RETLIF TESTING LABORATORIES
101 New Boston Road
Goffstown, New Hampshire 03045

CERTIFICATE OF CONFORMANCE
FCC RULES PART 15, SUBPART B, CLASS B

July 1, 2005

Issued to: TUV America
5 Cherry Hill Drive
Danvers, MA 01923

Reference: Retlif Report Number R-4455N1

RETLIF TESTING LABORATORIES hereby acknowledges that compliance testing in accordance with the below listed standards was performed on a representative sample of the equipment listed below. RETLIF TESTING LABORATORIES further acknowledges that the test sample listed below was found to be in compliance with these standards.
This certificate is hereby issued to the above-named grantee and is valid only for the equipment identified below.

Manufacturer:	Globtek, Inc. 186 Veterans Drive Northvale, NJ 07647
Equipment Tested:	AC-DC Power Supplies
Model Series:	*GTM9250*
**Model Numbers Tested:*	GTM9250P1503.3, GTM9250P27048 & GTM9250P753.3
Brand Name:	Globtek, Inc.
Equipment Class:	B
Authorization:	Verification, Digital Device

Note(s): 1) See attached report R-4455N1 for details and/or conditions pertaining to this certificate.
2) Conforms to the requirements of:
Para. 15.107(a) for Conducted Emissions, 150 kHz to 30 MHz
Para. 15.109(a) for Radiated Emissions, 30 MHz to 1GHz

*These Models were tested as representative of the complete GTM9250 Model Series. See Report R-4455N1 for a description of the Model Series.

CERTIFICATE OF CONFORMANCE

Issued By: ***RETLIF TESTING LABORATORIES***
101 New Boston Road
Goffstown, New Hampshire 03045

Date of Issue: July 20, 2005

Issued To: TUV America
5 Cherry Hill Drive
Danvers, MA 01923

Reference: Retlif Report Number R-4455N

RETLIF TESTING LABORATORIES *hereby acknowledges that compliance testing in accordance with the below listed standards was performed on a representative sample of the equipment listed below.* ***RETLIF TESTING LABORATORIES*** *further acknowledges that the test sample listed below was found to be in compliance with these standards.*
This certificate is hereby issued to the above named grantee and is valid only for the equipment identified below.

Manufacturer: Globtek Inc.
186 Veterans Drive
Northvale, NJ 07647

Equipment Tested: AC-DC Power Supplies

Model Series: *GTM9250*

**Model Numbers Tested*
For Radiated &Conducted Emissions: *GTM9250P27048 & GTM9250P753.3*

**Model Number Tested*
For Immunity & Emissions: *GTM9250P1503.3*

Brand Name: *Globtek Inc.*

Product Type: *Medical Equipment/Information Technology Equipment*

Note(s):

1) See attached report R-4455N for details and/or conditions pertaining to this certificate.
2) Conforms to the emissions requirements of:
IEC 60601-1-2:2001/EN 60601-1-2:2002
CISPR 22/EN55022:1998/A1:2000, Class B, Conducted Emissions, 150kHz to 30MHz
CISPR 22/EN55022:1998/A1:2000, Class B, Radiated Emissions, 30MHz to 1GHz
CISPR 11/EN55011:1998/A1:1999/A2:2002 Group 1, Class B, Conducted Emissions 150kHz to 30MHz
CISPR 11/EN55011:1998/A1:1999/A2:2002 Group 1, Class B, Radiated Emissions, 30MHz to 1GHz
EN 61000-3-2:2001 Harmonic Current Emissions
EN61000-3-3:1995/A1:2001/A2:2002 Voltage Fluctuations and Flicker
3) Conforms to the immunity requirements of: IEC 60601-1-2:2001/EN60601-1-2:2002&EN55024:1998/A1:2001/A2:2003

EN61000-4-2:1995/A1:1998/A2:2001	Electrostatic Discharge, 2kV, 4kV, 6kV Direct and Indirect Contact
EN61000-4-3:2002/A1:2002	Radiated Immunity 80kHz to 2.5GHz, 10V/m, 80% AM 1000Hz
EN61000-4-4:2004	EFT, 0.5kV, 1.0kV & 2kV Power
EN61000-4-5:1995/A1:2001	Surge Immunity, 0.5kV, 1kV, 2kV Common Mode, 0.5kV, 1kV Differential Mode
EN61000-4-6:1996/A1:2001	Conducted RF Immunity, 150kHz-80MHz,10Vrms, 80% AM 1kHz
EN 61000-4-11: 1994	Voltage Dips and Interruption

*These Models were tested as representative of the complete GTM9250 Model Series. See Report R-4455N for a description of the Model Series.

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MEMBER ACIL

EMC TEST REPORT
ON

GLOBTEK 9250 SERIES AC-DC POWER SUPPLIES

MODELS: GTM9250P1503.3, GTM92500P27048 & GTM9250P753.3

CUSTOMER NAME:	TUV America
CUSTOMER P.O.:	DC502794
DATE OF REPORT:	July 20, 2005
TEST REPORT NO.:	R-4455N
TEST START DATE:	June 8, 2005
TEST FINISH DATE:	July 13, 2005
TEST TECHNICIAN:	Todd Hannemann
TEST ENGINEER:	Scott Wentworth
SUPERVISOR:	Scott Wentworth
REPORT PREPARED BY:	Jamie Ramsey

GOVERNMENT SOURCE INSPECTION: Not Applicable

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CERTIFICATION AND SIGNATURES

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Todd Hannemann
EMC Test Technician

Scott Wentworth
Manager

NON-WARRANTY PROVISION
The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

NON-ENDORSEMENT
This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

REVISION HISTORY

Revision	Date	Pages Affected

ADMINISTRATIVE DATA

RETLIF TESTING LABORATORIES TEST REPORT NUMBER: R-4455N

TEST SPECIFICATION: IEC 60601-1-2:2001/EN60601-1-2:2002
EN55022:1998/A1:2001/A2:2003
EN55024:1998/A1:2001/A2:2003
EN 61000-3-2:2001
EN61000-3-3:1995/A1:2001/A2:2002

CUSTOMER: TUV America
5 Cherry Hill Drive
Danvers, MA 01923

MANUFACTURER: Globtek Inc.
186 Veterans Drive
Northvale, NJ 07647

TEST SAMPLE: AC-DC Power Supplies
Model Number: GTM9250P1503.3/ Serial Number: 001058, Model Number: GTM92500P27048/Serial Number: 001060 and Model Number: GTM9250P753.3/Serial Number: 001059

APPLICABLE DOCUMENTS: CISPR22/EN55022:1998/A1:2000
CISPR 11/EN55011:1998/A1:1999/A2:2002
EN61000-4-2:1995/A1:1998/A2:2001
EN61000-4-3:2002/A1:2002
EN61000-4-4:2004
EN61000-4-5:1995/A1:2001
EN61000-4-6:1996/A1:2001
EN61000-4-8:1994/A1:2001
EN61000-4-11:2004
See Paragraph 2.0

TESTING DATES: June 8, 2005 TO July 13, 2005

DATE OF REPORT: July 20, 2005

EUT	DESCRIPTION	MODEL	TEST METHODS PERFORMED
1	AC-DC Power Supply	GTM9250P1503.3	Full Emissions and Immunity
2	AC-DC Power Supply	GTM9250P27048	Radiated & Conducted Emissions Only
3	AC-DC Power Supply	GTM9250P753.3	Radiated & Conducted Emissions Only

ADMINISTRATIVE DATA (continued)

GTM 9250 SERIES:

Top Mounted Fan:		
GT(M)9250P1503.3	3.3V	45.45
GT(M)9250P2205.0-X.X	5.0 V	44.00 Amperes
GT(M)9250P2207.5-X.X	7.5 V	29.33 Amperes
GT(M)9250P2709.0-X.X	9.0 V	30.00 Amperes
GT(M)9250P27012-X.X	12.0V	22.50Amperes
GT(M)9250P27015-X.X	15.0V	18.00 Amperes
GT(M)9250P27018-X.X	18.0V	15.00 Amperes
GT(M)9250P27024-X.X	24.0V	11.25 Amperes
GT(M)9250P27036-X.X	36.0V	7.50 Amperes
GT(M)9250P27048-X.X	48.0V	5.62 Amperes
2 X Side Mounted Fans:		
GT(M)9250P1203.3	3.3 V	36.36
GT(M)9250P1505.0-X.X	5.0 V	30.30Amperes
GT(M)9250P2007.5-X.X	7.5 V	26.60 Amperes
GT(M)9250P2009.0-X.X	9.0 V	22.00 Amperes
GT(M)9250P5012-X.X	12.0V	20.83 Amperes
GT(M)9250P5015-X.X	15.0V	16.66 Amperes
GT(M)9250P25018-X.X	18.0V	13.88 Amperes
GT(M)9250P25024-X.X	24.0V	10.41 Amperes
GT(M)9250P20036-X.X	36.0V	6.94 Amperes
GT(M)9250P20048-X.X	48.0V	5.21 Amperes

Natural Convection Cooling		
GT(M)9250P753.3	3.3V	22.72A
GT(M)9250P1005.0-X.X	5.0V	20.00 Amperes
GT(M)9250P1007.5-X.X	7.5V	13.33 Amperes
GT(M)9250P1509.0-X.X	9.0V	16.67Amperes
GT(M)9250P15012-X.X	12.0V	12.50 Amperes
GT(M)9250P15015-X.X	15.0 V	15.0 Amperes
GT(M)9250P15018-X.X	18.0V	8.33 Amperes
GT(M)9250P15024-X.X	24.0V	6.25 Amperes
GT(M)9250P15036-X.X	36.0 V	4.17 Amperes
GT(M) 9250P15048-X.X	48.0 V	3.12 Amperes

The Models GTM9250P1503.3, GTM9250P27048 and GTM9250P753.3 were tested as representative of the Globtek 9250 Model Series which includes all models listed on pages 2 and 3 of this report. The test results contained in this report are considered to be valid for the complete Model Series.

MODIFICATION TO THE EUT
MADE DURING THE TEST PROGRAM

Test Method:
Conducted Emissions

Reason for Modification:
EUT emission levels were above the specified limit.

Description of Modification:
The following is a list of modifications made on the Models: GTM9250P1503.3 and GTM920P753.3:
1) Addition of shield to the main transformer T1, output choke L100 and EMI filter LF3 and LF4.
2) LF4 inductance change from 20mH to 25mH.
3) CX1 from 1uF to 0.47uF Xcap and CX2 from 1uF to 0.1uf Xcap.
4) Beads at gate of Q2 and Q3 and DC pins of BD1.
5) Addition of 2 pcs 90uH differential chokes located between CX1 and CX2.
6) Addition of turns for LF1 ground choke from 7T to 10T.
7) Relocate Ycap CY1 to near center screw.

For GTM9250P27048:
The same modifications were made except item 4 was not implemented.

GTM9250P1503.3 and GTM9250P753.3 were tested with Ferrite beads added at the Gate pins of Q2 and Q3 and DC pins of BD1 while no beads were added to the same components in the GTM9250P27048 unit. To cover the models between 48V and 3.3V, Globtek will add the beads for 24V models and below and will not add the bead for above 24V models.

Result of Modification:

EUT emission levels decreased and fell within the specified limit.

THE VALIDITY OF THE EUT COMPLIANCE AND OF THIS REPORT

IS BASED, IN PART, ON THE PRESENCE OF THE ABOVE MODIFICATION.

At the time of the modification installation, and at the conclusion of the test program, the EUT manufacturer was made aware of the need to have the above modification incorporated in all future productions of the EUT.

Test methods administered subsequent to the listed modification included the above modification.

1.0 SCOPE

The purpose of this testing program was to determine the compliance of AC-DC Power Supplies, Model Numbers: GTM9250P1503.3, GTM92500P27048 and GTM9250P753.3, manufactured by Globtek Inc., as described in paragraphs 4.0 and 5.0 of this report, to the EMC requirements of IEC 60601-1-2:2001/EN60601-1-2:2002, EN55022:1998/A1:2001/A2:2003, EN55024:1998/A1:2001/A2:2003, EN61000-3-2:2001 and EN61000-3-3:1995. The Models GTM9250P1503.3, GTM9250P27048 and GTM9250P753.3 were tested as representative of the Globtek 9250 Model Series which includes all models listed on pages 2 and 3 of this report. The test results contained in this report are considered to be valid for the complete Model Series.

2.0 APPLICABLE DOCUMENTS

The following documents form a part of this test report to the extent specified herein:

RCM-001	-Retlif Testing Laboratories, Calibration Manual.
RQM-001	-Retlif Testing Laboratories, Quality Assurance Manual.
ANSI/NCSL Z-540	-Calibration Laboratories and Measuring and Test Equipment–General Requirements
MIL-STD-45662A	-Calibration System Requirements.
EN 60601-1-2:2002	- Medical Electrical Equipment Part 1: General Requirements for Safety Part 2: Collateral Standard: Electromagnetic compatibility- Requirements and Tests.
IEC 60601-1-1-2:2001	- Medical Electrical Equipment Part 1: General Requirements for Safety Part 2: Collateral Standard: Electromagnetic compatibility Requirements and Tests.
EN55011:1998/ A1:1999/A2:2002	- Specification for Limits and Methods of Measurement of Radio
EN55022:1998/ A1:2001/A2:2003	- Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment.
EN55024:1998/ A1:2001/A2:2003	-Information Technology Equipment–Immunity, Characteristics–Limits and Methods of Measurements
CISPR 11: 1997	Disturbance Characteristics of Industrial, Scientific, and Medical (ISM) Radio Frequency Equipment.

2.0 APPLICABLE DOCUMENTS (continued)

EN 61000-3-2:2001 - Electromagnetic Compatibility (EMC). Part 3: Limits. Section 2: Limits for Harmonic Current Emissions (equipment input current ≤ 16 A per phase)

EN61000-3-3:1995/ A1:2001/A2:2002 - Electromagnetic Compatibility (EMC). Part 3: Limits. Section 3: Limitation of Voltage Fluctuations and Flicker in Low-voltage Supply Systems for Equipment with rated current ≤ 16 A

EN61000-4-2:1995/ A1:1998/A2:2001 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment. Part 2: Method of Evaluating Susceptibility to Electrostatic Discharge.

EN61000-4-3:2002/ A1:2002 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment. Part 3: Radiated Electromagnetic Field Requirements.

EN61000-4-4: 2004 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment. Part 4: Electrical Fast Transient/Burst Requirements.

EN61000-4-5: 1995/ A1:2001 - Electromagnetic Compatibility for Industrial Process Measurement and Control Equipment. Part 5: Surge Immunity.

EN61000-4-6:1996/ A1:2001 -Section 6: Conducted Disturbances Induced by Radio-Frequency Fields - Immunity Test

EN61000-4-8:1994/ A1:2001 - Section 8: Power Frequency Magnetic Field Immunity Requirements

EN61000-4-11:2004 -Section 11: Voltage Dips and Short Interruptions

3.0 GENERAL REQUIREMENTS

3.1 TEST ENVIRONMENT

All testing was performed at Retlif Testing Laboratories Goffstown, New Hampshire facility. Each test method was performed in the environment specified within the test standard. Where the test environment deviated from that specified, it is noted in the applicable test method.

3.1.1 Shielded Enclosures

All testing which required the use of a shielded enclosure was performed in a solid steel, double wall, modular type. The attenuation characteristics of the enclosure were in accordance with MIL-STD-285. All input power lines to the enclosure were filtered utilizing filters manufactured in accordance with MIL-F-15733F and tested in accordance with MIL-STD-220A. The enclosure was equipped with a 0.63 mm brass sheet with an minimum area of 4 square meters, with the minimum dimension no less than 90 cm. The ground planes were continuously bonded to the enclosure wall with a DC bonding resistance of less than 2.5 milliohms. Test methods requiring anechoic treatment were performed in a room treated with a combination of pyramidal carbon impregnated foam absorber and ferrite tile.

3.1.2 Conducted Emissions

All conducted emissions testing described herein was performed on a conducting ground plane. The conducting ground plane for measuring AC power line conducted emissions consisted of a floor-earth grounded conducting surface. The conducting surface extended at least 0.5 M beyond the vertical projection (footprint) of the test sample. The ground plane was covered by insulating material 10 mm thick. The vertical reference plane was located 0.4 meters from the rear of the test sample. It was continuously bonded to the conducting ground plane.

3.1.3 Radiated Emissions

3.1.3.1 Preliminary

Preliminary radiated emissions measurements were performed in a shielded enclosure.

3.1.3.2 Formal

Formal radiated emissions testing was performed on an open area test site (OATS). The test site was covered with a conducting ground plane constructed of one quarter inch ground cloth. The equipment under test was placed in an RF transparent enclosure on top of a 1.2 M Diameter, flush mounted, metallic turntable. An 80 cm high non-metallic table was mounted to the turntable for placement of portable equipment. The test site met the test site attenuation requirements specified in CISPR 16 throughout the range of measurement frequencies.

3.2 TEST INSTRUMENTATION

A listing of all test instrumentation utilized is contained within each applicable test method. These listings indicate the model, manufacturer, frequency range, last calibration date and calibration due date of all instrumentation utilized. All instrumentation utilized was calibrated prior to use in accordance with the procedures set forth in Retlif Testing Laboratories standard manuals RCM-001 and RQM-001 which are in accordance with the requirements of ANSI/NCSL Z-540.

3.3 DETECTOR FUNCTION

For the conducted emissions testing described herein both Quasi-Peak and Average detector functions were utilized as specified in EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002.

For the radiated emissions testing described herein a Quasi-Peak detector function was utilized as specified in EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002.

4.0 TEST SAMPLE DESCRIPTION

4.1 GENERAL

The test samples were three GTM9250 series AC-DC Power Supplies, Model Number: GTM9250P1503.3/ Serial Number: 001058, Model Number: GTM92500P27048/Serial Number: 001060 and Model Number: GTM9250P753.3/Serial Number: 001059 manufactured by Globtek Inc. of North Bergen, New Jersey. Each test sample was powered by 230VAC, 50Hz, single phase.

4.2 PORT CONFIGURATIONS AND INPUT/OUTPUT CABLES

During testing the power and I/O ports of each AC-DC Power Supply were configured as follows:

CABLE FROM	LENGTH	S/U[1]	TYPE	CABLE ROUTED TO
Power Input	2m	U	3 Conductor	Mains
Output	0.2m	U	Multi Conductor	Load

[1]Shielded or Unshielded

All ports not listed were unterminated.

4.3 LEADS TESTED

Each lead of the AC-DC Power Supply was tested during the course of this testing program as specified in each applicable test method:

- 230 VAC, 50 Hz - Hot
- 230 VAC, 50 Hz - Neutral

5.0 TEST SAMPLE PARAMETERS

5.1 MODE OF OPERATION

During all testing, the AC-DC Power Supplies were converting AC to DC power. DC output: EUT 1: 3.3 volts, 45amps, 150 watts. EUT 2: 48 volts, 5.6amps, 270 watts. EUT 3: 3.3 volts, 22.7 amps, 75 watts.

5.1.1 Support Equipment

EUT	DESCRIPTION	MANUFACTURER	MODEL NUMBER
1	Resistor Load	N/A	.07 ohm
2	Resistor Load	N/A	8.6 ohm
3	Resistor Load	N/A	.15 ohm

5.1.2 Monitoring Equipment

The EUT was monitored by visually observing the LED during the course of testing. The illuminated LED indicated that the output was on.

5.0 TEST SAMPLE PARAMETERS (continued)

5.3 Immunity Test Performance Criteria

The following standard criteria, as stated in EN55024:1998/A1:2001/A2:2003, are the minimum acceptable performance allowed and are the basis used to determine the minimum compliance of the EUT with the requirements of the standard. The manufacturer's criterion for performance was used to determine acceptance of the EUT.

TEST	CRITERION
EN 61000-4-2:1995/A1:1998/A2:2001	Performance Criterion B
EN 61000-4-3:1996:2002/A1:2002	Performance Criterion A
EN 61000-4-4:1995:2004	Performance Criterion B
EN 61000-4-5:1995:1995/A1:2001	Performance Criterion B
EN 61000-4-6:1996:1996/A1:2001	Performance Criterion A
EN61000-4-8:1994/A1:2001/A2:2003	Performance Criterion A
EN 61000-4-11: 2004	Voltage Dips, Performance Criterion B
	Voltage Dips, Performance Criterion C
	Voltage Interruption, Performance Criterion C

5.0 TEST SAMPLE PARAMETERS (continued)

EN55024:1998/A1:2001/A2:2003, Performance Criterion 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.

EN55024:1998/A1:2001/A2:2003, Performance 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, 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.

EN55024:1998/A1:2001/A2:2003, Performance Criterion 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 battery backup, shall not be lost.

Manufacturer's EUT Performance Criterion: In order to be considered acceptable, the test sample's output must remain on.

5.2 PERFORMANCE CRITERIA

EN60601-1-2 CLAUSE 36.202 COMPLIANCE CRITERIA

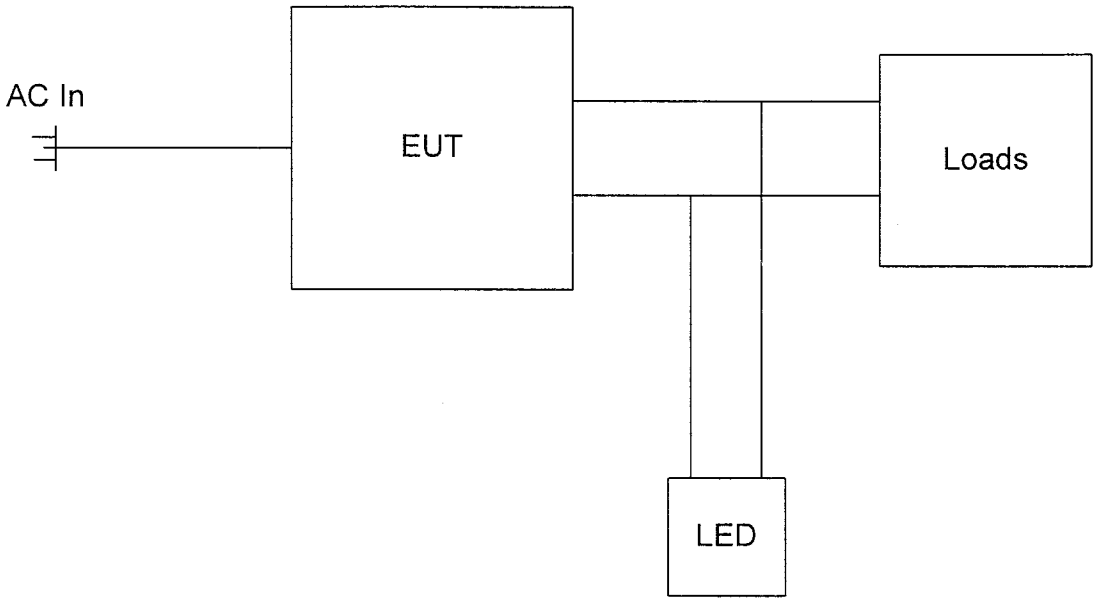
Under the test conditions specified in 36.202, the equipment or system shall be able to provide the essential performance and remain safe. The following degradation associated with essential performance and safety shall not be allowed:

- component failures;
- changes in programmable parameters
- reset to factory defaults (manufacturer's presets);
- change of operating mode;
- false alarms;
- cessation or interruption of any intended operation, even if accompanied by an alarm;
- initiation of any unintended operation, including unintended or uncontrolled motion, even if accompanied by an alarm;
- error of a displayed numerical value sufficiently large to affect diagnosis or treatment;
- noise on a waveform in which the noise would interfere with diagnosis, treatment or monitoring;
- artefact or distortion in an image in which the artefact would interfere with diagnosis, treatment or monitoring;
- failure of automatic diagnosis or treatment equipment and systems diagnose or treat, even if accompanied by an alarm.

For equipment and systems with multiple functions, the criteria apply to each function, parameter and channel.

The equipment or system may exhibit degradation of performance (e.g. deviation from manufacturer's specifications) that does not affect essential performance or safety.

FIGURE 1 - TEST SAMPLE BLOCK DIAGRAM



6.0 TEST METHODS PERFORMED AND TEST RESULTS

6.1 TEST METHOD SUMMARY

The tests outlined in the table below were performed in accordance with the requirements of IEC 60601-1-2:2001/EN60601-1-2:2002, EN55022:1998/A1:2001/A2:2003, EN55023:1998, EN61000-3-2:2001 and EN61000-3-3:1995:

PARAGRAPH	STANDARD	TEST METHOD	RESULTS
7.0	EN60601-1-2/ EN55011:1998/ A1:1999/A2:2002 EN55022:1998/ A1:2001/A2:2003	Conducted Emissions, Class B	Complied
8.0	EN60601-1-2/ EN55011:1998/ A1:1999/A2:2002 EN55022:1998/ A1:2001/A2:2003	Radiated Emissions, Class B	Complied
9.0	EN 61000-3-2:2001	Harmonics	Complied
10.0	EN61000-3-3:1995/A1:2001/A2:2002	Flicker	Complied
11.0	EN61000-4-2:1995/ A1:1998/A2:2001	Electrostatic Discharge	Complied
12.0	EN61000-4-3:2002/ A1:2002	Radiated Immunity	Complied
13.0	EN61000-4-4:2004	Electrical Fast Transient/Burst, Power Leads	Complied
14.0	EN61000-4-5:1995/ A1:2001	Surge Immunity, Power Leads	Complied
15.0	EN61000-4-6:1996/ A1:2001	Conducted Immunity, Power Leads	Complied
16.0	EN 61000-4-8: 1994	Magnetic Immunity	Complied
17.0	EN61000-4-11:2004	Voltage Dips and Interruption	Complied

See individual test methods contained in paragraphs 7.0 through 17.0 of this test report for a full description of the test procedures utilized and the results obtained.

7.0 CONDUCTED EMISSIONS, EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002

PURPOSE

The purpose of this test was to record the emissions emanating from the test sample and appearing on the input power leads.

TEST SETUP

The test sample setup is shown in the attached photograph. The general test setup is shown in Retlif Testing Laboratories Drawing, per the requirements in EN55022:1998/A1:2001/A2:2003/ EN55011:1998/A1:1999/A2:2002. The test sample was placed on a wooden test stand 0.8 meters above the floor ground plane and 0.4 meters from the wall ground plane. The test sample was at least 0.8 meters from all other grounded surfaces. The input power cord was connected to a floor grounded 50ohm/50µH artificial mains network (LISN), which was located a minimum of 0.8 meters from the test sample. The test sample was connected to the artificial mains network by a cord specified by the manufacturer, and if the cord length exceeded 1 meter, it was shortened by folding at the center into a 40cm bundle until the length was equal to 1 meter.

MEASUREMENTS

With the test sample configured as described above, a spectrum analyzer or receiver was connected to the mains network. The RF voltages were then measured on each power lead specified below, utilizing the peak or quasi-peak detector. These measurements were taken over the frequency range of 150kHz to 30MHz. The obtained readings were then compared to the average detector limits. If the peak/quasi-peak readings were below the average limit, the test sample was compliant, and no further testing was needed. However, if the peak/quasi-peak readings were above the average limit but below the quasi-peak limit, additional measurements had to be taken using the average detector, with the readings compared to the average limit. The following leads were tested:

- 230 VAC, 50Hz, Hot
- 230 VAC, 50Hz, Neutral

7.0 CONDUCTED EMISSIONS,

EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002

TEST LIMITS

The limits shown in the table below were used to determine test sample compliance.

FREQUENCY RANGE 150kHz to 30MHz	**EN55022 CLASS B/EN55011 GROUP 1, CLASS B** LIMITS [dB (μV)]	
	Quasi-Peak	Average
0.15MHz to 0.50MHz	66.0 to 56.0*	56.0 to 46.0*
0.50MHz to 5.00MHz	56.0	46.0
5.00MHz to 30.0MHz	60.0	50.0

(*) Limit decreases linearly with the logarithm of frequency

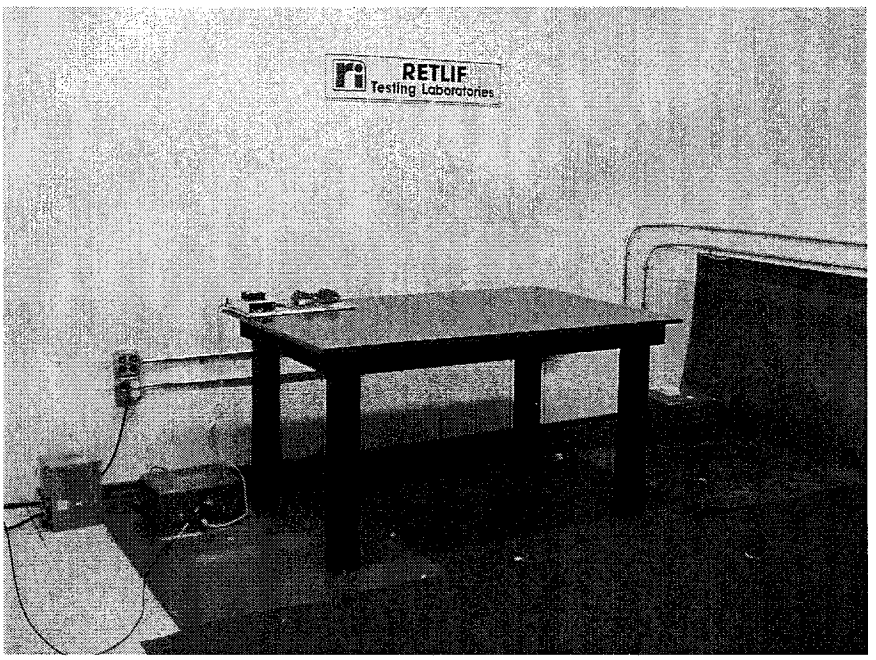
TEST RESULTS

After modifications listed on page four of this report, the test samples complied with the Class B requirements specified for this test method. See attached data for a full presentation of the results obtained.

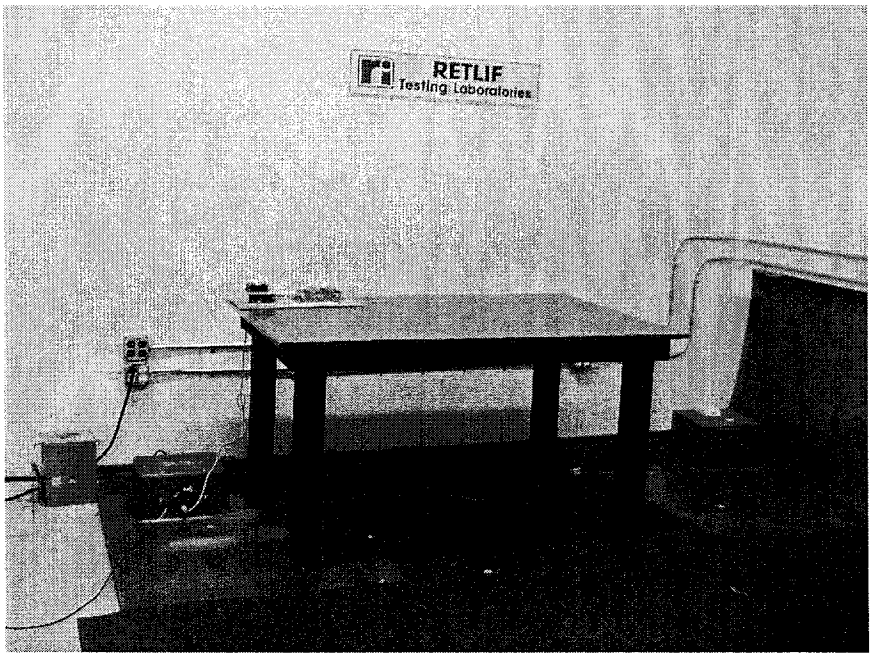
TEST SETUP PHOTOGRAPHS

CONDUCTED EMISSIONS

EUT 1



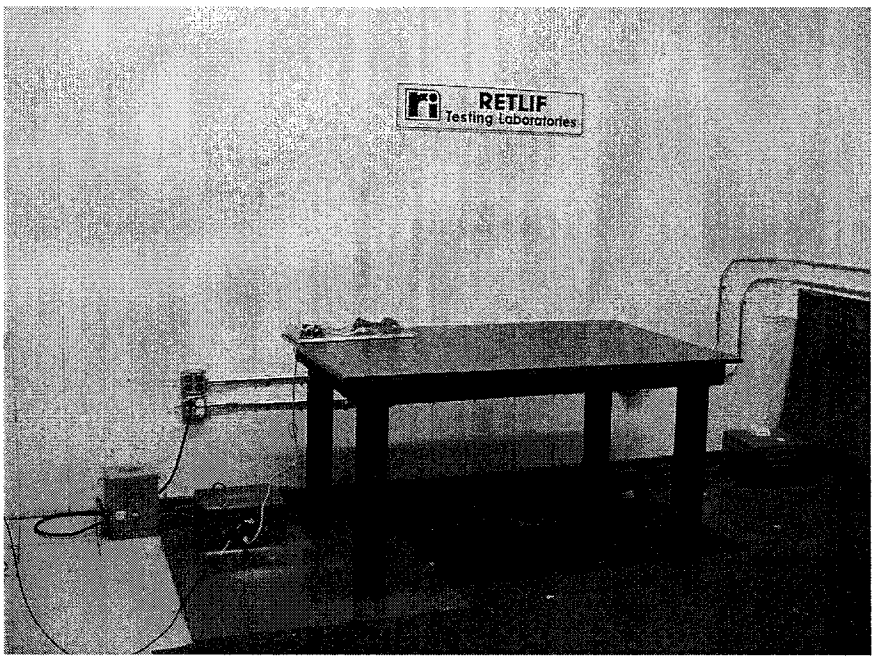
EUT 2



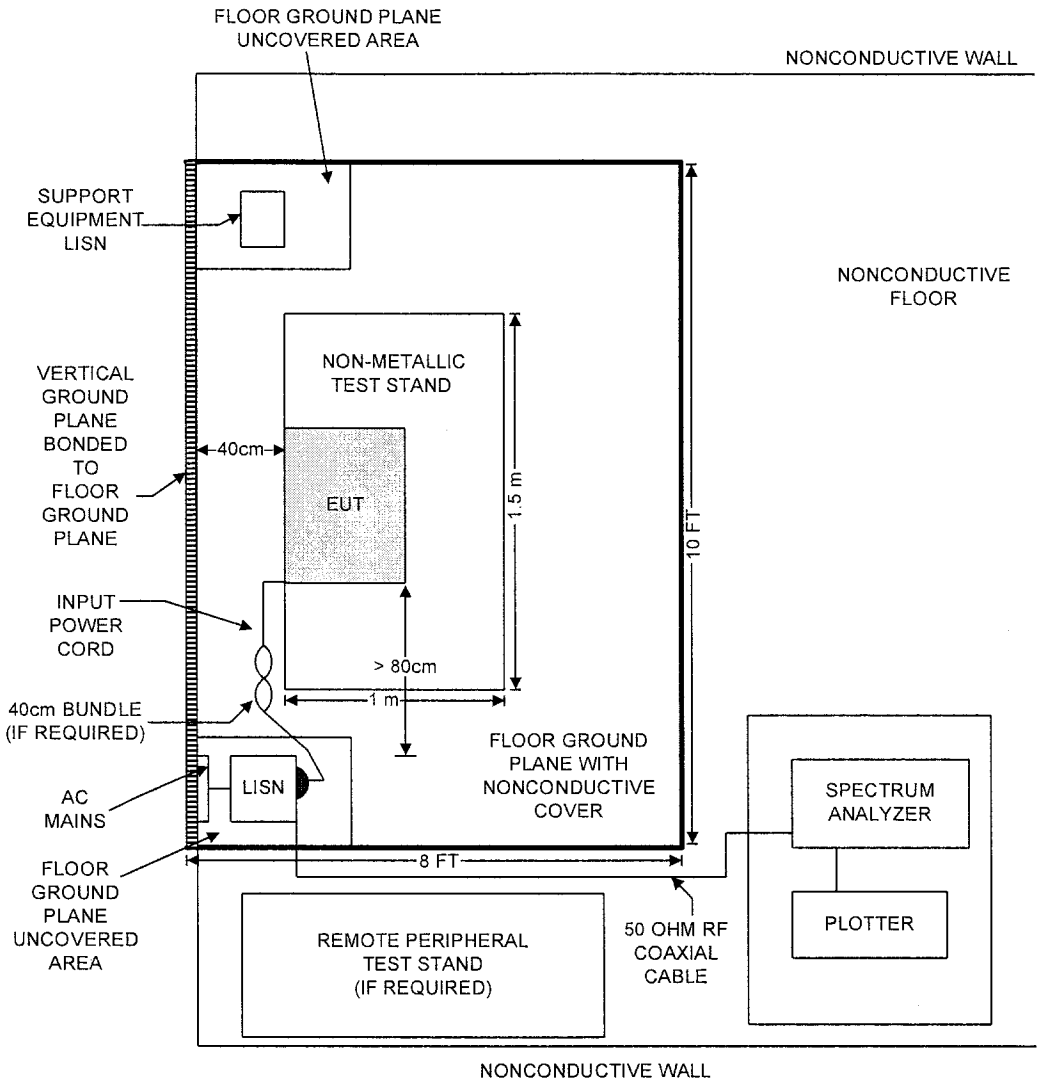
TEST SETUP PHOTOGRAPHS

CONDUCTED EMISSIONS

EUT 3



TEST METHOD SETUP–CONDUCTED EMISSIONS



-- DRAWING IS NOT TO SCALE --

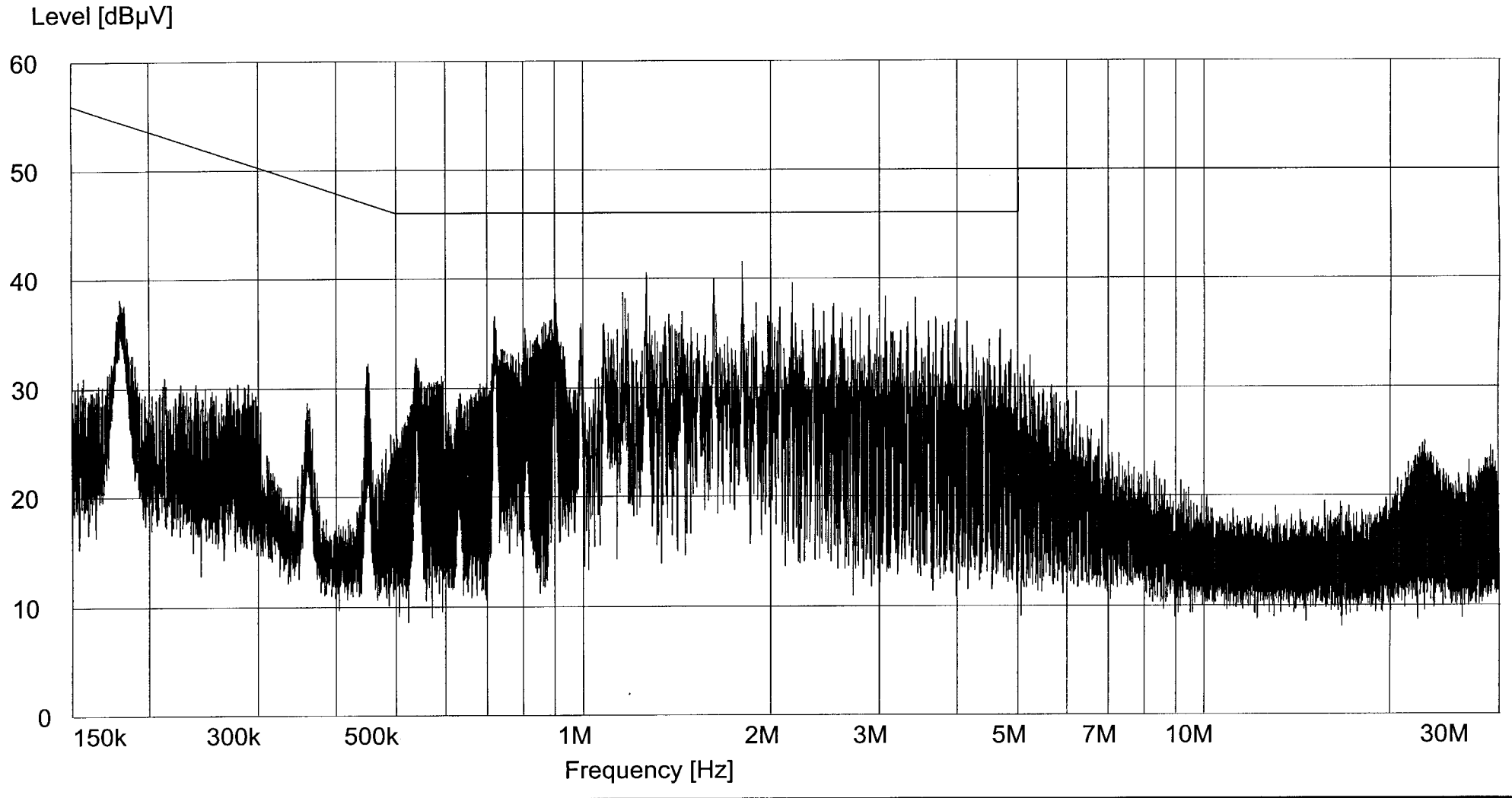
NOTES:

1) THE TOP OF THE NON-METALLIC TEST STAND IS 0.8 METERS ABOVE THE FLOOR GROUND PLANE.
2) THE FRONT AND SIDE EDGES OF THE NON-METALLIC TEST STAND ARE MORE THAN ONE METER DISTANT FROM ANY GROUND/REFLECTING VERTICAL SURFACE.
3) THE LISN IS BONDED TO THE FLOOR GROUND PLANE.
4) THE VERTICAL GROUND PLANE IS BONDED TO THE FLOOR GROUND PLANE AT 1 FT INTERVALS.

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

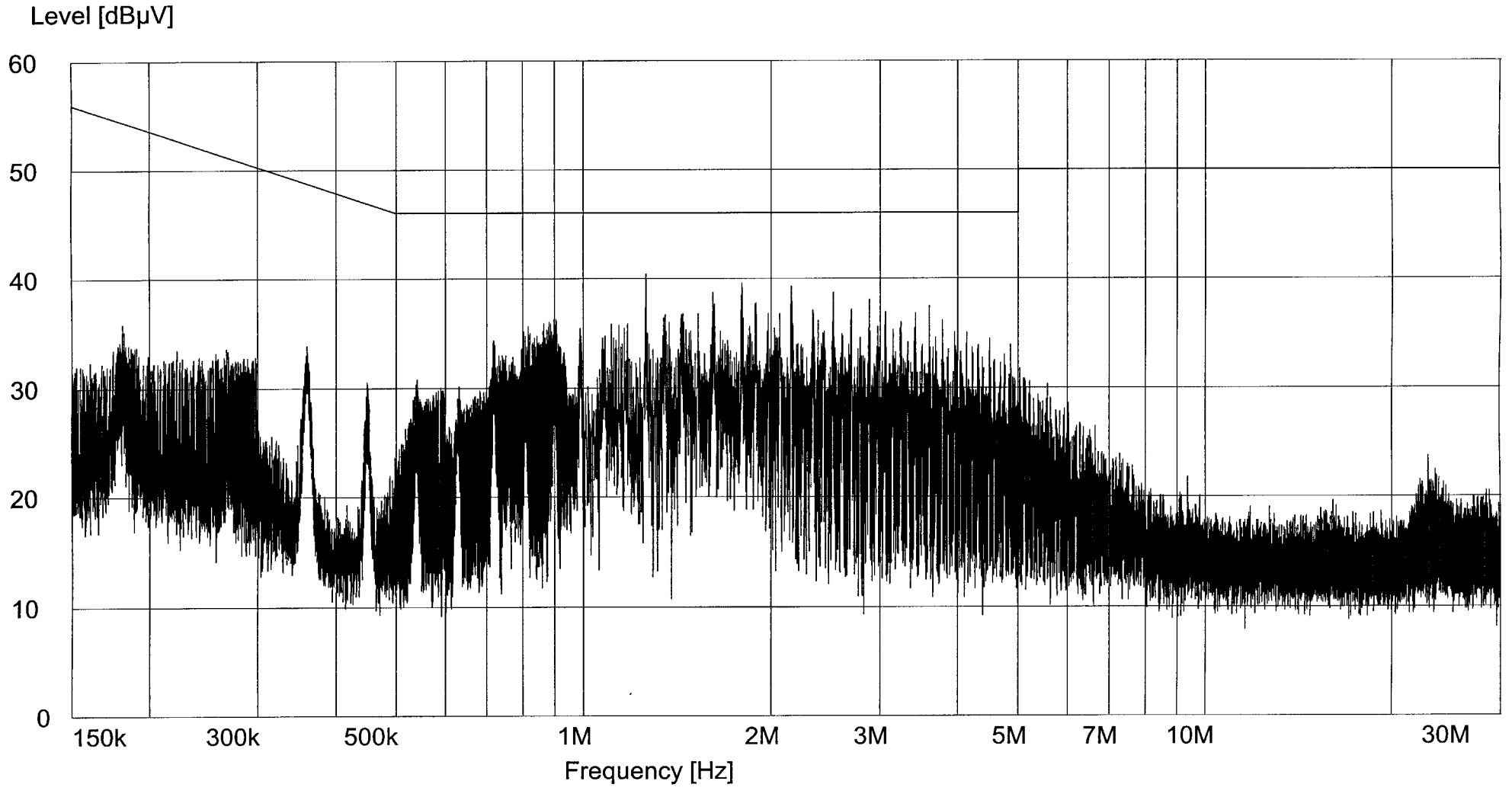
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Supply	**Job No:**	R-4455N
Model No:	GTM9250P753.3	**Serial No:**	001059	**Technician:**	T. Hannemann
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B	Paragraph 36.201, Table 2/Table 2b		**Date:**	June 20, 2005
Operating Mode:	Output 3.3VDC, 22.72A				
Notes:	Lead Tested: 230 VAC 50 Hz Hot Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

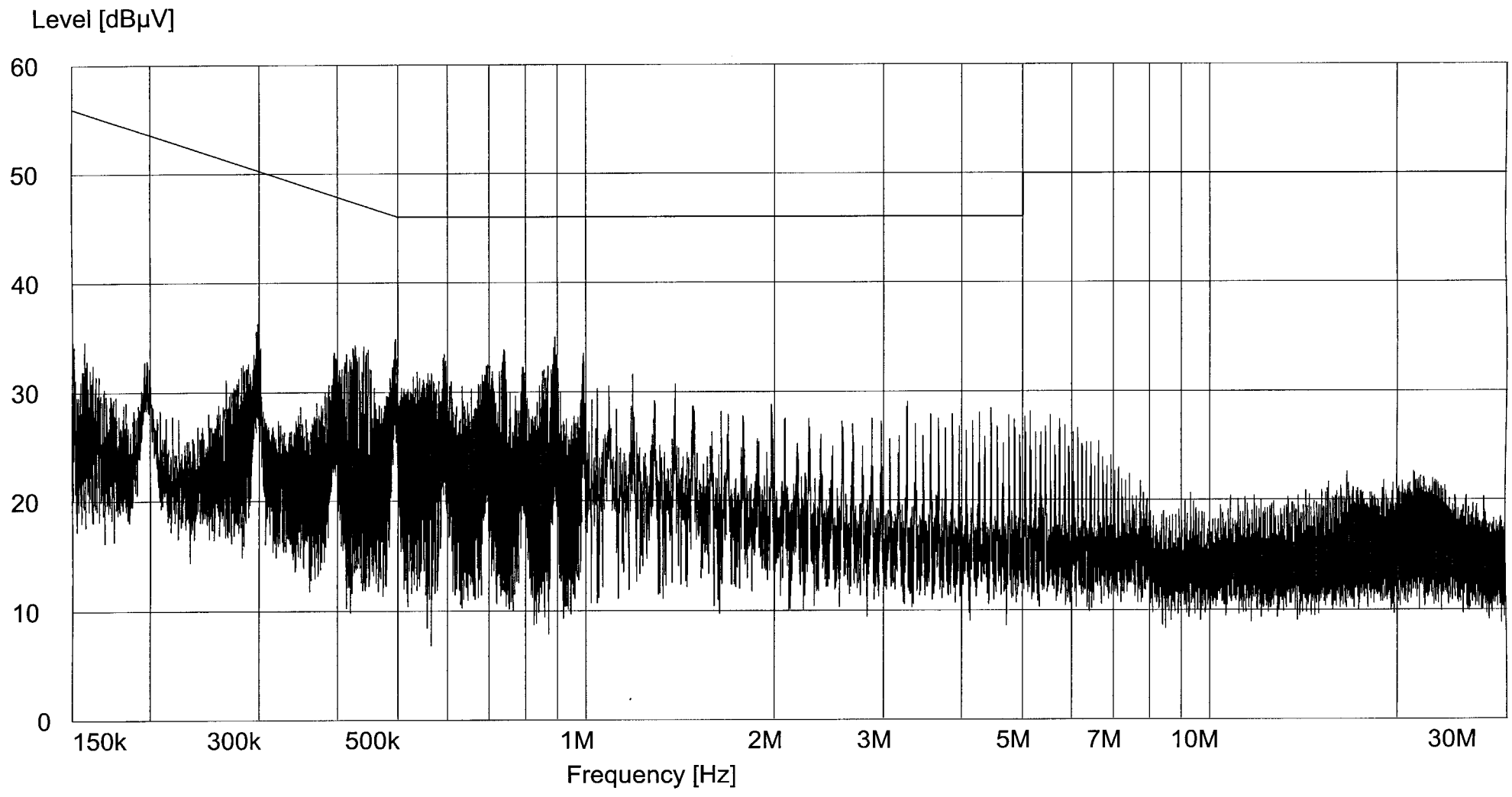
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Supply	**Job No:**	R-4455N
Model No:	GTM9250P753.3	**Serial No:**	001059	**Technician:**	T. Hannemann
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B	Paragraph 36.201, Table 2/Table 2b		**Date:**	June 20, 2005
Operating Mode:	Output 3.3VDC, 22.72A				
Notes:	Lead Tested: 230 VAC 50 Hz Neutral Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

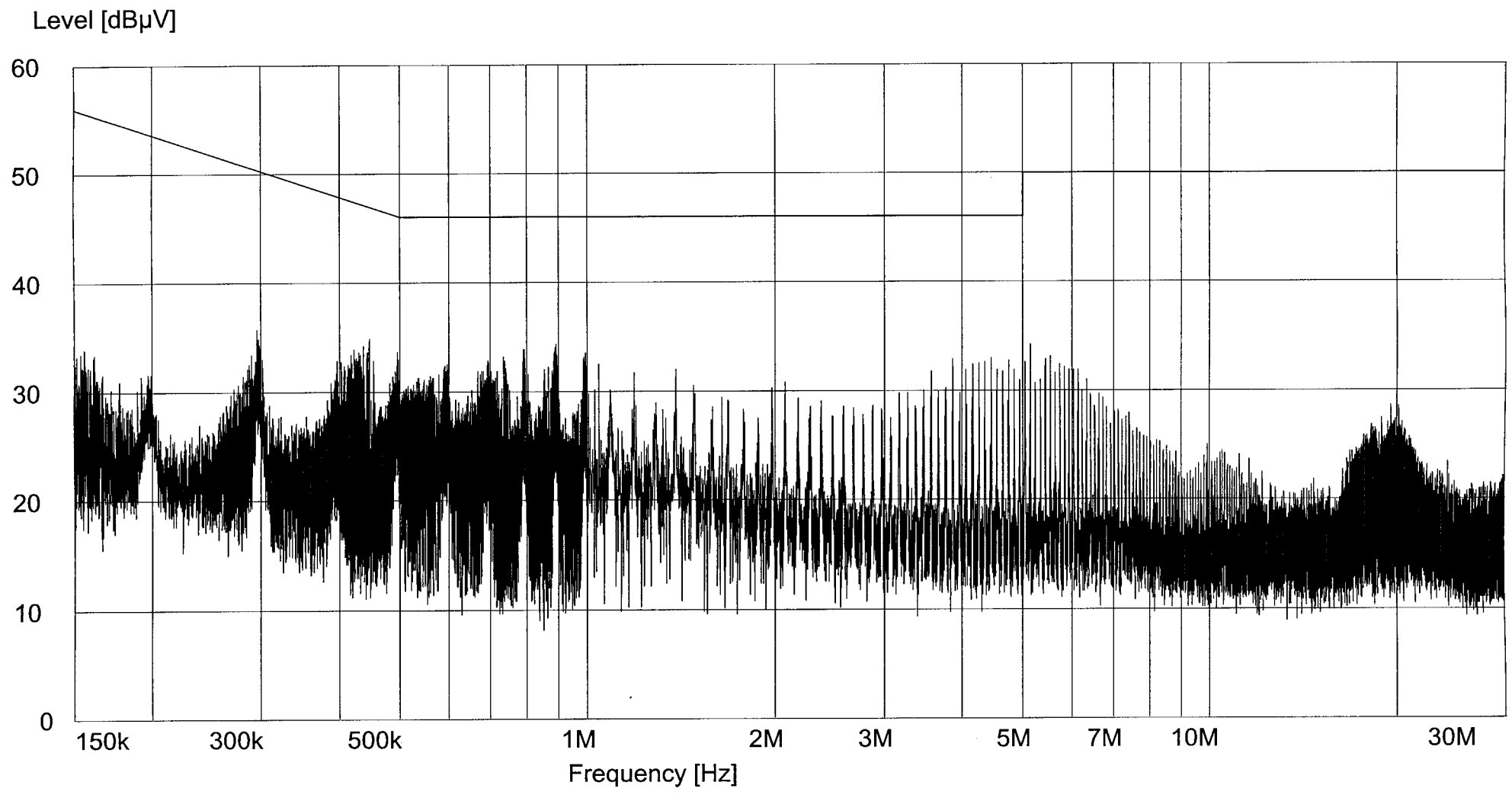
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Supply	**Job No:**	R-4455N
Model No:	GTM9250P27048	**Serial No:**	001060	**Technician:**	T. Hannemann
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B	Paragraph 36.201, Table 2/Table 2b		**Date:**	June 20, 2005
Operating Mode:	Output 48VDC, 5.62A				
Notes:	Lead Tested: 230 VAC 50 Hz Hot Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

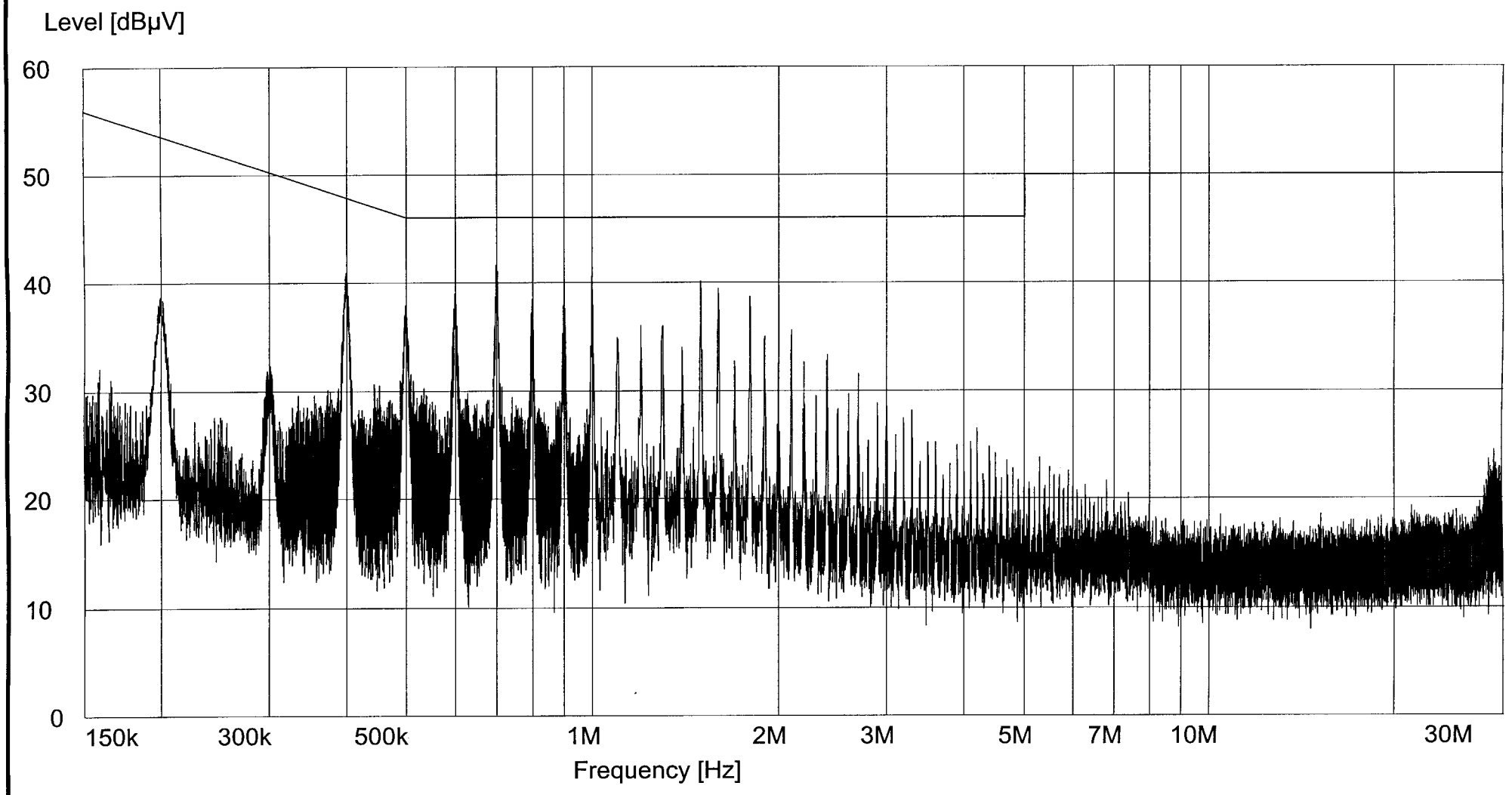
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Supply	**Job No:**	R-4455N
Model No:	GTM9250P27048	**Serial No:**	001060	**Technician:**	T. Hannemann
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B	Paragraph 36.201, Table 2/Table 2b		**Date:**	June 20, 2005
Operating Mode:	Output 48VDC, 5.62A				
Notes:	Lead Tested: 230 VAC 50 Hz Neutral Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

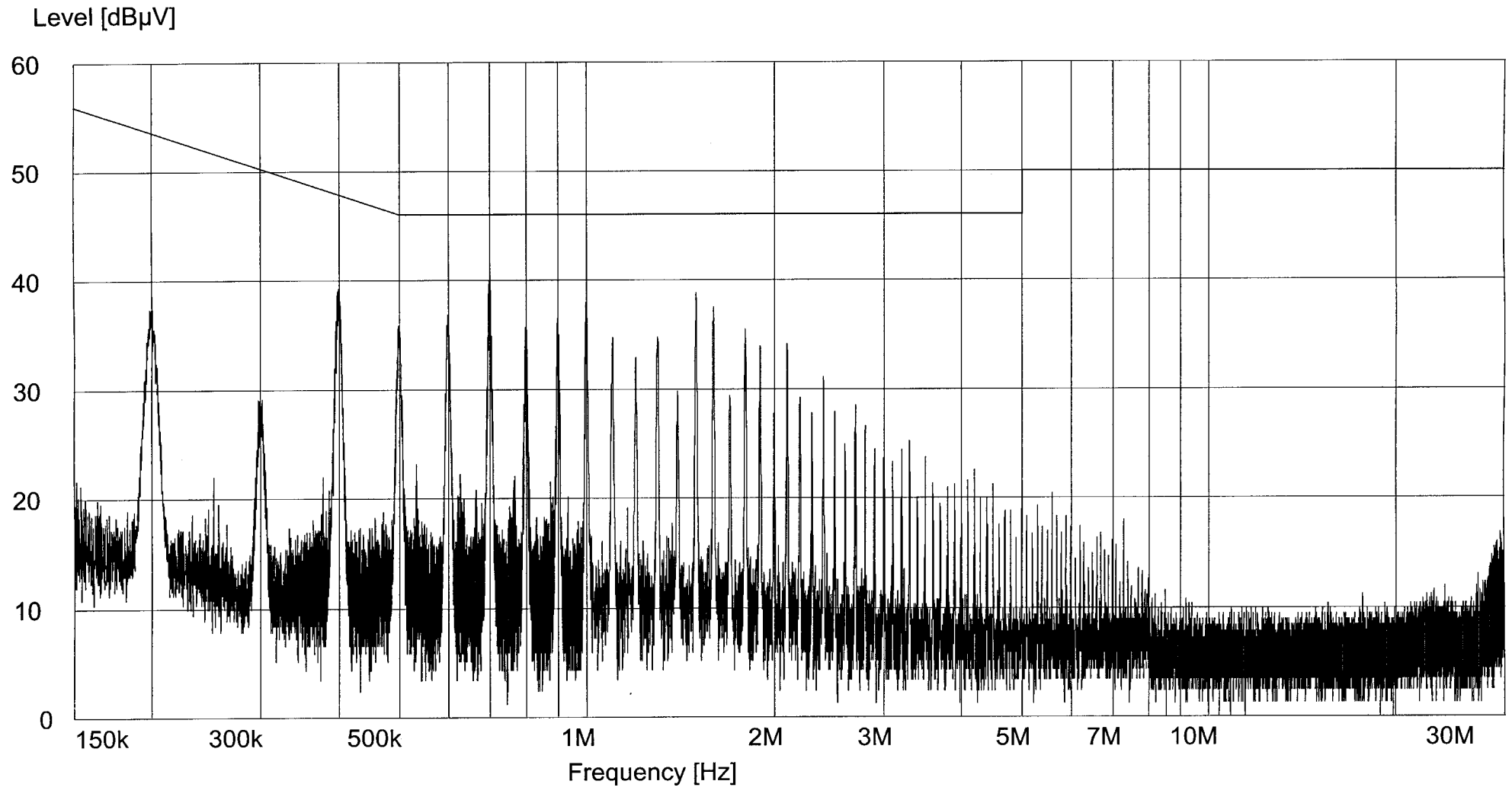
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Supply	**Job No:**	R-4455N
Model No:	GTM9250P1503.3	**Serial No:**	001058	**Technician:**	T. Hannemann
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B	Paragraph 36.201, Table 2/Table 2b		**Date:**	June 20, 2005
Operating Mode:	Output 3.3VDC, 45.45A				
Notes:	Lead Tested: 230 VAC 50 Hz Hot Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Supply	**Job No:**	R-4455N
Model No:	GTM9250P1503.3	**Serial No:**	001058	**Technician:**	T. Hannemann
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B	Paragraph 36.201, Table 2/Table 2b		**Date:**	June 20, 2005
Operating Mode:	Output 3.3VDC, 45.45A				
Notes:	Lead Tested: 230 VAC 50 Hz Neutral Peak Readings to Average Limits.				



TEST EQUIPMENT LISTING

CONDUCTED EMISSIONS

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
4028	Isolation Transformer	Acme	N/A	120x240	01/31/2005	01/31/2006
4029	Open Area Test Site	Retlif	3 / 10 Meters	RNH	11/14/2003	11/14/2006
5038	10 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9304	02/07/2005	02/07/2006
713	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	03/22/2005	03/22/2006

8.0 RADIATED EMISSIONS, EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002

PURPOSE

The purpose of this test was to determine the magnitude of the radiated emissions emanating from the test sample.

TEST SETUP

The test sample setup is shown in the attached photograph. The general test setup is shown in Retlif Testing Laboratories Drawing, per the requirements in EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002. The test sample was placed on a 0.8 meter high wooden test stand above the ground plane of the open field test site. The test stand is placed directly on the ground mounted turntable. The turntable positions are relative to the EUT as follows: When facing the EUT the front is at 0 °, the rear is at 180 °, and the left side is at 270 °. The turn stand was situated such that the boundary of the test sample was located 10 meters from the measuring antenna. The test sample was arranged on the test stand in accordance with the manufacturer's instructions.

MEASUREMENTS

With the test samples arranged as described above, a spectrum analyzer or receiver was connected to the measuring antenna. The emissions from the test samples were measured over the frequency range of 30MHz to 1000MHz with the test antenna specified below:

Frequency Range	Antenna
30MHz to 1GHz	Biconilog

At each frequency upon which an emission from the test samples was observed the following steps were performed to maximize the field strength of the emission:

1. The antenna height was varied from 1 to 4 meters.
2. The antenna was both horizontally and vertically polarized.
3. The test samples was rotated about its vertical axis.
4. The test samples and interconnecting cables were reoriented within the confines of the manufacturer's instructions.

8.0 RADIATED EMISSIONS, EN55022:1998/A1:2001/A2:2003/EN55011:1998/A1:1999/A2:2002

TEST LIMITS

The limits shown in the table below were used to determine test sample compliance.

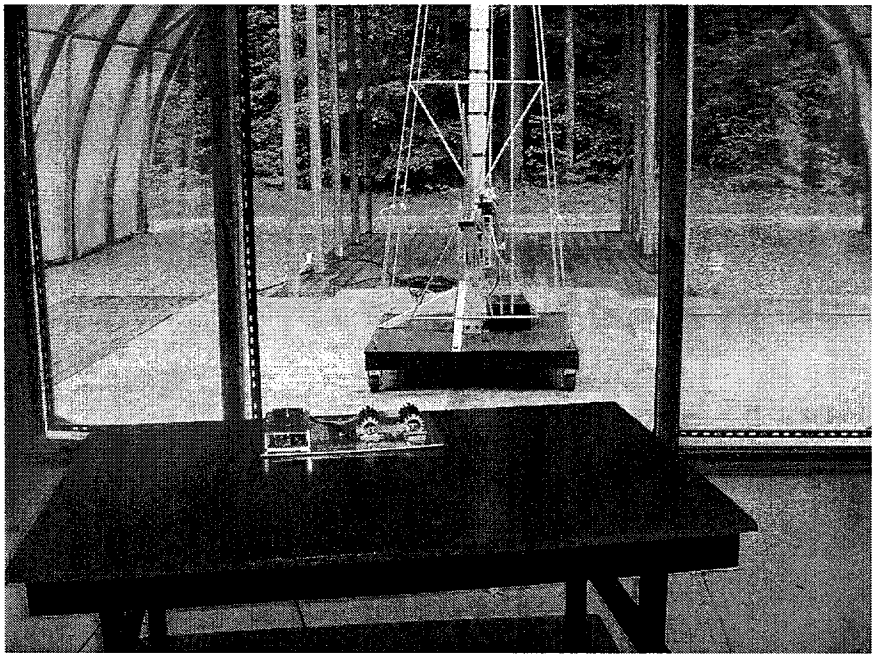
FREQUENCY RANGE	EN55022, CLASS B/EN55011 GROUP 1, CLASS B QUASI-PEAK LIMITS [dB (µV/M)], @ 10 METERS
30.0MHz to 230.0MHz	30.0
230.0MHz to 1000.0MHz	37.0

TEST RESULTS

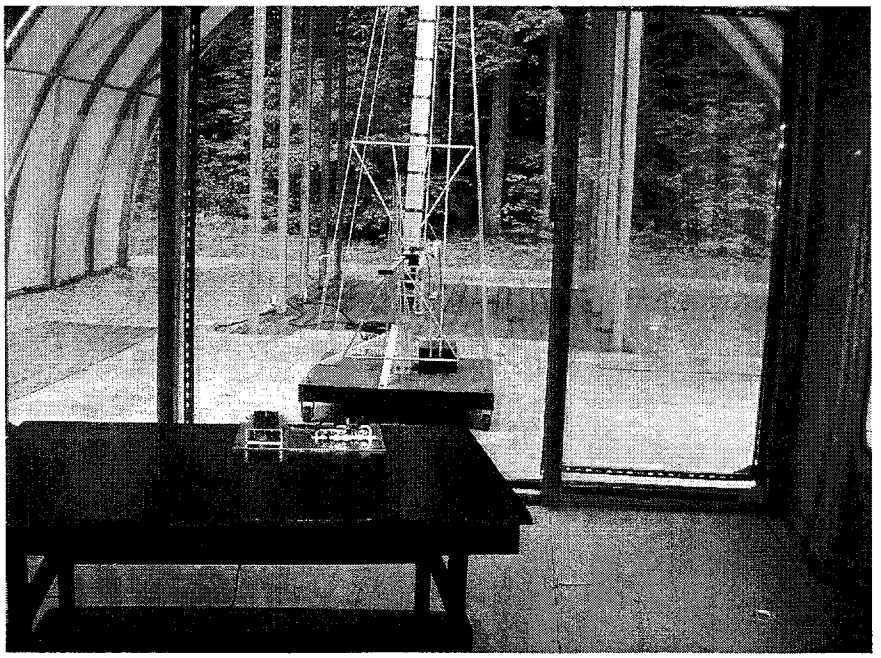
The test samples complied with the Class B requirements specified for this test method. See attached data for a full presentation of the results obtained.

TEST SETUP PHOTOGRAPHS
RADIATED EMISSIONS

EUT 1

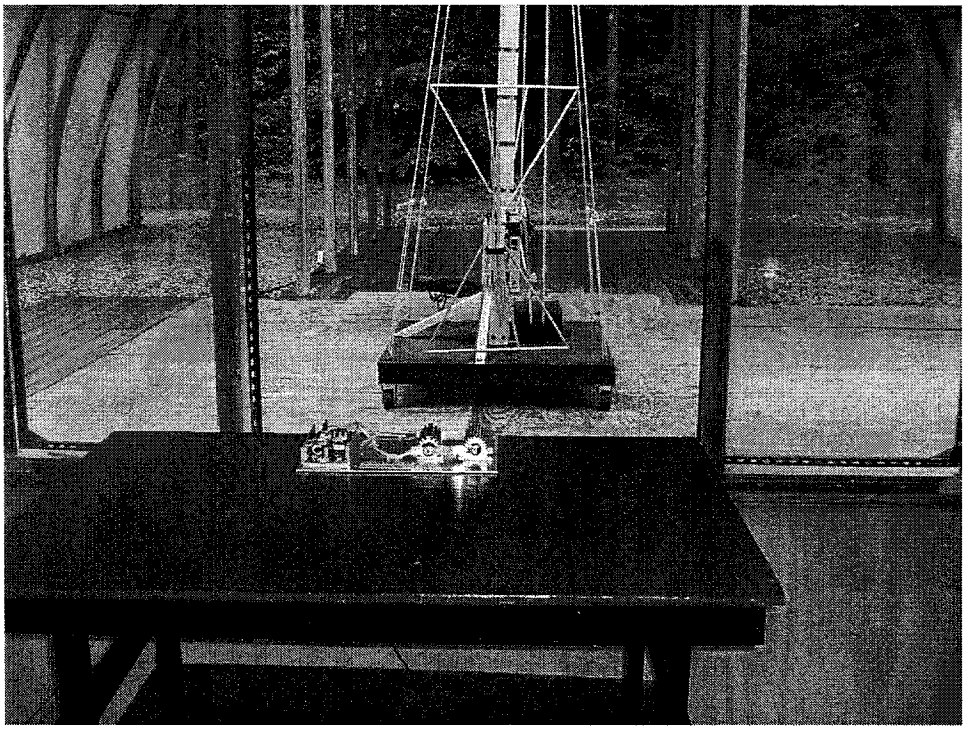


EUT 2

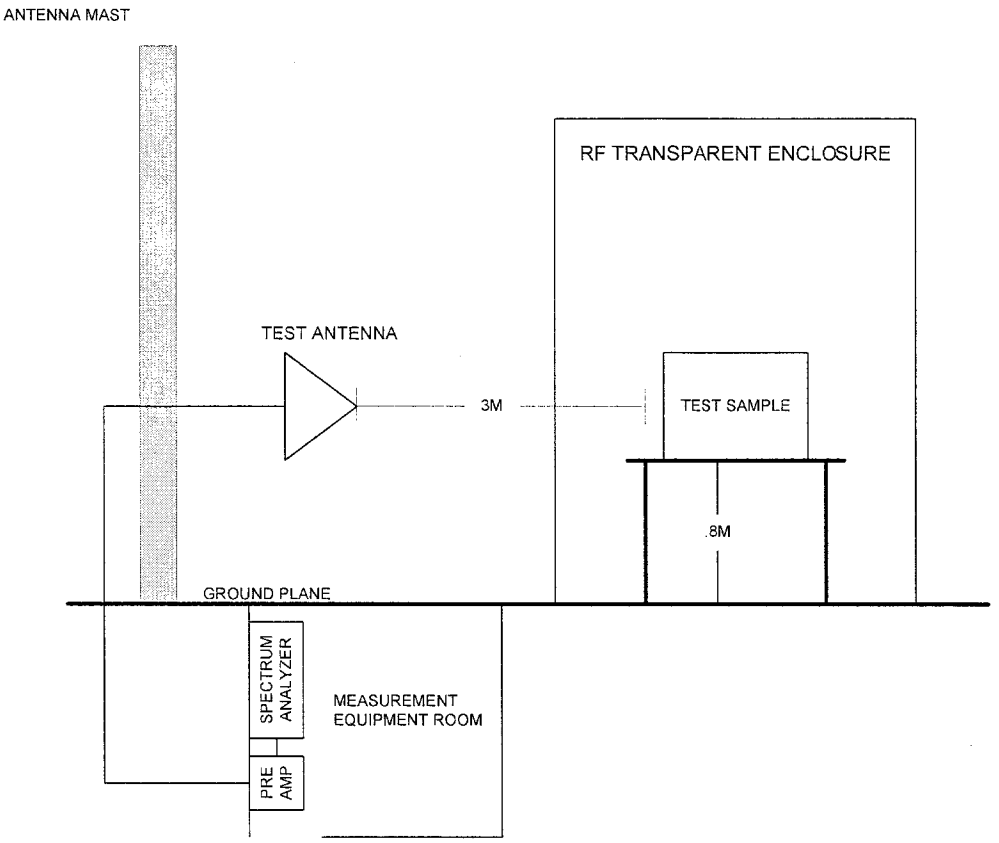


TEST SETUP PHOTOGRAPHS
RADIATED EMISSIONS

EUT 3



DRAWING NO. RCISPR11-RE GENERAL TEST SETUP, TEST METHOD
RADIATED EMISSIONS



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Radiated Emissions 30 MHz to 1 GHz**		
Customer	TUV America	**Job No.**	R-4455N
Test Sample	Globtek AC-DC Power Supply		
Model No.	GTM9250P753.3	**Serial No.**	001059
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B Paragraph 36.201, Table 6/Table 4		
Operating Mode:	Output 3.3VDC, 22.72A		
Technician:	T. Hannemann	**Date:**	June 9, 2005
Notes:	Test Distance: 3 Meters Detector: Quasi-Peak		

Test Frequency	Antenna Position	Turntable Position	Uncorrected Reading	Correction Factor	Corrected Reading	Distance Factor	Corrected Reading			Limit at 10 Meters
MHz	(H/V) - Height	Degrees	dBuV	dB	dBuV/m	dB	dBuV/m			dBuV/m
30.00	-	-	-	-	-	-	-			30.0
|	-	-	-	-	-	-	-			|
30.31	V-1m	0.0	29.14	1.96	31.10	-10.46	20.64			|
41.51	V-1m	0.0	31.31	-4.51	26.80	-10.46	16.34			|
45.74	V-1m	180.0	34.33	-6.63	27.70	-10.46	17.24			|
54.53	V-1m	0.0	33.19	-9.29	23.90	-10.46	13.44			|
56.99	V-1m	0.0	32.68	-9.58	23.10	-10.46	12.64			|
|	-	-	-	-	-	-	-			|
230.00	-	-	-	-	-	-	-			30.0
230.00	-	-	-	-	-	-	-			37.0
|	-	-	-	-	-	-	-			|
1000.00	-	-	-	-	-	-	-			37.0
	EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. Emission levels closest to the limit are listed on this data sheet.									

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Radiated Emissions 30 MHz to 1 GHz**		
Customer	TUV America	**Job No.**	R-4455N
Test Sample	Globtek AC-DC Power Supply		
Model No.	GTM9250P27048	**Serial No.**	001060
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B Paragraph 36.201, Table 6/Table 4		
Operating Mode:	Output 48VDC, 5.62A		
Technician:	T. Hannemann	**Date:**	June 9, 2005
Notes:	Test Distance: 3 Meters Detector: Quasi-Peak		

Test Frequency	Antenna Position	Turntable Position	Uncorrected Reading	Correction Factor	Corrected Reading	Distance Factor	Corrected Reading			Limit at 10 Meters
MHz	(H/V) - Height	Degrees	dBuV	dB	dBuV/m	dB	dBuV/m			dBuV/m
30.00	-	-	-	-	-	-	-			30.0
|	-	-	-	-	-	-	-			|
45.20	V-1m	180.0	32.26	-6.36	25.90	-10.46	15.44			|
54.26	V-1m	180.0	34.76	-9.26	25.50	-10.46	15.04			|
56.50	V-1m	180.0	31.92	-9.52	22.40	-10.46	11.94			|
|	-	-	-	-	-	-	-			|
230.00	-	-	-	-	-	-	-			30.0
230.00	-	-	-	-	-	-	-			37.0
|	-	-	-	-	-	-	-			|
1000.00	-	-	-	-	-	-	-			37.0

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. Emission levels closest to the limit are listed on this data sheet.

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Radiated Emissions 30 MHz to 1 GHz**		
Customer	TUV America	**Job No.**	R-4455N
Test Sample	Globtek AC-DC Power Supply		
Model No.	GTM9250P1503.3	**Serial No.**	001058
Test Specification:	EN60601-1-2, EN55011/EN55022 Class B Paragraph 36.201, Table 6/Table 4		
Operating Mode:	Output 3.3VDC, 45.45A		
Technician:	T. Hannemann	**Date:**	June 9, 2005
Notes:	Test Distance: 3 Meters Detector: Quasi-Peak		

Test Frequency	Antenna Position	Turntable Position	Uncorrected Reading	Correction Factor	Corrected Reading	Distance Factor	Corrected Reading			Limit at 10 Meters
MHz	(H/V) - Height	Degrees	dBuV	dB	dBuV/m	dB	dBuV/m			dBuV/m
30.00	-	-	-	-	-	-	-			30.0
|	-	-	-	-	-	-	-			|
50.70	V-1m	180.0	31.24	-8.84	22.40	-10.46	11.94			|
51.50	H-1m	0.0	28.74	-8.94	19.80	-10.46	9.34			|
53.50	V-1m	180.0	35.87	-9.17	26.70	-10.46	16.24			|
57.50	H-1m	0.0	30.14	-9.64	20.50	-10.46	10.04			|
57.80	V-1m	180.0	38.37	-9.67	28.70	-10.46	18.24			|
59.70	V-1m	180.0	40.69	-9.89	30.80	-10.46	20.34			|
61.90	V-1m	180.0	34.78	-9.78	25.00	-10.46	14.54			|
|	-	-	-	-	-	-	-			|
230.00	-	-	-	-	-	-	-			30.0
230.00	-	-	-	-	-	-	-			37.0
|	-	-	-	-	-	-	-			|
1000.00	-	-	-	-	-	-	-			37.0

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. Emission levels closest to the limit are listed on this data sheet.

TEST EQUIPMENT LISTING
RADIATED EMISSIONS

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
3119A	Pre-Amplifier	Retlif	10 kHz - 1 GHz	RET-PA-SW	07/23/2004	07/23/2005
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	12/03/2004	12/03/2005
4202	Biconilog	EMCO	26 MHz - 2 GHz	3142	12/13/2004	12/13/2005
713	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	03/22/2005	03/22/2006

9.0 HARMONIC CURRENT EMISSIONS, CLASS A, EN 61000-3-2:2001

PURPOSE

The purpose of this test method was to determine the frequency and level of the Harmonic components of the input current which may be produced by the EUT.

TEST SETUP AND MEASUREMENTS

The equipment setup is shown in the attached photograph. The general test setup is shown in Retlif Testing Laboratories Drawing No. EN61000-3-2, per the requirements in EN 61000-3-2:2000. The EUT input power cord was plugged into the test outlet on the Harmonic current measurement system receiver. The receiver was connected to the mains voltage source, which was maintained within ± 2% of the EUT Rated Voltage and within ± 0.5% of nominal frequency. The EUT was switched on and the level and frequency of the input current Harmonics were recorded and compared to the specified limit.

LIMITS FOR CLASS A EQUIPMENT

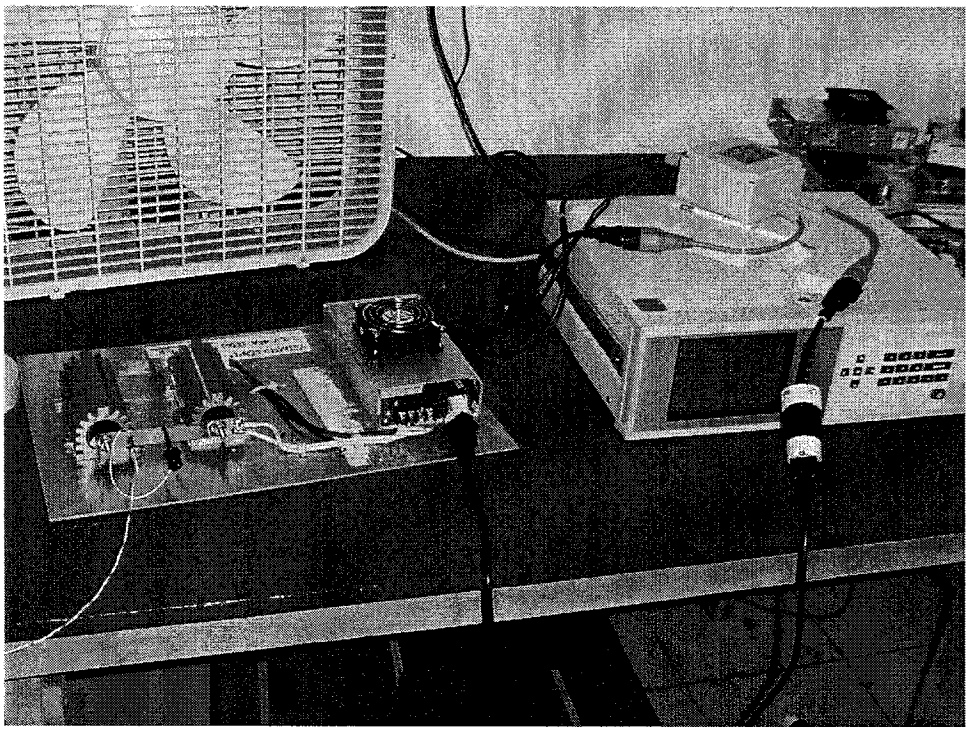
HARMONIC COMPONENT NUMBER —	MAXIMUM PERMISSIBLE HARMONIC CURRENT AMPS
2	1.08
3	2.30
4	0.43
5	1.14
6	0.30
7	0.77
$8 \leq n \leq 40$	0.23 x 8/n
9	0.40
10 (see 8)	(see 8)
11	0.33
12 (see 8)	(see 8)
13	0.21
14 (see 8)	(see 8)
$15 \leq n \leq 39$	0.15 x 15/n

TEST RESULTS

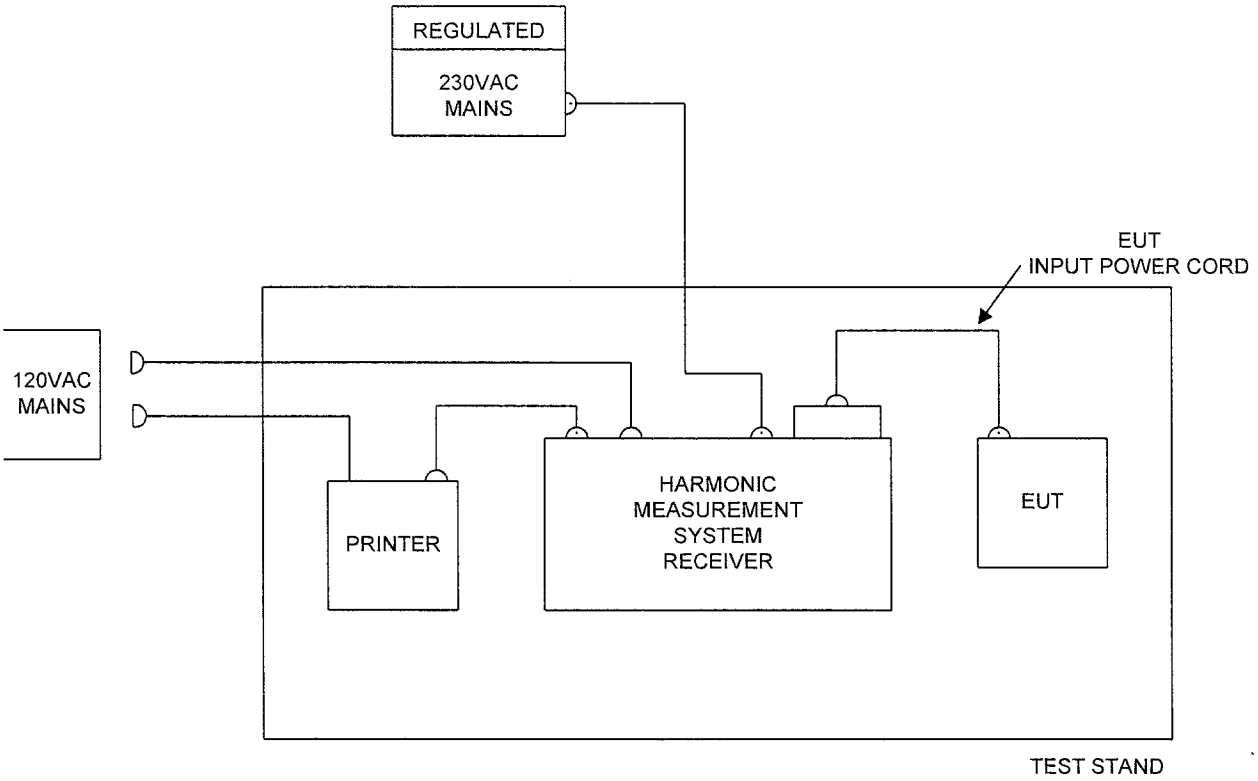
The EUT meets the requirements of the test specification. No Harmonic components of the input current exceeded the maximum permissible values. See attached data for a full presentation of the results obtained.

TEST SETUP PHOTOGRAPH
HARMONIC CURRENT EMISSIONS

EUT 1



DRAWING NO. 61000-3-2 GENERAL TEST SETUP, TEST METHOD HARMONIC CURRENT EMISSIONS



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Harmonics				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Suppy	**Job No:**	R-4455N
Model No:	GTM9250P1503.3	**Serial No:**	001058	**Technician:**	T. Hannemann
Test Specification:	EN61000-3-2: 2001			**Date:**	June 28, 2005
Operating Mode:	Output 3.3VDC, 45.45A				
Notes:	Lead Tested: Main Power 230 VAC 50 Hz				

Combinova Analyzer 300 2005-06-29 00:34:34

Current Harmonics

Setup: DEFAULT_H Gen setting: 1(1) U : 229.95 V fu: 50.000 Hz
Live Analysed periods: 6 I : 0.9387 A P: 214.8 W
Module: M1 Limit: Class A (EN61000_A14) I1: 0.9357 A
Note:
THD=6.30 % (PF=0.995) PASSED

No	A	Lim A	No	A	Lim A	No	A	Lim A
1	0.936		15	0.009	0.150	29	0.009	0.078
2	0.006	1.080	16	0.002	0.115	30	0.005	0.061
3	0.023	2.300	17	0.011	0.132	31	0.010	0.073
4	0.003	0.430	18	0.001	0.102	32	0.003	0.058
5	0.032	1.140	19	0.012	0.118	33	0.005	0.068
6	0.003	0.300	20	0.003	0.092	34	0.004	0.054
7	0.021	0.770	21	0.007	0.107	35	0.004	0.064
8	0.004	0.230	22	0.003	0.084	36	0.003	0.051
9	0.003	0.400	23	0.012	0.098	37	0.006	0.061
10	0.005	0.184	24	0.001	0.077	38	0.003	0.048
11	0.009	0.330	25	0.005	0.090	39	0.006	0.058
12	0.004	0.153	26	0.003	0.071	40	0.005	0.046
13	0.016	0.210	27	0.004	0.083			
14	0.001	0.131	28	0.005	0.066			

Current range: 3 Ap

Appl: DEFAULT

EQUIPMENT LIST

HARMONICS

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
5048	Power Meas. Sys. Analyzer	Combinova	N/A	300	9/9/2004	9/9/2005

10.0 VOLTAGE FLUCTUATIONS AND FLICKER, EN61000-3-3:1995/A1:2001/A2:2002

PURPOSE

The purpose of this test method was to examine voltage fluctuations and flicker produced by the EUT and impressed on the public mains system.

TEST SETUP AND MEASUREMENTS

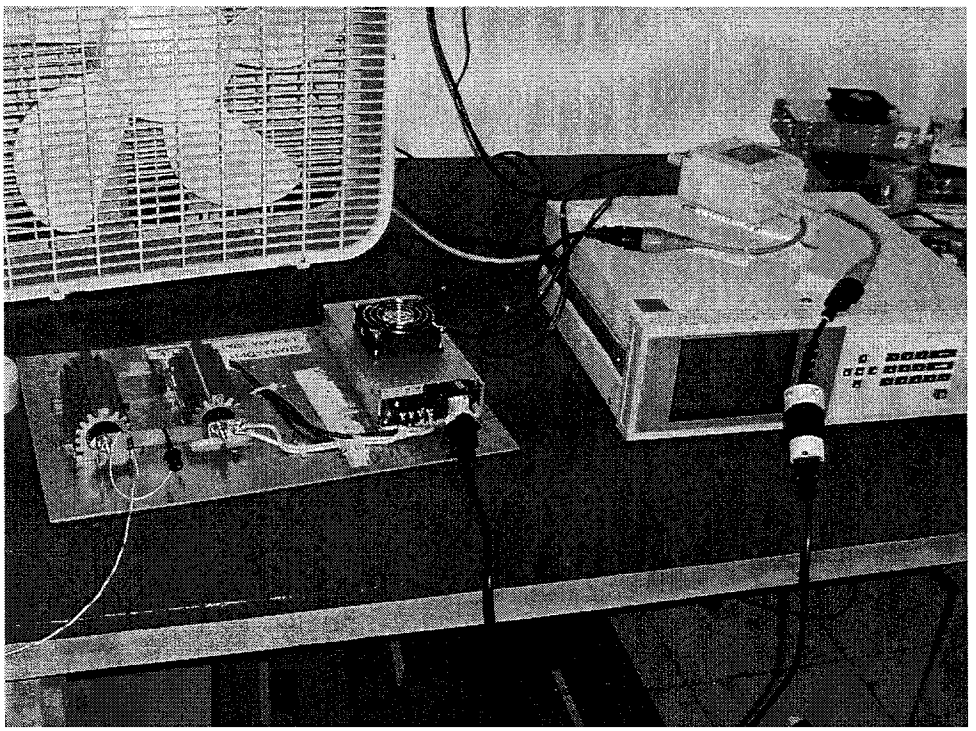
The equipment setup is shown in the attached photograph and drawing. The EUT input power cord was plugged into the test outlet on the Flickermeter. The Flickermeter was connected to the mains voltage. The EUT was turned on and the voltage fluctuations and flicker produced were measured and compared to the specified limits.

TEST RESULTS

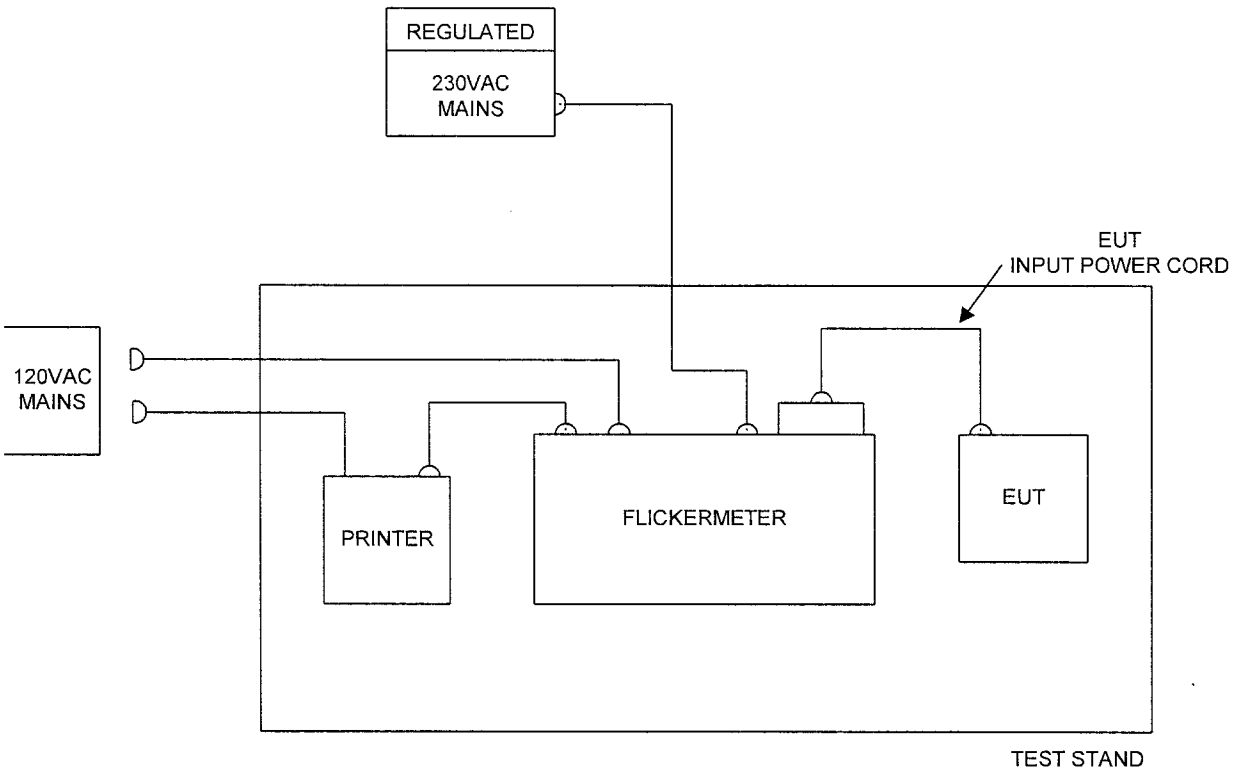
The EUT meets the specified requirements of the test specification. See attached data for a full presentation of the results obtained.

TEST SETUP PHOTOGRAPH
VOLTAGE FLUCTUATIONS AND FLICKER

EUT 1



DRAWING NO. 61000-3-3 GENERAL TEST SETUP, TEST METHOD VOLTAGE FLUCTUATIONS AND FLICKER



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Flicker**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Suppy	**Job No:**	R-4455N
Model No:	GTM9250P1503.3	**Serial No:**	001058	**Technician:**	T. Hannemann
Test Specification:	EN61000-3-3: 1995			**Date:**	June 28, 2005
Operating Mode:	Output 3.3VDC, 45.45A				
Notes:	Lead Tested: Main Power 230 VAC 50 Hz				

Combinova Analyzer 300 2005-06-28 04: 19: 33

Extreme Flicker-I M1

Note:

Numerical Reference Impedance
U: 229.8 V I: 0.922 A f: 50.012 Hz PF: 0.995

EVALUATION: ----------

Type of observation period		Short	Long		Limit
Observation time	Tp :	10	120	min	
Maximum relative voltage change	dmax:		0.17	%	4
Max rel steady state voltage change	dc :		0.16	%	3
Duration of d(t) > 3 %	t :		0.00	s	0.2
Short term flicker severity	Pst :		0.03		1.00
Long term flicker severity	Plt :	---	0.01		0.65

Based on 12 (12) short term cycles

PASSED

Measurement completed

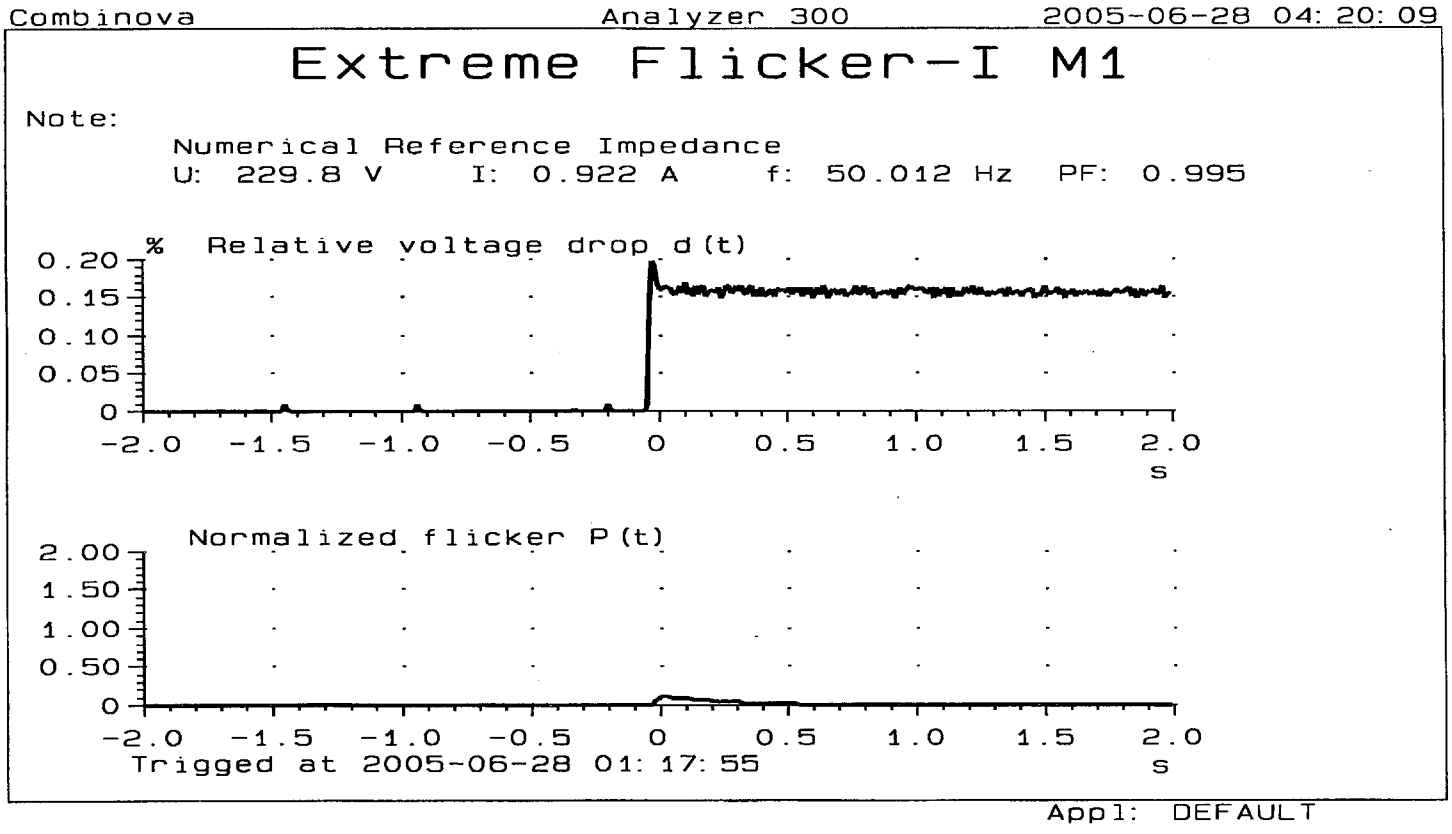
Appl: DEFAULT

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Flicker**				
Customer:	TUV America	**Test Sample:**	Globtek AC-DC Power Suppy	**Job No:**	R-4455N
Model No:	GTM9250P1503.3	**Serial No:**	001058	**Technician:**	T. Hannemann
Test Specification:	EN61000-3-3: 1995			**Date:**	June 28, 2005
Operating Mode:	Output 3.3VDC, 45.45A				
Notes:	Lead Tested: Main Power 230 VAC 50 Hz				

9250P1503.3



EQUIPMENT LIST

FLICKER

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
5048	Power Meas. Sys. Analyzer	Combinova	N/A	300	9/9/2004	9/9/2005

11.0 ELECTROSTATIC DISCHARGE, EN61000-4-2:1995/A1:1998/A2:2001

PURPOSE

The purpose of this test method was to determine the ability of the AC-DC Power Supply to withstand electrostatic discharges applied directly to the AC-DC Power Supply and those applied to objects adjacent to the AC-DC Power Supply.

TEST PARAMETERS

The critical parameters of the electrostatic discharge generator and the applied voltage waveform are shown below:

CONTACT:

Discharge Voltage:	2.0kV, 4.0kV, 6.0kV
Discharge Polarity:	Positive/Negative
Discharge Rate:	1 PPS
Rise Time:	0.7 to 1 nanosecond
Pulse Duration:	20 nanoseconds
Storage Capacitor:	150 picofarads
Discharge Resistor:	330 Ohms

TEST SETUP

The equipment setup is shown in the attached photograph. The general setup is shown in Retlif Testing Laboratories Drawing, per the requirements in EN 61000-4-2:1995/A1:1999/A2:2002. An 80 cm tall, 1.0 x 1.6 meter, wooden test stand table was standing, centered, on the floor mounted Ground Reference Plane (GRP). A Horizontal Coupling Plane (HCP), 0.8 x 1.6 meters, was on top of the test stand and coupled to the GRP with a cable which had a 470Kohm resistor located at each end. Using the same material and a similar cable as the HCP, the 0.5 x 0.5 meter Vertical Coupling Plane (VCP) was connected to the GRP. The EUT and the EUT associated cabling (including input power) were isolated from the HCP by a 0.5 mm insulating support. The EUT setup was a minimum of one meter from all walls and vertical metallic surfaces. The ESD generator discharge return cable, nominally 2 meters long, was connected to the GRP and kept at least 0.2 meters away from conductive parts of the setup.

TEST POINT DETERMINATION
After an engineering evaluation the following test points on the EUT were selected:

CONTACT DISCHARGE, DIRECT APPLICATION

- Right Side
- Left Side
- Top
- Both Ends

CONTACT DISCHARGE, INDIRECT APPLICATION

- Vertical Coupling Plane - All four sides of Test Sample
- Horizontal Coupling Plane - All four sides of Test Sample

CONTACT DISCHARGE

The contact electrode was positioned perpendicular to, and in contact with, the surface to which the discharge was to be applied. The generator was charged and the discharge switch was activated to apply the single discharge. This procedure was repeated until 10 discharges, in both the positive and negative polarities, were applied to the test point. The procedure was then repeated on each of the remaining test points.

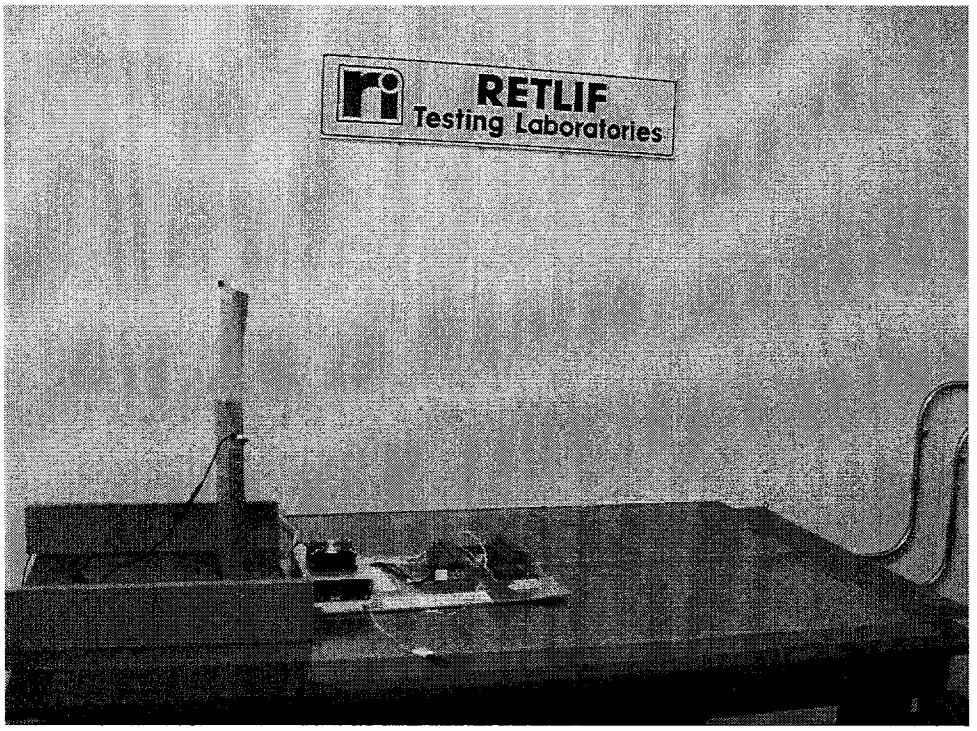
AIR DISCHARGE

The EUT had no non-conductive parts and air discharge was not performed.

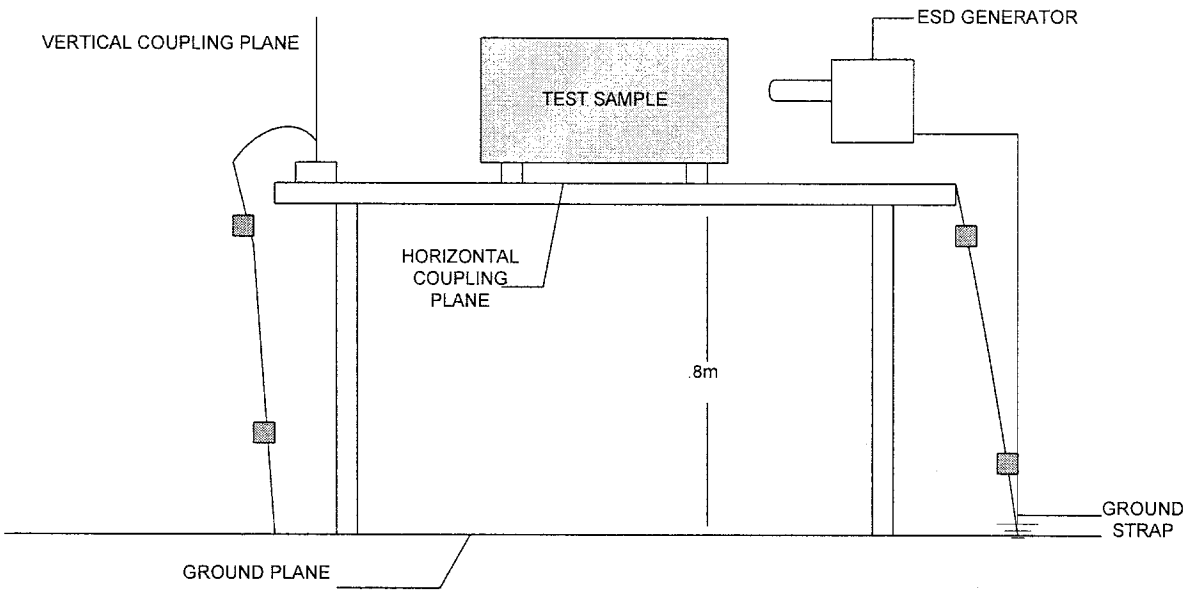
TEST RESULTS
The AC-DC Power Supply complied with the requirements specified for this test method. The test sample did not exhibit any malfunction or degradation of performance when subjected to the electrostatic discharges specified above. See the attached data sheets for a complete presentation of the results obtained.

TEST SETUP PHOTOGRAPH
ELECTROSTATIC DISCHARGE

EUT 1



DRAWING NO. 61000-4-2- GENERAL TEST SETUP, TEST METHOD ELECTROSTATIC DISCHARGE



NOTE: TEST SAMPLE AND VERTICAL COUPLING PLANE PLACED ON INSULATED SUPPORTS

= 470kOHMS

RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-2:1995/A1:1998/A2:2001, ELECTROSTATIC DISCHARGE**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No.	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Para. 36.202.2, Table 1: 1.3		
Operating Mode:	Output 3.3VDC, 45.45A		
Climatic Conditions:			
Technician:	M. Hippert	**Date:**	June 30, 2005
Notes:			

Repetition Rate	Threshold	Test Level	Number of Pulses & Pulse Polarity	Positions Tested	
PPS	K Volts				
Direct application of contact discharges.					
1.0	-----	2.0, 4.0 & 6.0	10 Positive & 10 Negative	Left Side of Case	
I	I	I	I	Right Side of Case	
I	I	I	I	Both ends of Case	
1.0	-----	2.0, 4.0 & 6.0	10 Positive & 10 Negative	Top of Case	
1.0	-----	2.0, 4.0 & 6.0	10 Positive & 10 Negative	Indirect Application of Contact Discharges	
I	I	I	I	Vertical Coupling Plane:	
I	I	I	I	-Front Side of EUT	
I	I	I	I	-Left Side of EUT'	
I	I	I	I	-Right Side of EUT	
I	I	I	I	-Back Side of EUT	
I	I	I	I	Horizontal Coupling Plane:	
I	I	I	I	-Front Side of EUT	
I	I	I	I	-Left Side of EUT'	
I	I	I	I	-Right Side of EUT	
1.0	-----	2.0, 4.0 & 6.0	10 Positive & 10 Negative	-Back Side of EUT	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by Criteria B of EN55024 and paragraph 36.202 j) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

TEST EQUIPMENT LISTING
ELECTROSTATIC DISCHARGE

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
461	ESD Gun	Schaffner	N/A	NSG 435	04/25/2005	04/25/2006

12.0 RADIATED IMMUNITY, EN61000-4-3:2002/A1:2002, 80MHz to 2.5GHz

PURPOSE

The purpose of this test method was to determine if the AC-DC Power Supply was so constructed as to have an adequate level of intrinsic immunity to radiated electromagnetic fields in the frequency range of 80 to 2500 MHz, enabling the AC-DC Power Supply to operate as intended.

TEST PARAMETERS

The critical parameters of the applied electromagnetic field are as shown below:

Frequency Range	80 to 2500MHz
Field Strength	10 V/M
Modulation	1kHz, 80%, AM
Test Distance	1 Meter
Polarization of Applied Field	Horizontal & Vertical

TEST SETUP

The test instrumentation and AC-DC Power Supply were configured as shown in the attached photographs and detailed in Paragraph 4.2 herein. This configuration was based upon the general test setup shown in Retlif Testing Laboratories Drawing Number R61000-4-3 and the requirements of EN 61000-4-3. The AC-DC Power Supply was placed on an 80 cm high wooden test stand above the test enclosure floor. The cabling of the AC-DC Power Supply was routed to the edge of the 1.5 by 1 meter test stand top, then directly to the enclosure floor. The field strength generating antenna was placed at a distance of one meter from the periphery of the AC-DC Power Supply and the associated cabling. An RF signal generator was connected to the input of the RF power amplifier. The output of the RF power amplifier was connected to an RF coupler which in turn was connected to the test antenna. A power meter was connected to the forward power port of the RF coupler.

The RF signal generator and power meter were connected to an automation computer in order to maintain the required field strength during testing. The test enclosure ceiling, walls and portions of the floor were treated with a mixture of ferrite tile and carbon impregnated foam absorber.
Prior to testing, the field was calibrated as specified in paragraph 6.2 of EN61000-4-3:2002. A uniform area, 1.5 M x 1.5 M, 80 cm above the ground plane, was established. Sixteen (16) evenly spaced calibration points were assigned within the 1.5 M x 1.5 M grid. The field was calibrated in both the Vertical and Horizontal polarizations in one percent steps in the frequency range of 80 MHz to 1000 MHz. The field was considered uniform if 12 of 16 points (75%) were within - 0dB to + 6 dB of nominal. Additionally, three percent of the frequencies were allowed to be within - 0 dB to + 10 dB of nominal. The following seven frequencies were found to be within this three percent window for the horizontal polarization: 138.28 MHz, 139.66 MHz, 141.06 MHz, 142.47 MHz, 143.90 MHz, 145.34 MHz & 146.79 MHz. All other frequencies met the - 0 dB to + 6 dB criteria.

TEST PROCEDURE

With the AC-DC Power Supply configured as described above, the following steps were performed:

1. The biconical test antenna was horizontally polarized facing the front of the AC-DC Power Supply.
2. The signal generator was adjusted for a frequency of 80 MHz and 80 % AM 1 kHz modulation.
3. The output level of the generator was increased until the power meter measured 10 V/M.
4. The automation computer was programmed to incrementally sweep the frequency range of 80 to 200 MHz in step sizes not exceeding 1% of the fundamental.
5. The field strength, as measured on the power meter, was continuously adjusted as necessary by the automation computer to maintain the test level at 10 V/M utilizing the power meter readings obtained during calibration.
6. The AC-DC Power Supply was continuously monitored for degradation or malfunction as specified in paragraph 5.2.
7. The biconical antenna was vertically polarized and steps 2 through 6 were repeated.
8. Steps 1 through 7 were repeated for the 200 to 1000 MHz frequency range with the double ridge guide antenna.
9. Steps 1 through 8 were repeated on each of the rear, left and right sides of the test sample.
10. The double ridge guide horn test antenna was horizontally polarized facing the front of the AC-DC Power Supply .
11. The signal generator was adjusted for a frequency of 1000 MHz and 80 % AM 1 kHz modulation.
12. The output level of the generator was increased until the E-field sensor measured 10 V/M.
13. The signal generator was configured to incrementally sweep the frequency range of 1000 to 2500 MHz in step sizes not exceeding 1% of the fundamental.
14. The field strength, as measured on the E-field sensor, was continuously monitored and adjusted as necessary to maintain the test level at 10 V/M.

15. The AC-DC Power Supply was continuously monitored for degradation or malfunction as specified in paragraph 5.2.
16. The double ridge guide antenna was vertically polarized and steps 11 through 15 were repeated.
17. Steps 10 through 16 were repeated on each of the rear, left and right sides of the test sample.

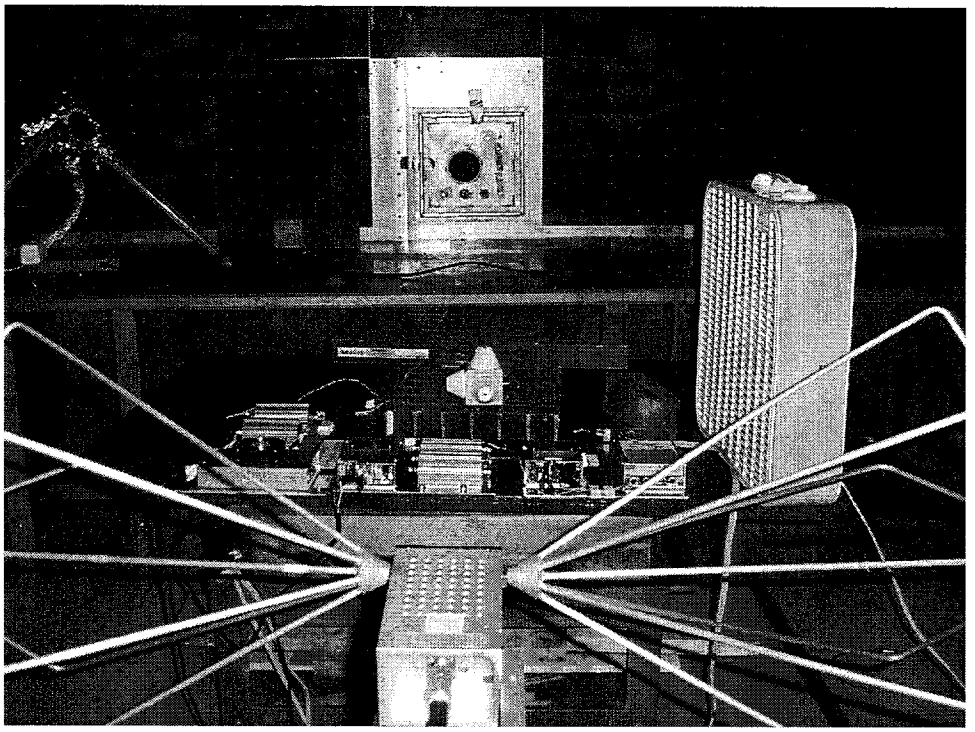
TEST RESULTS

The AC-DC Power Supply complied with the requirements specified for this test method. The test sample did not exhibit any malfunction or degradation of performance when subjected to the radiated electromagnetic energy specified above. See the attached data sheets for a complete presentation of test results.

TEST SETUP PHOTOGRAPHS

RADIATED IMMUNITY

EUT 1& 2



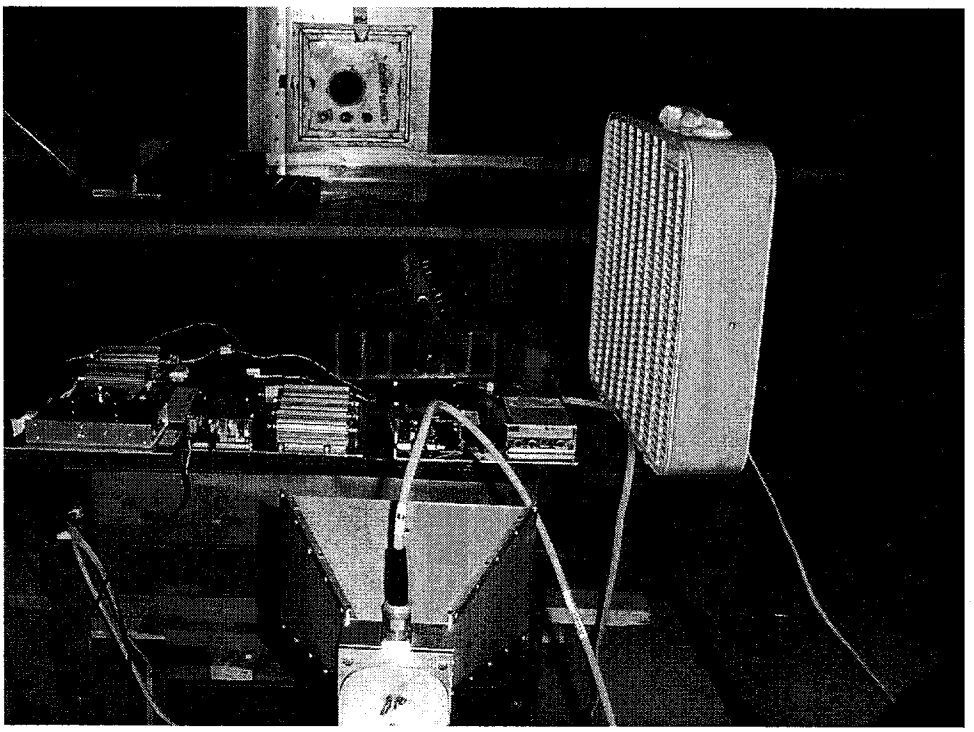
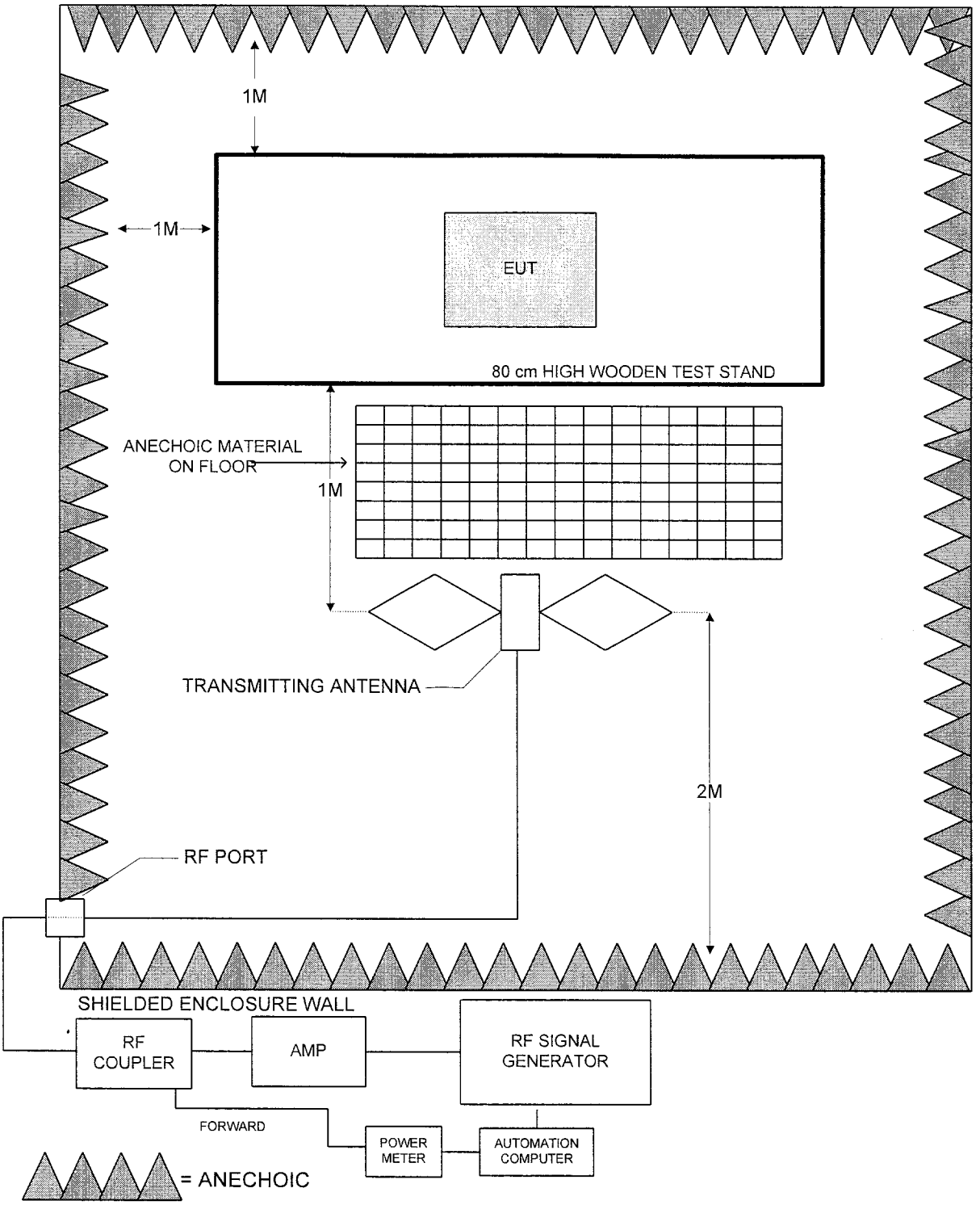


FIGURE R61000-4-3 - RADIATED IMMUNITY



RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-3:2002/A1:2002, Radiated Immunity 80 MHz to 2.5 GHz**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No.	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Para. 36.202.3, Table 1: 1.2		
Operating Mode:	Output 3.3VDC, 45.45A		
Climatic Conditions:			
Technician:	M. Hippert	**Date:**	June 30, 2005
Notes:			

Test Frequency	Threshold	Test Level	Modulation	Antenna Polarity	
MHz	V/m				
80	-----	10	80% AM 1 kHz	Vertical & Horizontal	
2500	-----	10	80% AM 1 kHz	Vertical & Horizontal	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by Criteria A of EN55024 and paragraph 36.202 j) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

RADIATED IMMUNITY

EQUIPMENT LIST

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
3258	Double Ridge Guide	EMCO	1 - 18 GHz	3115	06/01/2004	08/01/2005
4002	Biconical Antenna	EMCO	20 MHz - 200 MHz	3109	01/14/2005	01/14/2006
4016	Double Ridge Guide	EMCO	200MHz - 2GHz	3106	05/03/2005	05/03/2006
4025	Shielded Enclosure	Universal Shielding	100dB, 14kHz -	A1 NH/USC26	09/28/2004	09/28/2005
4944	Isotropic Field Probe	Amplifier Research	.010 - 1000 MHz	FP2000	10/11/2004	10/11/2005
4945	Isotropic Field Monitor	Amplifier Research	.010 - 1000 MHz	FM2000	10/11/2004	10/11/2005
4994	Amplifier	Amplifier Research	80-1000MHz, 250W	250W1000	11/18/2004	11/18/2005
5050	TWT Amplifier	Hughes	1 - 2 GHz	8020H09F000	04/15/2004	07/15/2005
530A	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023	08/12/2004	08/12/2005

13.0 ELECTRICAL FAST TRANSIENT / BURST, EN61000-4-4:2004

PURPOSE

The purpose of this test method was to determine if the AC-DC Power Supply was so constructed as to have an adequate level of intrinsic immunity to electrical fast transient bursts applied to input power leads, enabling the AC-DC Power Supply sample to operate as intended.

TEST PARAMETERS*

The critical parameters of the electrical fast transient/burst generator and the applied waveform are shown below:

Critical parameters of the electrical fast transient/burst generator and the applied waveform:

• Transient Voltage:	0.5, 1.0 and 2.0kV, Power
• Transient Polarity:	Positive and Negative
• Repetition Rate:	5 kHz
• Rise Time of Pulse:	5 ns ± 30%
• Pulse Duration:	50 ns ± 30%
• Burst Period:	300 ms
• Burst Duration:	15 ms

**The above parameters were verified prior to testing.*

LEADS TESTED

The following leads on the AC-DC Power Supply were tested in order to demonstrate compliance to the above requirements:

- 230VAC, 50Hz AC Input

POWER LEADS

With the equipment under test configured as stated above, the electrical fast transient/burst generator was configured to apply positive, then negative, transient bursts to the AC power leads. The 0.5kV, 1.0kV and 2.0kV bursts were applied for a duration of at least one minute.

TEST SAMPLE LEADS TESTED
230VAC Line to Ground
230VAC Neutral to Ground
230VAC Earth to Ground
All Leads to Ground

TEST SETUP

The equipment setup is shown in the attached photographs. The general test setups are shown in Retlif Testing Laboratories Drawing per the requirements in EN 61000-4-4:2004. The equipment under test, configured as specified by the manufacturer, was placed on a wooden test stand 80 cm above the ground plane floor. The EUT was at least 50cm from all conductive surfaces. The electrical fast transient/burst generator, with the coupling/decoupling network installed, was placed directly on, and was bonded to, the ground plane floor. For power lead testing, the AC line under test was connected directly to the EUT power port of the coupling/decoupling network.

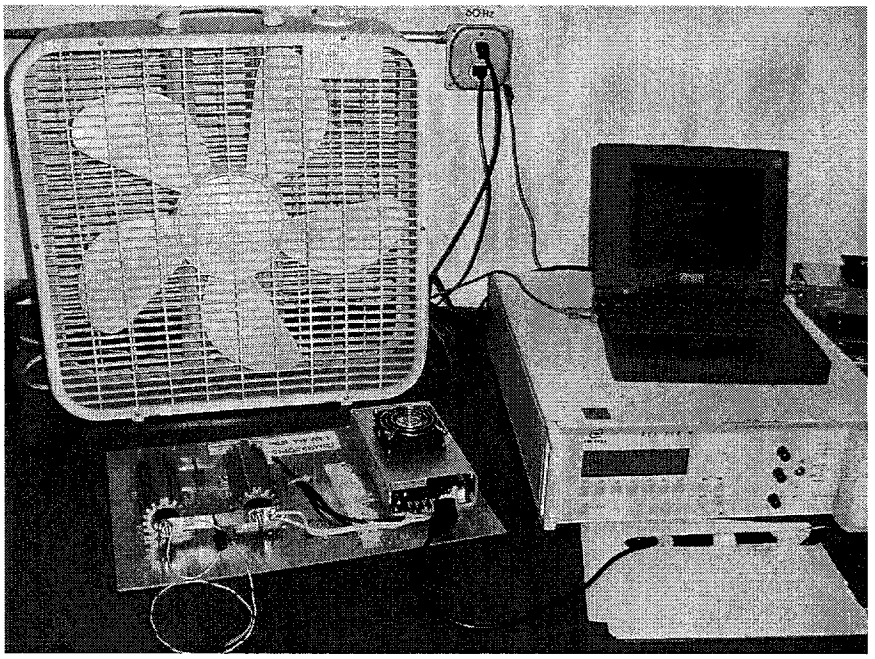
TEST RESULTS

The AC-DC Power Supply complied with the requirements specified for this test method. The test sample did not exhibit any malfunction or degradation of performance when the power input leads were subjected to the 0.5kV, 1.0kV and 2.0kV electrical fast transients/bursts specified above. See the attached data sheets for a full presentation of the results obtained.

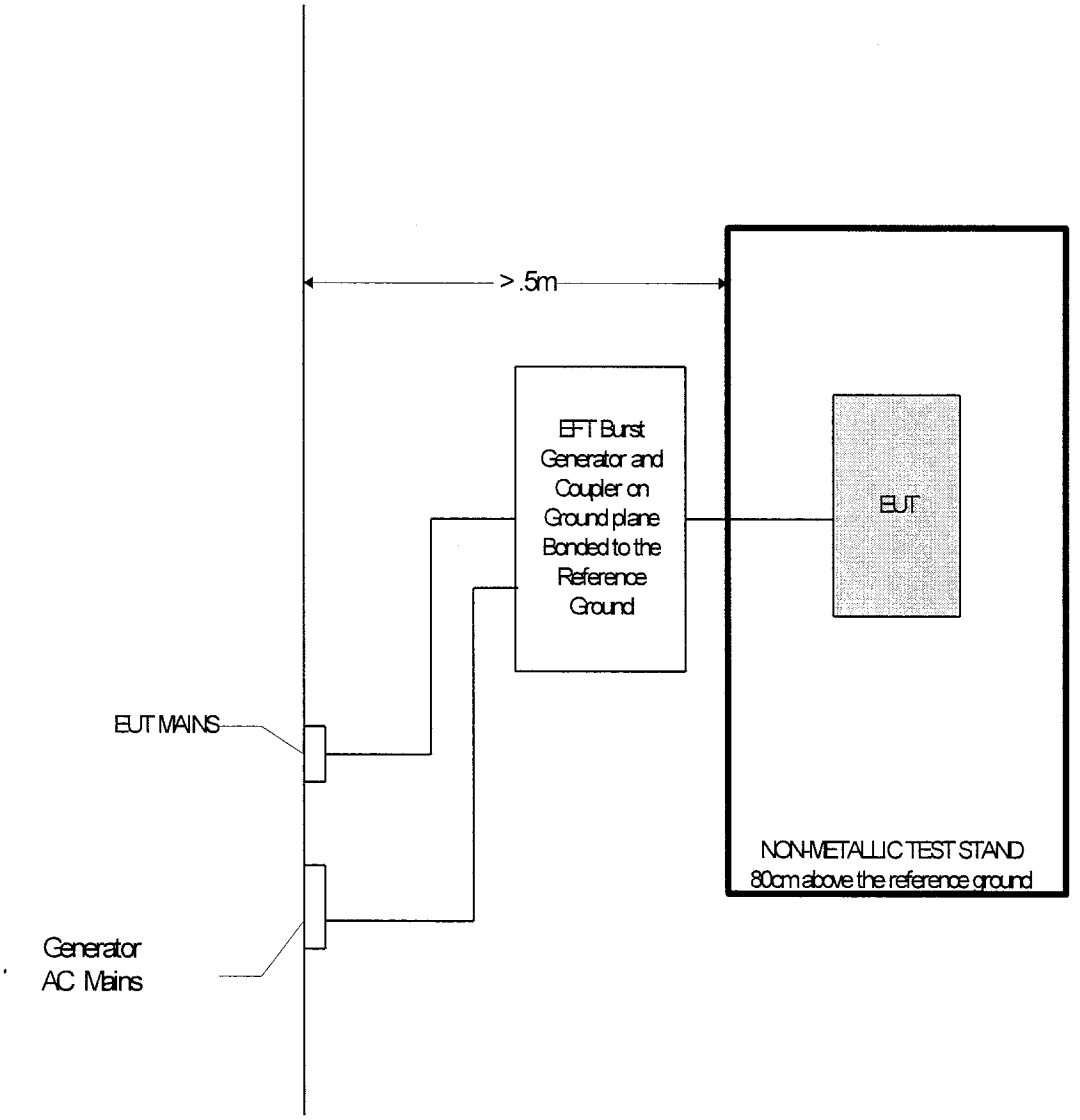
TEST SETUP PHOTOGRAPHS

ELECTRICAL FAST TRANSIENT/BURST

EUT 1



DRAWING NO. 61000-4-4- GENERAL TEST SETUP, TEST METHOD ELECTRIC FAST TRANSIENT/BURST, POWER LEADS



RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-4:2004, Electrical Fast Transient Burst**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No.	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Para. 36.202.4, Table 4: 4.5		
Operating Mode:	Output 3.3VDC, 45.45A		
Climatic Conditions:			
Technician:	M. Hippert	**Date:**	June 30, 2005
Notes:			

Test Frequency	Burst Period	Burst Duration	Threshold	Test Level	Pulse Polarity	Lead Tested	Test Duration	Injection Method	
kHz	mS		K Volts			230 VAC 50 Hz	Minutes		
5.0	300	15	---	0.5, 1.0 & 2.0	+ & -	Line to PE	1	CDN	
I	I	I	I	I	I	Neutral to PE	I	CDN	
I	I	I	I	I	I	Earth to PE	I	CDN	
5.0	300	15	---	0.5, 1.0 & 2.0	+ & -	All to PE	1	CDN	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by Criteria B of EN55024and paragraph 36.202 j) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

TEST EQUIPMENT LISTING

ELECTRICAL FAST TRANSIENT BURST

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
7015	Ultra Compact Generator	EM Test	N/A	USC 500-M	4/25/2005	4/25/2006

14.0 SURGE, EN61000-4-5:1995/A1:2001

PURPOSE

The purpose of this test method was to determine if the AC-DC Power Supply was so constructed as to have an adequate level of intrinsic immunity to common and differential mode surges applied to input power leads, enabling the AC-DC Power Supply to operate as intended.

TEST PARAMETERS

The critical parameters of the applied surge waveform are shown below:

Transient Voltage:	Common Mode, ±0.5kV; ±1kV; ±2kV
	Differential Mode, ±0.5kV; ±1kV
Transient Polarity:	Positive and Negative
Rise Time of Pulse:	1.2µs (10/90% Value)
Pulse Duration:	50µs (50% Value)

**The above parameters were verified prior to testing.*

LEADS TESTED

The following leads on the AC-DC Power Supply were tested in order to demonstrate compliance to the above requirements:

- 230 VAC, 50Hz Hot to Ground
- 230 VAC, 50Hz Neutral to Ground
- 230 VAC, 50Hz Hot to Neutral

TEST SETUP

The equipment setup is shown in the attached photograph. The general test setup is shown in Retlif Testing Laboratories Drawing, per the requirements in EN 61000-4-5:1995/A1:2001. The equipment under test was configured as specified by the manufacturer on a wooden test stand 80cm above the ground plane floor. The surge generator and the coupling/decoupling network were bonded to the ground plane. The input power line under test was connected directly to the coupling/decoupling network.

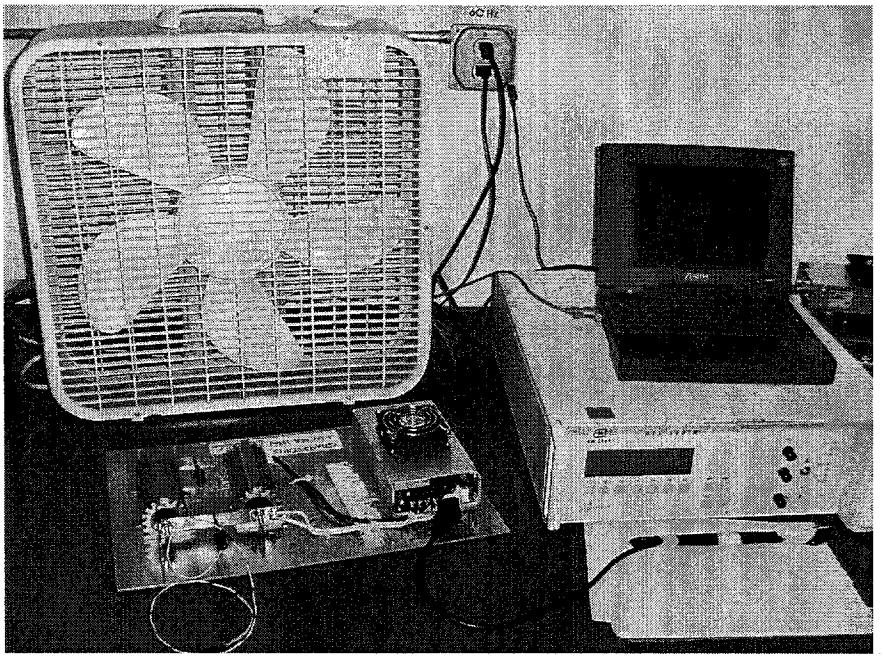
TEST RESULTS

The AC-DC Power Supply complied with the requirements specified for this test method. The test sample did not exhibit any malfunction or degradation of performance when subjected to the 0.5kV, 1 kV and 2 kV surges specified above. See the attached data sheets for a full presentation of the results obtained.

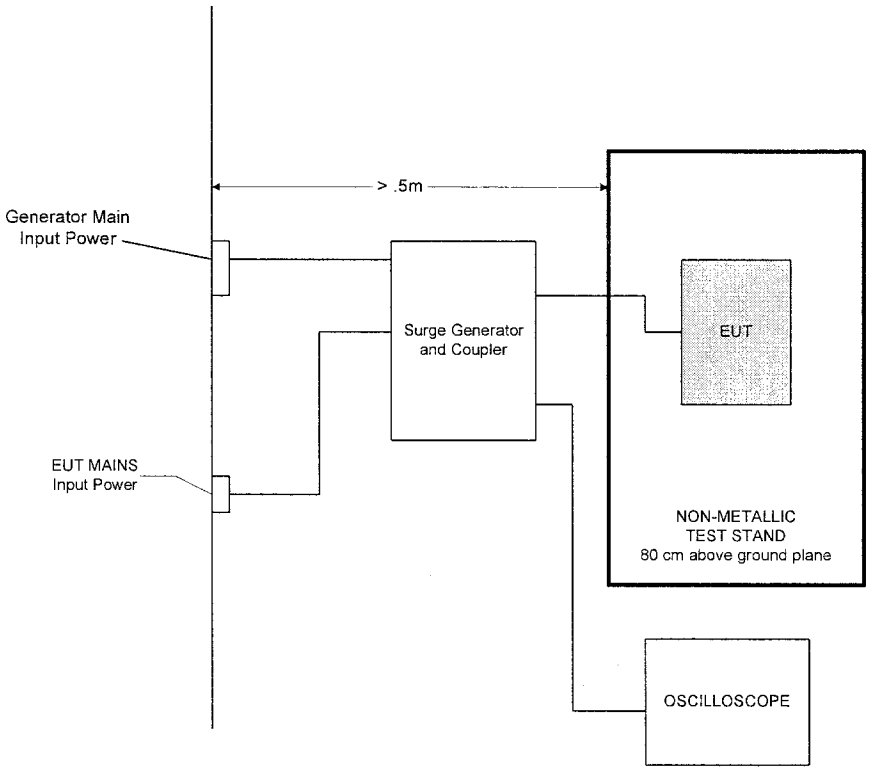
TEST SETUP PHOTOGRAPH

SURGE

EUT 1



DRAWING NO. 61000-4-5- GENERAL TEST SETUP,
TEST METHOD SURGE IMMUNIITY



RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-5:1995/A1:2001, Surge**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No.	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Para. 36.202.5, Table 4: 4.4		
Operating Mode:	Output 3.3VDC, 45.45A		
Climatic Conditions:			
Technician:	T. Hannemann	**Date:**	June 27, 2005
Notes:			

# of Pulses/ PPM	Threshold	Test Level	Pulse Polarity	Lead Tested	Phase Angle	Injection Method	
	K Volts			230 VAC 50 Hz			
5/1	-----	0.5, 1.0 & 2.0	+ & -	Line to Ground	0, 90, 180, 270	CDN	
5/1	-----	0.5, 1.0 & 2.0	+ & -	Neutral to Ground	0, 90, 180, 270	CDN	
5/1	-----	0.5 & 1.0	+ & -	Line to Neutral	0, 90, 180, 270	CDN	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by Criteria B of EN55024 and paragraph 36.202 j) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

TEST EQUIPMENT LISTING

SURGE

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
7015	Ultra Compact Generator	EM Test	N/A	USC 500-M	4/25/2005	4/25/2006

15.0 CONDUCTED RF IMMUNITY, 150kHz TO 80MHz, EN61000-4-6:1996/A1:2001

PURPOSE

The purpose of this test method was to determine if the AC-DC Power Supply was so constructed as to have an adequate level of intrinsic immunity to radio frequency electromagnetic energy injected into input power leads in the frequency range of 0.15 to 80 MHz, enabling the AC-DC Power Supply to operate as intended.

TEST PARAMETERS

The critical parameters of the applied electromagnetic energy for testing the power input leads were as shown below:

Frequency Range:	0.15 to 80 MHz
Applied Signal Level:	10 Vrms
Modulation:	1 kHz, 80%, AM
Injection Method:	Power Input Leads - Coupling Decoupling Network (CDN)

LEADS TESTED

The following leads of the AC-DC Power Supply were tested in order to demonstrate compliance:

- 230 VAC, 50 Hz Power Input Leads

15.0 CONDUCTED RF IMMUNITY, 150kHz TO 80MHz, EN61000-4-6:1996/A1:2001

TEST SETUP

The test instrumentation and AC-DC Power Supply were configured as shown in the attached photographs and detailed in Paragraph 4.2 herein. This configuration was based upon the general test setup shown in Retlif Testing Laboratories Drawing Number and per the requirements of EN 61000-4-6. The AC-DC Power Supply was placed on 10 cm high insulating supports above a ground reference plane.

A coupling / decoupling network was placed in the power input lead under test. All power leads were supported 5 cm above the ground reference. The signal generator was connected to the RF power amplifier which in turn, was connected to the injection device. A directional coupler was placed between the injection device and RF amplifier in order to monitor the level applied to the AC-DC Power Supply.

TEST PROCEDURE

With the test instrumentation and AC-DC Power Supply configured as stated above, the following steps were performed:

1. The AC-DC Power Supply was arranged with its cables terminated as specified in Paragraph 4.2 herein.
2. The injection device was connected to the lead under test.
3. The output of the directional coupler was connected to the injection device for the lead under test.
4. The AC-DC Power Supply was placed in the operating mode described in Paragraph 5.1 herein.
5. The signal generator was set for a frequency of 150 kHz and the level was adjusted for 10 Vrms.
6. The signal was then amplitude modulated 80% by a 1 kHz sine wave.
7. The frequency range was incrementally swept from 150 kHz to 80 MHz, while maintaining the required forward power to the injection network.
8. The AC-DC Power Supply was continuously monitored as described in Paragraph 5.2 herein.
9. Steps 2 through 8 were repeated for each lead subjected to this requirement.

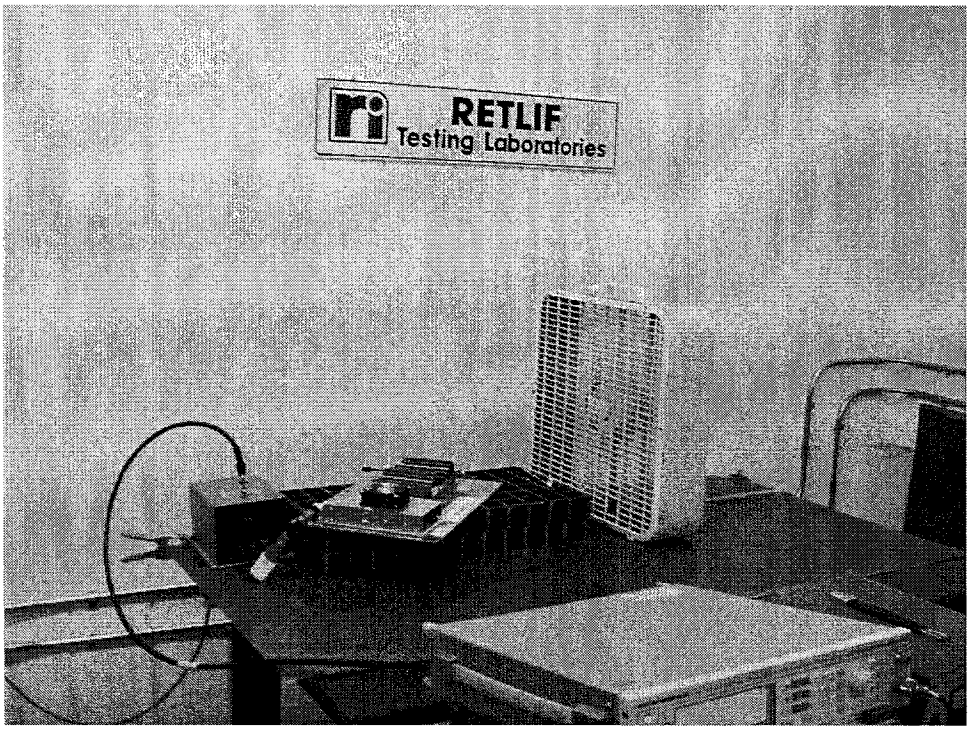
15.0 CONDUCTED RF IMMUNITY, 150kHz TO 80MHz, EN61000-4-6:1996/A1:2001

TEST RESULTS

The AC-DC Power Supply complied with the requirements specified for this test method. The test sample did not exhibit any malfunction or degradation of performance when the input power leads were subjected to the conducted electromagnetic energy specified above. See the following test data for a complete presentation of test results.

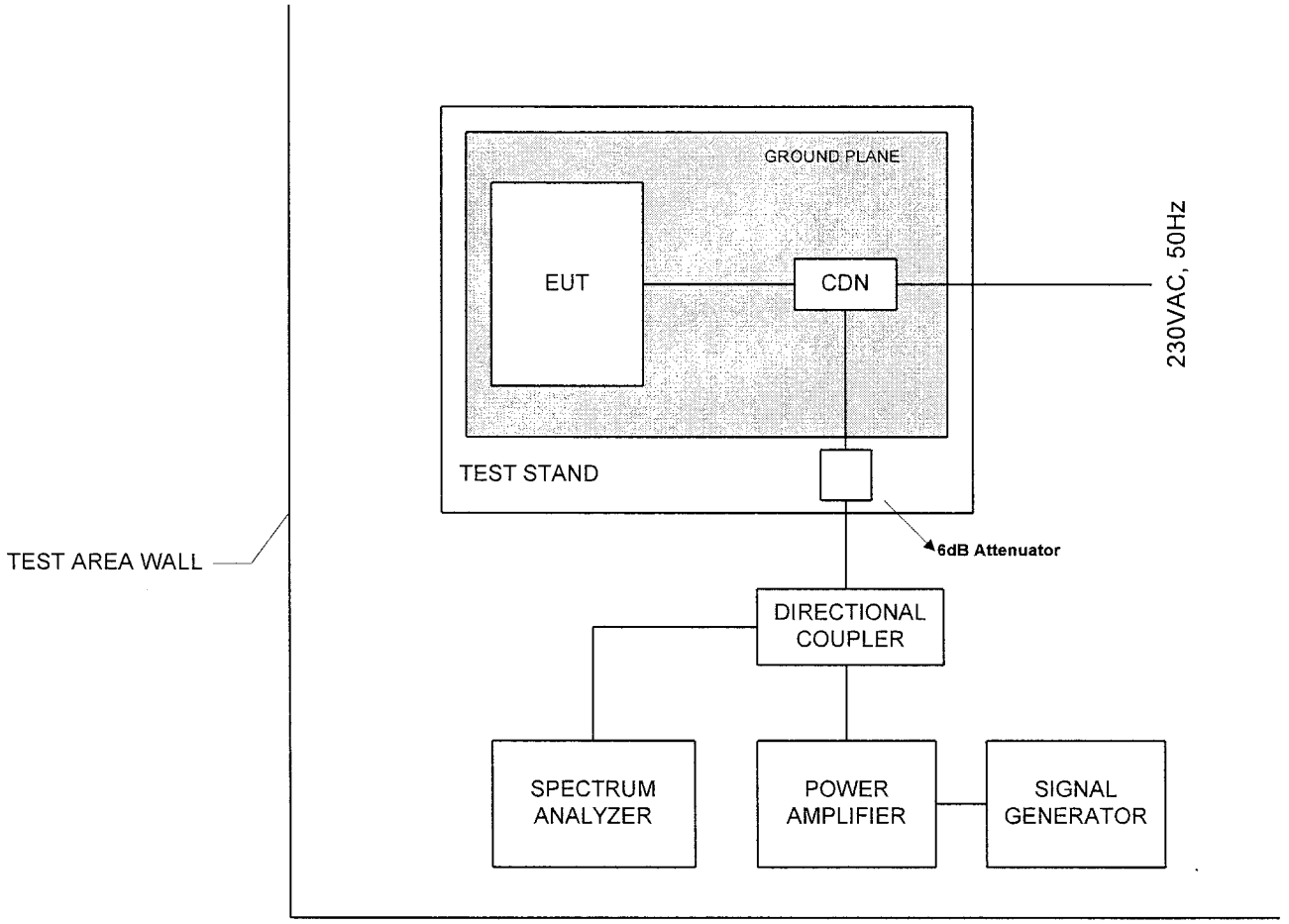
TEST SETUP PHOTOGRAPH - CONDUCTED RF IMMUNITY

EUT 1



GENERAL SETUP DRAWING -61000-4-6:1996

CONDUCTED IMMUNITY, POWER LEADS



RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-6:1996/A1:2001, Conducted Immunity 150 kHz to 80 MHz**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No:	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Para. 36.202.6, Table 4: 4.1		
Operating Mode:	Output 3.3VDC, 45.45A		
Climatic Conditions:			
Technician:	M. Hippert	**Date:**	June 27, 2005
Notes:			

Test Frequency	Threshold	Limit	Modulation	Lead Tested	Injection Method	
MHz	Vrms			230 VAC 50 Hz		
0.15	---	10	80% AM 1kHz	---	CDN	
80	---	10	80% AM 1kHz	---	CDN	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by Criteria A of EN55024 and paragraph 36.202 }) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

EQUIPMENT LIST

CONDUCTED IMMUNITY

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
4895	Spectrum Analyzer	Hewlett Packard	9kHz - 22GHz	8593EM	4/22/2004	7/22/2005
4935A	6.0 dB Attenuator	JFW Inc.	DC - 4 GHz	50FH-006-50N	1/27/2005	1/27/2006
4975	Power Amplifier	ENI	100 kHz - 150 MHz	325LA-HP	4/20/2005	4/20/2006
5046	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023A	9/16/2004	9/16/2005
531	RF Injection Probe	FCC	10 kHz - 100 MHz	F-120-3	9/29/2004	9/29/2005
532	High Power Dir Coupler	Werlatone Inc.	.01 - 1000 MHz	C2630	1/27/2005	1/27/2006
555A	Coupling/Decoupling Net	FCC	150 kHz - 230 MHz	FCC-801-M3-16	8/6/2004	8/6/2005

16.0 POWER FREQUENCY MAGNETIC FIELD IMMUNITY, EN61000-4-8:1994/A1:2001

PURPOSE

The purpose of this test method was to determine if the equipment under test was susceptible to power frequency magnetic fields.

TEST PARAMETERS

Critical parameters of the power frequency magnetic field test:

Severity Level:	3 A/M
Power Frequency:	50Hz

CALIBRATION

Prior to testing the following calibration procedure was performed to ensure that the equipment under test was subjected to the specified Magnetic Field.
The induction coil was positioned at a 1 m minimum distance from the laboratory wall and any magnetic material and then connected to the test generator. A magnetic field loop sensor was placed in the center of the induction coil. The test generator was adjusted to obtain the required current in the induction coil at the power frequency needed to establish the required field strength specified by the test level. The coil factor is determined by the above procedure. The coil factor gives the current value to be injected in the coil to obtain the required test magnetic field.

TEST SETUP

The equipment setup is shown in the attached photograph. The general test setup is shown in Retlif Testing Laboratories Drawing, per the requirements in EN61000-4-8:1994/A1:2001. The test sample was placed on a 1 x 1.5 meter ground reference plane with the interposition of a 0.1m insulating support. The test generator was connected to and placed less than 3 meters from the induction coil. The induction coil was centered around the test sample. The test sample was rotated by 90 degrees inside the induction coil in order to expose the EUT to the test field in each possible orientation. All cables were placed so that they would be exposed to the magnetic field for 1 meter of their length.

APPLICATION OF MAGNETIC FIELD

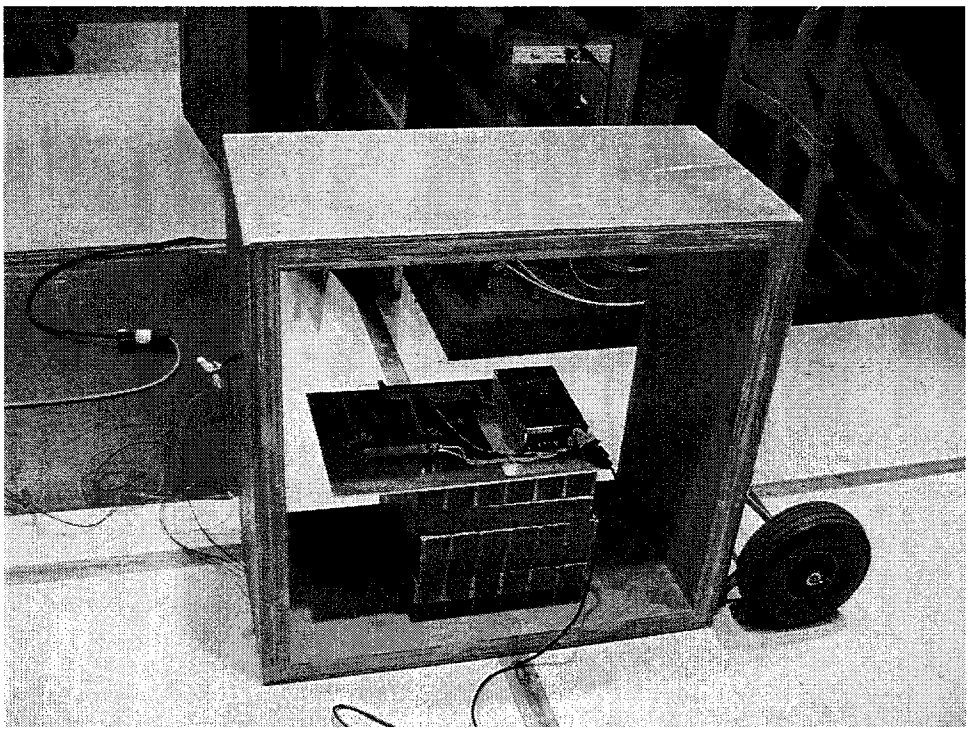
With the equipment under test configured as stated above, the required current value necessary to produce the specified test level as determined in the calibration procedure was established in the induction coil. During application of the magnetic field, the equipment under test was continuously monitored for signs of degradation of performance.

TEST RESULTS

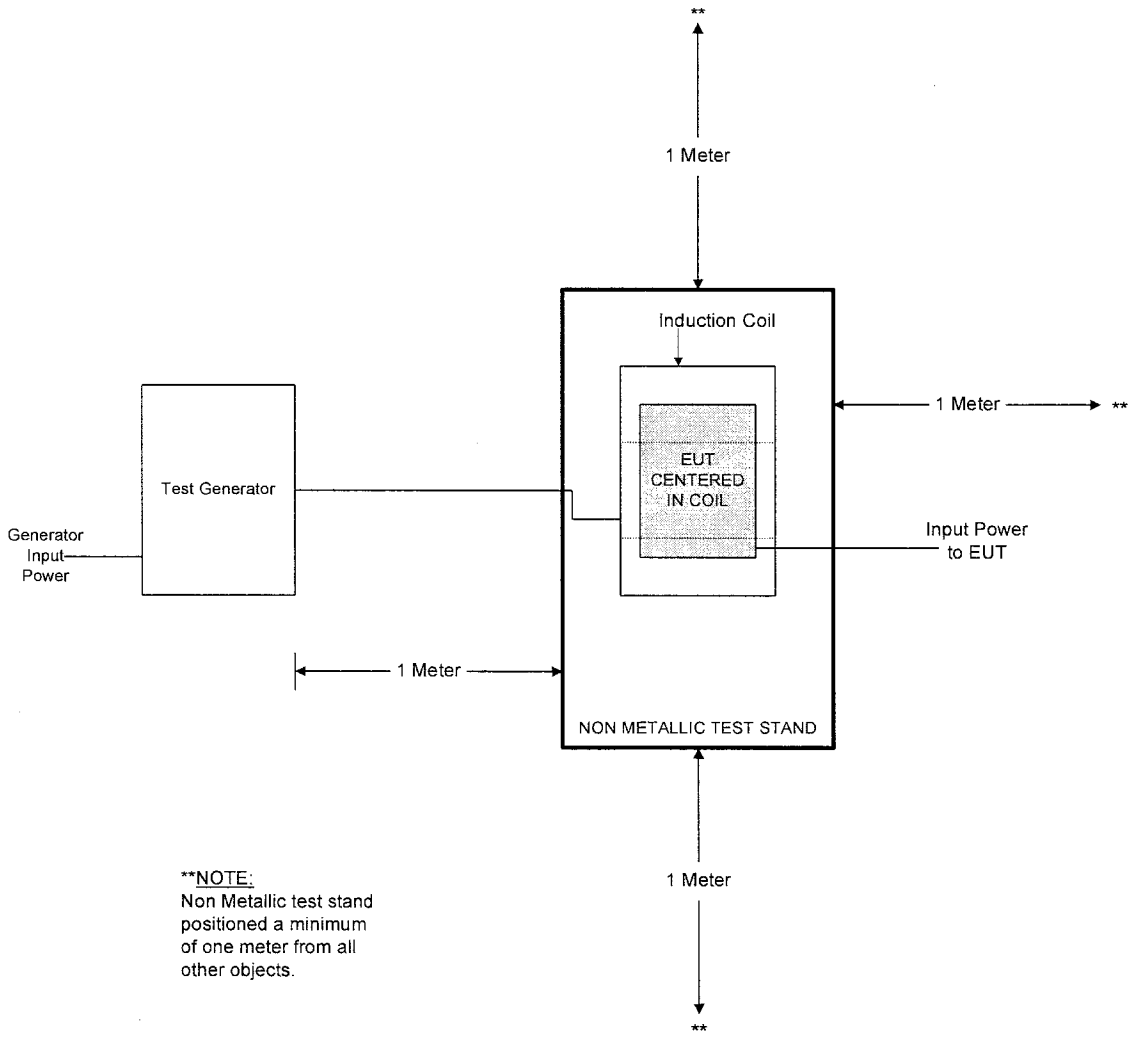
The EUT continued to operate as intended and as required under the specified performance criterion, per the manufacturer's operation guidelines. See attached data for a full presentation of the results obtained.

TEST SETUP PHOTOGRAPHS -
POWER FREQUENCY MAGNETIC FIELD IMMUNITY

EUT 1



DRAWING NO. 61000-4-8 GENERAL TEST SETUP
TEST METHOD POWER FREQUENCY MAGNETIC FIELD



**NOTE:
Non Metallic test stand positioned a minimum of one meter from all other objects.

RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-8: 1994, Magnetic Field Immunity 50 Hz**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No:	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Table 1: 1.1		
Operating Mode:	Output 3.3VDC, 45.45A		
Climatic Conditions:			
Technician:	M. Hippert	**Date:**	June 30, 2005
Notes:			

Test Frequency	Test Level	Threshold	Axis Tested	
Hz	A/m			
50.0	3	---	X, Y, Z	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by paragraph 36.202 j) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

EQUIPMENT LIST

MAGNETIC IMMUNITY

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
4275	Magnetic Coil (1m X 1m)	Retlif	DC - 400H	RTL-0010	1/14/2005	1/14/2006
4990	Audio Oscillator	Rohde & Schwarz	1 Hz - 1.3 MHz	SPN 336.3019.32	7/23/2004	7/23/2005
7010	AC Power Source	Elgar	45 - 500 Hz	3001	7/27/2004	7/27/2005

17.0 VOLTAGE DIPS AND INTERRUPTIONS, EN61000-4-11:2004

PURPOSE

The purpose of this method was to determine if the equipment under test was susceptible to voltage dips and short interruptions of power.

TEST SETUP

The equipment setup is shown in the attached photograph. The general test setup is shown in Retlif Testing Laboratories Drawing, per the requirements of EN 61000-4-11:2004.. The EUT was configured as specified by the manufacturer, with the input power leads connected to a variable power source.

APPLICATION OF DIPS AND INTERRUPTIONS

The EUT was subjected to variations in nominal AC voltage:

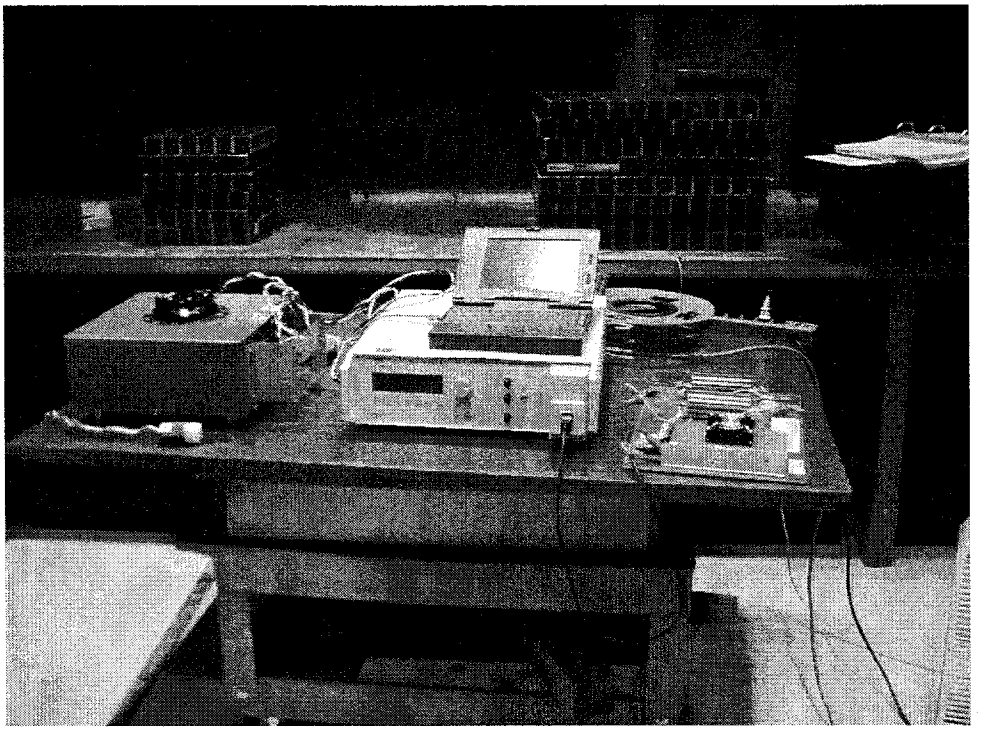
Voltage dip of >-95% for a duration of 10 milliseconds
Voltage dip of -30% for a duration of 500 milliseconds
Voltage dip of -60% for a duration of 100 milliseconds
Voltage interruption of >-95% for a duration of 5 seconds

TEST RESULTS

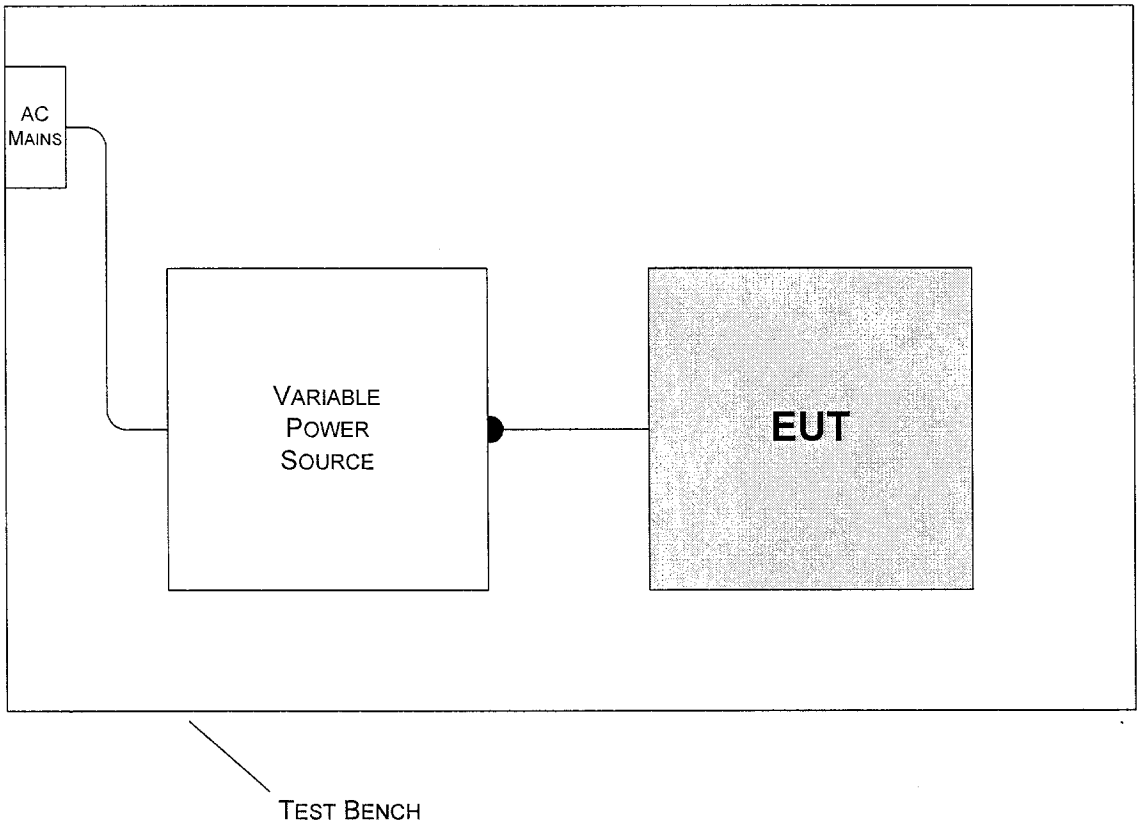
The AC-DC Power Supply complied with the requirements specified for this test method. The test sample did not exhibit any malfunction or degradation of performance when subjected to the voltage dips and interruptions specified above. See the attached data sheets for a full presentation of the results obtained.

TEST SETUP PHOTOGRAPH
VOLTAGE DIPS AND INTERRUPTION

EUT 1



DRAWING NO. 61000-4-11 - GENERAL TEST SETUP
VOLTAGE DIPS AND INTERRUPTIONS



RETLIF TESTING LABORATORIES

SUSCEPTIBILITY DATA SHEET

Test Method:	**EN61000-4-11:2004, Voltage Dips & Interruptions**		
Customer:	TUV America	**Job No:**	R-4455N
Test Sample:	Globtek AC-DC Power Supply		
Model No:	GTM9250P1503.3	**Serial No:**	001058
Test Specification:	EN60601-1-2, EN55024 Para. 36.202.7, Table 4: 4.2 & 4.3		
Operating Mode: **Climatic Conditions:**	Output 3.3VDC, 45.45A		
Technician:	M. Hippert	**Date:**	June 30, 2005
Notes:	Lead Tested: 230 VAC 50 Hz		

Voltage Deviation	Voltage Interruption	Duration	Times Applied	Repetition Interval	Specified Criteria	
Percent	Percent	mS		Seconds		
100		10	3	10	B	
60		100	3	10	C	
30		500	3	10	C	
	100	5000	3	10	C	

The test sample did not exhibit any malfunction, degradation of performance or deviation from specified indication beyond the tolerances specified by Criteria B & C of EN55024 and paragraph 36.202 j) of EN60601-1-2 or approved test plan in accordance with the above stated test method as defined by the manufacturer. If no threshold is listed, then the highest level EUT was subjected to, was the highest test level.

EQUIPMENT LIST

VOLTAGE DIPS AND INTERRUPTIONS

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
7015	Ultra Compact Generator	EM Test	N/A	USC 500-M	4/25/2005	4/25/2006