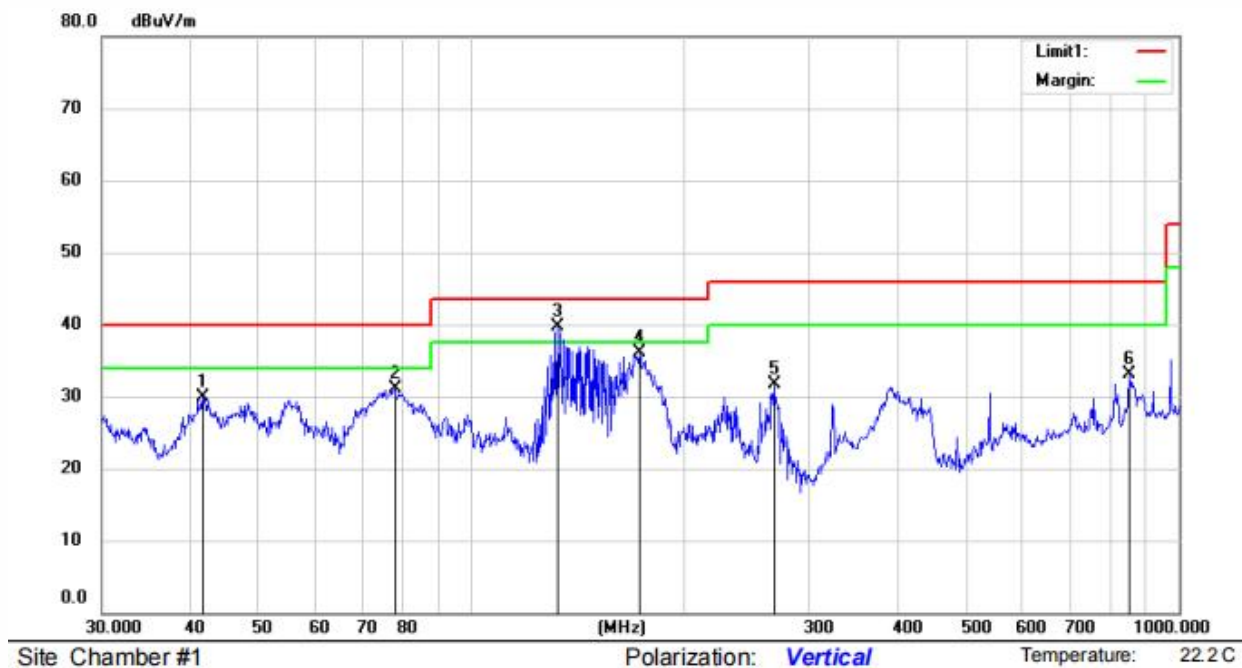
- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)
All the antenna(Antenna 1) and modes(802.11a/n) has been tested and the worst(Antenna 1 , 802.11a) result recorded was report as below:



No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	HI	Degree	Comment
1	*	130.8370	59.91	8.37	30.73	1.3	38.85	43.50	-4.65	QP		
2		145.8610	57.50	8.42	30.65	1.41	36.68	43.50	-6.82	QP		
3		241.6761	53.24	12.77	30.14	2.06	37.93	46.00	-8.07	QP		
4		260.1444	52.53	13.18	30.04	2.14	37.81	46.00	-8.19	QP		
5		378.5842	46.59	15.74	29.82	3.13	35.64	46.00	-10.36	QP		
6		810.2653	44.45	21.82	30.21	3.82	39.88	46.00	-6.12	QP		

*:Maximum data x:Over limit !:over margin

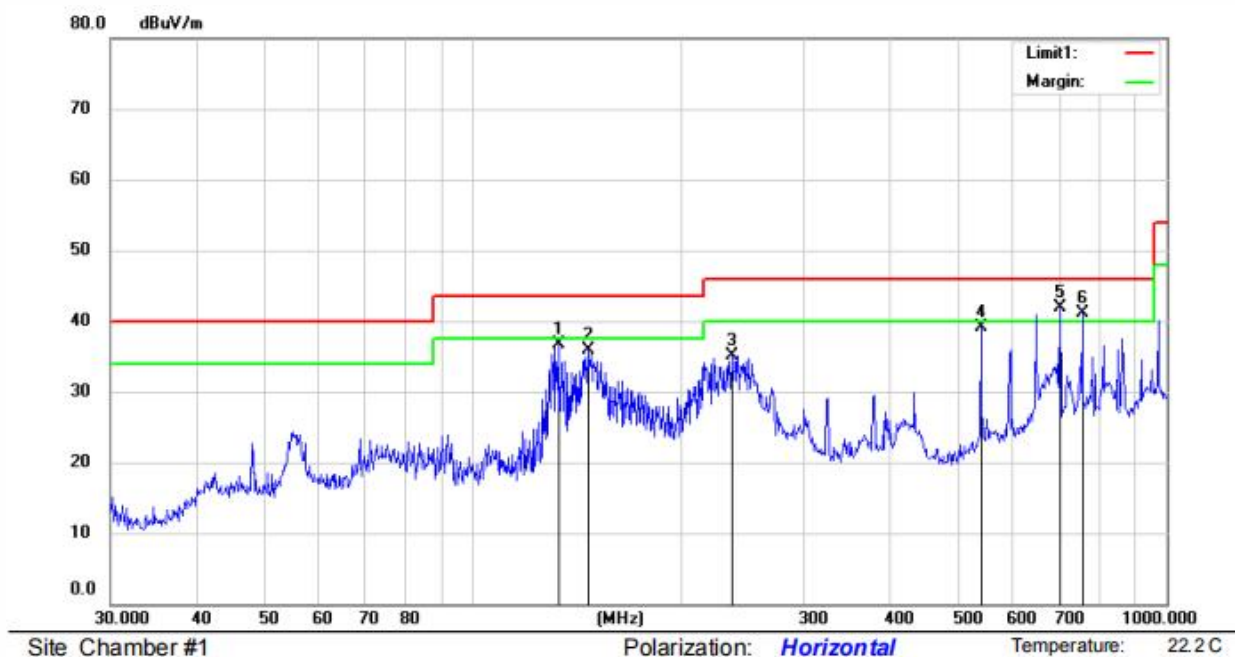
Operator: Ccyf



No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	HI	Degree	Comment
1		41.7130	46.47	13.21	30.52	0.65	29.81	40.00	-10.19	QP		
2		77.8653	52.47	8.16	30.58	1.06	31.11	40.00	-8.89	QP		
3	*	132.2206	60.80	8.31	30.72	1.31	39.70	43.50	-3.80	QP		
4		172.5987	55.51	9.55	30.51	1.56	36.11	43.50	-7.39	QP		
5		267.5453	46.29	13.32	30	2.14	31.75	46.00	-14.25	QP		
6		851.0353	36.87	22.31	30.03	3.9	33.05	46.00	-12.95	QP		

*:Maximum data x:Over limit !:over margin

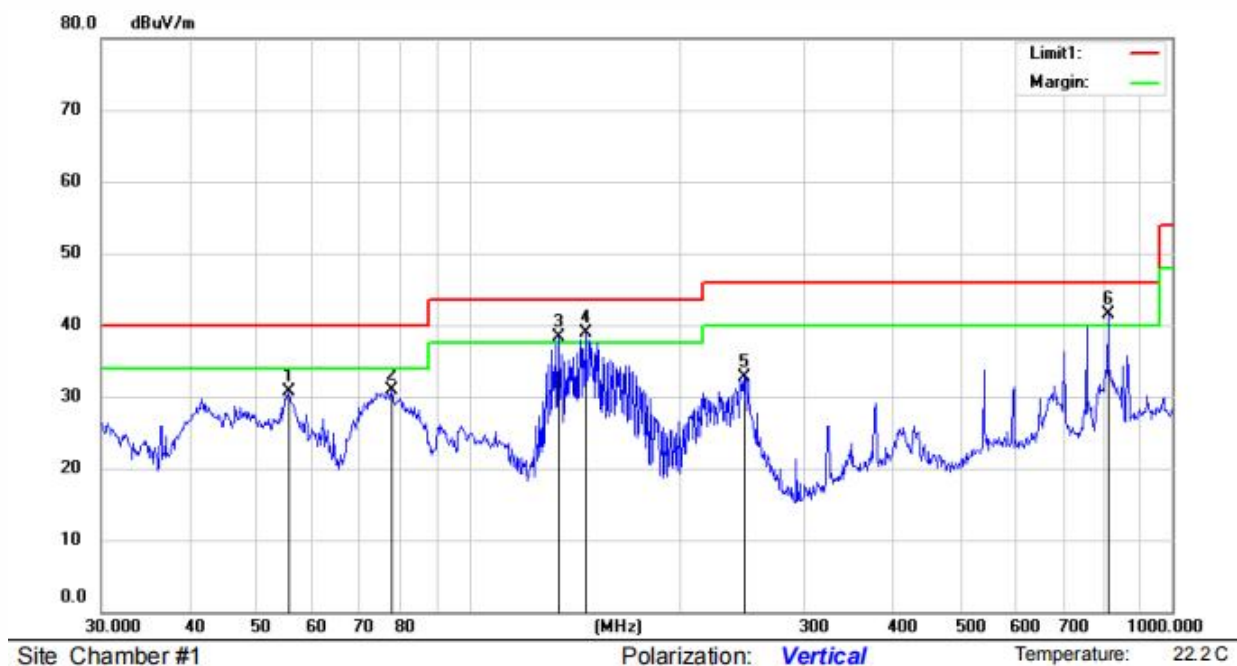
Operator: Ccyf



No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	HI	Degree	Comment
1		132.6850	57.91	8.29	30.72	1.32	36.80	43.50	-6.70	QP		
2		146.3734	56.75	8.43	30.64	1.41	35.95	43.50	-7.55	QP		
3		235.8163	50.70	12.6	30.17	2.01	35.14	46.00	-10.86	QP		
4		539.4774	47.34	18.67	29.87	3.06	39.20	46.00	-6.80	QP		
5	*	701.7610	46.73	21.76	30.11	3.5	41.88	46.00	-4.12	QP		
6	!	755.3872	46.75	20.81	30.18	3.78	41.16	46.00	-4.84	QP		

*:Maximum data x:Over limit !:over margin

Operator: Ccyf



No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	HI cm	Degree deg.	Comment
1		55.4147	46.79	13.4	30.5	0.93	30.62	40.00	-9.38	QP			
2		77.5926	52.17	8.19	30.58	1.06	30.84	40.00	-9.16	QP			
3	!	134.0880	59.48	8.24	30.71	1.33	38.34	43.50	-5.16	QP			
4	!	146.3734	59.61	8.43	30.64	1.41	38.81	43.50	-4.69	QP			
5		246.8150	47.86	12.91	30.11	2.1	32.76	46.00	-13.24	QP			
6	*	810.2653	46.06	21.82	30.21	3.82	41.49	46.00	-4.51	QP			

*:Maximum data x:Over limit !:over margin

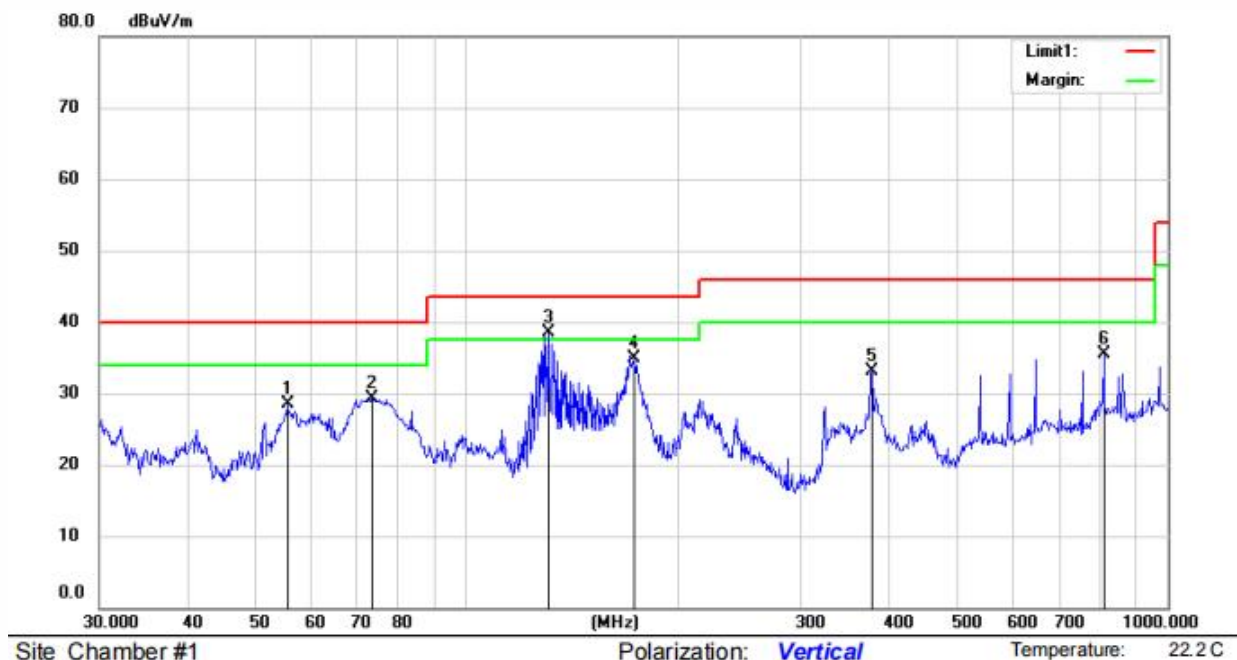
Operator: Ccyf



No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	HI	Degree	Comment
1	!	129.4677	59.02	8.47	30.73	1.29	38.05	43.50	-5.45	QP		
2		173.8135	50.53	9.58	30.5	1.56	31.17	43.50	-12.33	QP		
3		243.3771	49.86	12.81	30.13	2.07	34.61	46.00	-11.39	QP		
4		378.5842	47.90	15.74	29.82	3.13	36.95	46.00	-9.05	QP		
5	!	701.7610	46.04	21.76	30.11	3.5	41.19	46.00	-4.81	QP		
6	*	863.0561	45.65	22.46	29.98	3.92	42.05	46.00	-3.95	QP		

*:Maximum data x:Over limit !:over margin

Operator: Ccyf



No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	HI	Degree	Comment
1		55.6092	44.70	13.35	30.5	0.93	28.48	40.00	-11.52	QP		
2		73.3593	49.76	8.96	30.57	1.09	29.24	40.00	-10.76	QP		
3	*	130.8370	59.59	8.37	30.73	1.3	38.53	43.50	-4.97	QP		
4		173.8135	54.30	9.58	30.5	1.56	34.94	43.50	-8.56	QP		
5		378.5842	44.15	15.74	29.82	3.13	33.20	46.00	-12.80	QP		
6		810.2653	40.11	21.82	30.21	3.82	35.54	46.00	-10.46	QP		

*:Maximum data x:Over limit !:over margin

Operator: Ccyf

8.5 POWER LINE CONDUCTED EMISSIONS

8.5.1 Applicable Standard

According to FCC Part 15.207(a)

According to IC RSS-Gen 8.8

8.5.2 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.

8.5.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

8.5.4 Test Procedure

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

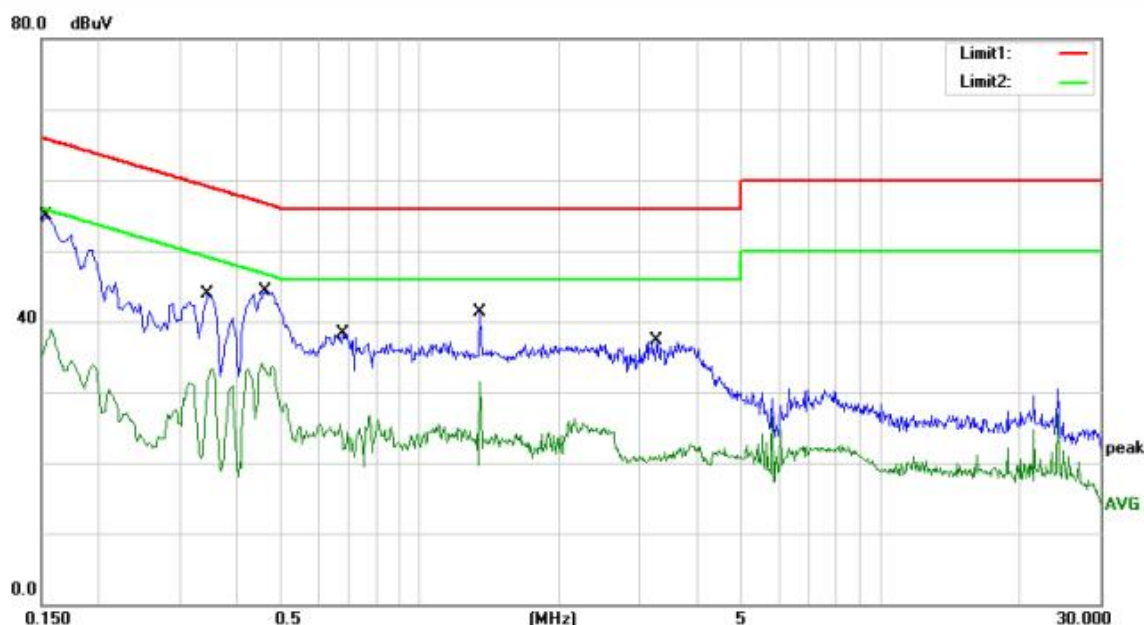
Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Repeat above procedures until all frequency measured were complete.

8.5.5 Test Results

Pass

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



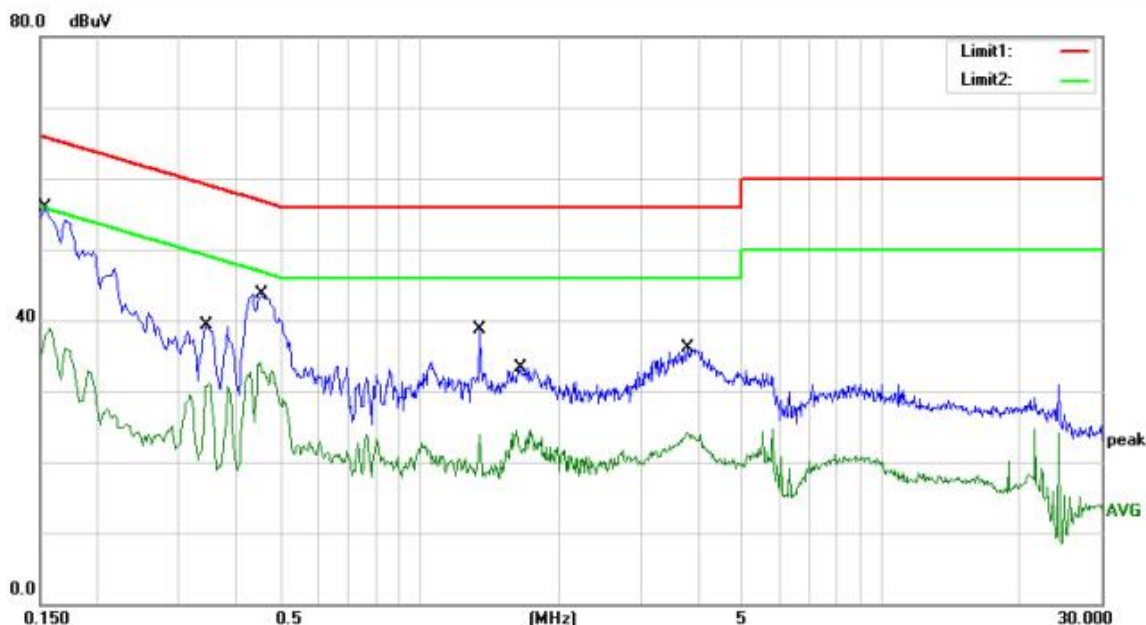
Site site #1

Phase: L1

Temperature: 25

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1540	37.83	17.06	54.89	65.78	-10.89	QP	
2		0.1540	21.74	17.06	38.80	55.78	-16.98	AVG	
3		0.3460	26.83	17.07	43.90	59.06	-15.16	QP	
4		0.3460	16.28	17.07	33.35	49.06	-15.71	AVG	
5		0.4580	27.18	17.08	44.26	56.73	-12.47	QP	
6		0.4580	17.01	17.08	34.09	46.73	-12.64	AVG	
7		0.6820	21.21	17.02	38.23	56.00	-17.77	QP	
8		0.6820	8.39	17.02	25.41	46.00	-20.59	AVG	
9		1.3500	24.33	17.06	41.39	56.00	-14.61	QP	
10		1.3500	14.43	17.06	31.49	46.00	-14.51	AVG	
11		3.2700	20.25	17.01	37.26	56.00	-18.74	QP	
12		3.2700	3.51	17.01	20.52	46.00	-25.48	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Jayce



Site site #1

Phase: **N**

Temperature: 25

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1540	38.83	17.06	55.89	65.78	-9.89	QP	
2		0.1540	21.07	17.06	38.13	55.78	-17.65	AVG	
3		0.3460	22.29	17.07	39.36	59.06	-19.70	QP	
4		0.3460	13.98	17.07	31.05	49.06	-18.01	AVG	
5		0.4540	26.55	17.07	43.62	56.80	-13.18	QP	
6		0.4540	17.03	17.07	34.10	46.80	-12.70	AVG	
7		1.3500	21.57	17.06	38.63	56.00	-17.37	QP	
8		1.3500	6.86	17.06	23.92	46.00	-22.08	AVG	
9		1.6460	16.25	17.08	33.33	56.00	-22.67	QP	
10		1.6460	7.49	17.08	24.57	46.00	-21.43	AVG	
11		3.8100	19.04	16.99	36.03	56.00	-19.97	QP	
12		3.8100	7.13	16.99	24.12	46.00	-21.88	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Jayce

8.6 ANTENNA APPLICATION

8.6.1 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 15.407(a)	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.

8.6.2 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.

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 -----