FCC Test Report

Report No.: AGC00183130401FE08

FCC ID	:	Z79ABS-01
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	wireless remoter
BRAND NAME	:	ATOB
MODEL NAME	:	ABS-01, ABS-02, RFS 1 , SG01, S1,S2,S3
CLIENT	:	HongKong AtoB Co. Ltd.
DATE OF ISSUE	:	May 24,2013
STANDARD(S)	:	FCC Part 15 Rules
REPORT VERSION	:	V1.0

***A**ttestation of **G**lobal **C**ompliance (Shenzhen) Co., Ltd*

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 20,2013	Valid	Original Report

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1. VERIFICATION OF COMPLIANCE

Applicant	HongKong AtoB Co. Ltd.
Address	The 1st floor, Shisheng Building,Shangkeng Industrial District Changping Town, DongGuan City, GuangDong, China
Manufacturer	HongKong AtoB Co. Ltd.
Address	The 1st floor, Shisheng Building,Shangkeng Industrial District Changping Town, DongGuan City, GuangDong, China
Product Designation	wireless remoter
Brand Name	ATOB
Test Model	ABS-01
Series Model	ABS-02, RFS 1 , SG01, S1,S2,S3
Difference description	All the same except for the model name.
Date of test	Apr.25,2013 to May 20,2013
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-BLE/RF (2013-03-01)

WE HEREBY CERTIFY THAT:

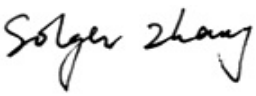
The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Prepared By 

Bart Xie May 24,2013

Checked By 

Forrest Lei May 24,2013

Authorized By 

Solger Zhang May 24,2013

2.GENERAL INFORMATION

2.1PRODUCT DESCRIPTION

The EUT is a **wireless remoter** designed as a “Communication Device”.

A major technical description of EUT is described as following

Operation Frequency	2.412 GHz to 2.452GHz
Modulation	GFSK
Number of channels	5 Channel
Antenna Designation	PCB Antenna
Antenna Gain for TX	0.3dBi
Hardware Version	V10
Software Version	V1.0
Power Supply	DC3V by Button Battery

Frequency Band	Channel Number	Frequency
2412~2452MHZ	1	2412MHZ
	2	2422MHZ
	3	2432MHZ
	4	2442 MHZ
	5	2452MHZ

2.2 RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for **FCC ID: Z79ABS-01** filing to comply with Section 15.247of the FCC Part 15, Subpart C Rules.

2.3TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.
The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions. The EUT was tested in all three orthogonal planes and the worse case was showed.

2.4 TEST FACILITY

All measurement facilities used to collect the measurement data are located at
Attestation of Global Compliance (Shenzhen) Co, Ltd
2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China.

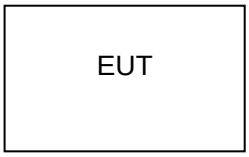
FCC register No.: 259865

2.5 SPECIAL ACCESSORIES
Refer to section 2.2.

2.6 EQUIPMENT MODIFICATIONS
Not available for this EUT intended for grant.

3. SYSTEM TEST CONFIGURATION

3.1 CONFIGURATION OF TESTED SYSTEM
Configuration:



3.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Note
1	wireless remoter	ABS-01	FCC ID: **Z79ABS-01**	EUT

4. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§ 15.203	Antenna Requirement	Compliant
§15.209 §15.247(d)	Radiated Emission	Compliant
§15.247(d)	Band Edges	Compliant
§15.247	6 dB Bandwidth	Compliant
§15.247(b)	Conducted Power	Compliant
§15.247(e)	Maximum Conducted Output Power SPECTRAL Density	Compliant
§15.207	Line Conduction Emission	N/A

Note: N/A means it's not applicable.

5. DESCRIPTION OF TEST MODES

The EUT has been operated in one modulation: GFSK

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX

Note:
1. All the test modes can be supply by button battery, only the result of the worst case was recorded in the report if no any records.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. Receiver mode have been tested via the procedure of Verification of Conformity.

6. ANTENNA REQUIREMENT

6.1. STANDARD APPLICABLE

According to FCC 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

6.2. TEST RESULT

This product has a PCB antenna, fulfill the requirement of this section.

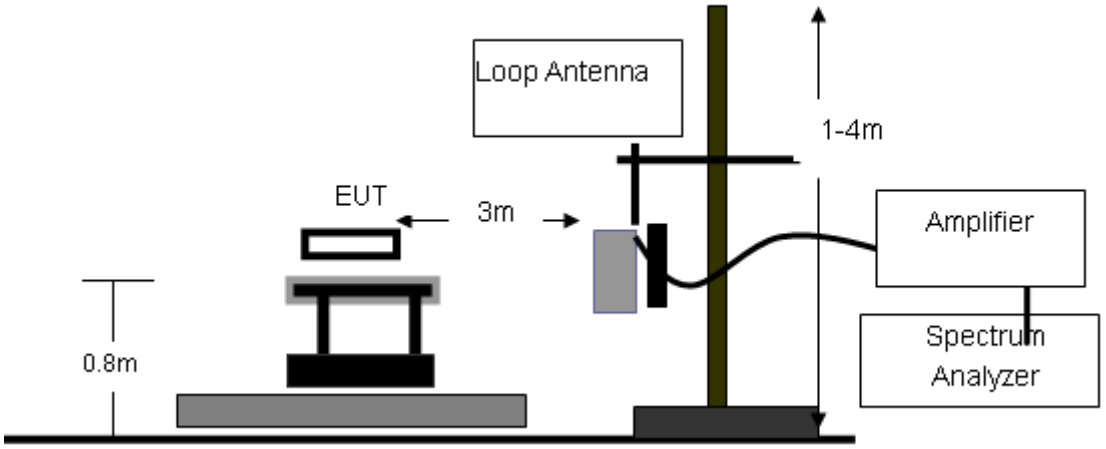
7. RADIATED EMISSION

7.1 MEASUREMENT PROCEDURE

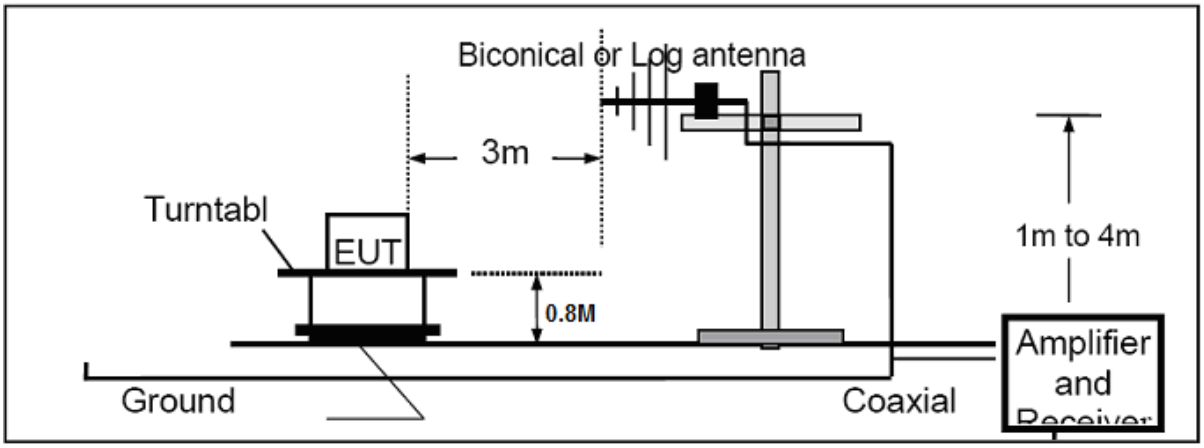
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

7.2 TEST SETUP

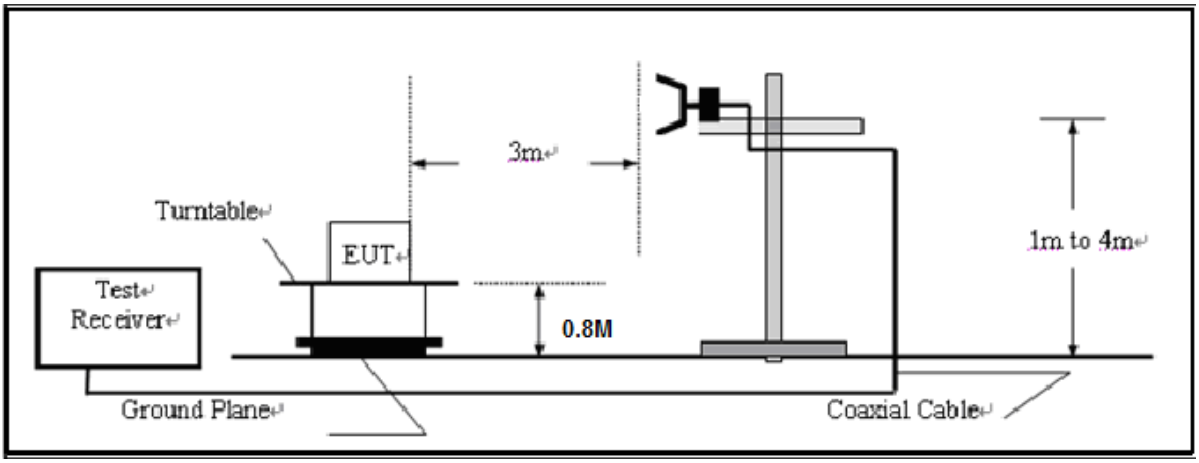
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



7.3 LIMITS AND MEASUREMENT RESULT

15.209 Limit in the below table 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

Note: All modes were tested For restricted band radiated emission,
the test records reported below are the worst result compared to other modes.

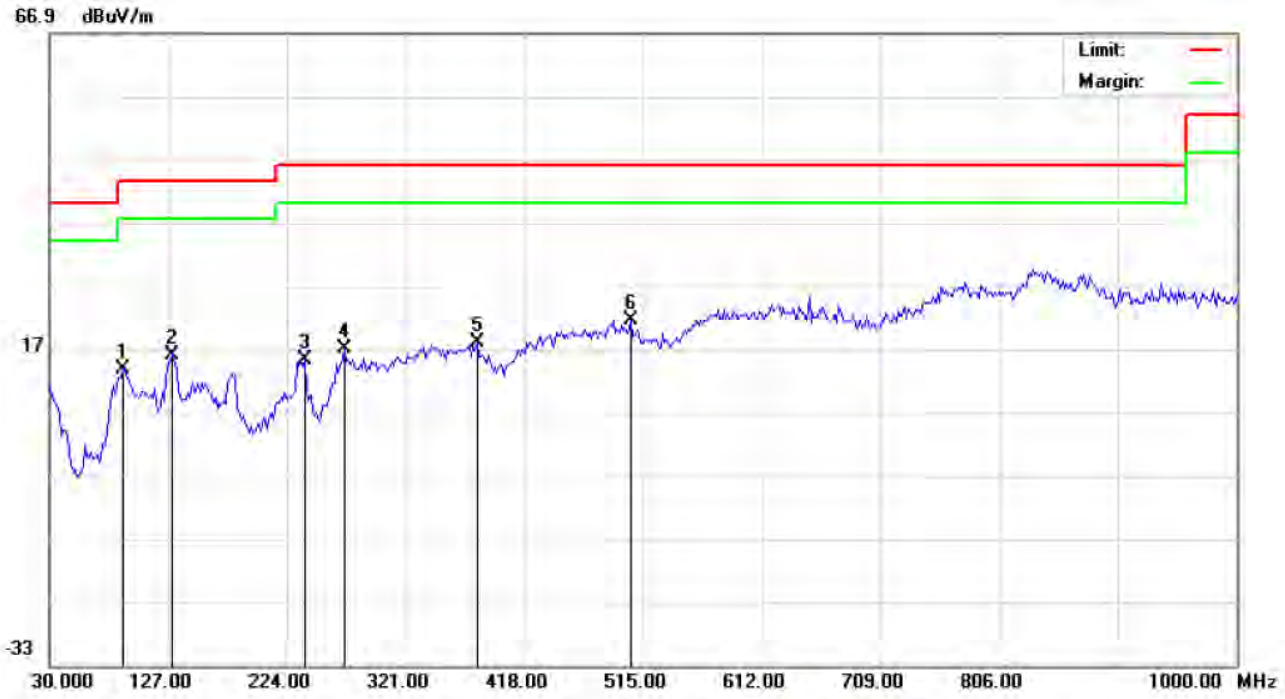
7.4 TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION BELOW 1GHZ

RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: wireless remoter
M/N: ABS-01
Mode: Low Channel TX
Note:

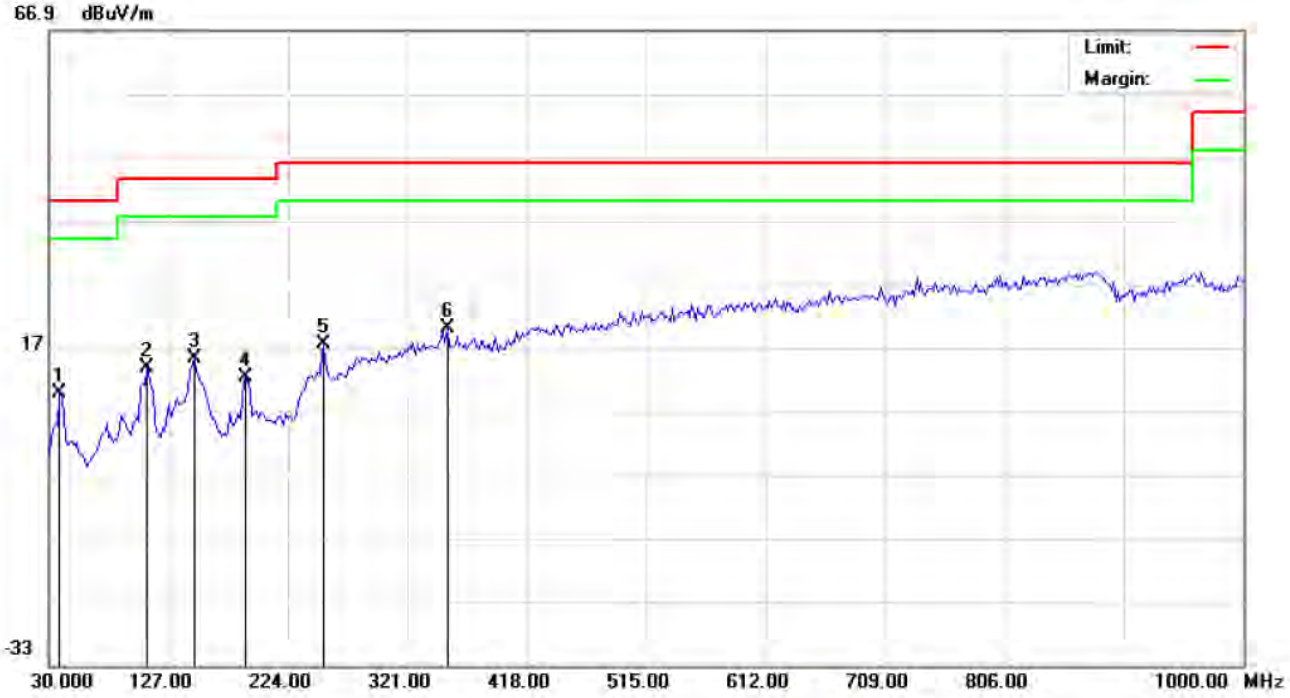
Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		89.8167	-3.41	17.11	13.70	43.50	-29.80	peak			
2		130.2333	1.60	14.35	15.95	43.50	-27.55	peak			
3		238.5500	2.96	12.27	15.23	46.00	-30.77	peak			
4		270.8833	-0.15	17.22	17.07	46.00	-28.93	peak			
5		379.2000	-1.12	19.23	18.11	46.00	-27.89	peak			
6	*	505.3000	-0.61	22.25	21.64	46.00	-24.36	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL -VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: wireless remoter
M/N: ABS-01
Mode: Low Channel TX
Note:

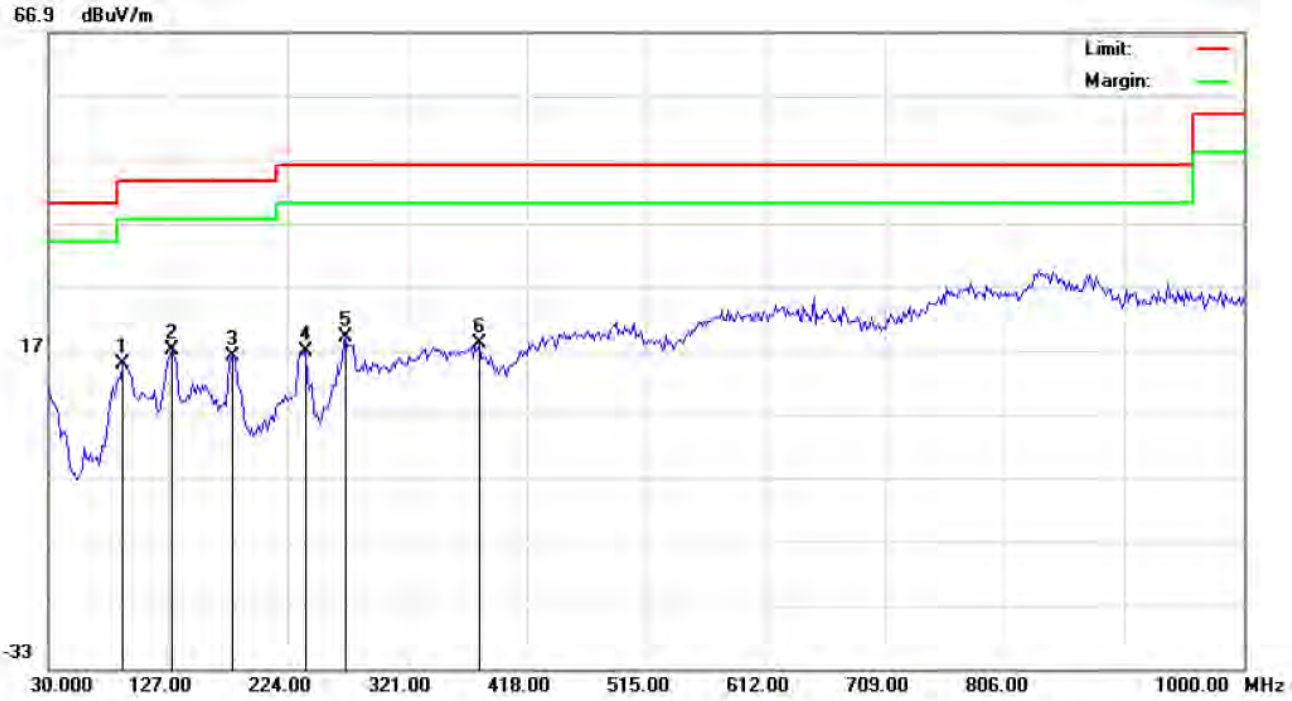
Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		38.0833	2.20	7.60	9.80	40.00	-30.20	peak			
2		109.2167	3.53	10.19	13.72	43.50	-29.78	peak			
3		148.0167	1.55	13.72	15.27	43.50	-28.23	peak			
4		190.0500	2.44	9.89	12.33	43.50	-31.17	peak			
5		253.1000	3.41	14.23	17.64	46.00	-28.36	peak			
6	*	353.3333	1.03	19.07	20.10	46.00	-25.90	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: wireless remoter
M/N: ABS-01
Mode: Middle Channel TX
Note:

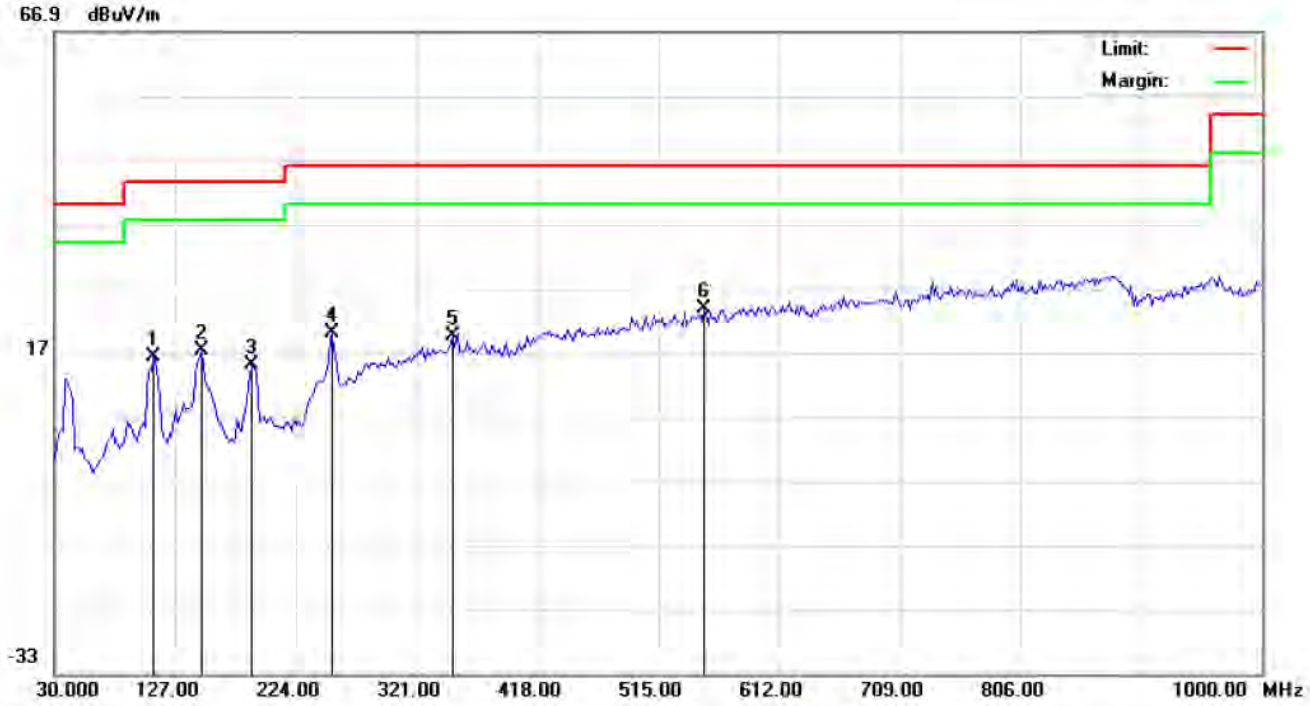
Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		89.8167	-2.41	17.11	14.70	43.50	-28.80	peak			
2	*	130.2333	2.60	14.35	16.95	43.50	-26.55	peak			
3		178.7333	4.00	12.03	16.03	43.50	-27.47	peak			
4		238.5500	4.46	12.27	16.73	46.00	-29.27	peak			
5		270.8833	1.85	17.22	19.07	46.00	-26.93	peak			
6		379.2000	-1.12	19.23	18.11	46.00	-27.89	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)- MIDDLE CHANNEL -VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: wireless remoter
M/N: ABS-01
Mode: Middle Channel TX
Note:

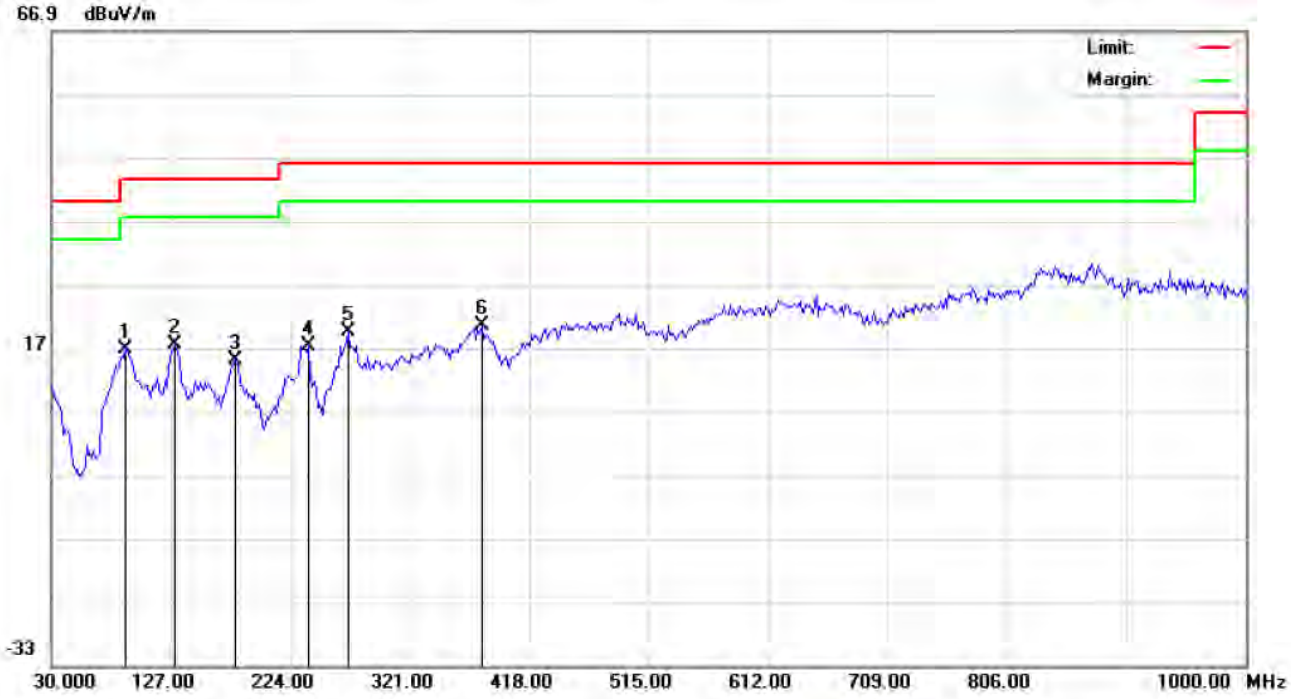
Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		109.2167	6.03	10.19	16.22	43.50	-27.28	peak			
2		148.0166	3.55	13.72	17.27	43.50	-26.23	peak			
3		188.4333	5.49	9.49	14.98	43.50	-28.52	peak			
4		253.1000	5.91	14.23	20.14	46.00	-25.86	peak			
5		350.1000	0.55	19.05	19.60	46.00	-26.40	peak			
6	*	552.1833	-0.03	23.79	23.76	46.00	-22.24	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: wireless remoter
M/N: ABS-01
Mode: High Channel TX
Note:

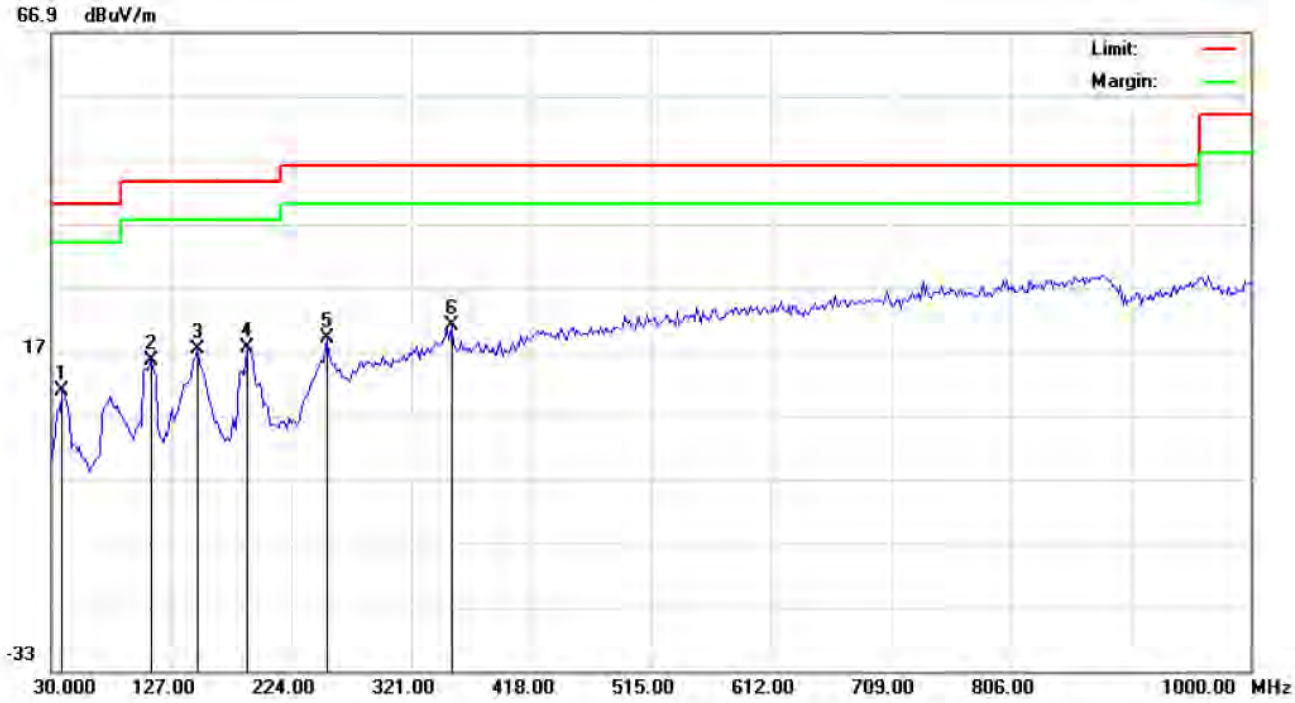
Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		89.8167	-0.41	17.11	16.70	43.50	-26.80	peak			
2		130.2333	3.10	14.35	17.45	43.50	-26.05	peak			
3		178.7333	3.00	12.03	15.03	43.50	-28.47	peak			
4		238.5500	4.96	12.27	17.23	46.00	-28.77	peak			
5		270.8833	2.35	17.22	19.57	46.00	-26.43	peak			
6	*	379.2000	1.38	19.23	20.61	46.00	-25.39	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL -VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: wireless remoter
M/N: ABS-01
Mode: High Channel TX
Note:

Polarization: *Vertical*
Power:
Distance:

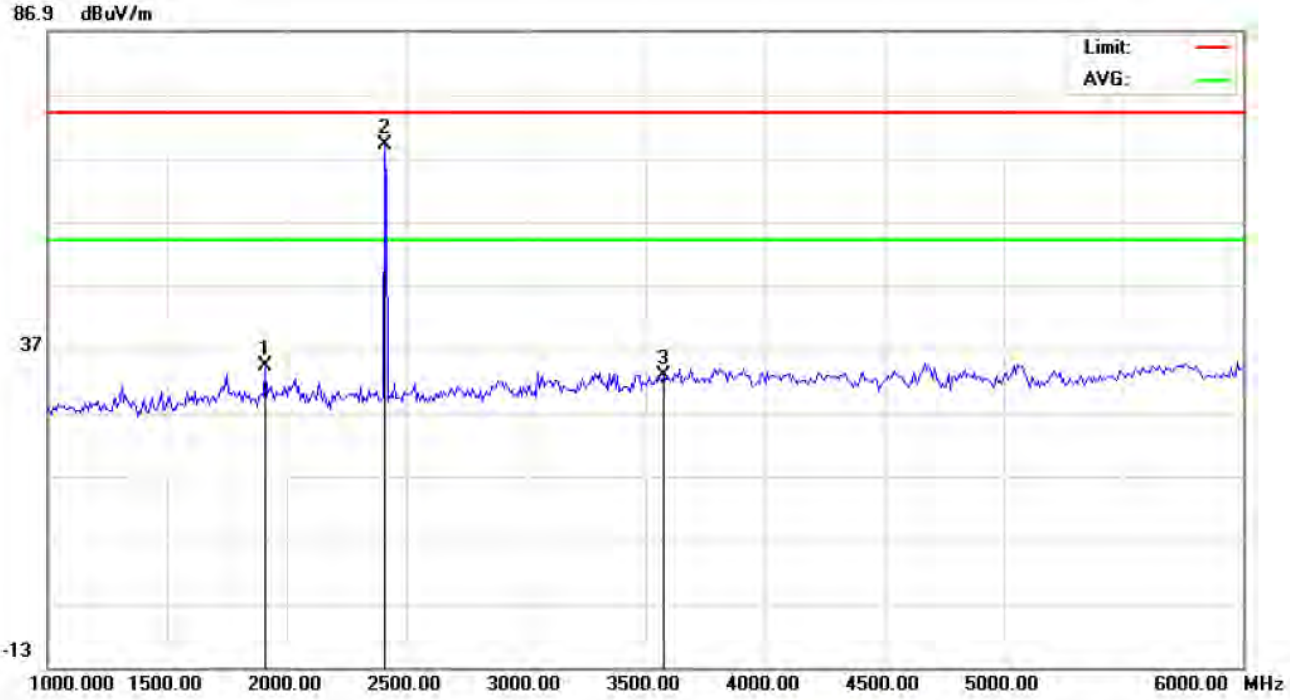
Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		38.0833	3.20	7.60	10.80	40.00	-29.20	peak			
2		110.8333	5.63	9.95	15.58	43.50	-27.92	peak			
3		148.0166	3.55	13.72	17.27	43.50	-26.23	peak			
4		188.4333	7.99	9.49	17.48	43.50	-26.02	peak			
5		253.1000	4.91	14.23	19.14	46.00	-26.86	peak			
6	*	353.3333	2.03	19.07	21.10	46.00	-24.90	peak			

RESULT: PASS

RADIATED EMISSION ABOVE 1GHZ

RADIATED EMISSION TEST- (ABOVE 1GHZ)-LOW CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: Low Channel TX
Note:

Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

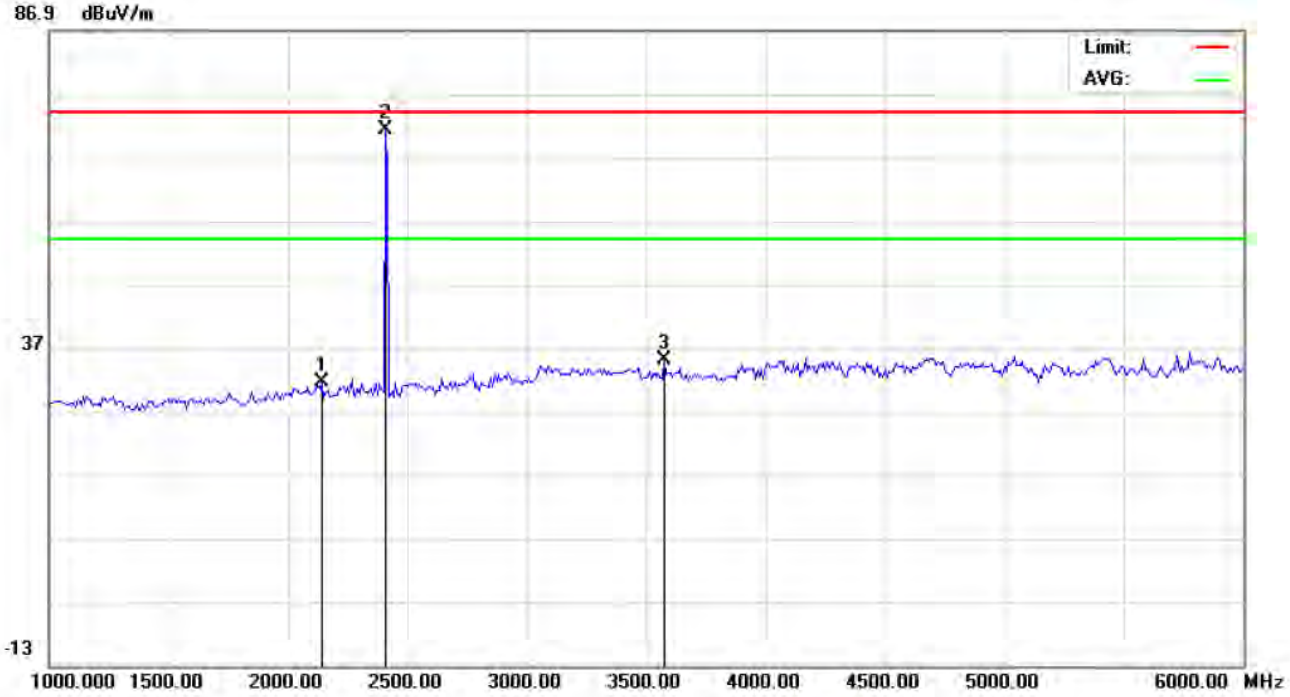
No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1908.333	25.42	8.92	34.34	74.00	-39.66	peak			
2	*	2412.333	58.76	10.33	69.09	74.00	-4.91	peak			
3		3575.000	20.26	12.57	32.83	74.00	-41.17	peak			

RESULT: PASS

Note：Marker2 is fundamental frequency.

6~25GHz at least have 20dB margin. No recording in the test report.

RADIATED EMISSION TEST-(ABOVE 1GHZ)-LOW CHANNEL-VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: Low Channel TX
Note:

Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

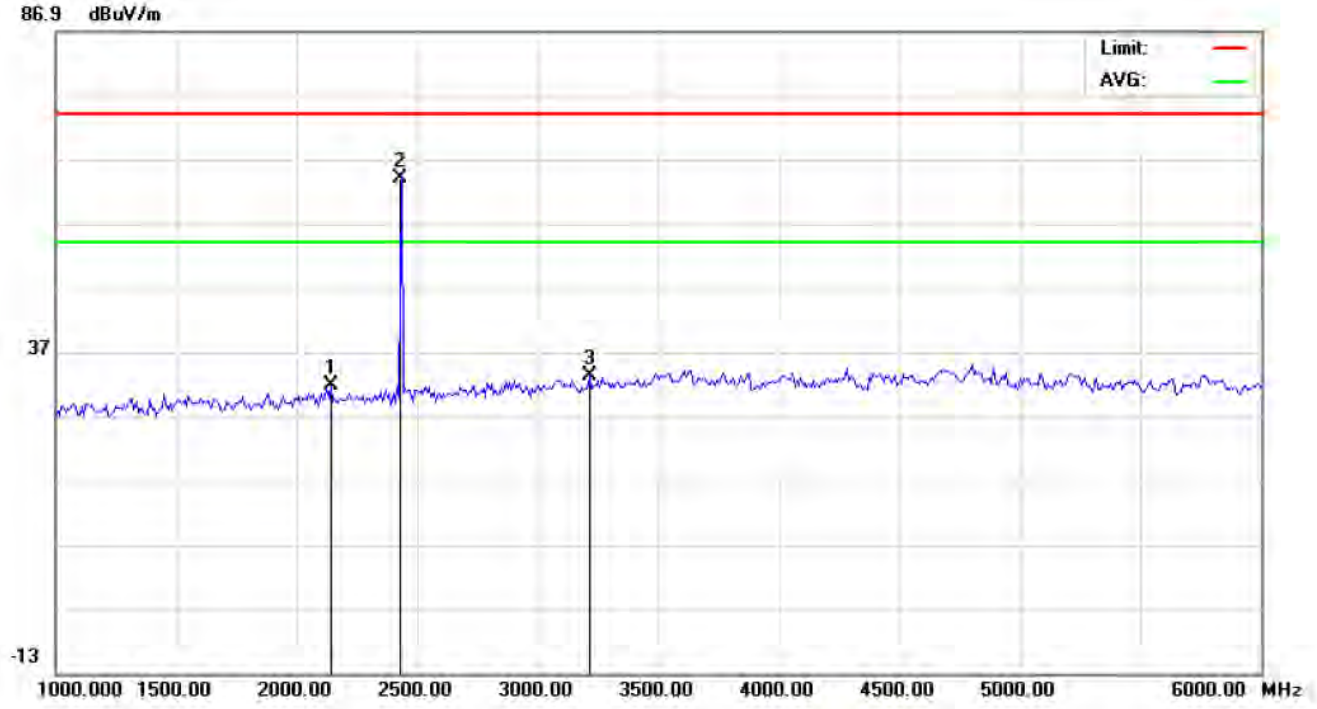
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2141.667	21.43	10.04	31.47	74.00	-42.53	peak			
2	*	2412.333	60.92	10.33	71.25	74.00	-2.75	peak			
3		3575.000	22.37	12.57	34.94	74.00	-39.06	peak			

RESULT: PASS

Note：Marker 2 is fundamental frequency.

6~25GHz at least have 20dB margin. No recording in the test report.

RADIATED EMISSION TEST-(ABOVE 1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: Middle Channel TX
Note:

Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

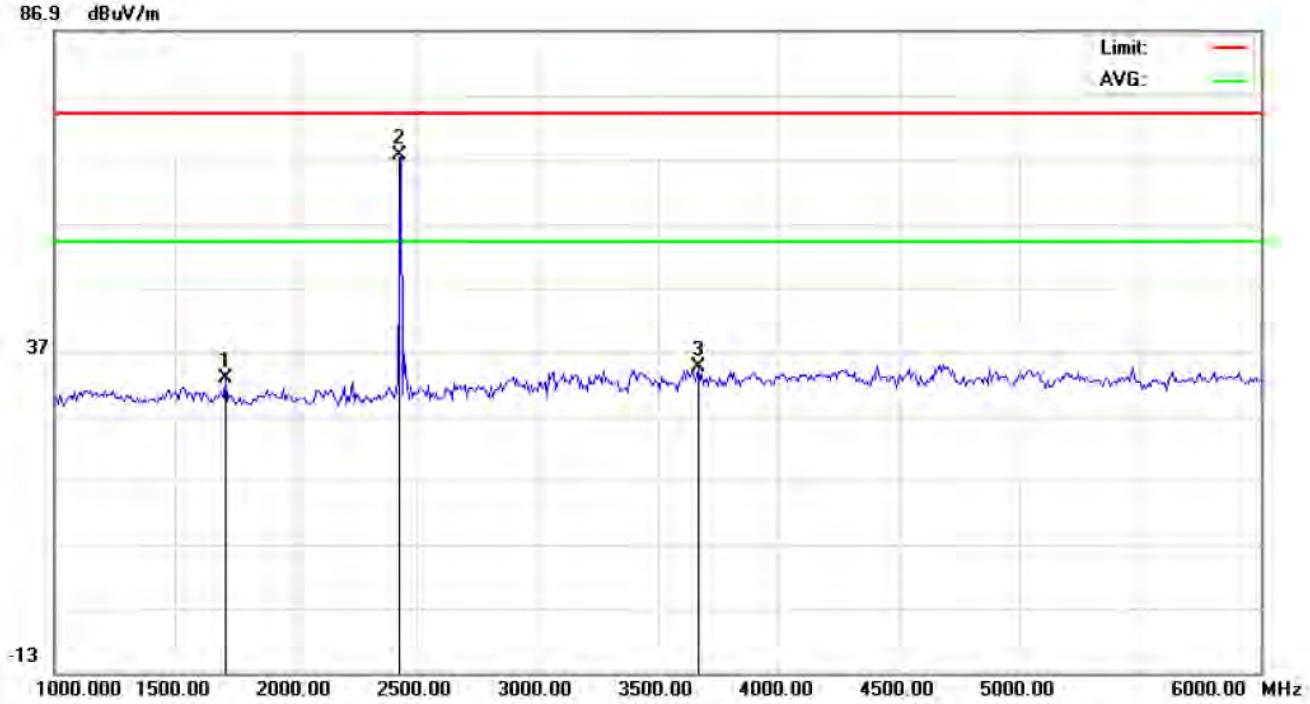
No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2141.667	21.72	10.04	31.76	74.00	-42.24	peak			
2	*	2432.333	53.77	10.36	64.13	74.00	-9.87	peak			
3		3216.667	21.50	11.84	33.34	74.00	-40.66	peak			

RESULT: PASS

Note: Marker 2 fundamental frequency.

6~25GHz at least have 20dB margin. No recording in the test report.

RADIATED EMISSION TEST-(ABOVE 1GHZ)-MIDDLE CHANNEL-VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: Middle Channel TX
Note:

Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

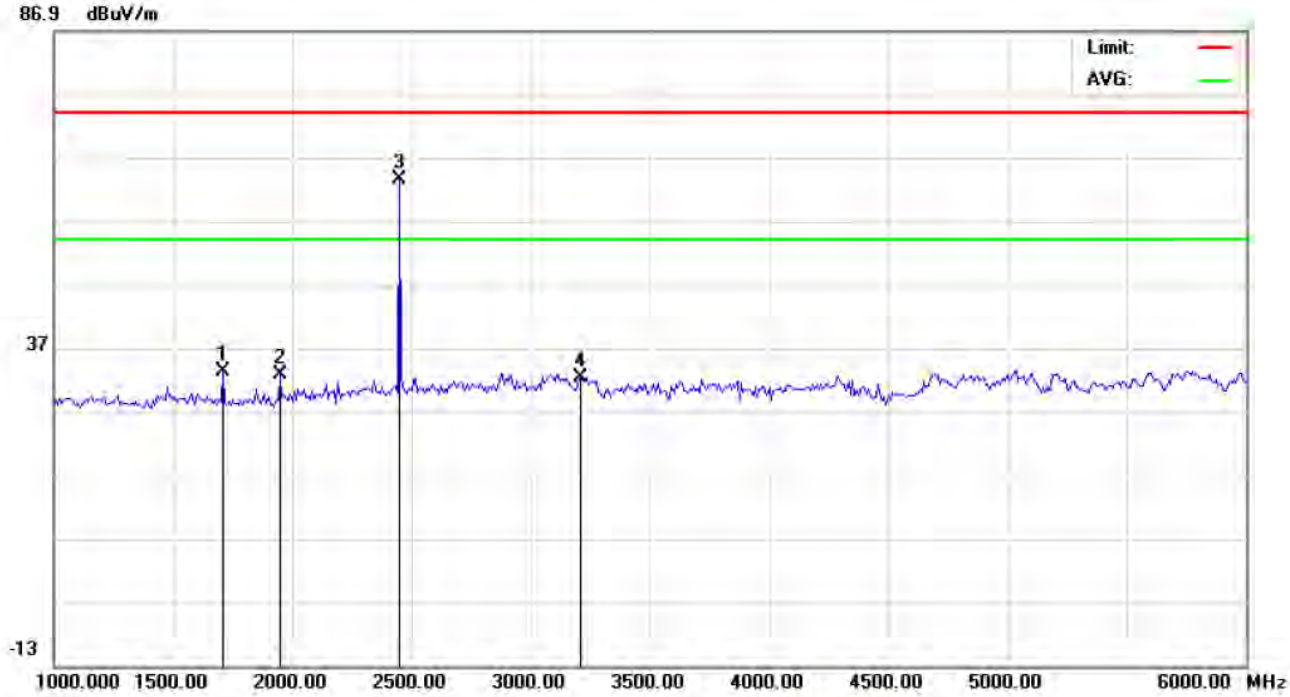
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1708.333	25.87	6.81	32.68	74.00	-41.32	peak			
2	*	2432.333	57.09	10.36	67.45	74.00	-6.55	peak			
3		3666.667	21.27	13.14	34.41	74.00	-39.59	peak			

RESULT: PASS

Note: Marker 2 is the fundamental frequency.

6~25GHz at least have 20dB margin. No recording in the test report.

RADIATED EMISSION TEST-(ABOVE 1GHZ)-HIGH CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: High Channel TX
Note:

Polarization: ***Horizontal***
Power:
Distance:

Temperature: 26
Humidity: 60 %

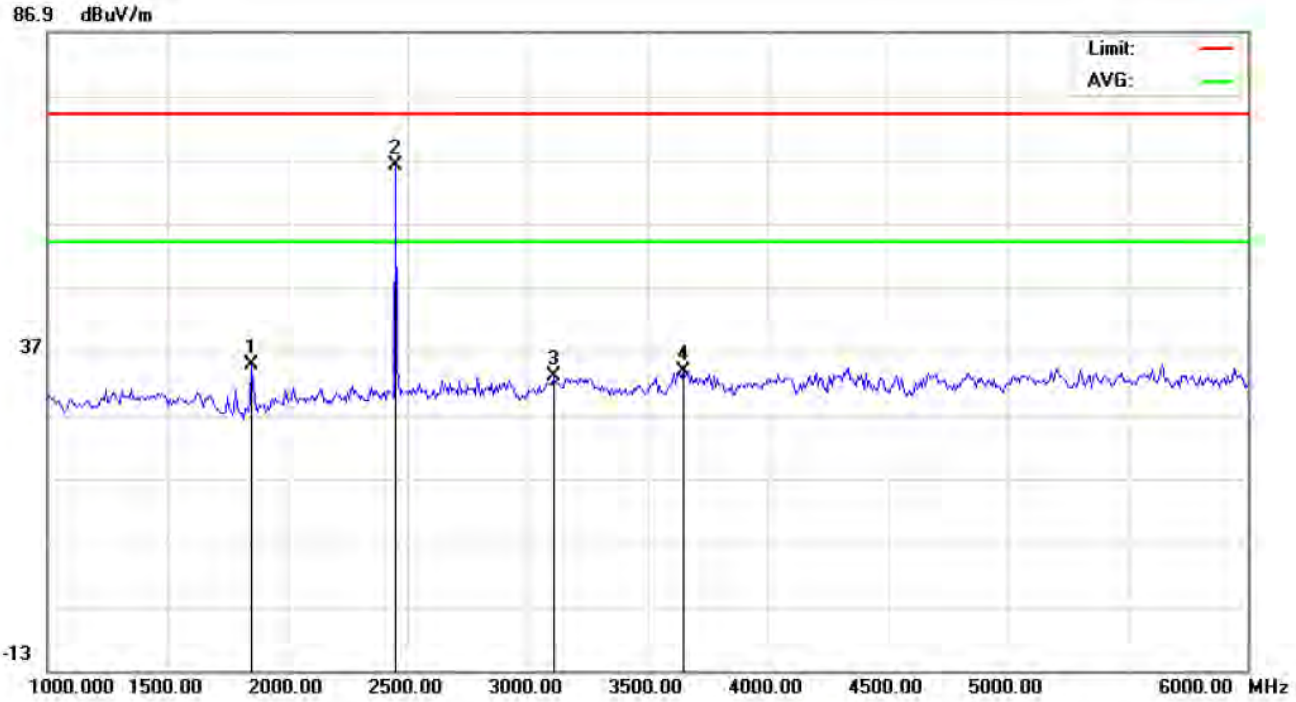
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1708.333	26.59	6.81	33.40	74.00	-40.60	peak			
2		1950.000	23.43	9.35	32.78	74.00	-41.22	peak			
3	*	2452.000	53.18	10.38	63.56	74.00	-10.44	peak			
4		3208.333	20.49	11.84	32.33	74.00	-41.67	peak			

RESULT: PASS

Note: Marker 2 is the fundamental frequency.

6~25GHz at least have 20dB margin. No recording in the test report.

RADIATED EMISSION TEST-(ABOVE 1GHZ)-HIGH CHANNEL-VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: High Channel TX
Note:

Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1850.000	26.38	8.30	34.68	74.00	-39.32	peak			
2	*	2452.000	55.58	10.38	65.96	74.00	-8.04	peak			
3		3108.333	21.28	11.74	33.02	74.00	-40.98	peak			
4		3650.000	20.85	13.03	33.88	74.00	-40.12	peak			

RESULT: PASS

Note: Marker 2 is the fundamental frequency.

6~25GHz at least have 20dB margin. No recording in the test report.

8. BAND EDGE EMISSION

8.1. MEASUREMENT PROCEDURE

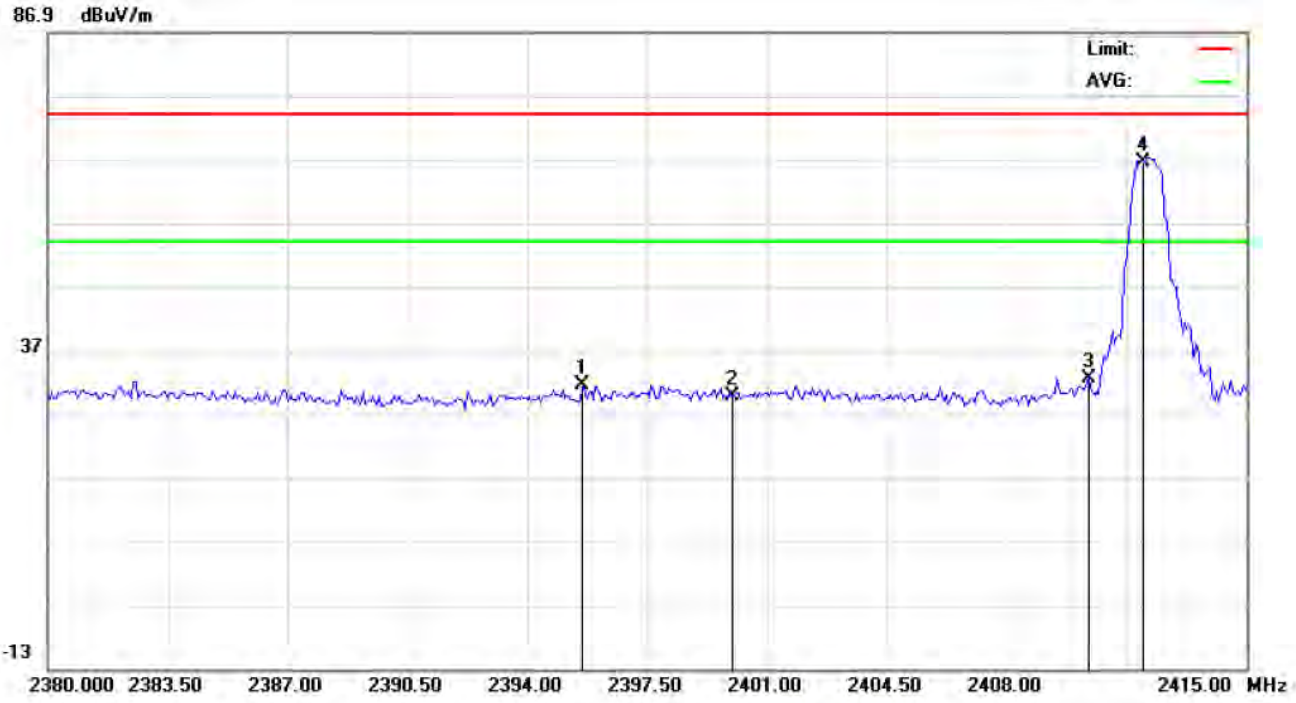
1. Set the EUT Work on the top, the bottom operation frequency individually.
2. Set SPA Start or Stop Frequency = Operation Frequency, RBW>=1%span, VBW>=RBW
3. The band edges was measured and recorded.

8.2. TEST SET-UP

Radiated same as 6.2

8.3. TEST RESULT

TEST PLOT OF BAND EDGE FOR LOW CHANNEL -Horizontal



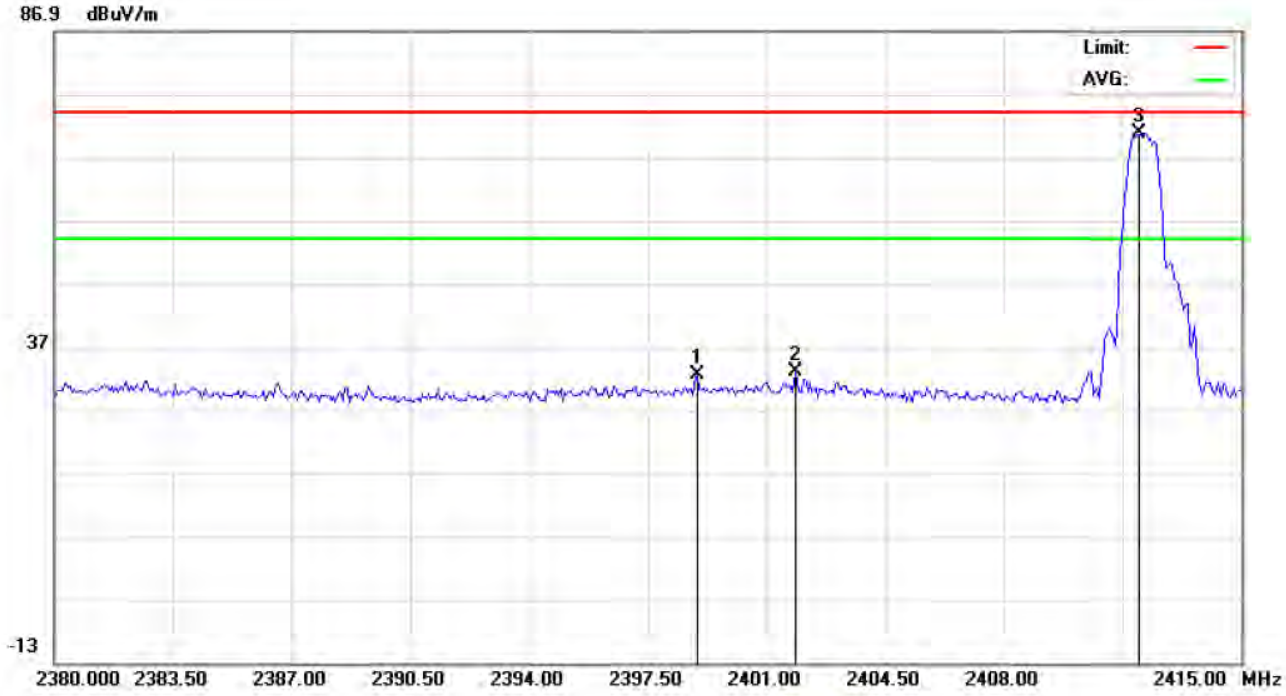
Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: Low Channel TX
Note:

Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	.	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2395.633	21.12	10.32	31.44	74.00	-42.56	peak			
2		2400.000	19.43	10.32	29.75	74.00	-44.25	peak			
3		2410.392	22.25	10.33	32.58	74.00	-41.42	peak			
4	*	2412.000	56.21	10.33	66.54	74.00	-7.46	peak			

TEST PLOT OF BAND EDGE FOR LOW CHANNEL - Vertical



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: Low Channel TX
Note:

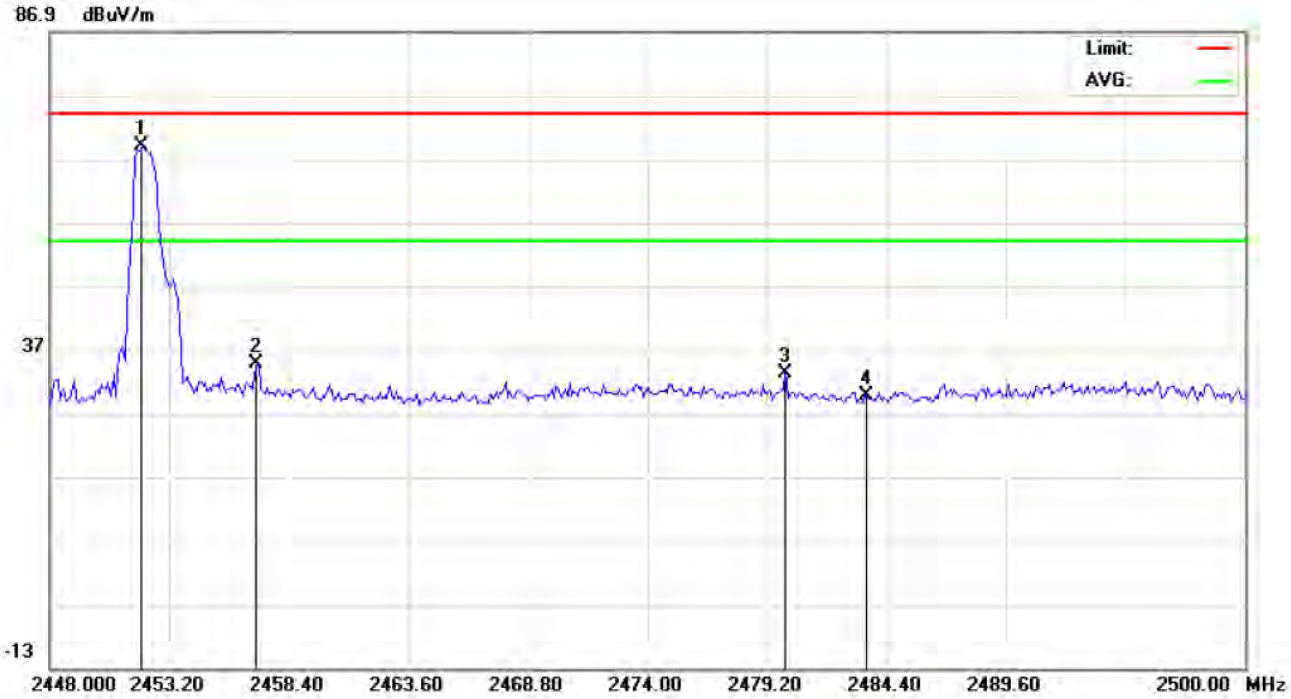
Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2398.958	22.18	10.32	32.50	74.00	-41.50	peak			
2		2401.875	22.60	10.32	32.92	74.00	-41.08	peak			
3	*	2412.000	60.49	10.33	70.82	74.00	-3.18	peak			

RESULT: PASS

TEST PLOT OF BAND EDGE FOR HIGH CHANNEL –Horizontal



Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: High Channel TX
Note:

Polarization: *Horizontal*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2452.000	58.67	10.38	69.05	74.00	-4.95	peak			
2		2457.013	24.50	10.38	34.88	74.00	-39.12	peak			
3		2479.980	22.96	10.41	33.37	74.00	-40.63	peak			
4		2483.500	19.44	10.41	29.85	74.00	-44.15	peak			

TEST PLOT OF BAND EDGE FOR HIGH CHANNEL -Vertical

Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: wireless remoter
M/N: ABS-01
Mode: High Channel TX
Note:

Polarization: *Vertical*
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk.	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2452.000	60.87	10.38	71.25	74.00	-2.75	peak			
2		2456.667	22.96	10.38	33.34	74.00	-40.66	peak			
3		2458.313	24.37	10.38	34.75	74.00	-39.25	peak			
4		2483.500	19.70	10.41	30.11	74.00	-43.89	peak			

RESULT: PASS

9. 6DB BANDWIDTH

9.1. TEST EQUIPMENT LIST AND DETAILS

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	US41421290	07/18/2012	07/17/2013
RECEIVER ANTENNA	ETS	2175	57337	07/18/2012	07/17/2013

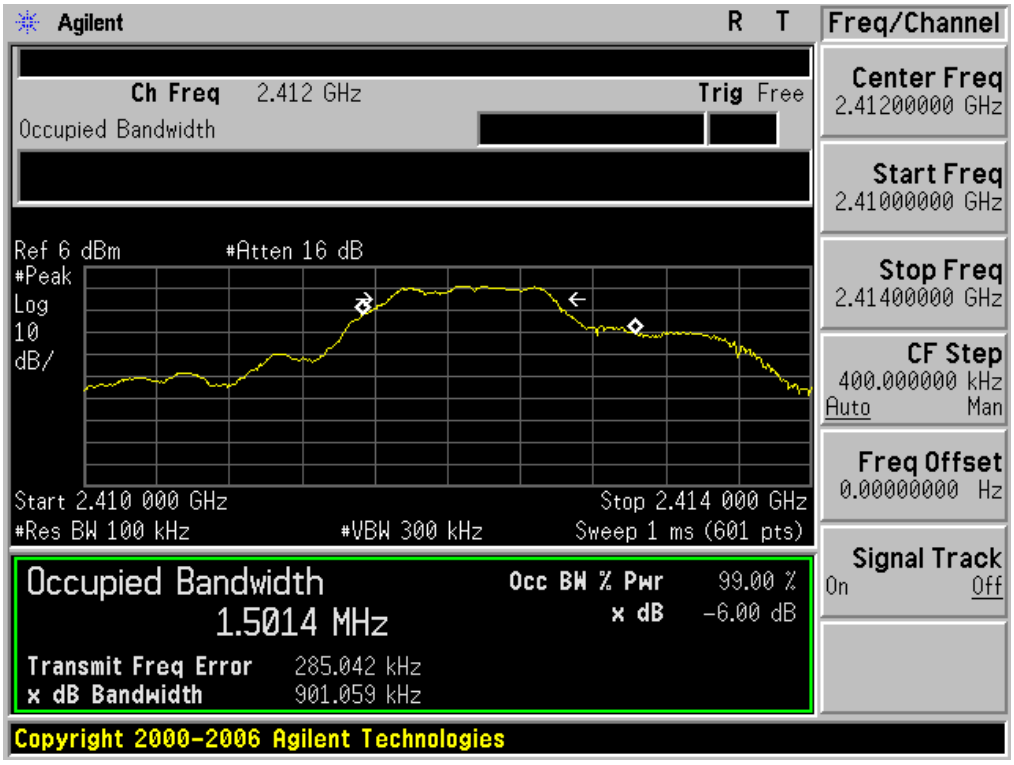
9.2. TEST PROCEDURE

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW≥RBW.
4. Set SPA Trace 1 Max hold, then View.

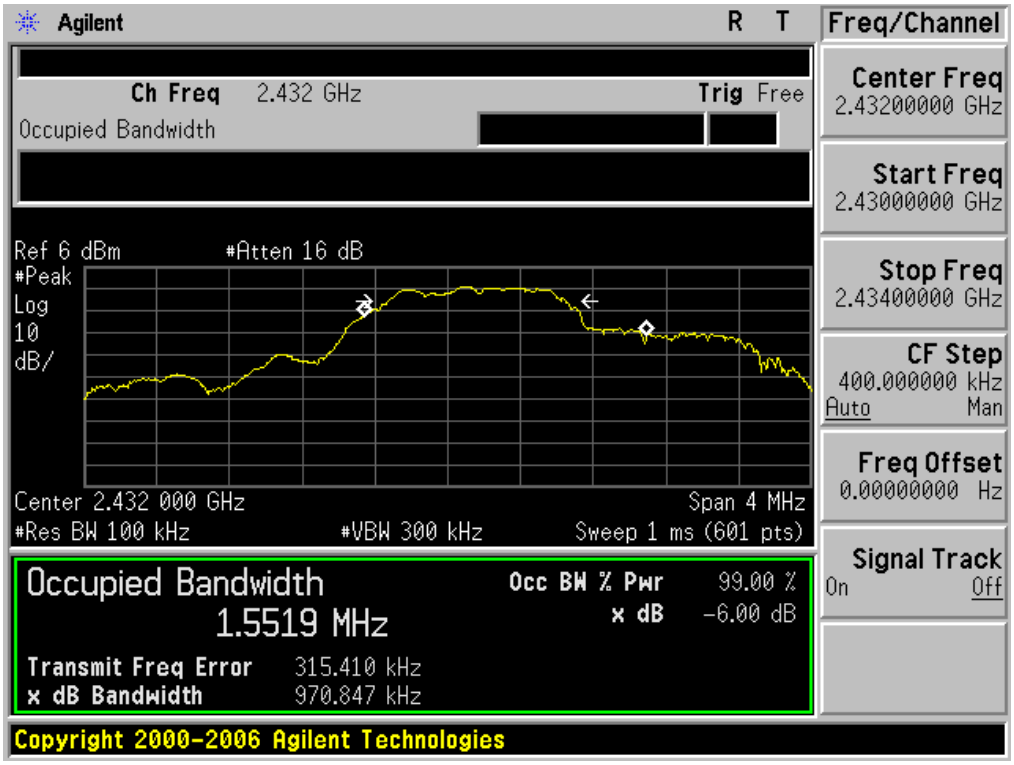
9.3. SUMMARY OF TEST RESULTS/PLOTS

Channel	6dB Bandwidth (KHz)	Minimum Limit (KHz)	Pass/Fail
Low	901.059	500KHz	Pass
Middle	970.847		Pass
High	972.580		Pass

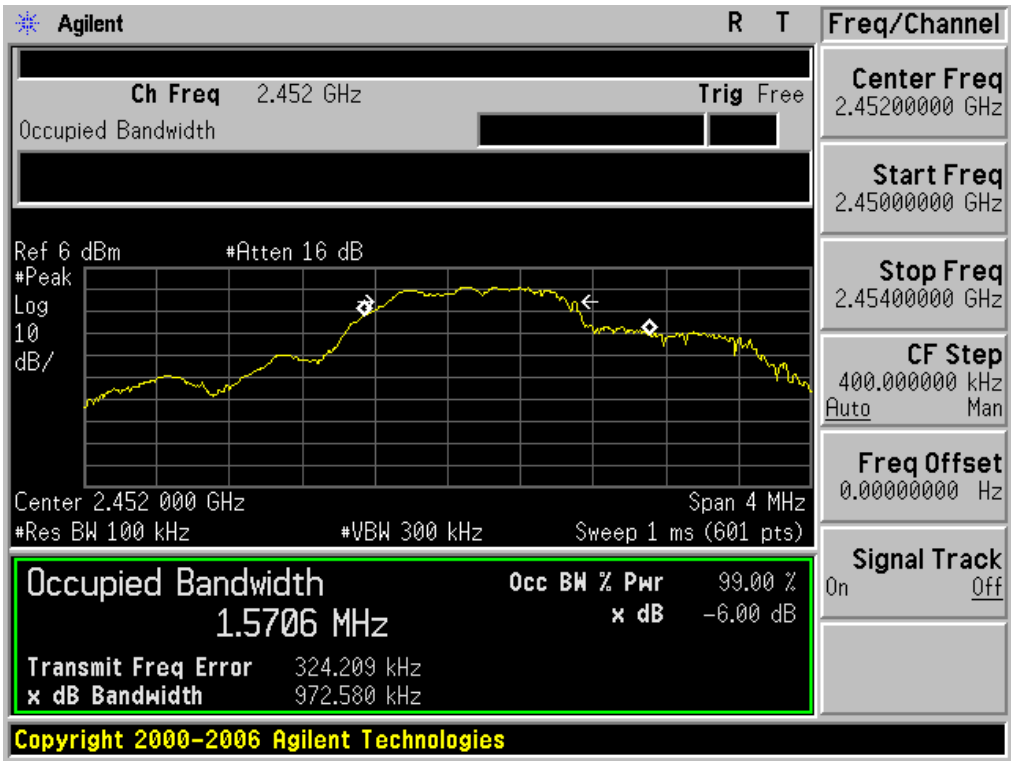
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



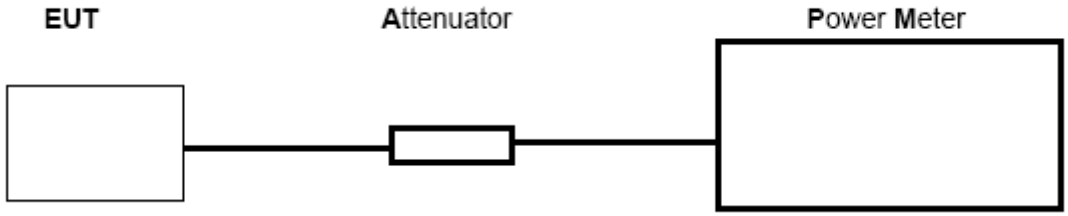
10. CONDUCTED OUTPUT POWER

10.1. MEASUREMENT PROCEDURE

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Connect EUT RF output port to power meter through an RF attenuator
3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
4. Set the RBW greater than 6DB bandwidth of emission.
5. Record the maximum power from the power meter.

Note： The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



10.3. LIMITS AND MEASUREMENT RESULT

Channel	Peak Power (dBm)	Applicable Limits (dBm)	Pass/Fail
Low Channel	-1.94	20	Pass
Middle Channel	-2.37	20	Pass
High Channel	-2.26	20	Pass

11. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

11.1 MEASUREMENT PROCEDURE

(1). The EUT was placed on a turn table which is 0.8m above ground plane.
(2). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
(3). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
(4). Set SPA Trace 1 Max hold, then View.
Note: The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

11.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2

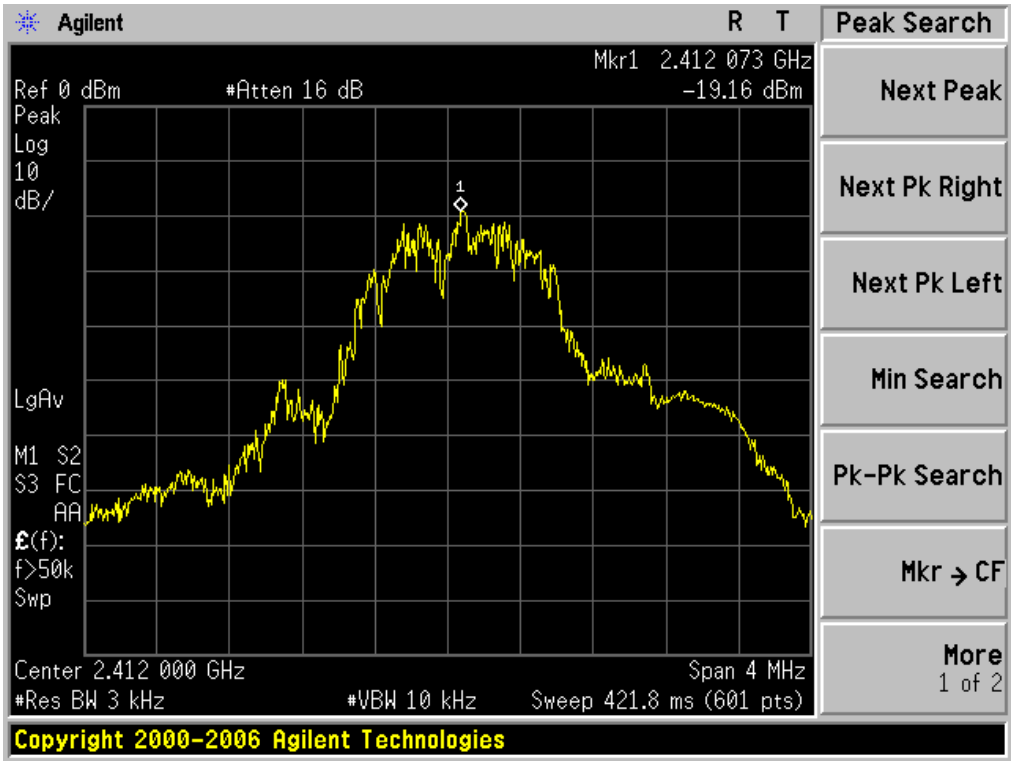
11.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

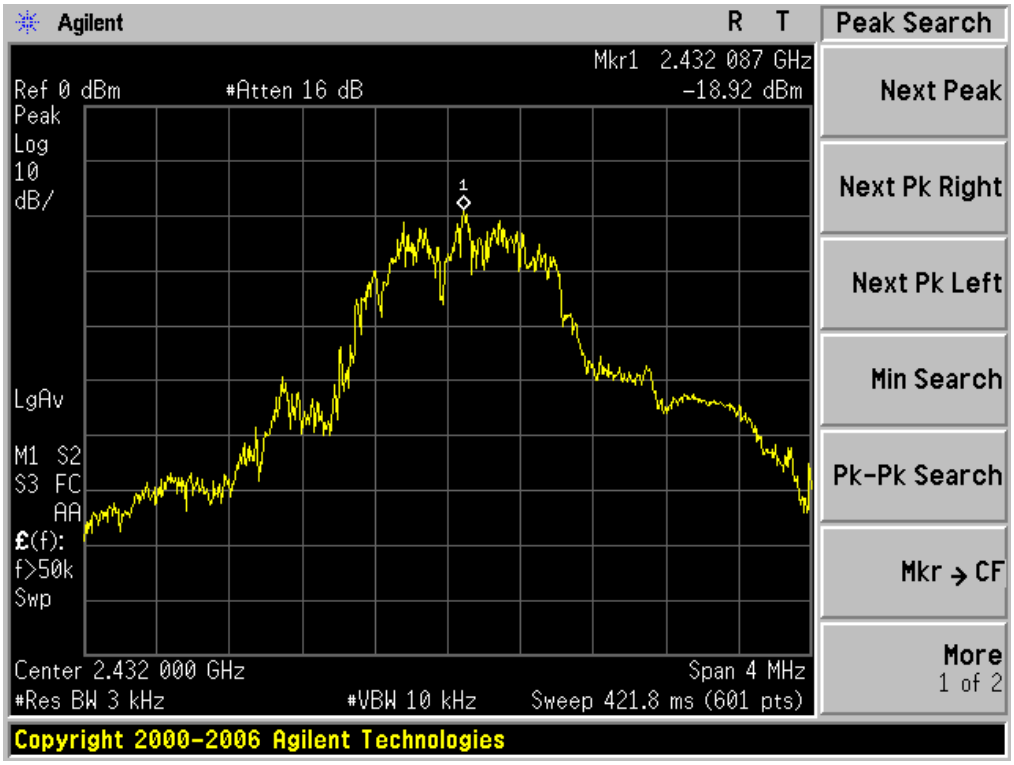
11.4 LIMITS AND MEASUREMENT RESULT

Channel No.	PSD (dBm)	Limit (dBm)	Result
Low Channel	-19.16	8	Pass
Middle Channel	-18.92	8	Pass
High Channel	-19.60	8	Pass

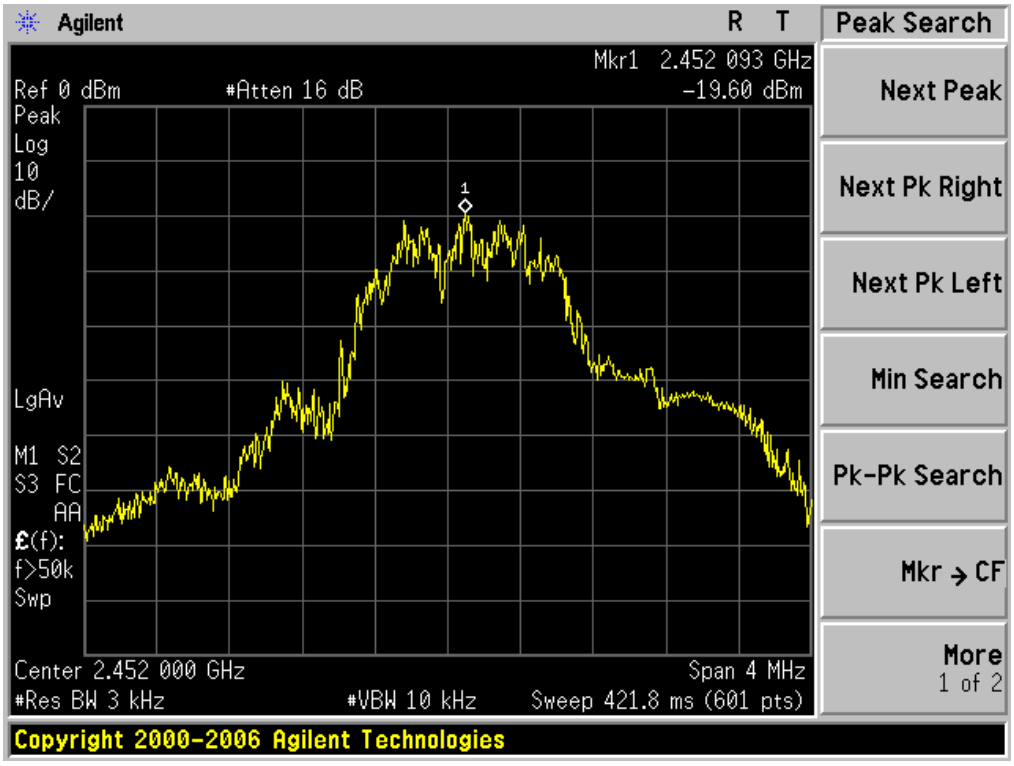
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

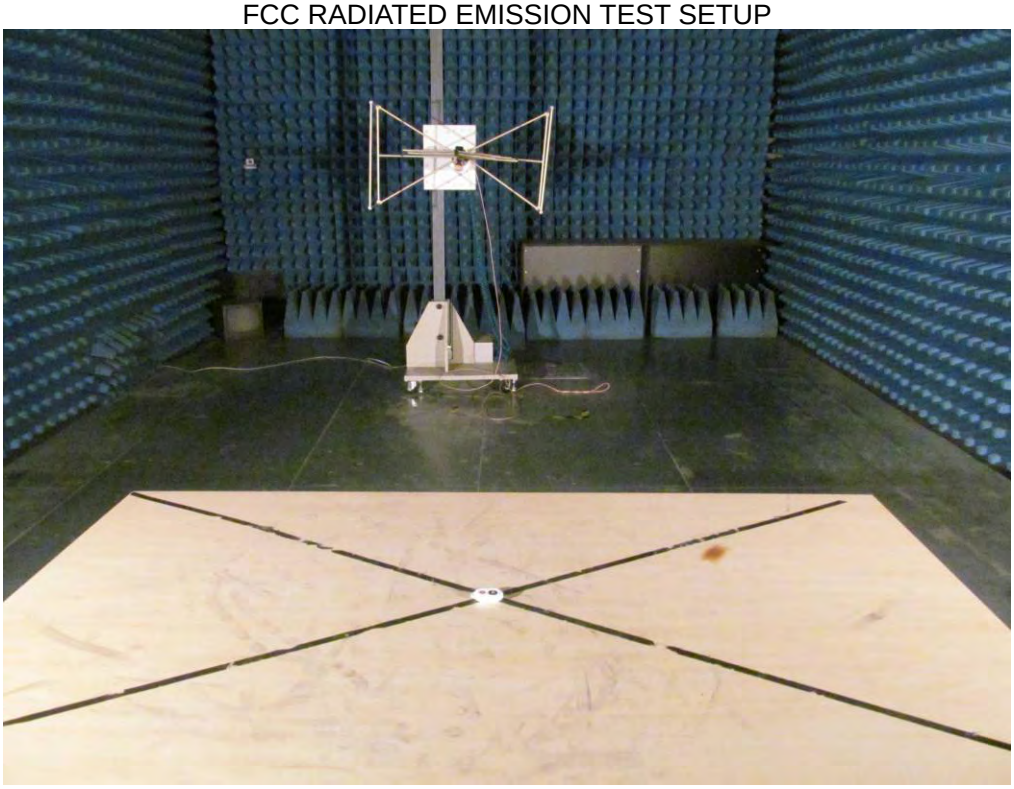


TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



APPENDIX A: PHOTOGRAPHS OF TEST SETUP

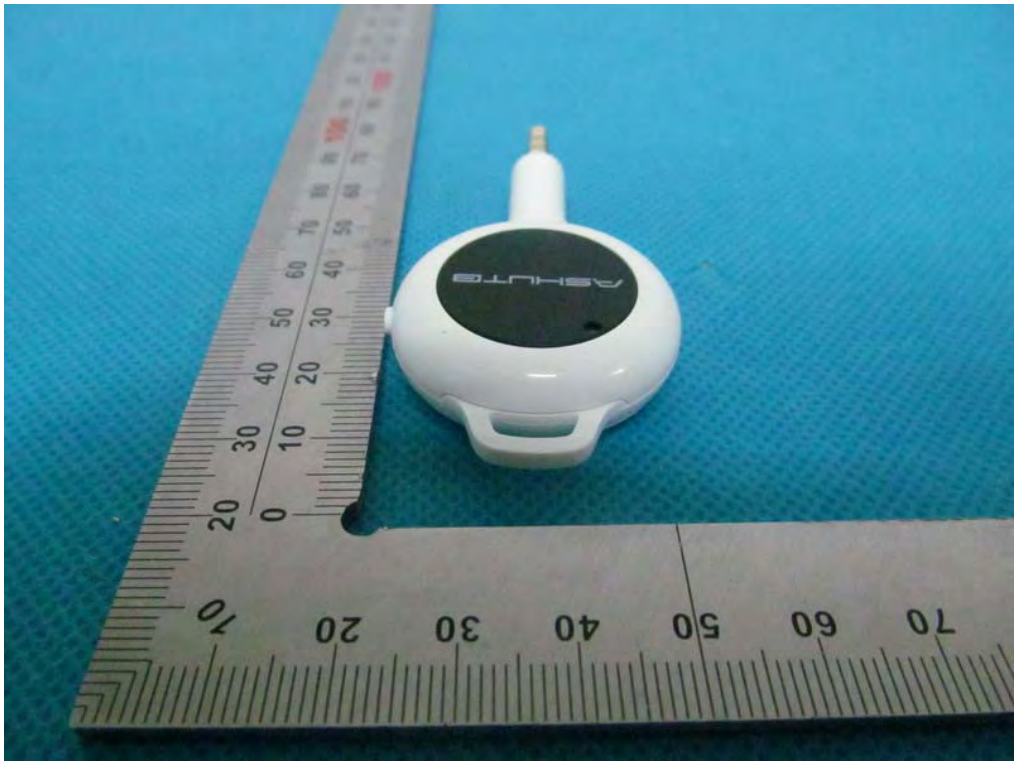
FCC RADIATED EMISSION TEST SETUP



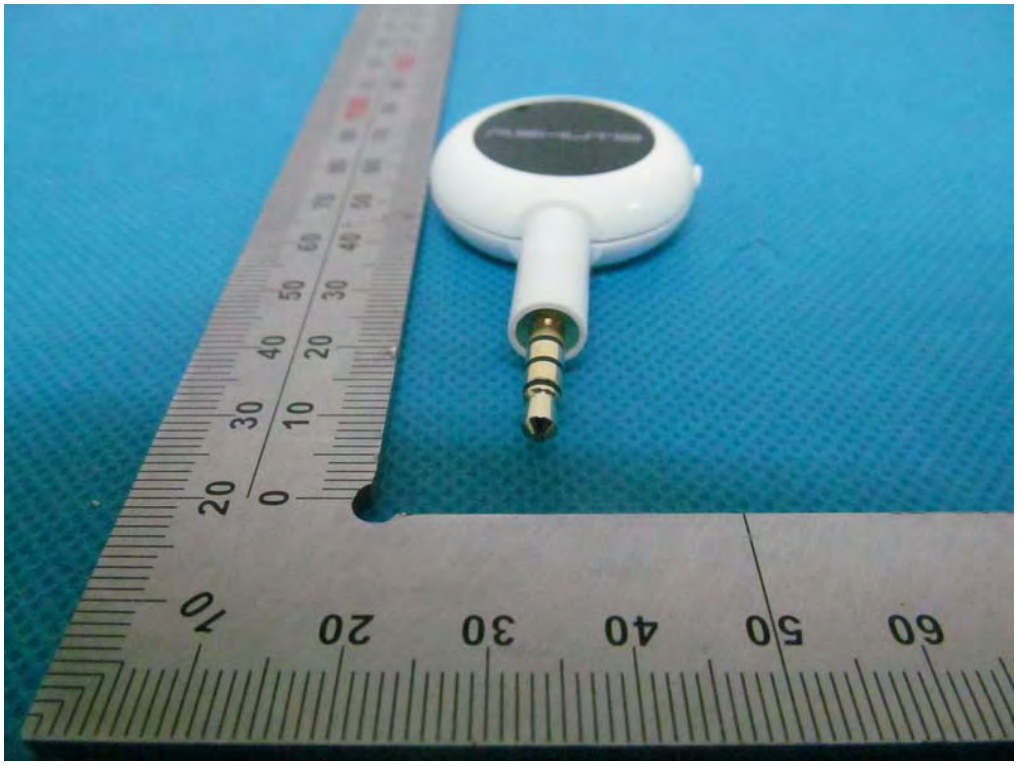
APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT

TOP VIEW OF EUT- RECEIVER



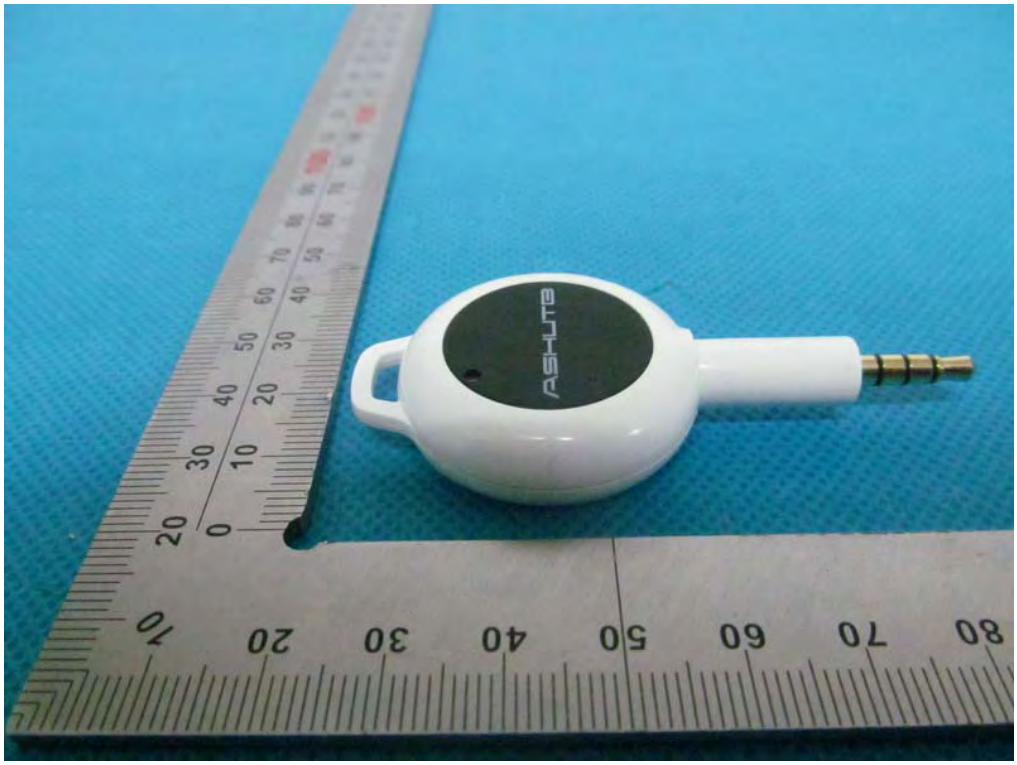
BOTTOM VIEW OF EUT- RECEIVER



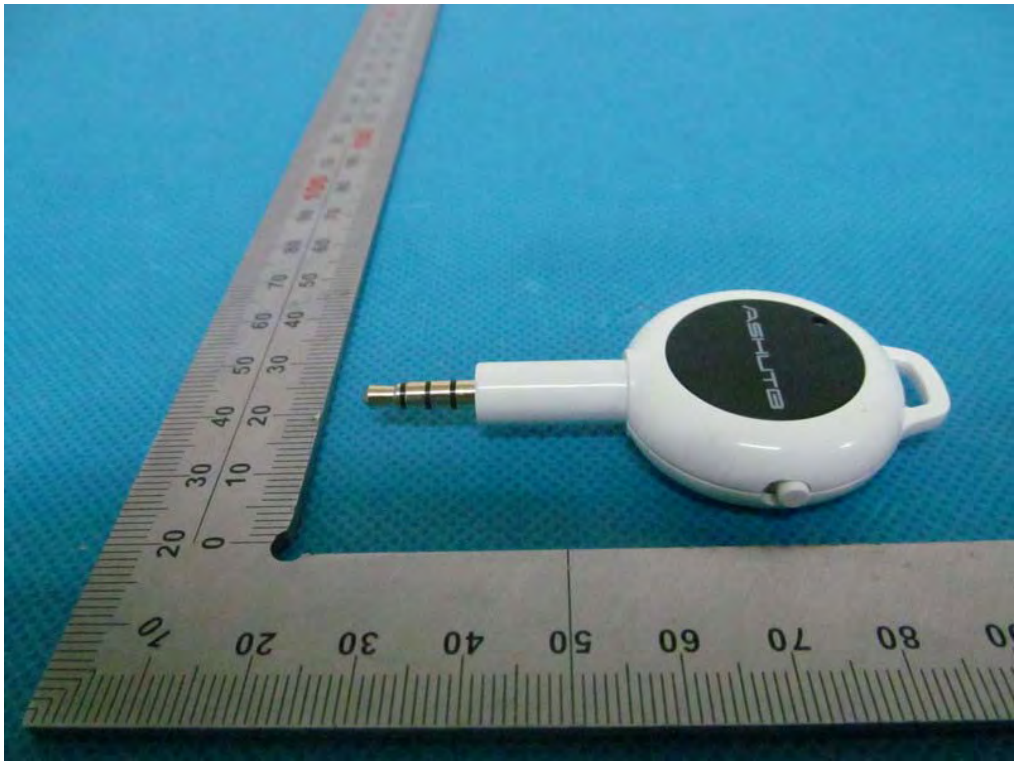
FRONT VIEW OF EUT- RECEIVER

BACK VIEW OF EUT- RECEIVER

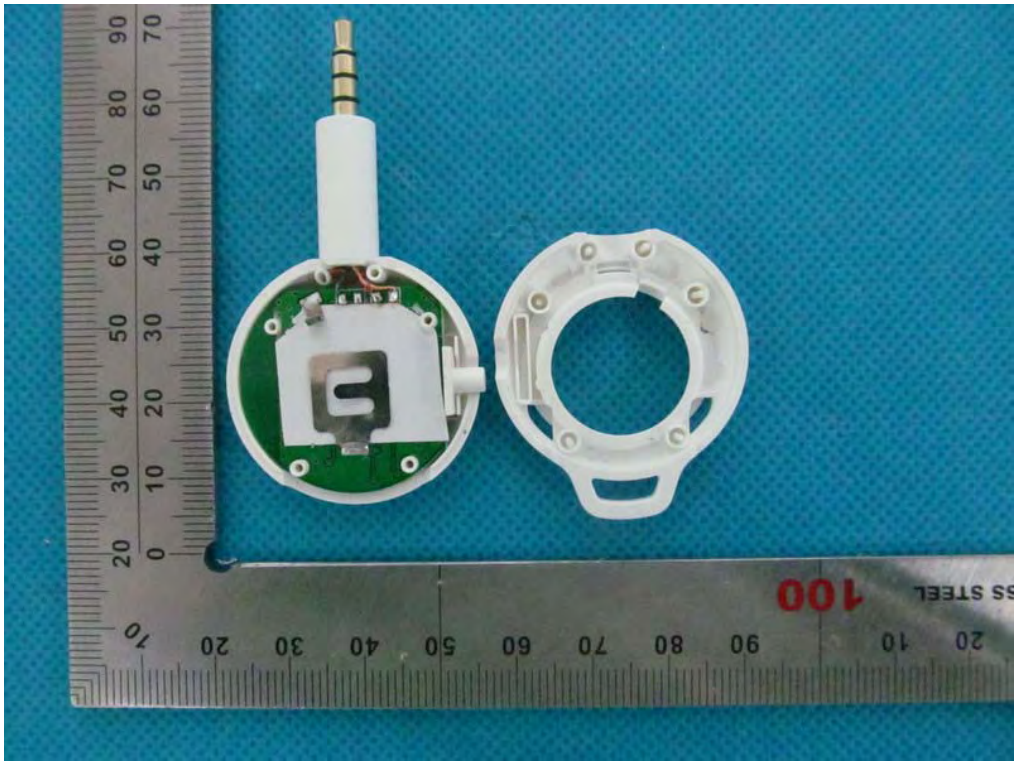
LEFT VIEW OF EUT- RECEIVER



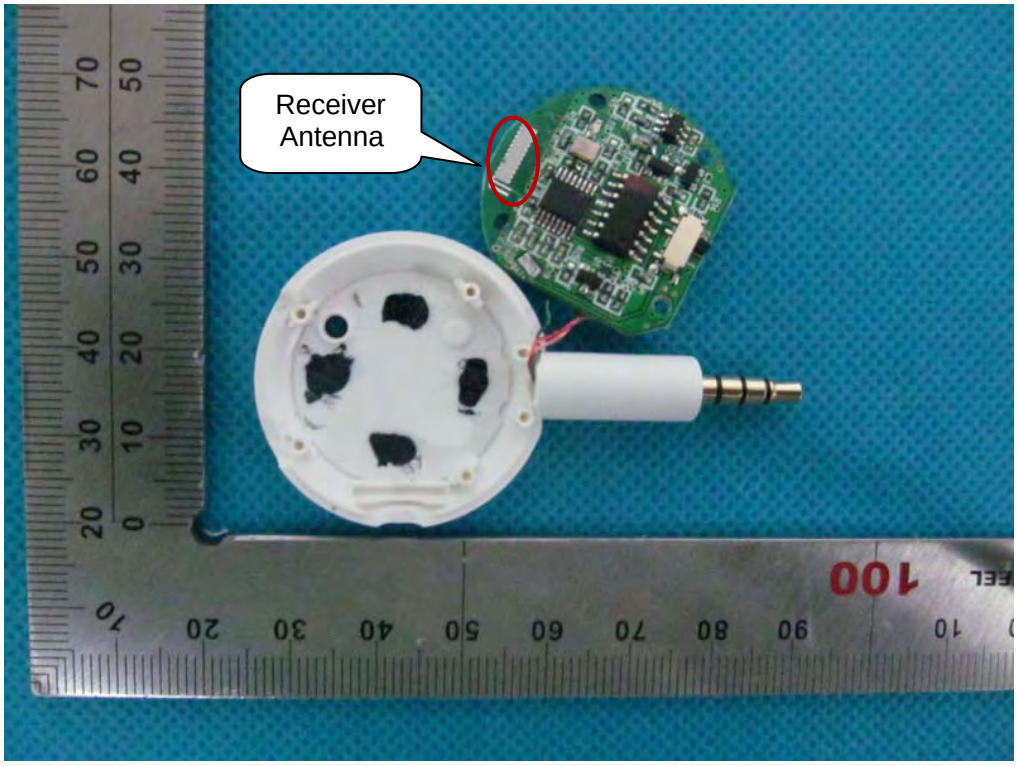
RIGHT VIEW OF EUT- RECEIVER



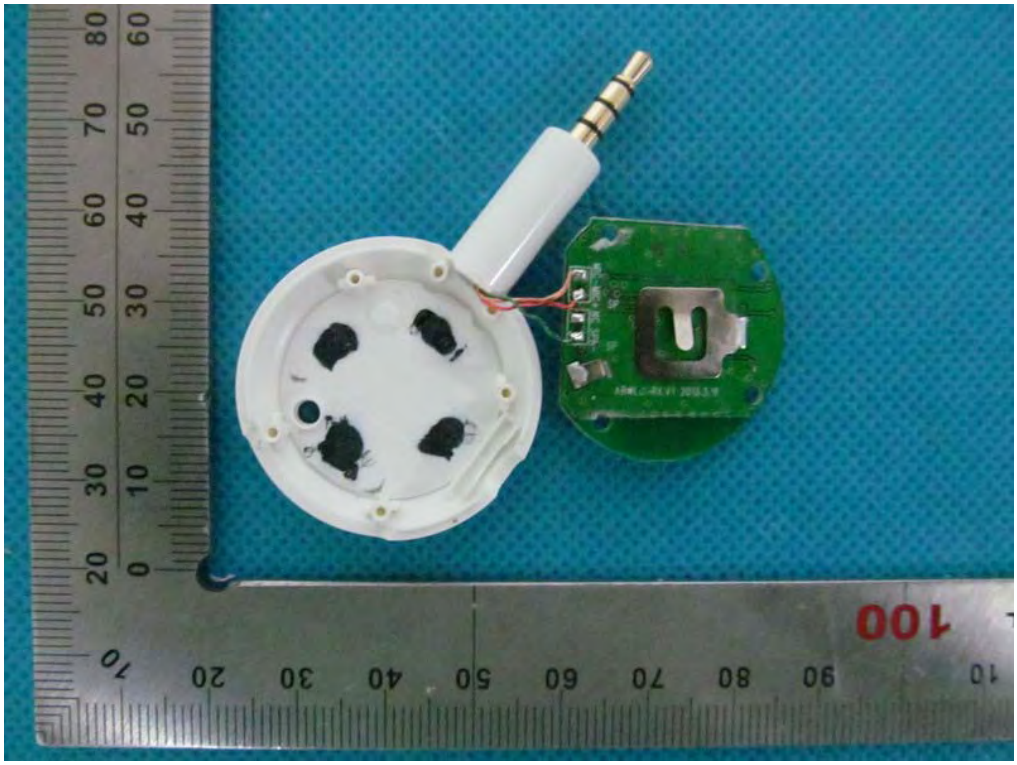
OPEN VIEW OF EUT- RECEIVER



INTERNAL VIEW OF EUT-1- RECEIVER



INTERNAL VIEW OF EUT-2- RECEIVER



TOP VIEW OF EUT- TRANSMITTER

BOTTOM VIEW OF EUT- TRANSMITTER

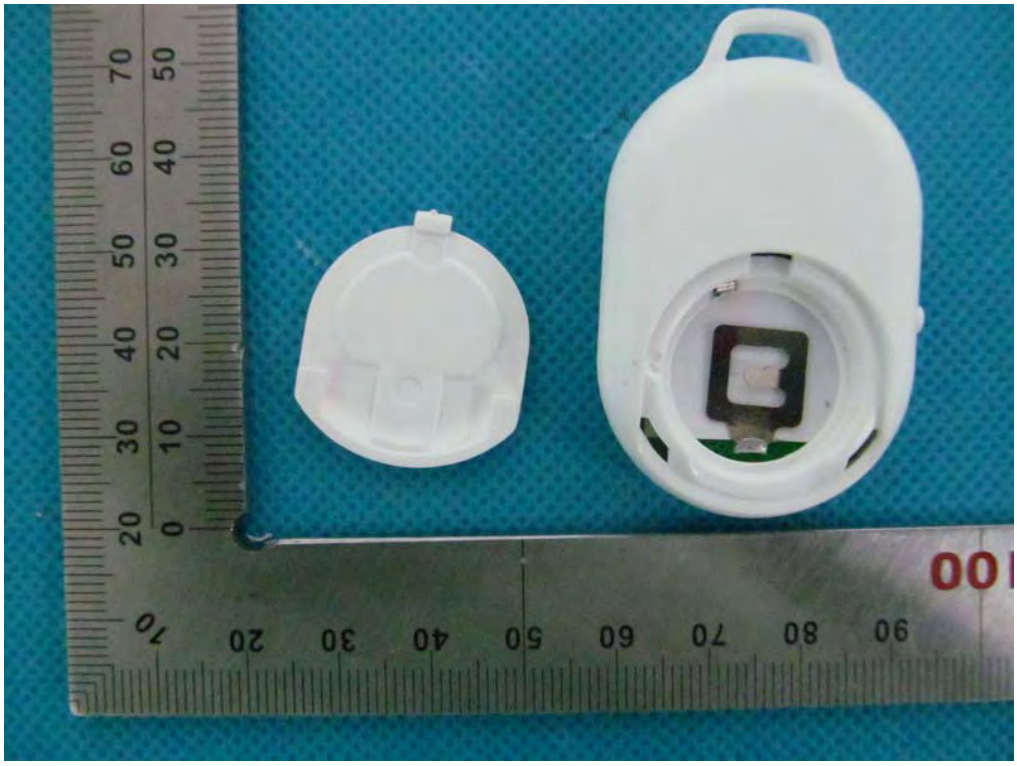
FRONT VIEW OF EUT- TRANSMITTER

BACK VIEW OF EUT- TRANSMITTER

LEFT VIEW OF EUT- TRANSMITTER

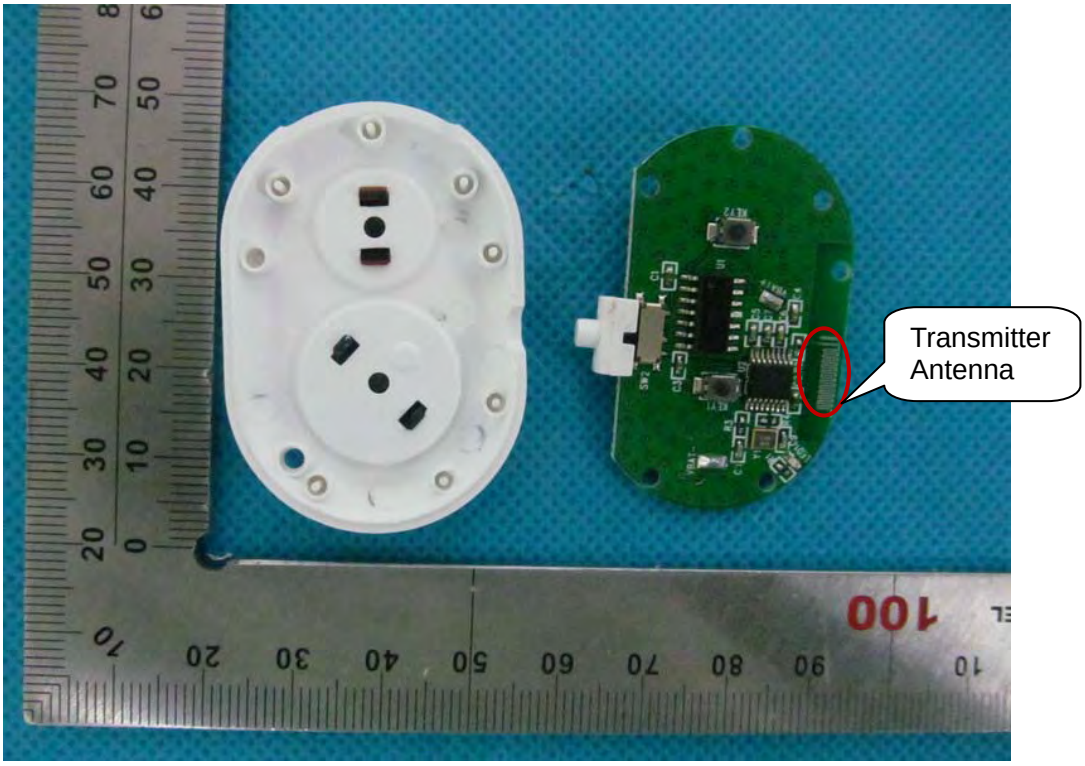
RIGHT VIEW OF EUT- TRANSMITTER

OPEN VIEW OF EUT-1- TRANSMITTER

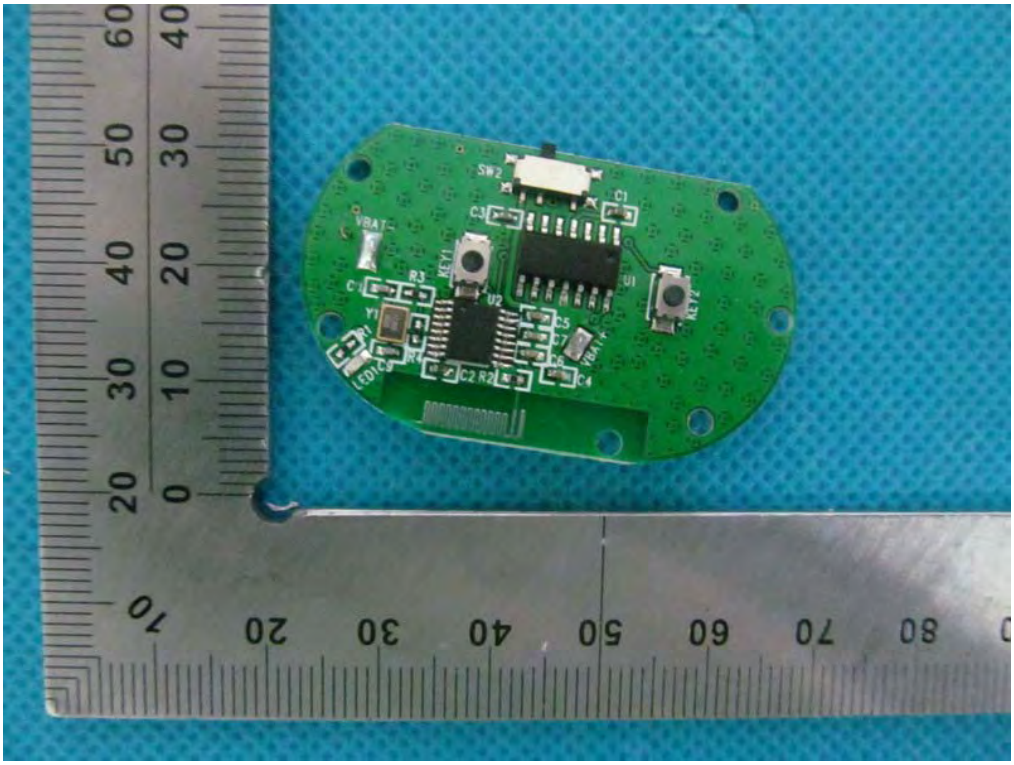


OPEN VIEW OF EUT-2- TRANSMITTER

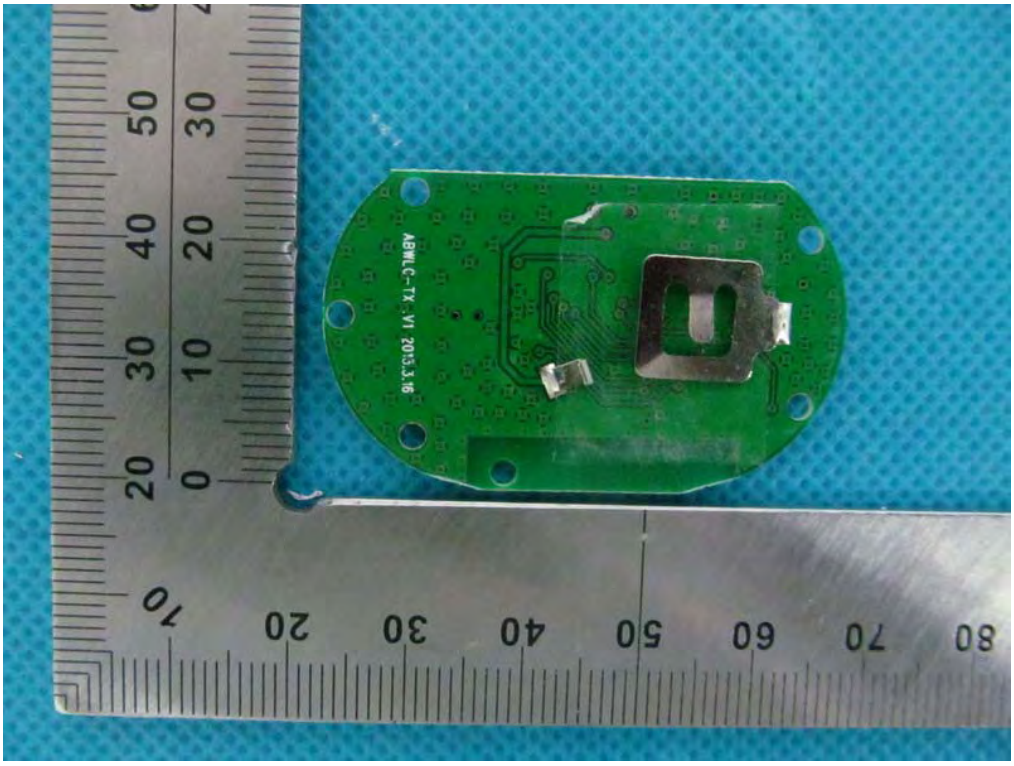
INTERNAL VIEW OF EUT-1- TRANSMITTER



INTERNAL VIEW OF EUT-2- TRANSMITTER



INTERNAL VIEW OF EUT-3- TRANSMITTER



----END OF REPORT----