Declaration of Conformity

We, Manufacturer

ZIPPY TECHNOLOGY CORP.
10F, No.50, MIN CHYUAN RD.
XINDIAN DIST., NEW TAIPEI CITY
TAIWAN, R.O.C.

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

SWITCHING POWER SUPPLY

MP1S-6400V

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

- ■EN 55011 : 2009+A1:2010 Class B
  Industrial, scientific and medical radio-frequency equipment
  -Radio disturbance characteristics
  -Limits and methods of measurement
- ■EN 60601-1-2 : 2007
  Medical electrical equipment
  -Immunity characteristics
  -Limits and methods of measurement
- ■EN 61000-4-2 : 2009 Criteria A
  Electrostatic discharge requirements "ESD"
- ■EN 61000-4-3 : 2006+A1:2008+A2:2010
  Criteria A
  Radiated, radio frequency electromagnetic field
- ■EN 61000-4-4 : 2012 Criteria A
  Electrical fast transient requirements "EFT"
- ■EN 61000-4-5 : 2006 Criteria A
  Surge Immunity requirements
- ■EN 61000-4-6 : 2009 Criteria A
  Conducted Immunity
- ■EN 61000-4-8 : 2010 Criteria A
  Power Frequency Magnetic Field Immunity
- ■EN 61000-4-11 : 2004
  Dip Criteria B
  Interruptions Criteria C
  Voltage Dip,interruptions Immunity requirements
- ■EN 61000-3-2 : 2006+A1:2009+A2:2009
  Harmonic current requirements
- ■EN 61000-3-3 : 2008
  Voltage fluctuations and flicker requirements

Checked by : Karen , Date : SEP,26,2014
(Karen Ma / Engineer)

Approved by : Jeff Huang , Date : SEP,26,2014
(Jeff Huang / Director)

APPLICATION FOR CERTIFICATION

ON Behalf Of

ZIPPY TECHNOLOGY CORP.

SWITCHING POWER SUPPLY

Model# : **MP1S-6400V**

FCCID:N/A

PREPARED FOR：

ZIPPY TECHNOLOGY CORP.
10F., No.50, MINQUAN RD.,
XINDIAN DIST., NEW TAIPEI CITY
TAIWAN, R.O.C

REPORT BY：

ZIPPY TECHNOLOGY CORP.
10F., No.50, MINQUAN RD.,
XINDIAN DIST., NEW TAIPEI CITY
TAIWAN, R.O.C
TEL： (02)2918-8512
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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.	:	**MP1S-6400V**
(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.

2. General Information

2.1 Production Description

Description	:	Switching Power Supply
Model Number	:	**MP1S-6400V**
Applicant	:	ZIPPY TECHNOLOGY CORP.
Address	:	10F., No.50, MINQUAN RD.,XINDIAN DIST., NEW TAIPEI CITY 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	:	400W

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, MINQUAN RD.,
XINDIAN DIST., NEW TAIPEI CITY
TAIWAN, R.O.C

3. Electronic-Magnetic Interference Test

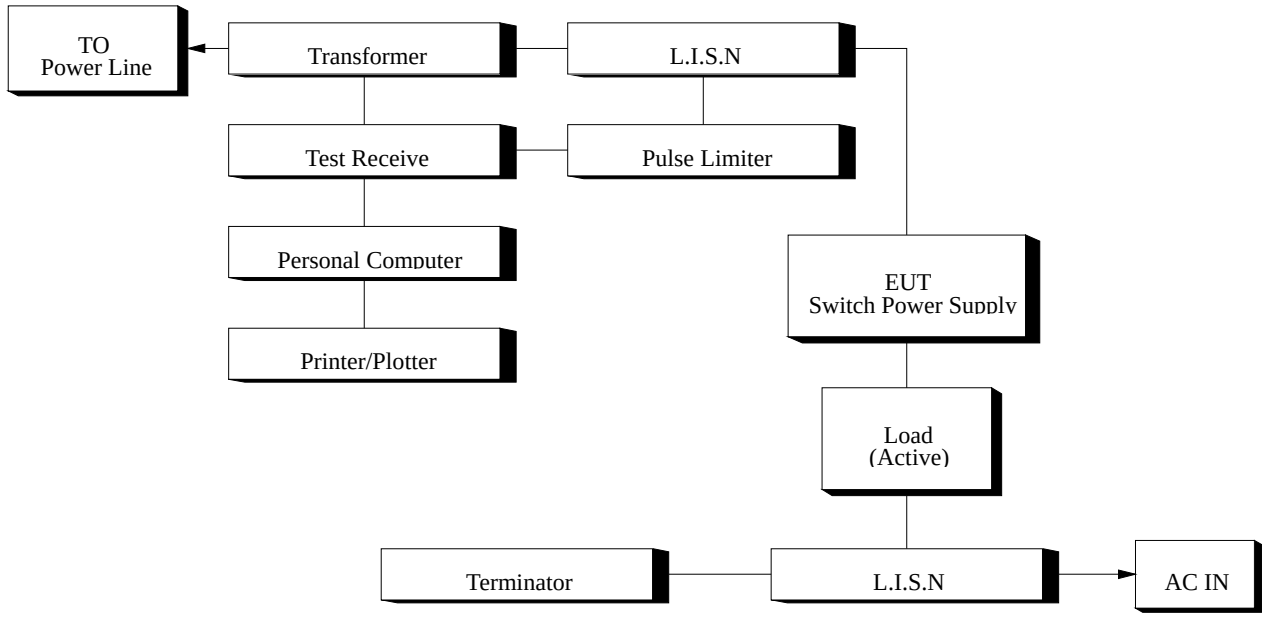
3.1 Conducted Power Line Test

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	ESHS10	Mar.,2014
2	LISN	ROHDE & SCHWARZ	ENV4200	Jan.,2014
3	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 : MP1S-6400V	REPORT NO. : 14092606

Conducted Emission Data

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 65%

Frequency	Reading Level dBuV		Limites
MHz	Line 1	Line 2	DBuV
15.32	52.68	54.32	60.00
15.40	55.67	56.67	60.00
15.52	55.83	53.70	60.00
15.60	55.47	55.23	60.00
15.72	54.14	54.97	60.00
15.84	51.07	51.77	60.00
15.92	51.53	52.40	60.00

Remark：All readings are Quasi-Peak values.

ZIPPY EMC LAB

conduction test

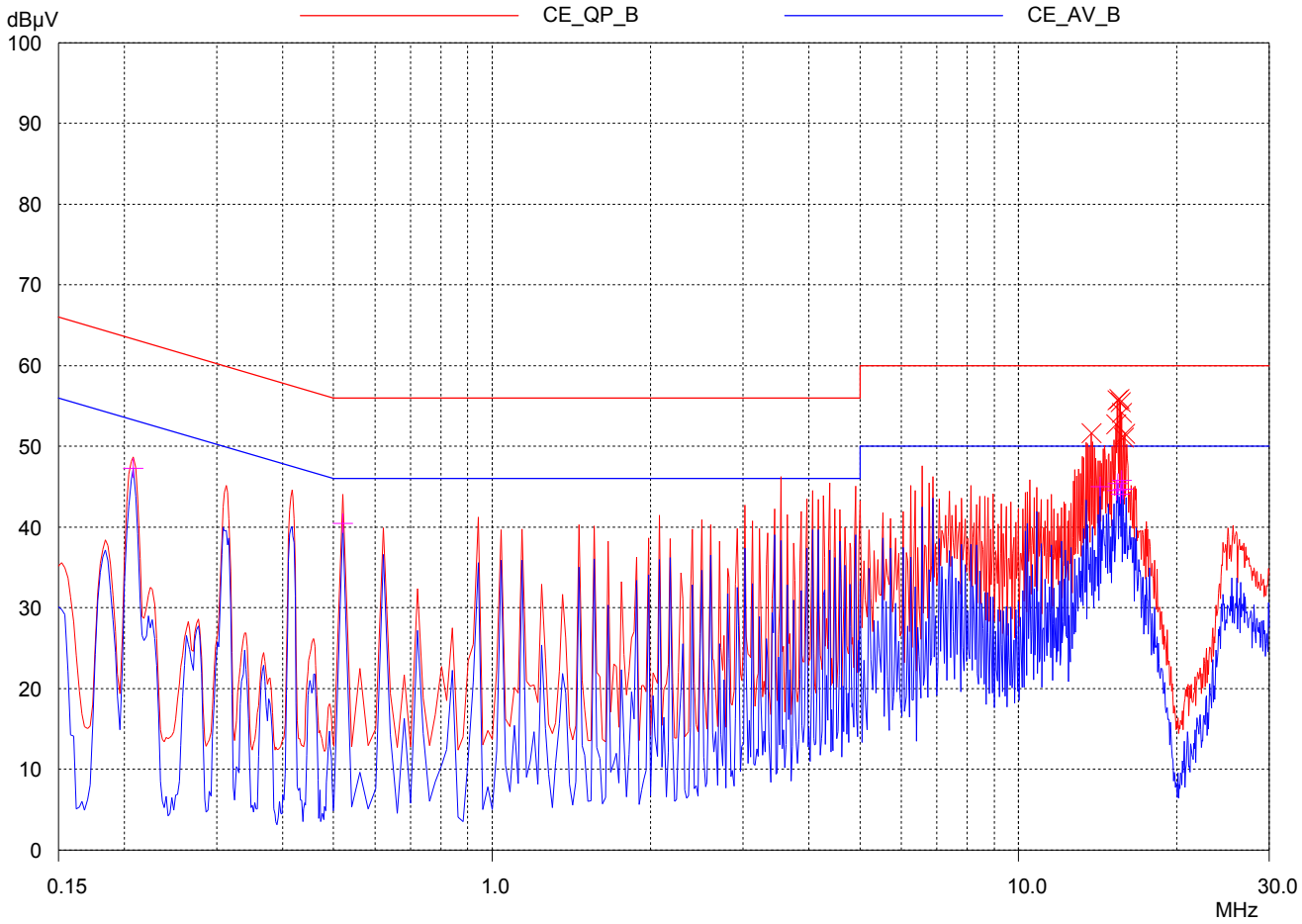
EUT: MP1S-6400V SPS
Manuf: ZIPPY TECH CO..LTD
Op Cond: FULL LOAD
Operator:
Test Spec: EN 55011-- Class B
Comment: Load Condition (14 9 6 0.3 9 2.5)
L220V

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	40kHz	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

conduction test

EUT: MP1S-6400V SPS
Manuf: ZIPPY TECH CO..LTD
Op Cond: FULL LOAD
Operator:
Test Spec: EN 55011-- Class B
Comment: Load Condition (14 9 6 0.3 9 2.5)
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Scan Settings (3 Ranges)

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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	40kHz	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 -
13.76	51.59	60.00	8.41	N	gnd
15.32	52.68	60.00	7.32	N	gnd
15.4	55.67	60.00	4.33	N	gnd
15.52	55.83	60.00	4.17	N	gnd
15.6	55.47	60.00	4.53	N	gnd
15.72	54.14	60.00	5.86	N	gnd
15.84	51.07	60.00	8.93	N	gnd
15.92	51.53	60.00	8.47	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.208	47.27	53.28	6.01	N	gnd
0.52	40.46	46.00	5.54	N	gnd
14.28	45.01	50.00	4.99	N	gnd
15.36	44.51	50.00	5.49	N	gnd
15.44	45.40	50.00	4.60	N	gnd
15.64	44.07	50.00	5.93	N	gnd
15.72	45.77	50.00	4.23	N	gnd
15.8	44.65	50.00	5.35	N	gnd

* limit exceeded

Indicated Phase/PE shows Configuration of max. Emission

ZIPPY EMC LAB

conduction test

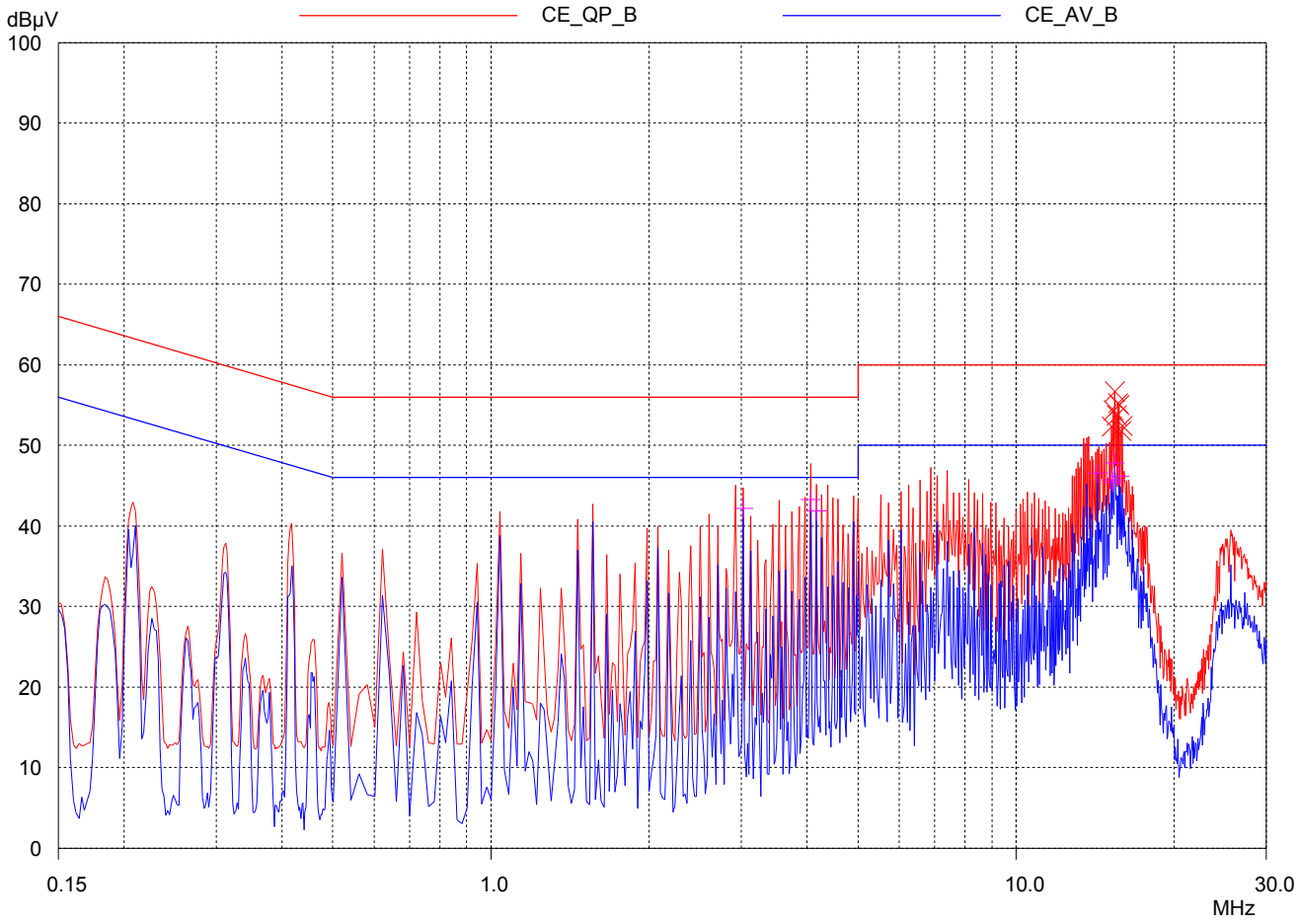
EUT: MP1S-6400V SPS
Manuf: ZIPPY TECH CO..LTD
Op Cond: FULL LOAD
Operator:
Test Spec: EN 55011-- Class B
Comment: Load Condition (14 9 6 0.3 9 2.5)
N220V

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	40kHz	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

conduction test

EUT: MP1S-6400V SPS
Manuf: ZIPPY TECH CO..LTD
Op Cond: FULL LOAD
Operator:
Test Spec: EN 55011-- Class B
Comment: Load Condition (14 9 6 0.3 9 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	40kHz	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 -
15.2	52.34	60.00	7.66	N	gnd
15.32	54.32	60.00	5.68	N	gnd
15.4	56.67	60.00	3.33	N	gnd
15.52	53.70	60.00	6.30	N	gnd
15.6	55.23	60.00	4.77	N	gnd
15.72	54.97	60.00	5.03	N	gnd
15.84	51.77	60.00	8.23	N	gnd
15.92	52.40	60.00	7.60	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
3.02	42.15	46.00	3.85	N	gnd
4.06	43.22	46.00	2.78	N	gnd
4.16	41.82	46.00	4.18	N	gnd
14.28	46.52	50.00	3.48	N	gnd
15.2	45.71	50.00	4.29	N	gnd
15.28	45.40	50.00	4.60	N	gnd
15.4	47.81	50.00	2.19	N	gnd
15.72	46.20	50.00	3.80	N	gnd

* limit exceeded

Indicated Phase/PE shows Configuration of max. Emission

3.2 Radiation Emission Test

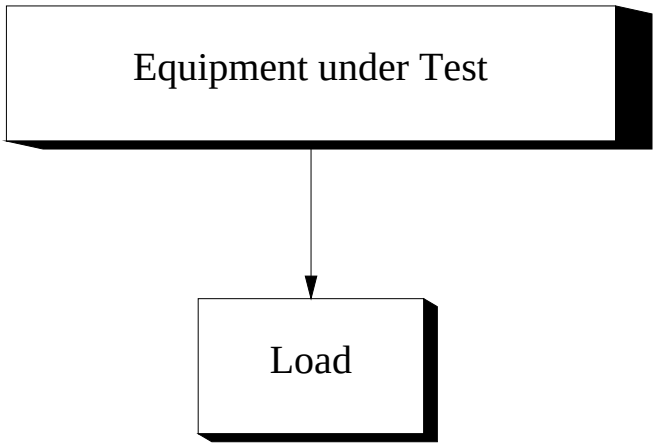
3.2.1 Test Equipment

The following test equipment's are used during the radiated emission test :

Instrument	Manufacture	Type No:	Last Calibration
Spectrum Analyzer	H.P	8594A	May.,2014
Test Receiver	IFR System	A-7550	Jun.,2014
Preamplifier	H.P	8447D	May.,2014
Biconical Ant.	Emco	3110	Jun.,2014
Log-Periodic Ant.	Emco	3146	Jun.,2014
Dipole Antenna	Emco	3121C	May.,2014

3.2.2 Test Setup

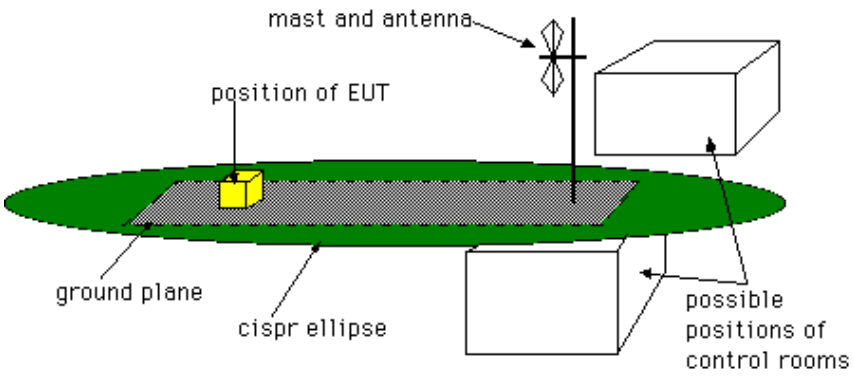
3.2.2.1 Block Diagram of Connection between EUT and simulators



EUT: SWITCHING POWER SUPPLY

3.2.2.2 Open Field Test Site - description

The open field test site (OFTS) is designed to provide an environment in which repeatable tests of radiated emissions can be carried out.
It consists of a flat elliptical area as shown in the diagram below.
The equipment under test and the antenna are placed at the foci of the ellipse.



The antenna height should be remotely adjustable from 1m to 4m. Measuring instrumentation should be outside the ellipse at the position shown or in a room under the ground plane.
The whole or part of the site may be enclosed in an RF transparent building.
For precompliance testing a 3m test site with a fixed height antenna (at 1.5-2m height) and no metallic ground plane may be used. This may be a clear area on a car park or a grass area but should be away from large metallic structures.

3.2.3 Radiated Emission Limit

Class B Limits

Frequency	Distance	Field Strength
MHz	Meter	DB(uV/M)
30-230	10	30
230-1000	10	37

Remarks :
1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrumentantenna and the closed point of any part of the device or system.

3.2.4 EUT Configuration

The equipment's which is listed 4.2.1 are installed on Radiated Emission Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.2.5 Operation Condition of EUT

Same as Conducted Power Line Test which is listed in 3.1.5 .

3.2.6 Radiated Emission Data

The measurement range of radiated emission which is from 30 MHz to 1000 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 : MP1S-6400V	REPORT NO. : 14092606

Radiated Emission Data

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 57%

Frequency	Emission Level	Limits	Remark
	Horizontal		
(MHz)	dBuV/m	dBuV/m	
74.62	12.92	30.00	
247.28	32.23	37.00	
258.92	35.54	37.00	
289.96	28.75	37.00	
414.12	20.50	37.00	
580.96	20.90	37.00	
703.18	20.78	37.00	
877.78	23.87	37.00	
1000.00	24.99	37.00	

Remark：All readings are Quasi-Peak values.

MODEL : MP1S-6400V	REPORT NO. : 14092606

Radiated Emission Data

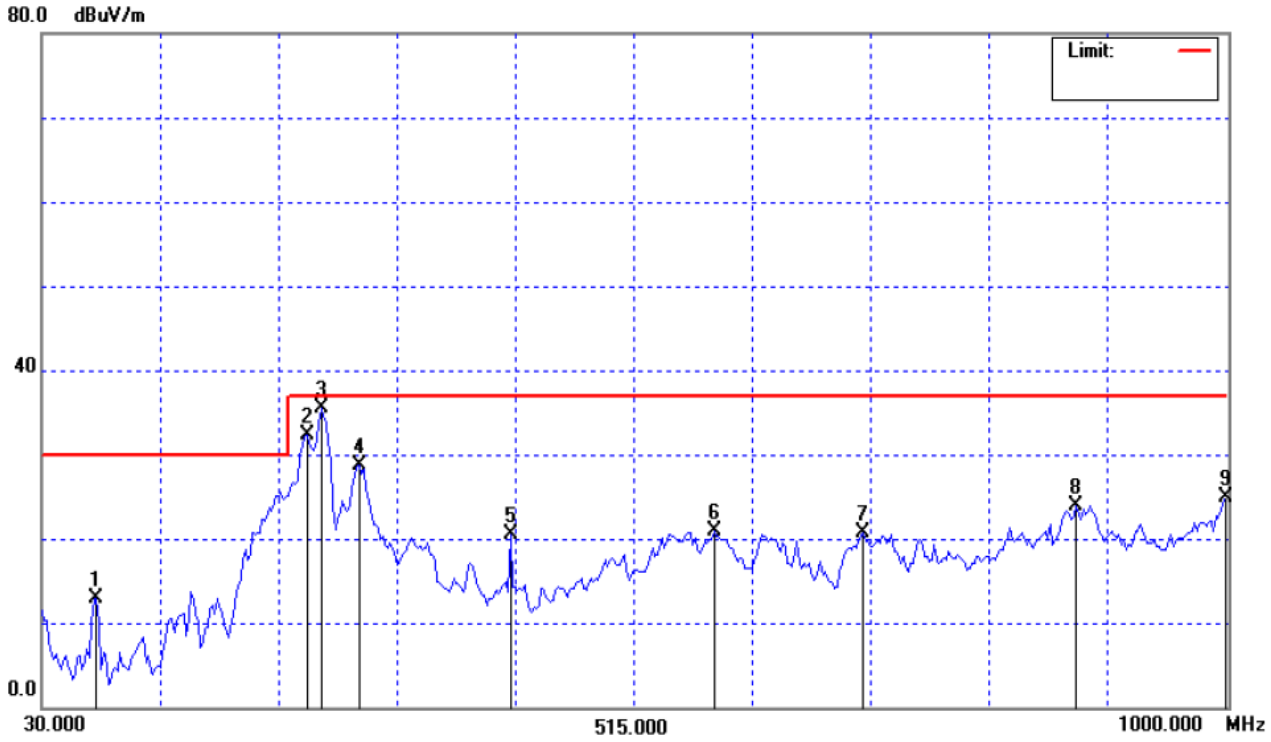
EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 57%

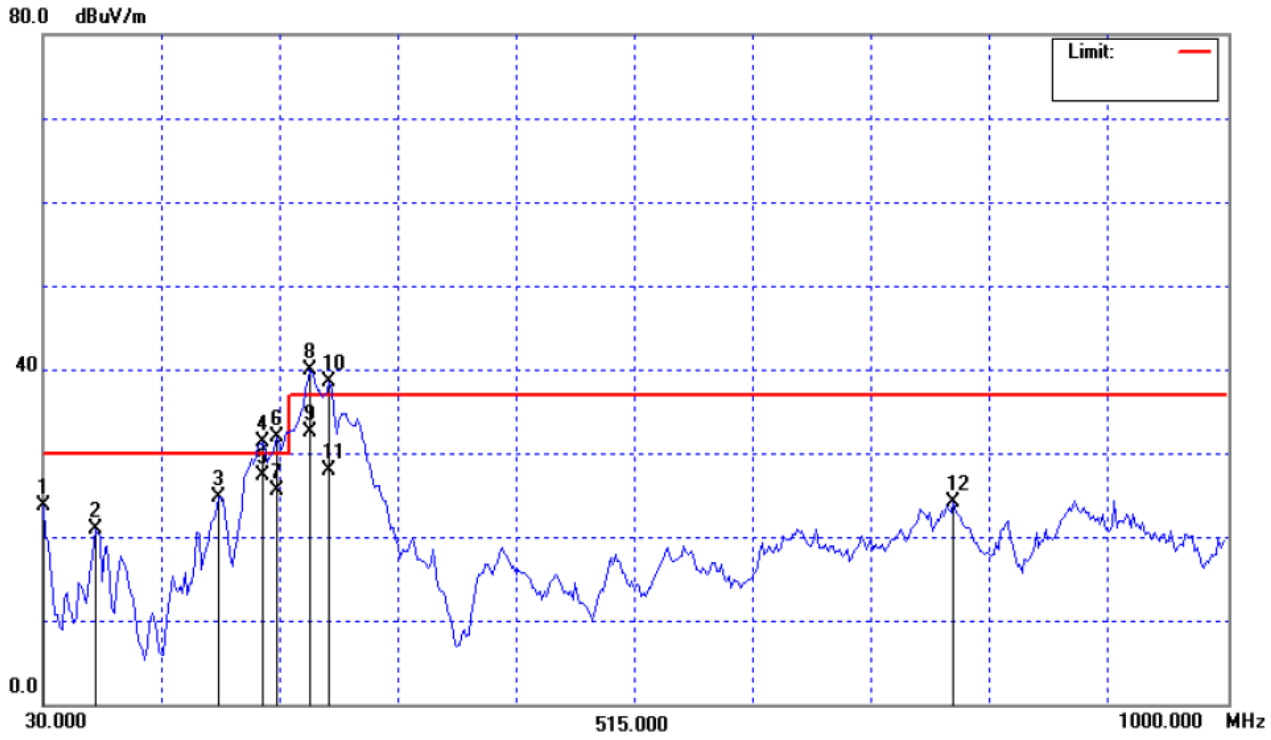
Frequency	Emission Level	Limits	Remark
	Vertical		
(MHz)	dBuV/m	dBuV/m	
30.00	23.70	30.00	
72.68	20.96	30.00	
173.56	24.79	30.00	
210.42	27.35	30.00	
222.06	25.57	30.00	
249.22	32.48	37.00	
264.74	27.93	37.00	
776.90	24.01	37.00	

Remark：All readings are Quasi-Peak values.

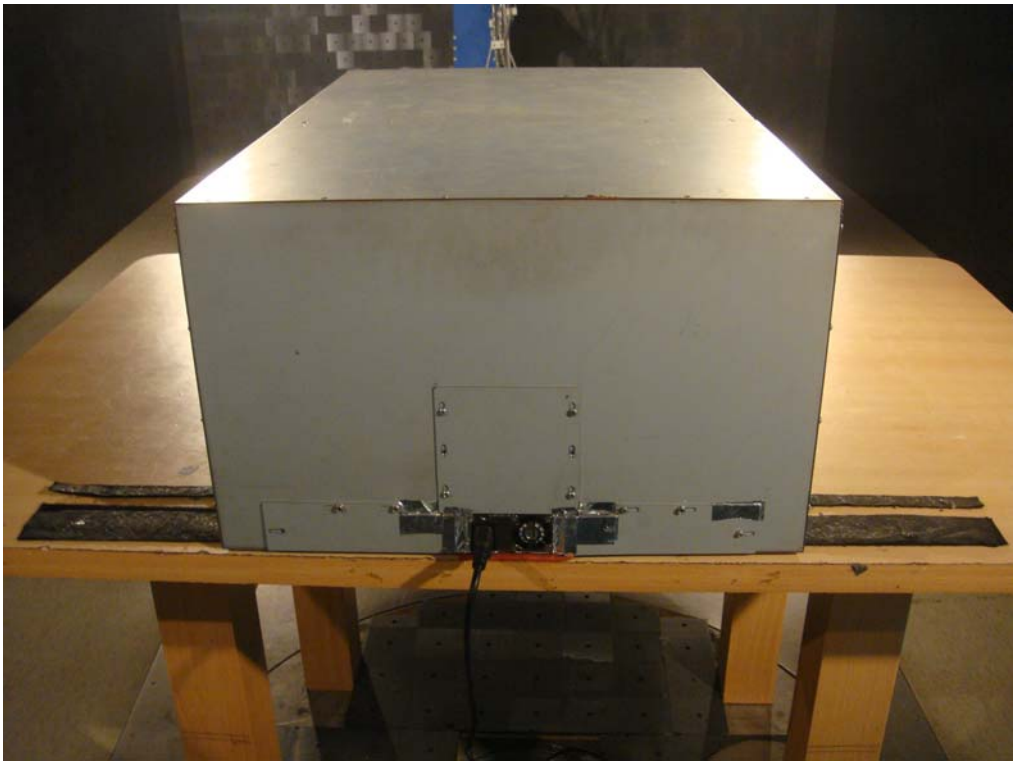
Horizontal Curve



Vertical Curve



3.2.7 Test Photo and Setup



※During the radiated test, the power-supply has to test with chassis, which is not allowed to be operated stand-alone. (For user, final assembly has to comply with corresponding EMC-and safety-regulations.)

4. ESD Measurement

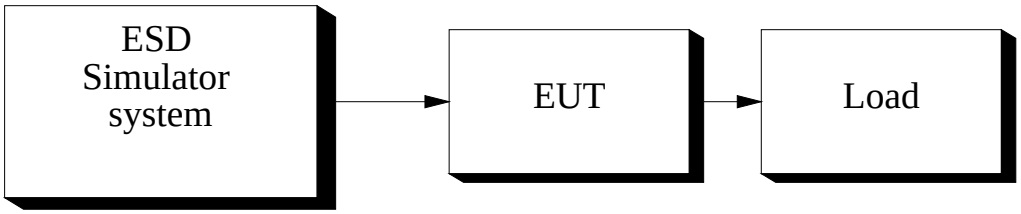
4.1 Test Equipment

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

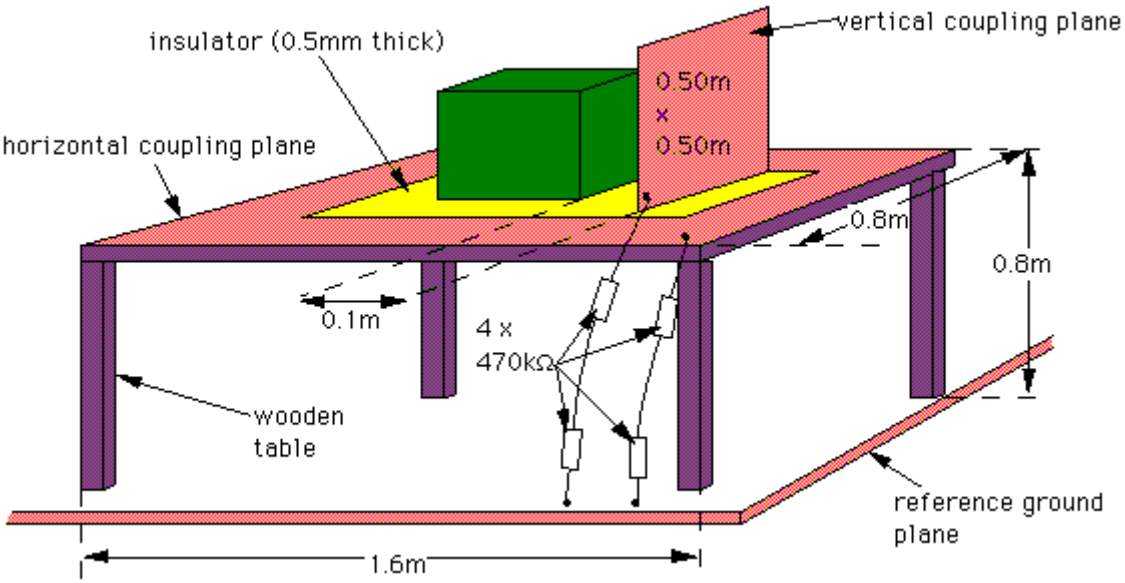
Instrument	Manufacture	Type No:	Last Calibration
ESD Simulator system	Keytek	MZ-15/EC	May.,2014
Electronic Load	D-RAM	Load-2000	N/A

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

EUT	: SWITCH POWER SUPPLY	TEMPERATURE	: 26℃
TEST MODE	: **MP1S-6400V**	HUMIDITY	: 65%

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

※Input Voltage / Frequency : 230Vac/50Hz

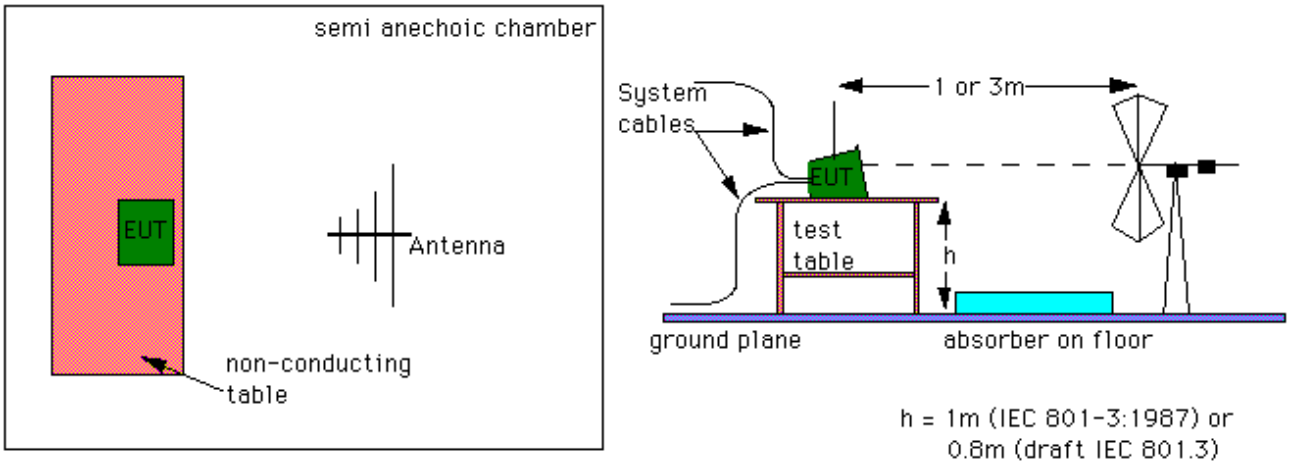
5. Radiated Susceptibility Measurement

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.,2013
Power amplifier	A&R	100A100	Dec.,2013
Field strength meter	A&R	FM2000	Oct.,2013
Field strength sensor	A&R	EP2000	Oct.,2013
Power antenna	A&R	AT1080	Oct.,2013

5.2 Block Diagram of Test Setup



Antennas-layout

For the upper frequency range of 200 to 2500 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-2.5 GHz
4. Sweep Time of Radiated	0.0015 Decade/s

5.6 Test Method

According to IEC 61000-4-3

5.7 Test Result

EUT	: SWITCH POWER SUPPLY	TEMPERATURE	: 26℃
TEST MODE	: **MP1S-6400V**	HUMIDITY	: 65%

Frequency Range (MHz)	Position (Angle)	Polarity (HorV)	Field Strength (V/M)	Results
80-2500	0° (Front)	H	3	Pass
80-2500	90° (Right)	H	3	Pass
80-2500	180° (Back)	H	3	Pass
80-2500	270° (Left)	H	3	Pass
80-2500	0° (Front)	V	3	Pass
80-2500	90° (Right)	V	3	Pass
80-2500	180° (Back)	V	3	Pass
80-2500	270° (Left)	V	3	Pass

Test Result：Criteria A

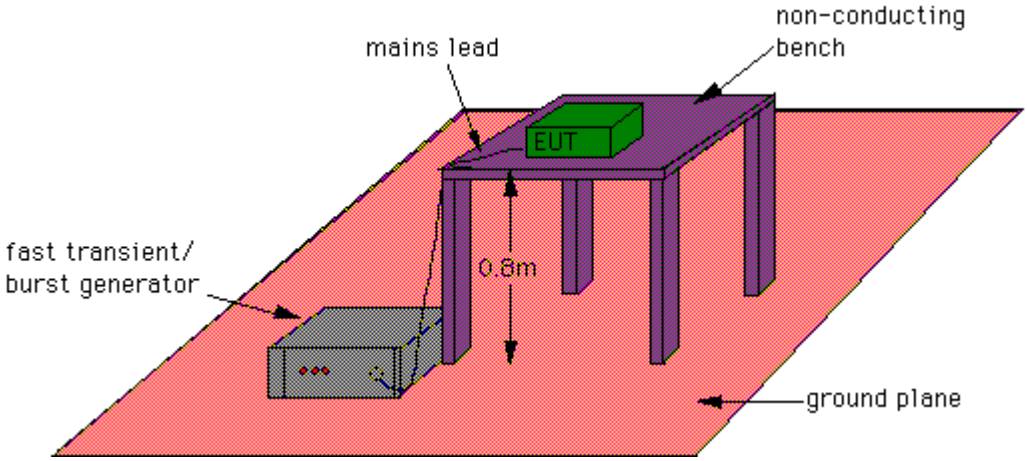
6. Electrical Fast Transient / Burst Measurement

6.1 Test Equipment

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

Instrument	Manufacturer	Type No.	Last Calibration
Fast Transient / Burst enerator	Keytek	EMCpro	May.,2014

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

EUT	: SWITCH POWER SUPPLY	TEMPERATURE	: 26℃
TEST MODE	: **MP1S-6400V**	HUMIDITY	: 65%

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 / Frequency : 230Vac/50Hz

7. Harmonic Current Test

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 65%

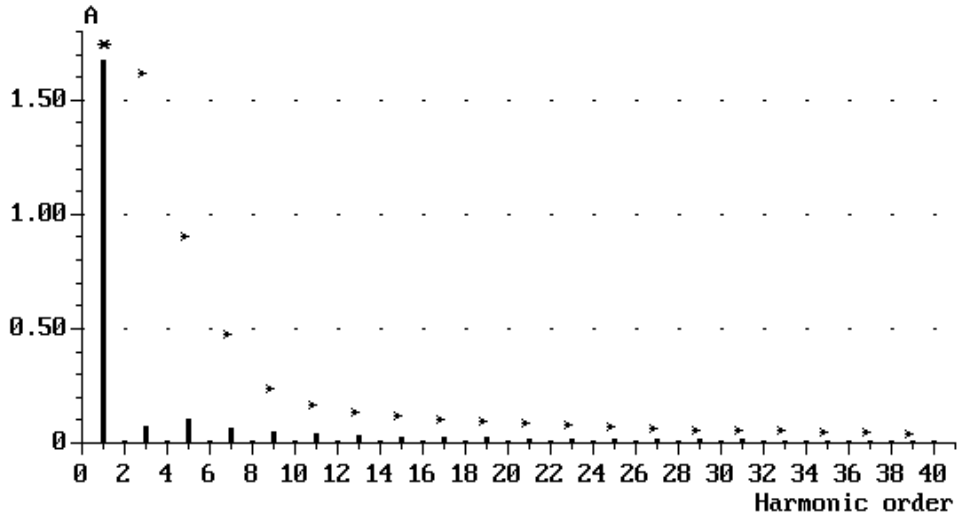
Item	Reading Leve A		Item	Reading Leve A	
	A	Limites		A	Limites
1	2.0991				
3	0.0763	1.6199			
5	0.1066	0.9052			
7	0.0706	0.4764			
9	0.0541	0.2382			
11	0.0432	0.1668			
13	0.0361	0.1411			
15	0.0311	0.1223			
17	0.0274	0.1079			
19	0.0247	0.0965			
21	0.0225	0.0873			
23	0.0207	0.0798			
25	0.0192	0.0734			
27	0.0181	0.0679			
29	0.0171	0.0633			
31	0.0161	0.0592			
33	0.0152	0.0556			
35	0.0145	0.0524			
37	0.0138	0.0496			
39	0.0133	0.0470			

Chroma ANALYZER 6630

Current Harmonics

Setup: CLASS_D
Live
Module: M1

Gen setting: 1(1) U : 230.06 V fu: 50.000 Hz
Analysed periods: 4 I : 2.1074 A P: 476.4 W
Limit: Class D (User def) I1: 2.0991 A
Note:
THD=8.73 % (PF=0.983) PASSED



Next measure
Change to table
Relative current
Log scale
Write to disk

Appl: EUROPE (12112_00)

Chroma ANALYZER 6630

Current Harmonics

Setup: CLASS_D
Live
Module: M1

Gen setting: 1(1) U : 230.06 V fu: 50.000 Hz
Analysed periods: 4 I : 2.1074 A P: 476.4 W
Limit: Class D (User def) I1: 2.0991 A
Note:
THD=8.73 % (PF=0.983) PASSED

No	A	Lim A	No	A	Lim A	No	A	Lim A
1	2.0991		15	0.0311	0.1223	29	0.0171	0.0633
2	0.0007		16	0.0001		30	0.0001	
3	0.0763	1.6199	17	0.0274	0.1079	31	0.0161	0.0592
4	0.0001		18	0.0001		32	0.0001	
5	0.1066	0.9052	19	0.0247	0.0965	33	0.0152	0.0556
6	0.0001		20	0.0001		34	0.0001	
7	0.0706	0.4764	21	0.0225	0.0873	35	0.0145	0.0524
8	0.0001		22	0.0001		36	0.0003	
9	0.0541	0.2382	23	0.0207	0.0798	37	0.0138	0.0496
10	0.0000		24	0.0001		38	0.0001	
11	0.0432	0.1668	25	0.0192	0.0734	39	0.0133	0.0470
12	0.0001		26	0.0001		40	0.0002	
13	0.0361	0.1411	27	0.0181	0.0679			
14	0.0001		28	0.0002				

Current range: 3 Ap

Next measure
Change to bar graph
Relative current
Write to disk

Appl: EUROPE (12112_01)

8. Voltage Fluctuation And Flicker Test

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 65%

Item	Reading	Limit	Result
Pst	0.000	1.00	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

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 65%

Waveform	Voltage	Output:LC	Phs Ref	Phs Ang	Tests	Delay	Result
12 Ohm	-2000V	MAINS:L1/PE	L1	0 deg.	5	60 sec	Pass
12 Ohm	-2000V	MAINS:L1/PE	L1	90 deg.	5	60 sec	Pass
12 Ohm	-2000V	MAINS:L1/PE	L1	270 deg.	5	60 sec	Pass
12 Ohm	2000V	MAINS:L1/PE	L1	0 deg.	5	60 sec	Pass
12 Ohm	2000V	MAINS:L1/PE	L1	90 deg.	5	60 sec	Pass
12 Ohm	2000V	MAINS:L1/PE	L1	270 deg.	5	60 sec	Pass
12 Ohm	-2000V	MAINS:L2/PE	L1	0 deg.	5	60 sec	Pass
12 Ohm	-2000V	MAINS:L2/PE	L1	90 deg.	5	60 sec	Pass
12 Ohm	-2000V	MAINS:L2/PE	L1	270 deg.	5	60 sec	Pass
12 Ohm	2000V	MAINS:L2/PE	L1	0 deg.	5	60 sec	Pass
12 Ohm	2000V	MAINS:L2/PE	L1	90 deg.	5	60 sec	Pass
12 Ohm	2000V	MAINS:L2/PE	L1	270 deg.	5	60 sec	Pass
2 Ohm	-1000V	MAINS:L1/L2	L1	0 deg.	5	60 sec	Pass
2 Ohm	-1000V	MAINS:L1/L2	L1	90 deg.	5	60 sec	Pass
2 Ohm	-1000V	MAINS:L1/L2	L1	270 deg.	5	60 sec	Pass
2 Ohm	1000V	MAINS:L1/L2	L1	0 deg.	5	60 sec	Pass
2 Ohm	1000V	MAINS:L1/L2	L1	90 deg.	5	60 sec	Pass
2 Ohm	1000V	MAINS:L1/L2	L1	270 deg.	5	60 sec	Pass

10. Conducted Immunity Test

EUT	: SWITCH POWER SUPPLY	TEMPERATURE	: 26℃
TEST MODE	: **MP1S-6400V**	HUMIDITY	: 65%

Test frequency Range : 150kHz ~ 80MHz
Frequency Step : 1% of the momentary frequency
Dwell Time : Minimum 3 sec. per frequency
Modulation : 1kHz Sine Wave with 80% Amplitude Modulation

Frequency Range (MHz)	Polarity (HorV)	Field Strength (V/M)	Performance		Result
			Required	Observation	
0.15-80	H	3	A	A	Pass

11. Voltage Dip, Interruptions Immiunity Test

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

TEST MODE : **MP1S-6400V** HUMIDITY : 65%

Test Voltage	Reduction %	Duration (Periods)	Performance Required	Results
AC 115V	100	0.5	A	Pass
	100	1	B	Pass
	60	5	B	Pass
	30	25	C	Pass
	100	250	C	Pass
AC 230V	100	0.5	A	Pass
	100	1	B	Pass
	60	5	B	Pass
	30	25	C	Pass
	100	250	C	Pass

12. Power Frequency Magnetic Field (PFM) Immunity Test

EUT : SWITCH POWER SUPPLY TEMPERATURE : 26℃

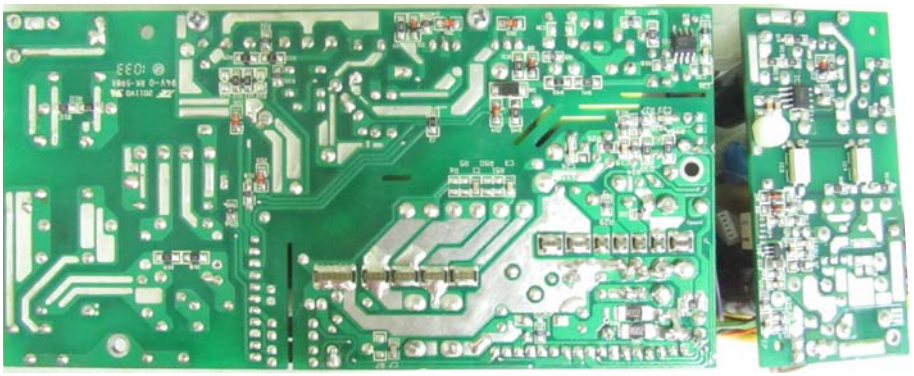
TEST MODE : **MP1S-6400V** HUMIDITY : 65%

Magnetic Field Orientation	Magnetic Field (A/m)	Performance		Result
		Required	Observation	
X-axis	1A	A	A	Pass
Y-axis	1A	A	A	Pass
Z-axis	1A	A	A	Pass

13. 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

14. EMI Reduction Method During Compliance Testing

1.No modification was made during test.