



# TEST REPORT

**Reference No.** : WTX23X06126277E  
**Applicant** : GlobTek, Inc.  
**Address** : 186 Veterans Dr. Northvale, NJ 07647 USA  
**Manufacturer** : 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  
**Product Name** : Power supply  
**Model No.** : GT\*961200P\*\*\*\* and GT\*96900P\*\*\*\*  
**Standards** : EN 60601-1-2:2015+A1:2021  
**Date of Receipt sample** : 2023-06-26  
**Date of Test** : 2023-06-26 to 2023-07-21  
**Date of Issue** : 2023-07-21  
**Test Report Form No.** : WTX\_EN 60601\_1\_2\_2015\_B  
**Test Result** : Pass

**Remarks:**

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

**Prepared By:**

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## Report version

Version No.	Date of issue	Description
Rev.00	2023-07-21	Original
/	/	/

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## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Power supply
Trade Name:	GlobTek, Inc.
Model No.:	GT*961200P**** and GT*96900P****
Adding Model(s):	/
<p><i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model GT*961200P**** and GT*96900P****, but the circuit and the electronic construction do not change, declared by the manufacturer.</i></p> <p><i>GT*961200P**** and GT*96900P****</i>  <i>The 1st “*” can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety.</i>  <i>The 2nd “*” can be “-01” to “-120”, with interval of 1 and “-” can be omitted, denotes the rated output wattage designation.</i>  <i>The 3rd “*” can be “12” to “54” or “12.0” to “54.0” in 0.1V increments, denotes the standard rated output voltage designation.</i>  <i>The 4th “*” can be “-T2”, “-T2A”, “-T3”, “-T3A”, “-T3TAB”, “-TW”, “-TW3”, “-TP”, “-TP3”, “-P2”, “-P3”:</i>  <i>“-T2” means desktop class II with C8 AC inlet</i>  <i>“-T2A” means desktop class II with C18 AC inlet</i>  <i>“-T3” means desktop class I or class II with functional earth with C14 AC inlet</i>  <i>“-T3A” means desktop class I or class II with functional earth with C6 AC inlet</i>  <i>“-T3TAB” means desktop class I or class II with functional earth with C14 AC inlet and housing with a tab</i>  <i>“-TW” means desktop class II with input wire without plug</i>  <i>“-TW3” means desktop class I or class II with functional earth with input wire without plug</i>  <i>“-TP” means desktop class II with power supply cord with plug</i>  <i>“-TP3” means desktop class I or class II with functional earth with power supply cord with plug</i>  <i>“-P2” means Encapsulated Type, class II, with two-core input wire, IP68</i>  <i>“-P3” means Encapsulated Type, class I or class II with functional earth, with three-core input wire, IP68</i>  <i>The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes</i></p>	

Technical Characteristics of EUT	
Rated Voltage/ Current:	Input: AC 100-240V~, 50-60Hz or 50/60Hz, 1.5A Output: DC 12-54V, Max. 120W
Rated Power:	/
Power Adaptor Model:	/



Highest Internal Frequency:	Below 108MHz
Classification of Equipment:	Class B

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## 1.2 Test Standards

The tests were performed according to following standards:

**EN 60601-1-2:2015+A1:2021**: 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 IEC 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.

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## 1.4 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:

<b>Test Mode List</b>				
Test Mode	Description	Remark	Power Supply Mode	
TM1	Working mode	Model: GTM961200P12015-T3 Output:DC 15V/8A	AC 230V/50Hz	
TM2	Working mode	Model: GTM96900P9012-T2 Output:DC 12V/7.5A	AC 230V/50Hz	
TM3	Working mode	Model: GTM96900P9054-T2 Output:DC 54V/1.66A	AC 230V/50Hz	
TM4	Working mode	Model: GTM961200P12015-T3 Output:DC 15V/8A	AC 120V/60Hz	
TM5	Working mode	Model: GTM96900P9012-T2 Output:DC 12V/7.5A	AC 120V/60Hz	
TM6	Working mode	Model: GTM96900P9054-T2 Output:DC 54V/1.66A	AC 120V/60Hz	

<b>EUT Cable List and Details</b>					
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite	With / Without Chip	
Model: GTM961200P12015- T3 DC Cable	1.22	Unshielded	With	Without	
Model: GTM96900P9012 -T2 DC Cable	1.32	Unshielded	With	Without	
Model: GTM96900P9054 -T2 DC Cable	1.48	Unshielded	Without	Without	

<b>Special Cable List and Details</b>					
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite	With / Without Chip	
/	/	/	/	/	/

<b>Auxiliary Equipment List and Details</b>					
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Description	Manufacturer	Model	Serial Number
Load	/	/	/

## 1.5 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 manufacturer. No change in operating state or loss of 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.

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## 1.6 Test Equipment List and Details

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
<input checked="" type="checkbox"/> Chamber A:Below 1GHz					
Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2023-02-25	2024-02-24
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2023-02-25	2024-02-24
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2023-03-20	2026-03-19
Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2024-03-19
Amplifier	HP	8447F	2805A03475	2023-02-25	2024-02-24
<input type="checkbox"/> Chamber A:Above 1GHz					
Amplifier	C&D	PAP-1G18	2002	2023-02-25	2024-02-24
Horn Antenna	ETS	3117	00086197	2021-03-19	2024-03-18
<input type="checkbox"/> Chamber B:Below 1GHz					
Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2024-04-08
Amplifier	Agilent	8447D	2944A10179	2023-02-25	2024-02-24
EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2023-02-25	2024-02-24
<input type="checkbox"/> Chamber C:Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2023-02-25	2024-02-24
Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2024-05-27
Amplifier	HP	8447F	2944A03869	2023-02-25	2024-02-24
<input type="checkbox"/> Chamber C:Above 1GHz					
Horn Antenna	POAM	RTF-11A	LP228060221	2023-03-10	2026-03-09
Amplifier	Tonscend	TAP01018050	AP22E806235	2023-02-25	2024-02-24
<input checked="" type="checkbox"/> Conducted Room 1#					
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2023-02-25	2024-02-24
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2023-02-25	2024-02-24
AC LISN	Schwarz beck	NSLK8126	8126-224	2023-02-25	2024-02-24
8-WIRE LISN	Schwarz beck	8158	CAT3-8158-0059	2023-02-25	2024-02-24
8-WIRE LISN	Schwarz beck	8158	CAT5-8158-0117	2023-02-25	2024-02-24
<input type="checkbox"/> Conducted Room 2#					
EMI Test Receiver	Rohde & Schwarz	ESPI	10129	2023-02-25	2024-02-24
LISN	Rohde & Schwarz	ENV 216	100097	2023-02-25	2024-02-24
<input checked="" type="checkbox"/> Harmonics & Flicker					
Digital Power Analyzer	California Instrument	CTS	72831	2023-02-25	2024-02-24
Power Source	California Instrument	5001IX-CTS-400	25965	2023-02-25	2024-02-24
<input checked="" type="checkbox"/> Electrostatic discharges					
ESD Generator	LIONCEL	ESD-203B	0170901	2023-03-14	2024-03-13



<input checked="" type="checkbox"/> Power-frequency magnetic field (PFMF)					
PMF Generator	LIONCEL	PMF-801C-C	0171101	2023-02-25	2024-02-24
PMF Antenna	LIONCEL	PMF-801C-A	0180302	2023-02-25	2024-02-24
Instantaneous PMF Generator Module	LIONCEL	PMF-801C-T	0171001	2023-02-25	2024-02-24
<input checked="" type="checkbox"/> Electronic fast transient(EFT)/Surges/Dips					
Transient 2000	EMC PARTNER	TRA2000	863	2023-02-25	2024-02-24
Couple Clamp	EMC PARTNER	CN-EFT1000	513	2023-02-25	2024-02-24
<input checked="" type="checkbox"/> Radio frequency, continuous conducted (C/S)					
CONDUCTED IMMUNITY TEST SYSTEM	FRANKONIA	CIT-10/75	126B1247/2013	2023-02-25	2024-02-24
Attenuator	EMTEST	MA-5100/6BF2	1009	2023-02-25	2024-02-24
CDN	Luthi	L-801M2/M3	2665	2023-02-25	2024-02-24
CDN	LIONCEL	CDN-T8	0210401	2023-02-25	2024-02-24
EM Clamp	TESEQ	KEMZ801A	45028	2023-02-25	2024-02-24
<input checked="" type="checkbox"/> Radio frequency electromagnetic Field (R/S)					
Signal Generator	HP	8688B	3438A00604	2023-02-25	2024-02-24
Power Sensor	Agilent	E9301A	MY52450001	2023-02-25	2024-02-24
Power Sensor	Agilent	E9304A	MY55081055	2023-02-25	2024-02-24
RF Power Amplifier	MicoTop	MPA-80-1000-250	MPA1906239	2023-02-25	2024-02-24
RF Power Amplifier	MicoTop	MPA-1000-6000-100	MPA1906238	2023-02-25	2024-02-24
Antenna	SCHWARZBECK	STLP 9129	9129 114	N/A	N/A
Power Meter	Agilent	E4419B	GB42420578	2023-02-25	2024-02-24



## 2. SUMMARY OF TEST RESULTS

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Standards	Description of Test Item	Result
EN 60601-1-2	Conducted Disturbance	Compliant
	Radiated Disturbance	Compliant
	Harmonic Current Emission IEC 61000-3-2	Compliant
	Voltage Fluctuation and Flicker IEC 61000-3-3	Compliant
	Electrostatic Discharge Immunity in accordance with IEC 61000-4-2	Compliant
	Continuous Radiated Disturbances Immunity in accordance with IEC 61000-4-3	Compliant
	Electrical Fast Transient/Burst Immunity in accordance With IEC 61000-4-4	Compliant
	Surges Immunity in accordance with IEC 61000-4-5	Compliant
	Continuous Conducted Disturbances Immunity in accordance with IEC 61000-4-6	Compliant
	Power-frequency Magnetic Fields Immunity in accordance with IEC 61000-4-8	Compliant
	Voltage Dips/Interruptions Immunity in accordance with IEC 61000-4-11	Compliant



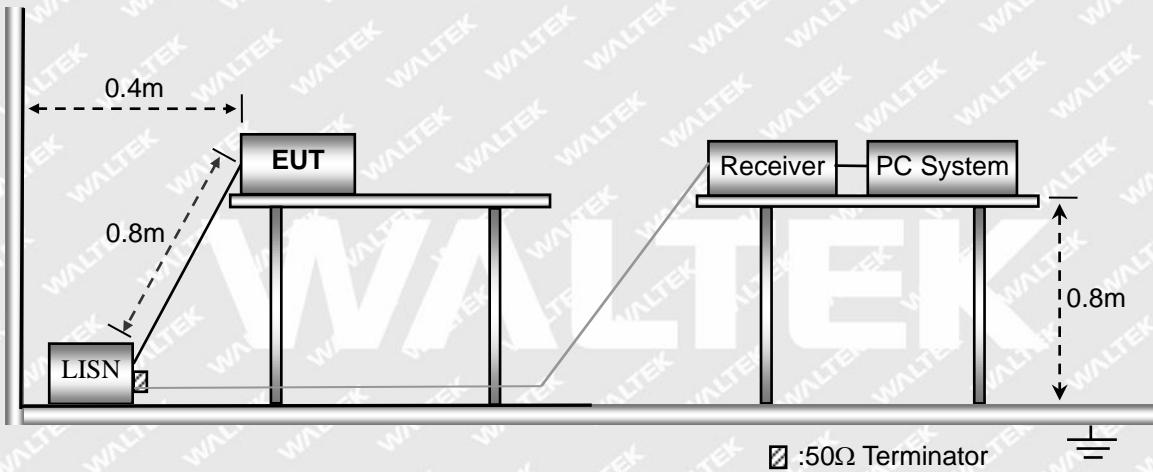
### 3. Conducted Emission

#### 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 Basic Test Setup Block Diagram

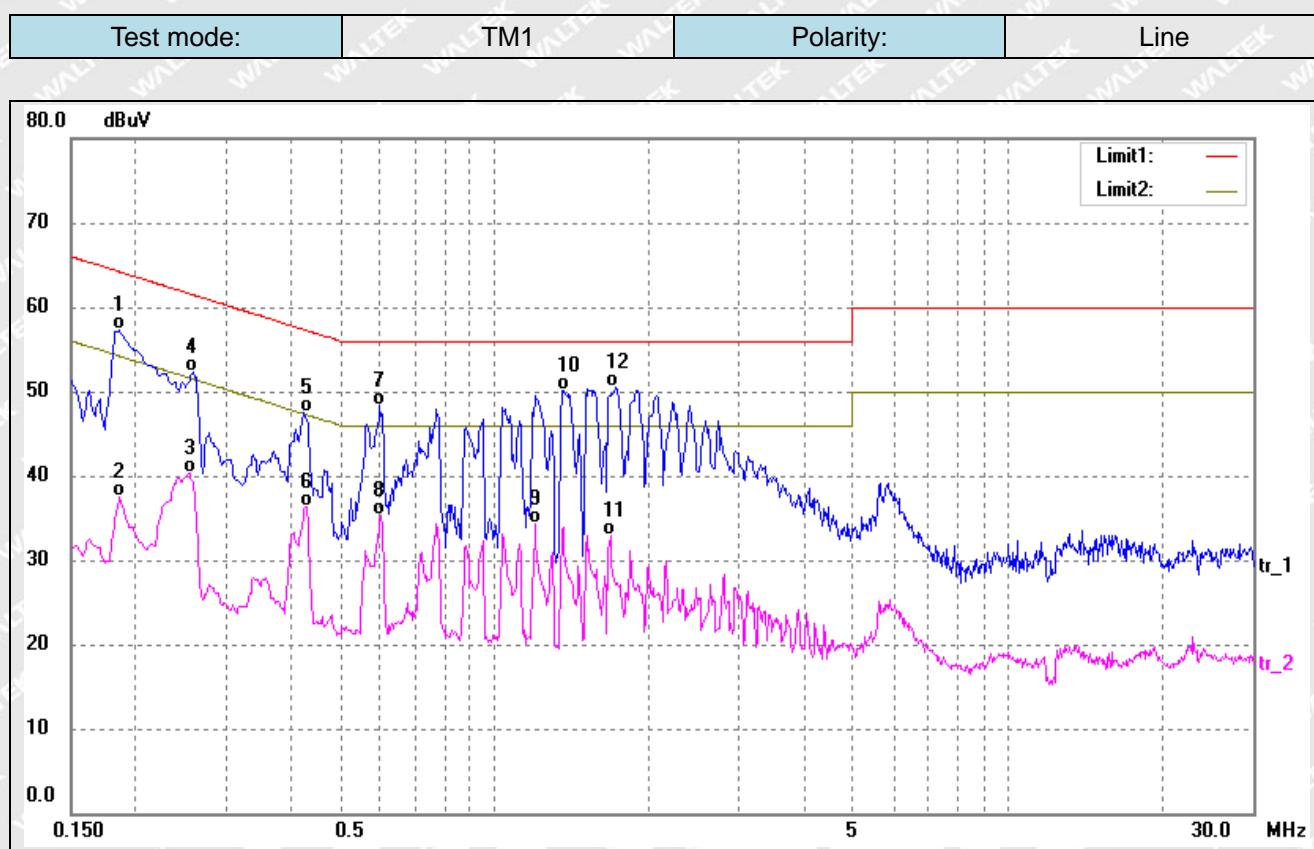


#### 3.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	54 %
ATM Pressure:	998 mbar

#### 3.4 Summary of Test Results

Please find the results below:



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1860	46.83	10.40	57.23	64.21	-6.98	QP
2	0.1860	27.10	10.40	37.50	54.21	-16.71	AVG
3	0.2540	29.95	10.34	40.29	51.62	-11.33	AVG
4	0.2580	41.92	10.34	52.26	61.49	-9.23	QP
5	0.4260	37.18	10.25	47.43	57.33	-9.90	QP
6	0.4300	26.02	10.25	36.27	47.25	-10.98	AVG
7	0.5980	38.14	10.22	48.36	56.00	-7.64	QP
8	0.6020	25.04	10.22	35.26	46.00	-10.74	AVG
9	1.2020	24.19	10.18	34.37	46.00	-11.63	AVG
10	1.3619	39.93	10.21	50.14	56.00	-5.86	QP
11	1.6820	22.61	10.27	32.88	46.00	-13.12	AVG
12*	1.7180	40.21	10.27	50.48	56.00	-5.52	QP

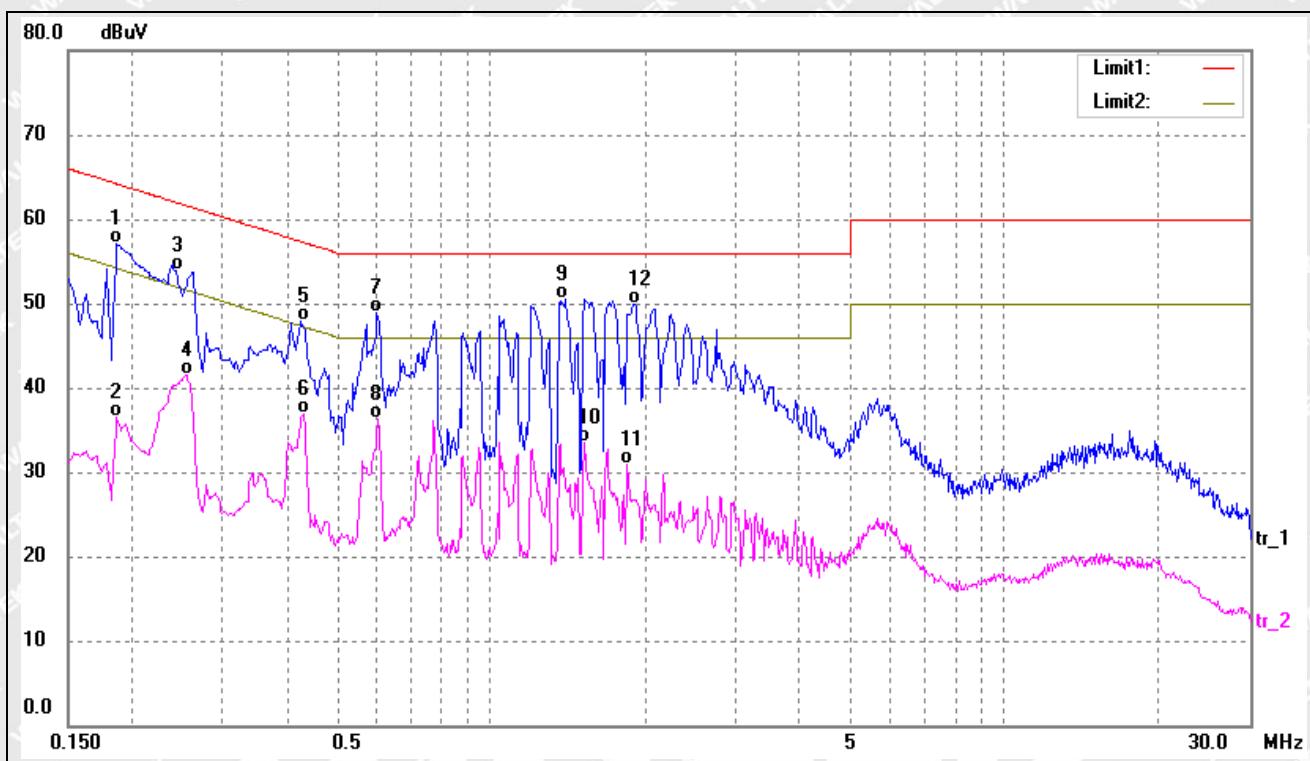


Test mode:

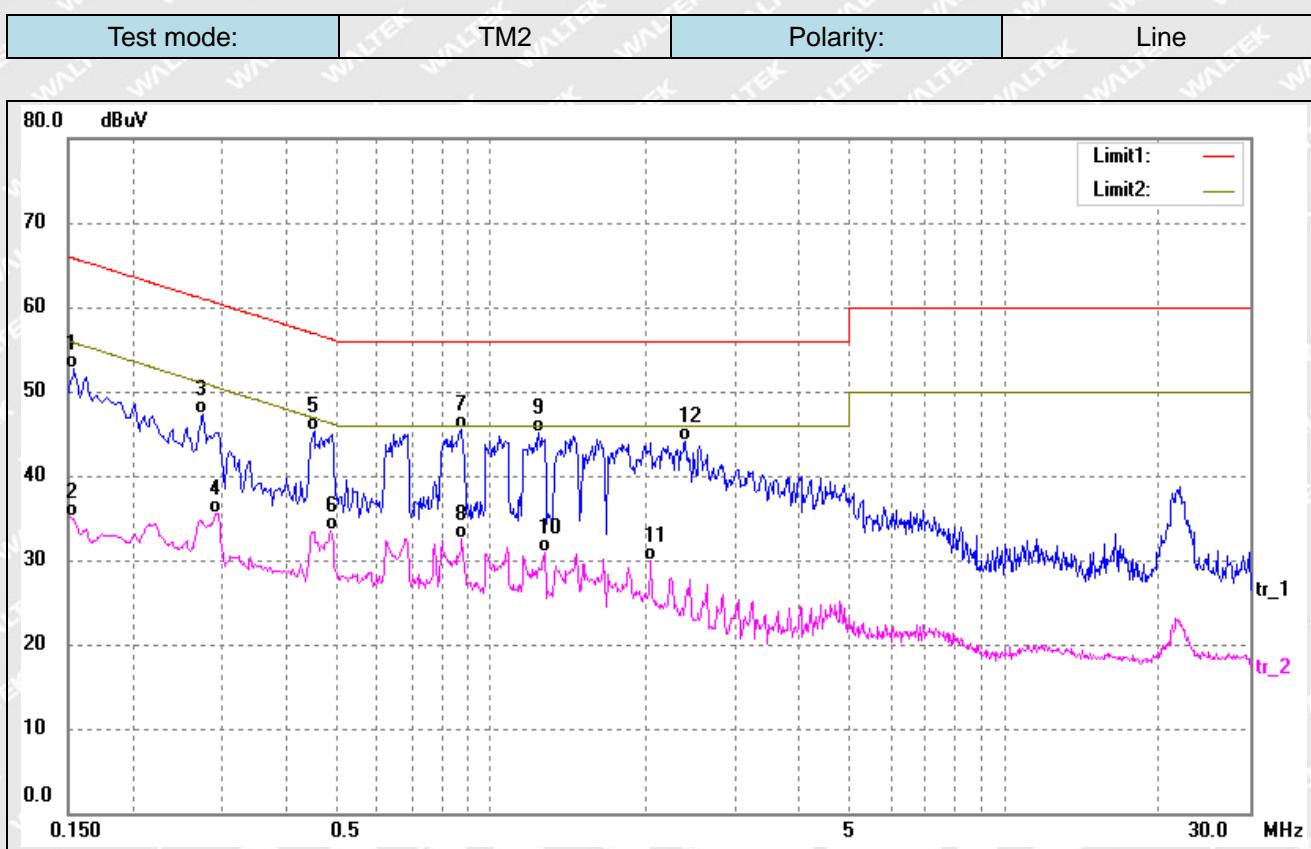
TM1

Polarity:

Neutral



No.	Frequency (MHz)	Reading (dB <sub>uV</sub> )	Correct (dB)	Result (dB <sub>uV</sub> )	Limit (dB <sub>uV</sub> )	Margin (dB)	Detector
1	0.1860	46.75	10.40	57.15	64.21	-7.06	QP
2	0.1860	26.14	10.40	36.54	54.21	-17.67	AVG
3	0.2416	43.57	10.35	53.92	62.04	-8.12	QP
4	0.2540	31.20	10.34	41.54	51.62	-10.08	AVG
5	0.4260	37.65	10.25	47.90	57.33	-9.43	QP
6	0.4300	26.56	10.25	36.81	47.25	-10.44	AVG
7	0.5980	38.64	10.22	48.86	56.00	-7.14	QP
8	0.6020	26.15	10.22	36.37	46.00	-9.63	AVG
9*	1.4020	40.31	10.22	50.53	56.00	-5.47	QP
10	1.5220	23.36	10.24	33.60	46.00	-12.40	AVG
11	1.8420	20.54	10.30	30.84	46.00	-15.16	AVG
12	1.9060	39.61	10.31	49.92	56.00	-6.08	QP



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	42.26	10.41	52.67	65.78	-13.11	QP
2	0.1539	24.71	10.41	35.12	55.78	-20.66	AVG
3	0.2740	36.96	10.33	47.29	60.99	-13.70	QP
4	0.2900	25.20	10.31	35.51	50.52	-15.01	AVG
5	0.4500	35.00	10.25	45.25	56.87	-11.62	QP
6	0.4860	23.28	10.23	33.51	46.24	-12.73	AVG
7*	0.8780	35.30	10.16	45.46	56.00	-10.54	QP
8	0.8780	22.31	10.16	32.47	46.00	-13.53	AVG
9	1.2379	34.88	10.18	45.06	56.00	-10.94	QP
10	1.2700	20.72	10.19	30.91	46.00	-15.09	AVG
11	2.0500	19.62	10.33	29.95	46.00	-16.05	AVG
12	2.3940	33.69	10.34	44.03	56.00	-11.97	QP

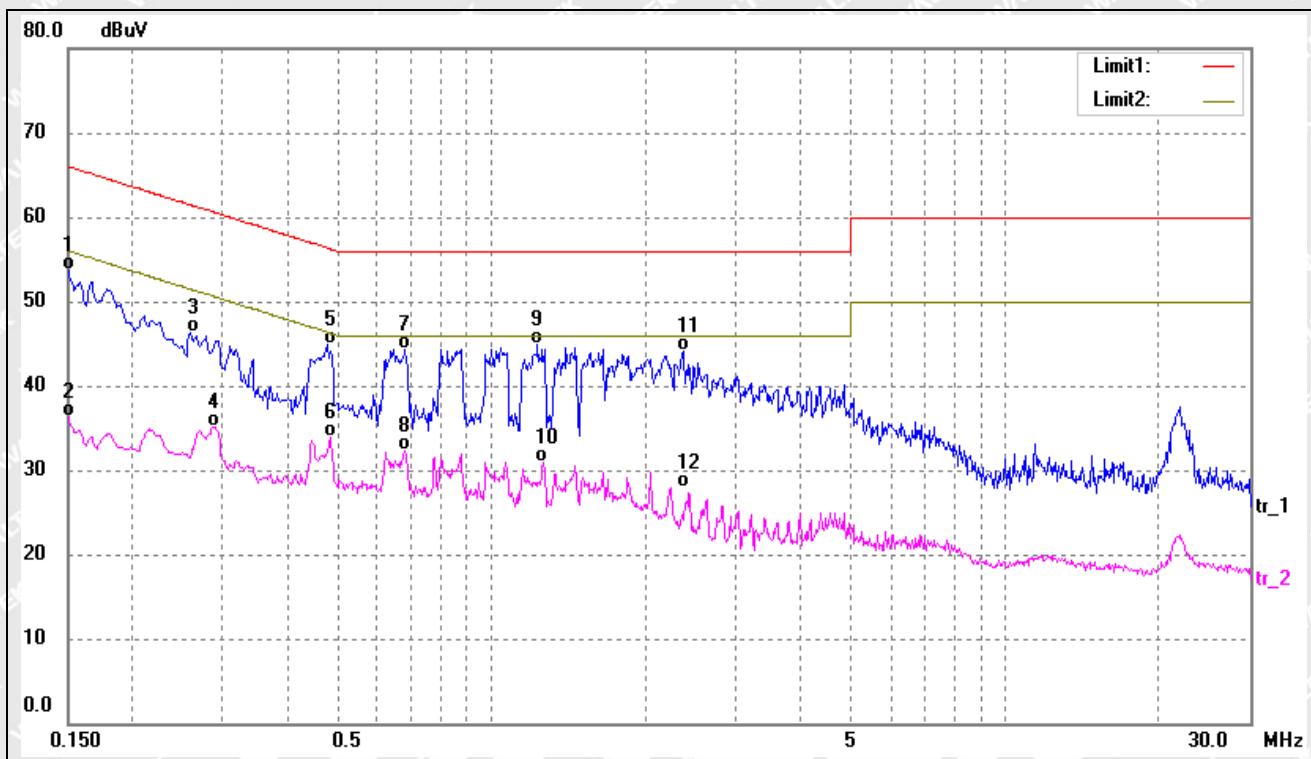


Test mode:

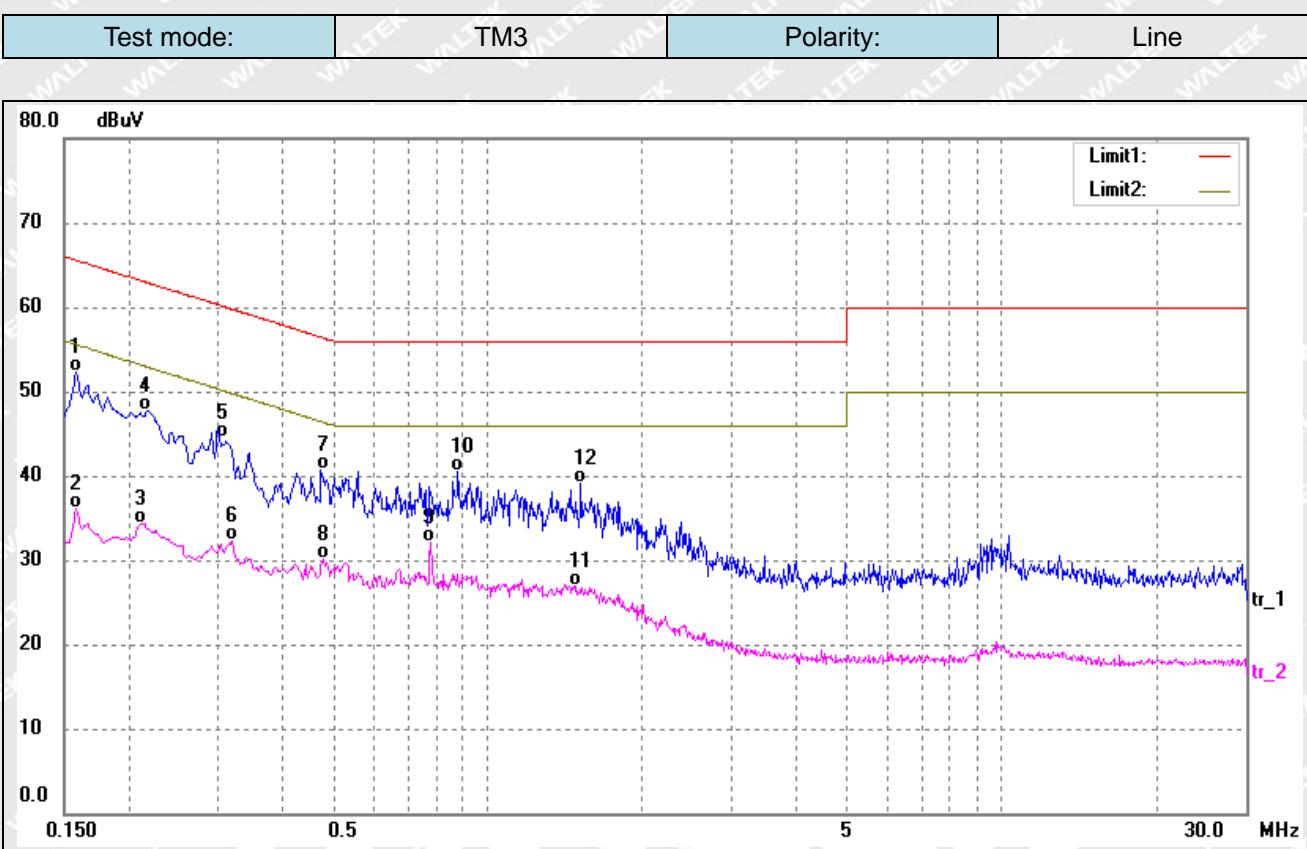
TM2

Polarity:

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	43.24	10.40	53.64	65.99	-12.35	QP
2	0.1500	25.86	10.40	36.26	55.99	-19.73	AVG
3	0.2580	36.02	10.34	46.36	61.49	-15.13	QP
4	0.2860	24.82	10.31	35.13	50.64	-15.51	AVG
5	0.4780	34.64	10.23	44.87	56.37	-11.50	QP
6	0.4860	23.75	10.23	33.98	46.24	-12.26	AVG
7	0.6820	34.10	10.20	44.30	56.00	-11.70	QP
8	0.6820	22.10	10.20	32.30	46.00	-13.70	AVG
9*	1.2300	34.65	10.18	44.83	56.00	-11.17	QP
10	1.2660	20.65	10.19	30.84	46.00	-15.16	AVG
11	2.3660	33.74	10.34	44.08	56.00	-11.92	QP
12	2.3660	17.58	10.34	27.92	46.00	-18.08	AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1580	41.98	10.40	52.38	65.56	-13.18	QP
2	0.1580	25.80	10.40	36.20	55.56	-19.36	AVG
3	0.2100	23.97	10.38	34.35	53.20	-18.85	AVG
4	0.2180	37.38	10.37	47.75	62.89	-15.14	QP
5	0.3003	34.18	10.30	44.48	60.23	-15.75	QP
6	0.3180	21.96	10.30	32.26	49.76	-17.50	AVG
7	0.4738	30.39	10.24	40.63	56.45	-15.82	QP
8	0.4778	19.91	10.23	30.14	46.38	-16.24	AVG
9	0.7780	21.97	10.18	32.15	46.00	-13.85	AVG
10	0.8780	30.27	10.16	40.43	56.00	-15.57	QP
11	1.4900	16.65	10.23	26.88	46.00	-19.12	AVG
12	1.5220	28.90	10.24	39.14	56.00	-16.86	QP

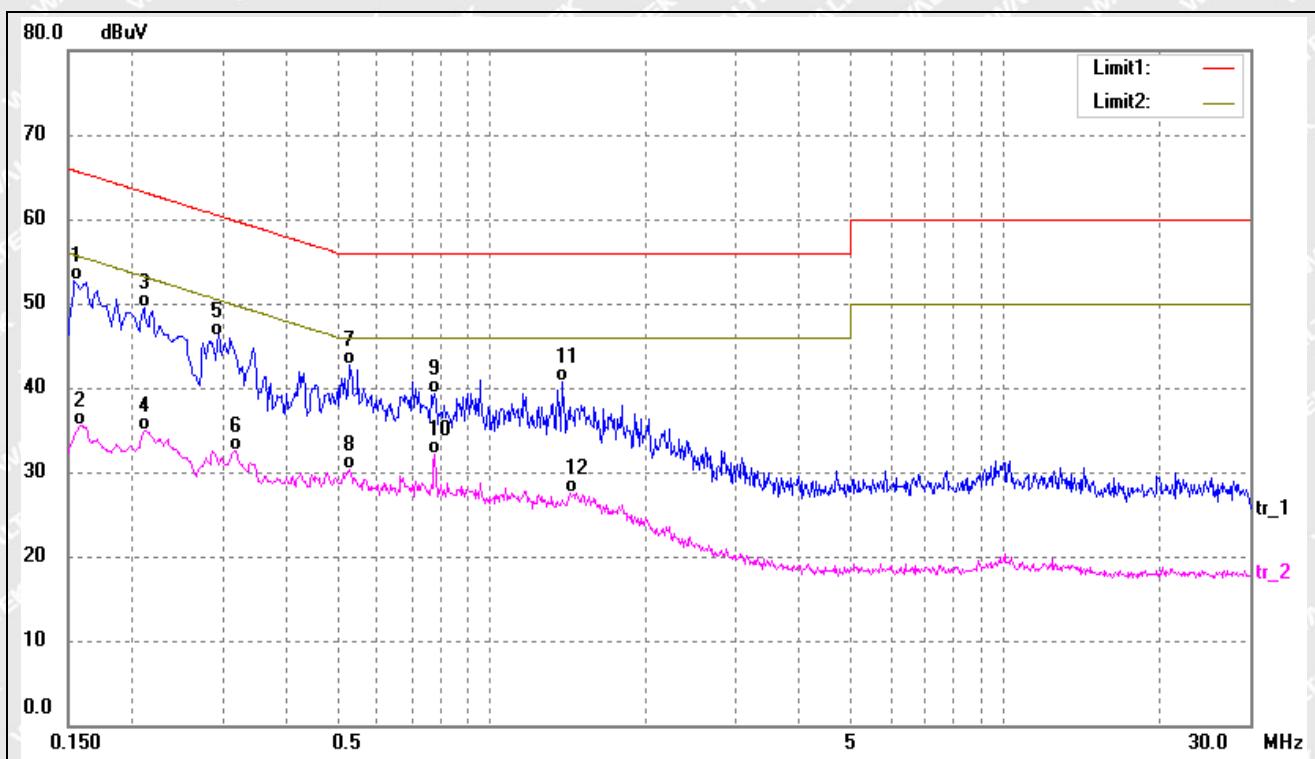


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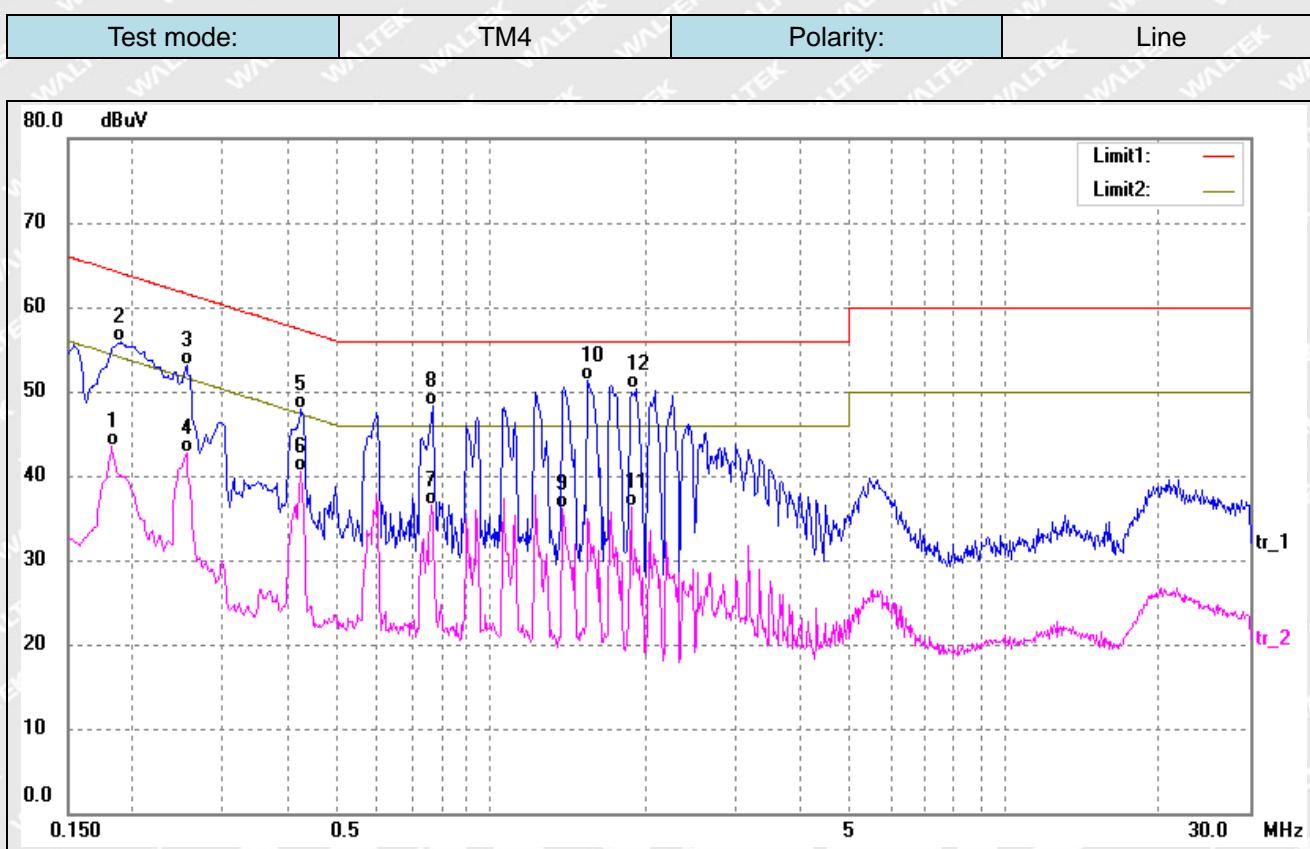
TM3

Polarity:

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1539	42.26	10.41	52.67	65.78	-13.11	QP
2	0.1580	25.16	10.40	35.56	55.56	-20.00	AVG
3	0.2100	39.04	10.38	49.42	63.20	-13.78	QP
4	0.2100	24.61	10.38	34.99	53.20	-18.21	AVG
5	0.2940	35.90	10.30	46.20	60.41	-14.21	QP
6	0.3180	22.29	10.30	32.59	49.76	-17.17	AVG
7	0.5299	32.40	10.23	42.63	56.00	-13.37	QP
8	0.5299	20.16	10.23	30.39	46.00	-15.61	AVG
9	0.7780	29.10	10.18	39.28	56.00	-16.72	QP
10	0.7780	21.85	10.18	32.03	46.00	-13.97	AVG
11	1.3779	30.42	10.21	40.63	56.00	-15.37	QP
12	1.4260	17.21	10.22	27.43	46.00	-18.57	AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1819	33.09	10.39	43.48	54.39	-10.91	AVG
2	0.1900	45.45	10.39	55.84	64.03	-8.19	QP
3	0.2540	42.68	10.34	53.02	61.62	-8.60	QP
4	0.2540	32.43	10.34	42.77	51.62	-8.85	AVG
5	0.4260	37.57	10.25	47.82	57.33	-9.51	QP
6	0.4260	30.30	10.25	40.55	47.33	-6.78	AVG
7	0.7660	26.26	10.18	36.44	46.00	-9.56	AVG
8	0.7700	38.20	10.18	48.38	56.00	-7.62	QP
9	1.3779	25.98	10.21	36.19	46.00	-9.81	AVG
10*	1.5420	40.98	10.24	51.22	56.00	-4.78	QP
11	1.8700	25.93	10.31	36.24	46.00	-9.76	AVG
12	1.9180	39.98	10.31	50.29	56.00	-5.71	QP

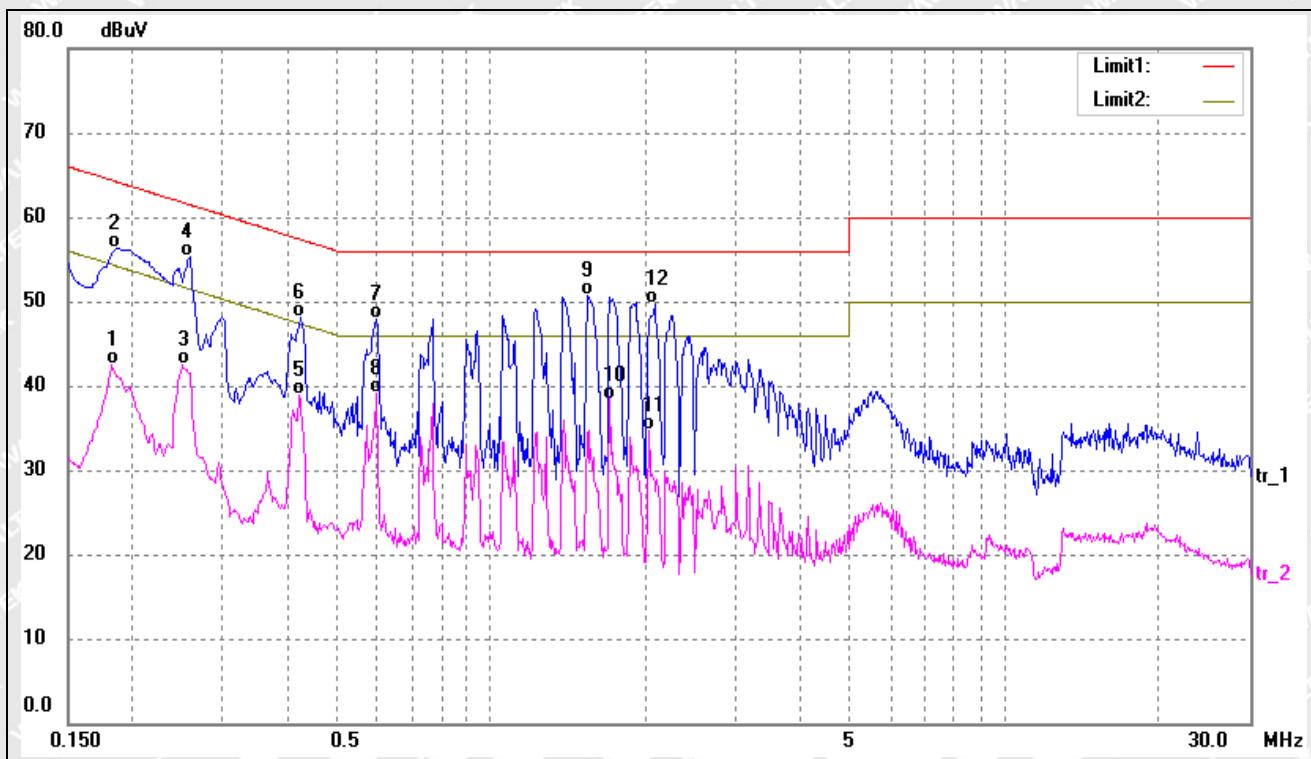


Test mode:

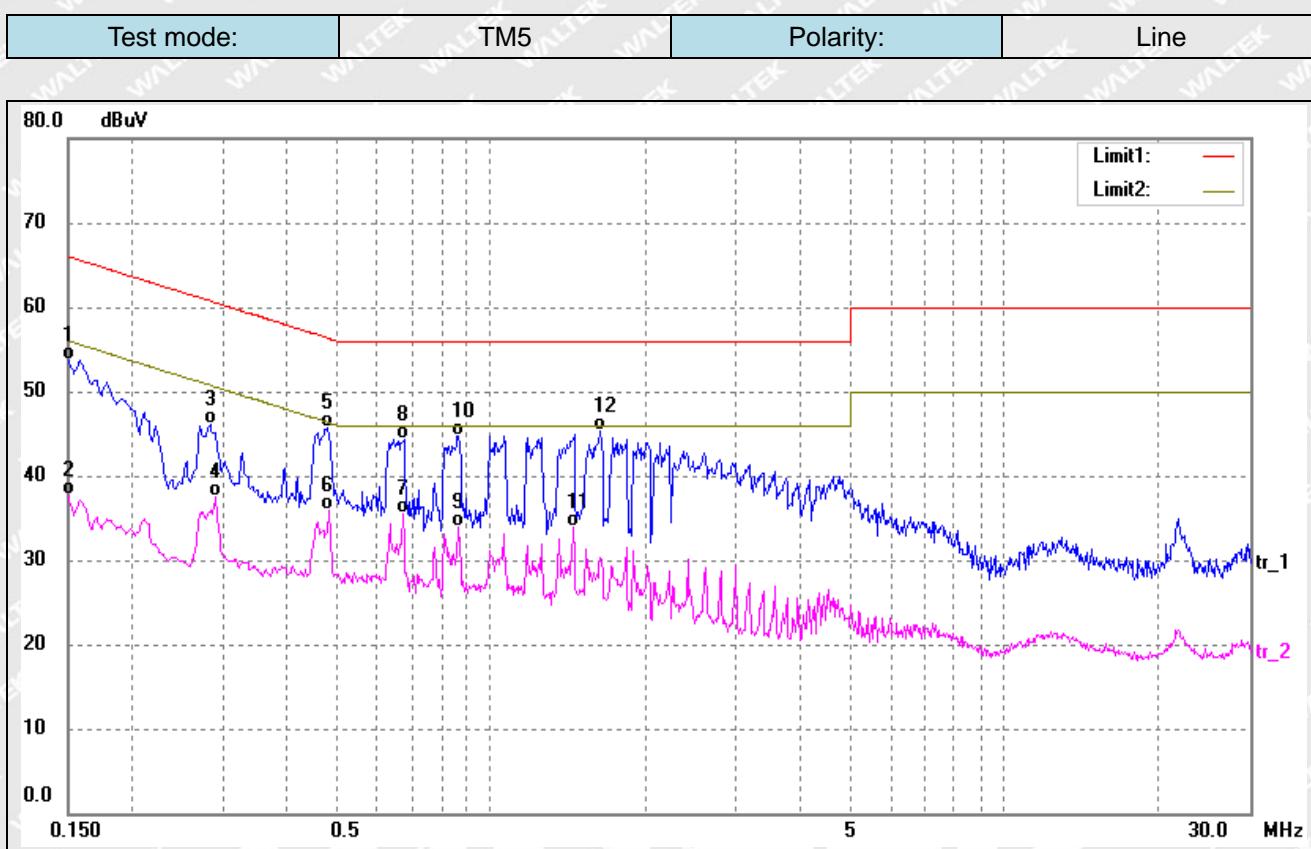
TM4

Polarity:

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1819	32.02	10.39	42.41	54.39	-11.98	AVG
2	0.1860	45.93	10.40	56.33	64.21	-7.88	QP
3	0.2500	32.12	10.34	42.46	51.75	-9.29	AVG
4	0.2580	44.91	10.34	55.25	61.49	-6.24	QP
5	0.4220	28.63	10.26	38.89	47.41	-8.52	AVG
6	0.4260	37.90	10.25	48.15	57.33	-9.18	QP
7	0.5940	37.77	10.22	47.99	56.00	-8.01	QP
8	0.5980	28.84	10.22	39.06	46.00	-6.94	AVG
9*	1.5420	40.38	10.24	50.62	56.00	-5.38	QP
10	1.7060	28.13	10.27	38.40	46.00	-7.60	AVG
11	2.0300	24.31	10.33	34.64	46.00	-11.36	AVG
12	2.0780	39.32	10.33	49.65	56.00	-6.35	QP



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	43.32	10.40	53.72	65.99	-12.27	QP
2	0.1500	27.22	10.40	37.62	55.99	-18.37	AVG
3	0.2819	35.72	10.31	46.03	60.76	-14.73	QP
4	0.2900	27.22	10.31	37.53	50.52	-12.99	AVG
5	0.4780	35.47	10.23	45.70	56.37	-10.67	QP
6*	0.4820	25.73	10.23	35.96	46.30	-10.34	AVG
7	0.6740	25.24	10.20	35.44	46.00	-10.56	AVG
8	0.6780	34.11	10.20	44.31	56.00	-11.69	QP
9	0.8659	23.81	10.17	33.98	46.00	-12.02	AVG
10	0.8660	34.58	10.17	44.75	56.00	-11.25	QP
11	1.4460	23.66	10.22	33.88	46.00	-12.12	AVG
12	1.6340	35.07	10.26	45.33	56.00	-10.67	QP

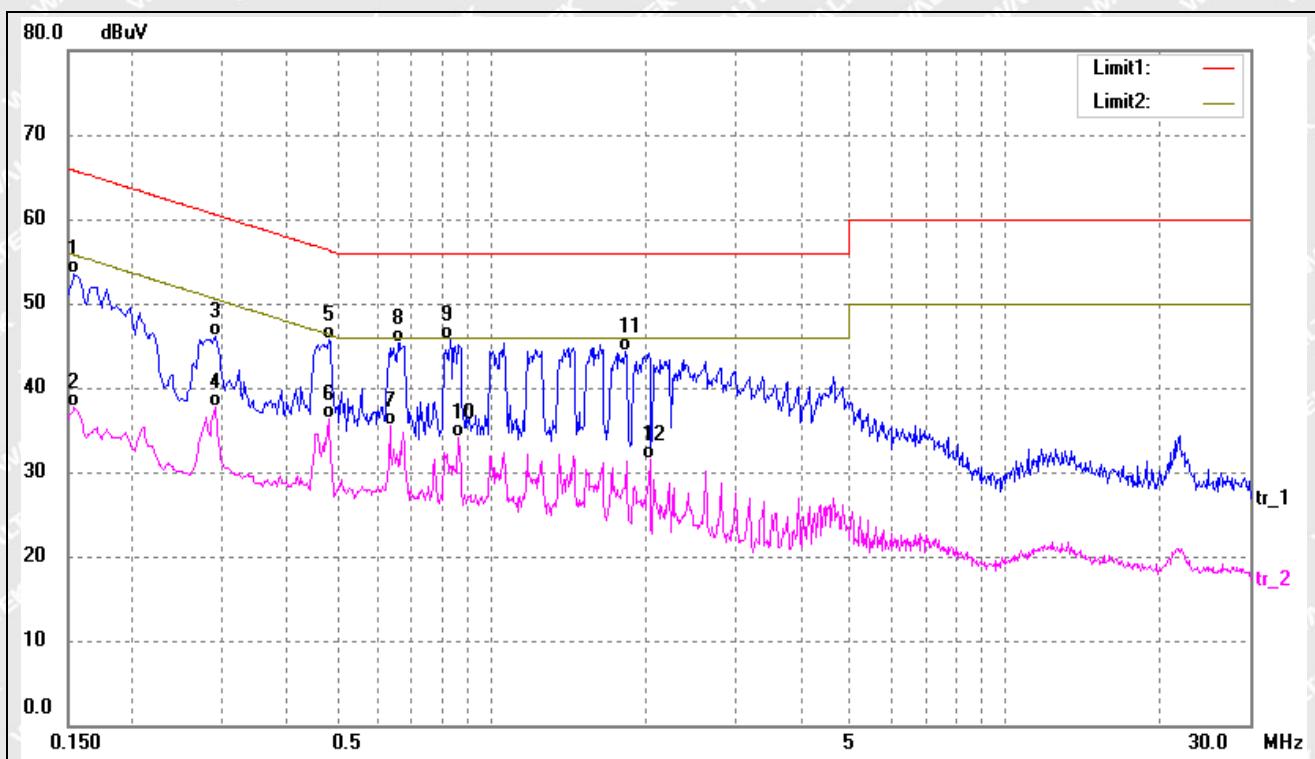


Test mode:

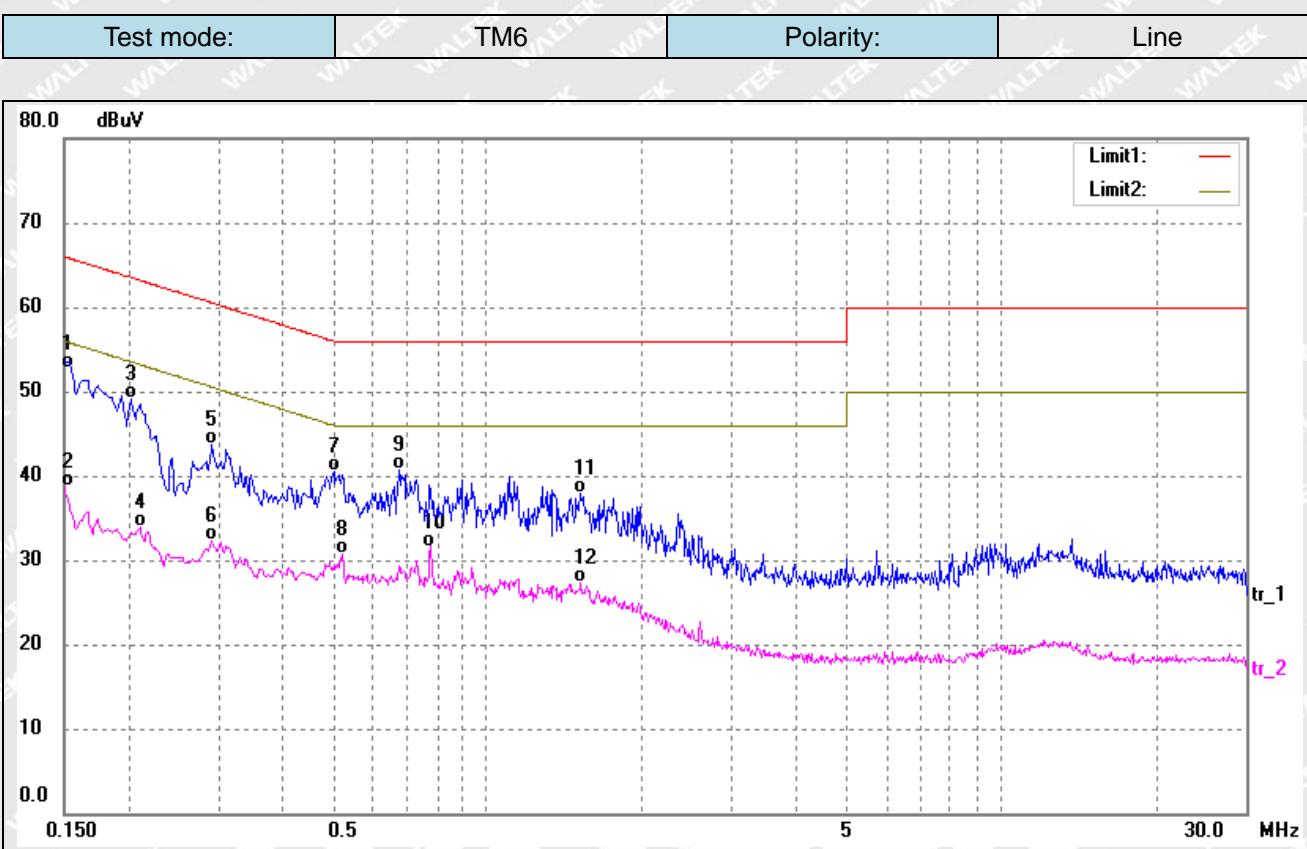
TM5

Polarity:

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	43.02	10.41	53.43	65.78	-12.35	QP
2	0.1539	27.21	10.41	37.62	55.78	-18.16	AVG
3	0.2900	35.89	10.31	46.20	60.52	-14.32	QP
4	0.2900	27.34	10.31	37.65	50.52	-12.87	AVG
5	0.4820	35.38	10.23	45.61	56.30	-10.69	QP
6*	0.4820	26.16	10.23	36.39	46.30	-9.91	AVG
7	0.6340	25.22	10.20	35.42	46.00	-10.58	AVG
8	0.6580	35.10	10.20	45.30	56.00	-10.70	QP
9	0.8340	35.52	10.17	45.69	56.00	-10.31	QP
10	0.8659	23.92	10.17	34.09	46.00	-11.91	AVG
11	1.8220	34.06	10.29	44.35	56.00	-11.65	QP
12	2.0340	21.10	10.33	31.43	46.00	-14.57	AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1548	42.34	10.41	52.75	65.73	-12.98	QP
2	0.1548	28.29	10.41	38.70	55.73	-17.03	AVG
3	0.2020	38.65	10.39	49.04	63.52	-14.48	QP
4	0.2100	23.46	10.38	33.84	53.20	-19.36	AVG
5	0.2900	33.30	10.31	43.61	60.52	-16.91	QP
6	0.2900	21.90	10.31	32.21	50.52	-18.31	AVG
7	0.5020	30.19	10.23	40.42	56.00	-15.58	QP
8	0.5220	20.45	10.23	30.68	46.00	-15.32	AVG
9	0.6740	30.56	10.20	40.76	56.00	-15.24	QP
10	0.7780	21.42	10.18	31.60	46.00	-14.40	AVG
11	1.5140	27.62	10.24	37.86	56.00	-18.14	QP
12	1.5260	17.05	10.24	27.29	46.00	-18.71	AVG

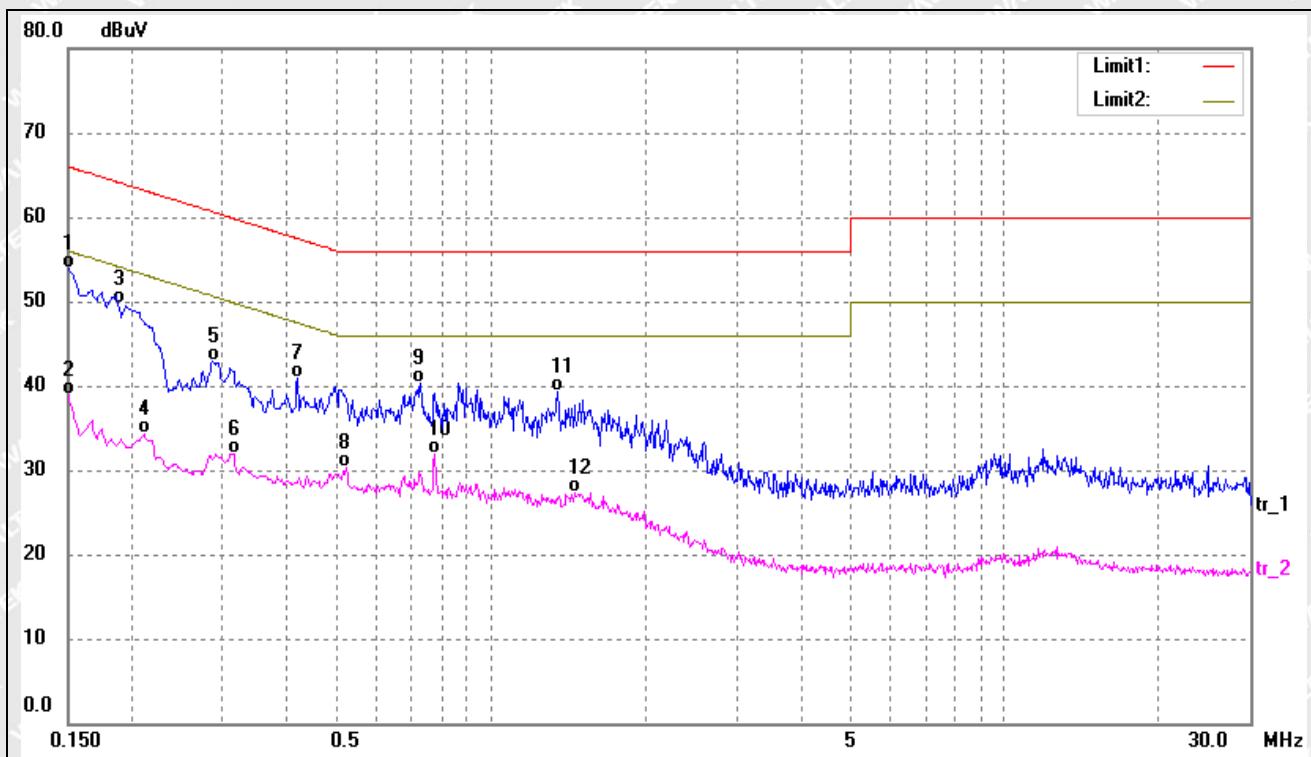


Test mode:

TM6

Polarity:

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	43.50	10.40	53.90	65.99	-12.09	QP
2	0.1500	28.49	10.40	38.89	55.99	-17.10	AVG
3	0.1874	39.34	10.39	49.73	64.15	-14.42	QP
4	0.2100	23.91	10.38	34.29	53.20	-18.91	AVG
5	0.2860	32.63	10.31	42.94	60.64	-17.70	QP
6	0.3140	21.62	10.30	31.92	49.86	-17.94	AVG
7	0.4180	30.70	10.26	40.96	57.49	-16.53	QP
8	0.5220	19.99	10.23	30.22	46.00	-15.78	AVG
9	0.7300	30.17	10.19	40.36	56.00	-15.64	QP
10	0.7780	21.65	10.18	31.83	46.00	-14.17	AVG
11	1.3460	29.06	10.20	39.26	56.00	-16.74	QP
12	1.4540	17.13	10.23	27.36	46.00	-18.64	AVG

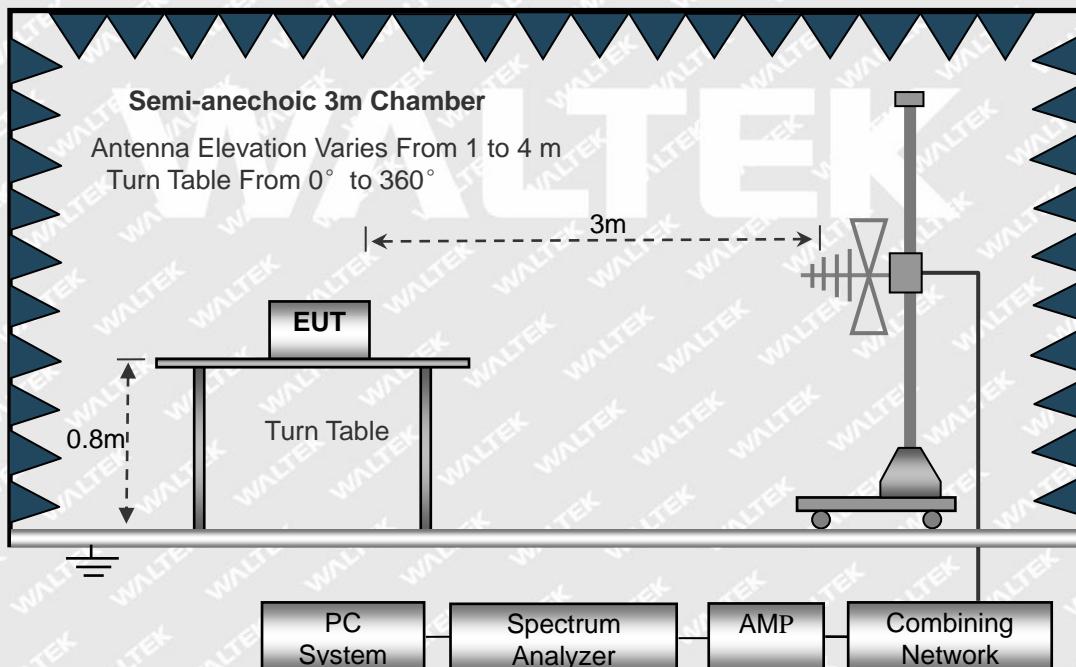
## 4. Radiated Emission

### 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 $\pm 4.52\text{dB}$
		0.2-1GHz $\pm 5.56\text{dB}$
		1-6GHz $\pm 3.84\text{dB}$
		6-18GHz $\pm 3.92\text{dB}$

### 4.2 Basic Test Setup Block Diagram





### 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:

$$\begin{aligned}\text{Corr. Ampl.} &= \text{Indicated Reading} + \text{Correct} \\ \text{Correct} &= \text{Ant.Factor} + \text{Cable Loss} - \text{Ampl.Gain}\end{aligned}$$

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit.

For example, a margin of  $-6\text{dB}\mu\text{V}$  means the emission is  $6\text{dB}\mu\text{V}$  below the maximum limit for Class B device.

The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{CISPR 11 Class B Limit}$$

### 4.4 Environmental Conditions

Temperature:	22.5 °C
Relative Humidity:	54 %
ATM Pressure:	998 mbar

### 4.5 Summary of Test Results

Please find the results below:

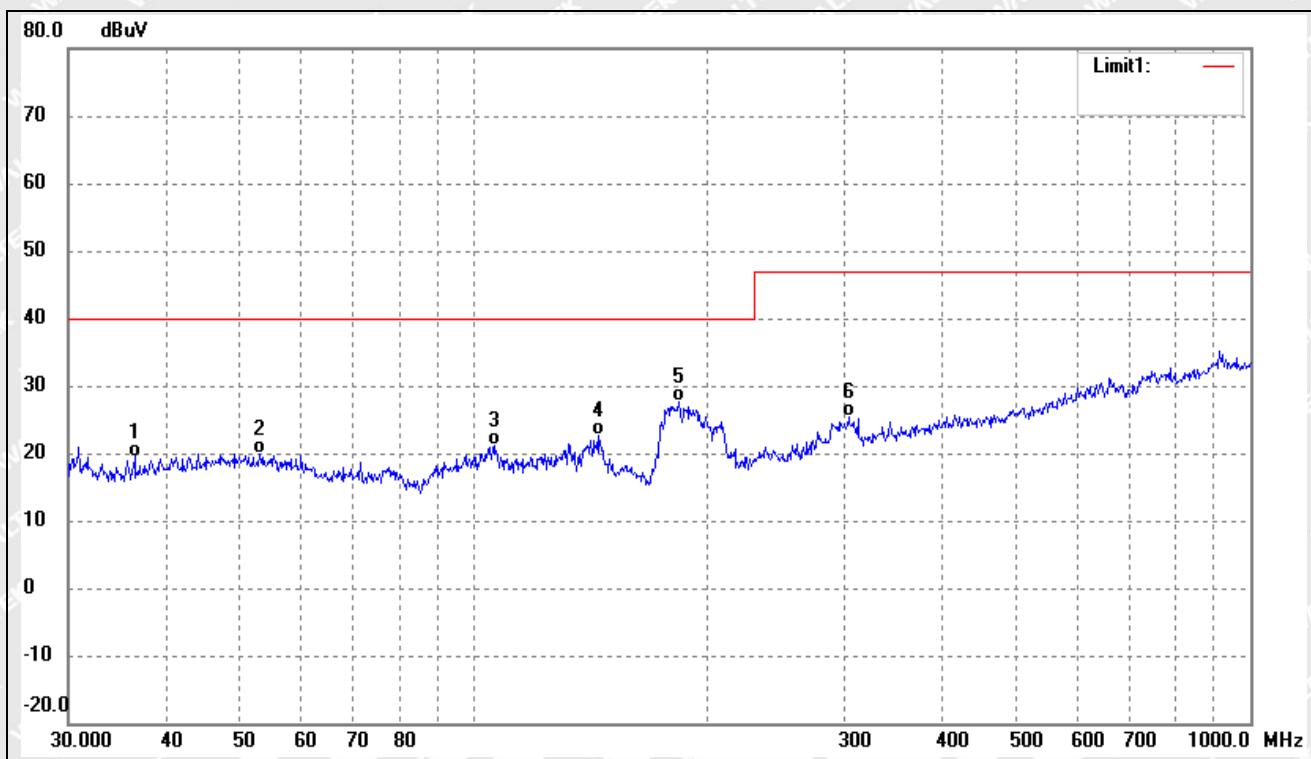


Test mode:

TM1

Polarity:

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	36.5092	28.80	-9.30	19.50	40.00	-20.50	147	100	QP
2	52.9453	27.29	-7.44	19.85	40.00	-20.15	122	100	QP
3	106.0126	29.71	-8.47	21.24	40.00	-18.76	69	100	QP
4	144.3348	34.34	-11.82	22.52	40.00	-17.48	140	100	QP
5	183.8440	37.05	-9.45	27.60	40.00	-12.40	251	100	QP
6	303.5437	30.11	-4.68	25.43	47.00	-21.57	86	100	QP

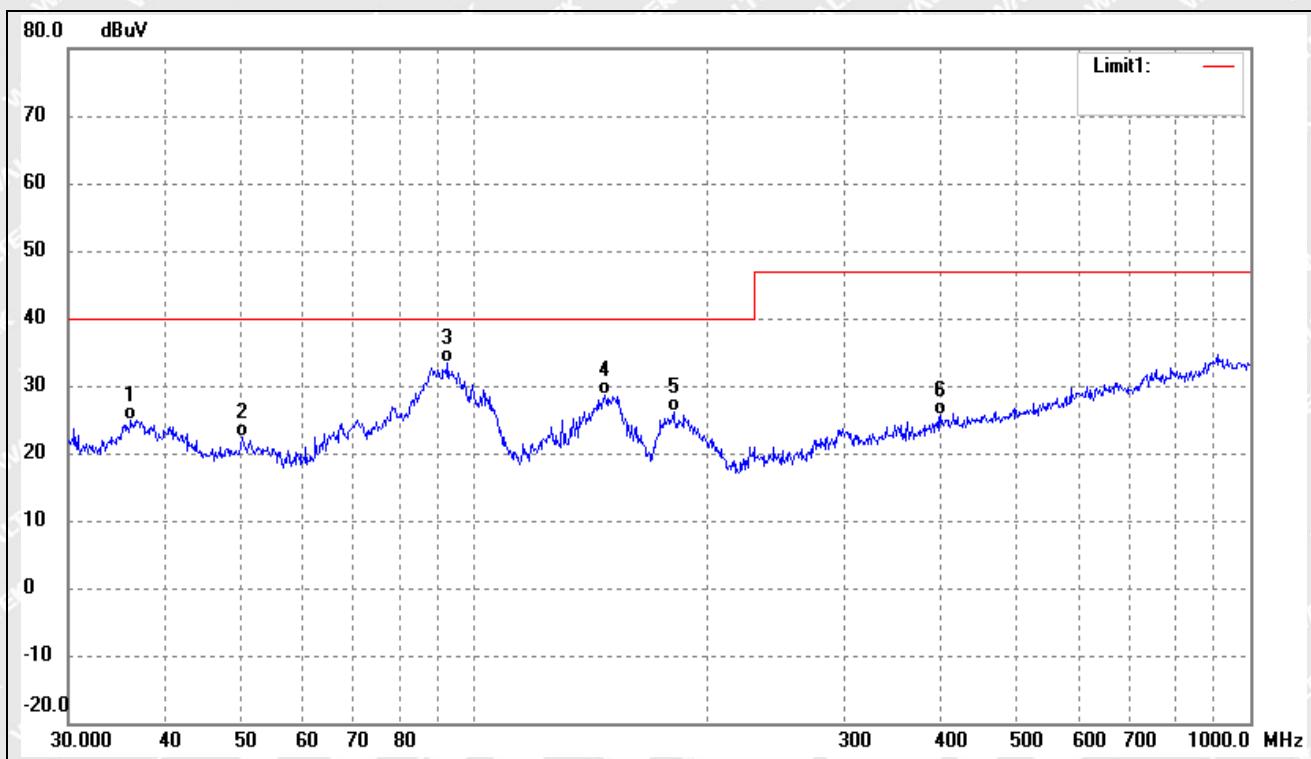


Test mode:

TM1

Polarity:

Vertical



No.	Frequency (MHz)	Reading (dB <sub>uV</sub> )	Correct dB	Result (dB <sub>uV</sub> )	Limit (dB <sub>uV</sub> )	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	36.1272	34.34	-9.39	24.95	40.00	-15.05	193	100	QP
2	50.2324	29.76	-7.35	22.41	40.00	-17.59	241	100	QP
3	92.4624	43.37	-10.07	33.30	40.00	-6.70	166	100	QP
4	147.4036	40.42	-11.78	28.64	40.00	-11.36	95	100	QP
5	180.6488	35.94	-9.83	26.11	40.00	-13.89	107	100	QP
6	399.0302	28.23	-2.57	25.66	47.00	-21.34	88	100	QP

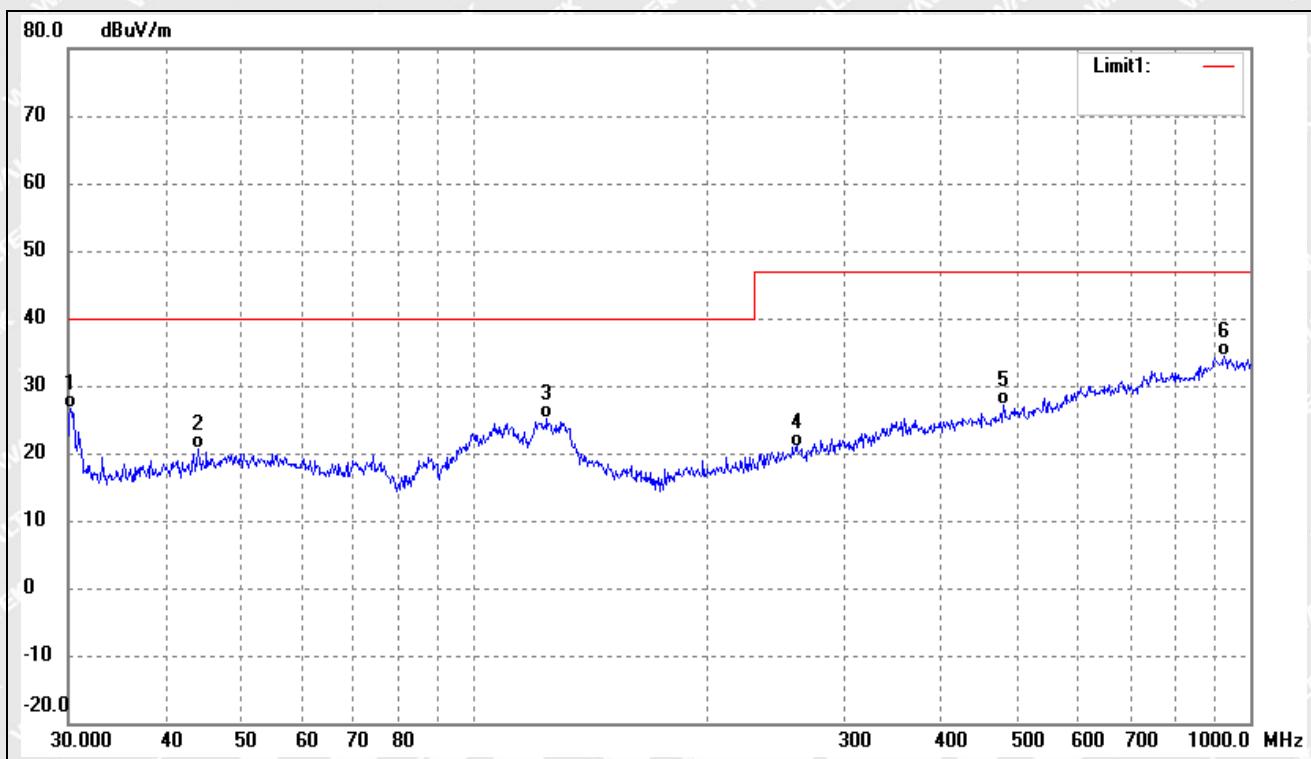


Test mode:

TM2

Polarity:

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	30.2111	37.49	-10.76	26.73	40.00	-13.27	249	100	QP
2	44.1202	28.46	-7.84	20.62	40.00	-19.38	141	100	QP
3	124.1330	35.96	-10.72	25.24	40.00	-14.76	64	100	QP
4	260.1444	27.32	-6.32	21.00	47.00	-26.00	126	100	QP
5	480.5276	28.73	-1.54	27.19	47.00	-19.81	136	100	QP
6	925.7563	54.58	-20.32	34.26	47.00	-12.74	243	100	QP

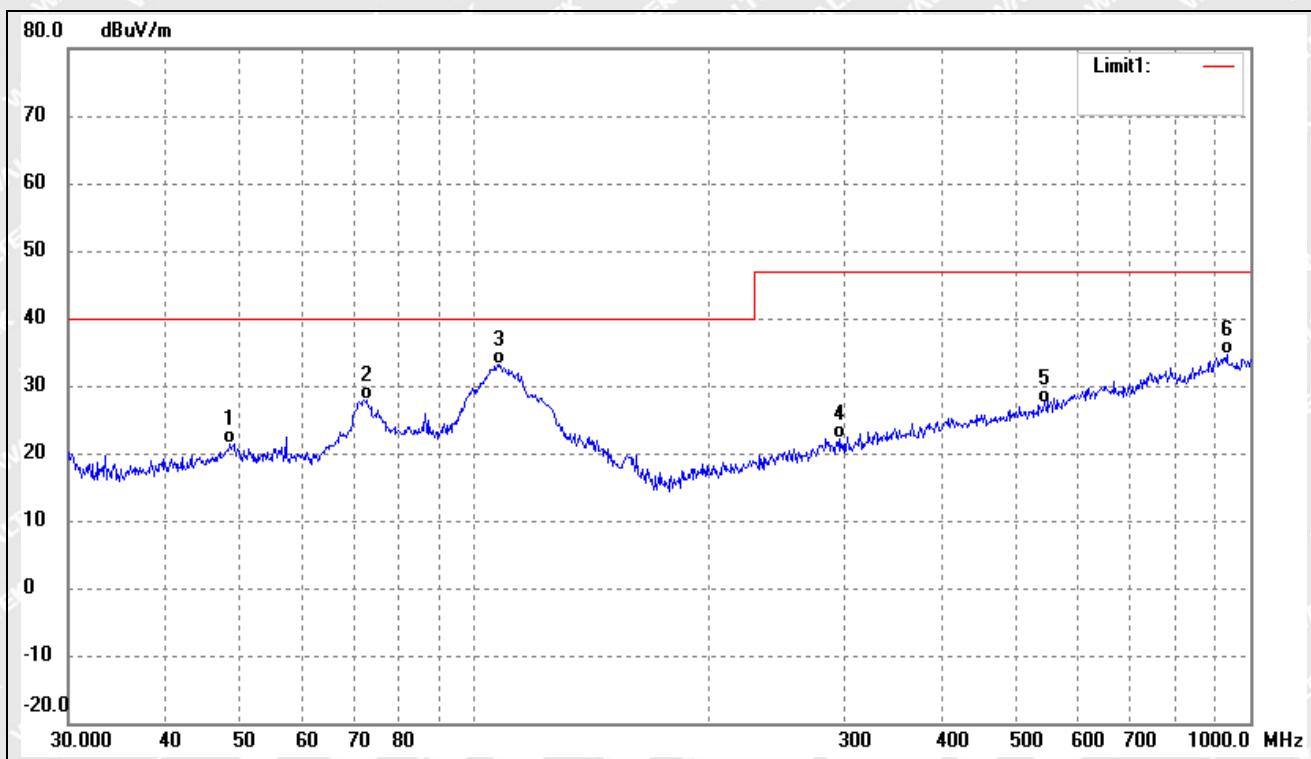


Test mode:

TM2

Polarity:

Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree	Height (cm)	Remark
1	48.5016	28.68	-7.40	21.28	40.00	-18.72	354	100	QP
2	72.5916	40.04	-12.11	27.93	40.00	-12.07	284	100	QP
3	107.5101	41.75	-8.54	33.21	40.00	-6.79	53	100	QP
4	296.1836	26.81	-4.77	22.04	47.00	-24.96	145	100	QP
5	543.2742	27.81	-0.31	27.50	47.00	-19.50	117	100	QP
6	932.2715	54.90	-20.28	34.62	47.00	-12.38	258	100	QP

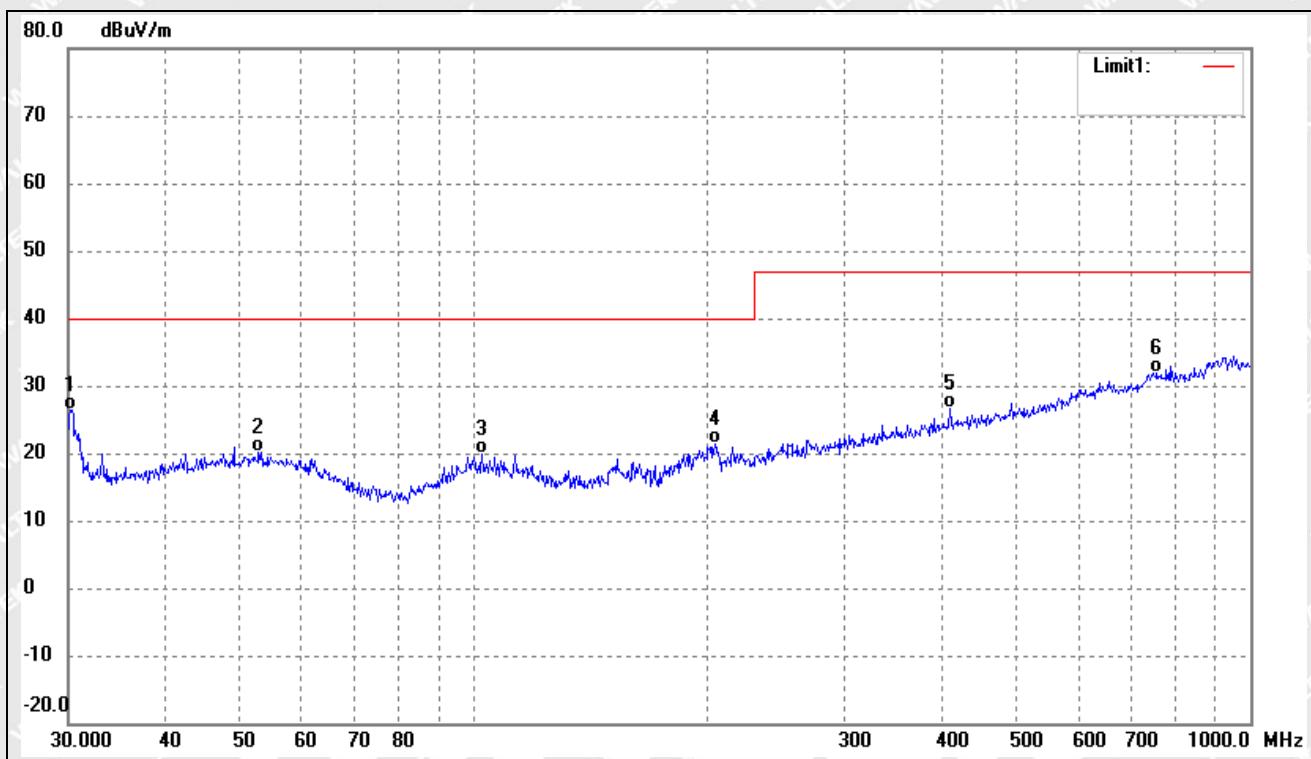


Test mode:

TM3

Polarity:

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree	Height (cm)	Remark
1	30.2111	37.26	-10.76	26.50	40.00	-13.50	176	100	QP
2	52.7600	27.53	-7.43	20.10	40.00	-19.90	111	100	QP
3	102.3597	28.43	-8.48	19.95	40.00	-20.05	77	100	QP
4	204.2377	29.41	-8.04	21.37	40.00	-18.63	106	100	QP
5	410.3825	28.82	-2.31	26.51	47.00	-20.49	77	100	QP
6	758.0408	53.05	-21.07	31.98	47.00	-15.02	327	100	QP

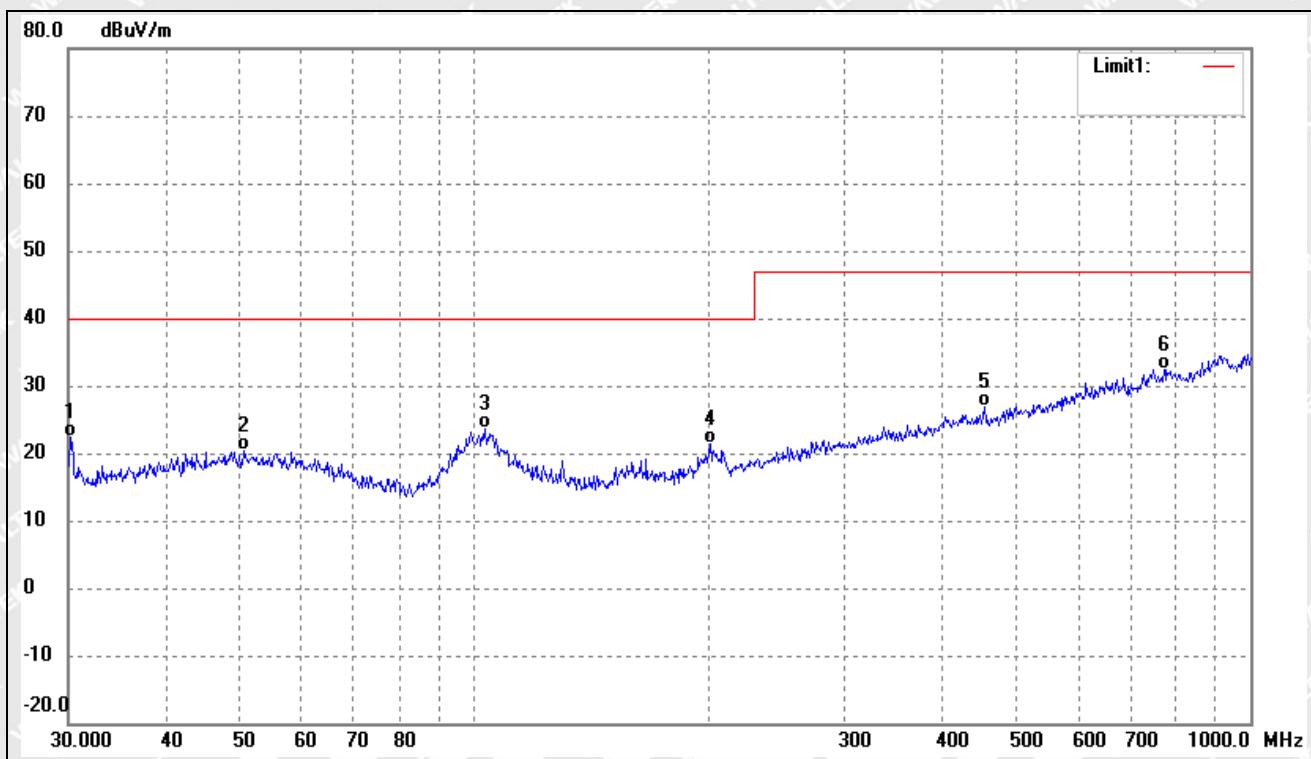


Test mode:

TM3

Polarity:

Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	30.2111	33.11	-10.76	22.35	40.00	-17.65	62	100	QP
2	50.5860	27.73	-7.35	20.38	40.00	-19.62	163	100	QP
3	103.0800	32.04	-8.45	23.59	40.00	-16.41	148	100	QP
4	201.3930	29.28	-8.00	21.28	40.00	-18.72	90	100	QP
5	454.3100	28.89	-2.05	26.84	47.00	-20.16	132	100	QP
6	774.1584	53.39	-20.98	32.41	47.00	-14.59	275	100	QP

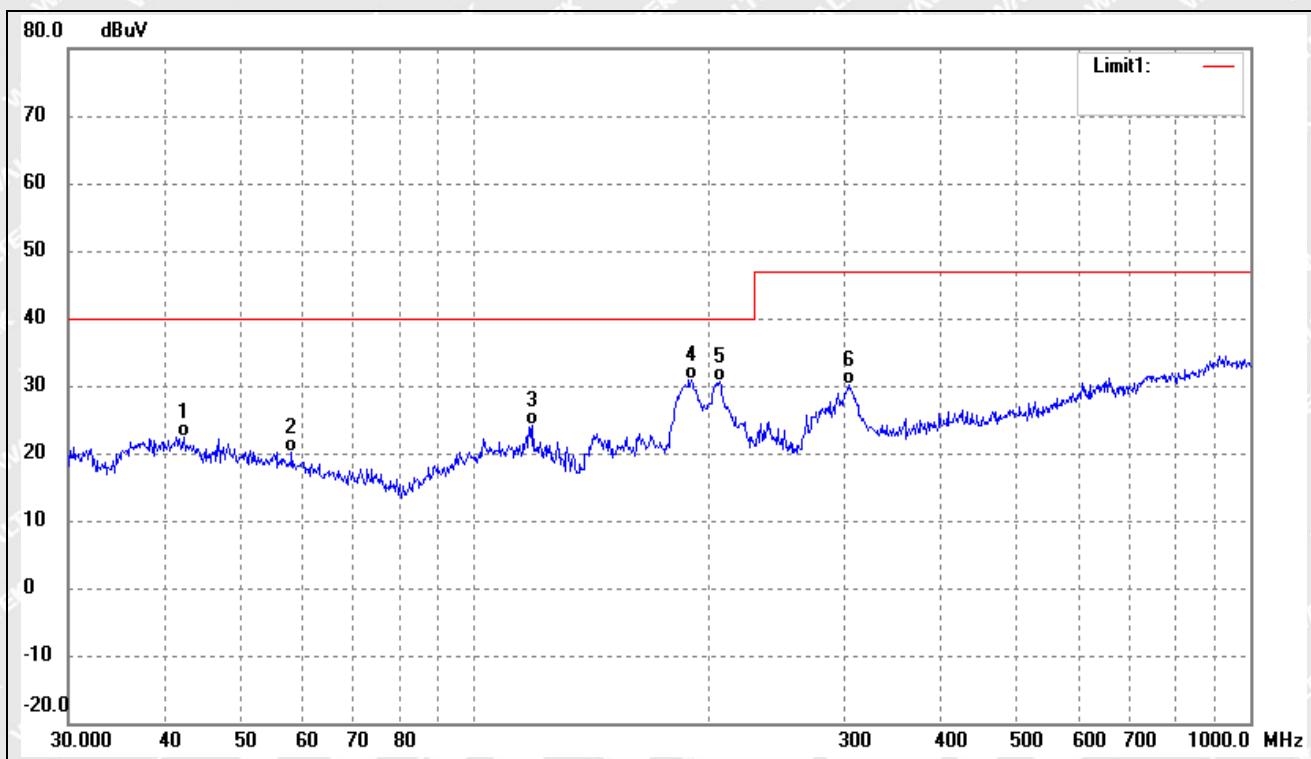


Test mode:

TM4

Polarity:

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	42.3022	30.60	-8.15	22.45	40.00	-17.55	193	100	QP
2	58.2030	28.14	-8.09	20.05	40.00	-19.95	241	100	QP
3	119.0180	34.02	-9.97	24.05	40.00	-15.95	254	100	QP
4	190.4050	39.48	-8.62	30.86	40.00	-9.14	163	100	QP
5	207.1226	38.87	-8.13	30.74	40.00	-9.26	241	100	QP
6	303.5437	34.75	-4.68	30.07	47.00	-16.93	92	100	QP

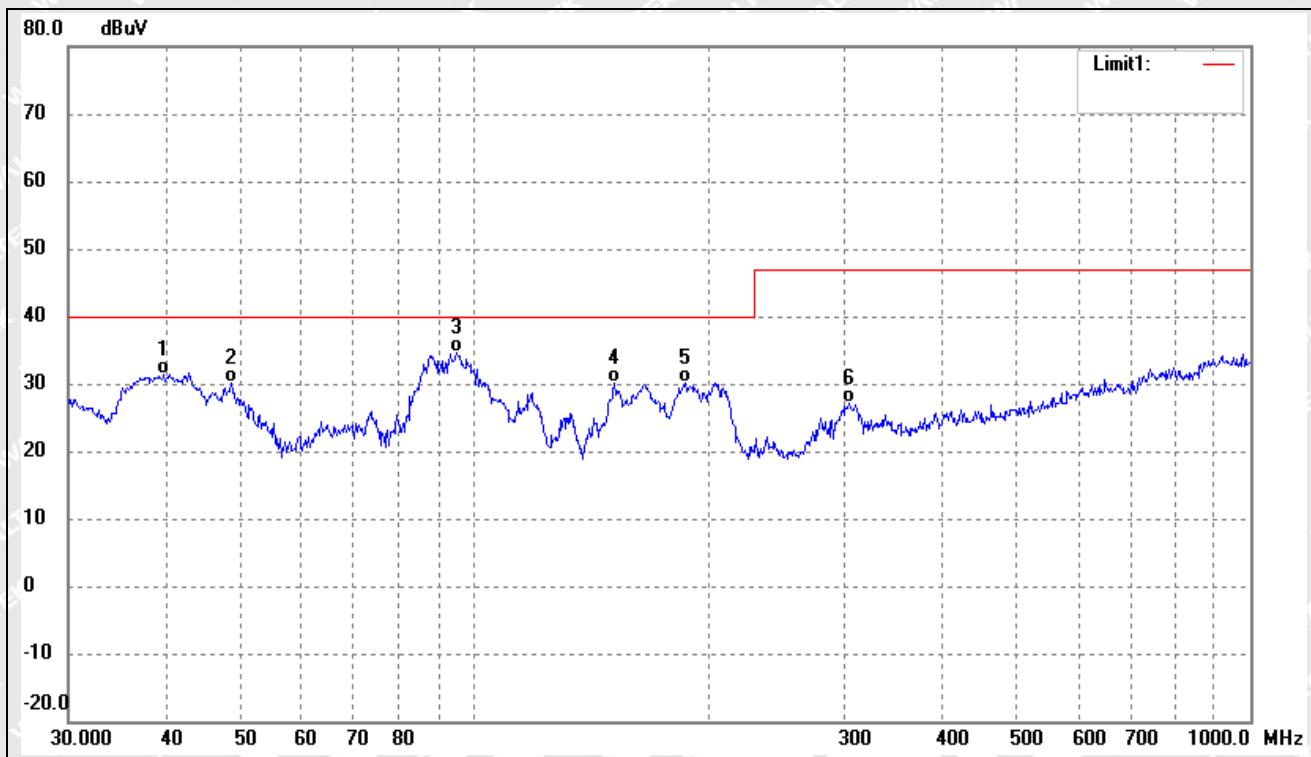


Test mode:

TM4

Polarity:

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	39.8542	40.00	-8.60	31.40	40.00	-8.60	96	100	QP
2	48.6719	37.50	-7.40	30.10	40.00	-9.90	241	100	QP
3	94.7601	44.01	-9.50	34.51	40.00	-5.49	251	100	QP
4	151.5972	41.74	-11.67	30.07	40.00	-9.93	88	100	QP
5	187.0958	39.24	-9.00	30.24	40.00	-9.76	103	100	QP
6	303.5437	31.71	-4.68	27.03	47.00	-19.97	79	100	QP

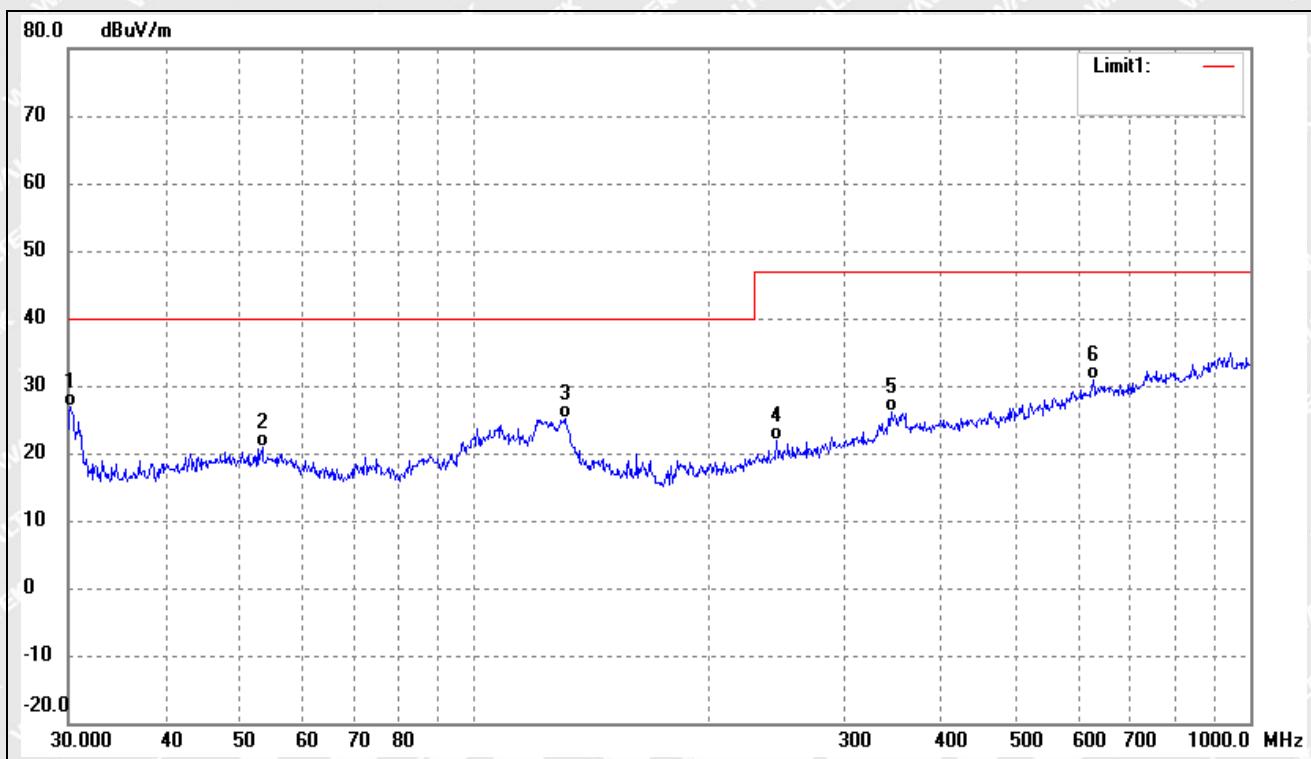


Test mode:

TM5

Polarity:

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree	Height (cm)	Remark
1	30.2111	37.60	-10.76	26.84	40.00	-13.16	101	100	QP
2	53.3179	28.39	-7.47	20.92	40.00	-19.08	181	100	QP
3	130.8369	36.55	-11.40	25.15	40.00	-14.85	75	100	QP
4	245.0900	28.26	-6.47	21.79	47.00	-25.21	124	100	QP
5	344.3855	29.37	-3.29	26.08	47.00	-20.92	166	100	QP
6	627.2738	29.30	1.50	30.80	47.00	-16.20	324	100	QP

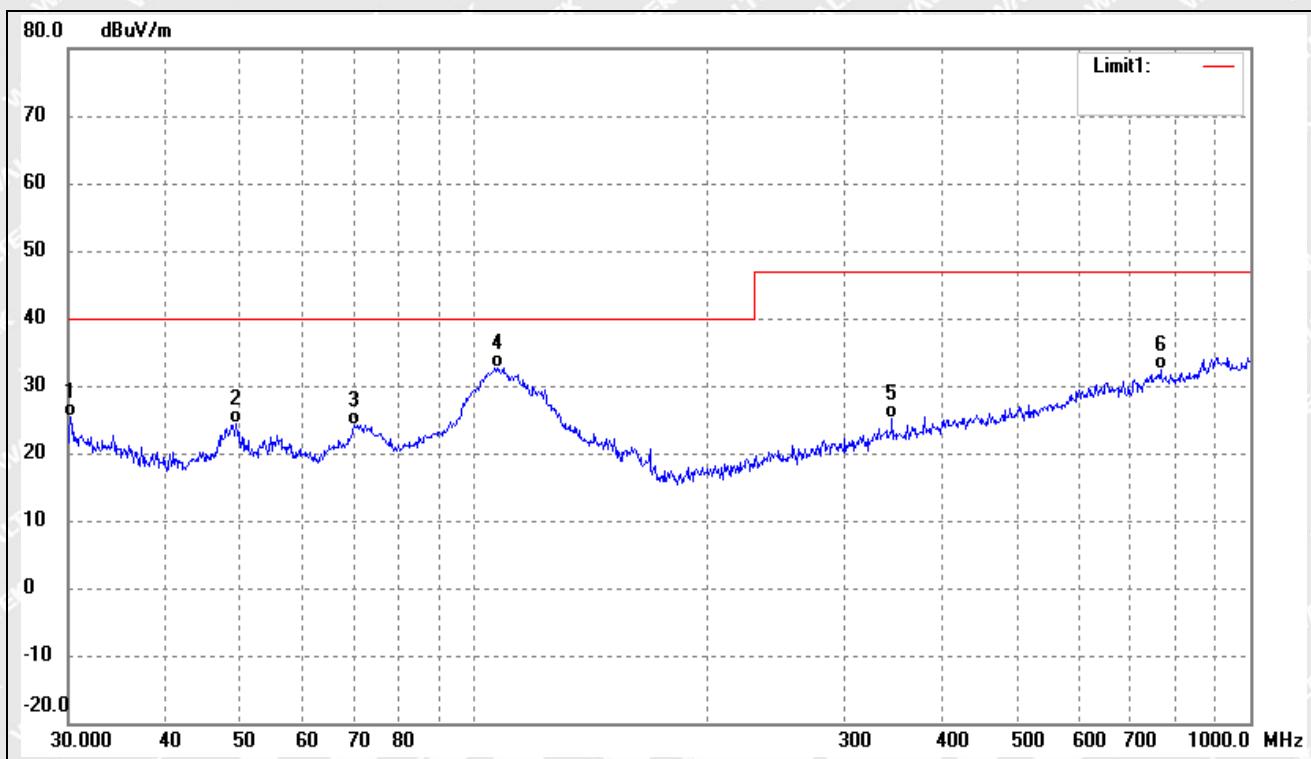


Test mode:

TM5

Polarity:

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dB <sub>u</sub> V/m)	dB/m	(dB <sub>u</sub> V/m)	(dB <sub>u</sub> V/m)	(dB)	( )	(cm)	
1	30.2111	36.26	-10.76	25.50	40.00	-14.50	92	100	QP
2	49.3594	31.65	-7.37	24.28	40.00	-15.72	102	100	QP
3	70.0903	35.70	-11.45	24.25	40.00	-15.75	150	100	QP
4	107.1337	41.21	-8.51	32.70	40.00	-7.30	128	100	QP
5	345.5952	28.43	-3.29	25.14	47.00	-21.86	281	100	QP
6	766.0571	53.50	-21.03	32.47	47.00	-14.53	226	100	QP

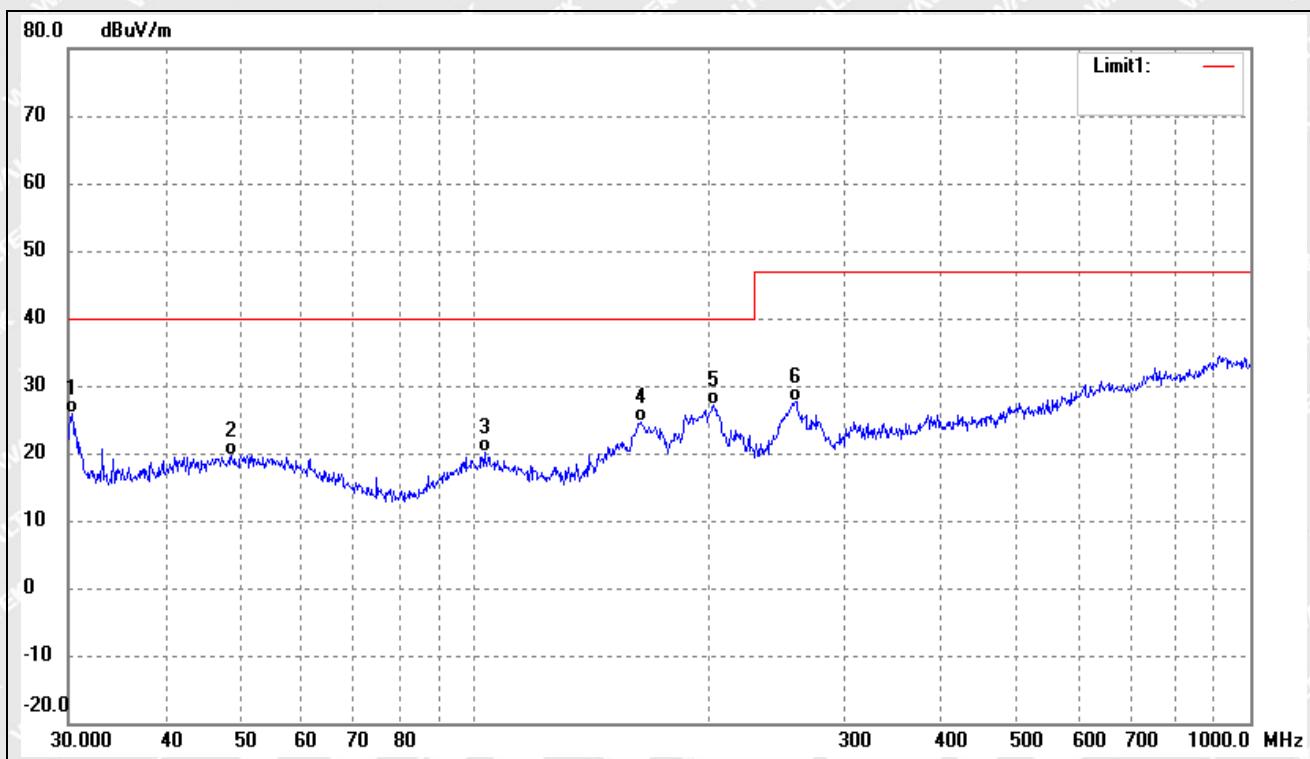


Test mode:

TM6

Polarity:

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dB <sub>UV</sub> /m)	dB/m	(dB <sub>UV</sub> /m)	(dB <sub>UV</sub> /m)	(dB)	( )	(cm)	
1	30.3173	36.67	-10.76	25.91	40.00	-14.09	192	100	QP
2	48.6719	27.11	-7.40	19.71	40.00	-20.29	149	100	QP
3	103.0800	28.57	-8.45	20.12	40.00	-19.88	120	100	QP
4	163.7550	35.58	-10.98	24.60	40.00	-15.40	129	100	QP
5	203.5228	35.07	-8.02	27.05	40.00	-12.95	243	100	QP
6	259.2338	34.07	-6.33	27.74	47.00	-19.26	196	100	QP

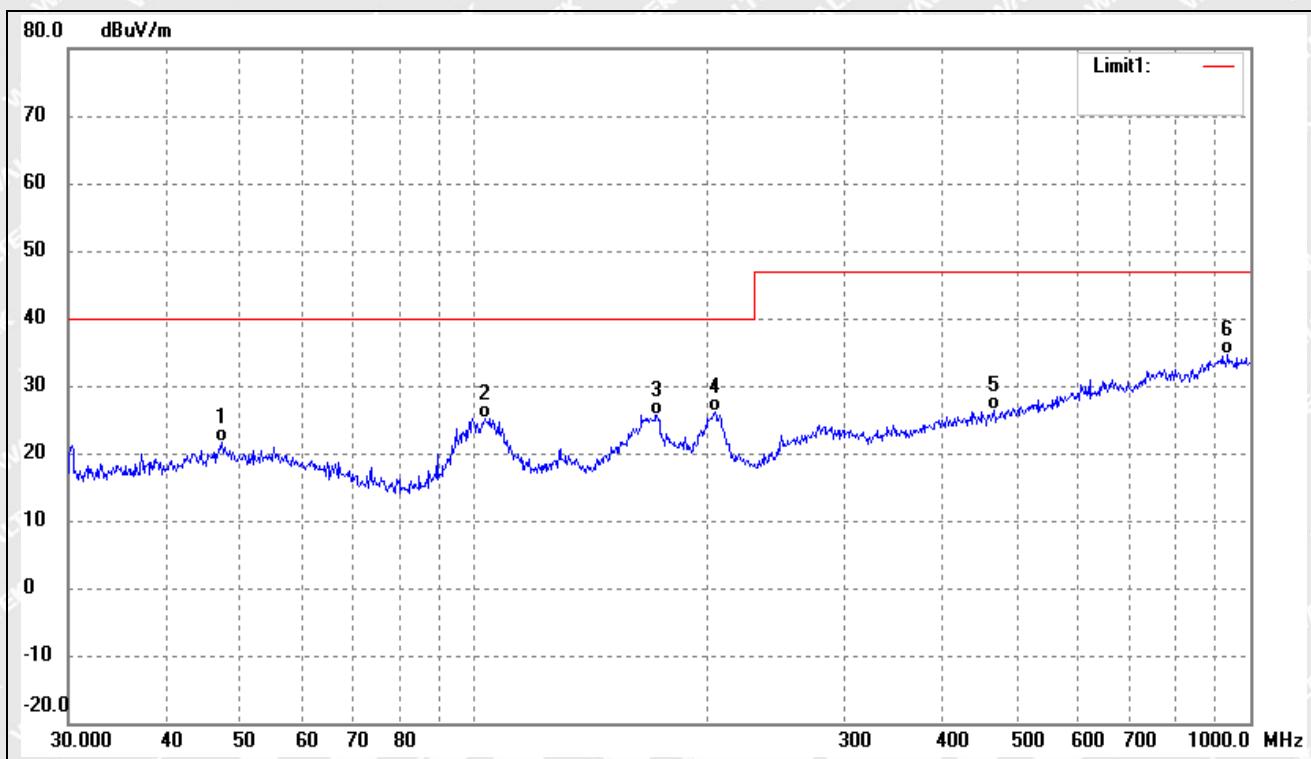


Test mode:

TM6

Polarity:

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	47.3255	29.17	-7.47	21.70	40.00	-18.30	90	100	QP
2	103.0800	33.69	-8.45	25.24	40.00	-14.76	139	100	QP
3	171.9946	36.24	-10.54	25.70	40.00	-14.30	73	100	QP
4	204.2377	34.15	-8.04	26.11	40.00	-13.89	97	100	QP
5	467.2349	28.31	-1.95	26.36	47.00	-20.64	274	100	QP
6	935.5463	55.00	-20.26	34.74	47.00	-12.26	181	100	QP



## 5. Harmonic Current Emissions

### 5.1 Test Procedure

Test is conducted under the description of IEC 61000-3-2.

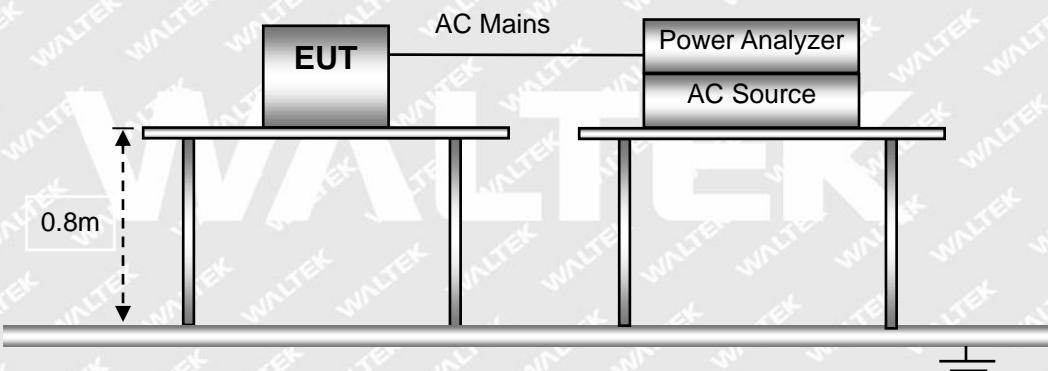
### 5.2 Test Standards

IEC 61000-3-2, Clause 7.2 Limits for Class A equipment.

### 5.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	54 %
ATM Pressure:	998 mbar

### 5.4 Basic Test Setup Block Diagram

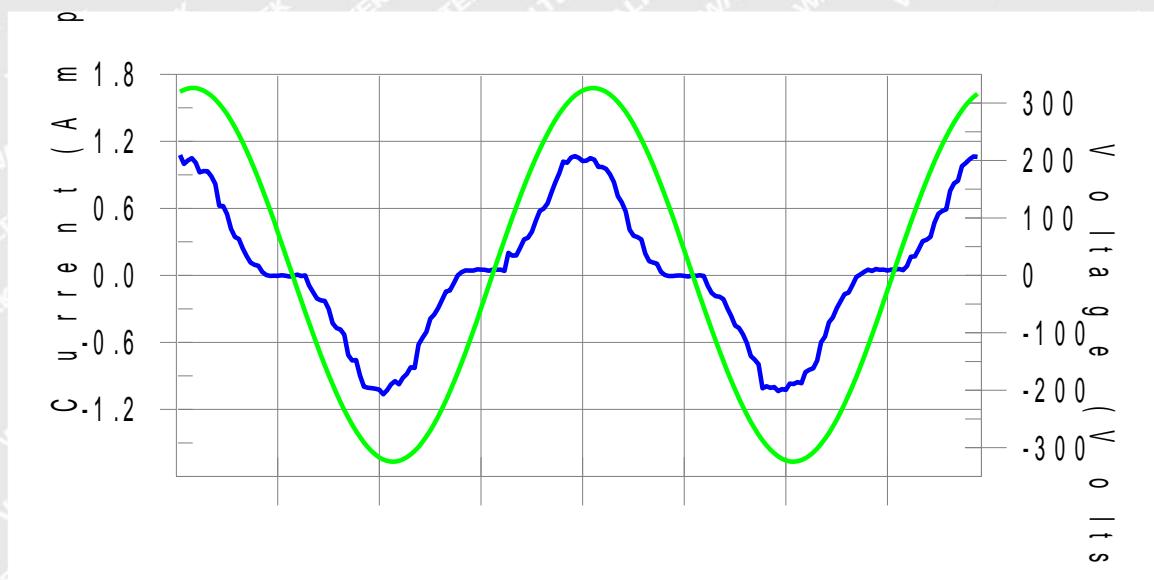
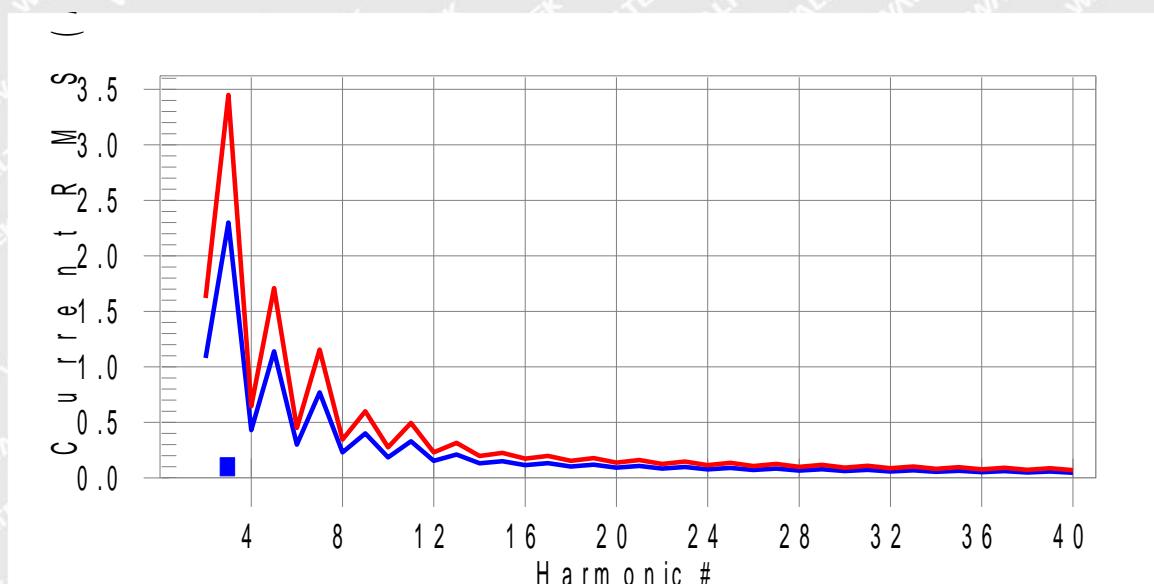


### 5.5 Harmonic Current Emissions Test Data



Test mode:

TM1

**Harmonics – Class-A per IEC 61000-3-2:2018+AMD1:2020(Run time)****Comment: TM1****Customer: Customer information****Test Result: Pass****Source qualification: Normal****Current & voltage waveforms****Harmonics and Class A limit line****European Limits****Test result: Pass****Worst harmonics H31-7.5% of 150% limit, H31-10.8% of 100% limit**



## Current Test Result Summary (Run time)

**Comment:** TM1

**Customer:** Customer information

**Test Result:** Pass

**Source qualification:** Normal

**THC(A):** 0.184

**I-THD(%):** 31.8

**POHC(A):** 0.013

**POHC Limit(A):** 0.251

**Highest parameter values during test:**

<b>V_RMS (Volts):</b>	230.14	<b>Frequency(Hz):</b>	50.00
<b>I_Peak (Amps):</b>	1.133	<b>I_RMS (Amps):</b>	0.609
<b>I_Fund (Amps):</b>	0.580	<b>Crest Factor:</b>	1.869
<b>Power (Watts):</b>	131.3	<b>Power Factor:</b>	0.937

<b>Harm#</b>	<b>Harms(avg)</b>	<b>100%Limit</b>	<b>%of Limit</b>	<b>Harms(max)</b>	<b>150%Limit</b>	<b>%of Limit</b>	<b>Status</b>
2	0.001	1.080	N/A	0.001	1.620	N/A	Pass
3	0.182	2.300	7.9	0.183	3.450	5.3	Pass
4	0.001	0.430	N/A	0.001	0.645	N/A	Pass
5	0.009	1.140	0.8	0.010	1.710	0.6	Pass
6	0.000	0.300	N/A	0.001	0.450	N/A	Pass
7	0.009	0.770	1.1	0.009	1.155	0.8	Pass
8	0.000	0.230	N/A	0.001	0.345	N/A	Pass
9	0.016	0.400	4.0	0.016	0.600	2.7	Pass
10	0.000	0.184	N/A	0.001	0.276	N/A	Pass
11	0.005	0.330	1.6	0.006	0.495	1.2	Pass
12	0.000	0.153	N/A	0.000	0.230	N/A	Pass
13	0.002	0.210	N/A	0.002	0.315	N/A	Pass
14	0.000	0.131	N/A	0.000	0.197	N/A	Pass
15	0.007	0.150	4.5	0.007	0.225	3.1	Pass
16	0.000	0.115	N/A	0.000	0.173	N/A	Pass
17	0.007	0.132	5.3	0.007	0.198	3.6	Pass
18	0.000	0.102	N/A	0.000	0.153	N/A	Pass
19	0.003	0.118	N/A	0.003	0.178	N/A	Pass
20	0.000	0.092	N/A	0.000	0.138	N/A	Pass
21	0.002	0.107	N/A	0.002	0.161	N/A	Pass
22	0.000	0.084	N/A	0.000	0.125	N/A	Pass
23	0.003	0.098	N/A	0.003	0.147	N/A	Pass
24	0.000	0.077	N/A	0.000	0.115	N/A	Pass
25	0.003	0.090	N/A	0.003	0.135	N/A	Pass
26	0.000	0.071	N/A	0.001	0.107	N/A	Pass
27	0.005	0.083	6.4	0.006	0.125	4.5	Pass
28	0.000	0.066	N/A	0.001	0.099	N/A	Pass



Reference No.: WTX23X06126277E

29	0.002	0.078	N/A	0.002	0.116	N/A	Pass
30	0.000	0.061	N/A	0.000	0.092	N/A	Pass
31	0.008	0.073	10.8	0.008	0.109	7.5	Pass
32	0.000	0.058	N/A	0.001	0.086	N/A	Pass
33	0.004	0.068	N/A	0.004	0.102	N/A	Pass
34	0.000	0.054	N/A	0.000	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	0.077	N/A	Pass
37	0.005	0.061	N/A	0.005	0.091	N/A	Pass
38	0.000	0.048	N/A	0.000	0.073	N/A	Pass
39	0.004	0.058	N/A	0.004	0.087	N/A	Pass
40	0.000	0.046	N/A	0.000	0.069	N/A	Pass

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## Voltage Source Verification Data (Run time)

Comment: TM1

Customer: Customer information

Test Result: Pass

Source qualification: Normal

**Highest parameter values during test:**

Voltage (Vrms):	230.14	Frequency(Hz):	50.00
I_Peak (Amps):	1.133	I_RMS (Amps):	0.609
I_Fund (Amps):	0.580	Crest Factor:	1.869
Power (Watts):	131.3	Power Factor:	0.937

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.051	0.460	11.17	OK
3	0.547	2.071	26.43	OK
4	0.079	0.460	17.06	OK
5	0.060	0.920	6.49	OK
6	0.039	0.460	8.41	OK
7	0.037	0.690	5.38	OK
8	0.015	0.460	3.16	OK
9	0.017	0.460	3.78	OK
10	0.010	0.460	2.22	OK
11	0.014	0.230	6.05	OK
12	0.011	0.230	4.85	OK
13	0.012	0.230	5.29	OK
14	0.007	0.230	3.13	OK
15	0.010	0.230	4.30	OK
16	0.009	0.230	3.92	OK
17	0.011	0.230	4.90	OK
18	0.011	0.230	4.67	OK
19	0.009	0.230	4.11	OK
20	0.016	0.230	7.15	OK
21	0.009	0.230	3.90	OK
22	0.004	0.230	1.59	OK
23	0.008	0.230	3.28	OK
24	0.004	0.230	1.73	OK
25	0.006	0.230	2.63	OK
26	0.004	0.230	1.55	OK
27	0.013	0.230	5.82	OK
28	0.005	0.230	2.34	OK
29	0.007	0.230	3.17	OK



30	0.004	0.230	1.54	OK
31	0.014	0.230	6.03	OK
32	0.003	0.230	1.36	OK
33	0.009	0.230	3.83	OK
34	0.003	0.230	1.47	OK
35	0.005	0.230	2.06	OK
36	0.003	0.230	1.31	OK
37	0.007	0.230	3.14	OK
38	0.004	0.230	1.55	OK
39	0.008	0.230	3.61	OK
40	0.008	0.230	3.50	OK

# WALTEK



Test mode:

TM2

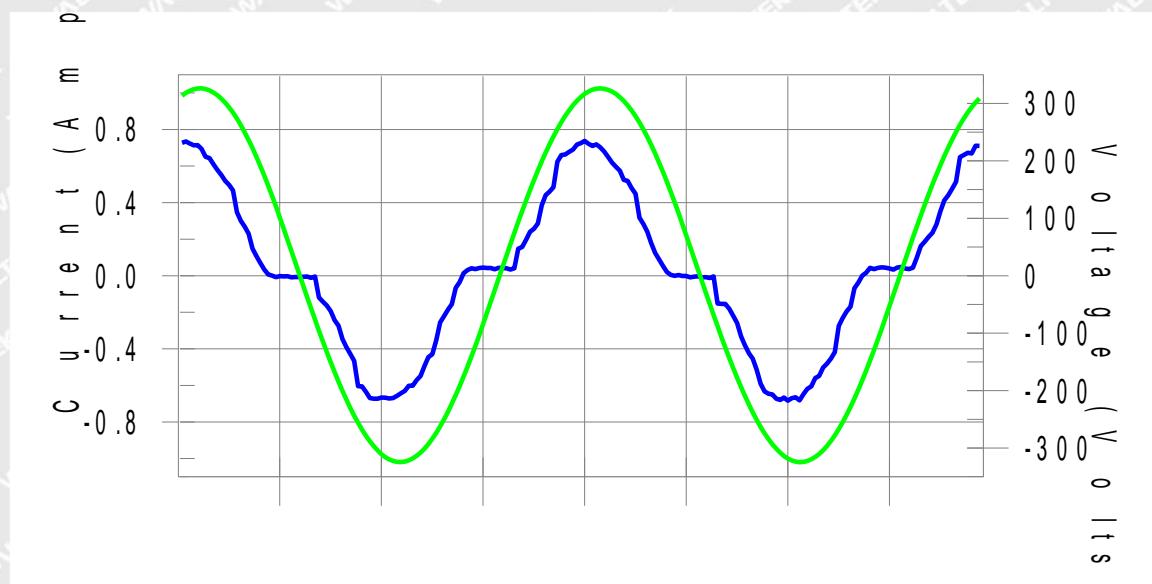
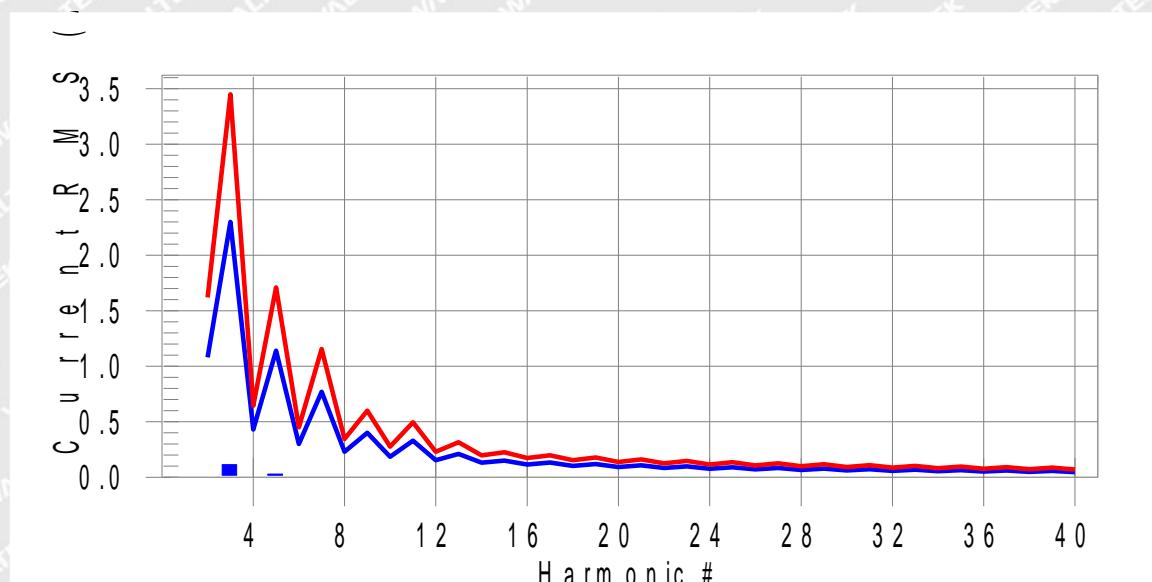
**Harmonics – Class-A per IEC 61000-3-2:2018+AMD1:2020(Run time)**

Comment: TM2

Customer: Customer information

Test Result: Pass

Source qualification: Normal

**Current & voltage waveforms****Harmonics and Class A limit line****European Limits****Test result: Pass****Worst harmonics H19-4.1% of 150% limit, H19-5.9% of 100% limit**



### Current Test Result Summary (Run time)

Comment: TM2

Customer: Customer information

Test Result: Pass      Source qualification: Normal

THC(A): 0.117      I-THD(%): 28.5      POHC(A): 0.010      POHC Limit(A): 0.251

**Highest parameter values during test:**

V_RMS (Volts):	230.11	Frequency(Hz):	50.00
I_Peak (Amps):	0.761	I_RMS (Amps):	0.429
I_Fund (Amps):	0.412	Crest Factor:	1.778
Power (Watts):	92.8	Power Factor:	0.941

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	N/A	0.001	1.620	N/A	Pass
3	0.112	2.300	4.9	0.113	3.450	3.3	Pass
4	0.001	0.430	N/A	0.001	0.645	N/A	Pass
5	0.028	1.140	2.5	0.029	1.710	1.7	Pass
6	0.000	0.300	N/A	0.001	0.450	N/A	Pass
7	0.009	0.770	1.2	0.010	1.155	0.8	Pass
8	0.000	0.230	N/A	0.000	0.345	N/A	Pass
9	0.003	0.400	N/A	0.003	0.600	N/A	Pass
10	0.000	0.184	N/A	0.000	0.276	N/A	Pass
11	0.005	0.330	1.6	0.006	0.495	1.2	Pass
12	0.000	0.153	N/A	0.000	0.230	N/A	Pass
13	0.005	0.210	2.4	0.005	0.315	1.7	Pass
14	0.000	0.131	N/A	0.001	0.197	N/A	Pass
15	0.004	0.150	N/A	0.004	0.225	N/A	Pass
16	0.000	0.115	N/A	0.001	0.173	N/A	Pass
17	0.003	0.132	N/A	0.003	0.198	N/A	Pass
18	0.000	0.102	N/A	0.000	0.153	N/A	Pass
19	0.007	0.118	5.9	0.007	0.178	4.1	Pass
20	0.000	0.092	N/A	0.000	0.138	N/A	Pass
21	0.004	0.107	N/A	0.004	0.161	N/A	Pass
22	0.000	0.084	N/A	0.000	0.125	N/A	Pass
23	0.005	0.098	5.6	0.006	0.147	3.9	Pass
24	0.000	0.077	N/A	0.000	0.115	N/A	Pass
25	0.001	0.090	N/A	0.002	0.135	N/A	Pass
26	0.000	0.071	N/A	0.000	0.107	N/A	Pass
27	0.004	0.083	N/A	0.004	0.125	N/A	Pass
28	0.000	0.066	N/A	0.000	0.099	N/A	Pass
29	0.003	0.078	N/A	0.003	0.116	N/A	Pass



Reference No.: WTX23X06126277E

30	0.000	0.061	N/A	0.000	0.092	N/A	Pass
31	0.005	0.073	N/A	0.005	0.109	N/A	Pass
32	0.000	0.058	N/A	0.000	0.086	N/A	Pass
33	0.001	0.068	N/A	0.002	0.102	N/A	Pass
34	0.000	0.054	N/A	0.000	0.081	N/A	Pass
35	0.002	0.064	N/A	0.002	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	0.077	N/A	Pass
37	0.001	0.061	N/A	0.001	0.091	N/A	Pass
38	0.000	0.048	N/A	0.000	0.073	N/A	Pass
39	0.002	0.058	N/A	0.003	0.087	N/A	Pass
40	0.000	0.046	N/A	0.000	0.069	N/A	Pass

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### Voltage Source Verification Data (Run time)

Comment: TM2

Customer: Customer information

Test Result: Pass

Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	230.11	Frequency(Hz):	50.00
I_Peak (Amps):	0.761	I_RMS (Amps):	0.429
I_Fund (Amps):	0.412	Crest Factor:	1.778
Power (Watts):	92.8	Power Factor:	0.941

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.060	0.460	13.09	OK
3	0.527	2.070	25.48	OK
4	0.079	0.460	17.16	OK
5	0.063	0.920	6.84	OK
6	0.037	0.460	8.05	OK
7	0.035	0.690	5.14	OK
8	0.014	0.460	2.99	OK
9	0.013	0.460	2.74	OK
10	0.012	0.460	2.53	OK
11	0.011	0.230	4.73	OK
12	0.010	0.230	4.53	OK
13	0.012	0.230	5.25	OK
14	0.007	0.230	3.01	OK
15	0.010	0.230	4.33	OK
16	0.008	0.230	3.36	OK
17	0.012	0.230	5.21	OK
18	0.011	0.230	4.94	OK
19	0.011	0.230	4.93	OK
20	0.015	0.230	6.51	OK
21	0.010	0.230	4.22	OK
22	0.004	0.230	1.72	OK
23	0.009	0.230	3.73	OK
24	0.003	0.230	1.35	OK
25	0.004	0.230	1.90	OK
26	0.003	0.230	1.34	OK
27	0.011	0.230	4.78	OK
28	0.005	0.230	2.08	OK
29	0.004	0.230	1.86	OK
30	0.003	0.230	1.14	OK



31	<b>0.008</b>	<b>0.230</b>	<b>3.58</b>	<b>OK</b>
32	<b>0.003</b>	<b>0.230</b>	<b>1.11</b>	<b>OK</b>
33	<b>0.006</b>	<b>0.230</b>	<b>2.42</b>	<b>OK</b>
34	<b>0.002</b>	<b>0.230</b>	<b>1.08</b>	<b>OK</b>
35	<b>0.004</b>	<b>0.230</b>	<b>1.64</b>	<b>OK</b>
36	<b>0.003</b>	<b>0.230</b>	<b>1.29</b>	<b>OK</b>
37	<b>0.004</b>	<b>0.230</b>	<b>1.79</b>	<b>OK</b>
38	<b>0.003</b>	<b>0.230</b>	<b>1.27</b>	<b>OK</b>
39	<b>0.005</b>	<b>0.230</b>	<b>2.04</b>	<b>OK</b>
40	<b>0.008</b>	<b>0.230</b>	<b>3.39</b>	<b>OK</b>

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Test mode:

TM3

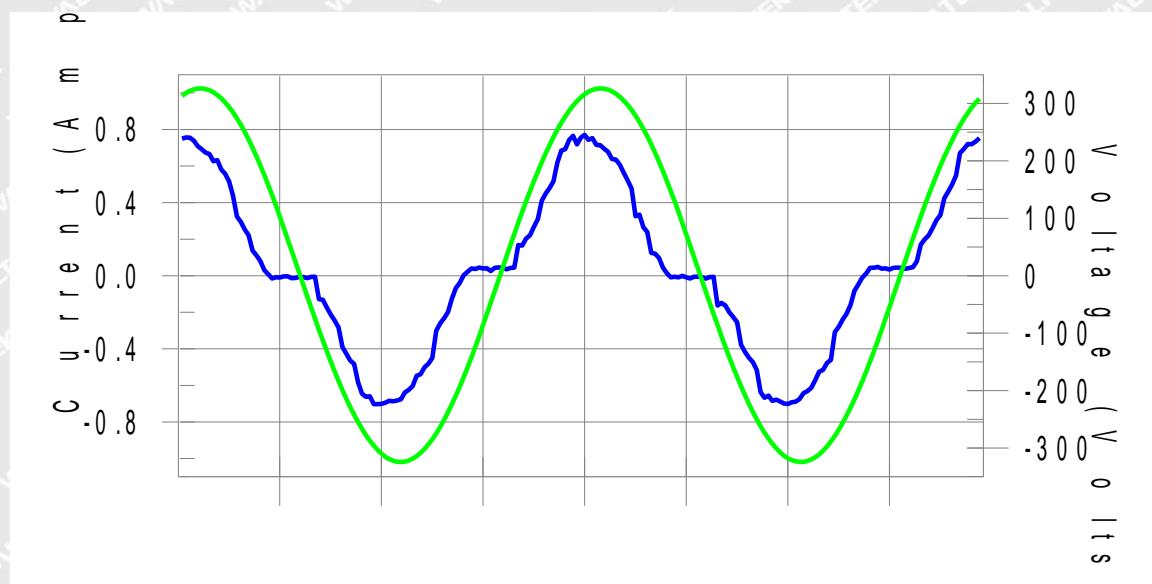
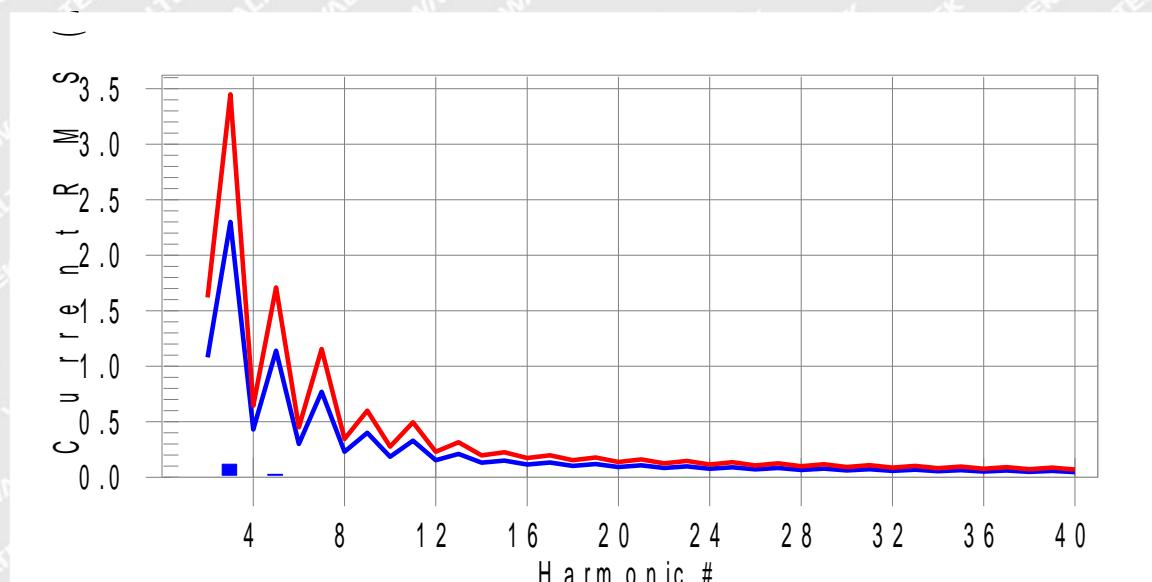
**Harmonics – Class-A per IEC 61000-3-2:2018+AMD1:2020(Run time)**

Comment: TM3

Customer: Customer information

Test Result: Pass

Source qualification: Normal

**Current & voltage waveforms****Harmonics and Class A limit line****European Limits****Test result: Pass****Worst harmonics H29-4.8% of 150% limit, H29-7% of 100% limit**



## Current Test Result Summary (Run time)

Comment: TM3

Customer: Customer information

Test Result: Pass

Source qualification: Normal

THC(A): 0.123

I-THD(%): 28.8

POHC(A): 0.011

POHC Limit(A): 0.251

**Highest parameter values during test:**

V_RMS (Volts):	230.11	Frequency(Hz):	50.00
I_Peak (Amps):	0.796	I_RMS (Amps):	0.443
I_Fund (Amps):	0.425	Crest Factor:	1.805
Power (Watts):	95.5	Power Factor:	0.937

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	N/A	0.002	1.620	N/A	Pass
3	0.118	2.300	5.1	0.119	3.450	3.4	Pass
4	0.001	0.430	N/A	0.001	0.645	N/A	Pass
5	0.027	1.140	2.4	0.027	1.710	1.6	Pass
6	0.000	0.300	N/A	0.001	0.450	N/A	Pass
7	0.008	0.770	1.1	0.009	1.155	0.7	Pass
8	0.000	0.230	N/A	0.000	0.345	N/A	Pass
9	0.005	0.400	N/A	0.005	0.600	N/A	Pass
10	0.000	0.184	N/A	0.001	0.276	N/A	Pass
11	0.004	0.330	N/A	0.004	0.495	N/A	Pass
12	0.000	0.153	N/A	0.001	0.230	N/A	Pass
13	0.006	0.210	2.7	0.006	0.315	1.8	Pass
14	0.000	0.131	N/A	0.001	0.197	N/A	Pass
15	0.005	0.150	N/A	0.005	0.225	N/A	Pass
16	0.000	0.115	N/A	0.000	0.173	N/A	Pass
17	0.003	0.132	N/A	0.003	0.198	N/A	Pass
18	0.000	0.102	N/A	0.000	0.153	N/A	Pass
19	0.008	0.118	6.8	0.008	0.178	4.7	Pass
20	0.000	0.092	N/A	0.000	0.138	N/A	Pass
21	0.003	0.107	N/A	0.003	0.161	N/A	Pass
22	0.000	0.084	N/A	0.000	0.125	N/A	Pass
23	0.006	0.098	6.0	0.006	0.147	4.2	Pass
24	0.000	0.077	N/A	0.001	0.115	N/A	Pass
25	0.004	0.090	N/A	0.004	0.135	N/A	Pass
26	0.000	0.071	N/A	0.000	0.107	N/A	Pass
27	0.002	0.083	N/A	0.002	0.125	N/A	Pass
28	0.000	0.066	N/A	0.000	0.099	N/A	Pass
29	0.005	0.078	7.0	0.006	0.116	4.8	Pass



30	0.000	0.061	N/A	0.000	0.092	N/A	Pass
31	0.002	0.073	N/A	0.003	0.109	N/A	Pass
32	0.000	0.058	N/A	0.001	0.086	N/A	Pass
33	0.003	0.068	N/A	0.003	0.102	N/A	Pass
34	0.000	0.054	N/A	0.000	0.081	N/A	Pass
35	0.001	0.064	N/A	0.001	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	0.077	N/A	Pass
37	0.001	0.061	N/A	0.002	0.091	N/A	Pass
38	0.000	0.048	N/A	0.000	0.073	N/A	Pass
39	0.003	0.058	N/A	0.003	0.087	N/A	Pass
40	0.000	0.046	N/A	0.000	0.069	N/A	Pass

# WALTEK



### Voltage Source Verification Data (Run time)

Comment: TM3

Customer: Customer information

Test Result: Pass

Source qualification: Normal

**Highest parameter values during test:**

Voltage (Vrms):	230.11	Frequency(Hz):	50.00
I_Peak (Amps):	0.796	I_RMS (Amps):	0.443
I_Fund (Amps):	0.425	Crest Factor:	1.805
Power (Watts):	95.5	Power Factor:	0.937

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.066	0.460	14.24	OK
3	0.523	2.070	25.24	OK
4	0.076	0.460	16.49	OK
5	0.067	0.920	7.29	OK
6	0.035	0.460	7.72	OK
7	0.031	0.690	4.56	OK
8	0.014	0.460	3.07	OK
9	0.014	0.460	2.96	OK
10	0.011	0.460	2.46	OK
11	0.011	0.230	4.71	OK
12	0.010	0.230	4.28	OK
13	0.011	0.230	4.87	OK
14	0.007	0.230	2.95	OK
15	0.009	0.230	3.90	OK
16	0.008	0.230	3.36	OK
17	0.011	0.230	4.79	OK
18	0.011	0.230	4.75	OK
19	0.009	0.230	3.92	OK
20	0.015	0.230	6.62	OK
21	0.007	0.230	2.89	OK
22	0.004	0.230	1.71	OK
23	0.009	0.230	4.09	OK
24	0.003	0.230	1.42	OK
25	0.006	0.230	2.81	OK
26	0.003	0.230	1.29	OK
27	0.008	0.230	3.65	OK
28	0.005	0.230	2.18	OK
29	0.005	0.230	2.13	OK
30	0.003	0.230	1.32	OK



31		0.006	0.230	2.61	OK
32		0.003	0.230	1.19	OK
33		0.008	0.230	3.42	OK
34		0.003	0.230	1.17	OK
35		0.005	0.230	2.12	OK
36		0.003	0.230	1.42	OK
37		0.005	0.230	2.01	OK
38		0.003	0.230	1.29	OK
39		0.005	0.230	2.38	OK
40		0.008	0.230	3.55	OK

# WALTEK



## 6. Voltage Fluctuation Flicker

### 6.1 Test Procedure

Test is conducted under the description of IEC 61000-3-3.

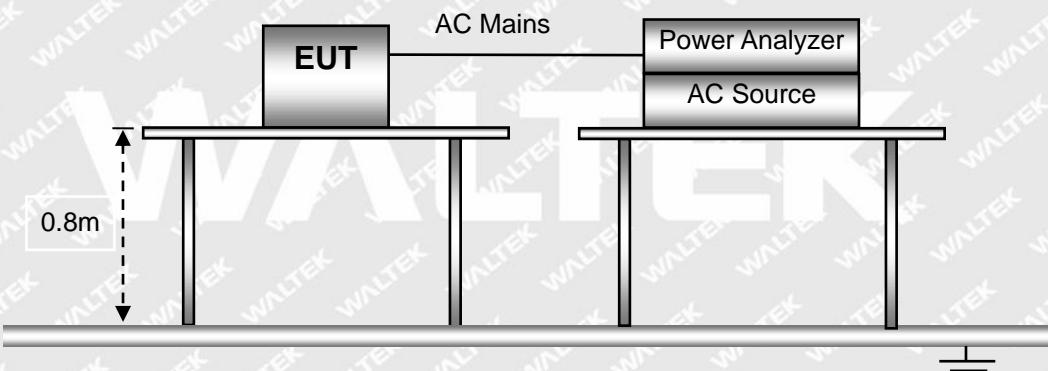
### 6.2 Test Standards

IEC 61000-3-3, Limit: Clause 5.

### 6.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	54 %
ATM Pressure:	998 mbar

### 6.4 Basic Test Setup Block Diagram

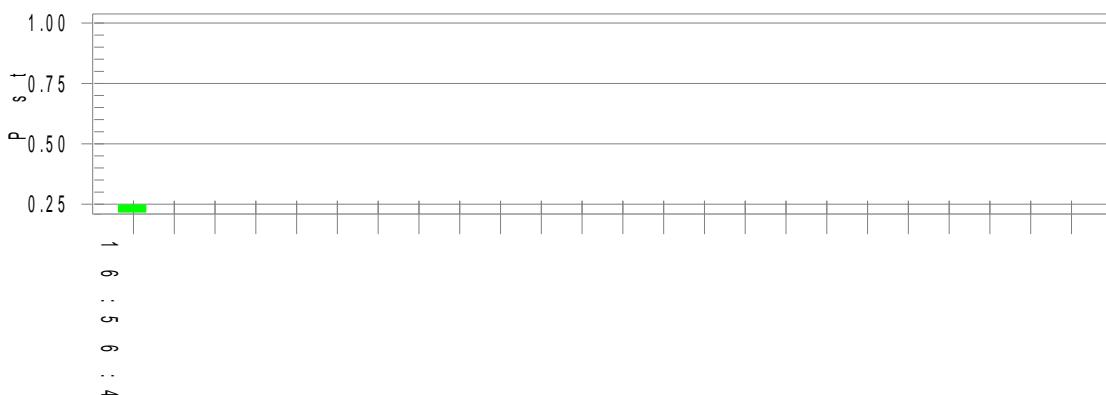


### 6.5 Voltage Fluctuation and Flicker Test Data



Test mode:

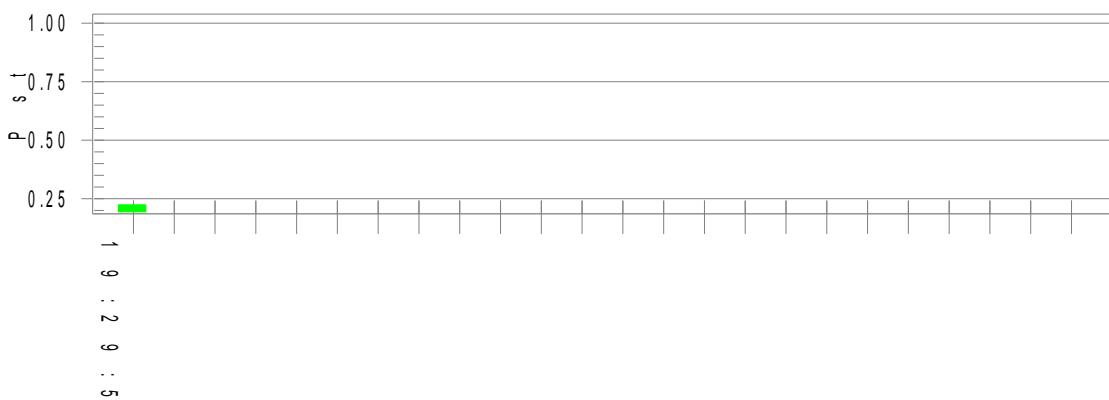
TM1

**Flicker Test Summary per IEC61000-3-3:2013+AMD2:2021 (Run time)****Comment:** TM1**Customer:** Customer information**Test Result:** Pass**Status:** Test Completed**Pst<sub>1</sub> and limit line****European Limits****Plt and limit line****Parameter values recorded during the test:****Vrms at the end of test (Volt):** 230.03**Highest dt (%):****T-max (mS):** 0**Test limit (%):****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):** 0.247**Test limit:** 1.000 **Pass****Highest Plt (2 hr. period):** 0.108**Test limit:** 0.650 **Pass**



Test mode:

TM2

**Flicker Test Summary per IEC61000-3-3:2013+AMD2:2021 (Run time)****Comment:** TM2**Customer:** Customer information**Test Result:** Pass**Status:** Test Completed**Pst<sub>i</sub> and limit line****European Limits****Plt and limit line****Parameter values recorded during the test:****Vrms at the end of test (Volt):** 230.08**Highest dt (%):****T-max (mS):** 0**Test limit (%):****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):** 0.224**Test limit:** 1.000 **Pass****Highest Plt (2 hr. period):** 0.098**Test limit:** 0.650 **Pass**



Test mode:

TM3

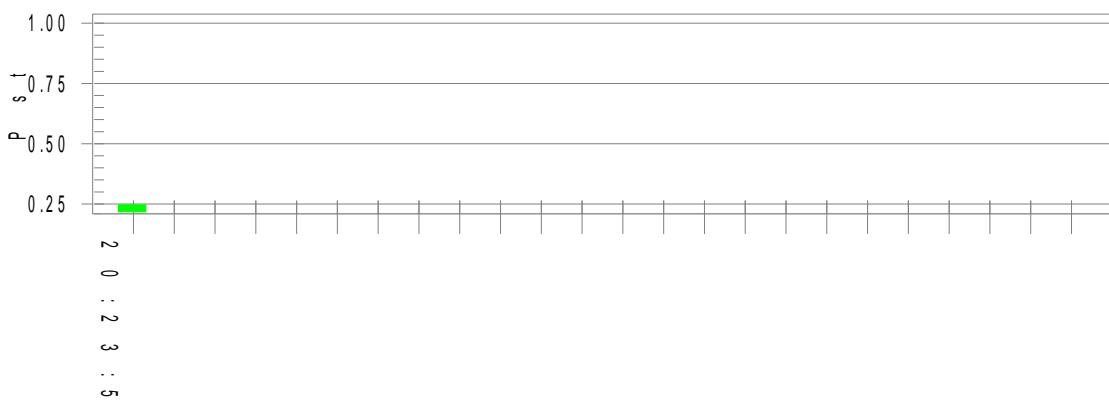
**Flicker Test Summary per IEC61000-3-3:2013+AMD2:2021 (Run time)**

Comment: TM3

Customer: Customer information

Test Result: Pass

Status: Test Completed

Pst<sub>1</sub> and limit lineEuropean LimitsPlt and limit line**Parameter values recorded during the test:**

Vrms at the end of test (Volt): 230.03

Highest dt (%):

T-max (mS): 0

Test limit (%):

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): 0.247

Test limit: 1.000 Pass

Highest Plt (2 hr. period): 0.108

Test limit: 0.650 Pass



## 7. Electrostatic Discharges (ESD)

### 7.1 Test Procedure

Test is conducted under the description of IEC 61000-4-2.

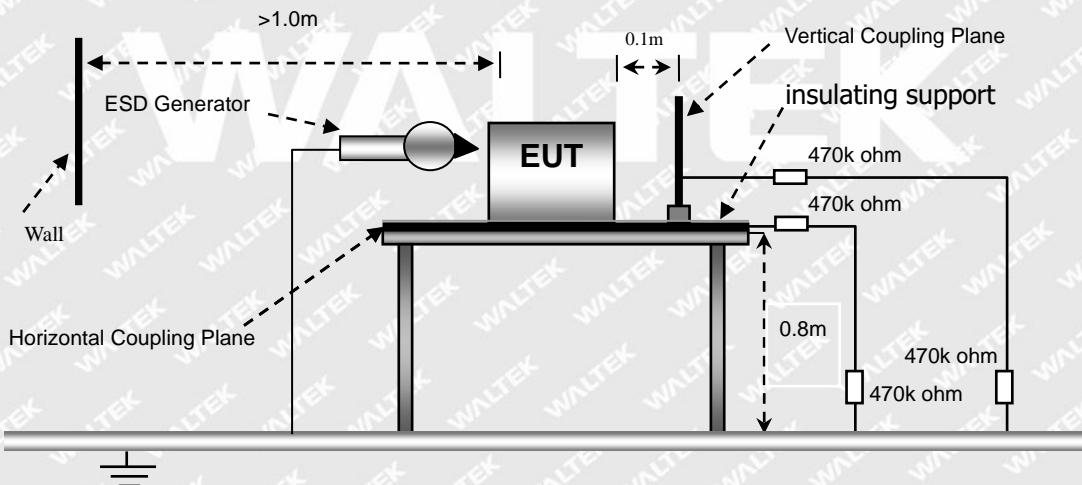
### 7.2 Test Performance

Performance Criterion: B

### 7.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 7.4 Basic Test Setup Block Diagram





## 7.5 Electrostatic Discharge Immunity Test Data

Table 1: Electrostatic Discharge Immunity (Air Discharge)

IEC 61000-4-2 Test Points	Test Voltage (kV)									
	-2	+2	-4	+4	-8	+8	-15	+15	-18	+18
Shell edge crack	A	A	A	A	A	A	A	A	A	A
Pilot lamp	A	A	A	A	A	A	A	A	A	A

Table 2: Electrostatic Discharge Immunity (Direct Contact)

IEC 61000-4-2 Test Points	Test Voltage (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-15	+15
/	/	/	/	/	/	/	/	/	/	/

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

IEC 61000-4-2 Test Points	Test Voltage (kV)									
	-2	+2	-4	+4	-6	+6	-8	+8	-10	+10
HCP (6 Sides)	A	A	A	A	A	A	A	A	A	A
VCP (4 Sides)	A	A	A	A	A	A	A	A	A	A

Test Result: Pass

## 8. Continuous RF Electromagnetic Field Disturbances (RS)

### 8.1 Test Procedure

Test is conducted under the description of IEC 61000-4-3.

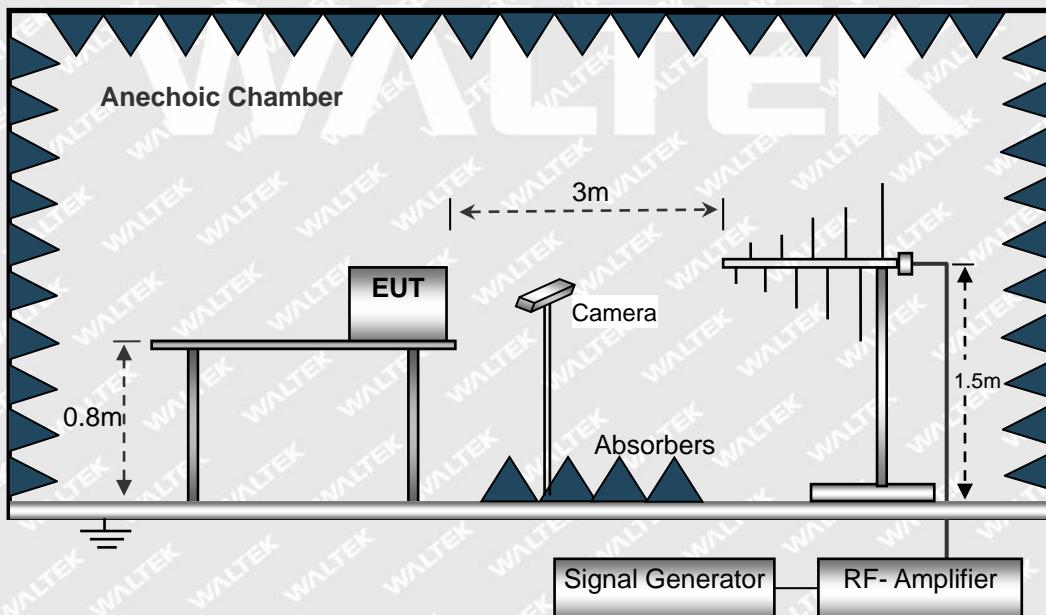
### 8.2 Test Performance

Performance Criterion: A

### 8.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 8.4 Basic Test Setup Block Diagram





## 8.5 Continuous Radiated Disturbances Test Data

Frequency step: 1% of fundamental

Dwell time: 1 second

Modulation: AM by 1kHz sine wave with 80% modulation depth

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

Test Result: Pass

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## 9. Electrical Fast Transients (EFT)

### 9.1 Test Procedure

Test is conducted under the description of IEC 61000-4-4.

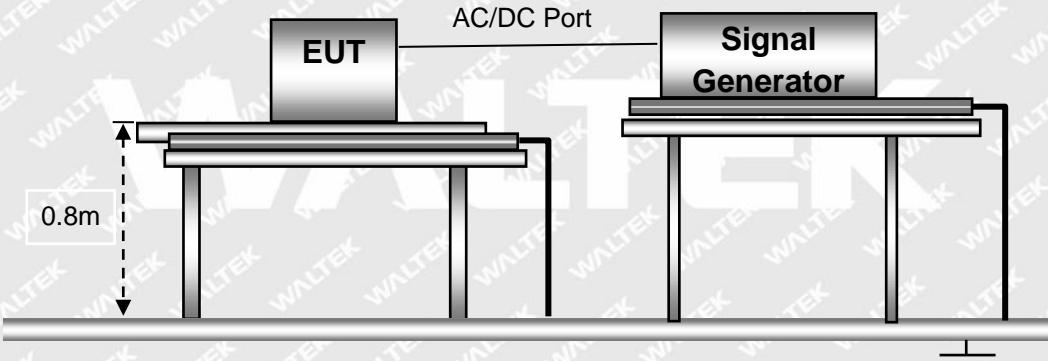
### 9.2 Test Performance

Performance Criterion: B

### 9.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 9.4 Basic Test Setup Block Diagram





## 9.5 Electrical Fast Transients Test Data

Repetition frequency 100 kHz

GTM961200P12015-T3

IEC 61000-4-4 Test Points		Test Voltage (kV)							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
Power Supply	L	/	/	/	/	A	A	A	A
	N	/	/	/	/	A	A	A	A
	PE	/	/	/	/	A	A	A	A
	L+N	/	/	/	/	A	A	A	A
	L+PE	/	/	/	/	A	A	A	A
	N+PE	/	/	/	/	A	A	A	A
	L+N+PE	/	/	/	/	A	A	A	A
Signal ports	RJ45	/	/	/	/	/	/	/	/

GTM96900P9012-T2, GTM96900P9054-T2

IEC 61000-4-4 Test Points		Test Voltage (kV)							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
Power Supply	L	/	/	/	/	A	A	A	A
	N	/	/	/	/	A	A	A	A
	PE	/	/	/	/	/	/	/	/
	L+N	/	/	/	/	A	A	A	A
	L+PE	/	/	/	/	/	/	/	/
	N+PE	/	/	/	/	/	/	/	/
	L+N+PE	/	/	/	/	/	/	/	/
Signal ports	RJ45	/	/	/	/	/	/	/	/

Test Result: Pass



## 10. Surges

### 10.1 Test Procedure

Test is conducted under the description of IEC 61000-4-5.

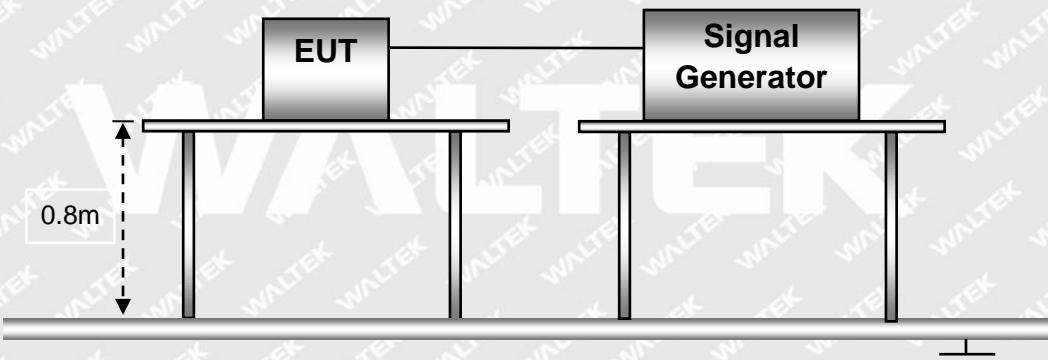
### 10.2 Test Performance

Performance Criterion: B

### 10.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 10.4 Basic Test Setup Block Diagram





## 10.5 Surge Test Data

GTM961200P12015-T3

Test Voltage (kV)	Poll	Path	Pass	Fail
0.5kV	±	L-N, L-PE, N-PE	A	/
1kV	±	L-N, L-PE, N-PE	A	/
2kV	±	L-PE, N-PE	A	/
4kV	±	L-PE, N-PE	/	/

GTM96900P9012-T2

Test Voltage (kV)	Poll	Path	Pass	Fail
0.5kV	±	L-N	A	/
1kV	±	L-N	A	/
2kV	±	L-N	A	/
4kV	±	L-PE, N-PE	/	/

GTM96900P9054-T2

Test Voltage (kV)	Poll	Path	Pass	Fail
0.5kV	±	L-N	A	/
1kV	±	L-N	A	/
2kV	±	L-PE, N-PE	/	/
4kV	±	L-N, L-PE, N-PE	/	/

Test Result: Pass



## 11. Continuous Induced RF Disturbances (C/S)

### 11.1 Test Procedure

Test is conducted under the description of IEC 61000-4-6.

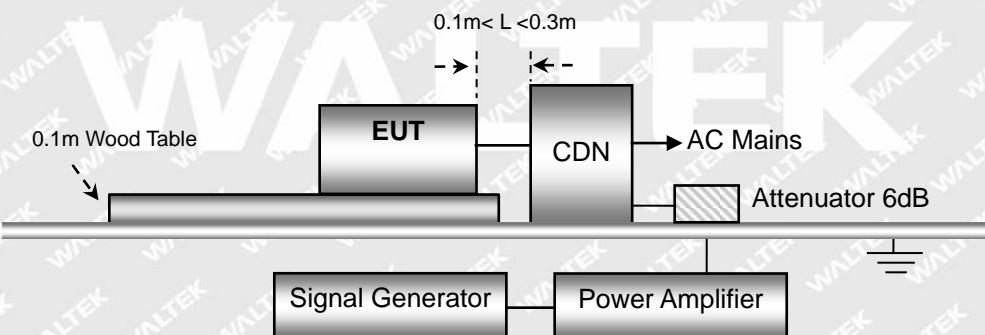
### 11.2 Test Performance

Performance Criterion: A

### 11.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 11.4 Basic Test Setup Block Diagram





## 11.5 Continuous Conducted Disturbances Test Data

Sweep frequency range: 0.15 MHz to 80 MHz

Frequency step: 1% of fundamental

Dwell time: 1 second

AC Port

Frequency MHz	Injected Position	Voltage level (e.m.f.)	Observations (Performance Criterion)	Result
0.15-80	AC Mains	1V	/	Pass
0.15-80	AC Mains	3V	A	Pass
0.15-80	AC Mains	10V	/	Pass

Test Result: Pass

## 12. Power-Frequency Magnetic Fields (PFMF)

### 12.1 Test Procedure

Test is conducted under the description of IEC 61000-4-8.

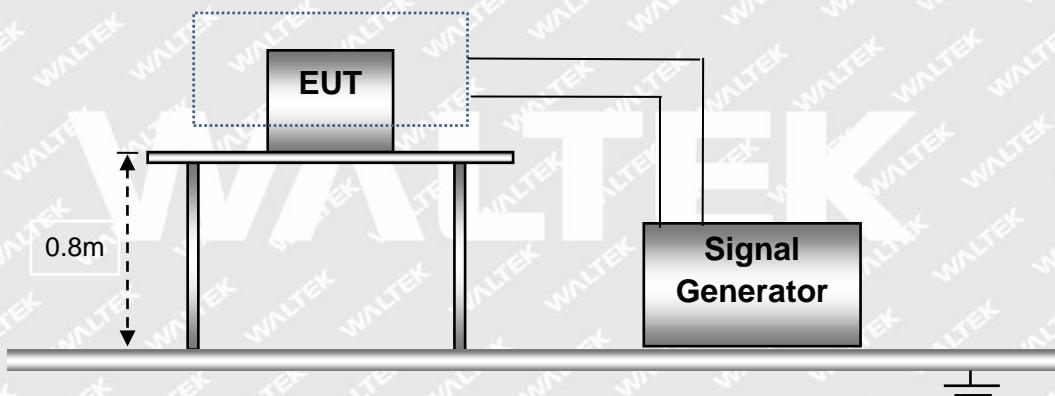
### 12.2 Test Performance

Performance Criterion: A

### 12.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 12.4 Basic Test Setup Block Diagram



### 12.5 Power-Frequency Magnetic Field Test Data

Level	Magnetic Field Strength (r.m.s) A/m	Frequency Hz	Induction Coil Postion	Pass	Fail
1	1	50/60	X, Y, Z	/	/
2	3	50/60	X, Y, Z	/	/
3	10	50/60	X, Y, Z	/	/
4	30	50/60	X, Y, Z	A	/

Test Result: Pass



## 13. Voltage Dips and Interruptions

### 13.1 Test Procedure

Test is conducted under the description of IEC 61000-4-11.

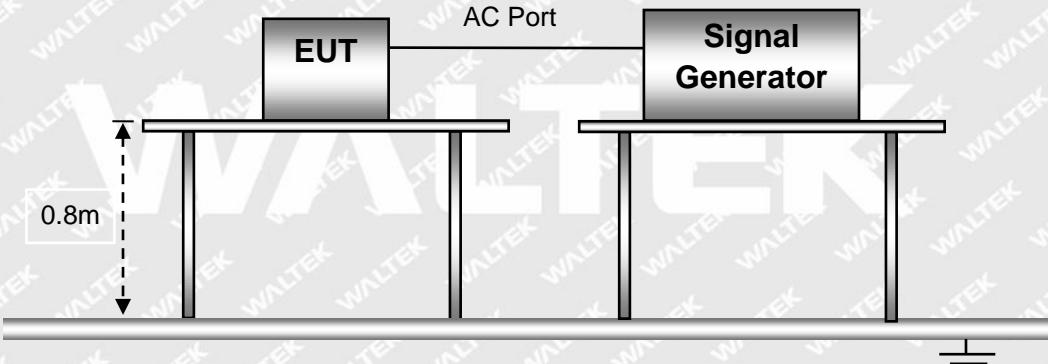
### 13.2 Test Performance

Performance Criterion: B/C

### 13.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	53 %
ATM Pressure:	998 mbar

### 13.4 Basic Test Setup Block Diagram



### 13.5 Voltage Dips And Interruptions Test Data

U: Voltage dips in % U<sub>T</sub> (U<sub>T</sub> is rated voltage for the EUT)

T: Test duration

Level	U	T	Phase Angle	N	Pass	Fail
1	100%	10ms	0°/45°/90°/135°/180°,225°/270°/315°	3	A	/
2	100%	20ms	0°/45°/90°/135°/180°,225°/270°/315°	3	A	/
3	70%	500ms/600ms	0°/45°/90°/135°/180°,225°/270°/315°	3	B	/
4	100%	5000ms/6000ms	0°/45°/90°/135°/180°,225°/270°/315°	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. 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





## EXHIBIT 2 - EUT PHOTOGRAPHS

GTM961200P12015-T3

EUT View 1



EUT View 2





**EUT View 3**



**EUT View 4**



Reference No.: WTX23X06126277E



**GTM96900P9012-T2**

**EUT View 5**



**EUT View 6**





EUT View 7



EUT View 8





**EUT View 9**



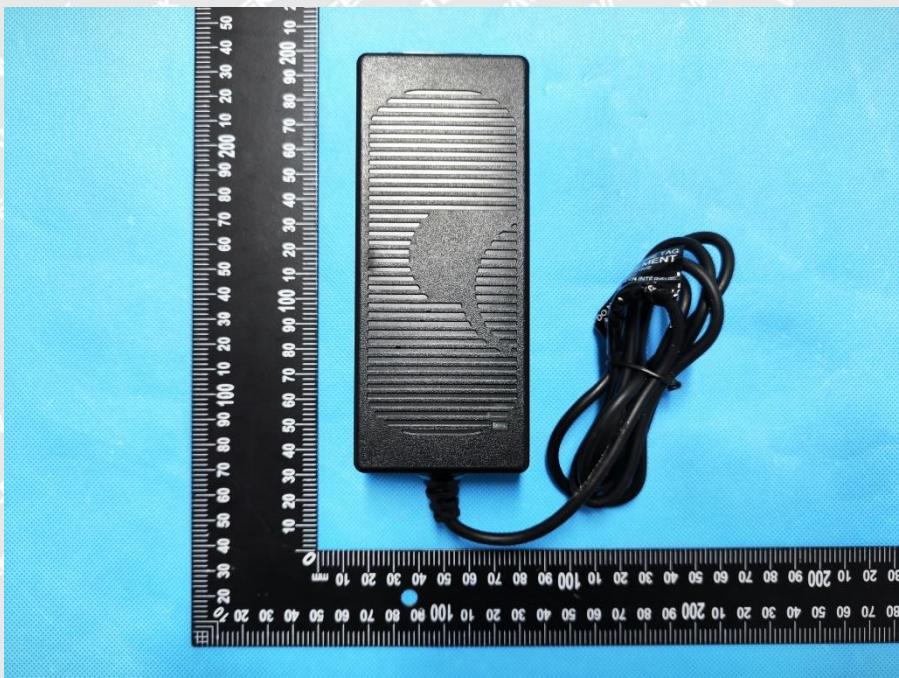
**GTM96900P9054-T2**

**EUT View 10**





EUT View 11

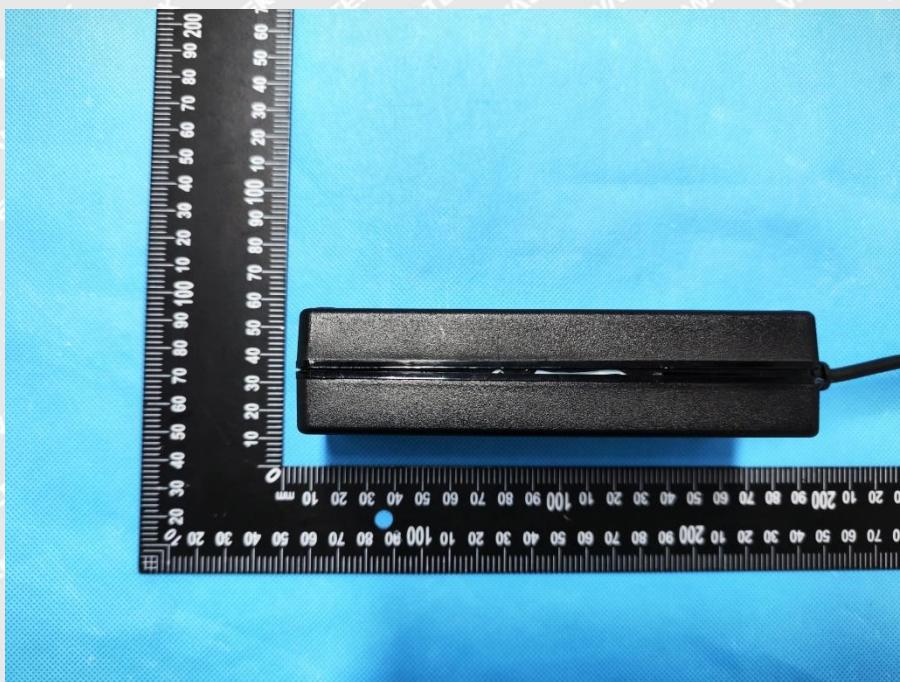


EUT View 12





EUT View 13



EUT View 14

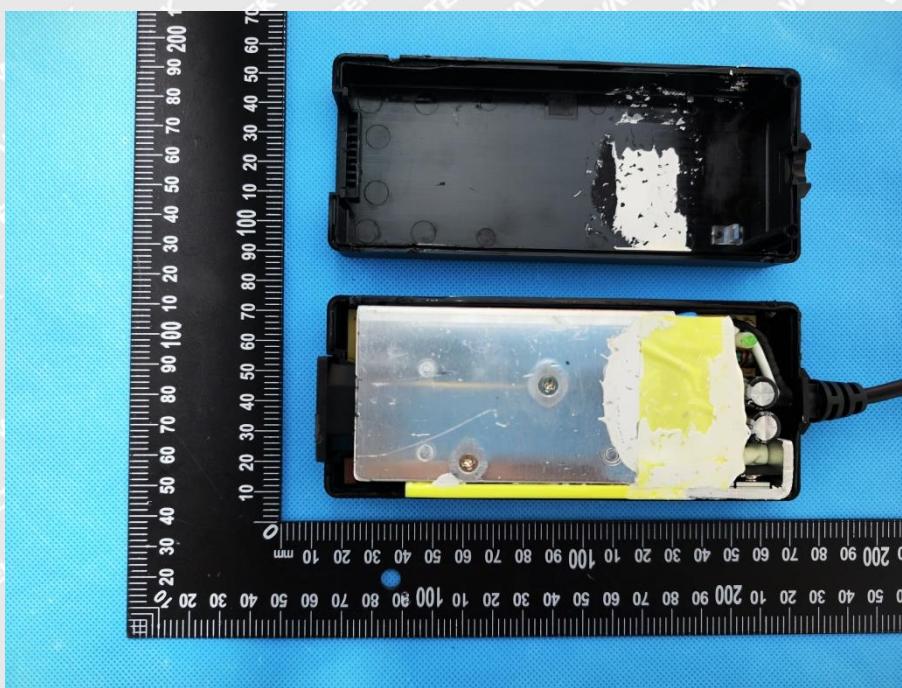


Reference No.: WTX23X06126277E

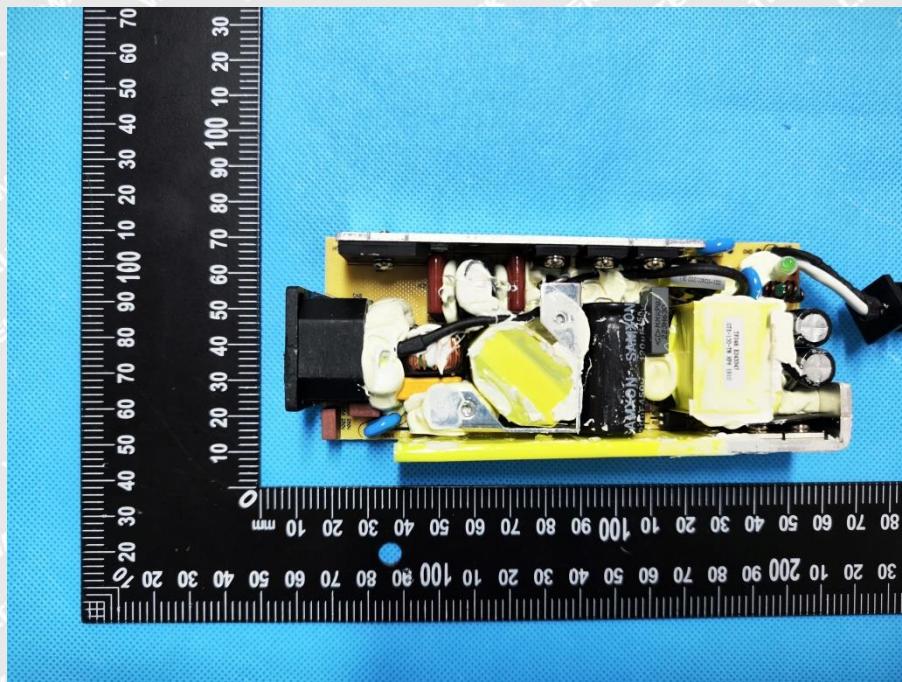


**GTM961200P12015-T3**

**EUT Housing and Board View 1**

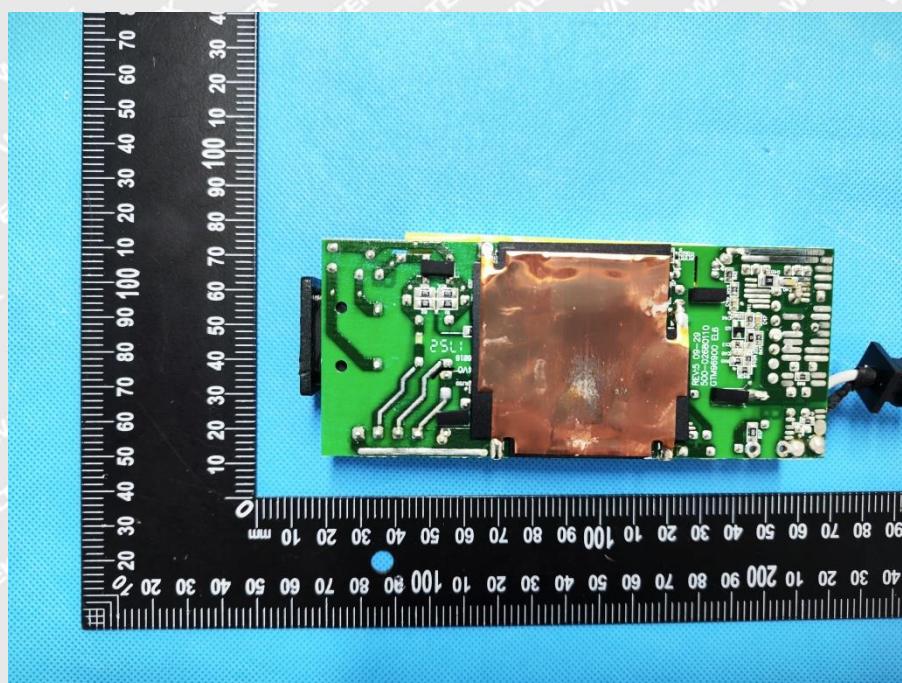


**Solder Board-Component View 2**



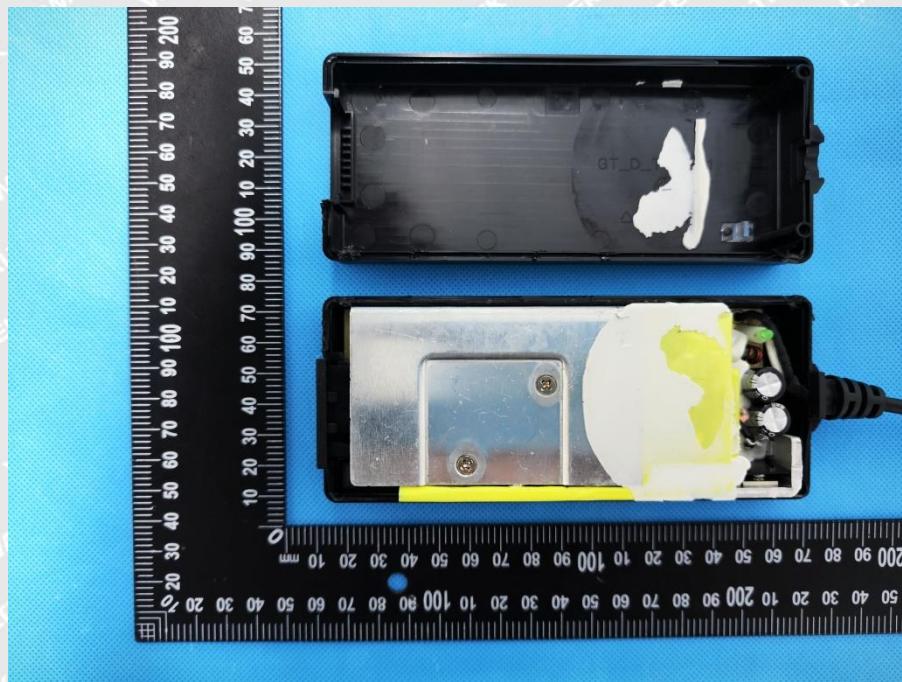


### Solder Board-Component View 3



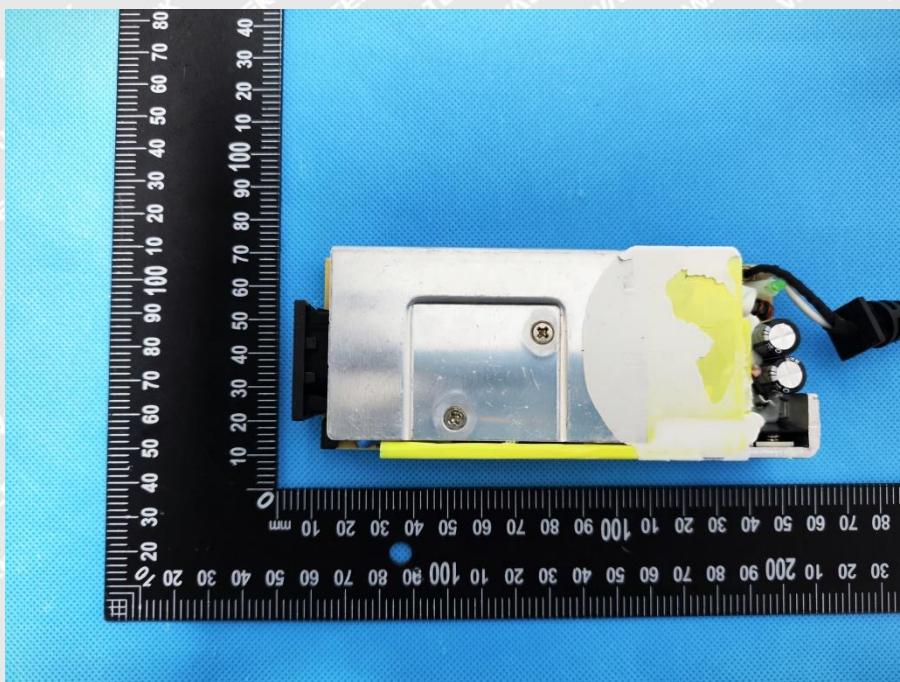
GTM96900P9012-T2

EUT Housing and Board View 4

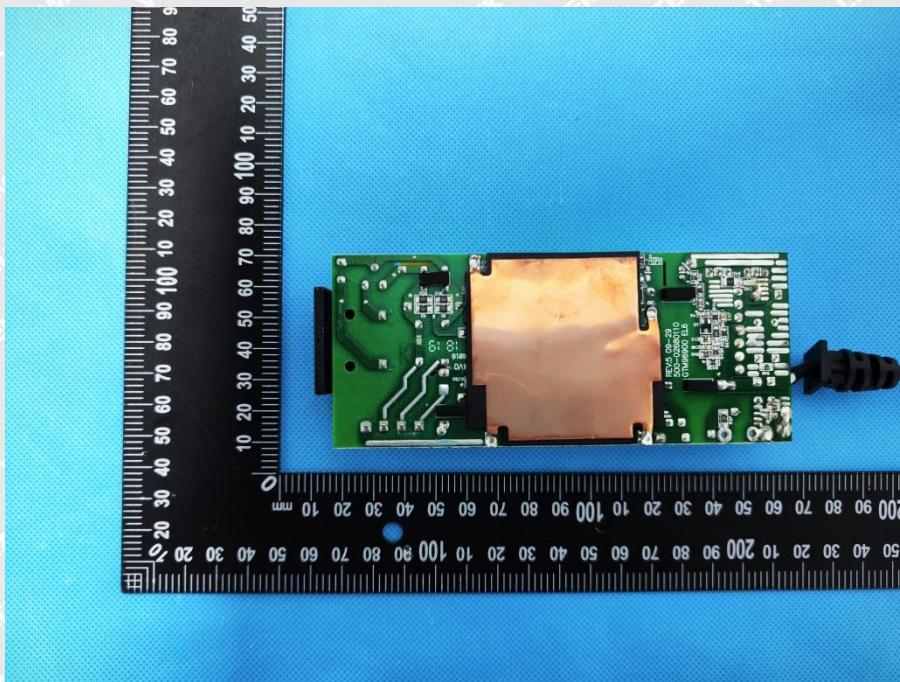




**Solder Board-Component View 5**

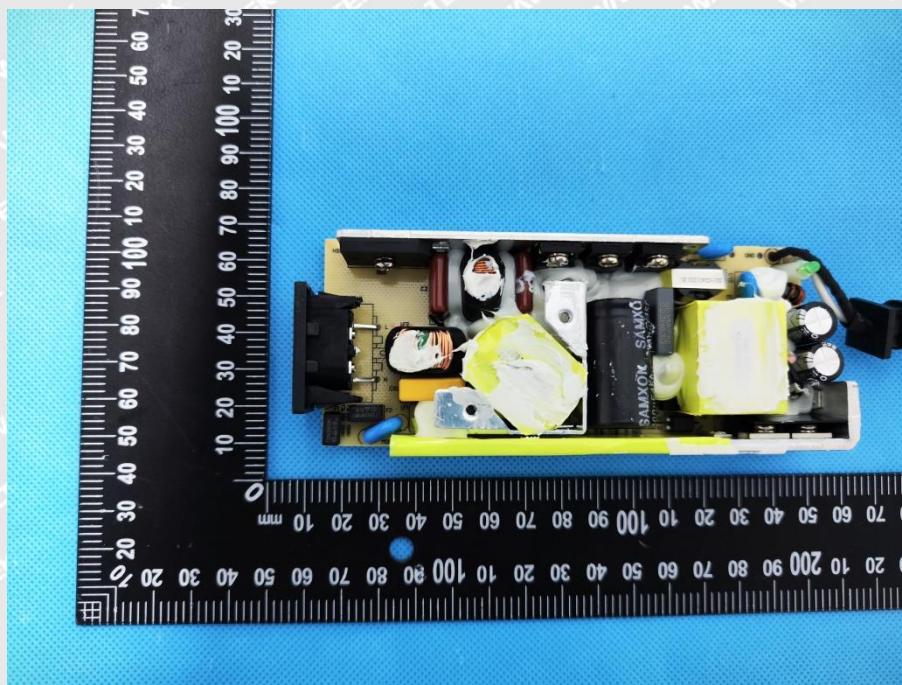


**Solder Board-Component View 6**



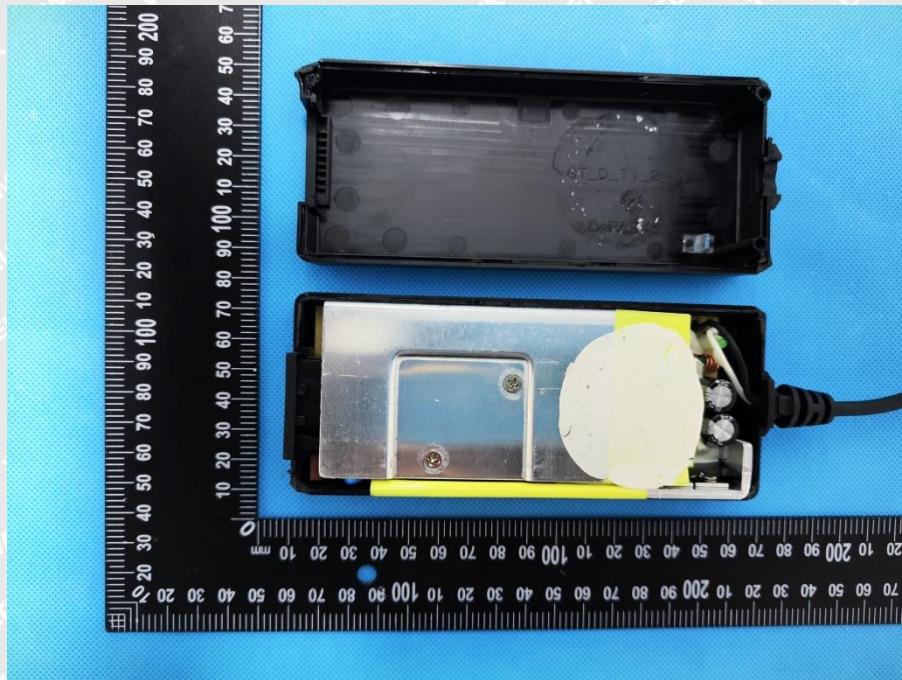


### Solder Board-Component View 7



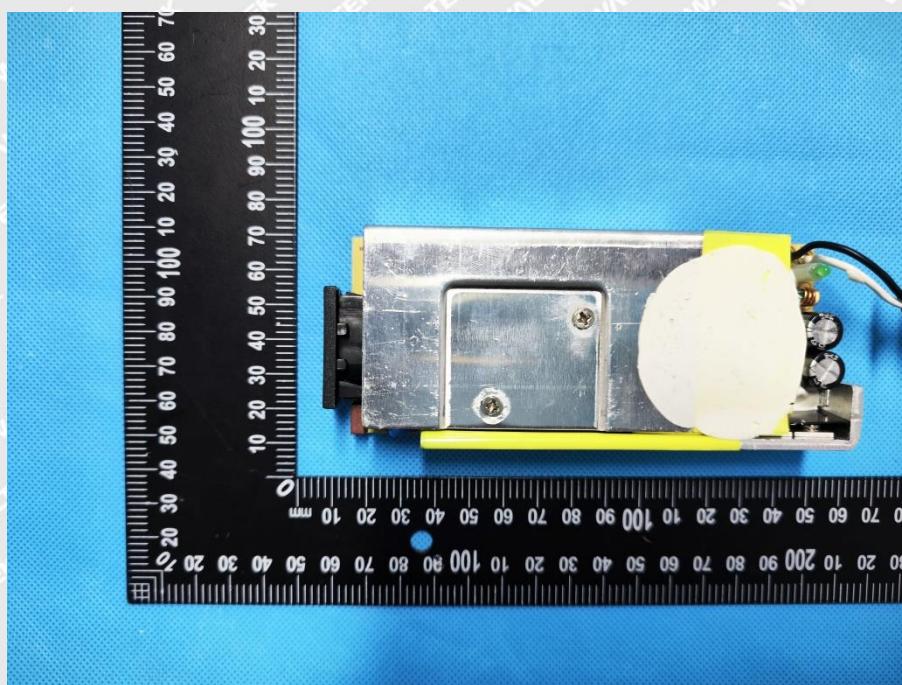
GTM96900P9054-T2

### EUT Housing and Board View 8

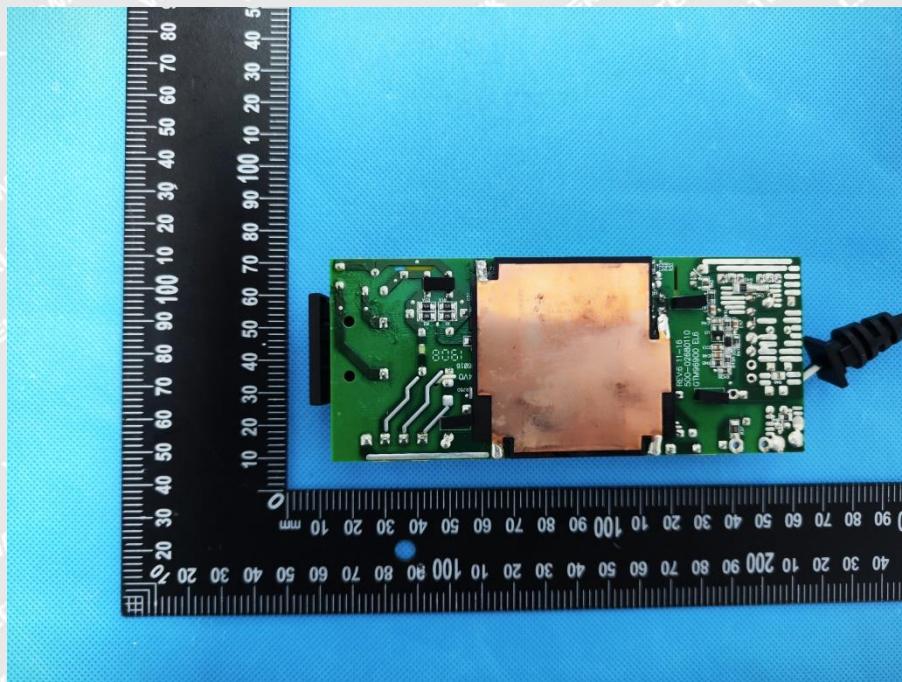




**Solder Board-Component View 9**

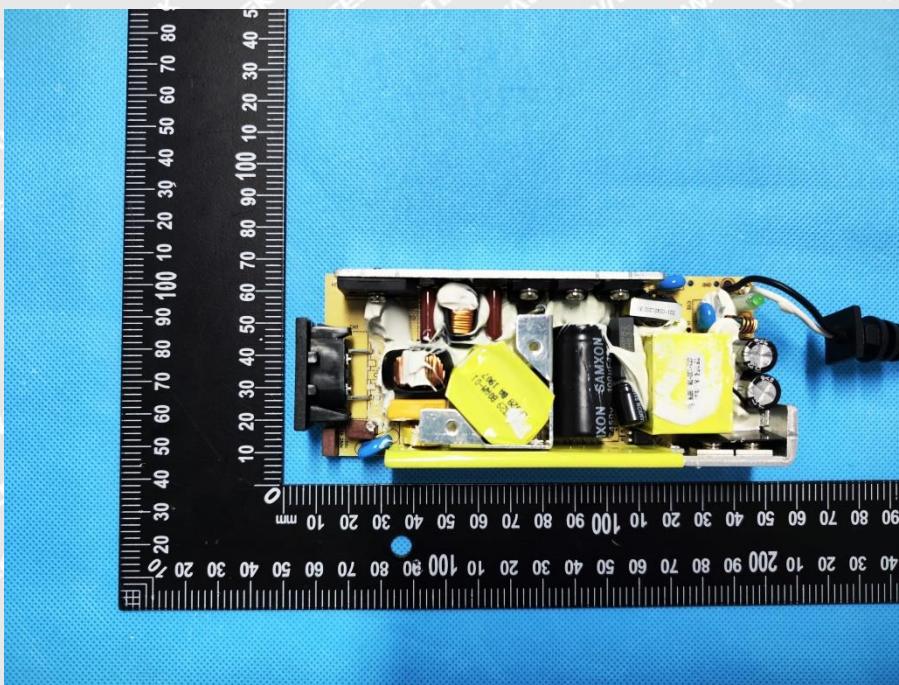


**Solder Board-Component View 10**





**Solder Board-Component View 11**



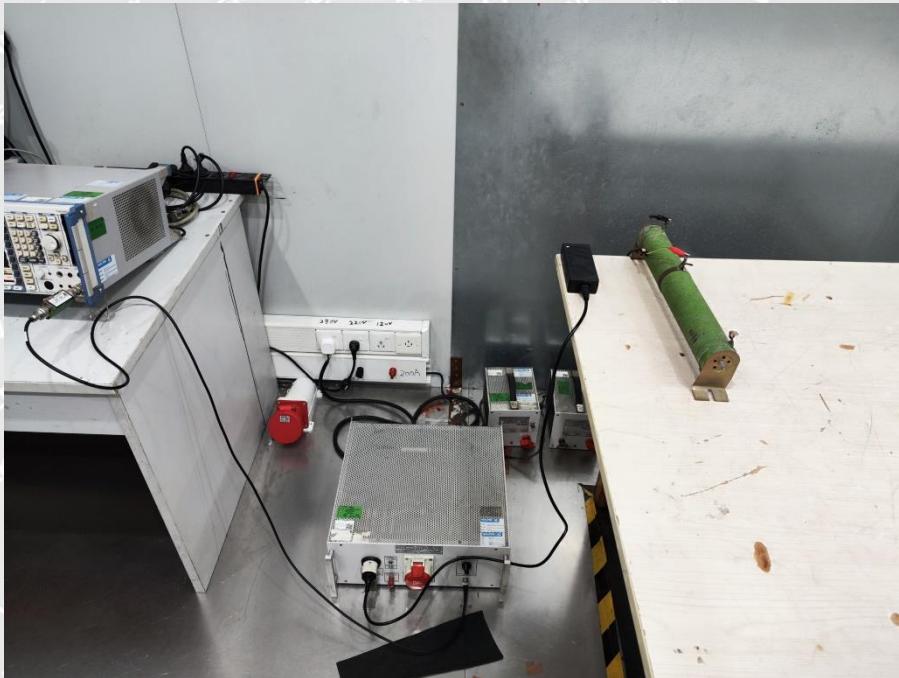
**WALTEK**



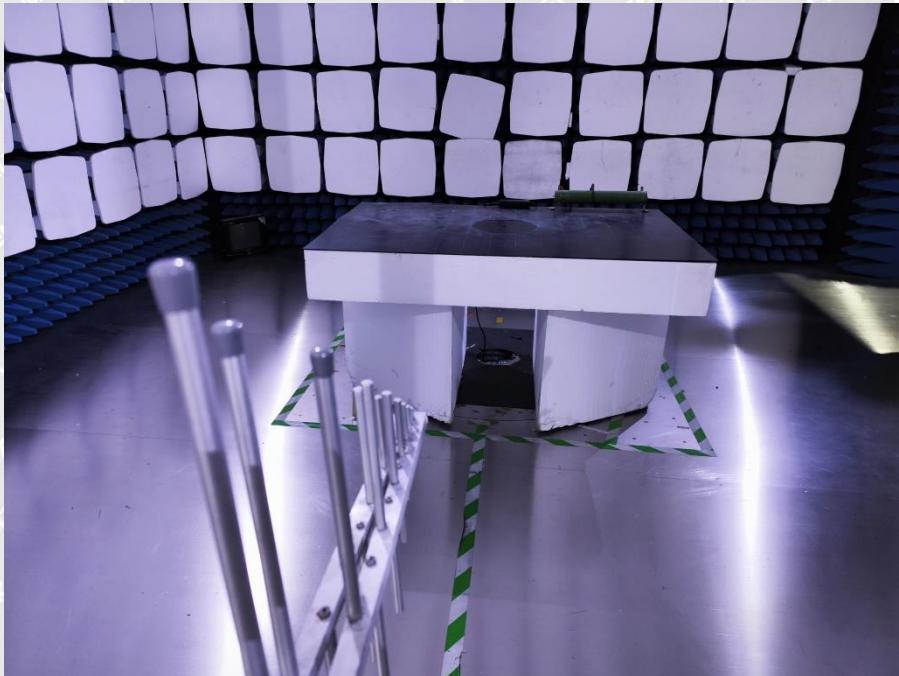
## EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

GTM961200P12015-T3

Conduction Emission Test View



Radiation Emission Test View

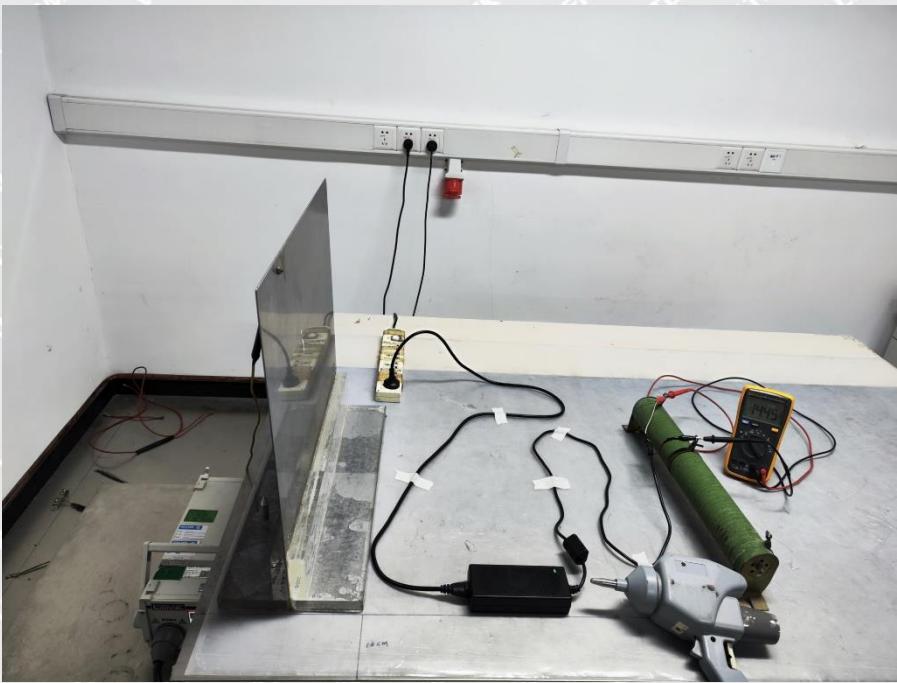




**Harmonic/Flicker Test View**

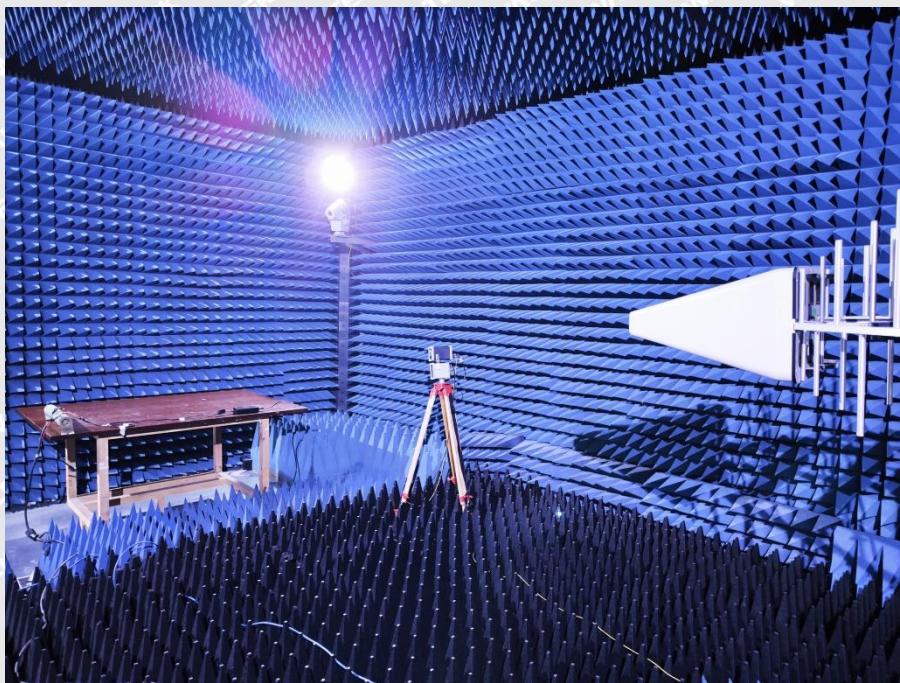


**IEC 61000-4-2 Test View**





**IEC 61000-4-3 Test View**



**IEC 61000-4-4/5/11 Test View**

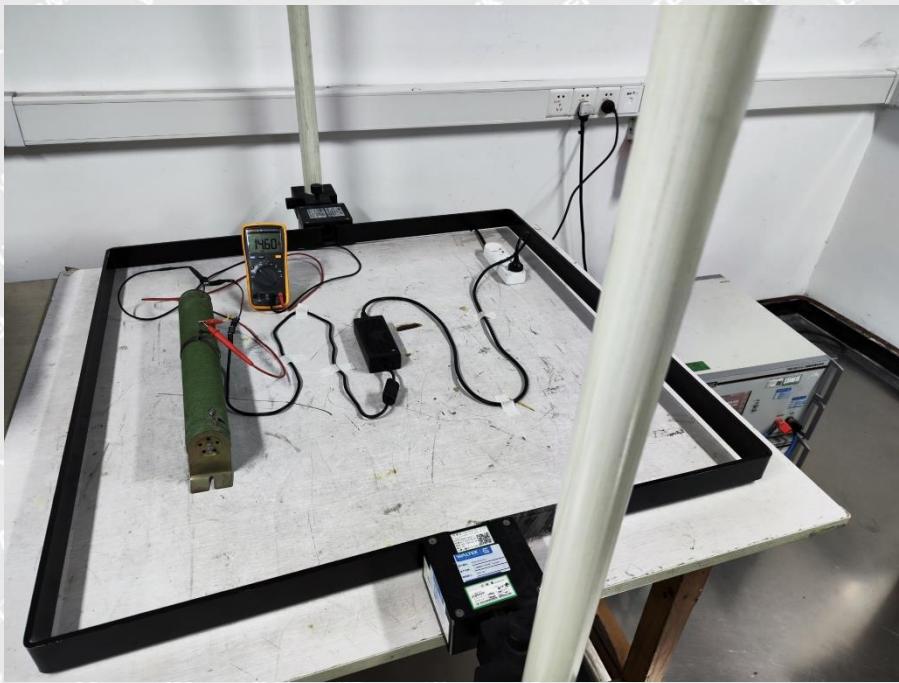




**IEC 61000-4-6 Test View**



**IEC 61000-4-8 Test View**



Reference No.: WTX23X06126277E

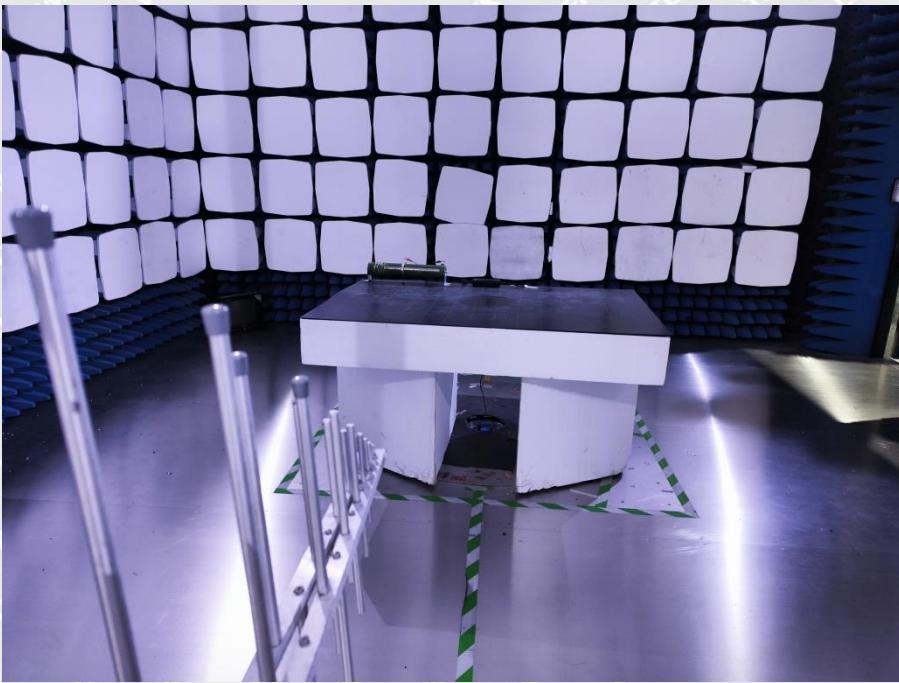


**GTM96900P9012-T2**

**Conduction Emission Test View**

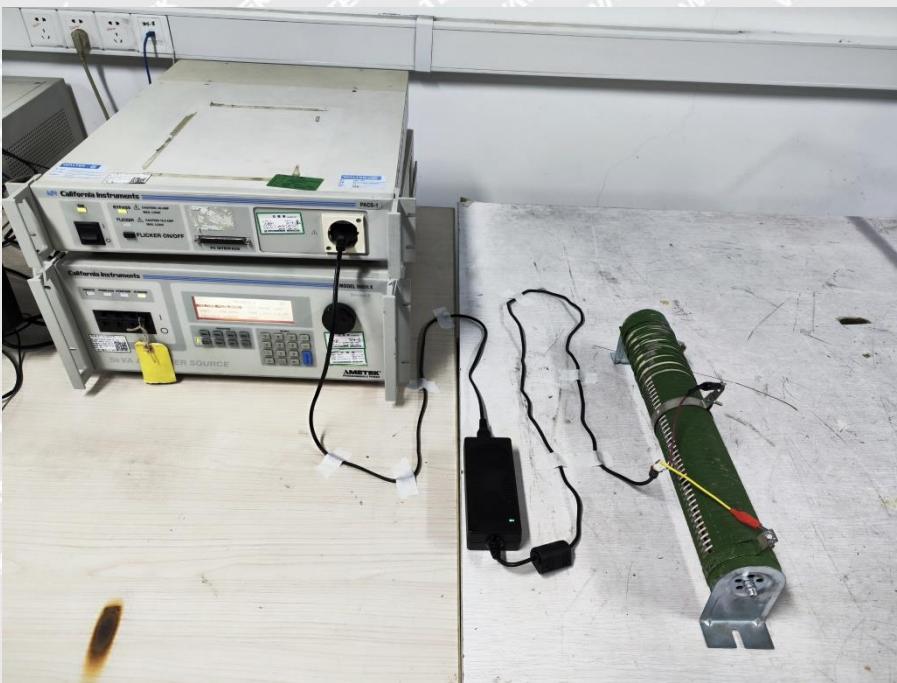


**Radiation Emission Test View**





### Harmonic/Flicker Test View

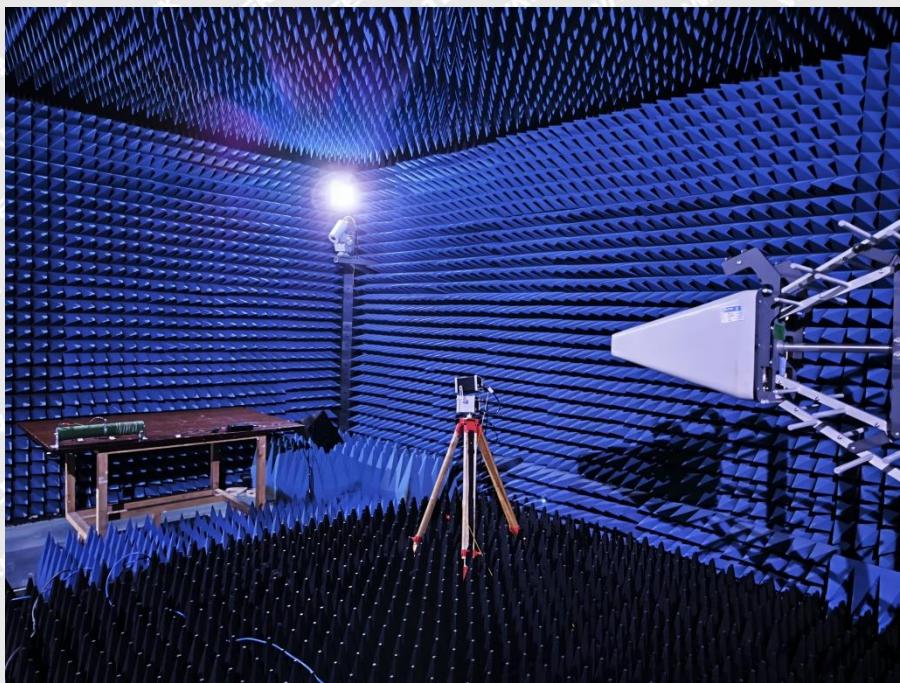


### IEC 61000-4-2 Test View





**IEC 61000-4-3 Test View**



**IEC 61000-4-4/5/11 Test View**

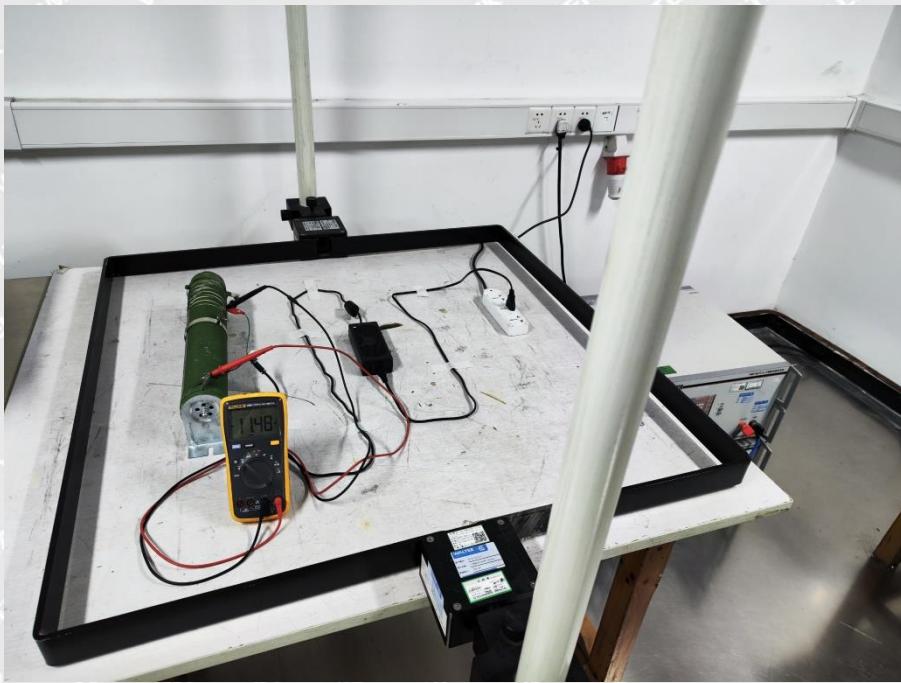




**IEC 61000-4-6 Test View**



**IEC 61000-4-8 Test View**

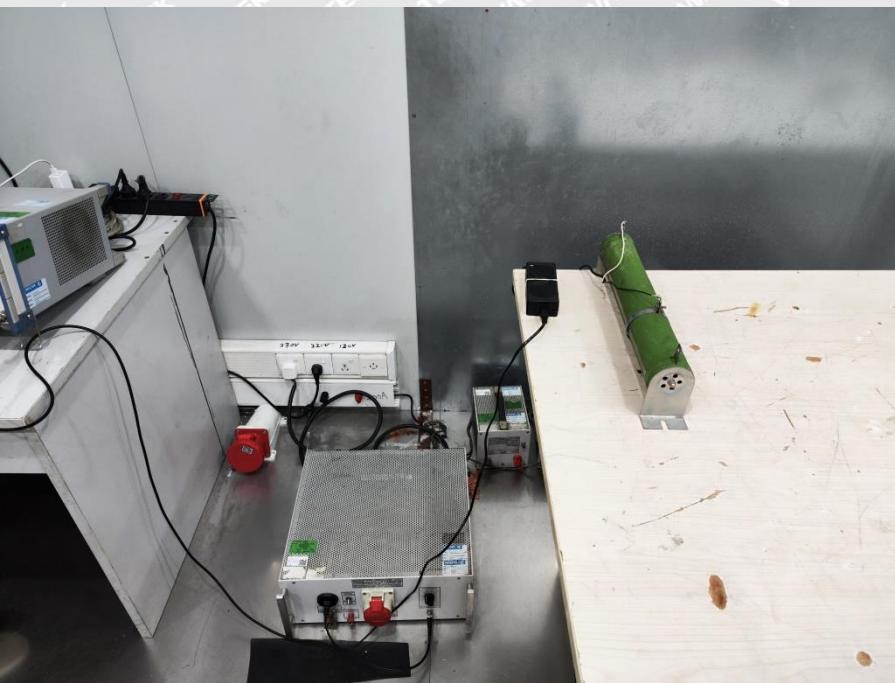


Reference No.: WTX23X06126277E

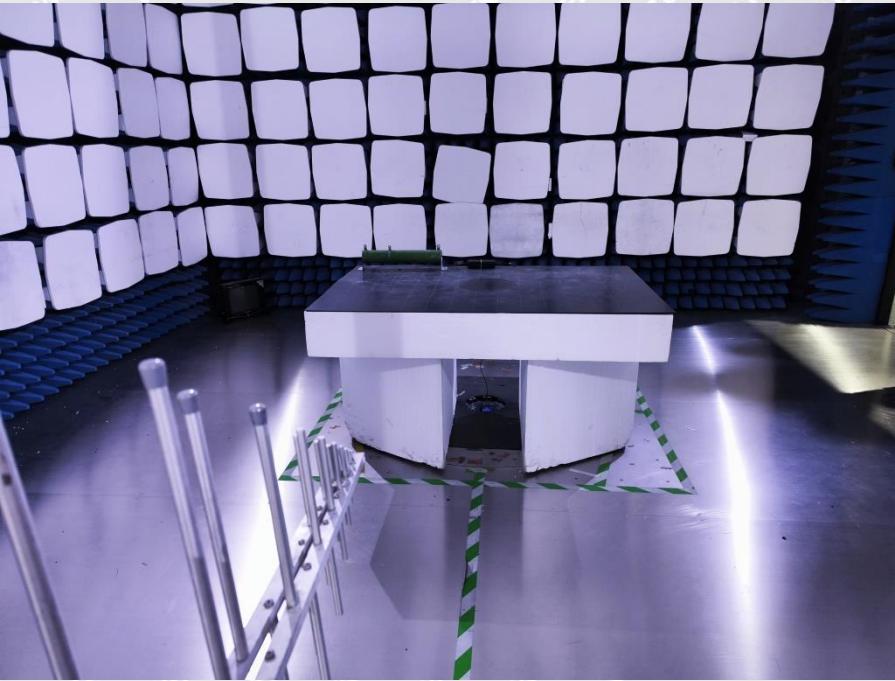


**GTM96900P9054-T2**

**Conduction Emission Test View**

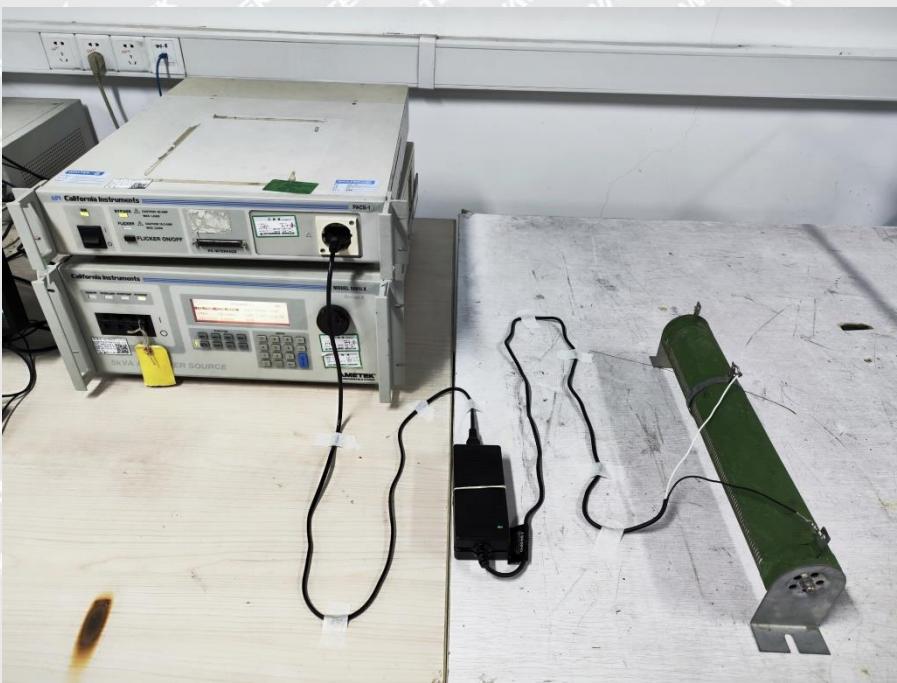


**Radiation Emission Test View**

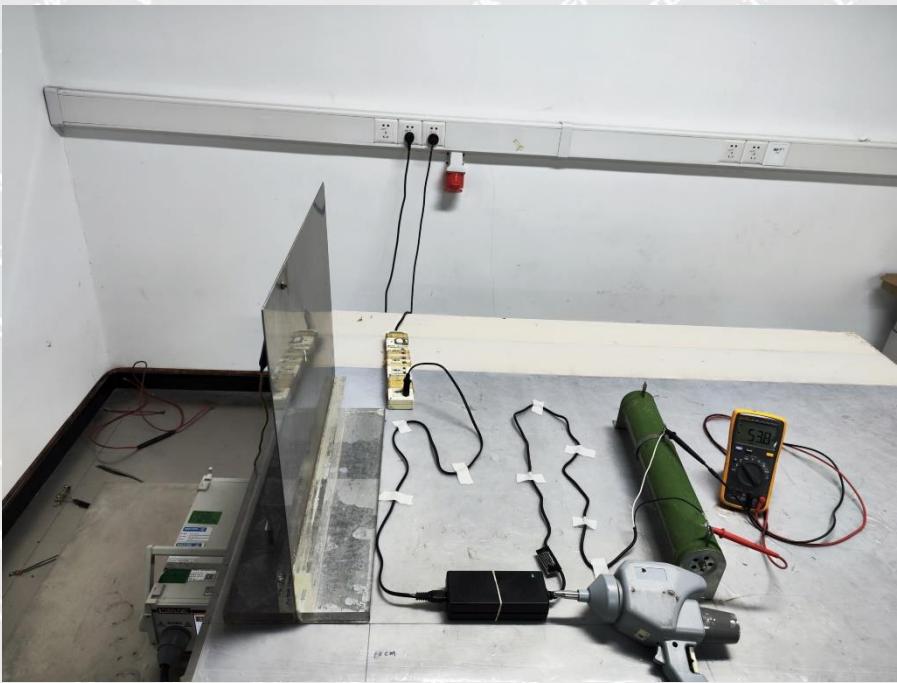




**Harmonic/Flicker Test View**

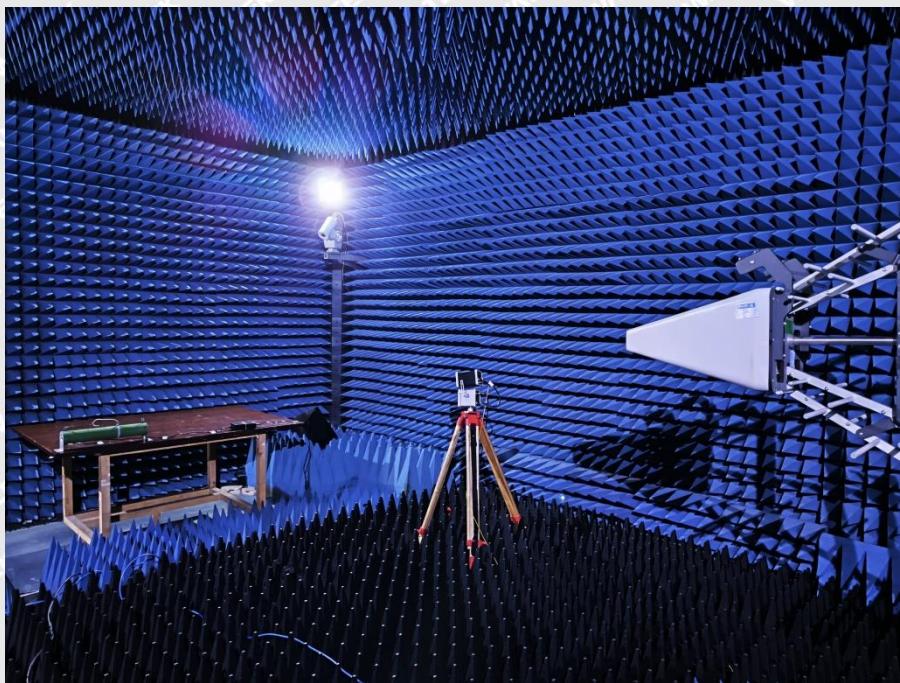


**IEC 61000-4-2 Test View**





**IEC 61000-4-3 Test View**

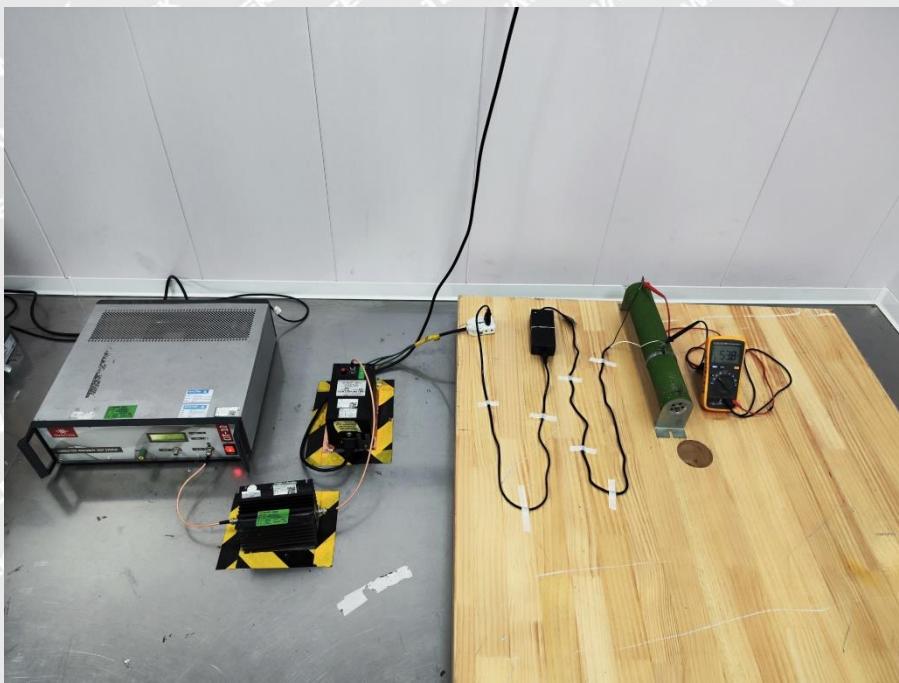


**IEC 61000-4-4/5/11 Test View**

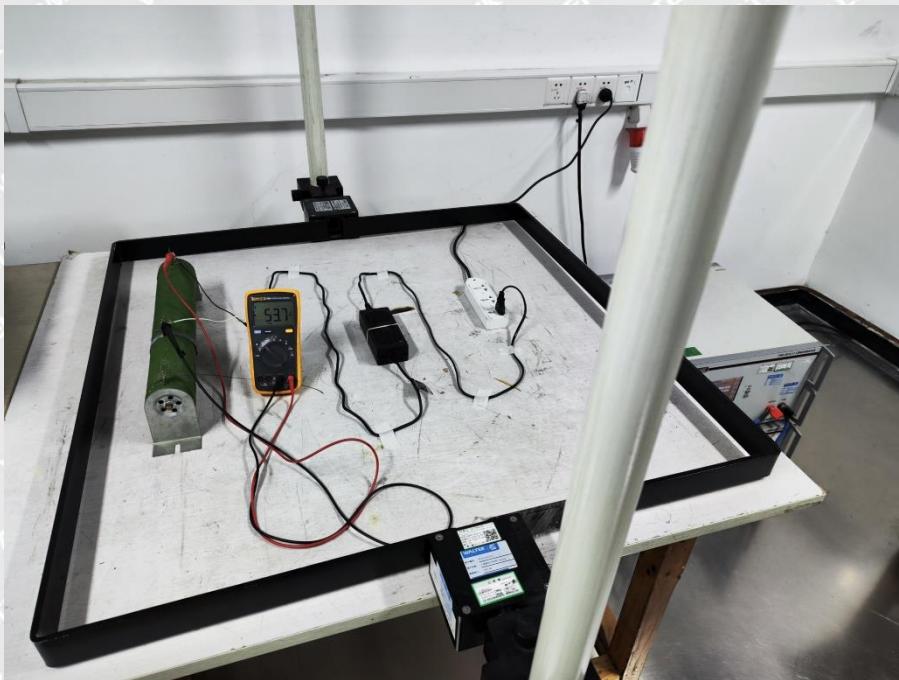




**IEC 61000-4-6 Test View**



**IEC 61000-4-8 Test View**



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