FCC Part 15C Test Report

FCC ID: 2AOM9-JIAXIN

Product Name:	Remote Control
Trademark:	N/A
Model Name :	JIAXIN
Prepared For :	Shenzhen Hedy Intelligent Technology Co., Ltd
Address :	3-1 Area, 19B Buildings, The Second Industrial Park Of Xitian, Gongming Street, Guangming New District, Shenzhen, Guangdong, China
Prepared By :	Shenzhen BCTC Testing Co., Ltd.
Address :	BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road, Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China
Test Date:	Dec.06 - Dec. 16, 2017
Date of Report :	Dec. 16, 2017
Report No.:	BCTC-LH171202863E

TEST RESULT CERTIFICATION

Applicant's name..... :	Shenzhen Hedy Intelligent Technology Co., Ltd
Address..... :	3-1 Area, 19B Buildings, The Second Industrial Park Of Xitian, Gongming Street, Guangming New District, Shenzhen, Guangdong, China
Manufacture's Name..... :	DONGGUAN CITY JIAXIN SPORTS EQUIPMENT CO., LTD
Address..... :	B Block, 3-4 Floor, Yin Man Di Industrial Zone, Huangjiang Town, Dongguan, China
Product description	
Product name.....:	Remote Control
Trademark.....:	N/A
Model and/or type reference :	JIAXIN
Standards..... :	FCC Part15.249 ANSI C63.10-2013

This device described above has been tested by BCTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Prepared by(Engineer):	Snow Zeng	Snow Zeng
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BCTC APPROVED SHENZHEN BCTC TECHNOLOGY CO., LTD

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.249) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.249	Fundamental &Radiated Spurious Emission Measurement	PASS	
15.249	Bandwidth	PASS	
15.205	Restricted Bands Edge Emission	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

Shenzhen BCTC Testing Co., Ltd.

Add. : BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road, Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China

A2LA Certificate No.: 4474.01

IC Registered No.: 12655A

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Remote Control</td></tr>
<tr><td>Trademark</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>JIAXIN</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Remote Control
<table>
<tr><td>Operation Frequency:</td><td>2401~2408MHz</td></tr>
<tr><td>Modulation Type:</td><td>GFSK</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>1Mbps</td></tr>
<tr><td>Number Of Channel</td><td>8CH</td></tr>
<tr><td>Antenna type:</td><td>Internal Antenna</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>0dBi</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Power</td><td>DC 3.7V
DC 5V from USB</td></tr>
<tr><td>hardware version</td><td>--</td></tr>
<tr><td>Software version</td><td>--</td></tr>
<tr><td>Serial number</td><td>--</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2401	08	2408		
02	2402				
03	2403				
04	2404				
05	2405				
06	2406				
07	2407				

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	CH01
Mode 2	CH04
Mode 3	CH08
Mode 4	Link Mode

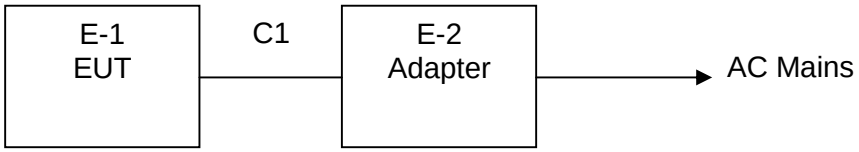
For Radiated Emission	
Final Test Mode	Description
Mode 1	CH01
Mode 2	CH04
Mode 3	CH08

Note:

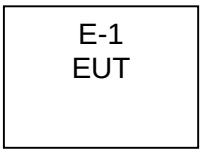
(1) The measurements are performed at the highest, middle, lowest available channels.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Radiated Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Remote Control	N/A	JIAXIN	N/A	EUT
E-2	Adapter (provide by test lab)	N/A	BC-050100		I/P: AC 100-240V 50/60Hz O/P: DC 5V/0.5A

Item	Shielded Type	Ferrite Core	Length	Note
C1	No	No	0.8	Mini USB line

Note: For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation test, Band-edge test and bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4407B	MY45108040	2017.08.25	2018.08.24
2	Test Receiver (9kHz-7GHz)	R&S	ESPI	101318	2017.08.25	2018.08.24
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB 9168	VULB91 68-438	2017.08.25	2018.08.24
4	Horn Antenna (1GHz-18GHz)	SCHWARZBECK	BBHA9120D	1201	2017.09.03	2018.09.02
5	Horn Antenna (14GHz-40GHz)	SCHWARZBECK	BBHA 9170	9170-181	2017.09.03	2018.09.02
6	Amplifier (9KHz-6GHz)	SCHWARZBECK	BBV9744	9744-0037	2017.08.25	2018.08.24
7	Amplifier (1GHz-18GHz)	SCHWARZBECK	BBV9718	9718-309	2017.08.25	2018.08.24
8	Amplifier (18GHz-40GHz)	SCHWARZBECK	BBV 9721	9721-205	2017.09.03	2018.09.02
9	Loop Antenna (9KHz-30MHz)	SCHWARZBECK	FMZB1519B	00014	2017.09.03	2018.09.02
10	RF cables1 (9kHz-1GHz)	R&S	R203	R20X	2017.08.25	2018.08.24
11	RF cables2 (1GHz-40GHz)	R&S	R204	R21X	2017.08.25	2018.08.24
12	Antenna connector	Florida RF Labs	N/A	RF 01#	2017.08.25	2018.08.24
13	Power Metter	ANRITSU	ML2487A	6K00001568	2017.08.25	2018.08.24
14	Power Sensor (AV)	ANRITSU	ML2491A	030989	2017.08.25	2018.08.24
15	Signal Analyzer 9kHz-26.5GHz	Agilent	N9010A	MY48030494	2017.08.25	2018.08.24
16	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	2017.08.25	2018.08.24
17	D.C. Power Supply	LongWei	PS-305D	010964729	2017.08.25	2018.08.24

Conduction Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Test Receiver	R&S	ESCI	1166.5950K03-1 01165-ha	2017.08.25	2018.08.24
2	LISN	SCHWARZBECK	NSLK8127	8127739	2017.08.25	2018.08.24
3	LISN	R&S	NSLK8126	8126487	2017.08.25	2018.08.24
4	RF cables	R&S	R204	R20X	2017.08.25	2018.08.24
5	Attenuator	R&S	ESH3-Z2	143206	2017.08.25	2018.08.24

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

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

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

3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal 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.

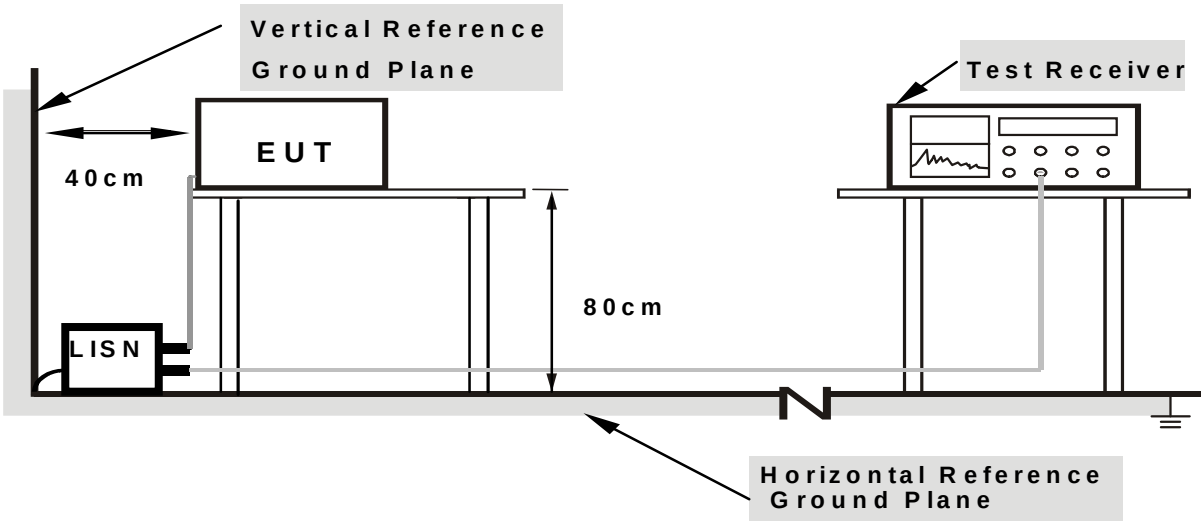
d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



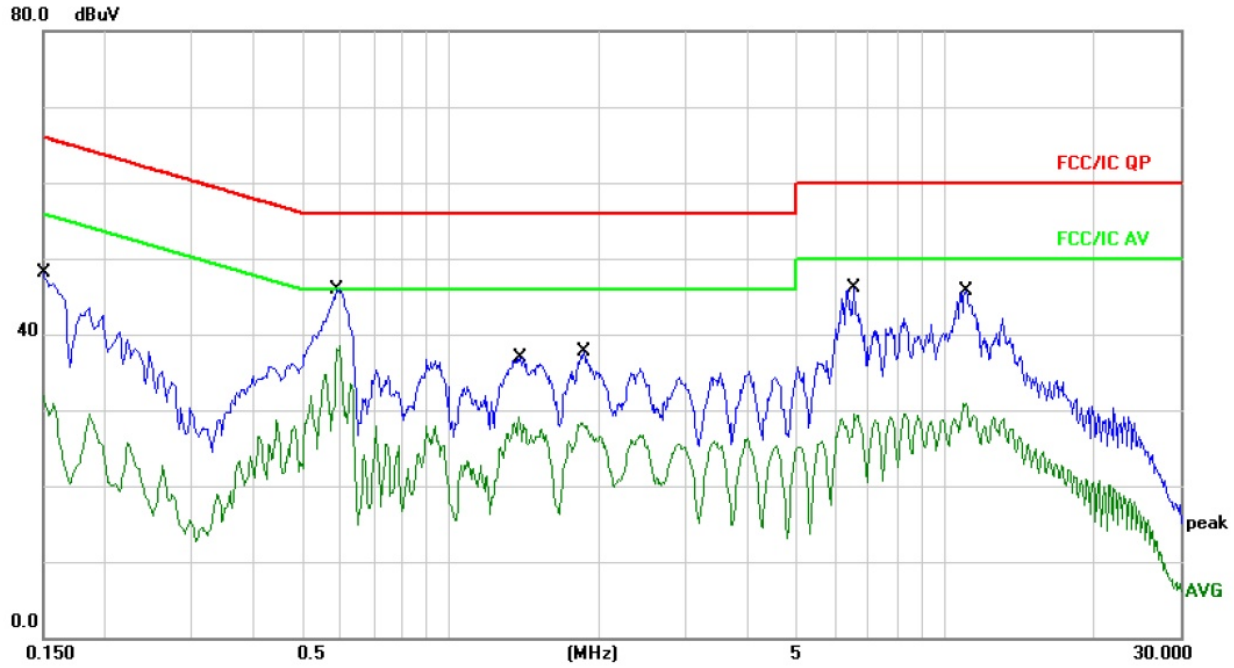
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

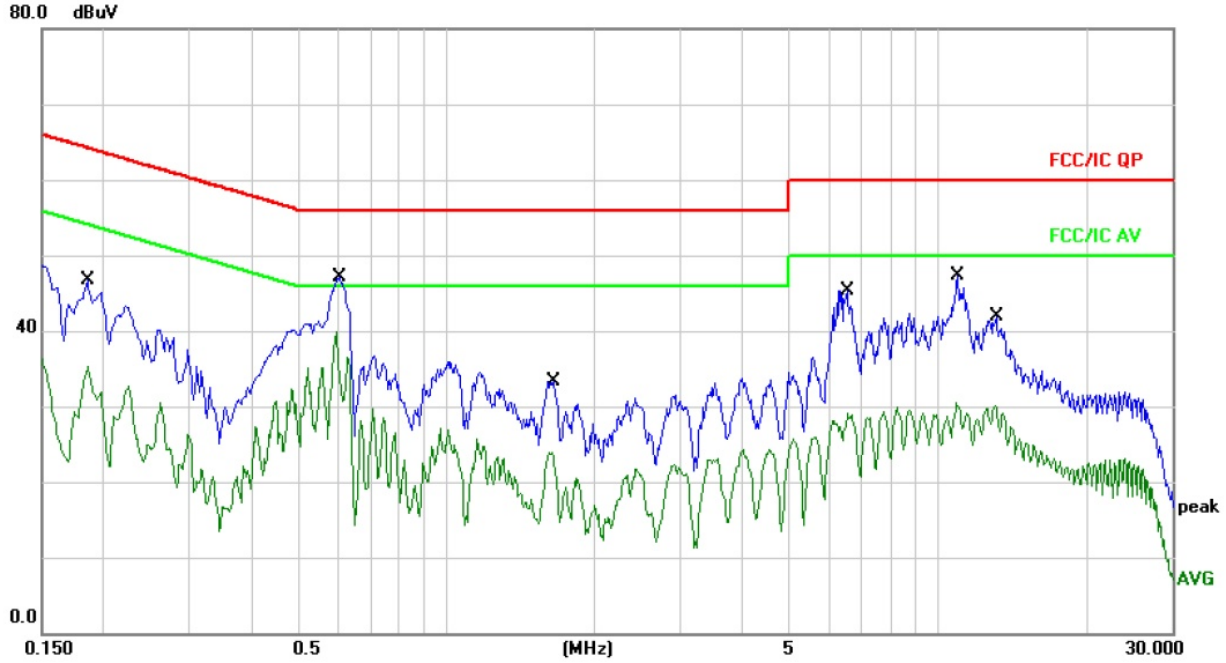
Temperature：	25 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	AC 120V/60Hz	Test Mode：	Mode 4



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	38.00	10.05	48.05	65.99	-17.94	QP	
2		0.1500	21.78	10.05	31.83	55.99	-24.16	AVG	
3		0.5899	35.82	10.12	45.94	56.00	-10.06	QP	
4	*	0.5899	28.35	10.12	38.47	46.00	-7.53	AVG	
5		1.3779	26.73	10.17	36.90	56.00	-19.10	QP	
6		1.3779	18.88	10.17	29.05	46.00	-16.95	AVG	
7		1.8620	27.49	10.18	37.67	56.00	-18.33	QP	
8		1.8620	17.74	10.18	27.92	46.00	-18.08	AVG	
9		6.5620	36.09	10.10	46.19	60.00	-13.81	QP	
10		6.5620	19.31	10.10	29.41	50.00	-20.59	AVG	
11		10.9500	35.65	10.13	45.78	60.00	-14.22	QP	
12		10.9500	20.77	10.13	30.90	50.00	-19.10	AVG	

Temperature：	25 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	AC 120V/60Hz	Test Mode：	Mode 4



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1860	36.58	10.06	46.64	64.21	-17.57	QP	
2		0.1860	25.25	10.06	35.31	54.21	-18.90	AVG	
3		0.5980	36.90	10.12	47.02	56.00	-8.98	QP	
4	*	0.5980	29.85	10.12	39.97	46.00	-6.03	AVG	
5		1.6380	23.05	10.18	33.23	56.00	-22.77	QP	
6		1.6380	13.78	10.18	23.96	46.00	-22.04	AVG	
7		6.5500	35.28	10.10	45.38	60.00	-14.62	QP	
8		6.5500	19.08	10.10	29.18	50.00	-20.82	AVG	
9		10.9260	37.13	10.13	47.26	60.00	-12.74	QP	
10		10.9260	20.31	10.13	30.44	50.00	-19.56	AVG	
11		13.1059	31.70	10.14	41.84	60.00	-18.16	QP	
12		13.1059	19.99	10.14	30.13	50.00	-19.87	AVG	

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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 (Above 1000MHz)

FREQUENCY (MHz)	Limit (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).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	25GHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel

Note:

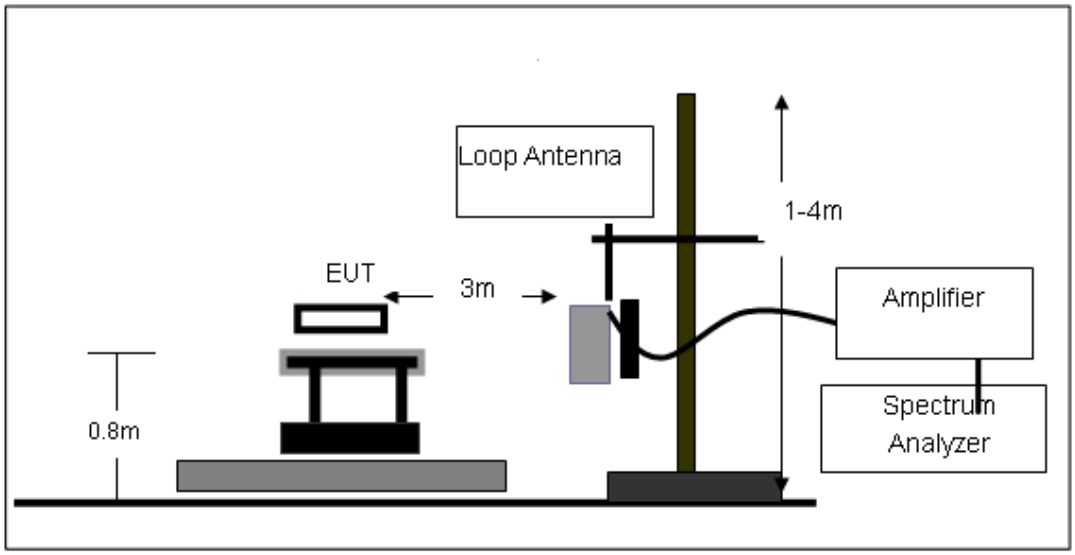
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

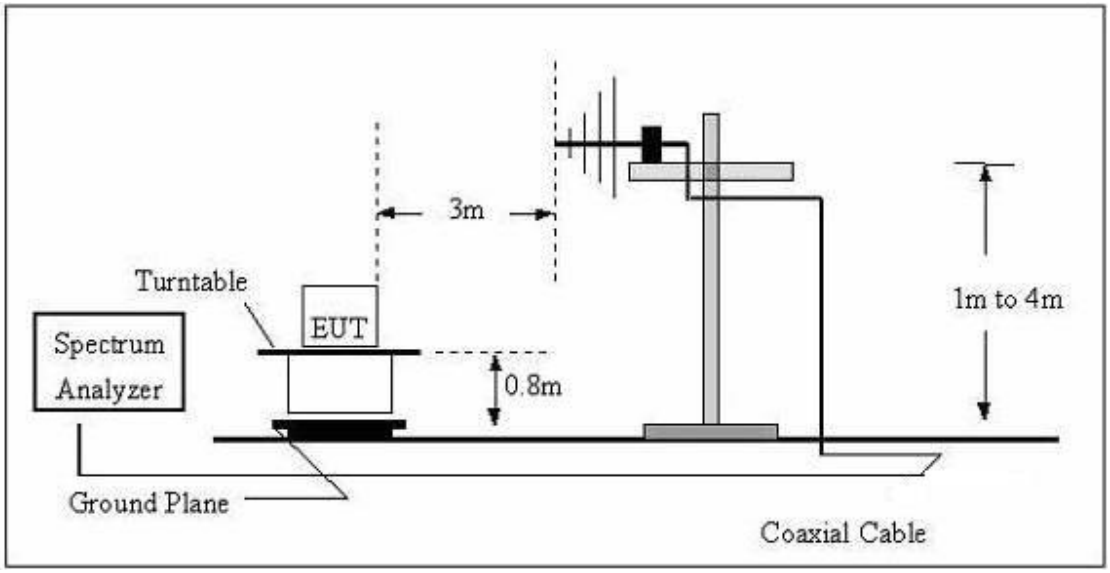
No deviation

3.2.4 TEST SETUP

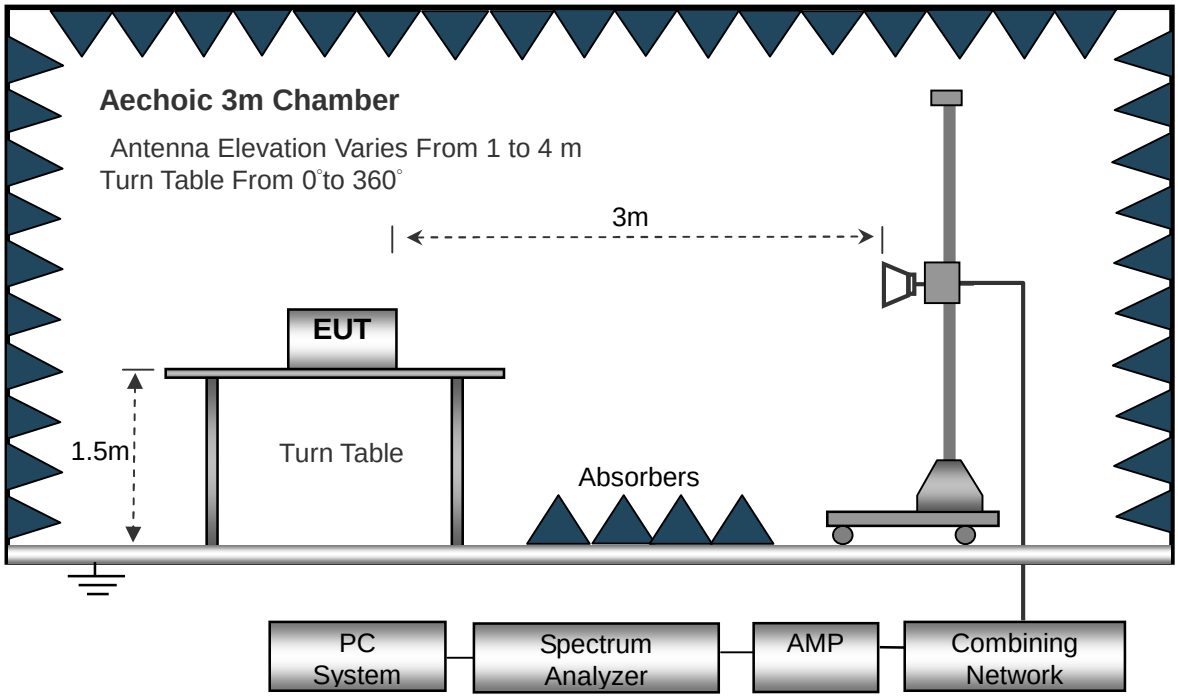
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

Temperature:	20℃	Relative Humidtity:	48%
Pressure:	1010 hPa	Test Voltage :	DC 3.7V
Test Mode :	Mode 4	Polarization :	--

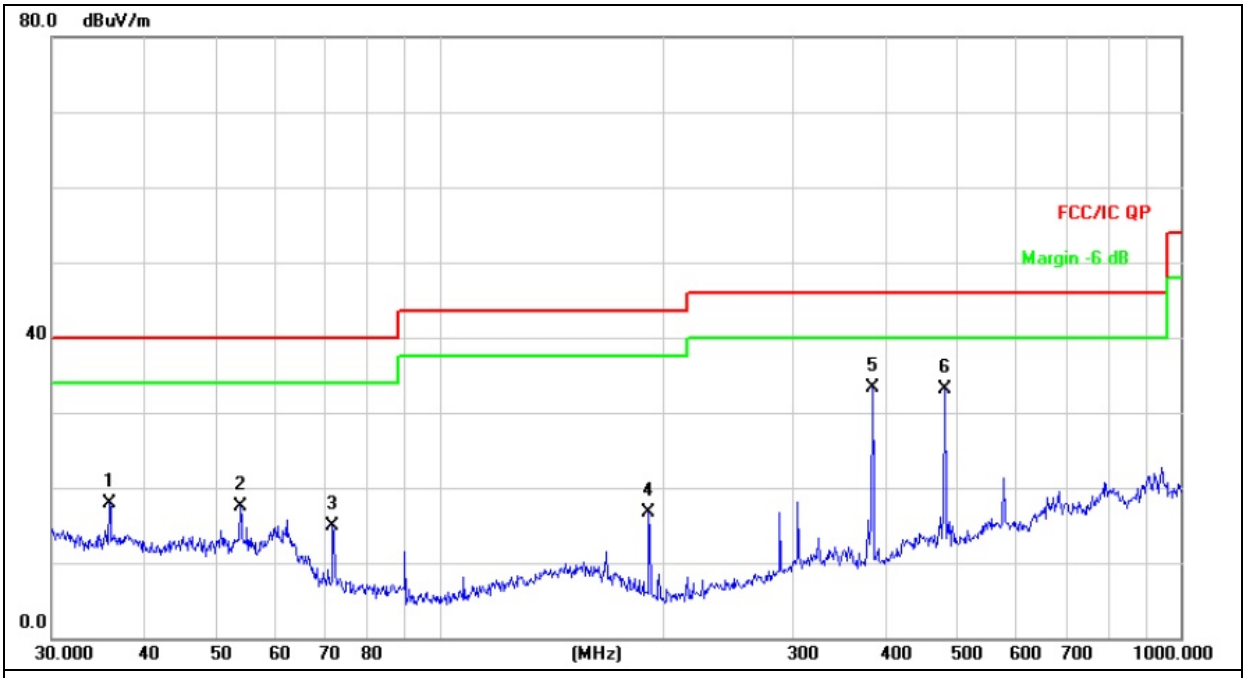
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

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.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

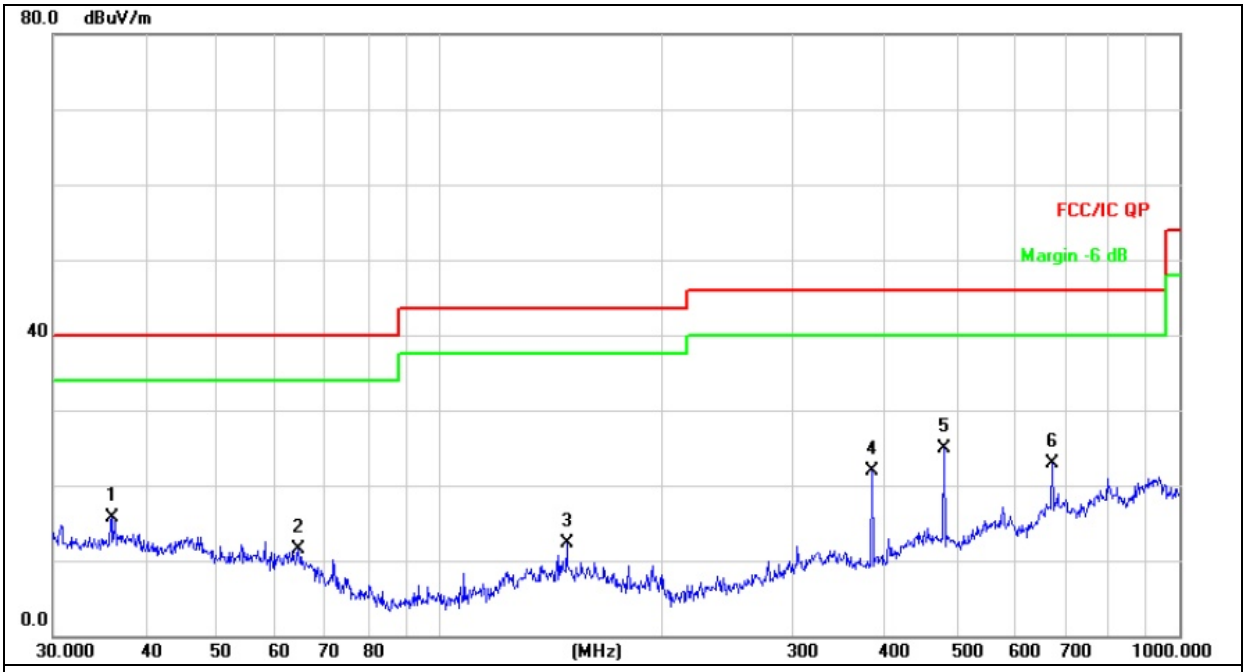
Temperature：	26℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Horizontal
Test Voltage ：	DC 3.7V		
Test Mode ：	Mode 4		



Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		35.8746	26.42	-8.58	17.84	40.00	-22.16	QP
2		53.8818	28.41	-10.93	17.48	40.00	-22.52	QP
3		71.8320	30.07	-15.19	14.88	40.00	-25.12	QP
4		191.7450	32.40	-15.69	16.71	43.50	-26.79	QP
5	*	383.9318	43.90	-10.57	33.33	46.00	-12.67	QP
6		480.5276	41.47	-8.42	33.05	46.00	-12.95	QP

Temperature：	26℃	Relative Humidity：	54%
Pressure：	1010 hPa	Polarization：	Vertical
Test Voltage ：	DC 3.7V		
Test Mode ：	Mode 4		



Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		36.0007	24.38	-8.59	15.79	40.00	-24.21	QP
2		64.4331	23.87	-12.40	11.47	40.00	-28.53	QP
3		148.4410	25.26	-12.93	12.33	43.50	-31.17	QP
4		383.9318	32.40	-10.57	21.83	46.00	-24.17	QP
5	*	480.5276	33.27	-8.42	24.85	46.00	-21.15	QP
6		672.8444	27.61	-4.80	22.81	46.00	-23.19	QP

3.2.8 TEST RESULTS (1GHZ~25GHZ)

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:2401									
V	2401.00	106.59	38.06	7.42	20.15	96.10	114.00	-17.90	PK
V	2401.00	97.45	38.06	7.42	20.15	86.96	94.00	-7.04	AV
V	4802.00	58.57	38.53	7.78	23.25	51.07	74.00	-22.93	PK
V	4802.00	45.12	38.53	7.78	23.25	37.62	54.00	-16.38	AV
V	16132.00	49.27	38.75	10.36	26.57	47.45	74.00	-26.55	PK
H	2401.00	106.56	38.06	7.42	20.15	96.07	114.00	-17.93	PK
H	2401.00	97.06	38.06	7.42	20.15	86.57	94.00	-7.43	AV
H	4802.00	59.39	38.53	7.78	23.25	51.89	74.00	-22.11	PK
H	4802.00	45.00	38.53	7.78	23.25	37.50	54.00	-16.50	AV
H	16132.00	49.02	38.75	10.36	26.57	47.20	74.00	-26.80	PK
operation frequency:2404									
V	2404.00	107.10	38.06	7.42	20.15	96.61	114.00	-17.39	PK
V	2404.00	96.60	38.06	7.42	20.15	86.11	94.00	-7.89	AV
V	4808.00	59.49	38.53	7.78	23.25	51.99	74.00	-22.01	PK
V	4808.00	45.16	38.53	7.78	23.25	37.66	54.00	-16.34	AV
V	16132.00	47.55	38.75	10.36	26.57	45.73	74.00	-28.27	PK
H	2404.00	107.12	38.06	7.42	20.15	96.63	114.00	-17.37	PK
H	2404.00	97.47	38.06	7.42	20.15	86.98	94.00	-7.02	AV
H	4808.00	60.53	38.53	7.78	23.25	53.03	74.00	-20.97	PK
H	4808.00	45.86	38.53	7.78	23.25	38.36	54.00	-15.64	AV
H	16132.00	49.19	38.75	10.36	26.57	47.37	74.00	-26.63	PK
operation frequency:2408									
V	2408.00	107.14	38.08	7.43	20.12	96.61	114.00	-17.39	PK
V	2408.00	96.69	38.08	7.43	20.12	86.16	94.00	-7.84	AV
V	4816.00	60.29	38.43	7.67	23.19	52.72	74.00	-21.28	PK
V	4816.00	45.43	38.43	7.67	23.19	37.86	54.00	-16.14	AV
V	16132.00	49.41	38.75	10.36	26.57	47.59	74.00	-26.41	PK
H	2408.00	107.17	38.08	7.43	20.12	96.64	114.00	-17.36	PK
H	2408.00	96.55	38.08	7.43	20.12	86.02	94.00	-7.98	AV
H	4816.00	60.48	38.43	7.67	23.19	52.91	74.00	-21.09	PK
H	4816.00	45.46	38.43	7.67	23.19	37.89	54.00	-16.11	AV
H	16132.00	49.73	38.75	10.36	26.57	47.91	74.00	-26.09	PK

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
   Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

3.3 RADIATED BAND EMISSION MEASUREMENT

3.3.1 TEST REQUIREMENT:

FCC Part15 C Section 15.209 and 15.205

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (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).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	2300MHz
Stop Frequency	2520
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

3.3.2 TEST PROCEDURE

Above 1GHz test procedure as below:

a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel,the Highest channel

Note:

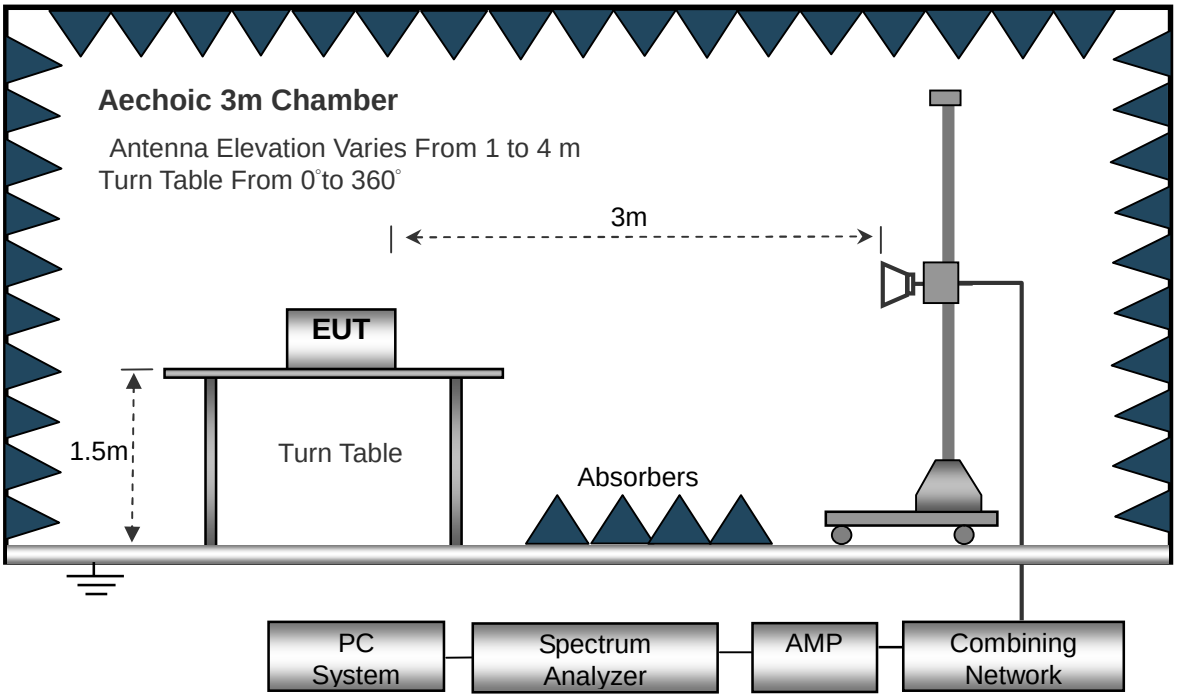
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



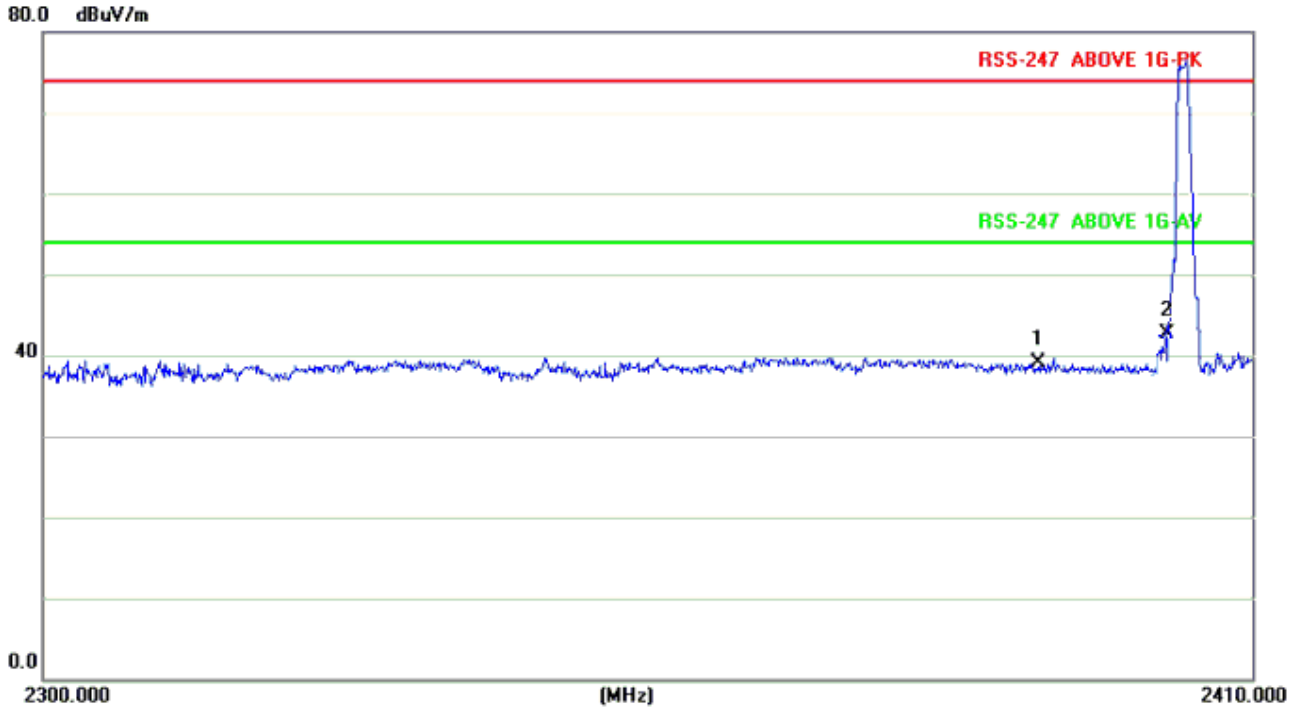
3.3.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

The plot only show the Horizontal's average data.

3.3.6 TEST RESULT

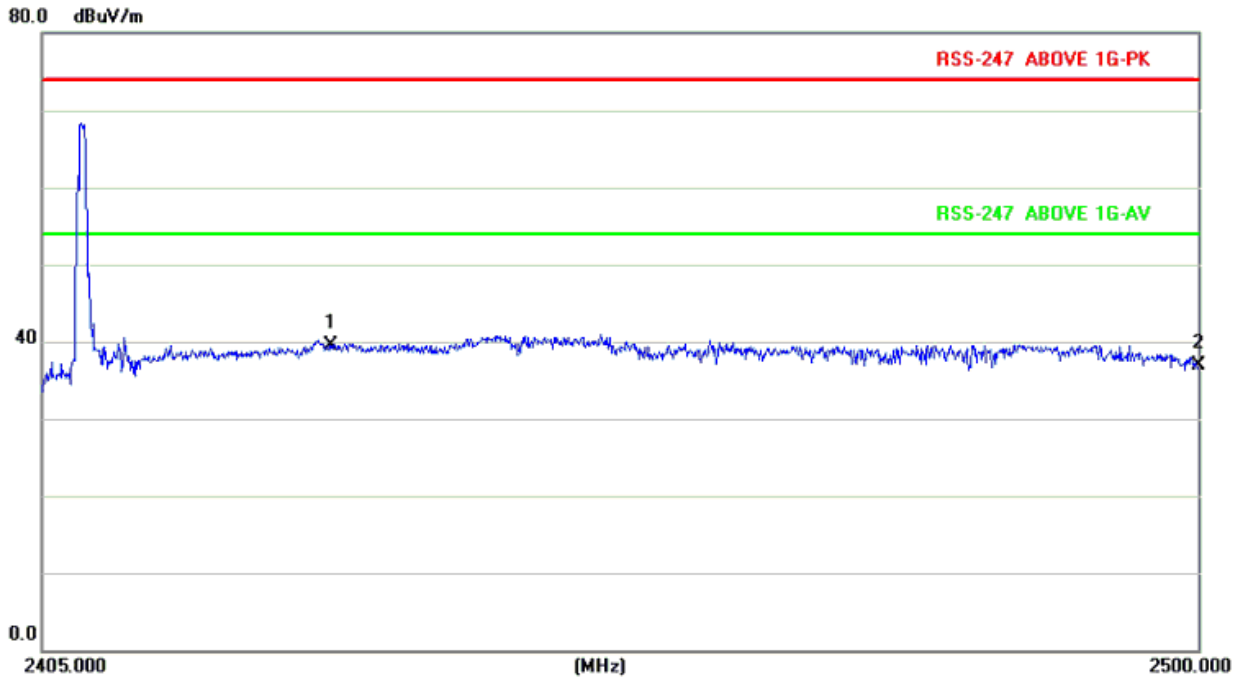
Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m	Margin (dB)	Detector Type
operation frequency:2401									
V	2390.00	66.83	38.06	7.42	20.15	56.34	74.00	-17.66	PK
V	2390.00	55.51	38.06	7.42	20.15	45.02	54.00	-8.98	AV
V	2400.00	67.04	38.06	7.42	20.15	56.55	74.00	-17.45	PK
V	2400.00	55.09	38.06	7.42	20.15	44.60	54.00	-9.40	AV
H	2390.00	67.12	38.06	7.42	20.15	56.63	74.00	-17.37	PK
H	2390.00	55.54	38.06	7.42	20.15	45.05	54.00	-8.95	AV
H	2400.00	66.99	38.06	7.42	20.15	56.50	74.00	-17.50	PK
H	2400.00	55.48	38.06	7.42	20.15	44.99	54.00	-9.01	AV



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:2408									
V	2483.50	67.04	38.17	7.42	20.51	56.80	74.00	-17.20	PK
V	2483.50	55.74	38.17	7.42	20.51	45.50	54.00	-8.50	AV
V	2500.00	66.98	38.20	7.45	20.54	56.77	74.00	-17.23	PK
V	2500.00	55.19	38.20	7.45	20.54	44.98	54.00	-9.02	AV
H	2483.50	67.16	38.17	7.42	20.51	56.92	74.00	-17.08	PK
H	2483.50	55.79	38.17	7.42	20.51	45.55	54.00	-8.45	AV
H	2500.00	66.78	38.20	7.45	20.54	56.57	74.00	-17.43	PK
H	2500.00	56.04	38.20	7.45	20.54	45.83	54.00	-8.17	AV

Remark:

1. Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



4. BANDWIDTH TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.249) , Subpart C	
Section	Test Item
15.249	Bandwidth

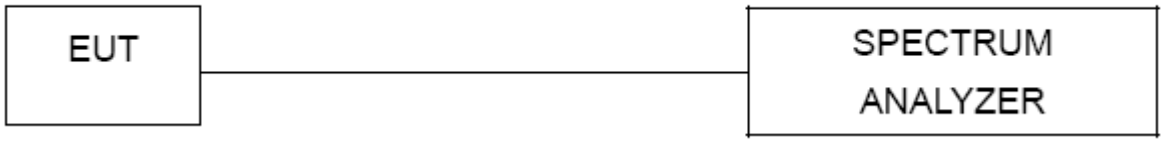
4.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

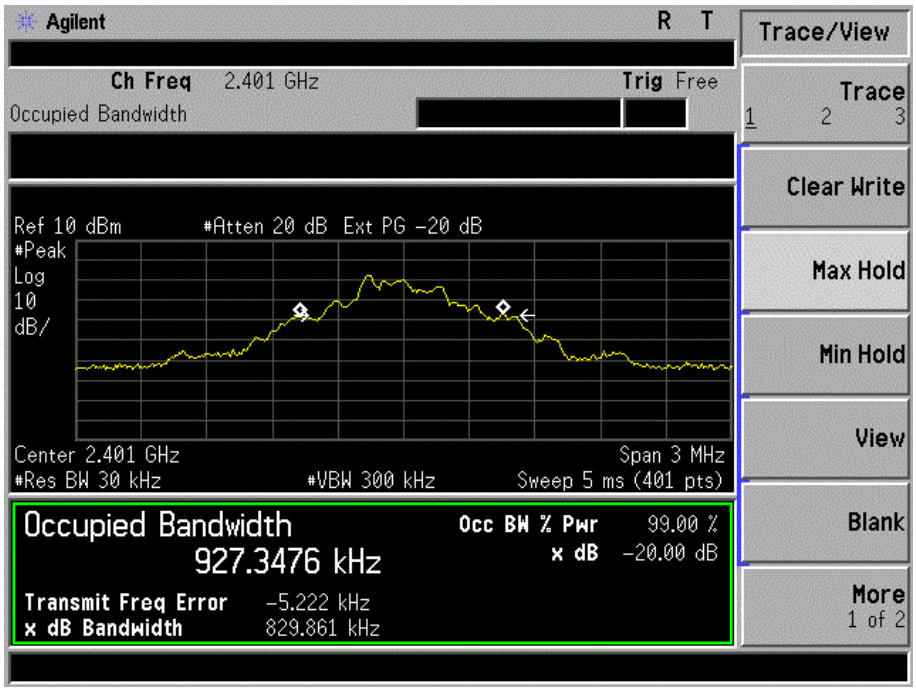
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

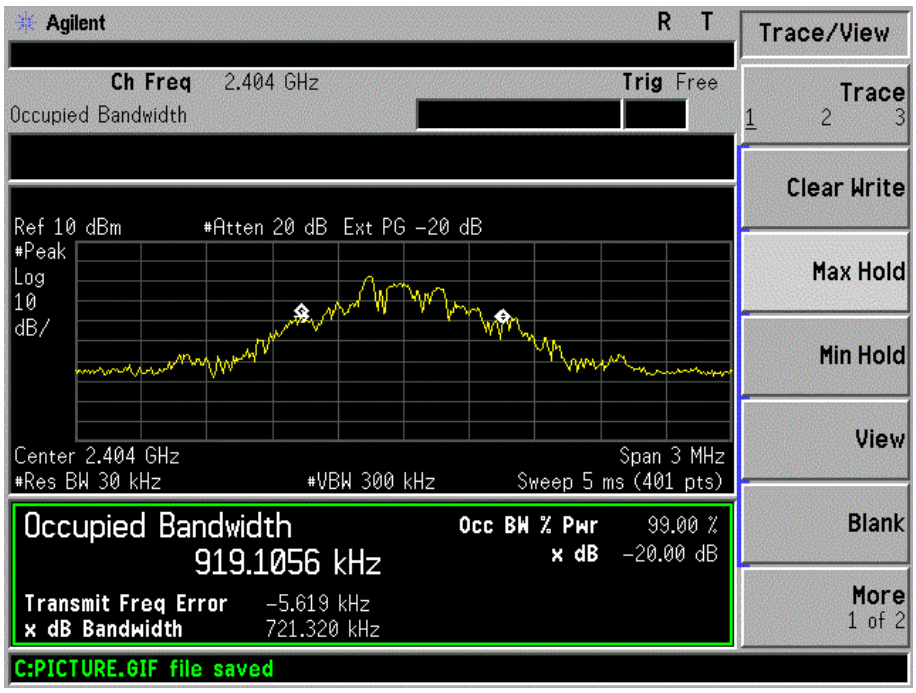
Temperature：	25℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V
Test Mode ：	TX Mode		

Frequency (MHz)	20dB bandwidth (KHz)	Result
2401	829.861	Pass
2404	721.320	Pass
2408	831.105	Pass

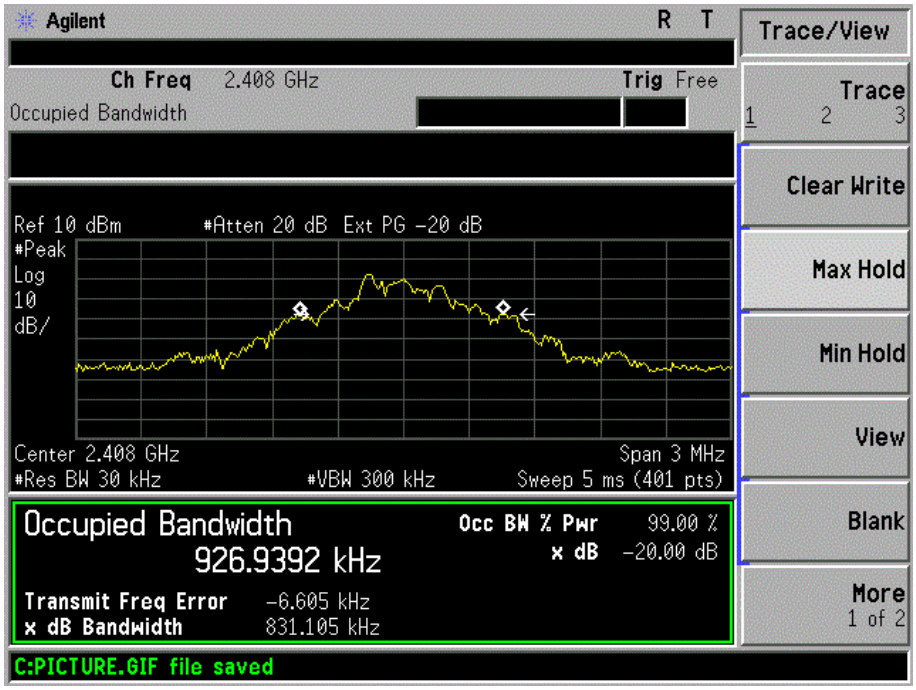
TX CH 01



TX CH 04



TX CH 08



5. ANTENNA REQUIREMENT

5.1 STANDARD REQUIREMENT

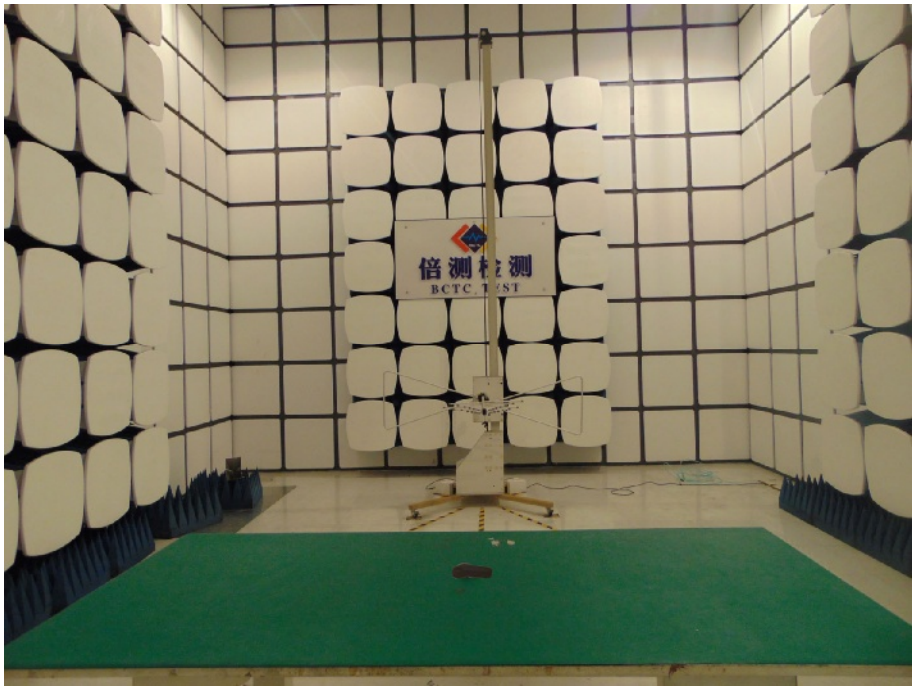
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

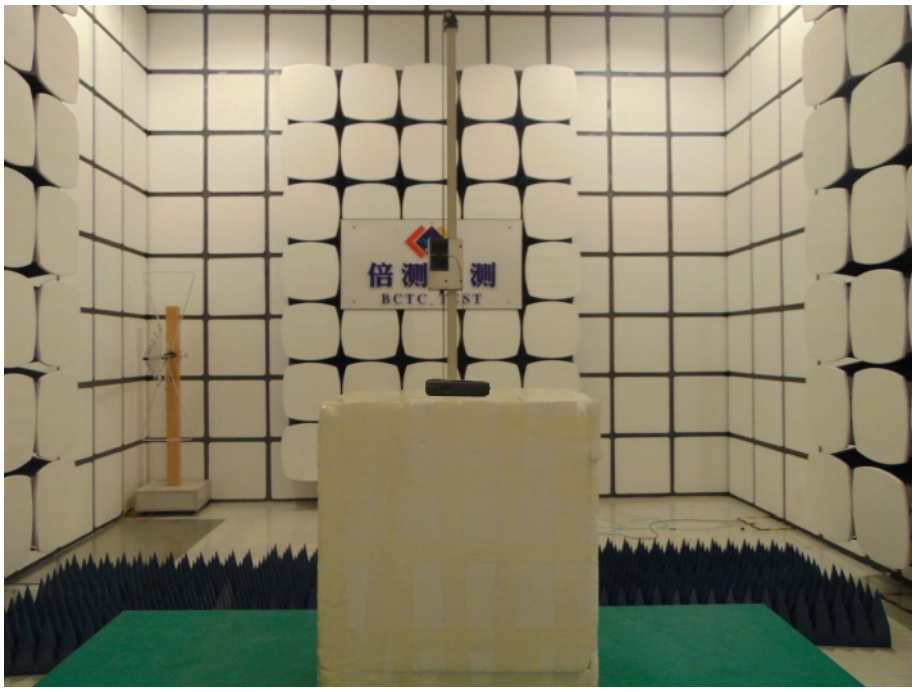
5.2 EUT ANTENNA

The EUT antenna is internal antenna, It comply with the standard requirement.

6. TEST SEUUP PHOTO

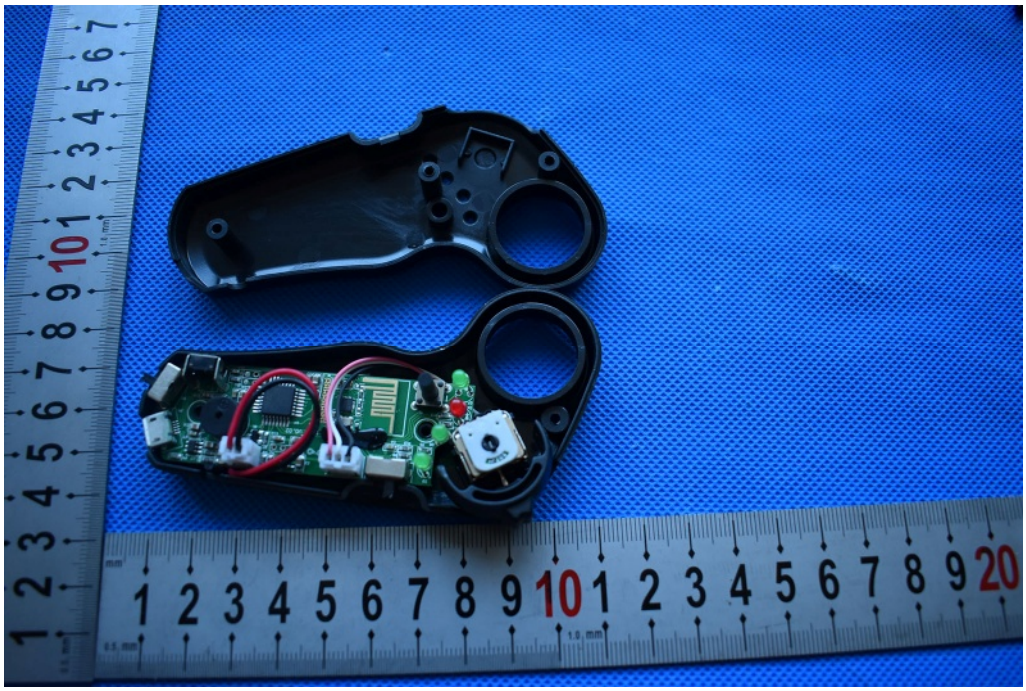
Radiated Measurement Photos





conducted Measurement Photos

7. EUT PHOTO



※※※※※ **END OF REPORT** ※※※※※