7 RADIATED EMISSION MEASUREMENT

7.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2013 below has to be followed

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (1GHz-25 GHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	PK=1MHz / 1MHz, AV=1 MHz /10 Hz

For Band edge

Spectrum Parameter	Setting
Detector	Peak/AV
Start/Stop Frequency	Lower Band Edge: 2300 to 2403 MHz Upper Band Edge: 2479 to 2500 MHz
RB / VB (emission in restricted band)	PK=1MHz / 1MHz, AV=1 MHz / 10 Hz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

7.2 TEST PROCEDURE

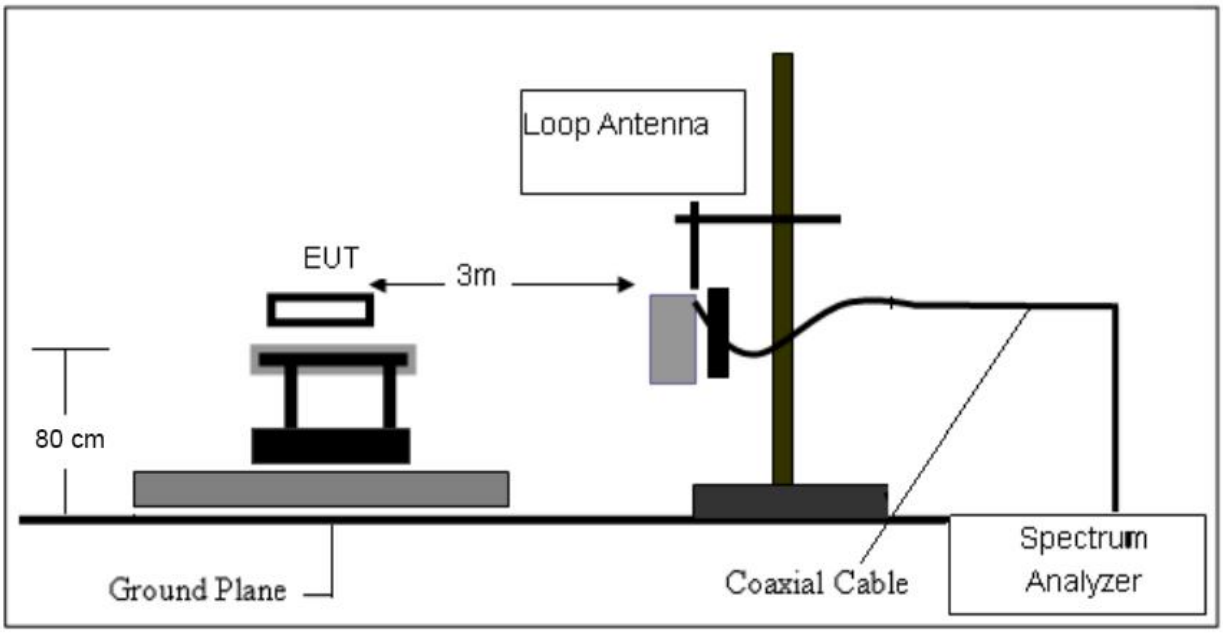
a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz,and above 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 meters (above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then QuasiPeak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

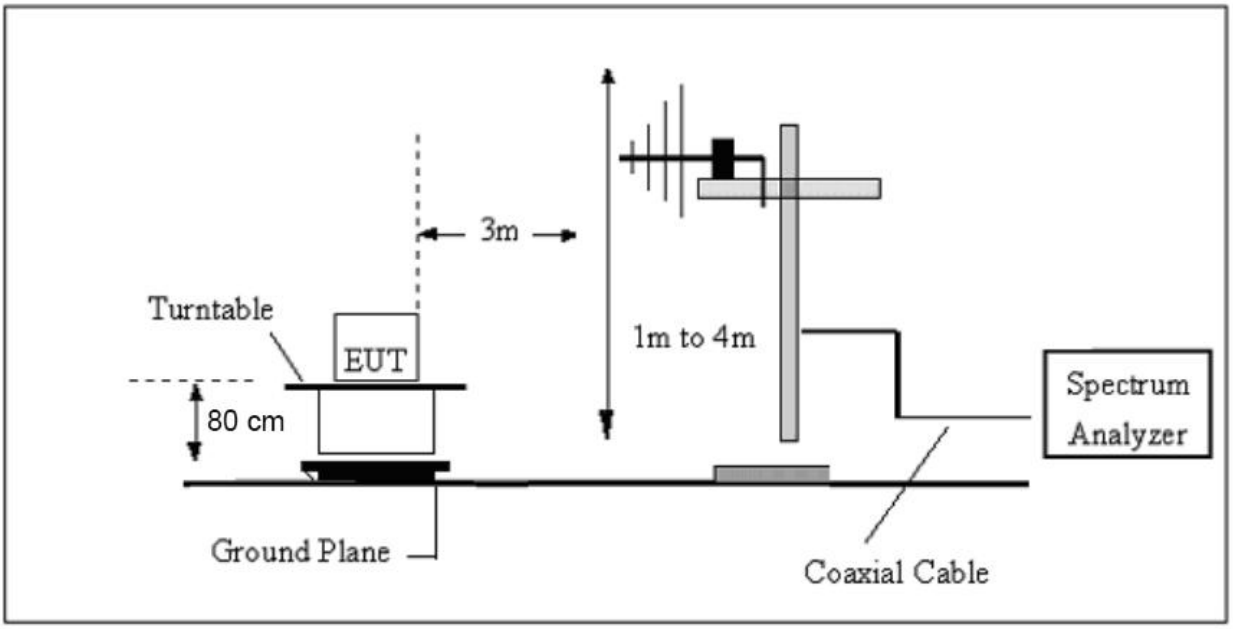
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

7.3 TESTSETUP

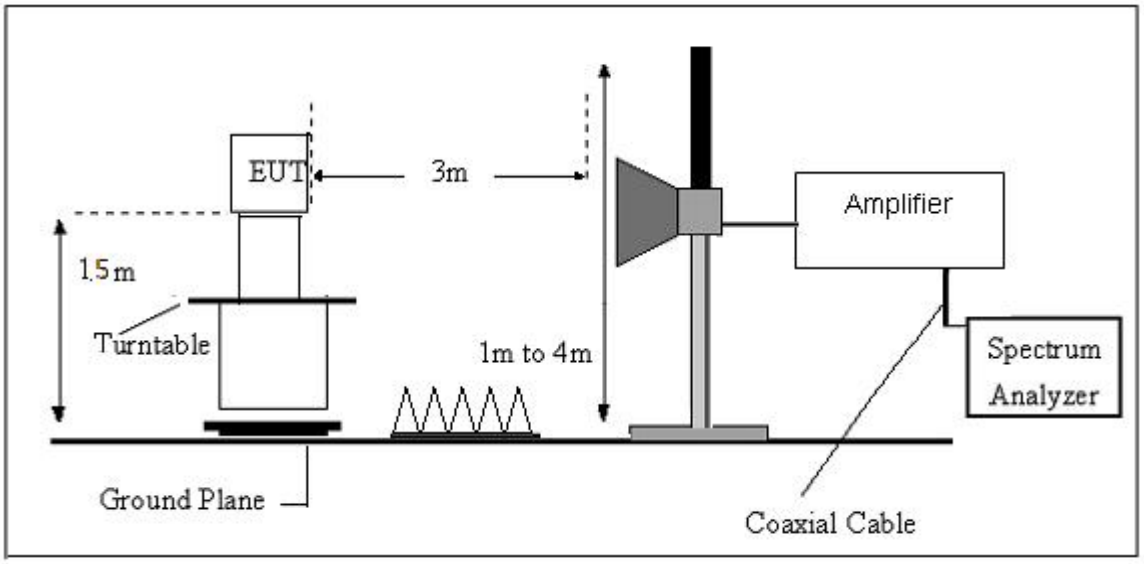
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



7.4. TEST RESULTS

(9KHz-30MHz)

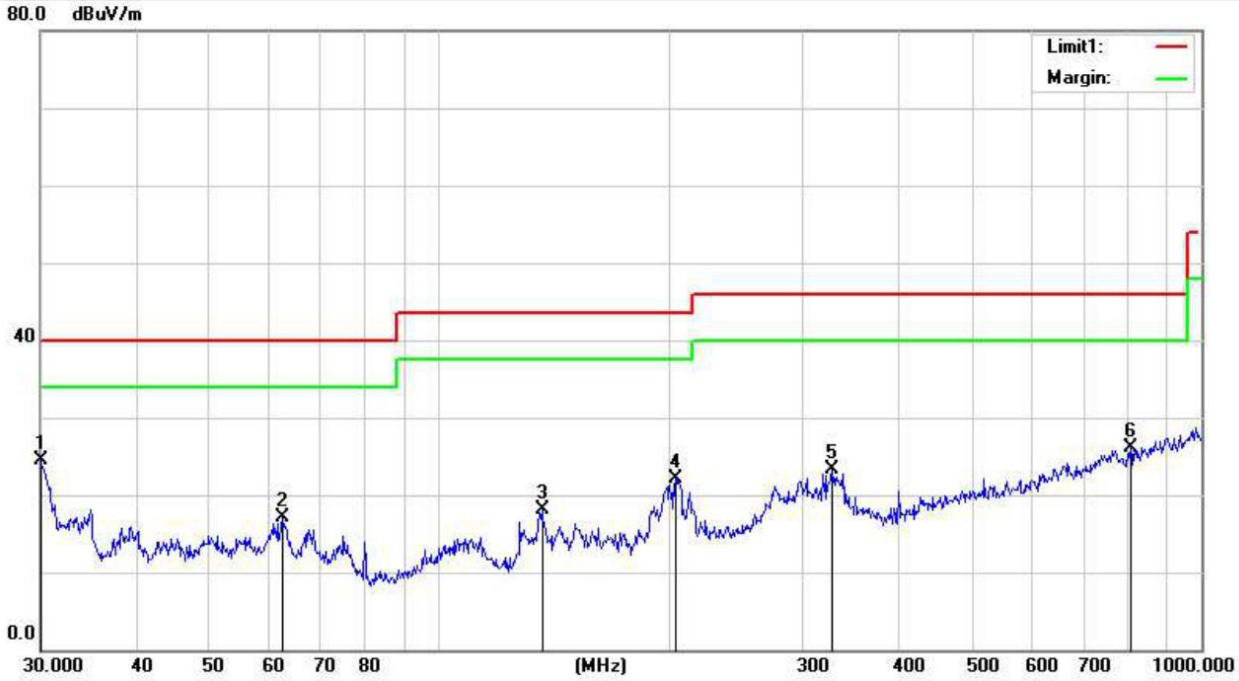
Temperature:	22.7℃	Relative Humidity:	61%
Test Voltage:	AC 110V	Test Mode:	802.11b

Freq.	Reading	Limit	Margin	State	Test Result
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F	
--	--	--	--	--	PASS
--	--	--	--	--	PASS

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits (dBuv) + distance extrapolation factor.

(30MHz-1000MHz)

Temperature:	24.7℃	Relative Humidity:	61%
Test Voltage:	AC 110V	Phase:	Horizontal
Test Mode:	802.11b(worst)		



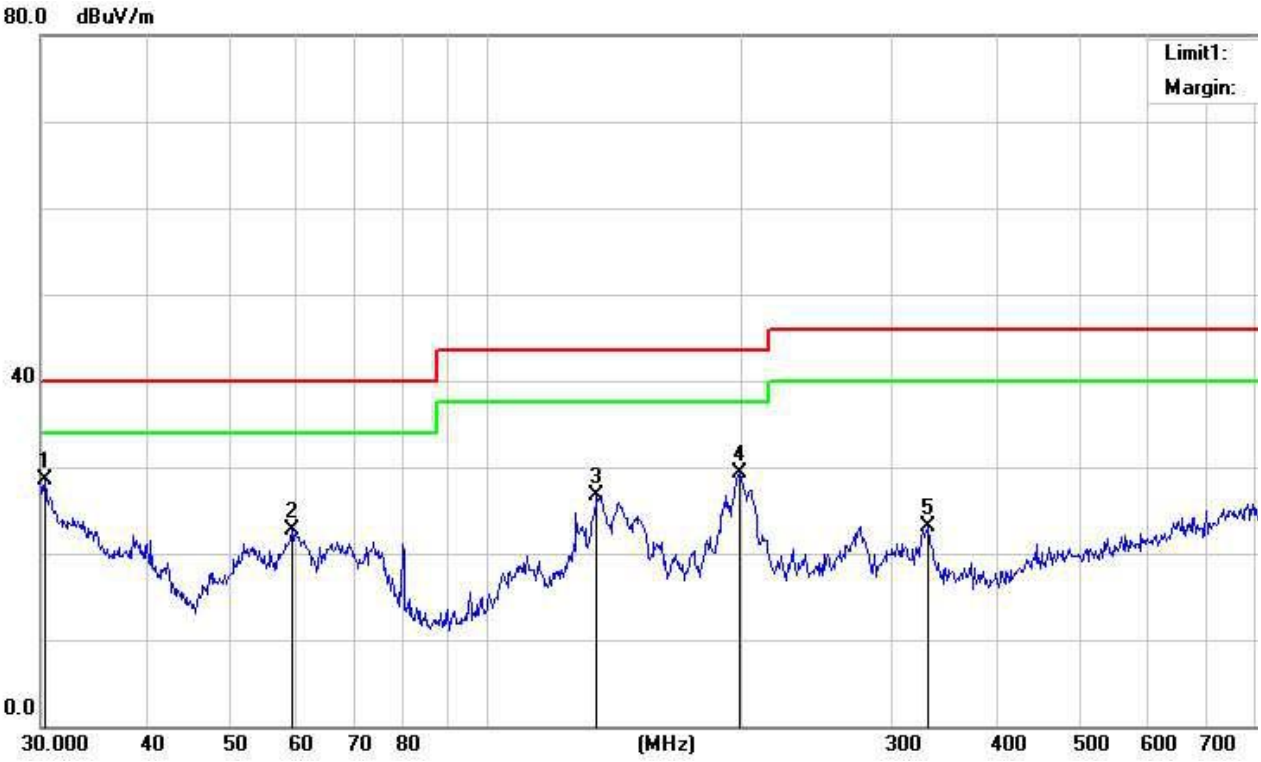
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	34.2760	38.69	-15.78	22.91	40.00	-17.09	QP
2	55.6094	31.15	-16.88	14.27	40.00	-25.73	QP
3	108.2667	31.15	-17.07	14.08	43.50	-29.42	QP
4	319.9370	38.27	-13.28	24.99	46.00	-21.01	QP
5	400.4320	41.61	-12.85	28.76	46.00	-17.24	QP
6	776.8778	30.25	-4.87	25.38	46.00	-20.62	QP

Note: 1. Margin = Result (Result =Reading + Factor)–Limit

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Temperature:	22.7℃	Relative Humidity:	61%
Test Voltage:	AC 110V	Phase:	Vertical
Test Mode:	802.11b(worst)		



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.3173	41.85	-13.30	28.55	40.00	-11.45	QP
2	59.2325	39.64	-16.91	22.73	40.00	-17.27	QP
3	135.0320	47.60	-20.89	26.71	43.50	-16.79	QP
4	198.5880	45.01	-15.76	29.25	43.50	-14.25	QP
5	331.3546	36.05	-13.01	23.04	46.00	-22.96	QP
6	842.1296	30.39	-4.01	26.38	46.00	-19.62	QP

Note: 1. Margin = Result (Result =Reading + Factor)–Limit

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

(1GHz~25GHz) Restricted band and Spurious emission Requirements

802.11b(Worst)-Low

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	41.51	31.78	8.60	32.09	49.80	74.00	-24.20	Vertical
7236.00	35.14	36.15	11.65	32.00	50.94	74.00	-23.06	Vertical
9648.00	33.82	37.95	14.14	31.62	54.29	74.00	-19.71	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	40.04	31.78	8.60	32.09	48.33	74.00	-25.67	Horizontal
7236.00	35.15	36.15	11.65	32.00	50.95	74.00	-23.05	Horizontal
9648.00	32.80	37.95	14.14	31.62	53.27	74.00	-20.73	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	30.56	31.78	8.60	32.09	38.85	54.00	-15.15	Vertical
7236.00	24.00	36.15	11.65	32.00	39.80	54.00	-14.20	Vertical
9648.00	24.16	37.95	14.14	31.62	44.63	54.00	-9.37	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	29.55	31.78	8.60	32.09	37.84	54.00	-16.16	Horizontal
7236.00	23.72	36.15	11.65	32.00	39.52	54.00	-14.48	Horizontal
9648.00	22.54	37.95	14.14	31.62	43.01	54.00	-10.99	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

802.11b(Worst)-Middle

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	40.49	31.85	8.67	32.12	48.89	74.00	-25.11	Vertical
7311.00	35.17	36.37	11.72	31.89	51.37	74.00	-22.63	Vertical
9748.00	34.80	38.35	14.25	31.62	55.78	74.00	-18.22	Vertical
12185.00	*					74.00		Vertical
14622.00	*					74.00		Vertical
17059.00	*					74.00		Vertical
4874.00	40.84	31.85	8.67	32.12	49.24	74.00	-24.76	Horizontal
7311.00	34.07	36.37	11.72	31.89	50.27	74.00	-23.73	Horizontal
9748.00	34.10	38.35	14.25	31.62	55.08	74.00	-18.92	Horizontal
12185.00	*					74.00		Horizontal
14622.00	*					74.00		Horizontal
17059.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	31.31	31.85	8.67	32.12	39.71	54.00	-14.29	Vertical
7311.00	23.47	36.37	11.72	31.89	39.67	54.00	-14.33	Vertical
9748.00	24.05	38.35	14.25	31.62	45.03	54.00	-8.97	Vertical
12185.00	*					54.00		Vertical
14622.00	*					54.00		Vertical
17059.00	*					54.00		Vertical
4874.00	30.94	31.85	8.67	32.12	39.34	54.00	-14.66	Horizontal
7311.00	23.15	36.37	11.72	31.89	39.35	54.00	-14.65	Horizontal
9748.00	23.81	38.35	14.25	31.62	44.79	54.00	-9.21	Horizontal
12185.00	*					54.00		Horizontal
14622.00	*					54.00		Horizontal
17059.00	*					54.00		Horizontal

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

802.11b(Worst)-High

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4944.00	46.28	31.93	8.73	32.16	54.78	74.00	-19.22	Vertical
7416.00	36.01	36.59	11.79	31.78	52.61	74.00	-21.39	Vertical
9888.00	38.22	38.81	14.38	31.88	59.53	74.00	-14.47	Vertical
12360.00	*					74.00		Vertical
14832.00	*					74.00		Vertical
17304.00	*					74.00		Vertical
4944.00	45.42	31.93	8.73	32.16	53.92	74.00	-20.08	Horizontal
7416.00	35.15	36.59	11.79	31.78	51.75	74.00	-22.25	Horizontal
9888.00	33.79	38.81	14.38	31.88	55.10	74.00	-18.90	Horizontal
12360.00	*					74.00		Horizontal
14832.00	*					74.00		Horizontal
17304.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4944.00	37.14	31.93	8.73	32.16	45.64	54.00	-8.36	Vertical
7416.00	25.91	36.59	11.79	31.78	42.51	54.00	-11.49	Vertical
9888.00	26.71	38.81	14.38	31.88	48.02	54.00	-5.98	Vertical
12360.00	*					54.00		Vertical
14832.00	*					54.00		Vertical
17304.00	*					54.00		Vertical
4944.00	35.75	31.93	8.73	32.16	44.25	54.00	-9.75	Horizontal
7416.00	24.53	36.59	11.79	31.78	41.13	54.00	-12.87	Horizontal
9888.00	23.04	38.81	14.38	31.88	44.35	54.00	-9.65	Horizontal
12360.00	*					54.00		Horizontal
14832.00	*					54.00		Horizontal
17304.00	*					54.00		Horizontal

Remark:

1. *Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *"*", means this data is the too weak instrument of signal is unable to test.*

802.11 b low CH

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	52.82	27.59	5.38	34.01	51.78	74.00	-22.22	Horizontal
2400.00	61.64	27.58	5.39	34.01	60.60	74.00	-13.40	Horizontal
2390.00	54.66	27.59	5.38	34.01	53.62	74.00	-20.38	Vertical
2400.00	63.65	27.58	5.39	34.01	62.61	74.00	-11.39	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	39.49	27.59	5.38	34.01	38.45	54.00	-15.55	Horizontal
2400.00	47.89	27.58	5.39	34.01	46.85	54.00	-7.15	Horizontal
2390.00	41.06	27.59	5.38	34.01	40.02	54.00	-13.98	Vertical
2400.00	49.08	27.58	5.39	34.01	48.04	54.00	-5.96	Vertical

802.11 b High CH

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	53.33	27.53	5.47	33.92	52.41	74.00	-21.59	Horizontal
2500.00	49.35	27.55	5.49	29.93	52.46	74.00	-21.54	Horizontal
2483.50	55.68	27.53	5.47	33.92	54.76	74.00	-19.24	Vertical
2500.00	52.01	27.55	5.49	29.93	55.12	74.00	-18.88	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	39.76	27.53	5.47	33.92	38.84	54.00	-15.16	Horizontal
2500.00	35.94	27.55	5.49	29.93	39.05	54.00	-14.95	Horizontal
2483.50	41.97	27.53	5.47	33.92	41.05	54.00	-12.95	Vertical
2500.00	37.65	27.55	5.49	29.93	40.76	54.00	-13.24	Vertical

802.11 g Low CH

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	51.14	27.59	5.38	34.01	50.10	74.00	-23.90	Horizontal
2400.00	60.02	27.58	5.39	34.01	58.98	74.00	-15.02	Horizontal
2390.00	53.18	27.59	5.38	34.01	52.14	74.00	-21.86	Vertical
2400.00	61.97	27.58	5.39	34.01	60.93	74.00	-13.07	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	38.56	27.59	5.38	34.01	37.52	54.00	-16.48	Horizontal
2400.00	47.08	27.58	5.39	34.01	46.04	54.00	-7.96	Horizontal
2390.00	40.10	27.59	5.38	34.01	39.06	54.00	-14.95	Vertical
2400.00	47.39	27.58	5.39	34.01	46.35	54.00	-7.65	Vertical

802.11 g High CH

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	51.22	27.53	5.47	33.92	50.30	74.00	-23.70	Horizontal
2500.00	47.63	27.55	5.49	29.93	50.74	74.00	-23.26	Horizontal
2483.50	53.28	27.53	5.47	33.92	52.36	74.00	-21.64	Vertical
2500.00	50.02	27.55	5.49	29.93	53.13	74.00	-20.88	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	38.42	27.53	5.47	33.92	37.50	54.00	-16.50	Horizontal
2500.00	34.83	27.55	5.49	29.93	37.94	54.00	-16.06	Horizontal
2483.50	40.46	27.53	5.47	33.92	39.54	54.00	-14.46	Vertical
2500.00	36.53	27.55	5.49	29.93	39.64	54.00	-14.36	Vertical

802.11 N 20 Low CH

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	51.06	27.59	5.38	34.01	50.02	74.00	-23.98	Horizontal
2400.00	59.92	27.58	5.39	34.01	58.88	74.00	-15.12	Horizontal
2390.00	53.10	27.59	5.38	34.01	52.06	74.00	-21.94	Vertical
2400.00	61.84	27.58	5.39	34.01	60.80	74.00	-13.20	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	38.50	27.59	5.38	34.01	37.46	54.00	-16.54	Horizontal
2400.00	47.01	27.58	5.39	34.01	45.97	54.00	-8.03	Horizontal
2390.00	40.04	27.59	5.38	34.01	39.00	54.00	-15.01	Vertical
2400.00	47.32	27.58	5.39	34.01	46.28	54.00	-7.72	Vertical

802.11 N 20 High CH

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	51.10	27.53	5.47	33.92	50.18	74.00	-23.82	Horizontal
2500.00	47.55	27.55	5.49	29.93	50.66	74.00	-23.34	Horizontal
2483.50	53.15	27.53	5.47	33.92	52.23	74.00	-21.77	Vertical
2500.00	49.92	27.55	5.49	29.93	53.03	74.00	-20.98	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	38.35	27.53	5.47	33.92	37.43	54.00	-16.57	Horizontal
2500.00	34.78	27.55	5.49	29.93	37.89	54.00	-16.11	Horizontal
2483.50	40.38	27.53	5.47	33.92	39.46	54.00	-14.54	Vertical
2500.00	36.47	27.55	5.49	29.93	39.58	54.00	-14.42	Vertical

8 CONDUCTED EMISSION TEST

8.1.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

FREQUENCY (MHz)	Conducted Emissionlimit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

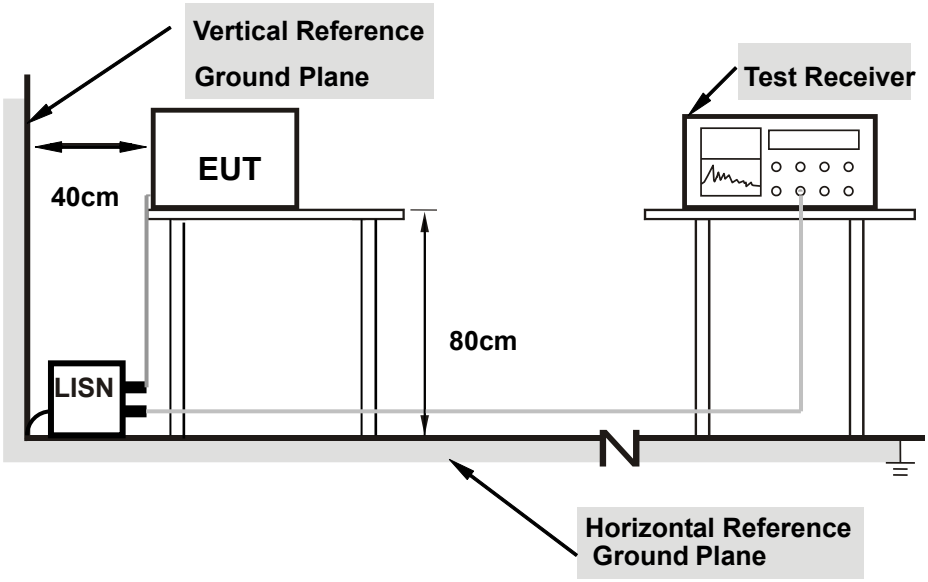
The following table is the setting of the receiver

Receiver Parameters	**Setting**
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

8.1.2 TEST PROCEDURE

a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

8.1.3 TEST SETUP



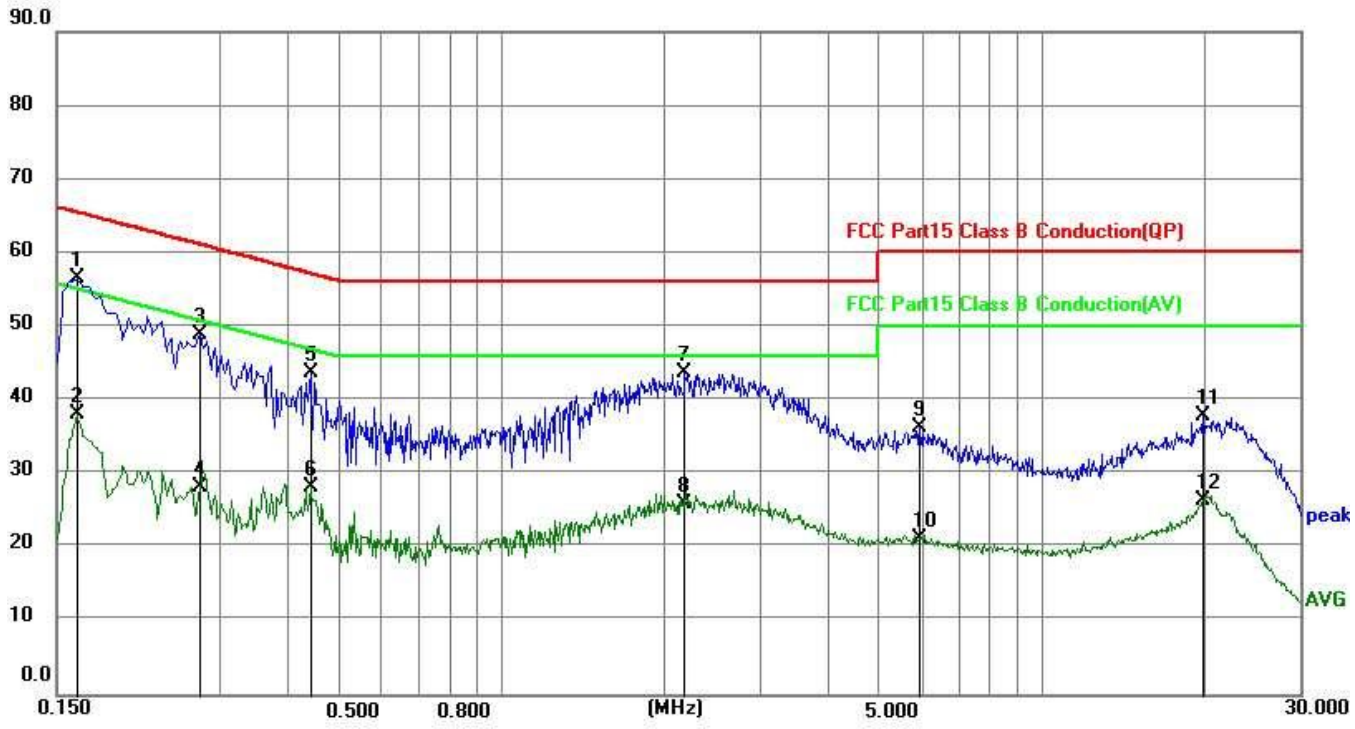
Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.4 TEST RESULTS

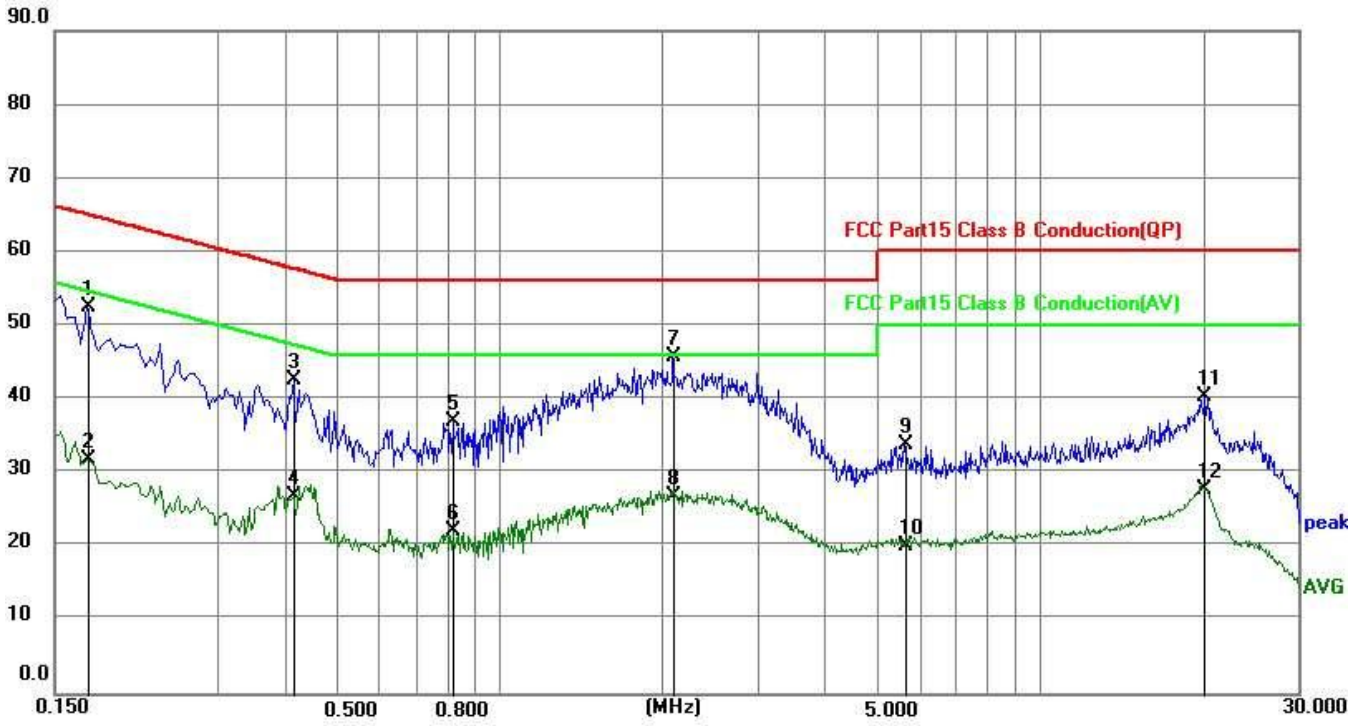
Temperature:	25℃	Relative Humidity:	50%
Test Mode:	GFSK	Test Voltage:	AC 110V
Phase:	L	Result:	Pass

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0. 1635	47.03	9.52	56.55	65.28	8.73	QP
2	0. 1635	28.67	9.52	38. 19	55.28	17.09	AVG
3	0.2760	39.38	9.54	48.92	60.94	12.02	QP
4	0.2760	18.62	9.54	28. 16	50.94	22.78	AVG
5	0.4425	34.26	9.55	43.81	57.01	13.20	QP
6	0.4425	18.72	9.55	28.27	47.01	18.74	AVG
7	2. 1884	34. 17	9.58	43.75	56.00	12.25	QP
8	2. 1884	16.39	9.58	25.97	46.00	20.03	AVG
9	5.9370	26.65	9.60	36.25	60.00	23.75	QP
10	5.9370	11.59	9.60	21. 19	50.00	28.81	AVG
11	19.9185	28.06	9.75	37.81	60.00	22. 19	QP
12	19.9185	16.76	9.75	26.51	50.00	23.49	AVG



Temperature:	25℃	Relative Humidity:	50%
Test Mode:	GFSK	Test Voltage:	AC 110V
Phase:	N	Result:	Pass

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0. 1725	42.97	9.52	52.49	64.84	12.35	QP
2	0. 1725	22.28	9.52	31.80	54.84	23.04	AVG
3	0.4155	33. 12	9.55	42.67	57.54	14.87	QP
4	0.4155	17.23	9.55	26.78	47.54	20.76	AVG
5	0.8204	27.40	9.56	36.96	56.00	19.04	QP
6	0.8204	12.58	9.56	22. 14	46.00	23.86	AVG
7	2.0894	36.30	9.58	45.88	56.00	10. 12	QP
8	2.0894	17.25	9.58	26.83	46.00	19. 17	AVG
9	5.5995	24.23	9.68	33.91	60.00	26.09	QP
10	5.5995	10.48	9.68	20. 16	50.00	29.84	AVG
11	20.2650	30.49	9.84	40.33	60.00	19.67	QP
12	20.2650	17.94	9.84	27.78	50.00	22.22	AVG



9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

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.

9.2 RESULT

The antennas used for this product are PCB antenna and other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 3.92 dBi.

※※※※※END OF THE REPORT※※※※※