FCC TEST REPORT

Test report
On Behalf of
Shenzhen Omni Intelligent Technology Co.,Ltd.
For
Manual guide for smart bicycle stem
Model No.: OC2

FCC ID: 2AI2O-OC2

Prepared for :	**Shenzhen Omni Intelligent Technology Co.,Ltd.** Floor H Block 1B Caizhan Industrial Area,NO.91 Lixin Road Danzhutou,Longgang District,Shenzhen,P.R.China.
Prepared By :	**Laboratory of Shenzhen United Testing Technology Co., Ltd** **5/F., Building 7, Xinyuan Industrial Park, Xili, Nanshan District, Shenzhen, Guangdong, China**
Date of Test:	**July. 03, 2016 ~ July. 12, 2016**
Date of Report:	**July. 12, 2016**
Report Number:	**UNI160710008-E**

TEST RESULT CERTIFICATION

Applicant's name	:	Shenzhen Omni Intelligent Technology Co.,Ltd.
Address	:	Floor H Block 1B Caizhan Industrial Area,NO.91 Lixin Road Danzhutou,Longgang District,Shenzhen,P.R.China.
Manufacture's Name	:	Shenzhen Omni Intelligent Technology Co.,Ltd.
Address	:	Floor H Block 1B Caizhan Industrial Area,NO.91 Lixin Road Danzhutou,Longgang District,Shenzhen,P.R.China.

Product description

Trade Mark:		Omni
Product name	:	Manual guide for smart bicycle stem
Model and/or type reference	:	OC2
Standards	:	FCC Rules and Regulations Part 15 Subpart C Section 15.249 ANSI C63.10: 2013

Date of Test	:	
Date (s) of performance of tests	:	**July. 03, 2016 ~ July. 12, 2016**
Date of Issue	:	**July. 12, 2016**
Test Result	:	**Pass**

Testing Engineer : Eric Xie

(Eric Xie)

Technical Manager : Dora Qin

(Dora Qin)

Authorized Signatory :

(Kait Chen)

Table of Contents **Page**

1. TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

DESCRIPTION OF TEST	RESULT
CONDUCTED EMISSIONS TEST	COMPLIANT
RADIATED EMISSION TEST	COMPLIANT
BAND EDGE	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	COMPLIANT
ANTENNA REQUIREMENT	COMPLIANT

1.2 TEST FACILITY

Test Firm : Shenzhen WST Testing Technology Co., Ltd.
Certificated by FCC, Registration No.: 939433

Address : 1F,No.9 Building,TGK Science & Technology Park,Yangtian Rd.,
NO.72 Bao'an Dist., Shenzhen,Guangdong,China. 518101

1.3 MEASUREMENT UNCERTAINTY

Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty(Above 1GHz)	=	4.06dB, k=2

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Manual guide for smart bicycle stem
Model Name	OC2
Serial No	/
Model Difference	/
FCC ID	2AI2O-OC2
Antenna Type	PCB Antenna
Antenna Gain	0dBi
BT Operation frequency	2402-2480MHz
Number of Channels	40CH
Modulation Type	GFSK
Power Source	DC Voltage
Power Rating	DC 5V

2.1.1 Carrier Frequency of Channels

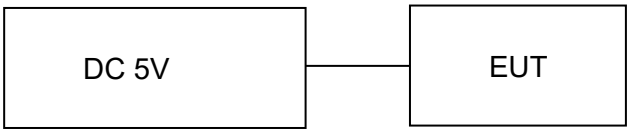
Channel	Frequency (MHz)
00	**2402**
02	2404
03	2406
⋮	⋮
20	**2442**
⋮	⋮
37	2476
38	2478
39	**2480**

Operation of EUT during testing

Operating Mode
The mode is used: **Transmitting mode**
Low Channel: 2402MHz
Middle Channel: 2442MHz
High Channel: 2480MHz

2.2 DESCRIPTION OF TEST SETUP

Operation of EUT during testing



2.3 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Receiver	Rohde & Schwarz	ESCI	100627	May 19, 2016	1 Year
2.	LISN	SchwarzBeck	NSLK 8126	8126377	May 19, 2016	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 19, 2016	1 Year
4.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
5.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	April 19, 2016	1 Year
6.	Trilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	April 17, 2016	1 Year
7.	Pre-amplifier	Compliance Direction	PAP-0203	22008	April 19, 2016	1 Year
8.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
9.	EMI Receiver	Rohde & Schwarz	ESCI	100627	April 19, 2016	1 Year
10.	LISN	SchwarzBeck	NSLK 8126	8126377	April 19, 2016	1 Year
11.	RF Switching Unit	Compliance Direction	RSU-M2	38303	April 19, 2016	1 Year
12.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
13.	EMI Receiver	Rohde & Schwarz	ESCI	100627	April 19, 2016	1 Year
14.	EMI Receiver	Rohde & Schwarz	ESCI	100627	April 19, 2016	1 Year
15.	LISN	SchwarzBeck	NSLK 8126	8126377	April 19, 2016	1 Year
16.	RF Switching Unit	Compliance Direction	RSU-M2	38303	April 19, 2016	1 Year
17.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
18.	Programmable AC Power source	SOPH POWER	PAG-1050	630250	April 26, 2016	1 Year
19.	Harmonic and Flicker Analyzer	LAPLACE	AC2000A	272629	April 26, 2016	1 Year
20.	Harmonic and Flicker Test Software AC 2000A	LAPLACE	N/A	N/A	N/A	N/A
21.	ESD Simulators	KIKUSUI	KES4021	LJ003477	April 26, 2016	1 Year
22.	EFT Generator	EMPEK	EFT-4040B	0430928N	April 26, 2016	1 Year
23.	Shielding Room	ChangZhou ZhongYu	JB88	SEL0166	April 26, 2016	1 Year
24.	Signal Generator 9KHz~2.2GHz	R&S	SML02	SEL0143	April 26, 2016	1 Year
25.	Signal Generator 9KHz~1.1GHz	R&S	SML01	SEL0135	April 26, 2016	1 Year
26.	Power Meter	R&S	NRVS	SEL0144	April 26, 2016	1 Year
27.	RF Level Meter		URV35	SEL0137	April 26, 2016	1 Year
28.	Audio Analyzer	R&S	UPL	SEL0136	April 26, 2016	1 Year
29.	RF-Amplifier 150KHz~150MHz	BONN Elektronik	BSA1515-25	SEL0157	April 26, 2016	1 Year

30.	Stripline Test Cell	Erika Fiedler	VDE0872	SEL0167	April 26, 2016	N/A
31.	TV Test Transmitter	R&S	SFM	SEL0159	April 26, 2016	1 Year
32.	TV Generator PAL	R&S	SGPF	SEL0138	April 26, 2016	1 Year
33.	TV Generator Ntsc	R&S	SGMF	SEL0140	April 26, 2016	1 Year
34.	TV Generator Secam	R&S	SGSF	SEL0139	April 26, 2016	1 Year
35.	TV Test Transmitter 0.3MHz~3300MHz	R&S	SFQ	SEL0142	April 26, 2016	1 Year
36.	MPEG2 Measurement Generator	R&S	DVG	SEL0141	April 26, 2016	1 Year
37.	Spectrum Analyzer	R&S	FSP	SEL0177	April 26, 2016	1 Year
38.	Matching	R&S	RAM	SEL0146	N/A	N/A
39.	Matching	R&S	RAM	SEL0148	N/A	N/A
40.	Absorbing Clamp	R&S	MDS21	SEL0158	April 26, 2016	1 Year
41.	Coupling Set	Erika Fiedler	Rco, Rci, MC, AC, LC	SEL0149	April 26, 2016	N/A
42.	Filters	Erika Fiedler	Sr, LBS	SEL0150	N/A	N/A
43.	Matching Network	Erika Fiedler	MN, T1	SEL0151	N/A	N/A
44.	Fully Anechoic Room	ChangZhou ZhongYu	854	SEL0169	April 26, 2016	1 Year
45.	Signal Generator	R&S	SML03	SEL0068	April 26, 2016	1 Year
46.	RF-Amplifier 30M~1GHz	Amplifier Reasearch	250W1000A	SEL0066	Oct. 24, 2015	1 Year
47.	RF-Amplifier 0.8~3.0GHz	Amplifier Reasearch	60S1G3	SEL0065	Oct. 24, 2015	1 Year
48.	Power Meter	R&S	NRVD	SEL0069	April 26, 2016	1 Year
49.	Power Sensor	R&S	URV5-Z2	SEL0071	April 26, 2016	1 Year
50.	Power Sensor	R&S	URV5-Z2	SEL0072	April 26, 2016	1 Year
51.	Software EMC32	R&S	EMC32-S	SEL0082	N/A	N/A
52.	Log-periodic Antenna	Amplifier Reasearch	AT1080	SEL0073	N/A	N/A
53.	Antenna Tripod	Amplifier Reasearch	TP1000A	SEL0074	N/A	N/A
54.	High Gain Horn Antenna(0.8-5G Hz)	Amplifier Reasearch	AT4002A	SEL0075	N/A	N/A

3. CONDUCTED EMISSIONS TEST

3.1 Conducted Power Line Emission Limit

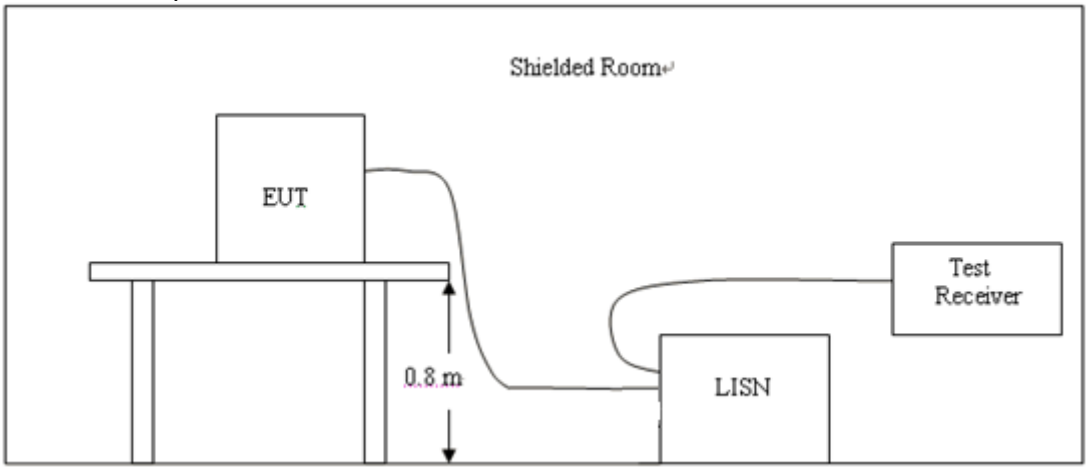
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2 Test Setup



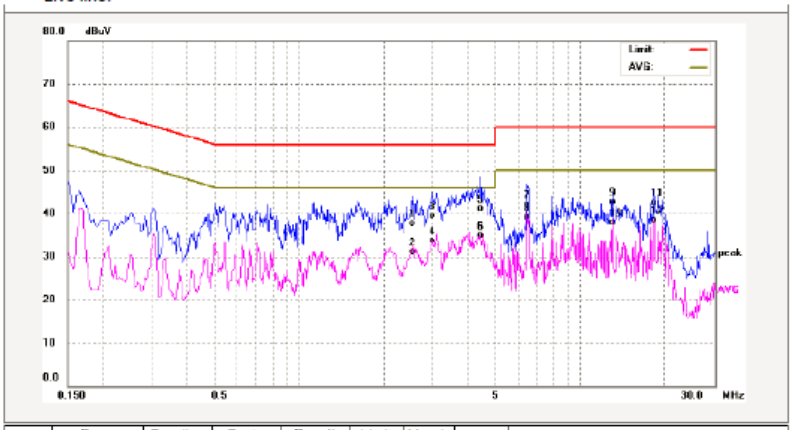
3.3 Test Procedure

1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2, Support equipment, if needed, was placed as per ANSI C63.10
3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5, All support equipments received AC power from a second LISN, if any.
6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

3.4 Test Result

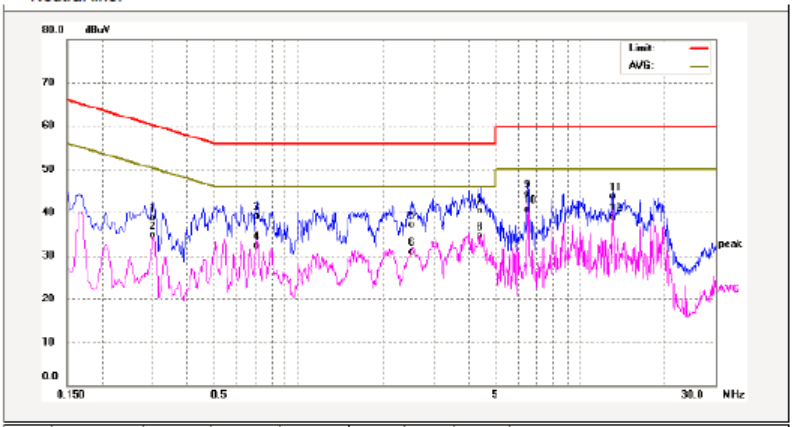
PASS

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	2.5220	27.60	10.20	37.80	56.00	-18.20	QP	
2	2.5220	20.97	10.20	31.17	46.00	-14.83	AVG	
3	2.9739	29.23	10.21	39.44	56.00	-16.56	QP	
4	2.9739	23.53	10.21	33.74	46.00	-12.26	AVG	
5	4.4140	30.93	10.24	41.17	56.00	-14.83	QP	
6	4.4140	24.57	10.24	34.81	46.00	-11.19	AVG	
7	6.4860	31.83	10.28	42.11	60.00	-17.89	QP	
8	6.4860	28.78	10.28	39.06	50.00	-10.94	AVG	
9	13.0140	32.27	10.48	42.75	60.00	-17.25	QP	
10	13.0140	27.35	10.48	37.83	50.00	-12.17	AVG	
11	18.2420	31.95	10.57	42.52	60.00	-17.48	QP	
12	18.2420	28.02	10.57	38.59	50.00	-11.41	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.3020	28.68	10.11	38.79	60.19	-21.40	QP	
2	0.3020	24.62	10.11	34.73	50.19	-15.46	AVG	
3	0.7140	28.88	10.17	39.05	56.00	-16.95	QP	
4	0.7140	22.13	10.17	32.30	46.00	-13.70	AVG	
5	2.5020	26.86	10.20	37.06	56.00	-18.94	QP	
6	2.5020	20.64	10.20	30.84	46.00	-15.16	AVG	
7	4.4140	30.04	10.24	40.28	56.00	-15.72	QP	
8	4.4140	24.23	10.24	34.47	46.00	-11.53	AVG	
9	6.4820	34.00	10.28	44.28	60.00	-15.72	QP	
10	6.4820	30.43	10.28	40.71	50.00	-9.29	AVG	
11	13.0140	33.32	10.48	43.80	60.00	-16.20	QP	
12	13.0140	28.34	10.48	38.82	50.00	-11.18	AVG	

4 RADIATED EMISSION TEST

4.1 Radiation Limit

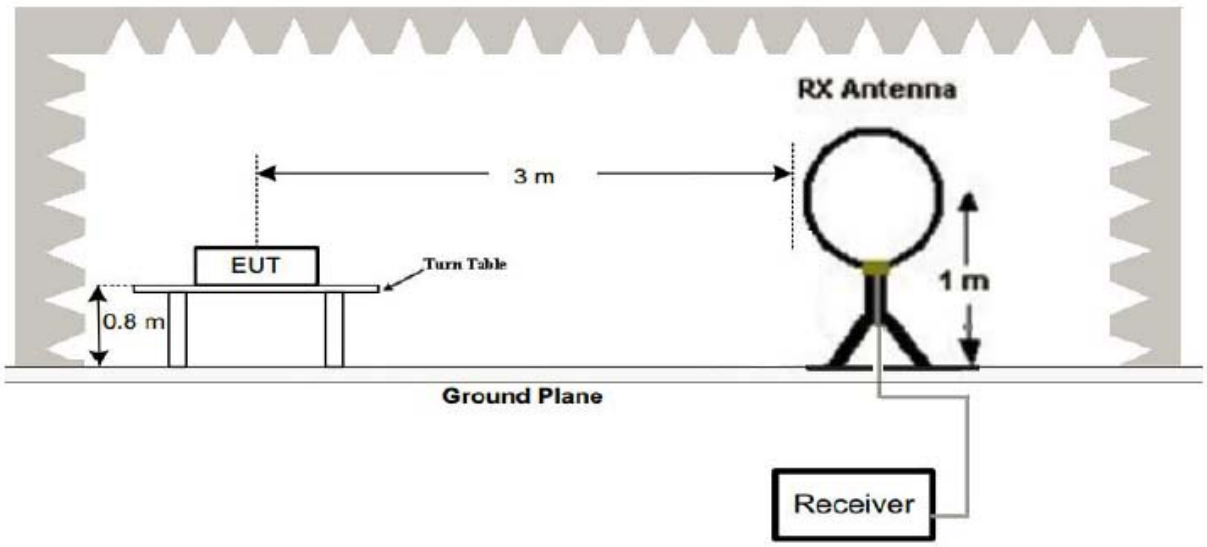
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	3	54	500

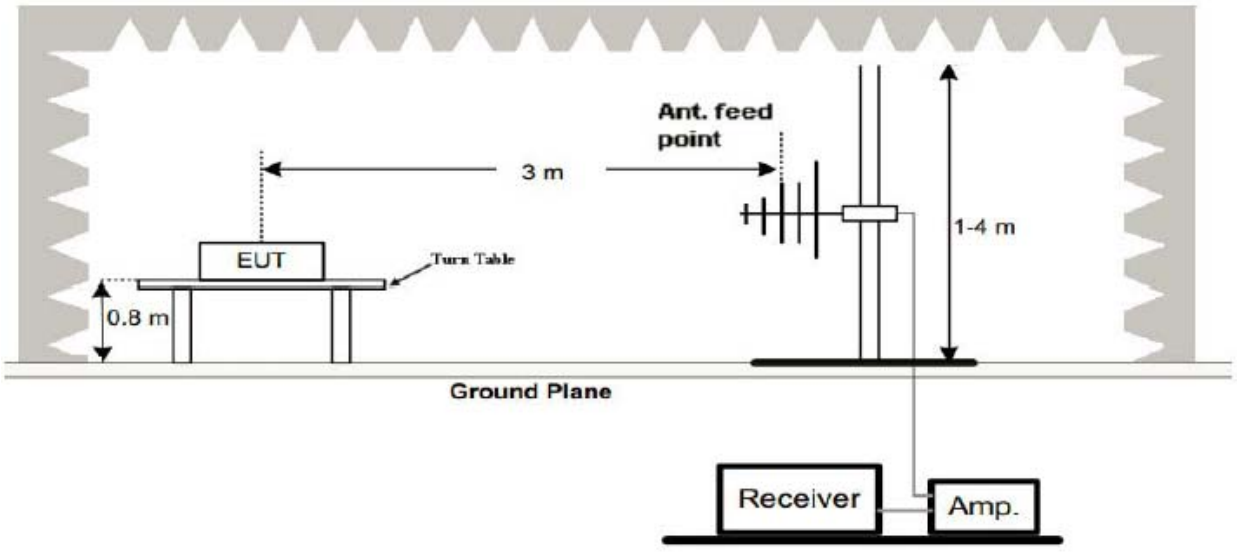
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

4.2 Test Setup

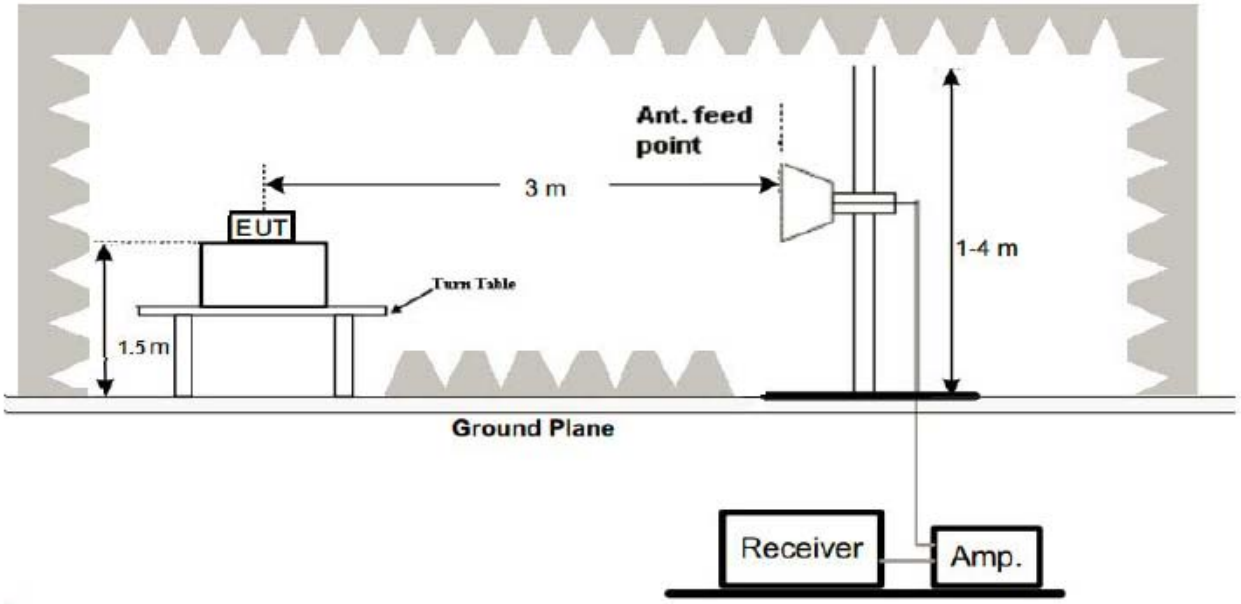
（1）Radiated Emission Test-Up Frequency Below 30MHz



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



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



4.3 Test Procedure

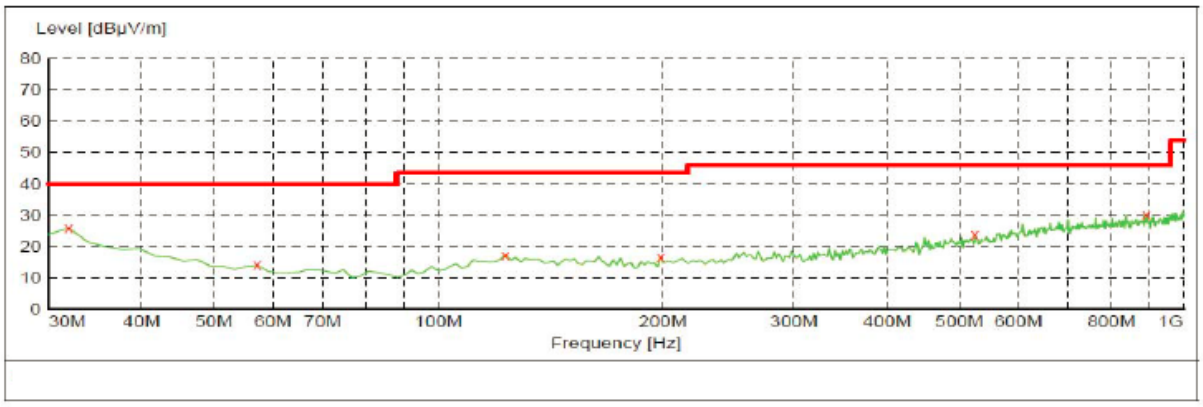
1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

Note:
For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4 Test Result

PASS
All the test modes completed for test. The worst case of Radiated Emission is CH 2402; the test data of this mode was reported.

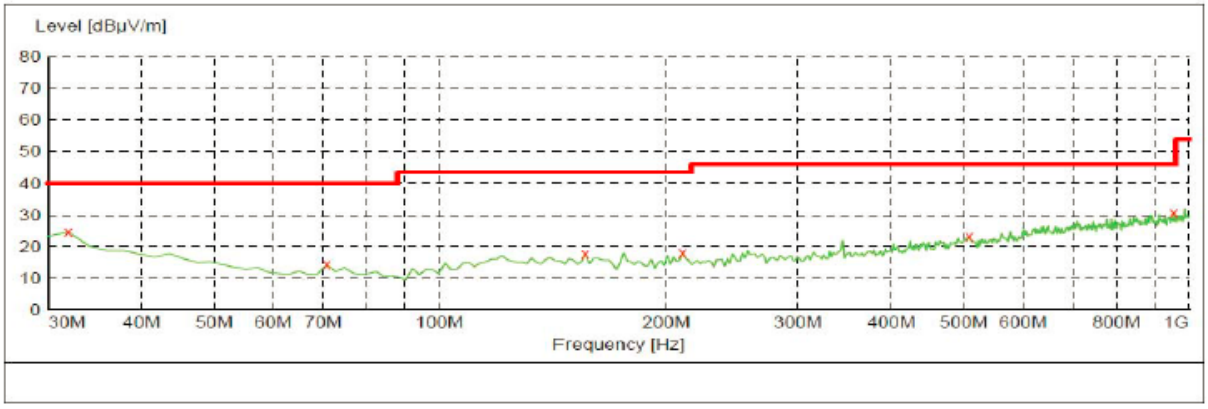
Below 1GHz Test Results:
Antenna polarity: H



MEASUREMENT RESULT:

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	25.80	19.2	40.0	14.2	---	0.0	0.00	HORIZONTAL
57.160000	14.00	8.0	40.0	26.0	---	0.0	0.00	HORIZONTAL
123.120000	17.30	14.6	43.5	26.2	---	0.0	0.00	HORIZONTAL
198.780000	16.50	13.9	43.5	27.0	---	0.0	0.00	HORIZONTAL
524.700000	23.70	20.4	46.0	22.3	---	0.0	0.00	HORIZONTAL
891.360000	30.30	25.8	46.0	15.7	---	0.0	0.00	HORIZONTAL

Antenna polarity: V



MEASUREMENT RESULT:

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	24.60	19.2	40.0	15.4	---	0.0	0.00	VERTICAL
70.740000	14.30	8.2	40.0	25.7	---	0.0	0.00	VERTICAL
156.100000	17.80	13.7	43.5	25.7	---	0.0	0.00	VERTICAL
210.420000	18.10	14.0	43.5	25.4	---	0.0	0.00	VERTICAL
509.180000	23.30	20.3	46.0	22.7	---	0.0	0.00	VERTICAL
955.380000	30.90	26.6	46.0	15.1	---	0.0	0.00	VERTICAL

Remark：
(1) Measuring frequencies from 9 KHz to the 1 GHz, Radiated emission test from 9KHz to 30MHz was verified, and no any emission was found except system noise floor.
(2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(3) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

Above 1 GHz Test Results:
Horizontal
CH Low (2402MHz)

Frequency(MHz):			2402		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2402.00	87.58	PK	114	26.42	54.18	28.78	4.61	0.00	33.40
2402.00	76.29	AV	94	17.71	42.89	28.78	4.61	0.00	33.40
4804.00	47.25	PK	74	26.75	42.74	33.49	6.91	35.89	4.51
4804.00	--	AV	54	--	--	--	--	--	--
5250.75	42.36	PK	74	31.64	34.92	34.59	7.17	34.32	7.44
5250.75	--	AV	54	--	--	--	--	--	--
7206.00	43.15	PK	74	30.85	32.04	36.95	9.18	35.03	11.11
7206.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2402		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2402.00	88.14	PK	114	25.86	54.74	28.78	4.61	0.00	33.40
2402.00	79.26	AV	94	14.74	45.86	28.78	4.61	0.00	33.40
4804.00	47.98	PK	74	26.02	43.47	33.49	6.91	35.89	4.51
4804.00	--	AV	54	--	--	--	--	--	--
5175.50	43.41	PK	74	30.59	36.09	34.49	7.13	34.29	7.32
5175.50	--	AV	54	--	--	--	--	--	--
7206.00	42.36	PK	74	31.64	31.25	36.95	9.18	35.03	11.11
7206.00	--	AV	54	--	--	--	--	--	--

CH Middle (2442MHz)

Frequency(MHz):				2442		Polarity:			HORIZONTAL	
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2442.00	87.98	PK	114	26.02	54.47	28.86	4.66	0.00	33.51
1	2442.00	79.66	AV	94	14.34	46.15	28.86	4.66	0.00	33.51
3	4884.00	47.45	PK	74	26.55	41.19	33.61	6.95	34.30	6.26
3	4884.00	--	AV	54	--	--	--	--	--	--
4	5213.25	41.24	PK	74	32.76	33.65	34.55	7.15	34.11	7.59
4	5213.25	--	AV	54	--	--	--	--	--	--
5	7326.00	43.54	PK	74	30.46	31.84	37.47	9.23	35.00	11.70
5	7326.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2442		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2442.00	88.87	PK	114	25.13	55.36	28.86	4.66	0.00	33.51
2442.00	80.41	AV	94	13.59	46.90	28.86	4.66	0.00	33.51
4884.00	46.98	PK	74	27.02	40.72	33.61	6.95	34.30	6.26
4884.00	--	AV	54	--	--	--	--	--	--
5233.50	42.45	PK	74	31.55	34.81	34.57	7.16	34.10	7.64
5233.50	--	AV	54	--	--	--	--	--	--
7326.00	43.11	PK	74	30.89	31.41	37.47	9.23	35.00	11.70
7326.00	--	AV	54	--	--	--	--	--	--

CH High (2480MHz)

Frequency(MHz):			2480		Polarity:			HORIZONTAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2480.00	87.58	PK	114	26.42	53.96	28.92	4.70	0.00	33.62
2480.00	78.66	AV	94	15.34	45.04	28.92	4.70	0.00	33.62
4960.00	46.66	PK	74	27.34	41.74	33.84	7.00	35.92	4.92
4960.00	--	AV	54	--	--	--	--	--	--
5148.50	44.35	PK	74	29.65	37.09	34.43	7.11	34.28	7.26
5148.50	--	AV	54	--	--	--	--	--	--
7440.00	43.14	PK	74	30.86	31.19	37.64	9.28	34.97	11.95
7440.00	--	AV	54	--	--	--	--	--	--

Frequency(MHz):			2480		Polarity:			VERTICAL	
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2480.00	89.98	PK	114	24.02	56.36	28.92	4.70	0.00	33.62
2480.00	79.44	AV	94	14.56	45.82	28.92	4.70	0.00	33.62
4960.00	46.41	PK	74	27.59	41.49	33.84	7.00	35.92	4.92
4960.00	--	AV	54	--	--	--	--	--	--
5015.50	40.52	PK	74	33.48	33.68	34.03	7.04	34.24	6.84
5015.50	--	AV	54	--	--	--	--	--	--
7440.00	41.21	PK	74	32.79	29.26	37.64	9.28	34.97	11.95
7440.00	--	AV	54	--	--	--	--	--	--

Remark：

(1) Measuring frequencies from 1 GHz to the 25 GHz。

(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.

(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.

(4) Data of measurement within this frequency range shown “--- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5 BAND EDGE

5.1 Limits

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

5.2 Test Procedure

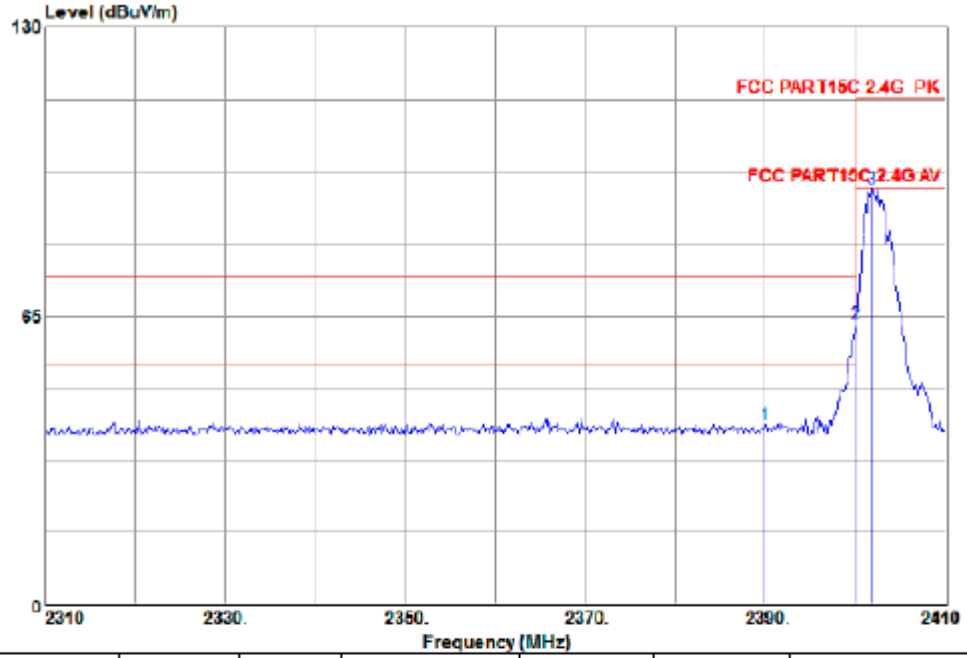
The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 100KHz and VBM to 300KHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 100 KHz and VBW to 300 KHz, to measure the conducted peak band edge.

5.3 Test Result

PASS

Radiated Test:
Operation Mode: TX Low CH
.

Left Band-Horizontal-PK

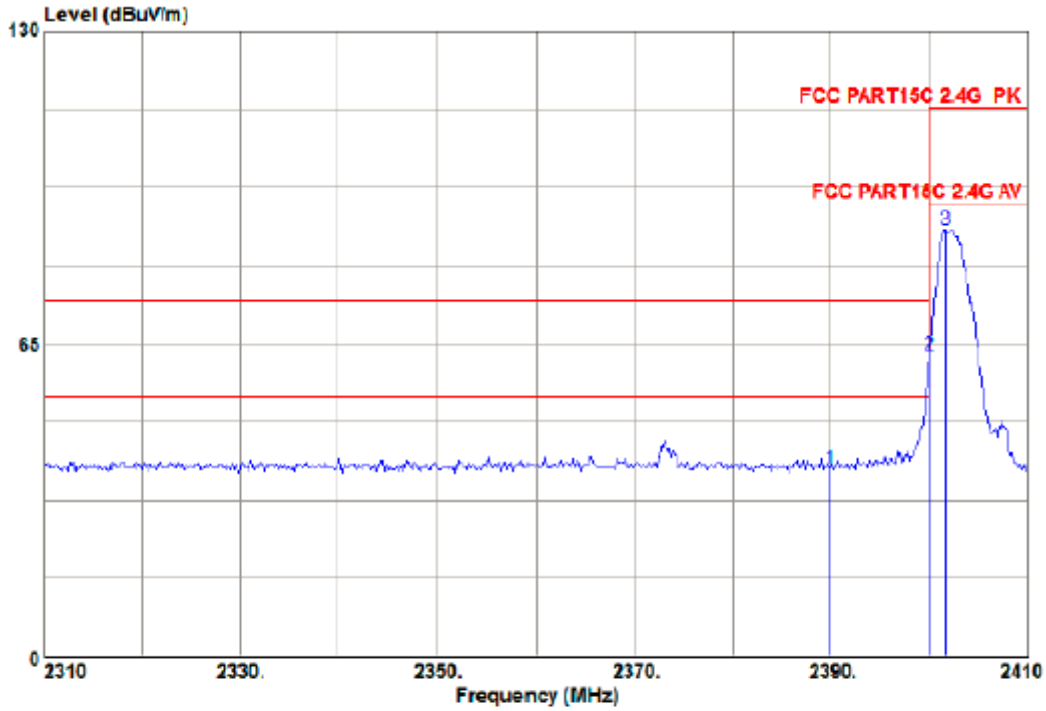


Frequency	Receiver Reading	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 209/249	
			Height	Polar			Limit	Margin
(MHz)	(dBµV)	Degree	(m)	(H/V)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
2390.00	53.87	0	1.4	H	-13.22	40.65	74.00	-33.35
2400.00	76.96	151	1.1	H	-13.19	63.77	74.00	-10.23
2401.84	106.63	25	1.5	H	-13.08	93.55	114.00	-20.45

Left Band-Horizontal -AV

Frequenc y	PK	Turn table Angle	RX Antenna		Duty cycle Factor	AV	FCC Part 15.231/209/205	
			Height	Polar			Limit	Margin
(MHz)	(dBµV/m)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
2400.00	63.77	41	1.0	H	-39.57	24.20	54.00	-29.80

Left Band-Vertical-PK



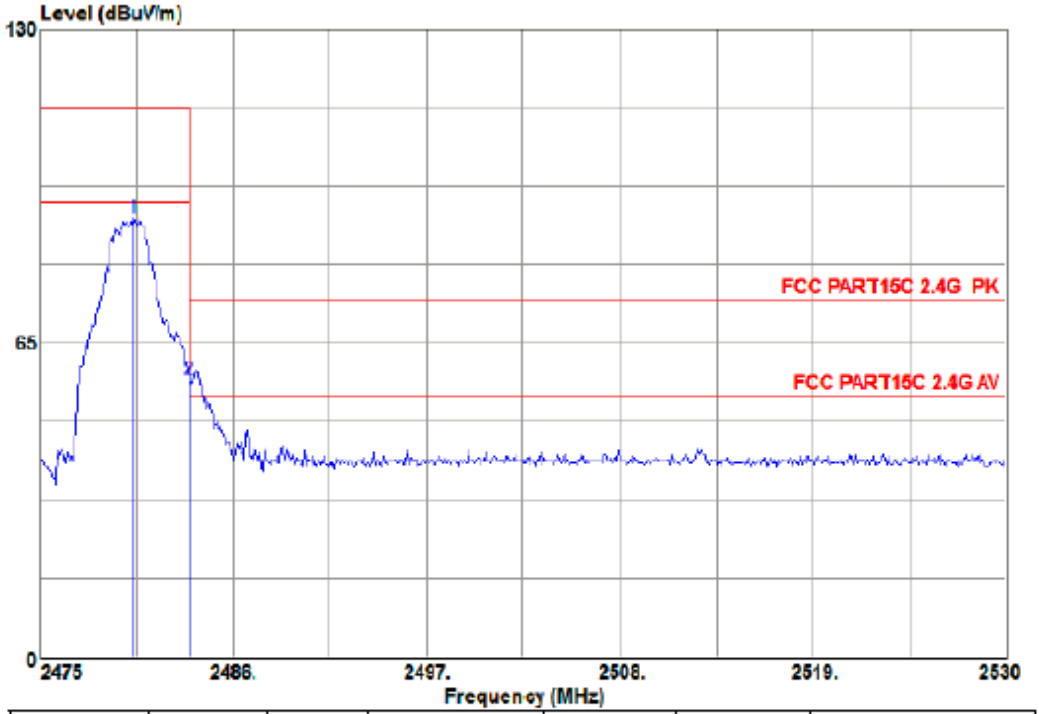
Frequency	Receiver Reading	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 209/249	
			Height	Polar			Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dB/m)	(dBμV/m)	(dBμV/m)	(dB)
2390.00	52.66	107	2.0	V	-13.22	39.44	74.00	-34.56
2400.00	75.48	292	1.2	V	-13.19	62.29	74.00	-11.71
2401.91	101.57	182	1.1	V	-13.08	88.49	114.00	-25.51

Left Band-Vertical -AV

Frequency	PK	Turn table Angle	RX Antenna		Duty cycle Factor	AV	FCC Part 15.231/209/205	
			Height	Polar			Limit	Margin
(MHz)	(dBμV/m)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
2400.00	62.29	299	1.2	V	-39.57	22.72	54.00	-31.28

Operation Mode: TX High CH

Right Band-Horizontal-PK

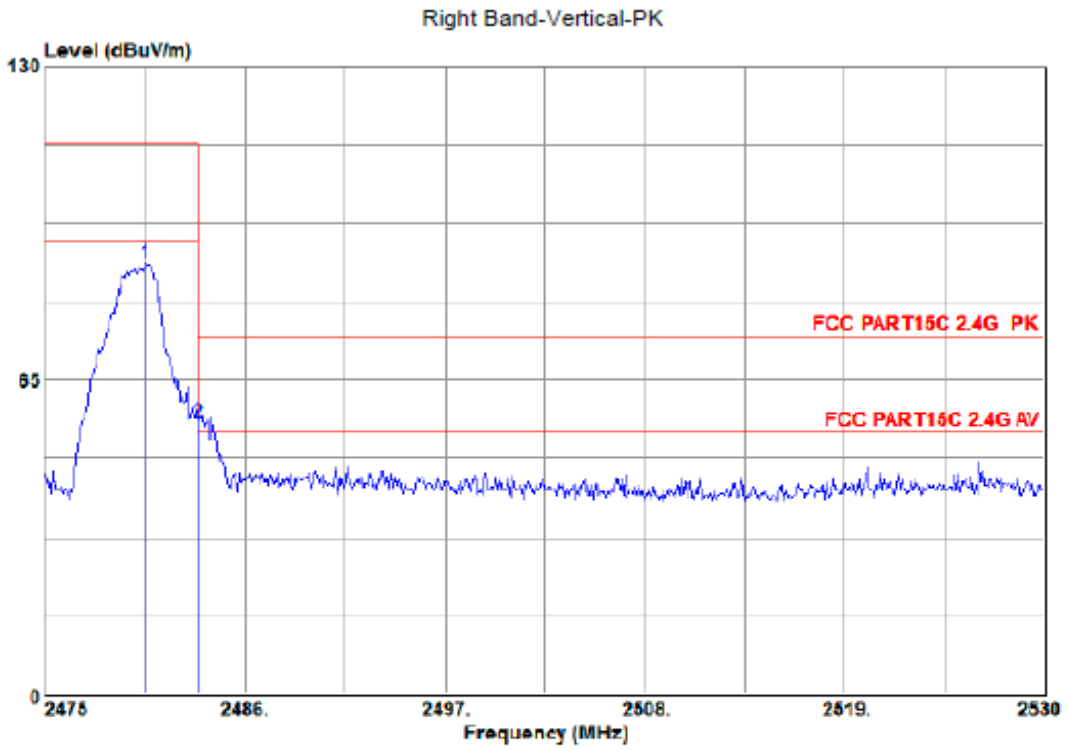


Frequency	Receiver Reading	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 209/249	
			Height	Polar			Limit	Margin
(MHz)	(dBµV)	Degree	(m)	(H/V)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
2480.33	103.26	215	1.3	H	-12.61	90.65	114.00	-23.35
2483.50	70.14	16	1.2	H	-12.53	57.61	74.00	-16.39

Right Band-Horizontal -AV

Frequency	PK	Turn table Angle	RX Antenna		Duty cycle Factor	AV	FCC Part 15.231/209/205	
			Height	Polar			Limit	Margin
(MHz)	(dBµV/m)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
2483.50	57.61	345	1.2	H	-39.57	18.04	54.00	-35.96

Operation Mode: TX High CH



Frequency	Receiver Reading	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 209/249	
			Height	Polar			Limit	Margin
(MHz)	(dBµV)	Degree	(m)	(H/V)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
2480.33	102.54	148	1.5	V	-12.61	89.93	114.00	-24.07
2483.50	68.27	338	1.4	V	-12.53	55.74	74.00	-18.26

Frequenc y	PK	Turn table Angle	RX Antenna		Duty cycle Factor	AV	FCC Part 15.231/209/205	
			Height	Polar			Limit	Margin
(MHz)	(dBµV/m)	Degree	(m)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
2483.50	55.74	19	1.8	V	-39.57	16.17	54.00	-37.83

6 OCCUPIED BANDWIDTH MEASUREMENT

6.1 Test Setup

Same as Radiated Emission Measurement

6.2 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation.
3. Based on FCC Part15 C Section 15.239(a): RBW= 10KHz. VBW= 30 KHz, Span=1MHz.
4. The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

6.3 Measurement Equipment Used

Same as Radiated Emission Measurement

6.4 Test Result

PASS

CH: 2402MHz

CH: 2442MHz

CH: 2480MHz

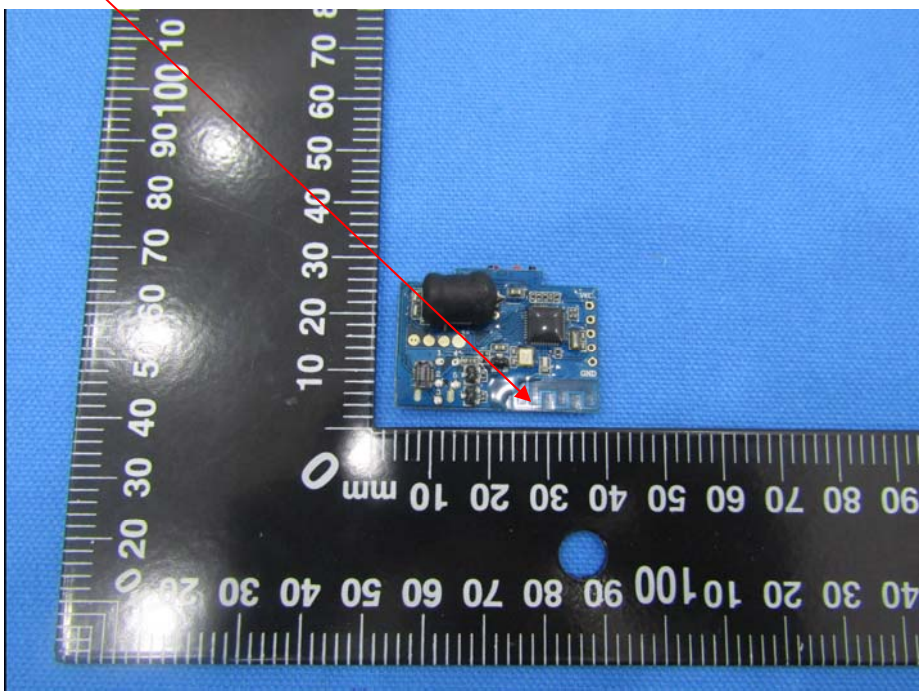
7 ANTENNA REQUIREMENT

Standard Applicable
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 15.249, 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.

Refer to statement below for compliance.
The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

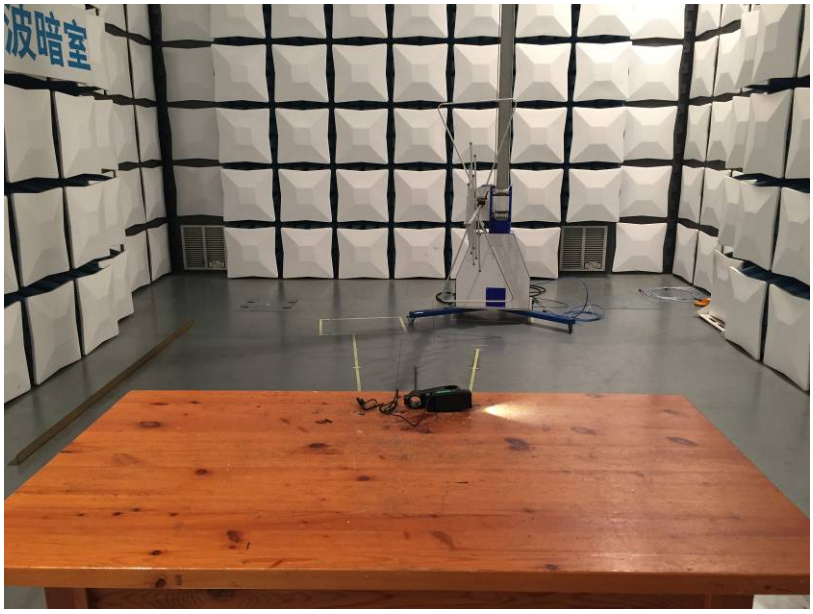
Antenna Connected Construction
The antenna used in this product is a PCB Antenna, The directional gains of antenna used for transmitting is 0dBi.

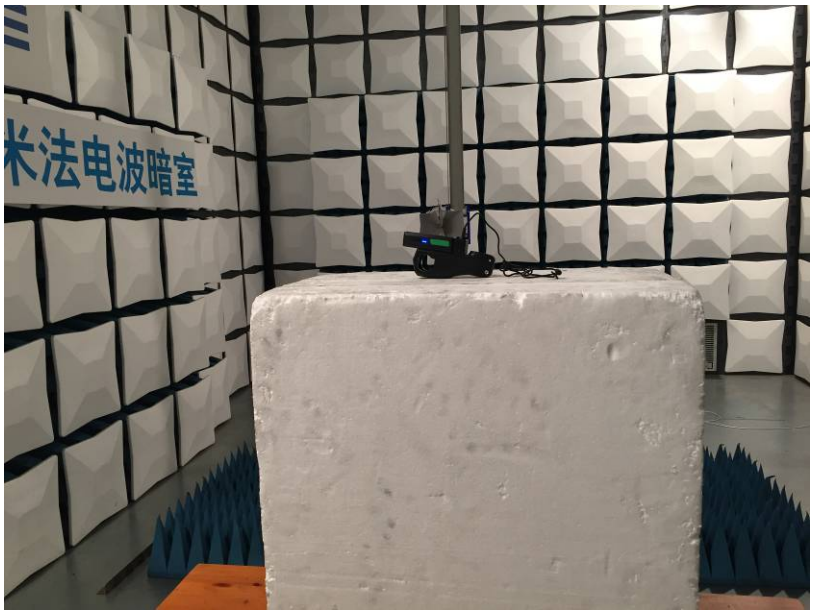
ANTENNA



8 PHOTOGRAPH OF TEST

8.1 Radiated Emission





8.2 Conducted Emission