SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION Co., Ltd.

Declaration of Conformity

Certification number: CTE08050005

Issue date: May 19, 2008

In accordance with the following Applicable Directives:

2004/108/EC

Electromagnetic Compatibility

The equipment, as described herewith, was tested pursuant to applicable test procedure and complies with the requirements of:

EN 55022: 2006

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

The test results are traceable to the international or national standards.

Applicant:	**GlobTek, Inc** 186 Veterans Dr Northvale, NJ 07647/USA
Manufacturer:	**Globtek (Shanghai) Co., LTD** Bldg 2, 2085 Jia An Gong Lu Jiading, Shanghai, 201821, China
Equipment under test:	**Adapter**
Model number:	GT-91112-4012(GS-1550)
Laboratory Name:	**Shenzhen Huatongwei International Inspection Co., Ltd** Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China Tel: 86-755-26748058 Fax: 86-755-26748005 Http: //www.szhtw.com.cn E-mail: master@szhtw.com.cn

Note:

The certification is only valid for the equipment and configuration described, in conjunction with the test data detailed above.

The CE mark as shown beside can be used, under the responsibility of the manufacturer, after completion of an EC Directive of Conformity and compliance with all relevant EC Directive.

Authorized by:

For and on behalf of
Shenzhen Huatongwei International Inspection Co., Ltd.

Authorized Signature(s)

Shenzhen Huatongwei International Inspection Co., Ltd.
Keji S.12th , Road, Hi-tech Industrial Park, Shenzhen, Guangdong, China
Phone:86-755-26748099 Fax:86-755-26748089 http://www.szhtw.com.cn

TEST REPORT

EN 55022
Information technology equipment –
Radio disturbance characteristics – Limits and methods of measurement
EN 55024
Information technology equipment –
Immunity characteristics – Limits and methods of measurement

Report Reference No.....:	**TRE08050005**
Compiled by (position+printed name+signature)..:	File administrators May Hu
Supervised by (position+printed name+signature)..:	Technique principal Byron Lai
Approved by (position+printed name+signature)..:	Manager Jimmy Li
Date of issue.....:	Mar 19, 2008
Testing Laboratory Name .....:	**Shenzhen Huatongwei International Inspection Co., Ltd**
Address.....:	Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Testing location/ procedure .....:	Full application of Harmonised standards ☒ Partial application of Harmonised standards ☐ Other standard testing methods ☐
Applicant's name.....:	**GlobTek, Inc**
Address.....:	186 Veterans Dr Northvale, NJ 07647/USA
Test specification:	
Standard .....:	**EN 55022: 2006** **EN 55024: 1998+A1: 2001+A2: 2003**
Test Report Form No.....:	HTWEMCCE_1A
TRF Originator.....:	Shenzhen Huatongwei International Inspection CO., Ltd
Master TRF.....:	Dated 2006-06

Test item description ..... :	Adapter
Trade Mark .....:	/
Manufacturer .....:	Globtek (Shanghai) Co., LTD
Model/Type reference.....:	GT-91112-4012(GS-1550)
Ratings.....:	36-72VDC less than 1.5A 40W
Result.....:	**Positive**

EMC -- T E S T R E P O R T

Test Report No. :	TRE08050005	Mar 19, 2008 Date of issue

Equipment under Test	:	Adapter
Model /Type	:	GT-91112-4012(GS-1550)
Listed Models	:	/
Applicant	:	GlobTek, Inc
Address	:	186 Veterans Dr Northvale, NJ 07647/USA
Manufacturer	:	Globtek (Shanghai) Co., LTD
Address	:	Bldg 2, 2085 Jia An Gong Lu Jiading, Shanghai, 201821, China

Test Result according to the standards on page 4:	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

EN 55022: 2006 Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement
EN 55024: 1998+A1: 2001+A2: 2003 Information technology equipment – Immunity characteristics – Limits and methods of measurement

2 . SUMMARY

2.1. General Remarks

Date of receipt of test sample : May 05, 2008

Testing commenced on : May 06, 2008

Testing concluded on : May 16, 2008

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage : o 230V / 50 Hz o 115V / 60Hz
o 12 V DC o 24 V DC
■ Other (specified in blank below)

DC 72V

2.3. Short description of the Equipment under Test (EUT)

The EUT is an Adapter.

Serial number: Prototype

2.4. EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

Test program (customer specific)

Emissions tests…….: According to EN 55022, searching for the highest disturbance.
Immunity tests ……..: According to EN 55024, searching for the highest susceptivity.
Harmonic current……. : Not performed according to EN 61000-3-2.
Voltage fluctuation……. : Not performed according to EN 61000-3-3.

2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

■ - supplied by the manufacturer

o - supplied by the lab

■ Power Cord(input) for EUT	Length (m) :	2.0
	Shield :	Unshielded
	Detachable :	Undetachable
■ Power Cord(output with core) for EUT	Length (m) :	2.0
	Shield :	Unshielded
	Detachable :	Undetachable
o Multimeter	Manufacturer :	Hong chang
	Model No. :	HC710

2.6. Performance level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test relative to a performance criteria defined by its manufacturer or the requestor of the test, or agreed between the manufacturer and the purchaser of the product. Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

— essential operational modes and states;
— tests of all peripheral access(hard disks, floppy disks, printers, keyboard, mouse, etc.);
— quality of software execution
— quality of data display and transmission
— quality of speech transmission

Definition related to the performance level:

■ based on the used product standard
o based on the declaration of the manufacturer, requestor or purchaser

Criterion A:

The apparatus 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.

Criterion 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 below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. 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 from what the user may reasonably expect from the apparatus if used as intended.

Criterion C:

Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Phone: 86-755-26715686 Fax: 86-755-26748089

3.2. Test Facility

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

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: August 02, 2007. Valid time is until March 04, 2009.

A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is from Aug 24, 2005 to Sept 30, 2009.

FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date September 12, 2006.

IC-Registration No.: 5377

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377 on November 28th, 2005.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

NEMKO-Aut. No.: ELA125

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025:2005 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10, the Authorization is valid through April 25, 2009.

VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2484. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

IECEE CB

Shenzhen Huatongwei International Inspection Co Ltd has been assessed and determined to fully comply with the requirements of ISO/IEC 17025: 2005-05, The Basic Rules, IECEE 01: 2006-10 and Rules of Procedure IECEE 02: 2006-10, and the relevant IECEE CB-Scheme Operational Documents.
It is therefore entitled to operate as a CB Testing Laboratory under the responsibility of Nemko A/S. This certificate remains valid until May 25th 2009 at which time it will be reissued by the IECEE Executive Secretary upon successful completion of the normally scheduled 3-year Reassessment Program administered by the IECEE CB Scheme.

DNV

Shenzhen Huatongwei International Inspection Co Ltd has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025(2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until 09 July, 2010.

3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Test Description

Emission Measurement		
Radiated Emission	EN 55022: 2006	PASS
Conducted Disturbance	EN 55022: 2006	PASS
Harmonic Current	EN 61000-3-2: 2006	N/A
Voltage Fluctuation and Flicker	EN 61000-3-3: 1995+A1: 2001+A2: 2005	N/A
Immunity Measurement		
Electrostatic Discharge	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-2: 2001	PASS
RF Field Strength Susceptibility	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-3: 2006	PASS
Electrical Fast Transient/Burst Test	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-4: 2004	PASS
Surge Test	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-5: 2005	PASS
Conducted Susceptibility Test	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-6: 2006	PASS
Power Frequency Magnetic Field Susceptibility Test	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-8: 2001	PASS
Voltage Dips and Interruptions Test	EN 55024: 1998+A1: 2001+A2: 2003 IEC 61000-4-29: 2000	N/A

Remark: The measurement uncertainty is not included in the test result.

3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.22dB	(1)
Conducted Disturbance	0.15~30MHz	3.29dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.6. Equipments Used during the Test

Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	2007/06
2	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2007/10
3	RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	2007/10
4	TURNTABLE	ETS	2088	2149	2007/10
5	ANTENNA MAST	ETS	2075	2346	2007/10
6	EMI TEST SOFTWARE	ROHDE & SCHWARZ	ESK1	N/A	2007/10

Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100038	2007/10
2	V-NETWORK	ROHDE & SCHWARZ	ESH3-Z6	100211	2007/10
3	V-NETWORK	ROHDE & SCHWARZ	ESH3-Z6	100210	2007/10
4	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100044	2007/10
5	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2007/10

Electrostatic Discharge					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	EM TEST	DITOC0103Z	0301-04	2007/10

RF Field Strength Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	SIGNAL GENERATOR	IFR	2032	203002/100	2007/10
2	AMPLIFIER	AR	150W1000	301584	2007/10
3	DUAL DIRECTIONAL COUPLER	AR	DC6080	301508	2007/10
4	POWER HEAD	AR	PH2000	301193	2007/10
5	POWER METER	AR	PM2002	302799	2007/10

Electrical Fast Transient/Burst					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Ultra Compact Simulator	EM TEST	UCS500M6	0500-19	2007/10
2	Coupling Clamp	EM TEST	HFK	1501-14	2007/10

Surge					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA COMPACT SIMULATOR	EM TEST	UCS500M6	0500-19	2007/10

Conducted Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Signal Generator	IFR	2023A	202304/060	2007/10
2	Amplifier	AR	75A250	302205	2007/10
3	Dual Directional Coupler	AR	DC2600	302389	2007/10
4	6db Attenuator	EMTEST	ATT6/75	0010230A	2007/10
5	EM CLAMP	LÜTHI	EM101	335625	2007/10
6	CDN	EMTEST	CDN M3	0802-03	2007/10

Power Frequency Magnetic Field Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA COMPACT SIMULATOR	EM TEST	UCS500M6	202304/060	2007/10
2	MOTOR DRIVEN VOLTAGE TRANSFORMER	EM TEST	MV2616	302205	2007/10
3	CURRENT TRANSFORMER	EM TEST	MC2630	302389	2007/10
4	MAGNETIC COIL	EM TEST	MS100	0010230A	2007/10

4. TEST CONDITIONS AND RESULTS

4.1. Radiated Emission

For test instruments and accessories used see section 3.6.

4.1.1. Description of the test location

Test location: Shielded room No. 4

4.1.2. Limits of disturbance(Class B)

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dBμV/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

4.1.3. Description of the test set-up

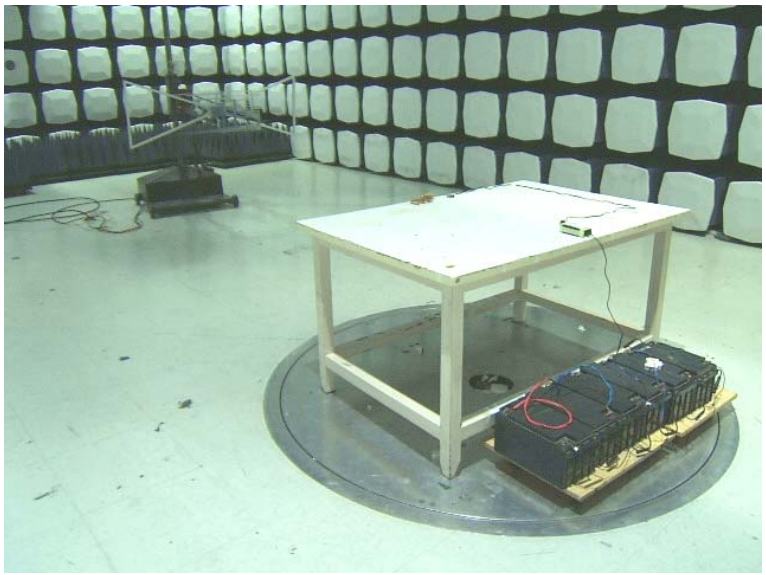
4.1.3.1. Operating Condition

The EUT is full loaded during the test, and the results of the maximum emanation are recorded.

4.1.3.2. Test Configuration and Procedure

EUT is tested in Semi-Anechoic Chamber. EUT is placed on a nonmetal table which is 0.8 meter above a grounded turntable. The turntable can rotate 360 degrees to determine the azimuth of the maximum emission level. EUT is set 3 meters away from the center of receiving antenna. The antenna can move up and down from 1 to 4 meter to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna are set on the test.

4.1.3.3. Photos of the test set-up



4.1.4. Test result

The requirements are **Fulfilled**

Band Width: 120KHz

Frequency Range: 30MHz to 1000MHz

Remarks: The limits are kept. For detailed results, please see the following page(s).

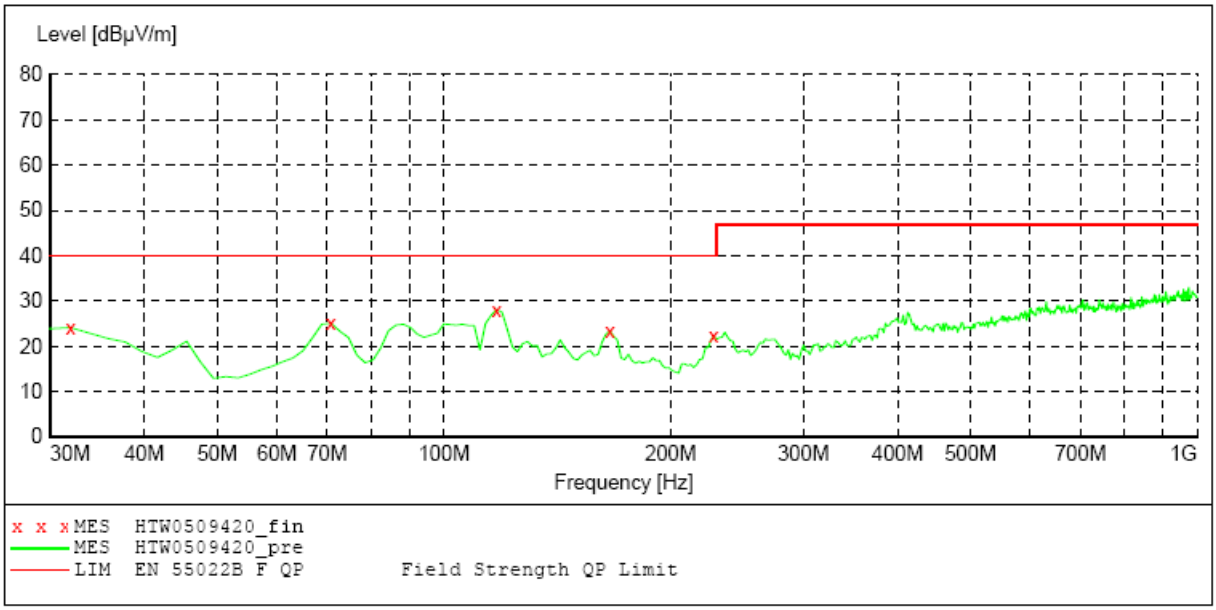
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION EN55022 CLASS B

```
EUT:                    Adapter M/N:GT-91112-4012(GS-1550)
Manufacturer:           Globtek(Shanghai) Co.,LTD
Operating Condition:    Full Load
Test Site:              3M CHAMBER
Operator:               Andy
Test Specification:     DC 72V
Comment:
Start of Test:          5/9/2008 / 2:23:31PM
```

SCAN TABLE: "test Field(30M-1G)QP"

```
  Short Description:              Field Strength(30M-1G)
  Start       Stop        Step        Detector  Meas.     IF       Transducer
  Frequency   Frequency   Width                 Time      Bandw.
  30.0 MHz    1.0 GHz     60.0 kHz    QuasiPeak 1.0 s     120 kHz  HL562 07
```



MEASUREMENT RESULT: "HTW0509420_fin"

5/16/2008 1:03PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	24.10	20.1	40.0	15.9	QP	300.0	100.00	HORIZONTAL
70.820000	25.10	10.7	40.0	14.9	QP	300.0	59.00	HORIZONTAL
117.470000	28.10	13.2	40.0	11.9	QP	300.0	336.00	HORIZONTAL
166.070000	23.40	10.7	40.0	16.6	QP	300.0	166.00	HORIZONTAL
228.270000	22.20	11.5	40.0	17.8	QP	100.0	199.00	HORIZONTAL

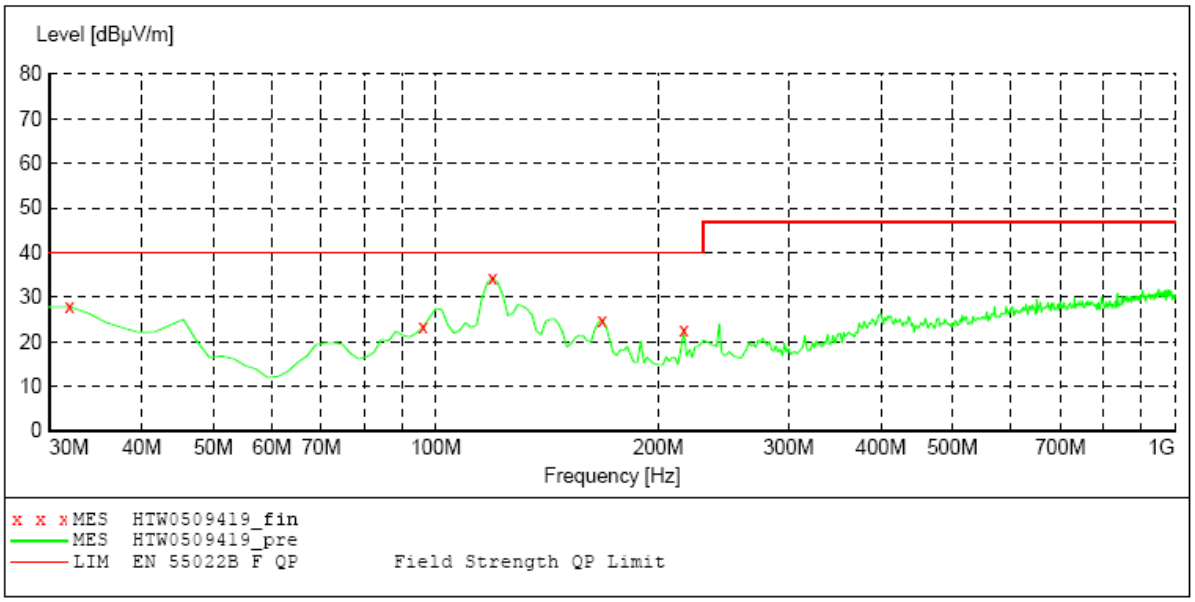
SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION CO.,LTD

RADIATED EMISSION EN55022 CLASS B

```
EUT:                    Adapter M/N:GT-91112-4012(GS-1550)
Manufacturer:           Globtek(Shanghai) Co.,LTD
Operating Condition:    Full Load
Test Site:              3M CHAMBER
Operator:               Andy
Test Specification:     DC 72V
Comment:
Start of Test:          5/9/2008 / 2:21:13PM
```

SCAN TABLE: "test Field(30M-1G)QP"

```
  Short Description:              Field Strength(30M-1G)
  Start       Stop        Step        Detector  Meas.     IF       Transducer
  Frequency   Frequency   Width                 Time      Bandw.
  30.0 MHz    1.0 GHz     60.0 kHz    QuasiPeak 1.0 s     120 kHz  HL562 07
```



MEASUREMENT RESULT: "HTW0509419_fin"

5/16/2008 1:02PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	27.90	20.1	40.0	12.1	QP	100.0	114.00	VERTICAL
96.090000	23.20	13.7	40.0	16.8	QP	100.0	95.00	VERTICAL
119.410000	34.20	13.0	40.0	5.8	QP	100.0	95.00	VERTICAL
168.010000	24.90	10.9	40.0	15.1	QP	100.0	136.00	VERTICAL
216.610000	22.60	11.2	40.0	17.4	QP	100.0	179.00	VERTICAL

4.2. Conducted disturbance

For test instruments and accessories used see section 3.6.

4.2.1. Description of the test location

Test location: Shielded room No. 3

4.2.2. Limits of disturbance

Limit of conducted disturbance at the mains ports(Class B)

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150～0.500	66～56	56～46
0.500～5.000	56	46
5.000～30.00	60	50

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

4.2.3. Description of the test set-up

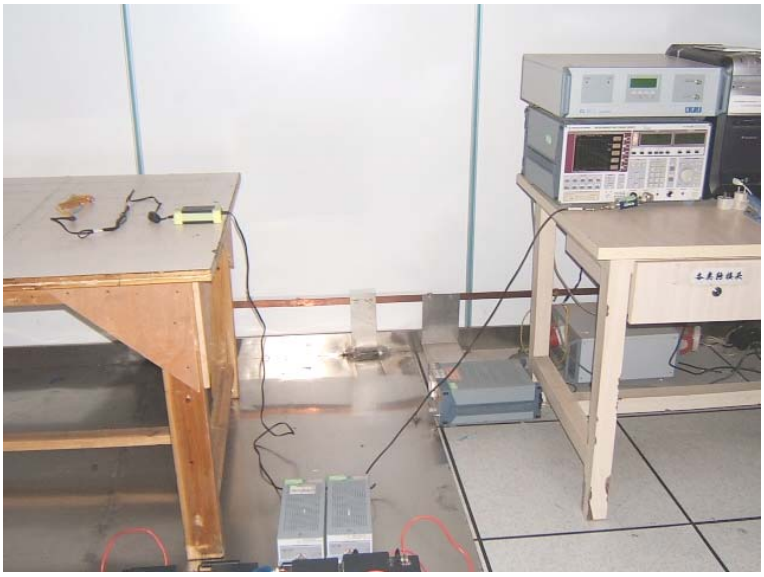
4.2.3.1. Operating Condition

The EUT is full loaded during the test, and the results of the maximum emanation are recorded.

4.2.3.2. Test Configuration and Procedure

EUT is placed on a nonmetal table which is 0.8 meter above the grounded reference plane. Connect the power line of the EUT to the LISN which is connected to receiver by coaxial line, then disturbance signals of the neutral line and live line can be detected by the receiver.

4.2.3.3. Photo of the test set-up



4.2.4. Test result

The requirements are **Fulfilled**

Band Width: 9KHz

Frequency Range: 150KHz to 30MHz

Remarks: The limits are kept. For detailed results, please see the following page(s).

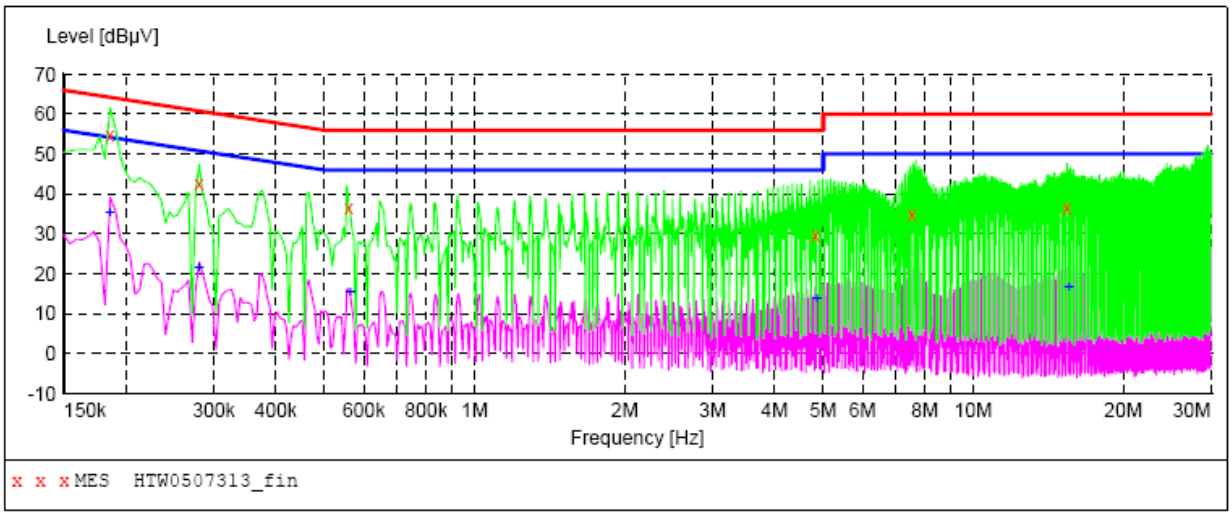
Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test EN55022 CLASS B

```
EUT:                    Adapter  M/N:GT-91112-4012(GS-1550)
Manufacturer:           Globtek(Shanghai) Co.,LTD
Operating Condition:    Full Load
Test Site:              3# SHIELDED ROOM
Operator:               Andy
Test Specification:     DC 72V
Comment:                +
Start of Test:          5/7/2008 / 1:41:08PM
```

SCAN TABLE: "Voltage (9K-30M)FIN"

```
  Short Description:              150K-30M Voltage
```



MEASUREMENT RESULT: "HTW0507313_fin"

5/7/2008 1:50PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	54.60	10.6	64	9.6	QP	???	GND
0.280500	42.50	10.6	61	18.3	QP	???	GND
0.559500	36.40	10.6	56	19.6	QP	???	GND
4.834500	29.70	10.8	56	26.3	QP	???	GND
7.539000	34.90	10.9	60	25.1	QP	???	GND
15.441000	36.60	11.0	60	23.4	QP	???	GND

MEASUREMENT RESULT: "HTW0507313_fin2"

5/7/2008 1:50PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	35.30	10.6	54	18.9	AV	???	GND
0.280500	21.40	10.6	51	29.4	AV	???	GND
0.564000	15.20	10.6	46	30.8	AV	???	GND
4.866000	13.70	10.8	46	32.3	AV	???	GND
15.571500	16.80	11.0	50	33.2	AV	???	GND

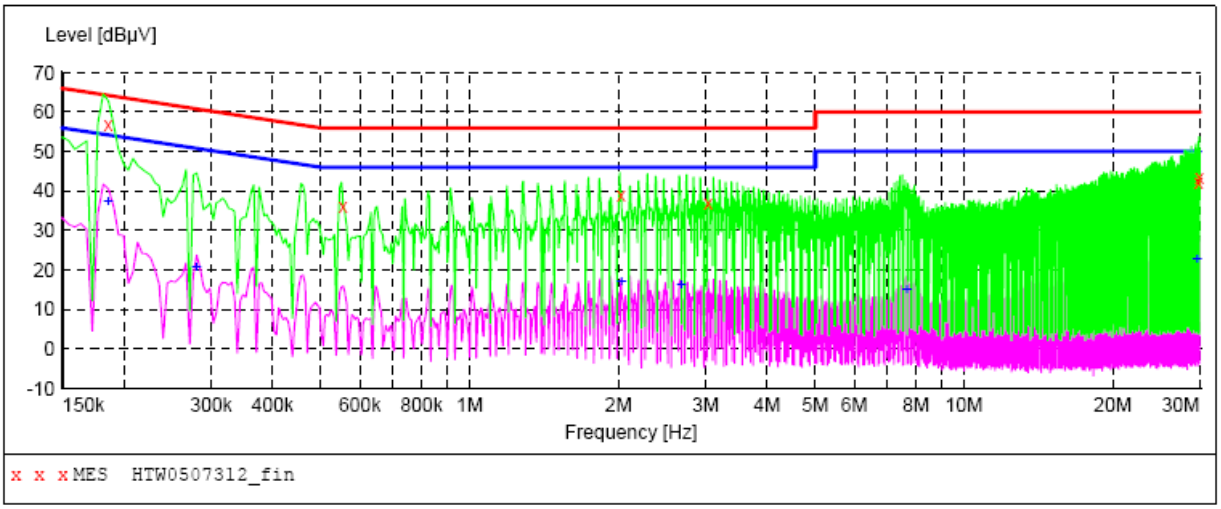
Shenzhen Huatongwei International Inspection CO.,Ltd

Voltage Mains Test EN55022 CLASS B

```
EUT:                  Adapter  M/N:GT-91112-4012(GS-1550)
Manufacturer:         Globtek(Shanghai) Co.,LTD
Operating Condition:  Full Load
Test Site:            3# SHIELDED ROOM
Operator:             Andy
Test Specification:   DC 72V
Comment:              -
Start of Test:        5/7/2008 / 1:37:02PM
```

SCAN TABLE: "Voltage (9K-30M)FIN"

```
  Short Description:          150K-30M Voltage
```



MEASUREMENT RESULT: "HTW0507312_fin"

5/7/2008 1:39PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	56.70	10.6	64	7.5	QP	???	GND
0.555000	36.20	10.6	56	19.8	QP	???	GND
2.026500	39.00	10.7	56	17.0	QP	???	GND
3.039000	36.80	10.7	56	19.2	QP	???	GND
29.890500	42.10	11.5	60	17.9	QP	???	GND
29.967000	43.60	11.5	60	16.4	QP	???	GND

MEASUREMENT RESULT: "HTW0507312_fin2"

5/7/2008 1:39PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186000	37.40	10.6	54	16.8	AV	???	GND
0.280500	20.70	10.6	51	30.1	AV	???	GND
2.031000	17.10	10.7	46	28.9	AV	???	GND
2.683500	16.10	10.7	46	29.9	AV	???	GND
7.674000	15.00	10.9	50	35.0	AV	???	GND
29.625000	22.60	11.5	50	27.4	AV	???	GND

4.3. Harmonic current

The test is not applicable to the EUT according to EN 61000-3-2:2006.

4.4. Voltage Fluctuation and Flicker

The test is not applicable to the EUT according to EN 61000-3-3: 1995+A1: 2001+A2: 2005

4.5. Electrostatic discharge

For test instruments and accessories used see section 3.6.

4.5.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: May 15, 2008

Operator: Andy

4.5.2. Severity levels of electrostatic discharge

4.5.2.1. Severity level: Contact Discharge at ±4KV Air Discharge at±8KV

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1	2	2
2	4	4
3	6	8
4	8	15
X	Special	Special

4.5.2.2. Performance criterion: **B**

4.5.3. Description of the test set-up

4.5.3.1. Operating Condition

The EUT is full loaded during the test, and the results of the maximum susceptive results are recorded.

4.5.3.2. Test Configuration and Procedure:
Air Discharge:

－This test is done on a non-conductive surfaces. The round discharge tip of the Electrostatic Discharge simulator shall be approached as fast as possible then to touch the EUT. After each discharge, the simulator shall be removed from the EUT. The simulator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed

Contact Discharge:

－All the procedure shall be same as air discharge, except using the acute discharge tip. The top end of the Electrostatic Discharge simulator is touch the EUT all the time when the simulator is re-triggered for a new single discharge and repeated 25 times for each pre-selected test point.

Indirect Discharge:

－The vertical coupling plane(VCP) is placed 0.1m away from EUT. The top end of Electrostatic Discharge simulator should aim at the center of one border of the VCP for at least 25 times discharge.

－The top end of Electrostatic Discharge simulator should place at the point 0.1m away from EUT on the horizontal coupling plane(HCP). At least 25 times discharge should be done for every pre-selected point around EUT.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.5.3.3. Photo of the test set-up

4.5.4. Test specification:

Contact discharge voltage:	■ 2 kV	■ 4 kV	□ 6kV
Number of discharges:	□10	■ 25	
Air discharge voltage:	■ 2 kV	■ 4 kV	■ 8 kV
Number of discharges:	■ 10	□ 25	
Type of discharge:	Direct discharge	■ Air discharge ■ Contact discharge	
	Indirect discharge	■ Contact discharge	
Polarity:	■ Positive	■ Negative	
Discharge location:	■ see photo documentation of the test set-up		
	■ all external locations accessible by hand		
	■ horizontal coupling plane (HCP)		
	■ vertical coupling plane (VCP)		

4.5.5. Test result

The requirements are **Fulfilled** Performance Criterion: **B**

Remarks: During the test no deviation was detected to the selected operation mode(s).

4.6. Radiated, radio-frequency, electromagnetic field

For test instruments and accessories used see section 3.6.

4.6.1. Description of the test location and date

Test location: Shielded room No. 4

Date of test: May 15, 2008

Operator: Andy

4.6.2. Severity levels of radiated, radio-frequency, electromagnetic field

4.6.2.1. Severity level: 3 V/m

Level	Field Strength (V/m)
1.	1
2.	3
3.	10
X	Special

4.6.2.2. Performance criterion**: A**

4.6.3. Description of the test set-up

4.6.3.1. Operating Condition

The EUT is full loaded during the test, and the results of the maximum susceptive results are recorded.

4.6.3.2. Test Configuration and Procedure

EUT and its auxiliary instrument are placed on a turntable which is 0.8 meter above ground. The center of the transmitting antenna mounted on an antenna mast is set 3 meter away from the EUT. During the test, each of the four sides of EUT will face the transmitting antenna with the turntable cycled. Both horizontal and vertical polarization of the antenna are set on test and measured individually.

In order to judge the performance of the EUT, a set of monitor system is used.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.6.3.3. Photo of the test set-up

4.6.4. Test specification:

Frequency range:	■ 80 MHz to 1000 MHz
Field strength:	■ 3 V/m
EUT - antenna separation:	■ 3 m
Modulation:	■ AM: 80 % ■ sinusoidal 1000Hz
Frequency step:	■ 1 % with 3 s dwell time
Antenna polarisation:	■ horizontal ■ vertical

4.6.5. Test result

The requirements are **Fulfilled** Performance Criterion: **A**

Remarks: During the test no deviation was detected to the selected operation mode(s).

4.7. Electrical fast transients / Burst

For test instruments and accessories used see section 3.6.

4.7.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: May 15, 2008

Operator: Andy

4.7.2. Severity levels of electrical fast transients / Burst

4.7.2.1. Severity level: ±500V for DC power supply lines

Open circuit output test voltage and repetition rate of the impulses				
Level	On power port, PE		On I/O signal, data and control ports	
	V peak(KV)	Repetition rate (KHz)	Voltage peak	Repetition rate (KHz)
1.	0.5	5 or 100	0.25	5 or 100
2.	1	5 or 100	0.5	5 or 100
3.	2	5 or 100	1	5 or 100
4.	4	5 or 100	2	5 or 100
X	Special	Special	Special	Special

4.7.2.2. Performance criterion: **B**

4.7.3. Description of the test set-up

4.7.3.1. Operating Condition

The EUT is full loaded during the test, and the results of the maximum susceptive results are recorded.

4.7.3.2. Test Requirements

EUT and its simulators shall be placed 0.1m high above the ground reference plane which is a minimum 1m*1m with minimum 0.65mm 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.

4.7.3.3. Test Configuration and Procedure

For DC power input ports:

— EUT is connected to coupling/decoupling network which couples the EFT signal to power input lines. During the test, both polarities of the test voltage should be applied and the duration of the test can't be less than 1mins.

Without signal / control lines and AC power lines, The EUT is unnecessary to test on these mentioned ports.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.7.3.4. Photo of the test set-up

4.7.4. Test specification:

Coupling network:	■ 0.5 kV	☐ 1 kV	☐ 2 kV
Coupling clamp:	☐ 0.5 kV	☐ 1 kV	
Burst frequency:	■ 5.0 kHz		
Coupling duration:	■ 60 s		
Polarity:	■ positive	■ negative	

4.7.5. Coupling points

Cable description: DC power line : + Line, －Line, + Line & －Line

Screening:	o screened	■ unscreened
Status:	o passive	■ active
Signal transmission:	■ analogue	o digital
Length:	■ 2.0 m	

4.7.6. Test result

The requirements are **Fulfilled** Performance Criterion: **B**

Remarks: During the test no deviation was detected to the selected operation mode(s).

4.8. Surge

For test instruments and accessories used see section 3.6.

4.8.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: May 15, 2008

Operator: Andy

4.8.2. Severity levels of surge

4.8.2.1. Severity level: Line to line: ±0.5KV

Level	Test Voltage (KV)
1	0.5
2	1.0
3	2.0
4	4.0
*	Special

4.8.2.2. Performance Criterion: **B**

4.8.3. Description of the test set-up

4.8.3.1. Operating Condition

The EUT is full loaded during the test, and the results of the maximum susceptive results are recorded.

4.8.3.2. Test Configuration and Procedure

In this test, the 1.2/50us& 8/20us surge generator must be used for DC power ports. The voltage for line to line and line to earth are 0.5K V. At least 5 positive and 5 negative (polarity) surge signal with a maximum 1/min repetition rate are injected to DC power lines during the test.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.8.3.3. Photo of the test set-up

4.8.4. Test specification:

Pulse amplitude-Power line sym: Source impedance: 2 Ω + 18µF	■ 0.5 kV	☐ 1 kV	☐ 2 kV	☐ 4 kV
Pulse amplitude-Power line unsym: Source impedance: 12 Ω + 9µF	☐ 0.5 kV	☐ 1 kV	☐ 2 kV	☐ 4 kV
Number of surges:	■ 5 Surges/Phase angle			
Repetition rate:	■ 60 s			
Polarity:	■ positive		■ negative	

4.8.5. Coupling points

Cable description: DC power line: + Line & - Line

Screening:	o screened	■ unscreened
Status:	o passive	■ active
Signal transmission:	■ analogue	o digital
Length:	■ 2.0 m	

4.8.6. Test result

The requirements are **Fulfilled** Performance Criterion: **B**

Remarks: During the test no deviation was detected to the selected operation mode(s).

4.9. Conducted disturbances induced by radio-frequency fields

For test instruments and accessories used see section 3.6.

4.9.1. Description of the test location and date

Test location: Shielded room No. 2

Date of test: May 15, 2008

Operator: Andy

4.9.2. Severity levels of conducted disturbances induced by radio-frequency fields discharge

4.9.2.1. Severity Level: 3V

Level	Field Strength （V）
1.	1
2.	3
3.	10
X	Special

4.9.2.2. Performance Criterion: **A**

4.9.3. Description of the test set-up

4.9.3.1. Operating Condition

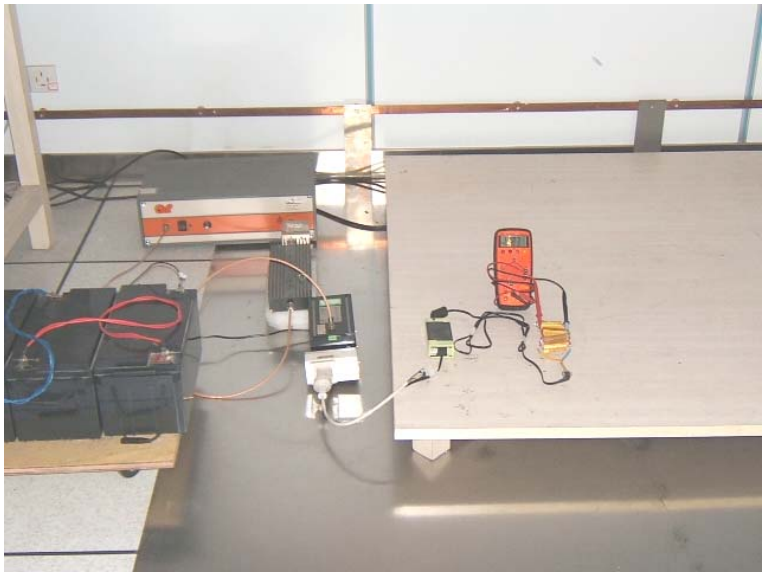
The EUT is full loaded during the test, and the results of the maximum susceptive results are recorded.

4.9.3.2. Test Configuration and Procedure

EUT is placed on an insulating support of 0.1m high above a ground reference plane. It must be 0.3m away the CDN (coupling and decoupling network) of which the bottom is made of metallic material and placed directly on the ground plane. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible). The disturbance signal amplified by amplifier is injected to EUT through CDN.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.9.3.3. Photo of the test set-up



4.9.4. Test specification:

Frequency range: ■ 0.15 MHz to 80 MHz

Test voltage: ■ 3 V

Modulation: ■ AM: 80 %
■ sinusoidal 1000Hz

Frequency step: ■ 1 % with 3 s dwell time

4.9.5. Coupling points

Cable description : DC power line

Screening:	o screened	■ unscreened
Status:	o passive	■ active
Signal transmission:	■ analogue	o digital
Length:	■ 2.0 m	

4.9.6. Test result

The requirements are **Fulfilled** Performance Criterion: **A**

Remarks: During the test no deviation was detected to the selected operation mode(s).

4.10. Magnetic Field Immunity

For test instruments and accessories used see section 3.6.

4.10.1. Description of the test location and date

Test location: Shielded room No. 1

Date of test: May 15, 2008

Operator: Andy

4.10.2. Severity levels of magnetic field immunity

4.10.2.1. Severity Level: 1A/m

Level	Magnetic Field Strength (A/m)
1	1
2	3
3	10
4	30
5	100
X.	Special

4.10.3. Description of the test set-up

4.10.3.1. Operating Condition

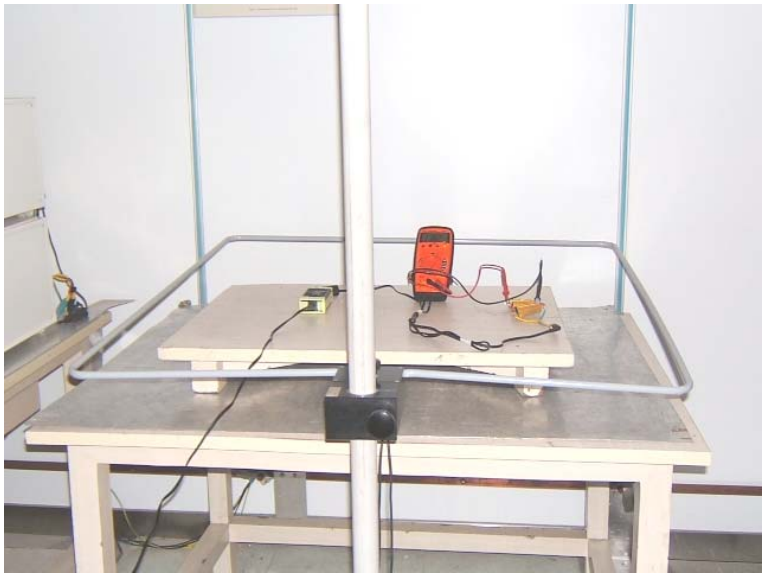
The EUT is full loaded during the test, and the results of the maximum susceptive results are recorded.

4.10.3.2. Test Procedure:

EUT is placed on an insulating support of 0.1m high above a table of 0.8m high. There is a minimum 1m*1m ground metallic plane put on this table. EUT is put in the center of the magnetic coil then two orientations of the magnetic coil, horizontal and vertical, shall be rotated in order to expose the EUT to the difference polarization magnetic field.

Recording any performance degradation of the EUT during the test and judge the test result according to performance criterion.

4.10.3.3. Photo of the test set-up



4.10.4. Test specification:

Test frequency:	■ 50 Hz		
Continuous field:	■ 1 A/m		
Test duration:	■ 5 m		
Antenna factor:	0.917 A/m		
Axis:	■ x-axis	■ y-axis	■ z-axis

4.10.5. Test result

The requirements are **Fulfilled** Performance Criterion: **A**

Remarks: During the test no deviation was detected to the selected operation mode(s).

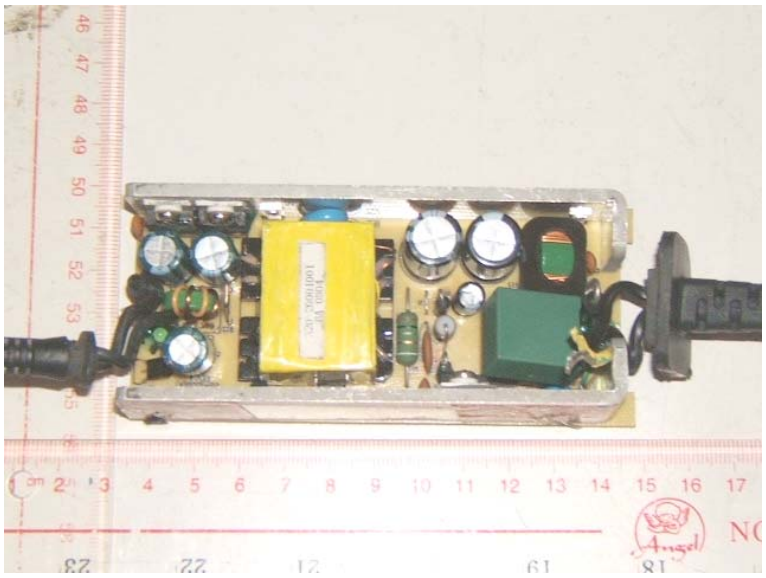
4.11. Voltage Dips and Interruptions

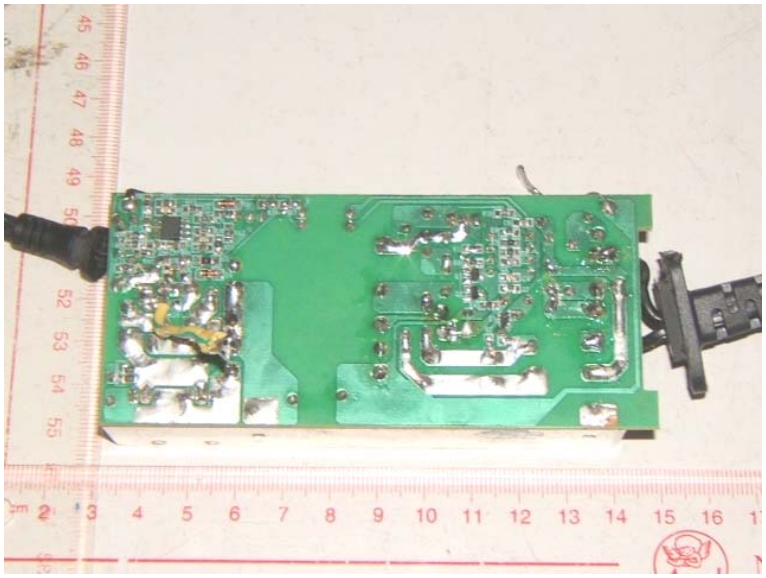
The test is not applicable to the EUT according to the standard of EN 61000-4-11: 2004.

5. External and Internal Photos of the EUT

5.1. External photos of the EUT

5.2. Internal photos of the EUT





.....End of Report.....