EMC TEST REPORT

Reference No. : WT08010091-S-E

Applicant : Gembird Electronics Ltd.
Address : Room 1709 A, News Building, #2 Shennan Zhong Lu, Shenzhen, China

Equipment Under Test (EUT) :

Product Name : Universal Travel Charger
Model No. : MP3A-UC-AC1, MP3A-UC-AC2

Standards : EN 55022:2006
EN 61000-3-2:2006
EN 61000-3-3:1995+A2:2005
EN 55024:1998+A2:2003

Date of Test : March 24, 2008

Test Engineer : Maikou.zhang

Reviewed By : Phillo zhong

Test Result :	**PASS ***

* The sample detailed above has been tested to the requirements of Council Directives 2004/108/EC. The test results have been reviewed against the Directives above and found to meet their essential requirement

1 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Mains Terminal Disturbance Voltage, 150kHz to 30MHz	EN 55022:2006	EN 55022:2006	Class B	PASS
Radiation Emission, 30MHz to 1000MHz	EN 55022:2006	EN 55022:2006	Class B	PASS
Harmonic Emission on AC, 100Hz to 2kHz	EN 61000-3-2 : 2006	EN 61000-3-2 : 2006	Clause 7 of EN61000-3-2	N/A
Flicker Emission on AC	EN 61000-3-3:1995/A2:2005	EN 61000-3-3:1995/A2:2005	Clause 5 of EN61000-3-3	PASS
ESD	EN 55024:1998 +A2:2003	EN 61000-4-2 :1995 + A2:2001	±4 kV Contact ±8 kV Air	PASS
Radiated Immunity (80MHz to 1GHz)	EN 55024:1998 +A2:2003	EN 61000-4-3 :2006	3V/m, 80%, 1kHz, Amp. Mod.	PASS
Electrical Fast Transients (EFT) on AC and DC	EN 55024:1998 +A2:2003	EN 61000-4-4 :2004	AC ±1.0kV DC ±0.5kV	PASS
Surge Immunity on AC	EN 55024:1998 +A2:2003	EN 61000-4-5 :2006	±1kV D.M.† ±2kV C.M.‡	PASS
Injected Currents on AC & DC, 150kHz to 80MHz	EN 55024:1998 +A2:2003	EN 61000-4-6 : 1996+A1: 2001	3Vrms(emf), 80%, 1kHz Amp. Mod.	PASS
Power frequency magnetic field immunity	EN 55024:1998 +A2:2003	EN 61000-4-8:1993+A1:2001	3A/m	N/A
Voltage Dips and Interruptions on AC	EN 55024:1998 +A2:2003	EN 61000-4-11 :2004	＞95 % U_T* for 250per 30 % U_T* for 25per ＞95 % U_T* for 0.5per	PASS

Remark:

A.M. Amplitude Modulation.

P.M. Pulse Modulation.

† D.M. – Differential Mode

* U_T is the nominal supply voltage

2 Contents

Page

3 General Information

3.1 Client Information

Applicant:	Gembird Electronics Ltd.
Address of Applicant:	Room 1709 A, News Building, #2 Shennan Zhong Lu, Shenzhen, China
Manufacturer:	Gembird Electronics (Zhuhai) Co., Ltd.
Address of Manufacturer:	5 Floor, Building 1, Pingdong Road 2#, Nanping Industry Park, Zhuhai, Guangdong Province, China

3.2 General Description of E.U.T.

Product Name:	Universal Travel Charger
Model No.:	MP3A-UC-AC1, MP3A-UC-AC2

3.3 Details of E.U.T.

Power Supply:	AC100-240V, 0.15A, 50-60Hz

3.4 Test Instruction

All the tests were performed in the condition of AC 230V/50Hz input.

3.5 Description of Support Units

The EUT has been tested as an independent unit.

3.6 Standards Applicable for Testing

The customer requested EMC tests for an Universal Travel Charger. The standards used were EN 55022 Class B, EN 61000-3-2 and EN 61000-3-3 for emissions & EN 55024 for immunity.

Table 1 : Tests Carried Out Under EN 55022: 2006

Standard		Status
EN 55022:2006	Radiation Emission, 30MHz to 1000MHz	√
EN 55022:2006	Mains Terminal Disturbance Voltage,150KHz to 30MHz	√

Table 2 : Tests Carried Out Under EN 61000-3-2: 2006 & EN 61000-3-3:1995+A2:2005

EN 61000-3-2: 2006	Harmonic Emissions on AC	×
EN 61000-3-3:1995+A2:2005	Flicker Emissions on AC	√

√ Indicates that the test is applicable

× Indicates that the test is not applicable

Table 3 : Tests Carried Out Under EN 55024:1998+A2:2003

Standard		**Status**
EN 61000-4-2:1995 + A2:2001	Electro-static discharge	√
EN 61000-4-3:2006	Radio frequency EM fields (80MHz to 1GHz)	√
EN 61000-4-4:2004	Fast transients	√
EN 61000-4-5:2006	Surges	√
EN 61000-4-6:1996+A1:2001	Radio frequency continuous conducted (150kHz to 80MHz)	√
EN 61000-4-8:1993 +A1:2001	Power-frequency magnetic field (50Hz)	×
EN 61000-4-11:2004	Voltage dips & interruptions	√

√ Indicates that the test is applicable

× Indicates that the test is not applicable

3.7 Test Facility

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

- **FCC – Registration No.: 759397**

  Solid Industrial (Shenzhen) Co., Ltd. EMC Laboratory 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 759397, December 28, 2006.

3.8 Test Location

All Emissions testswere performed at:-

Solid Industrial (Shenzhen) Co., Ltd. at 333 Bulong Highway Buji Longgang, Shenzhen, Guangdong, China.

Its' **VCCI – Registration No.: 2153.**

4 Equipment Used during Test

Equipment	Brand Name	Model	Cal. Int Months	Last Cal. Date
3m Anechoic chamber				
EMC Analyzer	Agilent	E7402A	12	2007-08
EMI Test Receiver	R&S	ESS	12	2007-08
Pre Amplifier	Anritsu	MH648A	12	2007-08
Bilog Antenna	SCHAFFNER	CBL6111C	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Signal Generator	R&S	SMG	12	2007-08
RF Selector	TOYO	NS4901A	-	-
Turn Disc	HD	DS4150S	-	-
Antenna Mast	HD	MA2400	-	-
EMI Shielded Room				
Spectrum analyzer	ADVANTEST	R3261C	12	2007-08
EMI Test Receiver	R&S	ESS	12	2007-08
Pre Amplifier	Anritsu	MH648A	12	2007-08
LISN	Kyoritsu	KNW-403D	12	2007-08
LISN	Kyoritsu	KNW-407	12	2007-08
LISN	Kyoritsu	KNW-242C	12	2007-08
Absorbing Clamp	R&S	MDS-21	12	2007-08
Absorbing Clamp	R&S	MDS-21	12	2007-08
Absorbing Clamp	Kyoritsu	KT-20	12	-
Distortion Meter	MEGURO	MAK-6578A	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Oscilloscope	LEADER	LS1020	12	2007-08
Function Generator	National	VP-7422A	12	2007-08
Signal Generator	R&S	SMG	12	2007-08
RF Selector	TOYO	NS4000	-	-
RF Selector	TOYO	NS4900	-	-
Remote Controller	TOYO	MAC	-	-

Harmonic & Flicker Test				
Signal Conditioning Unit	SCHAFFNER	CCN1000-1	12	2007-08
Signal Phase Impedance Network	SCHAFFNER	INA2152		
5KVA AC Power Source	SCHAFFNER	NSG1007		

List Of Test Equipment For EMS

Equipment	Brand Name	Model	Cal. Int Months	Last Cal. Date
3m Anechoic chamber				
Power Reflection Meter	R&S	NAP	12	2007-08
RF Power Amplifier	TOYO	AS300SSS	12	2007-08
Distortion Meter	HM-250	KNEWOOD	12	2007-08
Synthesized Function Generator	FC110	YOKOGAWA	12	2007-08
Noise Meter	MEGURO	MN-446A	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Oscilloscope	LEADER	LS1020	12	2007-08
Function Generator	National	VP-7422A	12	2007-08
Signal Generator	R&S	SMG	12	2007-08
Turn Disc	HD	DS4150S	-	-
Isotropic Field Monitor	AR	FM2000	-	-
Antenna Mast	HD	MA2400	-	-
RF Selector	TOYO	NS4901A	-	-
Remote Controller	TOYO	MAC	-	-
TEST Room				
Fast Transient Burst Generator	SCHAFFENR	NSG3025	12	2007-08
AC Power Supply	KIKUSUI	PCR2000L	12	2007-08
Electrostatic Discharge Simulator	Noiseken	ESS-200AX	12	2007-08
AM/FM Stereo Signal Generator	Panasonic	VP-8122A	12	2007-08
Function Generator	National	VP-7422A	12	2007-08
AC Power Supply	KIKUSUI	PCR4000L	12	2007-08
Shielded Room				
Spectrum analyzer	ADVANTEST	R3261C	12	2007-08

EMI Test Receiver	R&S	ESS	12	2007-08
Absorbing Clamp	R&S	MDS-21	12	2007-08
Milli-Voltmeter	R&S	URV3	12	2007-08
Absorbing Clamp	Kyoritsu	KT-20	12	-
Signal Generator	R&S	SMG	12	2007-08
Oscilloscope	LEADER	LS8022	12	2007-08
Audio Analyzer	R&S	UPA	12	2007-08
Milli-voltmeter	R&S	URV5	12	2007-08
Filter Unit	TOYO	NF8900	12	2007-08
RF Power Amplifier	EN	411LA	12	2007-08
RF Selector	TOYO	NS8900	-	-
RF Selector	TOYO	NS4000	-	-
RF Selector	TOYO	NS4900	-	-
Injection&Output Network for Audio Output	Kyoritsu	KSI-5104U	-	-
Mains Rejection Network	Kyoritsu	KSI-2004S	-	-
Mains Rejection Network	Kyoritsu	KSI-2005	-	-
Coupling Network"L"	Erika Fiedler	-	-	-
Coupling Network"A"	Erika Fiedler	-	-	-
Coupling Network"M"	Erika Fiedler	-	-	-
Rco Network(8Ω)	Erika Fiedler	-	-	-
Mains Filter	Erika Fiedler	-	-	-

EFT, Surge, Voltage dips and Interruptoion Test

Transient 1000 Pro Package	EMC Partner	TRA1HO1B	12	2007-08
Digital Oscilloscope	Tektronix	TDS3012	12	2007-08
TRACS-Lite Ver. 2.4 (3M.144855 - INSTALL P/W)	EMC PARTNER	TRA1Z65B	12	2007-08
Ultra Compact Generator	EM Test	UCS500-M4	12	2007-08

Conducted Immunity Test

Signal Generator	ROHDE & SCHWARZ	SMY01	12	2007-08
Amplifier 0.15-230MHz	OPHIRRF	GRF5048	12	2007-08
Power Meter	ROHDE & SCHWARZ	NRVS	12	2007-08
Power Sensor	ROHDE & SCHWARZ	NRV-Z5	12	2007-08

Dual Directional Coupler	WERLATONE INC.	C1795	12	2007-08
Oscilloscope Type 485	TEKTRONIX	485	12	2007-08
CDN M2	SCHAFFNER CHASE	CDN-M2-16	12	2007-08
Immunity S/W Ver 4.31	SCHAFFNER CHASE	CIS9942	12	2007-08
C/S Tester	EM Test	CWS 500	12	2007-08
Signal Generator	ROHDE & SCHWARZ	SMY01	12	2007-08

5 Emission Test Results

5.1 Mains Terminals Disturbance Voltage, 150kHz to 30MHz

Test Requirement:	EN 55022 Class B
Test Method:	EN 55022 Class B
Test Date:	March 24, 2008
Frequency Range:	150kHz to 30MHz
Class/Severity:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

5.1.1 E.U.T. Operation

Operating Environment:

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

EUT Operation :

The EUT was placed on the test table in working mode and connected with the full load.

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.

5.1.2 Measurement Data

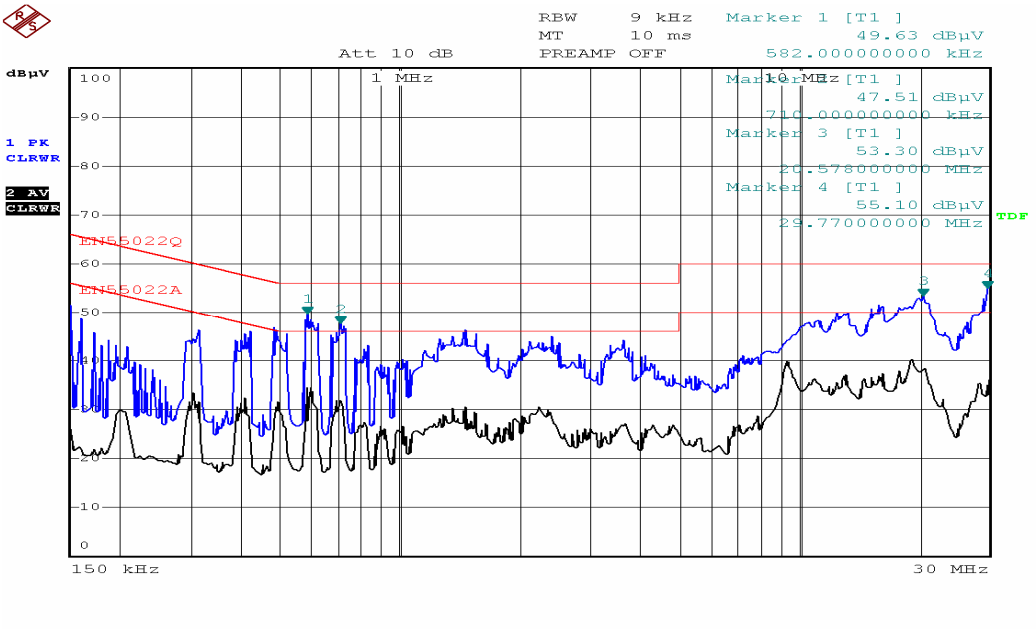
An initial pre-scan was performed on the live and neutral lines.

No futher quasi-peak or average measurements were performed since no peak emissions were detected within 10dB line below the average limit.

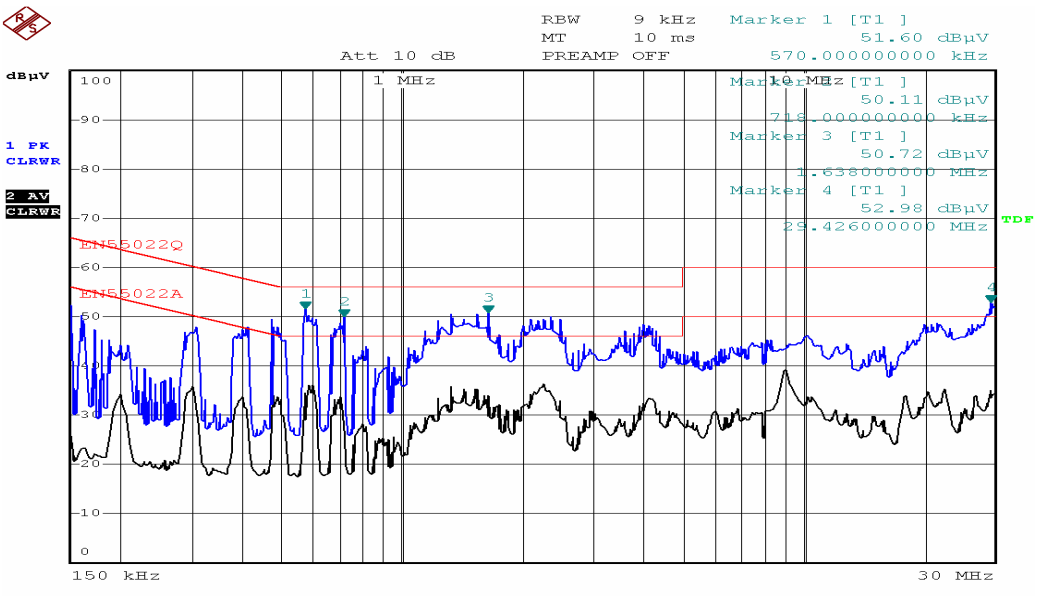
Please refer to the following peak scan graph for reference.

5.1.3 Conducted Emissions Test Data

Live line:



Neutral line:



5.1.4 Conducted Emission Test Data

Freq. MHz	Line	QP Level dBuV	Limit dBuV	Margin dB	AV Level dBuV	Limit dBuV	Margin dB
0.582	Live	49.63	56.0	6.37	33.52	46.0	12.48
0.710	Live	47.51	56.0	8.49	31.18	46.0	14.82
20.57	Live	53.30	60.0	6.7	37.61	50.0	12.39
29.77	Live	55.10	60.0	4.0	35.30	50.0	14.7
0.570	Neutral	51.60	56.0	4.4	34.97	46.0	11.03
0.718	Neutral	50.11	56.0	5.89	32.87	46.0	13.13
1.638	Neutral	50.72	56.0	5.28	34.22	46.0	11.78
29.42	Neutral	52.98	60.0	7.02	35.42	50.0	14.58

5.1.5 Photographs – Mains Terminal Disturbance Voltage on AC Test Setup

5.2 Radiation Emission Data

Test Requirement:	EN 55022 Class B
Test Method:	EN 55022 Class B
Test Date:	March 24, 2008
Frequency Range:	30MHz to 1000MHz
Class/Severity:	Class B
Detector:	Peak for pre-scan (120kHz Resolution Bandwidth) Quasi-Peak & Average if maximised peak within 6dB of Average Limit

5.2.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Solid EMC Lab is $\pm$4.0 dB.

5.2.2 EUT Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the CISPR16-1, The specification used in this report was the EN55022 Class B limits.

The EUT was placed on the test table in working mode and connected with the full load.

5.2.3 Spectrum Analyzer Setup

According to EN55022 Class B Rules, the system was tested to 1000 MHz.

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

5.2.4 Test procedure

The radiated emissions test.

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.

5.2.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

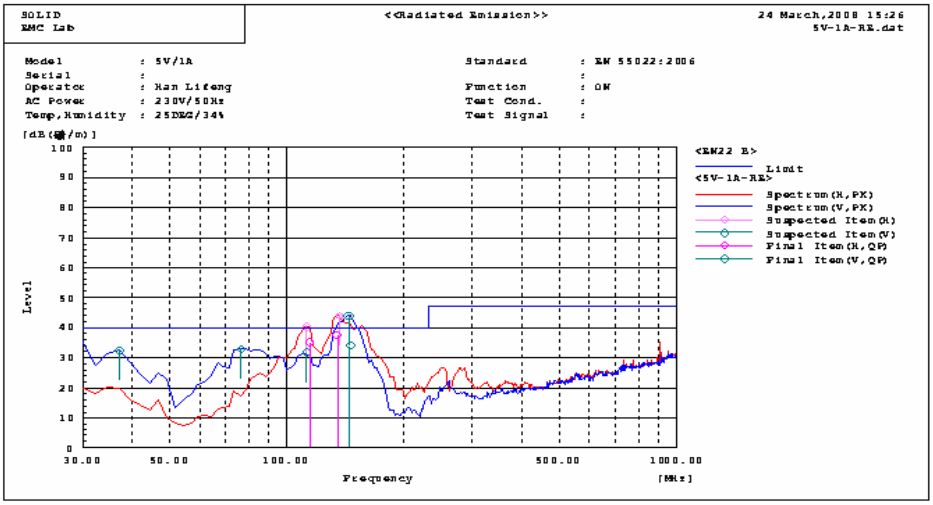
The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dBμV means the emission is 7dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – Class B Limit

5.2.6 Summary of Test Results

According to the data in section 4.2.7, the EUT complied with the EN55022 Class B standards, and had the worst margin of:

5.2.7 Radiated Emissions Test Data



Final Result

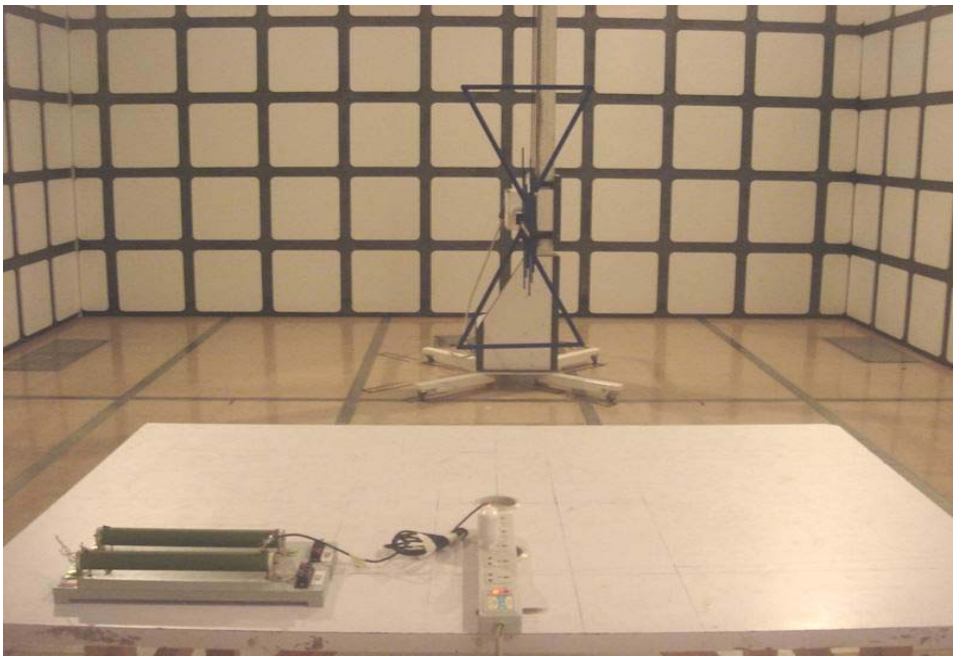
--- Horizontal Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Remark
1	114.750	21.0	14.2	35.2	40.0	4.8	
2	134.570	22.8	14.7	37.5	40.0	2.5	

--- Vertical Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Remark
1	145.280	19.6	14.4	34.0	40.0	6.0	

5.2.8 Photographs – Radiation Emission Test Setup



5.3 Harmonics Test Results

Test Requirement: EN 61000-3-2
Test Method: EN 61000-3-2
Frequency Range: 100Hz to 2kHz
Test Result: N/A

There is no need for Harmonics test to be performed on this product (rated power is less than 75W) in accordance with EN61000-3-2 (2006).

For further details, please refer to Clause 7, Note 1 of EN61000-3-2 which states:-

"For the following categories of equipment limits are not specified in this edition of the standard.

Note 1: Equipment with a rated power of 75W or less, other than lighting equipment."

5.4 Flicker Test Result

Test Requirement: EN 61000-3-3
Test Method: EN 61000-3-3
Test Result: PASS

Report title:	0115101
Company Name:	Waltek Services
Date of test:	17:31 24. March 2008
Tester:	Xiang Chungen
Standard used:	EN/IEC 61000-3-3 Flicker
Short time (Pst):	10 min
Observation time:	10 min (1 Flicker measurement)
Customer:	Gembird Electronics Ltd.
E. U. T.:	Universal Travel Charger
	AC 230V, 50Hz

Test Result	PASS

Maximum Flicker results

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
dc [%]	0.004	3.30	PASS
dmax [%]	0.163	4.00	PASS
dt [s]	0.000	0.50	PASS

5.4.1 Photographs –Flicker Test Setup

6 Immunity Test Results

6.1 Performance Criteria Description

Criterion A: The apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.

Criterion B: The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.

Criterion C: Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls.

For further details, please refer to of EN 55024.

6.2 ESD

Test Requirement:	EN 55024	
Test Method:	EN 61000-4-2	
Test Date:	March 24, 2008	
Discharge Impedance:	330 Ω / 150 pF	
Discharge Voltage:	Air Discharge:	8 kV
	Contact Discharge:	4 kV
	HCP & VCP:	4 kV
Polarity:	Positive & Negative	
Number of Discharge:	Minimum 10 times at each test point	
Discharge Mode:	Single Discharge	
Discharge Period:	1 second minimum	

6.2.1 E.U.T. Operation

Operating Environment:

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

EUT Operation:

The EUT was placed on the test table in working mode and connected with the full load.

6.2.2 Direct Application Test Results

Observations : Test points : 1. All Exposed Surface & Seams;
2. All metallic part

Direct Application			Test Results	
Discharge Level (kV)	**Polarity (+/-)**	**Test Point**	**Contact Discharge**	**Air Discharge**
8	+/-	1	N/A	A
4	+/-	2	A	N/A

Results

A: No degradation in the performance of the E.U.T. was observed.
N/A: Not applicable.

6.2.3 Indirect Application Test Results

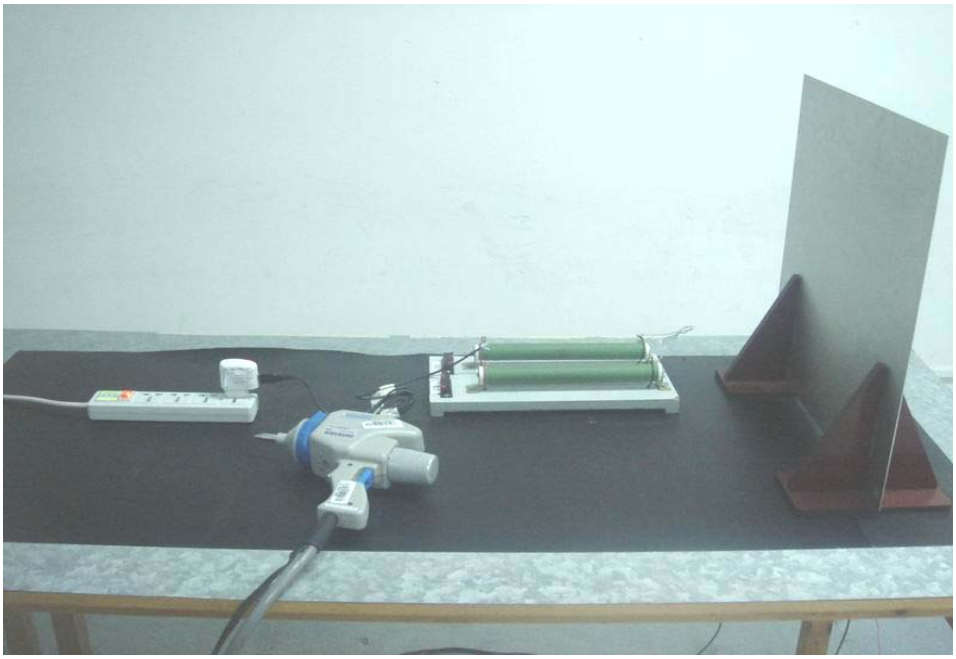
Observations : Test points : 1. All sides.

Indirect Application			Test Results	
Discharge Level (kV)	**Polarity (+/-)**	**Test Point**	**Horizontal Coupling**	**Vertical Coupling**
4	+/-	1	A	A

Results

A: No degradation in the performance of the E.U.T. was observed.

6.2.4 Photographs - ESD Test Setup



6.3 Radiated Immunity

Test Requirement: EN 55024
Test Method: EN 61000-4-3
Frequency Range: 80MHz–1GHz
Face Under Test: Three Mutually Orthogonal Faces
Severity: 3V/m, 1kHz, 80% Amp. Mod. from 80MHz to 1GHz
Test Date: March 24, 2008

6.3.1 E.U.T. Operation

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

EUT Operation:

The EUT was placed on the test table in working mode and connected with the full load.

6.3.2 Test Results

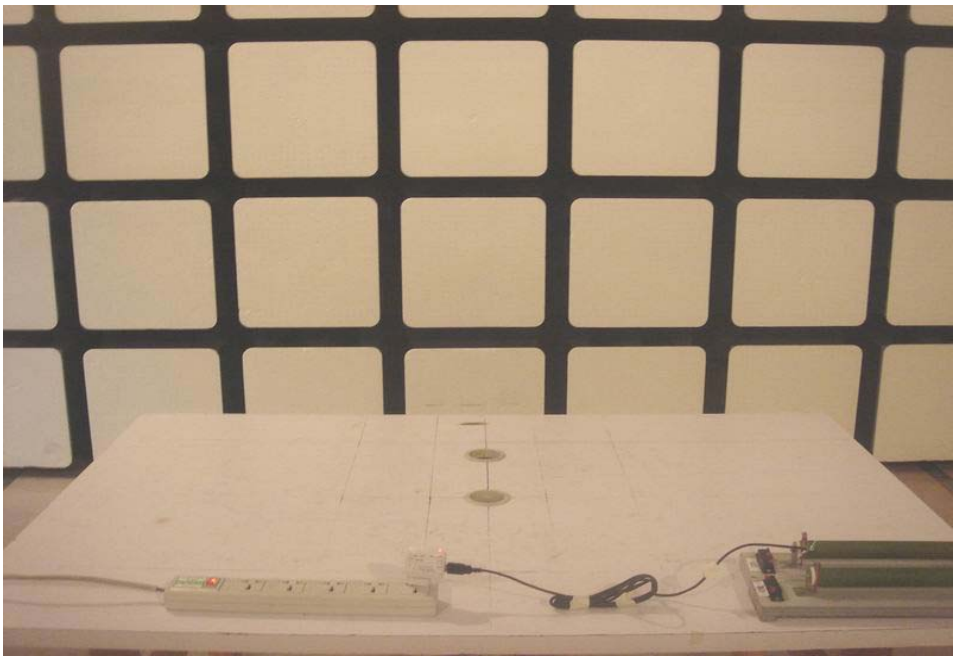
Frequency	Level	Modulation	EUT Face	Result / Observations
80MHz-1GHz	3V/m	1kHz, 80%, Amp. Mod.	X Y Z	During test and after test, the EUT was normal (A).

Remarks:
AM : Amplitude Modulation.
PM : Pulse Modulation.
X : EUT as per photograph in section 5.3.3 of this report.
Y : As X, but rotate EUT by 90° clockwise.
Z : As Y, but rotate EUT by 90° vertically.

Results

A: No degradation in the performance of the E.U.T. was observed.

6.3.3 Photographs - Radiated Immunity Test Setup For X-Direction



6.4 Electrical Fast Transients (EFT)

Test Requirement:	EN 55024
Test Method:	EN 61000-4-4
Test Date:	March 24, 2008
Test Level:	1.0kV on AC
Polarity:	Positive & Negative
Repetition Frequency:	5kHz
Burst Duration:	300ms
Test Duration:	2 minutes per level & polarity

6.4.1 E.U.T. Operation

Operating Environment:

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

EUT Operation:

Compliance test was performed in ON mode with the full load.

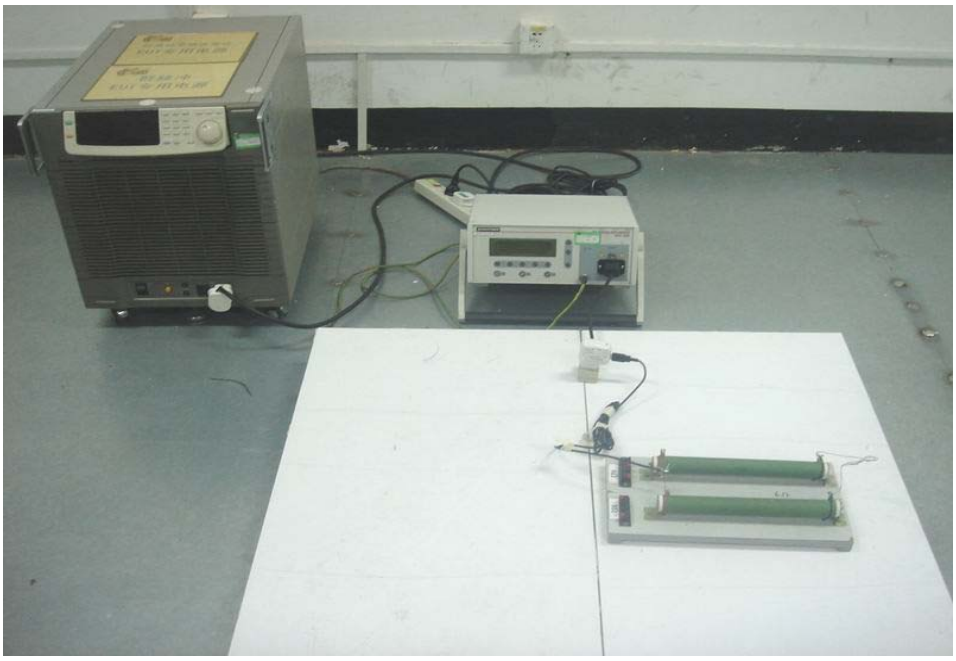
6.4.2 Test Results On AC Cable

Lead under Test	Level (±kV)	Coupling Direct/Clamp	EUT operating mode	Observations (Performance Criterion)
AC Live	±1.0 ±0.5	Direct	ON and Idle mode	No loss of function
AC Neutral	±1.0 ±0.5	Direct	ditto	ditto
AC Live & Neutral	±1.0 ±0.5	Direct	ditto	ditto

Results

A: No degradation in the performance of the E.U.T. was observed.

6.4.3 Photographs : EFT Test Setup For EUT On AC Cable



6.5 Surge

Test Requirement:	EN 55024
Test Method:	EN 61000-4-5
Test Date:	March 24, 2008
Test level:	±1kV Live to Neutral
Interval:	60s between each surge
No. of surges:	5 positive, 5 negative at 0°, 90°, 180°, 270°.

6.5.1 E.U.T. Operation

Operating Environment:

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

EUT Operation:

Compliance test was performed in ON mode with the full load.

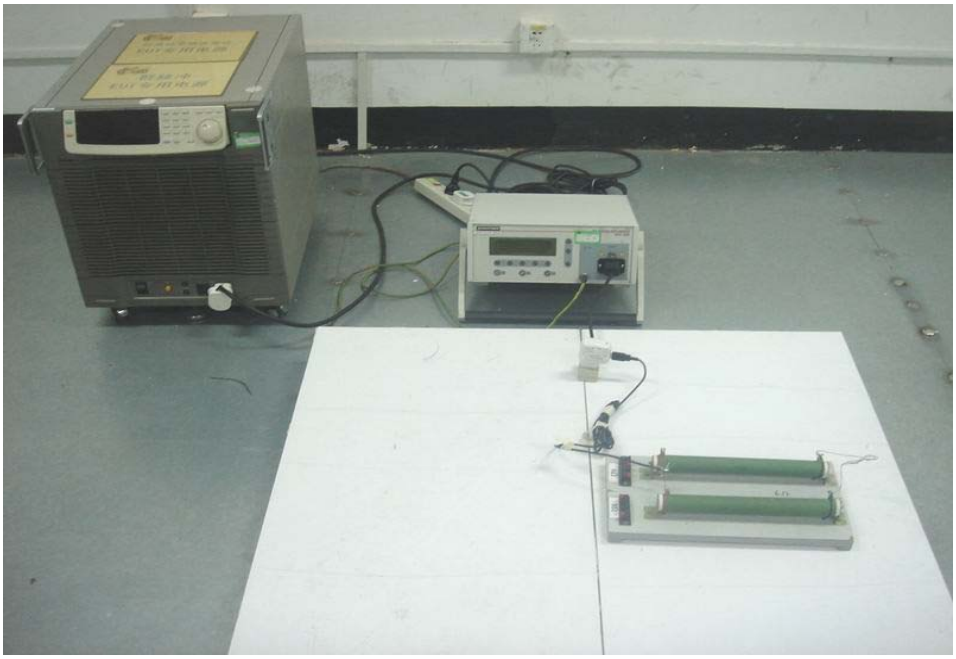
6.5.2 Test Results

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N, L-PE, N-PE	/	/
2	1kV	±	L-N	A	/
3	2kV	±	L-PE, N-PE,	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Results

A: No degradation in the performance of the E.U.T. was observed.

6.5.3 Photographs : Surge Test Setup



6.6 Conducted Immunity 0.15MHz to 80MHz

Test Requirement: EN 55024
Test Method: EN 61000-4-6
Test Date: March 24, 2008
Frequency Range: 0.15MHz to 80MHz
Test level: 3V rms (unmodulated emf into 150 Ω)
Modulation: 80%, 1kHz Amplitude Modulation.

6.6.1 E.U.T. Operation

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

EUT Operation:

Compliance test was performed in ON mode with the full load.

6.6.2 Test Results

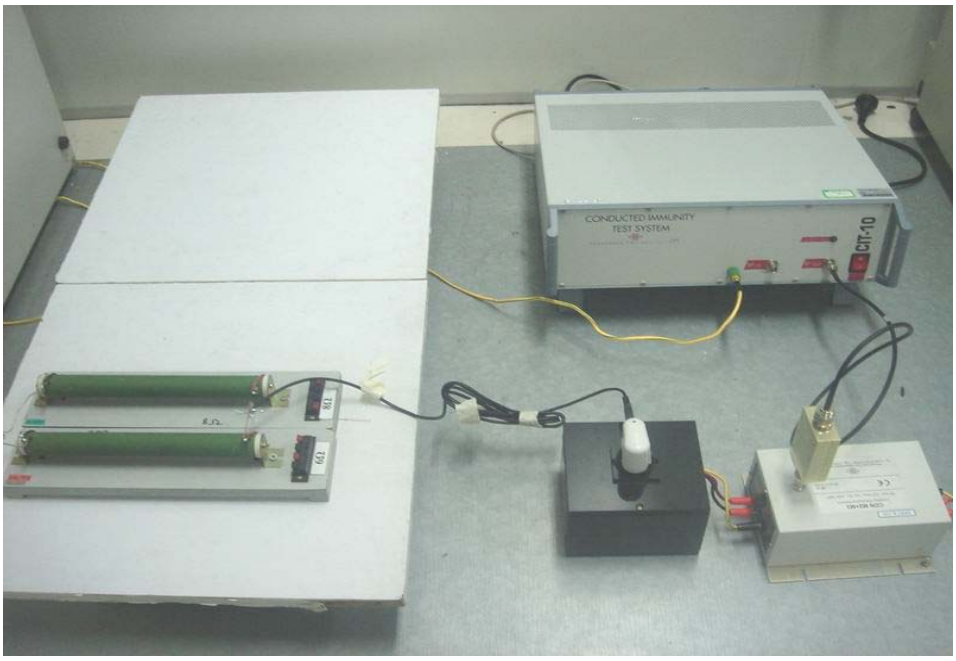
AC mains of AC Cable

Frequency	Line	Test Level	Modulation	Step Size	Dwell Time	Observation (Performance Criterion)
150kHz to 80MHz	2 Wire AC Supply Cable	3Vrms	80%, 1kHz Amp. Mod.	1%	1s	During test and after test, the EUT was normal (A).

Results

A: No degradation in the performance of the E.U.T. was observed.

6.6.3 Photographs : Conducted Immunity Test Setup On AC Cable



6.7 Voltage Dips and Interruptions

Test Requirement: EN 55024
Test Method: EN 61000-4-11
Test Date: March 24, 2008
Test Level: >95%&>95%&30%(Supply Voltage)
No. of Dips / Interruptions: 1 per Level at 20ms intervals

6.7.1 E.U.T. Operation

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

EUT Operation:

Compliance test was performed in ON mode with the full load.

6.7.2 Measurement Data

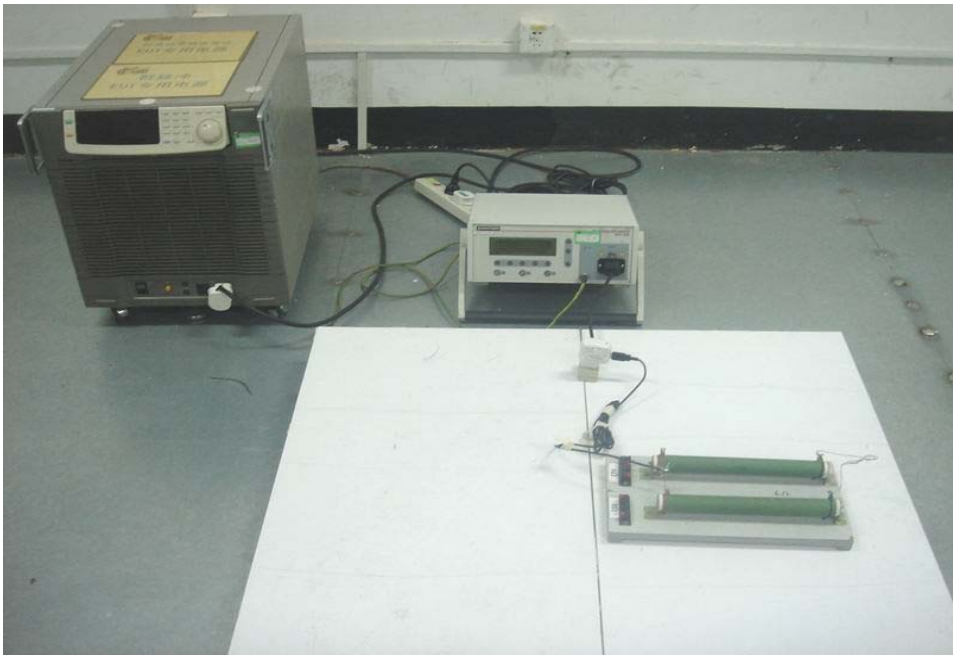
EUT operating mode	Dropout % U_T	Phase	Duration of dropout in Periods	No of dropout	Time between dropout	Observations (Performance Criterion)
On mode	＞95	0°	250	3	5000ms	C
ditto	＞95	0°	0.5	3	10ms	B
ditto	30	0°	25	3	500ms	B

Results

B & C: During test, This was within the minimum performance criteria set by the applicant.

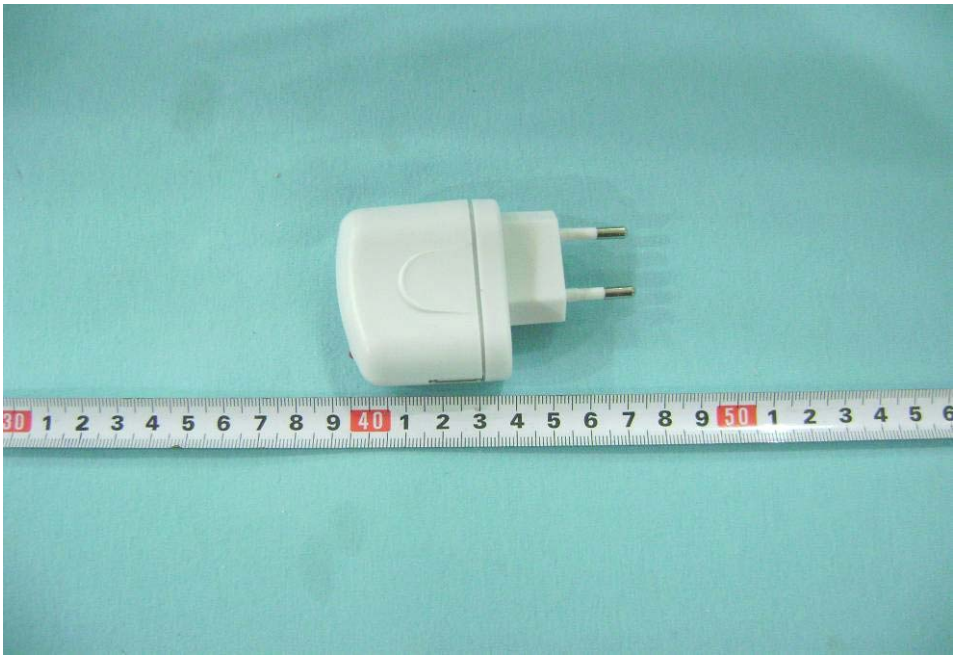
Please refer to section 5.1 of this report for further details.

6.7.3 Photographs : Voltage Dips and Interruptions Test Setup

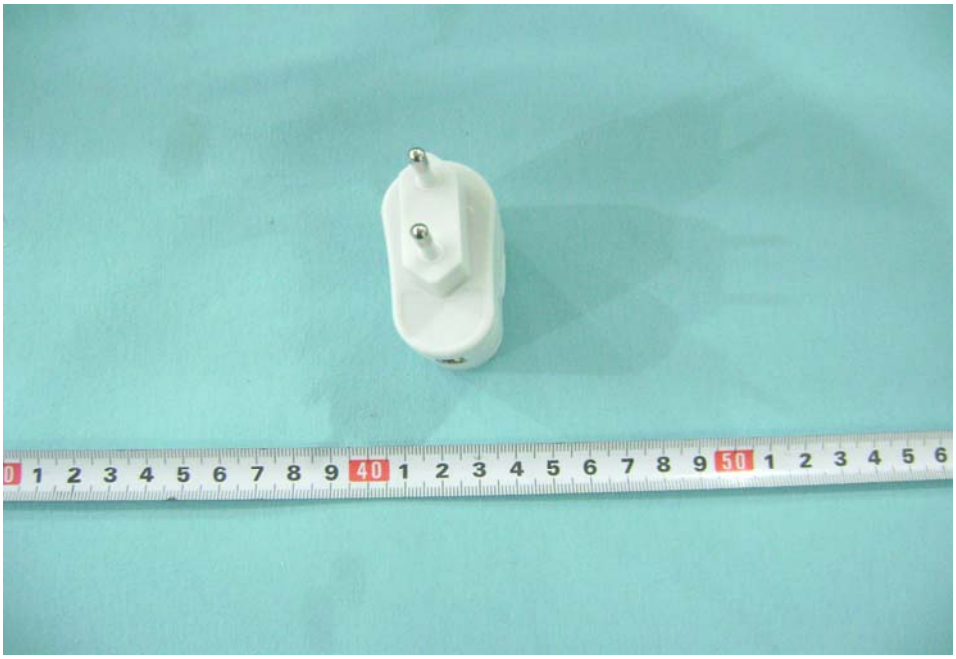


7 Photographs - Constructional Details

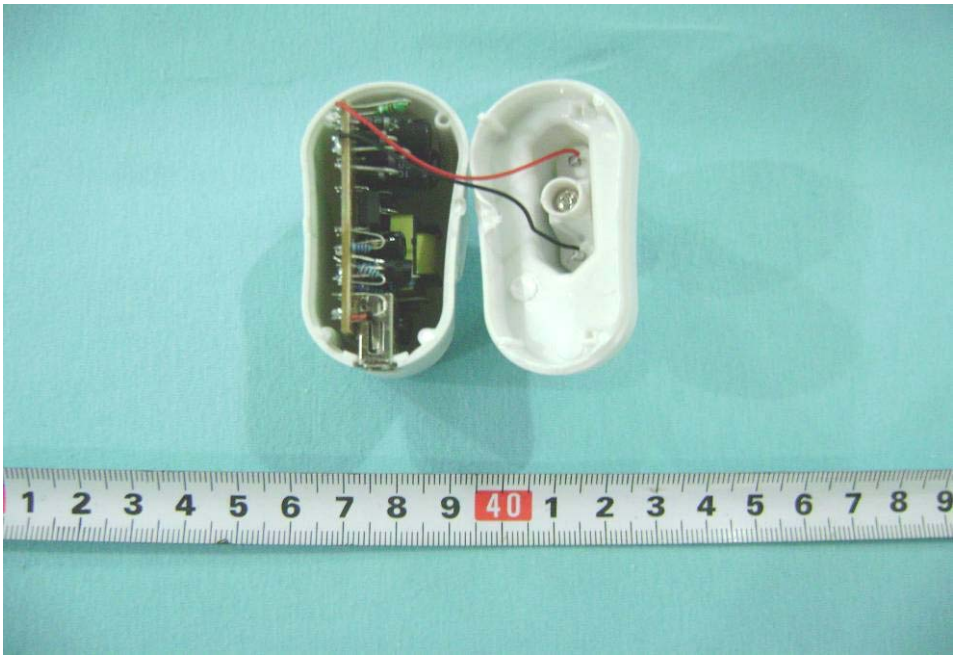
7.1 EUT - Appearance View (1)



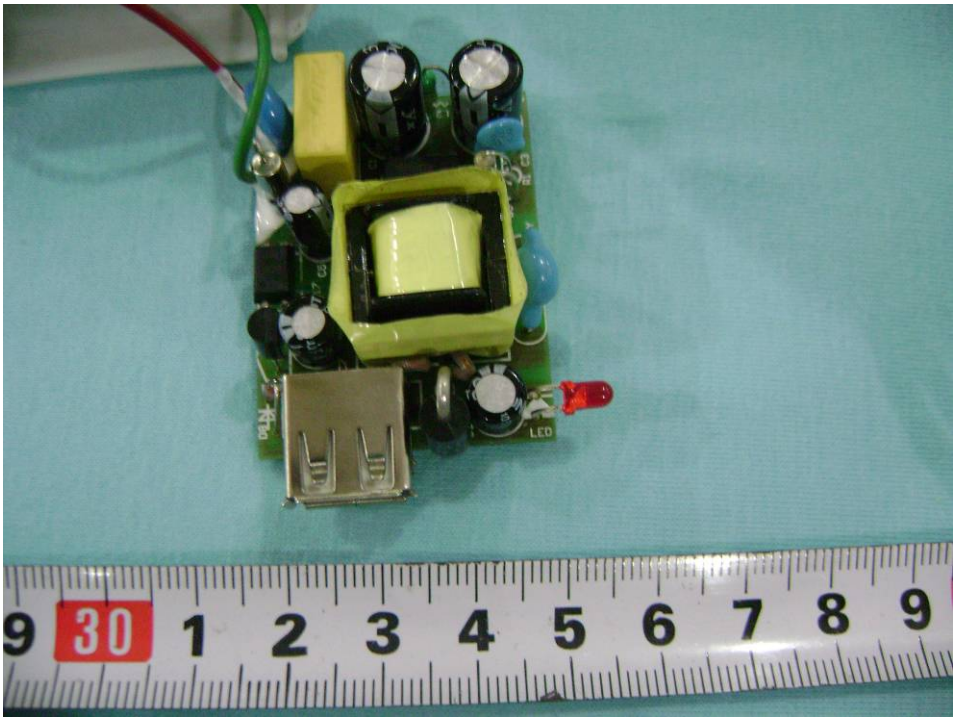
7.2 EUT – Appearance View (2)



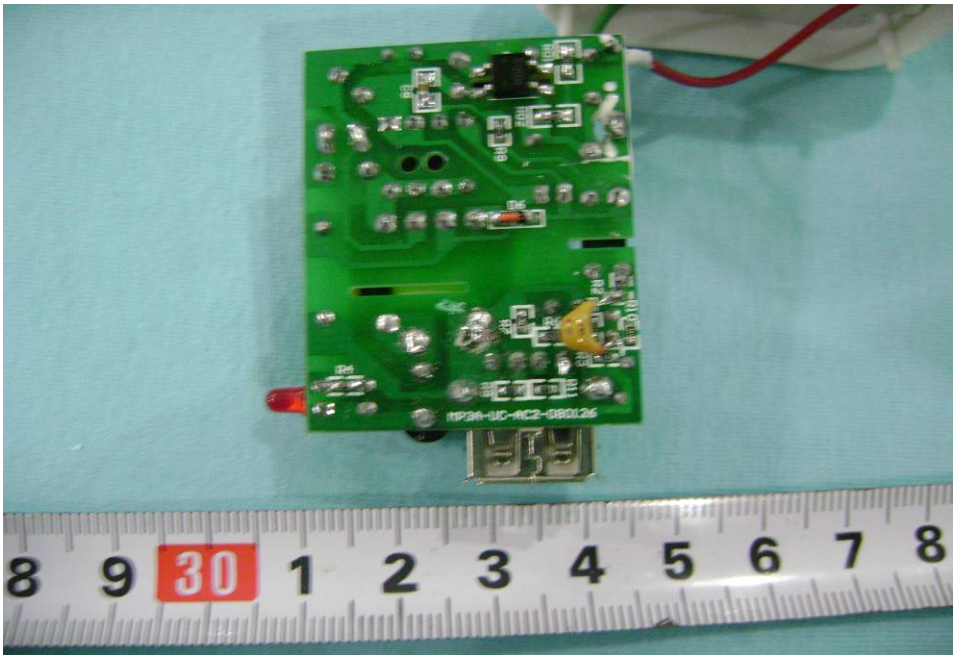
7.3 EUT - Open View



7.4 PCB - Front View



7.5 PCB- Back View



8 CE Label

1. The CE conformity marking must consist of the initials ‘CE’ taking the following form:
   If the CE marking is reduced or enlarged, the proportions given in the above graduated drawing must be respected.
2. The CE marking must have a height of at least 5 mm except where this is not possible on account of the nature of the apparatus.
3. The CE marking must be affixed to the product or to its data plate. Additionally it must be affixed to the packaging, if any, and to the accompanying documents.
4. The CE marking must be affixed visibly, legibly and indelibly.
   It must have the same height as the initials ‘CE’

Proposed Label Location on EUT

EUT Bottom View/proposed CE Mark Location