EN 55022: 2006+A1: 2007&EN55011: 2007
EN 60601-1-2: 2007
EN 55024: 1998+A1: 2001+A2: 2003
EN 61000-3-2: 2006+A2: 2009
EN 61000-3-3: 2008
Measurement and Test Report

For

GlobTek, Inc.

186 Veterans Dr. Northvale, NJ 07647 USA

Report Concerns: Original Report	**Equipment Type:** Medical power supply/I.T.E power supply
Model:	GTM91120-WWVV-X. X-YZ series
Report No.:	STR10088179E
Test Date:	2010-08-26 to 2010-08-31
Issue Date:	2010-09-01
Test Engineer:	Galy He
Reviewed By:	Lahm Peng
Approved & Authorized By:	Jandy so/PSQ Manager
Prepared By:	**SEM.Test Compliance Service Co., Ltd** 3/F, Jinbao Commerce Building, Xin'an Fanshen 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 SEM.Test Compliance Service Co., Ltd.

TABLE OF CONTENTS

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
Manufacturer1:	GlobTek, Inc.
Address of manufacturer1:	186 Veterans Dr. Northvale, NJ 07647 USA
Manufacturer2:	GlobTek (Suzhou) Co., Ltd
Address of manufacturer2:	Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China

General Description of E.U.T

Items	Description
EUT Description:	Medical power supply/I.T.E. power supply
Trade Name:	GlobTek
Model No.:	GTM91120-WWVV-X. X-YZ series (See the following)
Rated Voltage:	AC 100-240V
Rated Current:	1.5A Max
Size:	9.6 x4.4 x3.0 cm
For more information refer to the circuit diagram form and the user's manual.	

GT(M)or-91120-WWVV-X.X-YZ series

"M" is for MED product, "-" is for I.T.E product;
WW is the rated output wattage designation, with a maximum value of "30";
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;
Y designates physical configuration, T= External/Desktop model, F= Open Frame, P=Potted;
Z designates the input plug configuration or blank,2 or W= Class II type, 3A or 3 or Blank = Class I type.

The test data is gathered from a production sample, provided by the manufacturer. The other model listed in the report has different appearance only of GTM91120-WWVV-X. X-YZ series without circuit and electronic construction changed, declared by the manufacturer

Notes:

1) *Structures 1, 2 and 3 are only applicable to Class I version.*
2) *Structure 1 means earth ground is tied to the secondary common.*
3) *Structure 2 means a 220pf Y2 safety capacitor is connected between the earth ground pin of the AC inlet and the Negative pin of the primary side bulk capacitor C1.*
4) *Structure 3 means a 1nf Y1 type safety capacitor is connected between the earth ground pin and the secondary common.*

1.2 Test Standards

The following report is prepared on behalf of the GlobTek, Inc. in accordance with EN55022, Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement, and EN55024, Immunity characteristics Limits and methods of measurement. And EN55011: 2007 Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement and EN61000-3-2: 2006+A2: 2009, Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase). EN61000-3-3: 2008, 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. EN60601-1-2: 2007 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral standard: Electromagnetic compatibility – Requirements and tests.

The objective of the manufacturer is to demonstrate compliance with EN55022 Class B limits for Information Technology Equipment and and EN55024, Immunity characteristics Limits and methods of measurement. And EN55011 Class B limits for Industrial, scientific and medical equipment. EN60601-1-2: 2007 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 Related Submittal(s)/Grant(s)

No Related Submittal(s).

1.4 Test Methodology

All measurements contained in this report were conducted with EN 55022, Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement, and EN55024, Immunity characteristics Limits and methods of measurement. And EN55011: 2007 Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement. EN60601-1-2: 2007 Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral standard: Electromagnetic compatibility – Requirements and tests.

The equipment under test (EUT) was configured to measure its highest possible emission/immunity level. The test setup was adapted accordingly in reference to the Operating Instructions.

1.5 Test Facility

- **FCC – Registration No.: 994117**
  SEM.Test Compliance Services 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 994117.

- **Industry Canada (IC) Registration No.: 7673A**
  The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

1.6 EUT Exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the system components. The test software is started while the EUT is on to simulate the normal work.

1.7 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

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

1.8 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC Cable	1.5	Unshielded	Without Core

1.9 Performance Criteria

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

Description of Test	Result
EN55022&EN55011 Conducted Emission	Compliant
EN55022&EN55011 Radiated Emission	Compliant
EN61000-3-2 Harmonic Current Emission	Compliant
EN61000-3-3 Voltage Fluctuation And Flicker	Compliant
Electrostatic Discharge Immunity (ESD) in accordance with EN5524&EN60601-1-2&EN 61000-4-2	Compliant
Radiated RF-Electromagnetic Field Immunity in accordance with EN5524&EN60601-1-2&EN 61000-4-3	Compliant
Electrical Fast Transient/Burst (EFT/B) immunity in accordance with EN5524&EN60601-1-2&EN 61000-4-4	Compliant
Surge immunity test immunity in accordance with EN5524&EN60601-1-2&EN 61000-4-5	Compliant
Immunity to conducted disturbances in accordance with EN5524&EN60601-1-2&EN 61000-4-6	Compliant
Voltage Dips/Interruptions immunity test in accordance with EN5524&EN60601-1-2&EN 61000-4-11	Compliant

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.

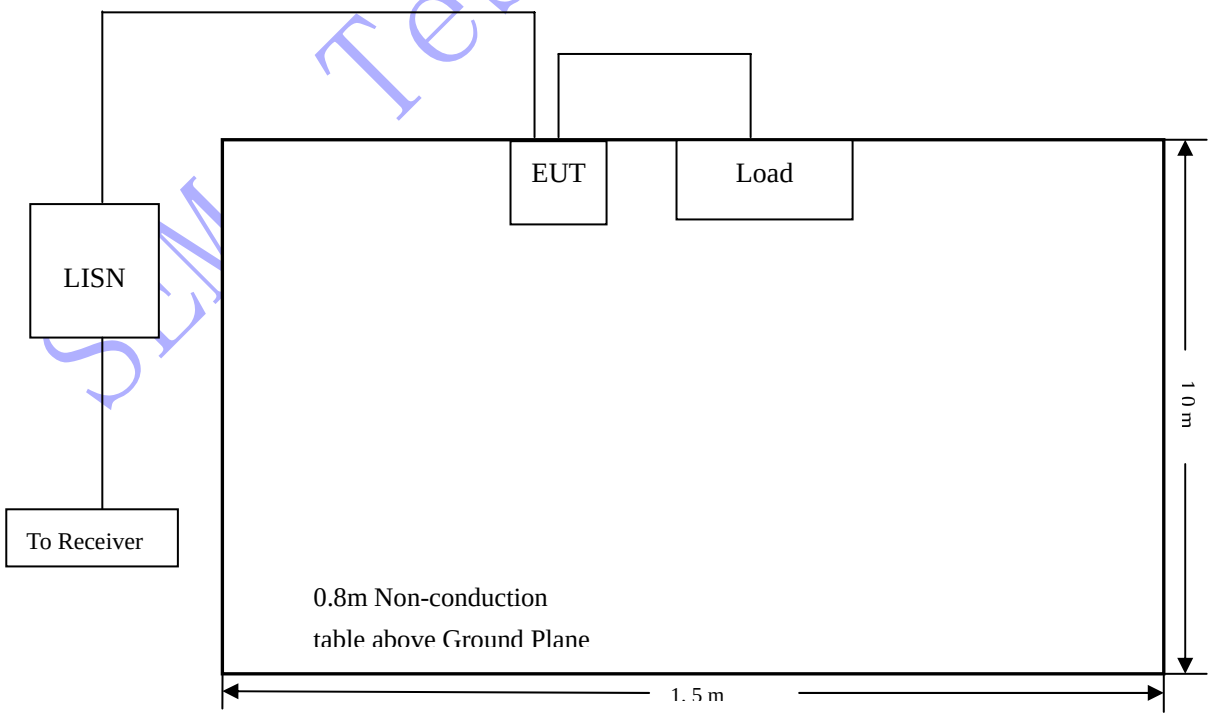
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2010-08-12	2011-08-11
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2010-08-12	2011-08-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2010-08-12	2011-08-11
AMN	EMCO	3825/2	11967C	2010-08-12	2011-08-11
Power Divider	Weinschel	1506A	PM204	2010-01-21	2011-01-20
Current Probe	FCC	F-33-4	091684	2010-01-21	2011-01-20

3.3 Test Procedure

Test is conducting under the description of EN 55022 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement, and EN55011 Industrial, scientific and medical equipment – Radio-frequency 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 EN55022&EN55011 Conducted margin for a Class B device, with the *worst* margin reading of:

-1.46 dBµV at **23.986 MHz** in the **Line** mode **GT(M)or-91120-3048-T3A(structure 1), Average** detector, **0.15-30MHz**

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

Conducted Disturbance

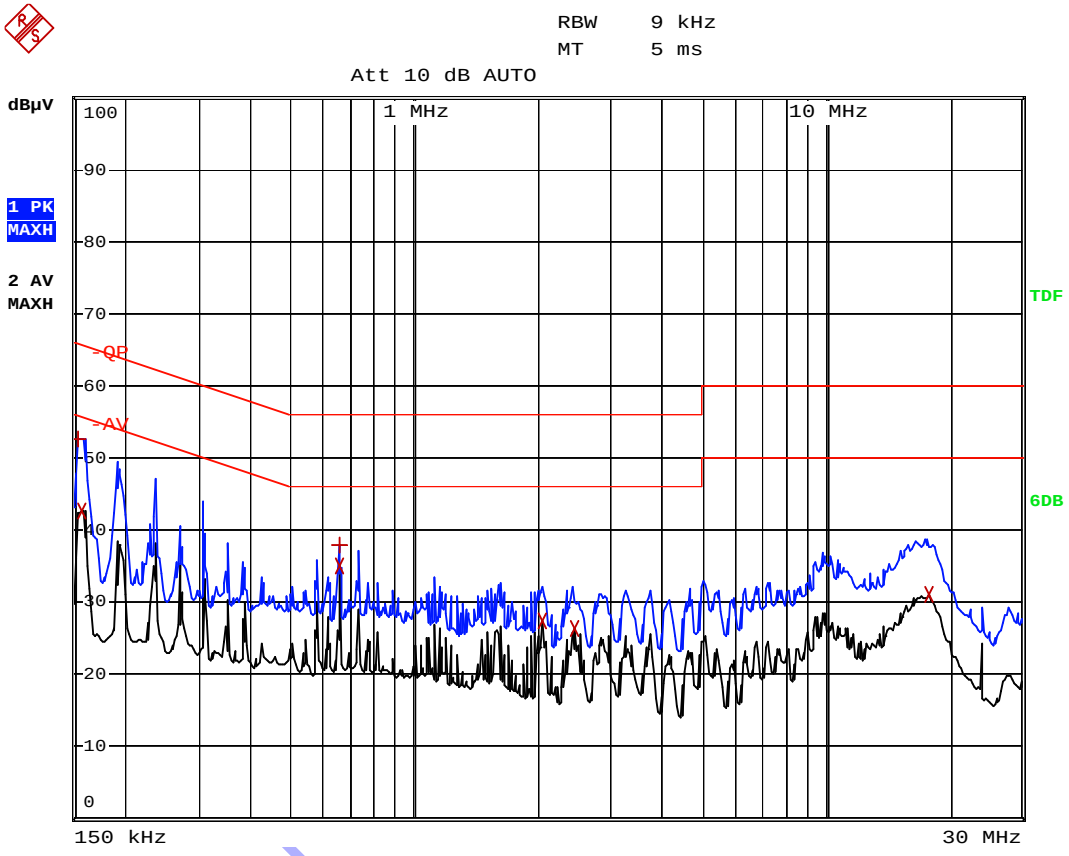
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3005-P2

Operating Condition: Full Load

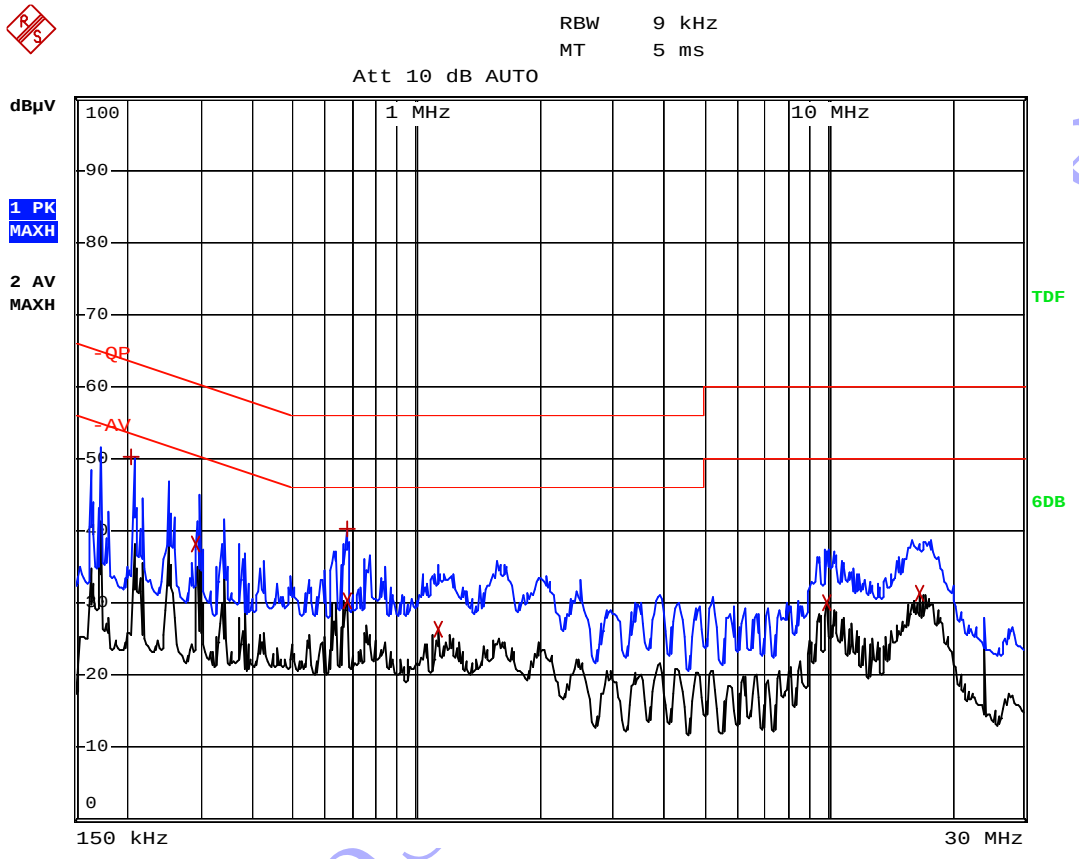
Test Specification: N

Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	154 kHz	52.75	-13.03
2 Average	158 kHz	42.73	-12.83
1 Max Peak	654 kHz	37.87	-18.12
2 Average	654 kHz	35.10	-10.89
2 Average	2.042 MHz	27.33	-18.66
2 Average	2.466 MHz	26.43	-19.57
2 Average	17.878 MHz	31.13	-18.86

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-P2
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Prescan Results)

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

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	206 kHz	50.16	-13.20
2 Average	294 kHz	38.19	-12.21
1 Max Peak	678 kHz	40.22	-15.77
2 Average	678 kHz	30.39	-15.61
2 Average	1.134 MHz	26.28	-19.71
2 Average	9.998 MHz	30.09	-19.90
2 Average	16.658 MHz	31.26	-18.73

Plot of Conducted Emissions Test Data

Conducted Disturbance

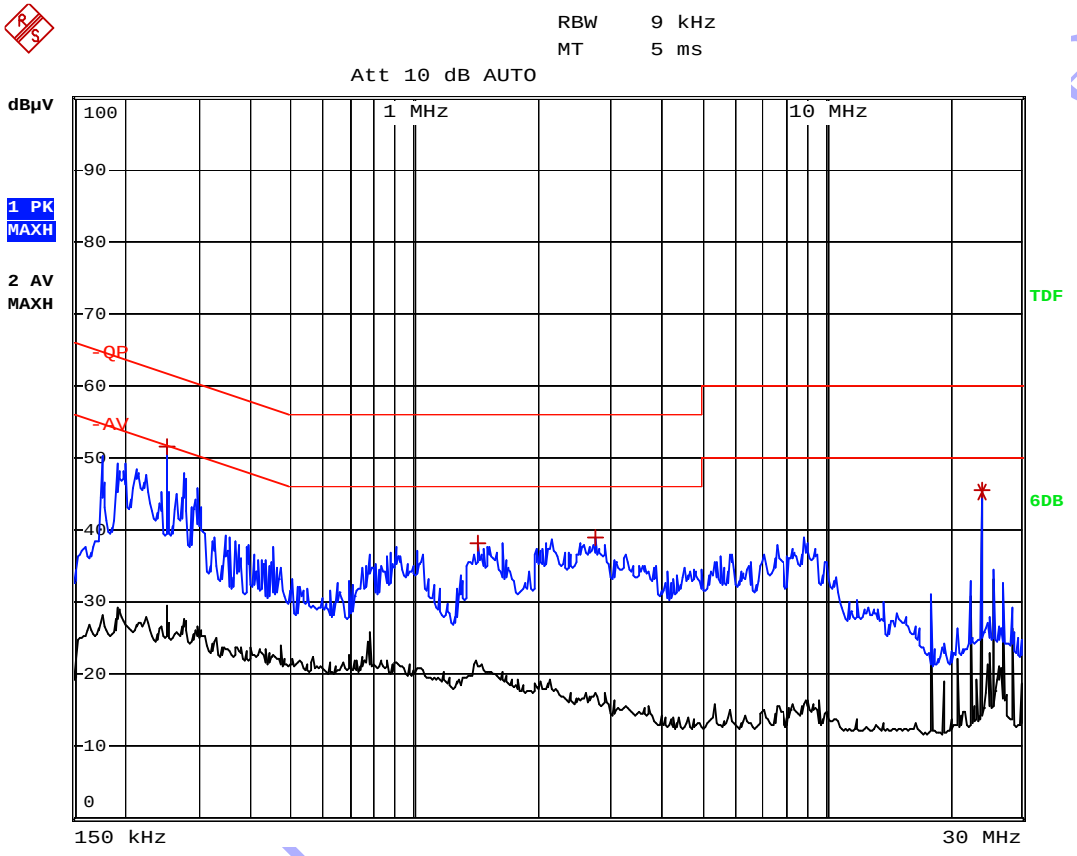
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3048-T2

Operating Condition: Full Load

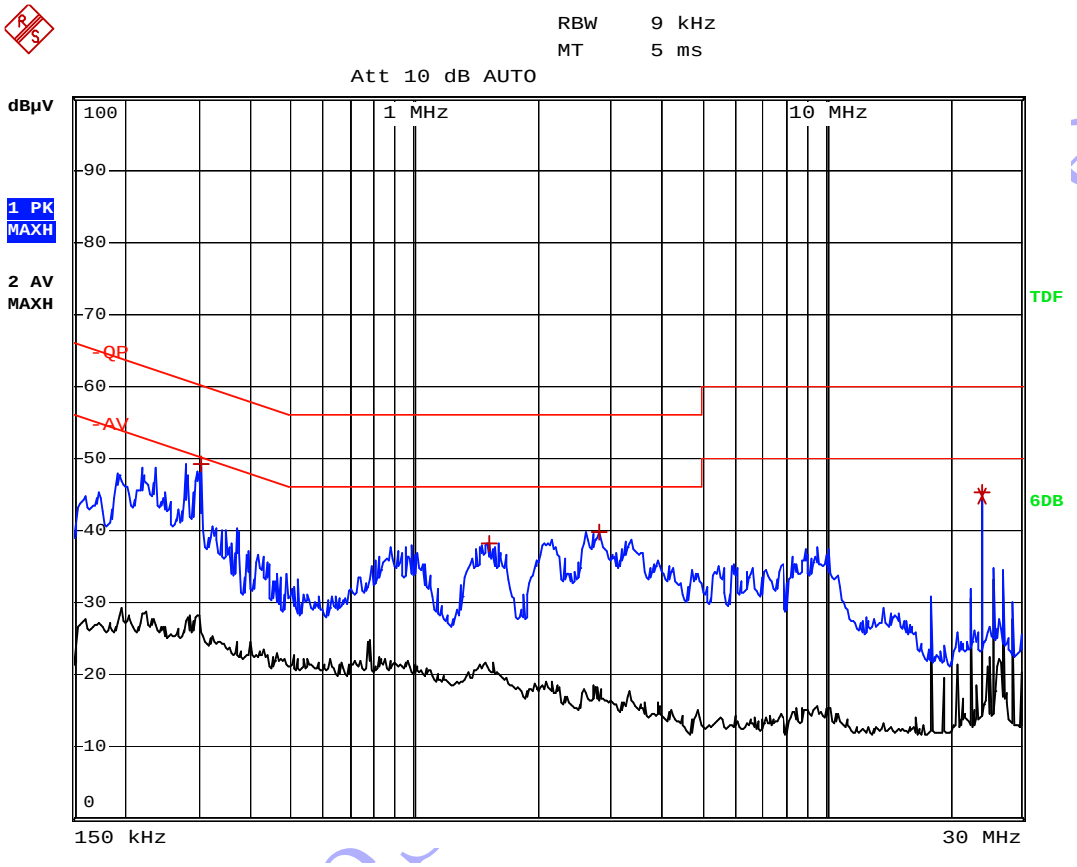
Test Specification: N

Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	250 kHz	51.56	-10.19
1 Max Peak	1.43 MHz	38.31	-17.68
1 Max Peak	2.766 MHz	38.90	-17.10
1 Max Peak	23.982 MHz	45.52	-14.47
2 Average	23.982 MHz	45.20	-4.79

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3048-T2
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Prescan Results)

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

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	302 kHz	49.30	-10.88
1 Max Peak	1.526 MHz	38.24	-17.75
1 Max Peak	2.806 MHz	39.87	-16.12
1 Max Peak	23.982 MHz	45.31	-14.68
2 Average	23.982 MHz	44.83	-5.16

Plot of Conducted Emissions Test Data

Conducted Disturbance

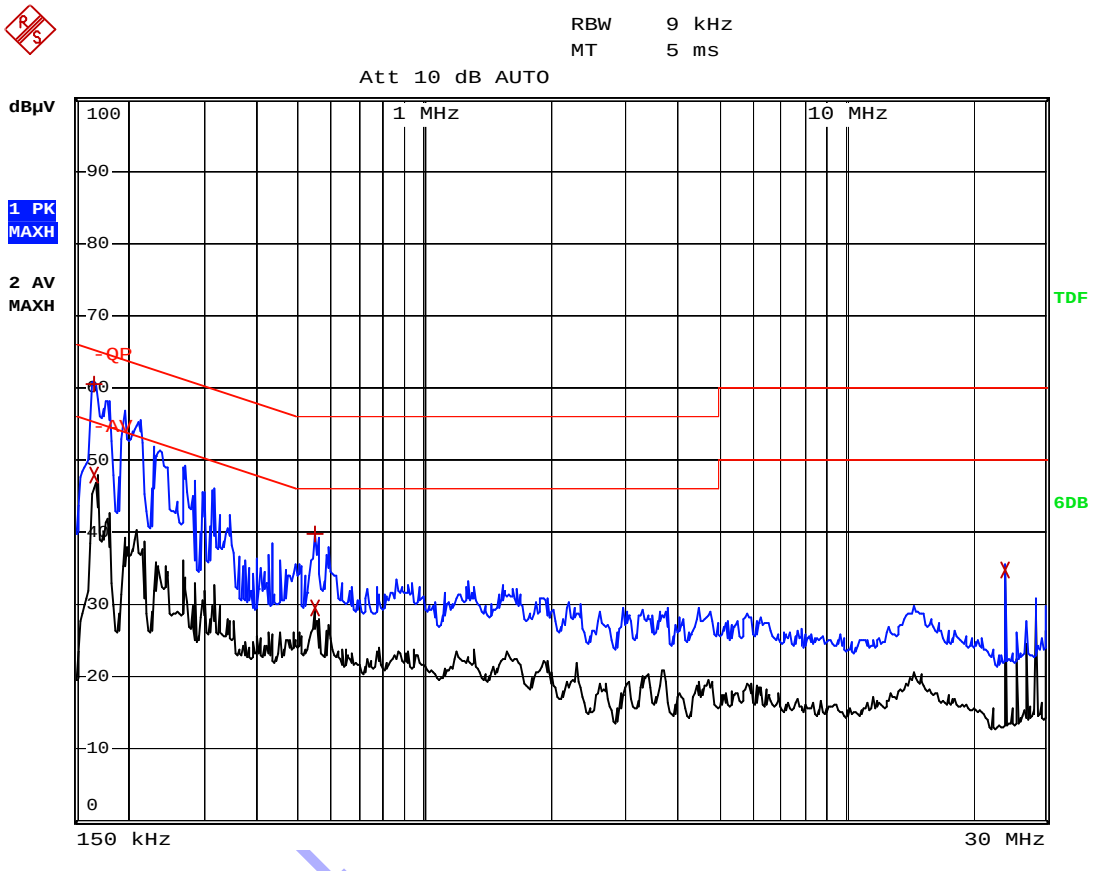
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3005-FW

Operating Condition: Full Load

Test Specification: N

Comment: AC 230V

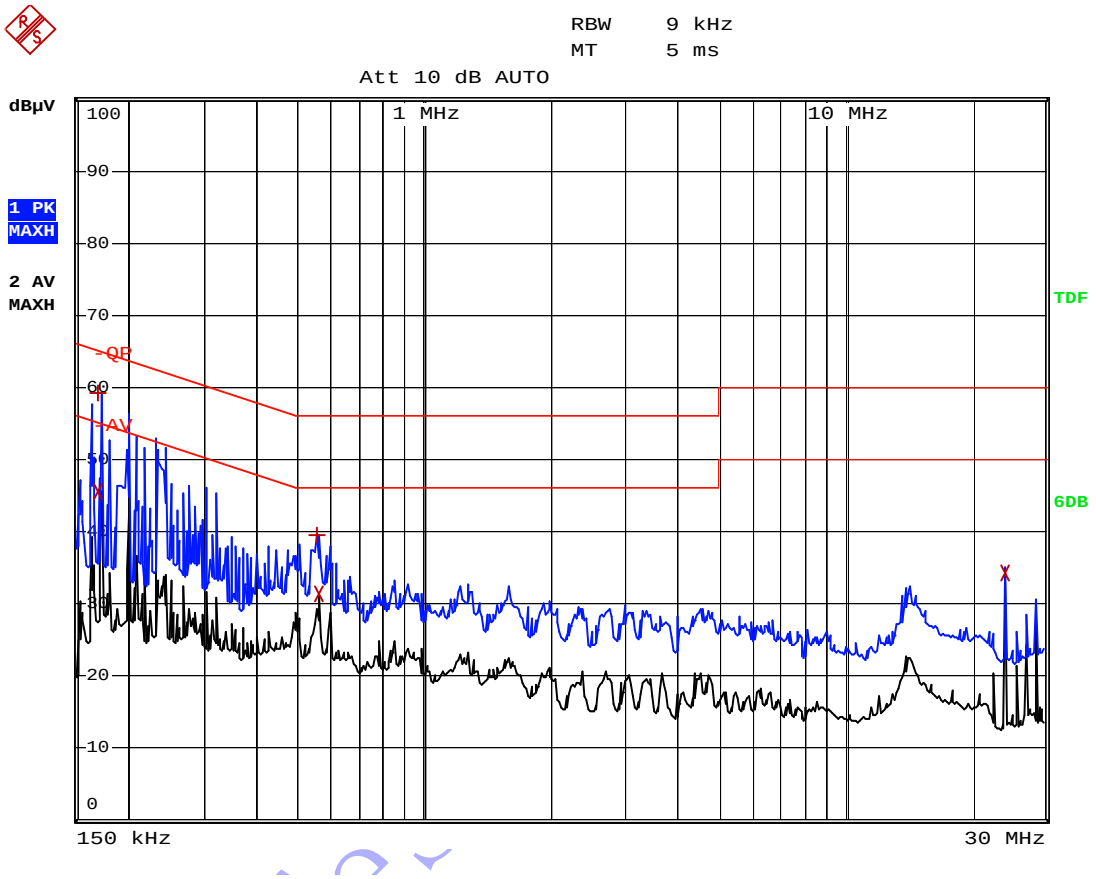


EDIT PEAK LIST (Prescan Results)

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

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	166 kHz	60.53	-4.62
2 Average	166 kHz	47.77	-7.38
1 Max Peak	546 kHz	39.73	-16.27
2 Average	546 kHz	29.56	-16.43
2 Average	23.986 MHz	34.86	-15.13

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-FW
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	170 kHz	59.28	-5.67
2 Average	170 kHz	45.50	-9.45
1 Max Peak	554 kHz	39.59	-16.40
2 Average	562 kHz	31.26	-14.73
2 Average	23.986 MHz	34.25	-15.74

Plot of Conducted Emissions Test Data

Conducted Disturbance

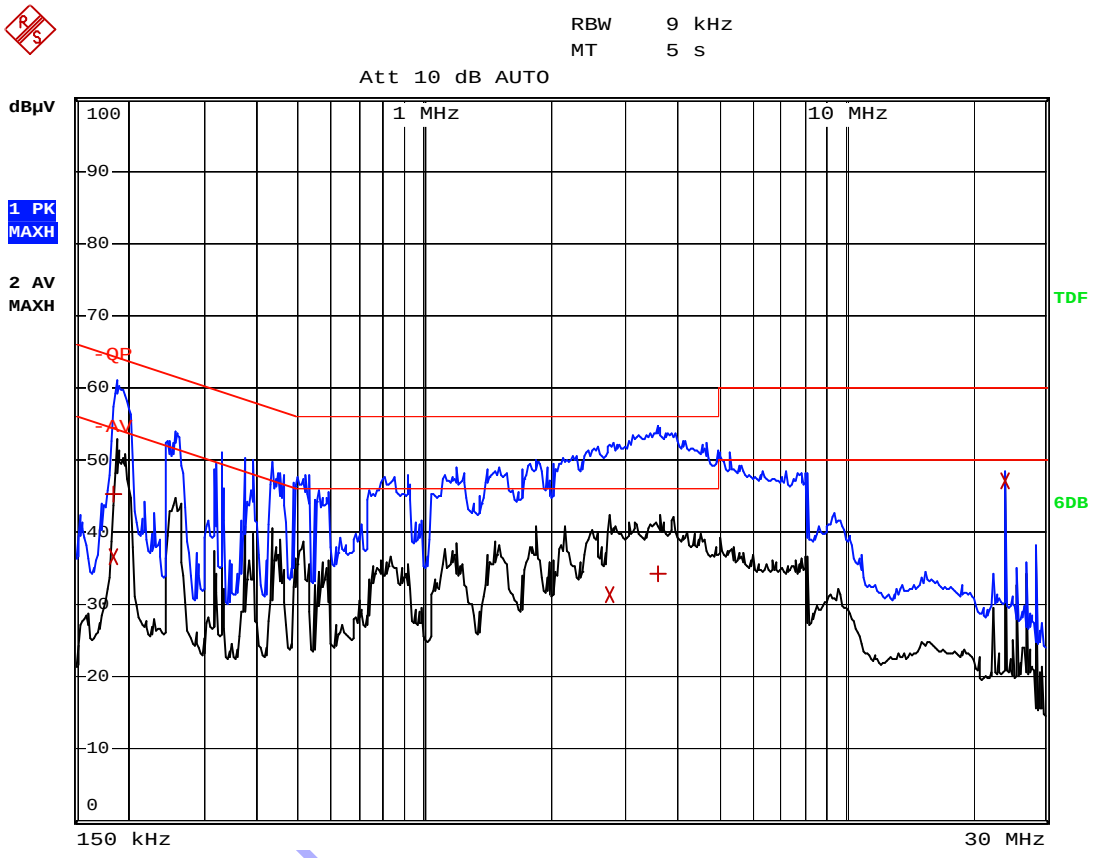
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3048-T3A(structure 1)

Operating Condition: Full Load

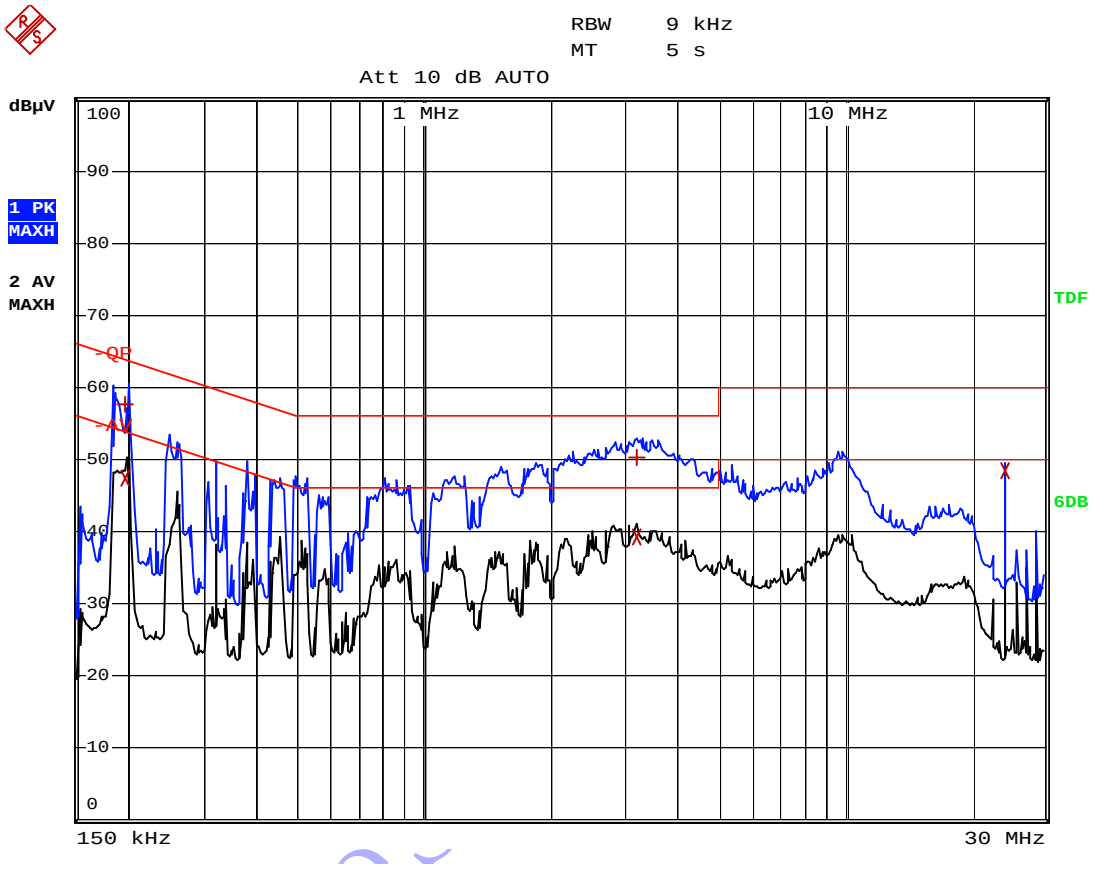
Test Specification: N

Comment: AC 230V



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	186 kHz	45.35	-18.85
2 Average	186 kHz	36.64	-17.56
2 Average	2.766 MHz	31.23	-14.76
1 Quasi Peak	3.606 MHz	34.27	-21.72
2 Average	23.986 MHz	47.20	-2.79

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3048-T3A(structure 1)
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Final Measurement Results)

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

TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Quasi Peak	198 kHz	57.62	-6.06
2	Average	198 kHz	47.26	-6.42
1	Quasi Peak	3.202 MHz	50.39	-5.60
2	Average	3.202 MHz	39.31	-6.68
2	Average	23.986 MHz	48.53	-1.46

Plot of Conducted Emissions Test Data

Conducted Disturbance

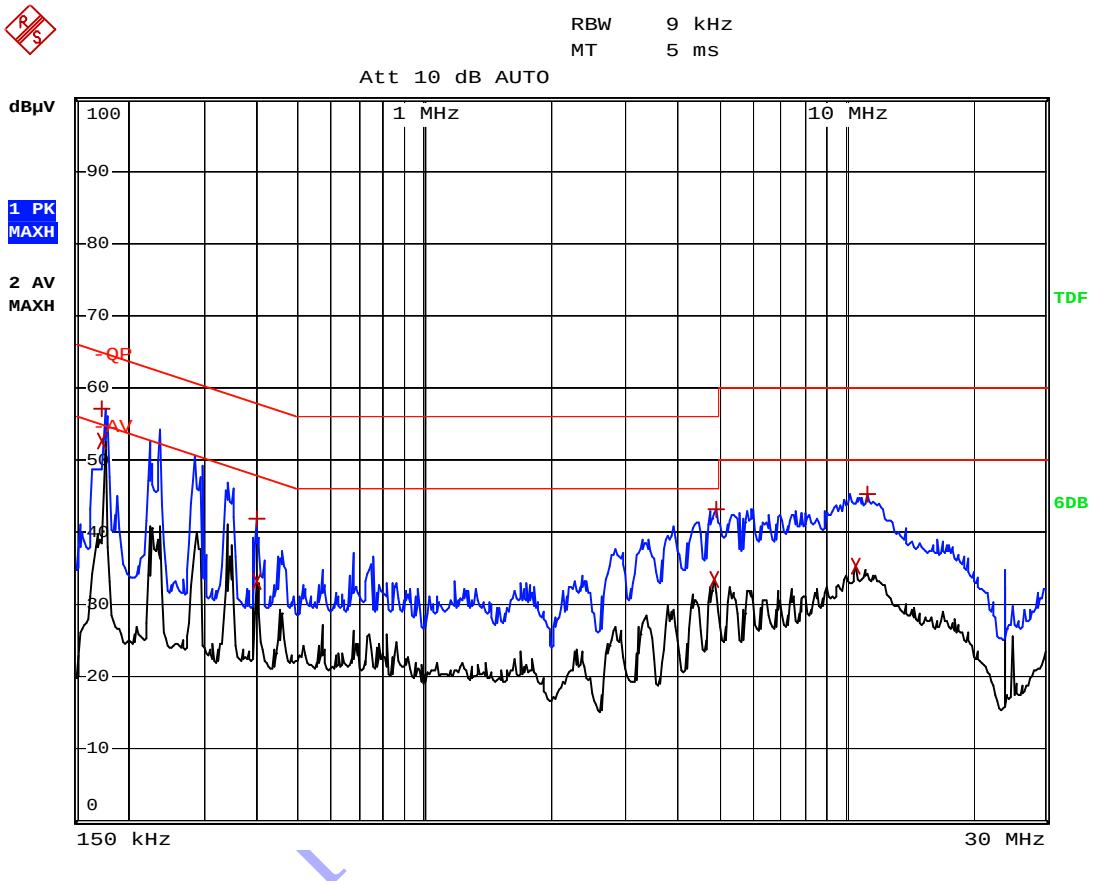
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3005-T3A(structure 1)

Operating Condition: Full Load

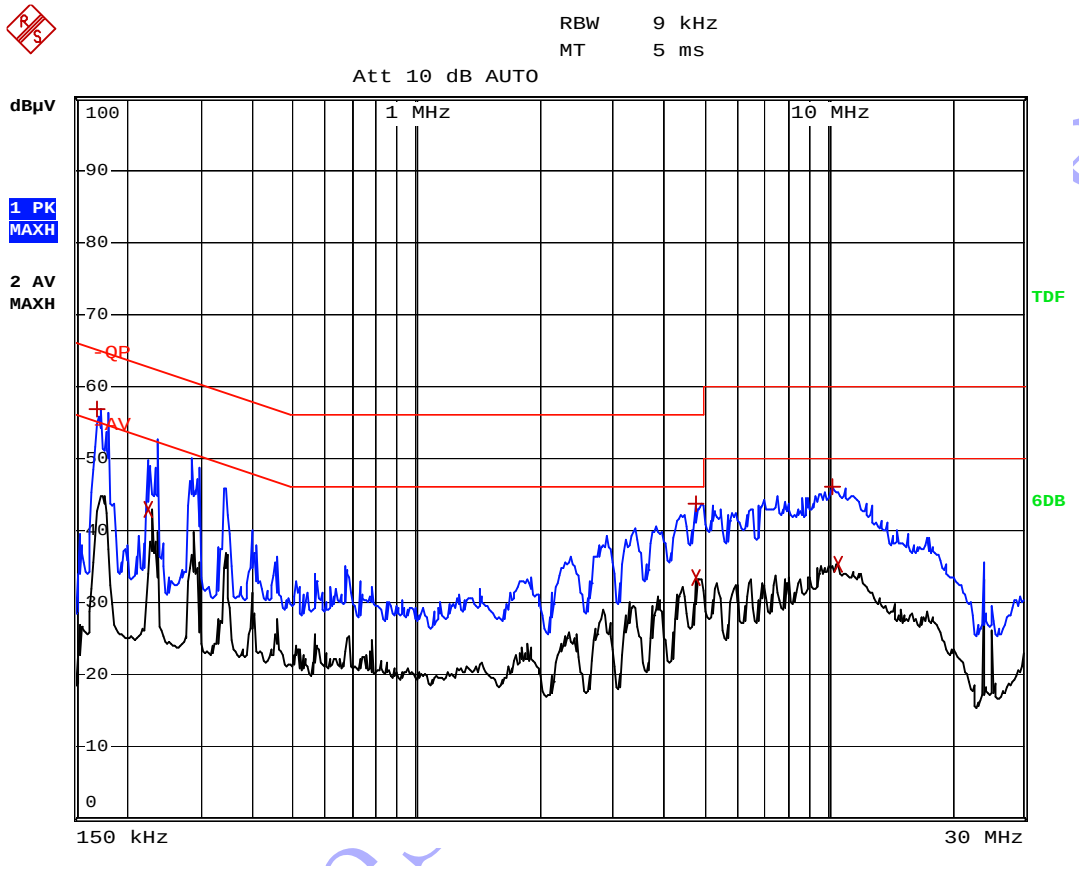
Test Specification: N

Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	174 kHz	57.17	-7.59
2 Average	174 kHz	52.66	-2.10
1 Max Peak	398 kHz	41.91	-15.98
2 Average	398 kHz	33.32	-14.57
2 Average	4.89 MHz	33.59	-12.40
1 Max Peak	4.962 MHz	43.13	-12.86
2 Average	10.594 MHz	35.33	-14.66
1 Max Peak	11.27 MHz	45.26	-14.73

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-T3A(structure 1)
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Prescan Results)

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

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	170 kHz	56.69	-8.26
2 Average	226 kHz	42.78	-9.80
1 Max Peak	4.81 MHz	43.63	-12.37
2 Average	4.81 MHz	33.38	-12.61
1 Max Peak	10.274 MHz	46.01	-13.98
2 Average	10.658 MHz	35.39	-14.60

Plot of Conducted Emissions Test Data

Conducted Disturbance

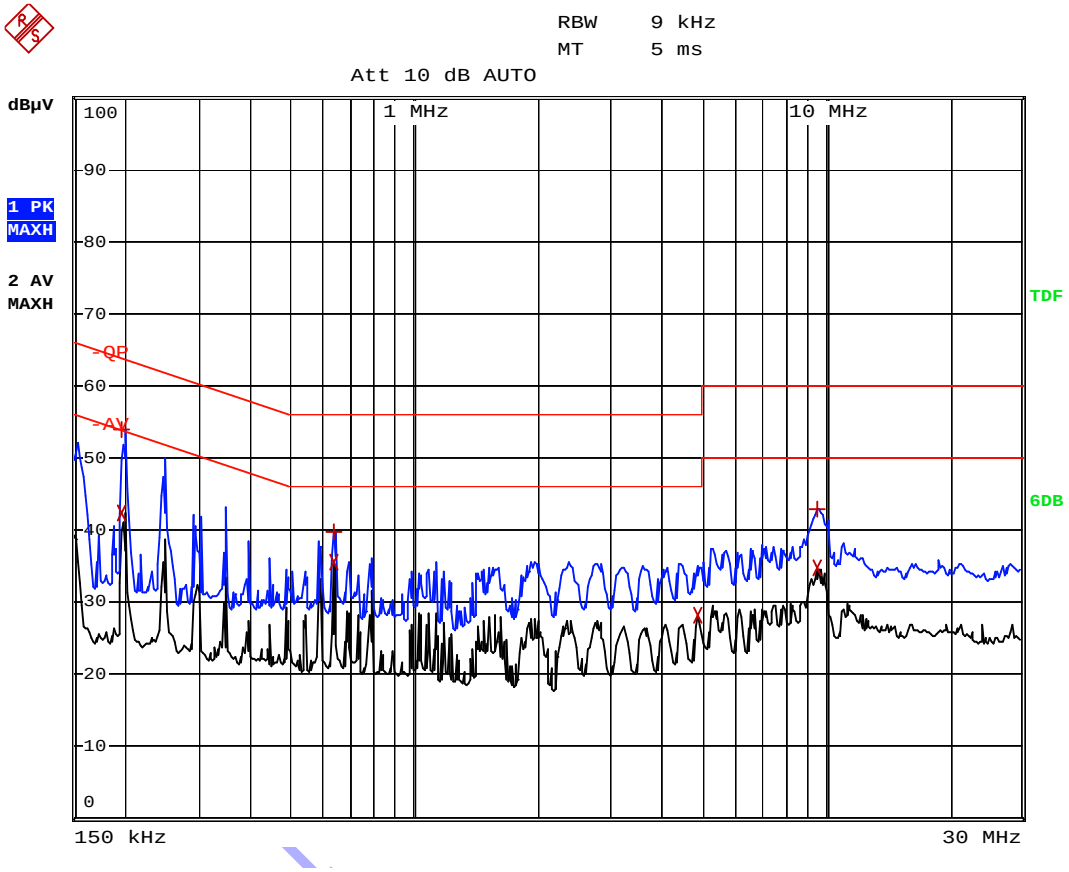
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3005-T3A(structure 2)

Operating Condition: Full Load

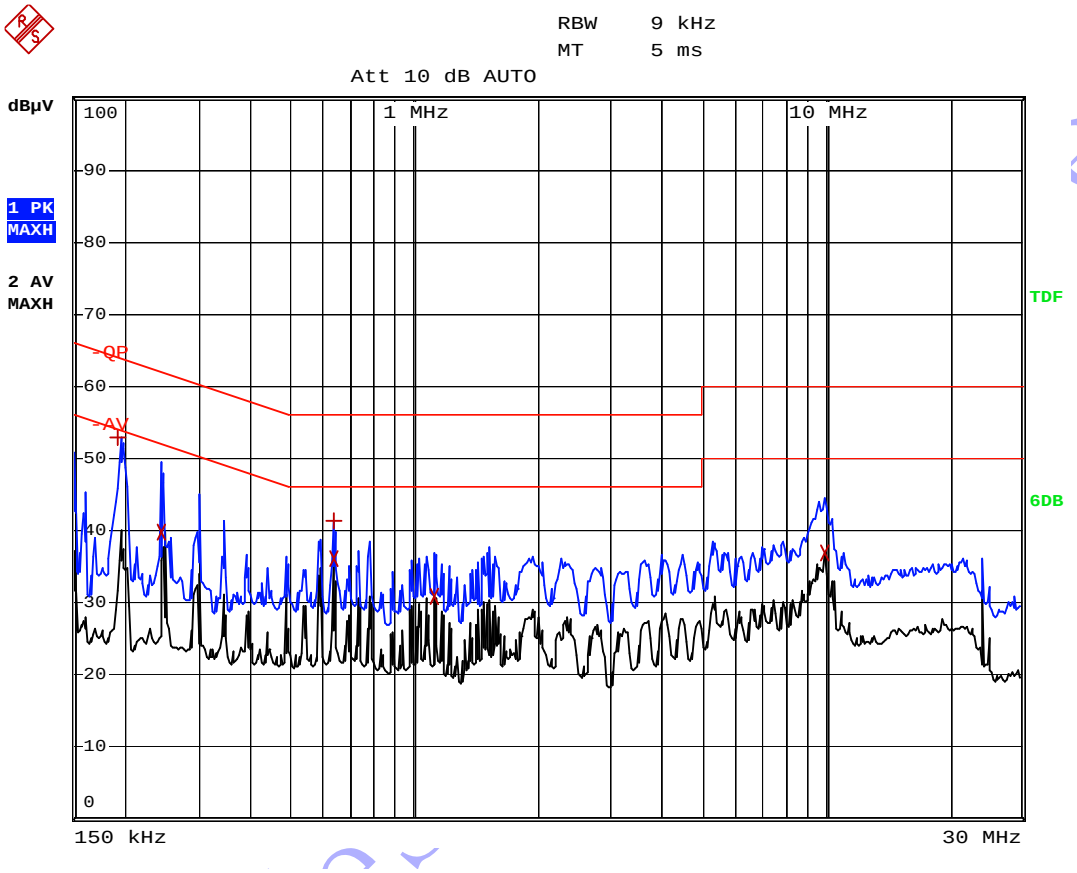
Test Specification: N

Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	198 kHz	54.01	-9.68
2 Average	198 kHz	42.44	-11.25
1 Max Peak	638 kHz	39.72	-16.27
2 Average	638 kHz	35.55	-10.45
2 Average	4.906 MHz	28.14	-17.85
2 Average	9.506 MHz	34.81	-15.18
1 Max Peak	9.55 MHz	42.97	-17.02

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-T3A(structure 2)
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Prescan Results)

Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	194 kHz	52.88	-10.97
2 Average	246 kHz	39.64	-12.25
1 Max Peak	638 kHz	41.26	-14.73
2 Average	638 kHz	36.20	-9.79
2 Average	1.122 MHz	30.76	-15.23
2 Average	9.99 MHz	36.82	-13.17

Plot of Conducted Emissions Test Data

Conducted Disturbance

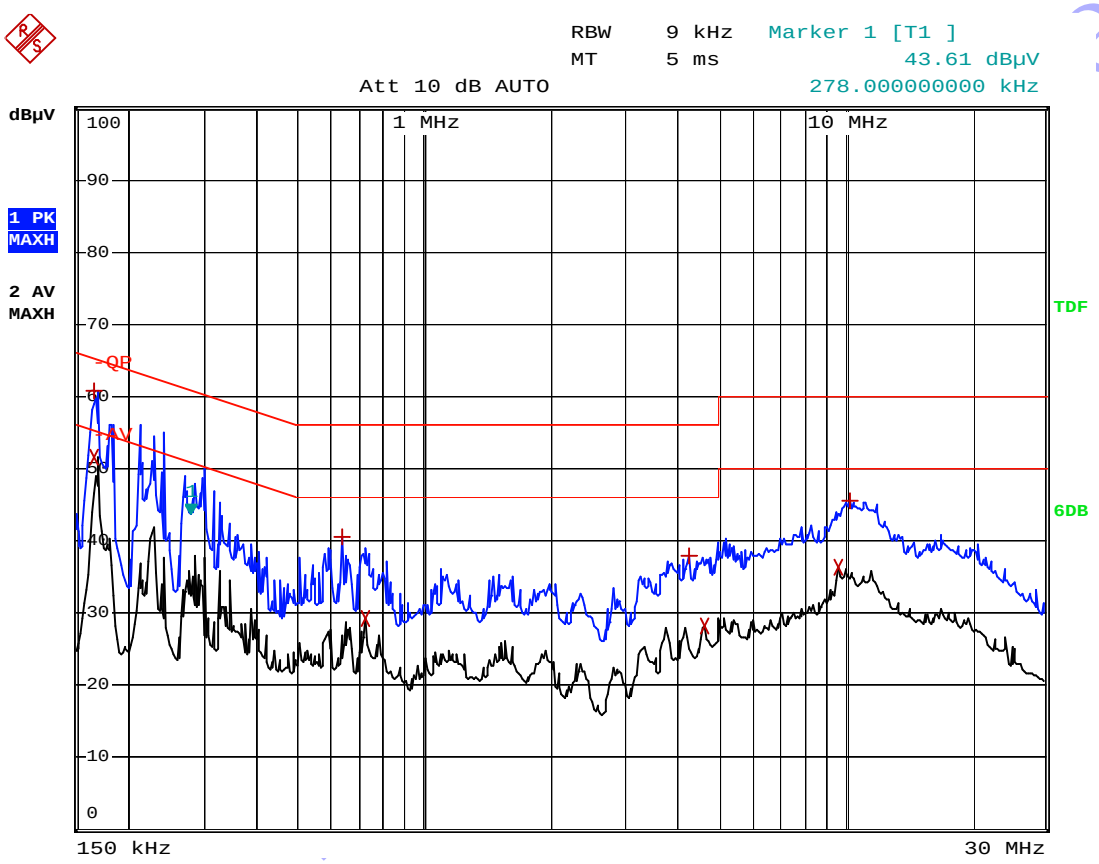
EUT: Medical power supply/I.T.E power supply

M/N: GT(M)or-91120-3005-T3A(structure 3)

Operating Condition: Full Load

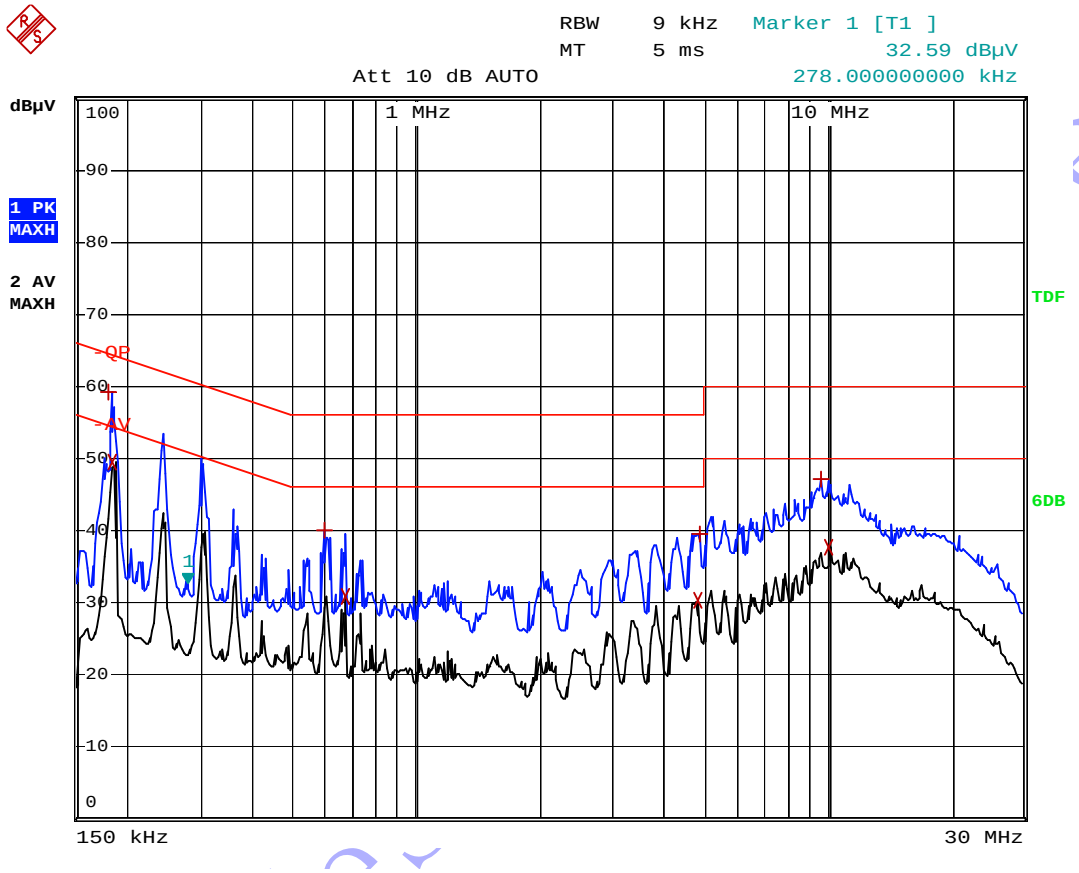
Test Specification: N

Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	166 kHz	60.65	-4.50
2 Average	166 kHz	51.57	-3.58
1 Max Peak	638 kHz	40.44	-15.56
2 Average	726 kHz	29.28	-16.71
1 Max Peak	4.274 MHz	37.99	-18.00
2 Average	4.626 MHz	28.10	-17.89
2 Average	9.694 MHz	36.26	-13.73
1 Max Peak	10.238 MHz	45.40	-14.59

EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-T3A(structure 3)
Operating Condition: Full Load
Test Specification: L
Comment: AC 230V



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	182 kHz	59.14	-5.24
2 Average	186 kHz	49.34	-4.86
1 Max Peak	598 kHz	39.91	-16.08
2 Average	674 kHz	30.91	-15.08
2 Average	4.838 MHz	30.43	-15.56
1 Max Peak	4.886 MHz	39.58	-16.41
1 Max Peak	9.658 MHz	47.10	-12.89
2 Average	10.082 MHz	37.62	-12.37

4. RADIATED EMISSION

4.1 Measurement Uncertainty

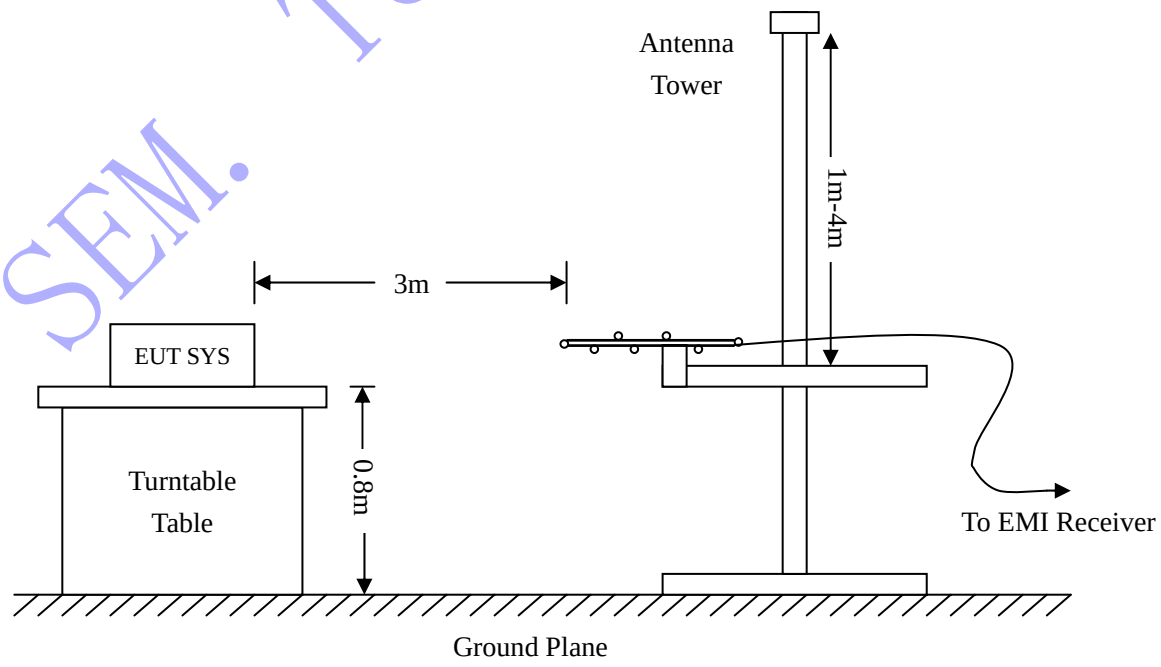
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2010-04-16	2011-04-15
EMI Test Receiver	R&S	ESVB	825471/005	2010-08-12	2011-08-11
Positioning Controller	C&C	CC-C-1F	N/A	2010-08-12	2011-08-11
RF Switch	EM	EMSW18	SW060023	2010-08-12	2011-08-11
Pre-amplifier	Agilent	8447F	3113A06717	2010-08-12	2011-08-11
Pre-amplifier	Compliance Direction	PAP-0118	24002	2010-08-12	2011-08-11
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2010-07-21	2011-07-20
Horn Antenna	ETS	3117	00086197	2010-07-21	2011-07-20

4.3 Test Procedure

Test is conducting under the description of EN 55022 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement, and EN55011 Industrial, scientific and medical equipment – Radio-frequency 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 for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – EN55022&EN55011 Class B 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 EN55022&EN55011 Class B standards, and had the worst margin is:

-3.67 dBµV at **33.0950 MHz** in the, **Vertical** polarization, Model **GT(M)or-91120-3005-T3A(structure 1), 30 MHz to 6 GHz, 3Meters**

Plot of Radiation Emissions Test Data

Radiated Emission

EUT: Medical power supply/I.T.E power supply

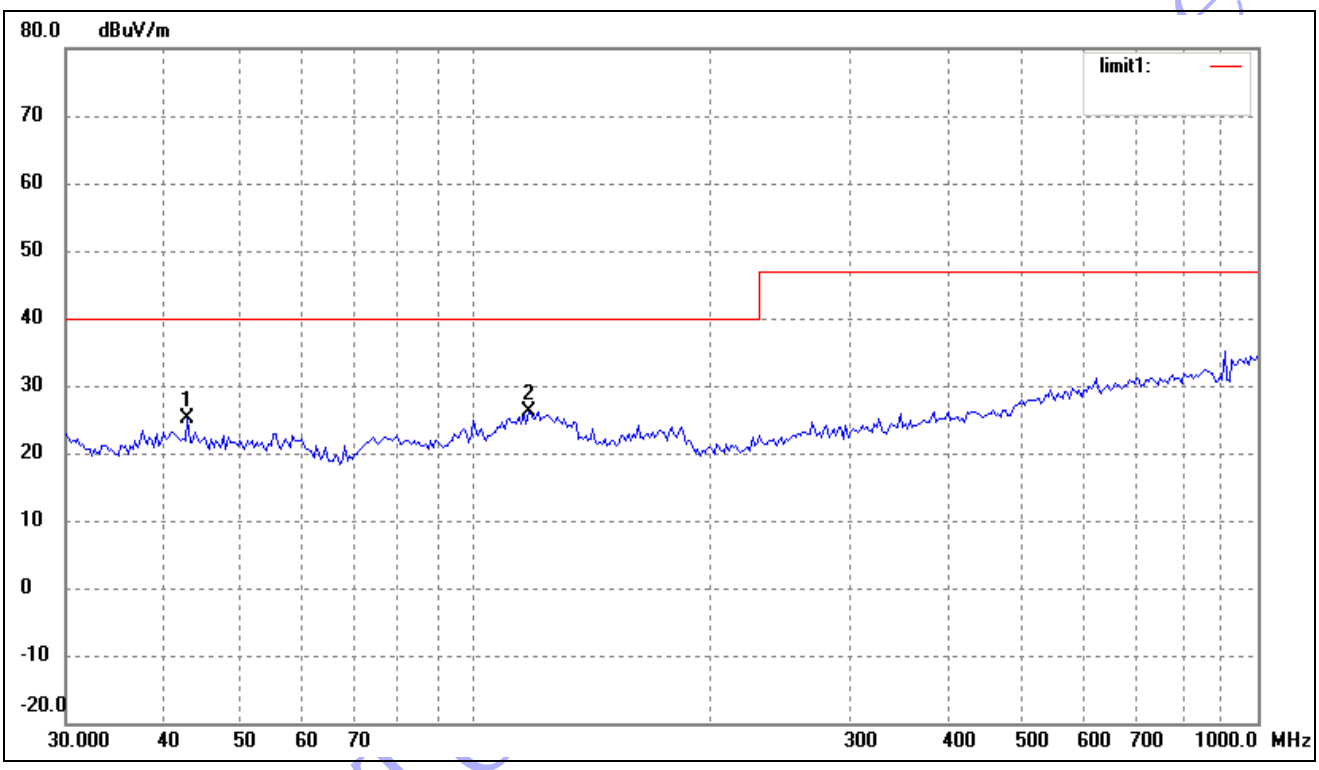
M/N: GT(M)or-91120-3005-P2

Operating Condition: Full Load

Test Specification: Horizontal & Vertical

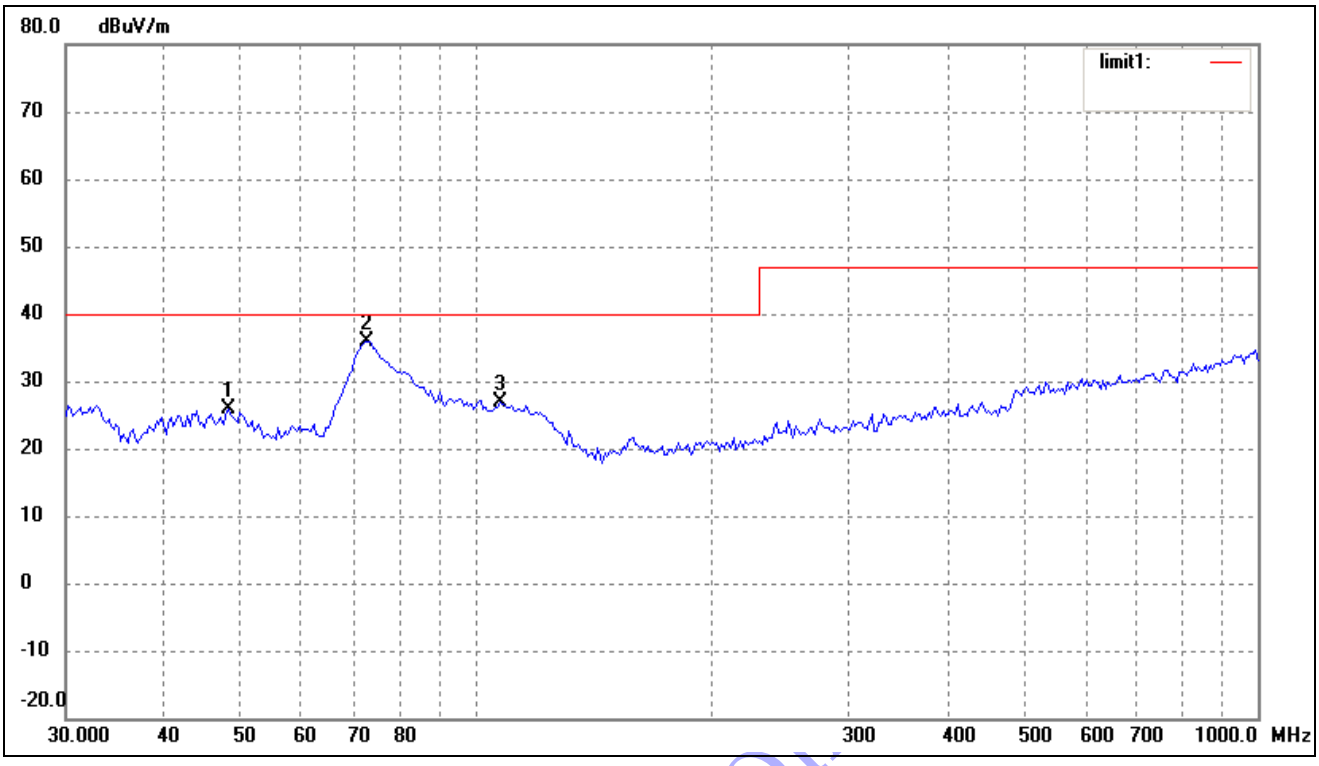
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	42.8998	17.25	7.97	25.22	40.00	-14.78	360	100	peak
2	116.9495	20.30	5.78	26.08	40.00	-13.92	360	100	peak

Vertical:

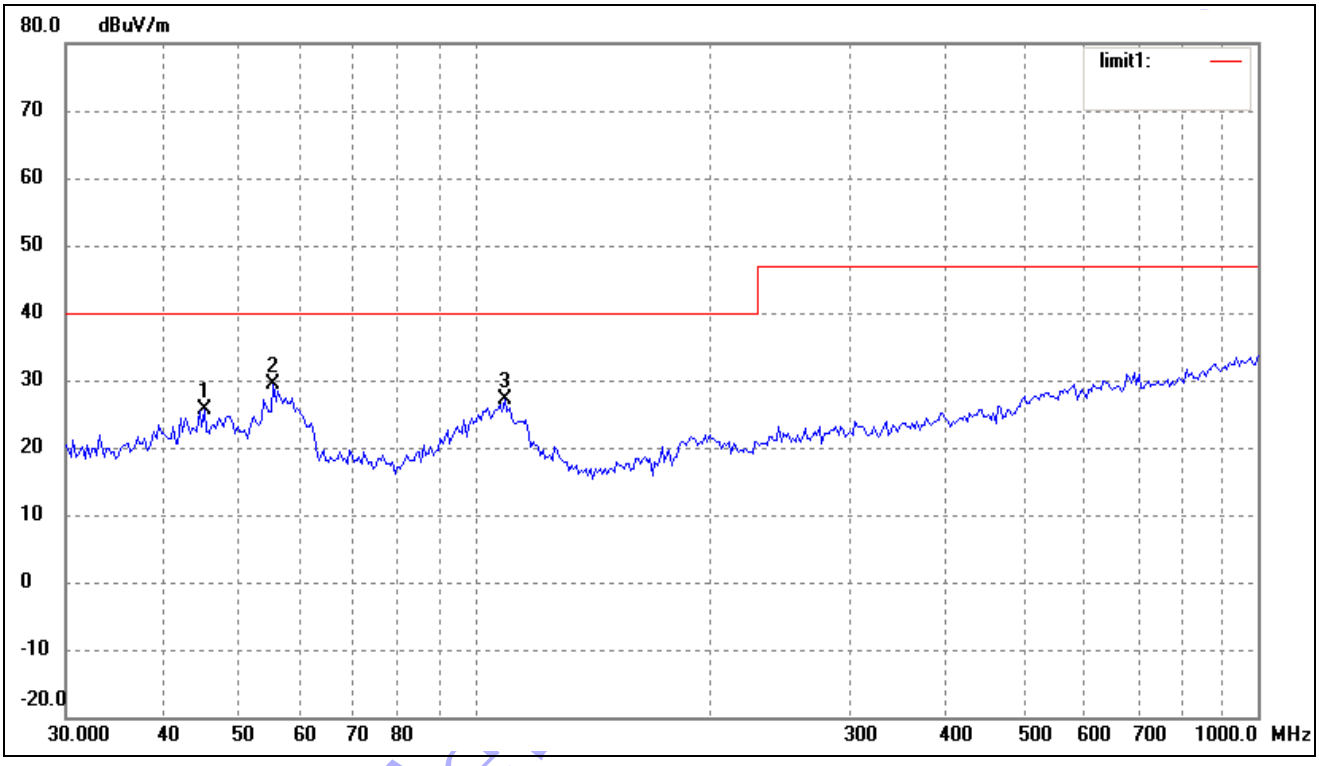


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	48.3318	18.08	7.79	25.87	40.00	-14.13	360	100	peak
2	72.5917	33.03	2.79	35.82	40.00	-4.18	360	100	peak
3	107.5101	19.65	7.16	26.81	40.00	-13.19	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

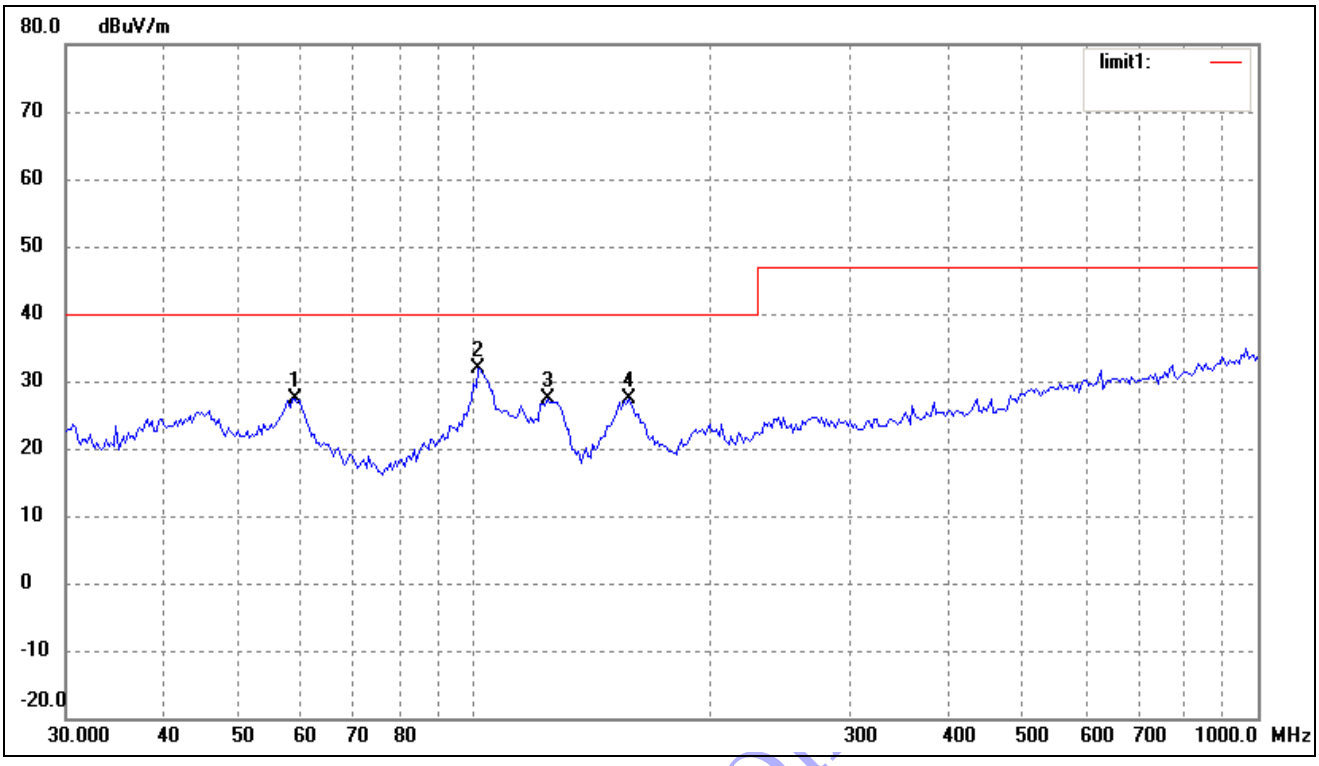
Radiated Emission
EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3048-T2
Operating Condition: Full Load
Test Specification: Horizontal & Vertical
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	45.0583	17.71	7.99	25.70	40.00	-14.30	360	100	peak
2	55.2207	21.91	7.45	29.36	40.00	-10.64	360	100	peak
3	109.0286	20.14	7.03	27.17	40.00	-12.83	360	100	peak

Vertical:

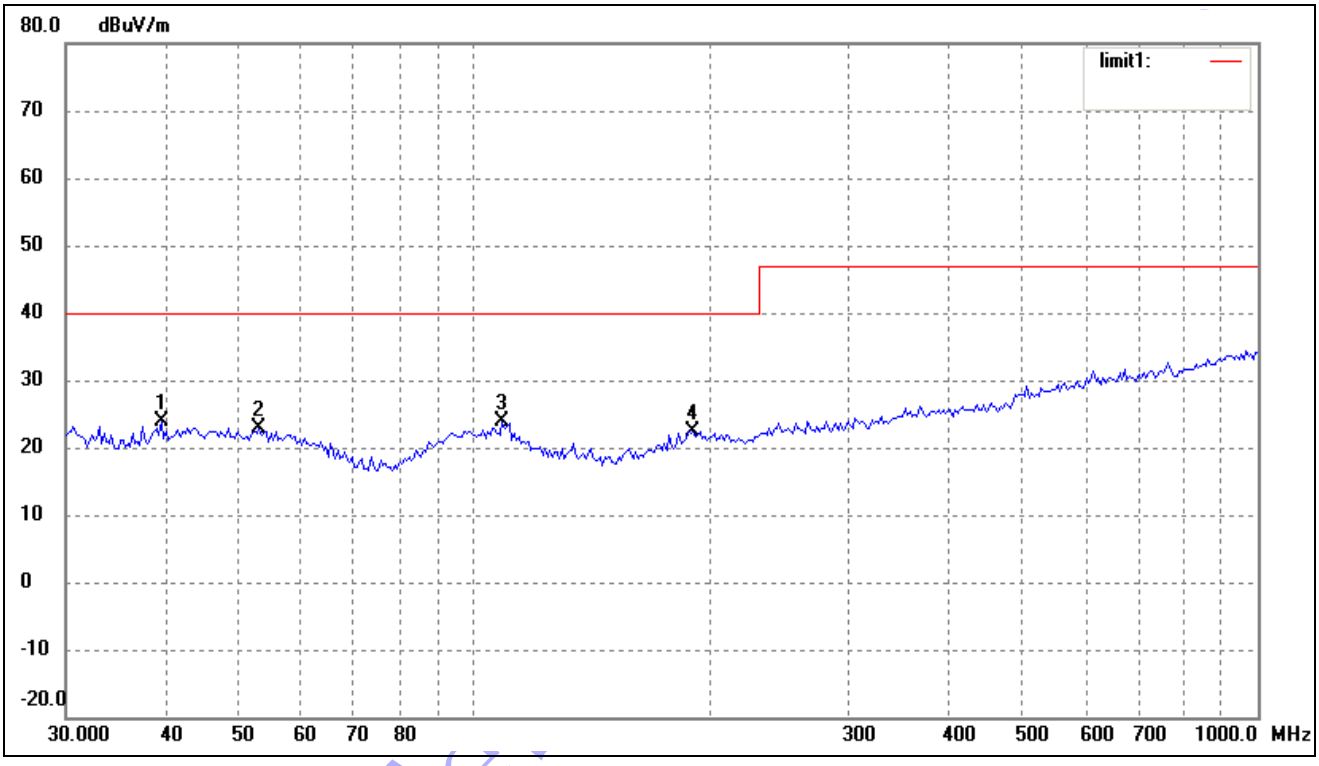


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	58.8185	20.19	7.26	27.45	40.00	-12.55	360	100	peak
2	100.9340	24.09	7.72	31.81	40.00	-8.19	360	100	peak
3	123.6985	22.64	4.75	27.39	40.00	-12.61	360	100	peak
4	157.0074	23.81	3.61	27.42	40.00	-12.58	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

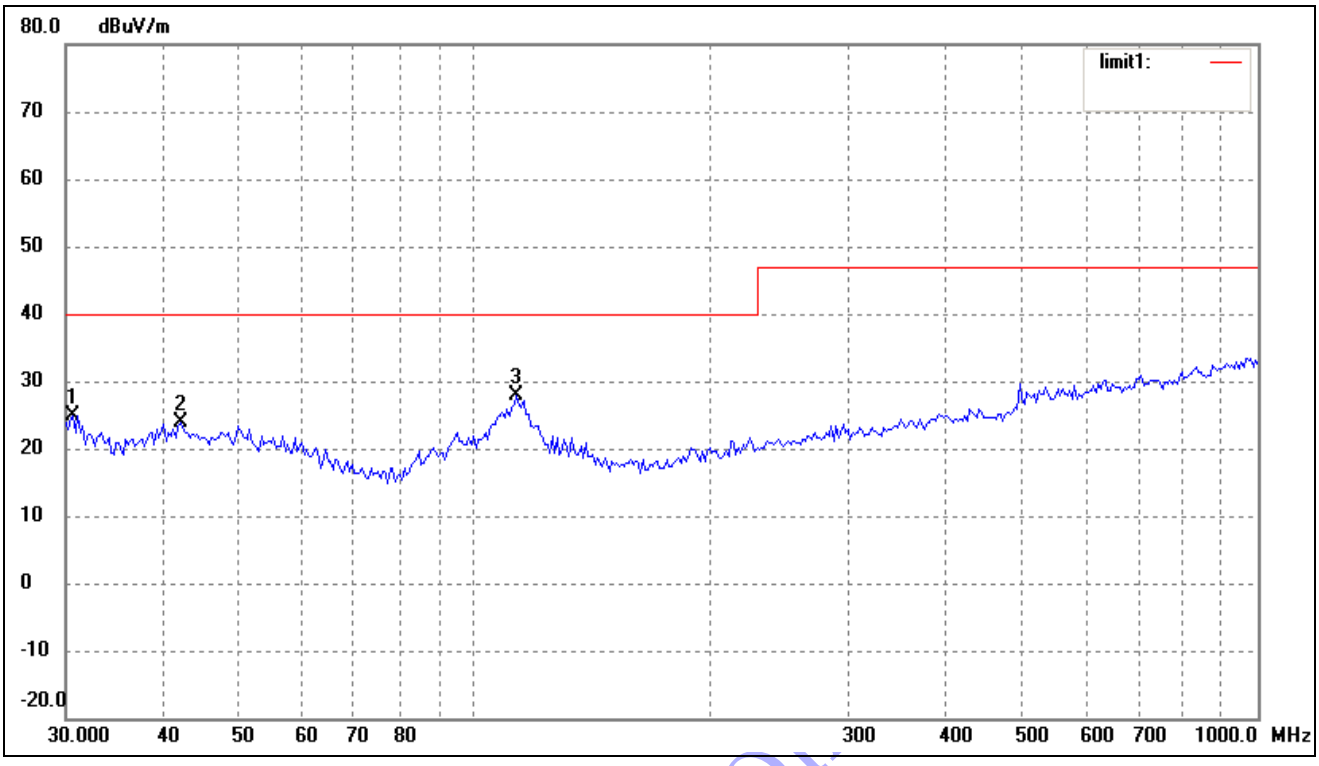
Radiated Emission
EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-FW
Operating Condition: Full Load
Test Specification: Horizontal & Vertical
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	39.7147	16.04	7.86	23.90	40.00	-16.10	360	100	peak
2	52.9453	15.36	7.55	22.91	40.00	-17.09	360	100	peak
3	108.2667	16.88	7.09	23.97	40.00	-16.03	360	100	peak
4	189.7385	16.74	5.64	22.38	40.00	-17.62	360	100	peak

Vertical:

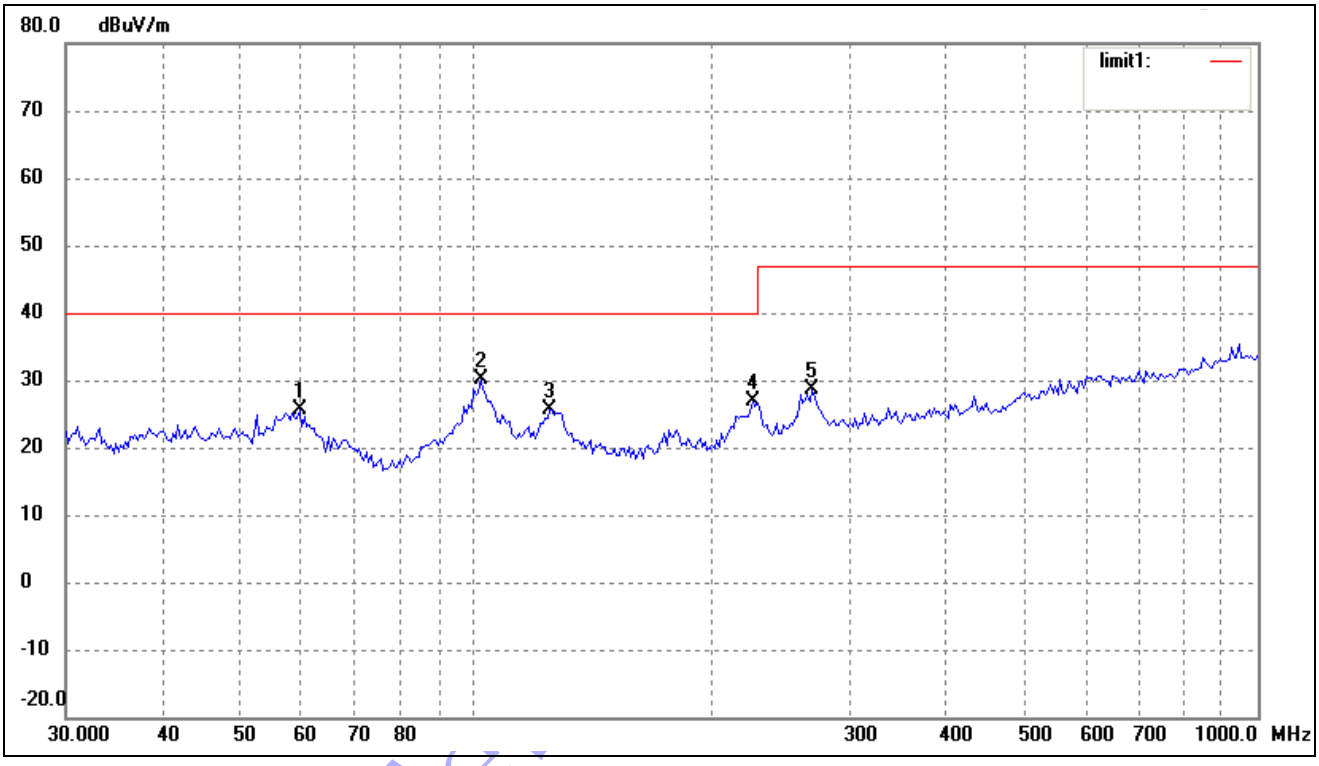


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.6379	18.36	6.63	24.99	40.00	-15.01	360	100	peak
2	42.0066	15.94	7.95	23.89	40.00	-16.11	360	100	peak
3	112.9196	21.42	6.45	27.87	40.00	-12.13	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

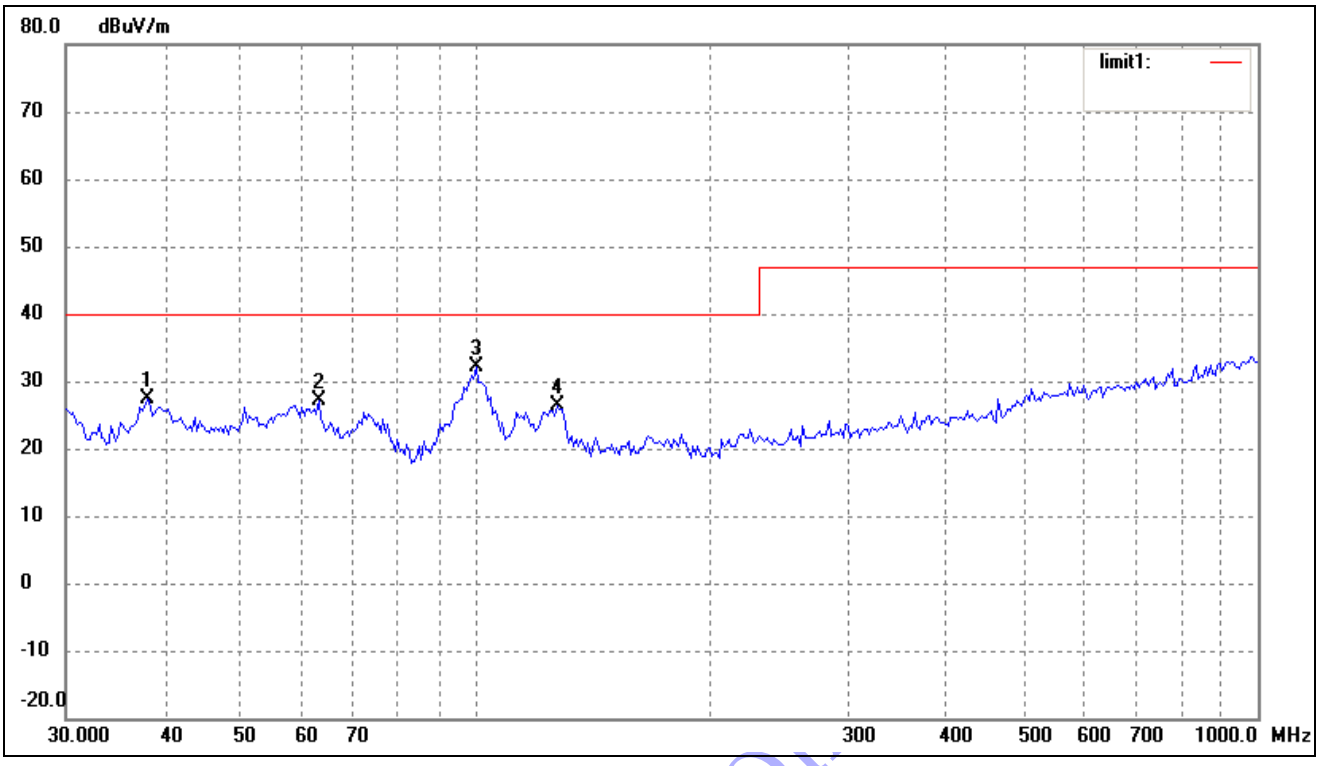
Radiated Emission
EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3048-T3A(structure 1)
Operating Condition: Full Load
Test Specification: Horizontal & Vertical
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	59.6493	18.41	7.21	25.62	40.00	-14.38	360	100	peak
2	101.6443	22.48	7.67	30.15	40.00	-9.85	360	100	peak
3	124.5690	20.91	4.63	25.54	40.00	-14.46	360	100	peak
4	226.0994	20.14	6.67	26.81	40.00	-13.19	360	100	peak
5	269.4284	20.46	8.17	28.63	47.00	-18.37	360	100	peak

Vertical:

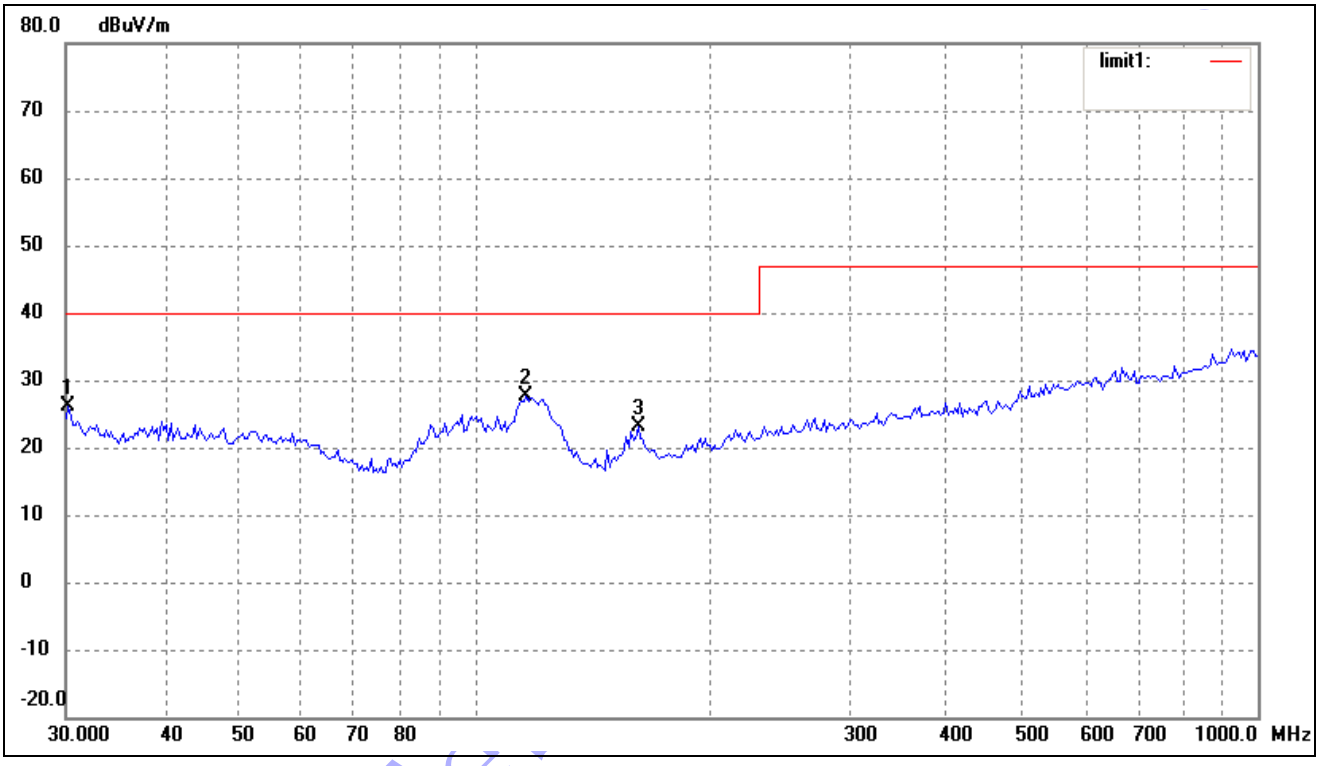


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	38.0783	19.86	7.42	27.28	40.00	-12.72	360	100	peak
2	63.0916	21.05	5.96	27.01	40.00	-12.99	360	100	peak
3	100.2286	24.29	7.79	32.08	40.00	-7.92	360	100	peak
4	127.2176	22.12	4.24	26.36	40.00	-13.64	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

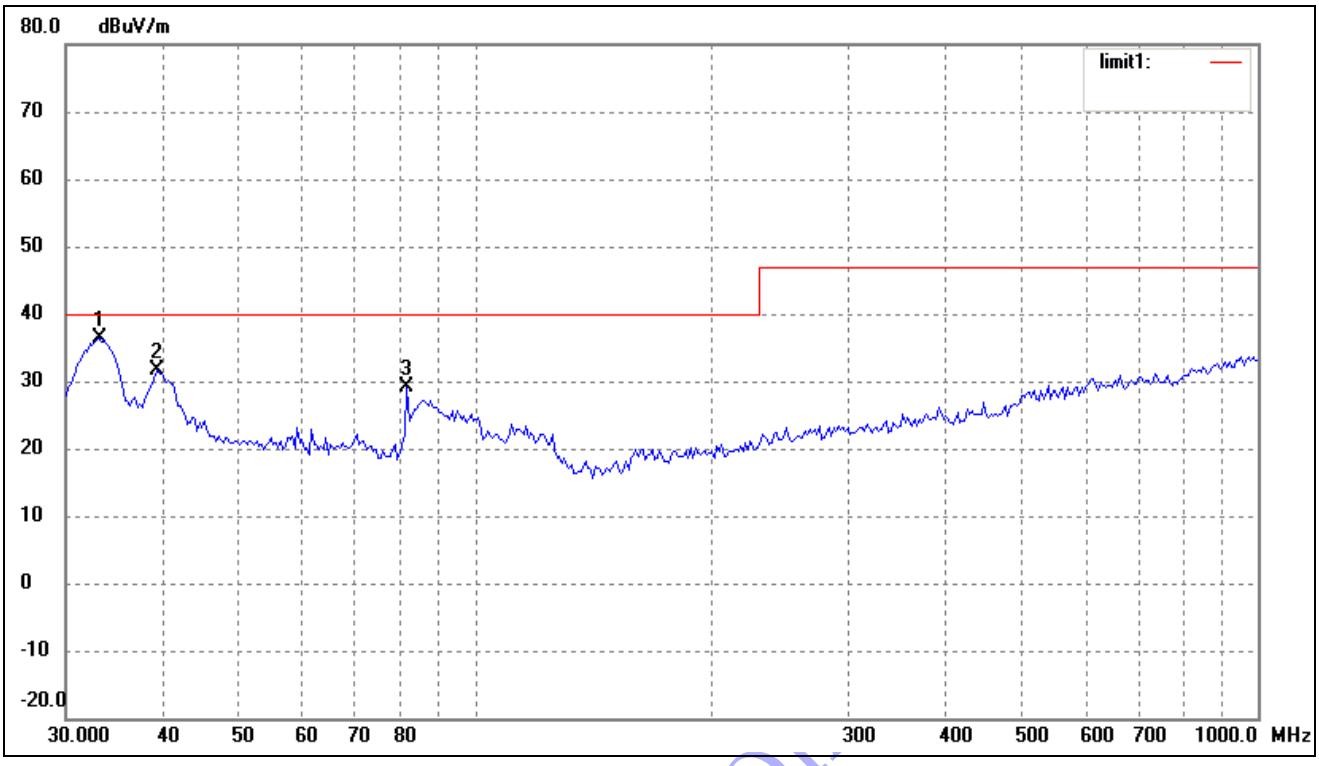
Radiated Emission
EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-T3A(structure 1)
Operating Condition: Full Load
Test Specification: Horizontal & Vertical
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.2111	19.59	6.63	26.22	40.00	-13.78	360	100	peak
2	116.1321	21.69	5.91	27.60	40.00	-12.40	360	100	peak
3	161.4742	19.22	3.79	23.01	40.00	-16.99	360	100	peak

Vertical:

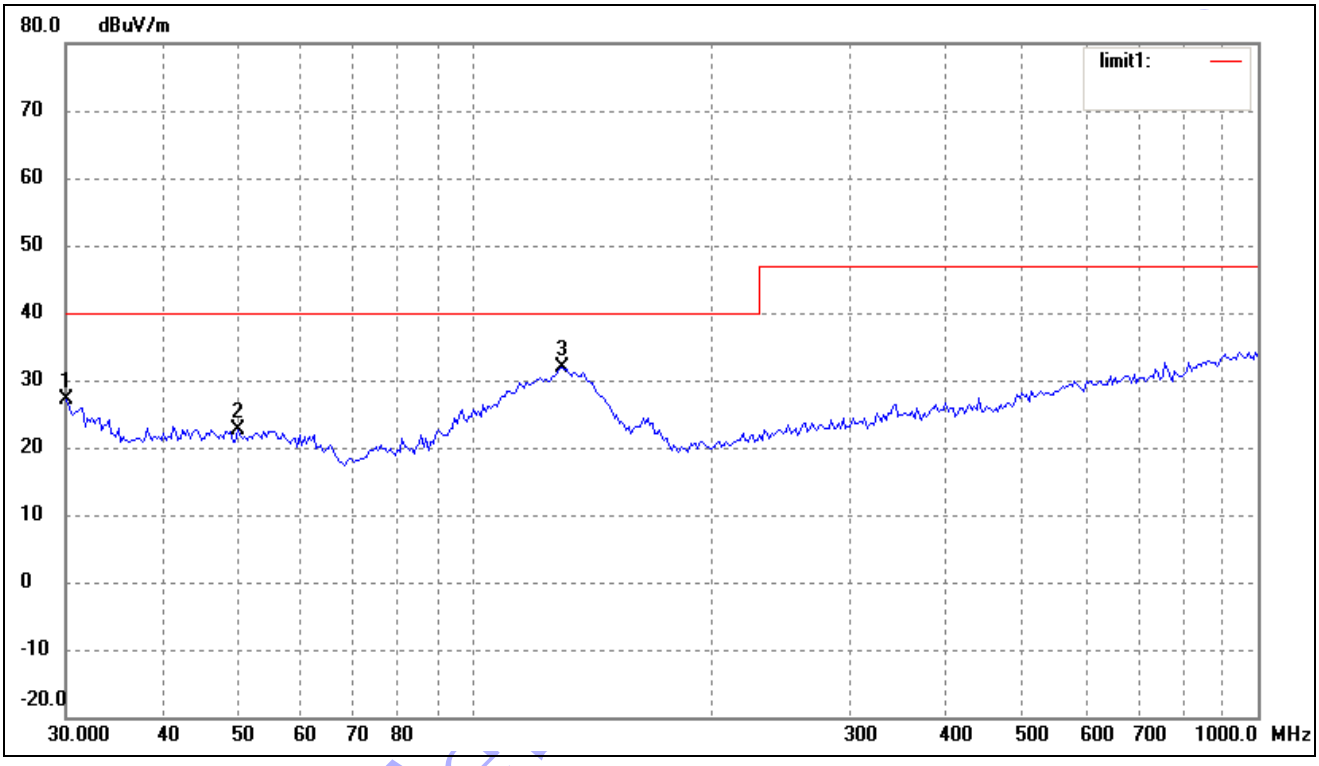


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	33.0950	29.72	6.61	36.33	40.00	-3.67	360	100	peak
2	39.1616	23.93	7.71	31.64	40.00	-8.36	360	100	peak
3	81.7833	25.36	3.79	29.15	40.00	-10.85	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

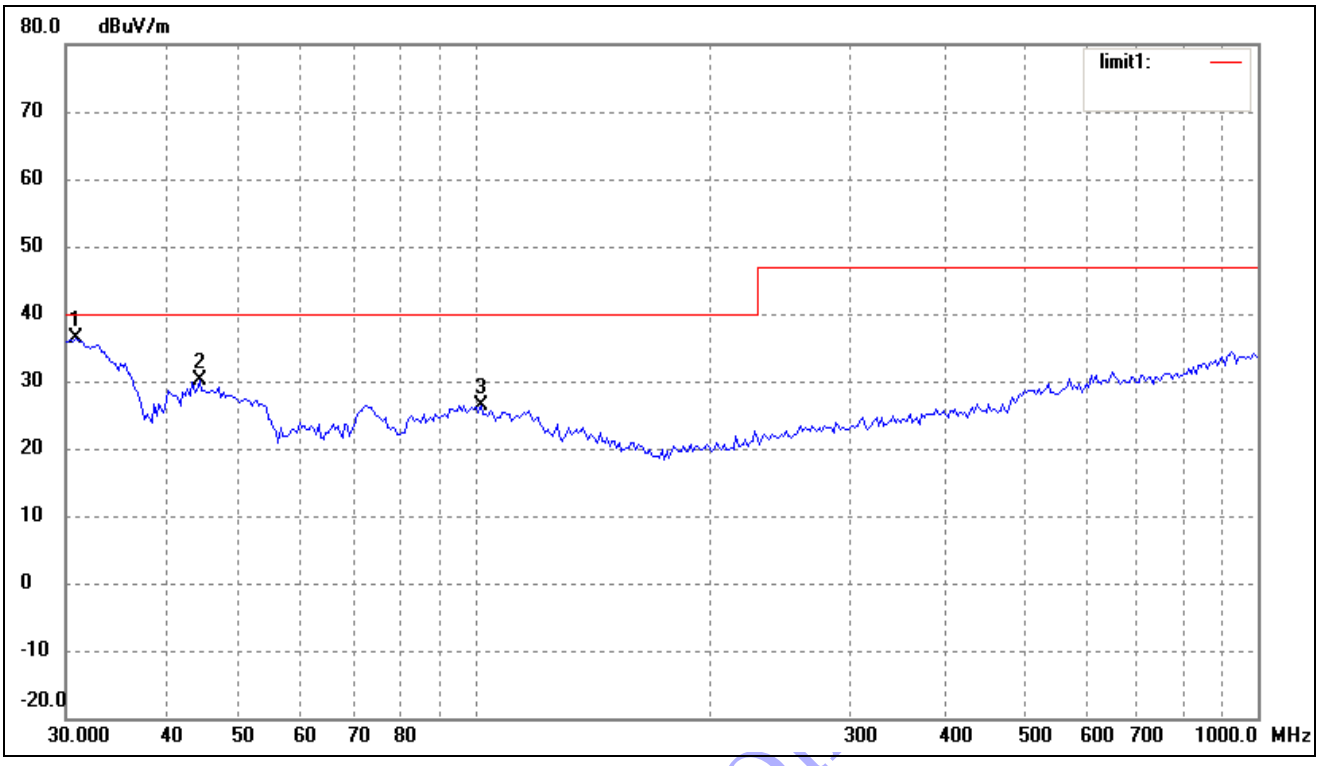
Radiated Emission
EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-T3A(structure 2)
Operating Condition: Full Load
Test Specification: Horizontal & Vertical
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.0000	20.47	6.63	27.10	40.00	-12.90	360	100	peak
2	49.7068	14.88	7.71	22.59	40.00	-17.41	360	100	peak
3	129.0146	27.84	3.99	31.83	40.00	-8.17	360	100	peak

Vertical:

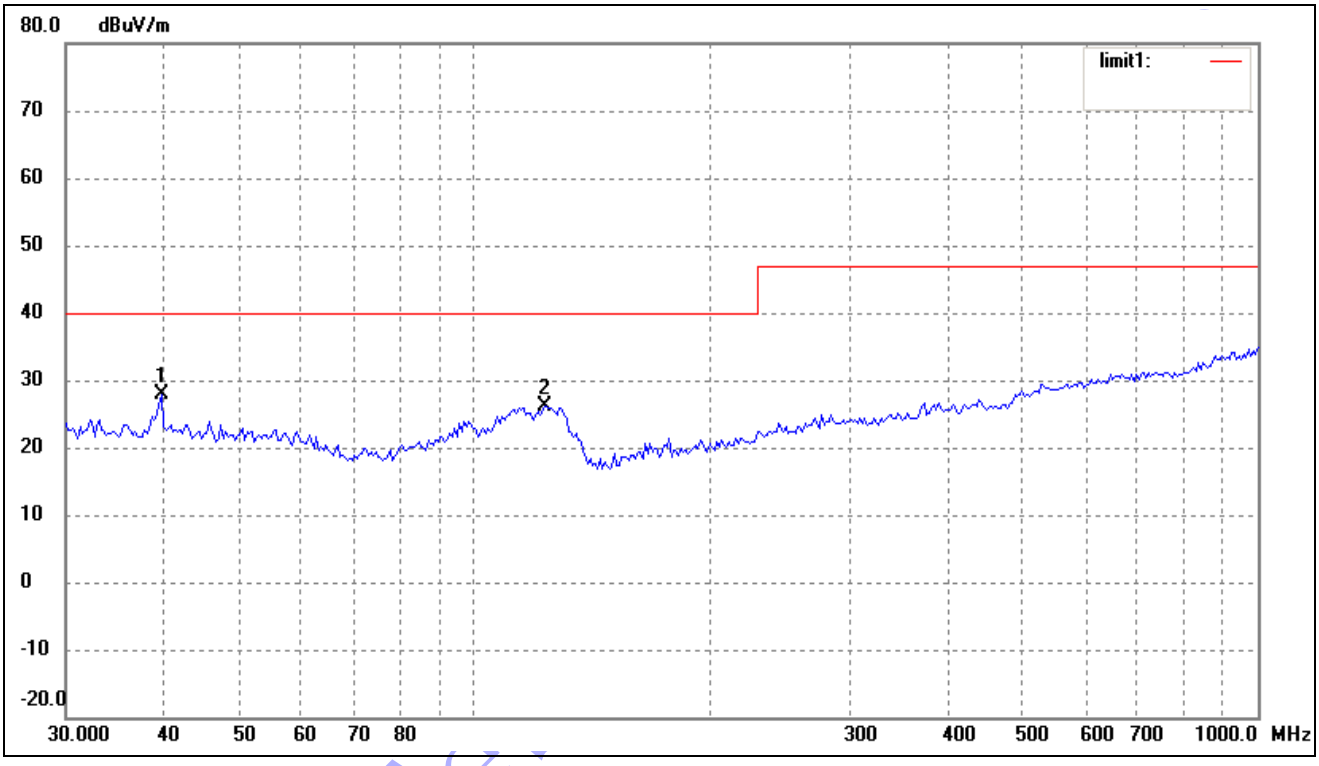


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	30.8535	29.64	6.62	36.26	40.00	-3.74	360	100	peak
2	44.4308	22.19	7.98	30.17	40.00	-9.83	360	100	peak
3	101.6443	18.80	7.67	26.47	40.00	-13.53	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

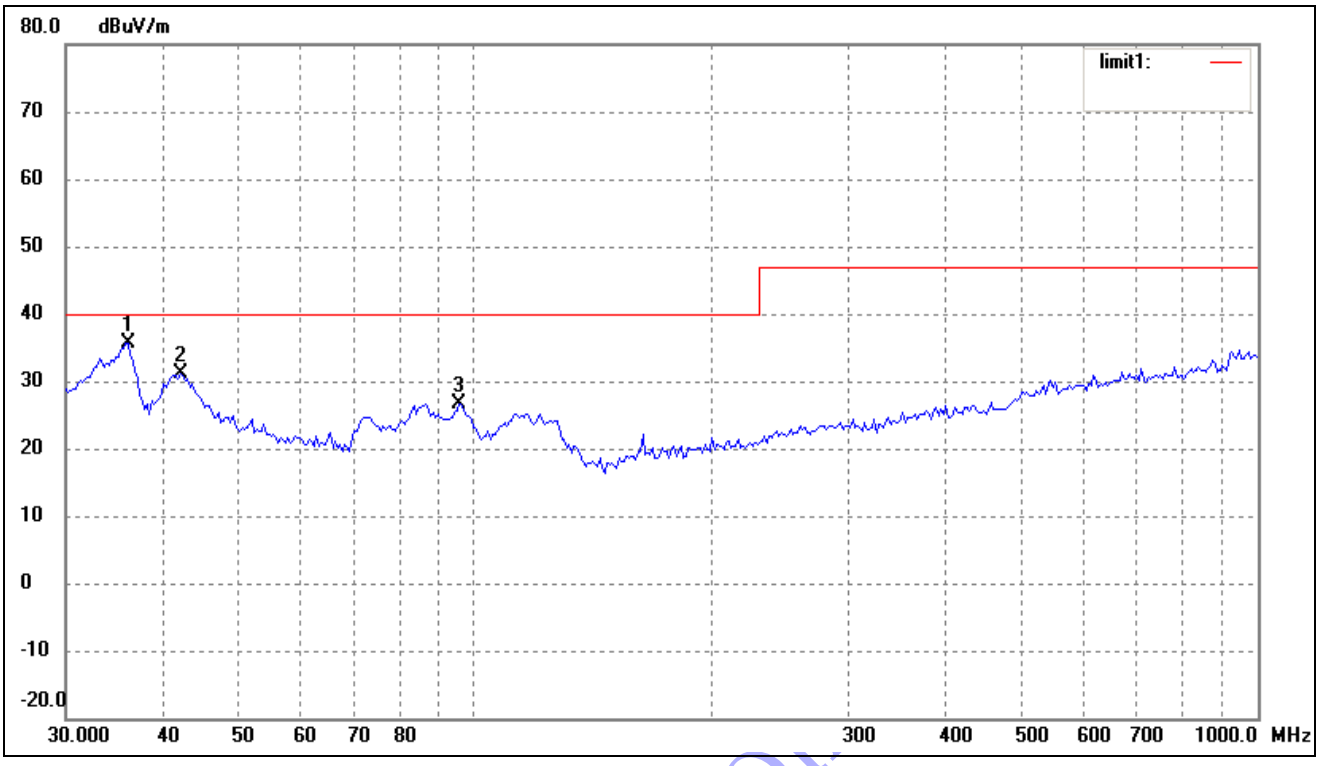
Radiated Emission
EUT: Medical power supply/I.T.E power supply
M/N: GT(M)or-91120-3005-T3A(structure 3)
Operating Condition: Full Load
Test Specification: Horizontal & Vertical
Comment: AC 230V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	39.7146	20.10	7.86	27.96	40.00	-12.04	360	100	peak
2	122.8340	21.27	4.87	26.14	40.00	-13.86	360	100	peak

Vertical:



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	36.0007	28.78	6.87	35.65	40.00	-4.35	360	100	peak
2	42.0066	23.12	7.95	31.07	40.00	-8.93	360	100	peak
3	95.4270	19.21	7.50	26.71	40.00	-13.29	360	100	peak

Note: emissions are only the base noise in frequency 1GHz~6GHz.

5. EN 61000-3-2 HARMONIC CURRENT EMISSIONS

5.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Digital Power Analyzer	Em Test AG/Switzerland	DPA 500	V0745103095	2010-08-12	2011-08-11
Source	Em Test AG/Switzerland	ACS 500	V0745103096	2010-08-12	2011-08-11

5.2 Test Procedure

Test is conducting under the description of EN61000-3-2: 2006+A2: 2009

5.3 Test Standards

EN61000-3-2: 2006+A2: 2009
Limit: Clause 7

Environmental Conditions

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

5.4 EN 61000-3-2: Harmonic Current Emissions Test Data

According to Clause 7 of EN 61000-3-2:2006+A2: 2009, the EUT (rate power is 30W) 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.

Test Result: Pass

6. EN 61000-3-3 VOLTAGE FLUCTUATION AND FLICKER

6.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Digital Power Analyzer	Em Test AG/Switzerland	DPA 500	V0745103095	2010-08-12	2011-08-11
Source	Em Test AG/Switzerland	ACS 500	V0745103096	2010-08-12	2011-08-11

6.2 Test Procedure

Test is conducting under the description of EN61000-3-3: 2008

6.3 Test Standards

EN61000-3-3: 2008
Limit: Clause 5

Environmental Conditions

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

6.4 EN 61000-3-3: Voltage Fluctuation and Flicker Test Data

The EUT can be deemed to comply with the requirement of EN 61000-3-3 without test, since it is working with low current and steady state, and it will not cause any flicker and fluctuation on the power line.

Test Result: Pass

7. Electrostatic Discharge Immunity (ESD)

7.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
ESD Generator	TESQ AG	NSG 437	161	2010-01-22	2011-01-21

7.2 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

7.3 EN61000-4-2: Electrostatic Discharge Immunity Test Data

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
Slots	A	A	A	A	A	A	B	B		

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
DC Port	A	A	A	A						

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

8.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Signal Generator	Rohde & Schwarz	SMT03	100059	2010-08-12	2011-08-11
Voltage Probe	Rohde & Schwarz	URV5-Z2	100013	2010-08-12	2011-08-11
Power Amplifier	AR	150W1000	300999	2010-08-12	2011-08-11
Power Amplifier	AR	25S1G4AM1	305993	2010-08-12	2011-08-11
Trilog Antenna	SCHWARZBECK	VULB9163	9163-333	2010-07-21	2011-07-20
Anechoic chamber	Albatross Projects	MCDC	----	2010-03-20	2012-03-19

8.2 Test Procedure

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

Test Performance

Performance Criterion: A

Environmental Conditions

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

8.3 EN61000-4-3: Continuous Radiated Disturbances Test Data

Frequency step: 1% of fundamental
Dwell time: 1 second

Frequency Range (MHz)	Front (3 V/m)		Rear (3 V/m)		Left Side (3 V/m)		Right Side (3 V/m)	
80-2500	VERT	HORI	VERT	HORI	VERT	HORI	VERT	HORI
	A	A	A	A	A	A	A	A

Test Result: Pass

9. Electrical Fast Transients

9.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Transient 2000	EMC PARTNER	TRA2000	863	2009-10-09	2010-10-08
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2009-10-09	2010-10-08

9.2 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

9.3 EN61000-4-4: Electrical Fast Transients Test Data

Class Ⅱ

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 Line of EUT	L1	A	A	B	B	B	B	/	/
	L2	A	A	B	B	B	B	/	/
	Earth	/	/	/	/	/	/	/	/
	L1+L2	A	A	B	B	B	B	/	/
	L1 + Earth	/	/	/	/	/	/	/	/
	L2 + Earth	/	/	/	/	/	/	/	/
	L1+L2+Earth	/	/	/	/	/	/	/	/
Signal ports		/	/	/	/	/	/	/	/

Class Ⅰ

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 Line of EUT	L1	A	A	B	B	B	B	/	/
	L2	A	A	B	B	B	B	/	/
	Earth	A	A	B	B	B	B	/	/
	L1+L2	A	A	B	B	B	B	/	/
	L1 + Earth	A	A	B	B	B	B	/	/
	L2 + Earth	A	A	B	B	B	B	/	/
	L1+L2+Earth	A	A	B	B	B	B	/	/
Signal ports		/	/	/	/	/	/	/	/

Test Result: Pass

10. Surge

10.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Transient 2000	EMC PARTNER	TRA2000	863	2009-10-09	2010-10-08
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2009-10-09	2010-10-08

10.2 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

10.3 EN61000-4-5: Surge Test Data

Class Ⅱ

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

Class Ⅰ

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

Test Result: Pass

11. Continuous Conducted Disturbances

11.1 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Immunity simulator	EMTEST	MV500	0800-44	2010-08-12	2011-08-11

11.2 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

11.3 EN61000-4-6: Continuous Conducted Disturbances Test Data

Sweep frequency range: 150kHz~80MHz
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. 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	2009-10-09	2010-10-08
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2009-10-09	2010-10-08

12.2 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

12.3 EN61000-4-11: Voltage Dips And Interruptions Test Data

Level	U2	td	Phase Angle	N	Pass	Fail
1	>95%	10ms	0/90/180/270	3	A	/
2	30%	500ms	0/90/180/270	3	B	/
3	60%	100ms	0/90/180/270	3	C	/
4	>95%	5000ms	0/90/180/270	3	C	/

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.

Proposed Label Location on EUT

EXHIBIT 2 - EUT PHOTOGRAPHS

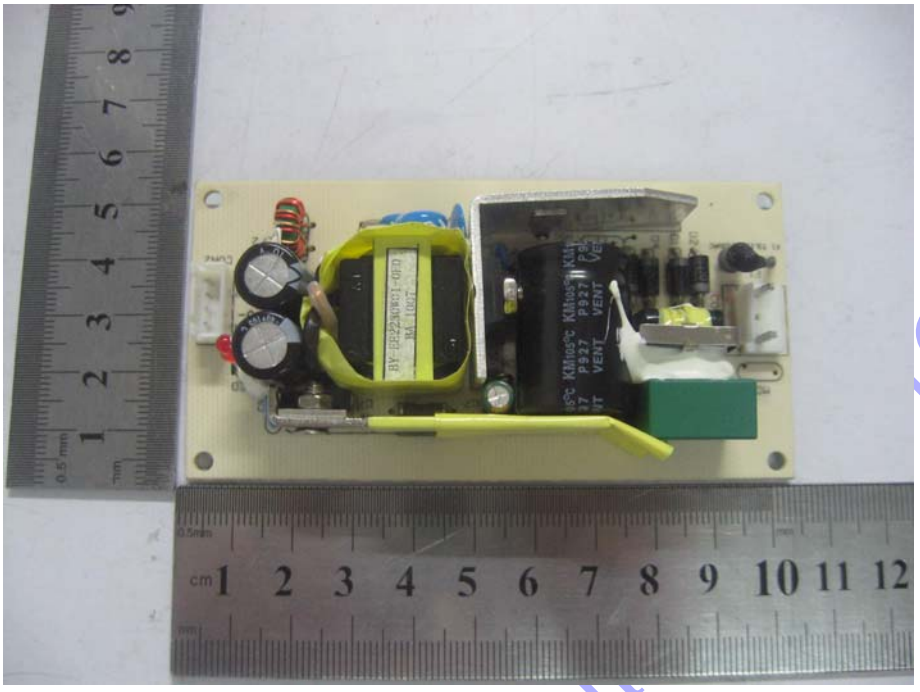
EUT View 1 (External/Desktop model: Class Ⅱ)

EUT View 2 (External/Desktop model: Class Ⅱ)

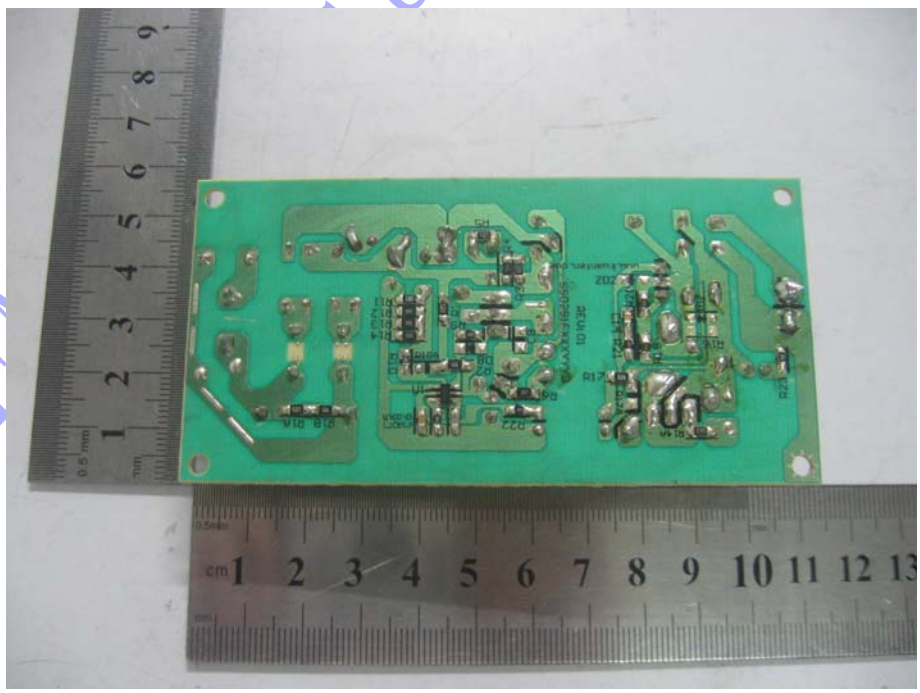
EUT View 3 (Plastic package: Class Ⅱ)

EUT View 4 (Plastic package: Class Ⅱ)

EUT View 5 (Open Frame: Class Ⅱ)

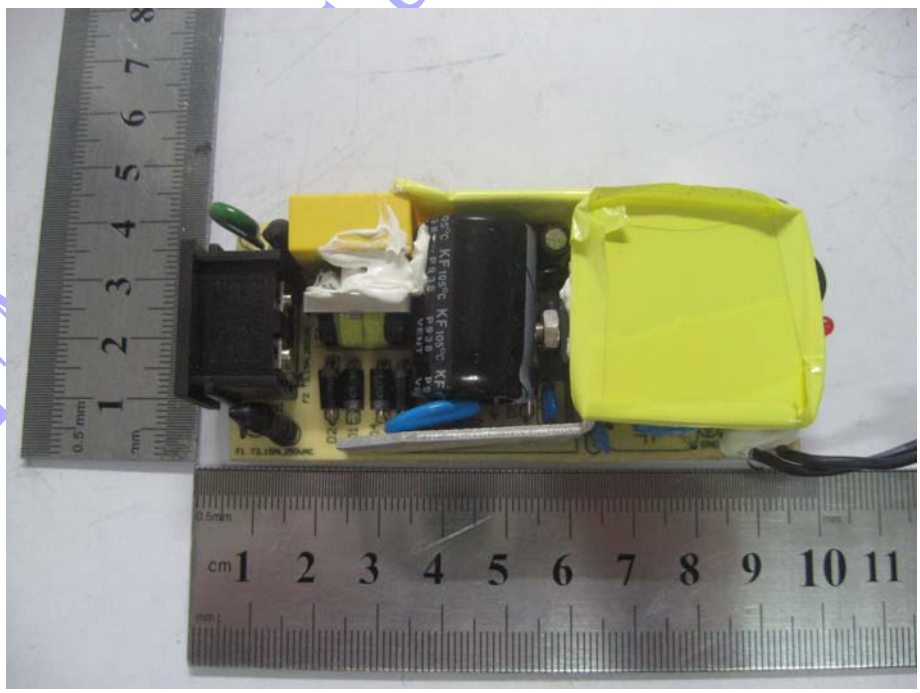


EUT View 6 (Open Frame: Class Ⅱ)

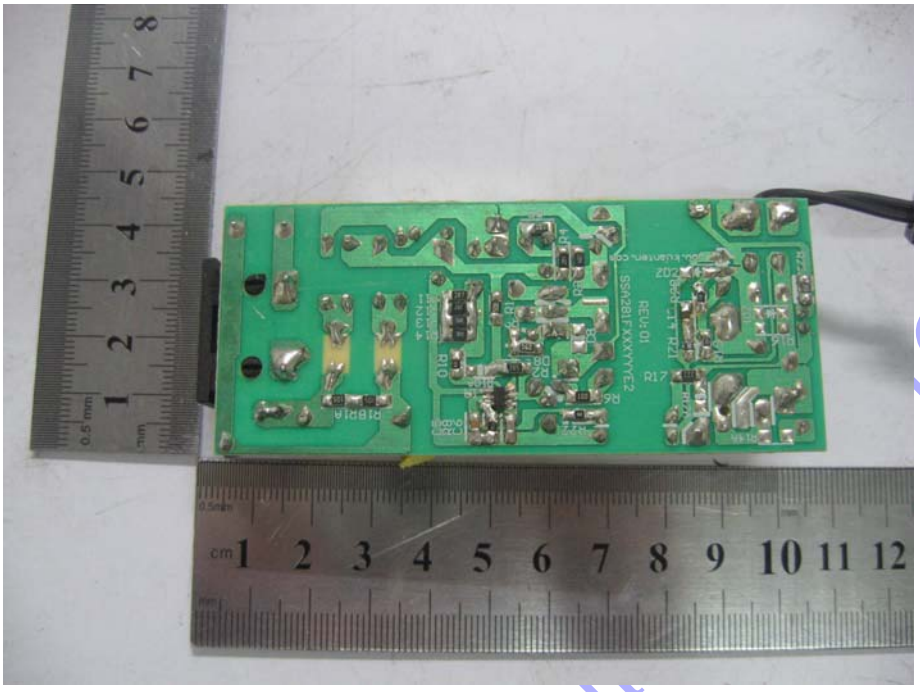


EUT Housing and Board View 1

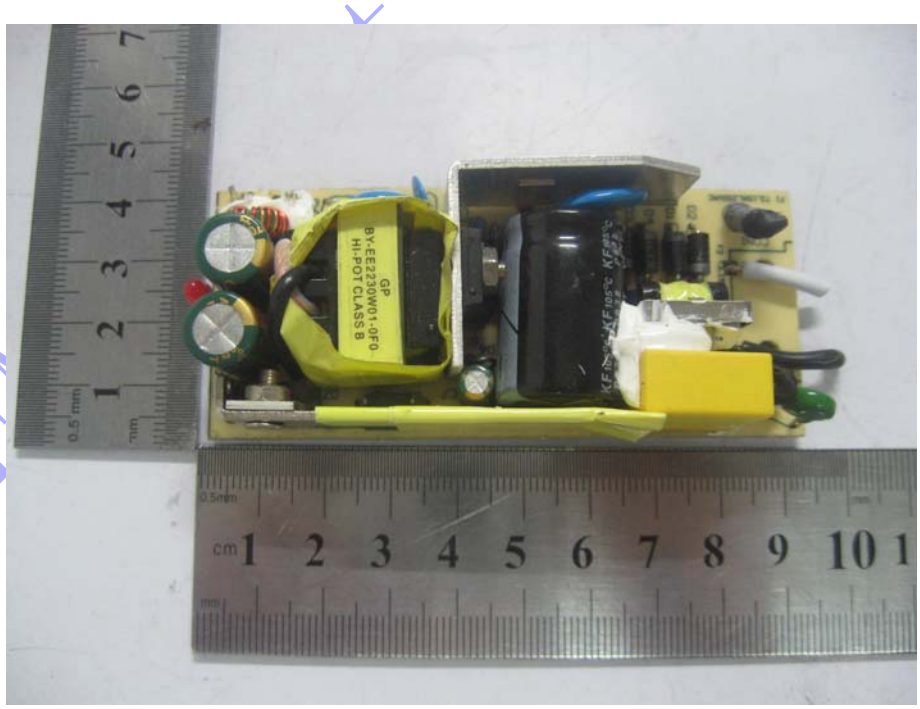
Solder Board-Component View 1 (External/Desktop model: GT(M)or-91120-3048-T2 Class Ⅱ)



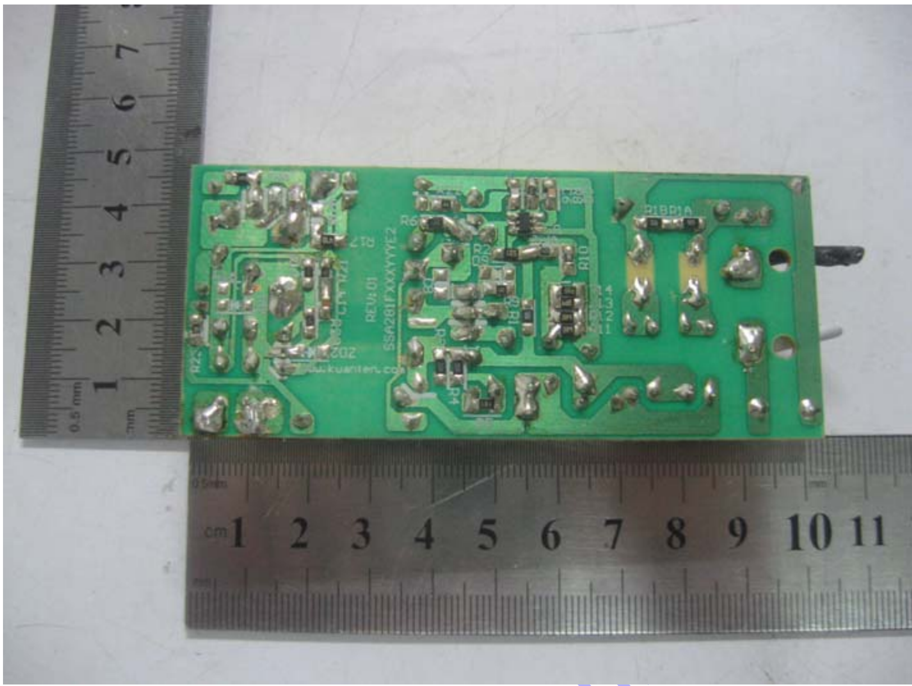
Solder Board-Component View 2 (External/Desktop model: GT(M)or-91120-3048-T2 Class Ⅱ)



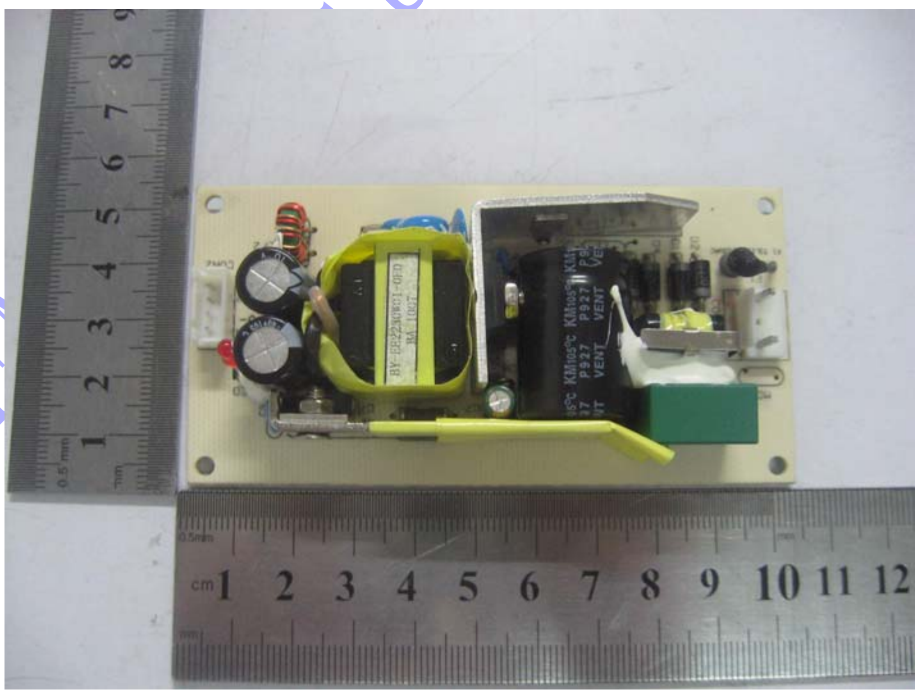
Solder Board-Component View 3 (Plastic package model: GT(M)or-91120-3005-P2 Class Ⅱ)



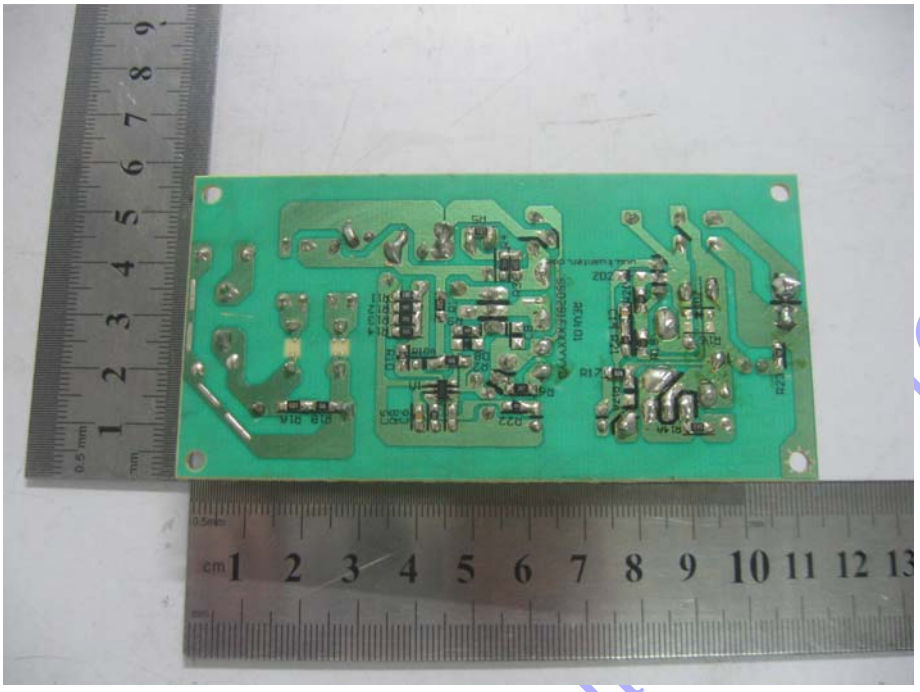
Solder Board-Component View 4 (Plastic package model: GT(M)or-91120-3005-P2 ClassⅡ)



Solder Board-Component View 5 (Open Frame model: GT(M)or-91120-3005-FW ClassⅡ)

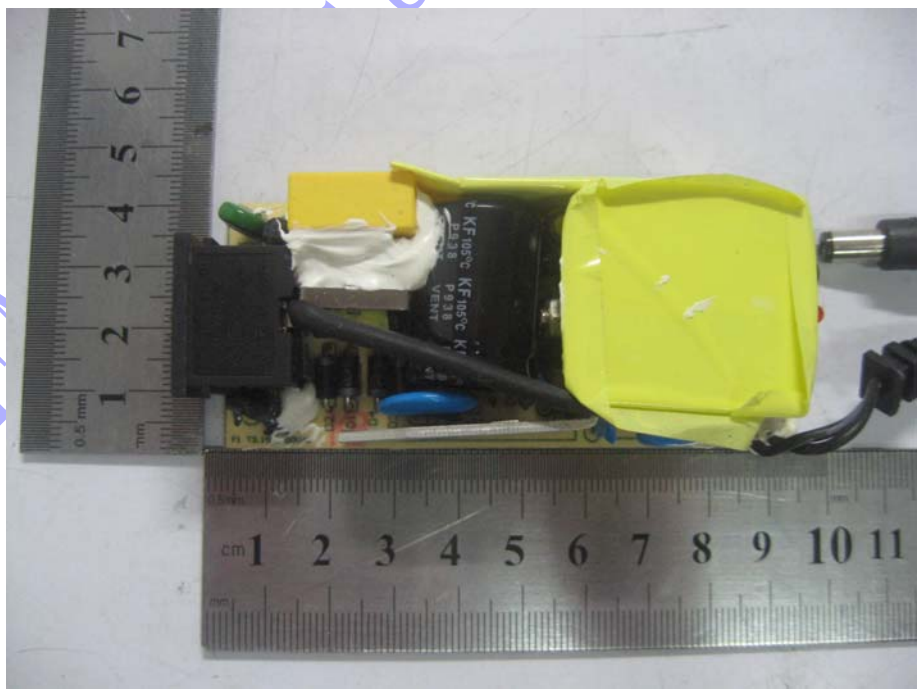


Solder Board-Component View 6 (Open Frame model: GT(M)or-91120-3005-FW Class Ⅱ)



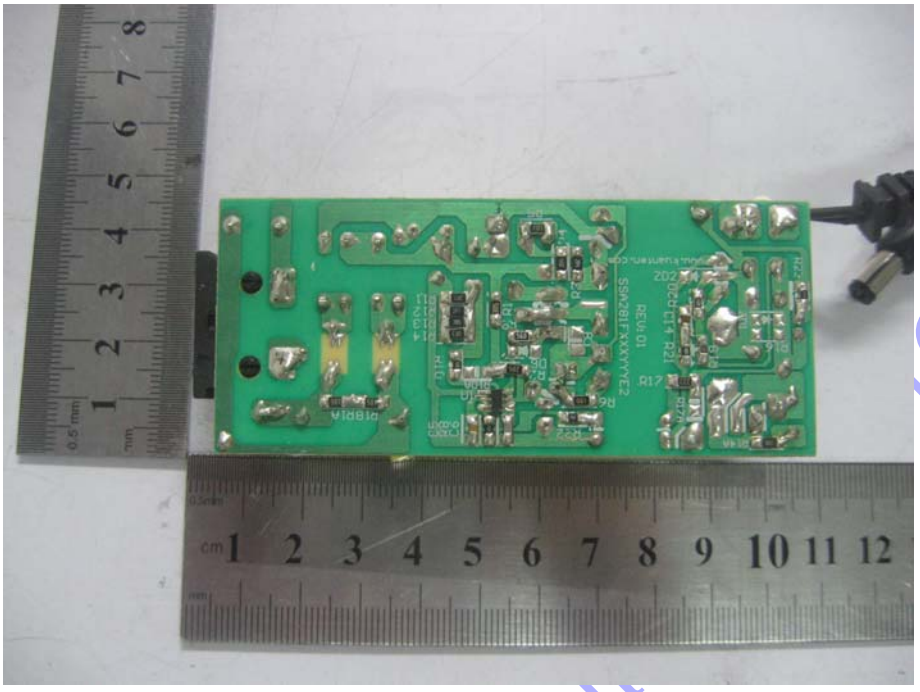
Solder Board-Component View 7 (External/Desktop model: GT(M)or-91120-3048-T3A Class Ⅰ)

(structure 1)



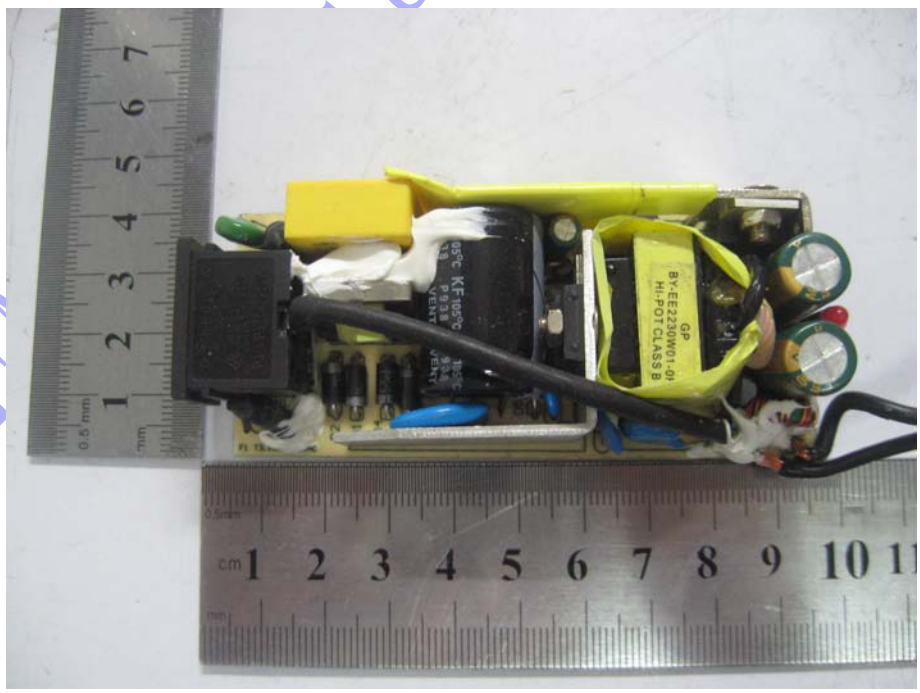
Solder Board-Component View 8 (External/Desktop model: GT(M)or-91120-3048-T3A Class Ⅰ)

(structure 1)



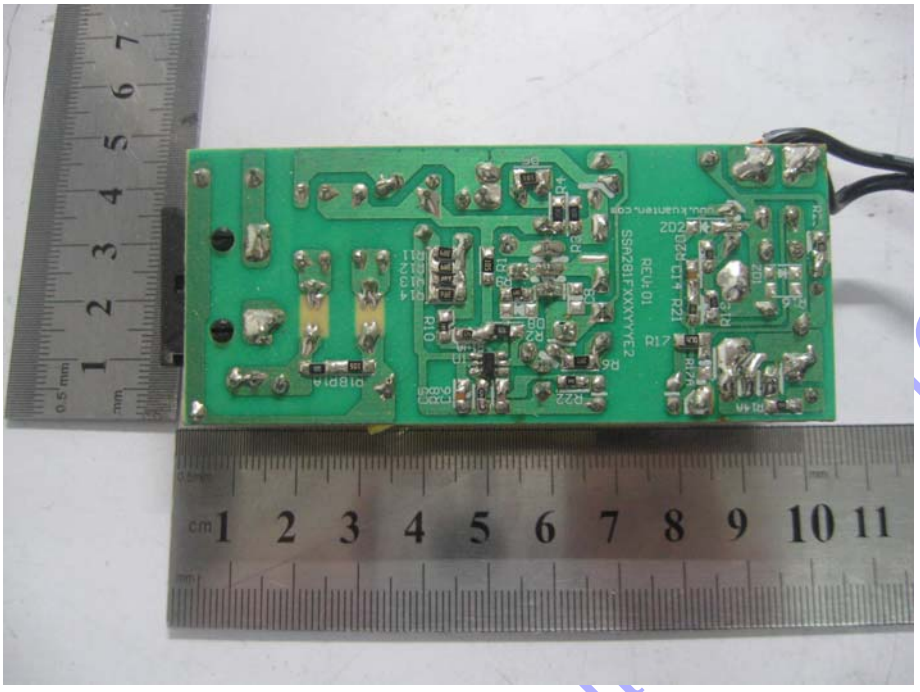
Solder Board-Component View 9 (External/Desktop model: GT(M)or-91120-3005-T3A Class Ⅰ)

(structure 1)



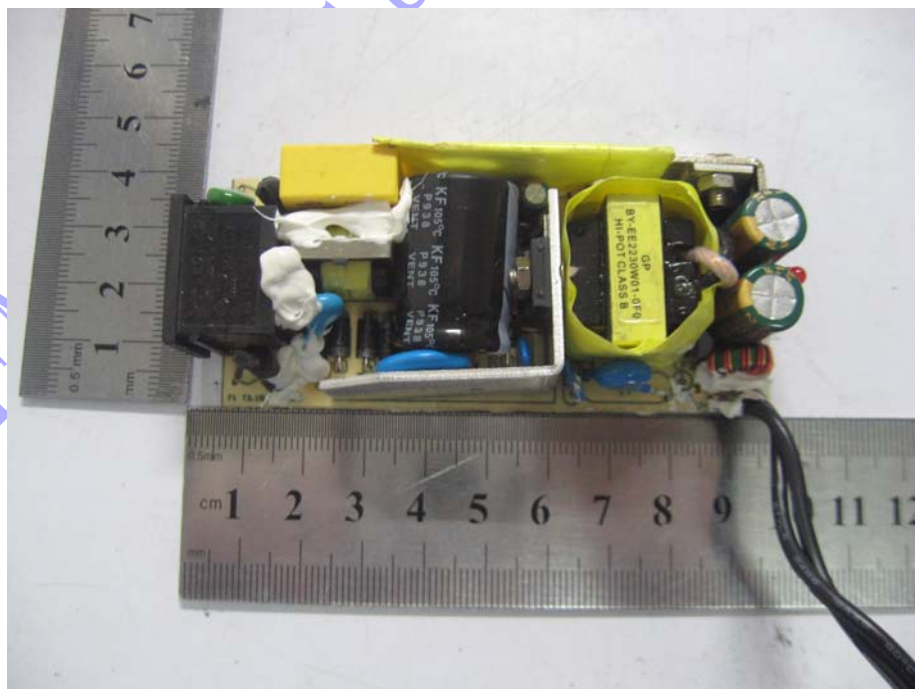
Solder Board-Component View 10 (External/Desktop model: GT(M)or-91120-3005-T3A Class Ⅰ)

(structure 1)



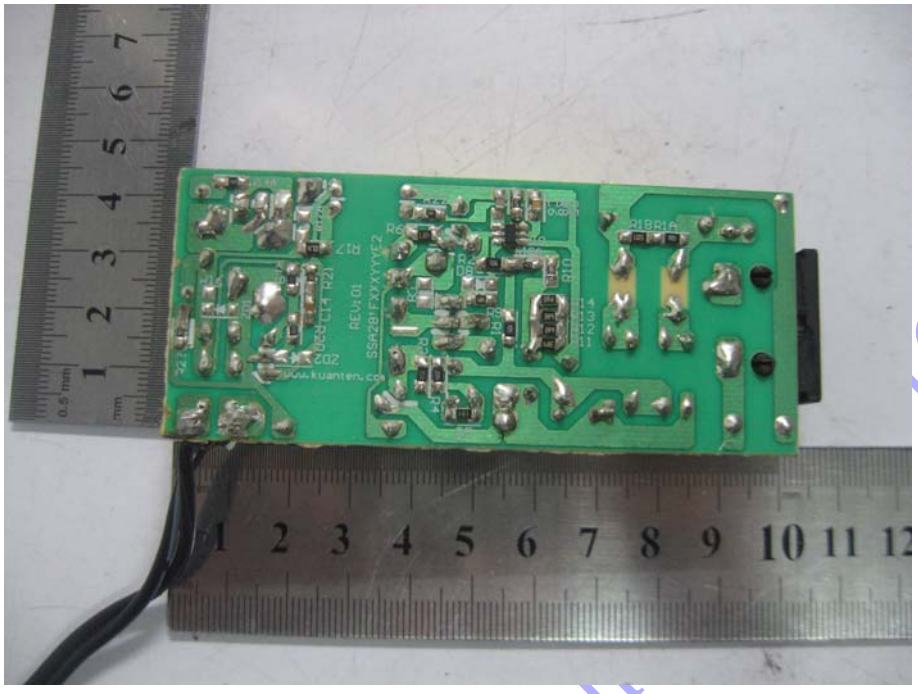
Solder Board-Component View 11 (External/Desktop model: GT(M)or-91120-3005-T3A Class Ⅰ)

(structure 2)



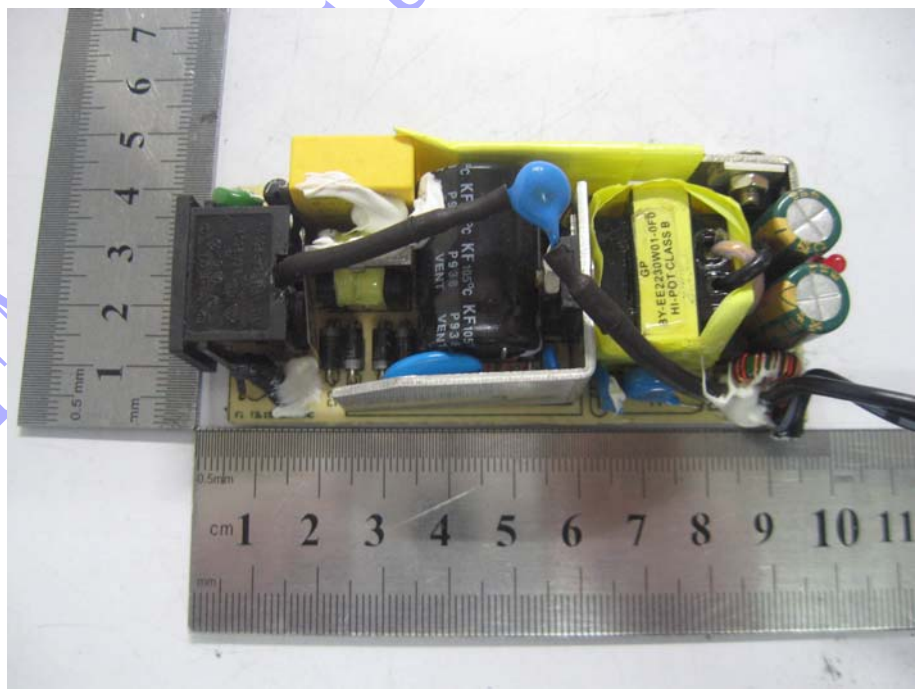
Solder Board-Component View 12 (External/Desktop model: GT(M)or-91120-3005-T3A Class Ⅰ)

(structure 2)



Solder Board-Component View 13 (External/Desktop model: GT(M)or-91120-3005-T3A Class Ⅰ)

(structure 3)



Solder Board-Component View 14 (External/Desktop model: GT(M)or-91120-3005-T3A Class Ⅰ)

(structure 3)

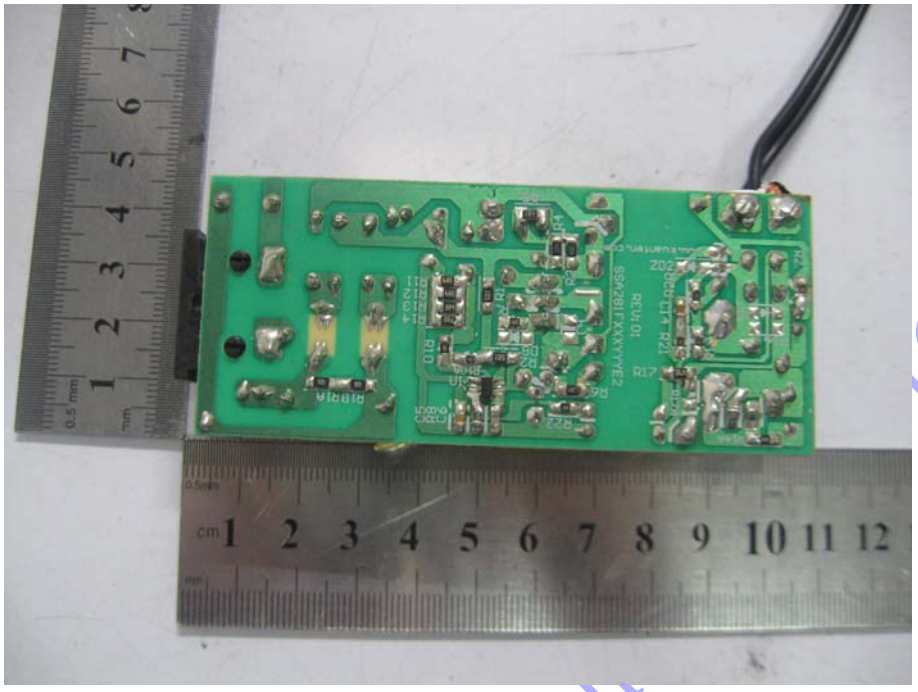
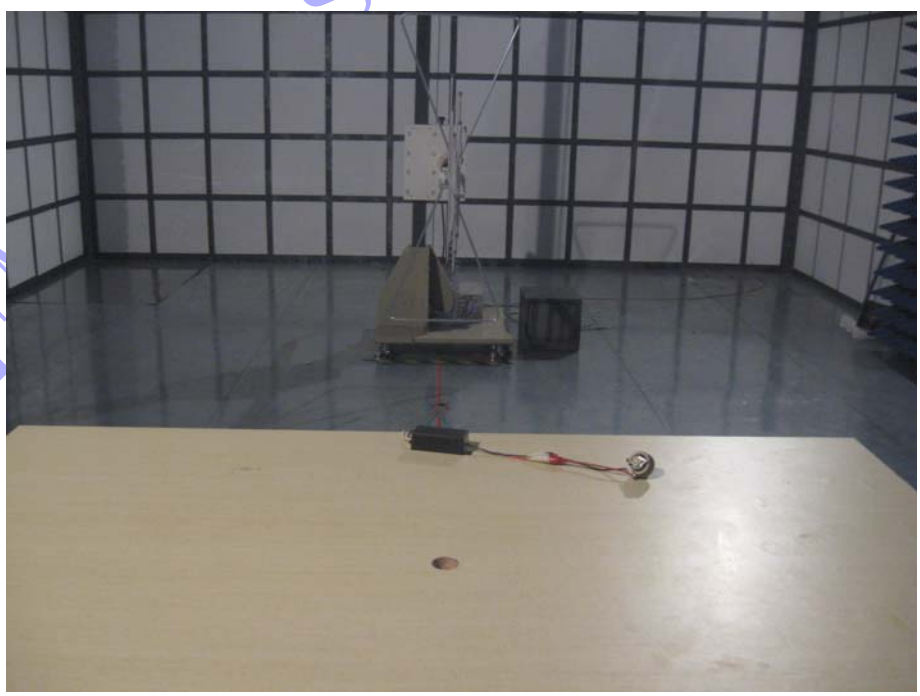


EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

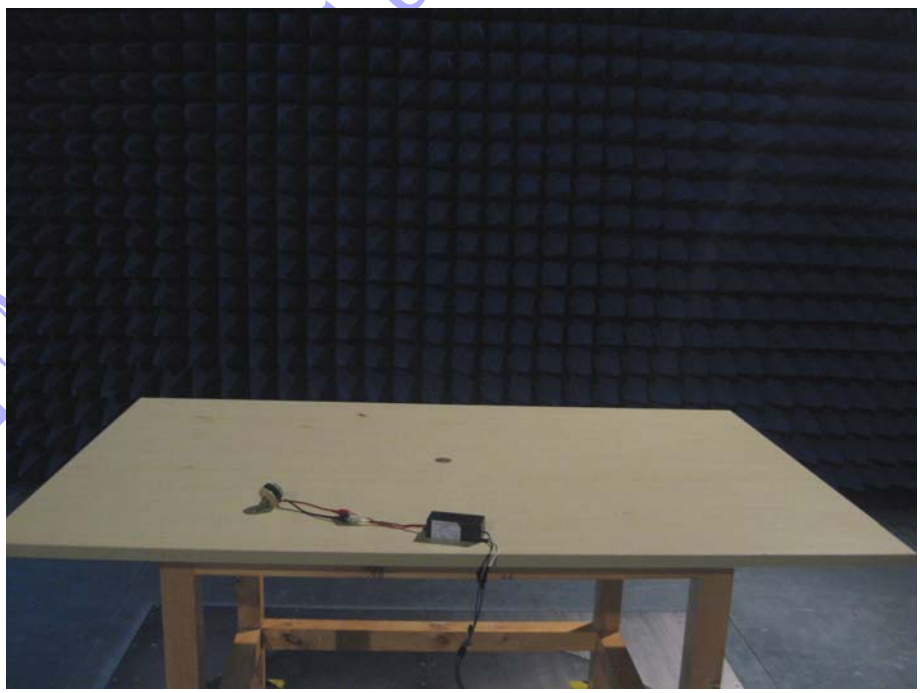
Conduction Emission Test View

Radiation Emission Test View



IEC 61000-4-2

IEC 61000-4-3



IEC 61000-4-4/-5/-11

IEC 61000-4-6

EXHIBIT 4 –SCHEMATICS

EXHIBIT 5 –USERS MANUAL

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