FCC CFR47 PART 18 SUBPART C
ISM EQUIPMENT

for

Electromagnetic Emissions

of

BALLAST

Trade Name **:** TDC POWER
Model Number **:** EBA120-013L2A-PL
Serial Number **:** N/A
Report Number **:** SZ050428B03-EF
Date **:** May 31,2005

Prepared for **:**

TDC POWER PRODUCTS CO., LTD.
DONGHANG 3 RD, INDUSTRIAL, DISTRICT DONG HANG,
DONG GUAN CITY, GUANG DONG PROVINCE, CHINA

Prepared by **:**

COMPLIANCE CERTIFICATION SERVICES (SHENZHEN) INC.
NO.6 JINAO INDUSTRIAL PARK, NO.35 JUKENG ROAD,
DASHUIKENG VILLAGE,GUANLAN TOWN,
BAOAN DISTRICT, SHENZHEN, CHINA
TEL:86-755-28055000
FAX:86-755-28055221

LAB CODE:200577-0

TABLE OF CONTENTS

VERIFICATION OF COMPLIANCE

Equipment Under Test:	BALLAST
Trade Name:	TDC POWER
Model Number:	EBA120-013L2A-PL
Serial Number:	N/A
Applicant:	TDC POWER PRODUCTS CO., LTD. DONGHANG 3 RD, INDUSTRIAL, DISTRICT DONG HANG, DONG GUAN CITY, GUANG DONG PROVINCE, CHINA
Manufacturer:	TDC POWER PRODUCTS CO., LTD. DONGHANG 3 RD, INDUSTRIAL, DISTRICT DONG HANG, DONG GUAN CITY, GUANG DONG PROVINCE, CHINA
Type of Test:	FCC CFR47 PART 18 SUBPART C ISM EQUIPMENT
Technical Limit:	SUBPART C
FCC Rules:	Part 18
Measurement Procedure:	ANSI C63.4
File Number:	SZ050428B03-EF
Date of test:	May 11-31,2005
Deviation:	None
Condition of Test Sample:	Normal

The above equipment was tested by Compliance Certification Services (Shenzhen) Inc. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart B and the measurement procedure according to ANSI C63.4. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Approved by Authorized Signatory: 

Clinton. Kao / Q.A. Manager

SYSTEM DESCRIPTION

EUT Test Program:

EUT worked with two lamps, and make sure EUT worked normally.

PRODUCT INFORMATION

Housing Type:	Metal
EUT Power Rating:	AC120V/60Hz
Power during Test:	AC120V/60Hz
AC Power Cord Type:	N/A
OSC/Clock Frequencies:	N/A

I/O Port of EUT:

I/O Port Type	Q'TY	Tested with
1) AC in	2	2
2) AC out	4	4

Difference between model numbers as below:

	Model Number	Trade Name
1	EBA120-009L2A-PL	TDC Power
2	EBA120-007L2A-PL	TDC Power
3	EBA120-013L1A-PL	TDC Power
4	EBA120-009L1A-PL	TDC Power
5	EBA120-007L1A-PL	TDC Power

Note: There are different output power and output modes between the model names.

SUPPORT EQUIPMENT

No.	Equipment	Model #	Serial #	Trade Name	Data Cable	Power Cord	FCC ID
1)	LAMP	PL-13W	N/A	N/A	N/A	N/A	N/A

***Note:** All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.*

***Grounding:** Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.*

SECTION 1 FCC (LINE CONDUCTED & RADIATED EMISSION)

MEASUREMENT PROCEDURE
(PRELIMINARY LINE CONDUCTED EMISSION TEST)

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When 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 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

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 AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.

5) All support equipments received AC120V/60Hz power from a second LISN supplying power, 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 450kHz to 30MHz for emissions in each of the test modes.

8) During the above scans, the emissions were maximized by cable manipulation.

9) The following test mode(s) were scanned during the preliminary test:

Preliminary Conducted Emission Test			
Frequency Range Investigated		450KHz TO 30 MHz	
Mode of operation	Date	Data Report No.	Worst Mode
Normal	2005-05-27	EBA120-013L2A_0(L,N)	☒

Then, the EUT configuration and cable configuration of the above highest emission level was recorded for reference of final testing.

MEASUREMENT PROCEDURE
(FINAL LINE CONDUCTED EMISSION TEST)

1) EUT and support equipment was set up on the test bench as per step 9 of the preliminary test.

2) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the Q.P limit in Peak mode, then the emission signal was re-checked using an Q.P. detector.

3) The test data of the worst case condition(s) was reported on the Summary Data page.

Data Sample:

Freq. MHz	Peak Raw dBuV	Q.P. Raw dBuV	Q.P. Limit dBuV	Q.P. Margin dB	Note
xx.xxx	39.82	---	48.00	-8.18	L 1

Freq.	= Emission frequency in MHz
Raw dBuV	= Uncorrected Analyzer/Receiver reading
Limit dBuV	= Limit stated in standard
Margin dB	= Reading in reference to limit
Note	= Current carrying line of reading
"---"	= The emission level complied with the Average limits, with at least 2 dB margin, so no further recheck.

LINE CONDUCTED EMISSION LIMIT

Frequency	Maximum RF Line Voltage
	Q.P.(dBuV)
450kHz-30MHz	48.00

***Note:** The lower limit shall apply at the transition frequency.*

MEASUREMENT PROCEDURE
(PRELIMINARY RADIATED EMISSION TEST)

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

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 AC120V/60Hz power through the outlet socket under the turntable. All support equipments received AC120V/60Hz power from socket under the turntable, if any.

5) The antenna was placed at 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.

6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

7) The following test mode(s) were scanned during the preliminary test:

Preliminary Radiated Emission Test			
Frequency Range Investigated		30 MHz TO 1000 MHz	
Mode of operation	Date	Data Report No.	Worst Mode
NORMAL	2005-05-11	EBA120-013L2A-PL_0(H,V)	☒

Then, the EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for final testing.

MEASUREMENT PROCEDURE
(FINAL RADIATED EMISSION TEST)

1) EUT and support equipment were set up on the turntable as per step 7 of the preliminary test.

2) The Analyzer / Receiver scanned from 30MHz to 1000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

3) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P/Peak. reading is presented.

4) The test data of the worst case condition(s) was reported on the Summary Data page.

Data Sample:

Freq. (MHz)	Raw Data (dBuV/m)	Corr. Factor (dB)	Emiss. Level (dBuV/m)	Limits	Margin (dB)	Reading Type P/Q
xx.xxx	14.02	12.25	26.27	33.0	-6.73	P

Freq.	= Emission frequency in MHz
Raw Data (dBuV/m)	= Uncorrected Analyzer / Receiver reading
Corr. Factor (dB)	= Correction factors of antenna factor and cable loss
Emiss. Level	= Raw reading converted to dBuV/m and CF added
Limit dBuV/m	= Limit stated in standard
Margin dB	= Reading in reference to limit
P	=Peak Reading
Q	=Quasi-peak

RADIATED EMISSION LIMIT

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30-88	10	29.5
88-216	10	33.0
216-1000	10	35.6

****Note:** *The lower limit shall apply at the transition frequency.*

SUMMARY DATA
(LINE CONDUCTED TEST)

Model Number: EBA120-013L2A-PL **Location:** Site G

Tested by: Casilin

Test Mode: NORMAL

Test Results: Passed

Temperature: 25°C **Humidity:** 55%RH

(The chart below shows the highest readings taken from the final data)

FREQ MHz	PEAK RAW dBuV	Q.P. RAW dBuV	Q.P. Limit dBuV	PEAK Margin Db	Q.P. Margin dB	NOTE
0.481	39.82	---	48.00	-8.18	---	L1
0.537	46.51	44.31	48.00	-1.49	-3.69	L1
0.642	44.79	---	48.00	-3.21	---	L1
0.857	42.51	---	48.00	-5.49	---	L1
15.503	43.99	---	48.00	-4.01	---	L1
17.567	46.77	40.02	48.00	-1.23	-7.98	L1
0.537	45.64	---	48.00	-2.36	---	L2
0.646	44.42	---	48.00	-3.58	---	L2
0.860	42.06	---	48.00	-5.94	---	L2
15.687	44.14	---	48.00	-3.86	---	L2
17.879	45.91	---	48.00	-2.09	---	L2
22.079	40.89	---	48.00	-7.11	---	L2

L1 = Line One (Hot side) / L2 = Line Two (Neutral side)

***NOTE:** "---" denotes the emission level was or more than 2dB below the Average limit, so no re-check anymore.*

SUMMARY DATA

(RADIATED EMISSION TEST)

Model Number:EBA120-013L2A-PL **Location:** Site G

Tested by: Casilin **Polar:** Vertical / Horizontal– 10m

Test Mode: NORMAL

Test Results: Passed

Temperature: 25℃ **Humidity:** 55%RH

(The chart below shows the highest readings taken from the final data)

Frequency Range Investigated (30 MHz TO 1000 MHz)							
Freq (MHz)	Meter Reading (dBuV/m	C.F. (dBuV/m)	Corrected Reading (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Reading Type P/Q	Pol. H/V
39.73	4.29	15.74	20.03	29.5	-9.47	P	V
50.41	6.08	8.06	14.14	29.5	-15.36	P	V
116.08	8.24	7.31	15.55	33.0	-17.45	P	V
136.04	5.30	11.44	16.75	33.0	-16.25	P	V
235.95	3.97	15.62	19.6	35.6	-16.00	P	V
594.49	2.53	21.44	23.97	35.6	-11.63	P	V
50.66	8.10	12.44	20.54	29.5	-8.96	P	H
85.76	6.34	8.73	15.07	29.5	-14.43	P	H
204.19	6.74	12.99	19.73	33.0	-13.27	P	H
249.1	5.39	15.24	20.63	35.6	-14.97	P	H
304.19	3.54	20.35	23.89	35.6	-11.71	P	H
464.51	4.67	20.67	25.34	35.6	-10.26	P	H

C.F.(Correction Factor)=Antenna Factor + Cable Loss - Amplifier Gain (+ Attenuator 6dB)

Corrected Reading = Metering Reading + C.F.

Margin=Corrected Reading - Limits

P=Peak Reading *H=Horizontal Polarization/Antenna*

Q=Quasi-peak *V=Vertical Polarization/Antenna*

Comments: N/A

TEST FACILITY

Location: No. 6, Jinao industrial park,No.35 Jukeng Road, Dashuikeng Village, Guanlan Town,Baoan District, Shenzhen, China

Description: There is one 3/10m open area test sites and one line conducted labs for final test.

The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents FCC CFR47 Part 18 Subpart C requirements.

Site Filing: A site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.

Site Accreditation: Accredited by NEMKO (Authorization #: ELA106), VCCI (Registration No#: R-1996,C-2150), FCC (Registration: 101879) & NVLAP (Lab code:200577-0) for EMC.

Instrument Tolerance: All measuring equipment is in accord with ANSI C63.4 and CISPR 22 requirements that meet industry regulatory agency and accreditation agency requirement.

Ground Plane: Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.

TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at Compliance Certification Services (Shenzhen) Inc. for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10kHz to 1.0GHz or above.
Equipment used during the tests:

Open Area Test Site: G

Open Area Test Site G					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL. DUE**
EMC ANALYZER	Agilent	E7402A	MY42000139	06/29/2004	06/28/2005
AMPLIFIER	H.P.	8447D	2944A07999	06/08/2005	06/07/2006
ANTENNA	EMCO	3142B	9910-1436	05/30/2005	05/29/2006
CABLE	TIME MICROWAVE	LMR-400	N-TYPE04	06/08/2005	06/07/2006

Note: *The measurement uncertainty is less than +/- 2.5078dB, which is evaluated as per the UKAS LAB34 and CISPR/A/291/CDV.*

Conducted Emission Test Site: G

Conducted Emission Test Site G					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL. DUE**
Spectrum Analyzer	ADVANTEST	R3132	120901472	06/29/2004	06/28/2005
EMI Test Receiver	SCHAFFNER	SCR3501	342	02/26/2005	02/25/2006
LISN	EMCO	3825/2	1371	02/26/2005	02/25/2006
LISN	EMCO	3825/2	8901-1459	02/26/2005	02/25/2006

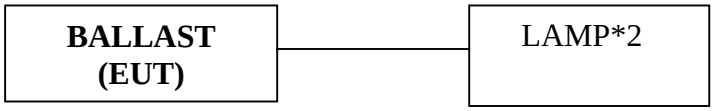
Note: *The measurement uncertainty is less than +/- 2.2318dB, which is evaluated as per the UKAS LAB34 and CISPR/A/291/CDV.*

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

BLOCK DIAGRAM OF TEST SETUP

SYSTEM Diagram of Connections between EUT and Simulators

EUT: BALLAST
Trade Name: TDC power
Model Number: EBA120-013L2A-PL



APPENDIX 1

PHOTOGRAPHS OF TEST SETUP

(TEST SETUP OF LINE CONDUCTED EMISSION)

LINE CONDUCTED EMISSION TEST

APPENDIX 2

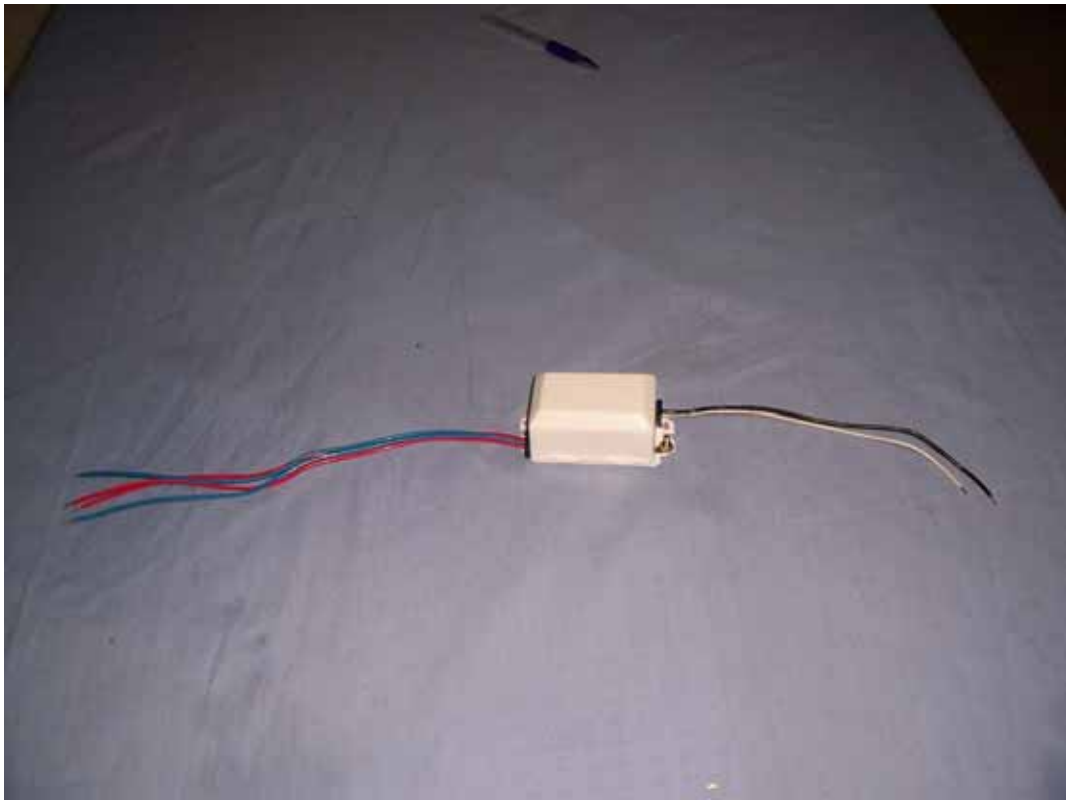
PHOTOGRAPHS OF TEST SETUP

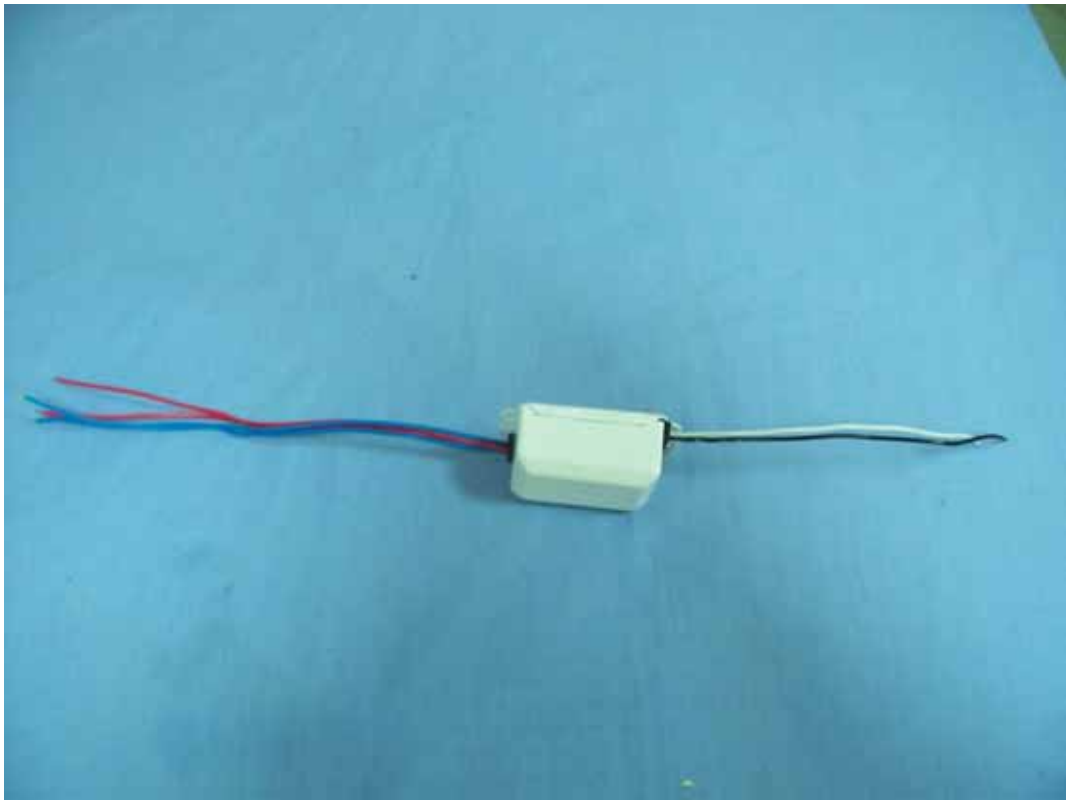
(TEST SETUP OF RADIATED EMISSION)

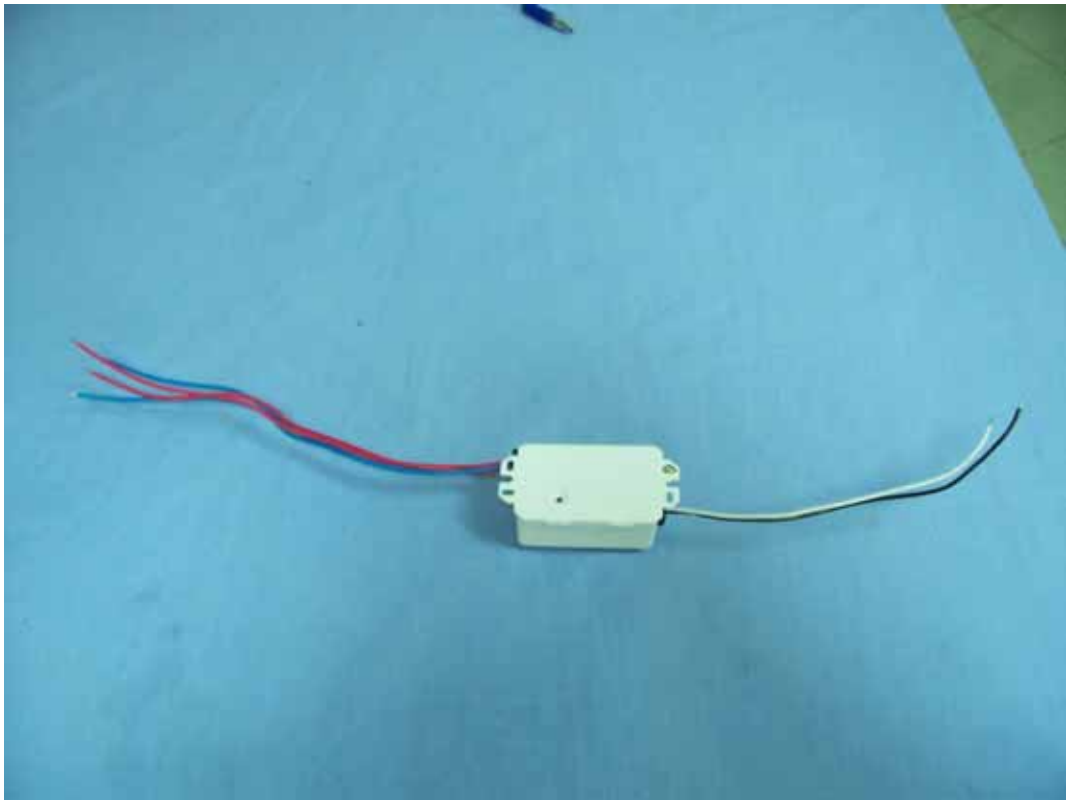
RADIATED EMISSION TEST

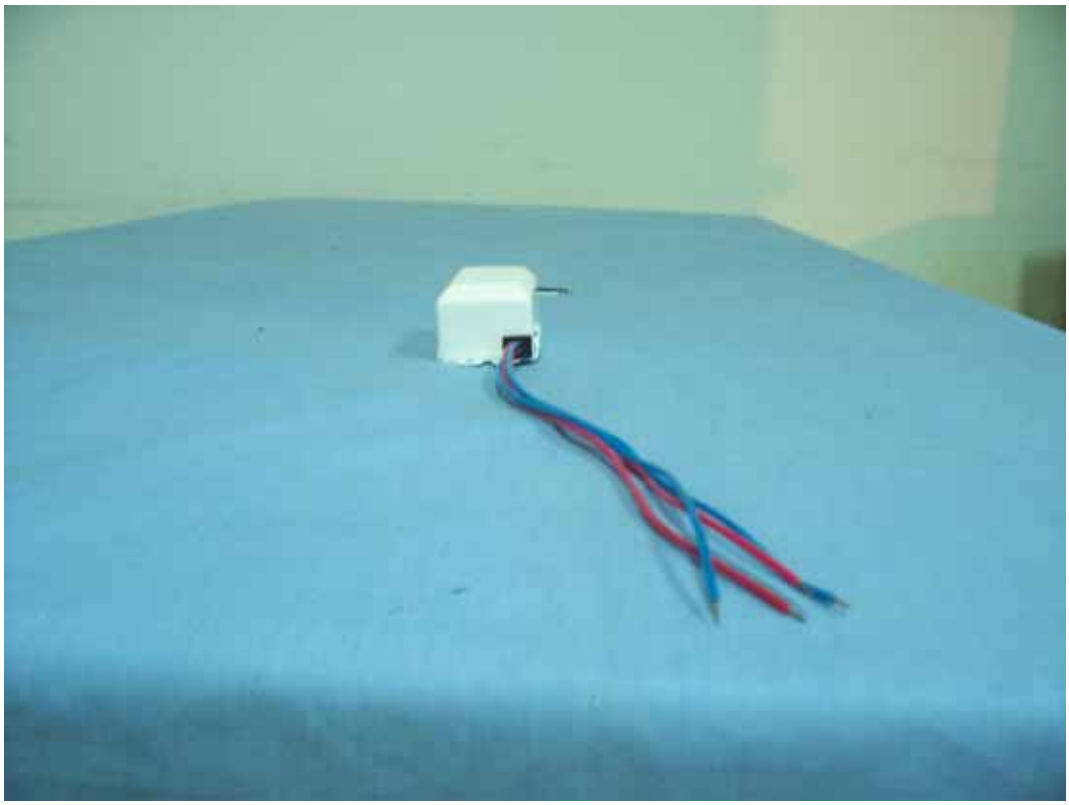
APPENDIX 3

EXTERNAL PHOTOGRAPHS OF EUT



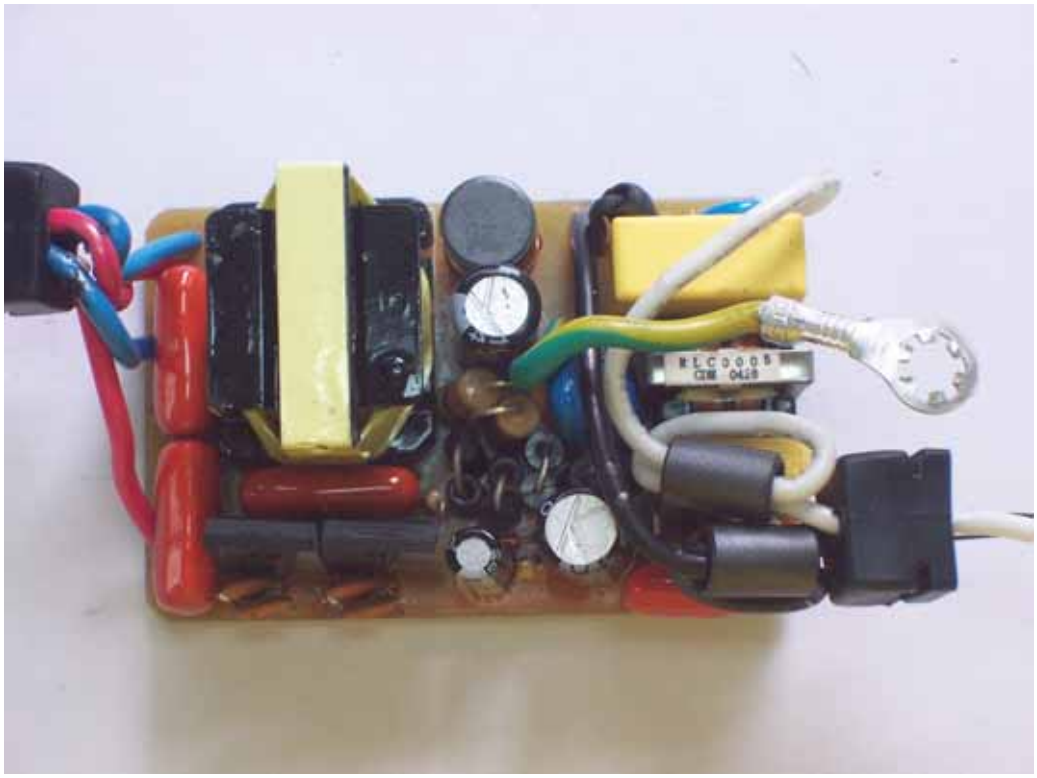


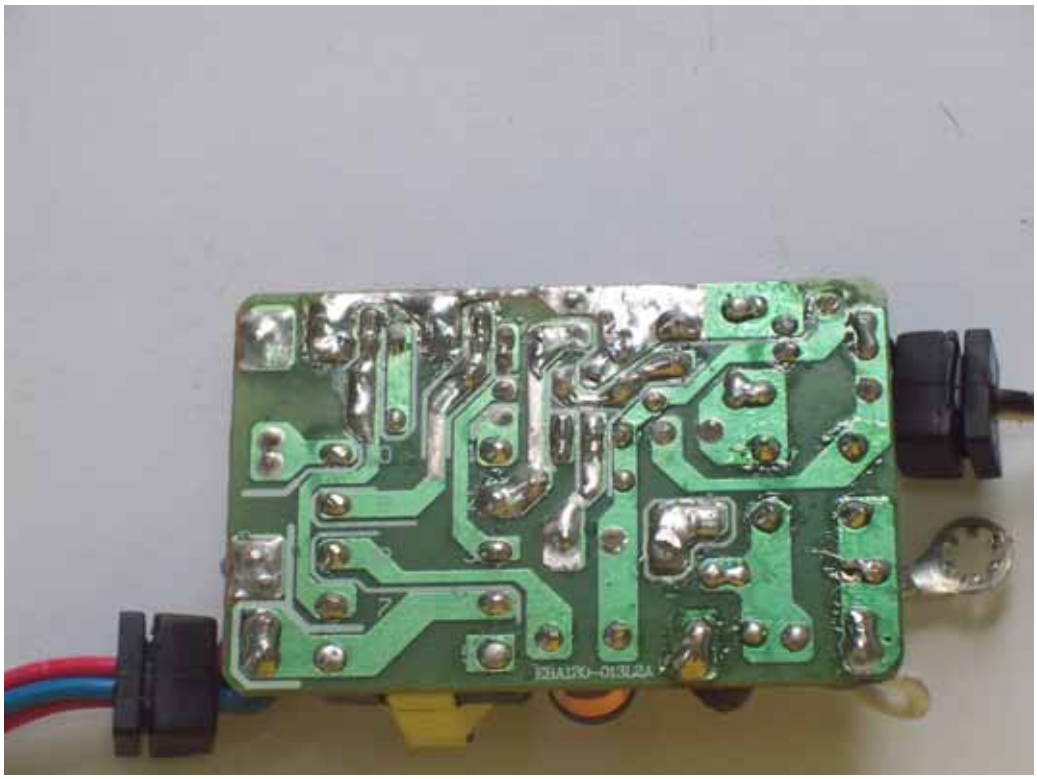




APPENDIX 4

INTERNAL PHOTOGRAPHS OF EUT





APPENDIX 5

CERTIFICATE OF ACCREDITATION

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

October 22, 2004

Mr. Lucky Chen
Compliance Certification Services
#6 Jinao Industry Yuan #35 Jikeng Road
Dashuikeng Cun Guanlan Zhen Baoan Qu
Shenzhen GD 518110
CHINA

NVLAP Lab Code: 200577-0

Dear Mr. Chen:

I am pleased to inform you that continuing accreditation for specific test methods in EC&T : Electromagnetic Compatibility & Telecommunications is granted to your organization under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until September 30, 2005, provided that your organization continues to comply with accreditation requirements contained in the NVLAP Procedures.

Your Certificate of Accreditation is enclosed along with a statement of your Scope of Accreditation. You may reproduce these documents in their entirety and announce your organization's accreditation status using the NVLAP logo in business publications, the trade press, and other business-oriented literature. Accreditation does not relieve your organization from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Jon Crickenberger, Sr. Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-4016.

Sincerely,

Warren R. Merkel, Chief
Laboratory Accreditation Program

Enclosure(s)

NIST

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation

ISO/IEC 17025:1999
ISO 9002:1994

COMPLIANCE CERTIFICATION SERVICES (SHENZHEN) INC.
SHENZHEN GD 518110
CHINA

is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

September 30, 2005
Effective through

For the National Institute of Standards and Technology
NVLAP Lab Code: 200577-0

NVLAP-01C (08-01)

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 200577-0

COMPLIANCE CERTIFICATION SERVICES (SHENZHEN) INC.
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Mr. Lucky Chen
Phone: 886-2-2299-9720 Fax: 886-2-2299-9721
E-Mail: luckychen@ccsemcen
URL: http://www.cclab.com.tw

NVLAP Code	*Designation / Description*
Emissions Test Methods:	
12/CIS22a	IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)
12/CIS22b	CNS 13438 (1997): Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/CIS22d	IEC/CISPR 22 (2001); EN 55022 (2001): Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment
12/EM02a	IEC 61000-3-2, Edition 2.1 (2001-10), EN 61000-3-2 (2000), and AS/NZS 2279.1 (2000): Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16 A)

September 30, 2005
Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 200577-0

COMPLIANCE CERTIFICATION SERVICES (SHENZHEN) INC.

NVLAP Code	*Designation / Description*
12/EM03d	IEC/EN 61000-3-3 (1995) + A1 (2001): Conducted Emissions, Voltage Flicker
12/FCC15b	ANSI C63.4 (2001) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
12/T51	AS/NZS CISPR 22 (2002) and AS/NZS 3548 (1997): Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
12/VCCIa	Agreement of Voluntary Control Council for Interference by Information Technology Equipment - Technical Requirements: V-3/02.04

Immunity Test Methods:

12/CIS24c	EN 55024 (1998) and A1 (2001): Information technology equipment - Immunity characteristics - Limits and methods of measurement
12/CIS24d	IEC/CISPR 24 (1997), A1 (2001), A2 (2002): Information technology equipment - Immunity characteristics - Limits and methods of measurements
12/I01b	IEC 61000-4-2 (2001); EN 61000-4-2 (2001), A2 (2001): Electrostatic Discharge Immunity Test
12/I02b	IEC/EN 61000-4-3 (2002), A1 (2002): Radiated, radio-frequency, electromagnetic field immunity test

September 30, 2005
Effective through

For the National Institute of Standards and Technology

NVLAP-01S (06-01)

National Institute of Standards and Technology — NVLAP® — National Voluntary Laboratory Accreditation Program

ISO/IEC 17025:1999
ISO 9002:1994

Scope of Accreditation

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 200577-0

COMPLIANCE CERTIFICATION SERVICES (SHENZHEN) INC.

NVLAP Code	*Designation / Description*
12/I03a	IEC/EN 61000-4-4 (2001), A1 (2001): Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical Fast Transient/Burst Immunity Test
12/I04b	IEC 61000-4-5 (2001), A1(2000); EN 61000-4-5(2001), A1(2000): Surge Immunity Test
12/I05b	IEC/EN 61000-4-6 (2001), A1 (2001): Immunity to Conducted Disturbances, Induced by Radio Frequency Fields
12/I06b	IEC 61000-4-8 (2001), A1(2000); EN 61000-4-8 (2001),A1(2000): Power Frequency Magnetic Field Immunity Test
12/I07b	IEC/EN 61000-4-11 (2001), A1 (2001): Voltage Dips, Short Interuptions and Voltage Variations Immunity Tests

September 30, 2005

Effective through

For the National Institute of Standards and Technology

NVLAP 01S (06-01)