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# FCC Test Report

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Report No.: AGC01892140501FE03

**FCC ID** : 2ACIP-TT-WM

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION** : Wireless Video Transmitter

**BRAND NAME** : TaoTronics

**MODEL NAME** : TT-WM01, TT-WM02, TT-WM03, TT-WM04, TT-WM05,  
TT-WM06, TT-WM07, TT-WM08

**CLIENT** : Hootoo.com Inc.

**DATE OF ISSUE** : Jun.23, 2014

**STANDARD(S)** : FCC Part 15 Rules

**REPORT VERSION** : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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### Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jun.23, 2014	Valid	Original Report

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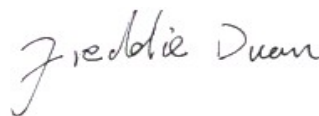
## 1. VERIFICATION OF CONFORMITY

<b>Applicant</b>	Hootoo.com Inc.
<b>Address</b>	2880 Zanker Road STE 203 San Jose, CA95134
<b>Manufacturer</b>	Hootoo.com Inc.
<b>Address</b>	2/F,Block D, Minle Industrial Park, Meiban RD,Longhua District,SZ, China. 518131
<b>Product Designation</b>	Wireless Video Transmitter
<b>Brand Name</b>	TaoTronics
<b>Test Model</b>	TT-WM01
<b>Series Model</b>	TT-WM02, TT-WM03, TT-WM04, TT-WM05, TT-WM06, TT-WM07, TT-WM08
<b>Difference description</b>	All the same except for the model name.
<b>Date of test</b>	Jun.17, 2014 to Jun.21, 2014
<b>Deviation</b>	None
<b>Condition of Test Sample</b>	Normal
<b>Report Template</b>	AGCRT-US-BR/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 radiated emission limits of FCC Rules Part 15.249.

Prepared By



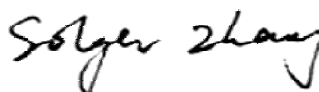
Freddie Duan Jun.23, 2014

Checked By



Kidd Yang Jun.23, 2014

Authorized By



Solger Zhang Jun.23, 2014

## 2. GENERAL INFORMATION

### 2.1. PRODUCT DESCRIPTION

The EUT is “Wireless Video Transmitter” designed as a “Communication Device”. It is designed by way of utilizing the FHSS technology to achieve the system operation.

A major technical description of EUT is described as following

<b>Operation Frequency</b>	2.414 GHz to 2.468GHz
<b>Field Strength</b>	88.60dBuV/m(Max)
<b>Modulation</b>	FM/DLL
<b>Number of channels</b>	4
<b>Hardware Version</b>	N/A
<b>Software Version</b>	N/A
<b>Antenna Designation</b>	Integrated Antenna
<b>Antenna Gain</b>	0dBi
<b>Power Supply</b>	DC12.0V

### 2.2. TABLE OF CARRIER FREQUENCIES

Frequency Band	Channel Number	Frequency
2414~2468MHZ	1	2414MHz
	2	2432MHz
	3	2450MHz
	4	2468 MHz

### **2.3. RELATED SUBMITTAL(S) / GRANT (S)**

This submittal(s) (test report) is intended for **FCC ID: 2ACIP-TT-WM** filing to comply with Section 15.249 of the FCC Part 15, Subpart C Rules.

### **2.4. TEST METHODOLOGY**

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

### **2.5. SPECIAL ACCESSORIES**

Refer to section 5.2.

### **2.6. EQUIPMENT MODIFICATIONS**

Not available for this EUT intended for grant.

### 3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2dB

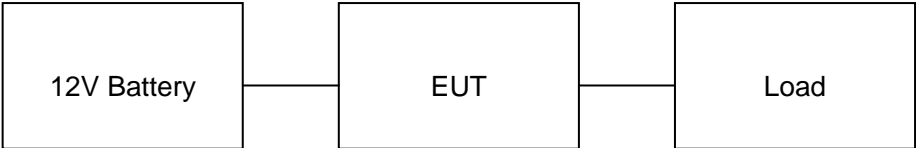
### 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low Channel (2414MHz)
2	Middle Channel (2432MHz)
3	High Channel (2468MHz)
<p>Note:</p> <ol style="list-style-type: none"><li>1. All the test modes can be supply by storage battery, only the result of the worst case was recorded in the report, if no other cases.</li><li>2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.</li></ol>	

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configuration:



5.2. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Battery	N/A	FengFan	DC Source
2	Load	N/A	75 Ω × 2	Accessory

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.249	Field Strength of Fundamental	Compliant
§15.249 & §15.209	Radiated Emission	Compliant
§15.249	Band Edges	Compliant



## 6. TEST FACILITY

<b>Site</b>	Attestation of Global Compliance (Shenzhen) Co., Ltd
<b>Location</b>	2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China
<b>Description</b>	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.

### ALL TEST EQUIPMENT LIST

Description	Manufacturer	Model	S/N	Cal. Date	Cal. Due
RF attenuator	N/A	RFA20db	68	N/A	N/A
Spectrum Analyzer	Agilent	E4440A	US41421290	07/17/2013	07/16/2014
Amplifier	EM	EM30180	0607030	02/27/2014	02/26/2015
Horn Antenna	EM	EM-AH-10180	67	04/19/2014	04/18/2015
Horn Antenna	A.H. Systems Inc.	SAS-574	--	06/06/2014	06/05/2015
Biological Antenna	A.H. Systems Inc.	SAS-521-4	26	06/06/2014	06/05/2015
Loop Antenna	Daze	ZN30900N	SEL0097	07/17/2013	07/16/2014
Isolation Transformer	LETEAC	LTBK	--	07/17/2013	07/16/2014

## 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 below 1GHz, use 120KHz RBW and VBW $\geq$ 3RBW for QP reading.
7. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
8. 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.
9. 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.
10. 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.
11. 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.
12. Simultaneously transmitting and continuous transmitting mode has been considered. Only the worst case is reported.

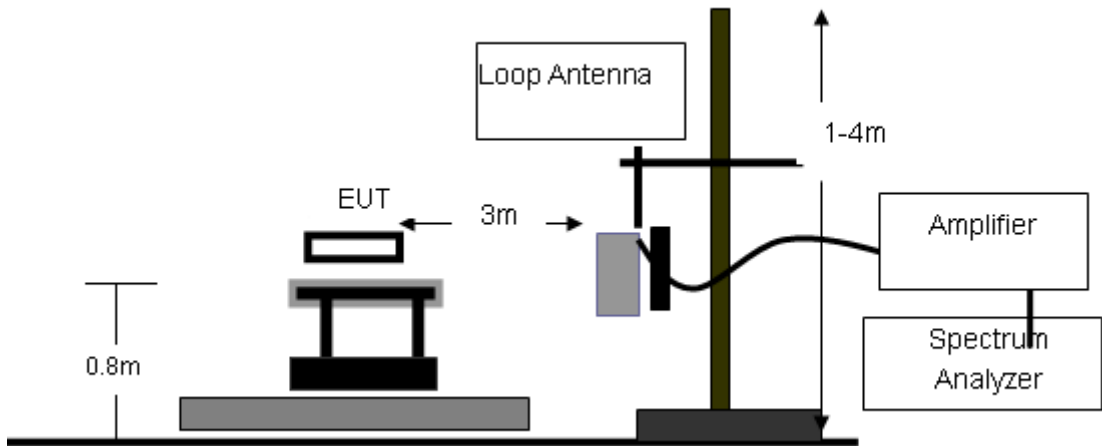
The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RBW 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RBW 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RBW 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/1MHz for Peak, 1MHz/10Hz for Average

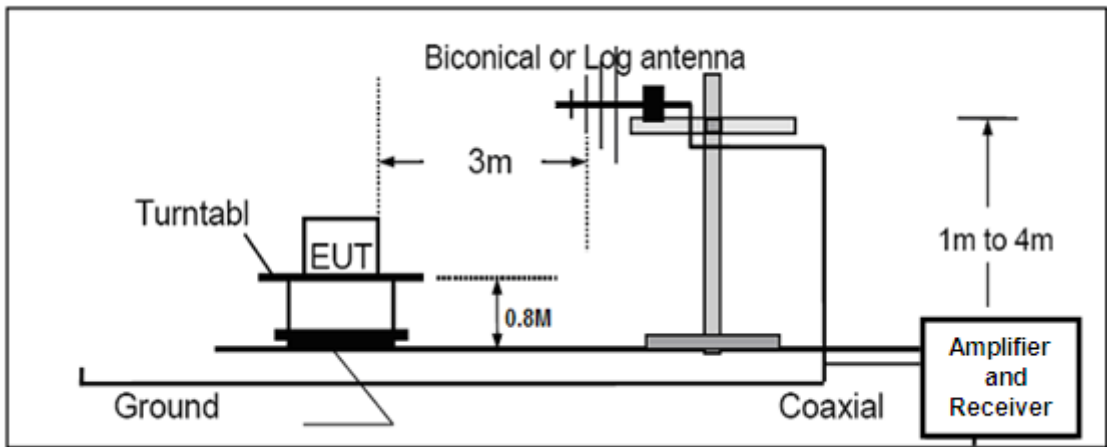
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RBW 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RBW 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RBW 120KHz for QP

7.2. TEST SETUP

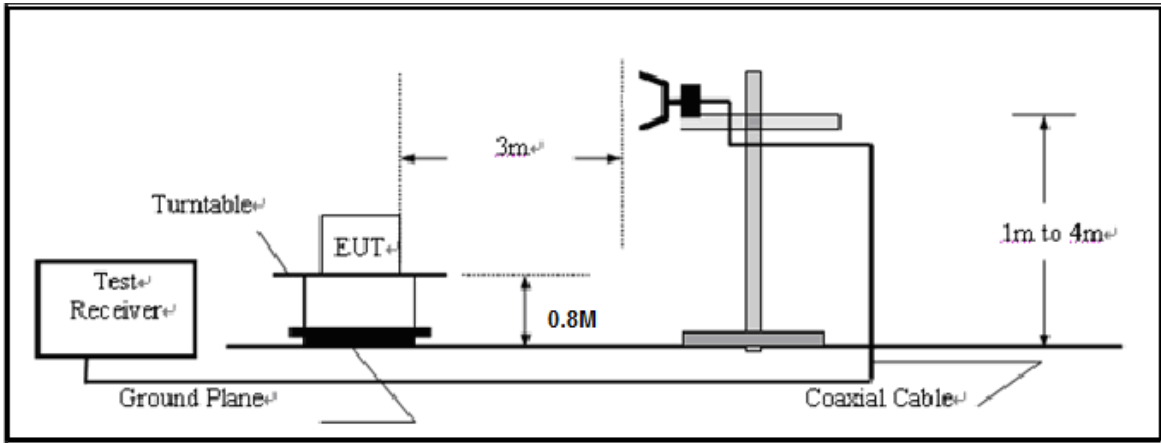
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz

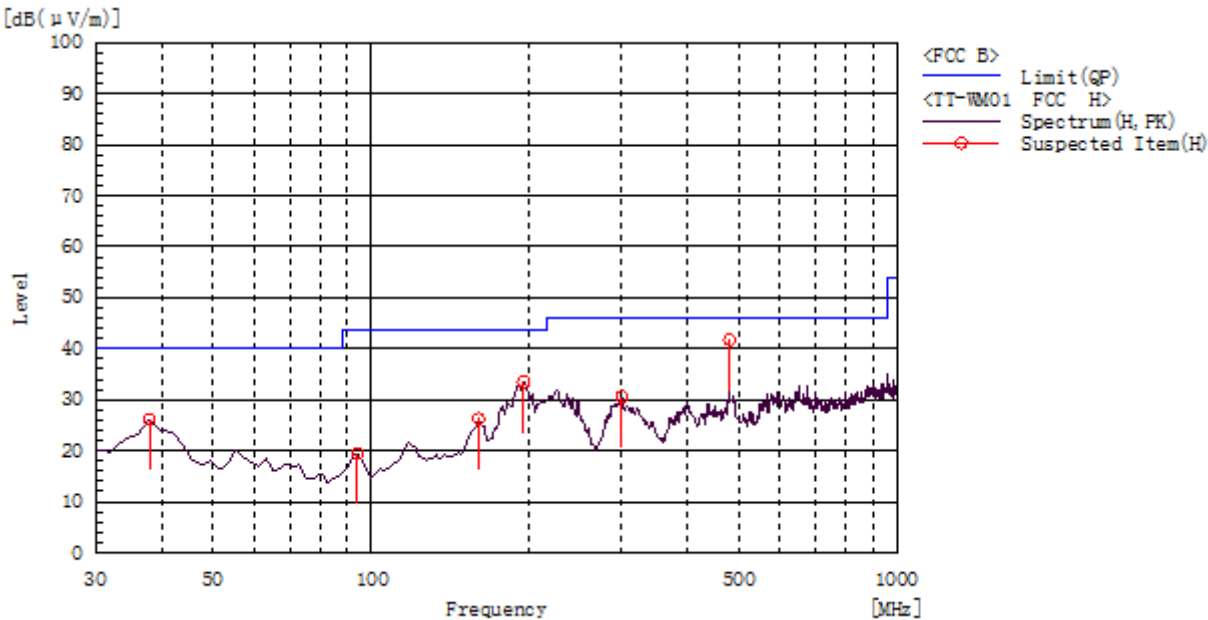


7.3. TEST RESULT

RADIATED EMISSION BELOW 30MHz

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

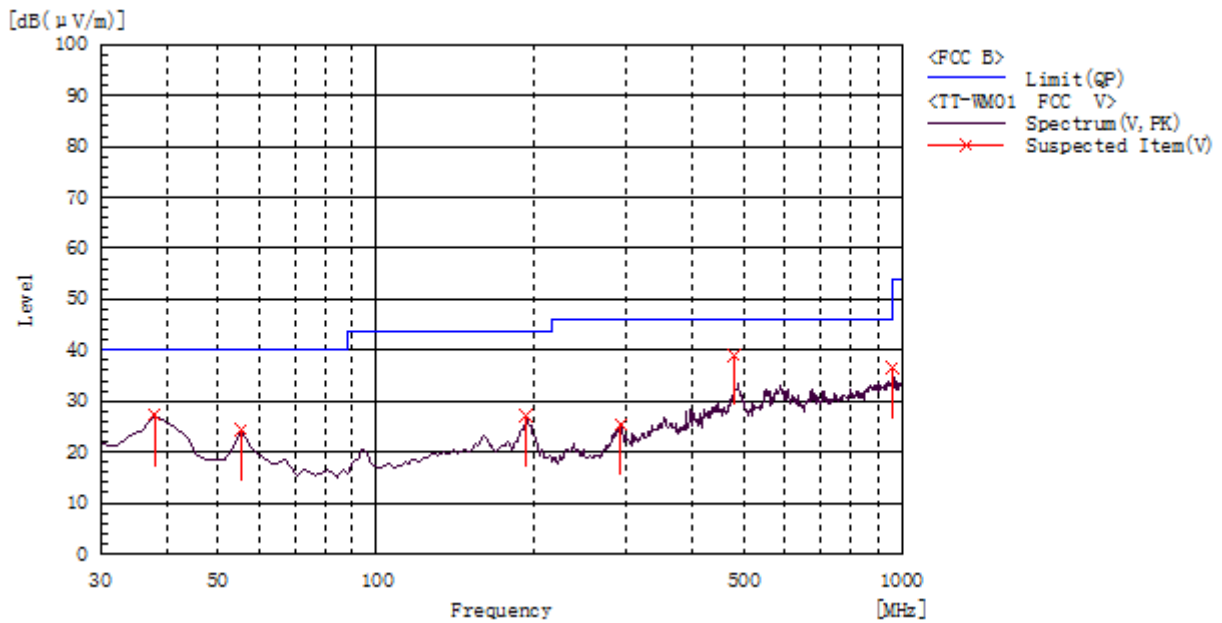
RADIATED EMISSION BELOW 1GHZ-Horizontal(2432MHz)



Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
37.760	H	5.0	21.2	26.2	40.0	13.8	Pass	100.2	340.4
94.020	H	10.0	9.5	19.5	43.5	24.0	Pass	100.2	343.7
159.980	H	11.3	15.0	26.3	43.5	17.2	Pass	100.2	325.1
194.900	H	20.9	12.6	33.5	43.5	10.0	Pass	100.2	343.7
299.660	H	15.5	15.1	30.6	46.0	15.4	Pass	100.2	343.7
480.080	H	21.5	20.2	41.7	46.0	4.3	Pass	100.2	341.6

RESULT: PASS

## RADIATED EMISSION BELOW 1GHZ-Vertical(2432MHz)



Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
37.760	V	6.1	21.2	27.3	40.0	12.7	Pass	200.0	300.3
55.220	V	11.0	13.3	24.3	40.0	15.7	Pass	100.0	305.1
192.960	V	14.5	12.7	27.2	43.5	16.3	Pass	200.0	115.1
291.900	V	9.9	15.6	25.5	46.0	20.5	Pass	200.0	214.4
480.080	V	18.9	20.2	39.1	46.0	6.9	Pass	200.0	288.2
959.260	V	7.7	28.7	36.4	46.0	9.6	Pass	200.0	358.4

**RESULT: PASS**

**Note:** 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) –Horizontal(2414MHz)

Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) AV	Margin dB	Pass/Fail	Height cm	Angle deg
2414.20	H	88.60	-0.31	88.29	94.00	5.71	Pass	100.0	152.2
4828.40	H	42.10	8.45	50.55	54.00	3.45	Pass	100.0	279.4
7242.60	H	40.32	11.26	51.58	54.00	2.42	Pass	100.0	152.1

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Vertical(2414MHz)

Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) AV	Margin dB	Pass/Fail	Height cm	Angle deg
2414.31	V	88.4	-0.31	88.09	94.00	5.91	Pass	100.0	311.2
4828.62	V	42.25	8.45	50.70	54.00	3.30	Pass	100.0	214.8
7242.93	V	40.47	11.26	51.73	54.00	2.27	Pass	100.0	124.4

**RESULT: PASS**

Note: Since the peak value is less than AV limit, it is deemed to comply the requirement of 15.249 without average testing.

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) –Horizontal(2432MHz)

Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) AV	Margin dB	Pass/Fail	Height cm	Angle deg
2432.100	H	88.1	-0.3	87.80	94.00	6.20	Pass	100.0	304.1
4864.200	H	42.8	8.4	51.20	54.00	2.80	Pass	100.0	12.8
7296.300	H	41.1	11.1	52.20	54.00	1.80	Pass	100.0	156.4

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Vertical(2432MHz)

Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) AV	Margin dB	Pass/Fail	Height cm	Angle deg
2432.500	V	88.9	-0.3	88.60	94.00	5.40	Pass	100.0	304.1
4865.200	V	43.2	8.5	51.70	54.00	2.30	Pass	100.0	13.3
7297.800	V	41.9	11.2	53.10	54.00	0.90	Pass	100.0	157.4

**RESULT: PASS**

Note: Since the peak value is less than AV limit, it is deemed to comply the requirement of 15.249 without average testing.

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) –Horizontal(2468MHz)

Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) AV	Margin dB	Pass/Fail	Height cm	Angle deg
2468.14	H	87.34	-0.21	87.13	94.00	6.87	Pass	100.0	311.4
4936.28	H	41.79	8.58	50.37	54.00	3.63	Pass	100.0	64.2
7404.42	H	41.16	11.33	52.49	54.00	1.51	Pass	100.0	361.2

RADIATED EMISSION ABOVE 1GHZ (1-10<sup>th</sup> Harmonics) -Vertical(2468MHz)

Frequency MHz	Polarization	Reading dB(uV/m) PK	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) AV	Margin dB	Pass/Fail	Height cm	Angle deg
2468.27	V	88.28	-0.21	88.07	94.00	5.93	Pass	100.0	15.7
4936.54	V	42.48	8.58	51.06	54.00	2.94	Pass	100.0	283.4
7404.81	V	41.24	11.33	52.57	54.00	1.43	Pass	100.0	264.3



**RESULT: PASS**

Note: Since the peak value is less than AV limit, it is deemed to comply the requirement of 15.249 without average testing.

**Note:** 8~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

8. BAND EDGE EMISSION

8.1. MEASUREMENT PROCEDURE

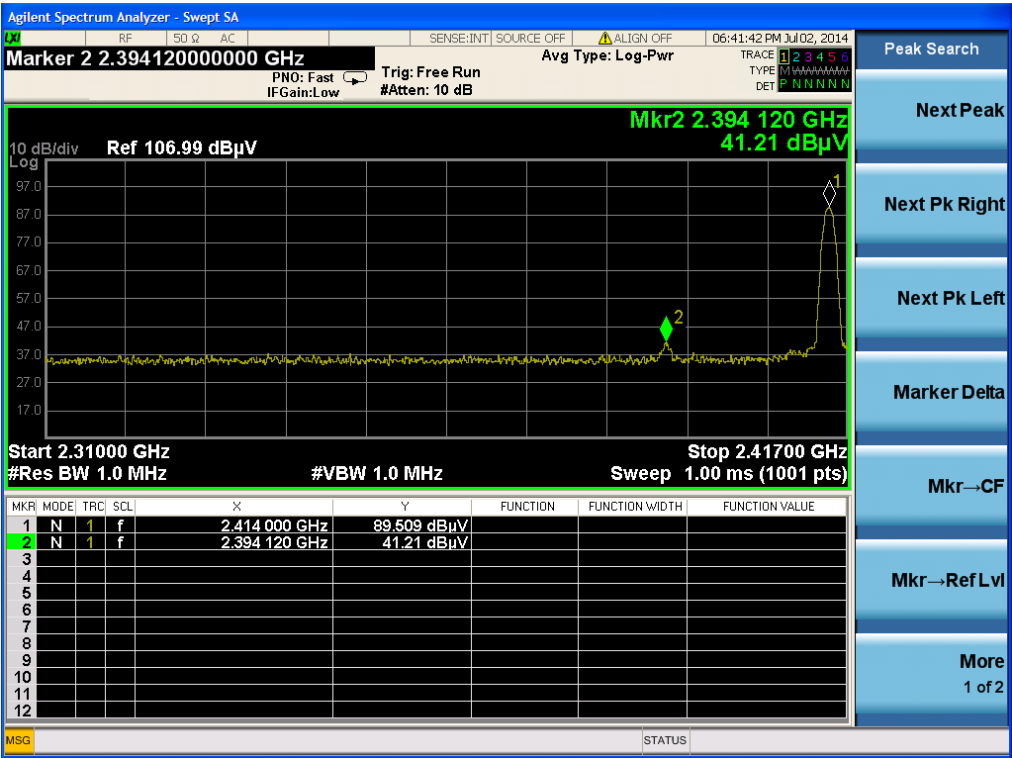
- 1. Set the EUT Work on the top, the bottom operation frequency individually.
- 2. Set SPA Start or Stop Frequency = Operation Frequency, use RBW 1MHz and VBW >=1MHz for peak Value search and use RBW 1MHz/VBW 10Hz for average value search
- 3. The band edges was measured and recorded.
- 4.Only worse case was recorded in this report.

8.2. TEST SET-UP

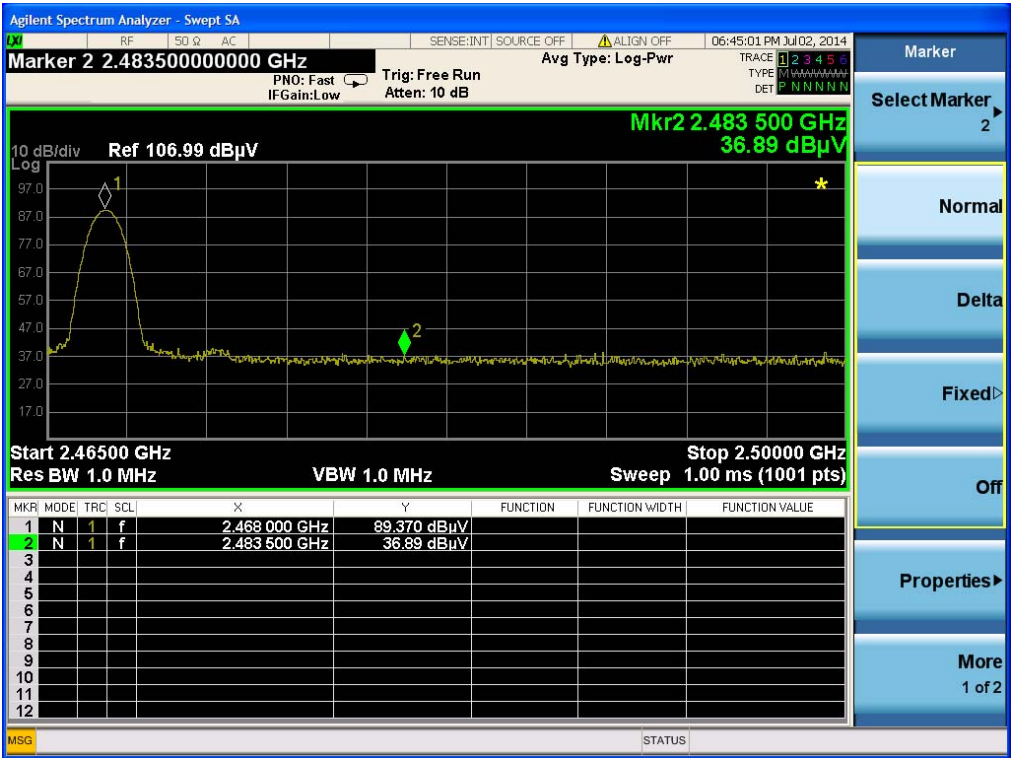
Radiated same as 10.2

8.3. TEST RESULT

TEST PLOT OF BAND EDGE FOR LOW CHANNEL(2414MHz)



TEST PLOT OF BAND EDGE FOR HIGH CHANNEL (2468MHz)



RESULT: PASS

**Note:** The other modes radiation emission have enough 20dB margin.

Factor=Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

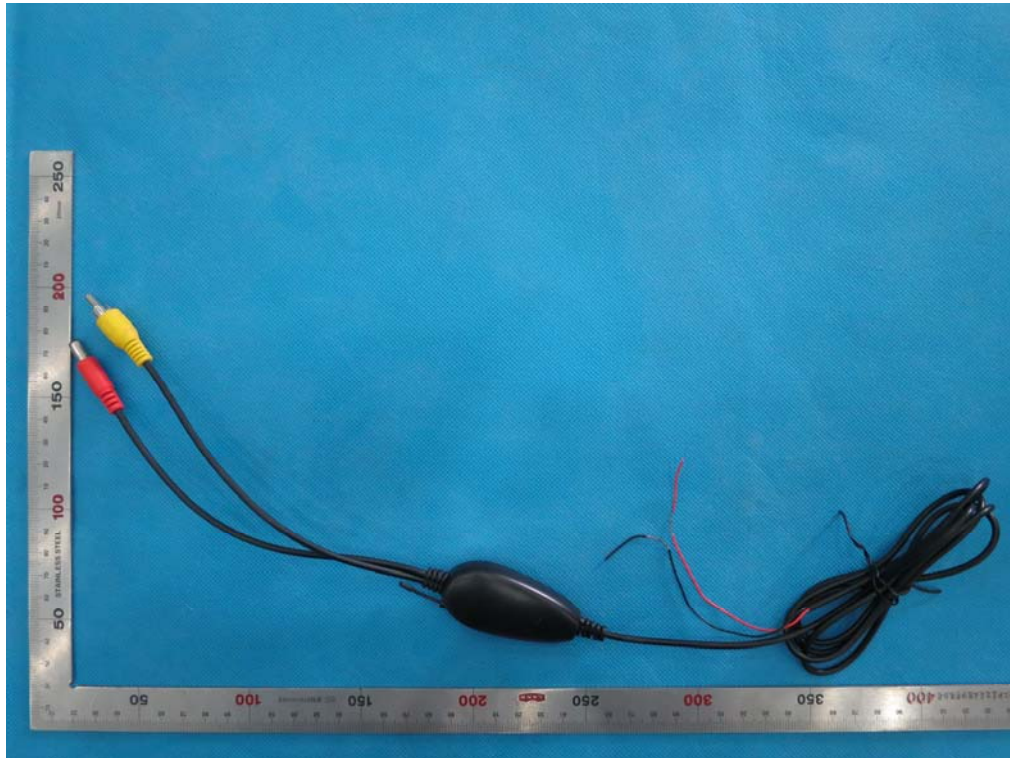
The "Factor" value can be calculated automatically by software of measurement system.

**APPENDIX A: PHOTOGRAPHS OF TEST SETUP**  
FCC RADIATED EMISSION TEST SETUP



## APPENDIX B: PHOTOGRAPHS OF EUT

### VIEW OF EUT (TRANSMITTER)

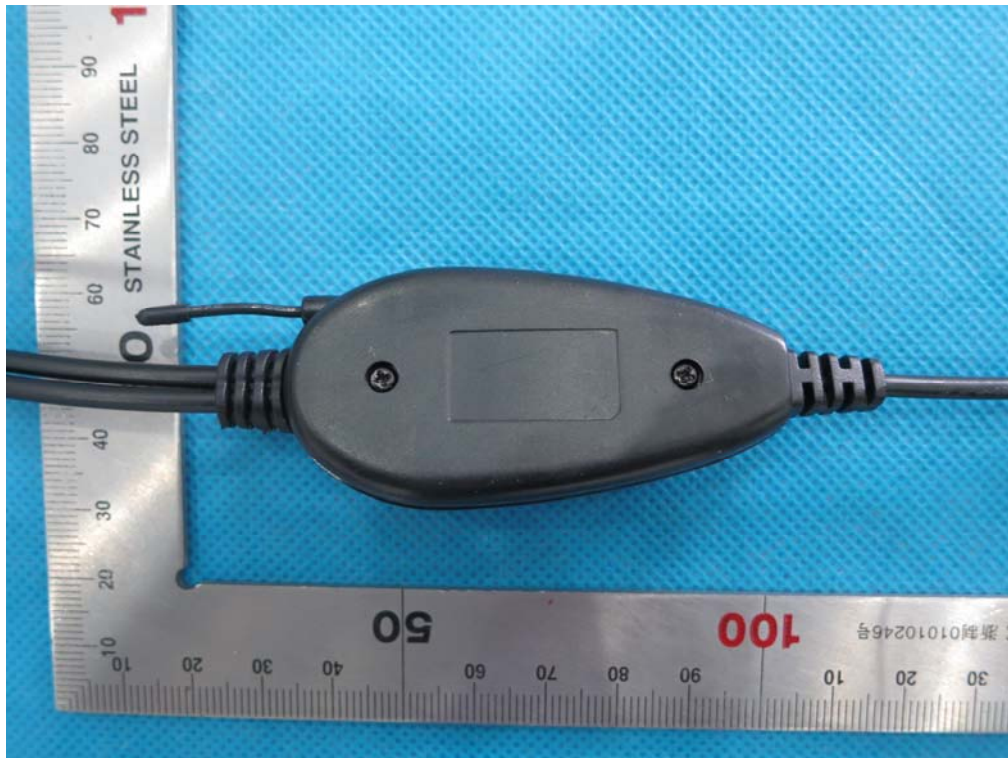


VIEW OF EUT (TRANSMITTER)

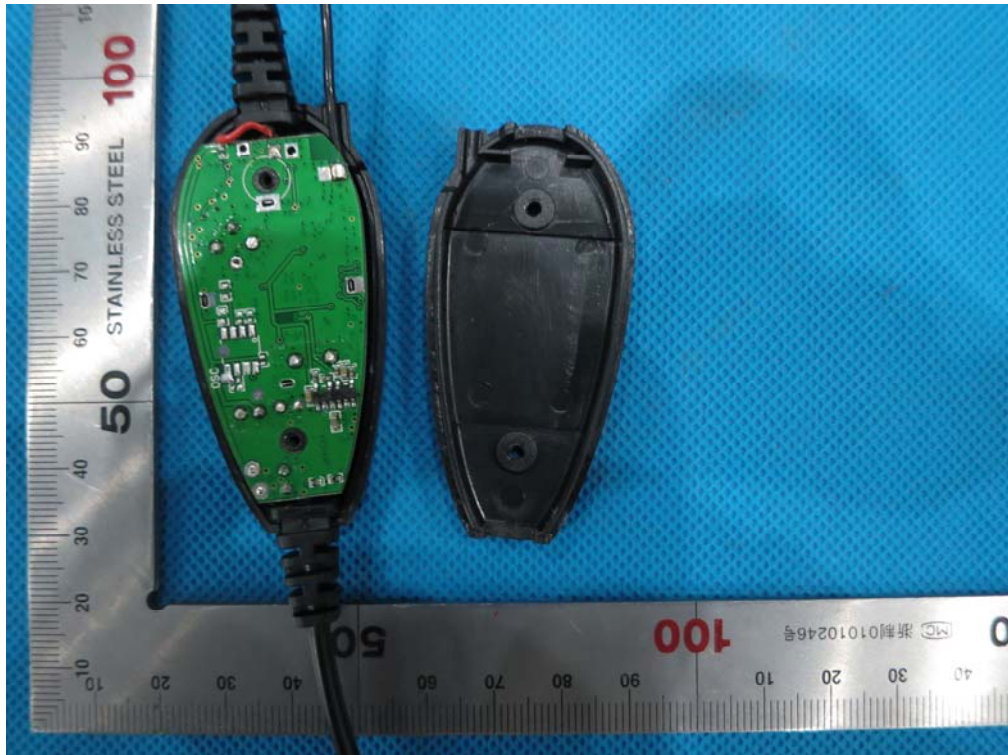




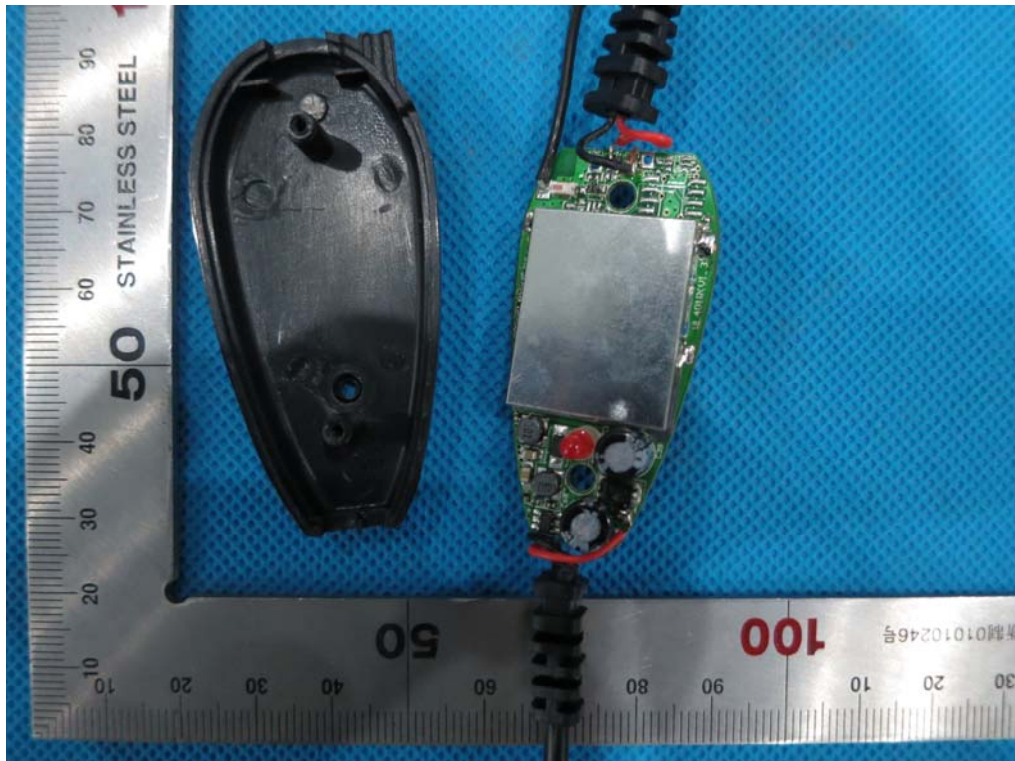
VIEW OF EUT (TRANSMITTER)



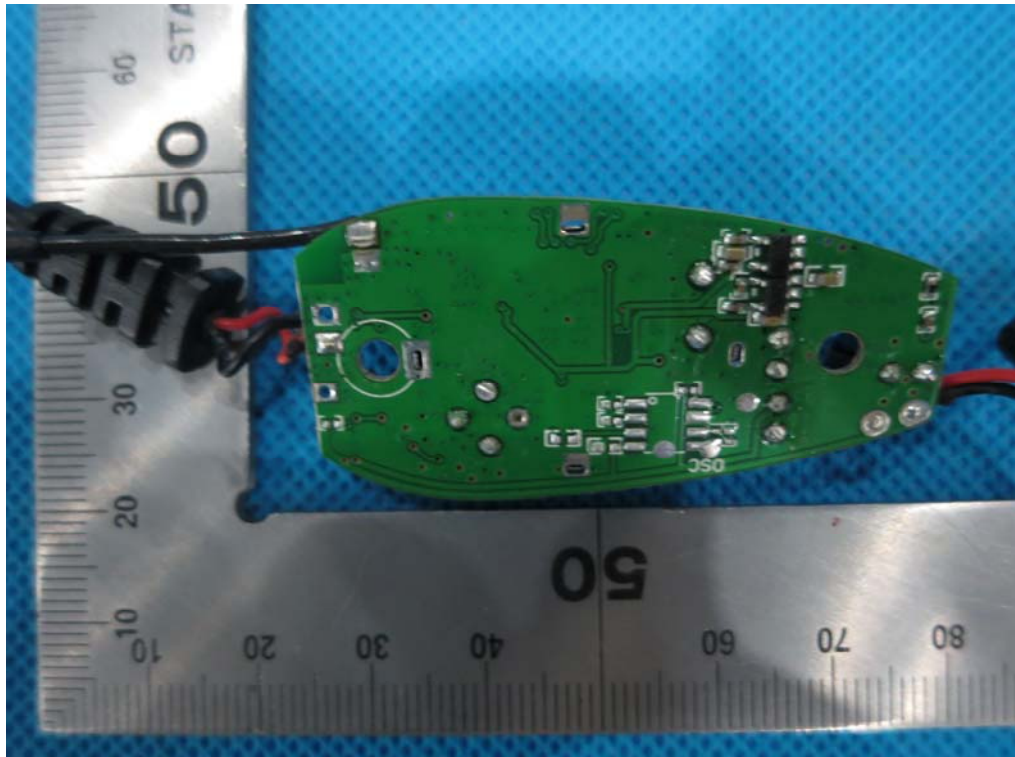
OPEN VIEW OF EUT-1(TRANSMITTER)



OPEN VIEW OF EUT-2 (TRANSMITTER)

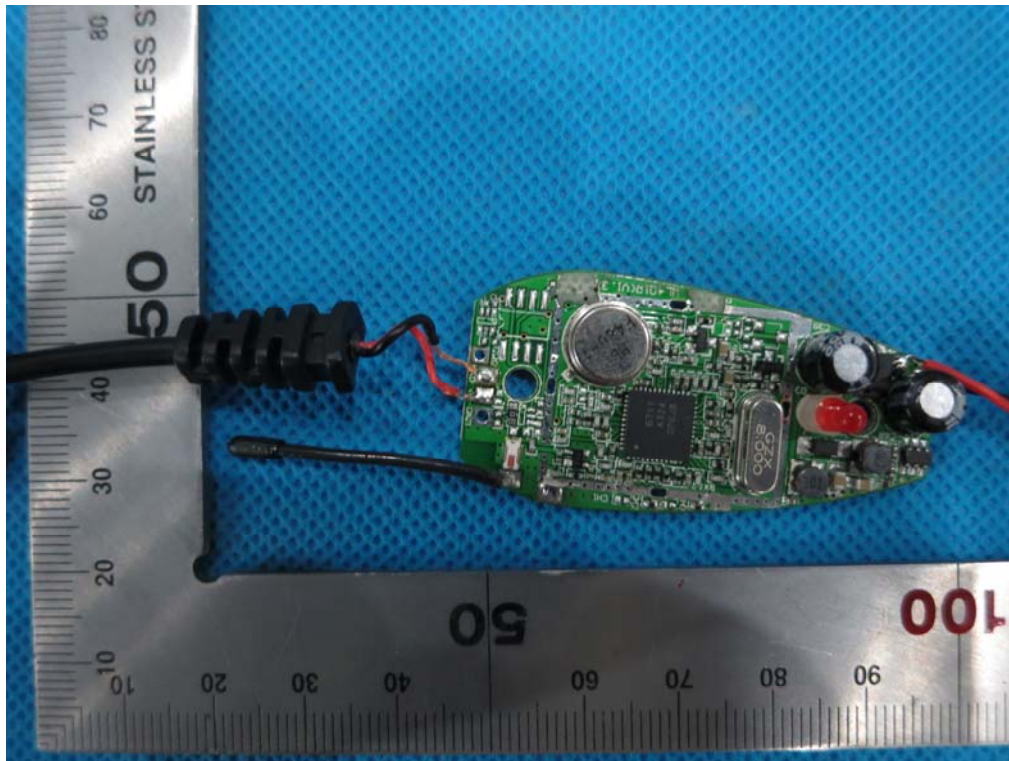


INTERNAL VIEW OF EUT-1(TRANSMITTER)





INTERNAL VIEW OF EUT-2(TRANSMITTER)



-----END OF REPORT-----