

FCC Part 15B Measurement and Test Report

For

GlobTek, Inc.

186 Veterans Dr. Northvale, NJ 07647 USA

FCC Rule(s):	<u>FCC Part 15 Subpart B</u>	
Product Description:	<u>Power Supply</u>	
Tested Model:	<u>GTD93035L6013.2-F, GTD93035H6013.2-F</u>	
Report No.:	<u>STR13118147E-3</u>	
Tested Date:	<u>2013-11-12 to 2013-11-26</u>	
Issued Date:	<u>2013-11-26</u>	
Tested By:	<u>Damon Ma / Engineer</u>	<i>Damon Ma</i>
Reviewed By:	<u>Lahm Peng / EMC Manager</u>	<i>Lahm peng</i>
Approved & Authorized By:	<u>Jandy so / PSQ Manager</u>	<i>Jandyso</i>
Prepared By:	Shenzhen SEM.Test Technology Co., Ltd. 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C. (518101) Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn	

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: GlobTek, Inc.
 Address of applicant: 186 Veterans Dr. Northvale, NJ 07647 USA
 Manufacturer: 1. GlobTek, Inc.
 2. GlobTek (Suzhou) Co., Ltd
 Address of manufacturer: 1. 186 Veterans Dr. Northvale, NJ 07647 USA
 2. Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China

General Description of EUT	
Product Name:	Power Supply
Trade Name:	GlobTek
Model No.:	GTD93035L6013.2-F, GTD93035H6013.2-F
Adding Model(s):	/
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	GTD93035L6013.2-F Input: DC 9-60V Output: DC 13.2V GTD93035H6013.2-F Input: DC 50-150V Output: DC 13.2V
Rated Current:	GTD93035L6013.2-F (4.54A) GTD93035H6013.2-F (4.54A)
Rated Power:	60W
Power Adapter Model:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Below 108MHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the GlobTek, Inc. in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	DC 50V	GTD93035H6013.2-F
TM2	DC 150V	GTD93035H6013.2-F
TM3	DC 9V	GTD93035L6013.2-F
TM4	DC 60V	GTD93035L6013.2-F

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
DC Power	XUHENG	TD9025MS	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

2. SUMMARY OF TEST RESULTS

Description of Test	Result
§15.107 (a) Conducted Emission	N/A
§15.109(a) Radiated Emission	Compliant

N/A: not applicable

SEM. Test

3. RADIATED EMISSION

3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

3.2 Test Equipment List and Details

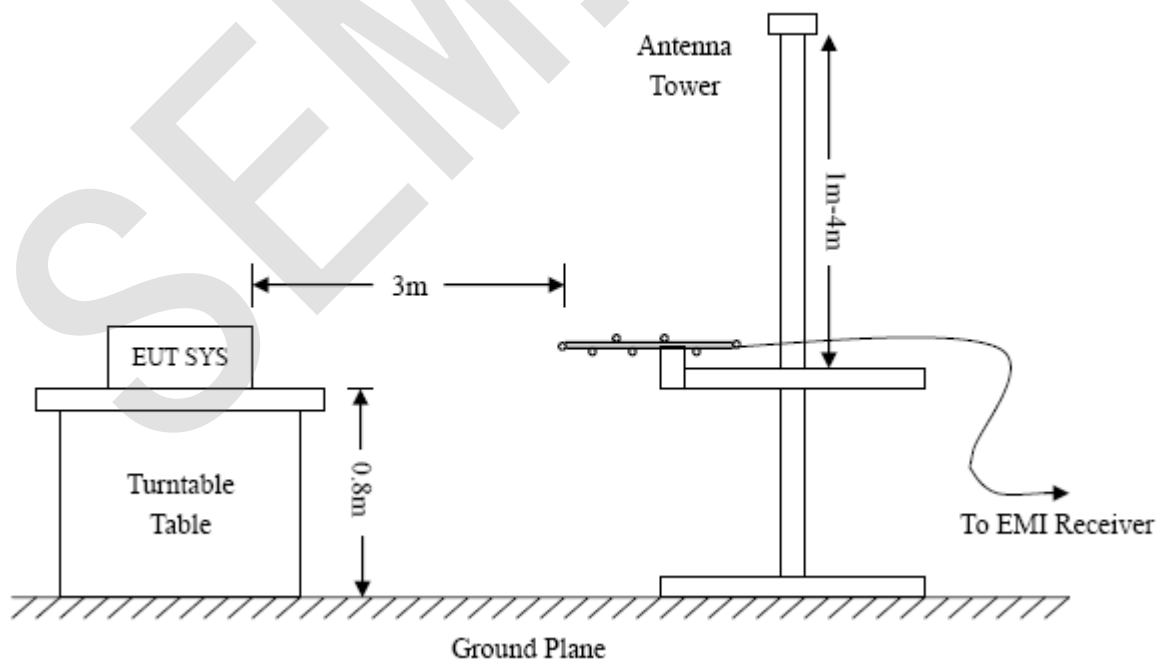
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-05-07	2014-05-06
EMI Test Receiver	R&S	ESVB	825471/005	2013-05-07	2014-05-06
Pre-amplifier	Agilent	8447F	3113A06717	2013-05-07	2014-05-06
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-05-07	2014-05-06
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-04-20	2014-04-19
Horn Antenna	ETS	3117	00086197	2013-04-20	2014-04-19
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2013-04-20	2014-04-19

3.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.



3.4 Test Receiver Setup

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

3.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

3.6 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

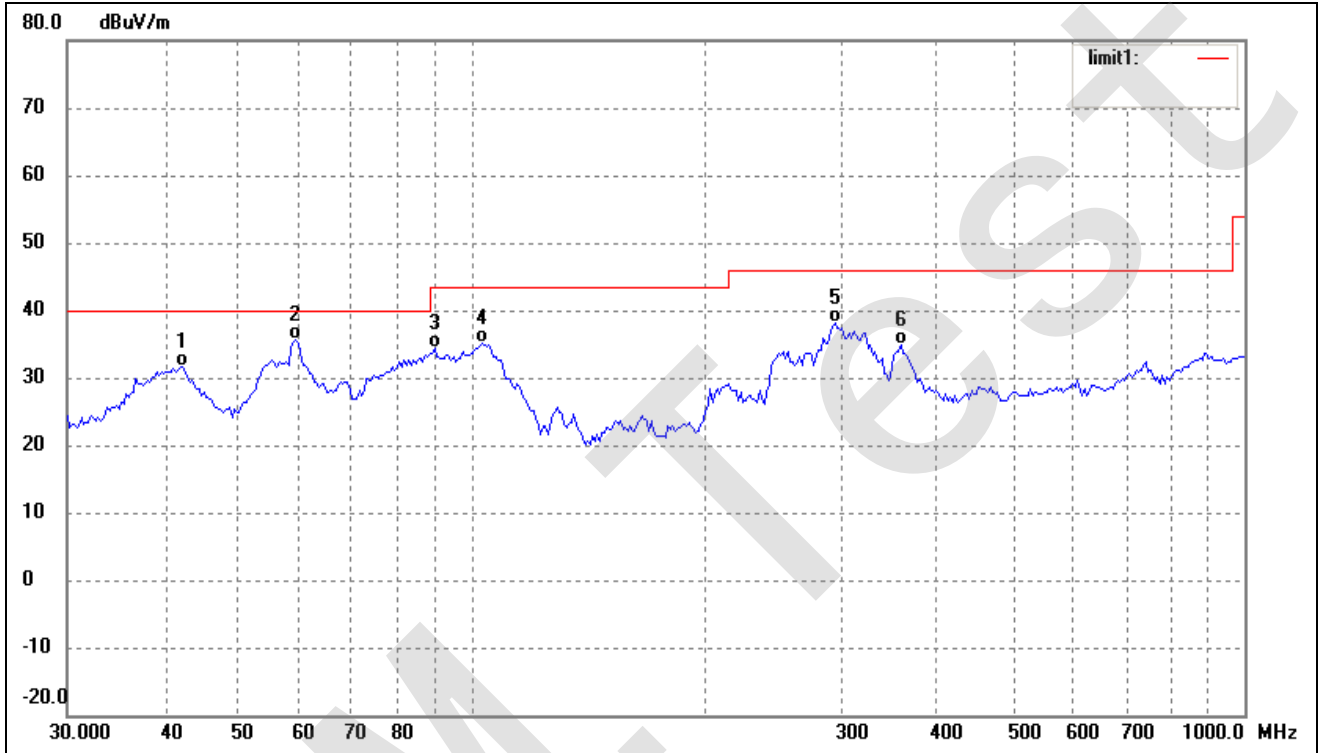
3.7 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-2.84 dB at 39.9941 MHz in the Vertical polarization, TM1 Mode, 30 MHz to 1 GHz, 3Meters

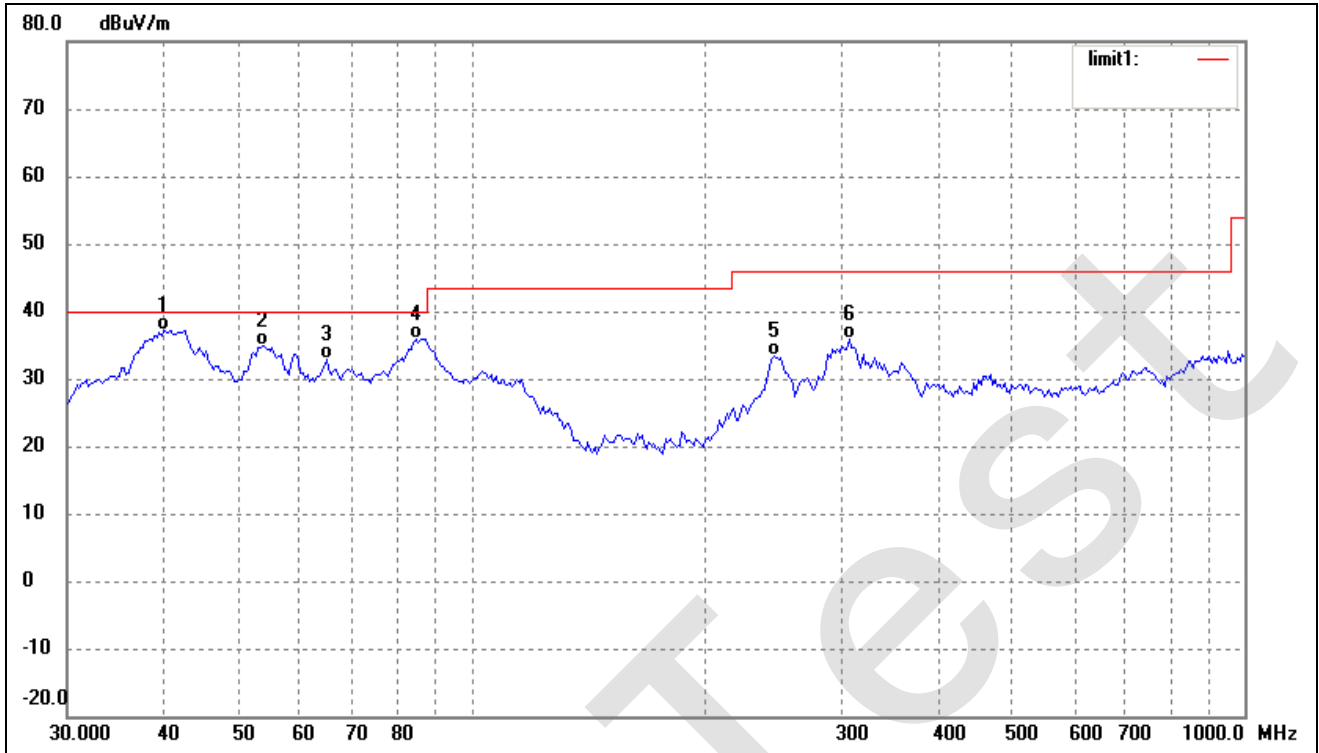
Plot of Radiated Emissions Test Data

EUT: Power Supply
 Tested Model: GTD93035H6013.2-F
 Operating Condition: TM1
 Comment: DC 50V
 Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	42.3021	23.00	8.56	31.56	40.00	-8.44	240	100	QP
2	59.2325	30.16	5.45	35.61	40.00	-4.39	255	100	QP
3	89.5900	30.76	3.51	34.27	43.50	-9.23	241	100	QP
4	103.0798	29.24	5.81	35.05	43.50	-8.45	245	100	QP
5	295.1469	29.08	8.98	38.06	46.00	-7.94	271	100	QP
6	359.1859	25.53	9.23	34.76	46.00	-11.24	263	100	QP

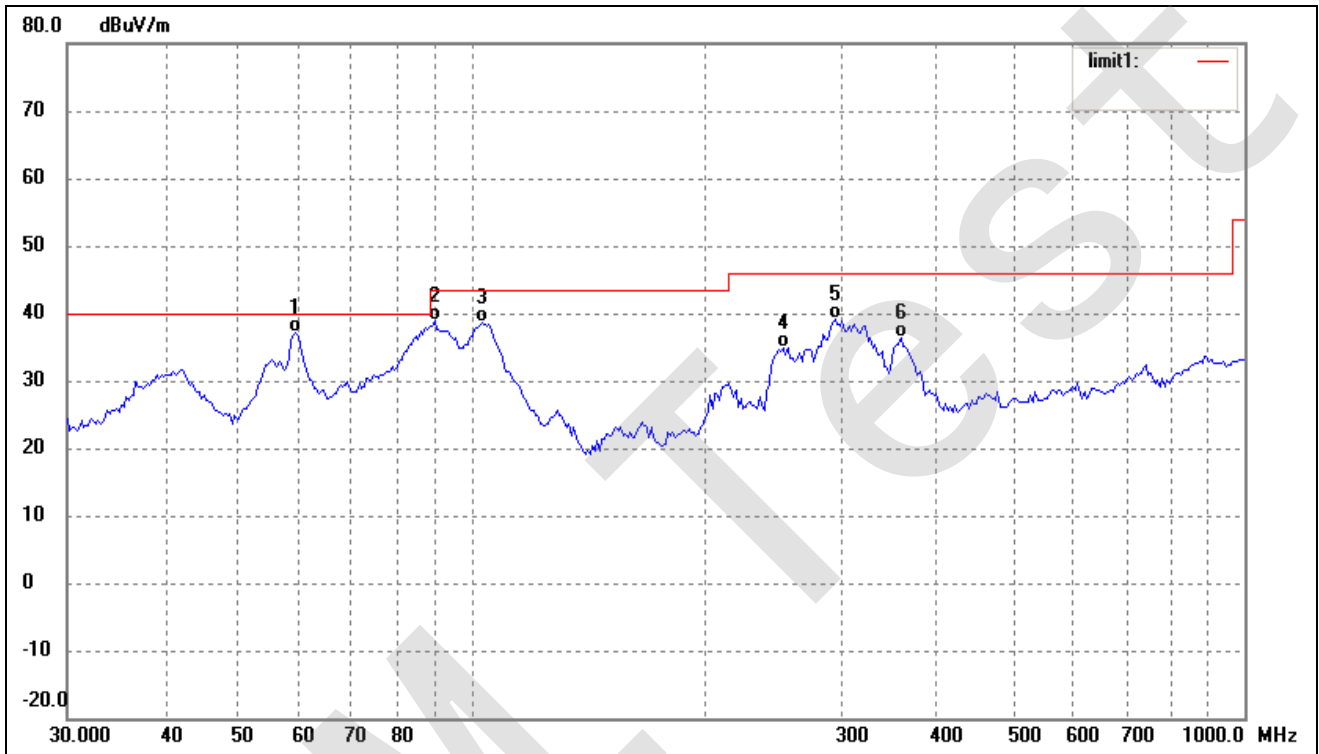
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9941	27.91	9.25	37.16	40.00	-2.84	210	100	QP
2	53.6931	29.03	5.94	34.97	40.00	-5.03	255	100	QP
3	64.8863	28.97	3.82	32.79	40.00	-7.21	241	100	QP
4	84.7018	33.74	2.23	35.97	40.00	-4.03	245	100	QP
5	245.9507	26.78	6.55	33.33	46.00	-12.67	251	100	QP
6	307.8312	26.54	9.22	35.76	46.00	-10.24	259	100	QP

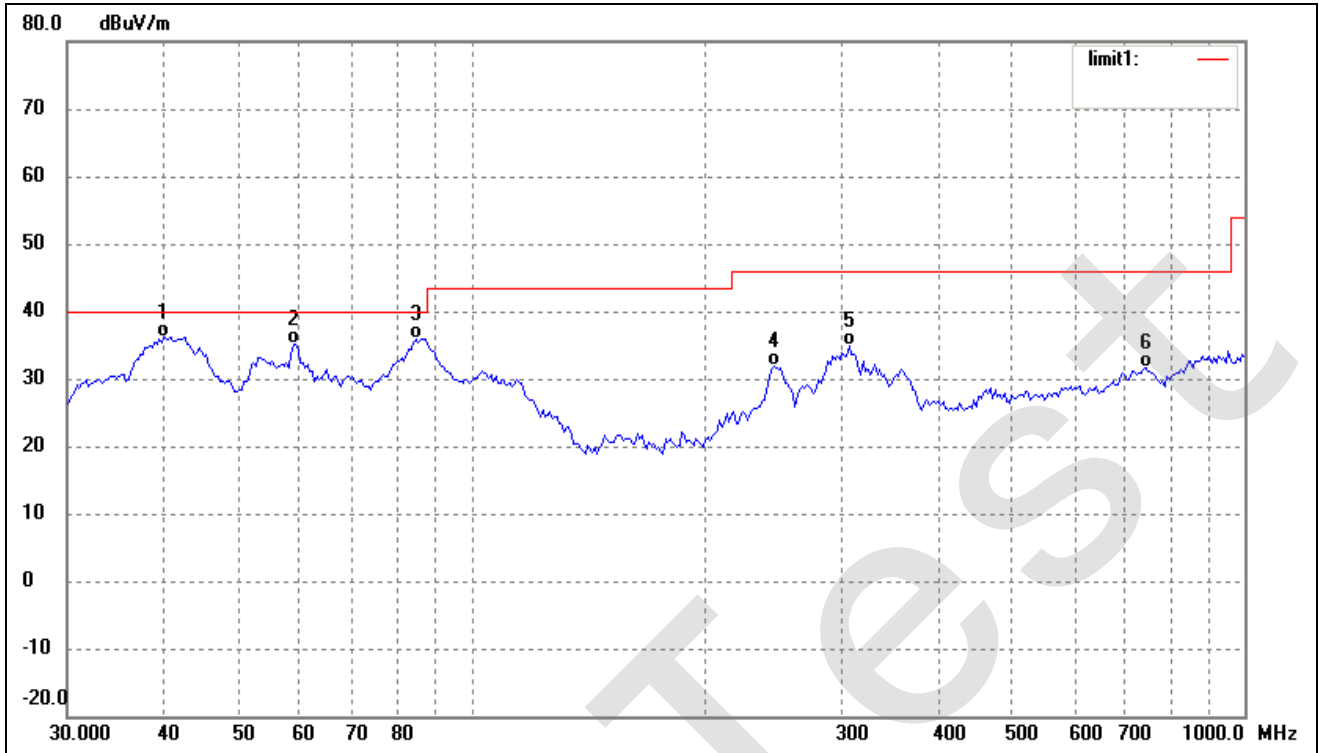
Plot of Radiated Emissions Test Data

EUT: Power Supply
 Tested Model: GTD93035H6013.2-F
 Operating Condition: TM2
 Comment: DC 150V
 Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	59.2325	31.66	5.45	37.11	40.00	-2.89	190	100	QP
2	89.5899	35.26	3.51	38.77	43.50	-4.73	255	100	QP
3	103.0800	32.74	5.81	38.55	43.50	-4.95	241	100	QP
4	252.9482	28.00	6.79	34.79	46.00	-11.21	196	100	QP
5	295.1469	30.08	8.98	39.06	46.00	-6.94	251	100	QP
6	359.1860	27.03	9.23	36.26	46.00	-9.74	259	100	QP

Test Specification: Vertical

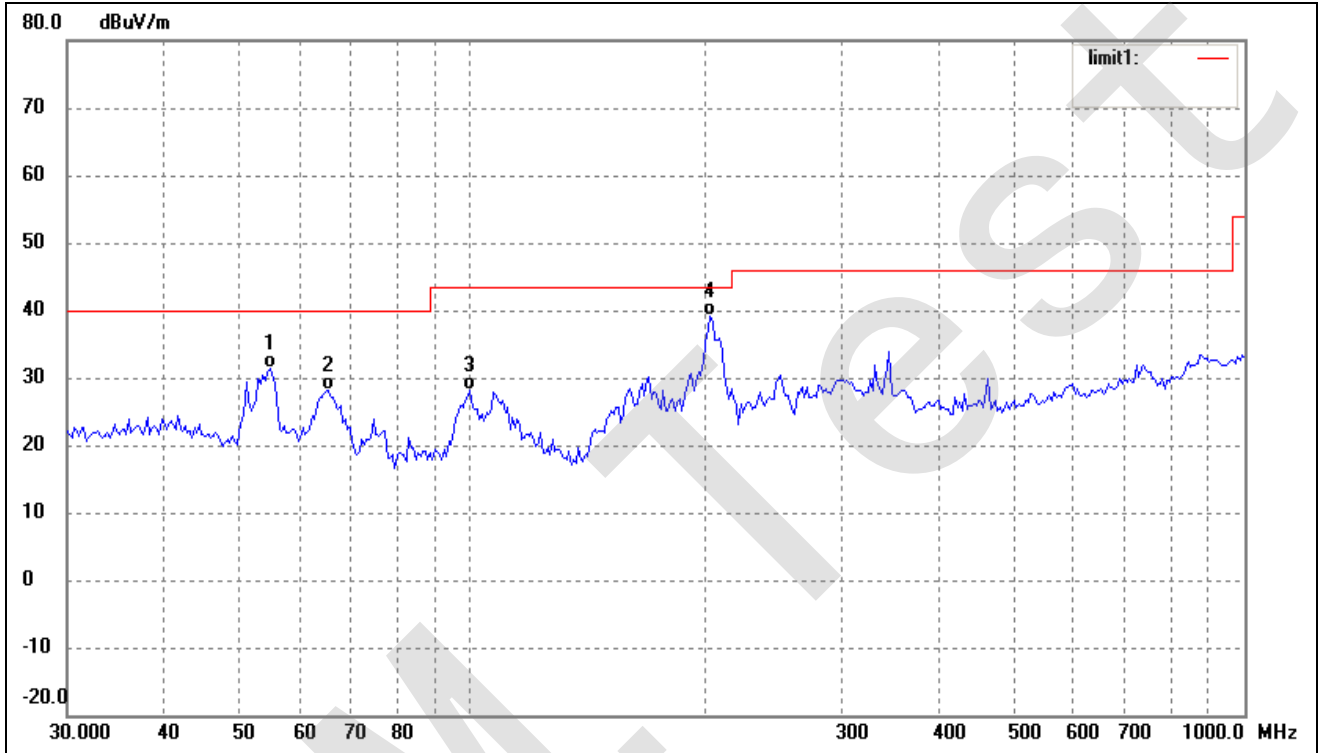


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9941	26.91	9.25	36.16	40.00	-3.84	210	100	QP
2	58.8185	29.69	5.49	35.18	40.00	-4.82	245	100	QP
3	84.7018	33.74	2.23	35.97	40.00	-4.03	241	100	QP
4	245.9509	25.28	6.55	31.83	46.00	-14.17	265	100	QP
5	307.8313	25.54	9.22	34.76	46.00	-11.24	251	100	QP
6	744.8661	16.34	15.33	31.67	46.00	-14.33	278	100	QP

Plot of Radiated Emissions Test Data

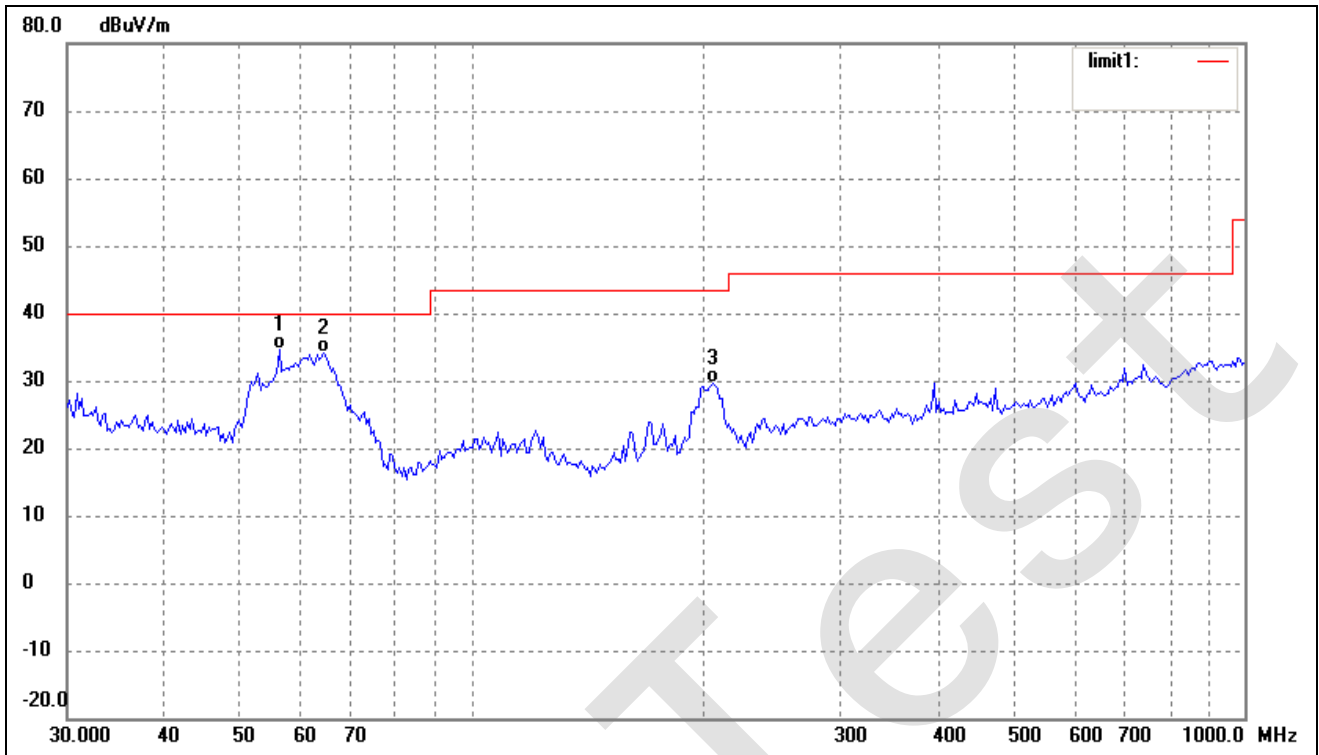
EUT: *Power Supply*
 Tested Model: *GTD93035L6013.2-F*
 Operating Condition: *TM3*
 Comment: *DC 9V*

 Test Specification: *Horizontal*



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	54.8348	25.63	5.83	31.46	40.00	-8.54	105	100	QP
2	65.3432	24.44	3.67	28.11	40.00	-11.89	125	100	QP
3	99.5281	22.11	6.01	28.12	43.50	-15.38	142	100	QP
4	203.5228	35.11	3.92	39.03	43.50	-4.47	128	100	QP

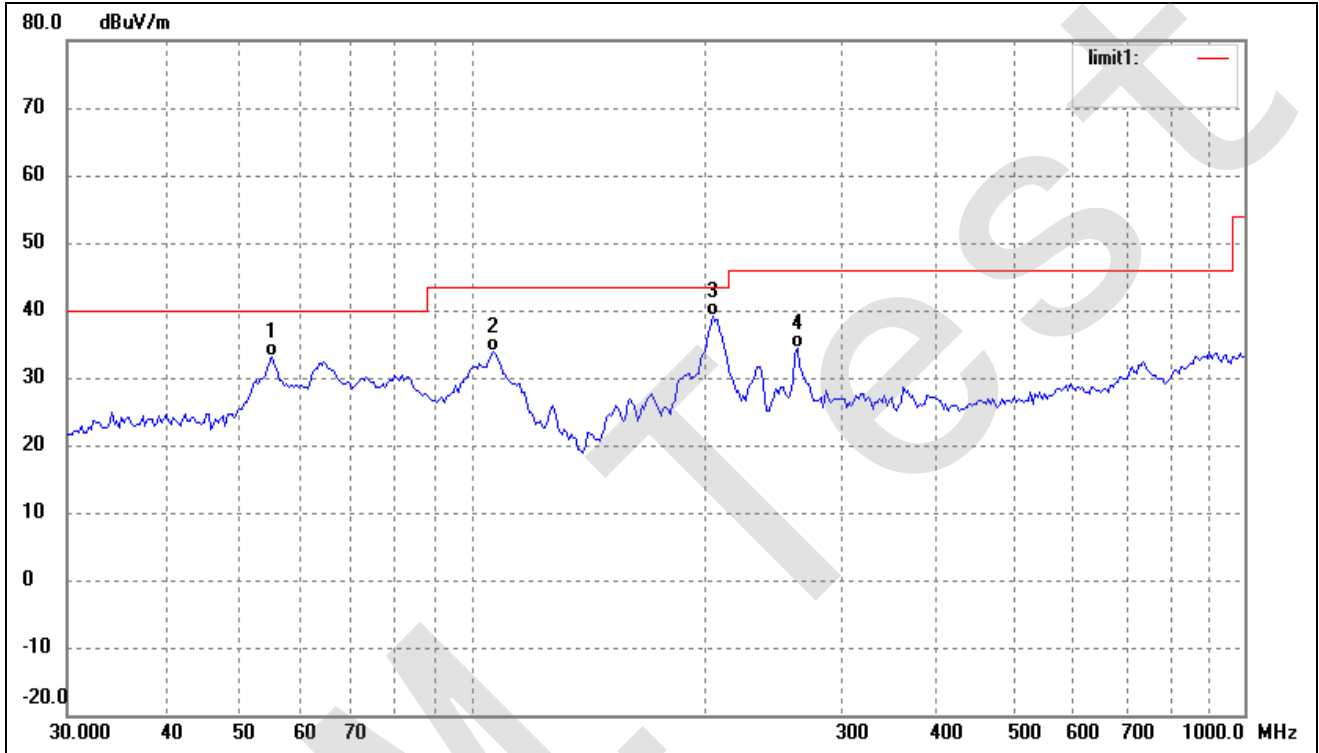
Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	56.3948	28.97	5.69	34.66	40.00	-5.34	211	100	QP
2	64.4331	30.28	3.96	34.24	40.00	-5.76	214	100	QP
3	204.9551	25.61	4.03	29.64	43.50	-13.86	262	100	QP

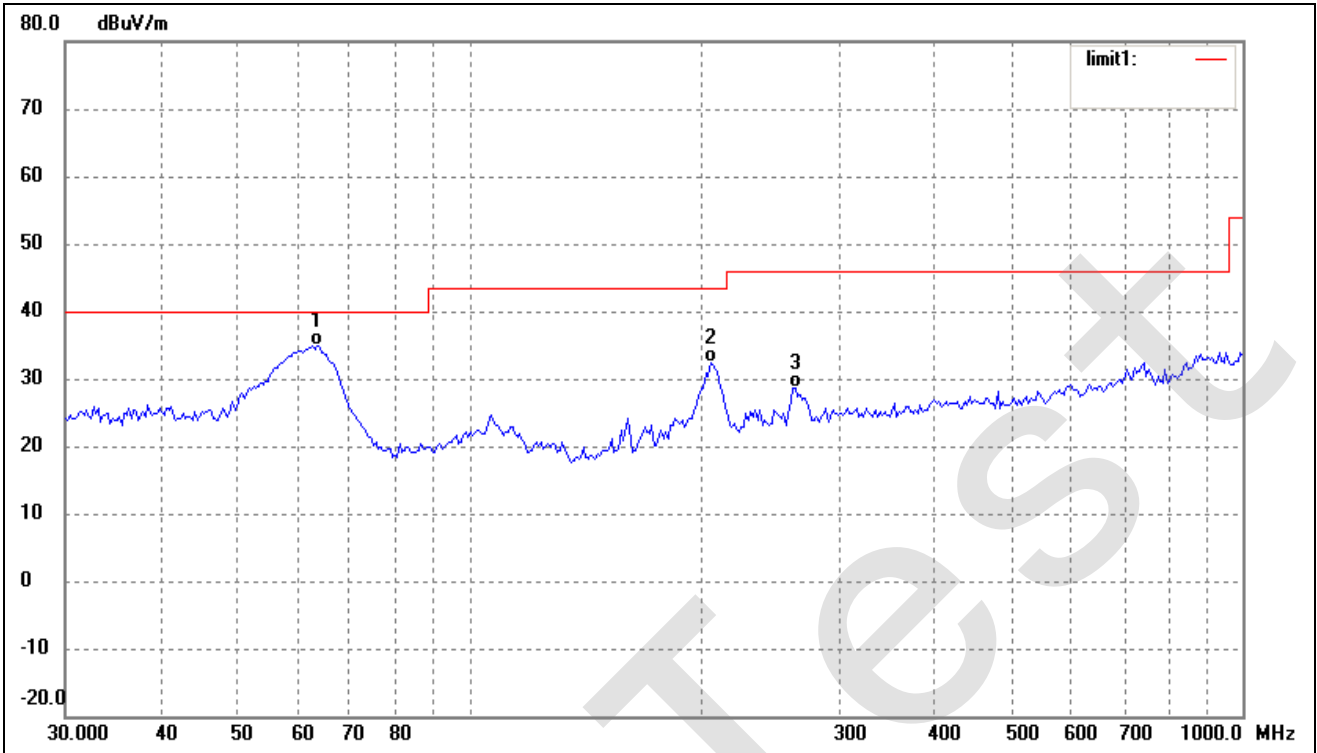
Plot of Radiated Emissions Test Data

EUT: Power Supply
 Tested Model: GTD93035L6013.2-F
 Operating Condition: TM4
 Comment: DC 60V
 Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	55.2207	27.41	5.80	33.21	40.00	-6.79	120	100	QP
2	106.7587	28.36	5.42	33.78	43.50	-9.72	150	100	QP
3	204.9551	35.01	4.03	39.04	43.50	-4.46	121	100	QP
4	263.8190	27.14	7.29	34.43	46.00	-11.57	140	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	63.5356	30.69	4.25	34.94	40.00	-5.06	109	100	QP
2	204.9551	28.42	4.03	32.45	43.50	-11.05	147	100	QP
3	263.8190	21.31	7.29	28.60	46.00	-17.40	120	100	QP

EXHIBIT 1 - PRODUCT LABELING

Proposed FCC Label Format

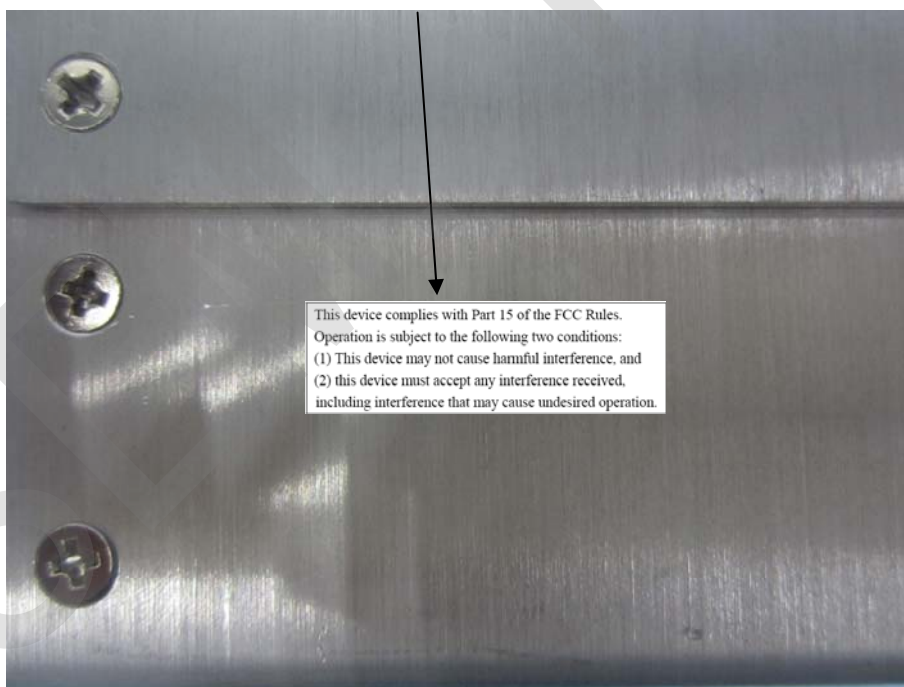
This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received,
including interference that may cause undesired operation.

Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. Where the EUT is constructed in two or more sections connected by wires and marketed together, the above statement is required to be affixed only to the main control unit. When the EUT is so small or for such use that it is not practicable to place the statement on it, the above information 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.

Proposed Label Location on EUT

FCC Label Location

Tested Model: GTD93035H6013.2-F



FCC Label Location

Tested Model: GTD93035L6013.2-F

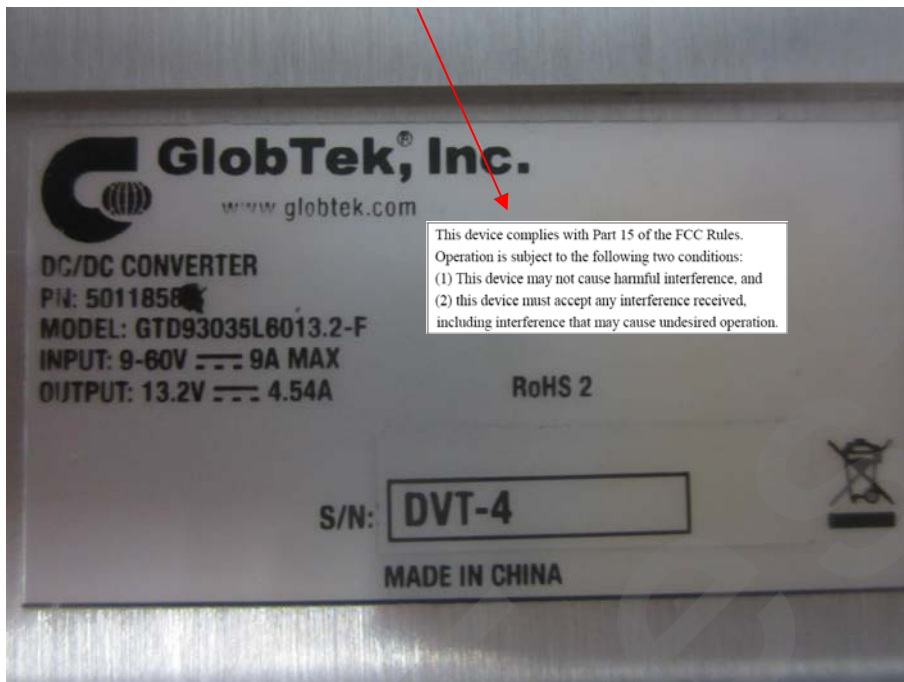
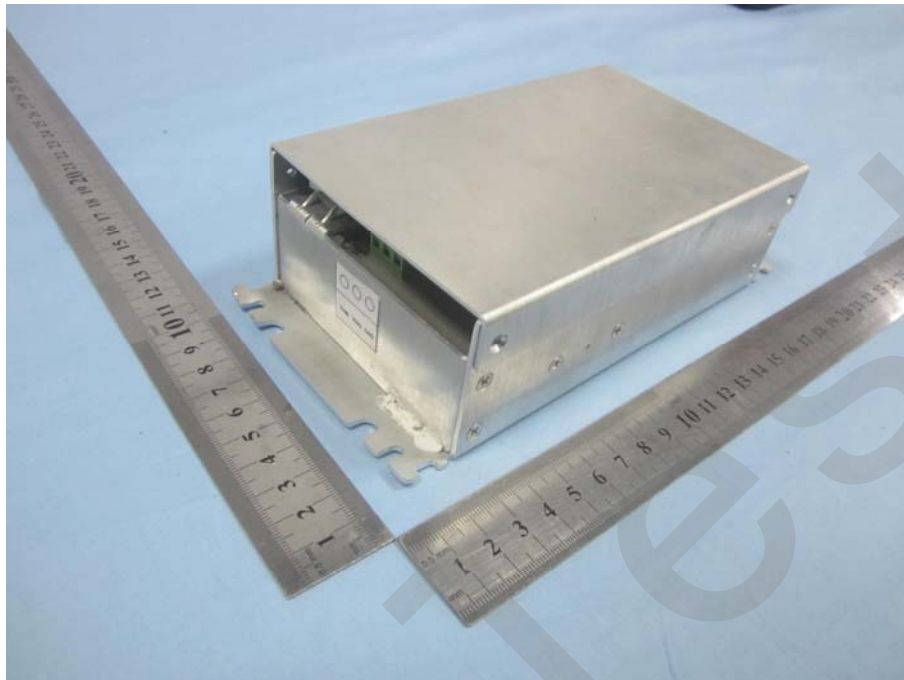


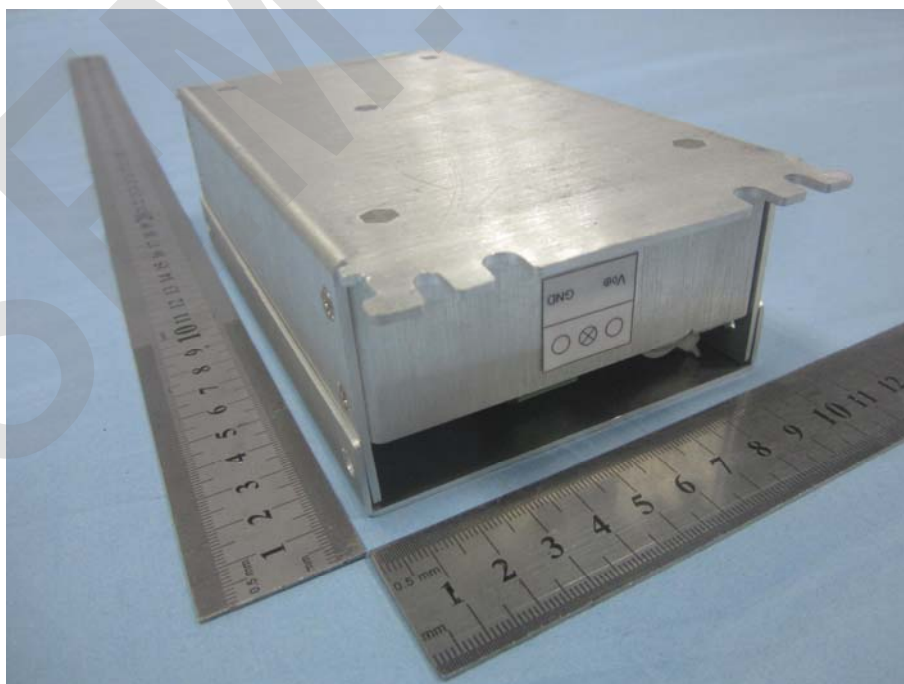
EXHIBIT 2 - EUT PHOTOGRAPHS

Tested Model: GTD93035H6013.2-F

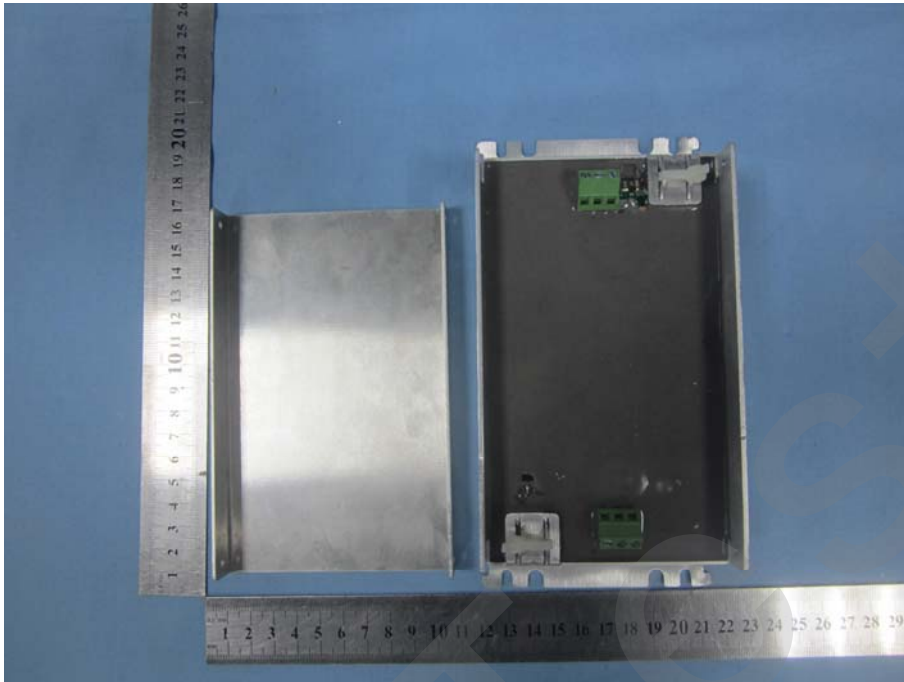
EUT View 1



EUT View 2

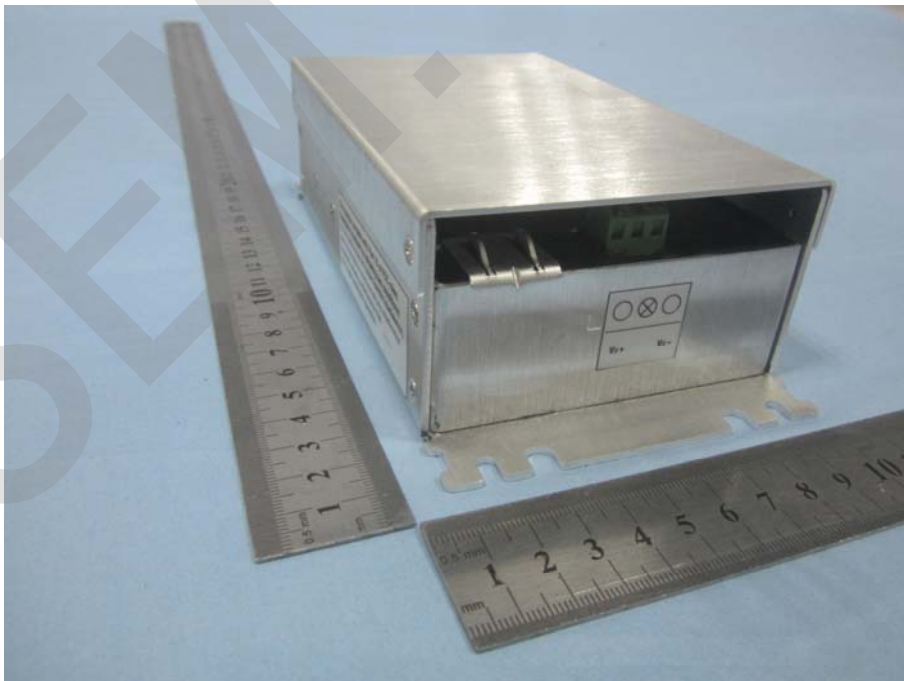


EUT Housing and Board View 1

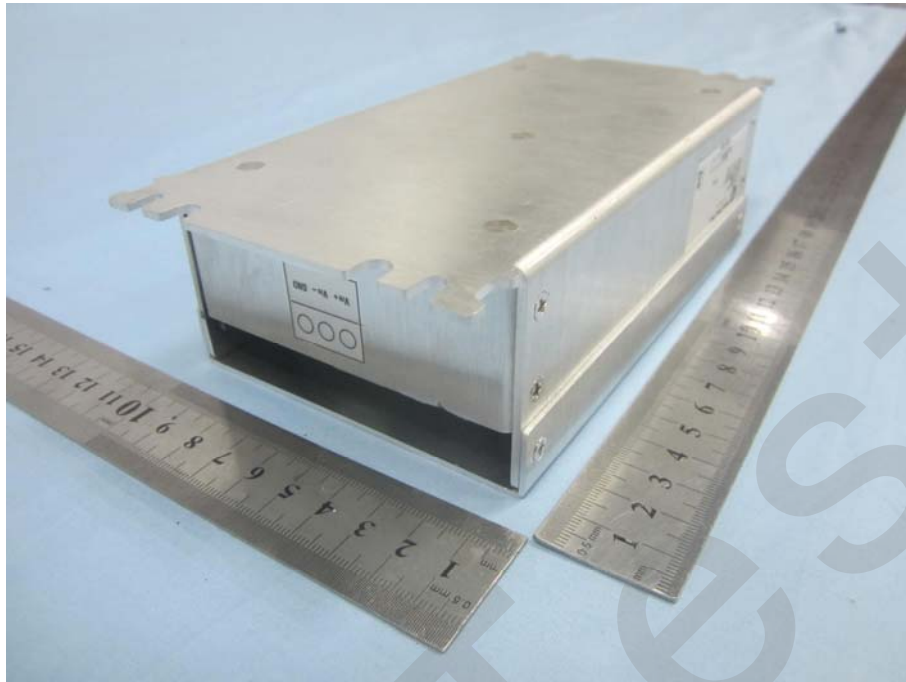


Tested Model: GTD93035L6013.2-F

EUT View 1



EUT View 2



EUT Housing and Board View 1

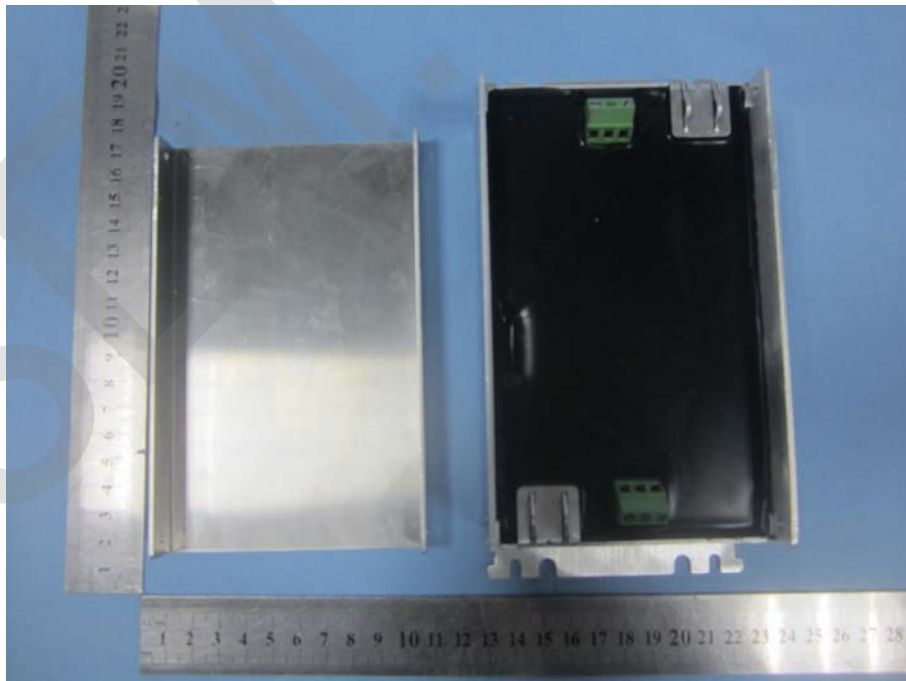
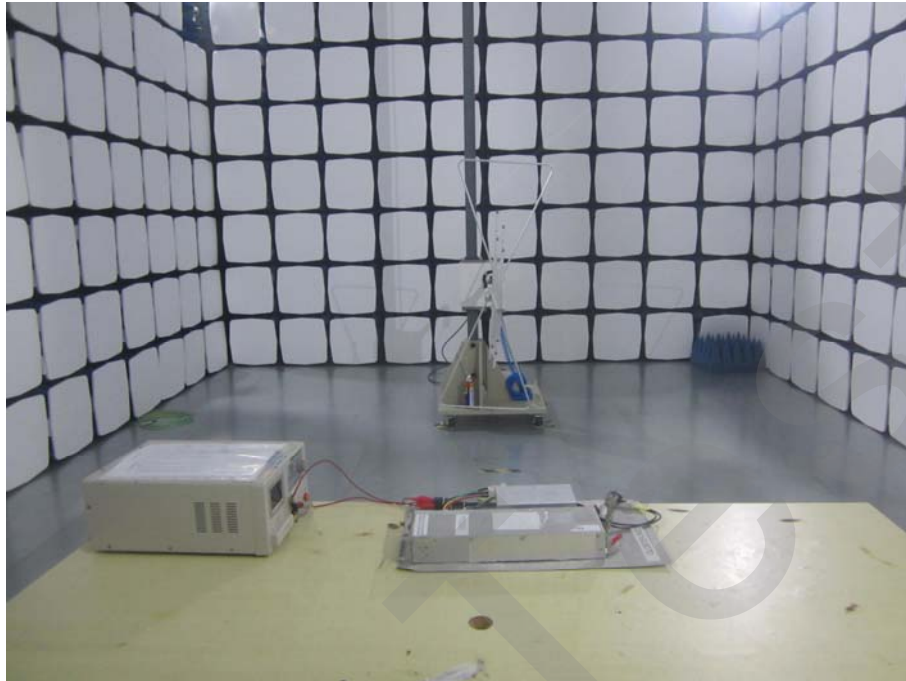


EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Tested Model: GTD93035H6013.2-F

Radiation Emission Test View



Tested Model: GTD93035L6013.2-F

Radiation Emission View

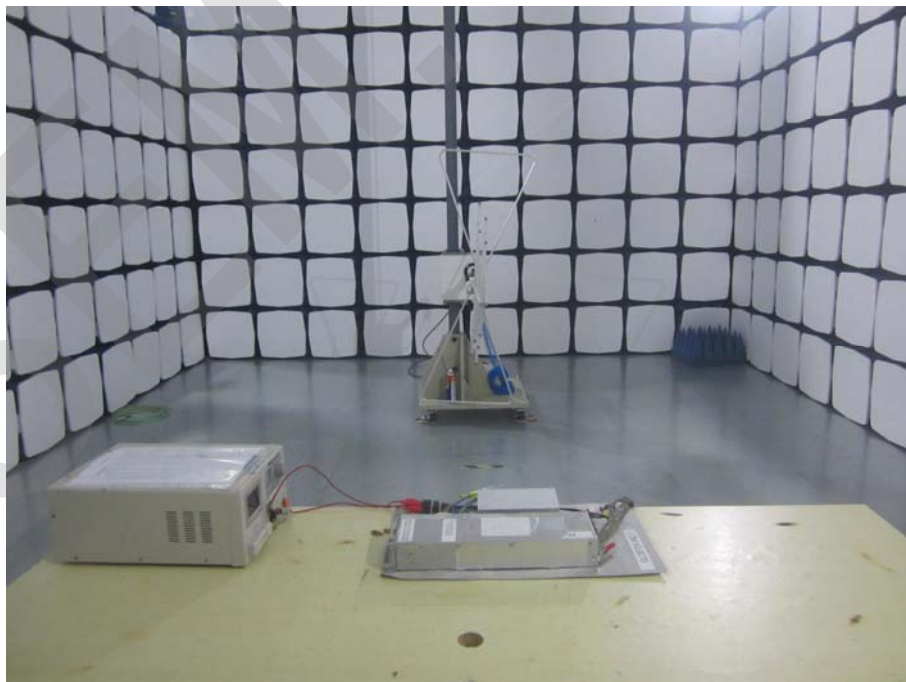


EXHIBIT 4 - USERS MANUAL

Information to Users

According to the FCC Part 15.19, 15.21 rules, for this EUT, the instructions or operation manual furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

FCC Caution

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.

NOTE: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

***** END OF REPORT *****