

FCC TEST REPORT

FCC ID NO. : SJ8MF-1041

Applicant : **RDI Technology (Shenzhen) Co., Ltd.**
Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan,
Shenzhen, P.R.C.

Equipment Under Test (EUT) :

Product Name : 10.4" Digital Picture Frame

Model No. : MF-1041

Standards : FCC Part 15 SUBPART B

Date of Test : Sep. 15,2008

Test Engineer : Nunu.Deng

Reviewed By : 

PERPARED BY:

Waltek Services (Shenzhen) Co., Ltd.

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2 Test Summary

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

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4 General Information

4.1 Client Information

Applicant: **RDI Technology (Shenzhen) Co., Ltd.**
Address of Applicant: Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan, Shenzhen, P.R.C.
Manufacturer: RDI Technology (Shenzhen) Co., Ltd.
Address of Manufacturer: Building C1 Xingtang Industrial Park, East Baishixia, Fuyong, Baoan, Shenzhen, P.R.C.

4.2 General Description of E.U.T.

Product Name: 10.4" Digital Picture Frame
Model No.: MF-1041

4.3 Details of E.U.T.

Power Supply: Adapter input: AC 100-120V 50/60Hz
Adapter output: DC 5V

4.4 Description of Support Units

Compliance test was performed test in ON mode and connected with notebook and printer.
The customer requested FCC tests for a 10.4" Digital Picture Frame.
The standard used was FCC Part 15.107 & Part15.109, SUBPART B

4.5 Test Facility

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

- **IC – Registration No.:IC7760**

Waltek Services(Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration IC7760,July 24,2008.

- **FCC – Registration No.: 880581**

Waltek Services(Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581, June 24, 2008.

4.6 Test Location

All Emissions tests were performed at:-

1/F, Fukangtai Building, West Baima Rd., Songgang Street,
Baoan District, Shenzhen 518105, China.

5 Equipment Used during Test

5.1 Equipment Used during (Emission and Immunity Test)

Equipment	Brand Name	Model	Cal.Int Months	LastCal. Date
3m Anechoic chamber				
EMC Analyzer	Agilent	E7405A	12	Jan-08
Active Loop Antenna	Beijing Dazhi	ZN30900A	12	Jan-08
Trilog Broadband Antenna	SCHWARZBECK MESS-ELEKTROM	VULB9163	12	Jan-08
Broadband Preamplifier	SCHWARZBECK MESS-ELEKTROM	BBV 9718	12	Jan-08
10m Coaxial Cable with N-male Connectors usable,	SCHWARZBECK MESS-ELEKTROM	AK 9515 H	12	Jan-08
10m 50 Ohm Coaxial Cable with N-plug, individual length, usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9513	12	Jan-08
Positioning Controller	C&C LAB	CC-C-IF	12	Jan-08
Color Monitor	SUNSP0	SP-14C	12	Jan-08
EMI Shielded Room				
Test Receiver	ROHDE&SCHWARZ	ESPI	12	Jan-08
Two-Line V-Network	ROHDE&SCHWARZ	ENV216	12	Jan-08
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	12	Jan-08
10m 50 Ohm Coaxial Cable with N-plug individual length, usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9514	12	Jan-08
other				
Notebook	IBM	X31		
printer	Canon	Mp150		

6 Conduction Emissions, 0.15MHz to 30MHz

Test Requirement:	FCC Part 15.107
Test Method:	ANSI C63.4: 2003
Test Date:	Sep. 15,2008
Frequency Range:	150kHz to 30MHz
Class/Severity:	B
Limit:	66-56 dB μ V/m between 0.15MHz & 0.5MHz 56 dB μ V/m between 0.5MHz & 5MHz 60 dB μ V/m between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

6.1.1 E.U.T. Operation

Operating Environment:

Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

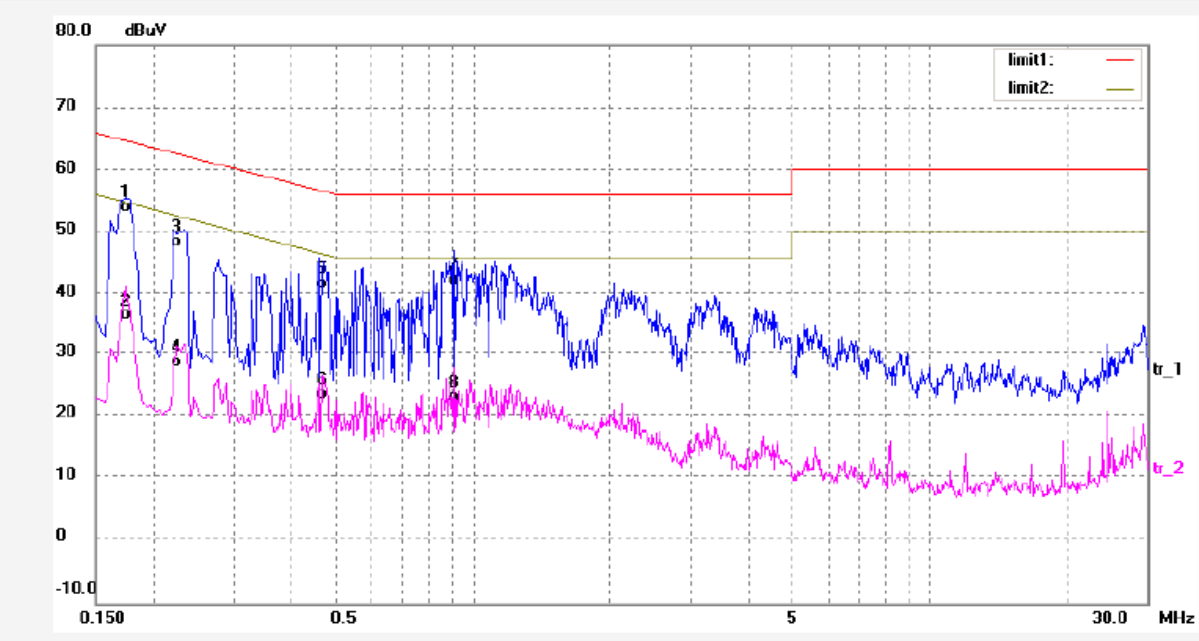
EUT Operation :

Compliance test was performed test in ON mode and connected with notebook and printer. The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

6.1.2 Measurement Result

Job No.: MF-1041	Phase: L1
Standard: FCC Part15 CE-Class B_QP	Power Source: AC 120V/60Hz
Test item: Conduction Test	Date: 2008/08/26
Temp.(C)/Hum.(%) 24.5 C / 55 %	Time: PM 07:36:50
EUT:	Engineer Signature:
Mode:	
Model: MF-1041	

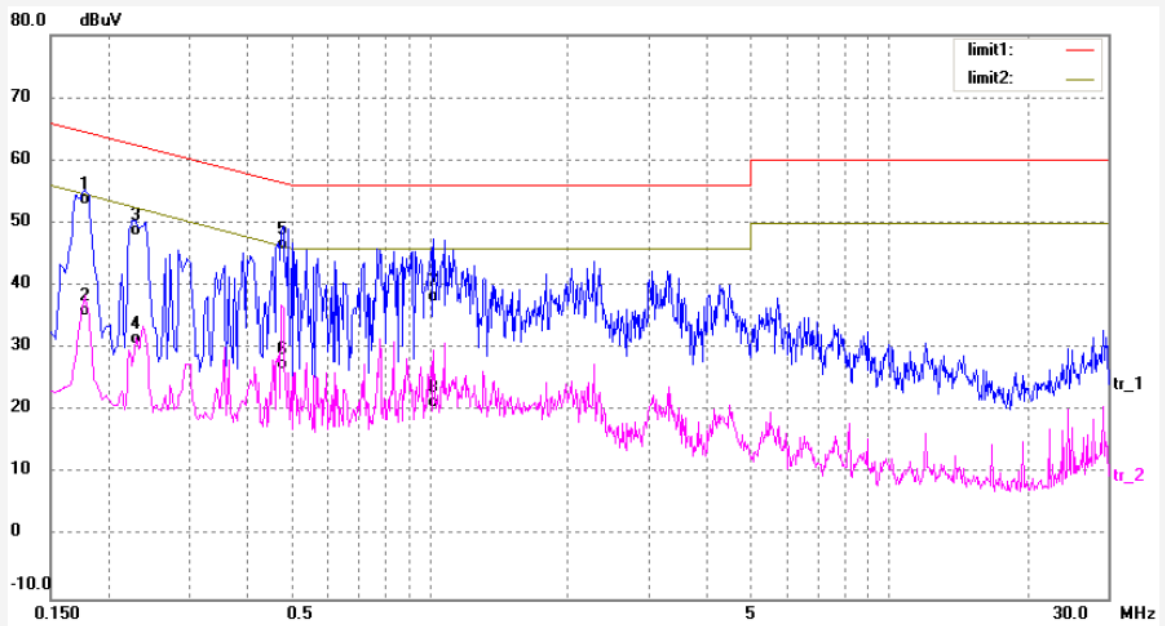
Note: USB PIAY



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1740	53.21	0.00	53.21	64.76	-11.55	QP	
2	0.1740	35.48	0.00	35.48	54.76	-19.28	AVG	
3	0.2220	47.56	0.00	47.56	62.74	-15.18	QP	
4	0.2220	27.97	0.00	27.97	52.74	-24.77	AVG	
5	0.4620	40.71	0.00	40.71	56.66	-15.95	QP	
6	0.4620	22.83	0.00	22.83	46.66	-23.83	AVG	
7	0.9180	41.37	0.00	41.37	56.00	-14.63	QP	
8	0.9180	22.35	0.00	22.35	46.00	-23.65	AVG	

Job No.: MF-1041 Standard: FCC Part15 CE-Class B_QP Test item: Conduction Test Temp.(C)/Hum.(%) 24.5 C / 55 % EUT: Mode: Model: MF-1041	Phase: N Power Source: AC 120V/60Hz Date: 2008/08/26 Time: PM 07:43:06 Engineer Signature:
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Note: USB PIAY



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1780	52.98	0.00	52.98	64.57	-11.59	QP	
2	0.1780	35.10	0.00	35.10	54.57	-19.47	AVG	
3	0.2260	47.85	0.00	47.85	62.59	-14.74	QP	
4	0.2260	30.60	0.00	30.60	52.59	-21.99	AVG	
5	0.4820	45.78	0.00	45.78	56.30	-10.52	QP	
6	0.4820	26.51	0.00	26.51	46.30	-19.79	AVG	
7	1.0220	37.27	0.00	37.27	56.00	-18.73	QP	
8	1.0220	20.57	0.00	20.57	46.00	-25.43	AVG	

7 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part 15.109
Test Method:	ANSI C63.4: 2003
Test Date:	Sep. 15,2008
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Limit:	40.0 dB μ V/m between 30MHz & 88MHz 43.5 dB μ V/m between 88MHz & 216MHz 46.0 dB μ V/m between 216MHz & 960MHz 54.0 dB μ V/m zbove 960MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth) Quasi-Peak if maximised peak within 6dB of limit

7.1.1 E.U.T. Operation

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1012 mbar

EUT Operation :

Compliance test was performed test in ON mode and connected with notebook and printer.

7.1.2 EUT Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003, The specification used in this report was the FCC Part 15.109 Class B limits.

7.1.3 Spectrum Analyzer Setup

According to FCC Part 15.109 Class B Rules, the system was tested to 1000 MHz.

Start Frequency	30 MHz
Stop Frequency	1000 MHz
Sweep Speed	Auto
IF Bandwidth.....	1 00KHz
Video Bandwidth.....	100KHz
Quasi-Peak Adapter Bandwidth	120 kHz
Quasi-Peak Adapter Mode.....	Normal
Resolution Bandwidth	100KHz

7.1.4 Test procedure

For the radiated emissions test, since the EUT has a power source, there was connection to AC outlets.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant 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 dBµV of specification limits), and are distinguished with a "Qp" in the data table.

The EUT was under normal mode during the final qualification test and the configuration was used to represent the worst case results.

7.1.5 Summary of Test Results

According to the data in section 7.1.6, the EUT complied with the FCC Part 15.109 Class B standards.

The test results: PASS.

7.1.6 Radiated Emissions Test Data

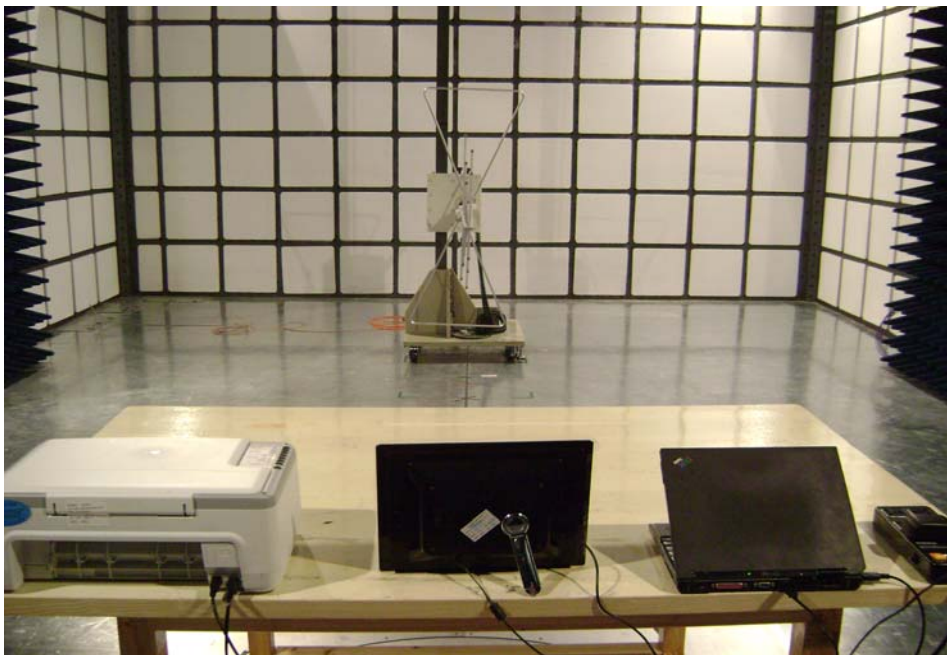
Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart B Limit (dBuV/m)	Margin (dB)	Detector	Antenna Height (m)	Turntable Angle (°)
64.30	Horizontal	36.60	40.00	-3.4	QP	1.4	100
133.55	Horizontal	37.89	43.50	-5.61	QP	1.5	120
154.24	Horizontal	39.04	43.50	-4.46	QP	1.4	100
245.26	Horizontal	39.21	46.00	-6.79	QP	1.5	110
540.70	Horizontal	38.37	46.00	-7.63	QP	1.4	110
154.24	Vertical	37.94	40.00	-2.06	QP	1.3	100
245.26	Vertical	39.75	43.50	-3.75	QP	1.4	120
312.54	Vertical	40.21	43.50	-3.29	QP	1.5	120
784.71	Vertical	39.79	46.00	-6.21	QP	1.4	80

8 Photographs - Test Setup

8.1 Conduction Emissions Test Setup



8.2 Radiated Emissions Test Setup



9 Photographs - Constructional Details

9.1.1 EUT - Front View



9.1.2 EUT - Back View



9.1.3 Adapter - Front View



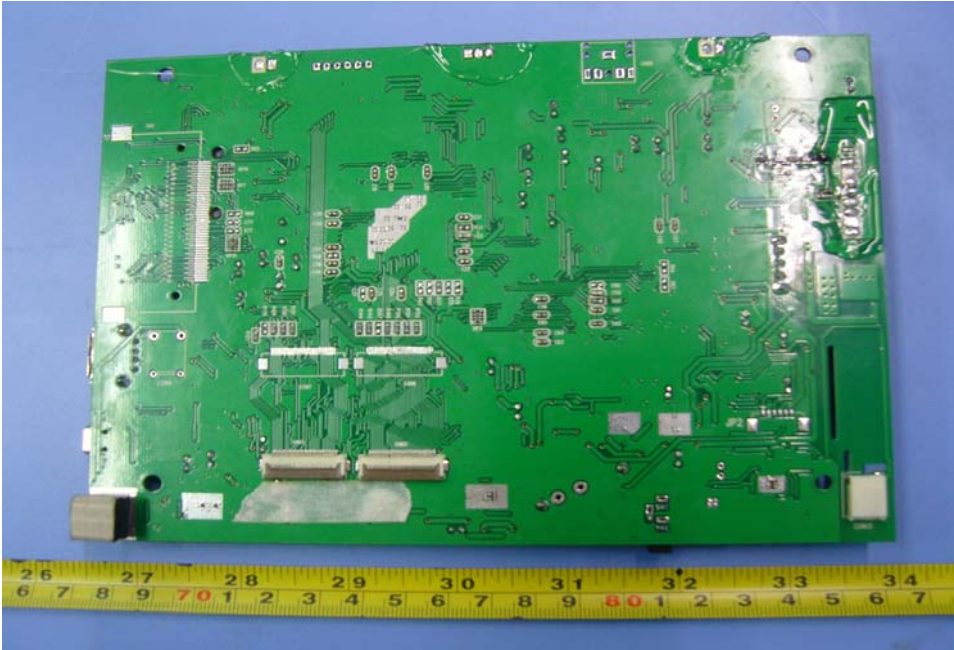
9.1.4 Adapter - Back View



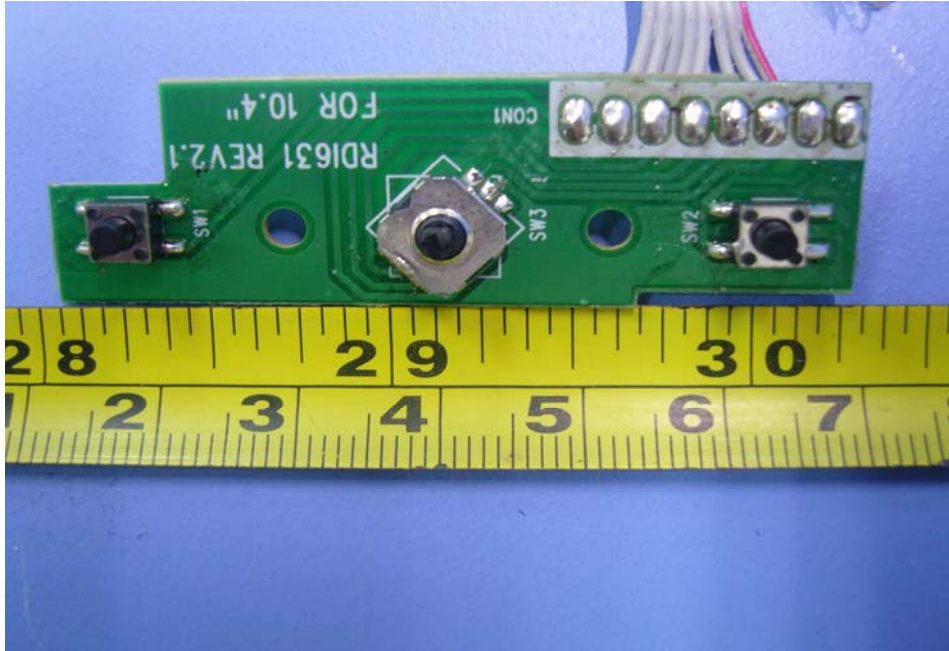
9.1.5 PCB1 - Front View



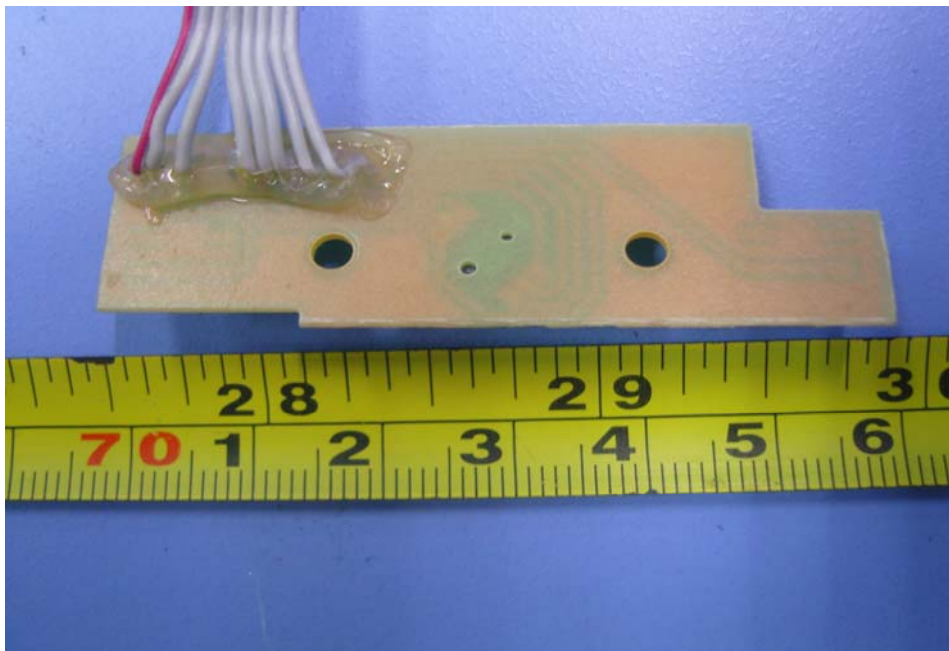
9.1.6 PCB1 - Back View



9.1.7 PCB2 - Front View



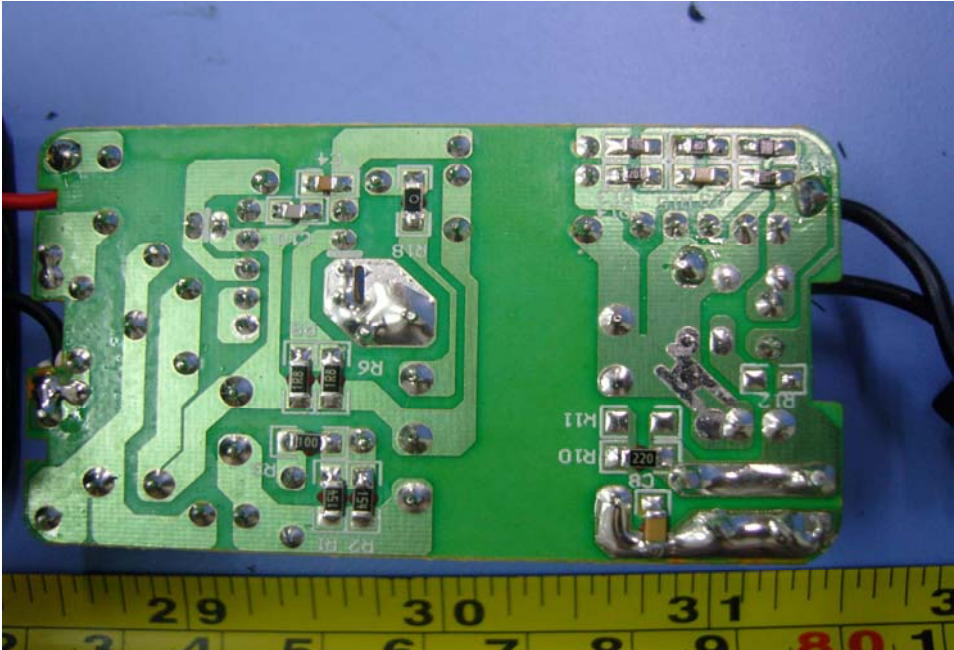
9.1.8 PCB2 - Back View



9.1.9 PCB3 - Front View



9.1.10 PCB3 - Back View



10 FCC ID Label

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)this device may not cause harmful interference,and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper. 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.

Proposed Label Location on EUT
EUT Top View/ proposed FCC Label Location

