EMC
Measurement and Test Report

For

GlobTek, Inc.

186 Veterans Dr. Northvale, NJ 07647 USA

Test Standards:	EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007+A1:2011 EN 61000-6-4:2007+A1:2011
Product Description:	Power supply
Tested Model:	GTM91099-WWVV-X.X-AB series
Report No.:	STR13108269E
Tested Date:	2013-10-28 to 2013-11-07
Issued Date:	2013-11-07
Tested By:	Damon Ma / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager
Prepared By:	

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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.:	GTM91099-WWVV-X.X-AB series
Adding Model(s):	GTM91099-WWVV-X.X-AB series
Note: The test data is gathered from a production sample, provided by the manufacturer. *GTM91099-WWVV-X.X-AB series* *M can be "M" or "-" for market identification and not related to saftey* *WW is the rated output wattage designation, with a maximum value of "60";* *VV is the standard rated output voltage designation, with a maximum value of "48";* *-X.X denotes the optional deviation, subtracted or added from standard output voltage in 0.1 volt increments or blank to indicate the no voltage different;* *VV-X.X together denotes the voltage rang 5V to 48V;* *A:T is External/Desktop model, F is Open Frame, P is Encapsulated;* *when A=T, B can be 2 or 3A, 2 presents Class II, 3A presents Class I;* *when A=F, B can be Blank or W, W means class II equipment, Blank means class I;* *when A=P, B can be 2 or 3, 2 means class II equipment, 3 means class I equipment.*	

Technical Characteristics of EUT	
Rated Voltage:	AC 100-240V, 50-60Hz
Rated Current:	1.5A
Rated Power:	Max.60W
Power Adaptor Model:	/
Highest Internal Frequency:	Below 108MHz

1.2 Test Standards

The following report is prepared on behalf of the GlobTek, Inc. in accordance with EN 61000-6-3, Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments, EN 61000-6-4, Electromagnetic compatibility (EMC) -- Part 6-4: Generic standards — Emission standard for industrial environments,EN61000-3-2, Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase), and EN61000-3-3, Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection,EN 61000-6-1, Electromagnetic compatibility (EMC) -- Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments, and EN 61000-6-2, Electromagnetic compatibility (EMC) -- Part 6-2: Generic standards — Immunity for industrial environments.

The objective of the manufacturer is to demonstrate compliance with the standards EN61000-6-3, EN 61000-6-4,EN61000-3-2, EN61000-3-3, EN61000-6-1 and EN61000-6-2 for residential, commercial and light-industrial environments.

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

1.3 Test Methodology

All measurements contained in this report were conducted with the standards EN61000-6-3, EN61000-3-2, EN61000-3-3, and EN61000-6-1 for residential, commercial and light-industrial environments, and all related testing and measurement techniques intentional standards.

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/immunity 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	Full Load	/

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
Resistance	/	38Ω	/
Resistance	/	0.83Ω	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Power Cable	1.0	Unshielded	Without Core

1.6 Performance Criteria for EMS

All the test data has been collected, reduced, and analyzed within this report in accordance with Immunity requires the following as specific performance criteria:

A. The apparatus shall continue to operate as intended during and after the test. The manufacturer specifies some minimum performance level. The performance level may be specified by the manufacturer as a permissible loss of performance.

B. The apparatus shall continue to operate as intended after the test. This indicates that the EUT does not need to function at normal performance levels during the test, but must recover. Again some minimal performance is defined by the manufacture. No change in operating state or loss or data is permitted.

C. Temporary loss of function is allowed. Operation of the EUT may stop as long as it is either automatically reset or can be manually restored by operation of the controls.

2. SUMMARY OF TEST RESULTS

Standards	Description of Test Item	Result
EN61000-6-3 EN61000-6-4	Conducted Emission	Compliant
	Radiated Emission	Compliant
	EN61000-3-2 Harmonic Current Emission	Compliant
	EN61000-3-3 Voltage Fluctuation And Flicker	Compliant
EN61000-6-1 EN61000-6-2	Electrostatic Discharge Immunity in accordance with IEC 61000-4-2	Compliant
	Radiated RF-Electromagnetic Field Immunity in accordance with IEC 61000-4-3	Compliant
	Electrical Fast Transient/Burst Immunity in accordance with IEC 61000-4-4	Compliant
	Surge Immunity in accordance with IEC 61000-4-5	Compliant
	Conducted disturbances Immunity in accordance with IEC 61000-4-6	Compliant
	Power-frequency magnetic field Immunity in accordance with IEC 61000-4-8	N/A
	Voltage Dips/Interruptions Immunity in accordance with IEC 61000-4-11	Compliant

N/A: not applicable

3. CONDUCTED EMISSIONS

3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

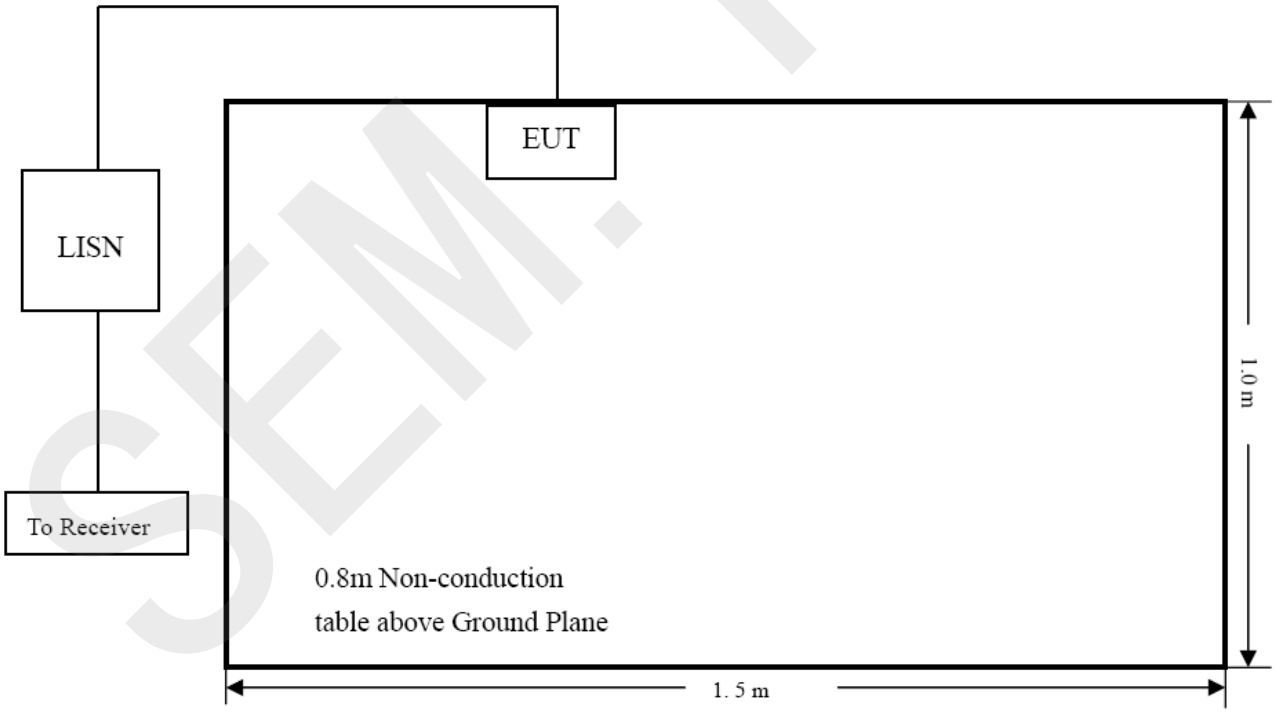
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2013-05-07	2014-05-06
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2013-05-07	2014-05-06
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2013-05-07	2014-05-06

3.3 Test Procedure

Test is conducting under the description of EN61000-6-3/EN61000-6-4 or CISPR22, Radio disturbance characteristics - Limits and methods of measurement.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	22 ° C
Relative Humidity:	55 %
ATM Pressure:	1015 mbar

3.6 Summary of Test Results/Plots

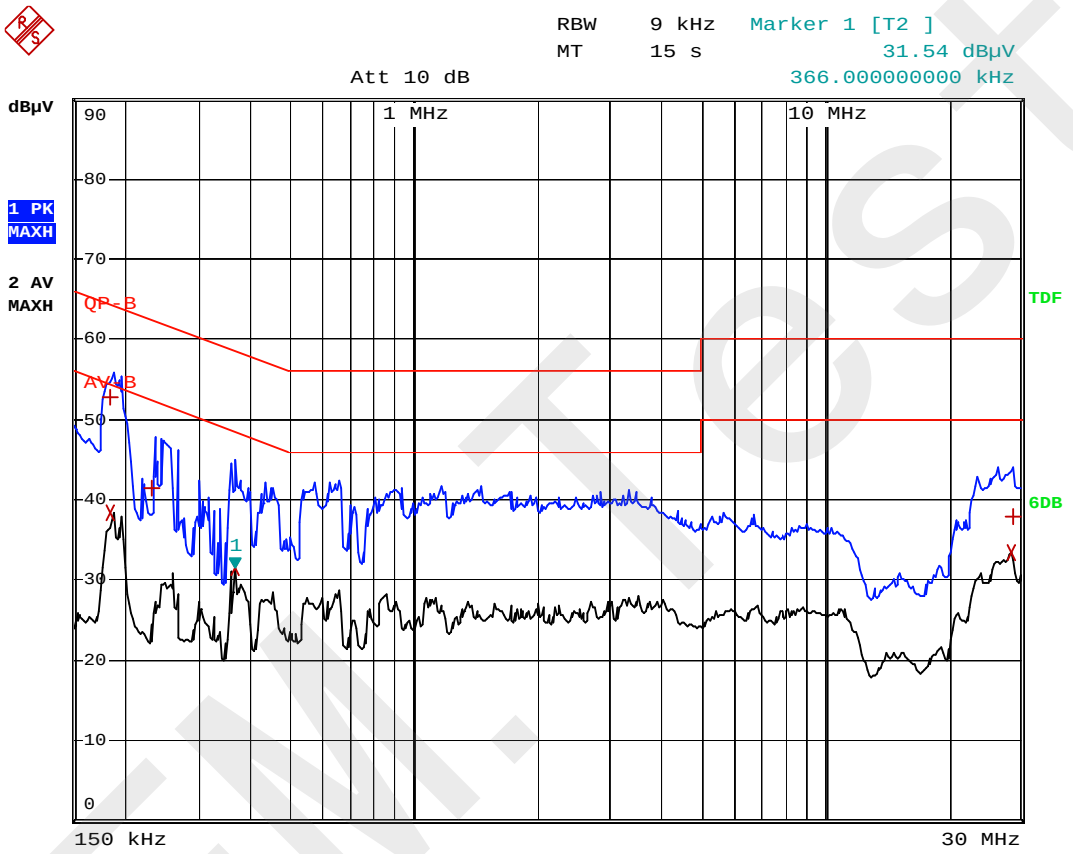
According to the data in section 3.7, the EUT complied with the EN61000-6-3/EN61000-6-4 standard, with the *worst* margin reading of:

-9.50 dB at **0.178 MHz** in the **Neutral** mode, **QP** detector, **GTM91099-6048-T2 2PCS** Mode, **0.15-30MHz**

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

EUT:	*Power supply*
Tested Model:	*GTM91099-6048-T2*
Operating Condition:	*TM1*
Comment:	*AC 230V/50Hz*
Class:	*B*
Test Specification:	*Line*

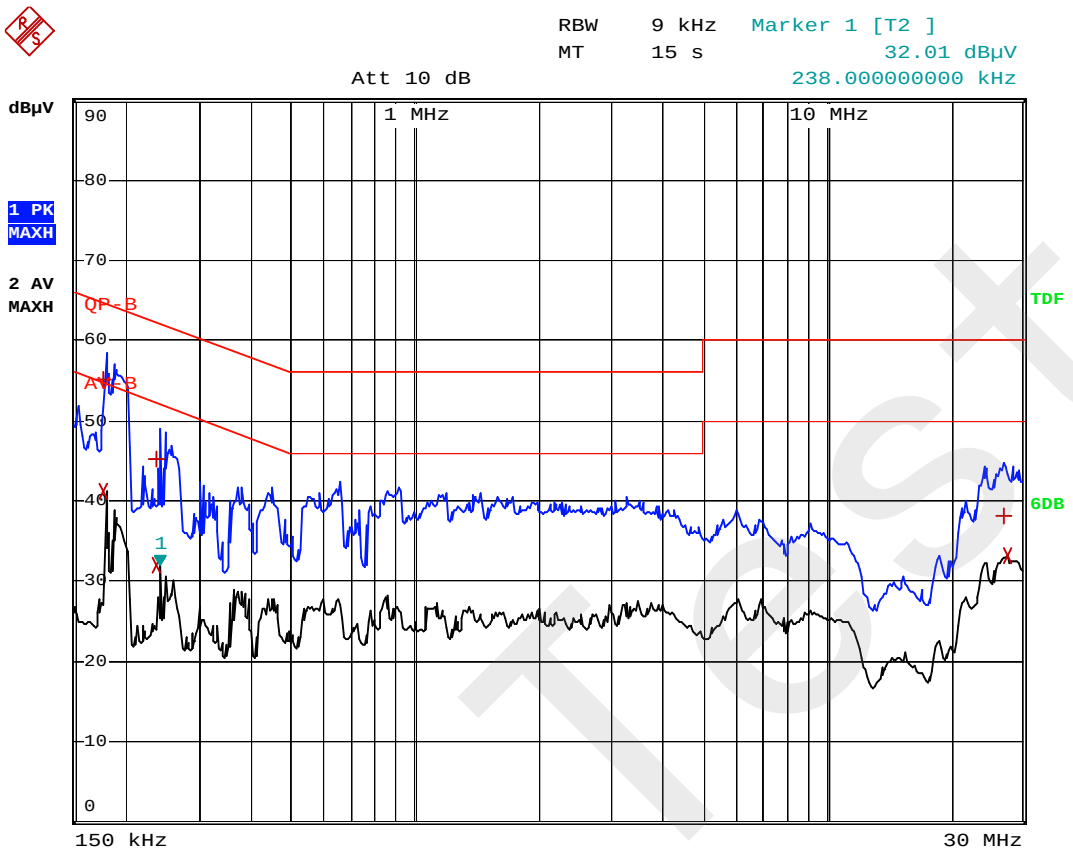


EDIT PEAK LIST (Prescan Results)

Trace1:	QP-B
Trace2:	AV-B
Trace3:	---

	TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2	Average	186 kHz	38.44	-15.77
1	Quasi Peak	186 kHz	52.72	-11.49
1	Quasi Peak	234 kHz	41.36	-20.94
2	Average	366 kHz	31.54	-17.05
2	Average	28.494 MHz	33.38	-16.61
1	Quasi Peak	28.63 MHz	37.93	-22.06

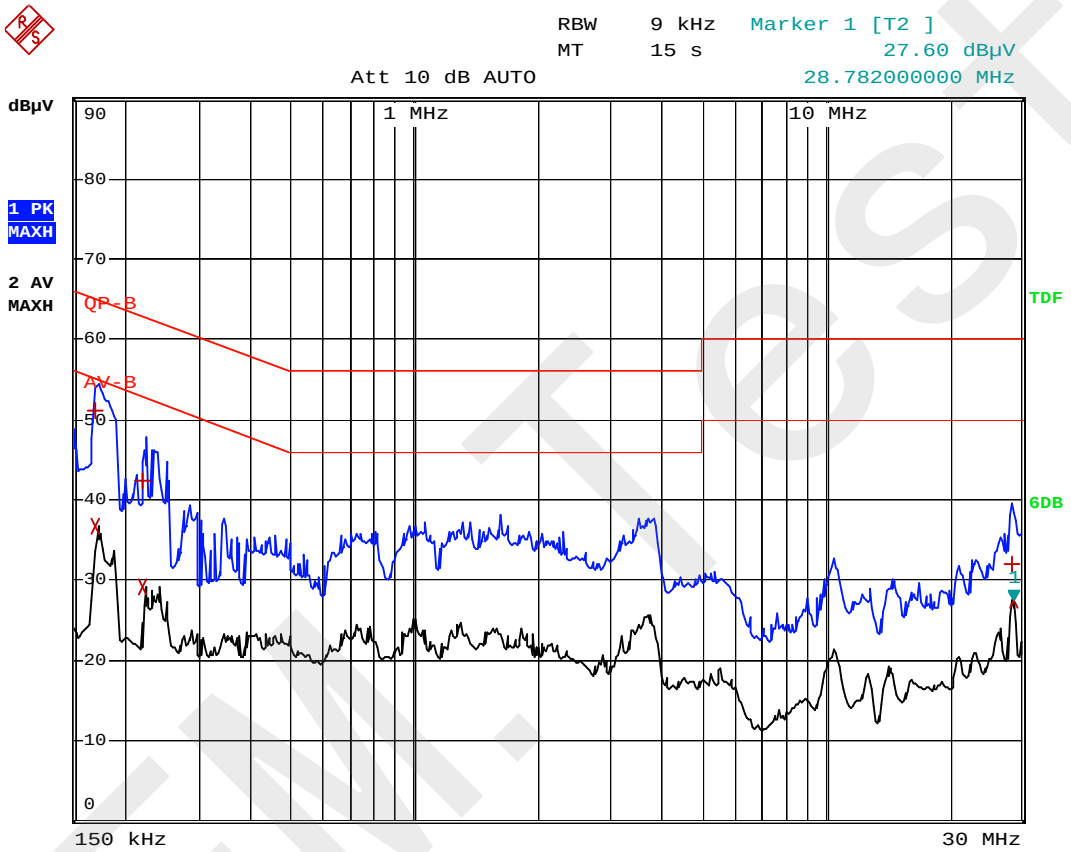
Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-B		
Trace2:	AV-B		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	178 kHz	41.15	-13.42
1 Quasi Peak	178 kHz	55.07	-9.50
2 Average	238 kHz	32.00	-20.15
1 Quasi Peak	238 kHz	45.25	-16.90
1 Quasi Peak	26.954 MHz	38.24	-21.75
2 Average	27.442 MHz	33.18	-16.81

Plot of Conducted Emissions Test Data

EUT:	*Power supply*
Tested Model:	*GTM91099-3009-4.0-FW(5V)*
Operating Condition:	*TM1*
Comment:	*AC 230V/50Hz*
Class:	*B*
Test Specification:	*Line*

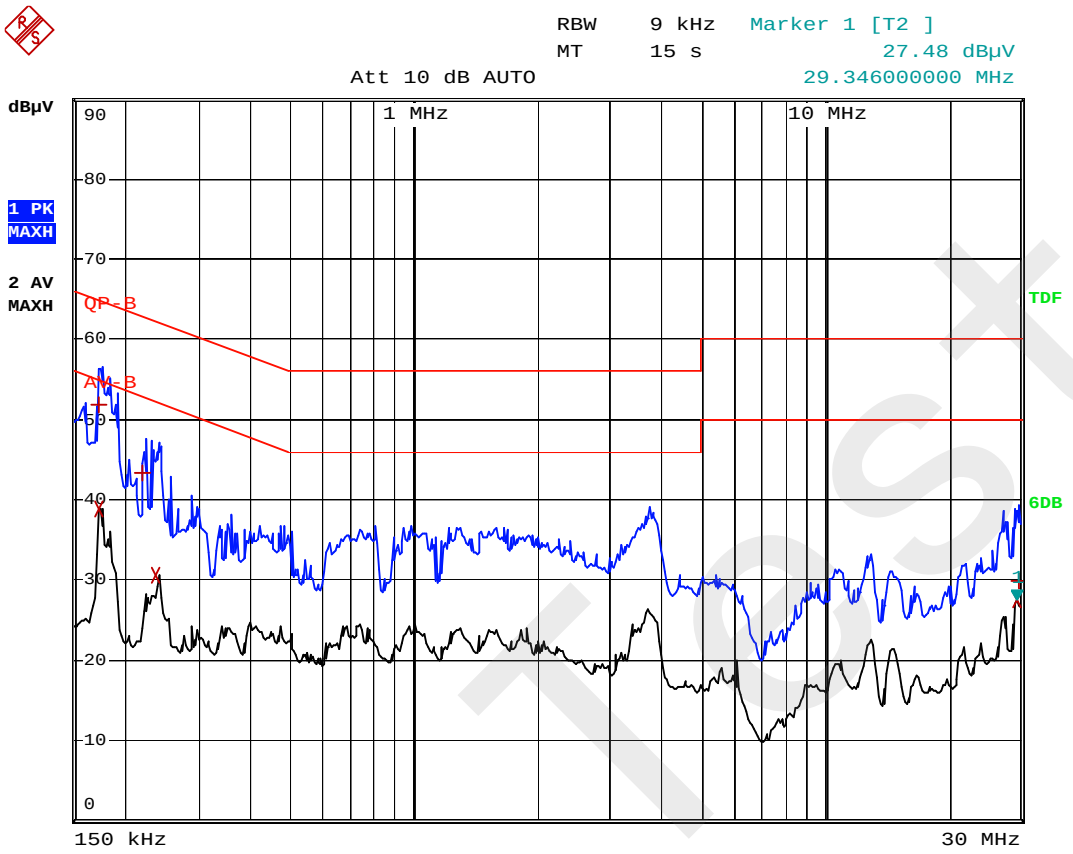


EDIT PEAK LIST (Prescan Results)

Trace1: QP-B
Trace2: AV-B
Trace3: ---

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2	Average	170 kHz	36.63	-18.32
1	Quasi Peak	170 kHz	51.02	-13.93
2	Average	222 kHz	29.20	-23.54
1	Quasi Peak	222 kHz	42.46	-20.27
1	Quasi Peak	28.546 MHz	31.99	-28.00
2	Average	28.782 MHz	27.60	-22.39

Test Specification: *Neutral*



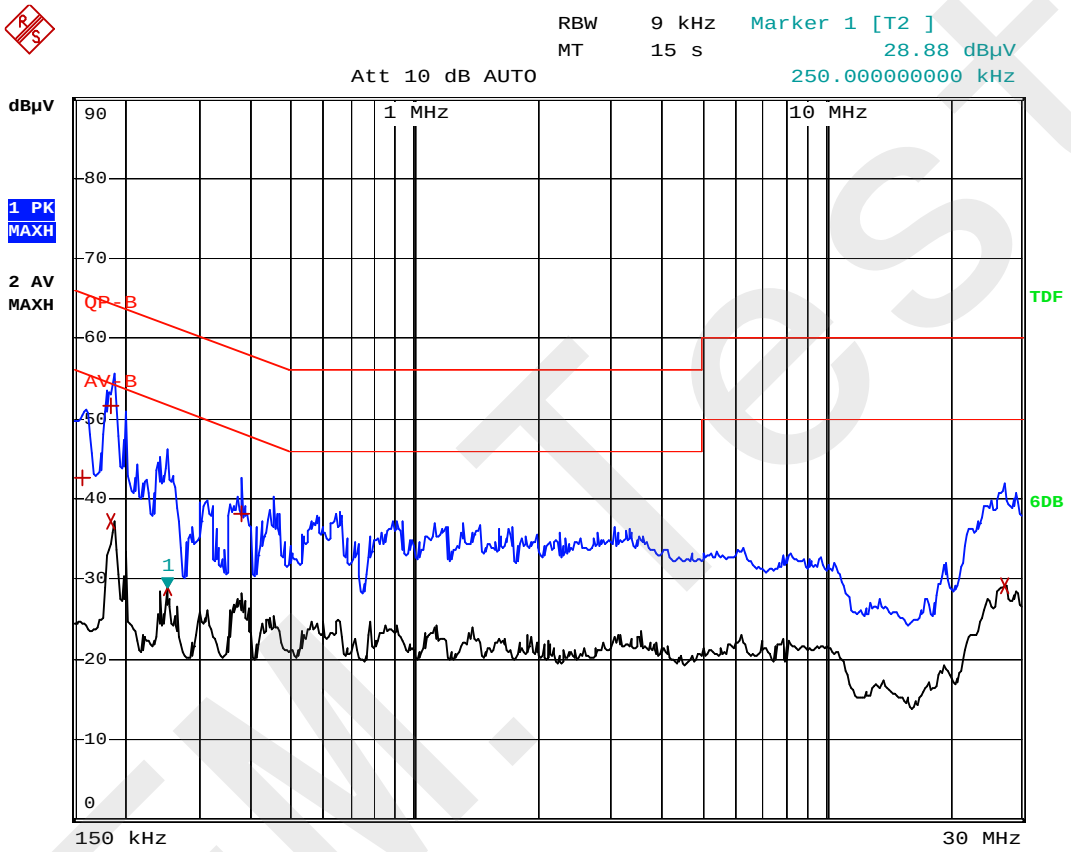
EDIT PEAK LIST (Prescan Results)

Trace1:	QP-B
Trace2:	AV-B
Trace3:	---

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2	Average	174 kHz	38.84	-15.92
1	Quasi Peak	174 kHz	51.96	-12.80
1	Quasi Peak	222 kHz	43.34	-19.40
2	Average	238 kHz	30.56	-21.60
2	Average	29.346 MHz	27.48	-22.51
1	Quasi Peak	29.826 MHz	29.81	-30.18

Plot of Conducted Emissions Test Data

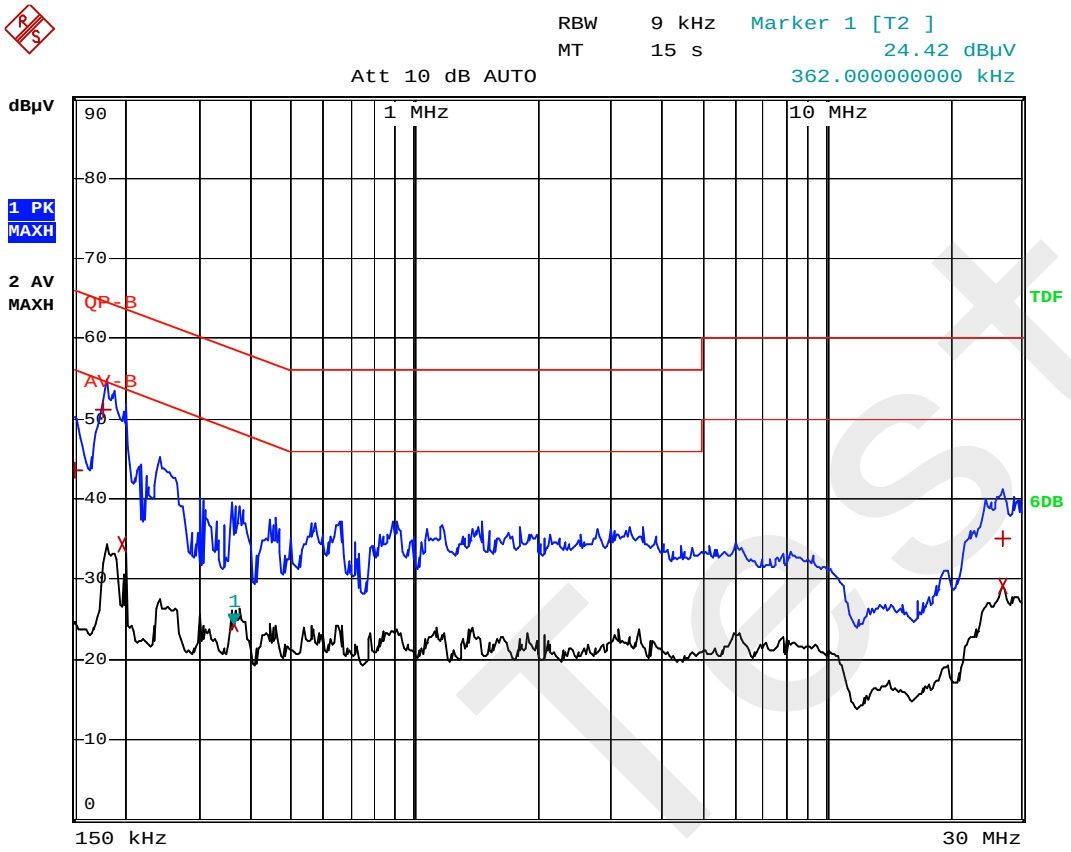
EUT:	*Power supply*
Tested Model:	*GTM91099-6048-FW*
Operating Condition:	*TM1*
Comment:	*AC 230V/50Hz*
Class:	*B*
Test Specification:	*Line*



EDIT PEAK LIST (Prescan Results)

Trace1:	QP-B		
Trace2:	AV-B		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	158 kHz	42.63	-22.93
2 Average	186 kHz	37.20	-17.00
1 Quasi Peak	186 kHz	51.51	-12.70
2 Average	250 kHz	28.87	-22.87
1 Quasi Peak	378 kHz	38.10	-20.22
2 Average	27.306 MHz	29.15	-20.84

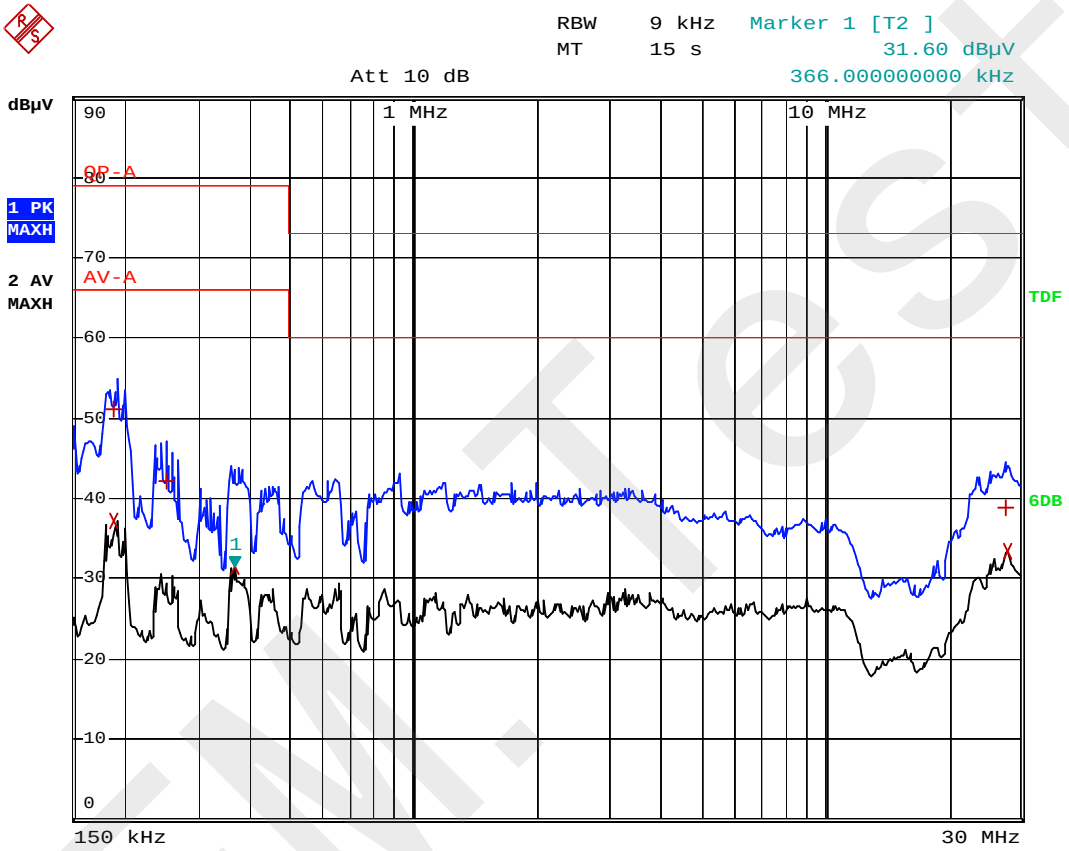
Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-B		
Trace2:	AV-B		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	150 kHz	43.56	-22.44
1 Quasi Peak	178 kHz	51.13	-13.44
2 Average	198 kHz	34.34	-19.35
2 Average	362 kHz	24.41	-24.26
1 Quasi Peak	26.878 MHz	35.03	-24.96
2 Average	27.094 MHz	29.17	-20.82

Plot of Conducted Emissions Test Data

EUT:	*Power supply*
Tested Model:	*GTM91099-6048-T2*
Operating Condition:	*TM1*
Comment:	*AC 230V/50Hz*
Class:	*A*
Test Specification:	*Line*

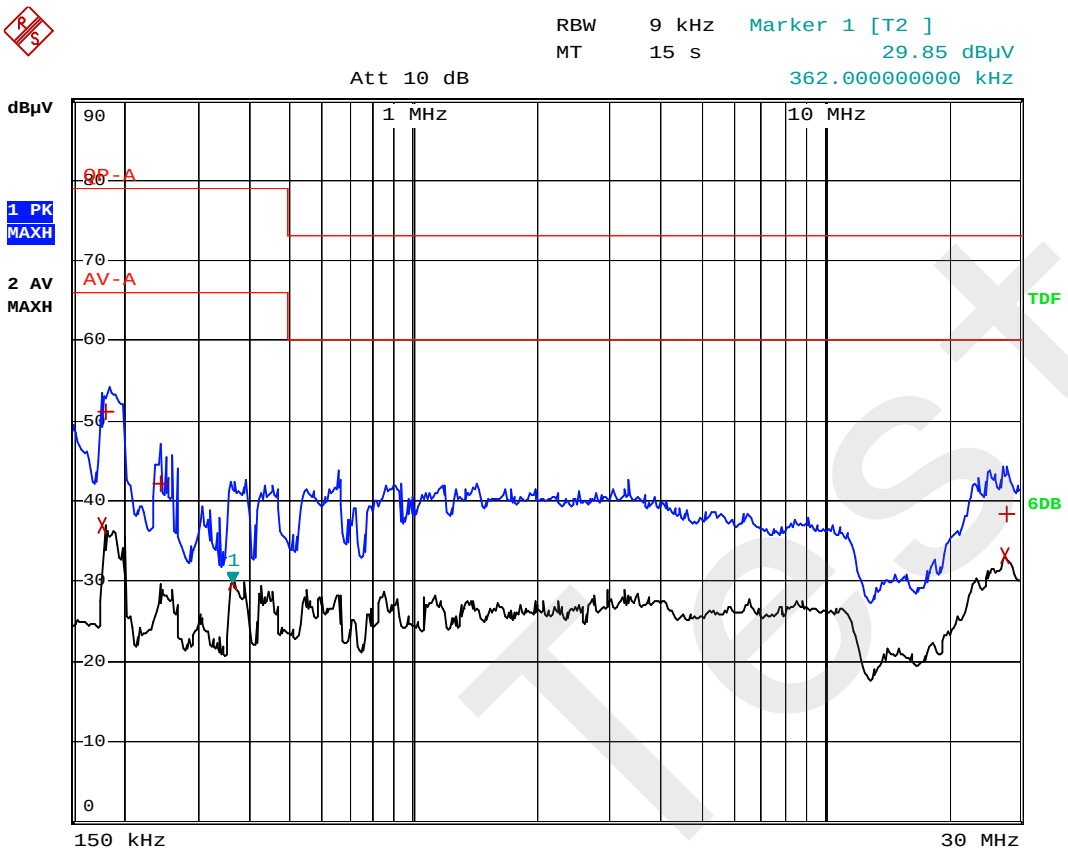


EDIT PEAK LIST (Prescan Results)

Trace1:	QP-A
Trace2:	AV-A
Trace3:	---

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2	Average	190 kHz	37.30	-28.69
1	Quasi Peak	190 kHz	51.08	-27.91
1	Quasi Peak	250 kHz	42.28	-36.71
2	Average	366 kHz	31.59	-34.40
1	Quasi Peak	27.61 MHz	38.81	-34.18
2	Average	27.954 MHz	33.48	-26.51

Test Specification: *Neutral*

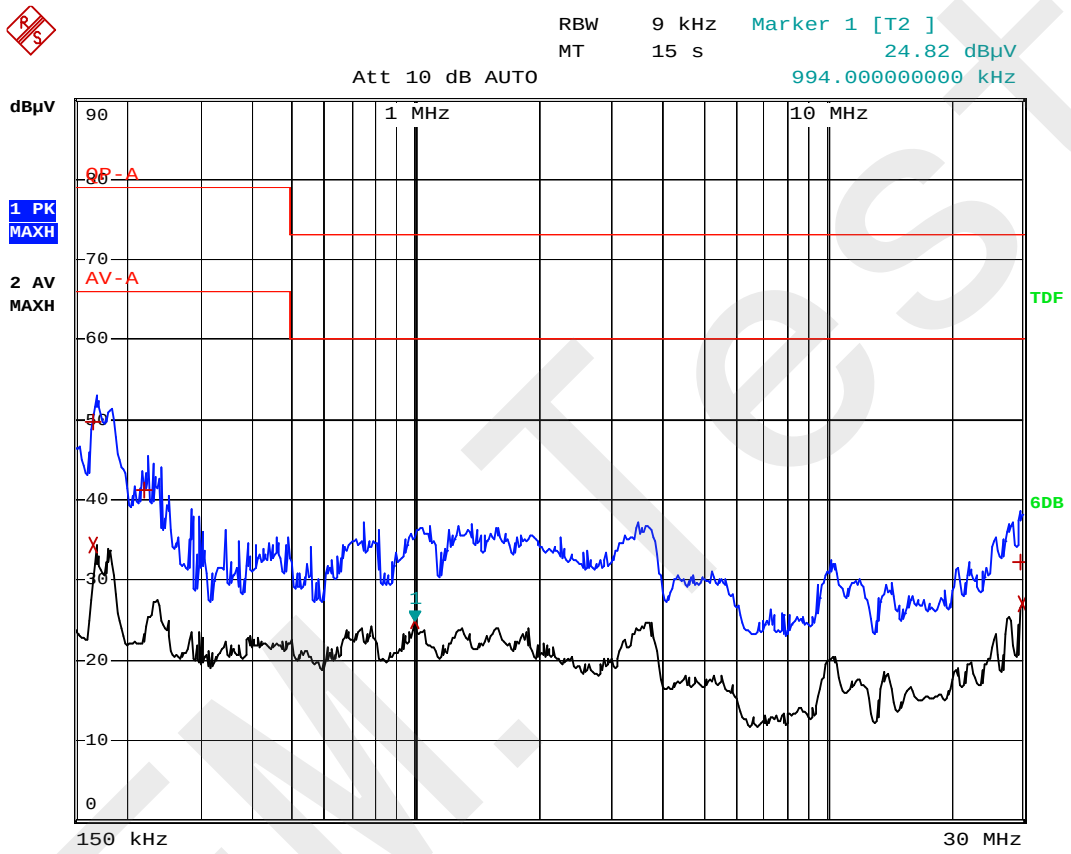


EDIT PEAK LIST (Prescan Results)

Trace1:	QP-A		
Trace2:	AV-A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	178 kHz	36.94	-29.05
1 Quasi Peak	182 kHz	51.04	-27.95
1 Quasi Peak	242 kHz	42.08	-36.91
2 Average	362 kHz	29.85	-36.14
2 Average	27.634 MHz	33.20	-26.79
1 Quasi Peak	27.79 MHz	38.31	-34.68

Plot of Conducted Emissions Test Data

EUT:	*Power supply*
Tested Model:	*GTM91099-3009-4.0-FW(5V)*
Operating Condition:	*TM1*
Comment:	*AC 230V/50Hz*
Class:	*A*
Test Specification:	*Line*

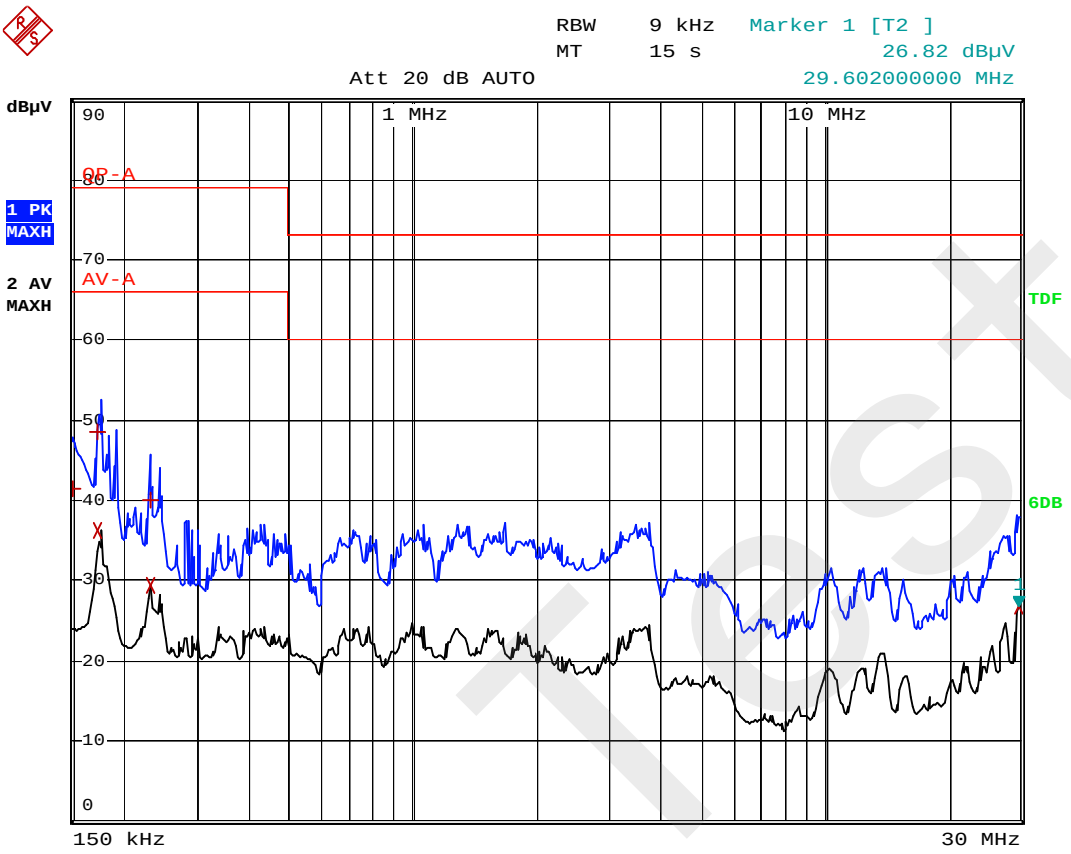


EDIT PEAK LIST (Prescan Results)

Trace1: QP-A
Trace2: AV-A
Trace3: ---

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2	Average	166 kHz	34.28	-31.71
1	Quasi Peak	166 kHz	49.68	-29.31
1	Quasi Peak	222 kHz	41.21	-37.78
2	Average	994 kHz	24.81	-35.18
1	Quasi Peak	29.63 MHz	32.13	-40.86
2	Average	29.866 MHz	27.12	-32.87

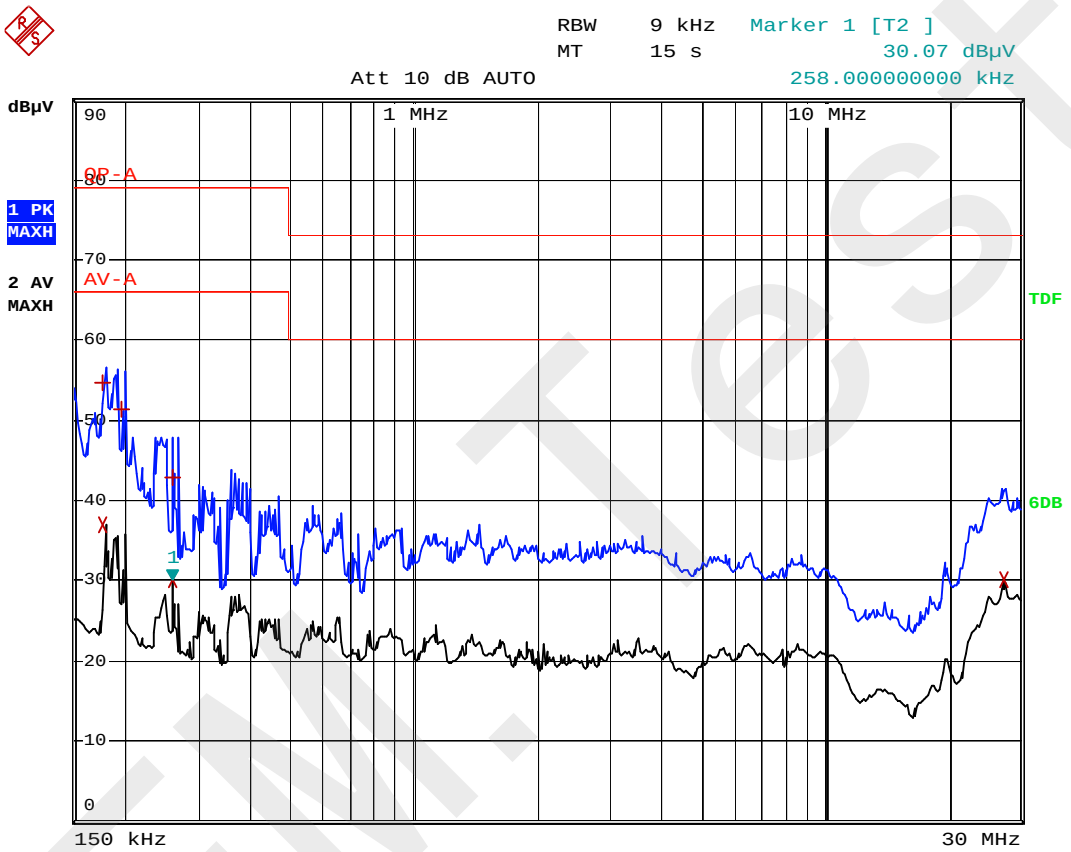
Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-A		
Trace2:	AV-A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	150 kHz	41.36	-37.64
2 Average	174 kHz	36.19	-29.80
1 Quasi Peak	174 kHz	48.56	-30.43
2 Average	230 kHz	29.38	-36.61
1 Quasi Peak	230 kHz	40.10	-38.89
2 Average	29.602 MHz	26.82	-33.17

Plot of Conducted Emissions Test Data

EUT:	*Power supply*
Tested Model:	*GTM91099-6048-FW*
Operating Condition:	*TM1*
Comment:	*AC 230V/50Hz*
Class:	*A*
Test Specification:	*Line*

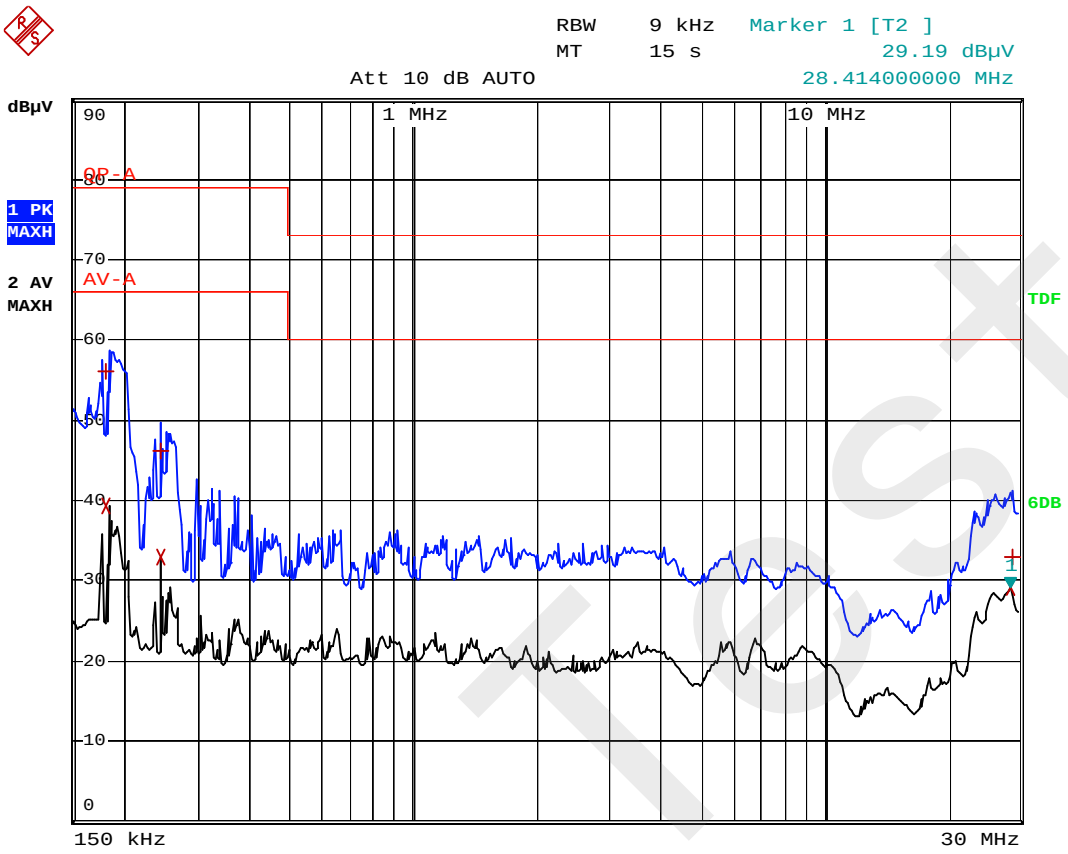


EDIT PEAK LIST (Prescan Results)

Trace1:	QP-A
Trace2:	AV-A
Trace3:	---

	TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2	Average	178 kHz	36.99	-29.00
1	Quasi Peak	178 kHz	54.75	-24.24
1	Quasi Peak	198 kHz	51.46	-27.53
2	Average	258 kHz	30.06	-35.93
1	Quasi Peak	258 kHz	42.83	-36.16
2	Average	27.366 MHz	30.10	-29.89

Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-A		
Trace2:	AV-A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	182 kHz	39.22	-26.77
1 Quasi Peak	182 kHz	56.00	-22.99
2 Average	242 kHz	33.01	-32.98
1 Quasi Peak	242 kHz	46.21	-32.78
2 Average	28.414 MHz	29.18	-30.81
1 Quasi Peak	28.75 MHz	32.93	-40.06

4. RADIATED EMISSION

4.1 Measurement Uncertainty

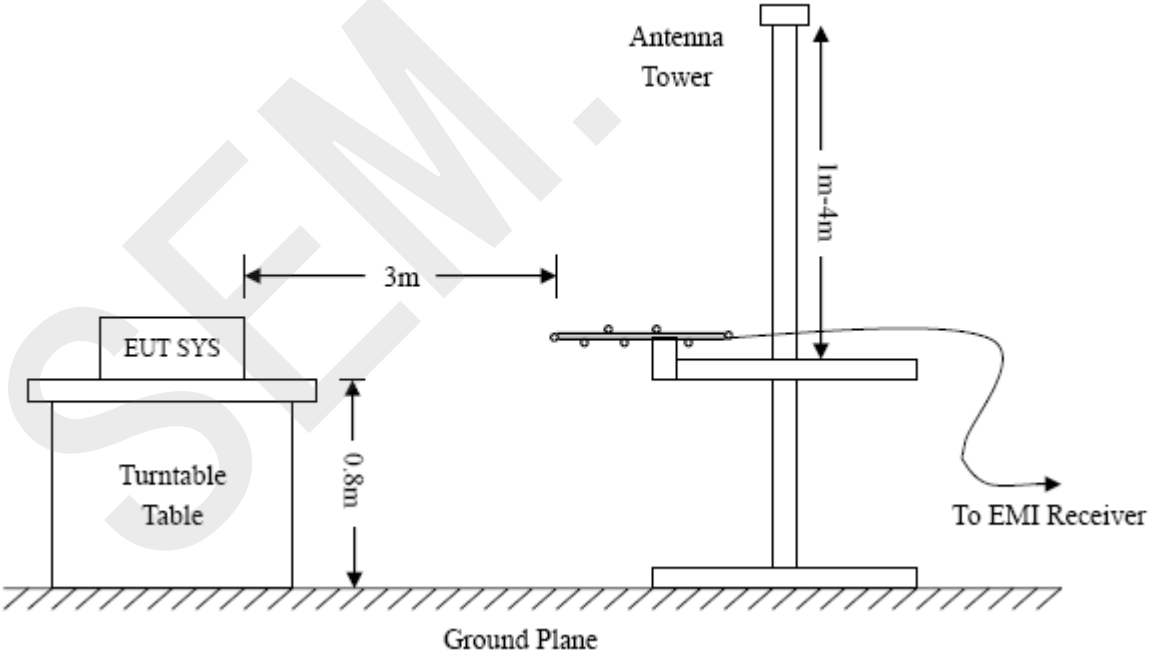
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 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

4.3 Test Procedure

Test is conducting under the description of EN61000-6-3/EN61000-6-4 or CISPR22, Radio disturbance characteristics - Limits and methods of measurement.



4.4 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:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

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. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – EN61000-6-3/EN61000-6-4 Limit

4.5 Environmental Conditions

Temperature:	23° C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

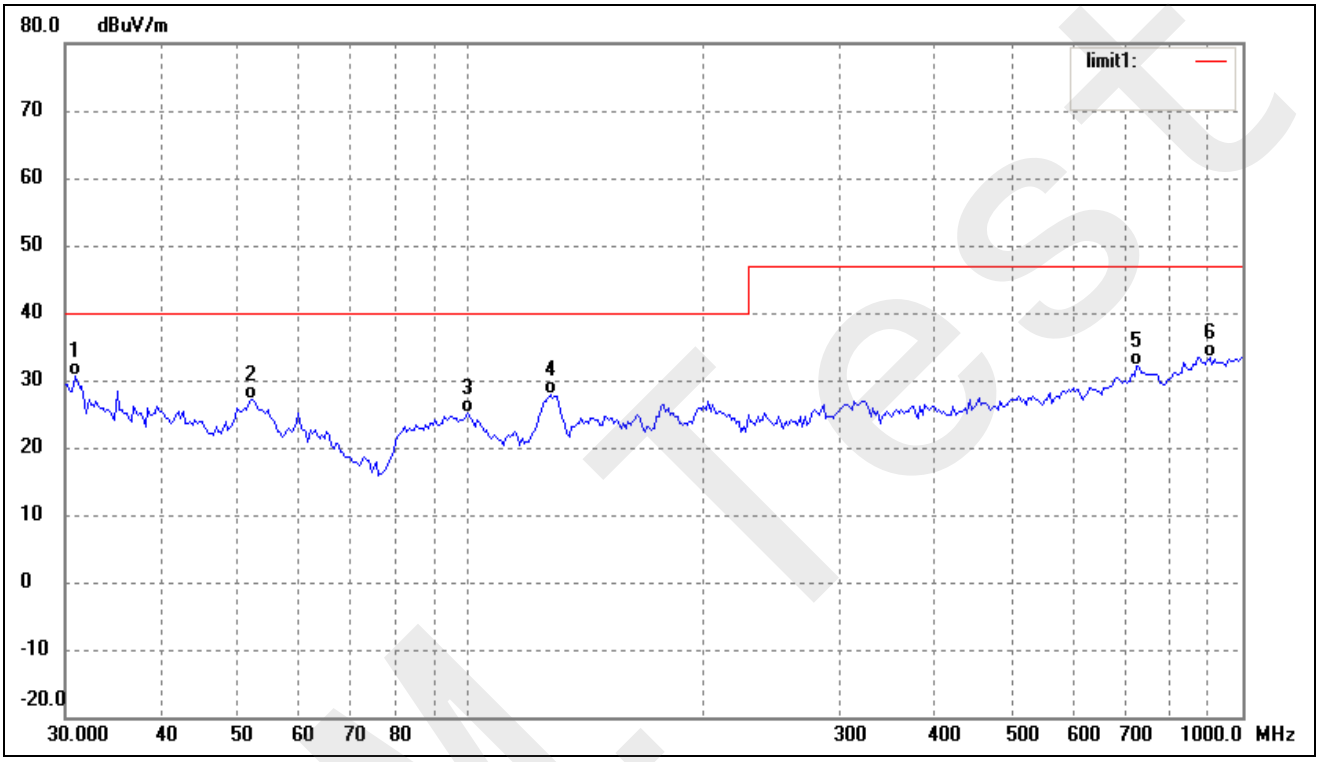
4.6 Summary of Test Results/Plots

According to the data in section 4.6, the EUT complied with the EN61000-6-3/EN61000-6-4 standards, and had the worst margin is:

-5.39 dB at **33.3279 MHz** in the **Horizontal** polarization, **GTM91099-6048-FW 1PC** Mode, **30 MHz to 1 GHz, 3Meters**

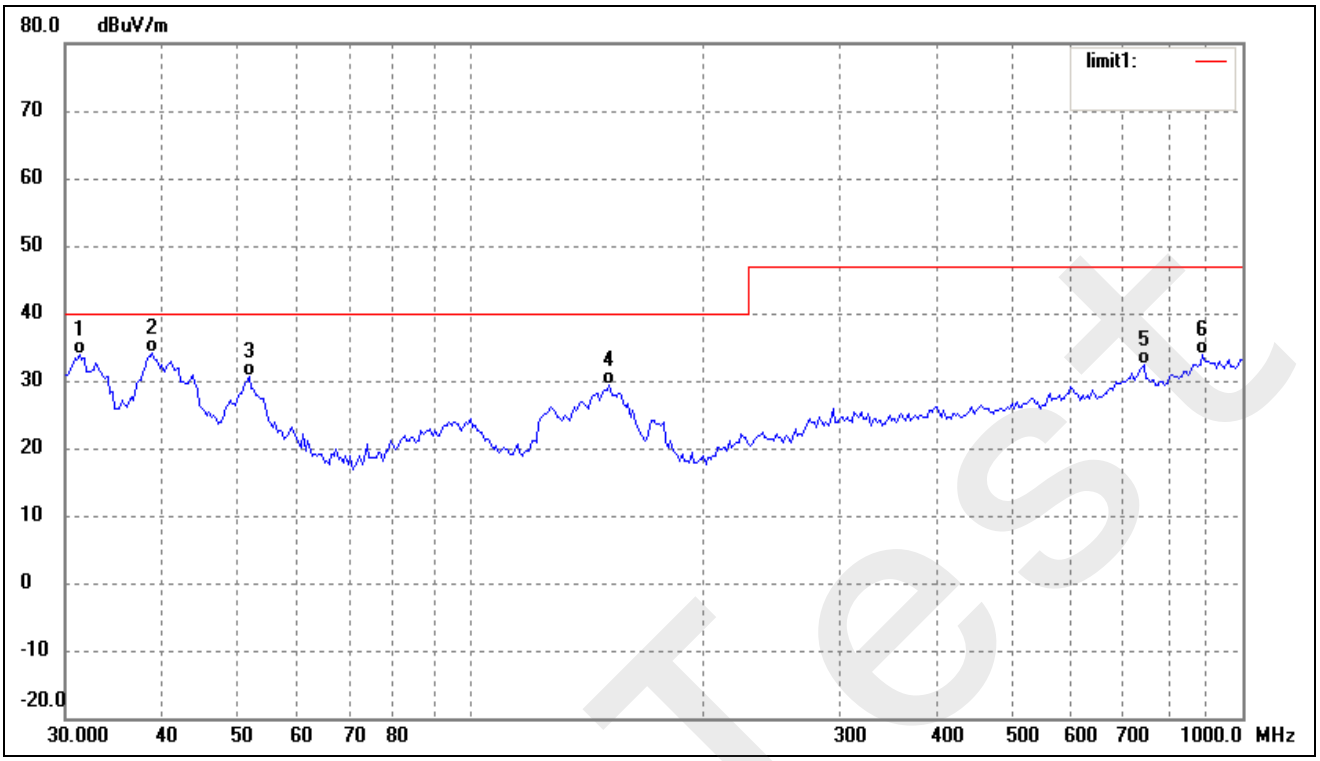
Plot of Radiated Emissions Test Data

EUT: *Power supply*
Tested Model: *GTM91099-6048-T2*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz*
Class *B*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	30.8535	22.75	7.77	30.52	40.00	-9.48	330	100	QP
2	52.2079	20.96	6.07	27.03	40.00	-12.97	350	100	QP
3	99.5281	19.09	6.01	25.10	40.00	-14.90	350	100	QP
4	127.2176	24.50	3.44	27.94	40.00	-12.06	338	100	QP
5	729.3583	17.09	14.92	32.01	47.00	-14.99	350	100	QP
6	906.4824	16.67	16.73	33.40	47.00	-13.60	340	100	QP

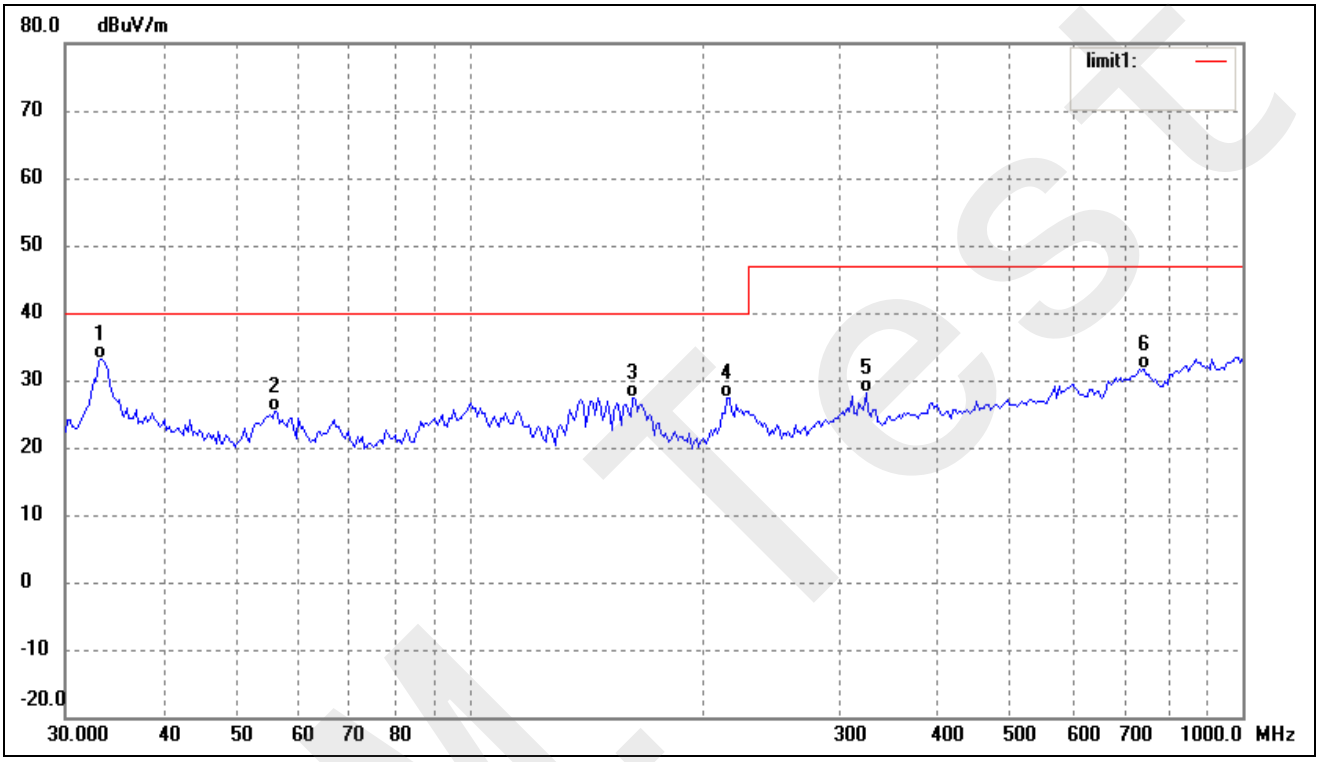
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.2893	26.16	7.83	33.99	40.00	-6.01	360	100	QP
2	38.8879	25.17	9.06	34.23	40.00	-5.77	321	100	QP
3	51.8430	24.52	6.10	30.62	40.00	-9.38	350	100	QP
4	151.5972	26.73	2.53	29.26	40.00	-10.74	338	100	QP
5	744.8661	17.04	15.33	32.37	47.00	-14.63	350	100	QP
6	887.6099	17.01	16.84	33.85	47.00	-13.15	320	100	QP

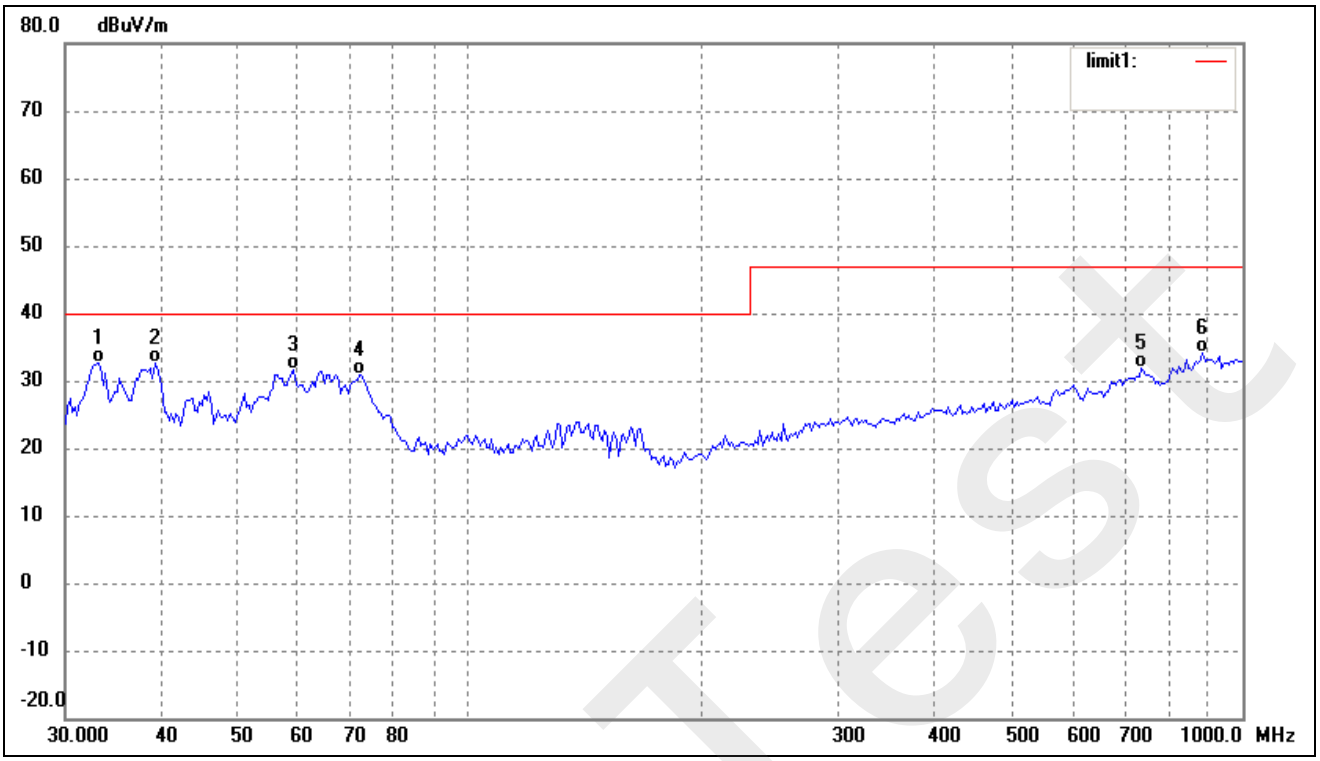
Plot of Radiated Emissions Test Data

EUT: *Power supply*
Tested Model: *GTM91099-3009-4.0-FW(5V)*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz*
Class *B*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	25.07	8.14	33.21	40.00	-6.79	230	100	QP
2	56.0007	19.72	5.73	25.45	40.00	-14.55	250	100	QP
3	162.6106	24.81	2.63	27.44	40.00	-12.56	240	100	QP
4	215.2678	22.69	4.76	27.45	40.00	-12.55	210	100	QP
5	325.5958	19.07	9.14	28.21	47.00	-18.79	220	100	QP
6	744.8661	16.23	15.33	31.56	47.00	-15.44	250	100	QP

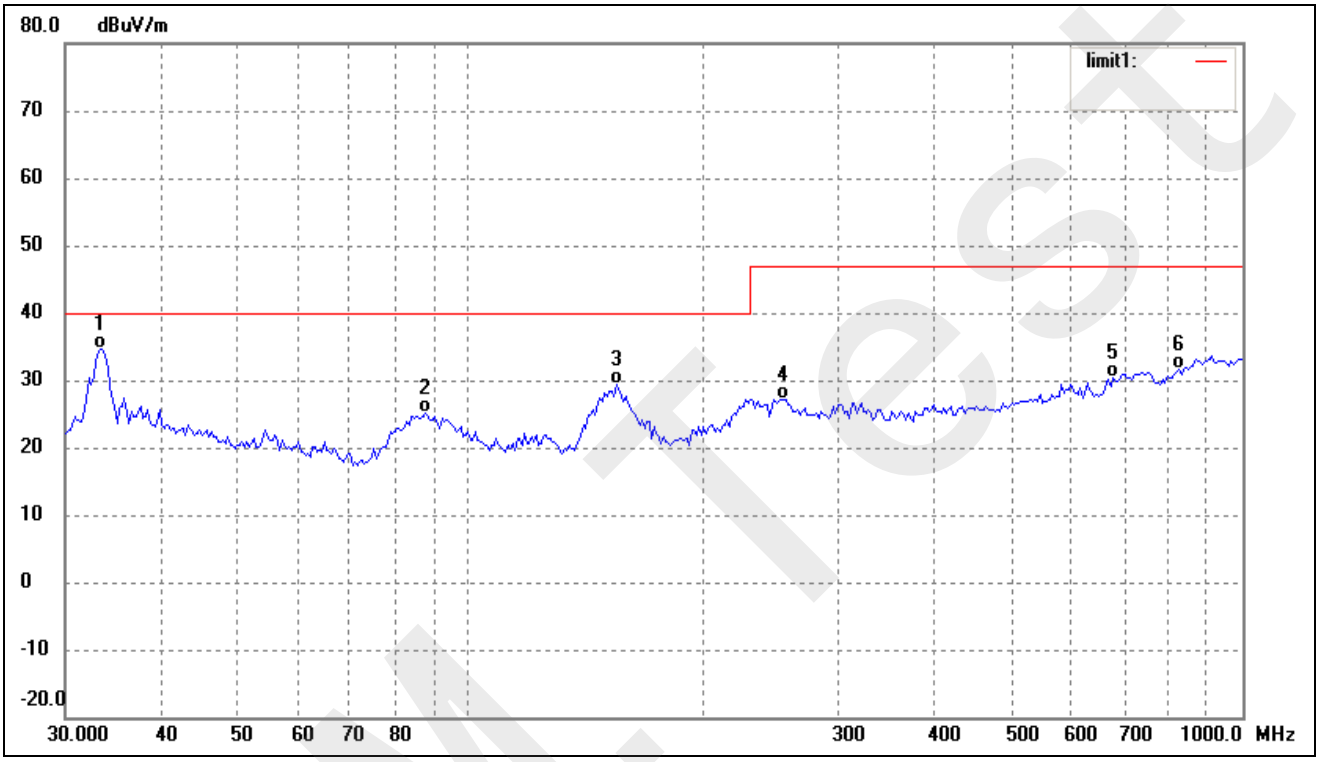
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.0950	24.53	8.10	32.63	40.00	-7.37	210	100	QP
2	39.1616	23.52	9.10	32.62	40.00	-7.38	230	100	QP
3	59.2325	26.08	5.45	31.53	40.00	-8.47	240	100	QP
4	72.0843	28.88	1.94	30.82	40.00	-9.18	210	100	QP
5	739.6605	16.41	15.53	31.94	47.00	-15.06	220	100	QP
6	887.6099	17.19	16.84	34.03	47.00	-12.97	250	100	QP

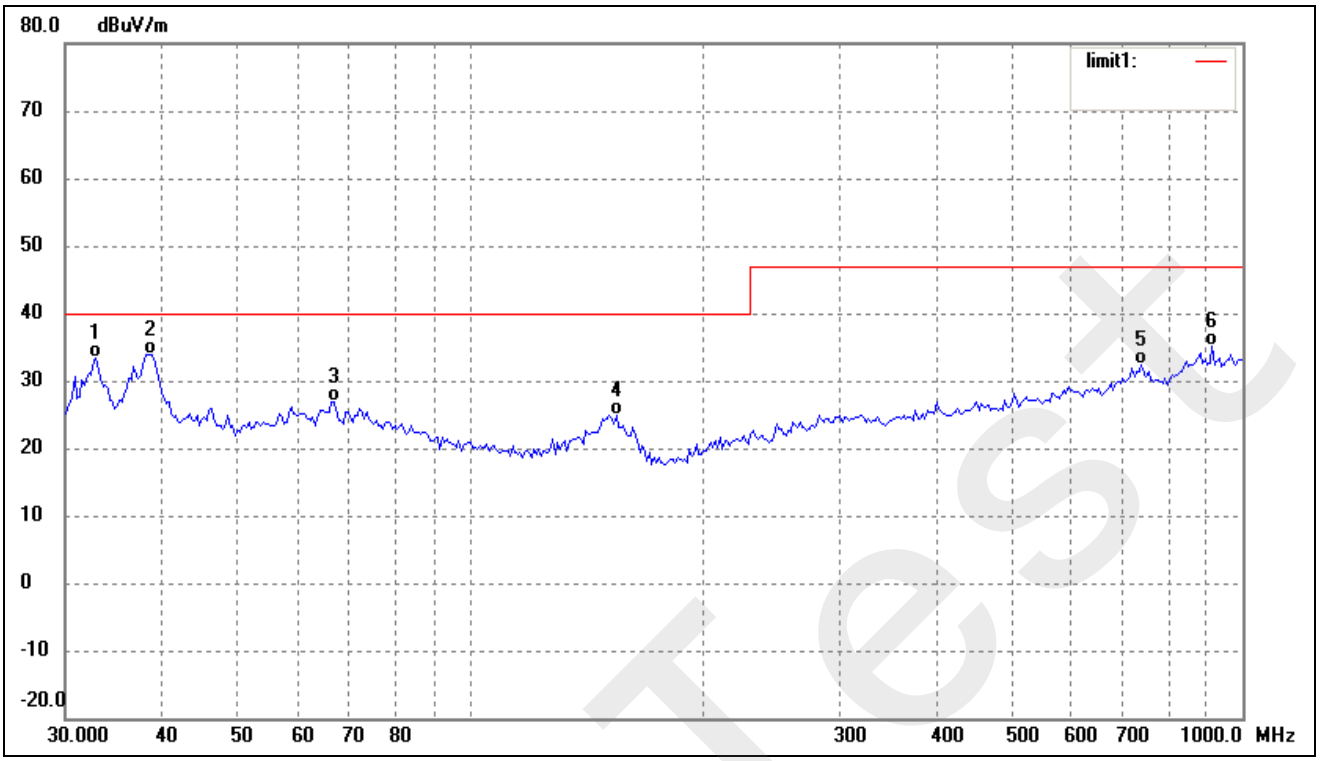
Plot of Radiated Emissions Test Data

EUT: *Power supply*
Tested Model: *GTM91099-6048-FW*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz*
Class *B*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	26.47	8.14	34.61	40.00	-5.39	120	100	QP
2	87.7248	22.03	3.02	25.05	40.00	-14.95	150	100	QP
3	154.8205	26.83	2.55	29.38	40.00	-10.62	120	100	QP
4	254.7284	20.38	6.85	27.23	47.00	-19.77	130	100	QP
5	679.9600	17.04	13.26	30.30	47.00	-16.70	150	100	QP
6	827.4934	16.39	15.16	31.55	47.00	-15.45	140	100	QP

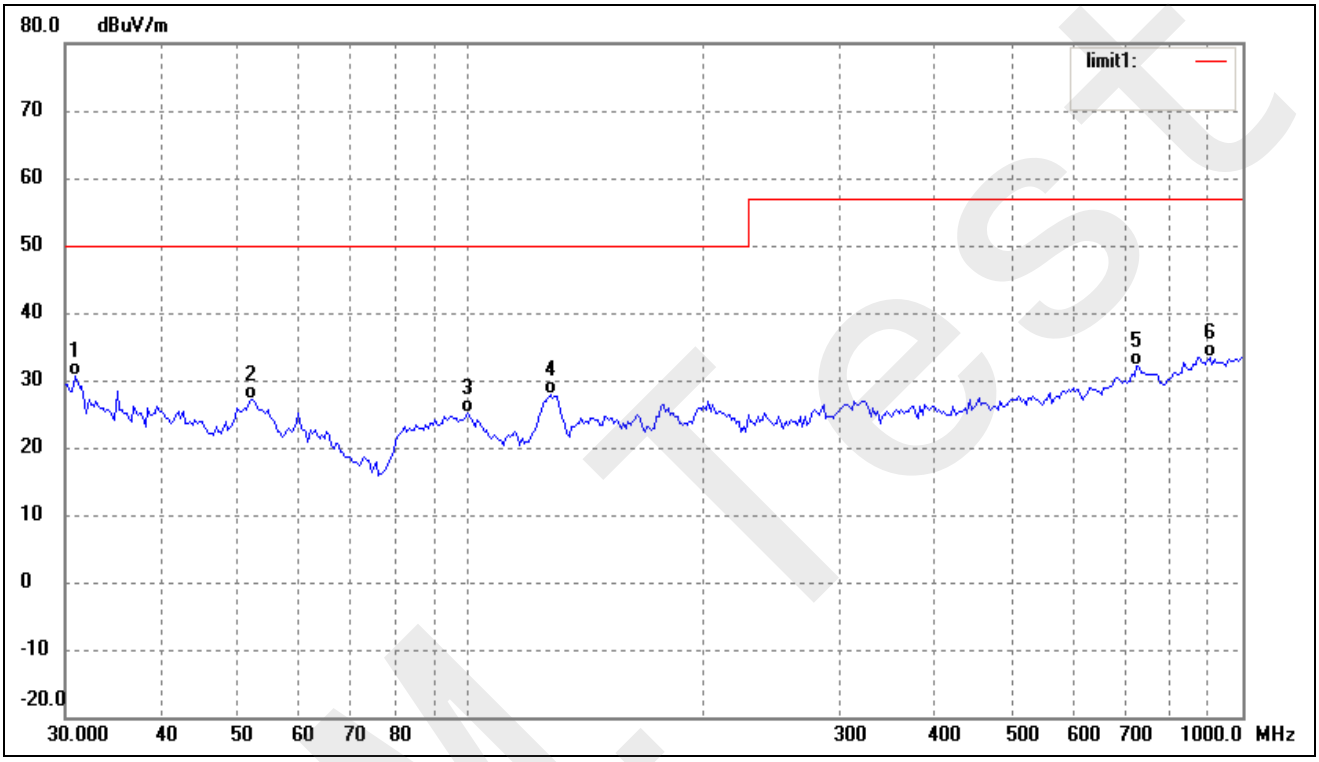
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.8637	25.39	8.07	33.46	40.00	-6.54	130	100	QP
2	38.6161	24.97	9.01	33.98	40.00	-6.02	150	100	QP
3	66.7325	23.74	3.24	26.98	40.00	-13.02	140	100	QP
4	154.8205	22.41	2.55	24.96	40.00	-15.04	130	100	QP
5	739.6605	16.73	15.53	32.26	47.00	-14.74	150	100	QP
6	912.8620	18.41	16.62	35.03	47.00	-11.97	170	100	QP

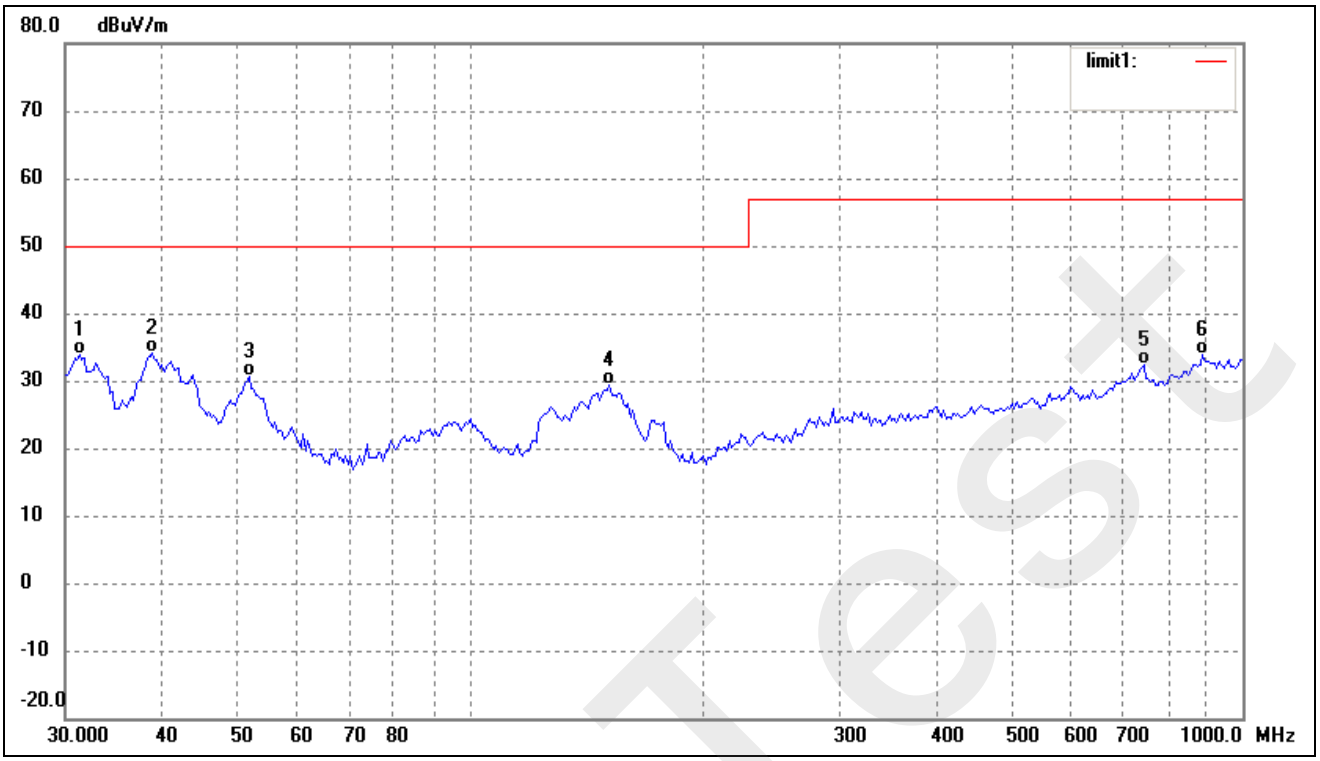
Plot of Radiated Emissions Test Data

EUT: *Power supply*
Tested Model: *GTM91099-6048-T2*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz*
Class *A*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	30.8535	22.75	7.77	30.52	50.00	-19.48	312	100	QP
2	52.2079	20.96	6.07	27.03	50.00	-22.97	321	100	QP
3	99.5281	19.09	6.01	25.10	50.00	-24.90	350	100	QP
4	127.2176	24.50	3.44	27.94	50.00	-22.06	320	100	QP
5	729.3583	17.09	14.92	32.01	57.00	-24.99	350	100	QP
6	906.4824	16.67	16.73	33.40	57.00	-23.60	340	100	QP

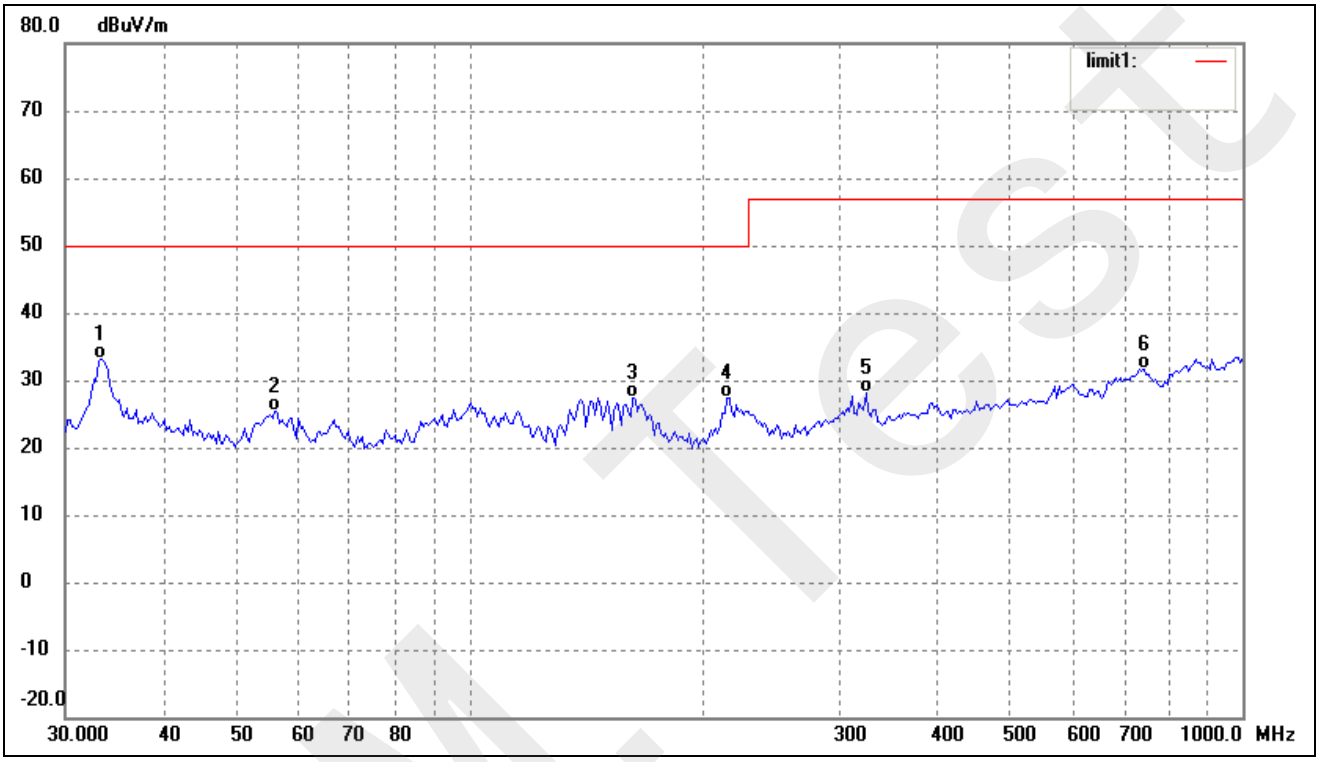
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	31.2893	26.16	7.83	33.99	50.00	-16.01	310	100	QP
2	38.8879	25.17	9.06	34.23	50.00	-15.77	321	100	QP
3	51.8430	24.52	6.10	30.62	50.00	-19.38	350	100	QP
4	151.5972	26.73	2.53	29.26	50.00	-20.74	338	100	QP
5	744.8661	17.04	15.33	32.37	57.00	-24.63	350	100	QP
6	887.6099	17.01	16.84	33.85	57.00	-23.15	340	100	QP

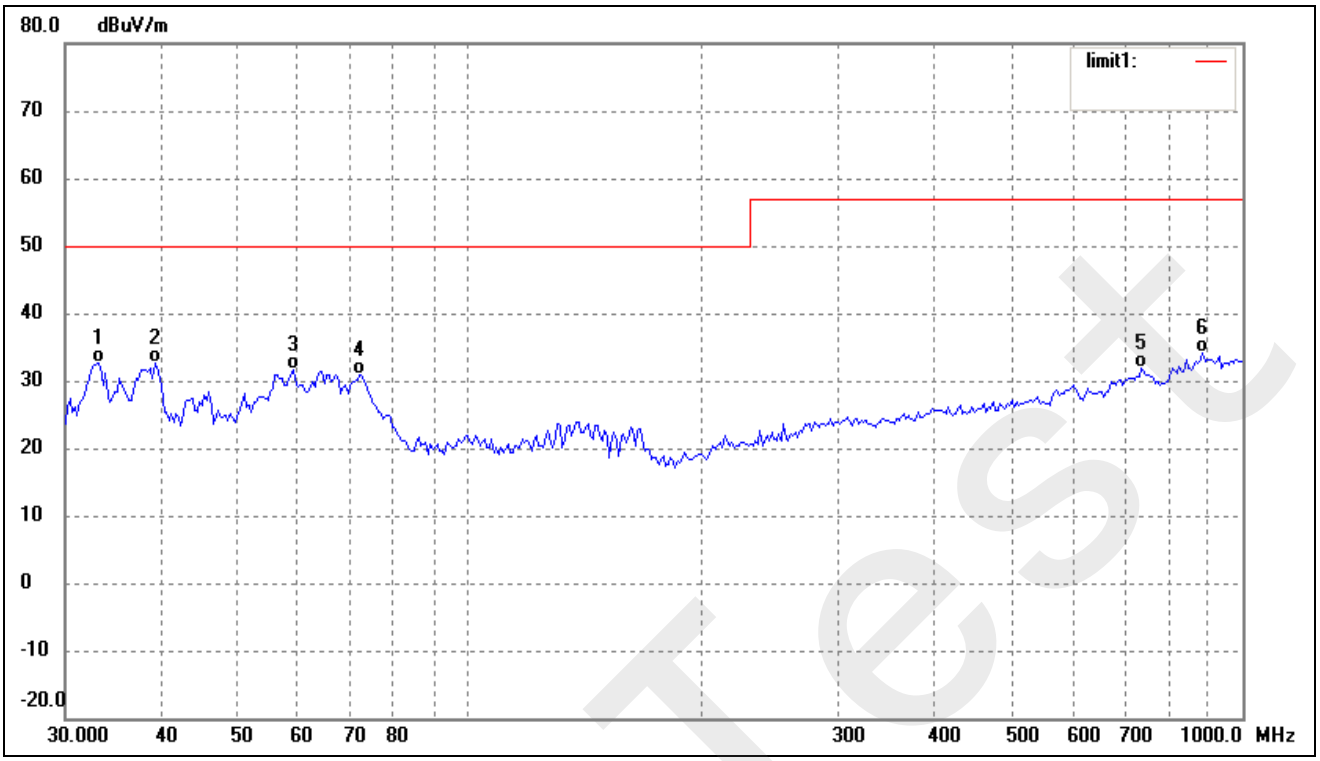
Plot of Radiated Emissions Test Data

EUT: *Power supply*
Tested Model: *GTM91099-3009-4.0-FW(5V)*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz*
Class *A*
Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.3279	25.07	8.14	33.21	50.00	-16.79	210	100	QP
2	56.0007	19.72	5.73	25.45	50.00	-24.55	250	100	QP
3	162.6106	24.81	2.63	27.44	50.00	-22.56	240	100	QP
4	215.2678	22.69	4.76	27.45	50.00	-22.55	210	100	QP
5	325.5958	19.07	9.14	28.21	57.00	-28.79	230	100	QP
6	744.8661	16.23	15.33	31.56	57.00	-25.44	250	100	QP

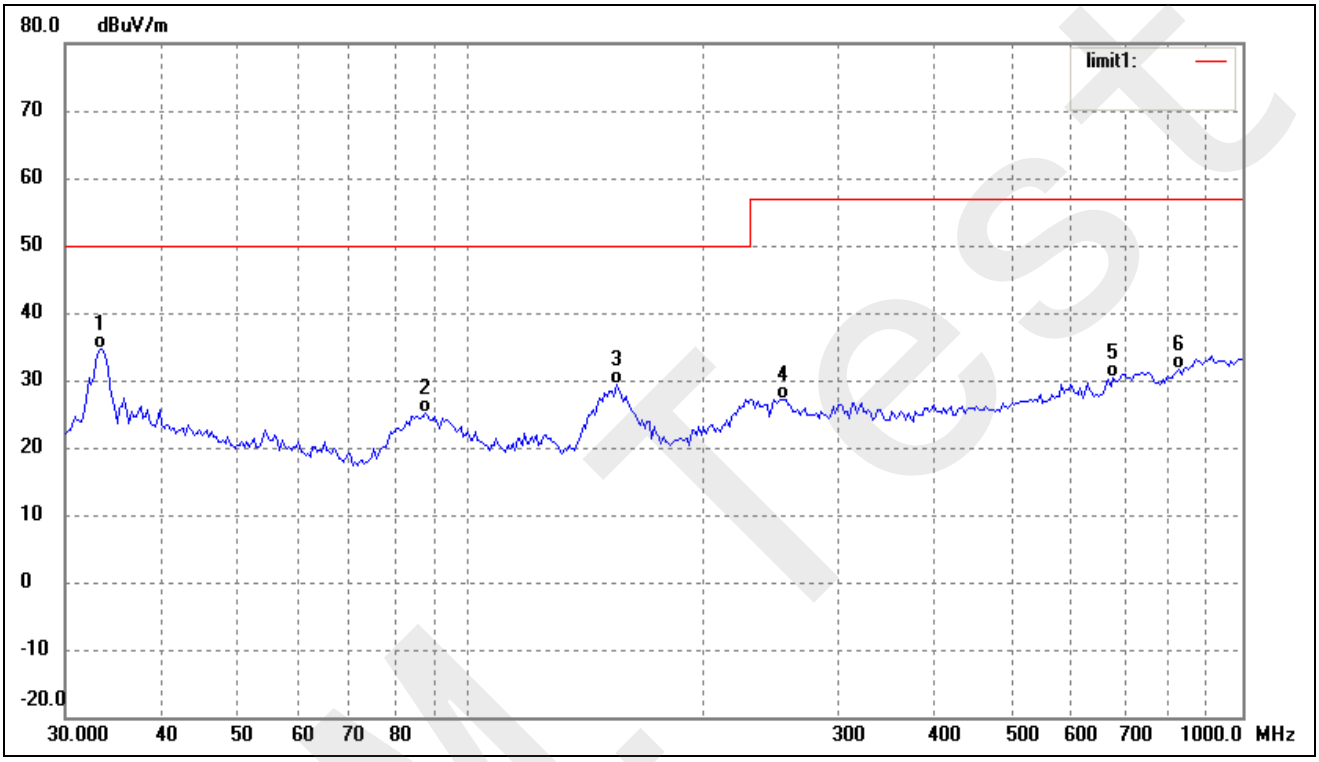
Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	33.0950	24.53	8.10	32.63	50.00	-17.37	210	100	QP
2	39.1616	23.52	9.10	32.62	50.00	-17.38	230	100	QP
3	59.2325	26.08	5.45	31.53	50.00	-18.47	240	100	QP
4	72.0843	28.88	1.94	30.82	50.00	-19.18	210	100	QP
5	739.6604	16.41	15.53	31.94	57.00	-25.06	220	100	QP
6	887.6099	17.19	16.84	34.03	57.00	-22.97	250	100	QP

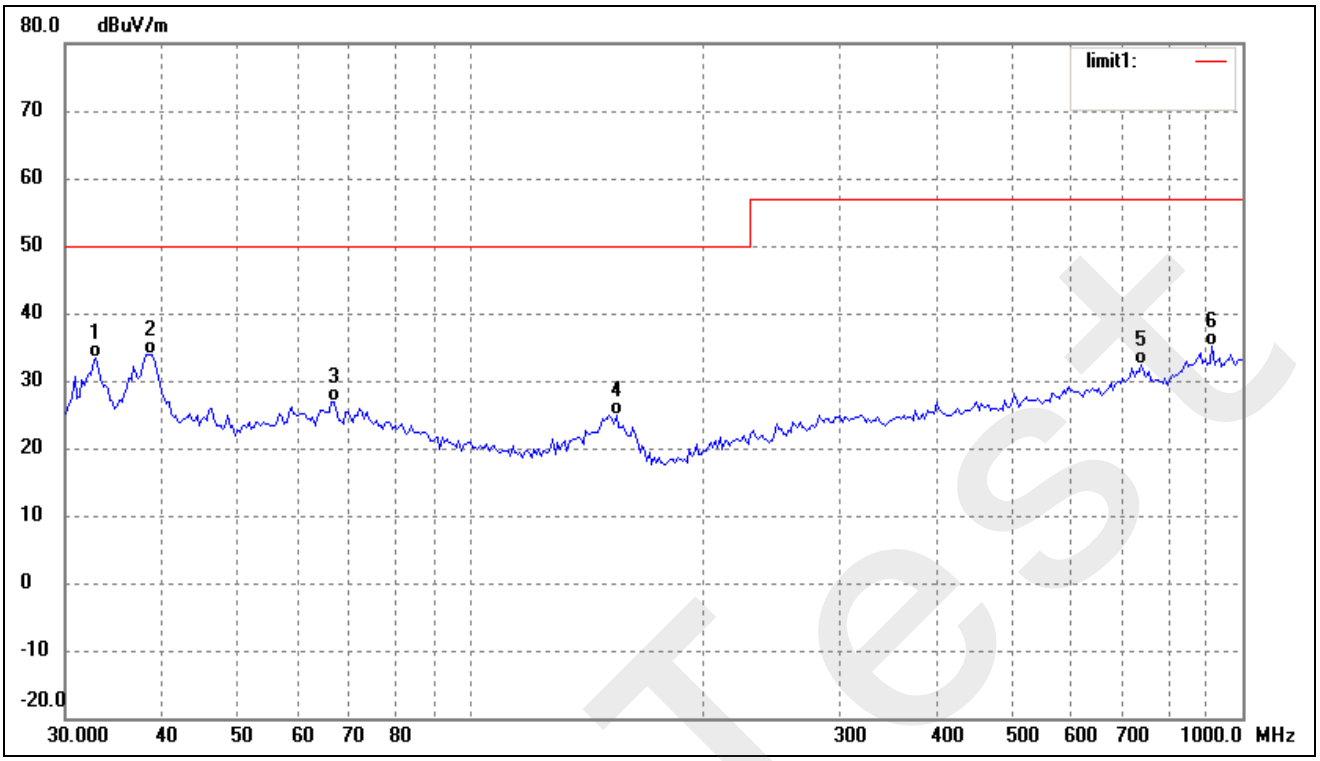
Plot of Radiated Emissions Test Data

EUT: *Power supply*
Tested Model: *GTM91099-6048-FW*
Operating Condition: *TM1*
Comment: *AC 230V/50Hz*
Class *A*
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	33.3279	26.47	8.14	34.61	50.00	-15.39	120	100	QP
2	87.7248	22.03	3.02	25.05	50.00	-24.95	150	100	QP
3	154.8205	26.83	2.55	29.38	50.00	-20.62	120	100	QP
4	254.7284	20.38	6.85	27.23	57.00	-29.77	130	100	QP
5	679.9600	17.04	13.26	30.30	57.00	-26.70	150	100	QP
6	827.4934	16.39	15.16	31.55	57.00	-25.45	140	100	QP

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	32.8637	25.39	8.07	33.46	50.00	-16.54	120	100	QP
2	38.6160	24.97	9.01	33.98	50.00	-16.02	150	100	QP
3	66.7325	23.74	3.24	26.98	50.00	-23.02	120	100	QP
4	154.8204	22.41	2.55	24.96	50.00	-25.04	130	100	QP
5	739.6604	16.73	15.53	32.26	57.00	-24.74	150	100	QP
6	912.8620	18.41	16.62	35.03	57.00	-21.97	140	100	QP

5. Harmonic Current Emissions

5.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Digital Power Analyzer	California Instrument	CTS	72831	2013-05-07	2014-05-06
Power Source	California Instrument	5001IX-CTS-400	60077	2013-05-07	2014-05-06

5.2 Test Procedure

Test is conducting under the description of EN61000-3-2.

5.3 Test Standards

EN61000-3-2, Clause 7.1 Limits for Class A equipment.

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	48%
ATM Pressure:	1022 mbar

5.4 Harmonic Current Emissions Test Data

According to Clause 7 of EN 61000-3-2, the rated power of the EUT is less than 75W, belong to ‘equipment with a rated power of Max.60W or less’, therefore ‘limits are not specified in this edition of the standards’. It is deem to full fit the requirements of the standards.

Result: The EUT is compliance with the requirements of this section.

6. Voltage Fluctuation and Flicker

6.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Digital Power Analyzer	California Instrument	CTS	72831	2013-05-07	2014-05-06
Power Source	California Instrument	5001IX-CTS-400	60077	2013-05-07	2014-05-06

6.2 Test Procedure

Test is conducting under the description of EN61000-3-3.

6.3 Test Standards

EN61000-3-3, Limit: Clause 5.

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	48%
ATM Pressure:	1022 mbar

6.4 Voltage Fluctuation and Flicker Test Data

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: GTM91099-6048-T2 **Tested by: Damon**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2013-10-28 **Start time: 06:52:29 PM** **End time: 07:02:50 PM**
Test duration (min): 10 **Data file name: F-000617.cts_data**
Comment: TM1
Customer: GlobTek, Inc.

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**

Plt and limit line

Parameter values recorded during the test:

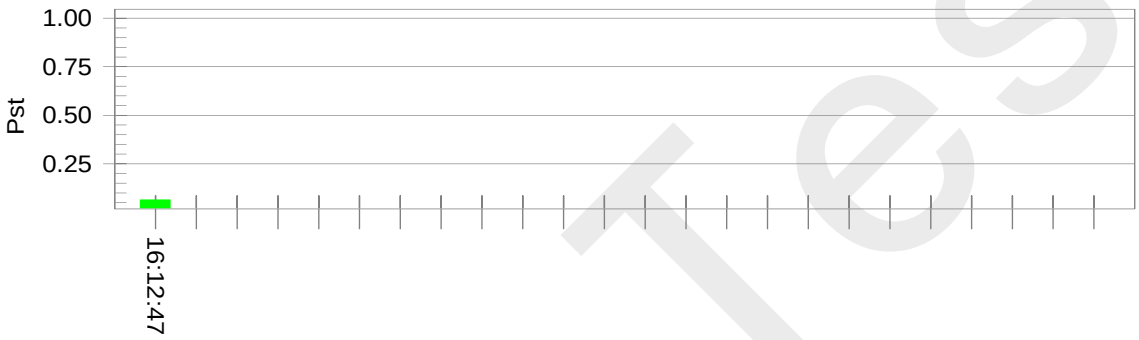
Vrms at the end of test (Volt):	**231.25**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: GTM91099-3009-4.0-FW(5V) **Tested by: Damon**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2013-10-31 **Start time: 04:02:27 PM** **End time: 04:12:48 PM**
Test duration (min): 10 **Data file name: F-000631.cts_data**
Comment: TM1
Customer: GlobTek, Inc.

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**



Plt and limit line

Parameter values recorded during the test:

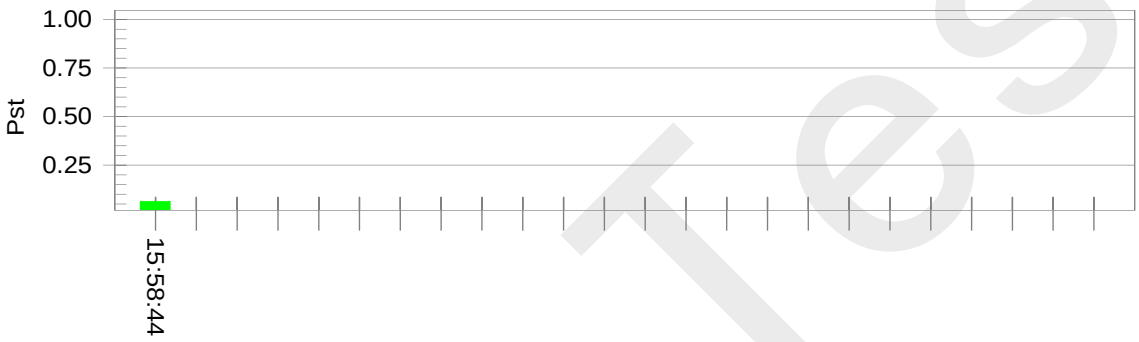
Vrms at the end of test (Volt):	**231.32**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: GTM91099-6048-FW **Tested by: Damon**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2013-10-31 **Start time: 03:48:24 PM** **End time: 03:58:45 PM**
Test duration (min): 10 **Data file name: F-000630.cts_data**
Comment: TM1
Customer: GlobTek, Inc.

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**



Plt and limit line

Parameter values recorded during the test:

Vrms at the end of test (Volt):	**231.25**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

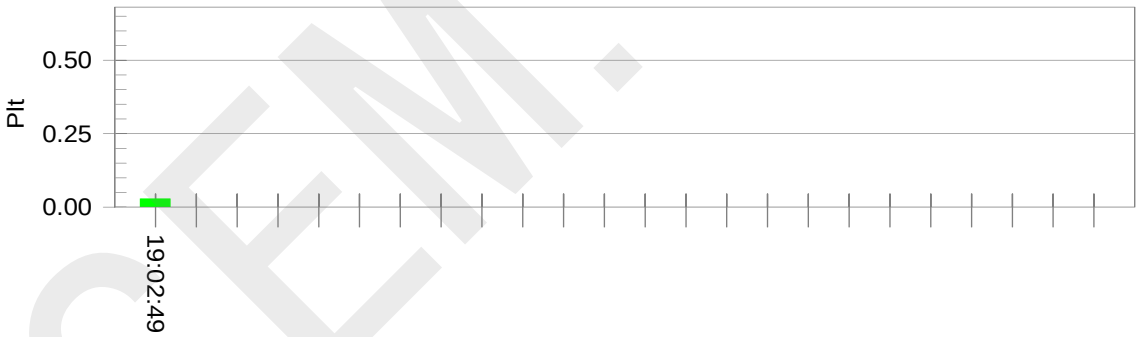
Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: GTM91099-6048-T2 **Tested by: Damon**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2013-10-28 **Start time: 06:52:29 PM** **End time: 07:02:50 PM**
Test duration (min): 10 **Data file name: F-000617.cts_data**
Comment: TM1
Customer: GlobTek, Inc.

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**

Plt and limit line



Parameter values recorded during the test:

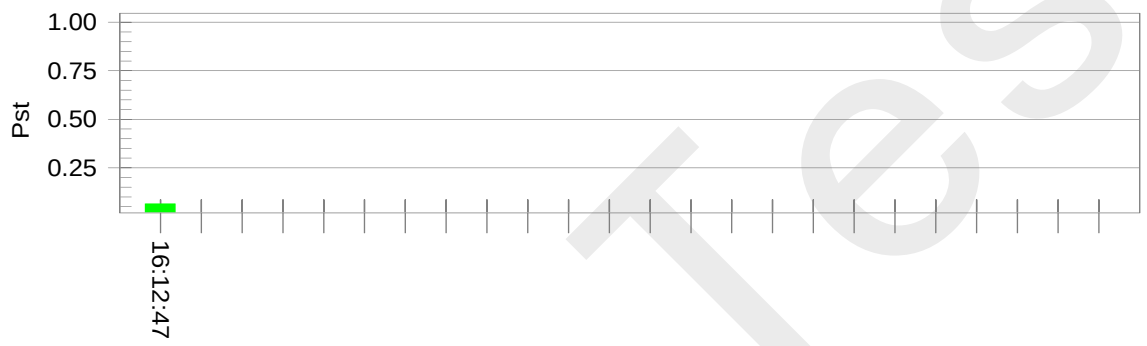
Vrms at the end of test (Volt):	**231.25**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

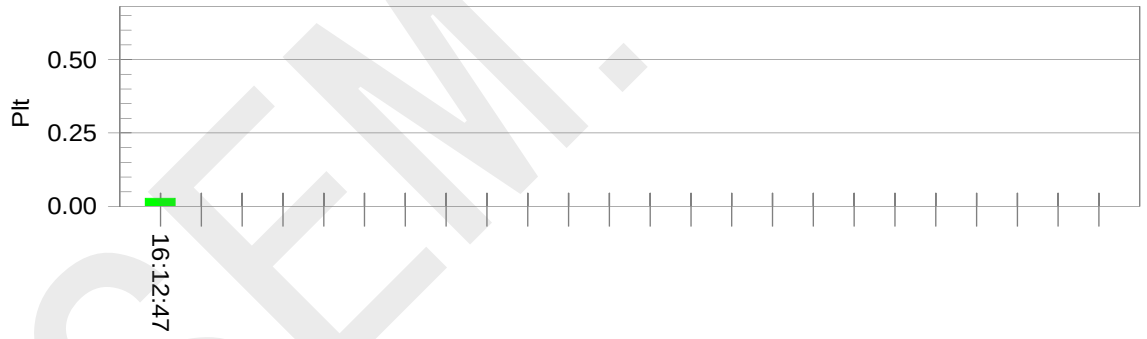
EUT: GTM91099-3009-4.0-FW(5V) **Tested by: Damon**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2013-10-31 **Start time: 04:02:27 PM** **End time: 04:12:48 PM**
Test duration (min): 10 **Data file name: F-000631.cts_data**
Comment: TM1
Customer: GlobTek, Inc.

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	**231.32**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

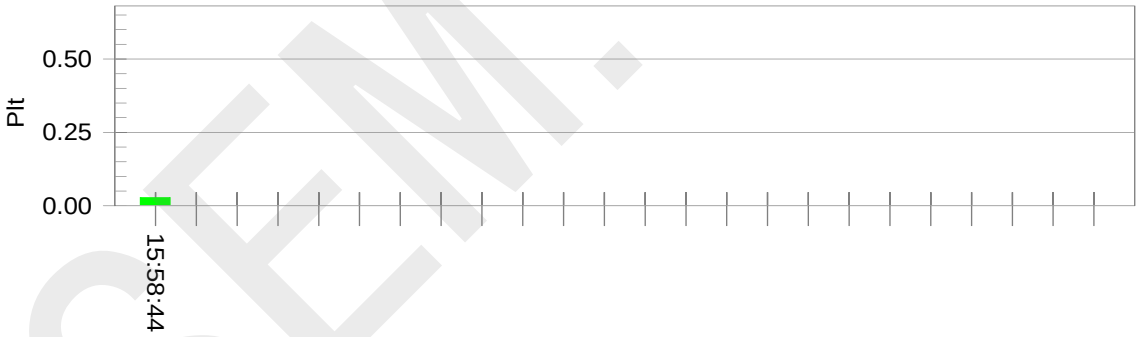
Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: GTM91099-6048-FW **Tested by: Damon**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2013-10-31 **Start time: 03:48:24 PM** **End time: 03:58:45 PM**
Test duration (min): 10 **Data file name: F-000630.cts_data**
Comment: TM1
Customer: GlobTek, Inc.

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**

Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	**231.25**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

7. Electrostatic Discharges (ESD)

7.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
ESD Generator	TESQ AG	NSG 437	161	2013-05-07	2014-05-06

7.2 Test Procedure

Test is conducting under the description of IEC61000-4-2.

Test Performance

Performance Criterion: B

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	55%
ATM Pressure:	1011 mbar

7.3 Electrostatic Discharge Immunity Test Data

Class:B

Tested Model: GTM91099-6048-T2/ GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Table 1: Electrostatic Discharge Immunity (Air Discharge)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Surface	A	A	A	A	A	A	A	A		
Crack	A	A	A	A	A	A	A	A		

Table 2: Electrostatic Discharge Immunity (Direct Contact)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
/	/	/	/	/						

Table 3: Electrostatic Discharge Immunity (Indirect Contact HCP)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Front Side	A	A	A	A						
Top Side	A	A	A	A						
Back Side	A	A	A	A						
Left Side	A	A	A	A						
Right Side	A	A	A	A						

Table 4: Electrostatic Discharge Immunity (Indirect Contact VCP)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Front Side	A	A	A	A						
Top Side	A	A	A	A						
Back Side	A	A	A	A						
Left Side	A	A	A	A						
Right Side	A	A	A	A						

Class:A

Tested Model: GTM91099-6048-T2 / GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Table 1: Electrostatic Discharge Immunity (Air Discharge)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Surface	A	A	A	A	A	A	A	A		
Crack	A	A	A	A	A	A	A	A		

Table 2: Electrostatic Discharge Immunity (Direct Contact)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
/	/	/	/	/						

Table 3: Electrostatic Discharge Immunity (Indirect Contact HCP)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Front Side	A	A	A	A						
Top Side	A	A	A	A						
Back Side	A	A	A	A						
Left Side	A	A	A	A						
Right Side	A	A	A	A						

Table 4: Electrostatic Discharge Immunity (Indirect Contact VCP)

EN 61000-4-2 Test Points	Test Levels (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Front Side	A	A	A	A						
Top Side	A	A	A	A						
Back Side	A	A	A	A						
Left Side	A	A	A	A						
Right Side	A	A	A	A						

Test Result: Pass

8. Continuous Radiated Disturbances (R/S)

8.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Signal Generator	Rohde & Schwarz	SMT03	100059	2013-05-07	2014-05-06
Voltage Probe	Rohde & Schwarz	URV5-Z2	100013	2013-05-07	2014-05-06
Power Amplifier	AR	150W1000	300999	2013-05-07	2014-05-06
Power Amplifier	AR	25S1G4AM1	305993	2013-05-07	2014-05-06
Trilog Antenna	SCHWARZBECK	VULB9163	9163-333	2013-04-20	2014-04-19
Anechoic chamber	Albatross Projects	MCDC	----	2013-03-20	2014-03-19

8.2 Test Procedure

Test is conducting under the description of IEC61000-4-3.

Test Performance

Performance Criterion: A

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1010 mbar

8.3 Continuous Radiated Disturbances Test Data

Frequency step: 1% of fundamental
Dwell time: 1 second
Modulation: AM by 1kHz sine wave with 80% modulation depth
Class:B
Tested Model: GTM91099-6048-T2/ GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	3	A	A	A	A	A	A	A	A

Class:A

Tested Model: GTM91099-6048-T2 2PCS / GTM91099-3009-4.0-FW(5V) 1PC / GTM91099-6048-FW 1PC

Frequency Range(MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
80-1000	10	A	A	A	A	A	A	A	A
1400-2000	3	A	A	A	A	A	A	A	A
2000-2700	1	A	A	A	A	A	A	A	A

Test Result: Pass

9. Electrical Fast Transients (EFT)

9.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Transient 2000	EMC PARTNER	TRA2000	863	2013-05-07	2014-05-06
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2013-05-07	2014-05-06

9.2 Test Procedure

Test is conducting under the description of IEC61000-4-4.

Test Performance

Performance Criterion: B

Environmental Conditions

Temperature:	22 °C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

9.3 Electrical Fast Transients Test Data

Class:B

Tested Model: GTM91099-6048-T2/ GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

EN 61000-4-4 Test Points		Test Levels (kV)							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
Power Supply Power Port of EUT	L1	A	A	A	A	/	/	/	/
	L2	A	A	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Class:A

Tested Model: GTM91099-6048-T2 / GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

EN 61000-4-4 Test Points		**Test Levels (kV)**							
		+0.5	**-0.5**	**+1.0**	**-1.0**	**+2.0**	**-2.0**	**+4.0**	**-4.0**
Power Supply Power Port of EUT	L1	A	A	A	A	A	A	/	/
	L2	A	A	A	A	A	A	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	A	A	A	A	A	A	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Test Result: Pass

10. Surges

10.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Transient 2000	EMC PARTNER	TRA2000	863	2013-05-07	2014-05-06

10.2 Test Procedure

Test is conducting under the description of IEC61000-4-5.

Test Performance

Performance Criterion: B

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

10.3 Surges Test Data

Class:B

Tested Model: GTM91099-6048-T2/ GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	A	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Class:A

Tested Model: GTM91099-6048-T2 / GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Level	Voltage	Poll	Path	Pass	Fail
1	0.5kV	±	L-N	A	/
2	1kV	±	L-N	A	/
3	2kV	±	L-N, L-PE, N-PE	/	/
4	4kV	±	L-N, L-PE, N-PE	/	/

Test Result: Pass

11. Continuous Conducted Disturbances (C/S)

11.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
CS Immunity Tester	EMTEST	CWS500	0900-03	2013-05-07	2014-05-06
Attenuator	EMTEST	MA-500	1009	2013-05-07	2014-05-06
CDN	Luthi	L-801M2/M3	2665	2013-05-07	2014-05-06

11.2 Test Procedure

Test is conducting under the description of IEC61000-4-6.

Test Performance

Performance Criterion: A

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

11.3 Continuous Conducted Disturbances Test Data

Sweep frequency range: 150kHz~80MHz
Frequency step: 1% of fundamental
Dwell time: 1 second
Class:B
Tested Model: GTM91099-6048-T2/ GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Level	Voltage Level (e.m.f.) U_0	Modulation:	Pass	Fail
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	A	/
3	10	AM 80%, 1kHz sinewave	/	/
X	Special	/	/	/

Class:A

Tested Model: GTM91099-6048-T2 / GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Level	**Voltage Level (e.m.f.) U_0**	**Modulation:**	**Pass**	**Fail**
1	1	AM 80%, 1kHz sinewave	/	/
2	3	AM 80%, 1kHz sinewave	/	/
3	10	AM 80%, 1kHz sinewave	A	/
X	Special	/	/	/

Test Result: Pass

12. Voltage Dips and Interruptions

12.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Transient 2000	EMC PARTNER	TRA2000	863	2013-05-07	2014-05-06

12.2 Test Procedure

Test is conducting under the description of IEC61000-4-11.

Test Performance

Performance Criterion: B/C

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50%
ATM Pressure:	1011 mbar

12.3 Voltage Dips And Interruptions Test Data

U: Vlotage dips in % U_T (U_T is rated voltage for the EUT)
T: Test duration
Class:B
Tested Model: GTM91099-6048-T2 / GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Level	U	T	Phase Angle	N	Pass	Fail
1	100%	10ms	0/90/180/270	3	A	/
2	100%	20ms	0/90/180/270	3	A	/
3	30%	500ms	0/90/180/270	3	A	/
4	100%	5000ms	0/90/180/270	3	B	/

Class:A
Tested Model: GTM91099-6048-T2 / GTM91099-3009-4.0-FW(5V) / GTM91099-6048-FW

Level	U	T	Phase Angle	N	Pass	Fail
1	100%	20ms	0/90/180/270	3	A	/
2	100%	5000/6000ms	0/90/180/270	3	A	/
3	60%	200/240ms	0/90/180/270	3	A	/
4	30%	500/600ms	0/90/180/270	3	B	/

Test Result: Pass

EXHIBIT 1 - PRODUCT LABELING

Proposed CE Label Format

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. The 'CE' marking must be affixed to the EUT or to its data plate. Where this is not possible or not warranted on account of the nature of the apparatus, it must be affixed to the packaging, if any, and to the accompanying documents. The 'CE' marking must have a height of at least 5 mm. If the 'CE' marking is reduced or enlarged the proportions given in the above graduated drawing must be respected.

Proposed Label Location on EUT

CE Label Location

Tested Model: GTM91099-6048-T2

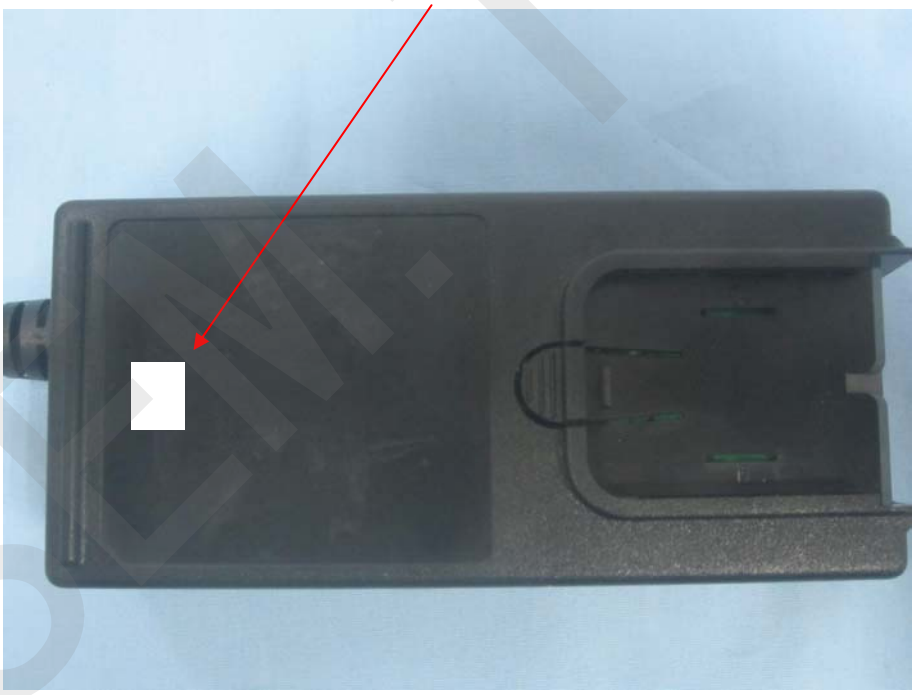


EXHIBIT 2 - EUT PHOTOGRAPHS

Tested Model: GTM91099-6048-T2

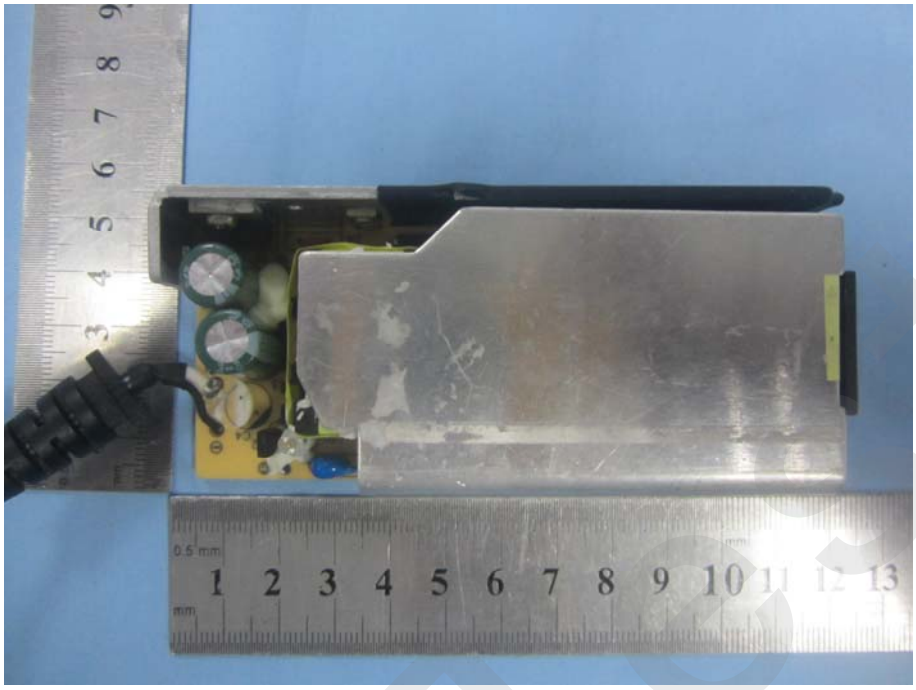
EUT View 1

EUT View 2

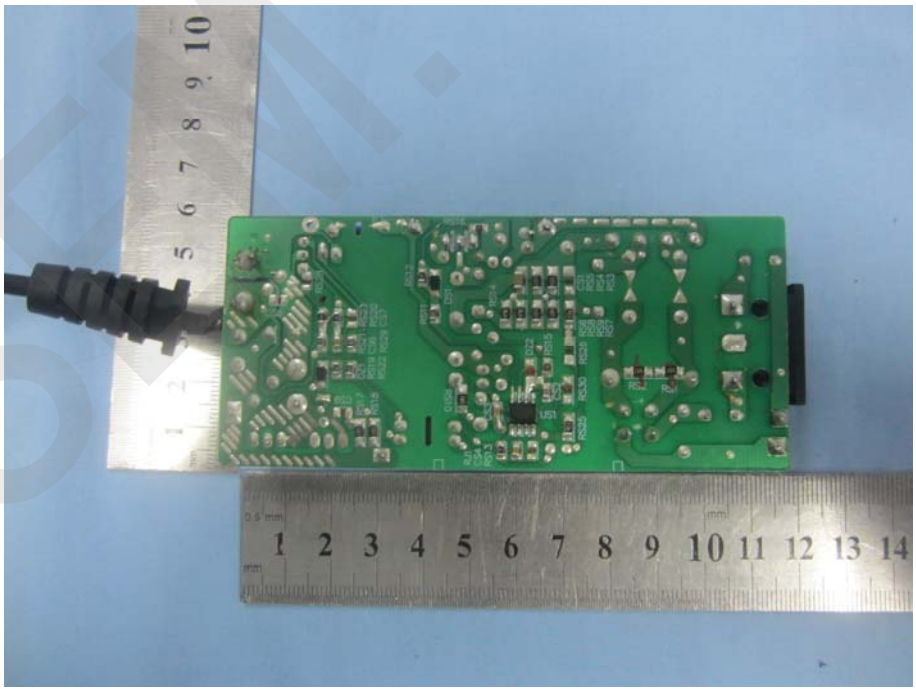
EUT View 3

EUT Housing and Board View 1

Solder Board-Component View 1

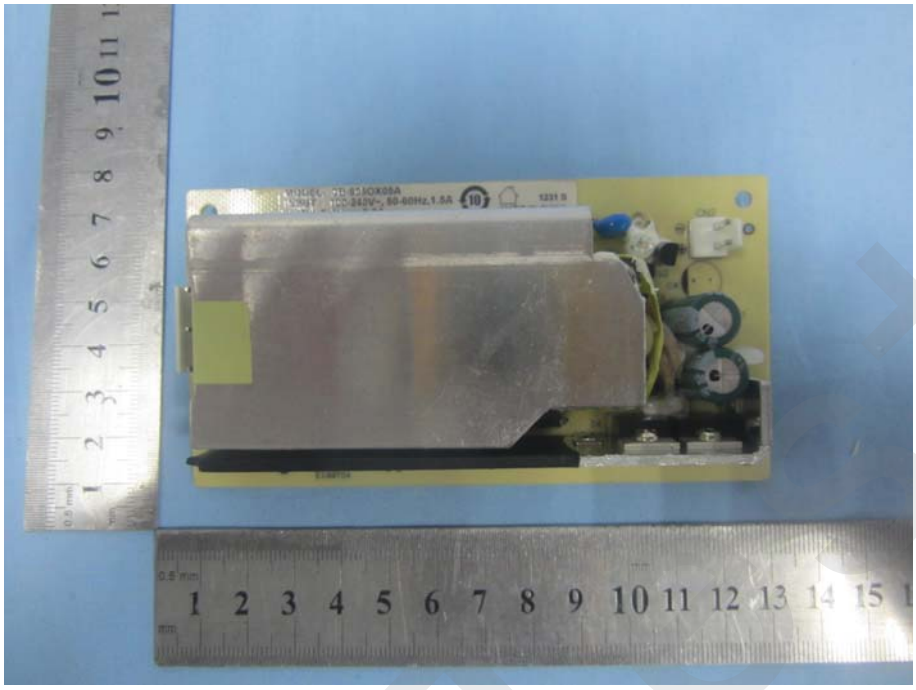


Solder Board-Component View 2

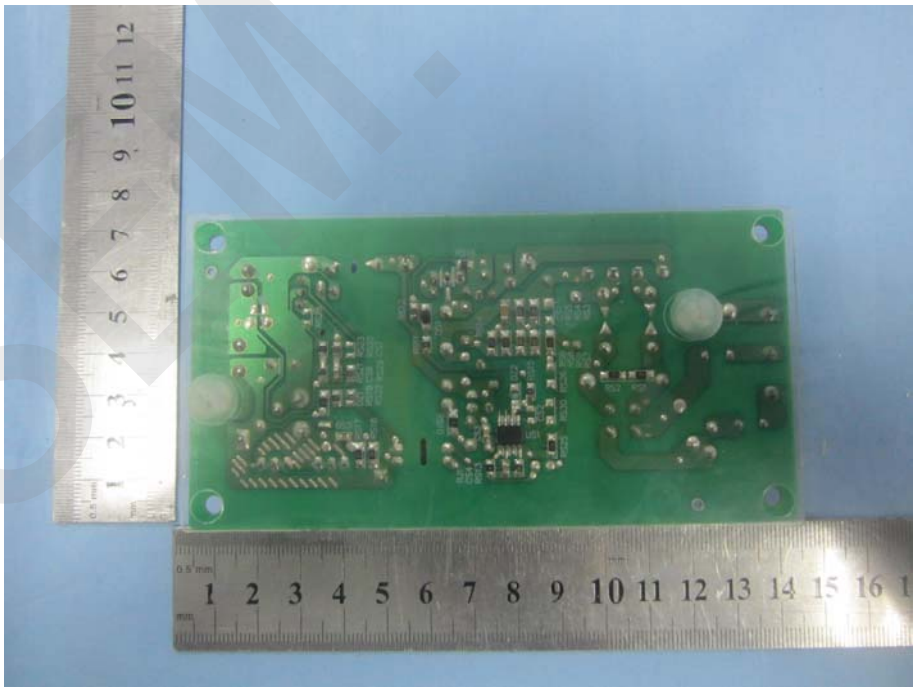


Tested Model: GTM91099-3009-4.0-FW(5V)

EUT View 1

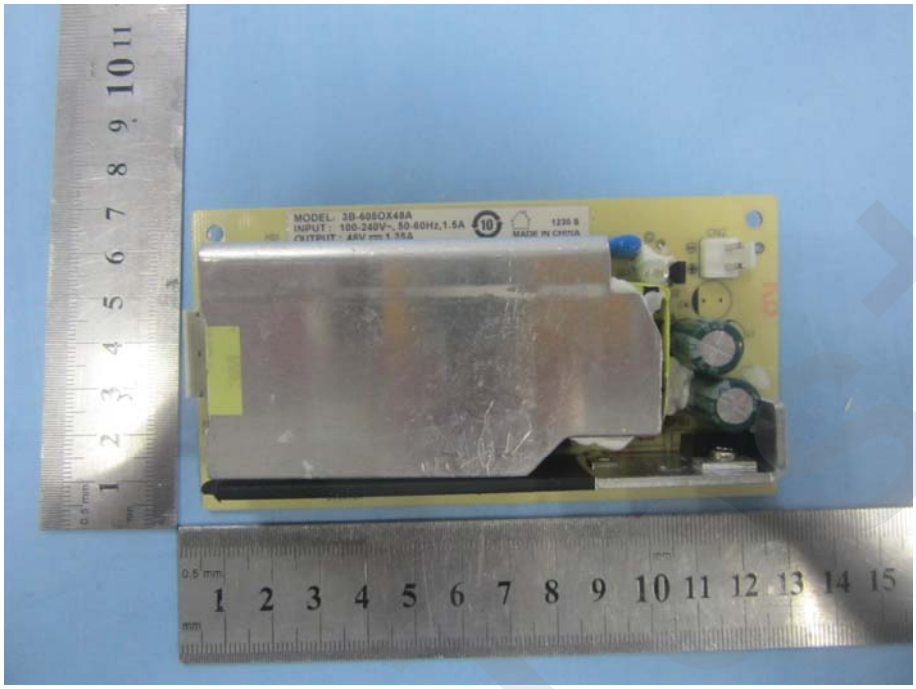


EUT View 2



Tested Model: GTM91099-6048-FW

EUT View 1



EUT View 2

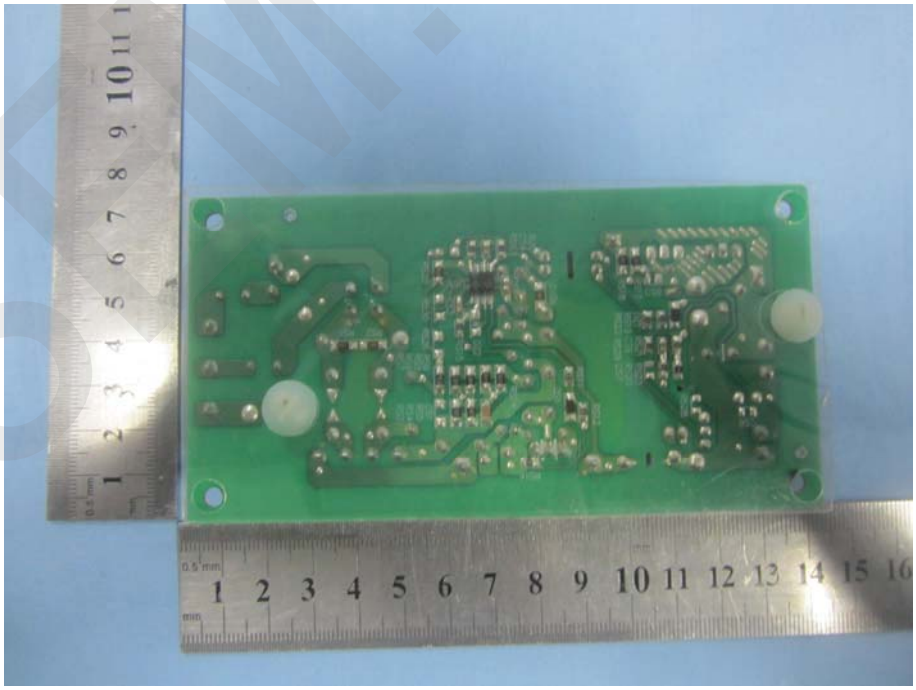
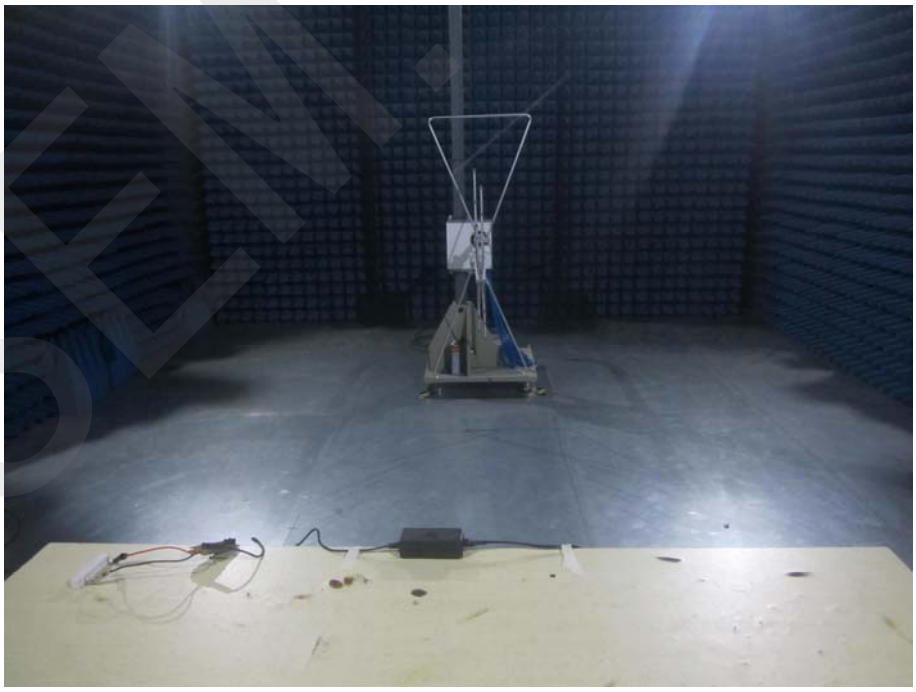


EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Tested Model: GTM91099-6048-T2

Conduction Emission Test View

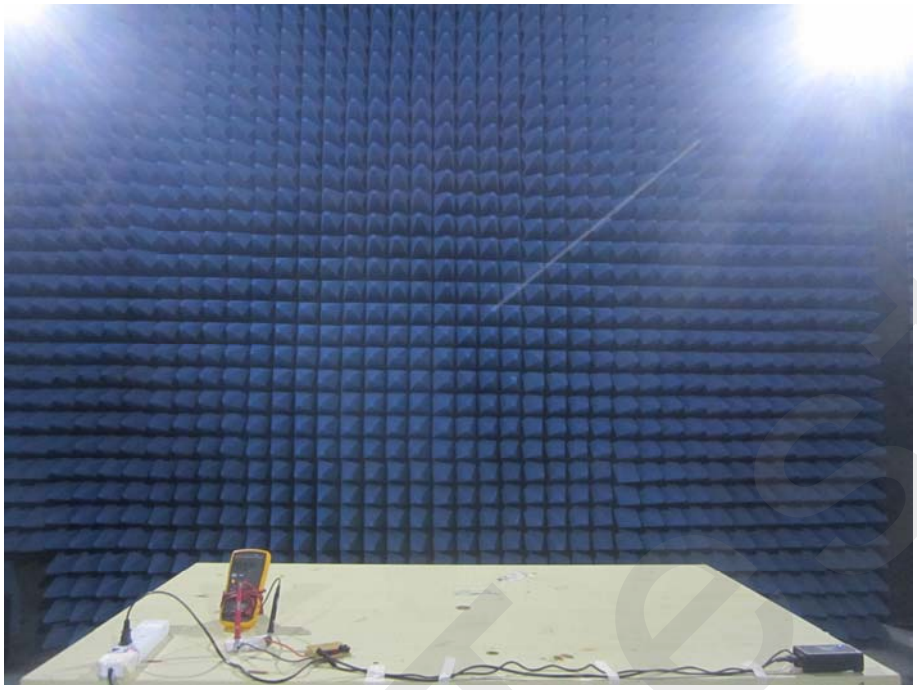
Radiation Emission Test View



Flicker Test View

IEC61000-4-2 Test View

IEC61000-4-3 Test View

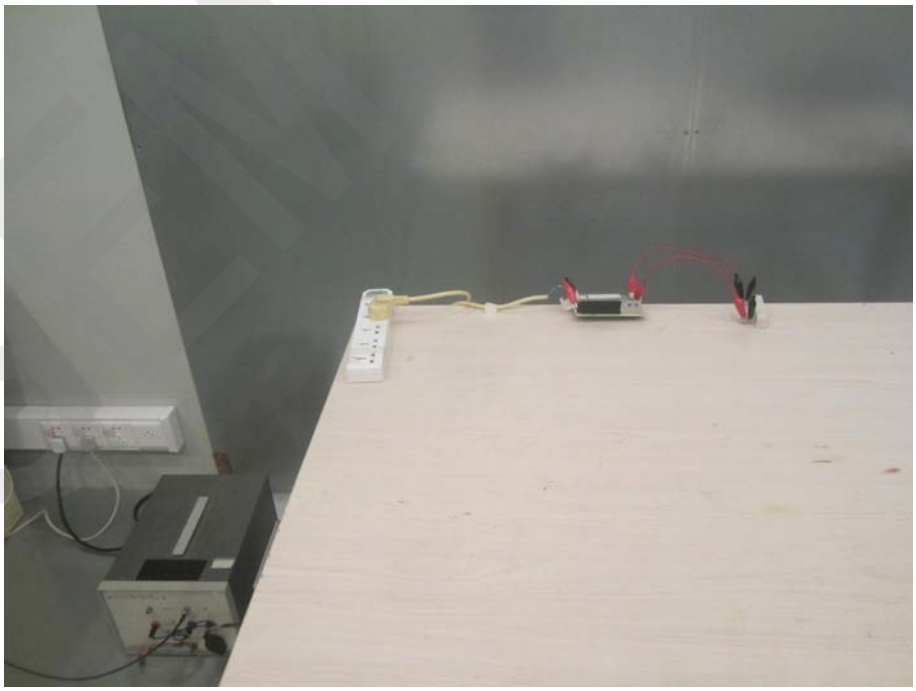


IEC61000-4-4/5/11 Test View

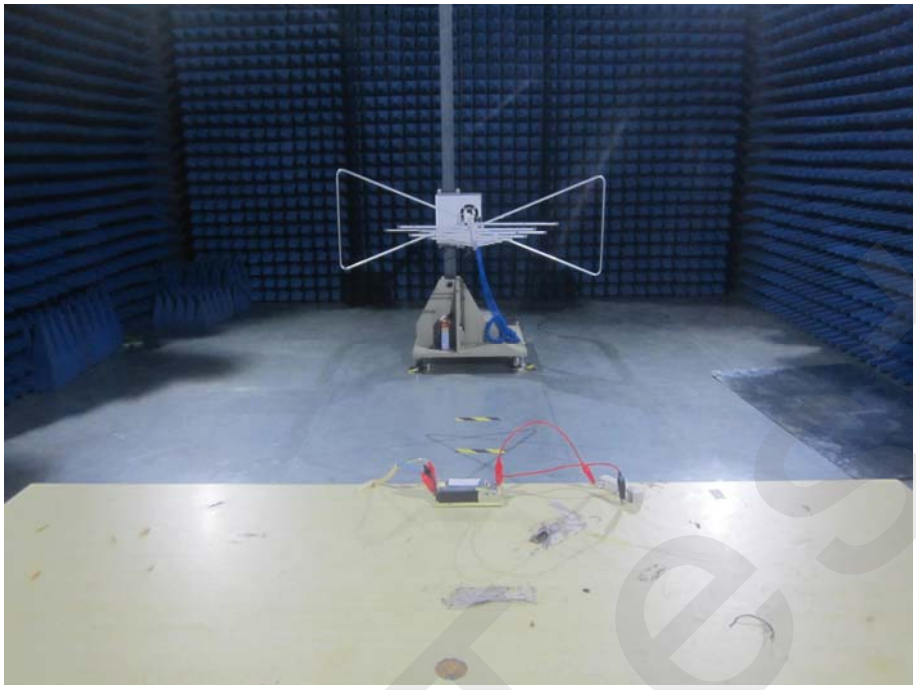
IEC61000-4-6 Test View

Tested Model: GTM91099-3009-4.0-FW(5V)

Conduction Emission Test View



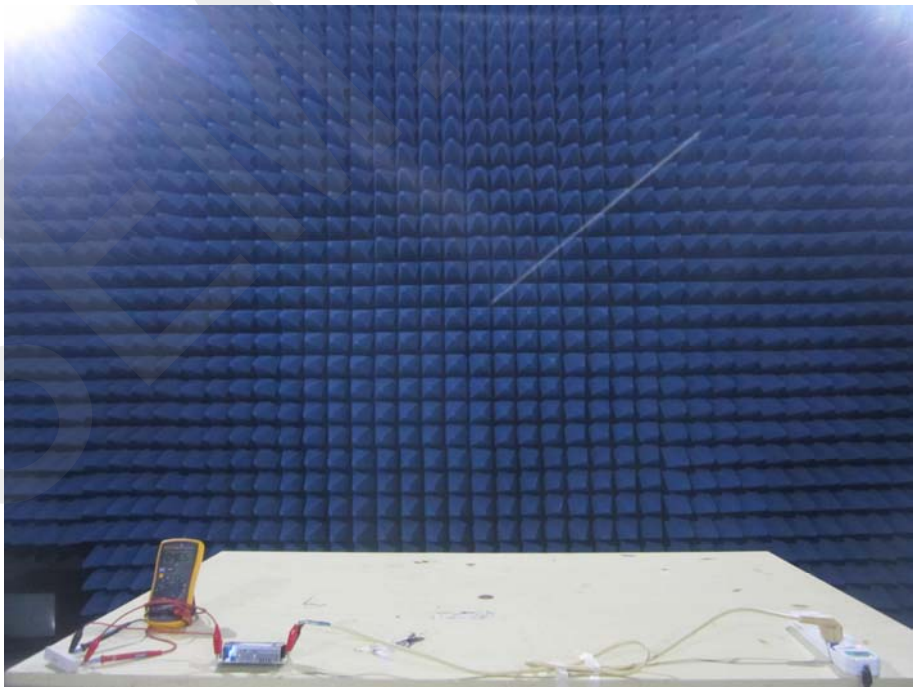
Radiation Emission Test View



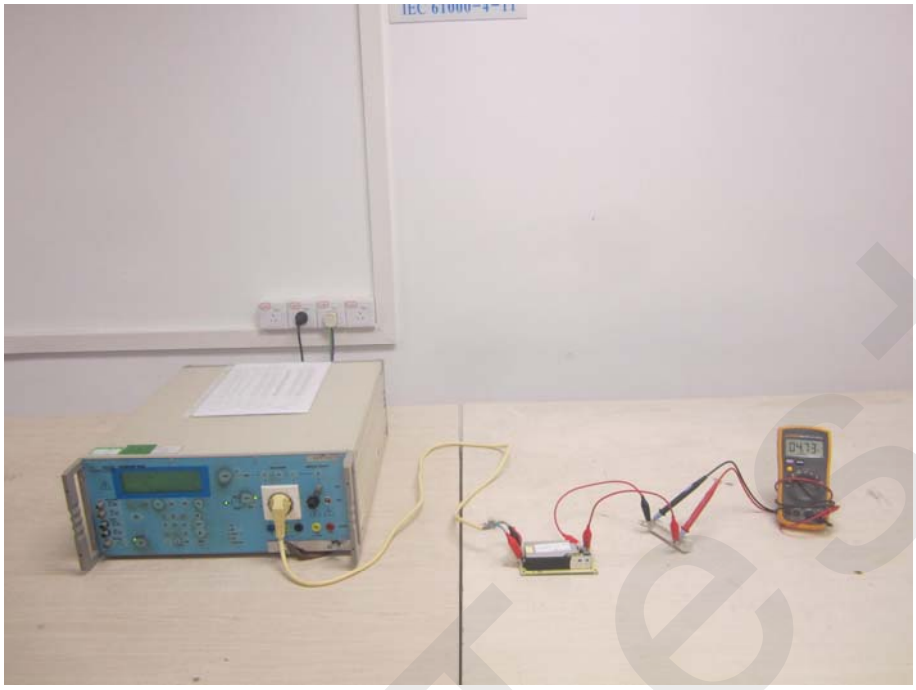
Flicker Test View

IEC61000-4-2 Test View

IEC61000-4-3 Test View



IEC61000-4-4/5/11 Test View

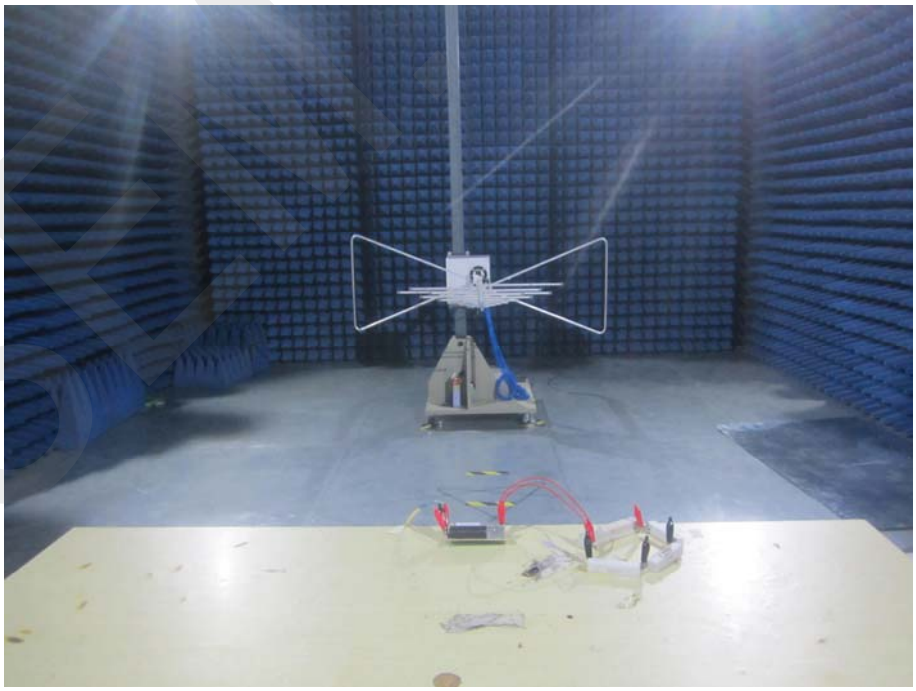


IEC61000-4-6 Test View

Tested Model: GTM91099-6048-FW

Conduction Emission Test View

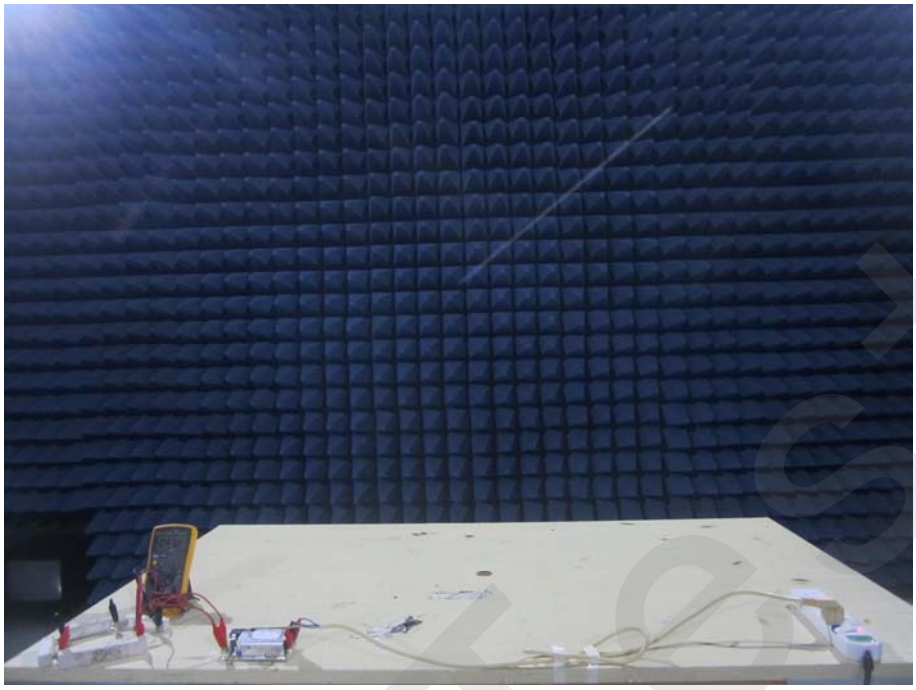
Radiation Emission Test View



Flicker Test View

IEC61000-4-2 Test View

IEC61000-4-3 Test View



IEC61000-4-4/5/11 Test View

IEC61000-4-6 Test View

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