

Declaration of Conformity

We, Manufacturer

ZIPPY TECHNOLOGY CORP.
10F, No.50, MIN CHYUAN RD.
SHIN-TIEN, TAIPEI HSIEN
TAIWAN, R.O.C.

declare that the product
(description of the apparatus, system, installation to which it refers)

SWITCHING POWER SUPPLY Q1J-1060V-24

is in conformity with
(reference to the specification under which conformity is declared)
i in accordance with 2004/108/EC-EMC Directive

- | | |
|---|---|
| ■ EN 55022 : 2006+A1/2007
Information technology equipment
-Radio disturbance characteristics
-Limits and methods of measurement | ■ EN 61000-4-5: 2006 Criteria B
Surge Immunity requirements |
| ■ EN 55024 : 1998+A1/2001+A2/2003
Information technology equipment
-Immunity characteristics
-Limits and methods of measurement | ■ EN 61000-4-6: 2007 Criteria A
Conducted Immunity |
| ■ EN 61000-4-2 :1995+A2/2001 Criteria B
Electrostatic discharge requirements "ESD" | ■ EN 61000-4-8: 1993+A1/2001 Criteria A
Power Frequency Magnetic Field Immunity |
| ■ EN 61000-4-3 :2006 Criteria A
Radiated, radio frequency electromagnetic field | ■ EN 61000-4-11:2004
Dip Criteria B
Interruptions Criteria C
Voltage Dip,interruptions Immunity requirements |
| ■ EN 61000-4-4 : 2004 Criteria B
Electrical fast transient requirements "EFT" | ■ EN 61000-3-2 :2006
Harmonic current requirements Class A |
| | ■ EN 61000-3-3 :1995+A1/2001+A2/2005
Voltage fluctuations and flicker requirements |

Manufacturer

Date : Mar,23,2010

Signature: Jeff Huang

Name: ZIPPY

Test-Lab

Date : Mar,23,2010

Signature: Karen

Name: ZIPPY

APPLICATION FOR CERTIFICATION

ON Behalf Of

ZIPPY TECHNOLOGY CORP.
SWITCHING POWER SUPPLY

Model#: Q1J-1060V-24

FCCID:N/A

PREPARED FOR:
ZIPPY TECHNOLOGY CORP.
10F,No.50,MIN CHYUAN RD.
SHIN-TIEN, TAIPEI HSIEN
TAIWAN, R.O.C

Report By: ZIPPY TECHNOLOGY CORP.
10F,No.50,MIN CHYUAN RD.
SHIN-TIEN, TAIPEI HSIEN
TAIWAN, R.O.C
TEL:(02)2918-8512
FAX:(02)2913-4969

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Appendix A Circuit diagram, block diagram, User Manual

Appendix B Doc

1. Test Report Certification

Applicant : ZIPPY TECHNOLOGY CORP.

Manufacturer : ZIPPY TECHNOLOGY CORP.

EUT Description : Switching power supply

(A) FCC ID	: N/A
(B) Model No.	: Q1J-1060V-24
(C) Serial No.	: N/A
(D) Power Supply	: 115Vac/60Hz, 230Vac/50Hz

MEASUREMENT PROCEDURE USED :

EN 55024 RULES

EN 55022 RULES

THE DEVICE DESCRIBED ABOVE WAS TESTED BY ZIPPY SHIN JIUH CORP. TO DETERMINE THE SEVERITY LEVELS THE DEVICE CAN ENDURE AND ITS PERFORMANCE CRITERION.

THE MEASUREMENT RESULTS ARE CONTAINED IN THIS TEST REPORT AND ZIPPY SHIN JIUH CORP. IS ASSUMED FULL RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF THESE MEASUREMENT.

ALSO, THIS REPORT SHOWS THAT THE EUT TO BE TECHNICALLY COMPLIANT WITH THE EN STANDARD.

Test Dated : MAR,23,2010

Test Engineer : Karen

Approve & Authorized Signer : Jeff Huang

2. General Information

2.1 Production Description

Description	: Switching power supply
Model Number	: Q1J-1060V-24
Applicant	: ZIPPY TECHNOLOGY CORP.
Address	: 10F,No.50,MIN CHYUAN RD. SHIN-TIEN, TAIPEI HSIEN TAIWAN, R.O.C
FCC ID	: N/A
Data Cable	: N/A
PowerCord	: Non-Shielded, detachable, 1.5m

2.2 Tested System Details

The FCC IDs for all equipment, plus descriptions of all cables used in the tested system (including inserted cards, which have grants) are:

2.2.1 Resistor Load

Model Number	: ELECTRONIC LOAD
Serial Number	: N/A
FCC ID	: N/A
Manufacturer	: ZIPPY
Power	: 60W

2.3 Test Methodology

EMI Test:

Both conducted and radiated testing were performed according to the procedures in EN 55022

Radiated testing was performed at an antenna to EUT distance of 10 meters.

EMS Test:

Performed according to procedures in EN 61000 series regulations.

2.4 Test Facility

ZIPPY TECHNOLOGY CORP.
10F, No.50, MIN CHYUAN RD.
SHIN-TIEN, TAIPEI HSIEN
TAIWAN, R.O.C

3. Electronic-Magnetic Interference Test

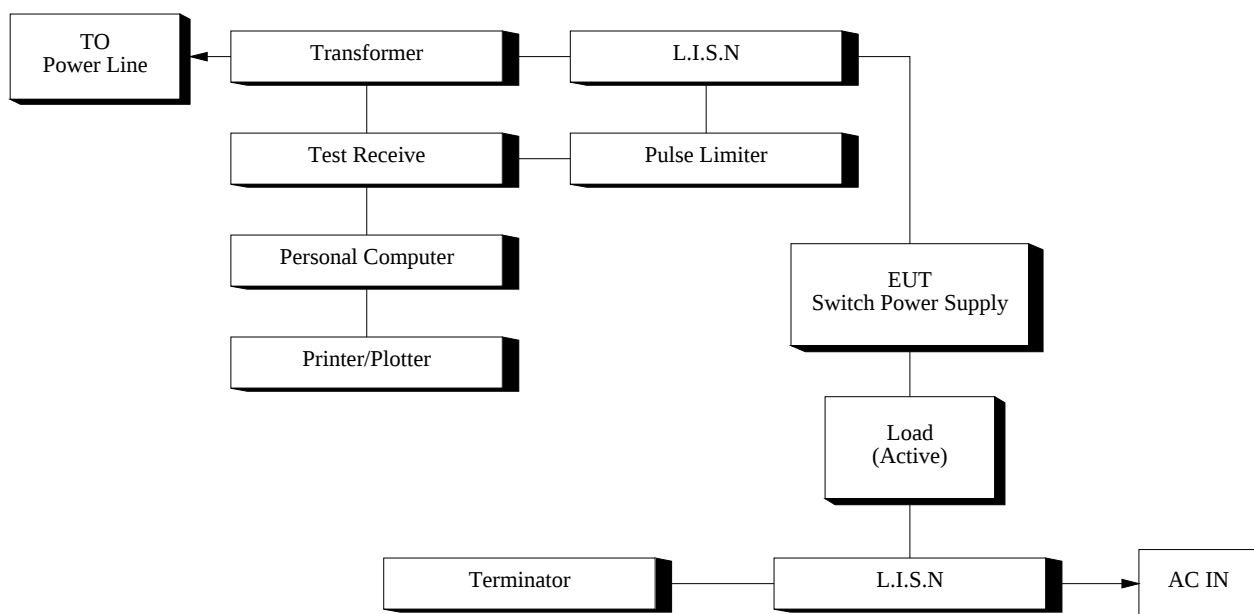
3.1 Conducted Power Line Test

3.1.1 TEST Equipment's

The following test equipment's are used during the conducted power line tests:

Item	Instrument	Manufacture	Type No:	Last Calibration
1	TEST RECEIVER	ROHDE & SCHWARZ	ESHS 10	MAR.2010
2	LISN	ROHDE & SCHWARZ	ENV4200	DEC.2009
3	COMPUTER	Acer	Power8000	N/A
4	PRINTER	EPSON	5700L	N/A
7	SHIELDED ROOM 4.0M*3.0M*3M			N/A

3.1.2 Block Diagram of Test Setup



3.1.3 Conducted Powerline Emission Limit

Maximum RF Line Voltage dB(uV)		
Frequency	Class B	
MHz	QUASI-PEAK	AVERAGE
0.15 - 0.50	66-56	66-56
0.50 - 5.0	56	56
5.0 - 30	60	60

Remarks: In the Above Table, the tighter limit applies at the band edges.

3.1.4 EUT Configuration on Measurement

The equipment's which is listed 3.2 are installed on Conducted Power Line Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.1.5 EUT Exercise Software

The EUT exercise program used during conducted testing was designed to exercise the EUT in a manner similar to a typical use. The exercise sequence is listed as below:

3.1.5.1 Setup the EUT and simulators as shown on 3.2.

3.1.5.2 Turn on the power of all equipment's.

3.1.6 Conducted Emission Data

The measurement range of conducted emission which is from 0.15 MHz to 30 MHz was investigated. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range for all the test modes. Then the worst modes were reported the following data pages.

MODEL: Q1J-1060V-24

REPORT NO: 10032301

CONDUCTED EMISSION DATA

DATE OF TEST : MAR,22,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

Frequency	Reading Level dBuV		Limites
MHz	Line 1	Line 2	DBuV
0.150	49.37	49.47	66.00
0.186	56.19	56.21	64.21
0.246	44.32	44.40	61.89

Remark:1.All readings are Quasi-Peak values.

ZIPPY EMC LAB

22 Mar 2010 22:11

conduction test

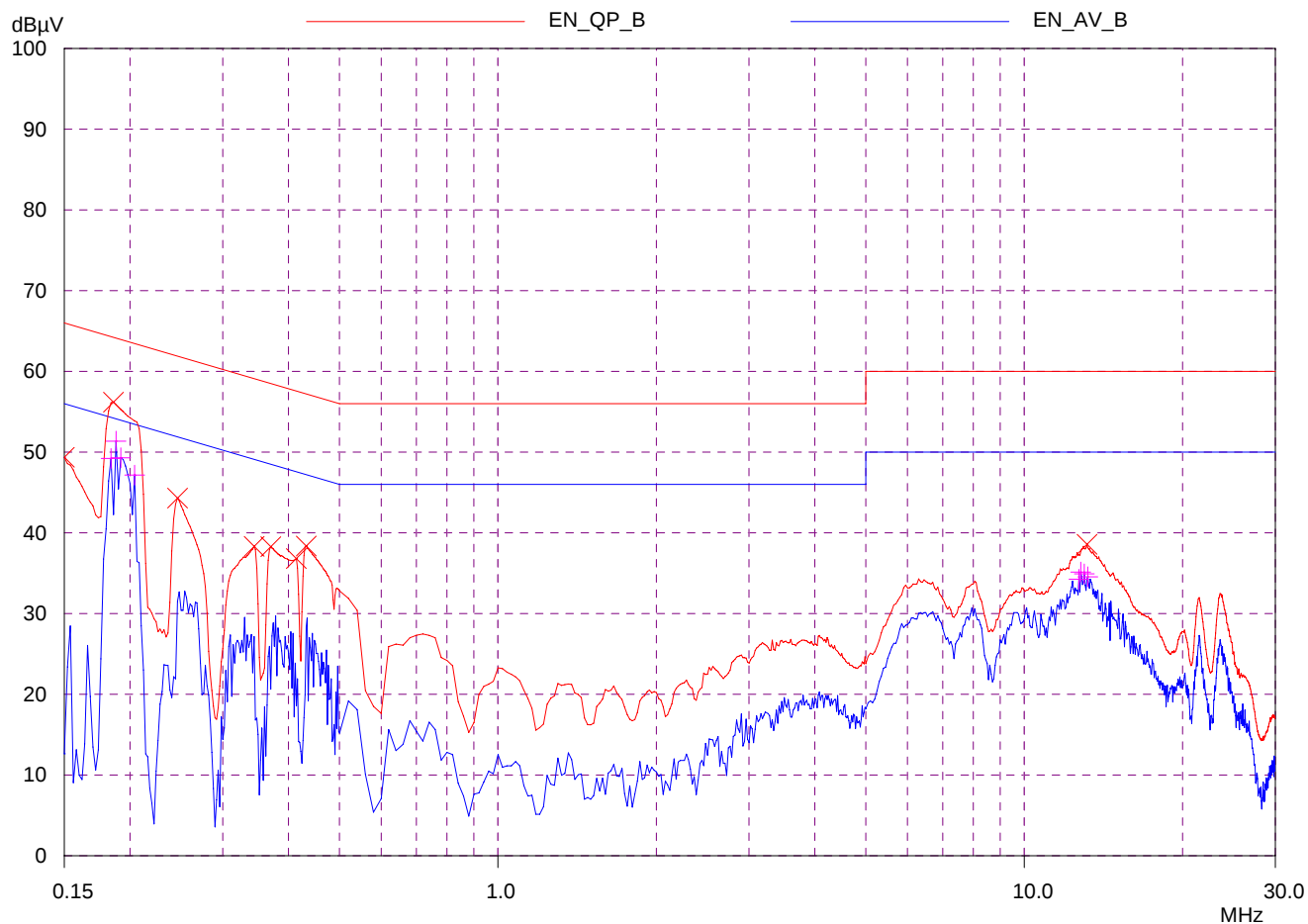
EUT: Q1J-1060V-24 SPS
 Manuf: ZIPPY TECH CO..LTD
 Op Cond: FULL LOAD
 Operator:
 Test Spec: EN 55022-- Class B
 Comment: Load Condition(2.5)
 L220V

Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	500kHz	2kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
500kHz	5MHz	20kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
5MHz	30MHz	50kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	CEB

Prescan Measurement: Detectors: X QP / + AV
 Meas Time: see scan settings
 Peaks: 8
 Acc Margin: 25 dB



ZIPPY EMC LAB

22 Mar 2010 22:11

conduction test

EUT: Q1J-1060V-24 SPS
 Manuf: ZIPPY TECH CO..LTD
 Op Cond: FULL LOAD
 Operator:
 Test Spec: EN 55022-- Class B
 Comment: Load Condition(2.5)
 L220V

Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	500kHz	2kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
500kHz	5MHz	20kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
5MHz	30MHz	50kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	CEB

Prescan Measurement: Detectors: X QP / + AV
 Meas Time: see scan settings
 Peaks: 8
 Acc Margin: 25 dB

Peak Search Results

Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -	PE -
0.15	49.37	66.00	16.63	N	gnd
0.186	56.19	64.21	8.02	N	gnd
0.246	44.32	61.89	17.57	N	gnd
0.344	38.33	59.11	20.78	N	gnd
0.37	38.29	58.50	20.21	N	gnd
0.414	36.82	57.57	20.75	N	gnd
0.432	38.37	57.21	18.84	N	gnd
13.15	38.58	60.00	21.42	N	gnd

Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -	PE -
0.184	49.22	54.30	5.08	N	gnd
0.188	51.35	54.12	2.77	N	gnd
0.192	49.29	53.95	4.66	N	gnd
0.204	47.15	53.45	6.30	N	gnd
12.7	34.25	50.00	15.75	N	gnd
12.8	35.15	50.00	14.85	N	gnd
13.0	34.92	50.00	15.08	N	gnd
13.2	34.56	50.00	15.44	N	gnd

* limit exceeded

Indicated Phase/PE shows Configuration of max. Emission

ZIPPY EMC LAB

22 Mar 2010 22:00

conduction test

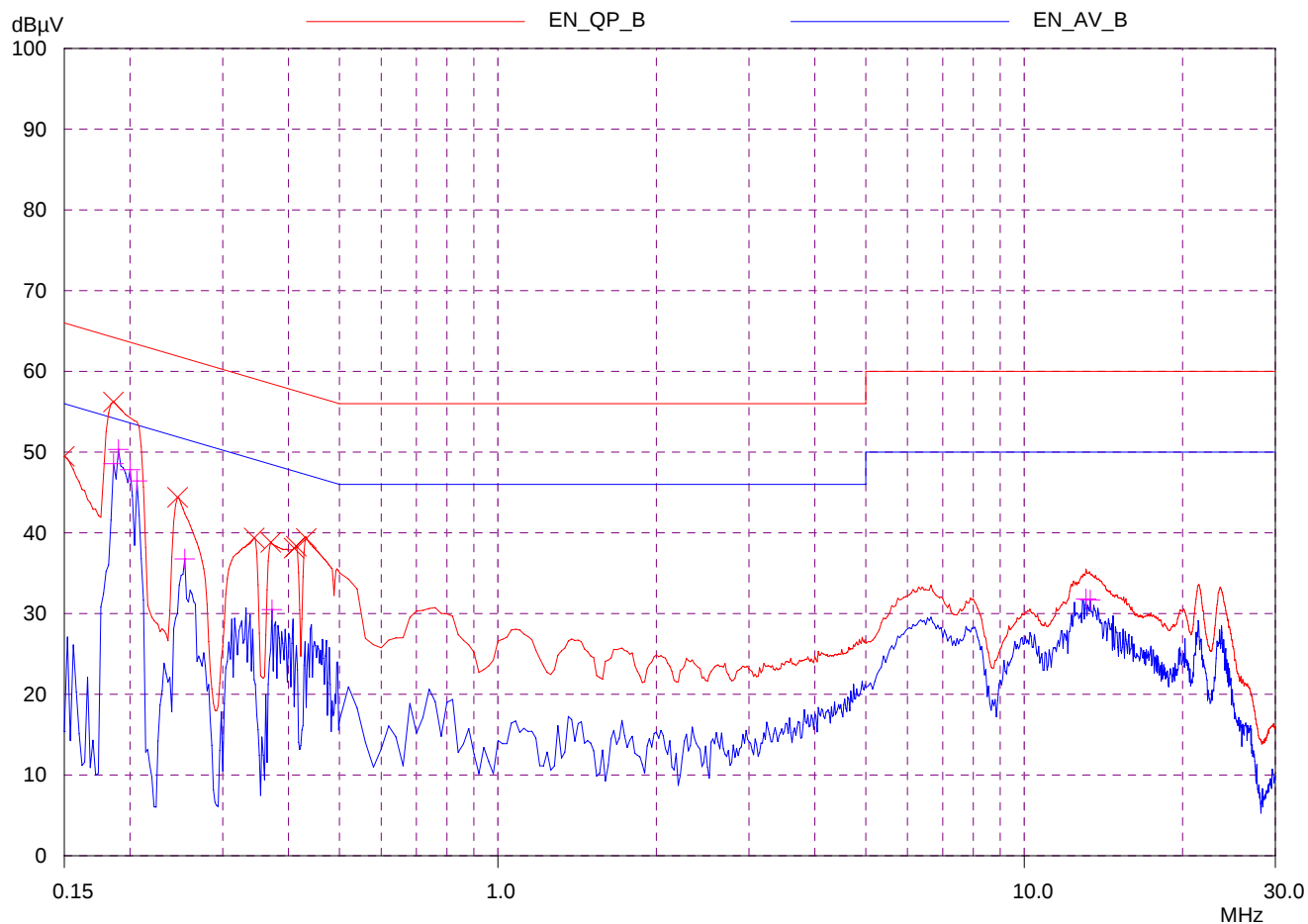
EUT: Q1J-1060V-24 SPS
 Manuf: ZIPPY TECH CO..LTD
 Op Cond: FULL LOAD
 Operator:
 Test Spec: EN 55022-- Class B
 Comment: Load Condition(2.5)
 N220V

Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	500kHz	2kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
500kHz	5MHz	20kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
5MHz	30MHz	50kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	CEB

Prescan Measurement: Detectors: X QP / + AV
 Meas Time: see scan settings
 Peaks: 8
 Acc Margin: 25 dB



ZIPPY EMC LAB

22 Mar 2010 22:00

conduction test

EUT: Q1J-1060V-24 SPS
 Manuf: ZIPPY TECH CO..LTD
 Op Cond: FULL LOAD
 Operator:
 Test Spec: EN 55022-- Class B
 Comment: Load Condition(2.5)
 N220V

Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	500kHz	2kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
500kHz	5MHz	20kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB
5MHz	30MHz	50kHz	10kHz	QP+AV	1msec	Auto	OFF	60dB

Transducer	No.	Start	Stop	Name
	1	9kHz	30MHz	CEB

Prescan Measurement: Detectors: X QP / + AV
 Meas Time: see scan settings
 Peaks: 8
 Acc Margin: 25 dB

Peak Search Results

Frequency MHz	QP Level dBμV	QP Limit dBμV	QP Delta dB	Phase -	PE -
0.15	49.47	66.00	16.53	N	gnd
0.186	56.21	64.21	8.00	N	gnd
0.246	44.40	61.89	17.49	N	gnd
0.344	39.36	59.11	19.75	N	gnd
0.37	38.82	58.50	19.68	N	gnd
0.41	38.10	57.65	19.55	N	gnd
0.414	38.35	57.57	19.22	N	gnd
0.432	39.30	57.21	17.91	N	gnd

Frequency MHz	AV Level dBμV	AV Limit dBμV	AV Delta dB	Phase -	PE -
0.186	48.58	54.21	5.63	N	gnd
0.19	50.33	54.04	3.71	N	gnd
0.2	47.82	53.61	5.79	N	gnd
0.206	46.43	53.37	6.94	N	gnd
0.254	36.76	51.63	14.87	N	gnd
0.372	30.49	48.46	17.97	N	gnd
13.1	31.81	50.00	18.19	N	gnd
13.35	31.69	50.00	18.31	N	gnd

* limit exceeded

Indicated Phase/PE shows Configuration of max. Emission

4.ESD Measurement

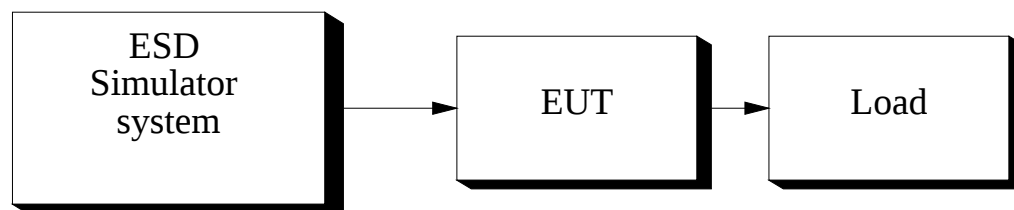
4.1 Test Equipment

The following test equipment's are used during the ESD test:

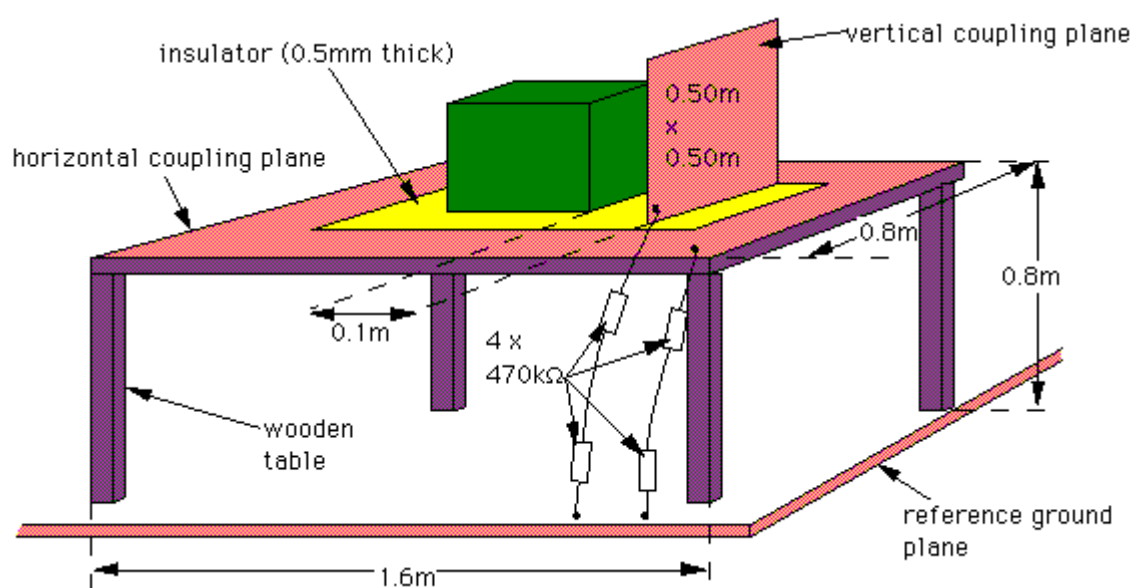
Instrument	Manufacture	Type No:	Last Calibration
ESD Simulator system	Keytek	MZ-15/EC	MAY,2009
Electronic Load	D-RAM	Load-2000	N/A

4.2 Test Setup

4.2.1 Block Diagram of Connections between EUT and simulators



4.2.2 Test Setup of EUT



4.3 Severity Levels

LEVEL	TEST VOLTAGE CONTACT DISCHARGE	TEST VOLTAGE AIR DISCHARGE
1	2KV	2KV
2	4KV	4KV
3	6KV	6KV
4	8KV	8KV
X	SPECIAL	SPECIAL

4.4 EUT Operating Condition

1. Setup the EUT and Test Equipment as shown on 4.2
2. power on.

4.5 Test Procedure

Air Discharge:

This test was done above a non-conductive surfaces. The round discharge electrode about 30cm away will approach as fast as possible to touch test points of the EUT. Discharge happens before the contact. This procedure is repeated ten times on one selected location.

4.6 Test Method

According to IEC 61000-4-2

4.7 Test Result

DATE OF TEST : MAR,22,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

Item	Amount of discharge	Voltage	Results
Contact discharge	500	+2KV	Pass
		-2KV	Pass
Contact discharge	500	+4KV	Pass
		-4KV	Pass
Air discharge	500	+2KV	Pass
		-2KV	Pass
Air discharge	500	+4KV	Pass
		-4KV	Pass
Air discharge	500	+6KV	Pass
		-6KV	Pass
Air discharge	500	+8KV	Pass
		-8KV	Pass

Input Voltage:AC 230V/50Hz

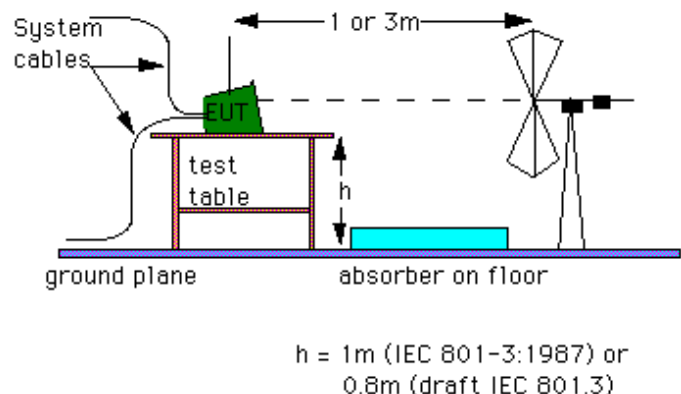
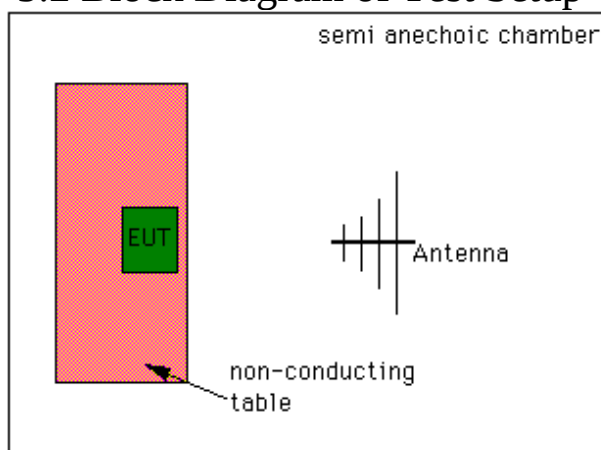
5. Radiated Susceptibility Measurement

5.1 Test Equipment

The following test equipment's are used during the RS test:

Instrument	Manufacture	Type No:	Last Calibration
Signal generator	H.P	8657A	Dec.,2009
Power amplifier	A&R	100A100	Dec.,2009
Field strength meter	A&R	FM2000	Oct.,2009
Field strength sensor	A&R	EP2000	Oct.,2009
Power antenna	A&R	AT1080	Oct.,2009

5.2 Block Diagram of Test Setup



Antennas-layout

For the upper frequency range of 200 to 1000 MHz, antennas are the normal method of producing the required field strength. This is also carried out in an anechoic chamber or a screened room. If a screened room is used it must be damped. The anechoic chamber should be used for compliance testing, the screened room may be used for precompliance testing. The fields in the screened room will not be as uniform as those obtainable in an anechoic chamber and will also not be as repeatable. The EUT is placed on a non-conductive table, 0.8 m above the reference ground plane, which in many cases will be the floor of a screened room. According to the standards, the EUT should be oriented so that its most sensitive side is facing the antenna. In practice it can be difficult to decide beforehand which is the most sensitive side, and in most cases, a series of tests will be required with the EUT in several orientations.

5.3 Severity Levels

LEVEL	FIELD STRENGTH V/M
1	1
2	3
3	10
X	SPECIAL

5.4 EUT Operating Condition

Same as section 4.4.

5.5 Test Procedure

The EUT and load are placed on a table which is 0.8 meter above ground. The field sensor is also placed on the same table to monitor field strength from transmitting antenna.

EUT is set 1 meter away from the transmitting antenna which is mounted on an antenna each time.

The antenna is fixed 1 meter above ground. Both horizontal and vertical polarization of the antenna are set on measurement.

In order to judge the EUT performance, a CCD camera is used to monitor EUT screen.

All the scanning conditions are as follows:

Condition of Test	Remarks
1. Field Strength	3 V/M Level 2
2. Radiated Signal	80% Amplitude Modulated with a 1KHz Tone
3. Scanning Frequency	80 MHz-1 GHz
4. Sweep Time of Radiated	0.0015 Decade/s

5.6 Test Method

According to IEC 61000-4-3

5.7 Test Result

DATE OF TEST : MAR,22,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

Frequency Range (MHz)	Position (Angle)	Polarity (HorV)	Field Strength (V/M)	Results
80-1000	0° (Front)	H	3	Pass
80-1000	90° (Right)	H	3	Pass
80-1000	180° (Back)	H	3	Pass
80-1000	270° (Left)	H	3	Pass
80-1000	0° (Front)	V	3	Pass
80-1000	90° (Right)	V	3	Pass
80-1000	180° (Back)	V	3	Pass
80-1000	270° (Left)	V	3	Pass

Test Result : Criteria A

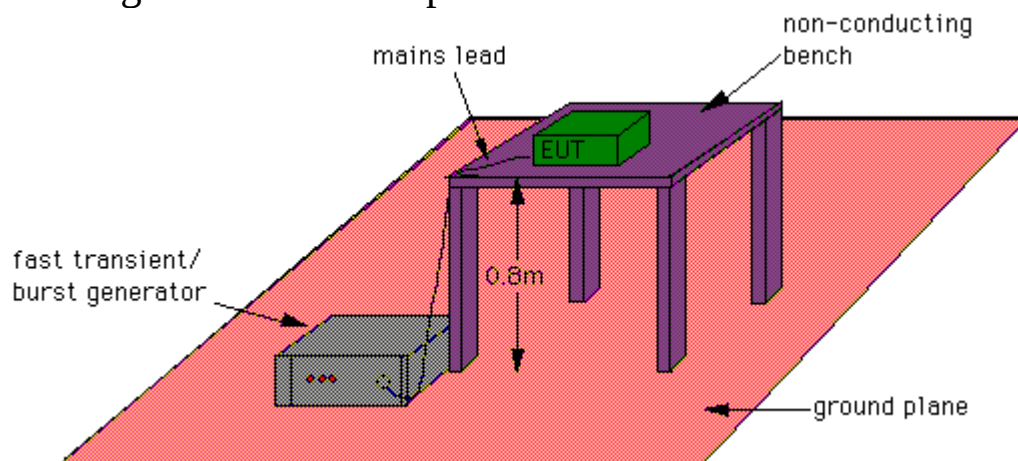
6. Electrical Fast Transient / Burst Measurement

6.1 Test Equipment

The following test equipment's are used during the EFT tests:

Instrument	Manufacturer	Type No.	Last Calibration
Fast Transient/Burst Generator	Keytek	EMCpro	MAY,2009

6.2 Block Diagram of Test Setup



6.3 Severity Levels

Open Circuit Output Test Voltage +/- 10%	
Level	On power supply lines
1	0.5kv
2	1KV
3	2KV
4	4KV
X	SPECIAL

6.4 EUT Operation Condition

Same as section 4.4.

6.5 Test Procedure

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured 1m*1m min. And 0.65 mm thick min. And projected beyond the EUT by at least 0.1m on all sides.

The EUT is away from the walls of the test AC power line test is as follows:

For Ac power line test:

The EUT is connected to the power mains through a coupling device that directly couples the EFT interference signal.

Each of the Line and Neutral conductor is impressed with burst noise for 1 min.

6.6 Test Method

According to IEC 61000-4-4.

6.7 Test Result

DATE OF TEST : MAR,22,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

Inject Line	Voltage KV	Inject time (sec)	Inject Method	Result
L1	+/-1	60	DIRECT	PASS
L2	+/-1	60	DIRECT	PASS
PE	+/-1	60	DIRECT	PASS
L1-L2	+/-1	60	DIRECT	PASS
L1-PE	+/-1	60	DIRECT	PASS
L2-PE	+/-1	60	DIRECT	PASS
L1,L2-PE	+/-1	60	DIRECT	PASS

Input Voltage: 230 V/50Hz

7. HARMONIC CURRENT TEST

DATE OF TEST : APR,24,2009

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

Item	Reading	LeveA	Item	Reading	LeveA
	A	Limites		A	Limites
1	0.3200				
3	0.3053	2.3000			
5	0.2819	1.1400			
7	0.2491	0.7700			
9	0.2106	0.4000			
11	0.1697	0.3300			
13	0.1295	0.2100			
15	0.0938	0.1500			
17	0.0665	0.1324			
19	0.0504	0.1184			
21	0.0444	0.1071			
23	0.0428	0.0978			
25	0.0405	0.0900			
27	0.0358	0.0833			
29	0.0290	0.0776			
31	0.0216	0.0726			
33	0.0157	0.0682			
35	0.0129	0.0643			
37	0.0129	0.0608			
39	0.0132	0.0577			

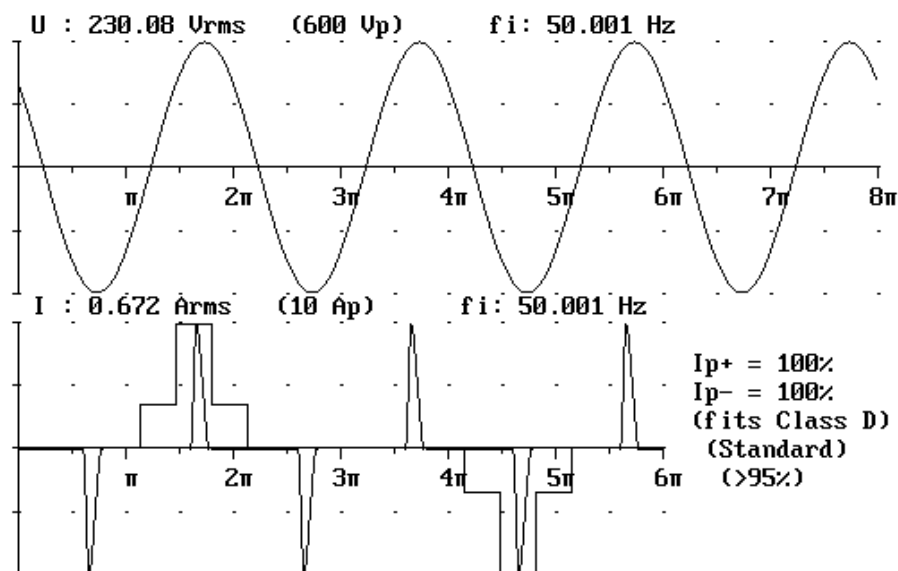
Chroma

ANALYZER 6630

2010.03.23 14:32:35

Waveform M1

Note:

Next
measureZoom
VoltageZoom
CurrentWrite to
diskData
cursor

App1: EUROPE

(1611_01)

Chroma

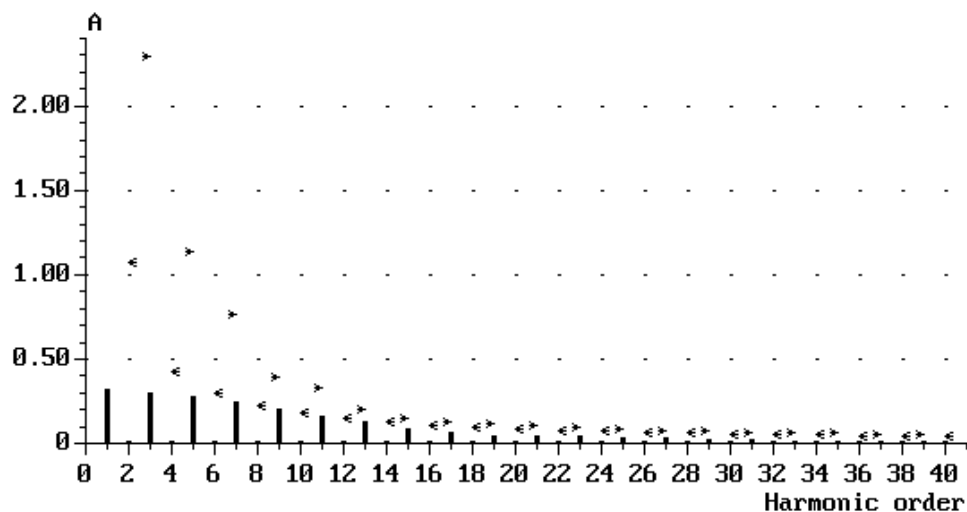
ANALYZER 6630

2010.03.23 14:33:17

Current Harmonics

Setup: CLASS_A
Live
Module: M1

Gen setting: 1(1) U : 230.08 V fu: 50.000 Hz
Analysed periods: 4 I : 0.6724 A P: 71.8 W
Limit: Class A (Standard) I1: 0.3200 A
Note:
THD=184.70 % (PF=0.464) PASSED

Next
measureChange to
tableRelative
currentLog
scaleWrite to
disk

App1: EUROPE

(1212_01)

Chroma

ANALYZER 6630

2010.03.23 14:33:56

Current Harmonics

Setup: CLASS_A
Live
Module: M1

Gen setting: 1(1) U : 230.00 V fu: 50.000 Hz
Analysed periods: 4 I : 0.6724 A P: 71.8 W
Limit: Class A (Standard) I1: 0.3200 A
Note:

THD=184.70 % (PF=0.464) PASSED

No	A	Lim A	No	A	Lim A	No	A	Lim A
1	0.3200		15	0.0938	0.1500	29	0.0290	0.0776
2	0.0002	1.0800	16	0.0019	0.1150	30	0.0009	0.0613
3	0.3053	2.3000	17	0.0665	0.1324	31	0.0216	0.0726
4	0.0003	0.4300	18	0.0020	0.1022	32	0.0008	0.0575
5	0.2819	1.1400	19	0.0504	0.1184	33	0.0157	0.0682
6	0.0005	0.3000	20	0.0020	0.0920	34	0.0008	0.0541
7	0.2491	0.7700	21	0.0444	0.1071	35	0.0129	0.0643
8	0.0008	0.2300	22	0.0019	0.0836	36	0.0008	0.0511
9	0.2106	0.4000	23	0.0428	0.0978	37	0.0129	0.0608
10	0.0011	0.1840	24	0.0017	0.0767	38	0.0009	0.0484
11	0.1697	0.3300	25	0.0405	0.0900	39	0.0132	0.0577
12	0.0015	0.1533	26	0.0014	0.0708	40	0.0009	0.0460
13	0.1295	0.2100	27	0.0358	0.0833			
14	0.0017	0.1314	28	0.0011	0.0657			

Current range: 3 Ap

Next
measure

Change to
bar graph

Relative
current

Write to
disk



Appl: EUROPE

(1212_02)

MODEL: Q1J-1060V-24

REPORT NO: 10032301

8. VOLTAGE FLUCTUATION AND FLICKER TEST DATA

DATE OF TEST : MAR,23,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

	Reading	Limit	Result
Pst	0.000	1.0	Pass
P1t	0.000	0.65	Pass
Dc (%)	0.000	3.00	Pass
Dmax (%)	0.000	4.00	Pass
Dt (%)	0.000	0.20	Pass

9. SURGE IMMUNITY TEST

DATE OF TEST : MAR,23,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

DISPLAY PATTERN: N/A

Waveform	Voltage	Output:LC	Phs Ref	Phs Ang	Tests	Delay
12 Ohm	-4000V	MAINS:L1/PE	L1	0 deg.	5	60 sec
12 Ohm	-4000V	MAINS:L1/PE	L1	90 deg.	5	60 sec
12 Ohm	-4000V	MAINS:L1/PE	L1	270 deg.	5	60 sec
12 Ohm	4000V	MAINS:L1/PE	L1	0 deg.	5	60 sec
12 Ohm	4000V	MAINS:L1/PE	L1	90 deg.	5	60 sec
12 Ohm	4000V	MAINS:L1/PE	L1	270 deg.	5	60 sec
12 Ohm	-4000V	MAINS:L2/PE	L1	0 deg.	5	60 sec
12 Ohm	-4000V	MAINS:L2/PE	L1	90 deg.	5	60 sec
12 Ohm	-4000V	MAINS:L2/PE	L1	270 deg.	5	60 sec
12 Ohm	4000V	MAINS:L2/PE	L1	0 deg.	5	60 sec
12 Ohm	4000V	MAINS:L2/PE	L1	90 deg.	5	60 sec
12 Ohm	4000V	MAINS:L2/PE	L1	270 deg.	5	60 sec
2 Ohm	-2000V	MAINS:L1/L2	L1	0 deg.	5	60 sec
2 Ohm	-2000V	MAINS:L1/L2	L1	90 deg.	5	60 sec
2 Ohm	-2000V	MAINS:L1/L2	L1	270 deg.	5	60 sec
2 Ohm	2000V	MAINS:L1/L2	L1	0 deg.	5	60 sec
2 Ohm	2000V	MAINS:L1/L2	L1	90 deg.	5	60 sec
2 Ohm	2000V	MAINS:L1/L2	L1	270 deg.	5	60 sec

Test Result : Pass

10. CONDUCTED IMMUNITY

DATE OF TEST : MAR,23,2010TEMPERATURE : 26°CEUT : SWITCH POWER SUPPLYHUMIDITY : 65%TEST MODE : Q1J-1060V-24DISPLAY PATTERN: N/A

Frequency Range (MHz)	Polarity (HorV)	Field Strength (V/M)	Results
0.15-80	H	3	Pass

INJECTION TYPE:

DIRECT CDN Type M3

TEST CONDITION:

Step: 1% Dwell Time: 3sec

Test result : Criteria A

11. VOLTAGE DIP,INTERRUPTIONS IMMUNITY

DATE OF TEST : MAR,23,2010

TEMPERATURE : 26°C

EUT : SWITCH POWER SUPPLY

HUMIDITY : 65%

TEST MODE : Q1J-1060V-24

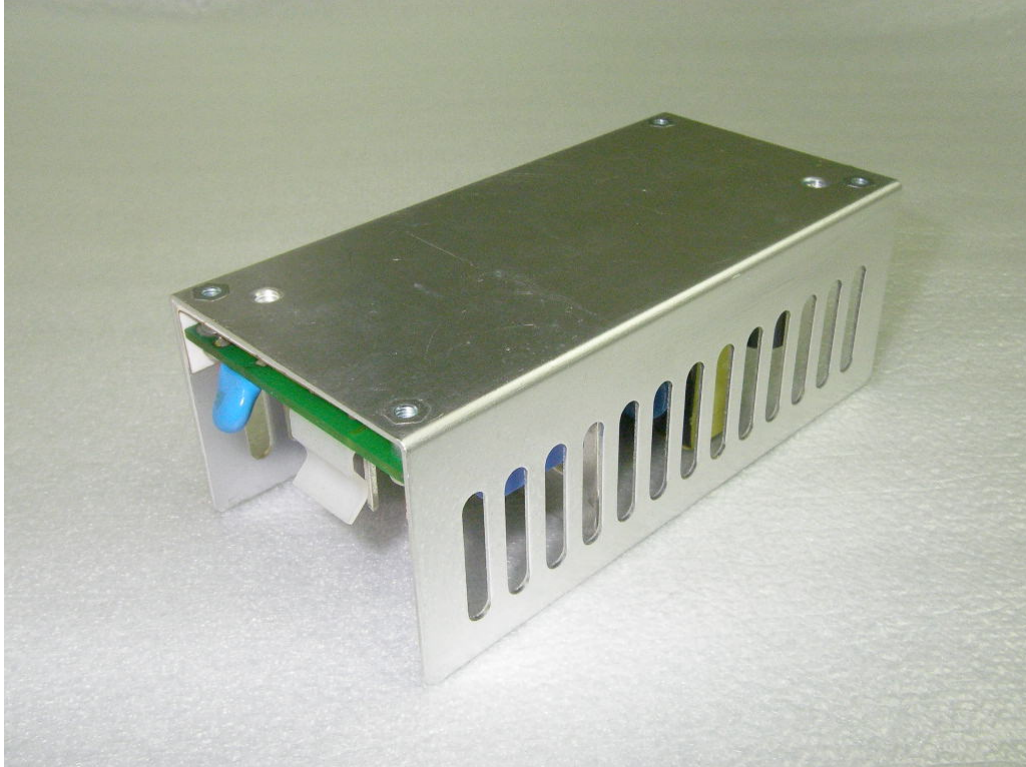
DISPLAY PATTERN: N/A

Test Voltage	Phase Angle	Reduction %	Duration (Periods)	Performance	
				Required	Observation
AC 115V	0 deg.	>95%	0.5	B	A
	90 deg.		0.5	B	A
	180 deg.		0.5	B	A
	270 deg.		0.5	B	A
	0 deg.	30%	25	C	A
	90 deg.		25	C	A
	180 deg.		25	C	A
	270 deg.		25	C	A
	0 deg.	>95%	250	C	C
	90 deg.		250	C	C
	180 deg.		250	C	C
	270 deg.		250	C	C
AC 230V	0 deg.	>95%	0.5	B	A
	90 deg.		0.5	B	A
	180 deg.		0.5	B	A
	270 deg.		0.5	B	A
	0 deg.	30%	25	C	A
	90 deg.		25	C	A
	180 deg.		25	C	A
	270 deg.		25	C	A
	0 deg.	>95%	250	C	C
	90 deg.		250	C	C
	180 deg.		250	C	C
	270 deg.		250	C	C

Test Result : Pass

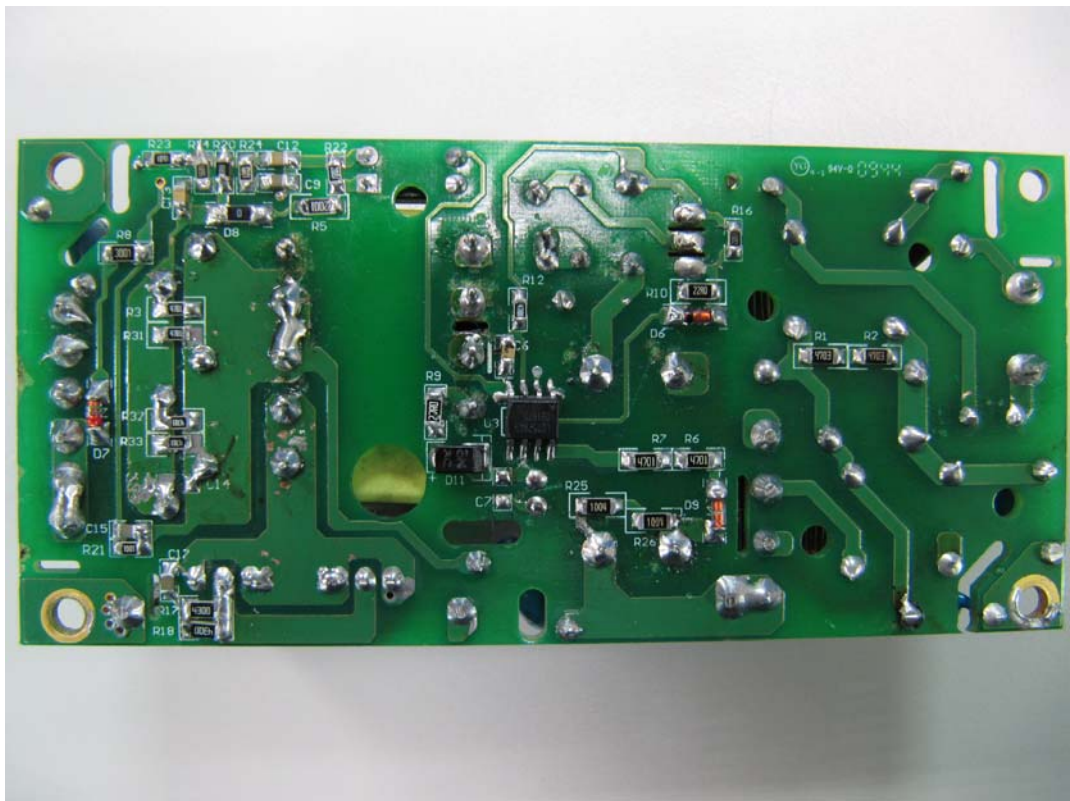
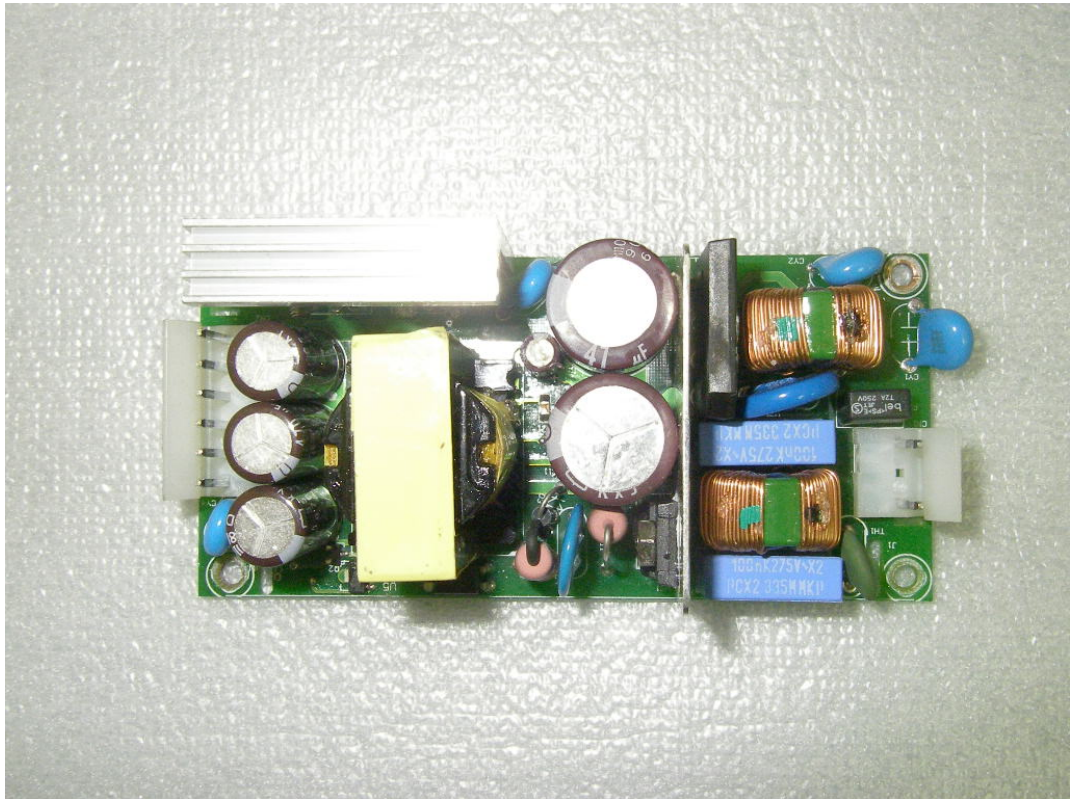
12. Photographs

1. Front view of Power Supply
2. Back view of Power Supply



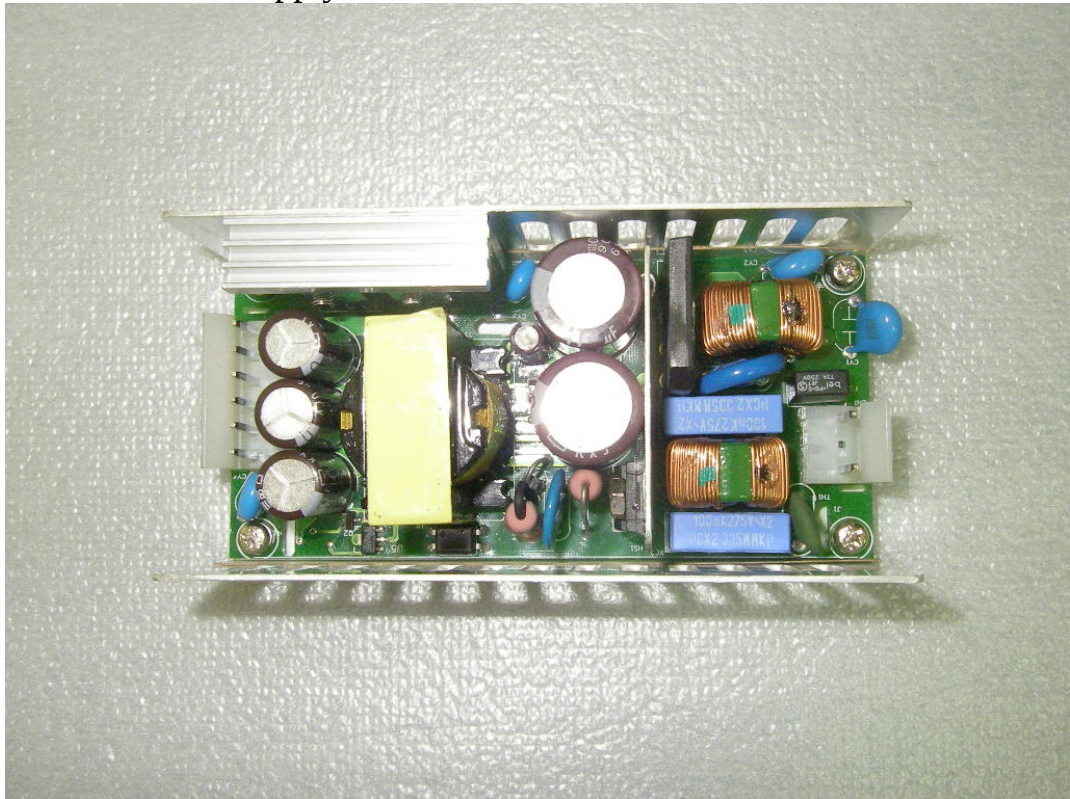
3.Component side of Mainboard

4.Solder side of Mainboard



5. Inside view of Power Supply

6. Inside view of Power Supply



7.Test view

8.Test view



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13. EMI Reduction Method During Compliance Testing

- 1.No modification was made during test.