EMC
Measurement and Test Report

For

GlobTek, Inc.

186 Veterans Dr. Northvale, NJ 07647 USA

Test Standards:	EN 55032:2015/AC:2016-07 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 55035:2017 EN 60601-1-2:2015
Product Description:	ITE / Medical Power supply
Tested Model:	GT*46161-**-USB,-USB1A, -USB2A or -USBC
Report No.:	STR18118126E
Tested Date:	2018-11-15 to 2018-11-20
Issued Date:	2018-11-20
Tested By:	Gan Li / Engineer
Reviewed By:	Silin Chen / EMC Manager
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Prepared By:	

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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:	ITE / Medical Power supply
Trade Name:	GlobTek, Inc.
Model No.:	GT*46161-**-USB, -USB1A, -USB2A or -USBC
	GT*46161-**-USB, -USB1A, -USB2A or -USBC The 1st "*" can be "M" or "-"or "H" for market identification and not related to safety. The 2nd "*" denote the rated output wattage designation, which can be "01" to "16", with interval of 1. The 3rd "*" denote the standard rated output voltage designation, which can be "5.0" to "5.5" or "05" to "05.5" with interval of 0,1.
Adding Model(s):	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	AC 100-240V
Rated Current:	0.45A
Rated Power:	16W
Power Adaptor Model:	/
Highest Internal Frequency:	Below 108MHz
Classification of Equipment:	Class B

1.2 Test Standards

The tests were performed according to following standards:

EN 55032:2015/AC:2016-07 Electromagnetic compatibility of multimedia equipment - Emission requirements

EN 55035:2017 Electromagnetic compatibility of multimedia equipment - Immunity requirements

EN 61000-3-2:2014 Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase),

EN 61000-3-3:2013 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 60601-1-2:2015 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral standard: Electromagnetic compatibility – Requirements and tests

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 EN55032, EN61000-3-2, EN61000-3-3, and EN55035 for electromagnetic compatibility of multimedia equipment, and all related testing and measurement techniques intentional standards, and EN 60601-1-2 for Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral standard:
Electromagnetic compatibility – Requirements and tests.

1.4 Test Facility

FCC – Registration No.: 125990
Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

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	Power Supply Mode
TM1	Connect to load	GTM46161-165.0-USB Output：5V3.2A	AC 230V/50Hz
TM2	Connect to load	GTM46161-165.5-USB Output：5.5V2.9A	AC 230V/50Hz
Note: The product is Measurement at two nominal voltages of 230V and 110V, using a frequency of 50Hz or 60Hz. This report is display the worst case with 230V/50Hz data.			

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB	0.4	Unshielded	Without Core

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Multimeter	Fluke	15B	/

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.

1.7 Test Equipment List and Details

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2018-05-22	2019-05-21
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2018-05-22	2019-05-21
Amplifier	Agilent	8447F	3113A06717	2018-05-22	2019-05-21
Amplifier	C&D	PAP-1G18	2002	2018-05-22	2019-05-21
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-08	2020-06-07
Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-333	2017-06-08	2020-06-07
Horn Antenna	ETS	3117	00086197	2017-06-08	2020-06-07
Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-08	2020-06-07
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2018-05-22	2019-05-21
EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2018-05-22	2019-05-21
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2018-05-22	2019-05-21
AC LISN	Schwarz beck	NSLK8126	8126-224	2018-05-22	2019-05-21
8-WIRE LISN	Schwarz beck	8158	CAT3-8158-0059	2018-05-22	2019-05-21
8-WIRE LISN	Schwarz beck	8158	CAT5-8158-0117	2018-05-22	2019-05-21
PMF Generator	LIONCEL	PMF-801C-C	0171101	2018-05-22	2019-05-21
PMF Antenna	LIONCEL	PMF-801C-A	0180302	2018-05-22	2019-05-21
Instantaneous PMF Generator Module	LIONCEL	PMF-801C-T	0171001	2018-05-22	2019-05-21
Digital Power Analyzer	California Instrument	CTS	72831	2018-05-22	2019-05-21
Power Source	California Instrument	5001IX-CTS-400	25965	2018-05-22	2019-05-21
ESD Generator	LIONCEL	ESD-203B	0170901	2018-05-28	2019-05-27
Amplifier	Agilent	8447D	2944A10179	2018-05-22	2019-05-21
Transient 2000	EMC PARTNER	TRA2000	863	2018-05-22	2019-05-21
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2018-05-26	2019-05-25
CS Immunity Tester	SCHAFFNER	NSG2070	1123	2018-05-22	2019-05-21
Attenuator	EMTEST	MA-500	1009	2018-05-22	2019-05-21
CDN	Luthi	L-801M2/M3	2665	2018-05-22	2019-05-21
Signal Generator	R&S	SMB100A	105942	2017-09-11	2018-09-10
Power Meter	R&S	NRP2	102031	2017-09-11	2018-09-10
RF Power Amplifier	BONN Elektronik	BLWA0830-160/100/40D	128740	2017-09-11	2018-09-10
RF Power Amplifier	NJNT	NTWPAS-2560025	2560025	2017-09-11	2018-09-10
Antenna	SCHWARZBECK	STLP9128D	043	2017-09-11	2020-09-10
Antenna	SCHWARZBECK	BBHA 9120 D	667	2017-09-11	2020-09-10

2. SUMMARY OF TEST RESULTS

Standards	Description of Test Item	Result
EN 55032 EN 61000-3-2 EN 61000-3-3 EN 55035 EN 60601-1-2	Conducted Emission	Compliant
	Radiated Emission	Compliant
	Harmonic Current Emission	Compliant
	Voltage Fluctuation and Flicker	Compliant
	Electrostatic Discharge Immunity in accordance with EN 61000-4-2	Compliant
	Continuous RF electromagnetic field Disturbances Immunity in accordance with EN 61000-4-3	Compliant
	Electrical Fast Transient/Burst Immunity in accordance with EN 61000-4-4	Compliant
	Surges Immunity in accordance with EN 61000-4-5	Compliant
	Continuous induced RF disturbances Immunity in accordance with EN 61000-4-6	Compliant
	Power-frequency Magnetic Fields Immunity in accordance With EN 61000-4-8	Compliant
	Voltage Dips/Interruptions Immunity in accordance with EN 61000-4-11	Compliant
	Broadband impulse noise disturbances, repetitive	N/A
	Broadband impulse noise disturbances, isolated	N/A

N/A: not applicable

3. Conducted Emission

3.1 Measurement Uncertainty

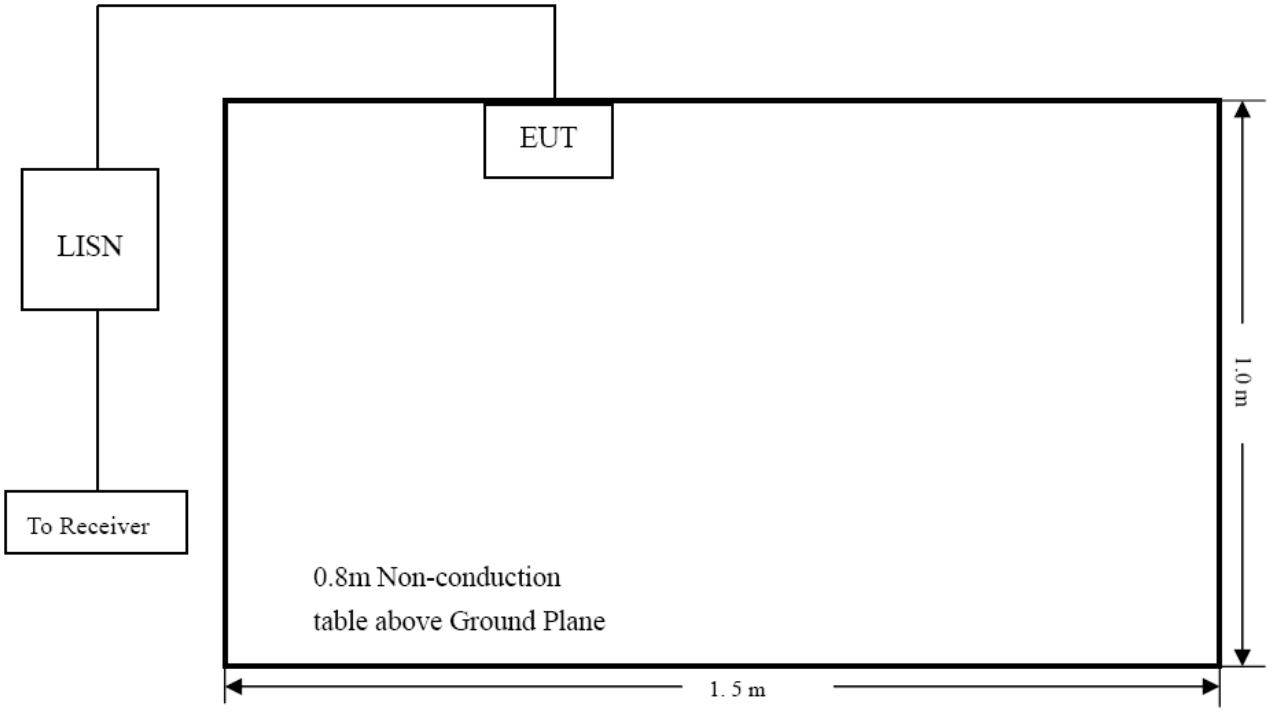
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz ±3.74dB
		0.15-30MHz ±3.34dB

3.2 Test Procedure

Test is conducting under the description of EN55032 Annex A.3.5.

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

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

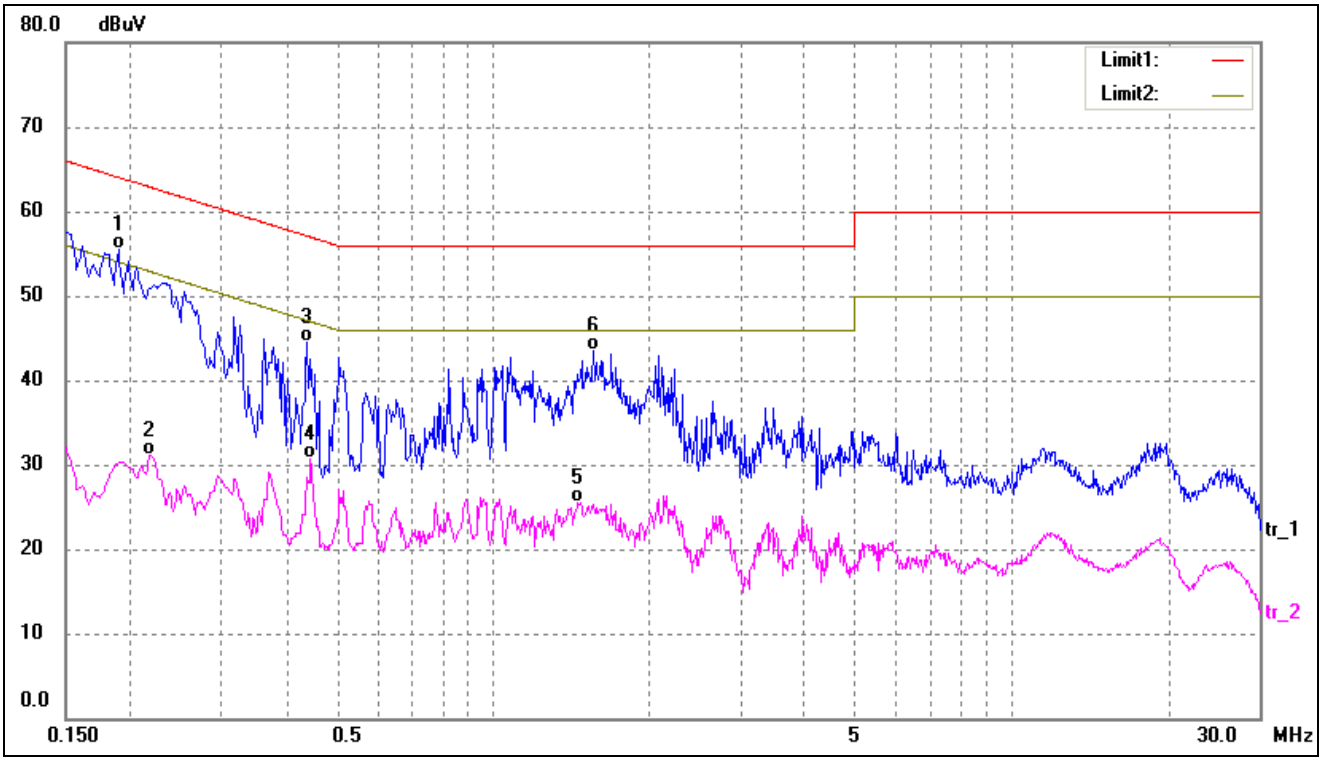
3.5 Summary of Test Results/Plots

According to the data in section 3.6, the EUT complied with the EN55032 / EN 60601-1-2 Conducted margin for a Class B device, with the *worst* margin reading of:

-8.36 at **0.4700 MHz** in the **Neutral** mode, **AVG** detector, **TM2** mode, **0.15-30MHz**

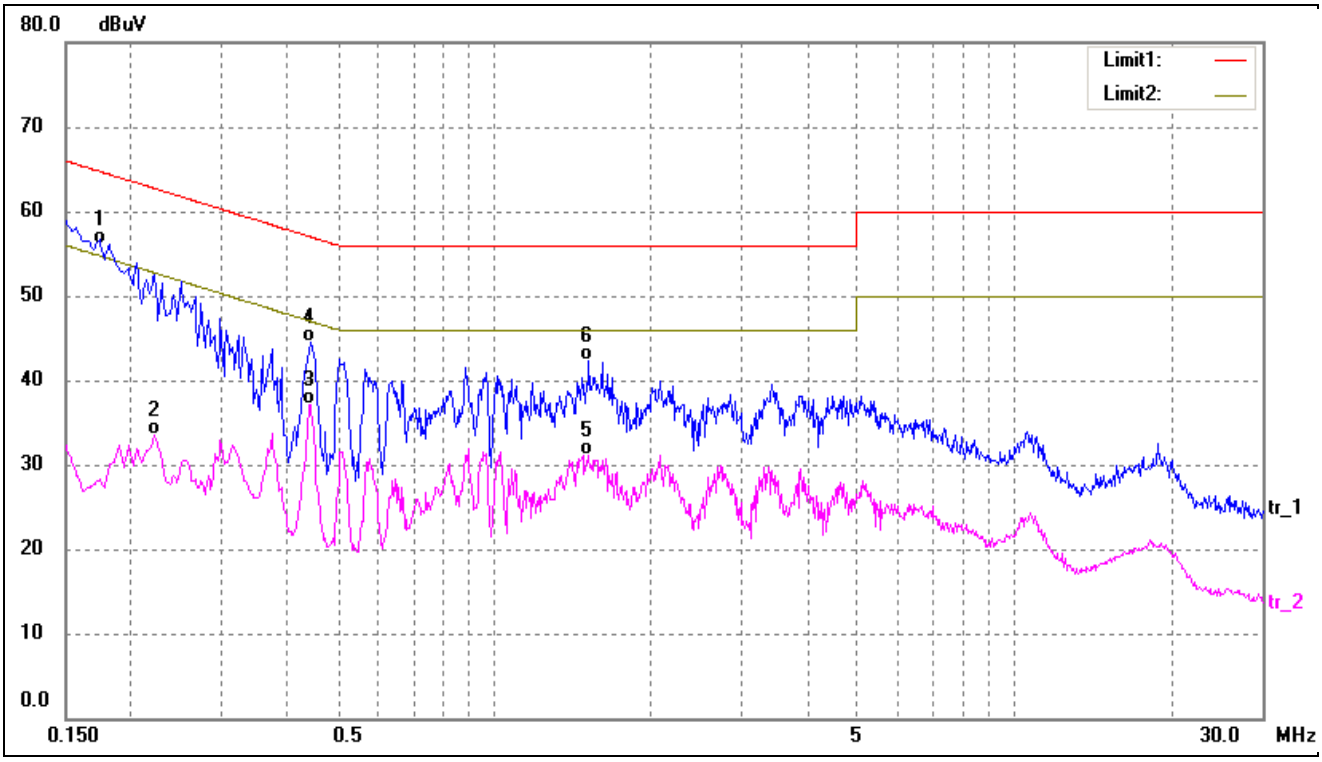
3.6 Conducted Emissions Test Data

Test mode:	TM1	Polarity:	Line



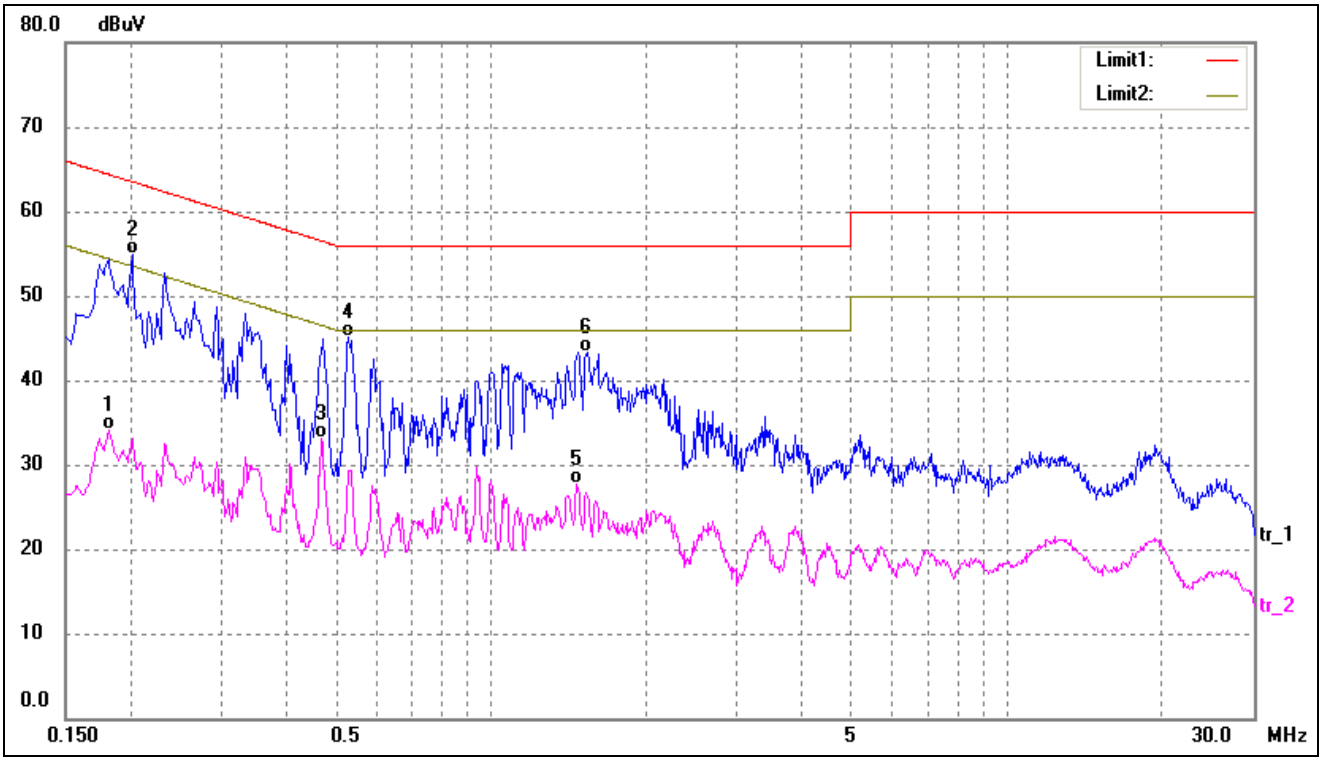
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1900	45.32	10.12	55.44	64.04	-8.60	QP
2	0.2180	21.00	10.13	31.13	52.89	-21.76	AVG
3	0.4380	34.14	10.27	44.41	57.10	-12.69	QP
4	0.4460	20.41	10.27	30.68	46.95	-16.27	AVG
5	1.4620	14.91	10.56	25.47	46.00	-20.53	AVG
6	1.5660	32.97	10.56	43.53	56.00	-12.47	QP

Test mode:	TM1	Polarity:	Neutral



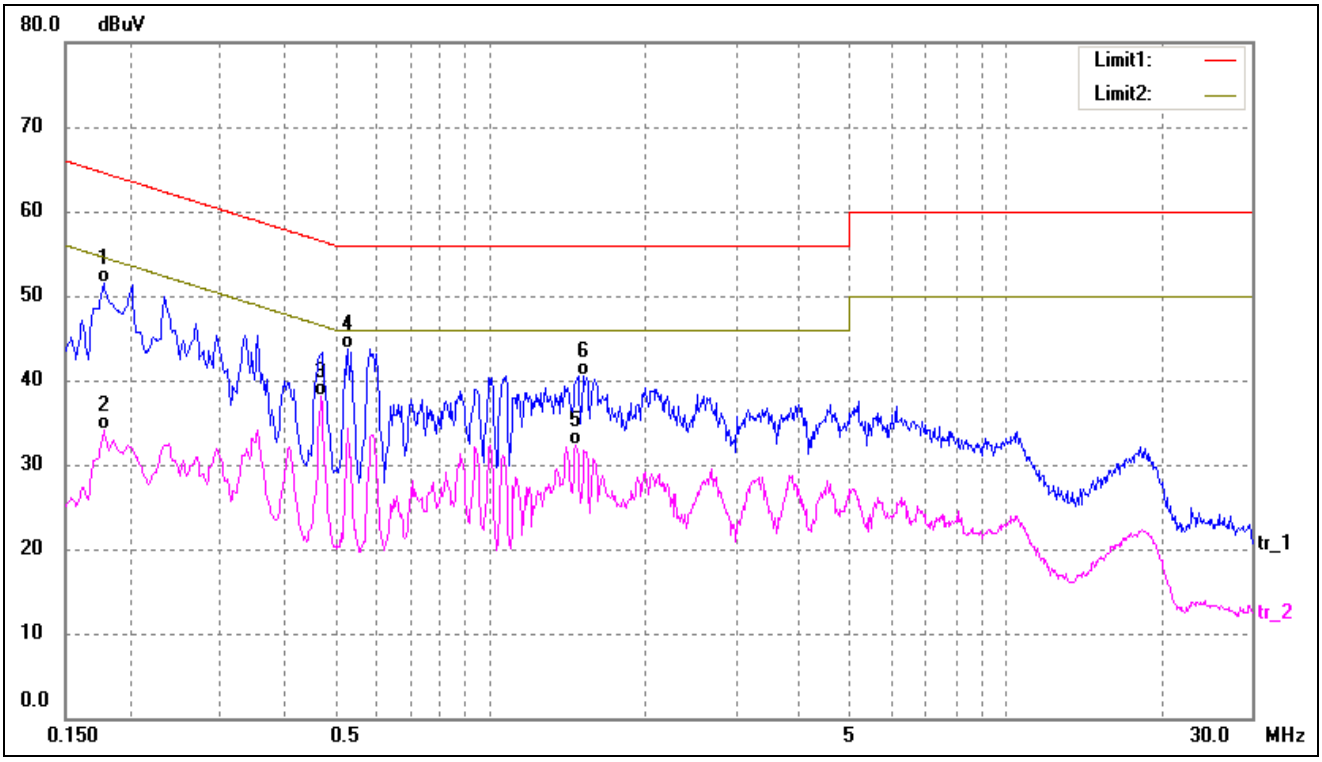
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1749	46.00	10.11	56.11	64.72	-8.61	QP
2	0.2220	23.32	10.14	33.46	52.74	-19.28	AVG
3	0.4420	26.75	10.27	37.02	47.02	-10.00	AVG
4	0.4460	34.24	10.27	44.51	56.95	-12.44	QP
5	1.5140	20.60	10.55	31.15	46.00	-14.85	AVG
6	1.5260	31.77	10.55	42.32	56.00	-13.68	QP

Test mode:	TM2	Polarity:	Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1820	24.00	10.11	34.11	54.39	-20.28	AVG
2*	0.2020	44.72	10.12	54.84	63.53	-8.69	QP
3	0.4700	22.82	10.28	33.10	46.51	-13.41	AVG
4	0.5300	34.75	10.30	45.05	56.00	-10.95	QP
5	1.4700	17.05	10.56	27.61	46.00	-18.39	AVG
6	1.5420	32.69	10.56	43.25	56.00	-12.75	QP

Test mode:	TM2	Polarity:	Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1780	41.32	10.11	51.43	64.58	-13.15	QP
2	0.1780	23.96	10.11	34.07	54.58	-20.51	AVG
3*	0.4700	27.87	10.28	38.15	46.51	-8.36	AVG
4	0.5300	33.50	10.30	43.80	56.00	-12.20	QP
5	1.4660	21.79	10.56	32.35	46.00	-13.65	AVG
6	1.5260	29.97	10.55	40.52	56.00	-15.48	QP

4. Radiated Emission

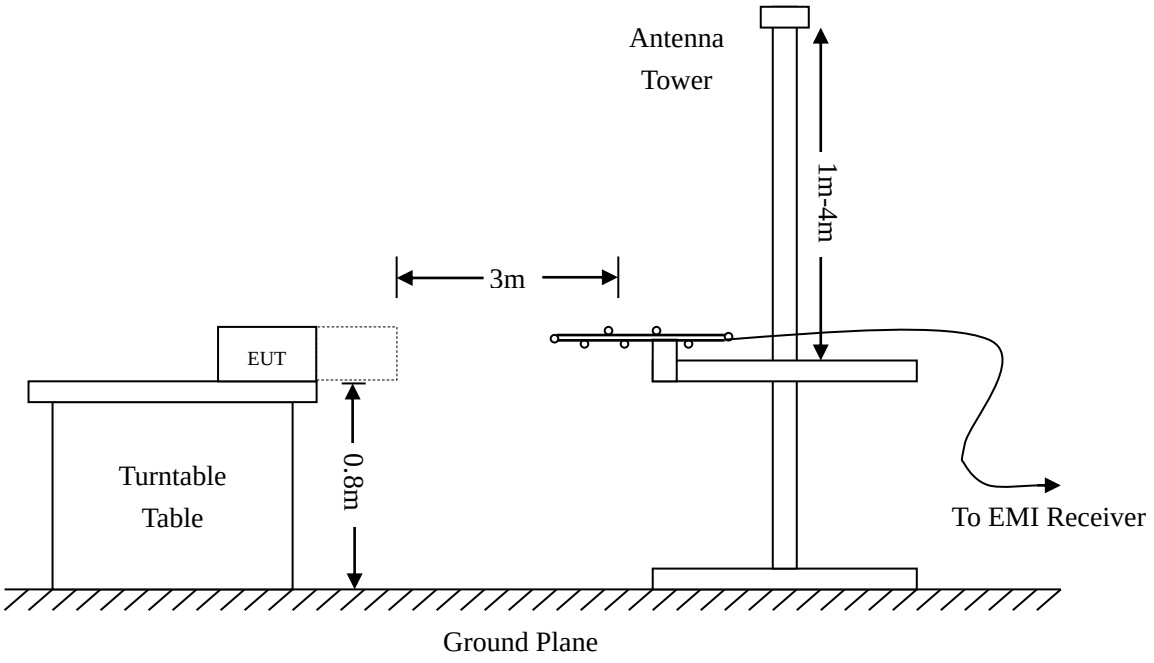
4.1 Measurement Uncertainty

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

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Radiated Emissions	Radiated	30-200MHz ±4.52dB
		0.2-1GHz ±5.56dB
		1-6GHz ±3.84dB
		6-18GHz ±3.92dB

4.2 Test Procedure

Test is conducting under the description of EN55032 Annex C.2.2.4



4.3 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 for Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – EN55032 / EN 60601-1-2 Class B Limit

4.4 Environmental Conditions

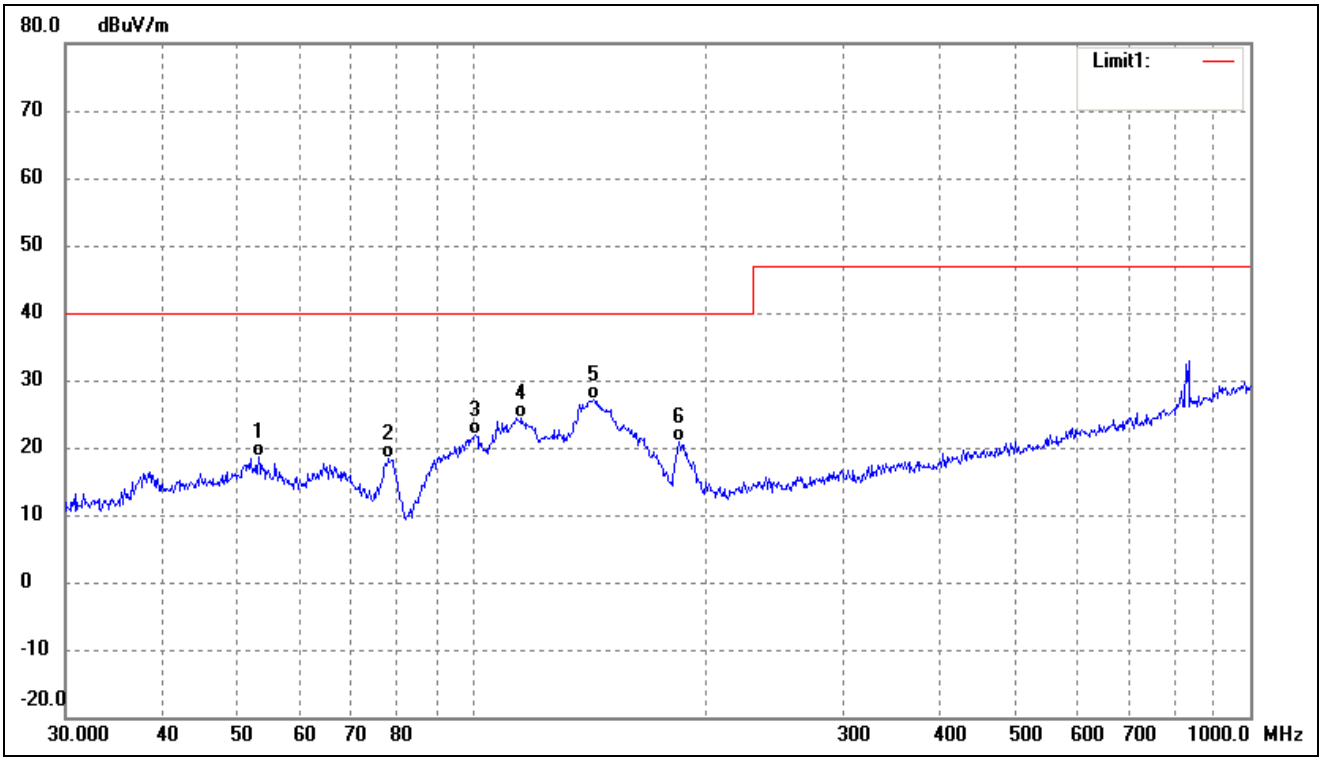
Temperature:	23° C
Relative Humidity:	53%
ATM Pressure:	1011 mbar

4.5 Summary of Test Results/Plots

According to the data in section 4.5, the EUT complied with the EN55032 / EN 60601-1-2 Class B standards, and had the worst margin is:

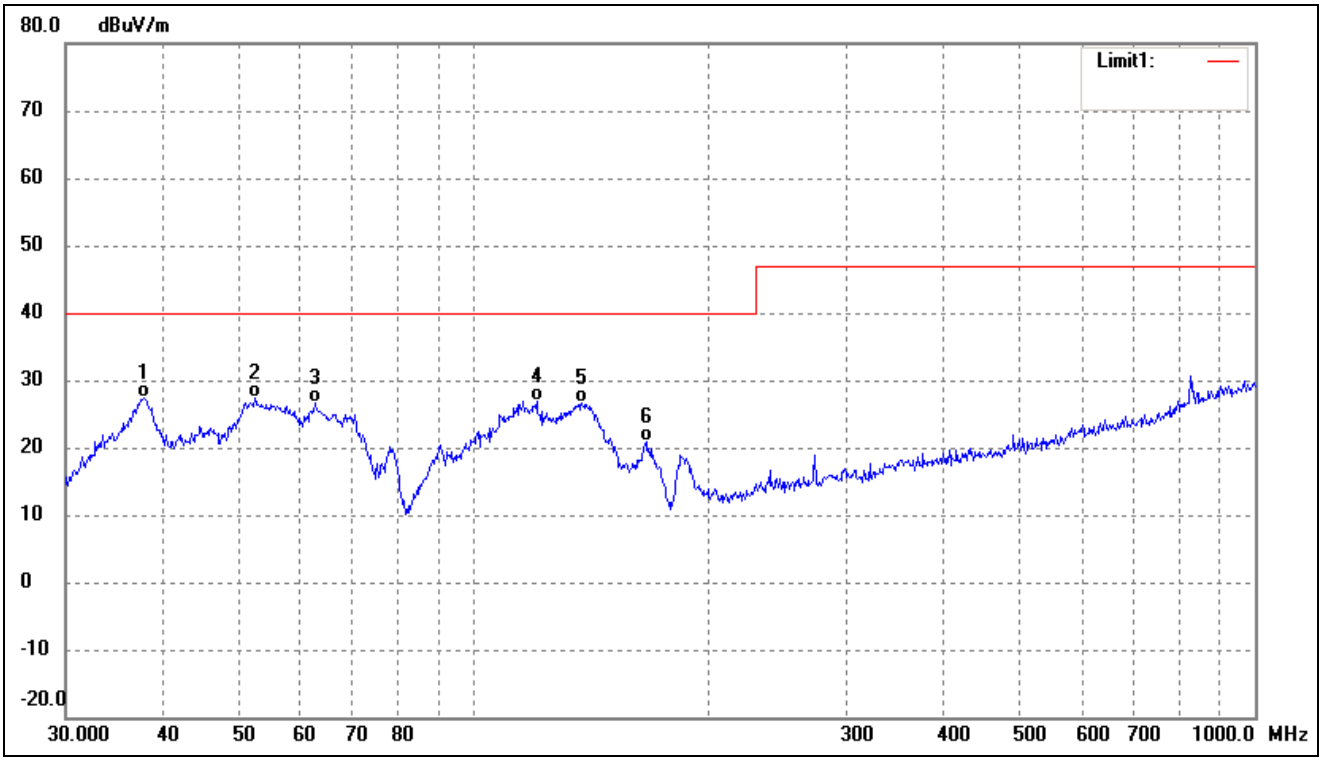
-9.45 dB at **147.9214 MHz** in the **Horizontal** polarization, **TM2** mode, **30 MHz to 1 GHz, 3Meters**

Test mode:	TM1	Polarity:	Horizontal



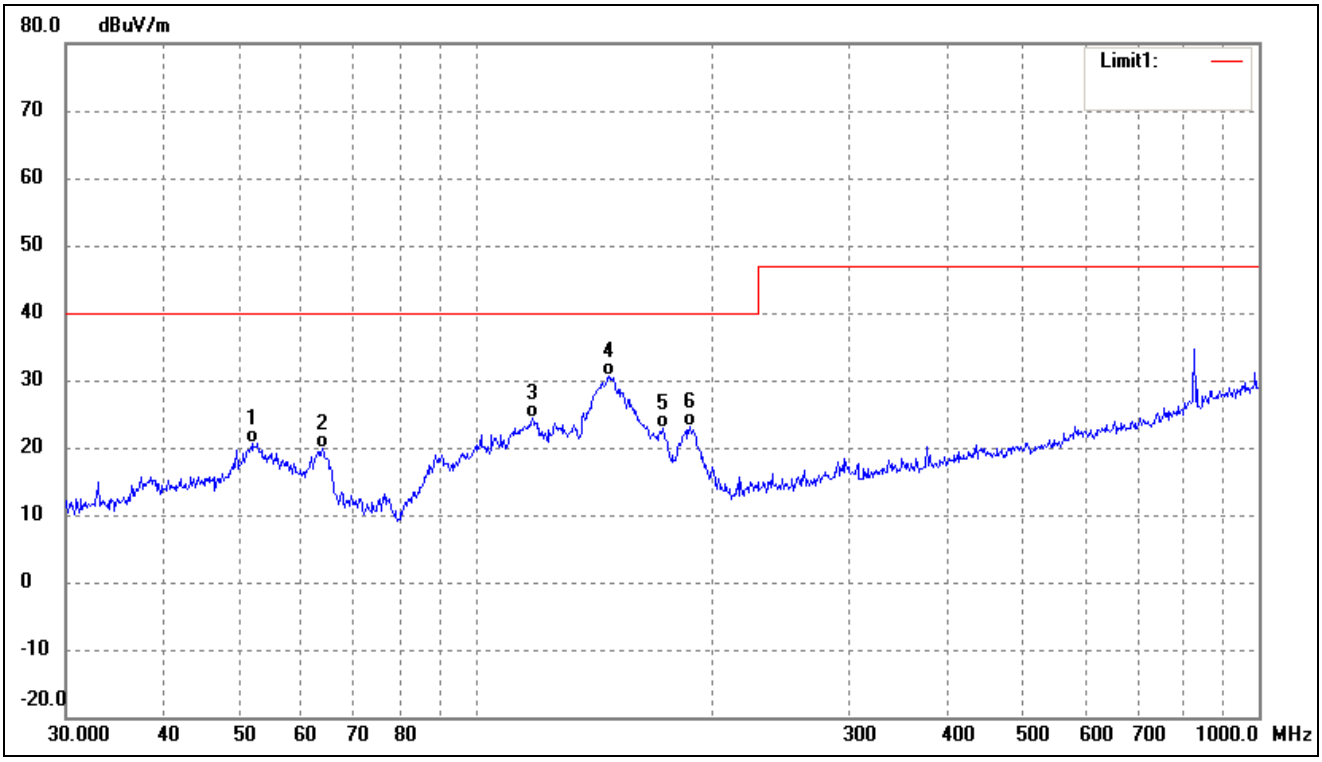
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	53.1313	30.41	-11.75	18.66	40.00	-21.34	251	100	QP
2	78.1389	35.72	-17.44	18.28	40.00	-21.72	123	100	QP
3	100.9340	35.69	-13.73	21.96	40.00	-18.04	23	100	QP
4	115.7256	39.34	-14.94	24.40	40.00	-15.60	306	100	QP
5	143.3261	44.56	-17.43	27.13	40.00	-12.87	259	100	QP
6	184.4898	35.84	-14.99	20.85	40.00	-19.15	210	100	QP

Test mode:	TM1	Polarity:	Vertical



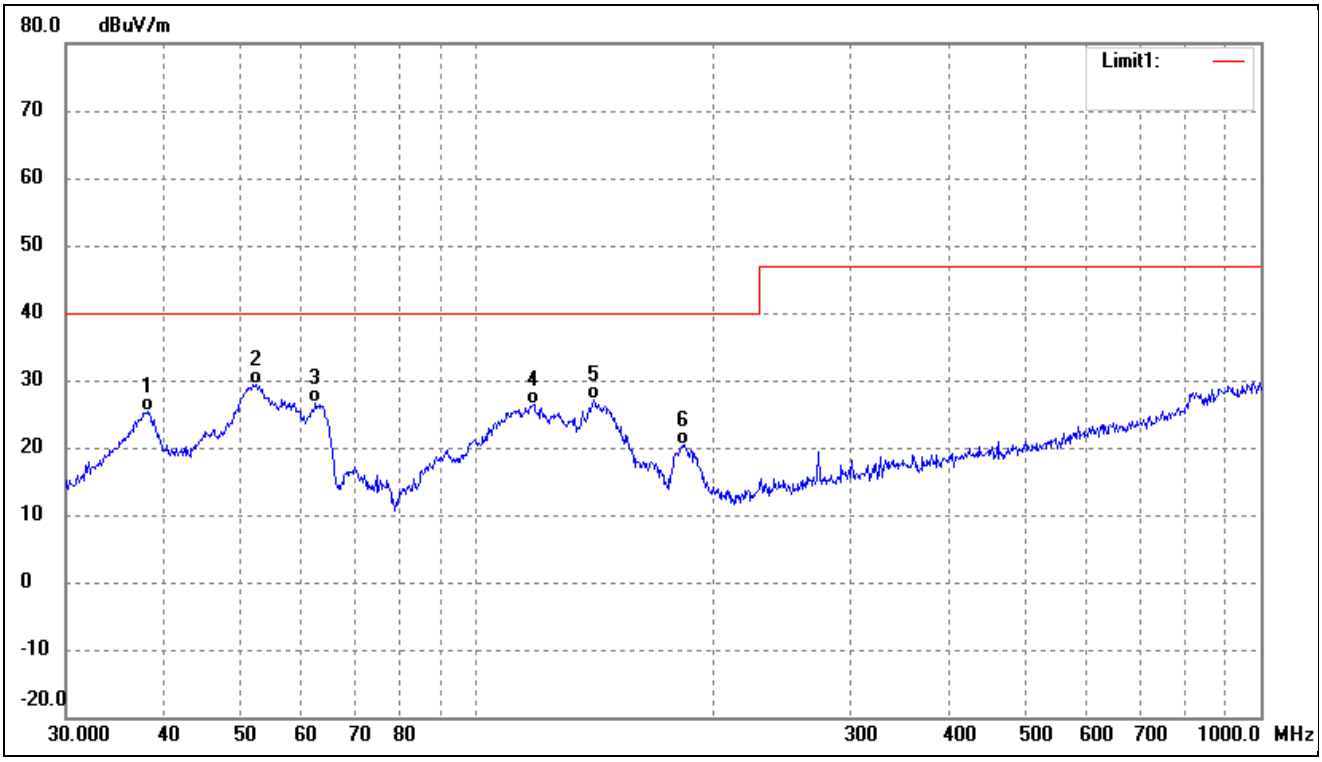
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	37.8121	40.72	-13.27	27.45	40.00	-12.55	356	100	QP
2	52.3913	39.12	-11.64	27.48	40.00	-12.52	289	100	QP
3	62.6507	40.27	-13.69	26.58	40.00	-13.42	251	100	QP
4	120.2766	42.45	-15.58	26.87	40.00	-13.13	104	100	QP
5	137.4202	43.98	-17.25	26.73	40.00	-13.27	211	100	QP
6	166.0680	37.06	-16.16	20.90	40.00	-19.10	125	100	QP

Test mode:	TM2	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	51.8430	32.32	-11.59	20.73	40.00	-19.27	169	100	QP
2	63.7588	33.60	-13.84	19.76	40.00	-20.24	258	100	QP
3	118.1862	39.61	-15.28	24.33	40.00	-15.67	345	100	QP
4	147.9214	48.00	-17.45	30.55	40.00	-9.45	105	100	QP
5	173.8135	39.00	-16.01	22.99	40.00	-17.01	222	100	QP
6	187.7530	37.78	-14.64	23.14	40.00	-16.86	102	100	QP

Test mode:	TM2	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.0783	38.44	-13.17	25.27	40.00	-14.73	35	100	QP
2	52.3913	41.02	-11.64	29.38	40.00	-10.62	289	100	QP
3	62.4314	40.18	-13.66	26.52	40.00	-13.48	214	100	QP
4	118.1862	41.77	-15.28	26.49	40.00	-13.51	107	100	QP
5	141.3298	44.53	-17.31	27.22	40.00	-12.78	251	100	QP
6	183.8440	35.41	-15.05	20.36	40.00	-19.64	126	100	QP

5. Harmonic Current Emissions

5.1 Test Procedure

Test is conducting under the description of EN 61000-3-2.

5.2 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

5.3 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 75W 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 Flicker

6.1 Test Procedure

Test is conducting under the description of EN 61000-3-3.

6.2 Test Standards

EN61000-3-3, Limit: Clause 5.

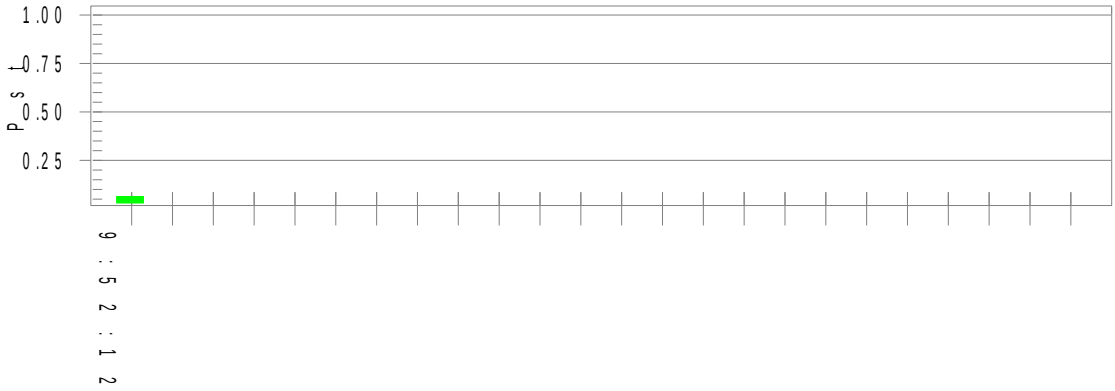
Environmental Conditions

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

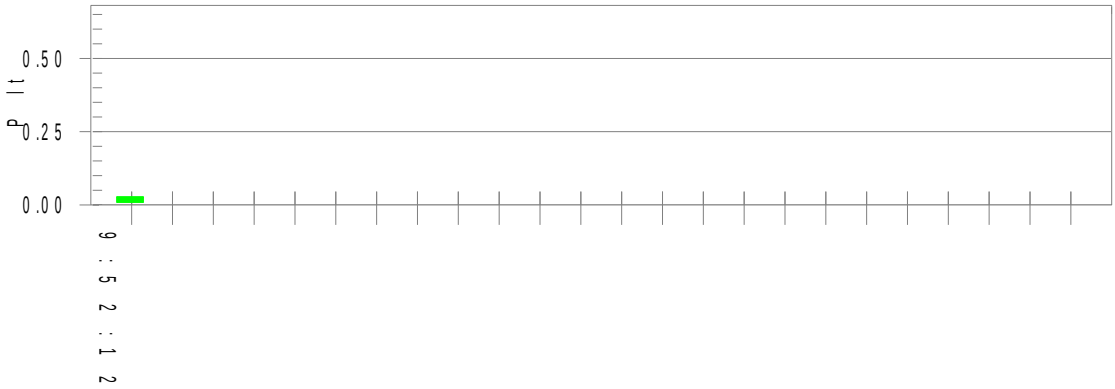
6.3 Voltage Fluctuation and Flicker Test Data

Test mode:	TM1

Pst and limit line **European Limits**



Plt and limit line

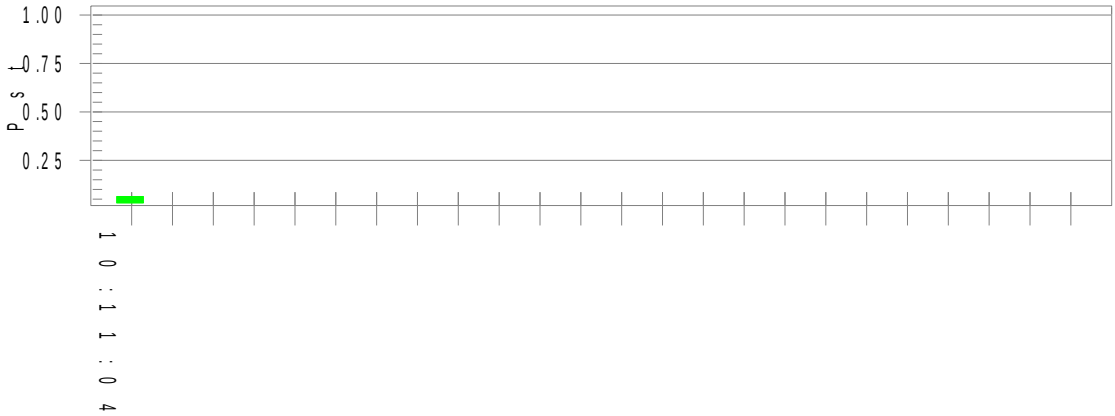


Parameter values recorded during the test:

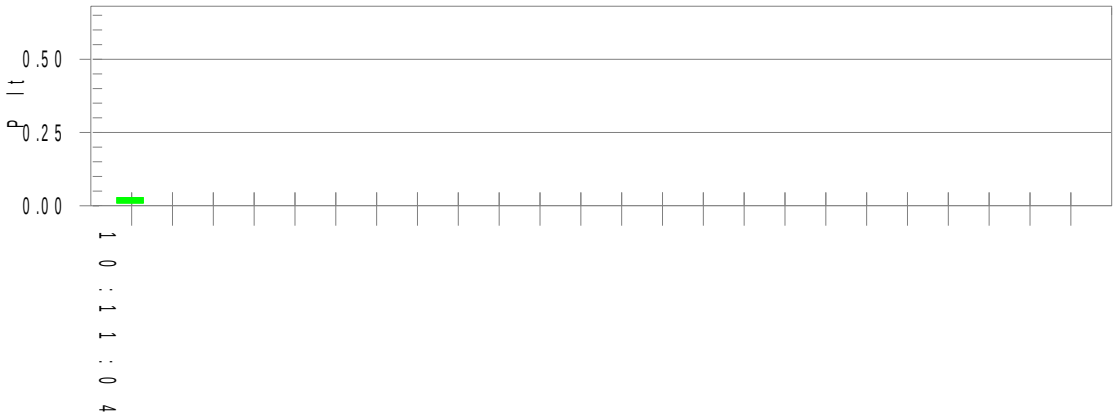
Vrms at the end of test (Volt):	**229.86**			
T-max (mS):	**0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.028**	**Test limit:**	**0.650**	**Pass**

Test mode:	TM2

Pst and limit line **European Limits**



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	**229.86**			
T-max (mS):	**0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.30**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.073**	**Test limit:**	**1.000**	**Pass**
Highest Plt (2 hr. period):	**0.032**	**Test limit:**	**0.650**	**Pass**

7. Electrostatic Discharges (ESD)

7.1 Test Procedure

Test is conducting under the description of EN 61000-4-2.

Test Performance

Performance Criterion: B

Environmental Conditions

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

7.2 Electrostatic Discharge Immunity Test Data

EN 55035
Table 1: Electrostatic Discharge Immunity (Air Discharge)

EN 61000-4-2	Test Levels (kV)									
Test Points	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
Gap	A	A	A	A	A	A	A	A	/	/
Surface	A	A	A	A	A	A	A	A	/	/
AC Port	A	A	A	A	A	A	A	A	/	/

Table 2: Electrostatic Discharge Immunity (Direct Contact)

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

Table 3: Electrostatic Discharge Immunity (Indirect Contact HCP & VCP)

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

EN 60601-1-2

Table 1: Electrostatic Discharge Immunity (Air Discharge)

EN 61000-4-2	Test Levels (kV)									
Test Points	-10	+10	-12	+12	-14	+14	-16	+16	-18	+18
Gap	A	A	A	A	A	A	A	A	A	A
Surface	A	A	A	A	A	A	A	A	A	A
AC Port	A	A	A	A	A	A	A	A	A	A

Table 2: Electrostatic Discharge Immunity (Direct Contact)

EN 61000-4-2	Test Levels (kV)									
Test Points	-2	+2	-4	+4	-6	+6	-8	+8	-10	+10
USB Port	A	A	A	A	A	A	B	B	/	/

Table 3: Electrostatic Discharge Immunity (Indirect Contact HCP & VCP)

EN 61000-4-2	Test Levels (kV)									
Test Points	-2	+2	-4	+4	-6	+6	-8	+8	-10	+10
HCP (6 Sides)	A	A	A	A	A	A	A	A	/	/
VCP (4 Sides)	A	A	A	A	A	A	A	A	/	/

Test Result: Pass

8. Continuous RF electromagnetic field Disturbances (RS)

8.1 Test Procedure

Test is conducting under the description of EN 61000-4-3, EN 61000-4-20, EN 61000-4-21.

Test Performance

Performance Criterion: A

Environmental Conditions

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

8.2 Continuous Radiated Disturbances Test Data

Frequency step: 1% of fundamental
Dwell time: 1 second
Modulation: AM by 1kHz sine wave with 80% modulation depth

EN 55035

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

Spot frequencies (MHz)	Field (V/m)	Front		Rear		Left Side		Right Side	
		VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
1800	3	A	A	A	A	A	A	A	A
2600	3	A	A	A	A	A	A	A	A
3500	3	A	A	A	A	A	A	A	A
5000	3	A	A	A	A	A	A	A	A

EN 60601-1-2

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

Test Result: Pass

9. Electrical Fast Transients (EFT)

9.1 Test Procedure

Test is conducting under the description of EN 61000-4-4.

Test Performance

Performance Criterion: B

Environmental Conditions

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

9.2 Electrical Fast Transients Test Data

EN 55035

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	/	/	/	/
	L2	/	/	A	A	/	/	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	/	/	A	A	/	/	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports	/	/	/	/	/	/	/	/	/

EN 60601-1-2

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	/	/
	L2	/	/	/	/	A	A	/	/
	PE	/	/	/	/	/	/	/	/
	L1+L2	/	/	/	/	A	A	/	/
	L1 + PE	/	/	/	/	/	/	/	/
	L2 + PE	/	/	/	/	/	/	/	/
	L1+L2+PE	/	/	/	/	/	/	/	/
Signal ports	/	/	/	/	/	/	/	/	/

Test Result: Pass

10. Surges

10.1 Test Procedure

Test is conducting under the description of EN 61000-4-5.

Test Performance

Performance Criterion: B

Environmental Conditions

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

10.2 Surge Test Data

EN 55035

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

EN 60601-1-2

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

Test Result: Pass

11. Continuous induced RF disturbances (C/S)

11.1 Test Procedure

Test is conducting under the description of EN 61000-4-6.

Test Performance

Performance Criterion: A

Environmental Conditions

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

11.2 Continuous Conducted Disturbances Test Data

EN 55035
Sweep frequency range: 0,15 MHz to 10 MHz 3 V; 10 MHz to 30 MHz 3 V to 1 V;30 MHz to 80 MHz 1V
Frequency step: 1% of fundamental
Dwell time: 1 second

Frequency MHz	Injected Position	Level	Observations (Performance Criterion)	Result
0.15-10	AC Mains	3Vrms	A	Pass
10-30	AC Mains	3-1Vrms	A	Pass
30-80	AC Mains	1Vrms	A	Pass

EN 60601-1-2
Sweep frequency range: 0,15 MHz to 80 MHz ; Frequency step: 1% of fundamental; Dwell time: 1 second

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	/	/	/

Test Result: Pass

12. Power-Frequency Magnetic Fields (PFMF)

12.1 Test Procedure

Test is conducting under the description of EN 61000-4-8.

Test Performance

Performance Criterion: A

Environmental Conditions

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

12.2 Power-Frequency Magnetic Field Test Data

EN 55035

Level	Magnetic Field Strength (r.m.s) A/m	Frequency Hz	Induction Coil Postion	Pass	Fail
1	1	50	X, Y, Z	A	/
2	3	50	X, Y, Z	/	/
3	10	50	X, Y, Z	/	/
X	Special	/		/	/

EN 60601-1-2

Level	Magnetic Field Strength (r.m.s) A/m	Frequency Hz	Induction Coil Postion	Pass	Fail
1	1	50	X, Y, Z	/	/
2	10	50	X, Y, Z	/	/
3	30	50	X, Y, Z	A	/
X	Special	/		/	/

Test Result: Pass

13. Voltage Dips and Interruptions

13.1 Test Procedure

Test is conducting under the description of EN 61000-4-11.

Test Performance

Performance Criterion: B/C

Environmental Conditions

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

13.2 Voltage Dips And Interruptions Test Data

U: Vlotage dips in % U_T (U_T is rated voltage for the EUT)
T: Test duration

EN 55035

Level	U	T	Phase Angle	N	Pass	Fail
1	100%	0.5P	0/90/180/270	3	B	/
2	30%	25P	0/90/180/270	3	B	/
3	100%	250P	0/90/180/270	3	B	/

EN 60601-1-2

Level	U	T	Phase Angle	N	Pass	Fail
1	100%	0.5P	0/90/180/270	3	B	/
2	60%	5P	0/90/180/270	3	B	/
3	100%	250P	0/90/180/270	3	B	/
4	70%	25P	0/90/180/270	3	B	/

Test Result: Pass

EXHIBIT 1 - PRODUCT LABELING

Proposed CE Label Format

ITE / Medical Power supply
Model: GT*46161-**-USB
Brand: GlobTek
Importer Name: XXX
Importer Address: XXX
1.GlobTek, Inc.
2.GlobTek (Suzhou) Co., Ltd
1.186 Veterans Dr. Northvale, NJ 07647 USA
2.Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China

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 is allowed less than 5 mm but must clear. If the 'CE' marking is reduced or enlarged the proportions given in the above graduated drawing must be respected. The Importer name, address and Manufacturer name and address should indicate on marking label or packaging or in a document accompanying

Proposed Label Location on EUT

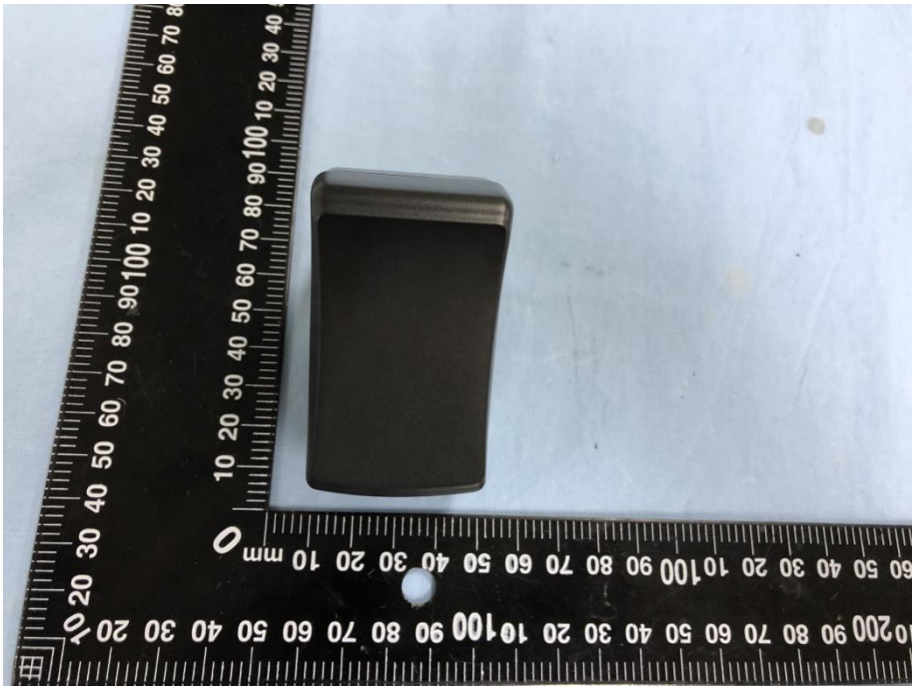
CE Label Location

EXHIBIT 2 - EUT PHOTOGRAPHS

GTM46161-165.0-USB

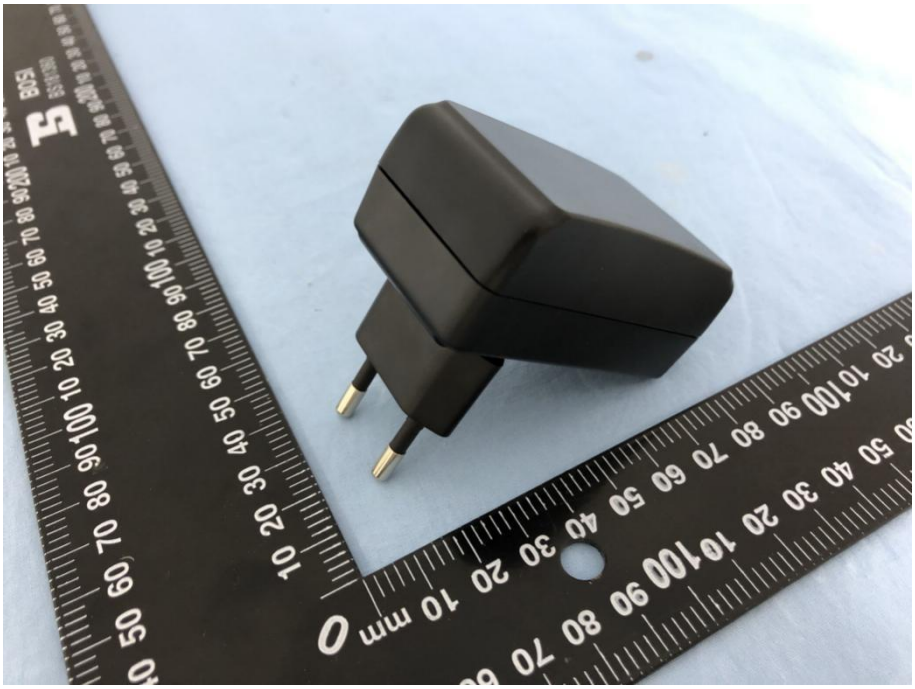
EUT View 1

EUT View 2



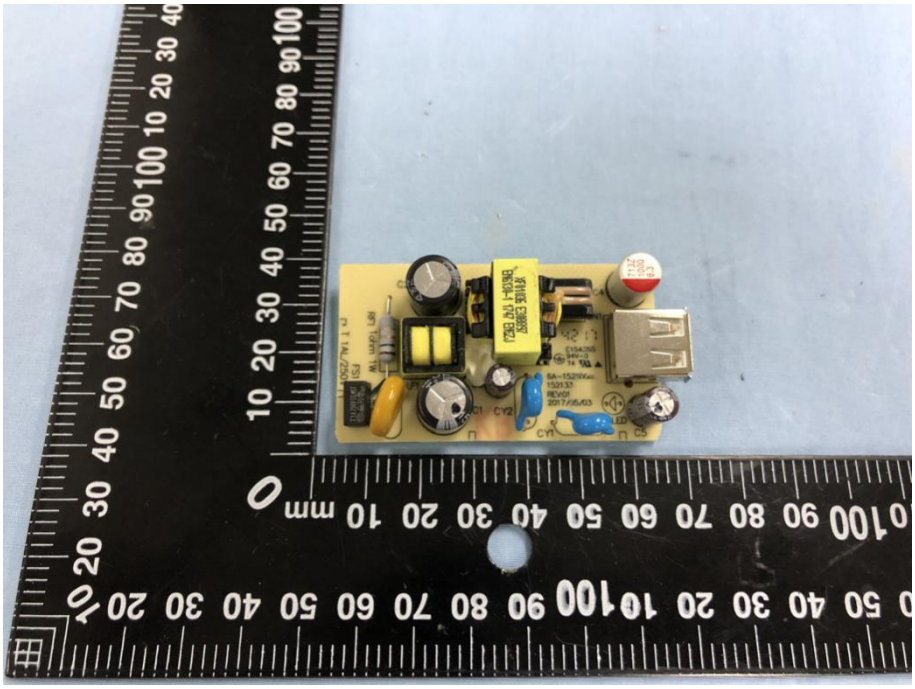
EUT View 3

EUT View 4

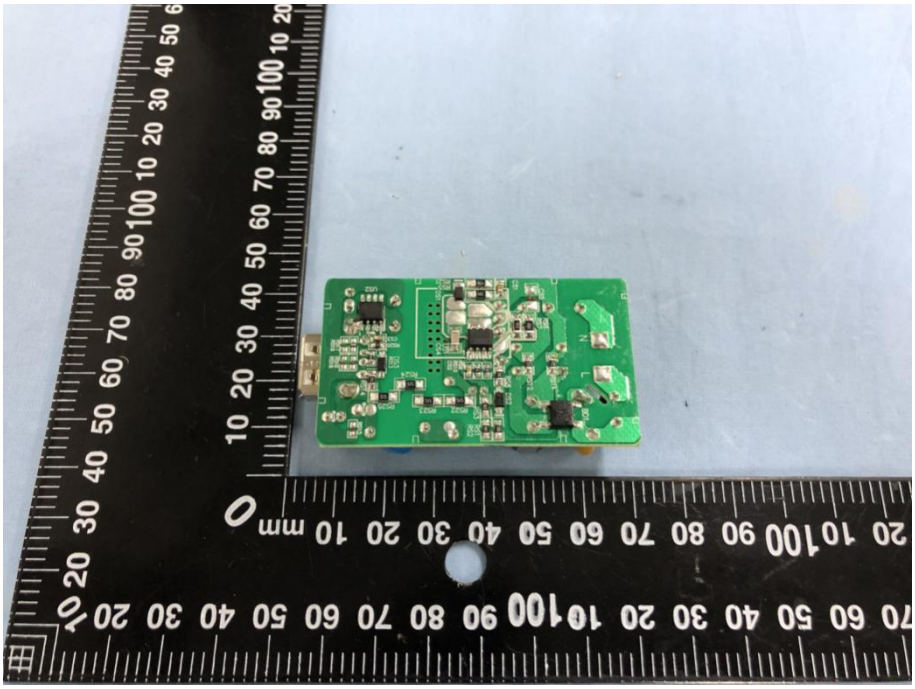


EUT Housing and Board View 1

Solder Board-Component View 1



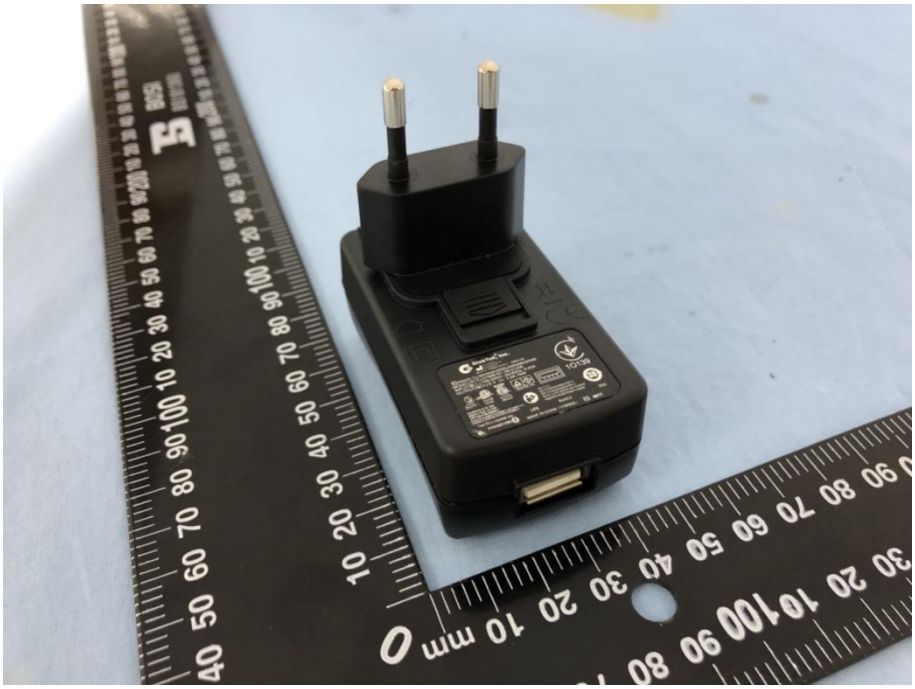
Solder Board-Component View 2



GTM46161-165.5-USB
EUT View 1

EUT View 2

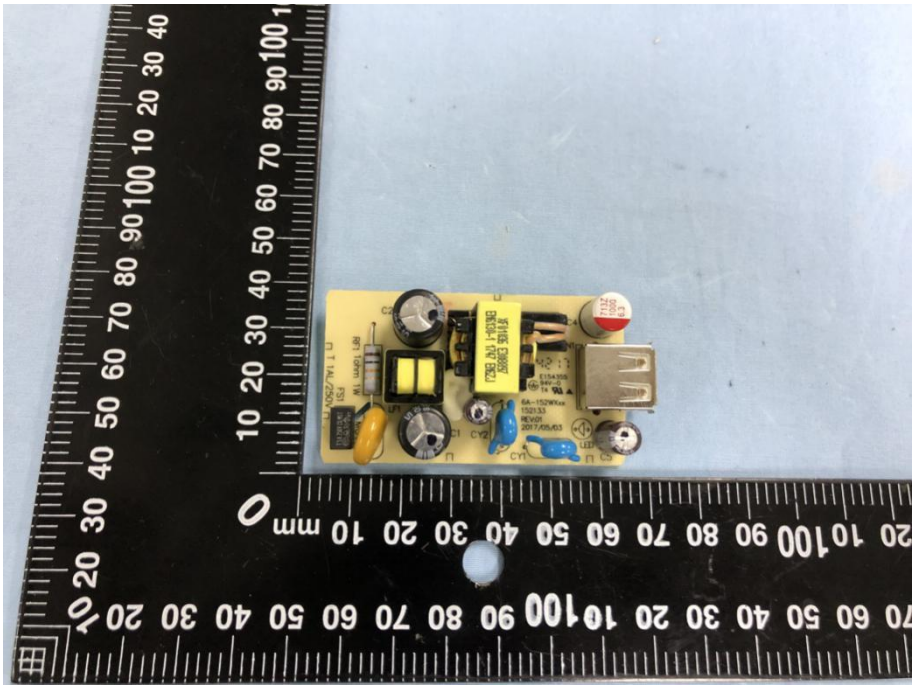
EUT View 3



EUT View 4

EUT Housing and Board View 1

Solder Board-Component View 1



Solder Board-Component View 2

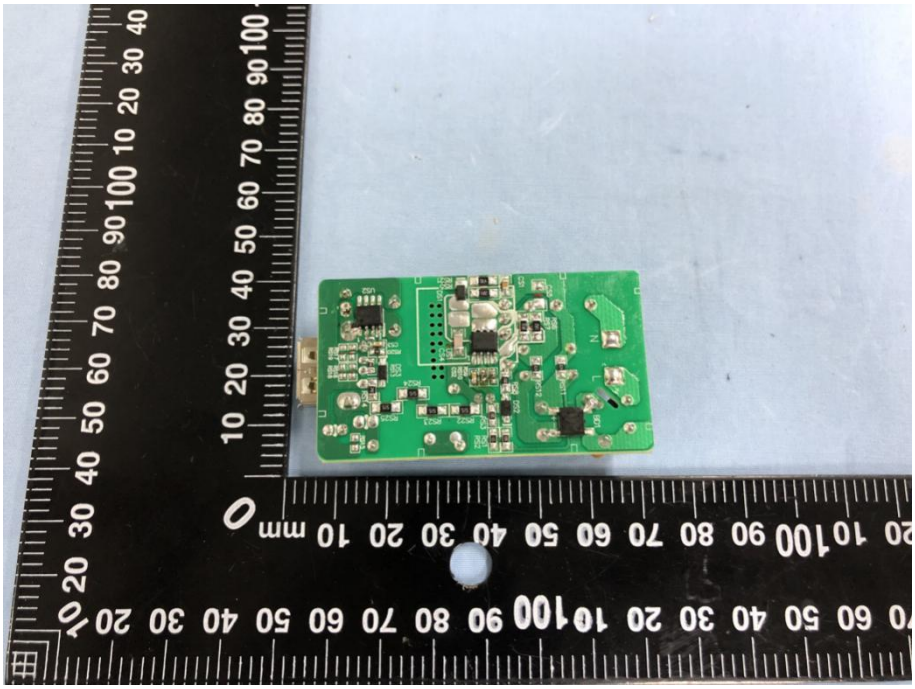
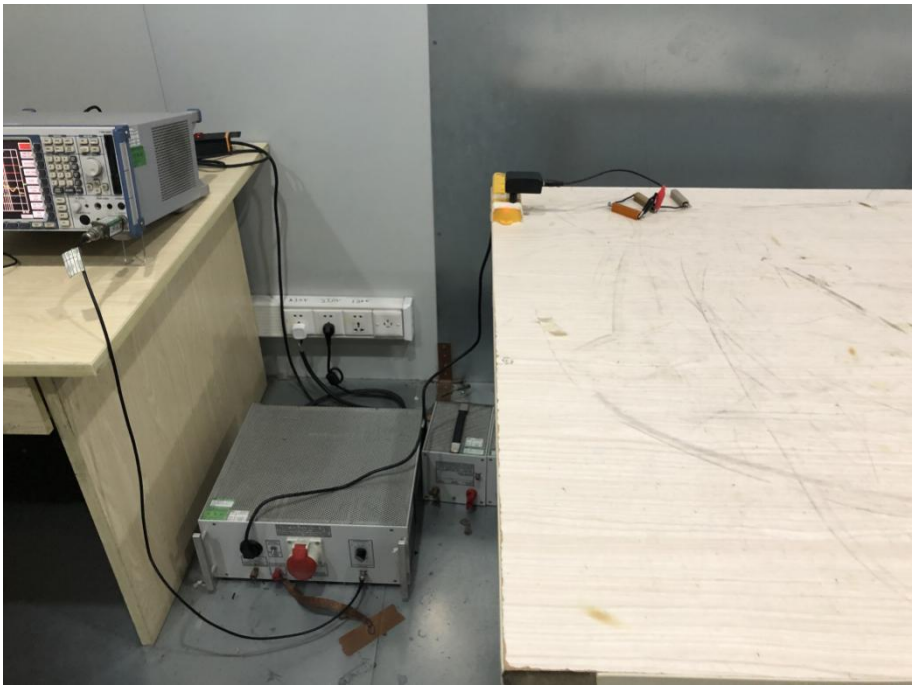
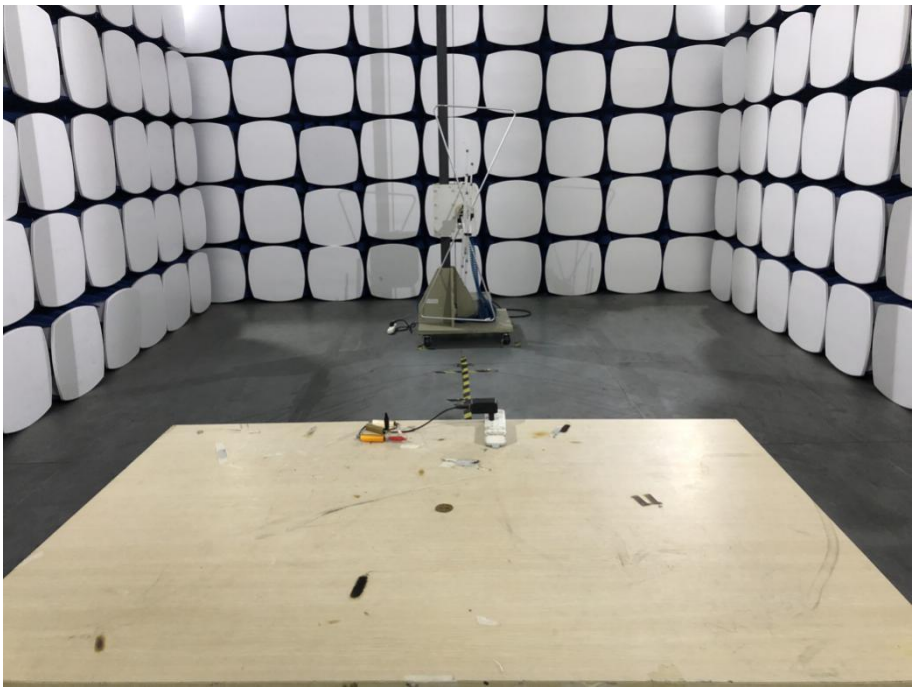


EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Conduction Emission Test View



Radiation Emission Test View



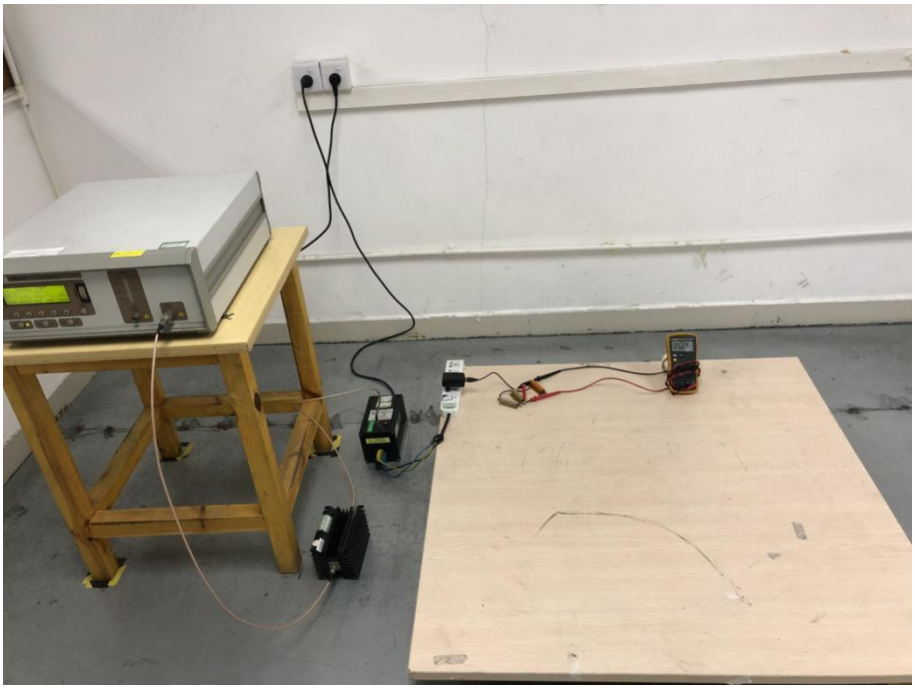
Harmonic/Flicker Test View

EN 61000-4-2 Test View

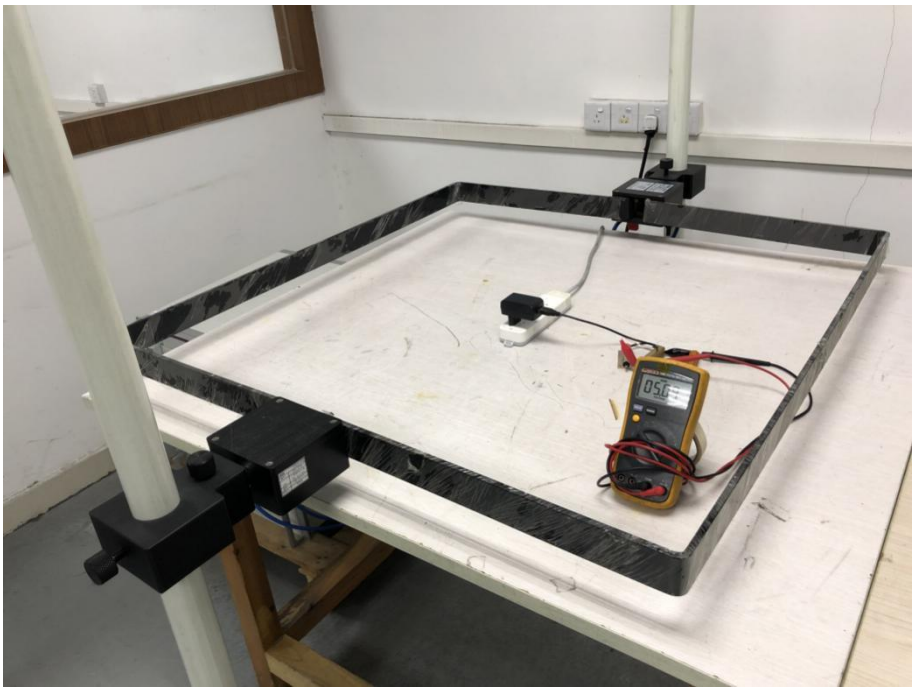
EN 61000-4-3 Test View

EN 61000-4-4/5/11 Test View

EN 61000-4-6 Test View



EN 61000-4-8 Test View



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