TECHNICAL REPORT

Report No:	FCC1708017
File reference No:	2017-07-11
Applicant:	Enuresis Solutions,LLC
Product:	DryBuddyFLEX Transceiver
Model No:	DBFLR03
Trademark:	
Test Standards:	FCC Part 15 Subpart C, Paragraph 15.231
Test result:	It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4&FCC Part 15 Subpart C, Paragraph 15.231 for the evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung
Manager

Dated: July 11, 2017

Results appearing herein relate only to the sample tested
The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Room 512-519, 5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen, Guangdong, China
Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meets with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

Test Report Conclusion

Content

1.0 General Details

1.1 Test Lab Details

Name : SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Room 512-519,5/F., East Tower,Building 4, Anhua Industrial Zone, Futian District,Shenzhen, Guangdong China

Telephone: (755) 83448688

Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m Anechoic Chamber

1.2 Applicant Details

Applicant: Enuresis Solutions,LLC

Address: 51W.Fairmont Avenue, Savannah, GA USA, 31406

Telephone: (011)1-912-352-8854

Fax: (011)1-912-352-8854

1.3 Description of EUT

Product:	DryBuddyFLEX Transceiver
Manufacturer:	Shenzhen Poshton Technology Co.,Ltd
Address:	3/F,BLDG9,Beifang Yongfa Technology Park,Chaoyang Rd,Yanchuan Industrial Zone,Songgang Town,Bao'an Distric,Shenzhen 518105,P.R.China
Brand Name:	DryBuddy Enuresis Solutions
Model Number:	DBFLR03
Additional Model Name	N/A
Additional Trade Name	N/A
Rating:	Input: 12VDC
Operation Frequency:	433.92MHz
Modulation Type:	ASK
Emission Designation:	164KF1D
Antenna Designation	Integral Antenna with Antenna Gain 0dBi
Power Adapter:	Model: MYX-1201000CP; Input: 100-240V~, 50/60Hz 0.5A max; Output: 12V, 1000mA

1.4 Submitted Sample

2 Samples

1.5 Test Duration

2017-07-06 to 2017-07-10

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by Terry Tang

Print Name: Terry Tang

2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2016-08-22	2017-08-21
TWO Line-V-NETW	R&S	EZH3-Z5	100294	2016-08-22	2017-08-21
TWO Line-V-NETW	R&S	EZH3-Z5	100253	2016-08-22	2017-08-21
Ultra Broadband ANT	R&S	HL562	100157	2016-08-23	2017-08-22
ESDV Test Receiver	R&S	ESDV	100008	2016-08-22	2017-08-21
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2016-08-22	2017-08-21
System Controller	CT	SC100	-	--	--
Printer	EPSON	PHOTO EX3	CFNH234850	--	--
Computer	IBM	8434	1S8434KCE99BLXLO*	-	-
Loop Antenna	EMCO	6502	00042960	2016-08-23	2017-08-22
ESPI Test Receiver	R&S	ESI26	838786/013	2016-08-22	2017-08-21
3m OATS	--	--	N/A	2016-08-24	2017-08-23
Horn Antenna	R&S	BBHA 9170	BBHA9170265	2016-08-24	2017-08-23
Horn Antenna	R&S	BBHA 9120D	9120D-631	2016-08-24	2017-08-23
Power meter	Anritsu	ML2487A	6K00003613	2016-08-22	2017-08-21
Power sensor	Anritsu	MA2491A	32263	2016-08-22	2017-08-21
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2016-08-23	2017-08-21
LISN	AFJ	LS16C	10010947251	2016-08-22	2017-08-21
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2016-08-23	2017-08-22
9*6*6 Anechoic	--	--	N/A	2016-08-24	2017-08-23
EMI Test Receiver	RS	ESCS30	100139	2016-08-22	2017-08-21
RF Cable	SCHWARZBECK	--	--	2016-08-23	2017-08-22
Pre-Amplifier	HP	8447D	2727A05017	2016-08-05	2017-08-04
Pre-Amplifier	EM	EM30265	--	2016-08-05	2017-08-04

3.0 Technical Details

3.1 Summary of test results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.203	Antenna requirements	**PASS**	Compliant
FCC Part 15, Paragraph 15.207	Conducted Emission Test	**PASS**	Compliant
FCC Part 15, Paragraph 15.209	General Requirement	**PASS**	Compliant
FCC Part 15, Paragraph 15.231 (b)	Radiated Emission Test	**PASS**	Compliant
FCC Part 15, Paragraph 15.231 (c)	20dB Bandwidth Testing	**PASS**	Compliant
FCC Part 15, Paragraph 15.231 (a)(2)	Deactivate Testing	**PASS**	Compliant

3.2 Test Standards

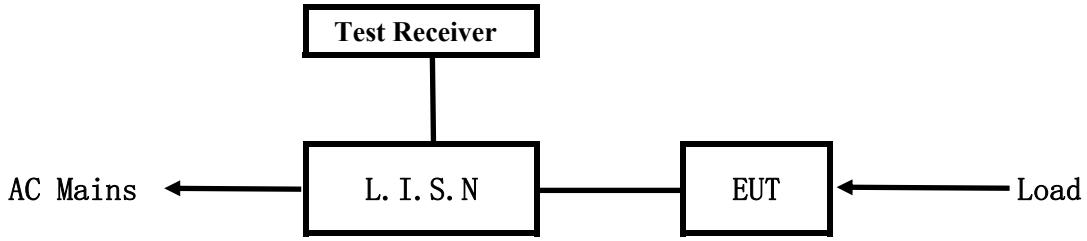
FCC Part 15 Subpart C, Paragraph 15.231 , ANSI C63.4 :2014 and ANSI C63.10 :2013

4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

5. Power Line Conducted Emission Test

5.1 Schematics of the test



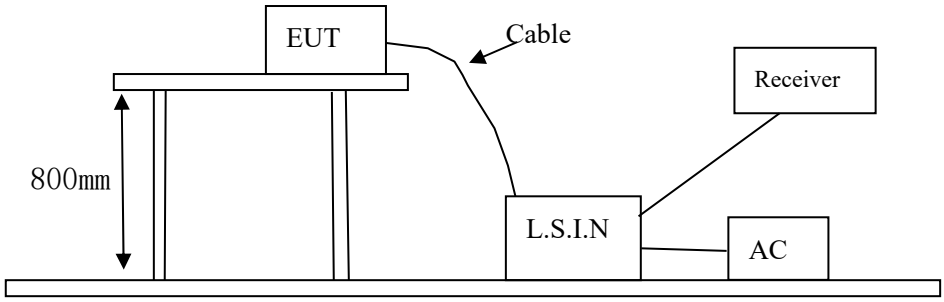
EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014.The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2014.

Test voltage: 120V~, 60Hz

Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2014. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	Model	FCC ID
DryBuddyFLEX Transceiver	Shenzhen Poshton Technology Co.,Ltd	DBFLR03	RHU-DBFLR03

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
N/A				

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2014.

A Setup the EUT and simulators as shown on follow

B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency (MHz)	Class A Limits (dB μ V)		Class B Limits (dB μ V)	
	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
0.15 ～ 0.50	79.0	66.0	66.0～56.0*	56.0～46.0*
0.50 ～ 5.00	73.0	60.0	56.0	46.0
5.00 ～ 30.00	73.0	60.0	60.0	50.0

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz. (The average detector is necessary when the Quasi-peak emission level beyond the average Limit.)

A: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

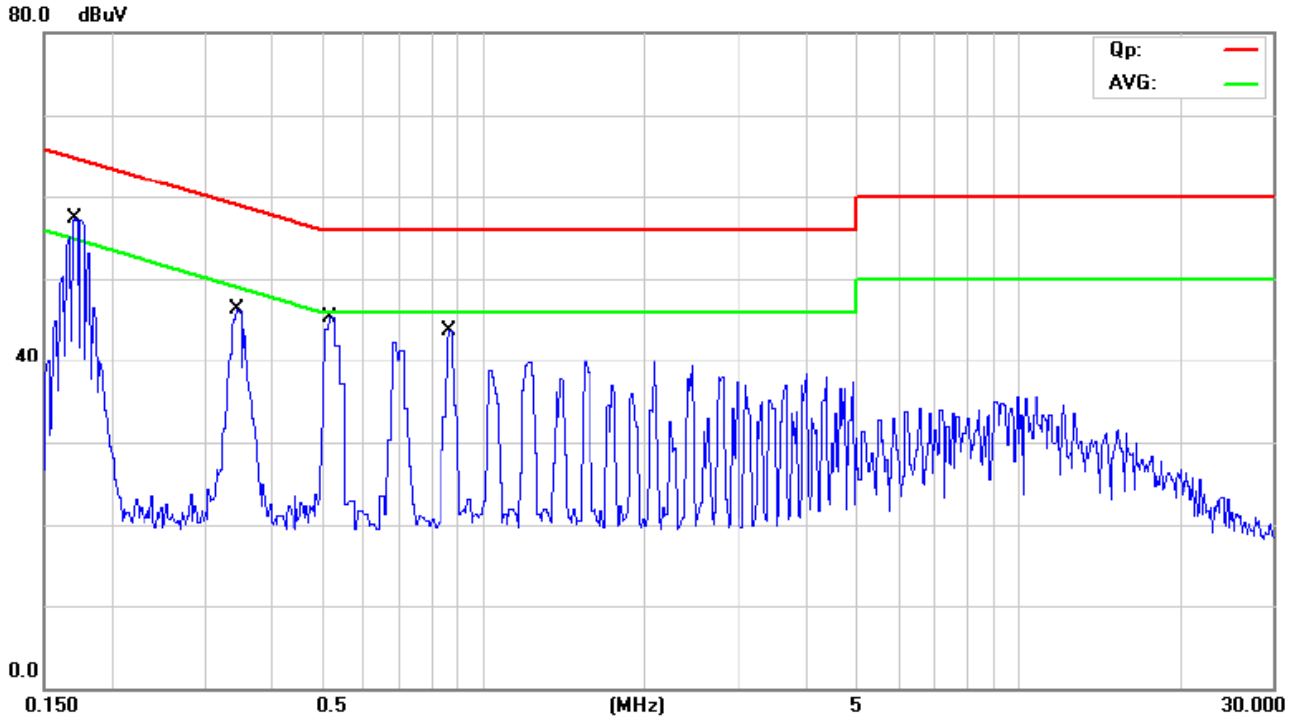
Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1716	45.70	9.87	55.57	64.88	-9.31	QP	
2		0.1716	30.00	9.87	39.87	54.88	-15.01	AVG	
3		0.3424	33.70	10.08	43.78	59.14	-15.36	QP	
4		0.3424	23.00	10.08	33.08	49.14	-16.06	AVG	
5		0.5217	33.40	10.30	43.70	56.00	-12.30	QP	
6		0.5217	16.70	10.30	27.00	46.00	-19.00	AVG	
7		0.8680	28.60	10.74	39.34	56.00	-16.66	QP	
8		0.8680	8.10	10.74	18.84	46.00	-27.16	AVG	

B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

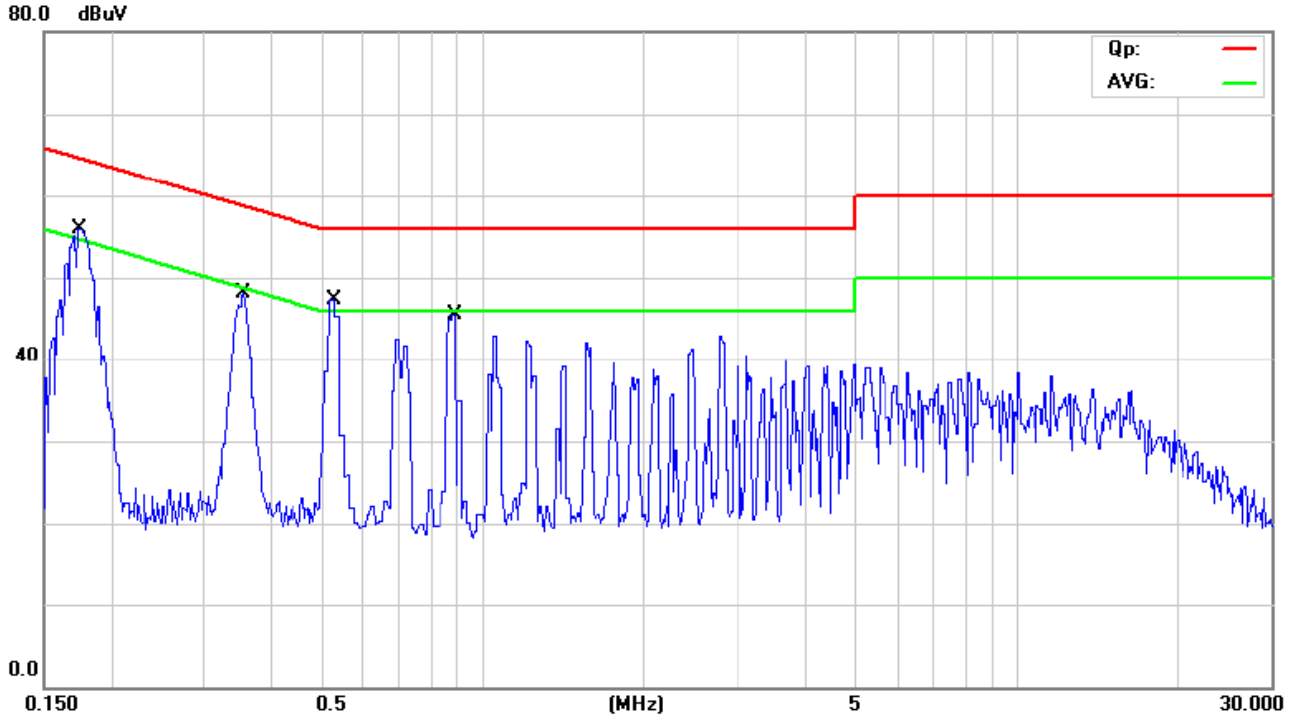
Temperature: 26℃ Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1744	44.10	9.87	53.97	64.75	-10.78	QP	
2		0.1744	33.00	9.87	42.87	54.75	-11.88	AVG	
3		0.3516	34.20	10.09	44.29	58.92	-14.63	QP	
4		0.3516	17.80	10.09	27.89	48.92	-21.03	AVG	
5	*	0.5254	35.20	10.31	45.51	56.00	-10.49	QP	
6		0.5254	17.50	10.31	27.81	46.00	-18.19	AVG	
7		0.8750	30.70	10.74	41.44	56.00	-14.56	QP	
8		0.8750	4.00	10.74	14.74	46.00	-31.26	AVG	

6 Radiated Emission Test

6.1 Test Method and test Procedure:

(1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at TIMEWAY EMC Laboratory. This site is on file with the FCC laboratory division, Registration No.899988

(2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.

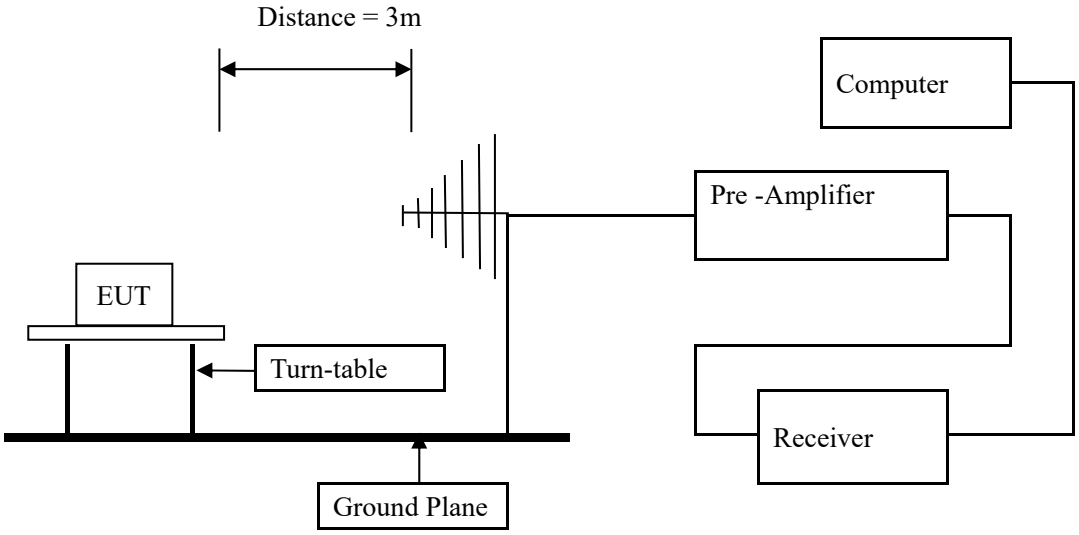
(3) The frequency spectrum from 30 MHz to 5 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters.

(4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.

(5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "**QP**" in the data table.

(6) The antenna polarization : Vertical polarization and Horizontal polarization.

Block diagram of Test setup



6.2 Configuration of The EUT

Same as section 5.3 of this report

6.3 EUT Operating Condition

Same as section 5.4 of this report.

6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

A FCC Part 15 Subpart C Paragraph 15.231(a) Limit

Fundamental Frequency (MHz)	Field Strength of Fundamental		Field Strength of Spurious Emission	
	uV/m	**dBuV/m**	**uV/m**	**dBuV/m**
40.66-40.70	2250	67.04	225	47.04
70-130	1250	61.94	125	41.94
130-174	1250-3750	61.94-71.48	125-375	41.94-51.48
174-260	3750	71.48	375	51.48
260-470	3750-12500	71.48-81.94	375-1250	51.48-61.94
Above 470	12500	81.94	1250	61.94

Note: 1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)

2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

4.Linear interpolations for frequency ranges 130-174MHz and 260-470MHz

5.the above field strength limits are specified at a distance of 3-meters and the tighter limits apply at the band edges

B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-5G, the final emission level got using PK detector. And Average = peak(dBuV/m) – duty cycle(dB)

6.5 Test result

A Fundamental and Harmonics Radiated emission data

Product:	DryBuddyFLEX Transceiver	Test Mode:	Keep Transmitting
Test Item:	Fundamental Radiated Emission and Spurious Emission Data	Temperature:	25℃
Test Voltage:	120V~	Humidity:	56%
Test Result:	Pass		

Frequency (MHz)	Emission PK/AV (dBuV/m)	Horiz / Vert	Limits PK/AV (dBuV/m)	Margin (dB)
433.92	75.50 (PK)	H	100.8/80.8	-5.3
433.92	75.40 (PK)	V	100.8/80.8	-5.4
867.84	51.00 (PK)	H	80.8/60.8	-9.8
867.84	42.60 (PK)	V	80.8/60.8	-18.2
1301.76	48.41 (PK)	H	74/54	-5.59
1301.76	46.91 (PK)	V	74/54	-7.09
1735.68	44.23 (PK)	H	80.8/60.8	-16.57
1735.68	42.73 (PK)	V	80.8/60.8	-18.07
2169.6	41.70 (PK)	H	80.8/60.8	-19.10
2169.6	--	V	80.8/60.8	--
2603.52	--	H/V	80.8/60.8	--
3037.44	--	H/V	80.8/60.8	--
3471.36	--	H/V	80.8/60.8	--
3905.28	-	H/V	80.8/60.8	--
4339.2	--	H/V	80.8/60.8	--

Note: Due to the measured PK value less than AV limit. No necessary to record the AV value.

B. **General Radiated Emission Data**

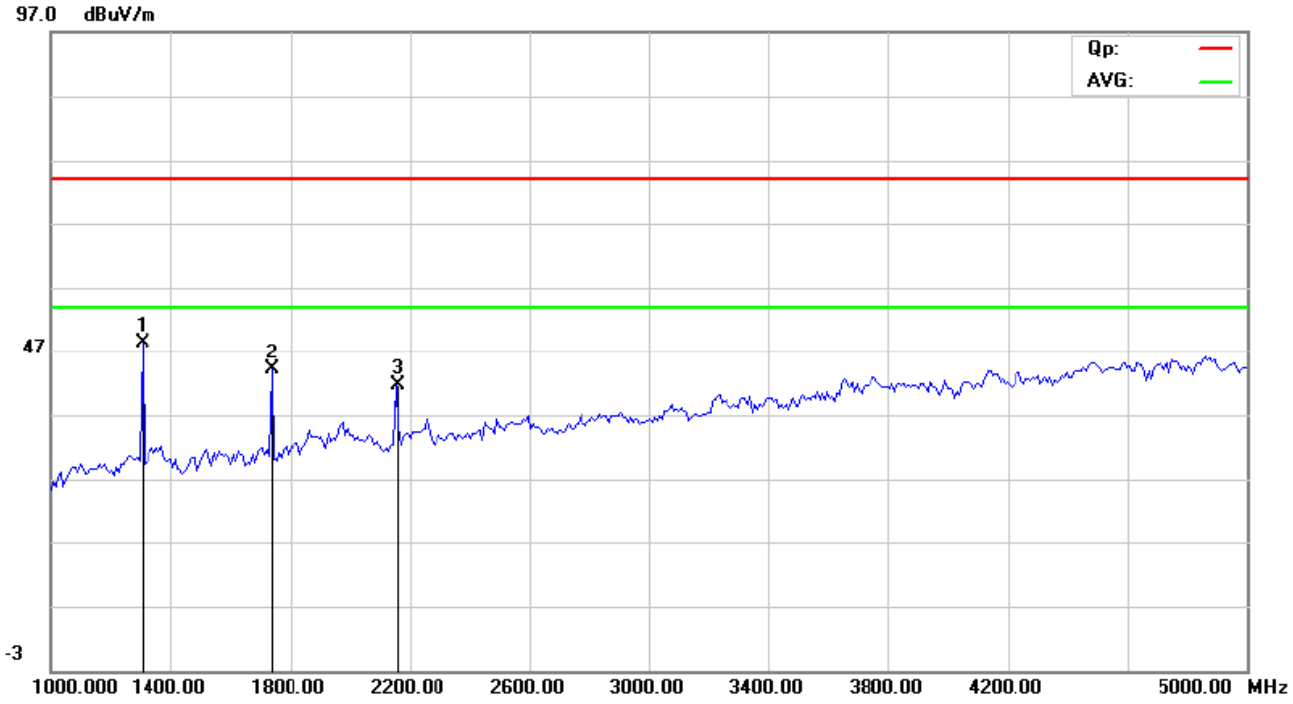
Radiated Emission In Horizontal

EUT set Condition: Keep Transmitting

Results: **Pass**

Test Plot above 1G

Horizontal



Note: PK scan curve is lower than AV limit

B. General Radiated Emission Data

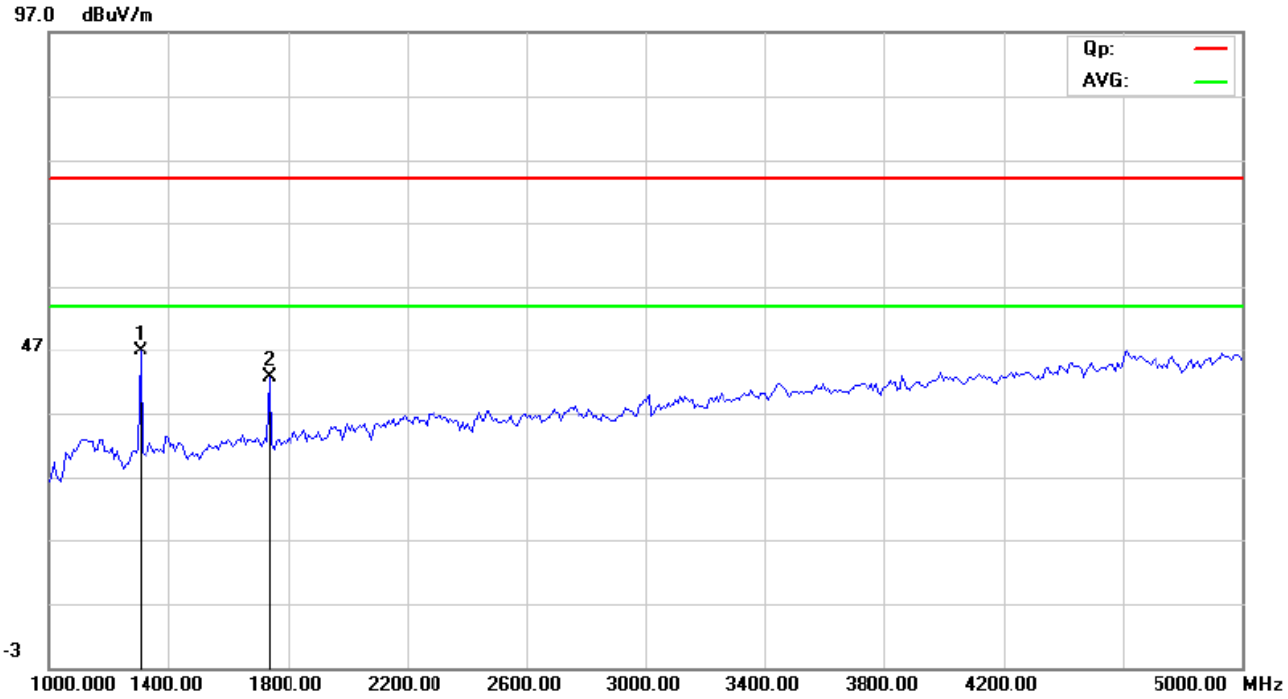
Radiated Emission In Vertical

EUT set Condition: Keep Transmitting

Results: **Pass**

Test Plot above 1G

Vertical



Note: PK scan curve is lower than AV limit

7.0 20dB and Bandwidth Testing

7.1 Requirement

Per 15.231(c) and RSS-210 A1, The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

7.2 Test Procedure

With the EUT's antenna attached, the EUT's 20dB Bandwidth power was received by the test antenna which was connected to the spectrum analyzer with the START and STOP frequencies set to the EUT's operation band.

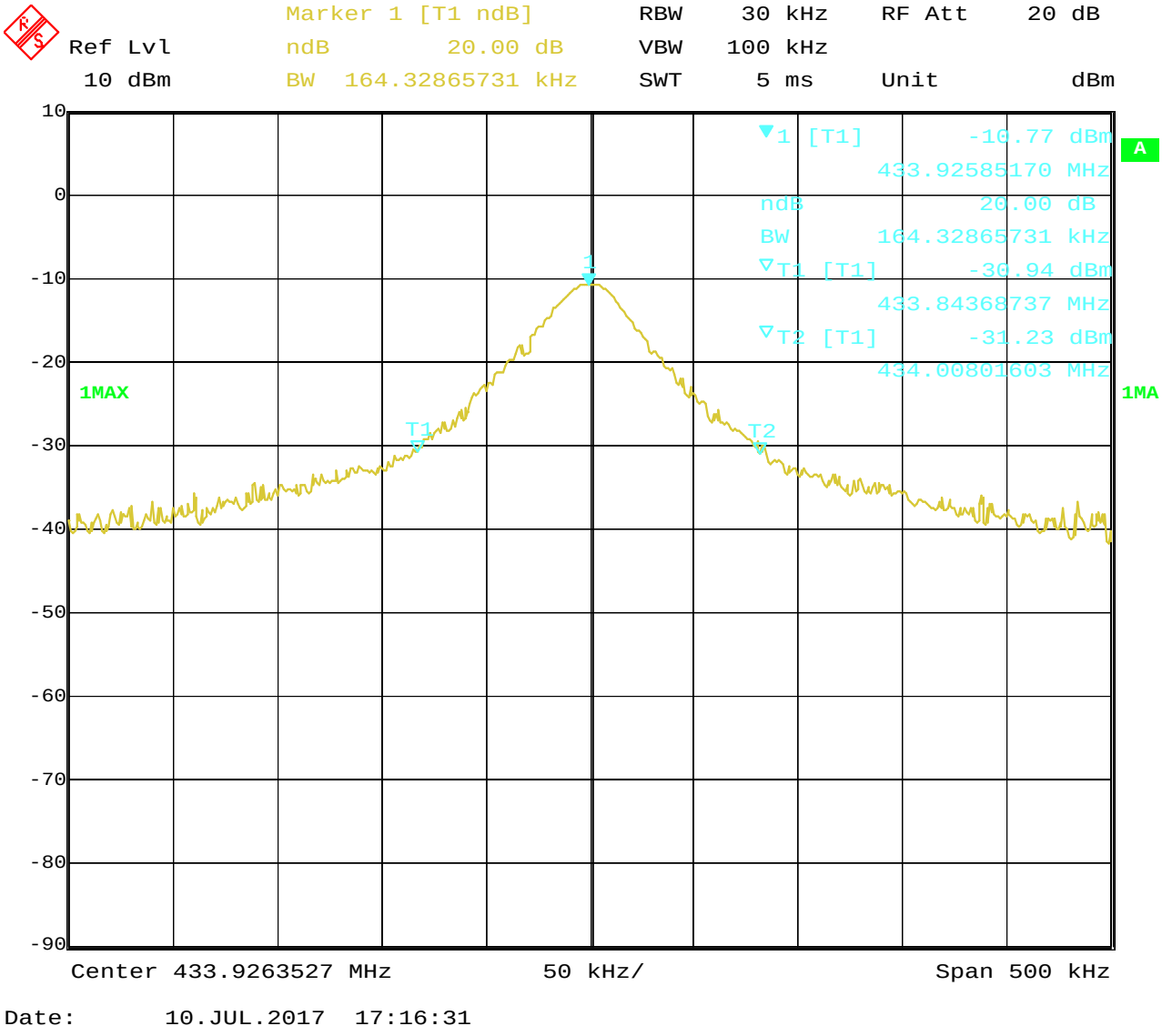
7.3 Test Data

Frequency （MHz）	20dB Bandwidth Emission (kHz)	Limit (kHz)	Result
433.92	164	1084.80	Pass

Limit=Frequency x 0.25%=433.92x 0.25%=1084.80kHz

Refer to attached plots:

20dB Bandwidth



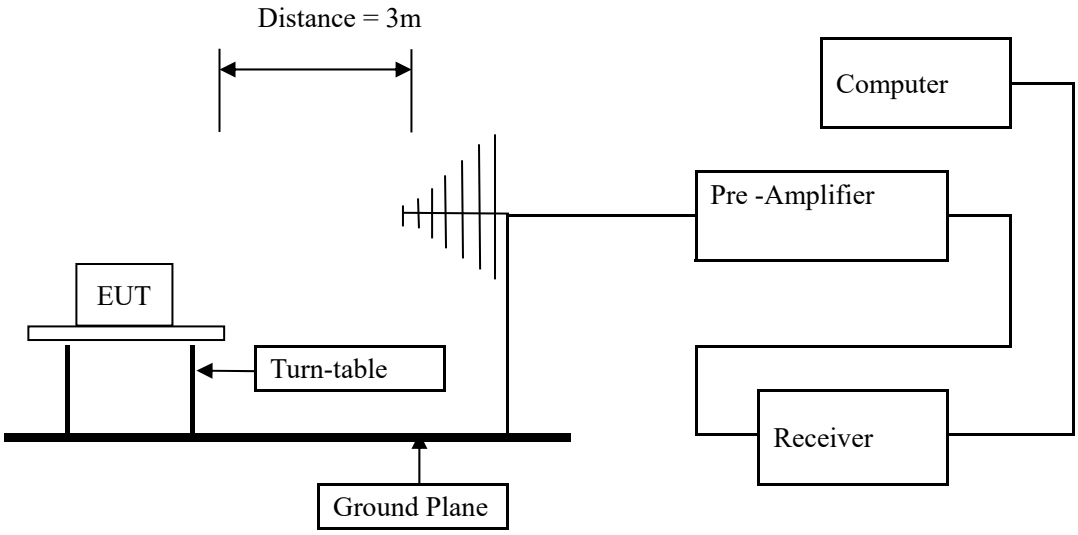
8.0 Deactivate Test

8.1 Requirement

Per 15.231(a) (2)

Transmitter activated automatically shall cease transmission within 5 seconds after activation.

8. 2 Radiated Test Setup



For the actual test configuration , please refer to the related items – Photos of Testing

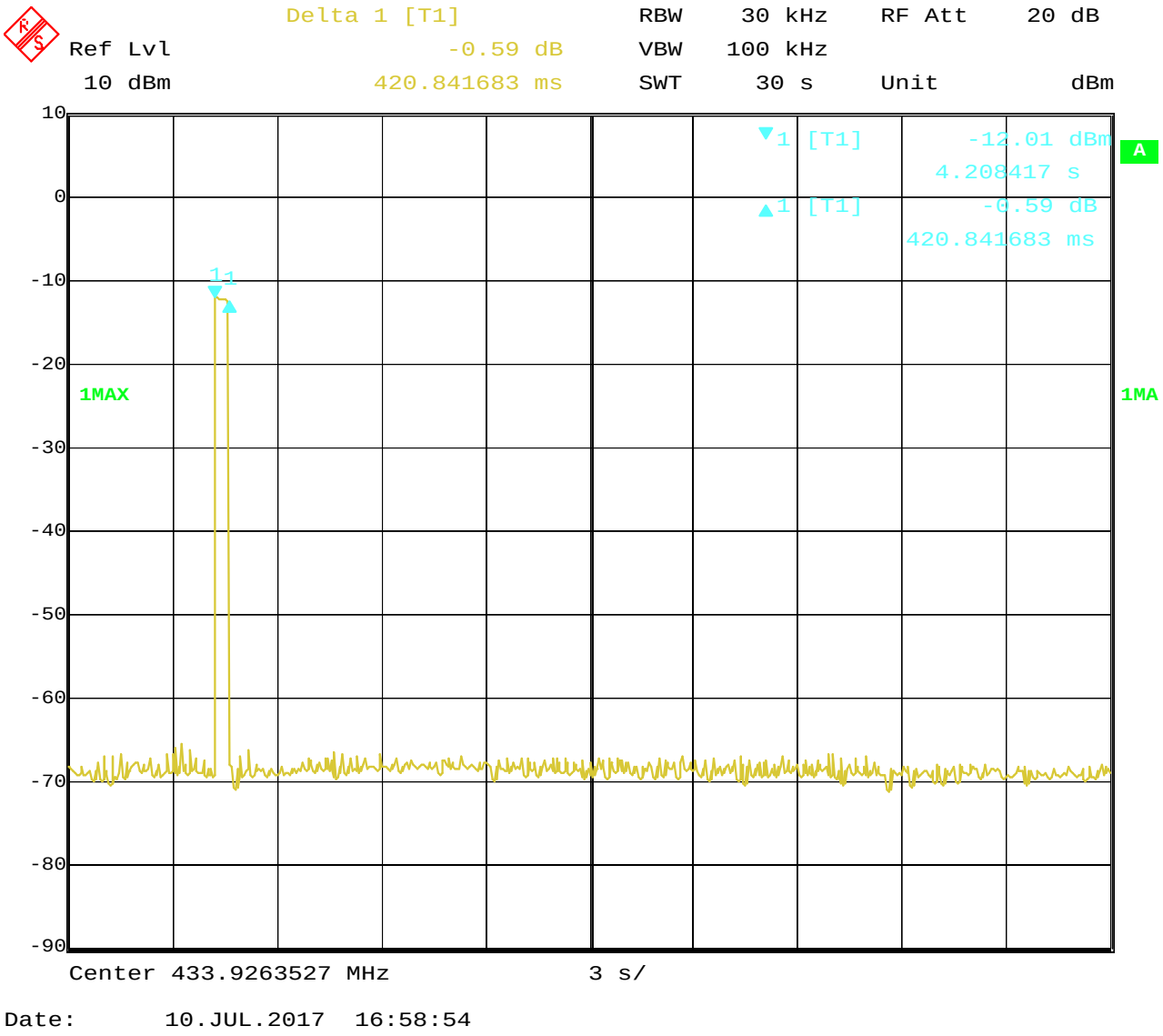
The deactivation test was performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.231(e) limits.

8.3 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

8.4 Test Data

Refer to attached plots:



Date: 10.JUL.2017 16:58:54

8.5 Test result

0.421s<5s

Pass

9.0 **Antenna Requirement**

9.1 Standard Applicable

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.

9.2 Antenna Connected constructions

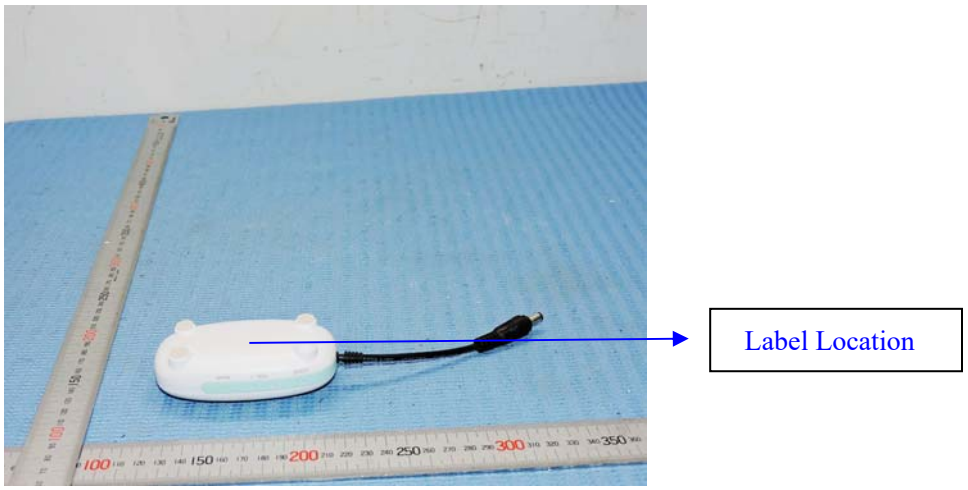
The antenna is PCB Printed antenna which is built-in. The antenna gain is 0dBi. So it meets the requirement of 15.203

10.0 FCC ID Label

FCC ID: RHU-DBFLR03

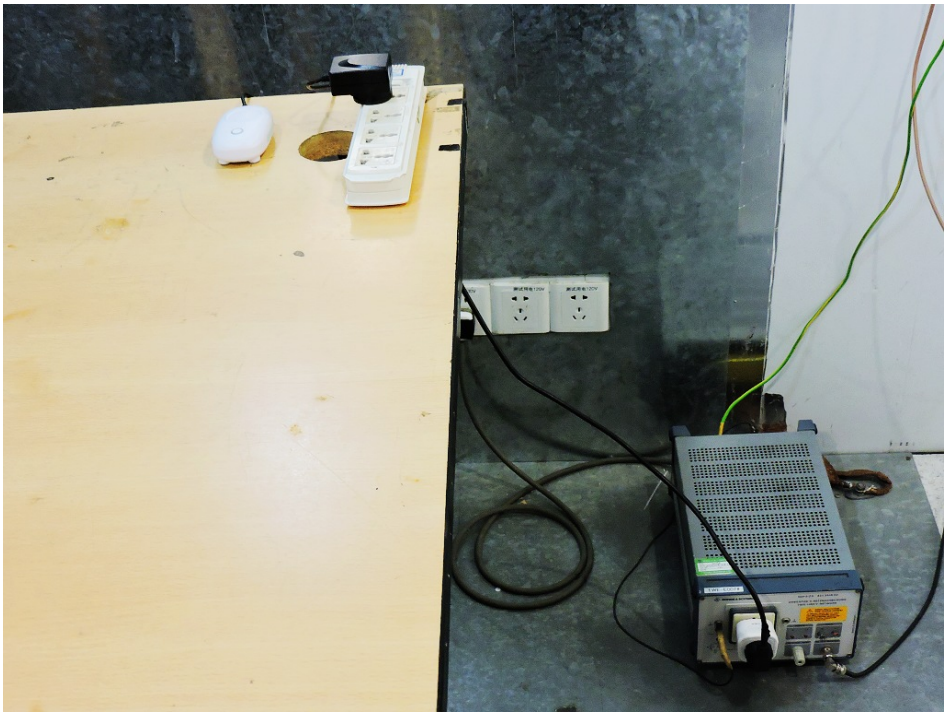
The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:

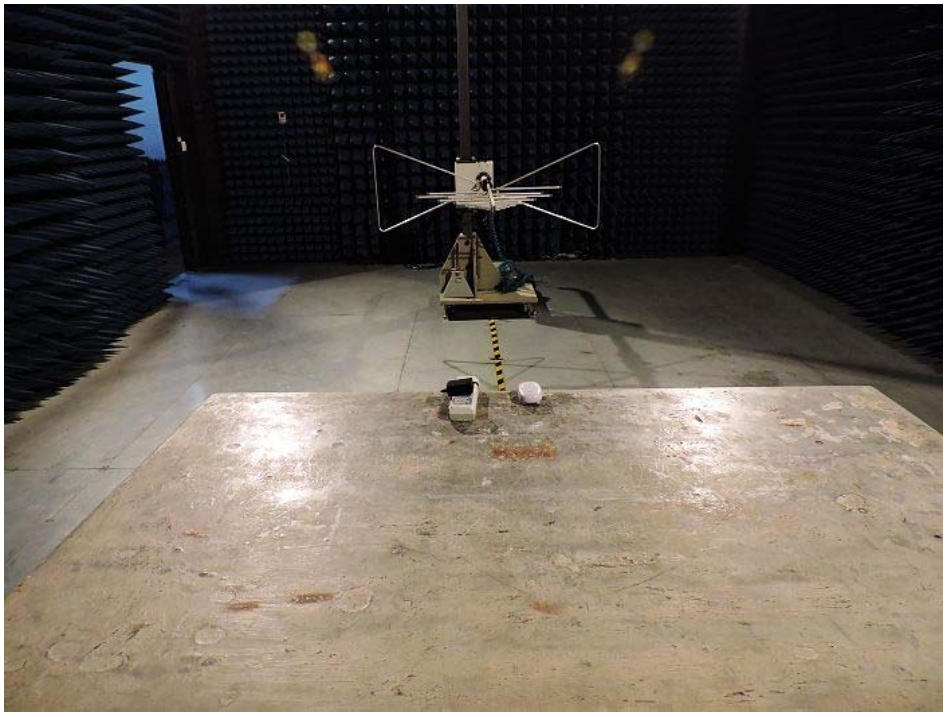


11.0. Photo of testing

11.1 Conducted test View



11.2 Radiated emission test view



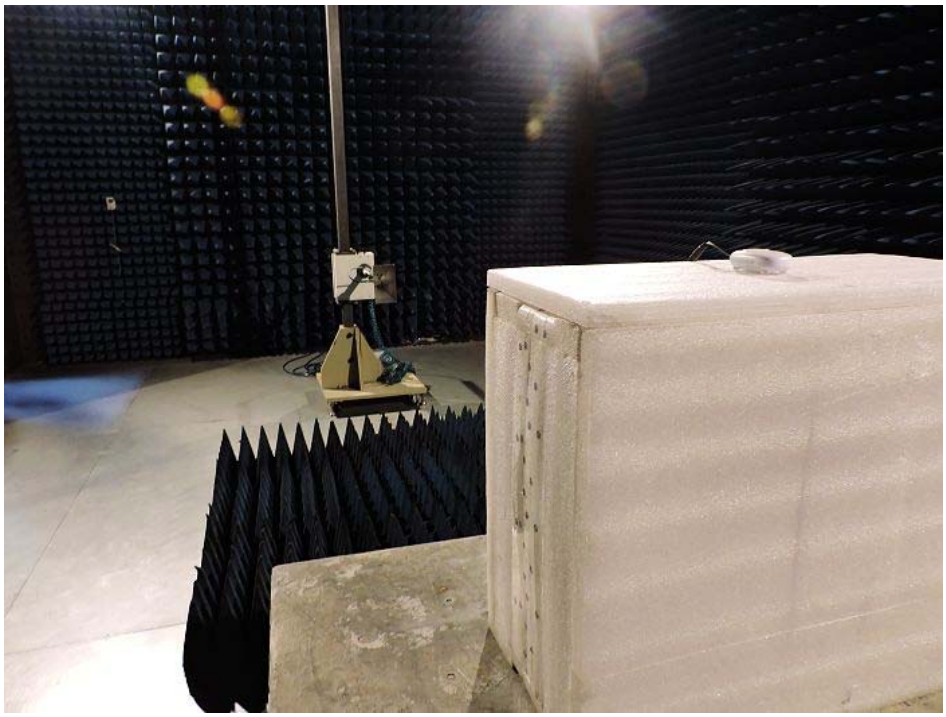


Photo for the EUT

Photo for the EUT

Photo for the EUT

Photo for the EUT

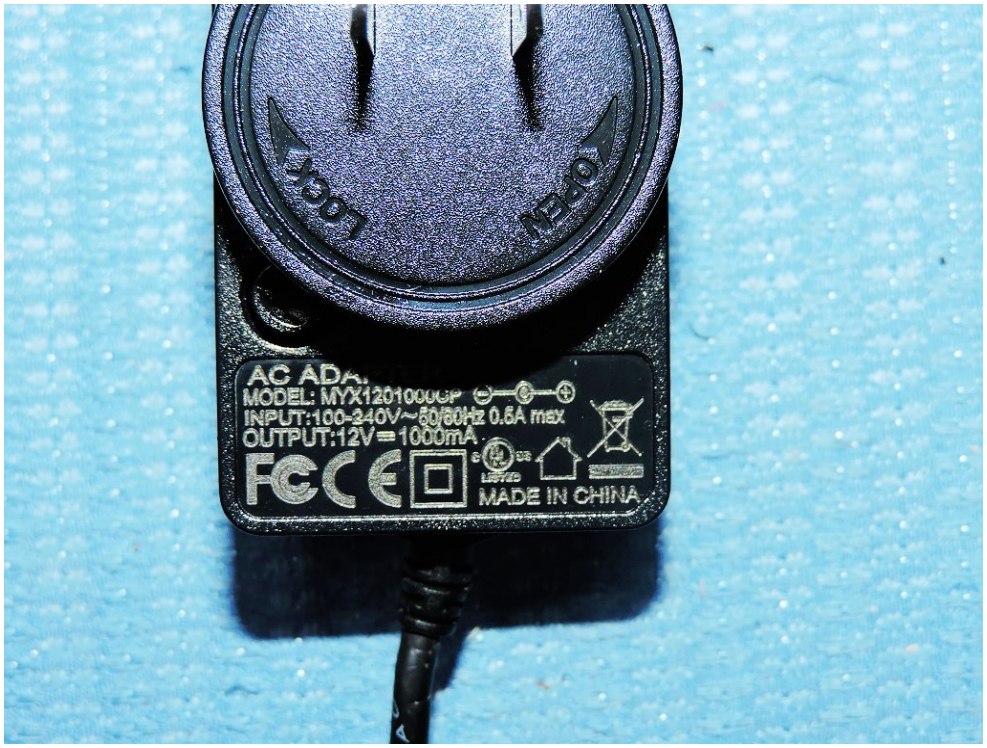
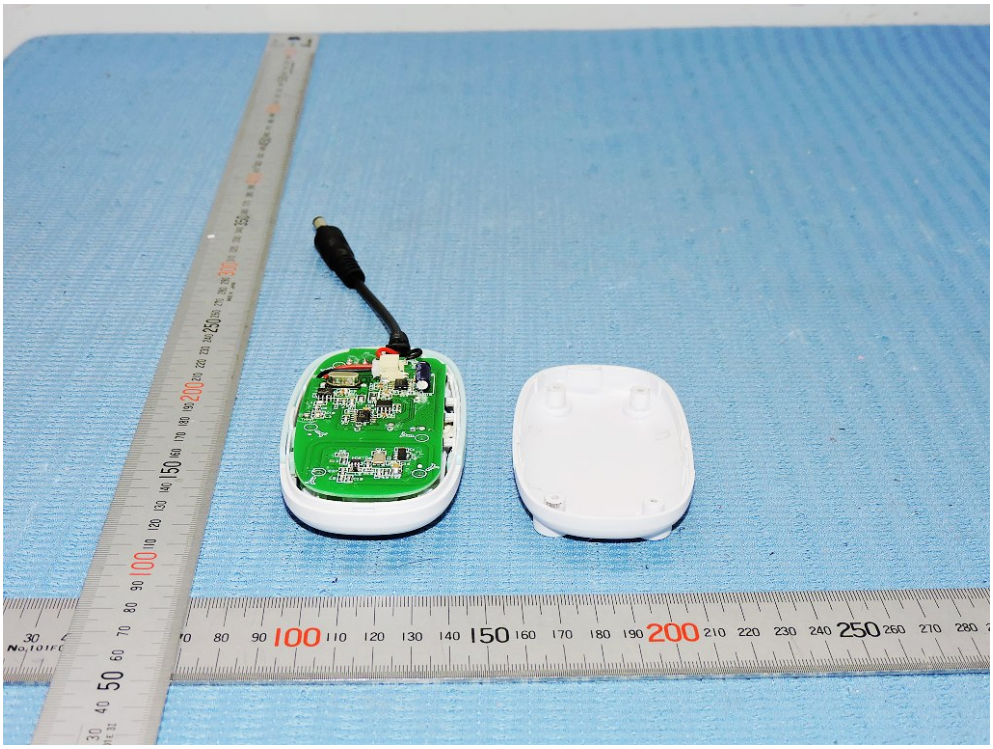


Photo for the EUT



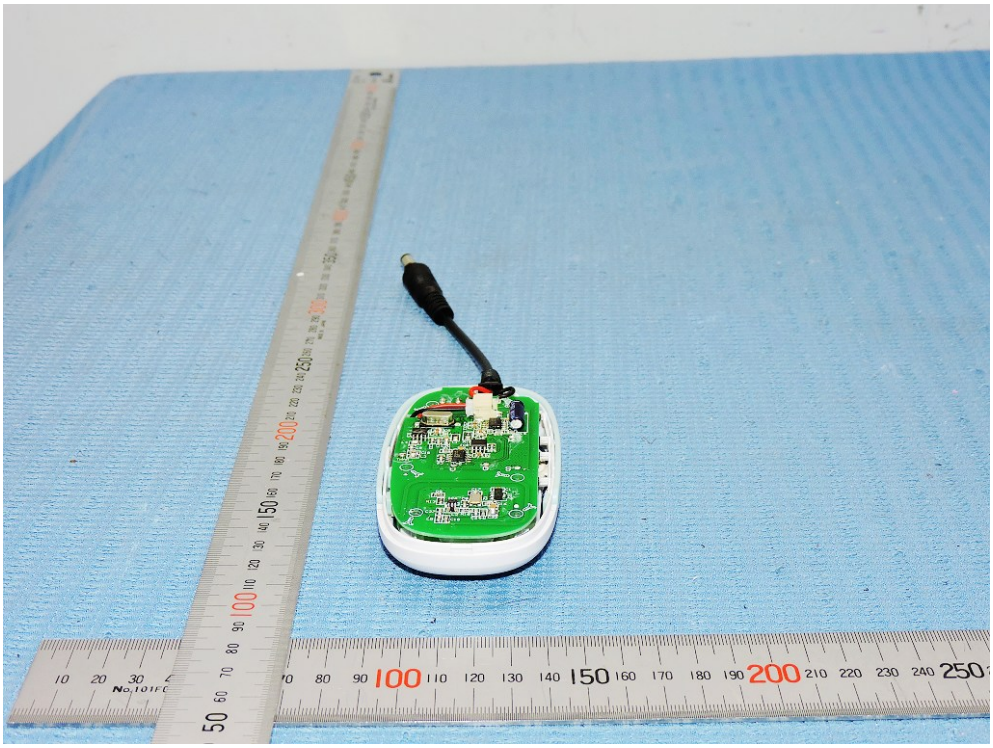
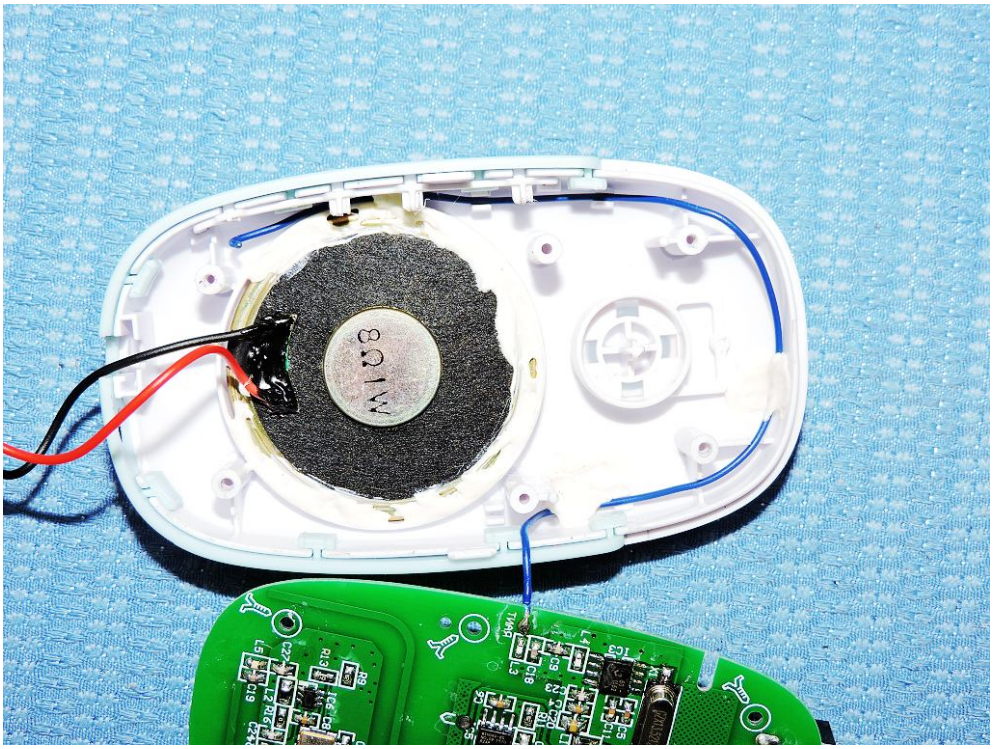


Photo for the EUT



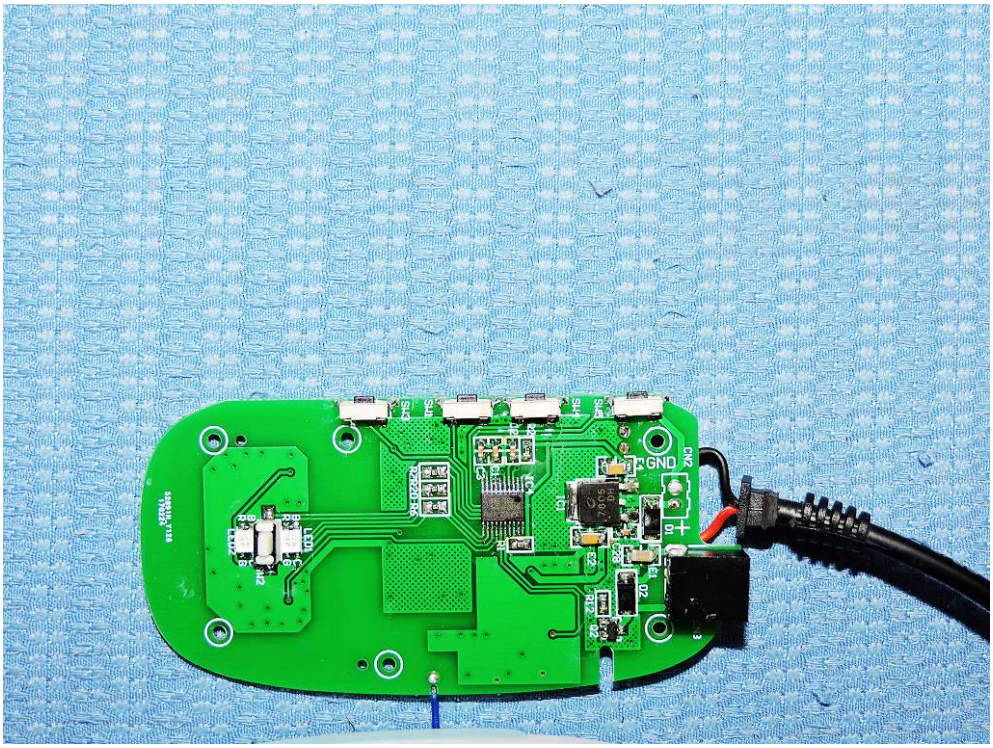


Photo for the EUT