Retlif Testing Laboratories

101 New Boston Road, Goffstown, NH 03045
603-497-4600 - Fax: 603-497-5281

CORPORATE OFFICE
795 Marconi Avenue
Ronkonkoma, NY 11779
631-737-1500 Fax 631-737-1497
(A NY Corporation)

WASHINGTON
REGULATORY OFFICE
703-533-1614 Fax 703-533-1612

MEMBER ACIL

FCC COMPLIANCE TEST REPORT
ON
GLOBTEK, INC.
AC-DC POWER SUPPLIES
MODEL: GTM41060-2530/SERIAL NO: 000022
MODEL: GTM41060-1505/SERIAL NO: 001059

CUSTOMER NAME: TUV America

CUSTOMER P.O.: DC502794

DATE OF REPORT: January 16, 2006

TEST REPORT NUMBER: R-4455N8

TEST START DATE: December 20, 2005

TEST FINISH DATE: December 21, 2005

TEST TECHNICIAN: Todd Hannemann/Matthew Seamans

TEST ENGINEER: Scott Wentworth

REPORT WRITTEN BY: Jamie Ramsey

SUPERVISOR: Scott Wentworth

GOVERNMENT SOURCE INSPECTION: Not Applicable

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

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

December 21, 2005

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

Reference: Retlif Report Number R-4455N8

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:	GT41060
Model Numbers Tested:*	GTM41060-2530 & GTM41060-1505
Brand Name:	Globtek, Inc.
Equipment Class:	B
Authorization:	Verification, Digital Device

Note(s): 1) See attached report R-4455N8 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 GT41060 Model Series. See Report R-4455N8 for a description of the Model Series.

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Certification and Signatures

We certify that this report is a true report 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
Laboratory Manager
NVLAP Approved Signatory

NON-WARRANTY PROVISION
The testing services have been performed, findings obtained, and reports prepared in accordance with generally accepted testing laboratory principles and practices. This warranty is in lieu of all other warranties, either express 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 report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Administrative Data

Retlif Testing Laboratories Test Report R-4455N8

Test Specification: FCC Rules and Regulations Part 15, Subpart B, Class B

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, Series GT41060
Model Number: GTM41060-1505/Serial Number: 001059
Model Number: GTM41060-2530/Serial Number: 000022

Applicable Documents: See Paragraph 2.0

Testing Dates: December 20, 2005 TO December 21, 2005

Date of Report: January 17, 2006

EUT	DESCRIPTION	MODEL	TEST METHODS PERFORMED
1	AC-DC Power Supply	GTM41060-1505	Radiated & Conducted Emissions
2	AC-DC Power Supply	GTM41060-2530	Radiated & Conducted Emissions

GT-41060 Series
GT(- OR M) 41060(- or CC)1003-X.X(-FW)
GT(- OR M)41060(- or CC) 1505-X.X(-FW)
GT(- OR M)41060(- or CC) 1706-X.X(-FW)
GT(- OR M)41060(- or CC) 1807-X.X(-FW)
GT(- OR M)41060(- or CC) 1809-X.X(-FW)
GT(- OR M)41060(- or CC) 2512-X.X(-FW)
GT(- OR M)41060(- or CC) 2515-X.X(-FW)
GT(- OR M)41060(- or CC) 2518-X.X(-FW)
GT(- OR M)41060(- or CC) 2520-X.X(-FW)
GT(- OR M)41060(- or CC)2524-X.X(-FW)
GT(- OR M)41060(- or CC) 2530-X.X(-FW)

MODEL NUMBER DESCRIPTION:

Model GT(- or M)41060-WWVV-X.X
Where:
GT=Prefix
M=Medical, - =Information Technology
41060: Series Code
(- or CC): "-" = Constant Voltage Model, "CC" = Constant Current Option
WW=Denotes Rated Wattage
VV=Rated Voltage
(X.X)=Denotes voltage differentiator if other than listed in table
(-FW)= Open frame Option

The Models GTM 41060-1505 & GTM41060-2530 were tested as representative of the Globtek 41060 Model Series which includes all models listed above. The test results contained in this report are considered by Globtek to be valid for the complete Model Series.

1.0 Scope

This test report documents the methods used in measuring the conducted and radiated emissions produced by three AC-DC Power Supplies, manufactured by Globtek, Inc. This report further serves to fully record the details of the sample tested including all interconnecting cables and support equipment. The objective of this test report is to demonstrate compliance of the GT41060 series AC-DC Power Supplies to the Class B Digital Device limits as set forth in Part 15, Subpart B, of the Rules and Regulations of the Federal Communications Commission. The Models GTM41060-1505 & GTM41060-2530 were tested as representative of the GT41060 Model Series which includes all models listed on page iv of this report. The test results contained in this report are considered by Globtek 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:

RCM001	- Retlif Testing Laboratories Calibration Manual.
RQM001	- 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.
FCC Part 15	- Federal Communications Commissions Part 15, Radio Frequency Devices, Subpart B, Unintentional Radiators.
ANSI C63.4:2001	- Interim Standard for Methods of Measurement of Radio - Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.
CISPR 22:1998	- Specification for Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.

3.0 General Requirements

3.1 Test Environment

All testing was performed according to each methods individual requirements. Each test method outlined herein describes the individual environment in which testing was performed. Both the conducted and radiated emissions tests described herein were performed by Retlif Testing Laboratories which is a NIST/NVLAP accredited facility. All radiated emissions testing was performed on an FCC listed open area test site (OATS).

3.1.1 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 was 3 m x 2.5 m in size, and extended at least 0.5 m beyond the vertical projection (footprint) of the EUT. The ground plane was covered by insulating material 1 mm thick.

3.1.2 Radiated Emissions

3.1.2.1 Preliminary

Preliminary radiated measurements were performed in a shielded enclosure.

3.1.2.2 Formal

Formal radiated emissions testing was performed on an open area test site (OATS). The test site measured 12 m x 20 m and 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 meter diameter, flush mounted, metallic turntable. The test site met the test site attenuation requirements specified in ANSI C63.4:2001 throughout the range of measurement frequencies.

3.0 General Requirements (continued)

3.2 Test Instrumentation

All test equipment utilized in determining compliance with the requirements specified herein was calibrated prior to use in accordance with the procedures and standards set forth in Retlif Testing Laboratories standard manuals RCM001, RQM001 and in ANSI/NCSL Z-540. See each test method for a full listing of test equipment utilized.

3.2.1 Grounding of Measuring Instrument

Interference measuring instruments were physically grounded with only one connection. When an antenna was used, the measuring instrument was connected to ground with only the power ground cord (green wire).

3.2.2 Measurement Accuracy

The accuracy of all measurements was as follows:
Frequency Accuracy: +/- 2% Amplitude Accuracy: +/- 2 dB

3.3 Emissions Testing

3.3.1 Ambient Interference Levels

Ambient interference levels were at least 6 dB below the specified limit for conducted emissions. For radiated emissions, the ambient levels were verified. If the ambient was within 6 dB of the specified limit the following procedure was performed:

1. The device was pre-screened in a shielded enclosure to determine its spectral content.
2. When measuring on OATS, if the ambient interference level was less than 6 dB below the limit, the measurement antenna was moved closer to the equipment under test. The measurement was then taken and measurement was extrapolated out to the desired test distance using a 1/D extrapolation factor.

3.3.2 Detector Function

For the conducted and radiated emissions testing described herein a Peak detector function was utilized as specified in ANSI C63.4.
If any emission emanating from the EUT was found to be exceeding the specified limit then the measurements were retaken utilizing a Quasi-Peak detector function as specified in ANSI C63.4.

3.3.3 Measurement Frequencies

The entire frequency range for each applicable test method was scanned. All frequencies with emissions within 20 dB of the specified limit were recorded.

4.0 Test Sample Description

4.1 General

The test samples were two AC-DC Power Supplies, Model Number: GTM41060-1505/Serial Number: 001059 and Model Number: GTM41060-2530/Serial Number:000022 manufactured by Globtek Inc. of Northvale, New Jersey. Each test sample was powered by 120VAC, 60Hz, single phase. The EUT consisted of the following components:

EUT Components	Part No.	Model No.	Serial No.
Globtek Medical Power Supply	WR9QA3000LCP-N-MED	GTM41060-1505	001059
Globtek Medical Power Supply	WR9QR833LCP-N-MED	GTM41060-2830	000022

4.2 Configuration

Each AC-DC Power Supply had its cables configured as follows:

EUT Conn. Desig	Cable Length	Signal Description	Cable Description [1]	Routed To
Hardwired	2m	DC Output	Multi Conductor (U)	Resistive Load

[1]Shielded or Unshielded

All ports not listed were unterminated

4.3 Leads Tested

The following leads of the AC/DC power supply were tested during the course of this testing program in order to ensure compliance:

- 120 VAC, 60 Hz, Hot
- 120 VAC, 60 Hz, Neutral

4.4 Modifications

No modifications were made to the EUT during the course of testing.

5.0 Test Sample Parameters

5.1 Mode of Operation

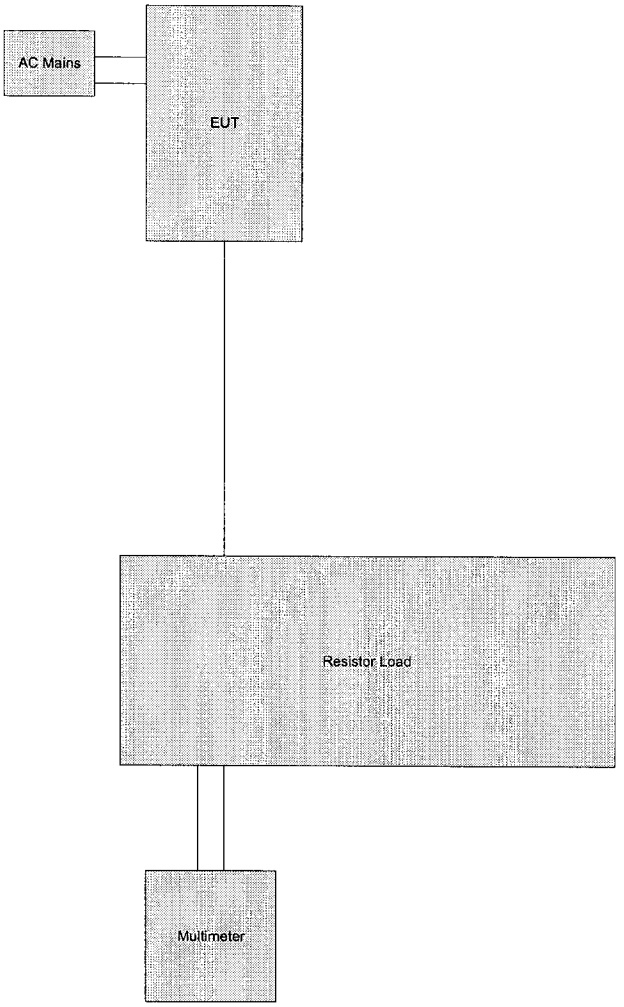
During testing, the GTM41060-1505 was converting 120VAC to 5VDC at 100% Load (3amps) and the GTM41060-2530 was converting 120VAC to 30VDC at 100% load (.83A).

5.1.1 Support Equipment

The AC-DC Power Supply utilized the following as support equipment in order to attain the above operating state during the course of this testing program:

EUT	DESCRIPTION	MANUFACTURER	MODEL NUMBER
1 & 2	Resistive Load	N/A	N/A

Figure 1 - Test Sample Outline Diagram



6.0 Test Methods Performed

Test Method Summary

The tests outlined in the table below were performed in accordance with the requirements of FCC Rules and Regulation Part 15, Subpart B, Class B limits:

PARAGRAPH	TEST METHOD	FREQUENCY RANGE	RESULTS
15.107(a)	Conducted Emissions, Class B	150 kHz to 30 MHz	Complied
15.109(a)	Radiated Emissions, Class B	30 MHz to 1 GHz	Complied

See individual test methods contained in paragraphs 6.1 through 6.2 of this test report for a full description of the test procedures utilized and the results obtained.

6.1 Conducted Emissions, 150 kHz TO 30 MHz

Purpose
The purpose of this test was to determine the magnitude of the radio frequency emissions emanating from the AC-DC Power Supply via conduction on the AC power leads in the frequency range of 0.150 to 30 MHz.

Test Limits
The limits shown in the table below were used to determine the AC-DC Power Supply's compliance:

Frequency Range	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

Leads Tested
The following leads of the AC/DC power supply were tested during the course of this testing program in order to ensure compliance:
- 120 VAC, 60 Hz, Hot
- 120 VAC, 60 Hz, Neutral

TEST SETUP
The AC-DC Power Supply was configured as shown in the attached photograph. This configuration was based on the test setup shown in Retlif Testing Laboratories Drawing No. R15107A-CE.
The test sample was placed on a 0.8 meter high wooden test stand above the floor of the test area (ground plane). The rear of the sample, including peripherals, was aligned and flush with the rear of the test stand. The test stand was situated such that the test sample was located 0.4 meters from one wall of the test area (the reference ground plane).
The test sample was located at least 0.8 meters from all other grounded surfaces (walls, floor, and ceiling of the test area). The power cord was then connected to a 50 ohm/50 uH artificial mains network (LISN). The artificial mains network was mounted on the ground plane of the test area in a position that produced a minimum distance of 0.8 meters between the test sample and the mains network. The test sample was connected to the artificial mains network by means of a cord of the type and length specified by the manufacturer. Where the cord length exceeded 1 meter it was folded in 40 cm bundles until the overall length was equal to 1 meter. External safety grounds were installed as specified by the manufacturer. Where not specified, the ground lead was 1 meter long and was ran parallel to and within 10 cm of the mains connection. The AC-DC Power Supply was arranged with cables terminated in accordance with manufacturer instructions. Care was taken during testing to relocate all system components and cabling in an effort to maximize the emissions from the test sample. Excess interface cable length was draped over the back edge of the test stand. If any draped cable extended closer than 40 cm to the conducting ground plane, the excess was bundled in the center in a serpentine fashion using 40 cm lengths to maintain the 40 cm height. If the cable(s) could not be bundled due to bulk, length, or stiffness, they were draped over the back edge of test stand unbundled, but in such a way that all portions of the interface cable remained at least 40 cm from the horizontal conducting ground plane.

6.1 Conducted Emissions, 150 kHz TO 30 MHz (continued)

Test Procedure

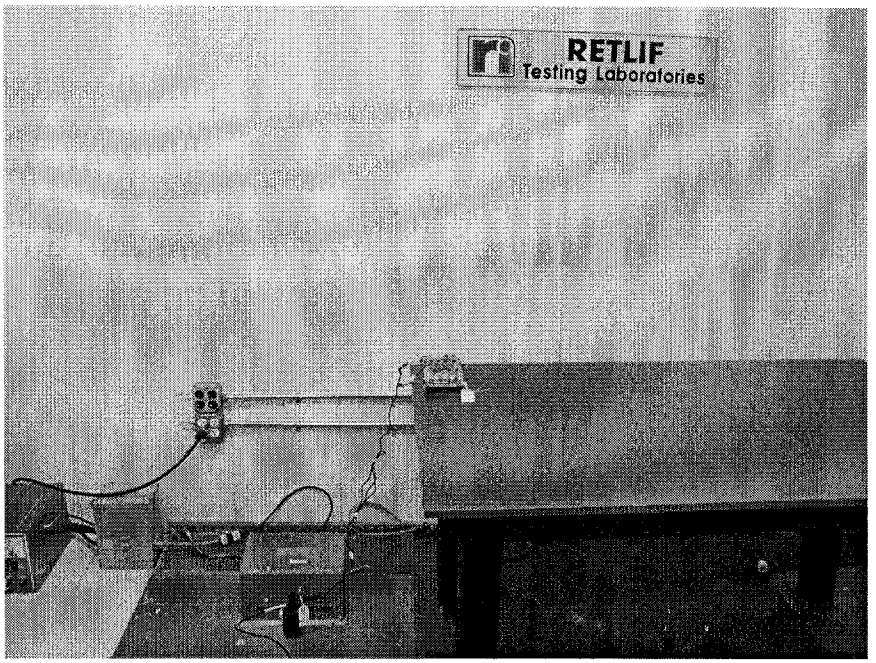
With the test instrumentation and the AC-DC Power Supply configured as stated above, the following steps were performed in accordance with ANSI C63.4:

1. The test sample was arranged with cables terminated as specified in Paragraph 4.2 herein.
2. The spectrum analyzer was configured to display the frequency range of 0.15 to 30 MHz.
3. The operating mode of the AC-DC Power Supply was varied in order to determine the operating mode which produced the maximum conducted emissions with respect to the limit. This mode is detailed in paragraph 5.1 herein.
4. The spectrum analyzer was then configured to attain a max hold trace of the 120 VAC Hot lead in the 0.15 to 0.50 MHz frequency band utilizing a peak detector function.
5. The attained peak data was then compared to the average specified limit. If the obtained data was found to be in compliance with the average limit, then the test sample was found to comply.
6. If the obtained data did not comply with the average limit the scan was repeated utilizing a CISPR compliant receiver with a Quasi-Peak detector.
7. The attained Quasi-Peak data was then compared to the average specified limit. If the obtained data was found to be in compliance with the average limit, then the test sample was found to comply.
8. If the obtained data did not comply with the average limit step 6 was repeated utilizing an average detector.
9. The attained average data was then compared to the average specified limit. If the obtained data was found to be in compliance with the average limit, then the test sample was found to comply.
10. Steps 3 through 8 were repeated for each remaining lead to be tested.
11. Steps 3 through 9 were repeated with the analyzer configured to acquire data in the 0.50 to 5.0 MHz range.
12. Steps 3 through 9 were repeated with the analyzer configured to acquire data in the 5.0 to 30 MHz range.

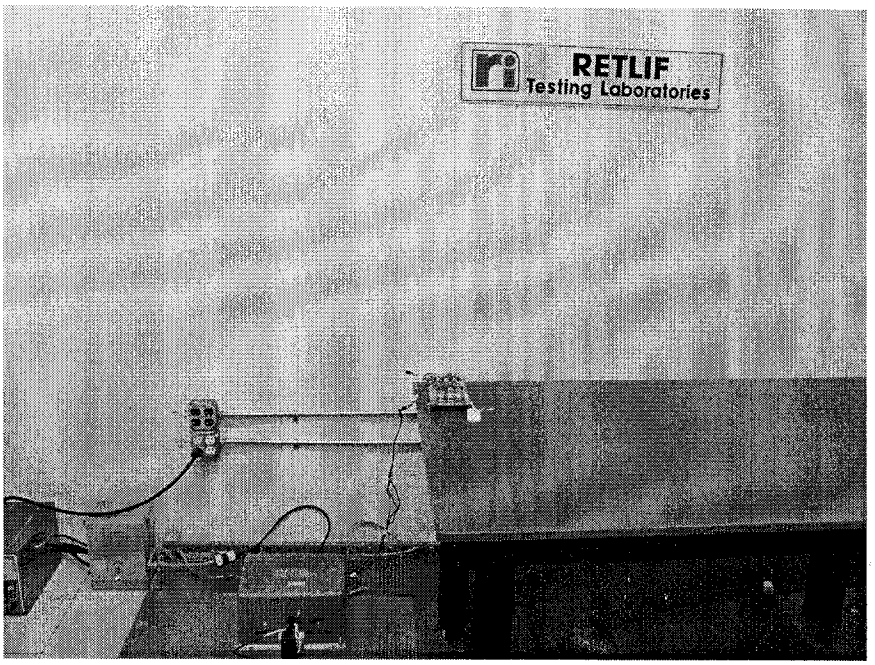
Test Results

No emissions which exceeded the specified Part 15, Subpart B, Class B limits were observed and the AC-DC Power Supply was found to comply with the requirements specified for this method. See the following data sheets for a full presentation of the results obtained.

Test Photograph
Conducted Emissions–MODEL: GTM41060-1505



Test Photograph
Conducted Emissions–MODEL: GTM41060-2530



Test Photograph
Conducted Emissions–MODEL: GTM41060-2530

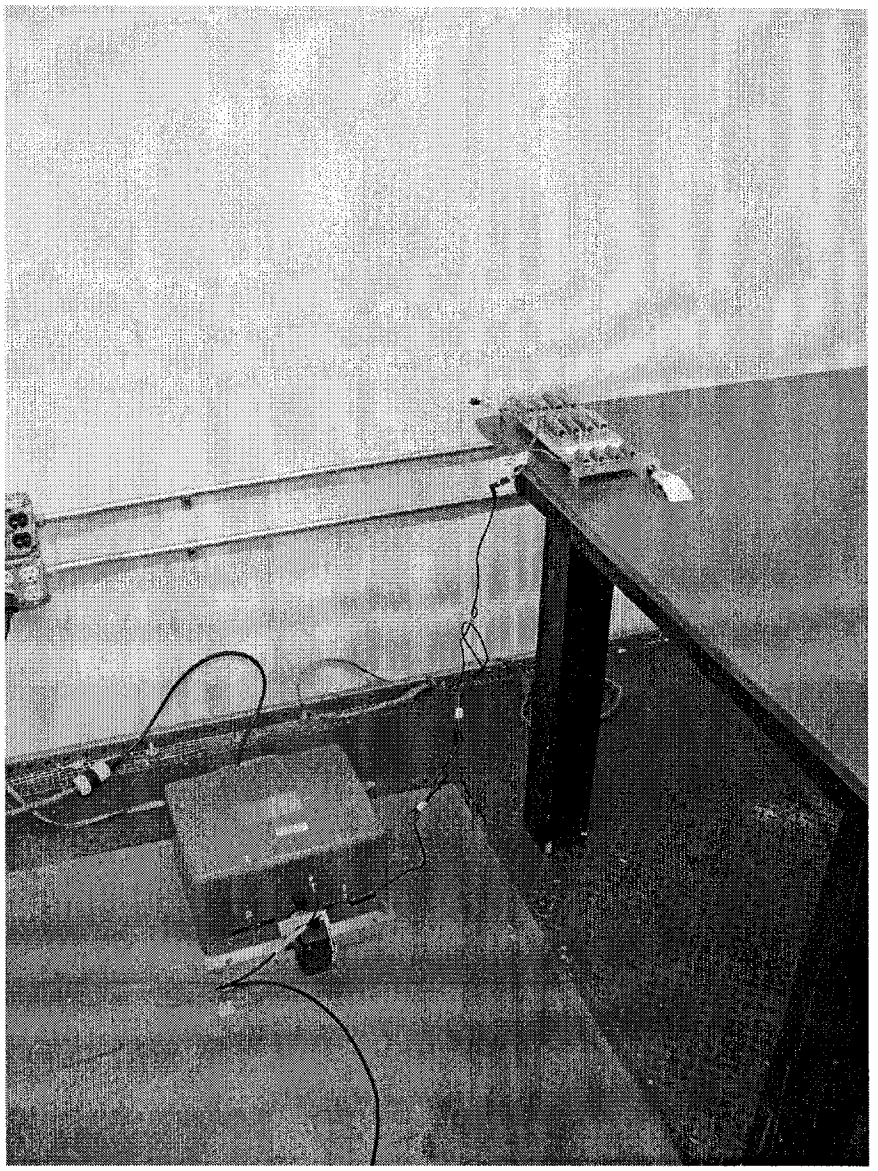
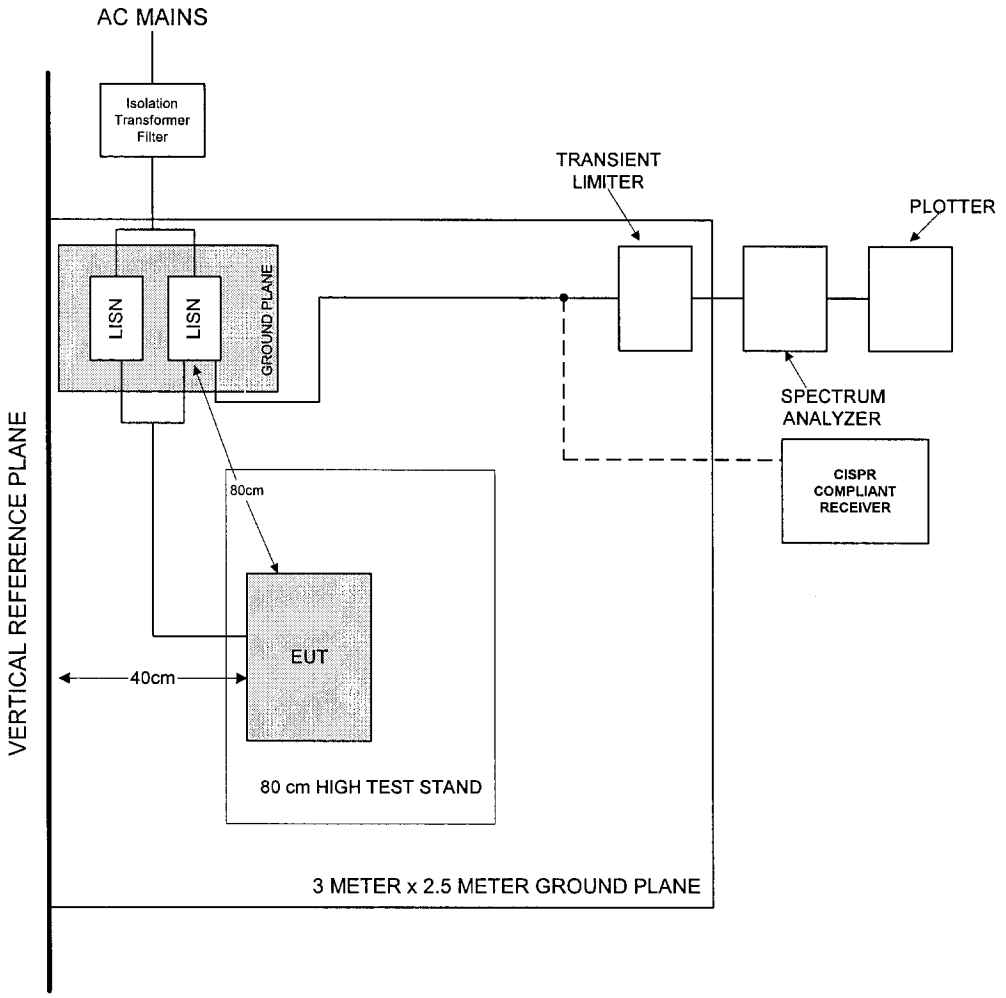


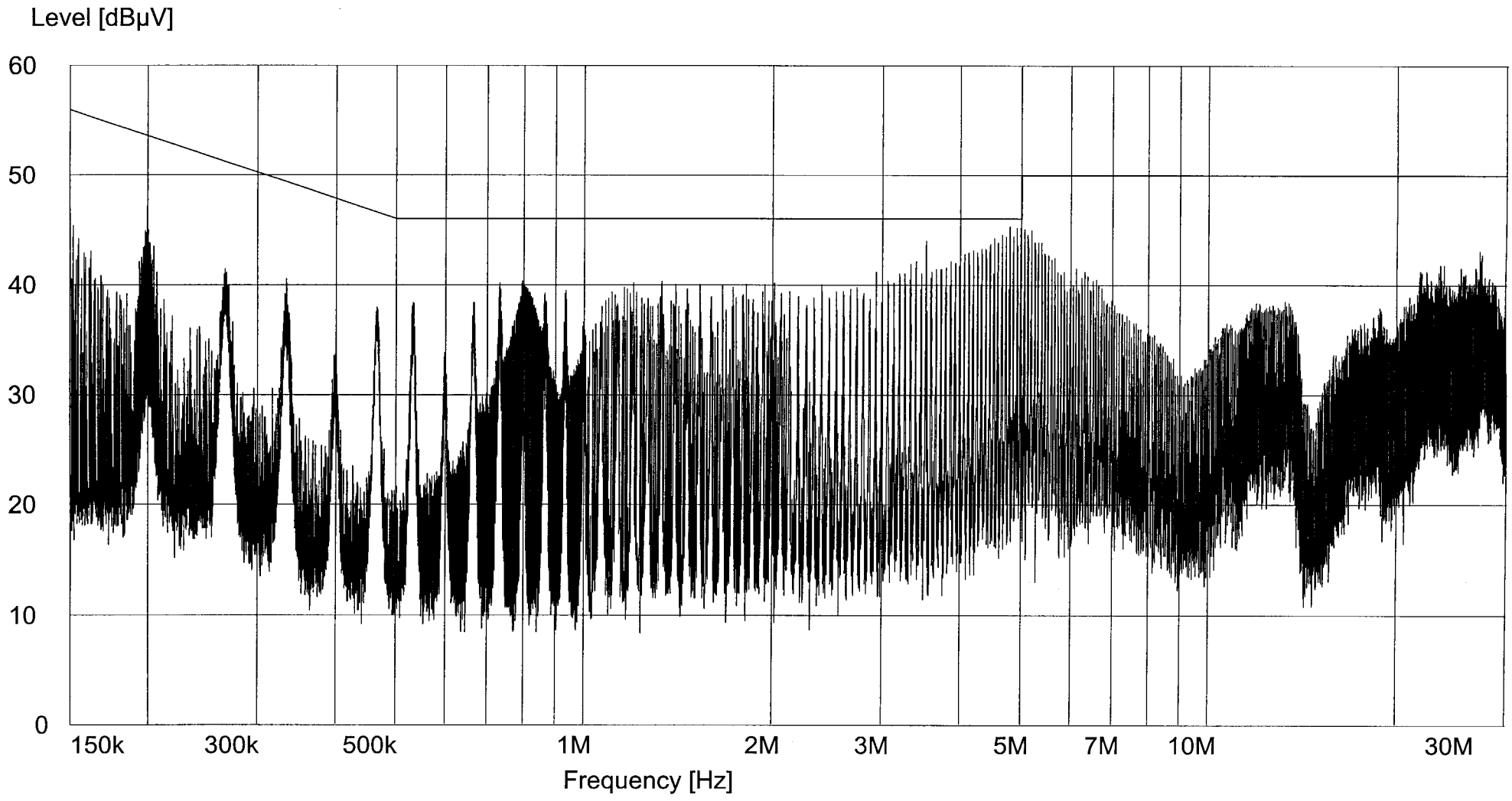
Figure R15107A-CE
Conducted Emissions



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

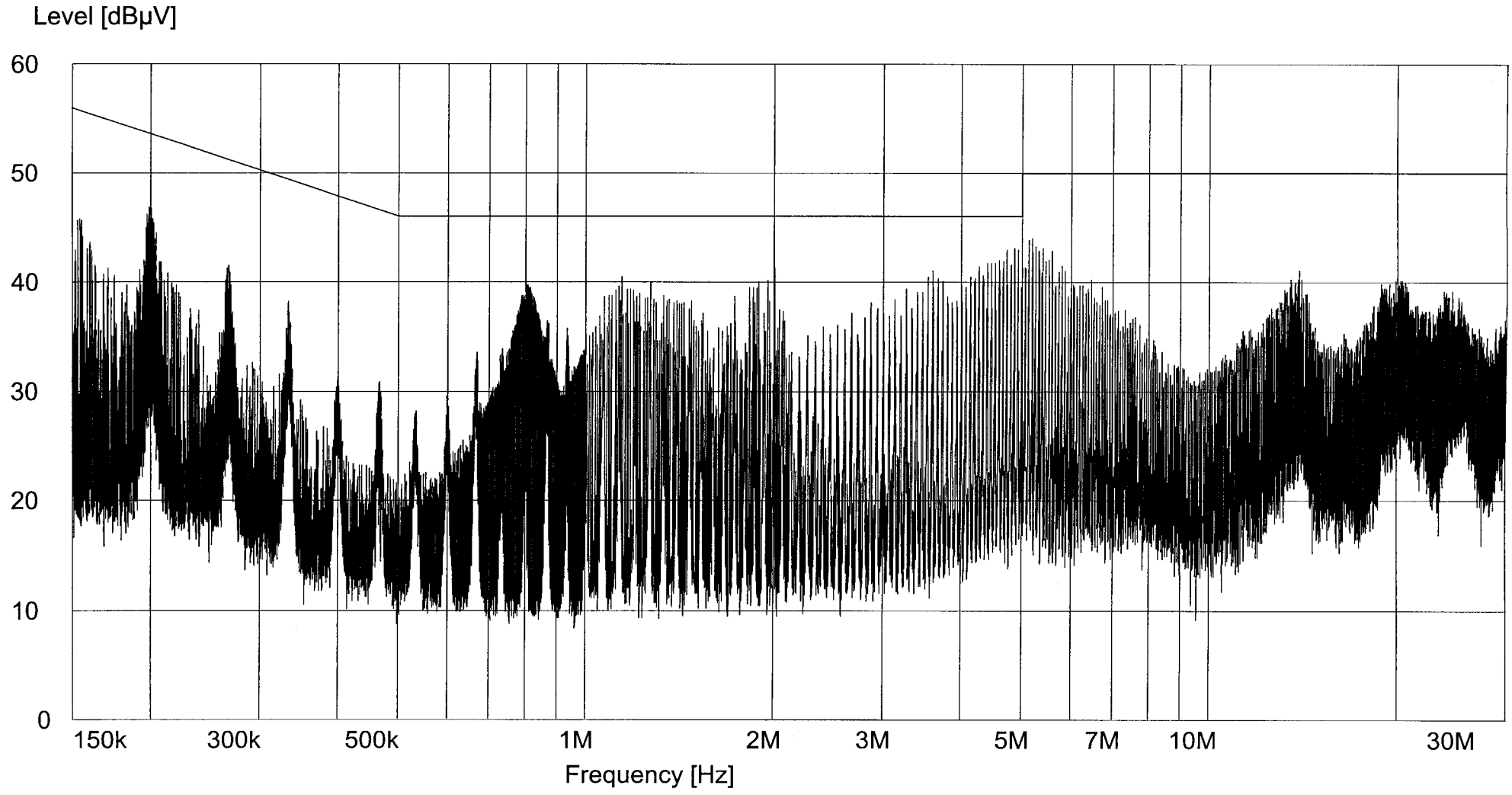
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek Power Supply	**Job No:**	R-4455N8
Model No:	GTM41060-2530	**Serial No:**	000022	**Technician:**	M. Seamans
Test Specification:	FCC Part 15 Subpart B Class B	Paragraph: 15.107 (a)		**Date:**	December 22, 2005
Operating Mode:	Converting 120VAC to 30VDC;100 % load .83A				
Notes:	Lead Tested: 120 VAC 60 Hz Hot Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

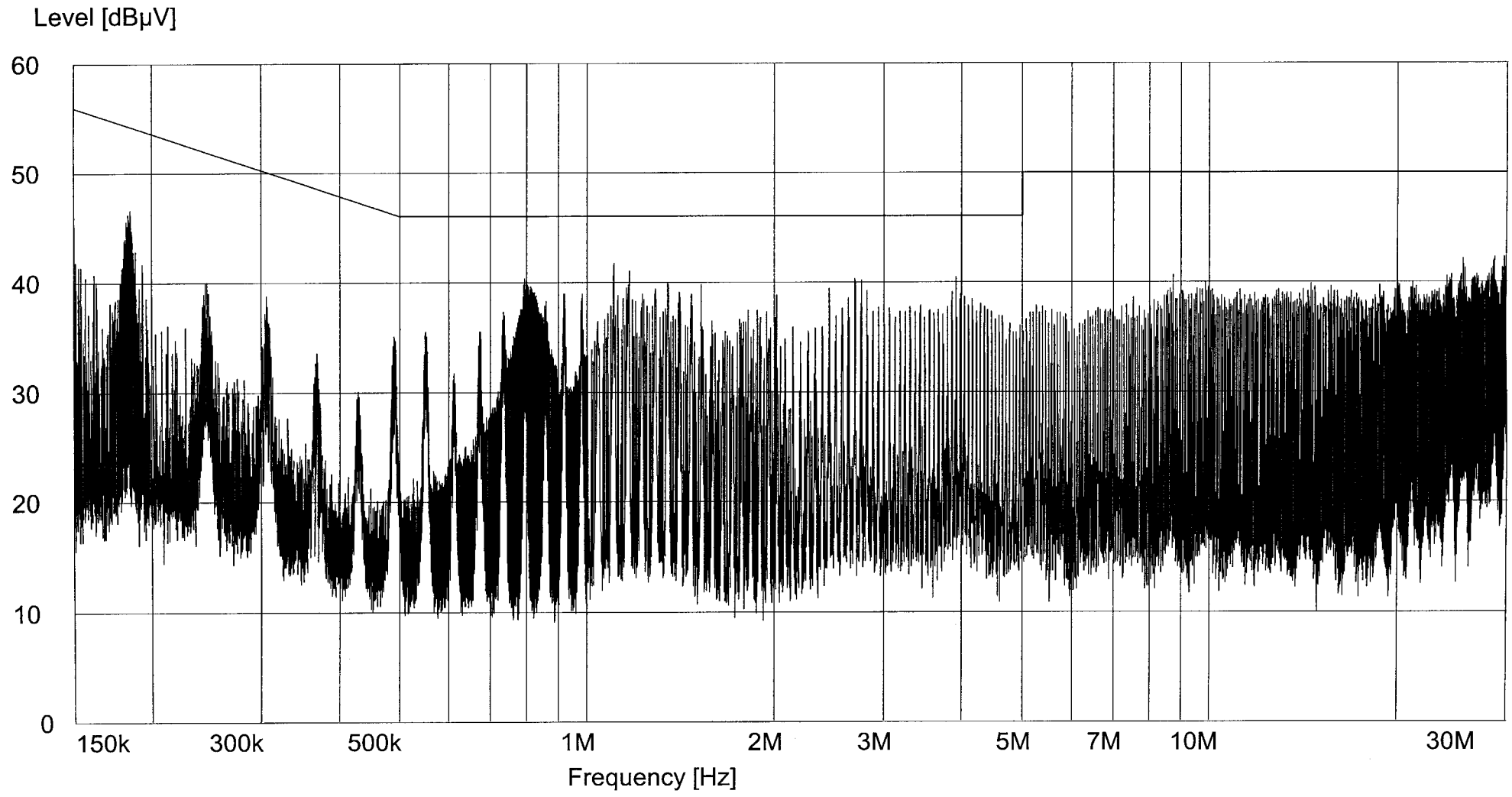
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek Power Supply	**Job No:**	R-4455N8
Model No:	GTM41060-2530	**Serial No:**	000022	**Technician:**	M. Seamans
Test Specification:	FCC Part 15 Subpart B Class B	Paragraph: 15.107 (a)		**Date:**	December 22, 2005
Operating Mode:	Converting 120VAC to 30VDC;100 % load .83A				
Notes:	Lead Tested: 120 VAC 60 Hz Neutral Peak Readings to Average Limits.				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

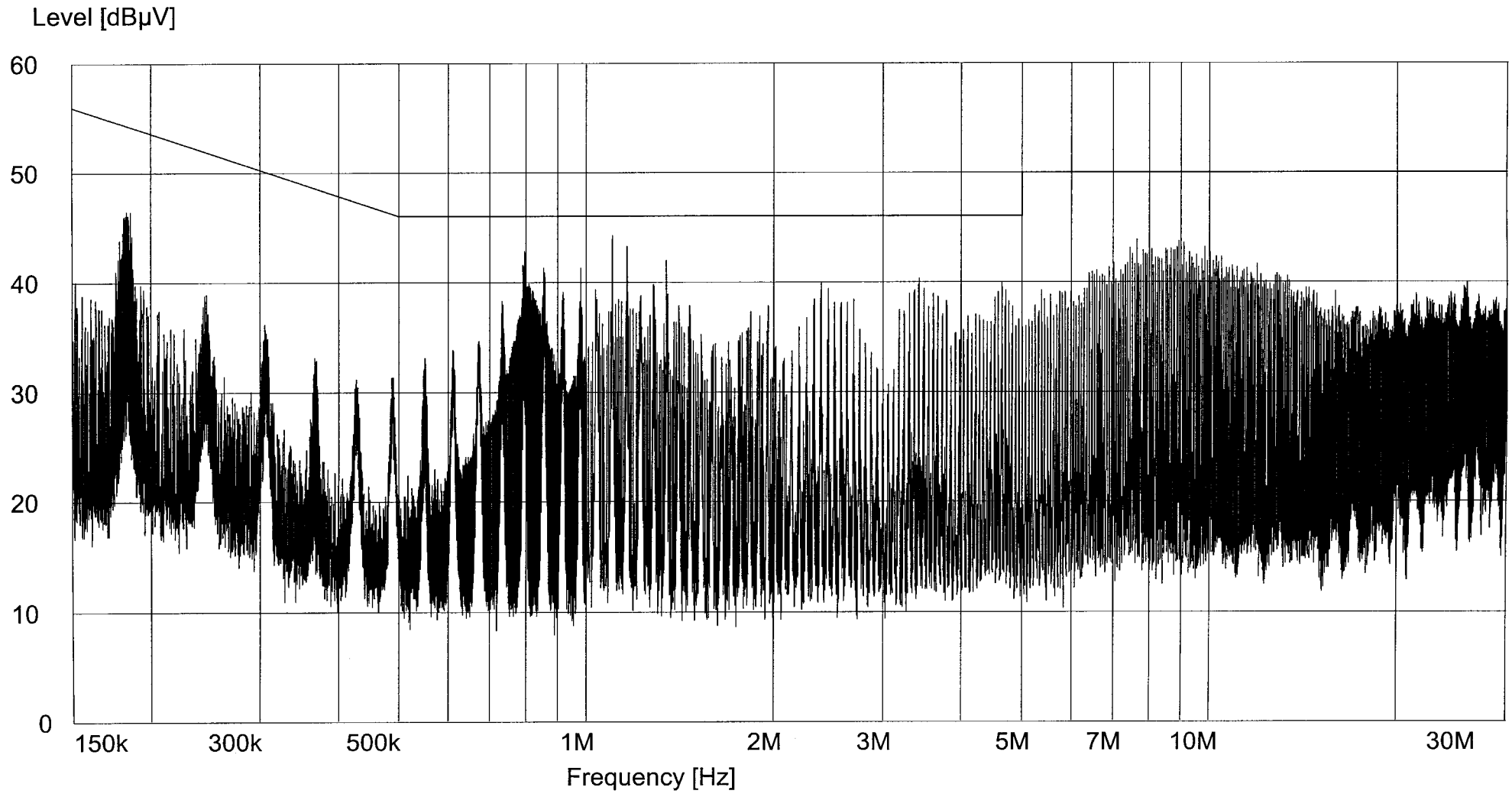
Test Method:	**Conducted Emissions 150 kHz to 30 MHz**				
Customer:	TUV America	**Test Sample:**	Globtek Power Supply	**Job No:**	R-4455N8
Model No:	GTM41060-1505	**Serial No:**	001059	**Technician:**	M. Seamans
Test Specification:	FCC Part 15 Subpart B Class B	Paragraph: 15.107 (a)		**Date:**	December 22, 2005
Operating Mode:	Converting 120VAC to 5VDC;100 % load 3A				
Notes:	Lead Tested: 120 VAC 60 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 Power Supply	**Job No:**	R-4455N8
Model No:	GTM41060-1505	**Serial No:**	001059	**Technician:**	M. Seamans
Test Specification:	FCC Part 15 Subpart B Class B	Paragraph: 15.107 (a)		**Date:**	December 22, 2005
Operating Mode:	Converting 120VAC to 5VDC;100 % load 3A				
Notes:	Lead Tested: 120 VAC 60 Hz Neutral Peak Readings to Average Limits.				



Equipment List
Conducted Emissions

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
4027	LISN	Solar Electronics	10 KHz - 30 MHz	9252-50-R-24BNC	11/21/2005	11/21/2006
4028	Isolation Transformer	Acme	N/A	120x240	1/31/2005	1/31/2006
5030	10 DB Atten. (50 ohm)	Narda	DC - 12.4 GHz	757C-10	2/7/2005	2/7/2006
713	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	3/22/2005	3/22/2006

6.2 Radiated Emissions, 30 MHz TO 1 GHz

Purpose
The purpose of this test was to determine the magnitude of the radio frequency emissions emanating from the AC-DC Power Supply via radiation from the enclosure and connected cabling in the frequency range of 30 MHz to 1 GHz.

Test Limits
The limits shown in the table below were used to determine AC-DC Power Supply compliance:

FREQUENCY RANGE	CLASS B LIMITS @ 3 Meters
	dBμV/M
30.0 MHz to 230.0 MHz	40.0
230.0 MHz to 1000 MHz	47.0

Test Setup
The AC-DC Power Supply was configured as shown in the attached photograph. This configuration was based on the test setup shown in Retlif Testing Laboratories Drawing No. R15109A-RE. The test sample was placed on an 80 cm high wooden test stand above the ground plane of the shielded enclosure for preliminary measurements and the FCC listed OATS for final measurements. The rear of the test sample, including peripherals, was aligned and flush with the rear of the test stand. The test stand was placed directly on the flush mounted turn table. The turn table positions were relative to the test sample as follows: When facing the AC-DC Power Supply the front is at 0°, the rear is at 180°, and the left side is at 270°. The test stand was situated such that the boundary of the test sample was located 3 meters from the measuring antenna.
The AC-DC Power Supply was arranged on the test stand in accordance with the manufacturers instructions. Care was taken during testing to relocate all system components and cabling in an effort to maximize the emissions from the test sample. Excess interface cable length was draped over the back edge of the test stand. If any draped cable extended closer than 40 cm to the conducting ground plane, the excess was bundled in the center in a serpentine fashion using 40 cm lengths to maintain the 40 cm height. If the cable(s) could not be bundled due to bulk, length, or stiffness, they were draped over the back edge of test stand unbundled, but in such a way that all portions of the interface cable remained at least 40 cm from the horizontal conducting ground plane. The AC power cable(s) were draped over the rear edge of the test stand and routed down to the AC mains.

6.2 Radiated Emissions, 30 MHz TO 1 GHz (continued)

Test Procedure

With the test instrumentation and the AC-DC Power Supply configured as stated above, the following steps were performed in accordance with ANSI C63.4:2001:

1. The AC-DC Power Supply was arranged with cables terminated as specified in Paragraph 4.2 herein.
2. The spectrum analyzer was configured to display the frequency range of 30 MHz to 80 MHz.
3. With the test antenna vertically polarized, the AC-DC Power Supply cabling was relocated in order to maximize the radiated emissions.
4. The operating mode of the AC-DC Power Supply was varied in order to determine the operating mode which produced maximum radiated emissions with respect to the limit.
5. Once the configuration, both cabling and operating mode, which produced maximum emissions was determined the AC-DC Power Supply was maintained in this configuration for the duration of testing.
6. A max hold spectrum analyzer trace, trace A, was obtained with the AC-DC Power Supply operating.
7. The AC-DC Power Supply was powered off and a max hold spectrum analyzer trace, trace B, was obtained to denote the ambient interference levels.
8. The two obtained traces were analyzed in order to determine which recorded emissions were produced by the AC-DC Power Supply.
9. At each frequency upon which an emission was determined to be from the AC-DC Power Supply the following steps were performed in order to further maximize the observed emissions:
    a. The test antenna height was varied from 1 to 4 meters.
    b. The test antenna polarization was varied from vertical to horizontal.
    c. The AC-DC Power Supply was rotated 360° about its vertical axis.
10. The test antenna RF cable was connected to the CISPR compliant receiver.
11. For all emissions found to be within 20 dB of the specified limit, the following was recorded on the x-y plot:
    a. Frequency of emission
    b. Quasi-Peak detector receiver meter reading.
    c. Correction factor consisting of antenna factor, cable loss and pre-amp gain.
    e. Test antenna height and polarization.
    f. Turntable position.
12. Steps 6 through 11 above were repeated for the following frequency ranges: 80 to 130 MHz, 130 to 200 MHz, 200 to 500 MHz, 500 to 750 MHz and 750 MHz to 1 GHz.

Test Results

No emissions which exceeded the specified Part 15, Subpart B, Class B limits were observed and the AC-DC Power Supply was found to comply with the requirements specified for this method. See the following test data for a full presentation of the results obtained.

Test Photographs
Radiated Emissions

MODEL: GTM41060-1505

PHOTOGRAPH UNAVAILABLE

MODEL: GTM41060-2530

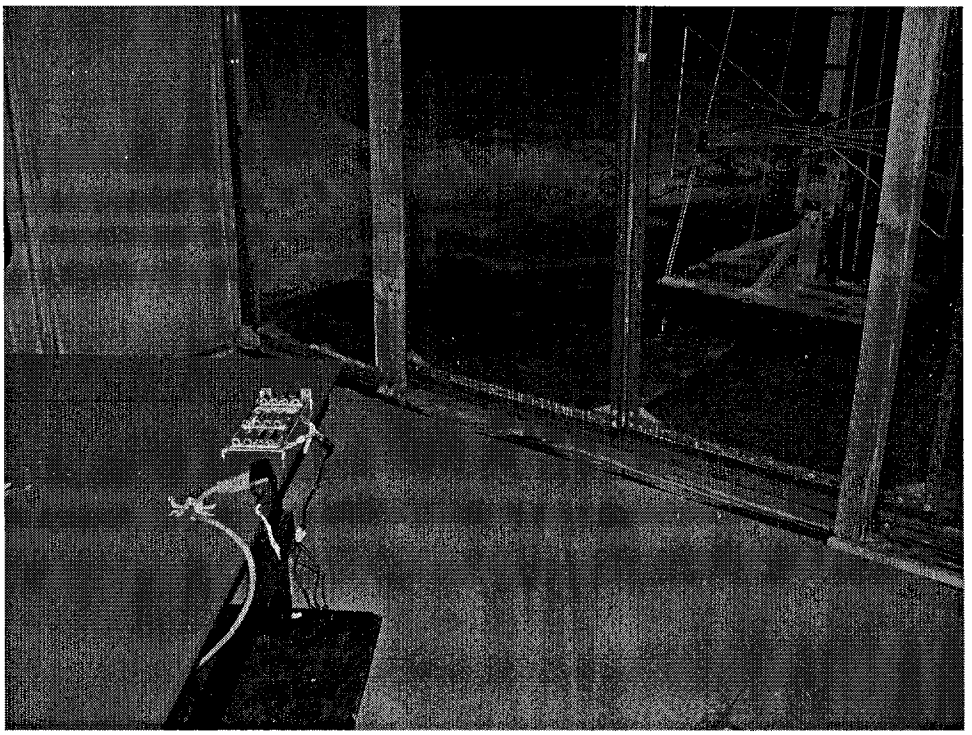
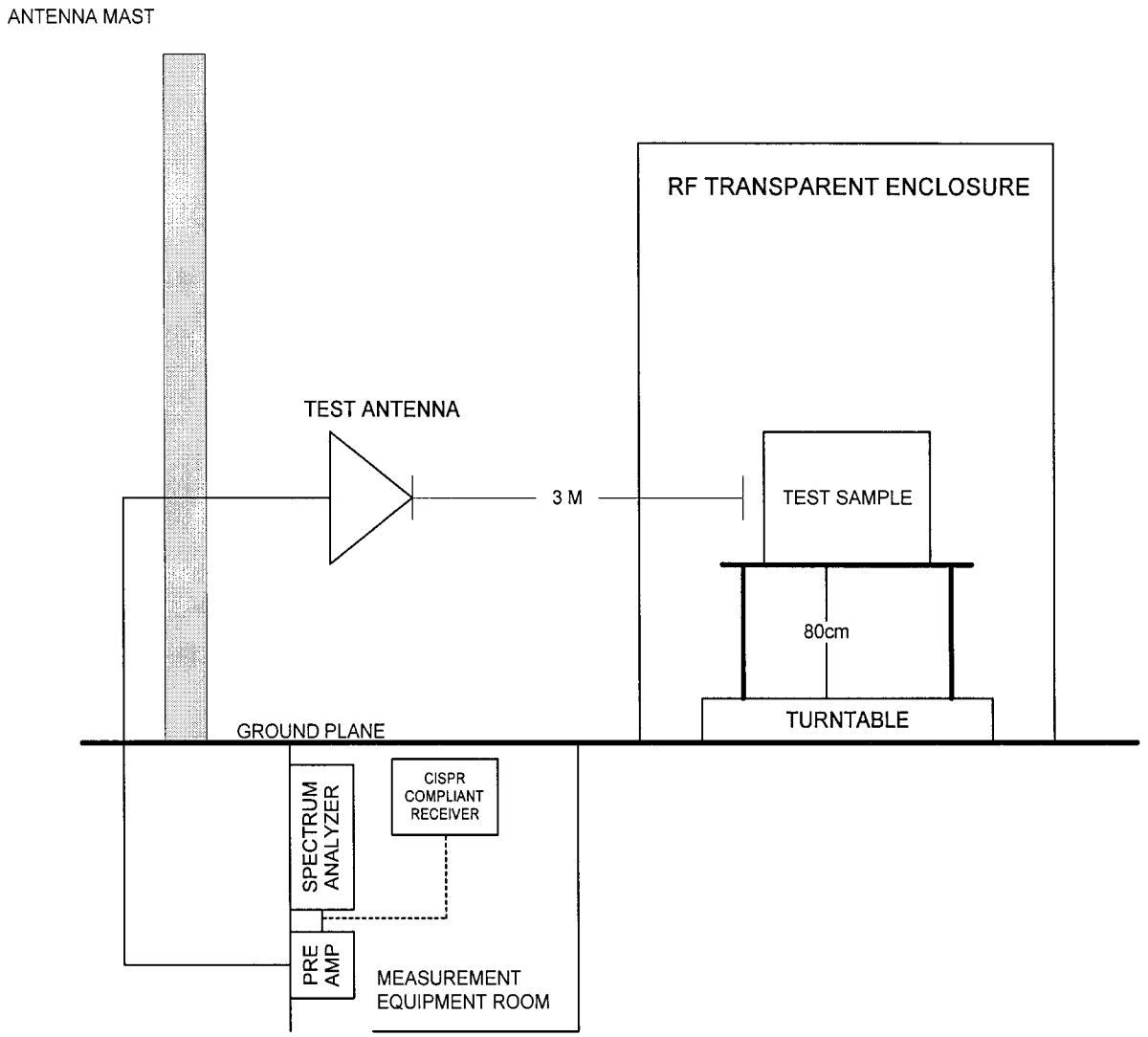


Figure R15109A-RE
Radiated Emissions



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Radiated Emissions 30 MHz to 1 GHz**		
Customer	TUV America	**Job No.**	R-4455N8
Test Sample	Globtek Power Supply		
Model No.	GTM41060-2530	**Serial No.**	000022
Test Specification:	FCC Part 15 Subpart B Class B Paragraph: 15.109 (a)		
Operating Mode:	Converting 120VAC to 30VDC;100 % load .83A		
Technician:	M. Seamans	**Date:**	December 21, 2005
Notes:	Test Distance: 3 Meters Detector: Quasi-Peak		

Test Frequency	Antenna Position	Turntable Position	Uncorrected Reading	Correction Factor	Corrected Reading					Limit at 3 Meters
MHz	(H/V) - Height	Degrees	dBuV	dB	dBuV/m					dBuV/m
30.00	-	-	-	-	-					40.0
|	-	-	-	-	-					|
116.69	V/1m	180.0	11.37	14.13	25.50					|
119.40	V/1m	270.0	16.00	14.10	30.10					|
122.91	V/1m	270.0	16.51	13.79	30.30					|
125.15	V/1m	270.0	15.15	13.55	28.70					|
126.91	V/1m	270.0	15.03	13.37	28.40					|
129.80	H/1m	180.0	11.03	13.07	24.10					|
148.32	H/1m	180.0	9.11	15.09	24.20					|
164.24	H/1m	180.0	10.70	15.60	26.30					|
170.73	H/1m	180.0	10.09	15.71	25.80					|
209.81	H/1m	270.0	11.85	17.25	29.10					|
217.72	V/1m	270.0	9.90	17.80	27.70					|
223.00	V/1m	270.0	9.14	18.16	27.30					|
223.45	H/1m	270.0	9.01	18.19	27.20					|
|	-	-	-	-	-					|
230.00	-	-	-	-	-					40.0
230.00	-	-	-	-	-					47.0
|	-	-	-	-	-					|
230.25	H/1m	270.0	8.23	18.57	26.80					|
237.73	H/1m	270.0	8.04	18.96	27.00					|
240.60	H/1m	270.0	8.09	19.11	27.20					|
263.51	H/1m	270.0	7.61	19.99	27.60					|
|	-	-	-	-	-					|
1000.00	-	-	-	-	-					47.0

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-4455N8
Test Sample	Globtek Power Supply		
Model No.	GTM41060-1505	**Serial No.**	001059
Test Specification:	FCC Part 15 Subpart B Class B Paragraph: 15.109 (a)		
Operating Mode:	Converting 120VAC to 5VDC;100 % load 3A		
Technician:	M. Seamans	**Date:**	December 21, 2005
Notes:	Test Distance: 3 Meters Detector: Quasi-Peak		

Test Frequency	Antenna Position	Turntable Position	Uncorrected Reading	Correction Factor	Corrected Reading					Limit at 3 Meters
MHz	(H/V) - Height	Degrees	dBuV	dB	dBuV/m					dBuV/m
30.00	-	-	-	-	-					40.0
|	-	-	-	-	-					|
117.16	V/1m	180.0	14.87	14.13	29.00					|
124.12	V/1m	180.0	12.94	13.66	26.60					|
223.00	V/1m	180.0	9.64	18.16	27.80					|
226.38	V/1m	180.0	9.43	18.37	27.80					|
229.79	V/1m	180.0	8.85	18.55	27.40					|
|	-	-	-	-	-					|
230.00	-	-	-	-	-					40.0
230.00	-	-	-	-	-					47.0
|	-	-	-	-	-					|
238.45	V/1m	180.0	8.70	19.00	27.70					|
240.36	V/1m	180.0	8.10	19.10	27.20					|
|	-	-	-	-	-					|
1000.00	-	-	-	-	-					47.0

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

Equipment List
Radiated Emissions

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	12/03/2004	2/03/2006
4202	Biconilog	EMCO	26 MHz - 2 GHz	3142	12/14/2005	12/14/2006
713	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	03/22/2005	03/22/2006

Appendix A: FCC Rules - Verification

Appendix A

Sec. 2.902 Verification.

(a) Verification is a procedure where the manufacturer makes measurements or takes the necessary steps to insure that the equipment complies with the appropriate technical standards. Submittal of a sample unit or representative data to the Commission demonstrating compliance is not required unless specifically requested by the Commission pursuant to Sec. 2.957, of this part.

(b) Verification attaches to all items subsequently marketed by the manufacturer or importer which are identical as defined in Sec. 2.908 to the sample tested and found acceptable by the manufacturer.

Sec. 2.908 Identical defined.

As used in this subpart, the term identical means identical within the variation that can be expected to arise as a result of quantity production techniques.

Sec. 2.909 Responsible party.

The following parties are responsible for the compliance of radio frequency equipment with the applicable standards:

(b) In the case of equipment subject to authorization under the verification procedure, the manufacturer or, in the case of imported equipment, the importer. If subsequent to manufacture and importation, the radio frequency equipment is modified by any party not working under the authority of the responsible party, the party performing the modification becomes the new responsible party.

(d) If, because of modifications performed subsequent to authorization, a new party becomes responsible for ensuring that a product complies with the technical standards and the new party does not obtain a new equipment authorization, the equipment shall be labeled, following the specifications in Sec. 2.925(d), with the following:

> ``This product has been modified by [insert name, address and telephone number of the party performing the modifications]."

Sec. 2.952 Limitation on verification.

(a) Verification signifies that the manufacturer or importer has determined that the equipment has been shown to be capable of compliance with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated. Compliance with these standards shall not be construed to be a finding by the manufacturer or importer with respect to matters not encompassed by the Commission's rules.

(b) Verification of the equipment by the manufacturer or importer is effective until a termination date is otherwise established by the Commission.

(c) No person shall, in any advertising matter, brochure, etc., use or make reference to a verification in a deceptive or misleading manner or convey the impression that such verification reflects more than a determination by the manufacturer or importer that the device or product has been shown to be capable of compliance with the applicable technical standards of the Commission's rules.

Sec. 2.953 Responsibility for compliance.

(a) In verifying compliance, the responsible party, as defined in Sec. 2.909 warrants that each unit of equipment marketed under the verification procedure will be identical to the unit tested and found acceptable with the standards and that the records maintained by the responsible party continue to reflect the equipment being produced under such verification within the variation that can be expected due to quantity production and testing on a statistical basis.

(b) The importer of equipment subject to verification may upon receiving a written statement from the manufacturer that the equipment complies with the appropriate technical standards rely on the manufacturer or independent testing agency to verify compliance. The test records required by Sec. 2.955 however should be in the English language and made available to the Commission upon a reasonable request, in accordance with Sec. 2.956.

(c) In the case of transfer of control of equipment, as in the case of sale or merger of the grantee, the new manufacturer or importer shall bear the responsibility of continued compliance of the equipment.

(d) Verified equipment shall be reverified if any modification or change adversely affects the emanation characteristics of the modified equipment. The party designated in Sec. 2.909 bears responsibility for continued compliance of subsequently produced equipment.

Appendix B: FCC Rules - Retention of records

Appendix B

Sec. 2.955 Retention of records.

(a) For each equipment subject to verification, the responsible party, as shown in Sec. 2.909 shall maintain the records listed as follows:

(1) A record of the original design drawings and specifications and all changes that have been made that may affect compliance with the requirements of Sec. 2.953.
(2) A record of the procedures used for production inspection and testing (if tests were performed) to insure the conformance required by Sec. 2.953. (Statistical production line emission testing is not required.)

(3) A record of the measurements made on an appropriate test site that demonstrates compliance with the applicable regulations in this chapter. The record shall:

(I) Indicate the actual date all testing was performed;
(ii) State the name of the test laboratory, company, or individual performing the verification testing. The Commission may request additional information regarding the test site, the test equipment or the qualifications of the company or individual performing the verification tests;
(iii) Contain a description of how the device was actually tested, identifying the measurement procedure and test equipment that was used;
(iv) Contain a description of the equipment under test (EUT) and support equipment connected to, or installed within, the EUT;
(v) Identify the EUT and support equipment by trade name and model number and, if appropriate, by FCC Identifier and serial number;
(vi) Indicate the types and lengths of connecting cables used and how they were arranged or moved during testing;
(vii) Contain at least two drawings or photographs showing the test set-up for the highest line conducted emission and showing the test set-up for the highest radiated emission. These drawings or photographs must show enough detail to confirm other information contained in the test report. Any photographs used must be focused originals without glare or dark spots and must clearly show the test configuration used;
(viii) List all modifications, if any, made to the EUT by the testing company or individual to achieve compliance with the regulations in this chapter;
(ix) Include all of the data required to show compliance with the appropriate regulations in this chapter; and
(x) Contain, on the test report, the signature of the individual responsible for testing the product along with the name and signature of an official of the responsible party, as designated in Sec. 2.909.

(4) For equipment subject to the provisions in part 15 of this chapter, the records shall indicate if the equipment was verified pursuant to the transition provisions contained in Sec. 15.37 of this chapter.

(b) The records listed in paragraph (a) of this section shall be retained for two years after the manufacture of said equipment item has been permanently discontinued, or until the conclusion of an investigation or a proceeding if the manufacturer or importer is officially notified that an investigation or any other administrative proceeding involving his equipment has been instituted.

Appendix C: FCC Rules - Identification / Labeling

Appendix C

Sec. 2.954 Identification.

Devices subject only to verification shall be uniquely identified by the person responsible for marketing or importing the equipment within the United States. However, the identification shall not be of a format which could be confused with the FCC Identifier required on certified, notified or type accepted equipment. The importer or manufacturer shall maintain adequate identification records to facilitate positive identification for each verified device.

Sec. 15.19 Labeling requirements.

(b) In addition to the requirements in part 2 of this chapter, a device subject to certification, or verification shall be labeled as follows:

(3) All other devices shall bear the following statement in a conspicuous location on the device:

> This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

(5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

Appendix D: FCC Rules - Information to user

Appendix D

Sec. 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible f for compliance could void the user's authority to operate the equipment. In cases where the manual is only available electronically through the Internet or other computer network, the information required by this section may be included in the electronic manual.

Sec. 15.105 Information to the user.

(b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more
of the following measures:

--Reorient or relocate the receiving antenna.
--Increase the separation between the equipment and receiver.
--Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
--Consult the dealer or an experienced radio/TV technician for help.

(c) The provisions of paragraphs (a) and (b) of this section do not apply to digital devices exempted from the technical standards under the provisions of Sec. 15.103.

(d) For systems incorporating several digital devices, the statement shown in paragraph (a) or (b) of this section needs to be contained only in the instruction manual for the main control unit.

(e) In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.