Test Report

Applicant:	Guangzhou Childhood Education Technology CO., Ltd.
Address of Applicant:	1505 Room, No.1 Jinying Road, Tianhe District, Guangzhou City, Guangdong Province, China
Equipment Under Test (EUT):	
EUT Name:	Touch-reading Pen
Model No.:	E2000, E2001, E2002, E2003
Serial No.:	Not supplied by client
Standards:	FCC PART15 SUBPART B: 2007
Date of Receipt:	Sep. 8, 2007
Date of Test:	Sep. 1, 2008-Sep. 10, 2008
Date of Issue:	Sep. 20, 2008
Test Result :	**PASS***

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Henly.xie / Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All test results in this report can be traceable to National or International Standards.

The test report prepare by:

Guangzhou Huesent Testing Service Co.,Ltd.

No.91, Dongguanzhuang Road,Guangzhou,China.

Tel: 86-20-28263298 Fax: 86-20-28263237 http://www.hst.org.cn E-mail:hst@hst.org.cn

2. Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4:2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4:2003	Class B	PASS

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4. General Information

4.1 Client Information

Applicant:	Guangzhou Childhood Education Technology CO., Ltd.
Address of Applicant:	1505 Room, No.1 Jinying Road, Tianhe District, Guangzhou City, Guangdong Province, China

4.2 General Description of E.U.T.

EUT Name:	Touch-reading Pen
Item No.:	See the model number shown on cover page. The item E2000 was actually carried through the tests as all the models were electric/ structure and component/ function identical with difference being model number/ color and appearance.
Serial No.:	Not supplied by client

4.3 Details of E.U.T.

Power Supply:	AC/DC adapter, model: BLC060500400WU; input: 100-240VAC, 50/60Hz, 0.15A (max); output: 5VDC/400mA.
Power Cord:	0.7m USB cable; 1.15m earphone cable.

4.4 Description of Support Units

The EUT has been tested in charging mode with an AC/DC adapter and an earphone cable, or tested in transmitting mode with a Samsung notebook (model: NP-R505H, input: 19VDC, 4.74A) and an earphone cable.

Notebook's AC adapter of Samsung, model: SADP-90FH B/ AD-9019S; input: 100-240VAC, 1.5A, 50-60Hz; output: 19VDC, 4.74A.

4.5 Standards Applicable for Testing

The standard used was FCC PART 15, SUBPART B, CLASS B 2007

4.6 Test Location

All tests were subcontract to the laboratory following:

CEPREI (headquarters) lab.

No.110, Dongguanzhuang Road, Tianhe District, Guangzhou city, Guangdong Province, P.R. China

Tel: 86-20-87237178 Fax: 86-20-87236171 Email: emc@ceprei.biz

FCC- Registration No: 258518 on Mar 25, 2005

4.8 Deviation from Standards

None.

4.9 Abnormalities from Standard Conditions

None.

5. Equipments Used during Test

No.	Test item.	Name of Equipment's	Model/Type	Last Calibrated Date
1	CE	EMI receiver	R&S ESCS 30	2008-6-8
2	CE	LISN	R&S ESH3-Z5	2008-6-8
3	CE	Shielded room	Lindgren 3.6*2.5*3	2008-6-8
4	RE	EMI RECEIVER	R&S ESU	2008-6-8
5	RE	Anechoic chamber	Lindgren FACT-4	2008-6-8
6	RE	Antenna	ETS-Lindgren 3142B	2008-6-8
Note: /				

6. Test Results

6.1 Conducted Emissions Mains Terminals, 150 kHz to 30MHz

Test Requirement:	FCC Part 15 B
Test Method:	ANSI C63.4
Class / Severity:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)
	Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit
Test Date:	Sep. 8, 2008

6.1.1 E.U.T. Operation

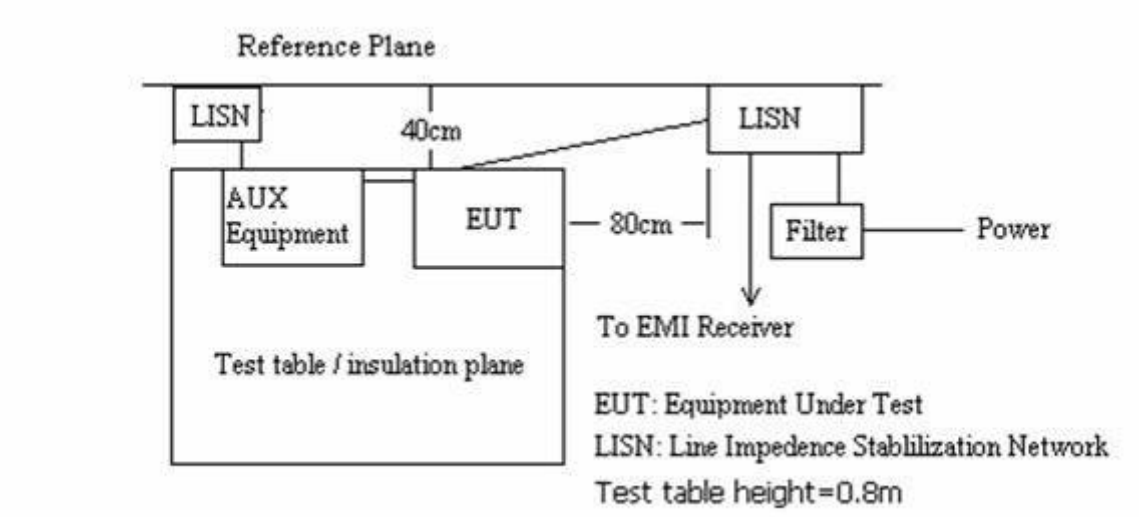
Operating Environment:

Temperature: 25.0°C Humidity:55% RH Atmospheric Pressure: 1020mBar

EUT Operation:

1. Connect the EUT via an USB cable to an AC/DC adapter which is in 120VAC/60Hz, then power on the EUT.
2. Connect the EUT to an earphone cable at the audio output port.
3. Test the EUT in charging mode with an AC/DC adapter and an earphone cable and test EUT in transmitting mode with a notebook for pre-test data.
4. Test the EUT in work normally in charging mode in 120VAC/60Hz, since no considerably varies found.

6.1.2 Plan View of Test Setup

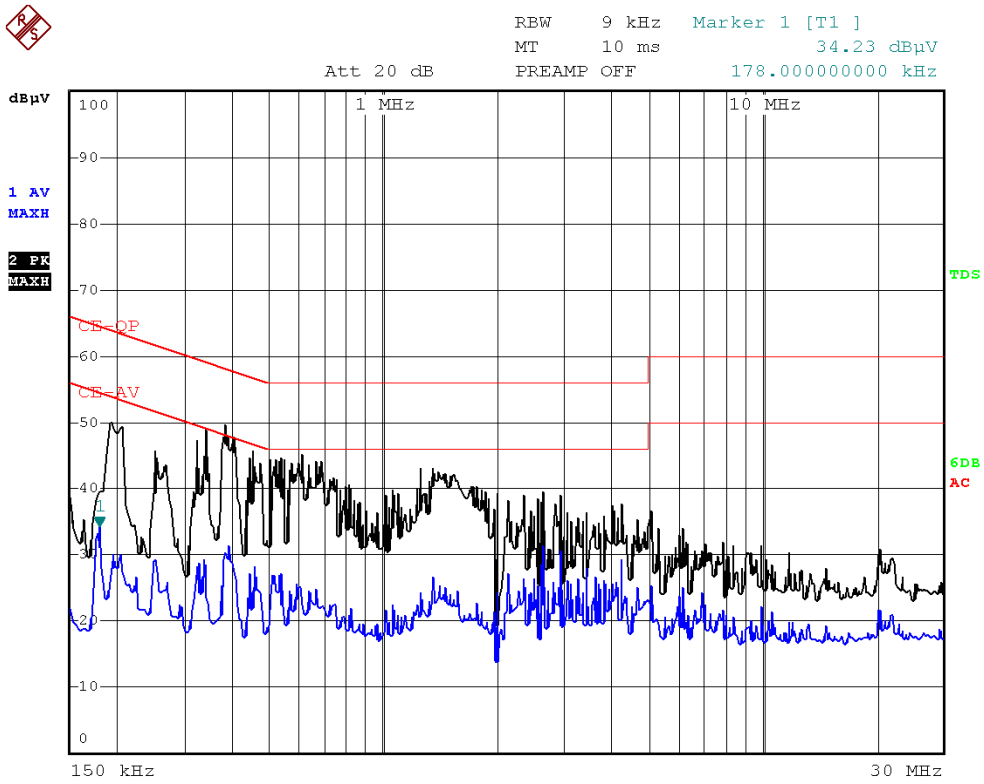


6.1.3 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized emission were detected when Peak measurement level is over Average Limit.

Live Line

Peak Scan

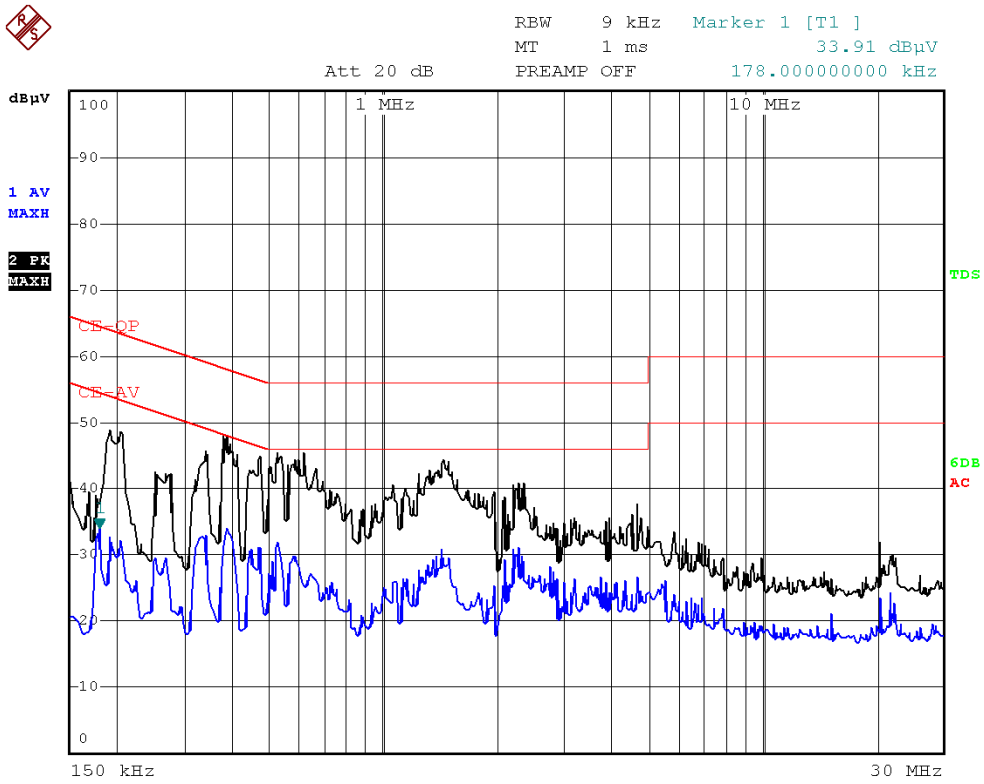


Quasi-peak and Average measurement

Freq. (MHz)	Line	QP (dBµV)	Transducer （dB）	QP limit (dBµV)	Margin (dB)	AV (dBµV)	Transducer （dB）	AV limit (dBµV)	Margin (dB)
0.178	Live	45.2	11.7	64.6	-19.4	34.2	11.7	54.6	-20.4
0.390	Live	42.3	10.52	58.1	-15.8	31.4	10.52	48.1	-16.7
0.538	Live	39.2	10.32	56.0	-16.8	27.2	10.32	46.0	-18.8
2.644	Live	36.4	10.31	56.0	-19.6	31.4	10.31	46.0	-14.6
5-30	Live	<40	/	60.00	/	<30	/	50.00	/

Neutral Line

Peak Scan



Quasi-peak and Average measurement

Freq. (MHz)	Line	QP (dBµV)	Transducer （dB）	QP limit (dBµV)	Margin (dB)	AV (dBµV)	Transducer （dB）	AV limit (dBµV)	Margin (dB)
0.178	Neutral	44.3	11.7	64.6	-20.3	33.9	11.7	54.6	-20.7
0.390	Neutral	43.6	10.52	58.1	-14.5	33.9	10.52	48.1	-14.2
0.582	Neutral	40.9	10.38	56.0	-15.1	29.4	10.38	46.0	-16.6
1.426	Neutral	40.7	10.23	56.0	-15.3	30.9	10.23	46.0	-15.1
5-30	Neutral	<40	/	60.00	/	<30	/	50.00	/

6.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4
Class:	Class B
Detector:	Peak for pre-scan (120kHz resolution bandwidth)
	Quasi-Peak if maximised peak within 6dB of limit
Test Date:	Sep. 8, 2008

6.2.1 E.U.T. Operation

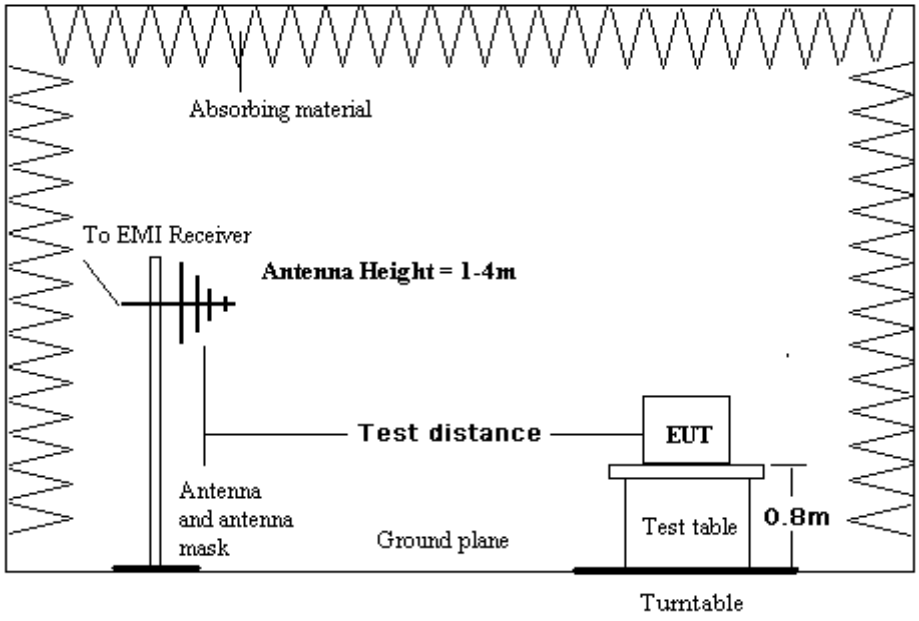
Operating Environment:

Temperature: 25°C Humidity:55% RH Atmospheric Pressure: 1020mBar

EUT Operation:

1. Connect the EUT via an USB cable to an AC/DC adapter which is in 120VAC/60Hz, then power on the EUT.
2. Connect the EUT to an earphone cable at the audio output port.
3. Test the EUT in charging mode with an AC/DC adapter and an earphone cable and test EUT in transmitting mode with a notebook for pre-test data.
4. Test the EUT in work normally in charging mode in 120VAC/60Hz, since no considerably varies found.
5. Manipulated the system cables to produce the highest amplitude signal relative to the limit.

6.2.2 Test Setup



6.2.3 Measurement Data

An initial pre-scan was performed in the 3m chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bilog antenna with 2 orthogonal polarities

Horizontal:

Quasi-peak measurement

Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
35.7	29.6	15.6	39	-9.4
50-88	<20	/	40	/
120.0	24.9	9.2	43.5	-18.6
150-216	<20	/	43.5	/
349.35	29.3	17.6	46.4	-17.1
>960	<34	/	54	/

Note:

The transducer factor includes antenna factor and cable loss.

Vertical:

Quasi-peak measurement

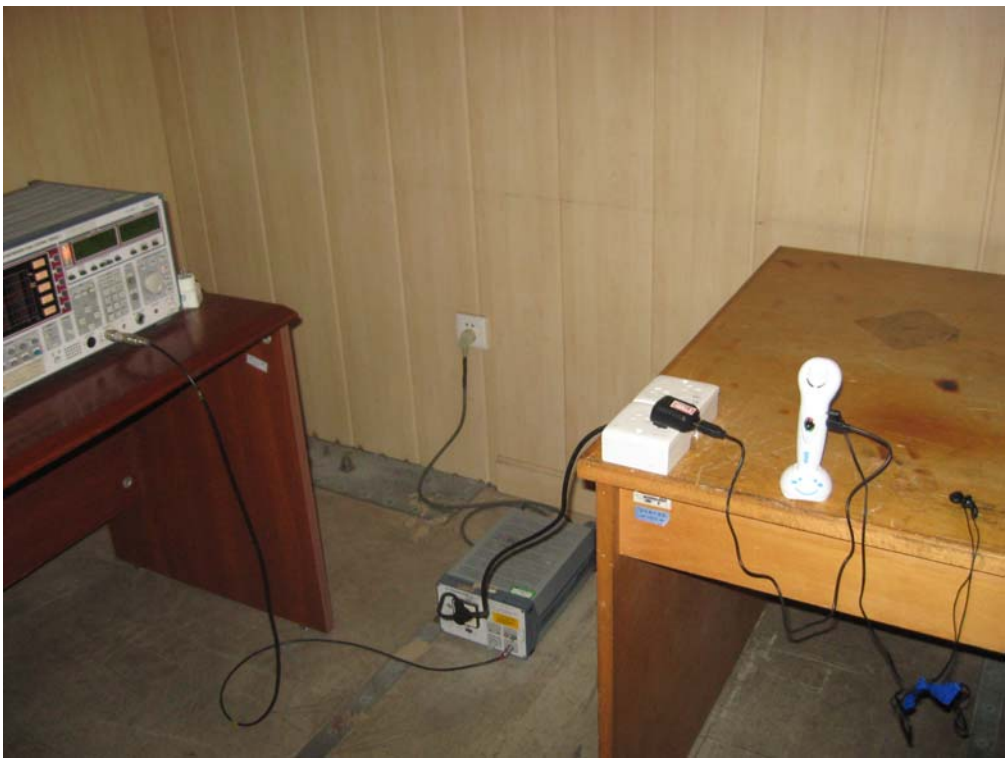
Frequency	Level	Transducer	Limit	Margin
MHz	dBuV/m	dB	dBuV/m	dB
34.7	36.8	16.0	39	-2.2
37.1	37.1	15.1	39	-1.9
60.0	35.0	8.2	39	-4.0
192.0	31.5	11.8	43.5	-12.0
380.4	28.8	18.4	46.4	-17.6
>960	<34	/	54	/

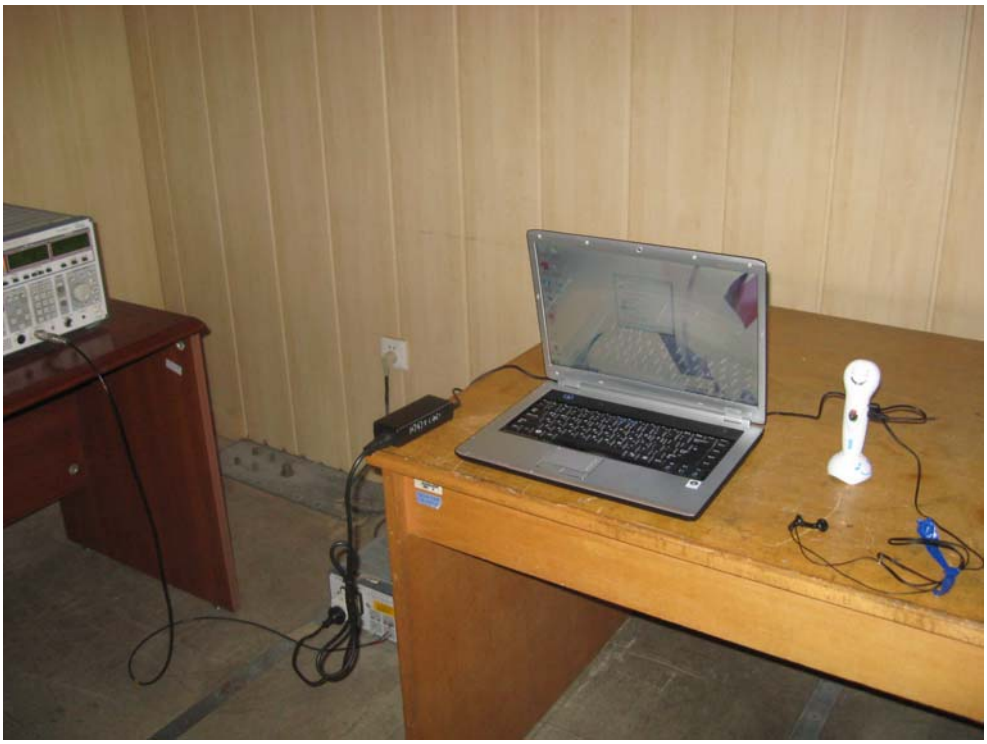
Note:

The transducer factor includes antenna factor and cable loss.

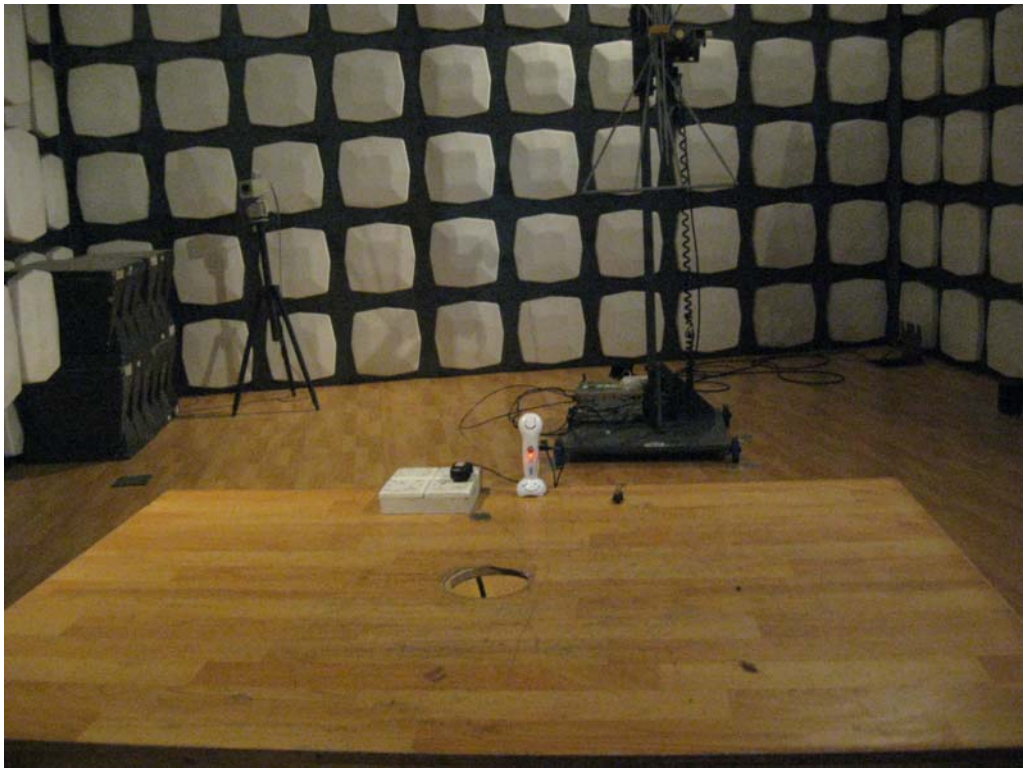
7. Photographs

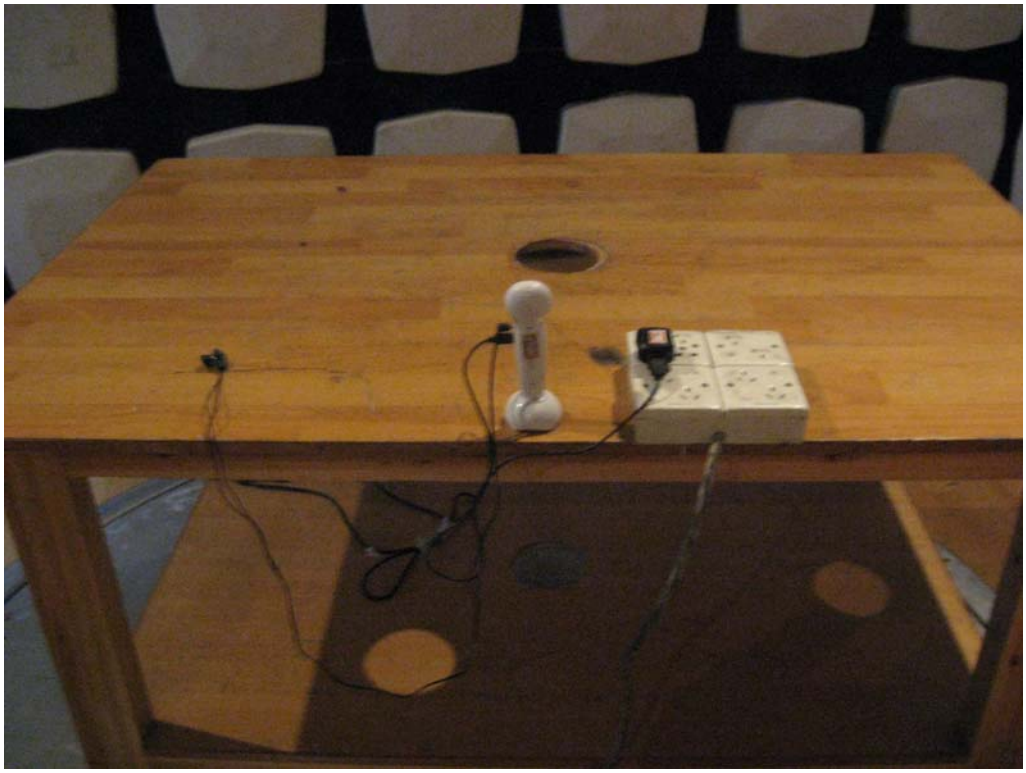
7.1 Conducted Emission Test Setup

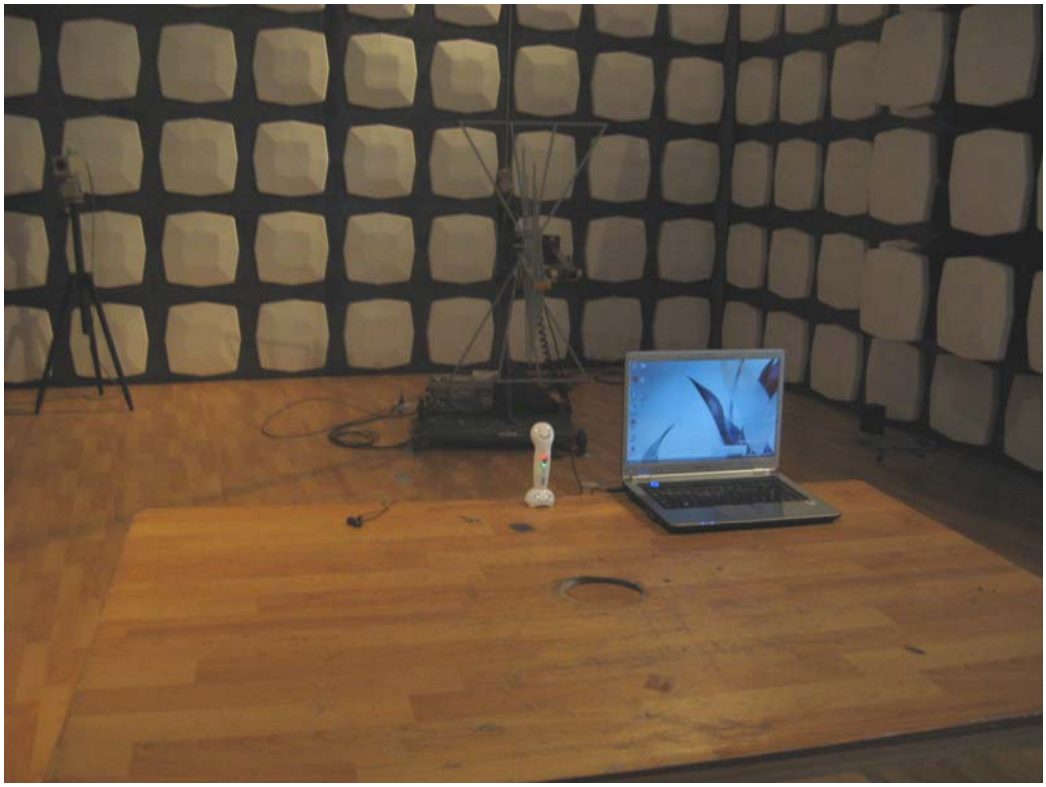


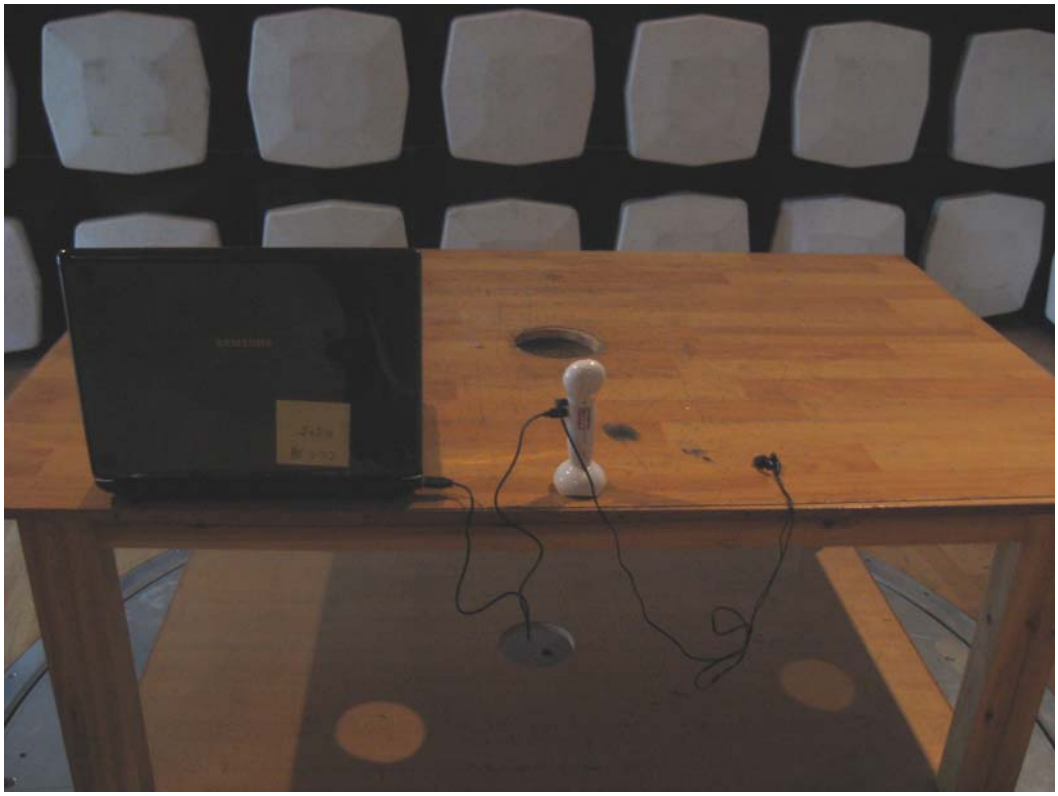


7.2 Radiated Emission Test Setup

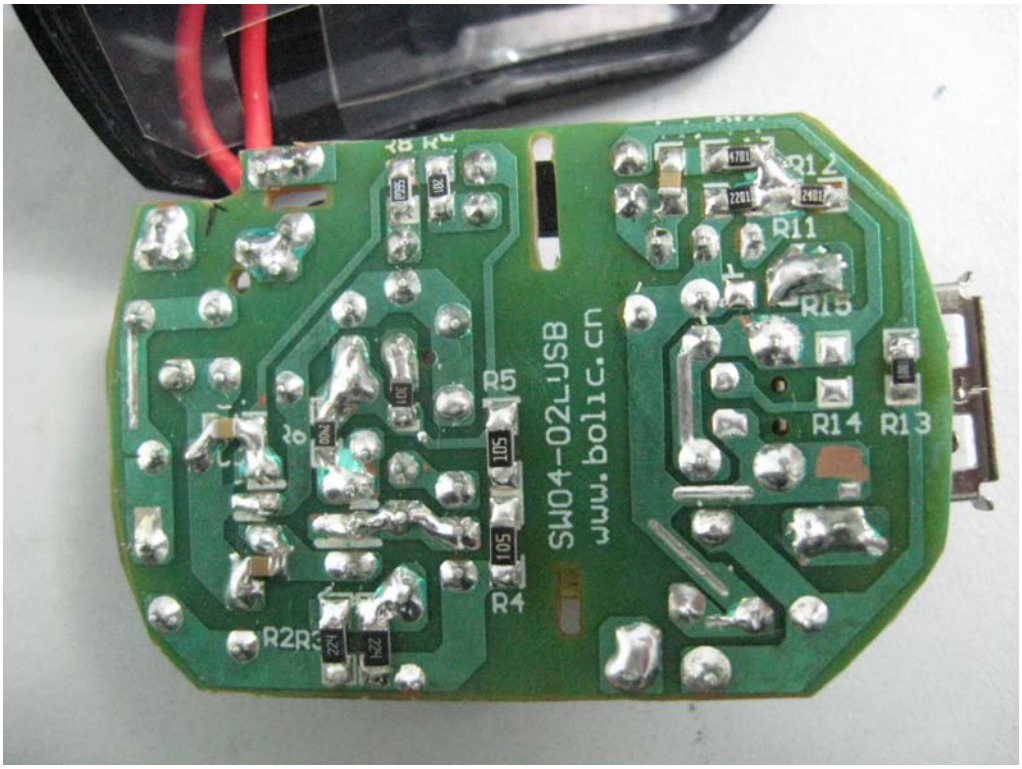








7.3 EUT Constructional Details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R15
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R4
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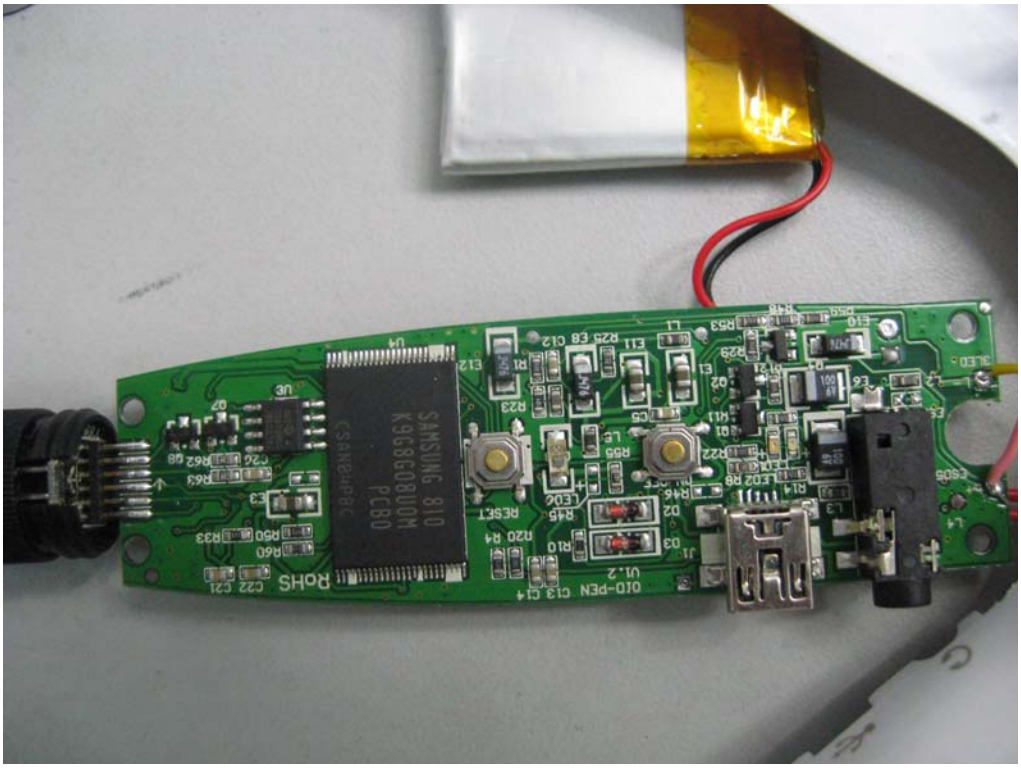
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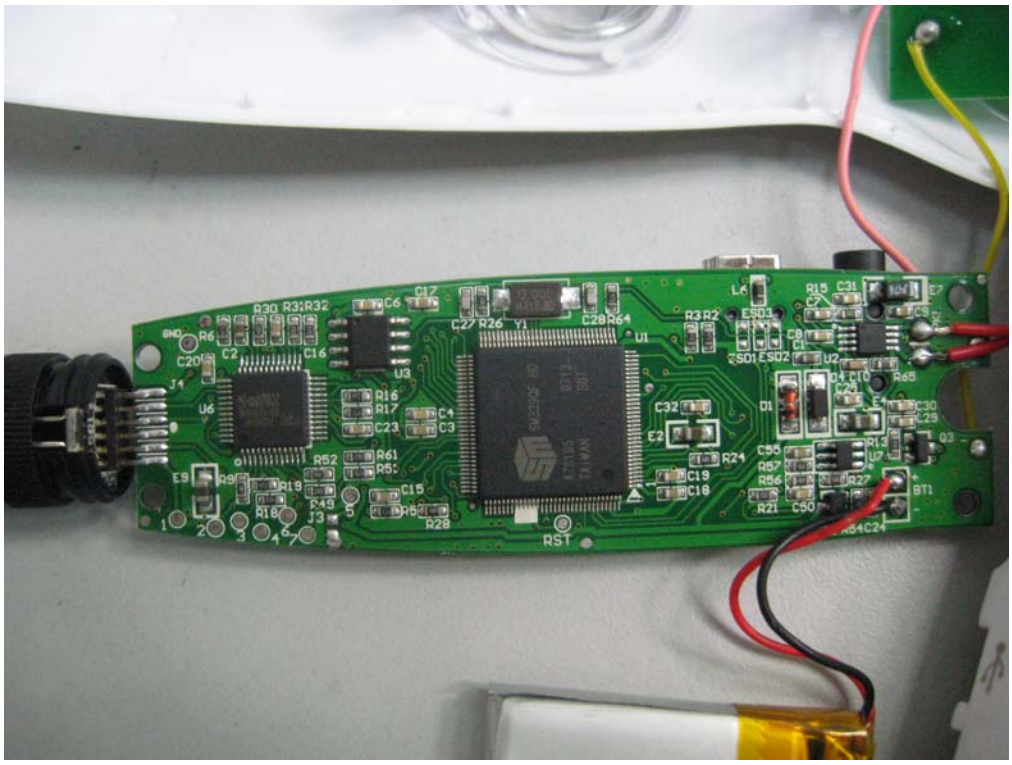
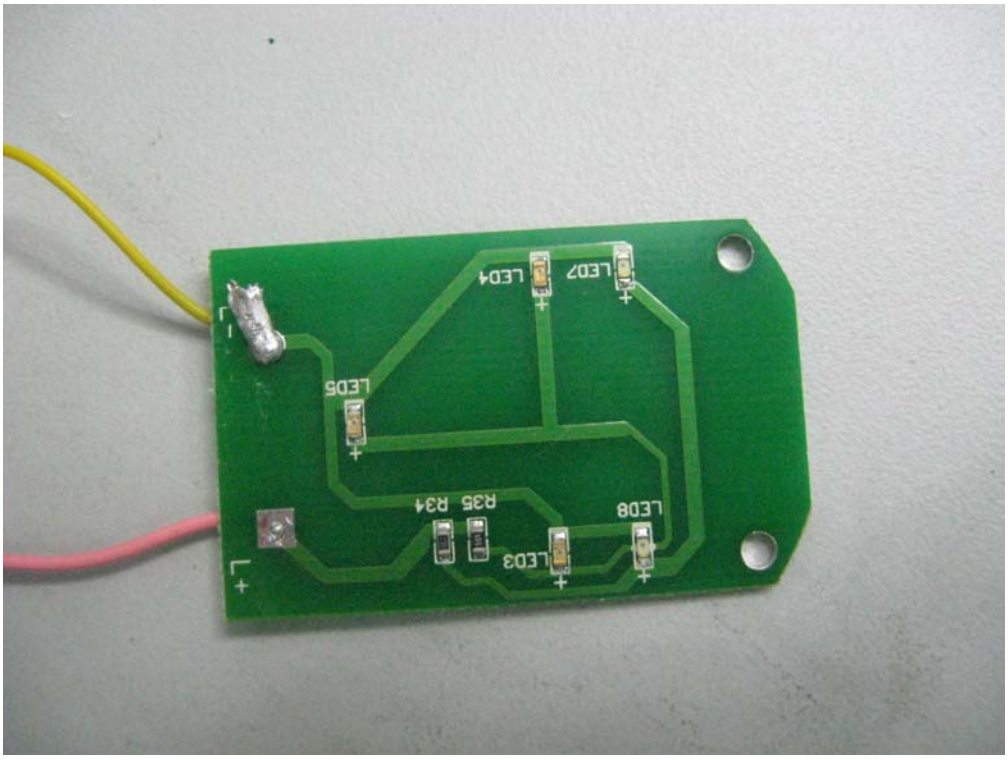
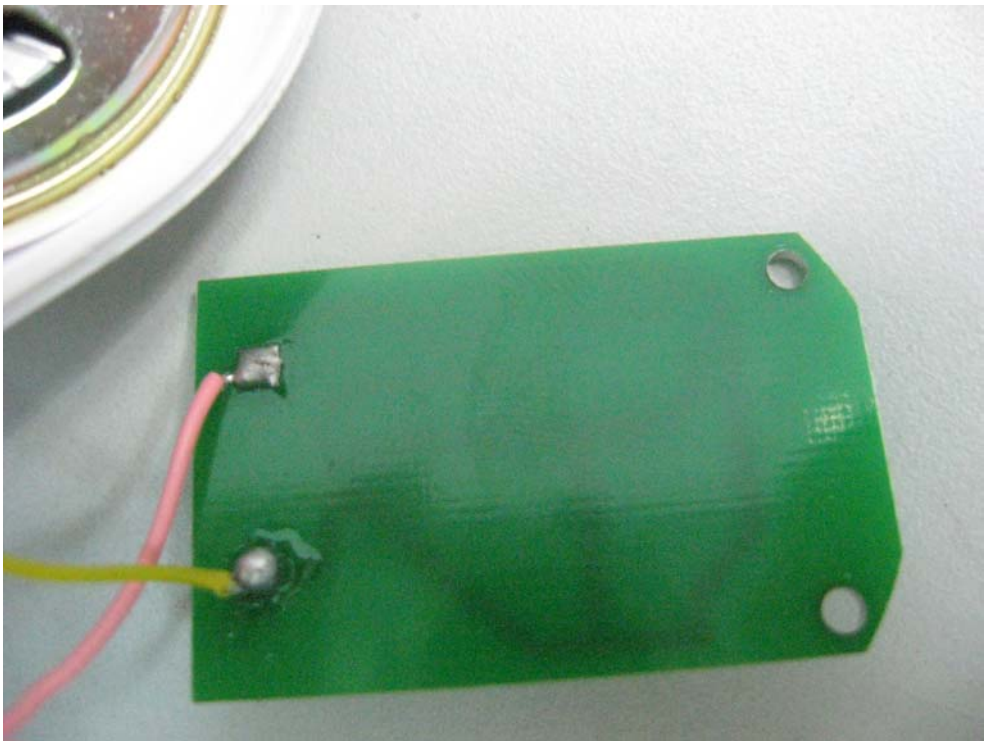
PCB0
RoHS


RST





End of Report