

CE/EMC COMPLIANCE REPORT

for

GLOBTEK, INC.

Switching Adapter

Model Number : GT-81041-2007.5-4.5-ZZZ:output rated:3.0VDC,3A.
GT-81041-2007.5-X.X-ZZZ:output rated:3.0VDC to
7.5VDC (max 3A or 15W)
GT-81041-2009.4-X.X-ZZZ:output rated:8.0VDC to
9.4VDC (max 1.8A or 15W)
GT-81041-2014-X.X-ZZZ:output rated:9.5VDC to 14VDC
(max 1.7A or 20.4W)
GT-81041-2024-X.X-ZZZ:output rated:18VDC to 24VDC
(max 1.7A or 20.4W)
ZZZ=AC input plug type:W2=USA,W2E=Europe,
W3U=UK,W2A=Australia,W2J=Japan,
W2C=China,W2K=Korea

Prepared for : GLOBTEK, INC.

Address : 186 VETERAN DRIVE, NORTHVALE, N.J. 07647 U.S.A.

Prepared By : NS Technology Co., Ltd.

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NS Technology Co., Ltd.

Applicant:	GLOBTEK, INC.		
Address:	186 VETERAN DRIVE, NORTHVALE, N.J. 07647 U.S.A.		
E.U.T:	Switching Adapter		
Model Number:	GT-81041-2007.5-4.5-ZZZ:output rated:3.0VDC,3A. GT-81041-2007.5-X.X-ZZZ:output rated:3.0VDC to 7.5VDC (max 3A or 15W) GT-81041-2009.4-X.X-ZZZ:output rated:8.0VDC to 9.4VDC (max 1.8A or 15W) GT-81041-2014-X.X-ZZZ:output rated:9.5VDC to 14VDC (max 1.7A or 20.4W) GT-81041-2024-X.X-ZZZ:output rated:18VDC to 24VDC (max 1.7A or 20.4W) ZZZ=AC input plug type:W2=USA,W2E=Europe,W3U=UK, W2A=Australia,W2J=Japan,W2C=China,W2K=Korea		
Trade Name:	GlobTek, Inc	Serial No.:	-----
Date of Receipt:	Feb. 18, 2008	Date of Test:	Feb. 20, 2008
Test Specification:	EN 55022:2006 Class B CISPR 22:2005 Class B EN 61000-3-2:2006 EN 61000-3-3:1995+A1:2001+A2:2005 EN 55024:1998+A1:2001+A2:2003 CISPR 24:1997+A1:2001+A2:2002		
Test Result:	The equipment under test was found to be compliance with the requirements of the standards applied.		
		Issue Date: Feb. 21, 2008	
Tested by:	Reviewed by:	Approved by:	
_____ Jade / Engineer	_____ Chris Du / Supervisor	_____ Steven Lee / Manager	
Other Aspects:	None.		
<i>Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested</i>			
<i>This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of NS Electromagnetic Technology Co., Ltd.</i>			

1. GENERAL PRODUCT INFORMATION

1.1. Product Function

Refer to Technical Construction Form and User Manual.

1.2. Description of Device (EUT)

Description : Switching Adapter
Model No. : GT-81041-2007.5-4.5-W2E
System Input Voltage : AC 230V/50Hz
DC Line : Unshielded, Undtachable 1.8m

1.3. Difference between Model Numbers

Note: The model names are different only for the output voltage and current and the plug type, but the PCB board is identical.

1.4. Independent Operation Modes

The basic operation modes are:

1.4.1. Full Load

1.4.2. Half Load

1.4.3. No Load

2. TEST SITES

2.1. Test Facilities

EMC Lab : Certificated by TUV Rheinland, Germany.
Date of registration: July 28, 2003

Certificated by FCC, USA
Registration No.: 897109
Date of registration: October 10, 2003

Certificated by VCCI, Japan
Registration No.: R-2527 & C-2770
Date of registration: March 23, 2007

Certificated by CNAL, CHINA
Registration No.: L1744
Date of registration: November 25, 2004

Certificated by Intertek ETL SEMKO
Registration No.: TMP-013
Date of registration: June 11, 2005

Certificated by TUV/PS, Hong Kong
Date of registration: December 1, 2005

Certificated by Industry Canada
Registration No.: 5936
Date of registration: March 24, 2006

Certificated by ATCB, America
Date of registration: August 03, 2006

Name of Firm : NS Technology Co., Ltd.

Site Location : Chenwu Industrial Zone, Houjie Town, Dongguan City,
Guangdong, China

2.2. List of Test and Measurement Instruments

2.2.1. For conducted emission at the mains terminal test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Test Receiver	Rohde & Schwarz	ESCS30	100199	Mar.24,07	Mar.24,08
L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	100071	Mar.24,07	Mar.24,08
L.I.S.N.#2(AUX)	Rohde & Schwarz	ESH3-Z5	100317	Mar.24,07	Mar.24,08

2.2.2. For radiated emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Test Receiver	Rohde & Schwarz	ESCS30	100340	Mar.24,07	Mar.24,08
Spectrum Analyzer	HP	8593E	3448U00806	Mar.24,07	Mar.24,08
Amplifier	Agilent	8447D	2944A10488	May 2,07	May 2,08
Bilog Antenna	EMCO	3142B	00022050	May 2,07	May 2,08

2.2.3. For harmonic current emissions and voltage fluctuations/flicker test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Analyzer	California Instrument	PACS-1	72134	Apr.11,07	Apr.11,08
Voltage Source	California Instrument	5001ix-400	55194	Apr.11,07	Apr.11,08

2.2.4. For electrostatic discharge immunity test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
ESD Generator	HAEFELY	PESD1610	H301530	Apr.11,07	Apr.11,08

2.2.5. For radio frequency electromagnetic field immunity test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Signal Generator	HP	8648A	3426A01263	Apr.11,07	Apr.11,08
Amplifier	A&R	500A100	17034	May 2,07	May 2,08
Amplifier	A&R	100W/1000M1	17028	May 2,07	May 2,08
Isotropic Field Monitor	A&R	FM2000	16829	May 2,07	May 2,08
Isotropic Field Probe	A&R	FP2000	16755	May 2,07	May 2,08
Biconic Antenna	EMCO	3108	9507-2534	May 2,07	May 2,08
Log-periodic Antenna	A&R	AT1080	16812	May 2,07	May 2,08

2.2.6. For electrical fast transient/burst immunity test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EFT Generator	HAEFELY	PEFT4010	150546	Apr.11,07	Apr.11,08
EFT Coupling Clamp	HAEFELY	IP4A	150407	Apr.11,07	Apr.11,08

2.2.7. For surge immunity test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Surge Controller	HAEFELY	PSURGE8000	150336	Apr.11,07	Apr.11,08
Surge Impulse Module	HAEFELY	PIM100	150007	Apr.11,07	Apr.11,08
Surge Coupling Module	HAEFELY	PCD100	149870	Apr.11,07	Apr.11,08

2.2.8. For injected currents susceptibility test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Signal Generator	HP	8648A	3426A01263	Apr.11,07	Apr.11,08
Amplifier	HAEFELY	PAMP250	149594	May 2,07	May 2,08
CDN	Luthi	L-801M2/M3	2015	May 2,07	May 2,08

2.2.9. For power frequency magnetic field immunity test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Magnetic Field Tester	HAEFELY	MAG100.1	150579	May 2,07	May 2,08

2.2.10. For voltage dips and short interruptions immunity test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
DIPS Tester	HAEFELY	PLINE 1610	150370	Apr.11,07	Apr.11,08

3. TEST SET-UP AND OPERATION MODES

3.1. Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

Immunity: The equipment under test (EUT) was configured to the representative operating mode and conditions.

3.2. Block Diagram of Test Set-up

System Diagram of Connections Between EUT and Simulators



(EUT: Switching Adapter)

3.3. Test Operation Mode and Test Software

Refer to Test Setup in clause 4 & 5.

3.4. Special Accessories and Auxiliary Equipment

None.

3.5. Countermeasures to Achieve EMC Compliance

None.

4. EMISSION TEST RESULTS

4.1. Conducted Disturbance at Mains Terminals Test

RESULT : **Pass**
Test procedure : EN 55022:2006
Frequency range : 0.15~30MHz
Test Site : Shielded Room
Limits : EN 55022:2006 Class B

Test Setup

Date of test : Feb. 20, 2008
Model No. : GT-81041-2007.5-4.5-W2E
Input Voltage : AC 230V/50Hz
Operation Mode : Full Load / Half Load / No Load

The EUT was put on a wooden table which was 0.8metre high above the ground and connected to the AC mains through a Artificial Mains Network (A.M.N). The mains lead in excess of 1 m separating the EUT from the AMN was folded back and forth parallel to the lead so as to form a bundle with a length of 0.3m to 0.4m.

The EUT was kept 0.4m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCS30) was set at 9KHz.

The frequency range from 150 KHz to 30 MHz was investigated.

The test data of the worst case condition(s) was reported on the following page. All the scanning waveform were attached within Appendix I.

Test Data

EUT:	Switching Adapter	Temperature:	24°C
M/N:	GT-81041-2007.5-4.5-W2E	Humidity:	56%
Test Mode:	Full Load	Test Engineer:	Jade

Conducted Disturbance at Mains Terminals Test					
Frequency (MHz)	Reading (dB μ V)			Limit (dB μ V)	
	Quasi-Peak	Average	Ports	Quasi-Peak	Average
0.159	57.2	47.3	Neutral	65.5	55.5
0.215	53.4	43.1	Neutral	63.0	53.0
0.272	49.5	38.1	Neutral	61.7	51.7
0.582	46.2	30.4	Neutral	56.0	46.0
0.994	45.3	29.9	Neutral	56.0	46.0
24.400	34.6	24.7	Neutral	60.0	50.0
0.162	58.4	50.8	Line	65.3	55.3
0.214	55.1	45.1	Line	63.0	53.0
0.269	50.3	39.9	Line	61.2	51.2
0.538	47.4	33.5	Line	56.0	46.0
0.943	48.2	32.9	Line	56.0	46.0
24.922	37.5	27.8	Line	60.0	50.0

4.2. Radiated Disturbance Test

RESULT : **Pass**
Test procedure : EN 55022:2006
Frequency range : 30~1000MHz
Test Site : 966 Chamber
Limits : EN 55022:2006 Class B

Test Setup

Date of testing : Feb. 20, 2008
Model No. : GT-81041-2007.5-4.5-W2E
Input Voltage : AC 230V/50Hz
Operation Mode : Full Load / Half Load / No Load

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 to 4 m for horizontal and vertical polarizations. The broadband antenna (calibrated by dipole antenna) was used as a receiving antenna.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCS30) was 120 KHz.

The EUT was tested in Chamber Site.

The test data of the worst case condition(s) was reported on the following pages. All the scanning waveform were attached within Appendix II.

Test Data

EUT	:	Switching Adapter	Temperature	:	25°C
Model No.	:	GT-81041-2007.5-4.5-W2E	Humidity	:	55%
Test Mode	:	Full Load	Test Engineer	:	Jade

Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading Horizontal dB μ V	Emission Level Horizontal dB μ V/m	Over Limits dB	Limits dB μ V/m
30.000	23.56	0.74	2.56	26.86	-13.14	40.00
77.530	9.92	1.30	14.46	25.68	-14.32	40.00
155.130	11.52	1.92	13.38	26.82	-13.18	40.00
193.930	12.56	2.19	10.90	25.65	-14.35	40.00
216.240	13.16	2.31	15.19	30.66	-9.34	40.00
255.040	14.21	2.57	14.20	30.98	-16.02	47.00

Remark: The worst emission was detected at **216.240MHz** with corrected signal level of **30.66dB μ V/m**(Limit was **40.00 dB μ V/m**) when the antenna was at **Horizontal** polarization and at **2.3m** high, the turn table was at **182°** .

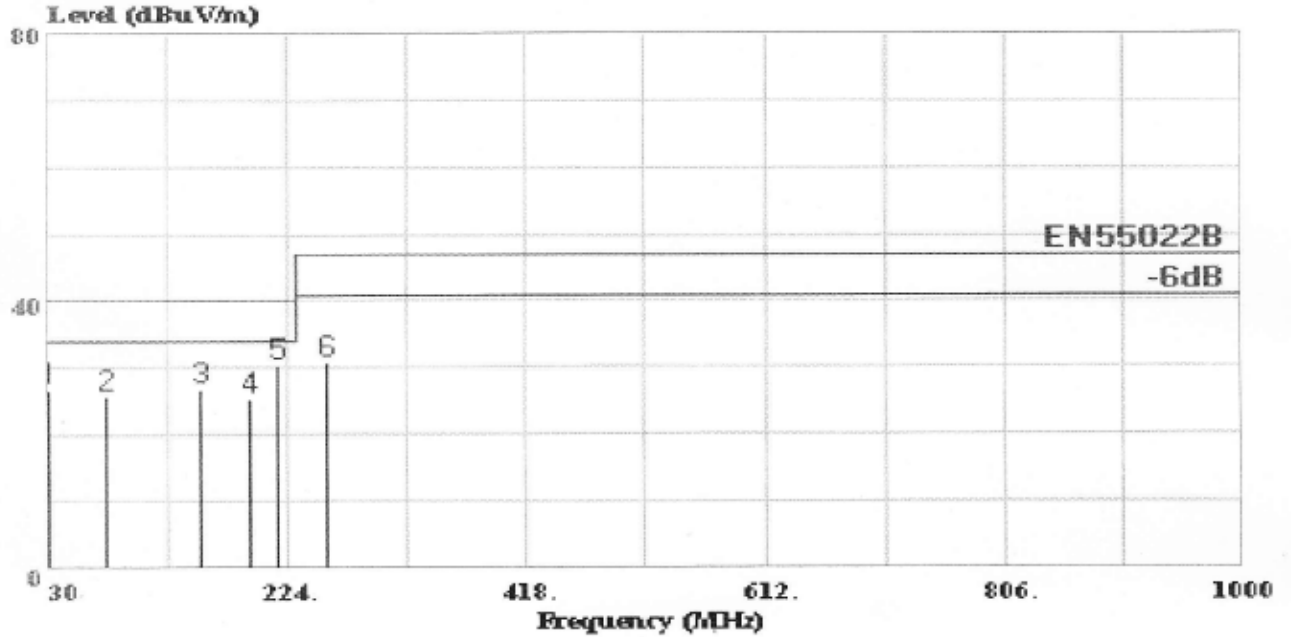
Frequency MHz	Antenna Factor dB	Cable Loss dB	Meter Reading Vertical dB μ V	Emission Level Vertical dB μ V/m	Over Limits dB	Limits dB μ V/m
30.680	22.60	0.76	10.00	33.36	-6.64	40.00
51.340	9.71	1.00	20.47	31.18	-8.82	40.00
72.680	9.73	1.31	13.42	24.46	-15.54	40.00
99.840	11.18	1.49	3.10	15.77	-24.23	40.00
193.930	12.56	2.19	4.09	18.84	-21.16	40.00
269.590	14.61	2.66	0.22	17.49	-29.51	47.00

Remark: The worst emission was detected at **30.680MHz** with corrected signal level of **33.36dB μ V/m** (Limit was **40.00 dB μ V/m**) when the antenna was at **Vertical** polarization and at **1.2m** high, the turn table was at **39°** .

- Note:
1. All readings were Quasi-Peak values.
 2. Emission Level = Antenna Factor + Cable Loss + Meter Reading
 3. 0 ° was the table front facing the antenna. Degree was calculated from 0 ° clockwise facing the antenna.

Data#: 385 File#: \\966pcl\radiation\D\Dve.emi

Date: 2008-02-20 Time: 16:14:29



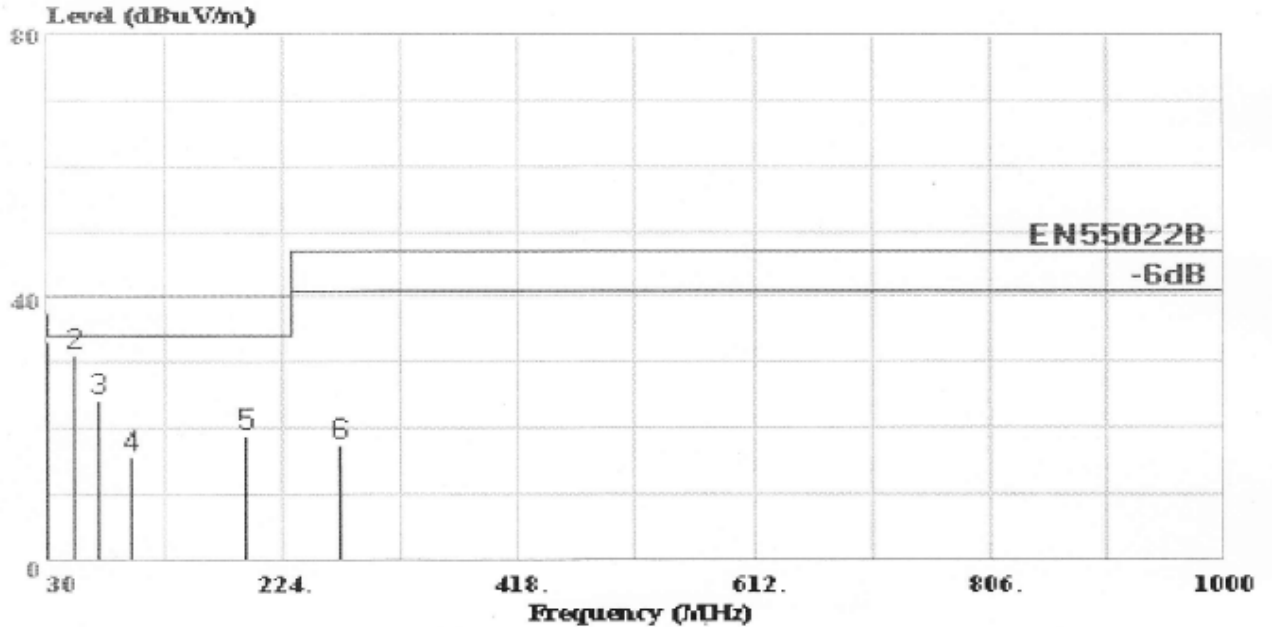
Site : 966 Chamber
Condition : EN55022B 3m 3142B HORIZONTAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25°C Humi:55%
Memo : Full Load
: Ant high:2.3m Table angle:182'

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	Freq	Level	Over	Limit	Read	Probe	Cable
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss
			dB	dBuV/m	dBuV	dB	dB
1	30.000	26.86	-13.14	40.00	2.56	23.56	0.74
2	77.530	25.68	-14.32	40.00	14.46	9.92	1.30
3	155.130	26.82	-13.18	40.00	13.38	11.52	1.92
4	193.930	25.65	-14.35	40.00	10.90	12.56	2.19
5	216.240	30.66	-9.34	40.00	15.19	13.16	2.31
6	255.040	30.98	-16.02	47.00	14.20	14.21	2.57

Data#: 386 File#: \\966pcl\radiation\D\Dve.emi

Date: 2008-02-20 Time: 16:15:02



Site : 966 Chamber
Condition : EN55022B 3m 3142B VERTICAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : Full Load
: Ant high:1.2m Table angle:39'

Page: 1

	Freq	Level	Over	Limit	Read	Probe	Cable
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss
			dB	dBuV/m	dBuV	dB	dB
1	30.680	33.36	-6.64	40.00	10.00	22.60	0.76
2	51.340	31.18	-8.82	40.00	20.47	9.71	1.00
3	72.680	24.46	-15.54	40.00	13.42	9.73	1.31
4	99.840	15.77	-24.23	40.00	3.10	11.18	1.49
5	193.930	18.84	-21.16	40.00	4.09	12.56	2.19
6	269.590	17.49	-29.51	47.00	0.22	14.61	2.66

4.3. Harmonic Current Emissions on AC Mains Test

RESULT	: Pass
Test procedure	: EN 61000-3-2:2006
Measured harmonics	: 1~40th
Limits	: EN 61000-3-2:2006

There is no need for Harmonics test to be performed on this product (rated power is less than 75W) in accordance with EN 61000-3-2:2006.

For further details, please refer to Clause 7 of EN 61000-3-2:2006 which states:

“For the following categories of equipment, limits are not specified in this edition of the standard:

- Equipment with a rated power of 75W or less, other than lighting equipment.”

4.4. Voltage Fluctuations and Flicker on AC Mains Test

RESULT	: Pass
Test procedure	: EN 61000-3-3:1995+A1:2001+A2:2005
Limits	: EN 61000-3-3:1995+A1:2001+A2:2005

There is no need for Flicker test to be performed on this product in accordance with EN 61000-3-3:1995+A1:2001+A2:2005.

For further details, please refer to Clause 6.1 of EN EN 61000-3-3:1995+A1:2001+A2:2005 which states:

“For voltage changes caused by manual switching, equipment is deemed to comply without further testing if the maximum r.m.s. input current (including inrush current) evaluated over each 10 ms half-period zero-crossings does not exceed 20 A, and the supply current after inrush is within a variation band of 1.5A.”

5. IMMUNITY TEST RESULT

5.1. Description of Performance Criteria:

Performance criteria A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Performance criteria B

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test. If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Performance criteria C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. Functions, and/or information stored in non-volatile memory, or protected by a backup, shall not be lost.

5.2. Electrostatic Discharge Immunity Test

RESULT : **Pass**

Test procedure : EN 55024:1998+A1:2001+A2:2003

Basic standard : EN 61000-4-2:1995+A1:1998+A2:2001

Test specification : +/-4.0kV(Contact discharge)
+/-8.0kV(Air discharge)

Number of discharges : ≥ 10 (Air discharge for single polarity discharge)
 ≥ 25 (Contact discharge for single polarity discharge)

Polarity : Positive/Negative

Performance criterion : B

Test Setup

Date of Test : Feb. 20, 2008

Model No. : GT-81041-2007.5-4.5-W2E

Input Voltage : AC 230V/50Hz

Operation Mode : Full Load

Temperature : 24°C

Humidity : 56%

Table 1: Electrostatic Discharge Immunity Test Result

Discharge Location	Type of discharge	Result
Slot 8 points	Air	Ok
HCP 4 points	Contact	Ok
VCP 4 points	Contact	Ok

*Remark: 1. No obvious change of function was found after test.
2. Discharge should be considered on Contact and Air and Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP).*

5.3. Radio Frequency Electromagnetic Field Immunity Test

RESULT : **Pass**
 Test procedure : EN 55024:1998+A1:2001+A2:2003
 Basic standard : EN 61000-4-3:2002+A1:2002
 Performance criterion : A

Test Setup

Date of Test : Feb. 20, 2008
 Model No. : GT-81041-2007.5-4.5-W2E
 Input Voltage : AC 230V/50Hz
 Operation Mode : Full Load
 Temperature : 24°C
 Humidity : 56%

The EUT and its simulators were placed on a turn table which was 0.8 meter above the ground. The EUT was set 3 m away from the transmitting antenna which was mounted on an antenna tower. Both horizontal and vertical polarization of the antenna were set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually.

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

All the scanning conditions were as follows:

Condition of Test	Remarks
1. Field Strength	3 V/m (Severity Level 2)
2. Radiated Signal	Modulated
3. Scanning Frequency	80 - 1000 MHz
4. Sweeping time of radiated	0.0015 decade/s
5. Dwell Time	1.5 Sec.

Table 2: Radio Frequency Electromagnetic Field Immunity Test Result

Position	Modulated signal	Test level	Step	Result
Front	AM 80% 1kHz	3 V/m	1%	Ok
Right				Ok
Rear				Ok
Left				Ok

Remark: The EUT was operated as intended during and after the test.

5.4. Electrical Fast Transient/Burst Immunity Test

RESULT	: Pass
Test procedure	: EN 55024:1998+A1:2001+A2:2003
Basic standard	: EN 61000-4-4:2004
Pulsform	: Tr/Th = 5/50ns
Repetition Frequency	: 100kHz
Test Duration	: 60s
Performance criterion	: B

Test Setup

Date of Test	: Feb. 20, 2008
Model No.	: GT-81041-2007.5-4.5-W2E
Input Voltage	: AC 230V/50Hz
Operation Mode	: Full Load
Temperature	: 24°C
Humidity	: 56%

The EUT and its simulators were placed 0.8m high above the ground reference plane which was a min. 2m*2m metallic sheet with 0.65mm minimum thickness. This reference ground plane shall project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5m.

1. For input and AC power ports:

The EUT was connected to the power mains by using a coupling device which coupled the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test can't less than 2 mins.

2. For signal lines and control lines ports:

None.

3. For DC input and DC output power ports:

None.

Table 3: Electrical Fast Transient/Burst Immunity Test Result

Coupling Ports		Coupling Voltage	Inject Method	Result
AC power ports	L	+/-1kV	Direct	Ok
	N	+/-1kV		Ok
	L-N	+/-1kV		Ok

Remark: No obvious change of function was found after test.

5.5. Surge Immunity Test

RESULT	: Pass
Test procedure	: EN 55024:1998+A1:2001+A2:2003
Basic standard	: EN 61000-4-5:1995+A1:2001
Pulsform	: Tr/Td= 1.2/50us
Test Duration	: 60s
Performance criterion	: B

Test Setup

Date of Test	: Feb. 20, 2008
Model No.	: GT-81041-2007.5-4.5-W2E
Input Voltage	: AC 230V/50Hz
Operation Mode	: Full Load
Temperature	: 24°C
Humidity	: 56%

2 Ω effective output impedance of the generator was used for L-N test. 12 Ω effective output impedance of the generator was used for L-PE, N-PE test.

5 positive and 5 negative (polarity) tests were applied successively synchronized to the voltage phase 0°, 90°, 180°, 270° to L-N, L-PE, N-PE respectively. The repetition rate was 1 per minute during test.

1. For input and AC power ports:

The EUT was connected to the power mains by using a coupling device which coupled the surge interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration was 1 minute.

2. For signal lines and control lines ports:

None.

3. For DC input and DC output power ports:

None.

Table 4: Surge Immunity Test Result

Coupling Ports		Coupling Voltage	Coupling Phase / Result			
			0°	90°	180°	270°
AC power ports	L-N	+/-1kV	Ok	Ok	Ok	Ok

Remark: No obvious change of function was found after test.

5.6. Injected Currents Susceptibility Test

RESULT	: Pass
Test procedure	: EN 55024:1998+A1:2001+A2:2003
Basic standard	: EN 61000-4-6:1996+A1:2001
Test specification	: 3V(r.m.s) unmodulated,1kHz sinusoidal signal, AM 80%, 0.15MHz ~ 80MHz
Performance criterion	: A

Test Setup

Date of Test	: Feb. 20, 2008
Model No.	: GT-81041-2007.5-4.5-W2E
Input Voltage	: AC 230V/50Hz
Operation Mode	: Full Load
Temperature	: 24°C
Humidity	: 56%

The EUT were placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) was placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT were as short as possible, and their height above the ground reference plane were between 30 and 50 mm (where possible).

The frequency range was swept from 150KHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1KHz sine wave.

The rate of sweep shall not exceed 1.5×10^{-3} decades/s. Where the frequency was swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.

Table 5: Injected Currents Susceptibility Test Result

Coupling ports	Voltage (r.m.s)	Modulation	Freq. step	Dwell time	Coupling method	Result
AC power ports	3V	1kHz AM 80%	1%	1.5s	CDN	Ok
DC power ports	/		/	/	EM Clamp	/
Signal/control	/		/	/	EM Clamp	/

Remark: The EUT was operated as intended during and after the test.

5.7. Power Frequency Magnetic Field Immunity Test

RESULT : **Pass**

Test procedure : EN 55024:1998+A1:2001+A2:2003

Basic standard : EN 61000-4-8:1993+A1:2001

Performance criterion : A

There is no need for this test to be performed on this product.

The immunity against power frequency magnetic field was not tested because the Product do not contain components, which are susceptible to magnetic fields.

5.8. Voltage Dips and Short Interruptions Immunity Test

RESULT : **Pass**
Test procedure : EN 55024:1998+A1:2001+A2:2003
Basic standard : EN61000-4-11:2004
Test specification : 0%U_T / 0.5P, Criterion: B
70%U_T / 25P, Criterion: C
0%U_T / 250P, Criterion: C

Test Setup

Date of Test : Feb. 20, 2008
Model No. : GT-81041-2007.5-4.5-W2E
Input Voltage : AC 230V/50Hz
Operation Mode : Full Load
Temperature : 24°C
Humidity : 56%

The interruptions was introduced at selected phase angles with specified duration.
Recorded any degradation of performance.

Table 7: Voltage Dips and Short Interruptions Immunity Test Result

Test Level % UT	Voltage Dips & Short Interruptions % UT	Duration (in period)	Criterion	Result
0	100	0.5P	B	PASS
70	30	25P	C	PASS
0	100	250P	C	PASS

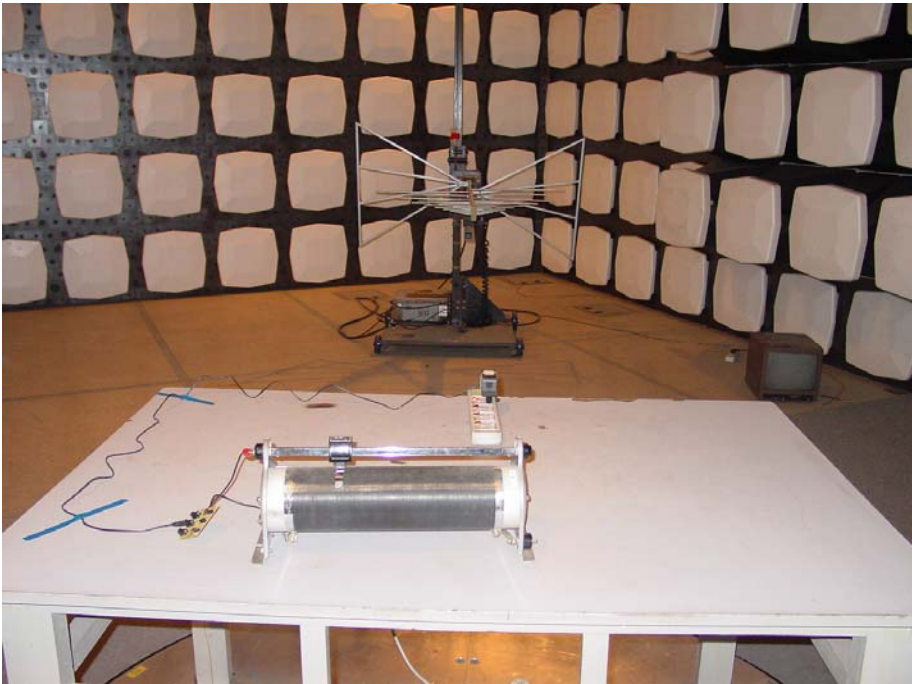
Remark: No obvious change of function was found after test.

6. PHOTOGRAPHS OF TEST SET-UP

6.1. Set-up for conducted disturbance at mains terminals test



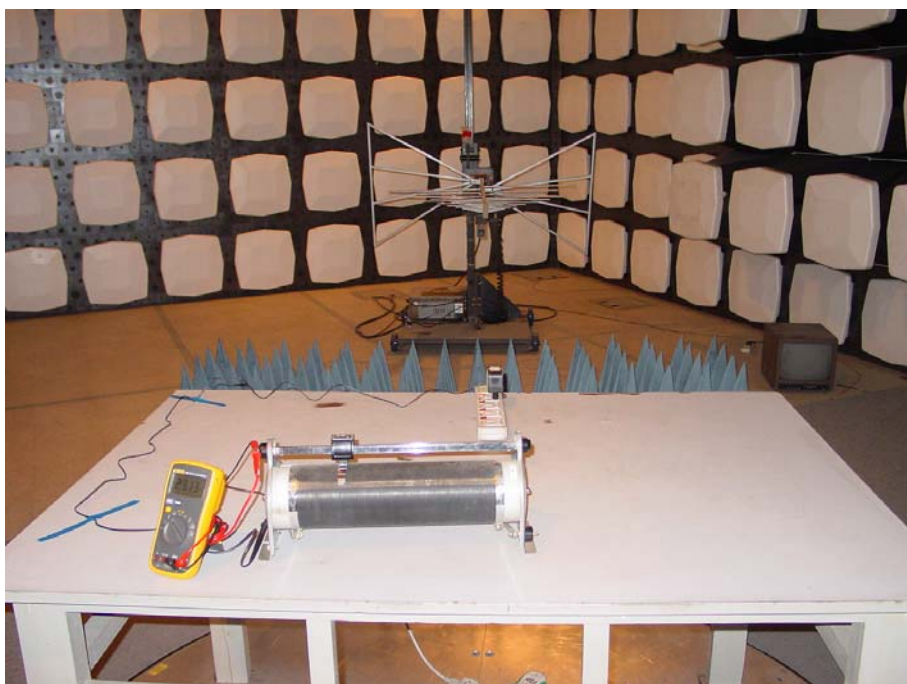
6.2. Set-up for radiated disturbances test



6.3. Set-up for electrostatic discharge immunity test



6.4. Set-up for radio frequency electromagnetic field immunity test



6.5. Set-up for electrical fast transient/burst immunity test



6.6. Set-up for surge immunity test



6.7. Set-up for injected currents susceptibility test



6.8. Set-up for voltage dips and short interruptions immunity test



7. PHOTOGRAPHS OF THE EUT

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
General Appearance of the PCB

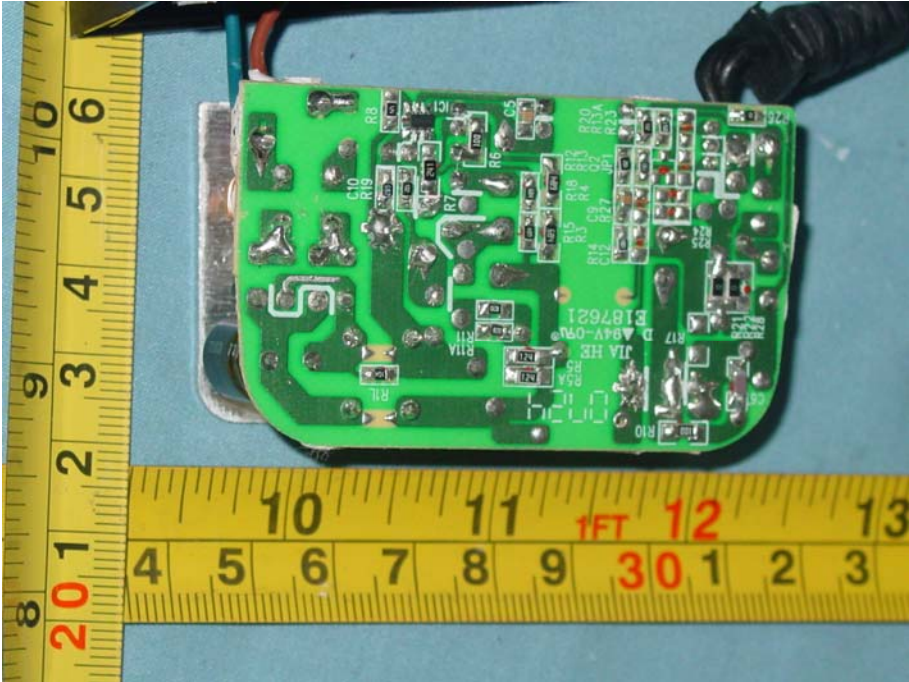
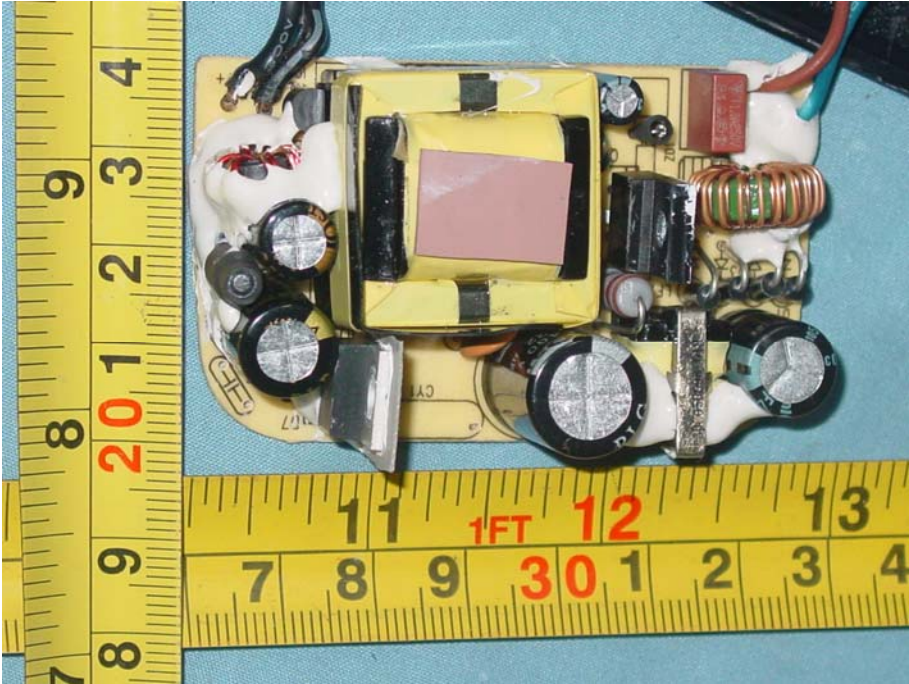


Figure 4
General Appearance of the PCB



Figure 5
General Appearance of the PCB



APPENDIX I

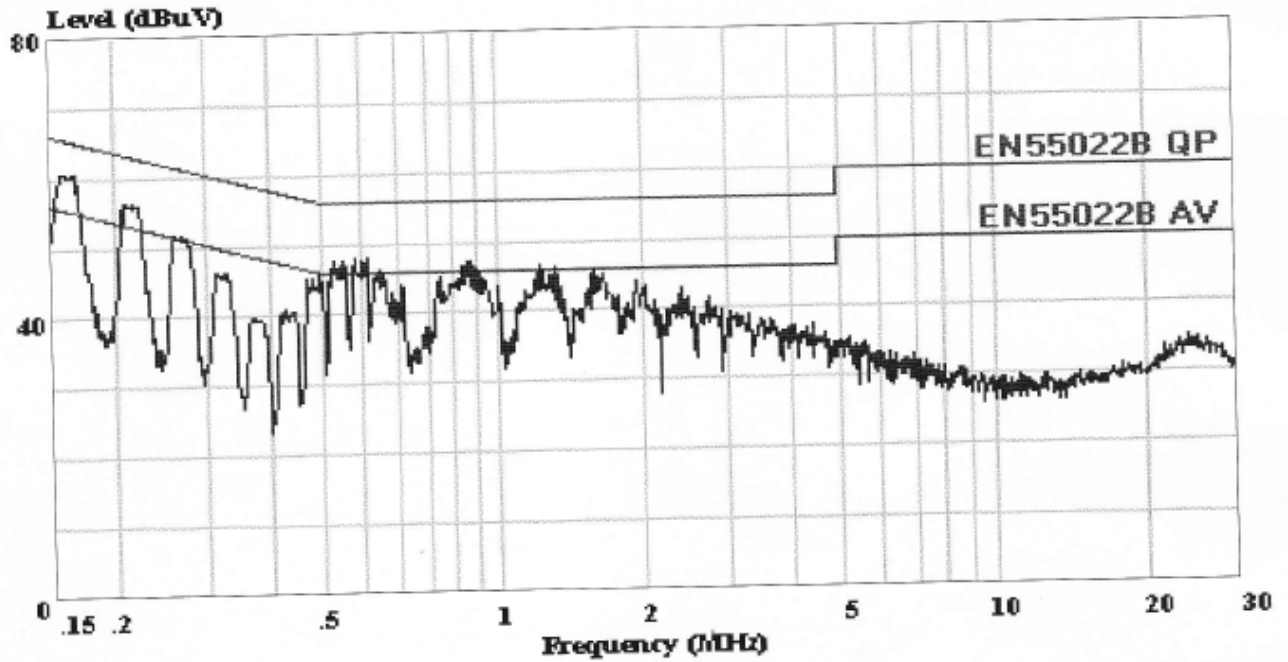
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Chenwu Industrial Zone,
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Guangdong, China
Tel:0769-5935656
Fax:0769-5991080
Http://www.nscn.cn

Data#: 122 File#: D:\Conduction\D\Dve.emi

Date: 2008-02-20 Time: 15:59:39



Site : 733 Shielded Room
Condition : EN55022B AV FACTOR NEUTRAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:24'C Humi:56%
Memo : Full Load

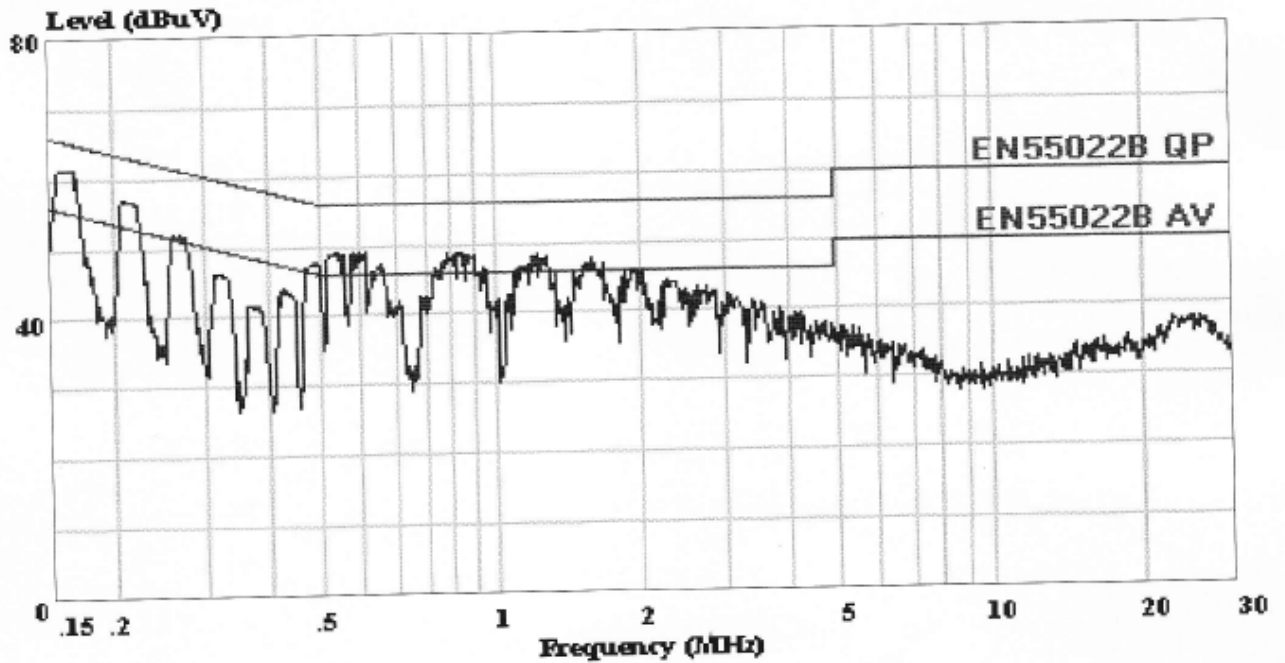
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Houjie Town, Dongguan,
Guangdong, China
Tel: 0769-5935656
Fax: 0769-5991080
Http://www.nscn.cn

Data#: 120 File#: D:\Conduction\D\Dve.emi

Date: 2008-02-20 Time: 15:57:19



Site : 733 Shielded Room
Condition : EN55022B AV FACTOR LINE
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:24'C Humi:56%
Memo : Full Load

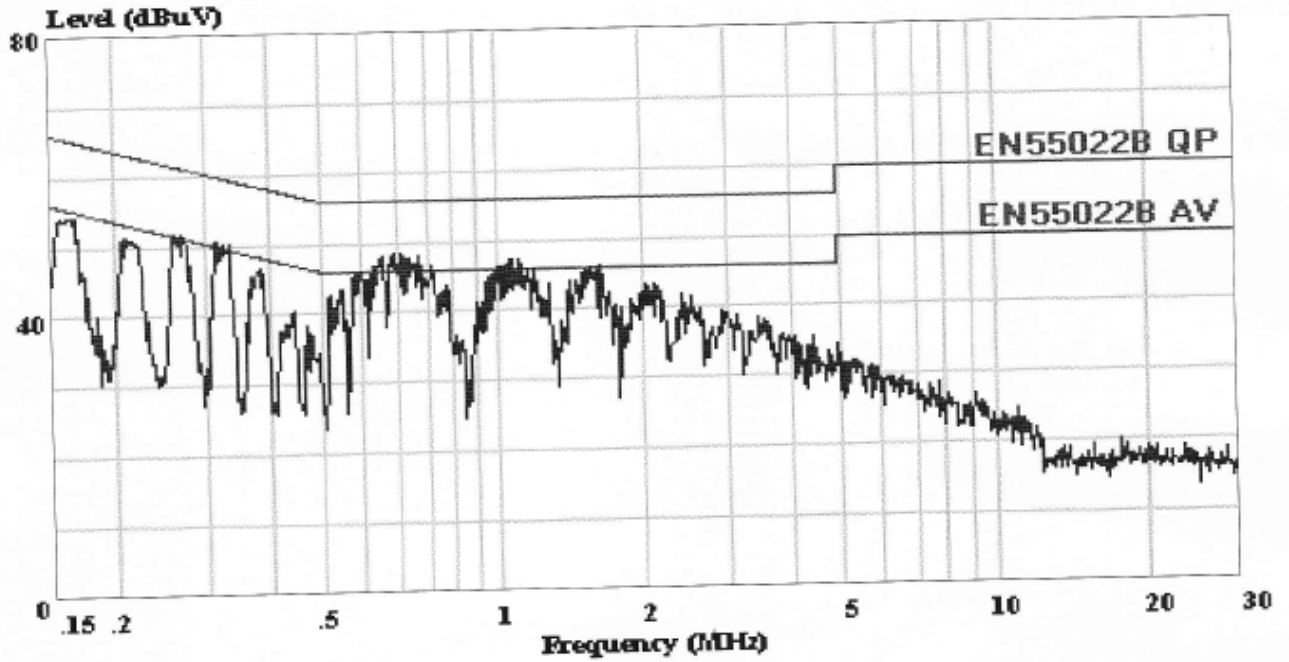
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Guangdong, China
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Http://www.nscn.cn

Data#: 124 File#: D:\Conduction\D\Dve.emi

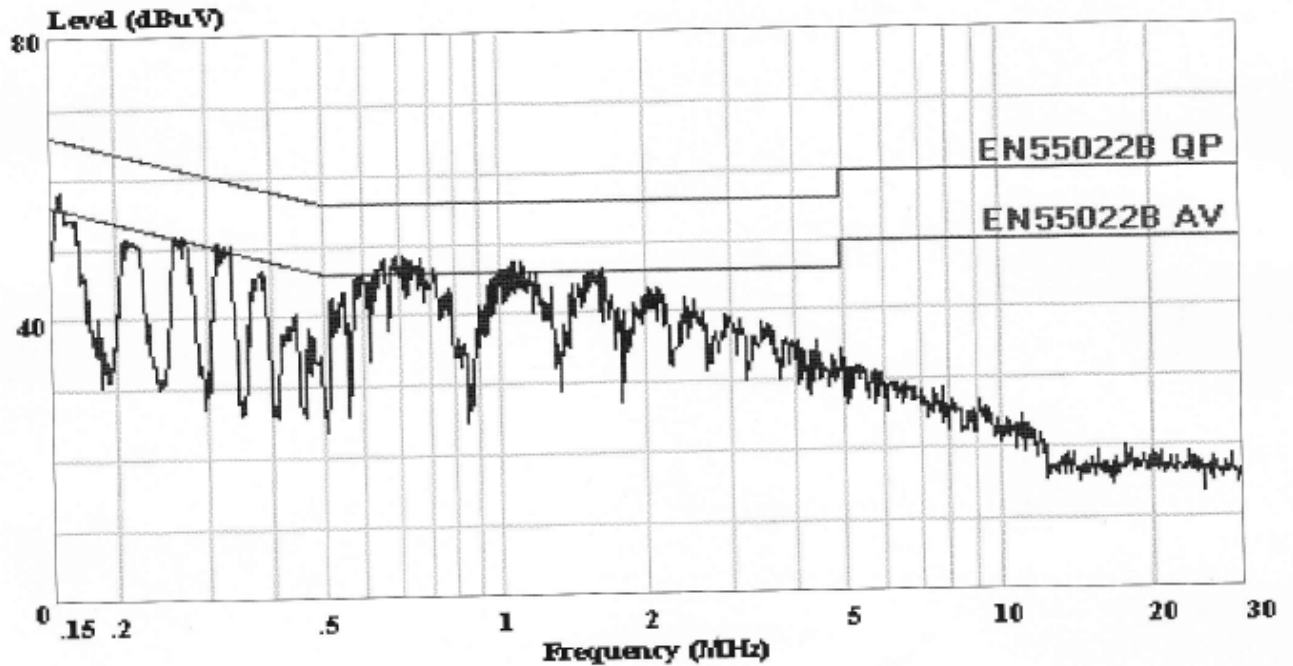
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Site : 733 Shielded Room
Condition : EN55022B AV FACTOR NEUTRAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:24'C Humi:56%
Memo : Half Load

Data#: 125 File#: D:\Conduction\D\Dve.emi

Date: 2008-02-20 Time: 16:05:24



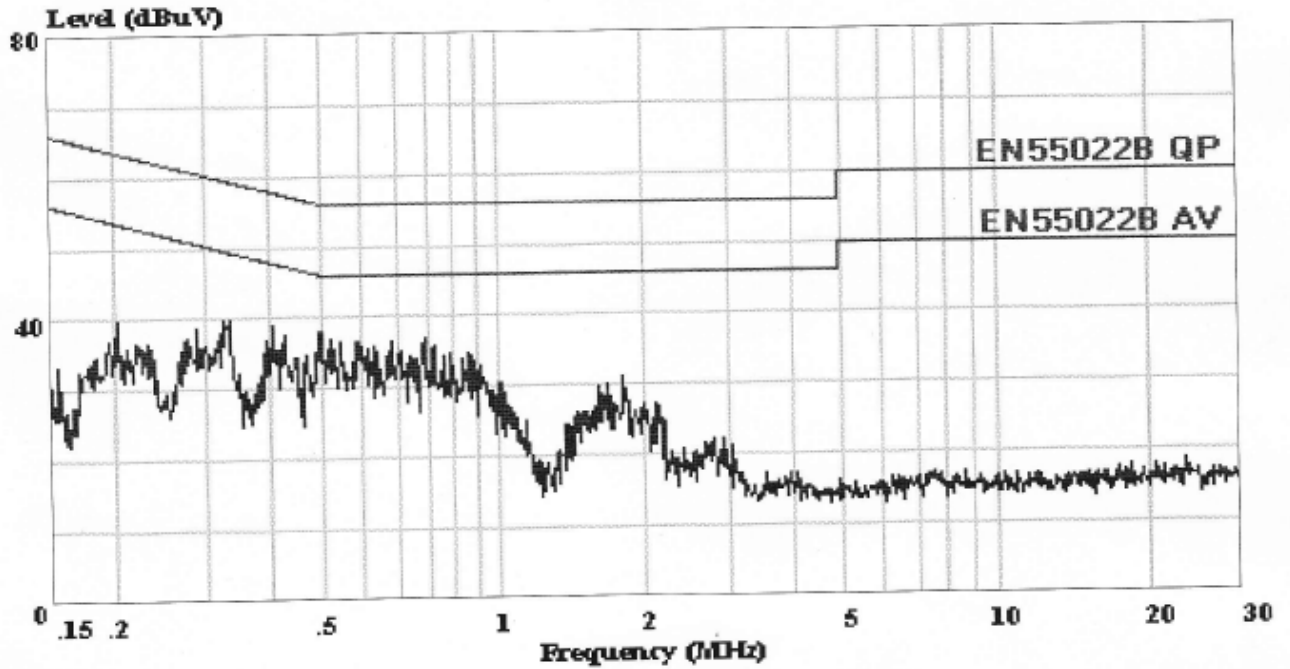
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Condition : EN55022B AV FACTOR LINE
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:24'C Humi:56%
Memo : Half Load

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Data#: 127 File#: D:\Conduction\D\Dve.emi

Date: 2008-02-20 Time: 16:08:14



Site : 733 Shielded Room
Condition : EN55022B AV FACTOR NEUTRAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:24'C Humi:56%
Memo : No Load

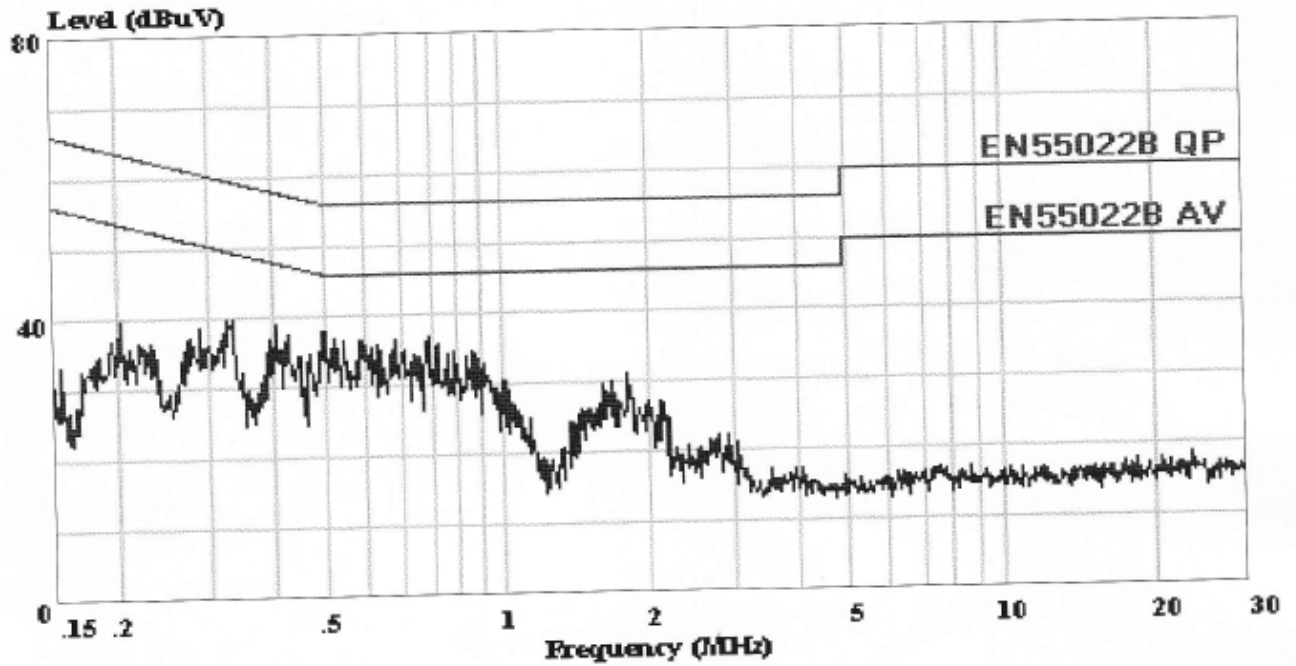
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Data#: 126 File#: D:\Conduction\D\Dve.emi

Date: 2008-02-20 Time: 16:06:09

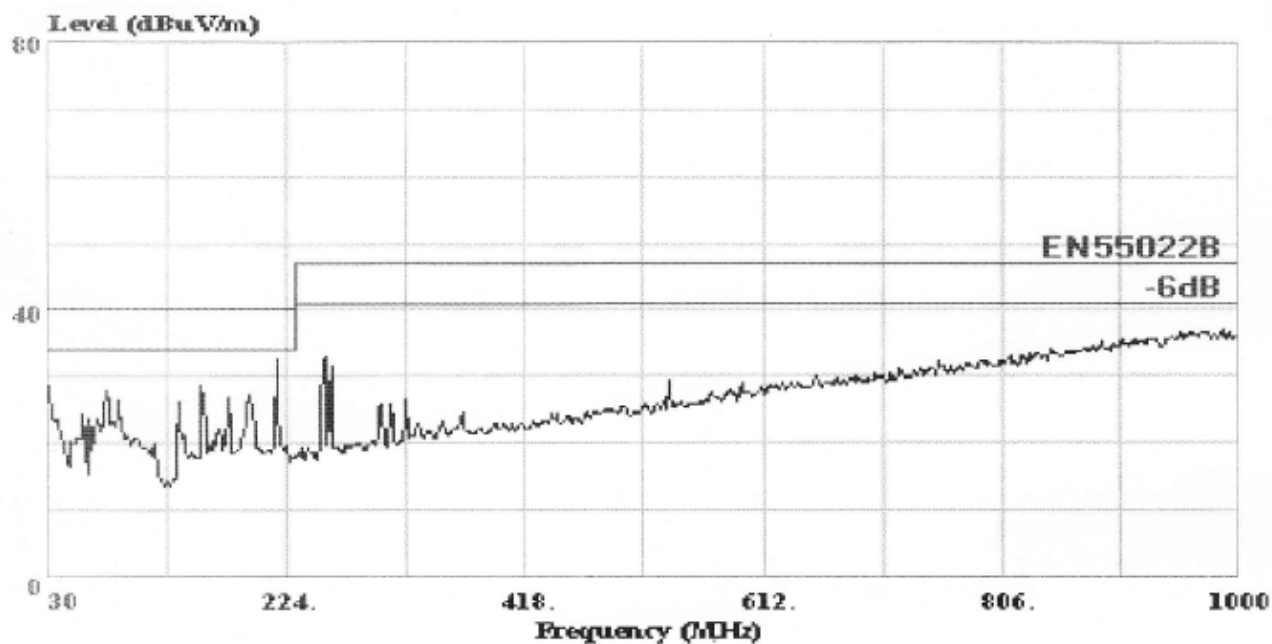


Site : 733 Shielded Room
Condition : EN55022B AV FACTOR LINE
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:24'C Humi:56%
Memo : No Load

APPENDIX II

Data#: 363 File#: \\966pc1\radiation\D\Dve.emi

Date: 2008-02-20 Time: 16:14:29



Site : 966 Chamber
Condition : EN55022B 3m 3142B HORIZONTAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : Full Load

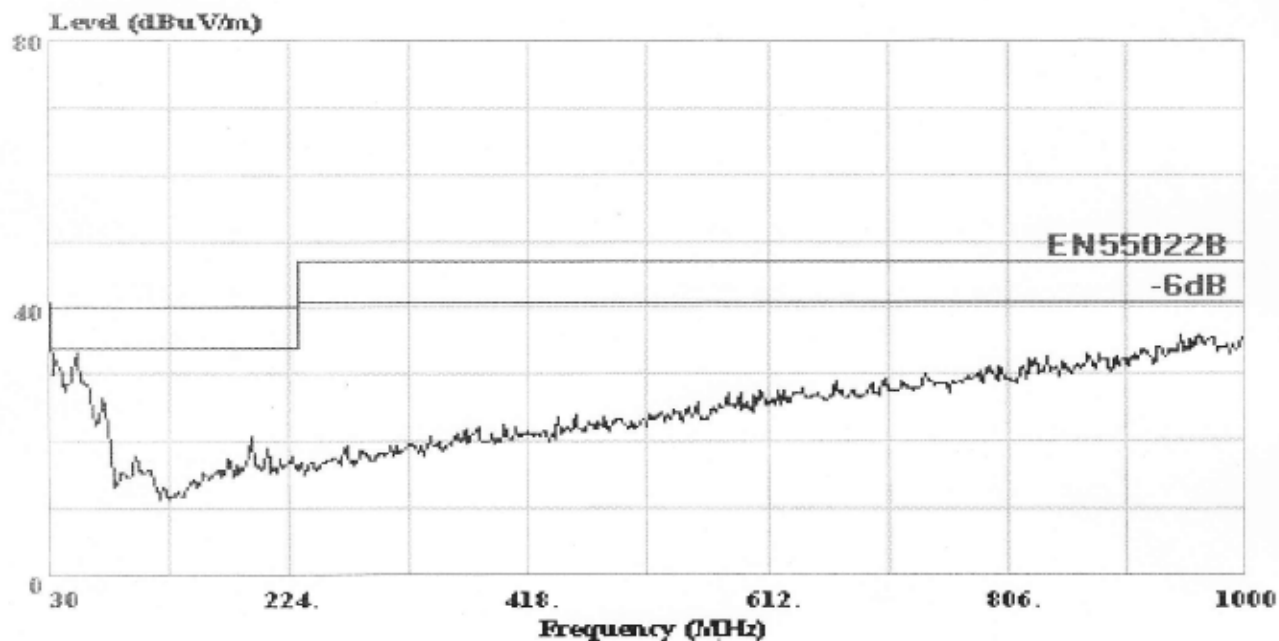
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Fax: 0769-85991080
www.nscn.cn

Data#: 364 File#: \\966pcl\radiation\D\Dve.emi

Date: 2008-02-20 Time: 16:15:02



Site : 966 Chamber
Condition : EN55022B 3m 3142B VERTICAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : Full Load

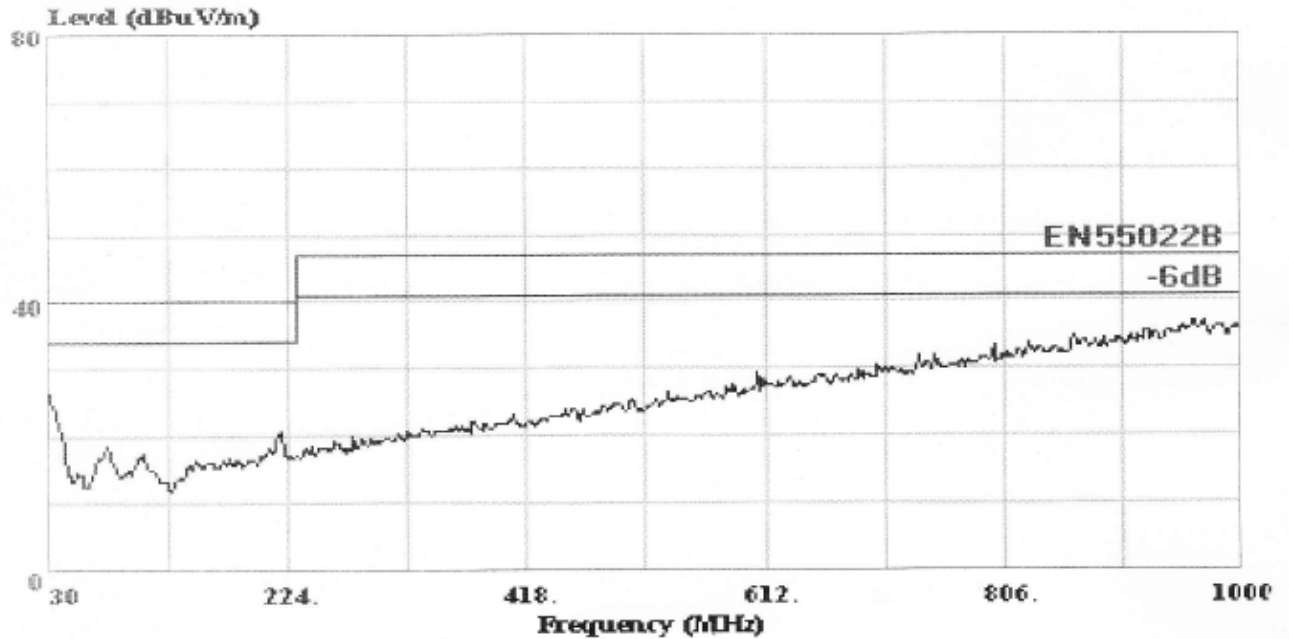
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Data#: 366 File#: \\966pcl\radiation\D\Dve.emi

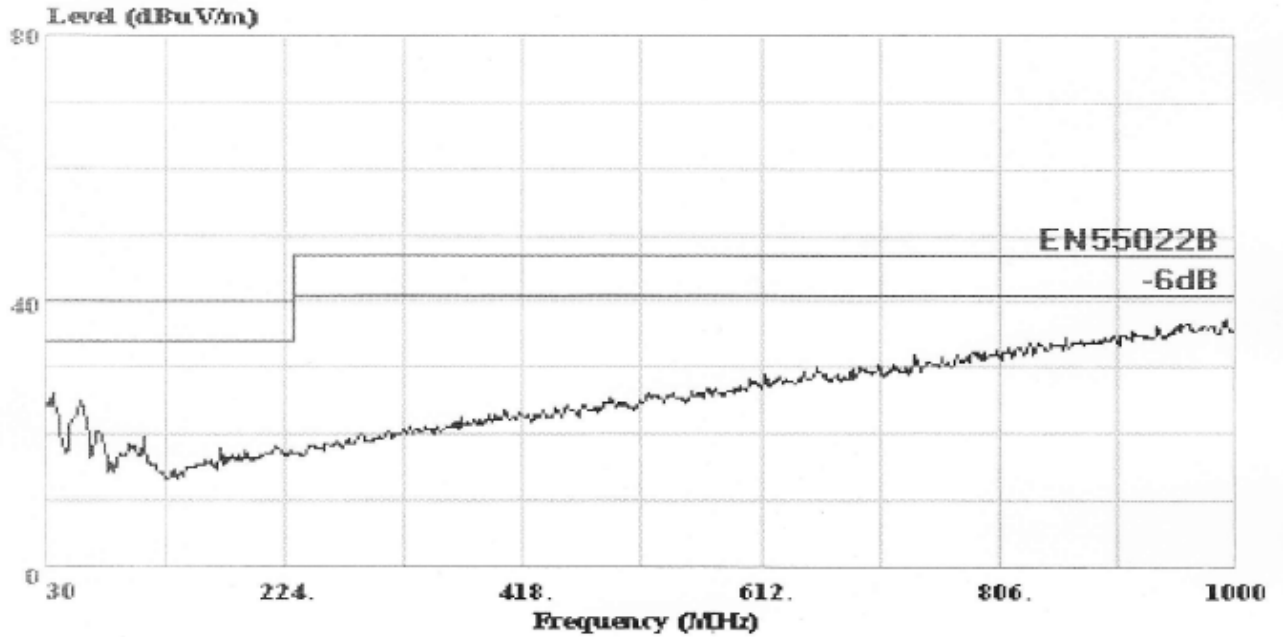
Date: 2008-02-20 Time: 16:17:59



Site : 966 Chamber
Condition : EN55022B 3m 3142B HORIZONTAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : Half Load

Data#: 365 File#: \\966pc1\radiation\D\Dve.emi

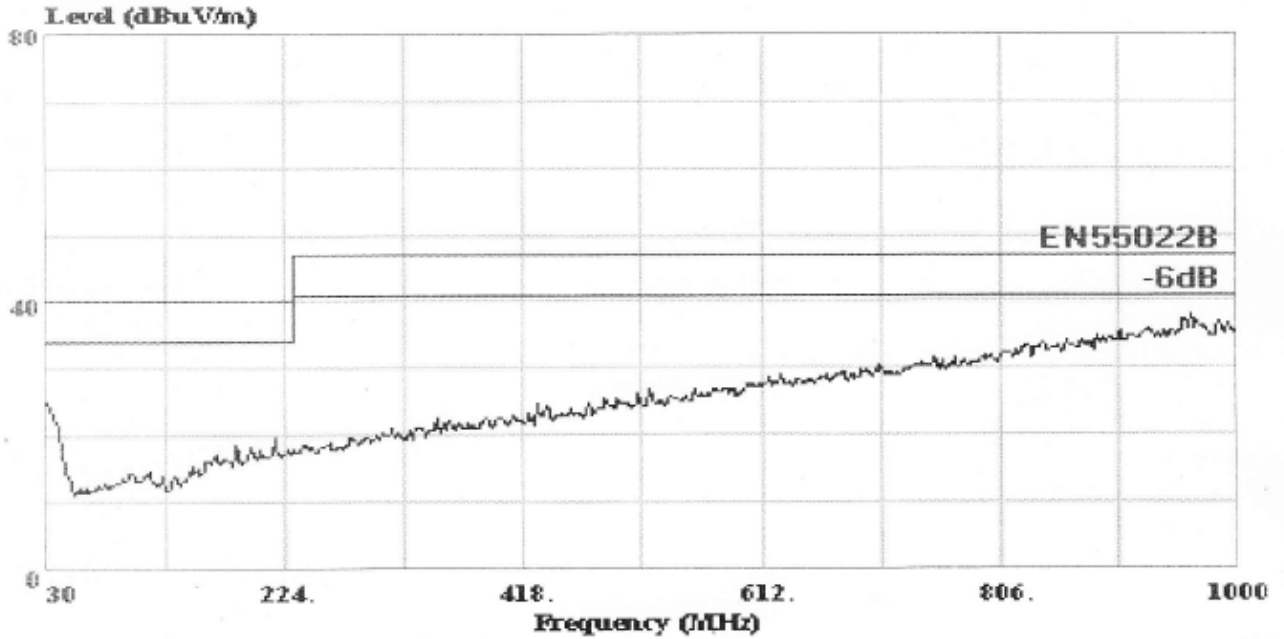
Date: 2008-02-20 Time: 16:17:37



Site : 966 Chamber
Condition : EN55022B 3m 3142B VERTICAL
EUT : Switching Adaptor
Power : AC 230V/50Hz
M/N : GT-01041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : Half Load

Data#: 367 File#: \\966pc1\radiation\D\Dve.emi

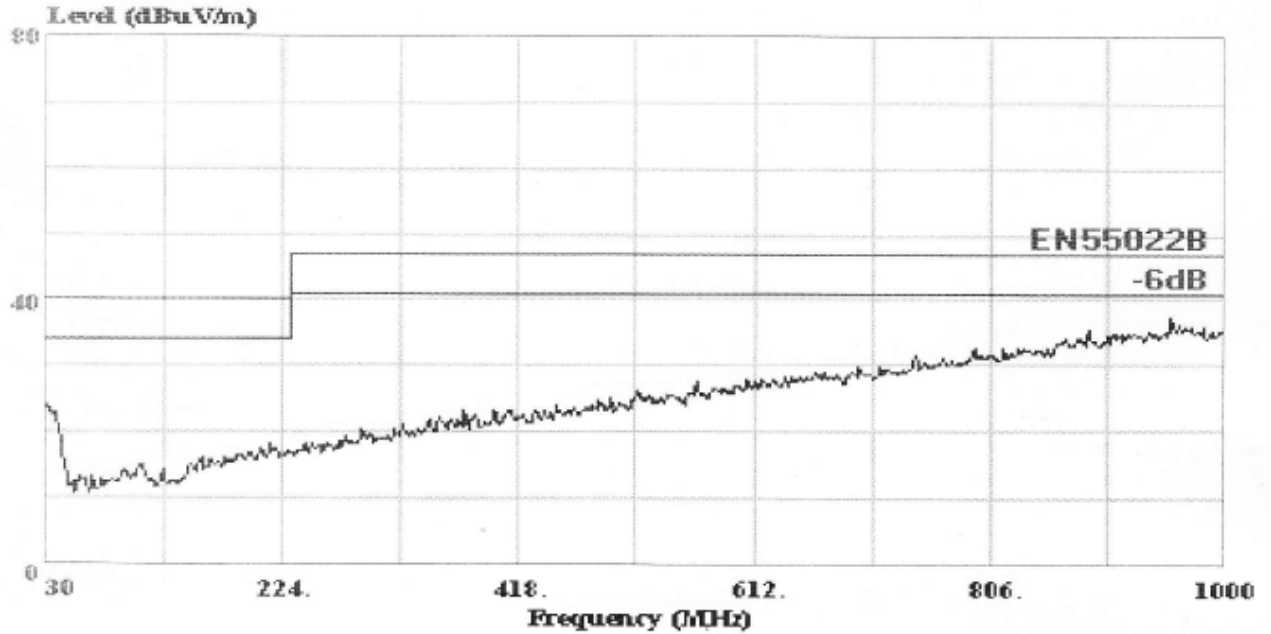
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Site : 966 Chamber
Condition : EN55022B 3m 3142B HORIZONTAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : No Load

Data#: 368 File#: \\966pcl\radiation\D\Dve.emi

Date: 2008-02-20 Time: 16:19:26



Site : 966 Chamber
Condition : EN55022B 3m 3142B VERTICAL
EUT : Switching Adapter
Power : AC 230V/50Hz
M/N : GT-81041-2007.5-4.5-W2E
Test Engineer: Jade
Comment : Temp:25'C Humi:55%
Memo : No Load