

FCC PART 15 SUBPART B TEST REPORT**FCC PART 15B****Report Reference No.**.....: **TZ190300594E**

Compiled by

(position+printed name+signature)...: File administrators Anna Hu

Name of the organization performing the tests

(position+printed name+signature)...: Technique principal Hugo Chen

Approved by

(position+printed name+signature)...: Manager Andy Zhang

Date of issue.....: 3/26/2019

Representative Laboratory Name: Shenzhen Tongzhou Testing Co.,Ltd

Address.....: 1th Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China

Applicant's name.....:

Address.....:

Test specification:Standard: **FCC Part 15B**

TRF Originator.....: Shenzhen Tongzhou Testing Co.,Ltd

Master TRF.....: Dated 2012-06

Shenzhen Tongzhou Testing Co.,Ltd All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Tongzhou Testing Co.,Ltd is acknowledged as copyright owner and source of the material. Shenzhen Tongzhou Testing Co.,Ltd takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description: Wireless Charging Speaker with Time display

Trade Mark: N/A

Model/Type reference.....: RS06

Listed Models: B75,RS06D, B75D, RS06C, B75C

Manufacturer:

Power Supply.....: DC 3.70V by Battery

Result.....: **Positive**

TEST REPORT

Test Report No. : HK1811051427-E	3/26/2019 Date of issue
---	----------------------------

Equipment under Test : Wireless Charging Speaker with Time display

Model /Type : RS06

Listed Models : B75,RS06D, B75D, RS06C, B75C

Applicant :

Address :

Manufacturer :

Address :

Test Result according to the standards on page 4:	Positive
--	-----------------

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

<u>1.</u>	<u>TEST STANDARDS</u>	<u>4</u>
<u>2.</u>	<u>SUMMARY</u>	<u>5</u>
2.1.	General Remarks	5
2.2.	Equipment Under Test	5
2.3.	Short description of the Equipment under Test (EUT)	5
2.4.	EUT operation mode	5
2.5.	EUT configuration	5
2.6.	Related Submittal(s) / Grant (s)	6
2.7.	Modifications	6
2.8.	Test Result Summary	6
<u>3.</u>	<u>TEST ENVIRONMENT</u>	<u>7</u>
3.1.	Address of the test laboratory	7
3.2.	Environmental conditions	7
3.3.	Statement of the measurement uncertainty	7
3.4.	Equipments Used during the Test	8
<u>4.</u>	<u>TEST CONDITIONS AND RESULTS</u>	<u>9</u>
4.1.	Radiated Emission Test	9
4.2.	Conducted Emissions Test	12
<u>5.</u>	<u>TEST SETUP PHOTOS OF THE EUT</u>	<u>15</u>
<u>6.</u>	<u>EXTERNAL AND INTERNAL PHOTOS OF THE EUT</u>	<u>16</u>

1. TEST STANDARDS

The tests were performed according to following standards:

[FCC Rules Part 15 Subpart B](#)

Unintentional Radiators

[ANSI C63.4-2014](#)

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

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample : 3/19/2019

Testing commenced on : 3/19/2019

Testing concluded on : 3/26/2019

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage : o 120V / 60 Hz o 115V / 60Hz
 o 12 V DC o 24 V DC
 o Other (specified in blank below)

DC 3.70V by Battery

2.3. Short description of the Equipment under Test (EUT)

Wireless Charging Speaker with Time display.
For more details, refer to the user's manual of the EUT.

Serial number: Prototype

2.4. EUT operation mode

The EUT has been tested under typical operating condition.

2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

○ - supplied by the manufacturer

● - supplied by the lab

○	Adapter	Model:	GKYPG0200050EU2
		Manufacturer:	GuaiKaiYuan

2.6. Related Submittal(s) / Grant (s)

This test report is intended for RS06 filing to comply with the FCC Part 15, Subpart B Rules.

2.7. Modifications

No modifications were implemented to meet testing criteria.

2.8. Test Result Summary

Test Item	Test Requirement	Standard Paragraph	Result
Radiated Emission	FCC PART 15	Section 15.109	PASS
Conducted Emission	FCC PART 15	Section 15.107	PASS

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Tongzhou Testing Co.,Ltd

1th Floor, Building 1, Haomai High-tech Park, Huating Road 387, Dalang Street, Longhua, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2014) and CISPR Publication 22.

3.2. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	<u>15-35 ° C</u>
Humidity:	<u>30-60 %</u>
Atmospheric pressure:	<u>950-1050mbar</u>

3.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Tongzhou Testing Co.,Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Tongzhou Testing Co.,Ltd y is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10dB	(1)
Radiated Emission	1~12.75GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.22dB	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.4. Equipments Used during the Test

Conducted emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100849/003	2019/1/3	2020/1/2
2	Artificial Mains	ROHDE & SCHWARZ	ENV 216	101333-IP	2019/1/3	2020/1/2
3	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	N/A	N/A

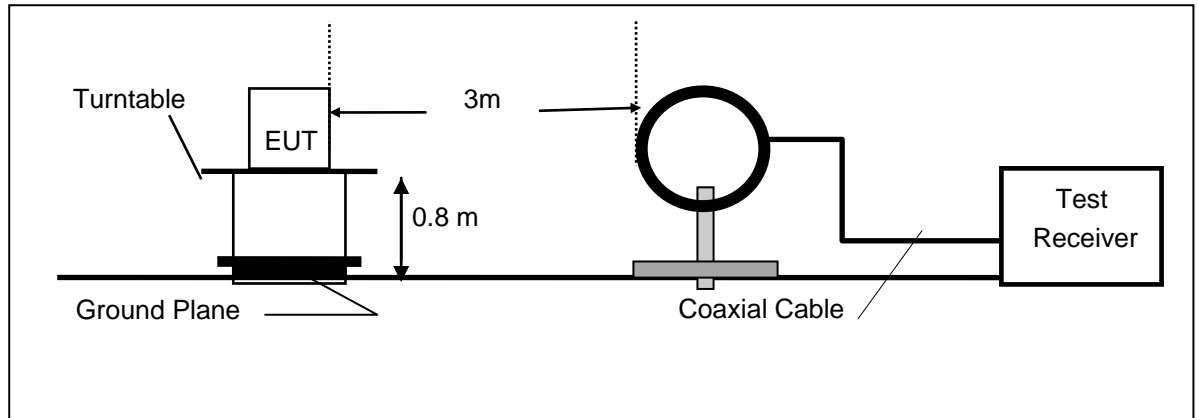
Radiated emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due
1	Test Receiver	R&S	ESCI-7	100849/003	2019/1/3	2020/1/2
2	wideband Antenna	schwarzbeck	VULB 9163	958	2018/11/20	2020/11/19
3	Horn Antenna	schwarzbeck	9120D-1141	1574	2018/11/20	2020/11/19
4	Amplifier	schwarzbeck	BBV 9743	209	2019/1/3	2020/1/2
5	Amplifier	Tonscend	TSAMP-0518SE	--	2019/1/3	2020/1/2
6	Postional Controller	MF	MF7802	--	--	--
7	Coaxial Cable	HUBER+SUHNER	RG214	N/A	2019/1/3	2020/1/2
8	Horn Antenna	ETS	3117	00218874	2019/1/3	2020/1/2

4. TEST CONDITIONS AND RESULTS

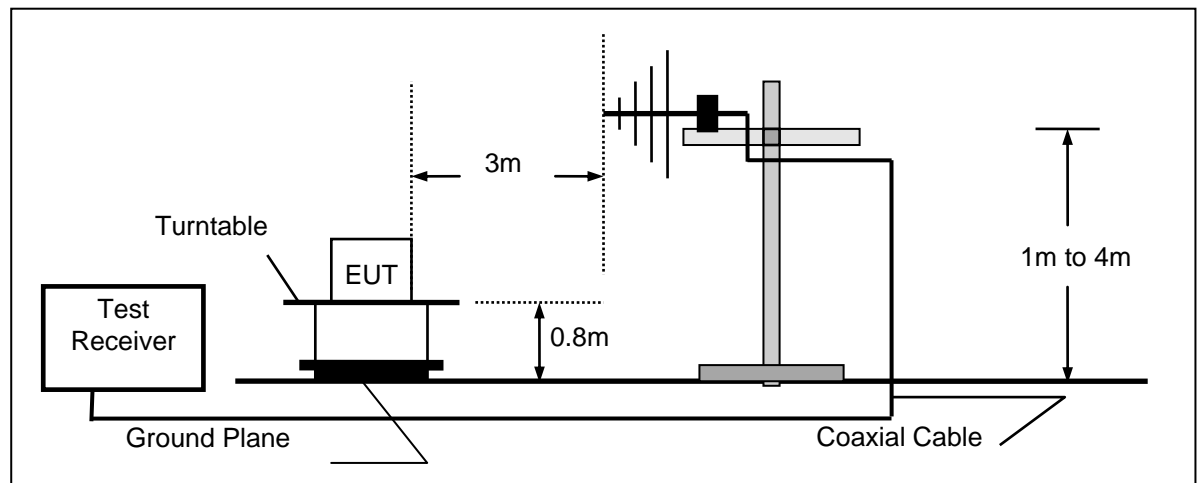
4.1. Radiated Emission Test

TEST CONFIGURATION

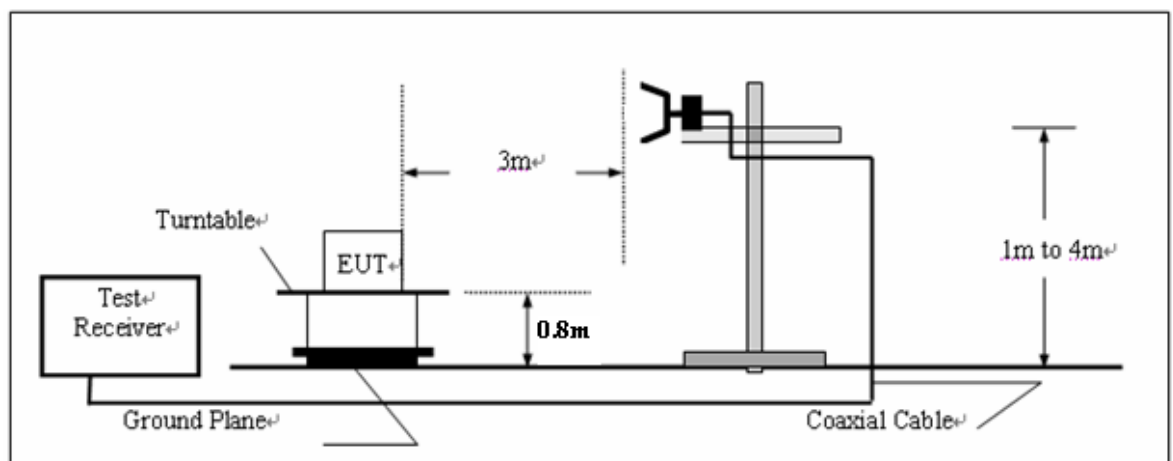
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

RADIATION LIMIT

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

Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

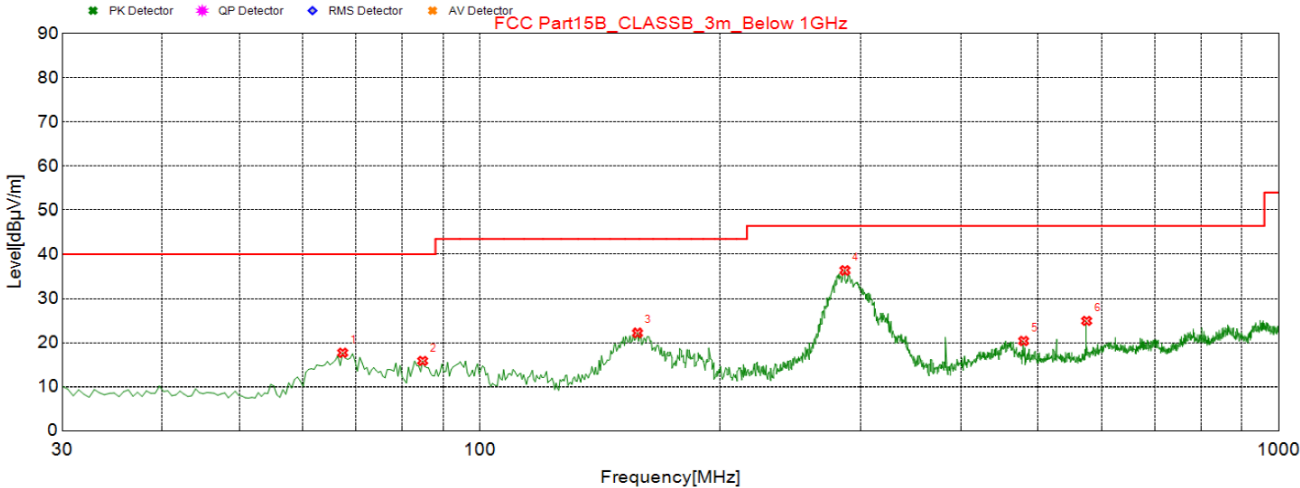
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

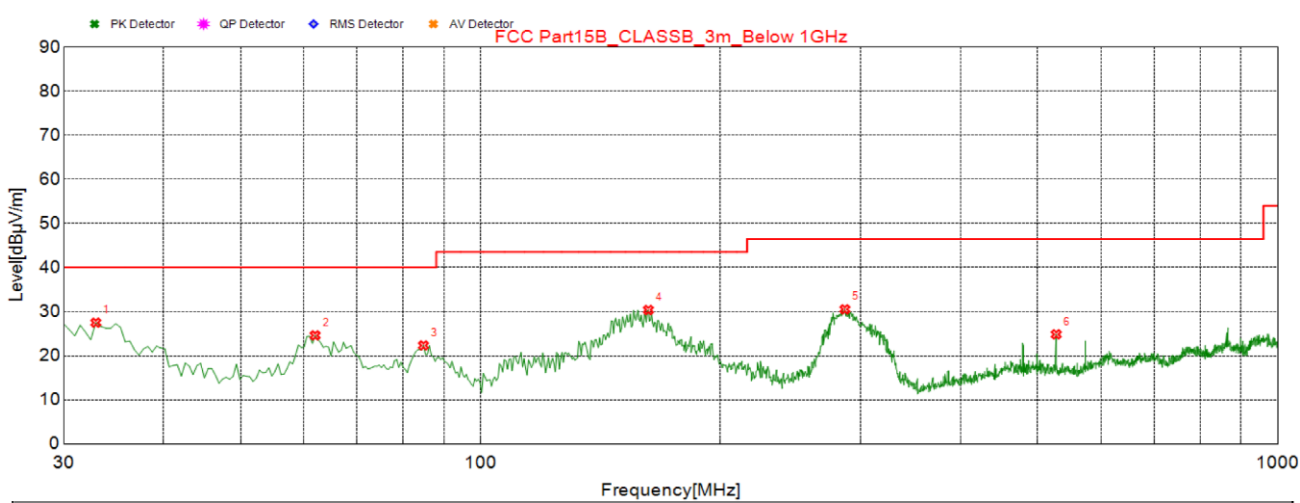
Radiation Test Results

Polarization: Horizontal



NO.	Freq. [MHz]	Result Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle[°]	Polarity
1	67.345	17.72	-17.53	40	22.28	300	359	Horizontal
2	84.805	15.86	-18.92	40	24.14	300	169	Horizontal
3	157.555	22.19	-18.78	43.5	21.31	300	272	Horizontal
4	286.565	36.33	-13.09	46.5	10.17	100	83	Horizontal
5	479.595	20.39	-8.47	46.5	26.11	300	138	Horizontal
6	575.140	24.87	-6.21	46.5	21.63	100	319	Horizontal

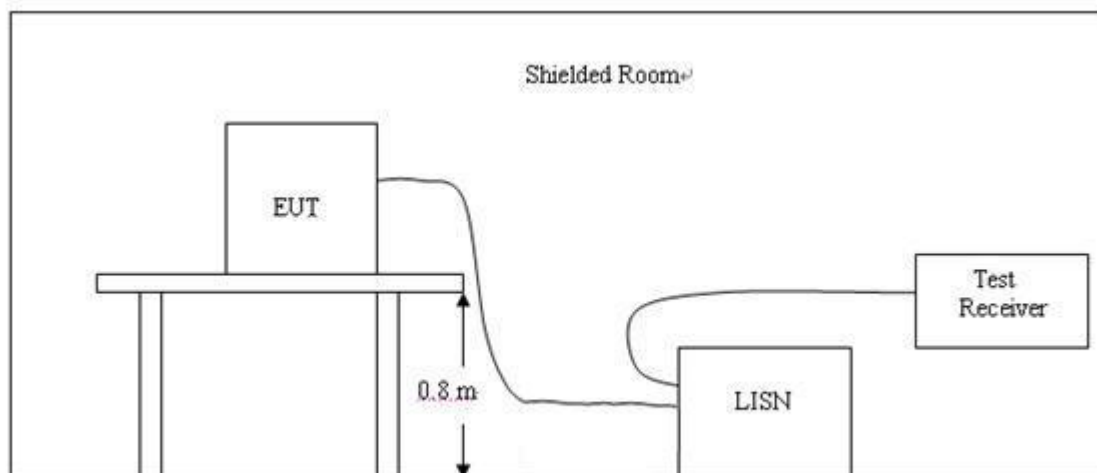
Polarization: Vertical



NO.	Freq. [MHz]	Result Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle[°]	Polarity
1	32.910	27.5	-16.15	40	12.50	100	255	Vertical
2	62.010	24.61	-16.16	40	15.39	100	342	Vertical
3	84.805	22.33	-18.92	40	17.67	100	204	Vertical
4	162.405	30.37	-18.54	43.5	13.13	100	224	Vertical
5	286.565	30.52	-13.09	46.5	15.98	200	355	Vertical
6	527.610	24.85	-7.38	46.5	21.65	100	201	Vertical

4.2. Conducted Emissions Test

TEST CONFIGURATION



TEST PROCEDURE

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

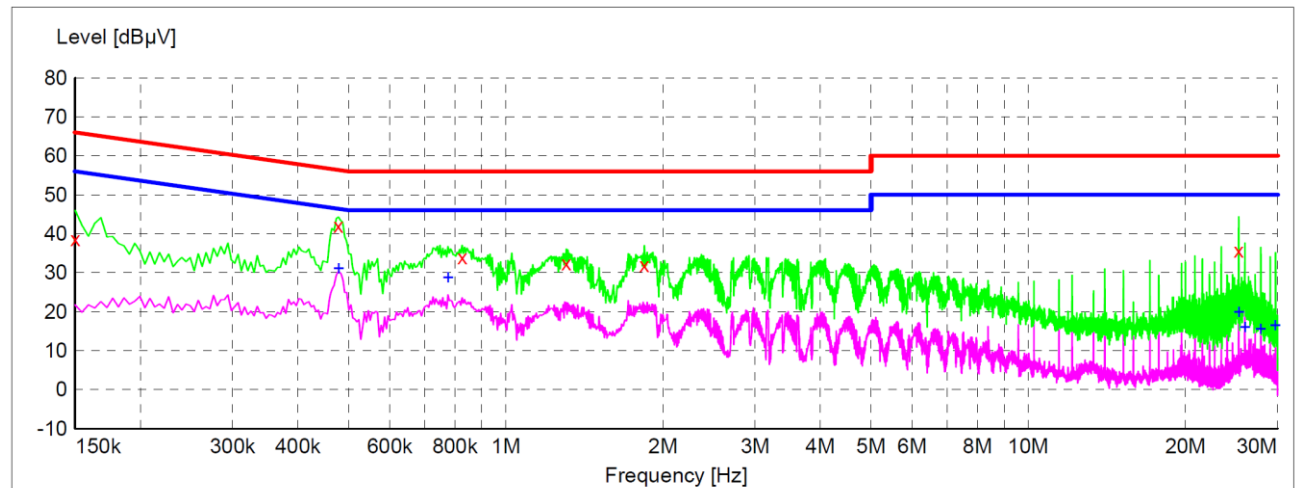
Conducted Power Line Emission Limit

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

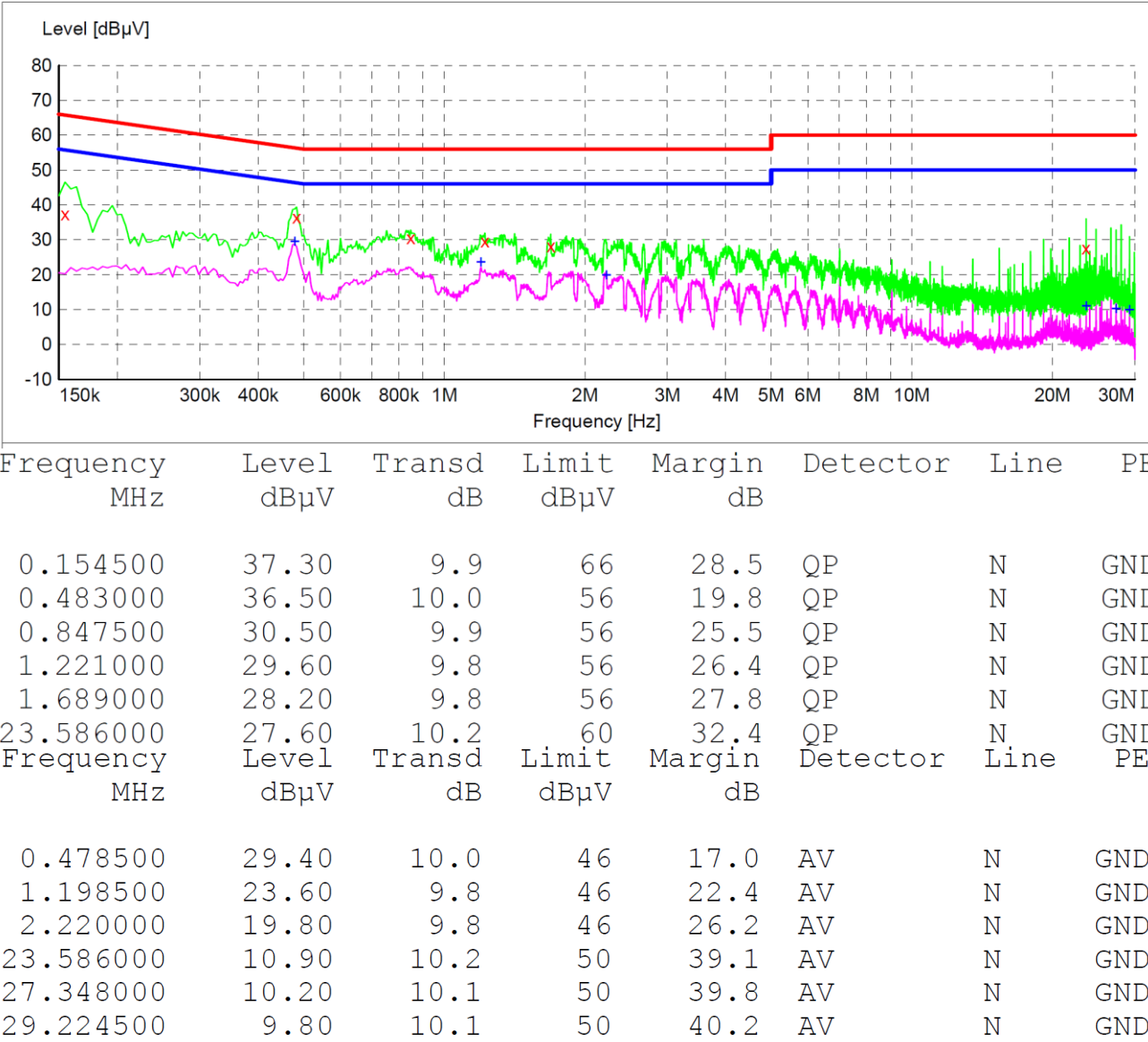
Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

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

TEST RESULTS

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	38.70	9.9	66	27.3	QP	L1	GND
0.478500	42.00	10.0	56	14.4	QP	L1	GND
0.825000	34.00	9.9	56	22.0	QP	L1	GND
1.306500	32.40	9.8	56	23.6	QP	L1	GND
1.842000	31.90	9.8	56	24.1	QP	L1	GND
25.296000	35.70	10.1	60	24.3	QP	L1	GND
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.478500	31.00	10.0	46	15.4	AV	L1	GND
0.775500	28.60	9.9	46	17.4	AV	L1	GND
25.296000	19.90	10.1	50	30.1	AV	L1	GND
25.980000	15.90	10.1	50	34.1	AV	L1	GND
27.861000	15.50	10.1	50	34.5	AV	L1	GND
29.737500	16.40	10.1	50	33.6	AV	L1	GND

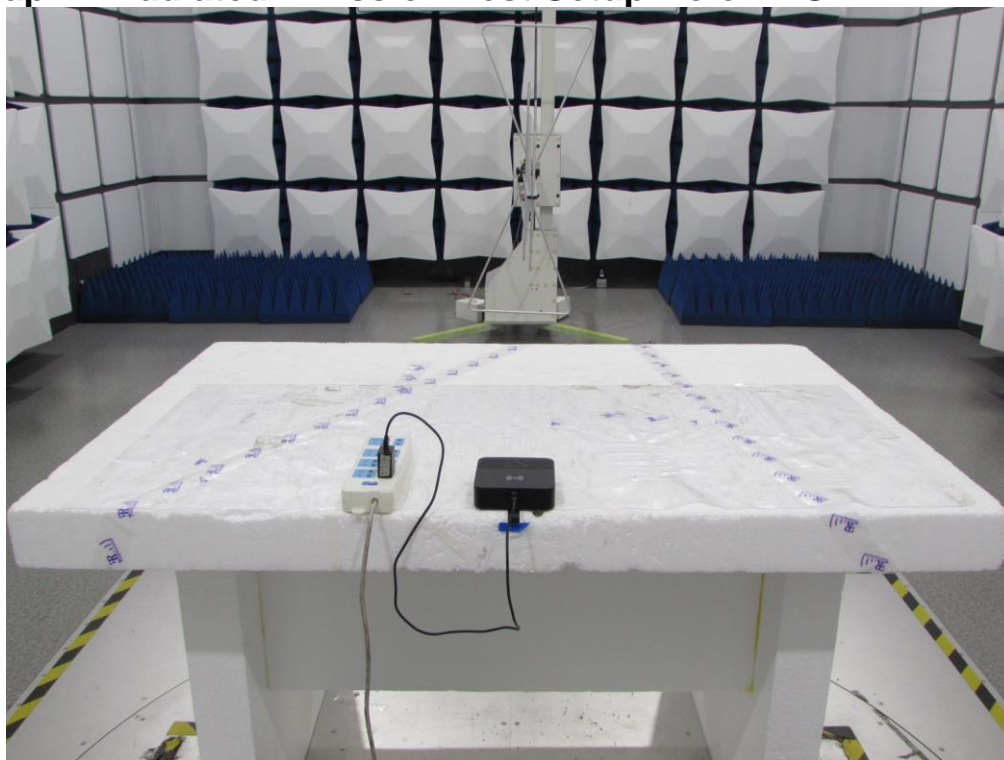


5. Test Setup Photos of the EUT

Photograph – Conducted Emission Test Setup



Photograph – Radiated Emission Test Setup-Below 1GHz



6. External and Internal Photos of the EUT

External Photos

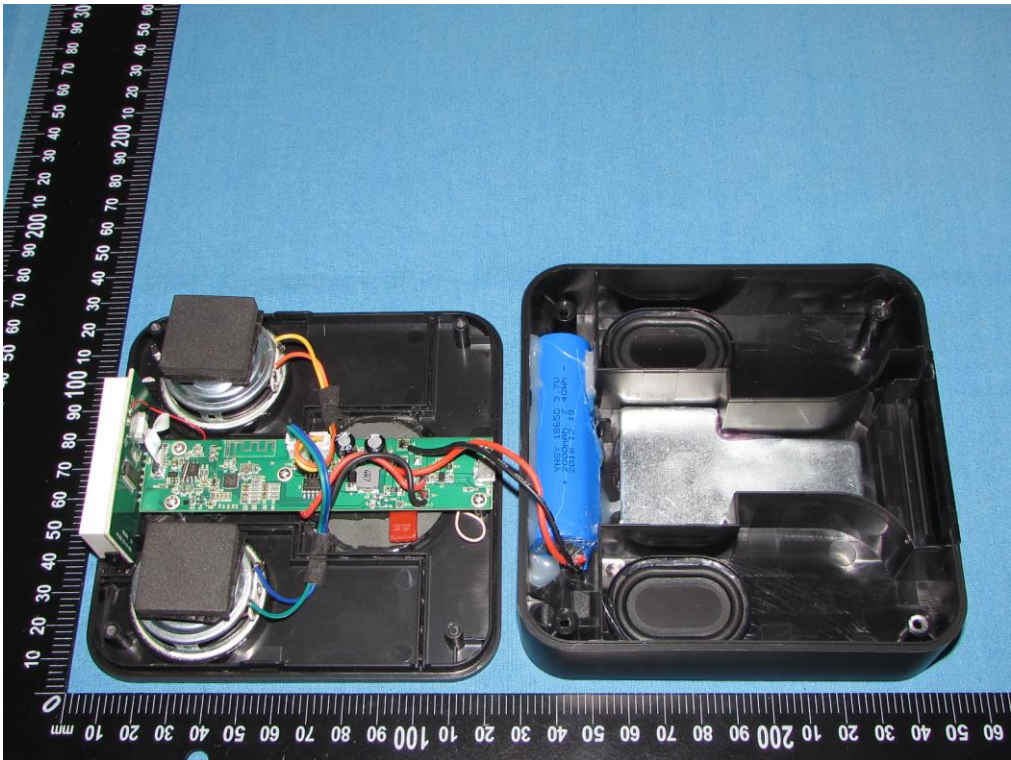


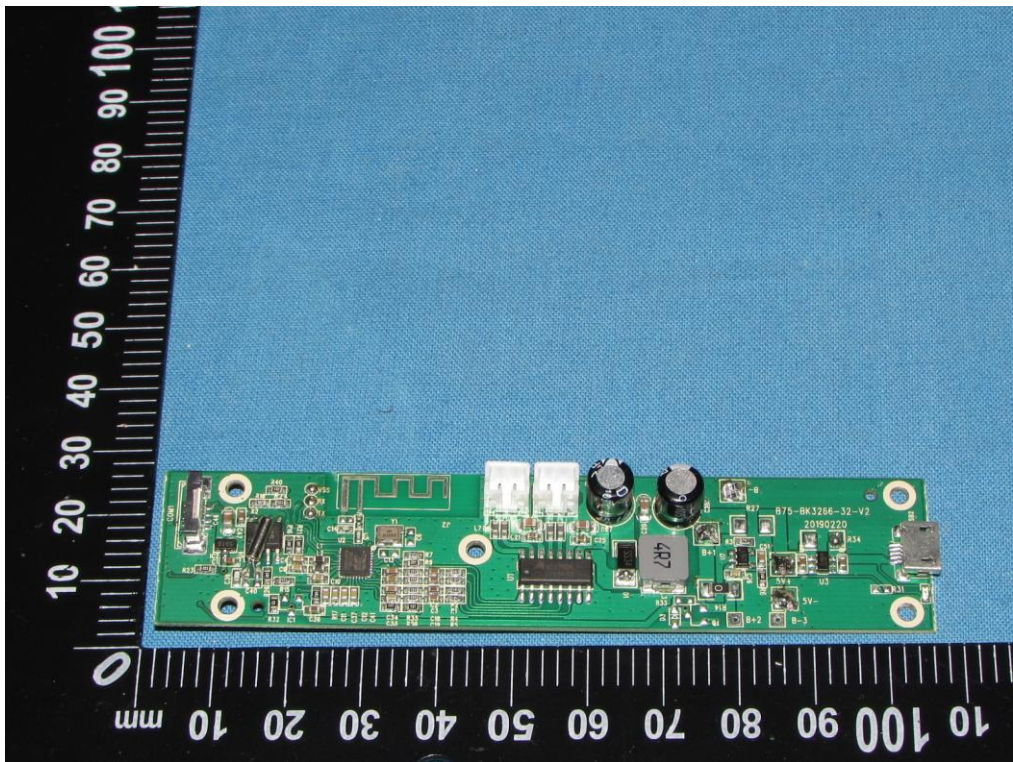
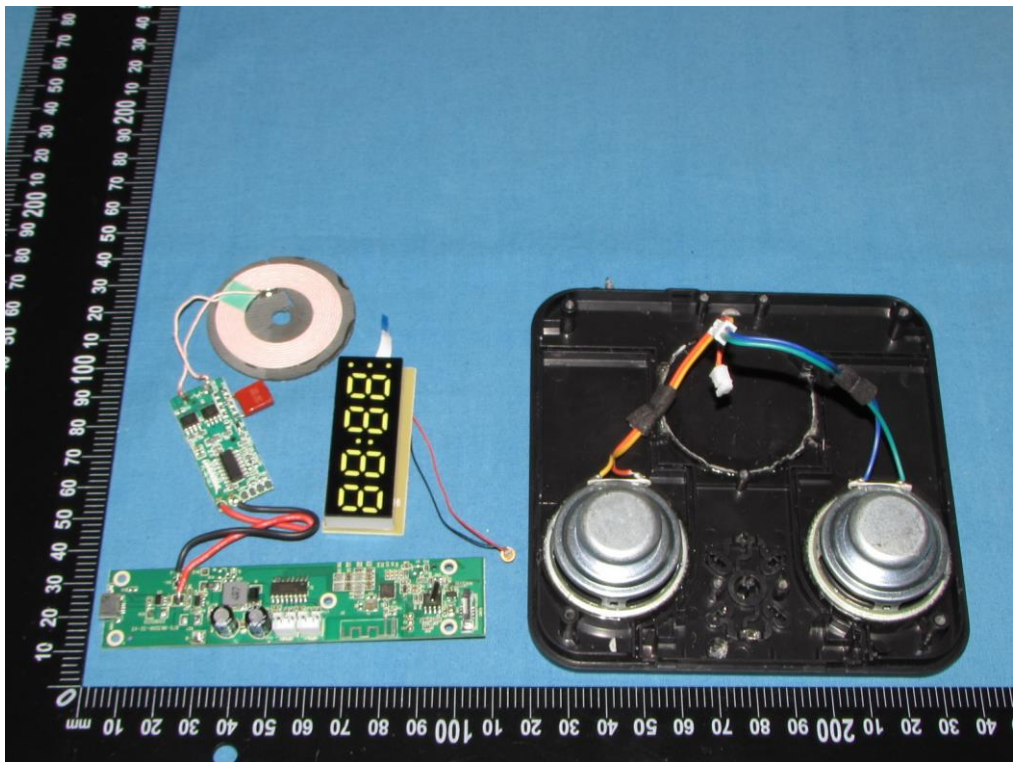


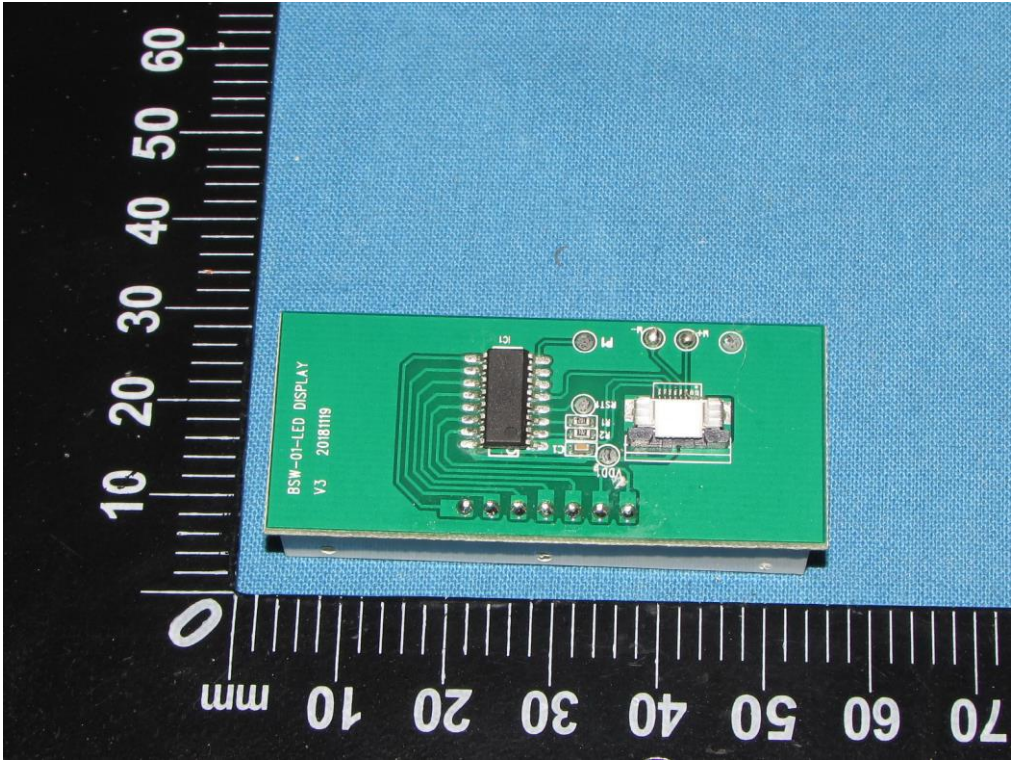
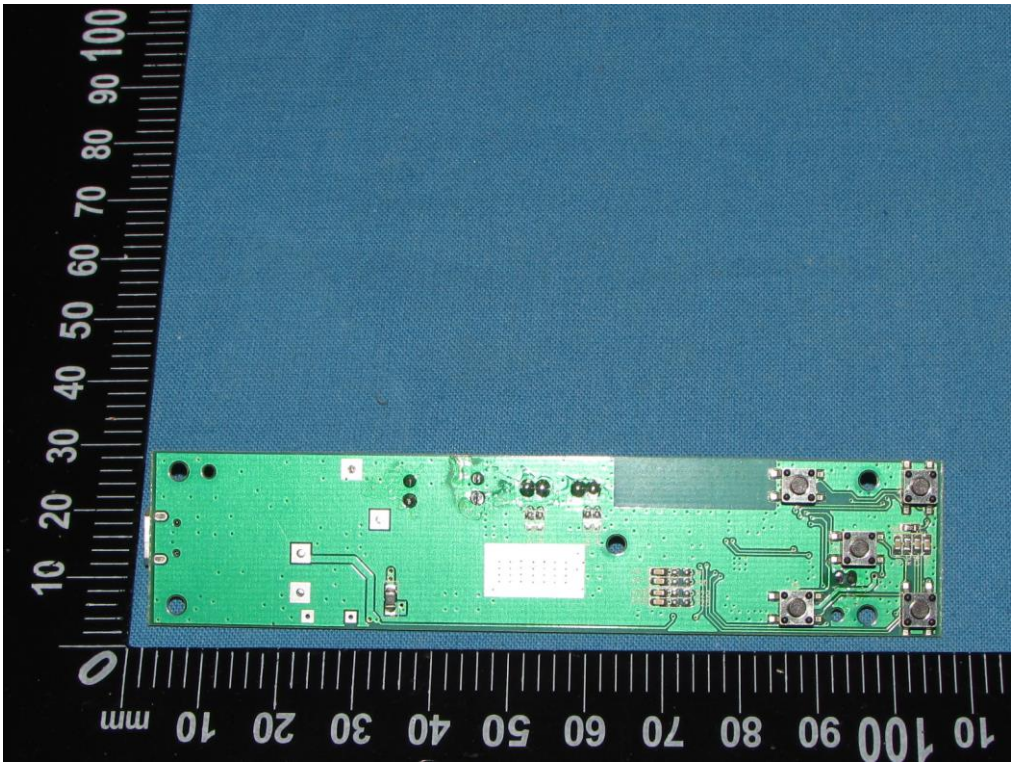


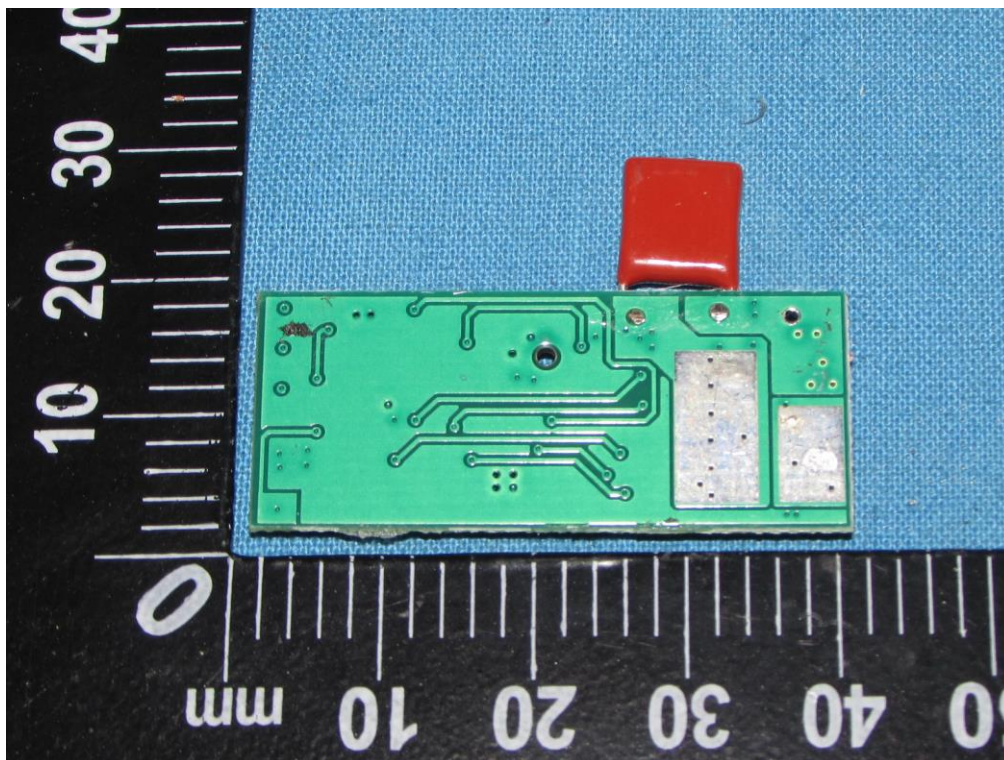
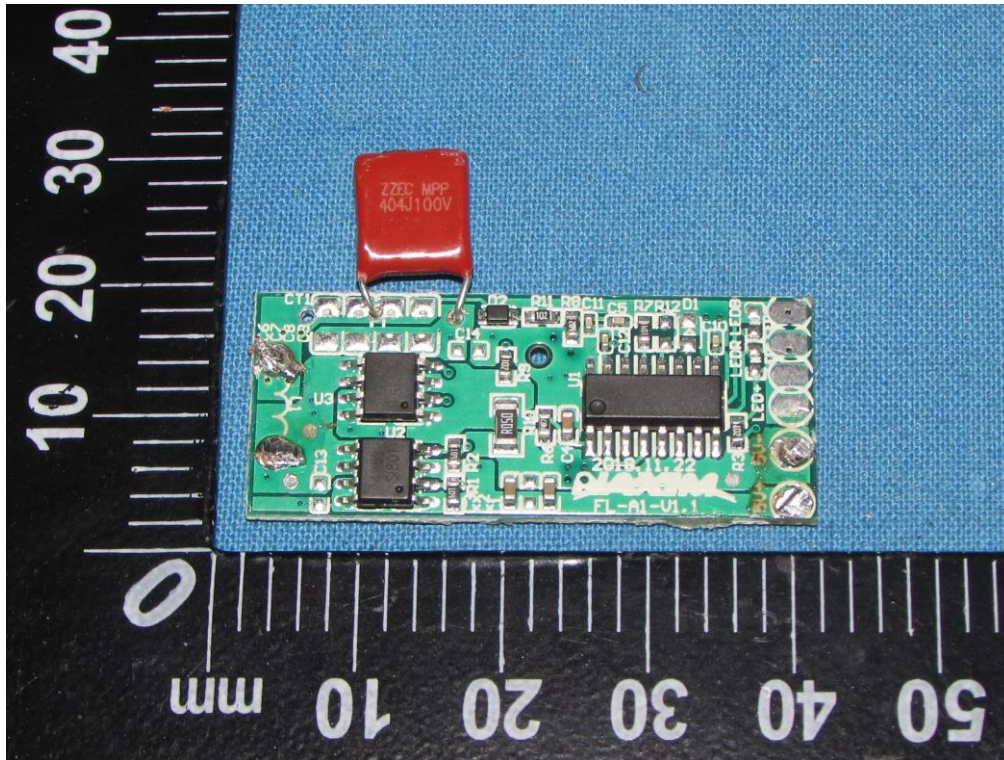


InternalPhotos









.....End of Report.....