

EMC

Measurement and Test Report


For

GlobTek, Inc.

186 Veterans Dr. Northvale, NJ 07647 USA

| | |
|--------------------------------------|---|
| Test Standards: | EN 55032:2015/AC:2016-07 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 55035:2017 <u>EN 60601-1-2:2015</u> |
| Product Description: | <u>Adaptive Power USB Source, ITE/Medical</u> |
| Tested Model: | <u>GT*96605-G2****</u> |
| Report No.: | <u>STR18088212E</u> |
| Tested Date: | <u>2018-08-17 to 2018-08-23</u> |
| Issued Date: | <u>2018-08-24</u> |
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

TABLE OF CONTENTS

| | |
|--|-----------|
| 1. GENERAL INFORMATION..... | 4 |
| 1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)..... | 4 |
| 1.2 TEST STANDARDS..... | 6 |
| 1.3 TEST METHODOLOGY..... | 6 |
| 1.4 TEST FACILITY..... | 6 |
| 1.5 EUT SETUP AND OPERATION MODE..... | 7 |
| 1.6 PERFORMANCE CRITERIA FOR EMS..... | 7 |
| 1.7 TEST EQUIPMENT LIST AND DETAILS..... | 9 |
| 2. SUMMARY OF TEST RESULTS..... | 10 |
| 3. CONDUCTED EMISSION..... | 11 |
| 3.1 MEASUREMENT UNCERTAINTY..... | 11 |
| 3.2 TEST PROCEDURE..... | 11 |
| 3.3 BASIC TEST SETUP BLOCK DIAGRAM..... | 11 |
| 3.4 ENVIRONMENTAL CONDITIONS..... | 12 |
| 3.5 SUMMARY OF TEST RESULTS/PLOTS..... | 12 |
| 3.6 CONDUCTED EMISSIONS TEST DATA..... | 12 |
| 4. RADIATED EMISSION..... | 21 |
| 4.1 MEASUREMENT UNCERTAINTY..... | 21 |
| 4.2 TEST PROCEDURE..... | 21 |
| 4.3 CORRECTED AMPLITUDE & MARGIN CALCULATION..... | 22 |
| 4.4 ENVIRONMENTAL CONDITIONS..... | 22 |
| 4.5 SUMMARY OF TEST RESULTS/PLOTS..... | 22 |
| 5. HARMONIC CURRENT EMISSIONS..... | 31 |
| 5.1 TEST PROCEDURE..... | 31 |
| 5.2 TEST STANDARDS..... | 31 |
| 5.3 HARMONIC CURRENT EMISSIONS TEST DATA..... | 31 |
| 6. VOLTAGE FLUCTUATION FLICKER..... | 38 |
| 6.1 TEST PROCEDURE..... | 38 |
| 6.2 TEST STANDARDS..... | 38 |
| 6.3 VOLTAGE FLUCTUATION AND FLICKER TEST DATA..... | 38 |
| 7. ELECTROSTATIC DISCHARGES (ESD)..... | 41 |
| 7.1 TEST PROCEDURE..... | 41 |
| 7.2 ELECTROSTATIC DISCHARGE IMMUNITY TEST DATA..... | 41 |
| 8. CONTINUOUS RF ELECTROMAGNETIC FIELD DISTURBANCES (RS)..... | 43 |
| 8.1 TEST PROCEDURE..... | 43 |
| 8.2 CONTINUOUS RADIATED DISTURBANCES TEST DATA..... | 43 |
| 9. ELECTRICAL FAST TRANSIENTS (EFT)..... | 45 |
| 9.1 TEST PROCEDURE..... | 45 |
| 9.2 ELECTRICAL FAST TRANSIENTS TEST DATA..... | 45 |
| 10. SURGES..... | 47 |
| 10.1 TEST PROCEDURE..... | 47 |
| 10.2 SURGE TEST DATA..... | 47 |
| 11. CONTINUOUS INDUCED RF DISTURBANCES (C/S)..... | 48 |
| 11.1 TEST PROCEDURE..... | 48 |
| 11.2 CONTINUOUS CONDUCTED DISTURBANCES TEST DATA..... | 48 |
| 12. POWER-FREQUENCY MAGNETIC FIELDS (PFMF)..... | 49 |
| 12.1 TEST PROCEDURE..... | 49 |
| 12.2 POWER-FREQUENCY MAGNETIC FIELD TEST DATA..... | 49 |
| 13. VOLTAGE DIPS AND INTERRUPTIONS..... | 50 |
| 13.1 TEST PROCEDURE..... | 50 |
| 13.2 VOLTAGE DIPS AND INTERRUPTIONS TEST DATA..... | 50 |

| | |
|--|-----------|
| EXHIBIT 1 - PRODUCT LABELING | 51 |
| PROPOSED CE LABEL FORMAT | 51 |
| PROPOSED LABEL LOCATION ON EUT | 51 |
| EXHIBIT 2 - EUT PHOTOGRAPHS..... | 52 |
| EXHIBIT 3 - TEST SETUP PHOTOGRAPHS..... | 62 |


1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: GlobTek, Inc.
Address of applicant: 186 Veterans Dr. Northvale, NJ 07647 USA

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

| General Description of EUT | |
|--|--|
| Product Name: | Adaptive Power USB Source, ITE/Medical |
| Trade Name: |  |
| Model No.: | GT*96605-G2**** |
| | <p>The 1st "*" part can be 'M' or '-' or 'H' for market identification and not related to safety.</p> <p>The 2nd "*" can be A1,A2,A3 denote different DC output voltage</p> <p>When 2nd *=A1: 5V/4.6A, 5.8V/4.6A, 9V/4.4A, 12V/4A, 15V/3.6A and 20V/3A</p> <p>When 2nd *=A2: 5V/3A, 5.8V/3A, 9V/3A, 12V/3A, 15V/3A and 20V/3A</p> <p>When 2nd *=A3: Any list of seven or less voltage/current combinations (Power Profiles), between 3.6V and 20V</p> <p>The 3rd "*" denotes blank or the rated output wattage designation, which can be "01" to "60", with interval of 0.1W.</p> <p>The 4th "*"=-T2 means desktop class II with C8 AC inlet =-T3 means desktop class I with C14 AC inlet =-T3F means desktop class I with C14 AC inlet with FLOATING OUTPUT =-R2 means hybrid desktop housing class II with C8 AC inlet =-R3A means hybrid desktop housing class I with C6 AC inlet =-R3AF means hybrid desktop housing class I with C6 AC inlet with FLOATING OUTPUT =-R3AF-RA means hybrid desktop housing class I with C6 AC inlet with FLOATING OUTPUT with RIGHT ANGLE daughter board (no output cord)</p> <p>The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.</p> |
| Adding Model(s): | / |
| <i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i> | |

| Technical Characteristics of EUT | |
|---|--------------|
| Rated Voltage: | AC 100-240V |
| Rated Current: | 1.5A |
| Rated Power: | 60W MAX |
| Power Adaptor Model: | / |
| Highest Internal Frequency: | Below 108MHz |
| Classification of Equipment: | Class B |

1.2 Test Standards

The tests were performed according to following standards:

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

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

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

EN 61000-3-3:2013 Electromagnetic compatibility (EMC) -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

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

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

1.3 Test Methodology

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

1.4 Test Facility

FCC – Registration No.: 125990

Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

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

1.5 EUT Setup and Operation Mode

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

| Test Mode List | | | |
|----------------|-----------------|--|-------------------|
| Test Mode | Description | Remark | Power Supply Mode |
| TM1 | Connect to load | GT*96605-G2A3*-T2 Output: 20V3A | AC230V/50HZ |
| TM2 | Connect to load | GT*96605-G2A3*-R3A Output: 6.9V4.46A | AC230V/50HZ |
| TM3 | Connect to load | GT*96605-G2A3*-R3A Output: 14.9V3.62A | AC230V/50HZ |
| TM4 | Connect to load | GT*96605-G2A3*-R3A Output: 20V3A | AC230V/50HZ |

Note: The product is Measurement at two nominal voltages of 230V and 110V, using a frequency of 50Hz or 60Hz. This report is display the worst case with 230V/50Hz data.

| EUT Cable List and Details | | | |
|----------------------------|------------|---------------------|------------------------|
| Cable Description | Length (m) | Shielded/Unshielded | With / Without Ferrite |
| DC Cable | 2 | Unshielded | Without Core |

| Special Cable List and Details | | | |
|--------------------------------|------------|---------------------|------------------------|
| Cable Description | Length (m) | Shielded/Unshielded | With / Without Ferrite |
| AC Cable | 1.2 | Unshielded | Without Core |

| Auxiliary Equipment List and Details | | | |
|--------------------------------------|--------------|------------------|---------------|
| Description | Manufacturer | Model | Serial Number |
| Multimeter | Fluke | 15B | / |
| Adjustable clamp | Qualcomm | QC3.0/2.0Trigger | / |

1.6 Performance Criteria for EMS

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

- A. The apparatus shall continue to operate as intended during and after the test. The manufacturer specifies some minimum performance level. The performance level may be specified by the manufacturer as a permissible loss of performance.
- B. The apparatus shall continue to operate as intended after the test. This indicates that the EUT does not need to function at normal performance levels during the test, but must recover. Again some minimal performance is defined by the manufacture. No change in operating state or loss or data is permitted.

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

1.7 Test Equipment List and Details

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

2. SUMMARY OF TEST RESULTS

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

N/A: not applicable

3. Conducted Emission

3.1 Measurement Uncertainty

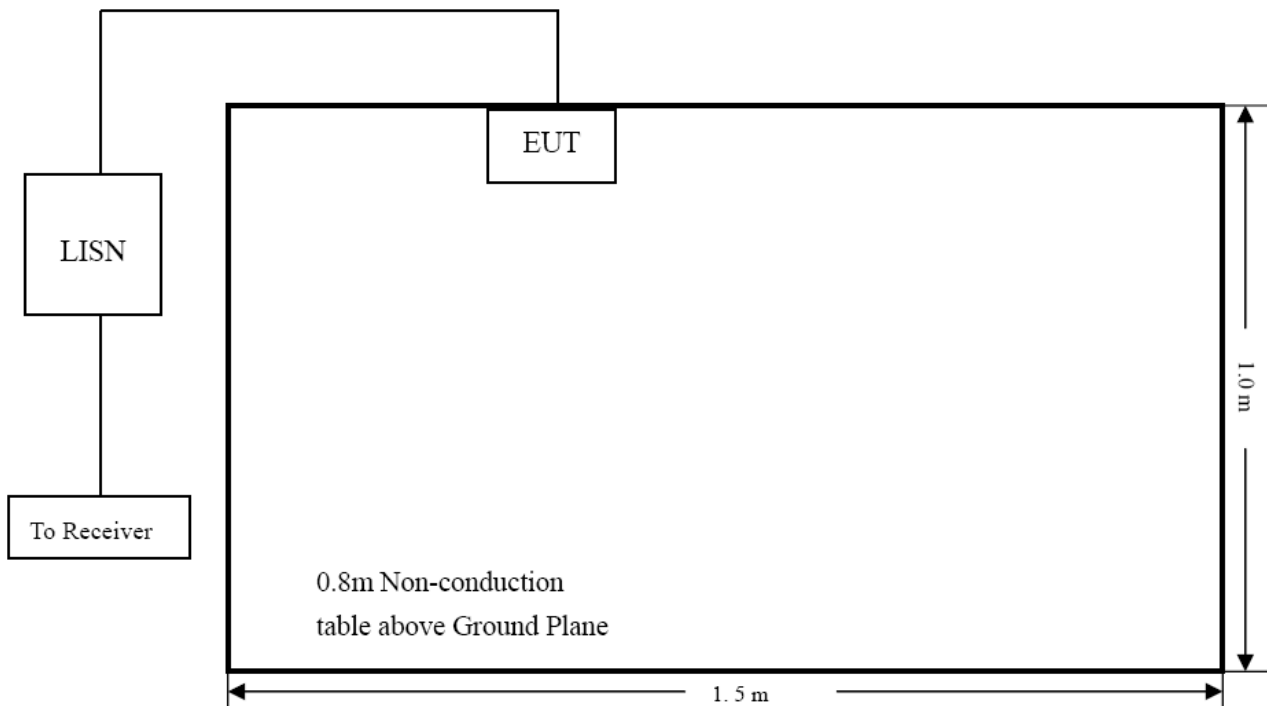
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement

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

3.2 Test Procedure

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

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

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

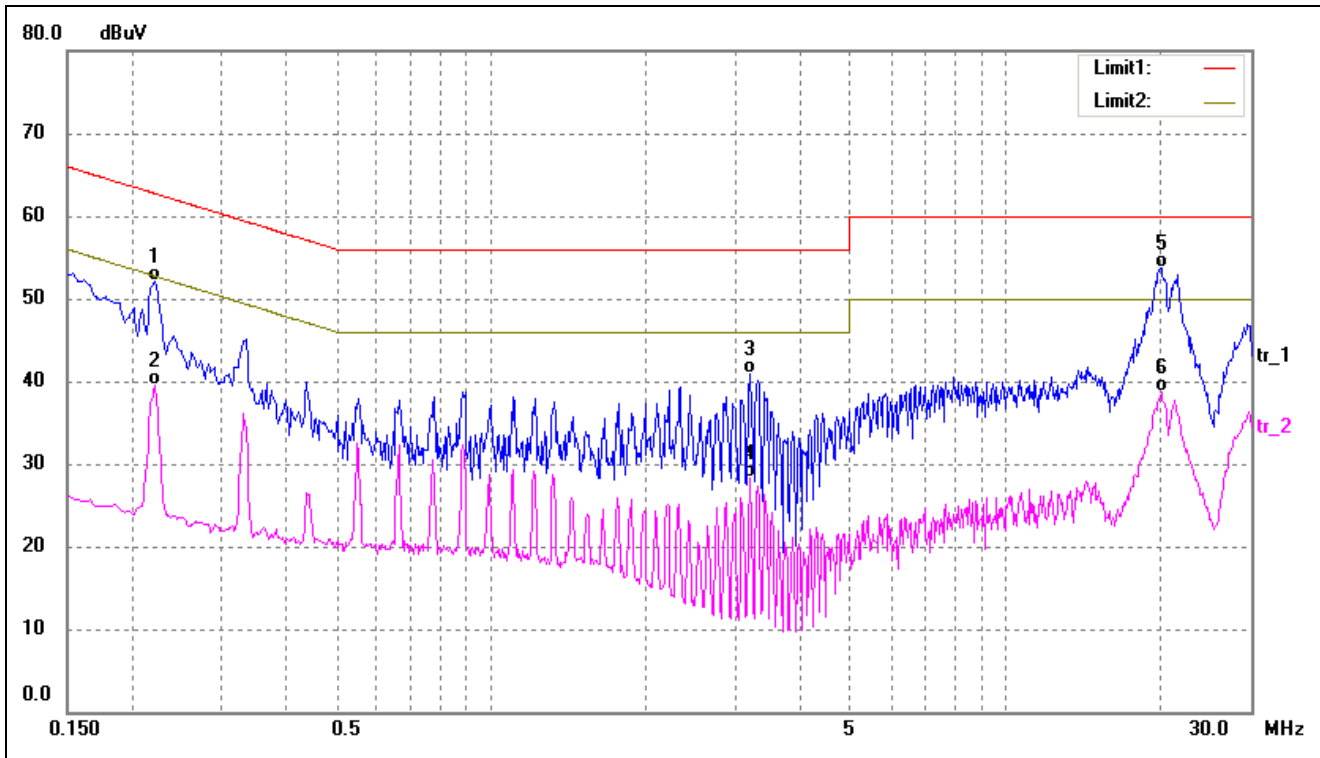
3.5 Summary of Test Results/Plots

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

-4.63 dB at 17.6620 MHz in the Line mode, AVG detector, TM2 mode, 0.15-30MHz

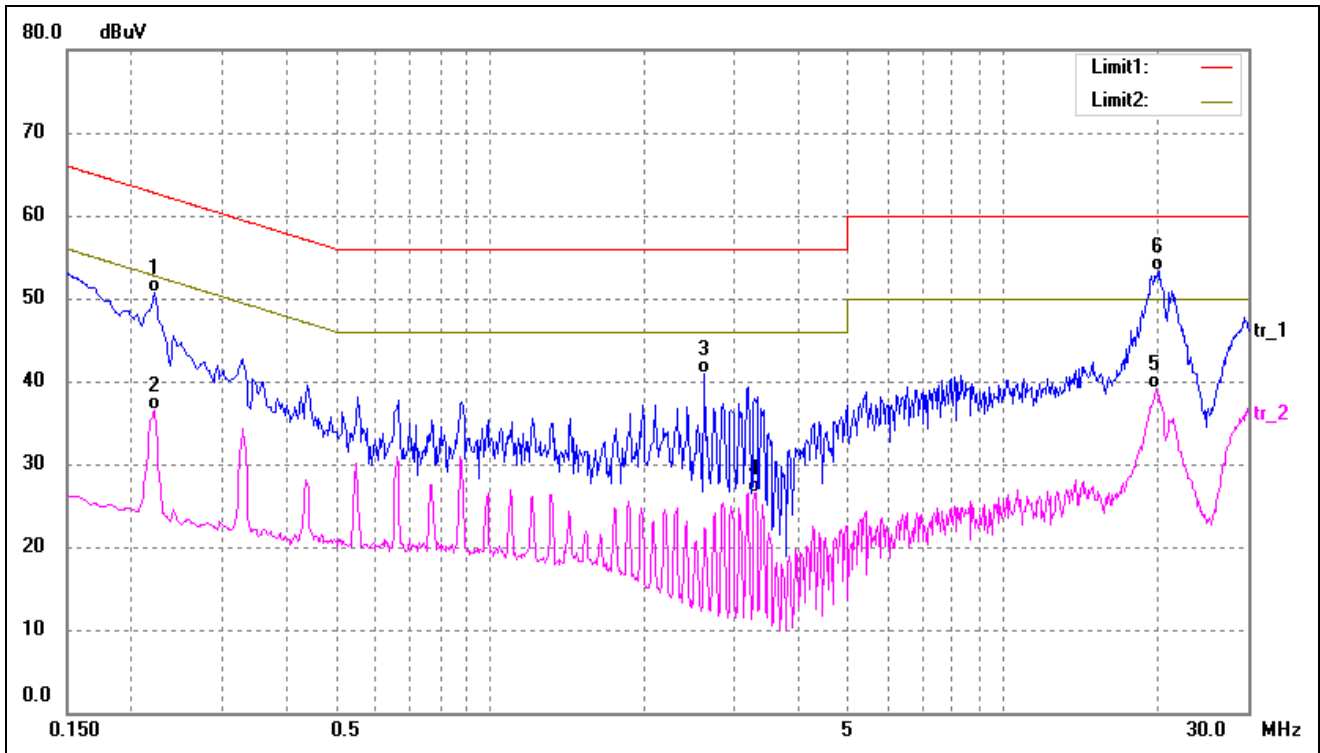
3.6 Conducted Emissions Test Data

| | | | |
|------------|-----|-----------|------|
| Test mode: | TM1 | Polarity: | Line |
|------------|-----|-----------|------|



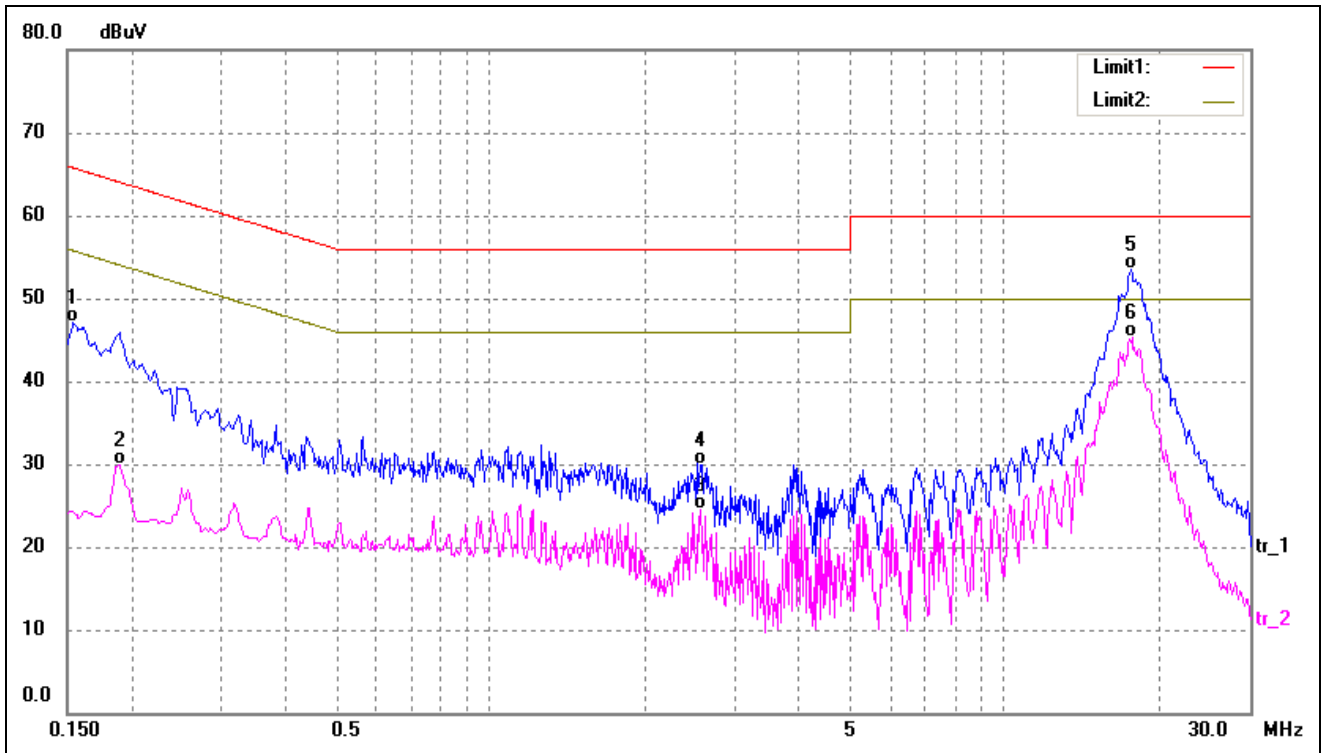
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.2220 | 41.95 | 10.14 | 52.09 | 62.74 | -10.65 | QP |
| 2 | 0.2220 | 29.30 | 10.14 | 39.44 | 52.74 | -13.30 | AVG |
| 3 | 3.1860 | 30.25 | 10.69 | 40.94 | 56.00 | -15.06 | QP |
| 4 | 3.1860 | 17.60 | 10.69 | 28.29 | 46.00 | -17.71 | AVG |
| 5* | 20.1380 | 42.54 | 11.17 | 53.71 | 60.00 | -6.29 | QP |
| 6 | 20.1380 | 27.48 | 11.17 | 38.65 | 50.00 | -11.35 | AVG |

| | | | |
|------------|-----|-----------|---------|
| Test mode: | TM1 | Polarity: | Neutral |
|------------|-----|-----------|---------|



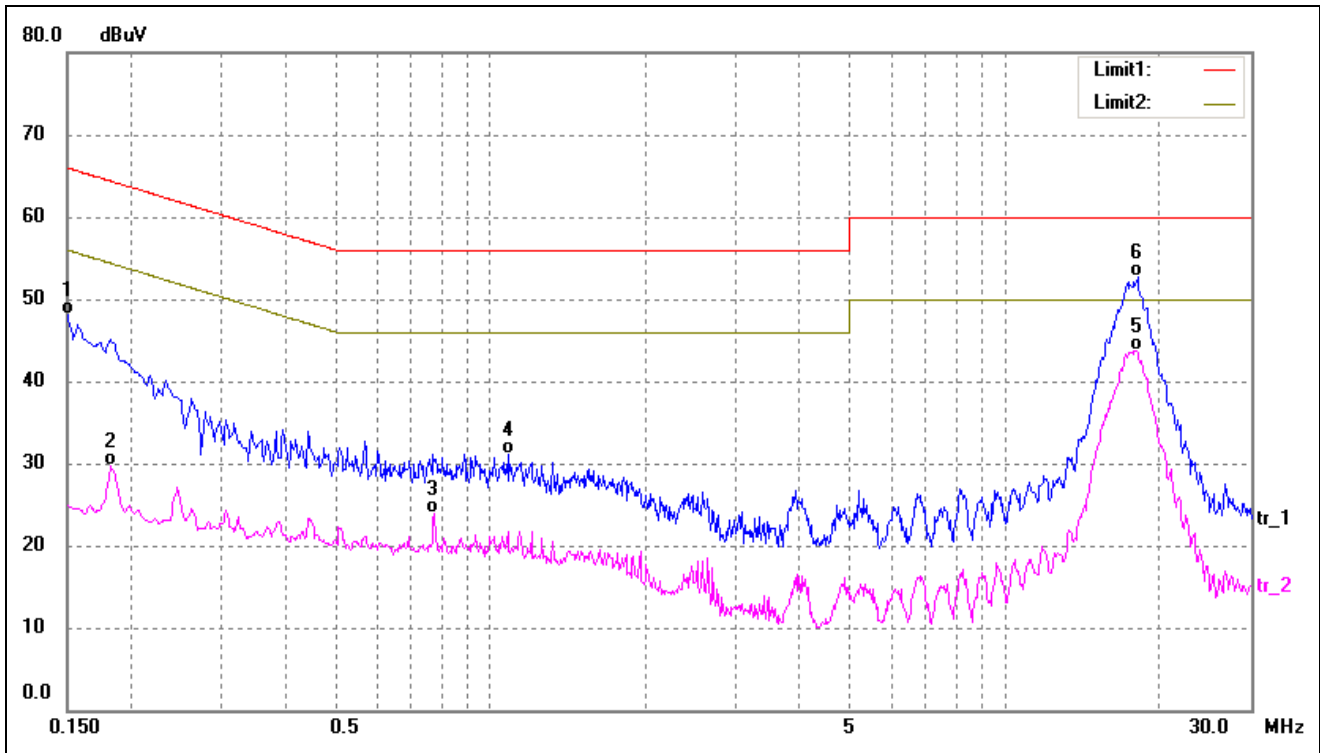
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.2220 | 40.61 | 10.14 | 50.75 | 62.74 | -11.99 | QP |
| 2 | 0.2220 | 26.31 | 10.14 | 36.45 | 52.74 | -16.29 | AVG |
| 3 | 2.6220 | 30.34 | 10.65 | 40.99 | 56.00 | -15.01 | QP |
| 4 | 3.2900 | 15.81 | 10.69 | 26.50 | 46.00 | -19.50 | AVG |
| 5 | 19.9460 | 27.99 | 11.17 | 39.16 | 50.00 | -10.84 | AVG |
| 6* | 20.1820 | 42.06 | 11.17 | 53.23 | 60.00 | -6.77 | QP |

| | | | |
|------------|-----|-----------|------|
| Test mode: | TM2 | Polarity: | Line |
|------------|-----|-----------|------|



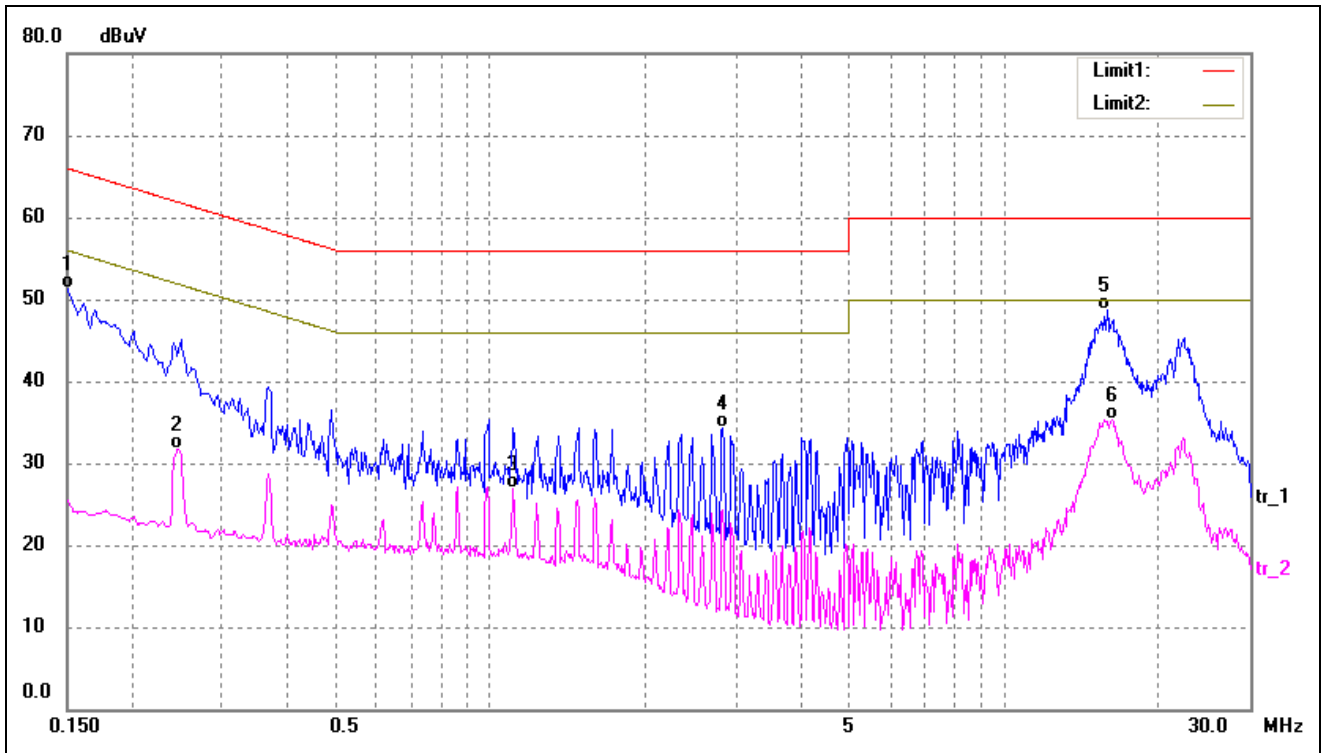
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.1540 | 37.00 | 10.10 | 47.10 | 65.78 | -18.68 | QP |
| 2 | 0.1900 | 19.85 | 10.12 | 29.97 | 54.04 | -24.07 | AVG |
| 3 | 2.5540 | 13.87 | 10.64 | 24.51 | 46.00 | -21.49 | AVG |
| 4 | 2.5820 | 19.32 | 10.64 | 29.96 | 56.00 | -26.04 | QP |
| 5 | 17.6060 | 42.38 | 11.10 | 53.48 | 60.00 | -6.52 | QP |
| 6* | 17.6620 | 34.27 | 11.10 | 45.37 | 50.00 | -4.63 | AVG |

| | | | |
|------------|-----|-----------|---------|
| Test mode: | TM2 | Polarity: | Neutral |
|------------|-----|-----------|---------|



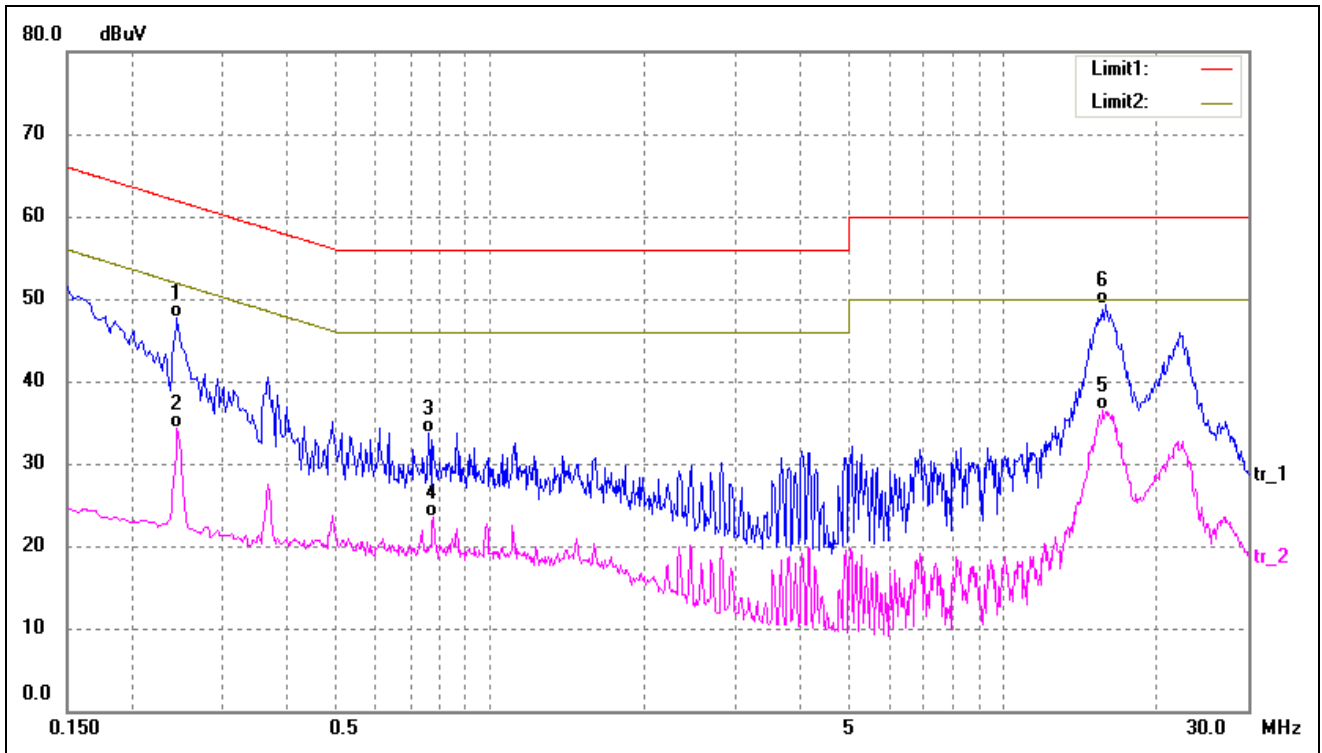
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.1500 | 38.00 | 10.10 | 48.10 | 66.00 | -17.90 | QP |
| 2 | 0.1820 | 19.52 | 10.11 | 29.63 | 54.39 | -24.76 | AVG |
| 3 | 0.7780 | 13.52 | 10.42 | 23.94 | 46.00 | -22.06 | AVG |
| 4 | 1.0780 | 20.69 | 10.51 | 31.20 | 56.00 | -24.80 | QP |
| 5* | 17.9500 | 32.67 | 11.11 | 43.78 | 50.00 | -6.22 | AVG |
| 6 | 18.0460 | 41.62 | 11.11 | 52.73 | 60.00 | -7.27 | QP |

| | | | |
|------------|-----|-----------|------|
| Test mode: | TM3 | Polarity: | Line |
|------------|-----|-----------|------|



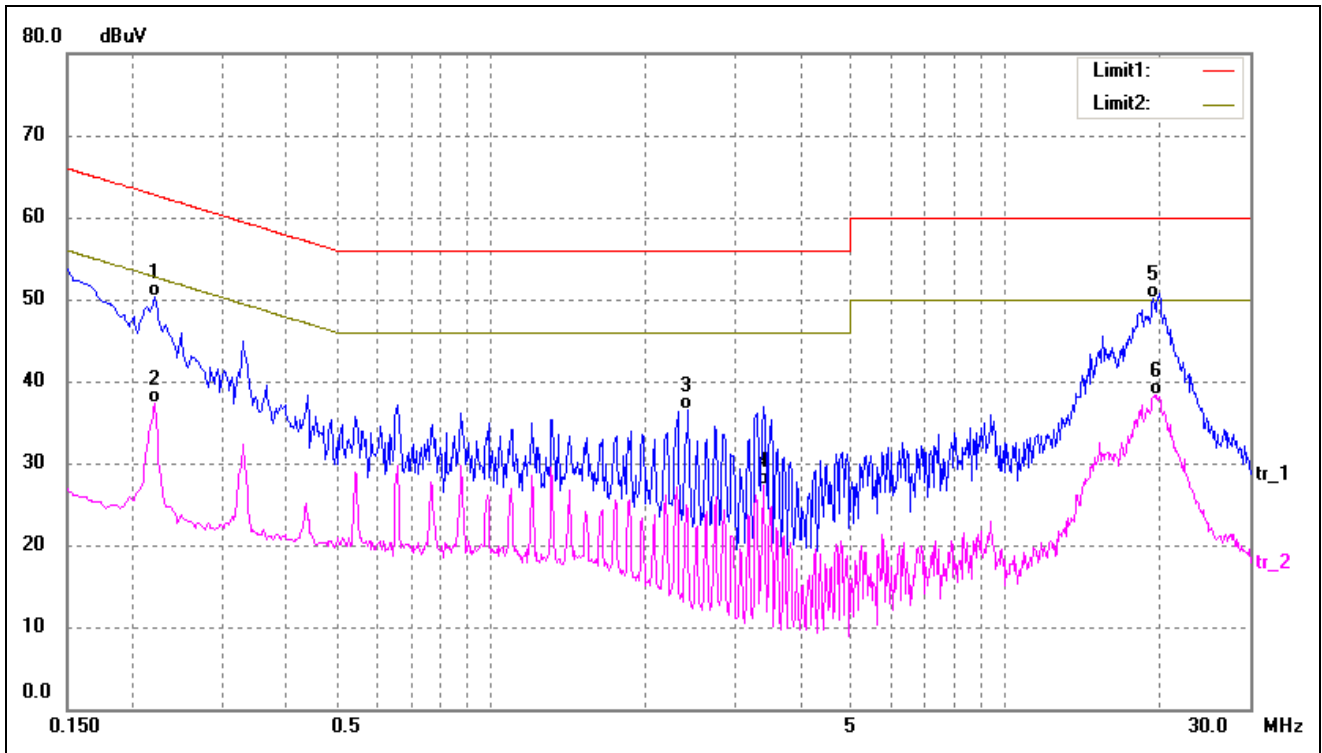
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.1500 | 41.27 | 10.10 | 51.37 | 66.00 | -14.63 | QP |
| 2 | 0.2460 | 21.62 | 10.15 | 31.77 | 51.89 | -20.12 | AVG |
| 3 | 1.1060 | 16.35 | 10.51 | 26.86 | 46.00 | -19.14 | AVG |
| 4 | 2.8300 | 23.56 | 10.67 | 34.23 | 56.00 | -21.77 | QP |
| 5* | 15.8060 | 37.64 | 11.05 | 48.69 | 60.00 | -11.31 | QP |
| 6 | 16.1580 | 24.34 | 11.06 | 35.40 | 50.00 | -14.60 | AVG |

| | | | |
|------------|-----|-----------|---------|
| Test mode: | TM3 | Polarity: | Neutral |
|------------|-----|-----------|---------|



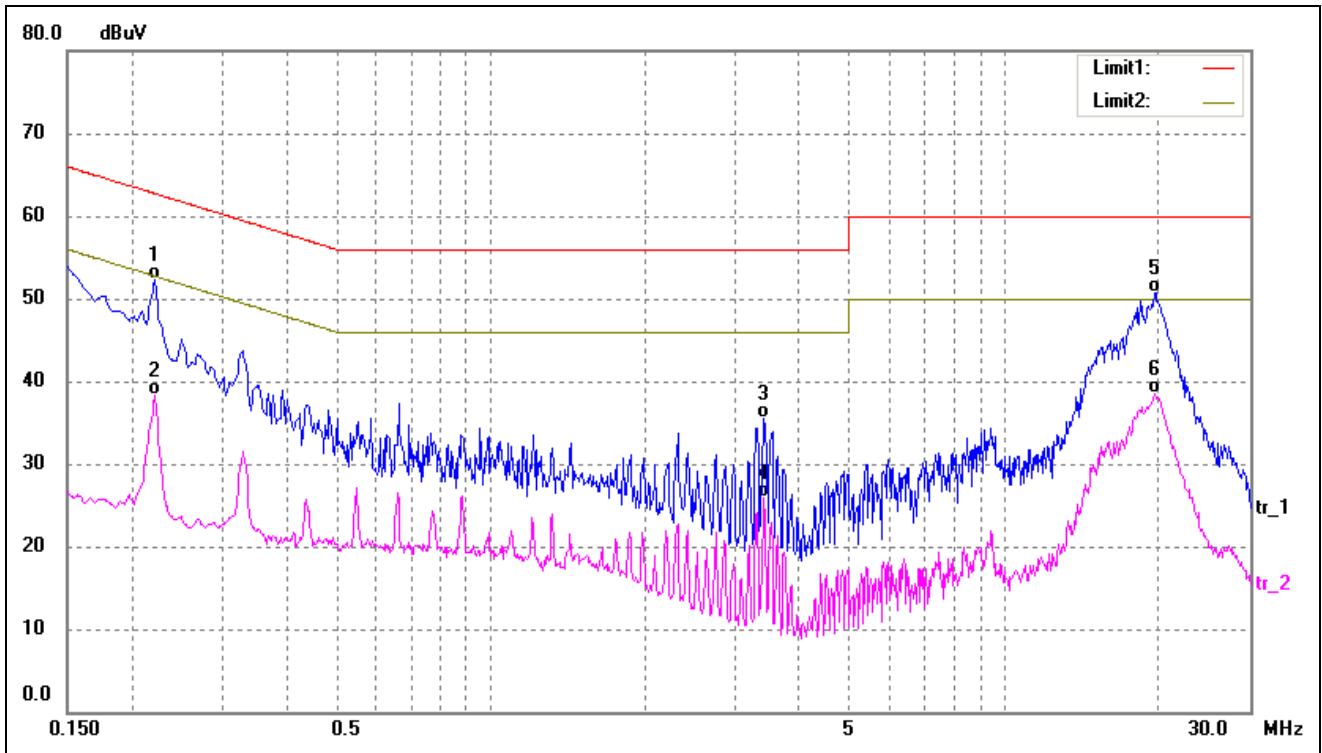
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.2460 | 37.49 | 10.15 | 47.64 | 61.89 | -14.25 | QP |
| 2 | 0.2460 | 24.20 | 10.15 | 34.35 | 51.89 | -17.54 | AVG |
| 3 | 0.7620 | 23.32 | 10.41 | 33.73 | 56.00 | -22.27 | QP |
| 4 | 0.7780 | 13.12 | 10.42 | 23.54 | 46.00 | -22.46 | AVG |
| 5 | 15.7100 | 25.39 | 11.05 | 36.44 | 50.00 | -13.56 | AVG |
| 6* | 15.8620 | 38.17 | 11.05 | 49.22 | 60.00 | -10.78 | QP |

| | | | |
|------------|-----|-----------|------|
| Test mode: | TM4 | Polarity: | Line |
|------------|-----|-----------|------|



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.2220 | 40.15 | 10.14 | 50.29 | 62.74 | -12.45 | QP |
| 2 | 0.2220 | 27.15 | 10.14 | 37.29 | 52.74 | -15.45 | AVG |
| 3 | 2.4219 | 25.82 | 10.64 | 36.46 | 56.00 | -19.54 | QP |
| 4 | 3.3940 | 16.70 | 10.69 | 27.39 | 46.00 | -18.61 | AVG |
| 5* | 19.5300 | 39.00 | 11.16 | 50.16 | 60.00 | -9.84 | QP |
| 6 | 19.8300 | 27.07 | 11.17 | 38.24 | 50.00 | -11.76 | AVG |

| | | | |
|------------|-----|-----------|---------|
| Test mode: | TM4 | Polarity: | Neutral |
|------------|-----|-----------|---------|



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Detector |
|-----|-----------------|----------------|----------------|---------------|--------------|-------------|----------|
| 1 | 0.2220 | 42.24 | 10.14 | 52.38 | 62.74 | -10.36 | QP |
| 2 | 0.2220 | 28.22 | 10.14 | 38.36 | 52.74 | -14.38 | AVG |
| 3 | 3.4060 | 24.85 | 10.69 | 35.54 | 56.00 | -20.46 | QP |
| 4 | 3.4060 | 15.15 | 10.69 | 25.84 | 46.00 | -20.16 | AVG |
| 5* | 19.5860 | 39.50 | 11.16 | 50.66 | 60.00 | -9.34 | QP |
| 6 | 19.5860 | 27.25 | 11.16 | 38.41 | 50.00 | -11.59 | AVG |

4. Radiated Emission

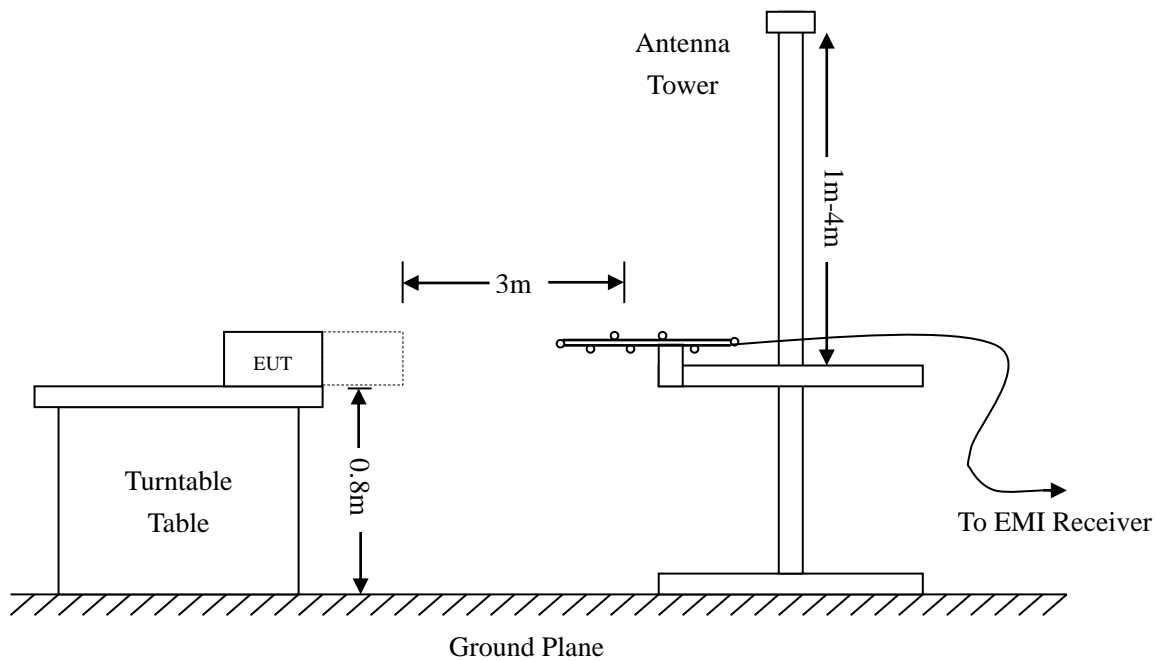
4.1 Measurement Uncertainty

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 Test Procedure

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



4.3 Corrected Amplitude & Margin Calculation

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

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

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

$$\text{Margin} = \text{Corr. Ampl.} - \text{EN55032 / EN 60601-1-2 Class B Limit}$$

4.4 Environmental Conditions

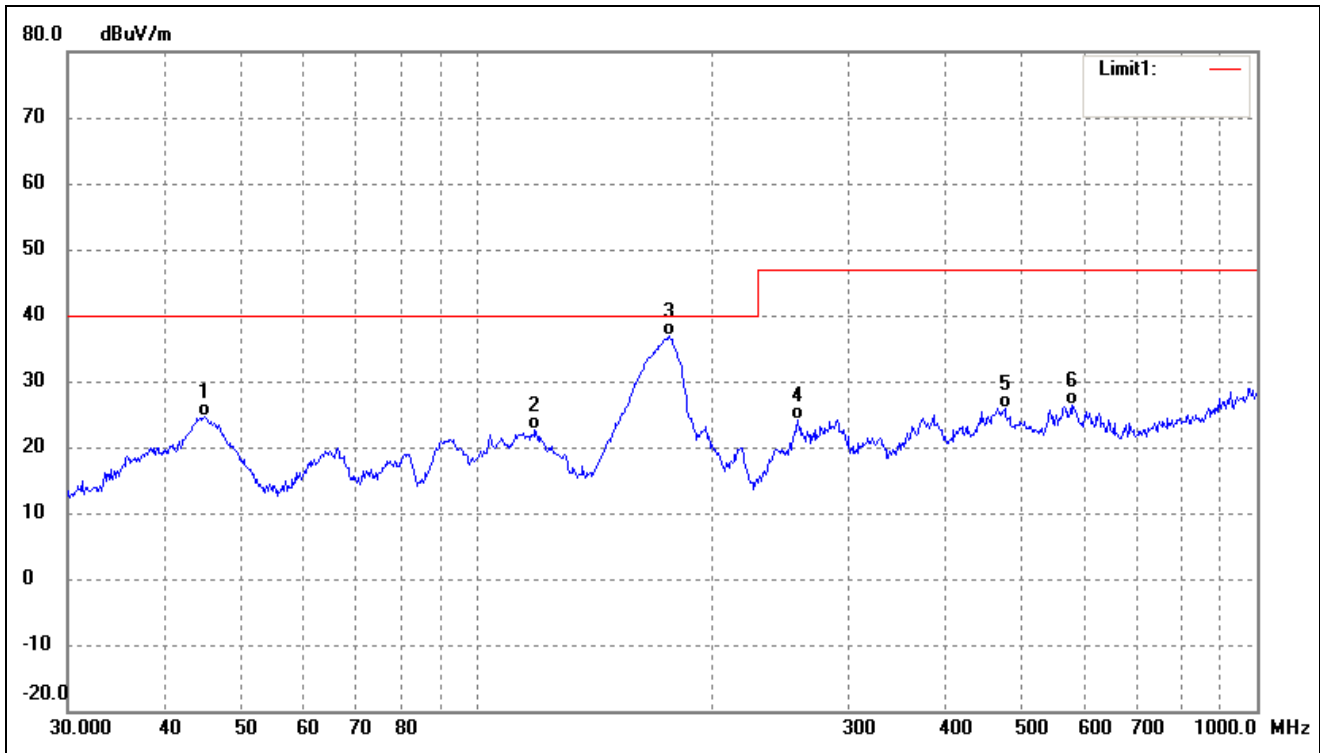
| | |
|--------------------|-----------|
| Temperature: | 23° C |
| Relative Humidity: | 53% |
| ATM Pressure: | 1011 mbar |

4.5 Summary of Test Results/Plots

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

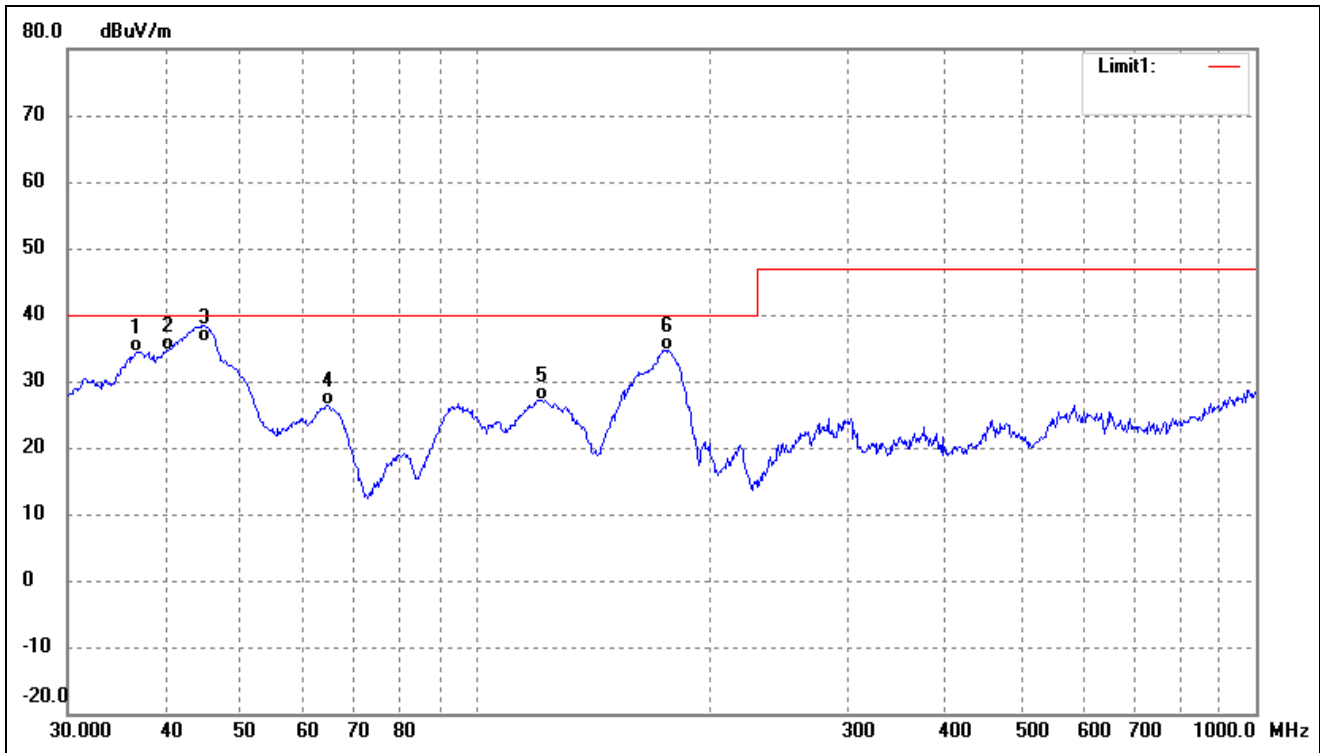
-3.15 dB at 176.8878 MHz in the Horizontal polarization, TM1 mode, 30 MHz to 1 GHz, 3Meters

| | | | |
|------------|-----|-----------|------------|
| Test mode: | TM1 | Polarity: | Horizontal |
|------------|-----|-----------|------------|



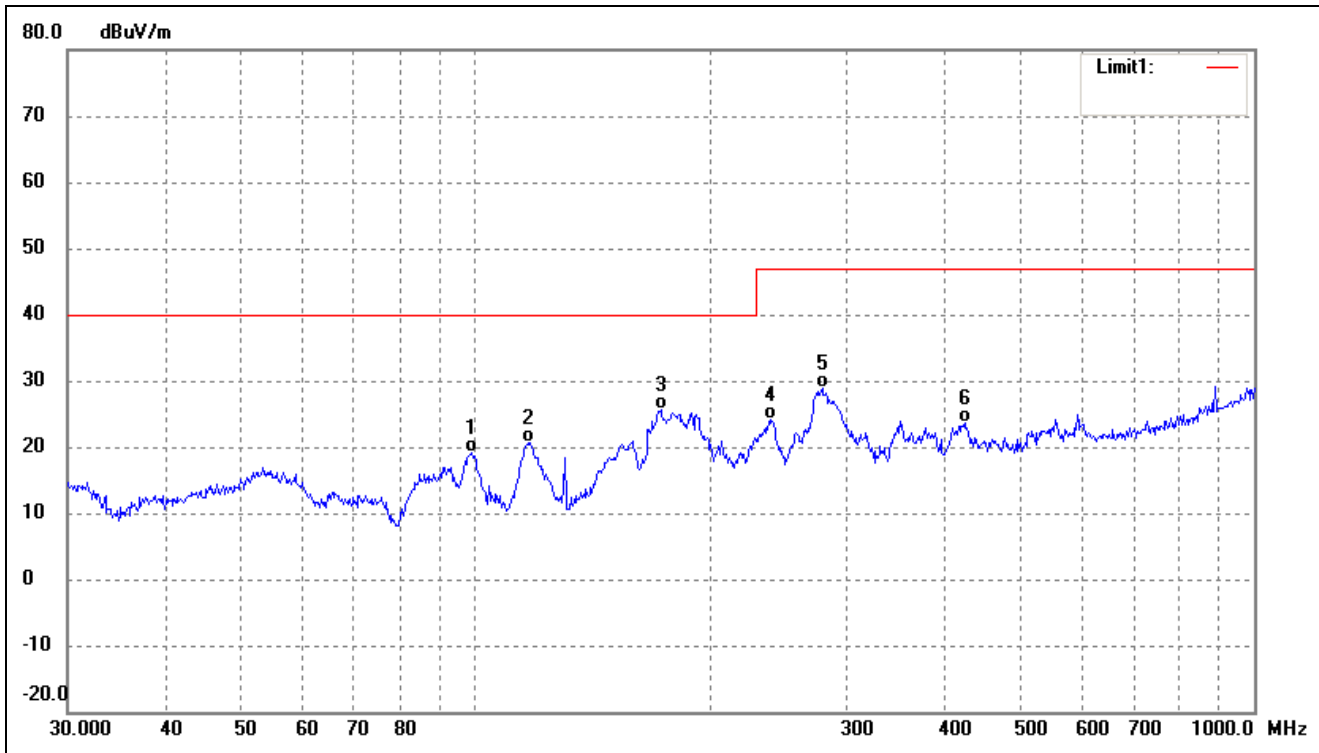
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 44.9006 | 38.59 | -13.92 | 24.67 | 40.00 | -15.33 | 251 | 100 | QP |
| 2 | 119.0180 | 39.61 | -17.10 | 22.51 | 40.00 | -17.49 | 123 | 100 | QP |
| 3 | 176.8878 | 53.44 | -16.59 | 36.85 | 40.00 | -3.15 | 23 | 100 | QP |
| 4 | 258.3264 | 35.12 | -11.05 | 24.07 | 47.00 | -22.93 | 306 | 100 | QP |
| 5 | 475.4991 | 34.48 | -8.61 | 25.87 | 47.00 | -21.13 | 259 | 100 | QP |
| 6 | 578.6699 | 33.29 | -6.99 | 26.30 | 47.00 | -20.70 | 210 | 100 | QP |

| | | | |
|------------|-----|-----------|----------|
| Test mode: | TM1 | Polarity: | Vertical |
|------------|-----|-----------|----------|



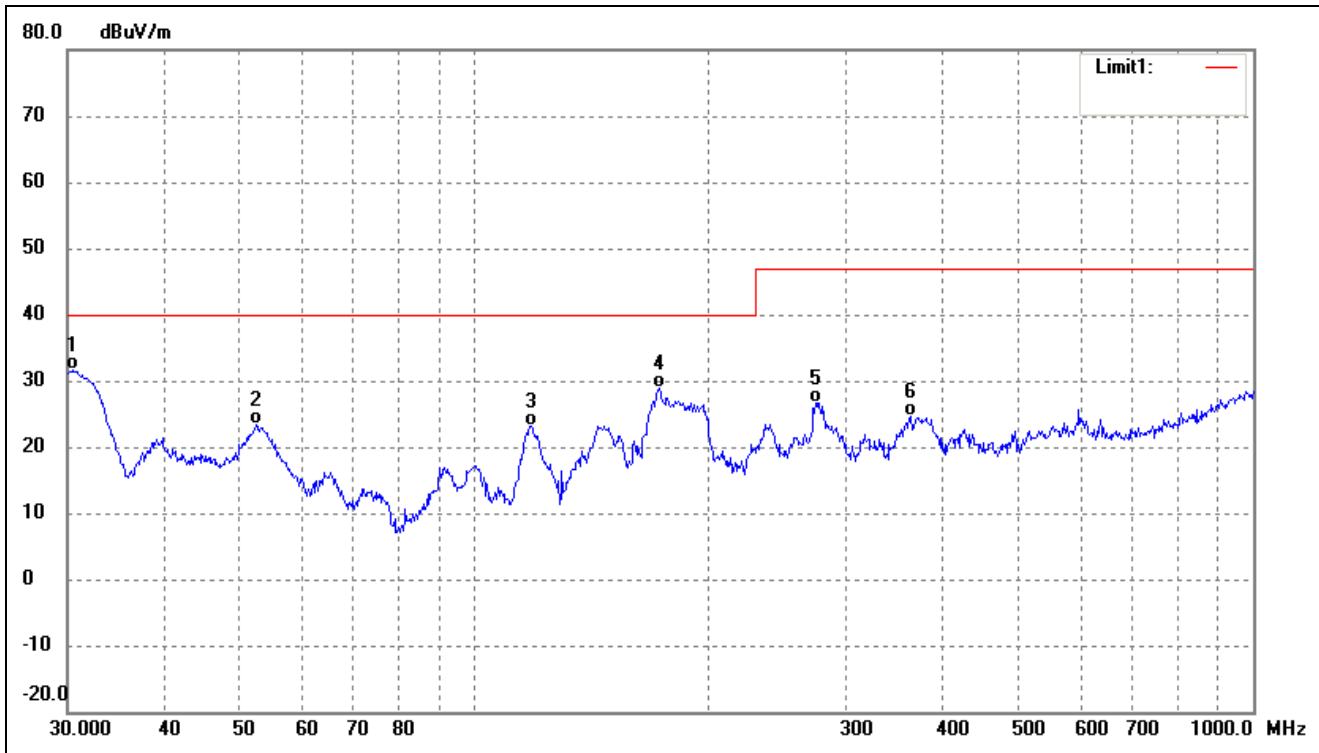
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 36.7662 | 50.09 | -15.69 | 34.40 | 40.00 | -5.60 | 356 | 100 | QP |
| 2 | 40.4172 | 49.19 | -14.54 | 34.65 | 40.00 | -5.35 | 289 | 100 | QP |
| 3 | 44.9006 | 49.82 | -13.92 | 35.90 | 40.00 | -4.10 | 251 | 100 | QP |
| 4 | 64.6594 | 42.29 | -16.00 | 26.29 | 40.00 | -13.71 | 104 | 100 | QP |
| 5 | 121.5486 | 44.77 | -17.53 | 27.24 | 40.00 | -12.76 | 211 | 100 | QP |
| 6 | 175.6516 | 51.48 | -16.74 | 34.74 | 40.00 | -5.26 | 125 | 100 | QP |

| | | | |
|------------|-----|-----------|------------|
| Test mode: | TM2 | Polarity: | Horizontal |
|------------|-----|-----------|------------|



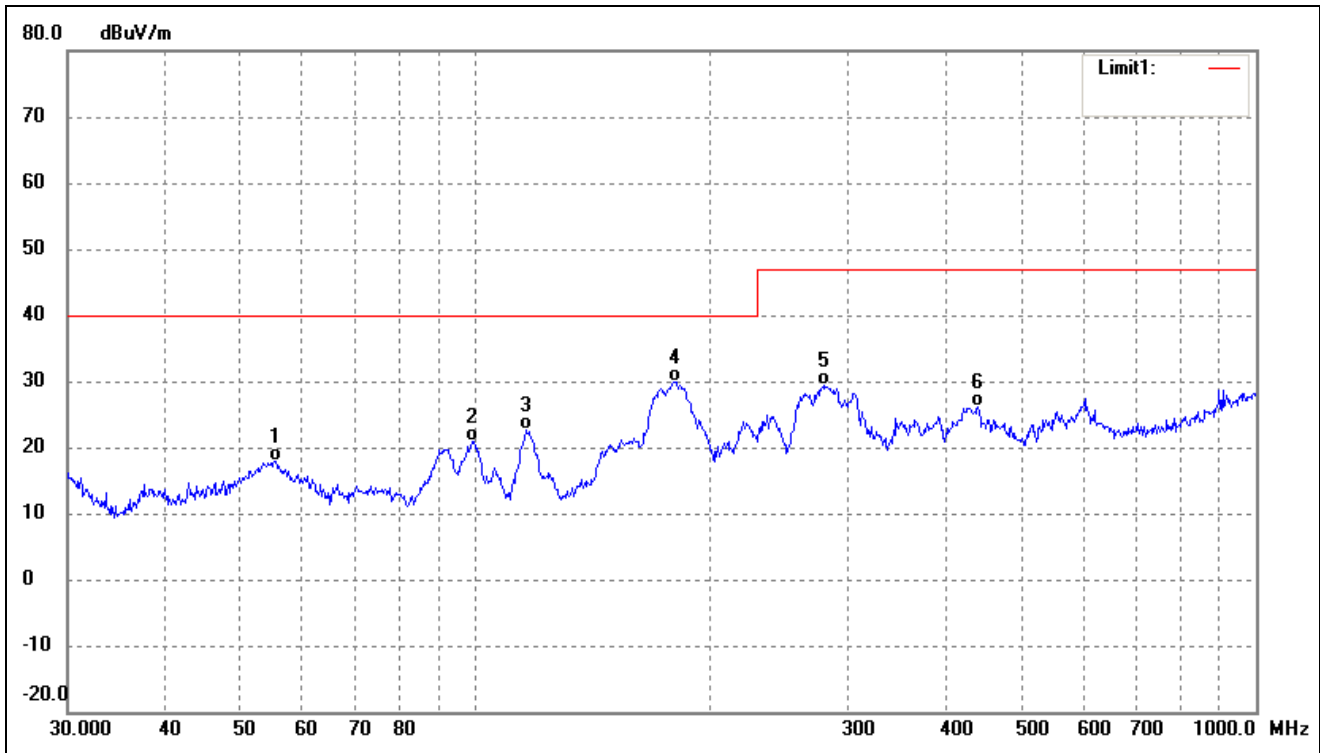
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 99.1797 | 35.07 | -15.90 | 19.17 | 40.00 | -20.83 | 169 | 100 | QP |
| 2 | 117.3603 | 37.56 | -16.90 | 20.66 | 40.00 | -19.34 | 258 | 100 | QP |
| 3 | 173.2051 | 42.68 | -16.94 | 25.74 | 40.00 | -14.26 | 345 | 100 | QP |
| 4 | 239.1473 | 35.61 | -11.59 | 24.02 | 47.00 | -22.98 | 105 | 100 | QP |
| 5 | 279.0436 | 39.14 | -10.19 | 28.95 | 47.00 | -18.05 | 222 | 100 | QP |
| 6 | 425.0280 | 32.08 | -8.38 | 23.70 | 47.00 | -23.30 | 102 | 100 | QP |

| | | | |
|------------|-----|-----------|----------|
| Test mode: | TM2 | Polarity: | Vertical |
|------------|-----|-----------|----------|



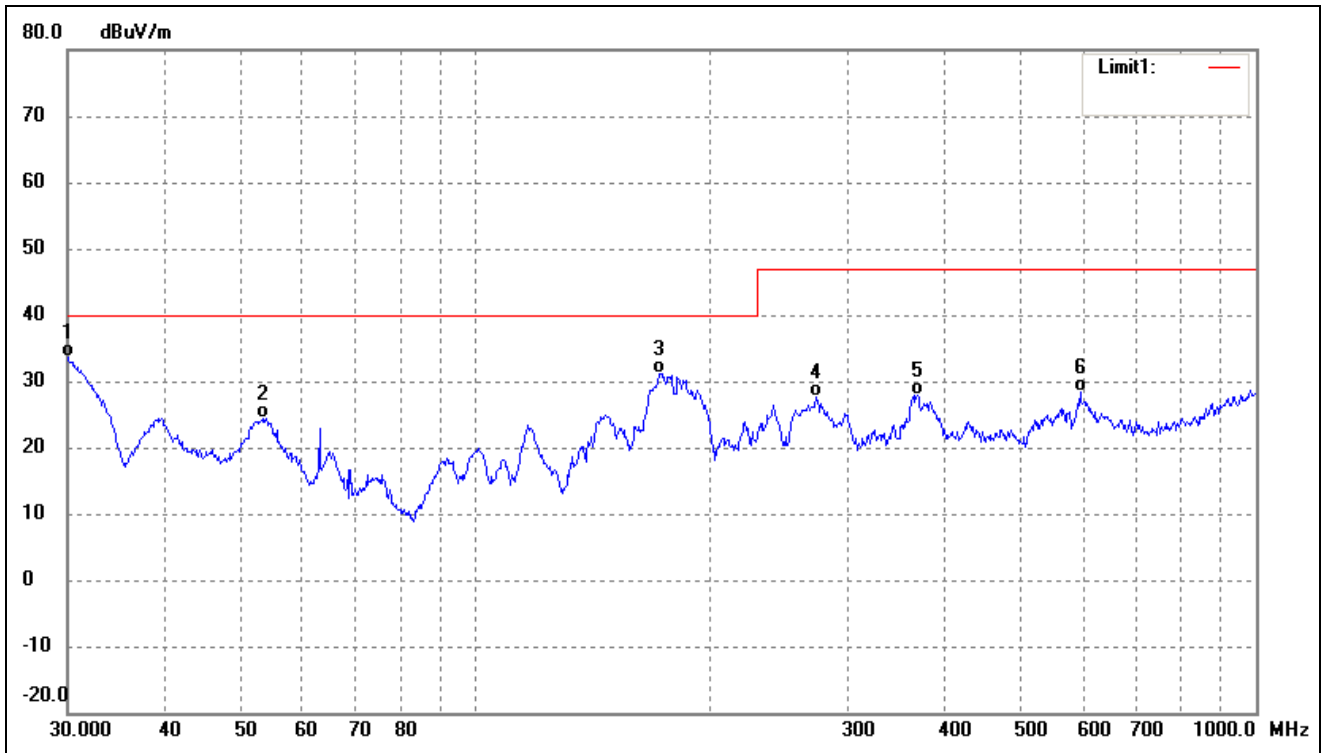
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 30.5306 | 48.26 | -16.60 | 31.66 | 40.00 | -8.34 | 35 | 100 | QP |
| 2 | 52.3913 | 36.98 | -13.65 | 23.33 | 40.00 | -16.67 | 289 | 100 | QP |
| 3 | 118.1862 | 40.15 | -17.00 | 23.15 | 40.00 | -16.85 | 214 | 100 | QP |
| 4 | 172.5988 | 45.76 | -16.98 | 28.78 | 40.00 | -11.22 | 107 | 100 | QP |
| 5 | 274.1939 | 36.97 | -10.39 | 26.58 | 47.00 | -20.42 | 251 | 100 | QP |
| 6 | 362.9845 | 33.42 | -8.83 | 24.59 | 47.00 | -22.41 | 126 | 100 | QP |

| | | | |
|------------|-----|-----------|------------|
| Test mode: | TM3 | Polarity: | Horizontal |
|------------|-----|-----------|------------|



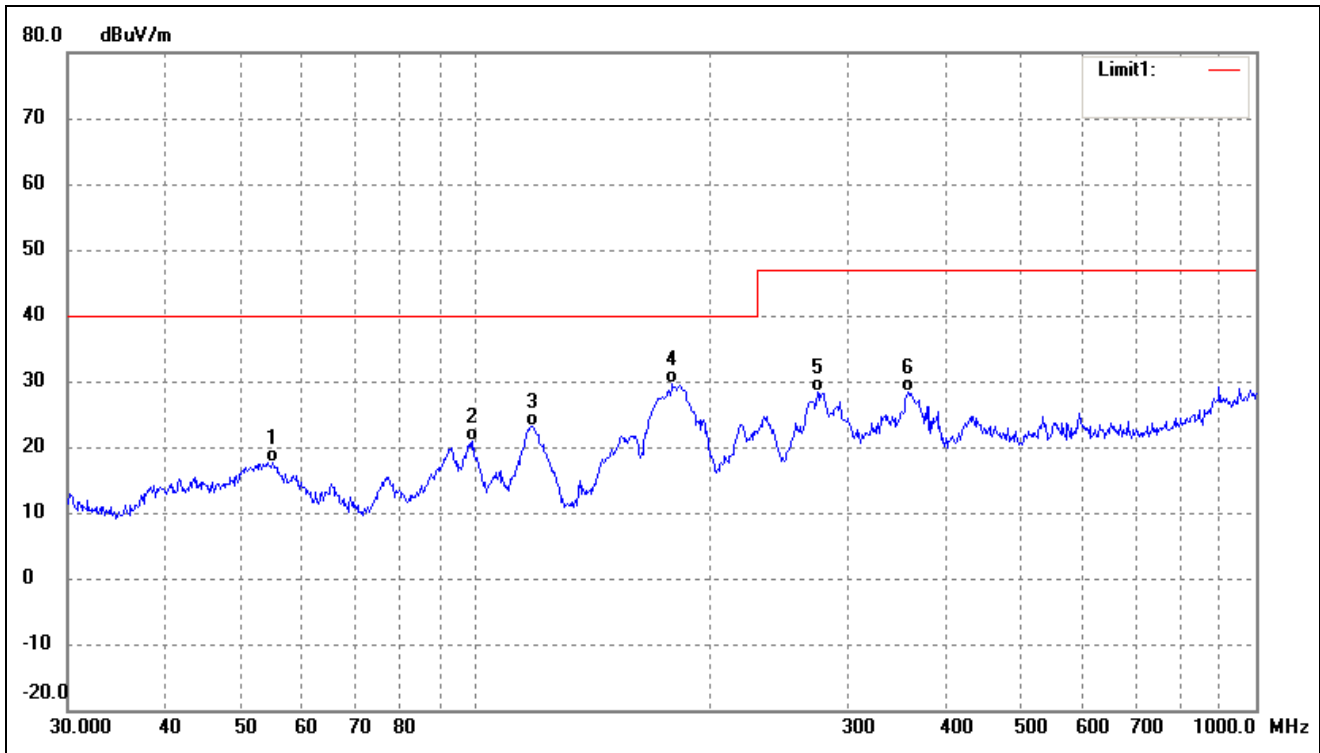
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 55.4147 | 32.19 | -14.23 | 17.96 | 40.00 | -22.04 | 56 | 100 | QP |
| 2 | 98.8326 | 36.91 | -15.95 | 20.96 | 40.00 | -19.04 | 295 | 100 | QP |
| 3 | 116.1321 | 39.45 | -16.75 | 22.70 | 40.00 | -17.30 | 215 | 100 | QP |
| 4 | 180.0165 | 46.06 | -16.20 | 29.86 | 40.00 | -10.14 | 110 | 100 | QP |
| 5 | 280.0238 | 39.56 | -10.15 | 29.41 | 47.00 | -17.59 | 258 | 100 | QP |
| 6 | 440.1963 | 34.54 | -8.42 | 26.12 | 47.00 | -20.88 | 352 | 100 | QP |

| | | | |
|------------|-----|-----------|----------|
| Test mode: | TM3 | Polarity: | Vertical |
|------------|-----|-----------|----------|



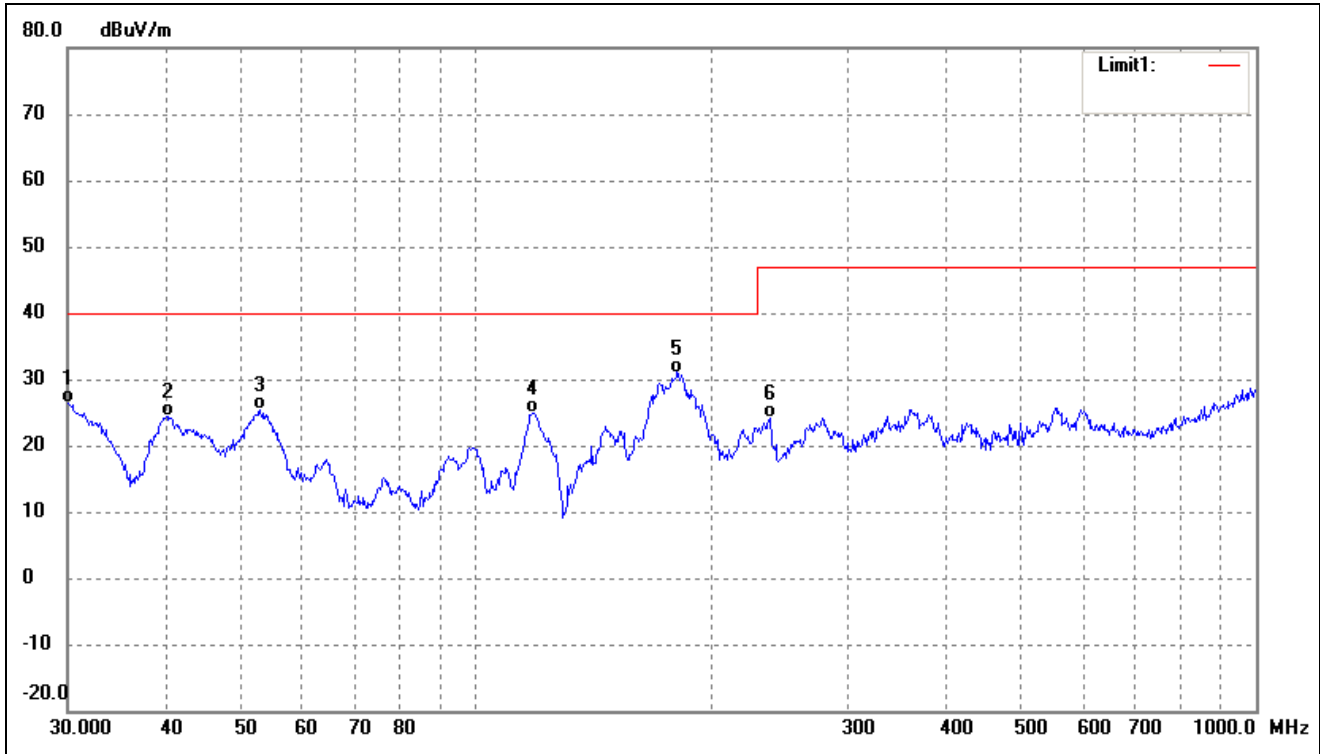
| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 30.0000 | 50.12 | -16.55 | 33.57 | 40.00 | -6.43 | 311 | 100 | QP |
| 2 | 53.3179 | 38.29 | -13.79 | 24.50 | 40.00 | -15.50 | 126 | 100 | QP |
| 3 | 171.9946 | 48.25 | -17.02 | 31.23 | 40.00 | -8.77 | 251 | 100 | QP |
| 4 | 273.2341 | 38.17 | -10.43 | 27.74 | 47.00 | -19.26 | 105 | 100 | QP |
| 5 | 368.1116 | 36.92 | -9.02 | 27.90 | 47.00 | -19.10 | 214 | 100 | QP |
| 6 | 595.1329 | 35.05 | -6.63 | 28.42 | 47.00 | -18.58 | 101 | 100 | QP |

| | | | |
|------------|-----|-----------|------------|
| Test mode: | TM4 | Polarity: | Horizontal |
|------------|-----|-----------|------------|



| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 55.0274 | 31.75 | -14.14 | 17.61 | 40.00 | -22.39 | 51 | 100 | QP |
| 2 | 99.1797 | 36.72 | -15.90 | 20.82 | 40.00 | -19.18 | 196 | 100 | QP |
| 3 | 118.1862 | 40.07 | -17.00 | 23.07 | 40.00 | -16.93 | 236 | 100 | QP |
| 4 | 178.7584 | 45.91 | -16.35 | 29.56 | 40.00 | -10.44 | 251 | 100 | QP |
| 5 | 274.1939 | 38.72 | -10.39 | 28.33 | 47.00 | -18.67 | 105 | 100 | QP |
| 6 | 357.9287 | 37.12 | -8.64 | 28.48 | 47.00 | -18.52 | 21 | 100 | QP |

| | | | |
|------------|-----|-----------|----------|
| Test mode: | TM4 | Polarity: | Vertical |
|------------|-----|-----------|----------|



| No. | Frequency (MHz) | Reading (dBuV/m) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree () | Height (cm) | Remark |
|-----|-----------------|------------------|----------------|-----------------|----------------|-------------|------------|-------------|--------|
| 1 | 30.1054 | 42.87 | -16.56 | 26.31 | 40.00 | -13.69 | 323 | 100 | QP |
| 2 | 40.2757 | 38.96 | -14.56 | 24.40 | 40.00 | -15.60 | 269 | 100 | QP |
| 3 | 52.9453 | 39.01 | -13.73 | 25.28 | 40.00 | -14.72 | 152 | 100 | QP |
| 4 | 118.1862 | 41.88 | -17.00 | 24.88 | 40.00 | -15.12 | 216 | 100 | QP |
| 5 | 181.2834 | 47.07 | -16.07 | 31.00 | 40.00 | -9.00 | 333 | 100 | QP |
| 6 | 238.3102 | 35.74 | -11.69 | 24.05 | 47.00 | -22.95 | 250 | 100 | QP |

5. Harmonic Current Emissions

5.1 Test Procedure

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

5.2 Test Standards

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

Environmental Conditions

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

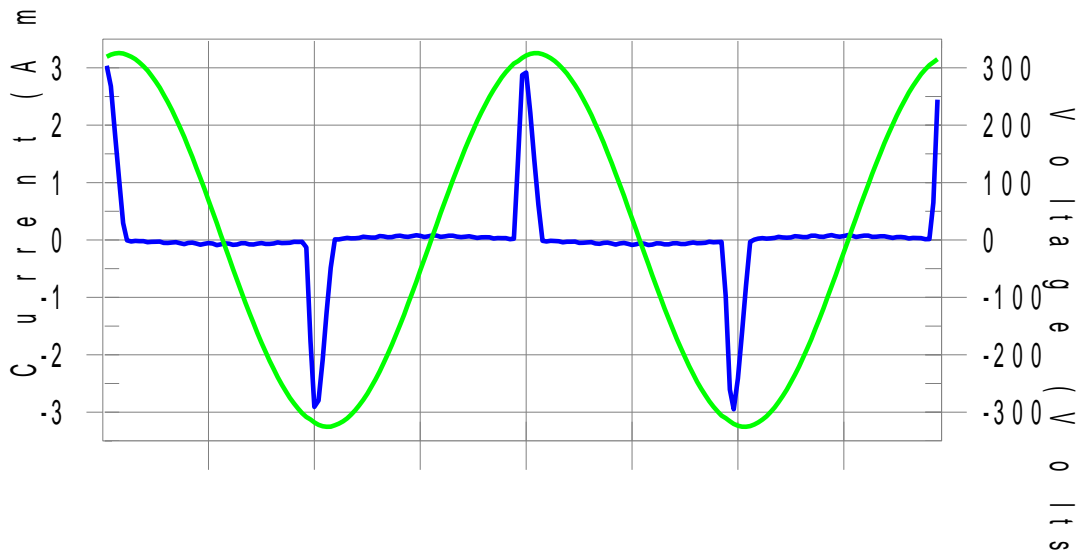
5.3 Harmonic Current Emissions Test Data

| | |
|------------|-----|
| Test mode: | TM1 |
|------------|-----|

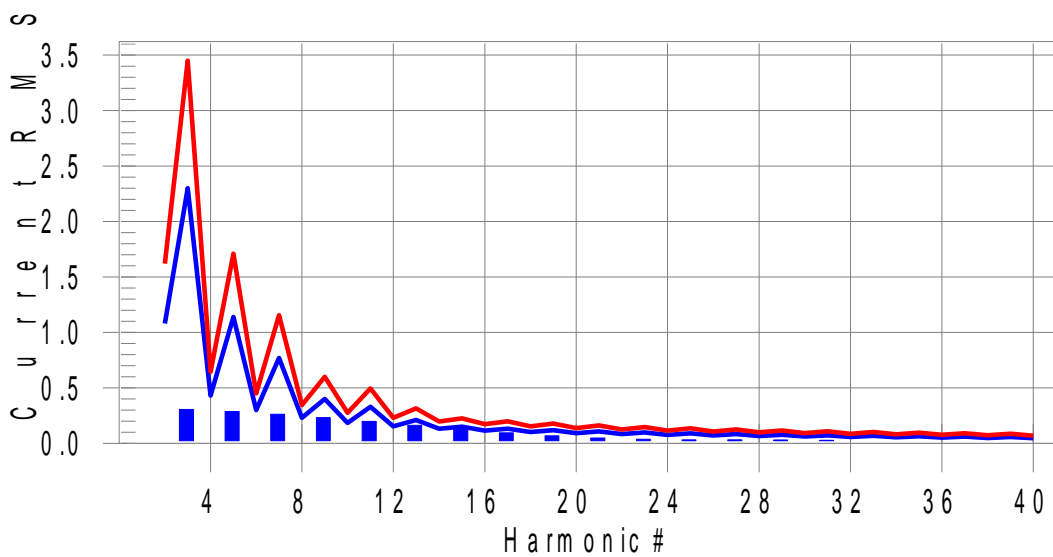
Highest parameter values during test:

| | |
|-----------------------|----------------------|
| V_RMS (Volts): 229.90 | Frequency(Hz): 50.00 |
| I_Peak (Amps): 3.053 | I_RMS (Amps): 0.712 |
| I_Fund (Amps): 0.325 | Crest Factor: 4.297 |
| Power (Watts): 71.4 | Power Factor: 0.438 |

Current & voltage waveforms



Harmonics and Class A limit line **European Limits**



Test result: Pass Worst harmonic was #15 with 84.49% of the limit.

| Harm# | Harms(avg) | 100%Limit | %of Limit | Harms(max) | 150%Limit | %of Limit | Status |
|-------|------------|-----------|-----------|------------|-----------|-----------|--------|
| 2 | 0.001 | 1.080 | 0.0 | 0.002 | 1.620 | 0.11 | Pass |
| 3 | 0.305 | 2.300 | 13.3 | 0.306 | 3.450 | 8.88 | Pass |
| 4 | 0.001 | 0.430 | 0.0 | 0.002 | 0.645 | 0.28 | Pass |
| 5 | 0.287 | 1.140 | 25.2 | 0.287 | 1.710 | 16.80 | Pass |
| 6 | 0.002 | 0.300 | 0.0 | 0.002 | 0.450 | 0.44 | Pass |
| 7 | 0.262 | 0.770 | 34.0 | 0.262 | 1.155 | 22.71 | Pass |
| 8 | 0.002 | 0.230 | 0.0 | 0.002 | 0.345 | 0.67 | Pass |
| 9 | 0.231 | 0.400 | 57.9 | 0.232 | 0.600 | 38.63 | Pass |
| 10 | 0.002 | 0.184 | 0.0 | 0.003 | 0.276 | 0.93 | Pass |
| 11 | 0.197 | 0.330 | 59.8 | 0.198 | 0.495 | 39.93 | Pass |
| 12 | 0.002 | 0.153 | 0.0 | 0.003 | 0.230 | 1.16 | Pass |
| 13 | 0.162 | 0.210 | 77.0 | 0.162 | 0.315 | 51.46 | Pass |
| 14 | 0.002 | 0.131 | 0.0 | 0.003 | 0.197 | 1.34 | Pass |
| 15 | 0.127 | 0.150 | 84.5 | 0.127 | 0.225 | 56.60 | Pass |
| 16 | 0.002 | 0.115 | 0.0 | 0.003 | 0.173 | 1.47 | Pass |
| 17 | 0.095 | 0.132 | 71.8 | 0.095 | 0.199 | 47.95 | Pass |
| 18 | 0.002 | 0.102 | 0.0 | 0.002 | 0.153 | 1.54 | Pass |
| 19 | 0.068 | 0.118 | 57.3 | 0.068 | 0.178 | 38.48 | Pass |
| 20 | 0.002 | 0.092 | 0.0 | 0.002 | 0.138 | 1.51 | Pass |
| 21 | 0.048 | 0.107 | 44.7 | 0.048 | 0.161 | 30.10 | Pass |
| 22 | 0.001 | 0.084 | 0.0 | 0.002 | 0.125 | 1.37 | Pass |
| 23 | 0.037 | 0.098 | 37.4 | 0.037 | 0.147 | 25.13 | Pass |
| 24 | 0.001 | 0.077 | 0.0 | 0.001 | 0.115 | 1.20 | Pass |
| 25 | 0.033 | 0.090 | 36.3 | 0.033 | 0.135 | 24.37 | Pass |
| 26 | 0.001 | 0.071 | 0.0 | 0.001 | 0.106 | 0.96 | Pass |
| 27 | 0.032 | 0.083 | 38.3 | 0.032 | 0.125 | 25.70 | Pass |
| 28 | 0.001 | 0.066 | 0.0 | 0.001 | 0.099 | 0.86 | Pass |
| 29 | 0.031 | 0.078 | 39.4 | 0.031 | 0.116 | 26.48 | Pass |
| 30 | 0.000 | 0.061 | 0.0 | 0.001 | 0.092 | 0.84 | Pass |
| 31 | 0.027 | 0.073 | 37.8 | 0.028 | 0.109 | 25.29 | Pass |
| 32 | 0.001 | 0.058 | 0.0 | 0.001 | 0.086 | 0.90 | Pass |
| 33 | 0.023 | 0.068 | 33.1 | 0.023 | 0.102 | 22.32 | Pass |
| 34 | 0.000 | 0.054 | 0.0 | 0.001 | 0.081 | 0.83 | Pass |
| 35 | 0.017 | 0.064 | 26.2 | 0.017 | 0.096 | 17.76 | Pass |
| 36 | 0.000 | 0.051 | 0.0 | 0.001 | 0.077 | 0.84 | Pass |
| 37 | 0.011 | 0.061 | 18.5 | 0.011 | 0.091 | 12.57 | Pass |
| 38 | 0.000 | 0.048 | 0.0 | 0.001 | 0.073 | 0.92 | Pass |
| 39 | 0.007 | 0.058 | 12.5 | 0.007 | 0.087 | 8.43 | Pass |
| 40 | 0.000 | 0.046 | 0.0 | 0.001 | 0.069 | 0.90 | Pass |

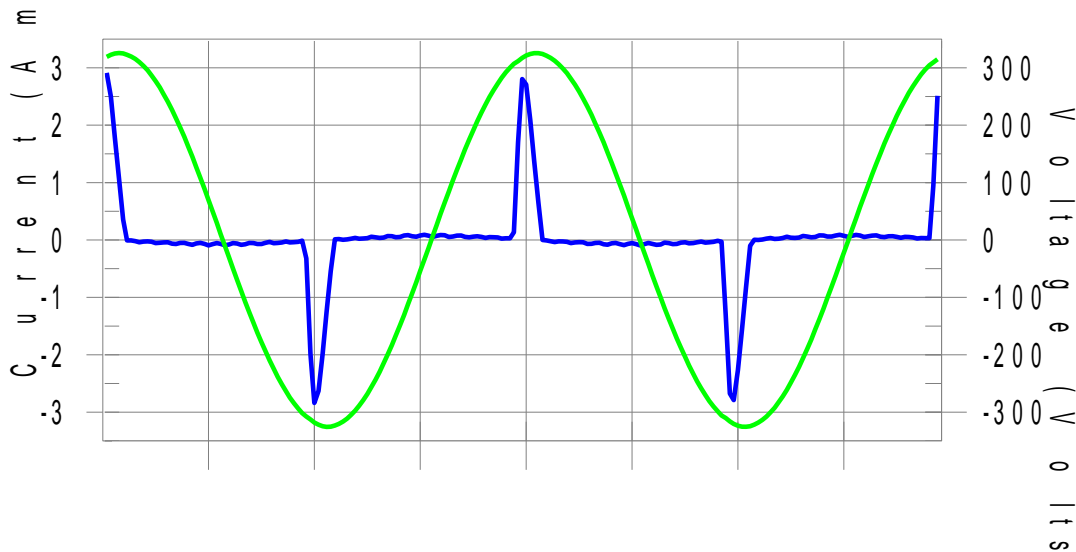
| Harm# | Harmonics V-rms | Limit V-rms | % of Limit | Status |
|-------|-----------------|-------------|------------|--------|
| 2 | 0.059 | 0.460 | 12.83 | OK |
| 3 | 0.584 | 2.069 | 28.24 | OK |
| 4 | 0.060 | 0.460 | 13.03 | OK |
| 5 | 0.086 | 0.919 | 9.40 | OK |
| 6 | 0.031 | 0.460 | 6.69 | OK |
| 7 | 0.106 | 0.690 | 15.38 | OK |
| 8 | 0.016 | 0.460 | 3.56 | OK |
| 9 | 0.122 | 0.460 | 26.52 | OK |
| 10 | 0.010 | 0.460 | 2.16 | OK |
| 11 | 0.125 | 0.230 | 54.51 | OK |
| 12 | 0.010 | 0.230 | 4.25 | OK |
| 13 | 0.110 | 0.230 | 47.73 | OK |
| 14 | 0.006 | 0.230 | 2.78 | OK |
| 15 | 0.100 | 0.230 | 43.70 | OK |
| 16 | 0.009 | 0.230 | 3.99 | OK |
| 17 | 0.075 | 0.230 | 32.65 | OK |
| 18 | 0.008 | 0.230 | 3.61 | OK |
| 19 | 0.068 | 0.230 | 29.52 | OK |
| 20 | 0.017 | 0.230 | 7.49 | OK |
| 21 | 0.049 | 0.230 | 21.26 | OK |
| 22 | 0.002 | 0.230 | 1.03 | OK |
| 23 | 0.041 | 0.230 | 17.64 | OK |
| 24 | 0.004 | 0.230 | 1.84 | OK |
| 25 | 0.039 | 0.230 | 16.84 | OK |
| 26 | 0.003 | 0.230 | 1.35 | OK |
| 27 | 0.046 | 0.230 | 19.88 | OK |
| 28 | 0.004 | 0.230 | 1.73 | OK |
| 29 | 0.040 | 0.230 | 17.28 | OK |
| 30 | 0.003 | 0.230 | 1.29 | OK |
| 31 | 0.041 | 0.230 | 17.68 | OK |
| 32 | 0.002 | 0.230 | 0.73 | OK |
| 33 | 0.036 | 0.230 | 15.49 | OK |
| 34 | 0.002 | 0.230 | 0.88 | OK |
| 35 | 0.029 | 0.230 | 12.58 | OK |
| 36 | 0.002 | 0.230 | 0.91 | OK |
| 37 | 0.023 | 0.230 | 9.94 | OK |
| 38 | 0.003 | 0.230 | 1.23 | OK |
| 39 | 0.017 | 0.230 | 7.54 | OK |
| 40 | 0.007 | 0.230 | 3.15 | OK |

| | |
|------------|-----|
| Test mode: | TM4 |
|------------|-----|

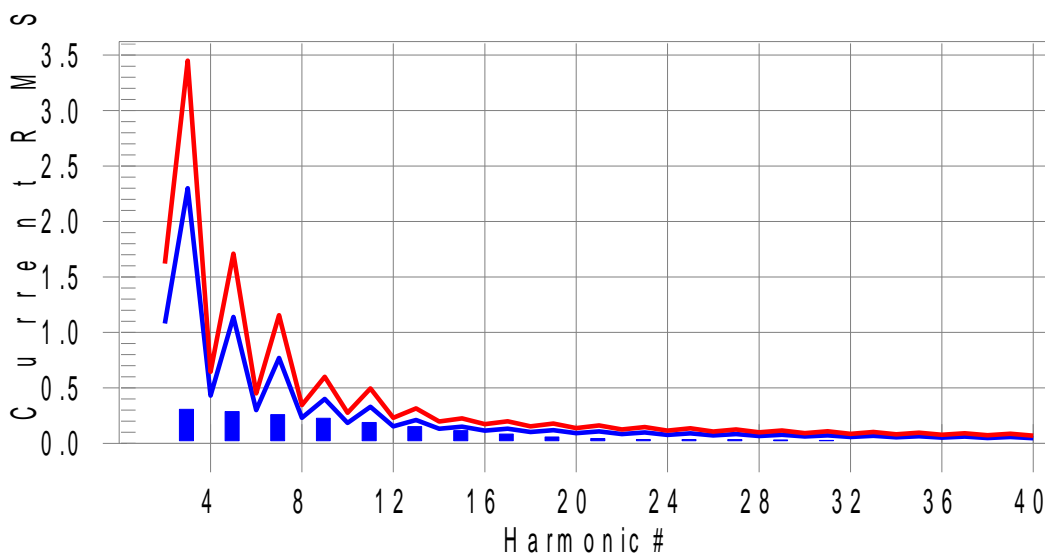
Highest parameter values during test:

| | |
|-----------------------|----------------------|
| V_RMS (Volts): 229.89 | Frequency(Hz): 50.00 |
| I_Peak (Amps): 2.911 | I_RMS (Amps): 0.699 |
| I_Fund (Amps): 0.327 | Crest Factor: 4.170 |
| Power (Watts): 71.9 | Power Factor: 0.456 |

Current & voltage waveforms



Harmonics and Class A limit line European Limits



Test result: Pass Worst harmonic was #15 with 74.20% of the limit.

| Harm# | Harms(avg) | 100%Limit | %of Limit | Harms(max) | 150%Limit | %of Limit | Status |
|-------|------------|-----------|-----------|------------|-----------|-----------|--------|
| 2 | 0.001 | 1.080 | 0.0 | 0.002 | 1.620 | 0.11 | Pass |
| 3 | 0.306 | 2.300 | 13.3 | 0.307 | 3.450 | 8.90 | Pass |
| 4 | 0.001 | 0.430 | 0.0 | 0.002 | 0.645 | 0.28 | Pass |
| 5 | 0.285 | 1.140 | 25.0 | 0.286 | 1.710 | 16.74 | Pass |
| 6 | 0.001 | 0.300 | 0.0 | 0.002 | 0.450 | 0.39 | Pass |
| 7 | 0.257 | 0.770 | 33.4 | 0.259 | 1.155 | 22.41 | Pass |
| 8 | 0.002 | 0.230 | 0.0 | 0.002 | 0.345 | 0.55 | Pass |
| 9 | 0.223 | 0.400 | 55.8 | 0.225 | 0.600 | 37.58 | Pass |
| 10 | 0.002 | 0.184 | 0.0 | 0.002 | 0.276 | 0.75 | Pass |
| 11 | 0.186 | 0.330 | 56.3 | 0.189 | 0.495 | 38.12 | Pass |
| 12 | 0.002 | 0.153 | 0.0 | 0.002 | 0.230 | 0.95 | Pass |
| 13 | 0.148 | 0.210 | 70.3 | 0.151 | 0.315 | 47.91 | Pass |
| 14 | 0.002 | 0.131 | 0.0 | 0.002 | 0.197 | 1.09 | Pass |
| 15 | 0.111 | 0.150 | 74.2 | 0.115 | 0.225 | 51.04 | Pass |
| 16 | 0.002 | 0.115 | 0.0 | 0.002 | 0.173 | 1.18 | Pass |
| 17 | 0.079 | 0.132 | 60.2 | 0.083 | 0.199 | 41.70 | Pass |
| 18 | 0.001 | 0.102 | 0.0 | 0.002 | 0.153 | 1.19 | Pass |
| 19 | 0.055 | 0.118 | 46.3 | 0.058 | 0.178 | 32.53 | Pass |
| 20 | 0.001 | 0.092 | 0.0 | 0.002 | 0.138 | 1.17 | Pass |
| 21 | 0.040 | 0.107 | 37.1 | 0.042 | 0.161 | 26.06 | Pass |
| 22 | 0.001 | 0.084 | 0.0 | 0.001 | 0.125 | 1.04 | Pass |
| 23 | 0.034 | 0.098 | 35.2 | 0.035 | 0.147 | 24.12 | Pass |
| 24 | 0.001 | 0.077 | 0.0 | 0.001 | 0.115 | 0.93 | Pass |
| 25 | 0.034 | 0.090 | 37.6 | 0.034 | 0.135 | 25.43 | Pass |
| 26 | 0.001 | 0.071 | 0.0 | 0.001 | 0.106 | 0.84 | Pass |
| 27 | 0.033 | 0.083 | 39.6 | 0.033 | 0.125 | 26.76 | Pass |
| 28 | 0.001 | 0.066 | 0.0 | 0.001 | 0.099 | 0.89 | Pass |
| 29 | 0.030 | 0.078 | 38.6 | 0.031 | 0.116 | 26.36 | Pass |
| 30 | 0.000 | 0.061 | 0.0 | 0.001 | 0.092 | 0.82 | Pass |
| 31 | 0.025 | 0.073 | 34.2 | 0.026 | 0.109 | 23.59 | Pass |
| 32 | 0.000 | 0.058 | 0.0 | 0.001 | 0.086 | 0.82 | Pass |
| 33 | 0.018 | 0.068 | 27.1 | 0.020 | 0.102 | 19.24 | Pass |
| 34 | 0.000 | 0.054 | 0.0 | 0.001 | 0.081 | 0.78 | Pass |
| 35 | 0.012 | 0.064 | 19.3 | 0.013 | 0.096 | 13.97 | Pass |
| 36 | 0.000 | 0.051 | 0.0 | 0.001 | 0.077 | 0.77 | Pass |
| 37 | 0.008 | 0.061 | 13.6 | 0.009 | 0.091 | 9.69 | Pass |
| 38 | 0.000 | 0.048 | 0.0 | 0.001 | 0.073 | 0.81 | Pass |
| 39 | 0.008 | 0.058 | 13.4 | 0.008 | 0.087 | 9.53 | Pass |
| 40 | 0.000 | 0.046 | 0.0 | 0.001 | 0.069 | 0.76 | Pass |

| Harm# | Harmonics V-rms | Limit V-rms | % of Limit | Status |
|-------|-----------------|-------------|------------|--------|
| 2 | 0.053 | 0.460 | 11.45 | OK |
| 3 | 0.594 | 2.068 | 28.70 | OK |
| 4 | 0.065 | 0.460 | 14.21 | OK |
| 5 | 0.091 | 0.919 | 9.95 | OK |
| 6 | 0.033 | 0.460 | 7.25 | OK |
| 7 | 0.107 | 0.689 | 15.56 | OK |
| 8 | 0.017 | 0.460 | 3.73 | OK |
| 9 | 0.120 | 0.460 | 26.14 | OK |
| 10 | 0.011 | 0.460 | 2.36 | OK |
| 11 | 0.122 | 0.230 | 53.14 | OK |
| 12 | 0.011 | 0.230 | 4.99 | OK |
| 13 | 0.104 | 0.230 | 45.40 | OK |
| 14 | 0.007 | 0.230 | 3.25 | OK |
| 15 | 0.092 | 0.230 | 40.01 | OK |
| 16 | 0.010 | 0.230 | 4.20 | OK |
| 17 | 0.068 | 0.230 | 29.44 | OK |
| 18 | 0.009 | 0.230 | 3.98 | OK |
| 19 | 0.059 | 0.230 | 25.69 | OK |
| 20 | 0.017 | 0.230 | 7.40 | OK |
| 21 | 0.042 | 0.230 | 18.46 | OK |
| 22 | 0.003 | 0.230 | 1.49 | OK |
| 23 | 0.040 | 0.230 | 17.48 | OK |
| 24 | 0.004 | 0.230 | 1.64 | OK |
| 25 | 0.042 | 0.230 | 18.18 | OK |
| 26 | 0.003 | 0.230 | 1.14 | OK |
| 27 | 0.046 | 0.230 | 19.94 | OK |
| 28 | 0.003 | 0.230 | 1.45 | OK |
| 29 | 0.042 | 0.230 | 18.20 | OK |
| 30 | 0.004 | 0.230 | 1.66 | OK |
| 31 | 0.039 | 0.230 | 16.79 | OK |
| 32 | 0.002 | 0.230 | 1.07 | OK |
| 33 | 0.031 | 0.230 | 13.50 | OK |
| 34 | 0.002 | 0.230 | 0.92 | OK |
| 35 | 0.024 | 0.230 | 10.43 | OK |
| 36 | 0.002 | 0.230 | 0.92 | OK |
| 37 | 0.019 | 0.230 | 8.38 | OK |
| 38 | 0.002 | 0.230 | 1.02 | OK |
| 39 | 0.016 | 0.230 | 7.17 | OK |
| 40 | 0.007 | 0.230 | 3.22 | OK |

6. Voltage Fluctuation Flicker

6.1 Test Procedure

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

6.2 Test Standards

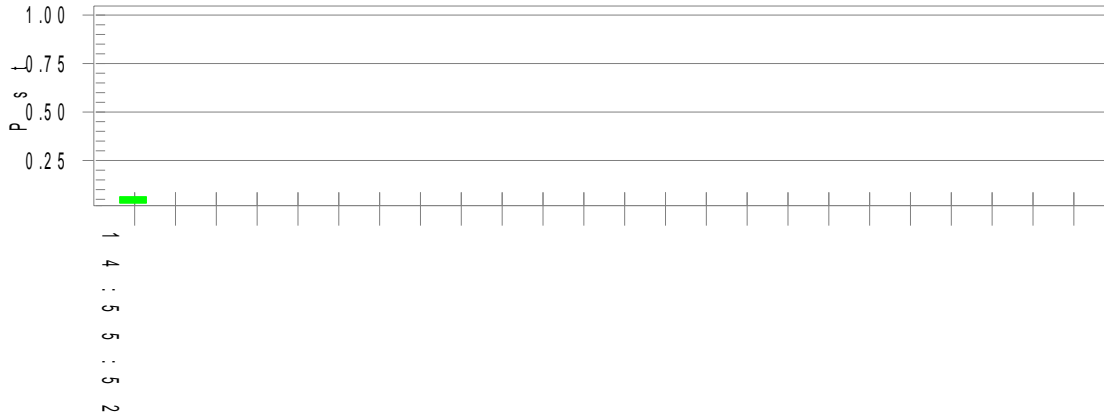
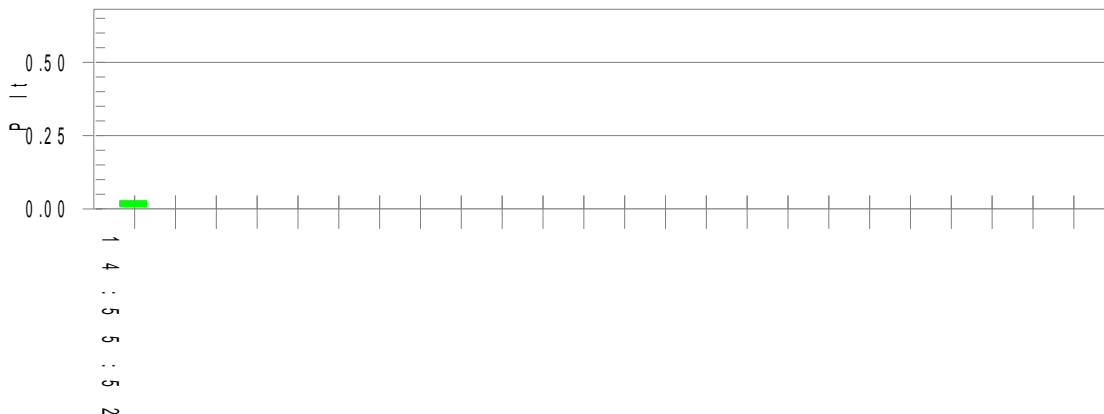
EN61000-3-3, Limit: Clause 5.

Environmental Conditions

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

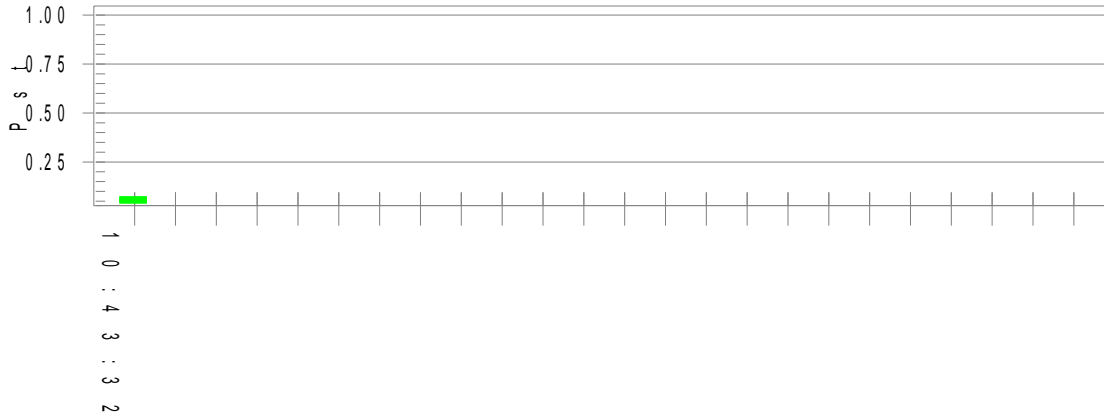
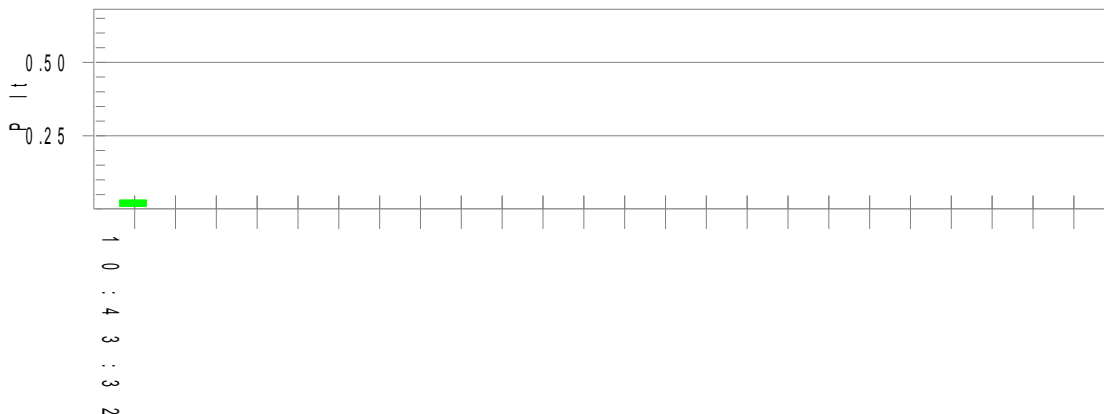
6.3 Voltage Fluctuation and Flicker Test Data

| | |
|------------|-----|
| Test mode: | TM1 |
|------------|-----|

Pst_i and limit line
European Limits

Plt and limit line

Parameter values recorded during the test:

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

| | |
|------------|-----|
| Test mode: | TM4 |
|------------|-----|

Pst_i and limit line
European Limits

Plt and limit line

Parameter values recorded during the test:

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

7. Electrostatic Discharges (ESD)

7.1 Test Procedure

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

Test Performance

Performance Criterion: B

Environmental Conditions

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

7.2 Electrostatic Discharge Immunity Test Data

EN 55035

Table 1: Electrostatic Discharge Immunity (Air Discharge)

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

Table 2: Electrostatic Discharge Immunity (Direct Contact)

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

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

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

EN 60601-1-2

Table 1: Electrostatic Discharge Immunity (Air Discharge)

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

Table 2: Electrostatic Discharge Immunity (Direct Contact)

| EN 61000-4-2 Test Points | Test Levels (kV) | | | | | | | | | |
|-----------------------------|------------------|----|----|----|----|----|----|----|-----|-----|
| | -2 | +2 | -4 | +4 | -6 | +6 | -8 | +8 | -10 | +10 |
| / | / | / | / | / | / | / | / | / | / | / |

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

| EN 61000-4-2 Test Points | Test Levels (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 conducting under the description of EN 61000-4-3, EN 61000-4-20, EN 61000-4-21.

Test Performance

Performance Criterion: A

Environmental Conditions

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

8.2 Continuous Radiated Disturbances Test Data

Frequency step: 1% of fundamental

Dwell time: 1 second

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

EN 55035

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

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

EN 60601-1-2

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

Test Result: Pass

9. Electrical Fast Transients (EFT)

9.1 Test Procedure

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

Test Performance

Performance Criterion: B

Environmental Conditions

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

9.2 Electrical Fast Transients Test Data

EN 55035

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

EN 60601-1-2

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

Test Result: Pass

10. Surges

10.1 Test Procedure

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

Test Performance

Performance Criterion: B

Environmental Conditions

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

10.2 Surge Test Data

EN 55035

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

EN 60601-1-2

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

Test Result: Pass

11. Continuous induced RF disturbances (C/S)

11.1 Test Procedure

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

Test Performance

Performance Criterion: A

Environmental Conditions

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

11.2 Continuous Conducted Disturbances Test Data

Sweep frequency range: 0,15 MHz to 10 MHz 3 V; 10 MHz to 30 MHz 3 V to 1 V; 30 MHz to 80 MHz 1V

Frequency step: 1% of fundamental

Dwell time: 1 second

EN 55035

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

EN 60601-1-2

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

Test Result: Pass

12. Power-Frequency Magnetic Fields (PFMF)

12.1 Test Procedure

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

Test Performance

Performance Criterion: A

Environmental Conditions

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

12.2 Power-Frequency Magnetic Field Test Data

EN 55035

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

EN 60601-1-2

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

Test Result: Pass

13. Voltage Dips and Interruptions

13.1 Test Procedure

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

Test Performance

Performance Criterion: B/C

Environmental Conditions

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

13.2 Voltage Dips And Interruptions Test Data

U: Voltage dips in % U_T (U_T is rated voltage for the EUT)

T: Test duration

EN 55035

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


EN 60601-1-2

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

Test Result: Pass

EXHIBIT 1 - PRODUCT LABELING

Proposed CE Label Format

| | |
|--|--|
| <p>Adaptive Power USB Source, ITE/Medical Model: GT*96605-G2**** Brand: GlobTek Importer Name: XXX Importer Address: XXX 1. GlobTek, Inc. 2. GlobTek (Suzhou) Co., Ltd 1.186 Veterans Dr. Northvale, NJ 07647 USA 2. Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China</p> |  |
|--|--|

Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. The 'CE' marking must be affixed to the EUT or to its data plate. Where this is not possible or not warranted on account of the nature of the apparatus, it must be affixed to the packaging, if any, and to the accompanying documents. The 'CE' marking is allowed less than 5 mm but must clear. If the 'CE' marking is reduced or enlarged the proportions given in the above graduated drawing must be respected. The Importer name, address and Manufacturer name and address should indicate on marking label or packaging or in a document accompanying

Proposed Label Location on EUT

CE Label Location



EXHIBIT 2 - EUT PHOTOGRAPHS

GT96605-G2A3-R3A

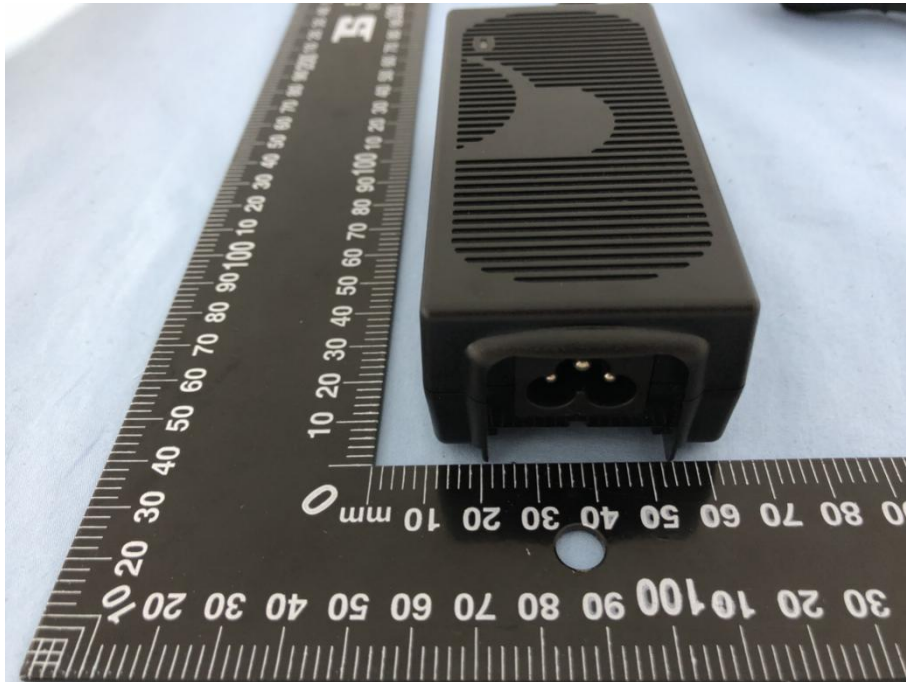
EUT View 1



EUT View 2



EUT View 3



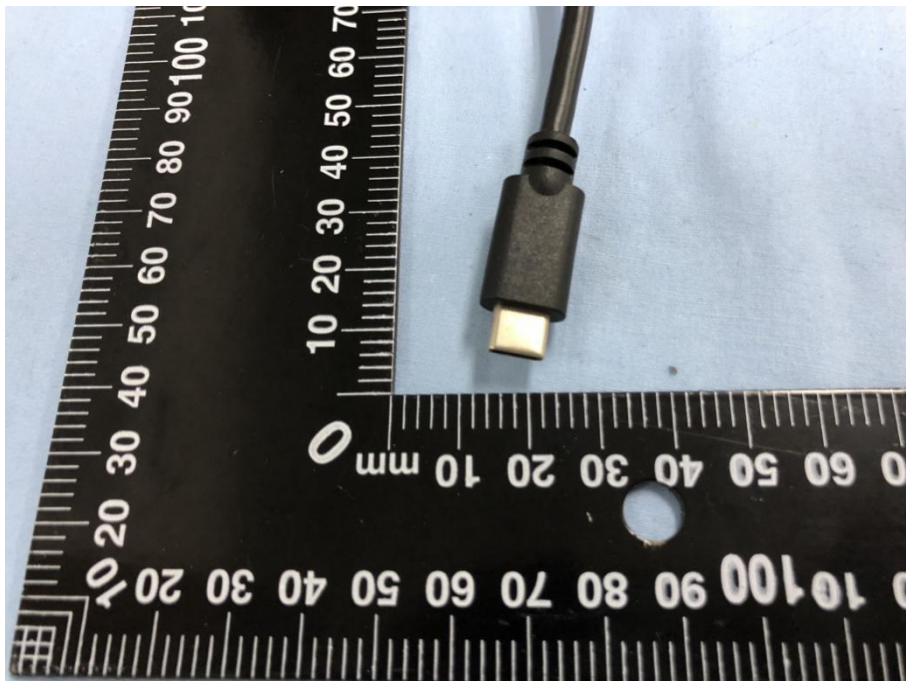
EUT View 4



EUT View 5



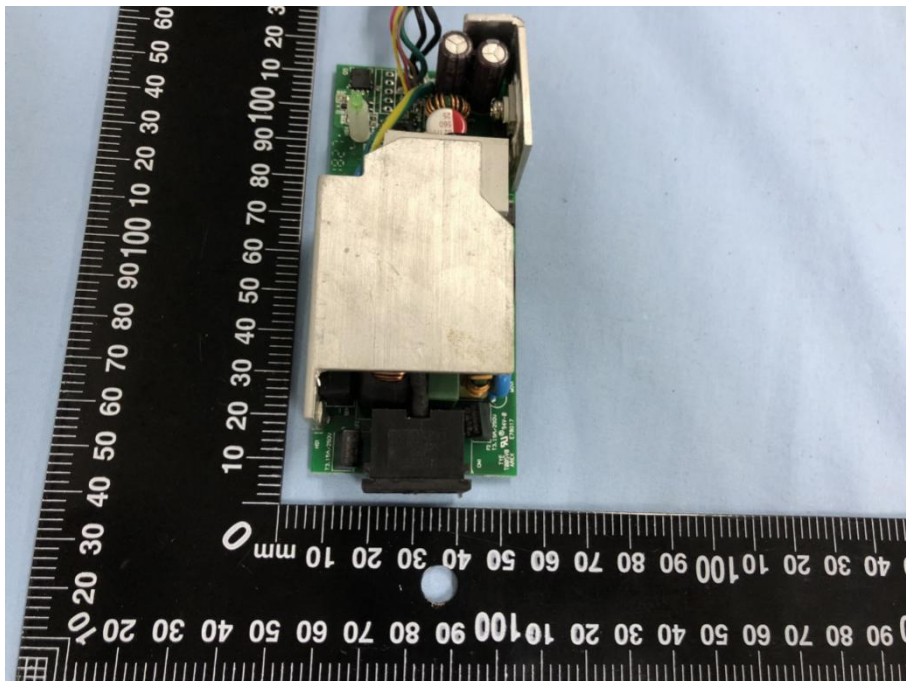
EUT View 6



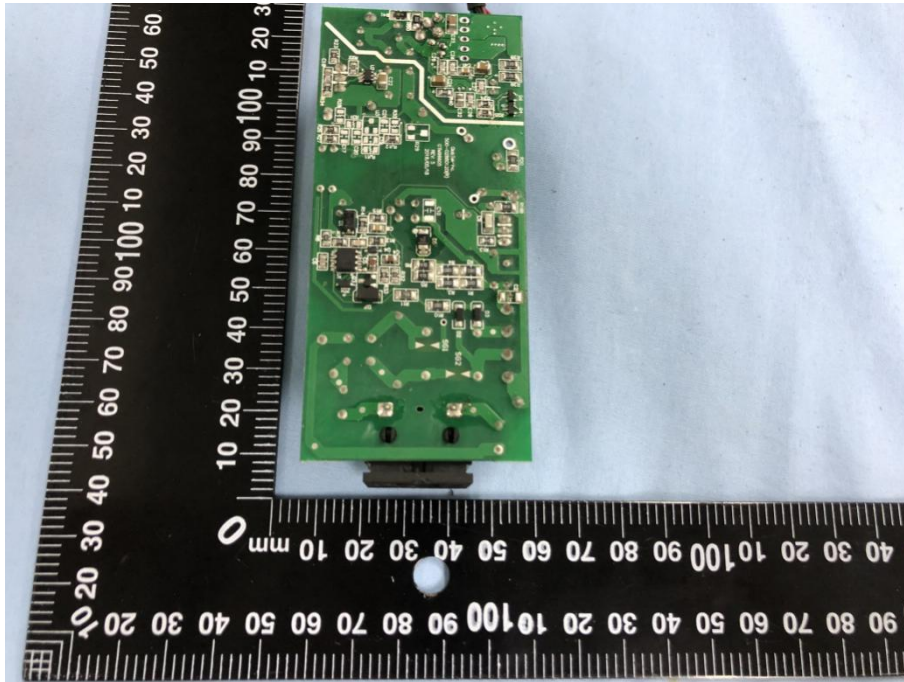
EUT Housing and Board View 1



Solder Board-Component View 1



Solder Board-Component View 2



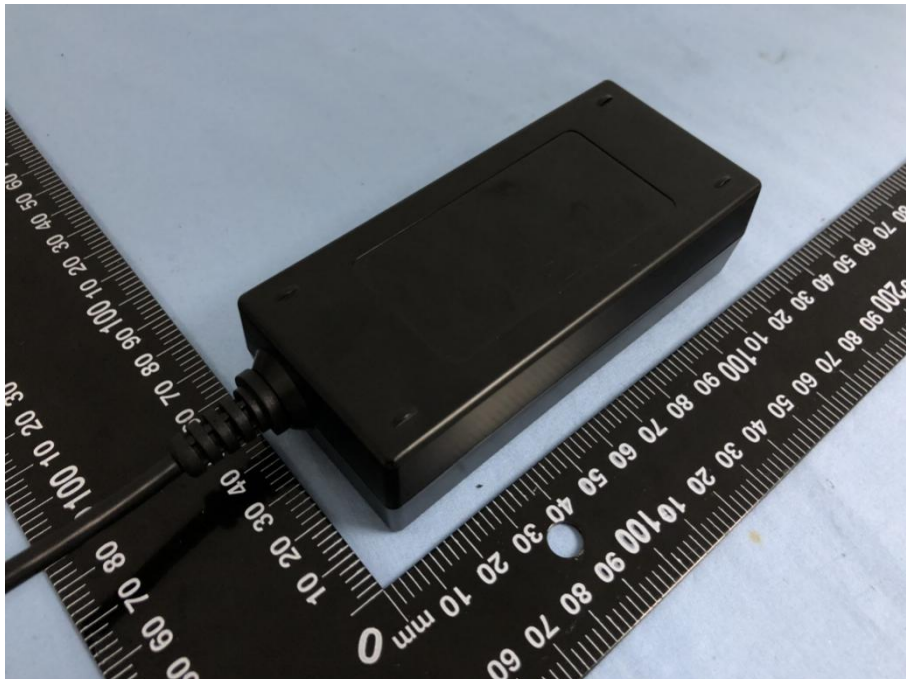
GT96605-G2A3-T2

EUT View 1



EUT View 2

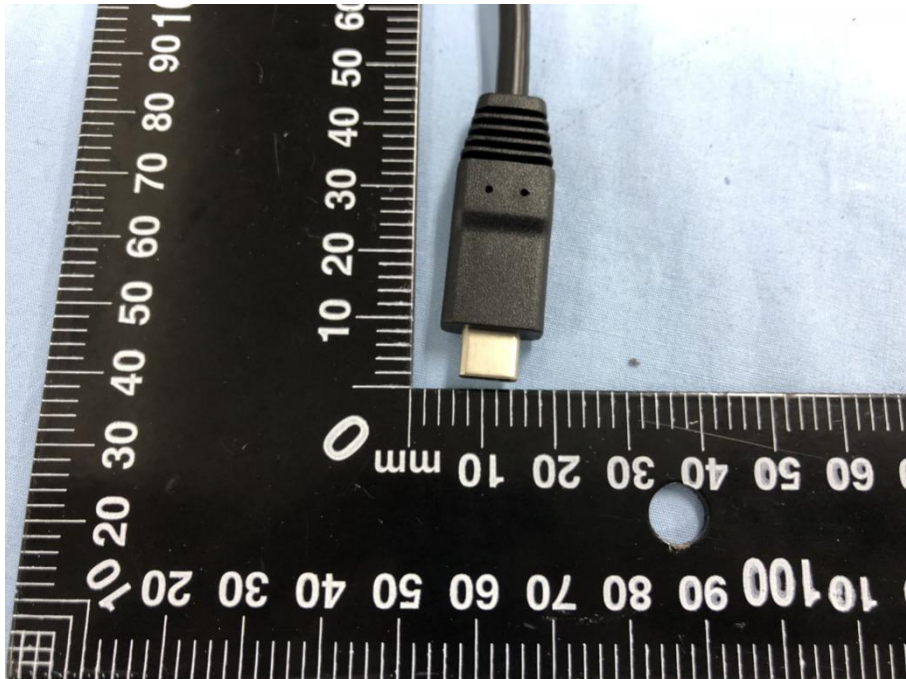


EUT View 3**EUT View 4**

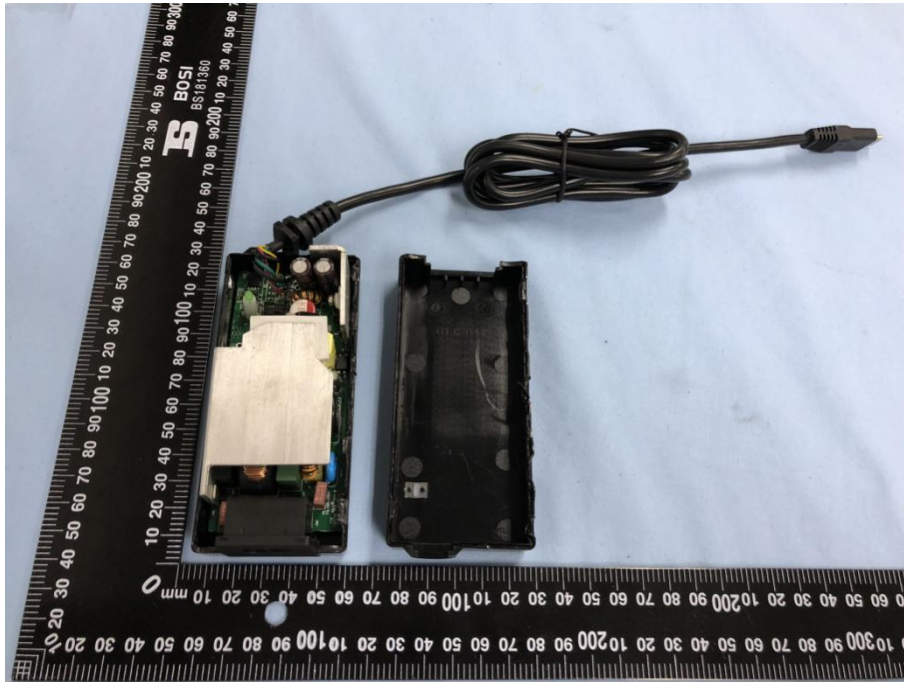
EUT View 5



EUT View 6



EUT Housing and Board View 1



Solder Board-Component View 1



Solder Board-Component View 2

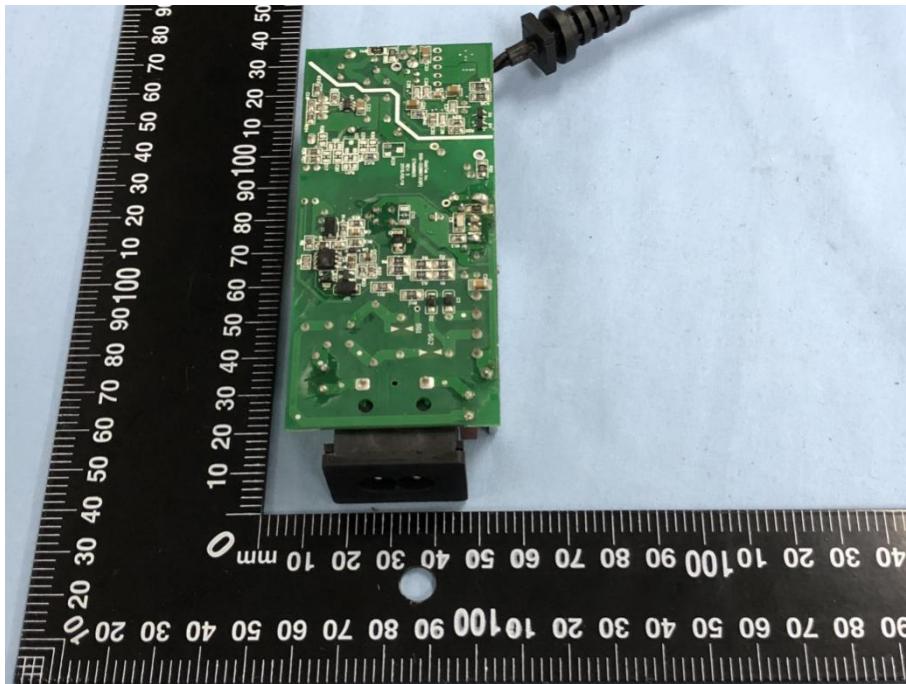
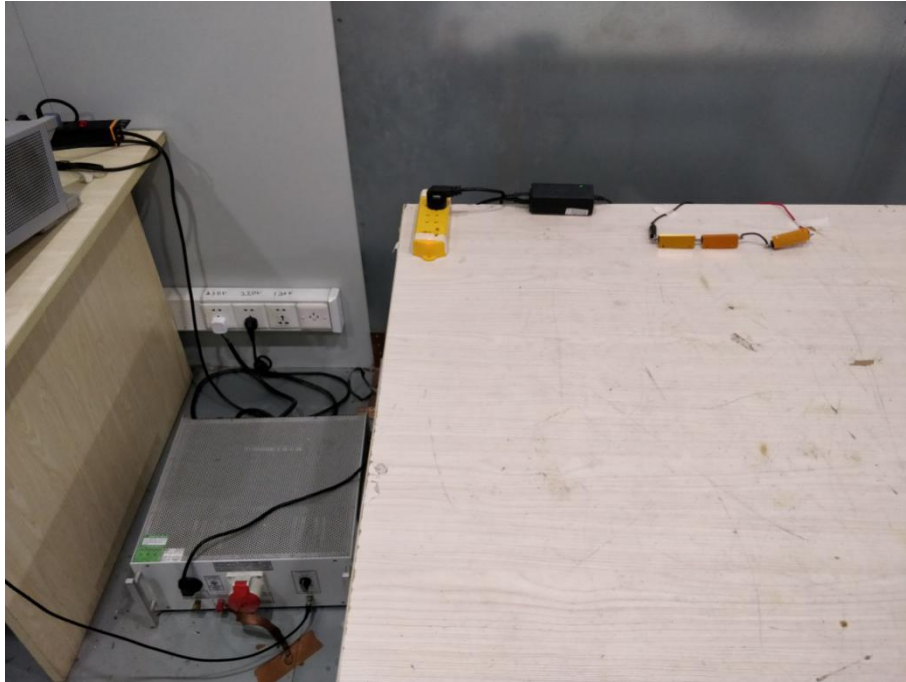


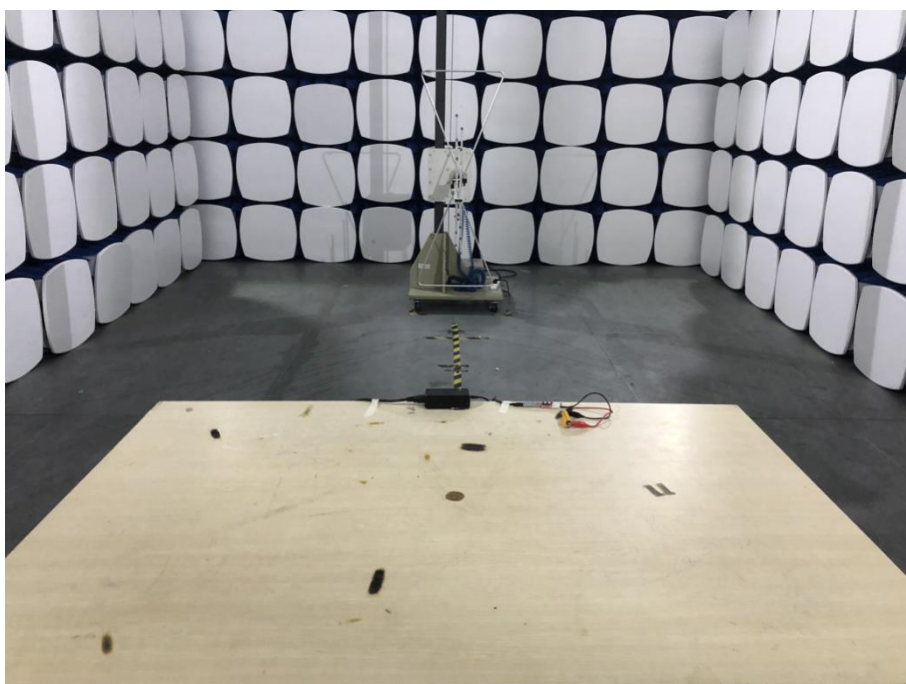
EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

GT96605-G2A3-R3A

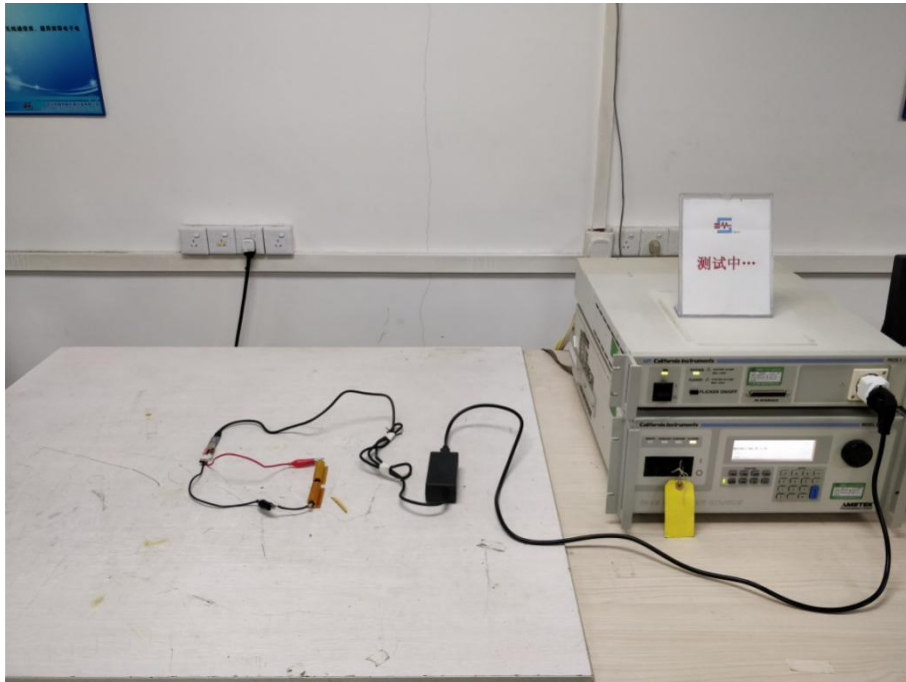
Conduction Emission Test View



Radiation Emission Test View



Harmonic/Flicker Test View



EN 61000-4-2 Test View

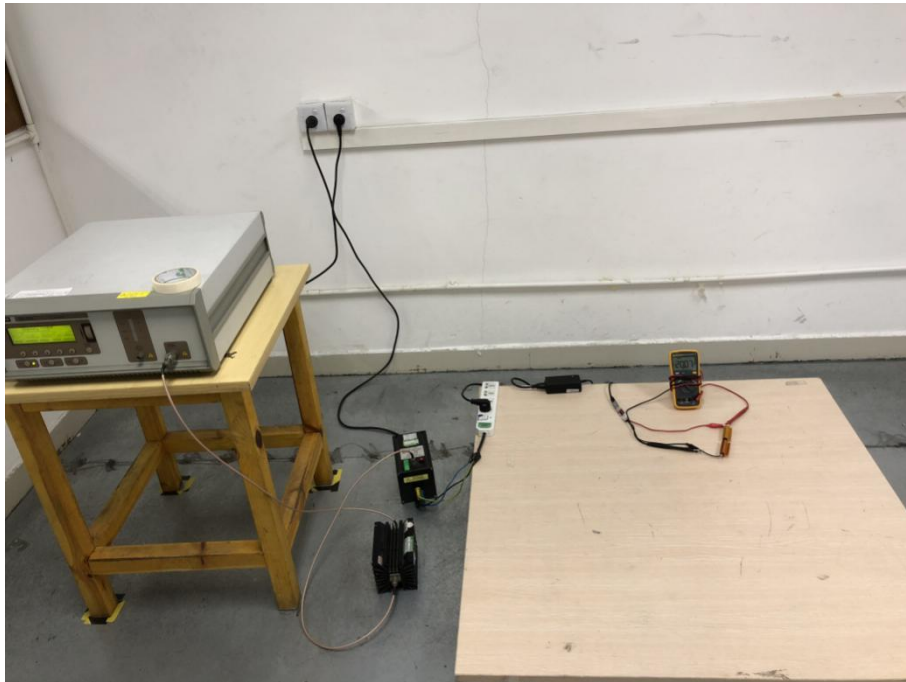
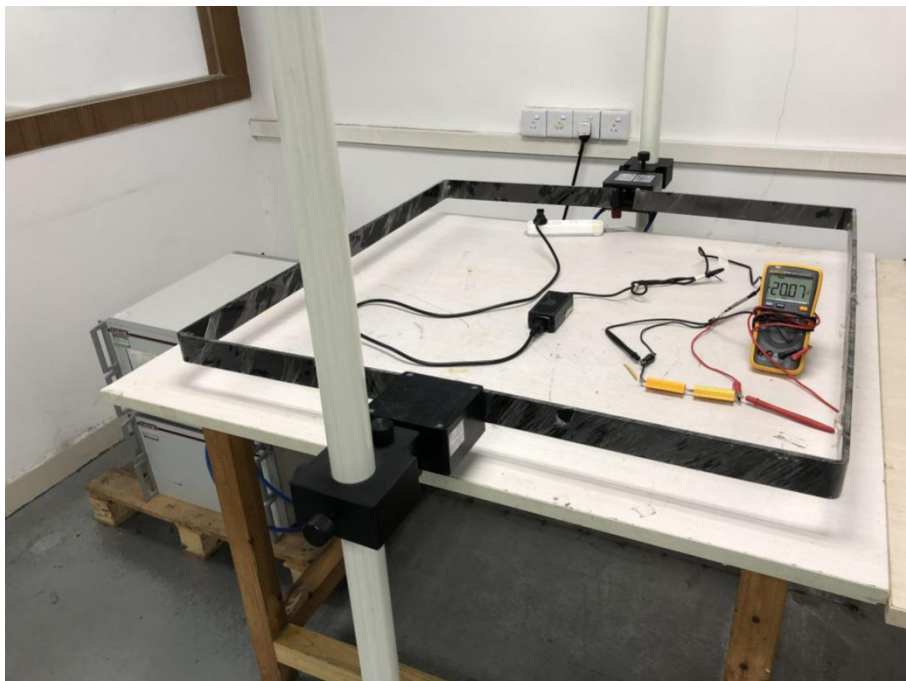


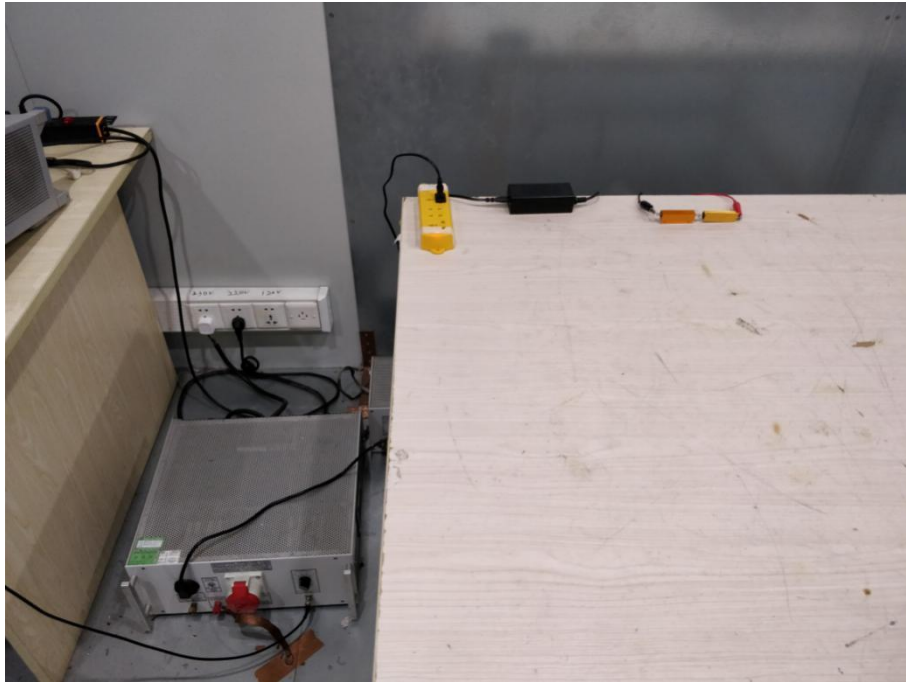
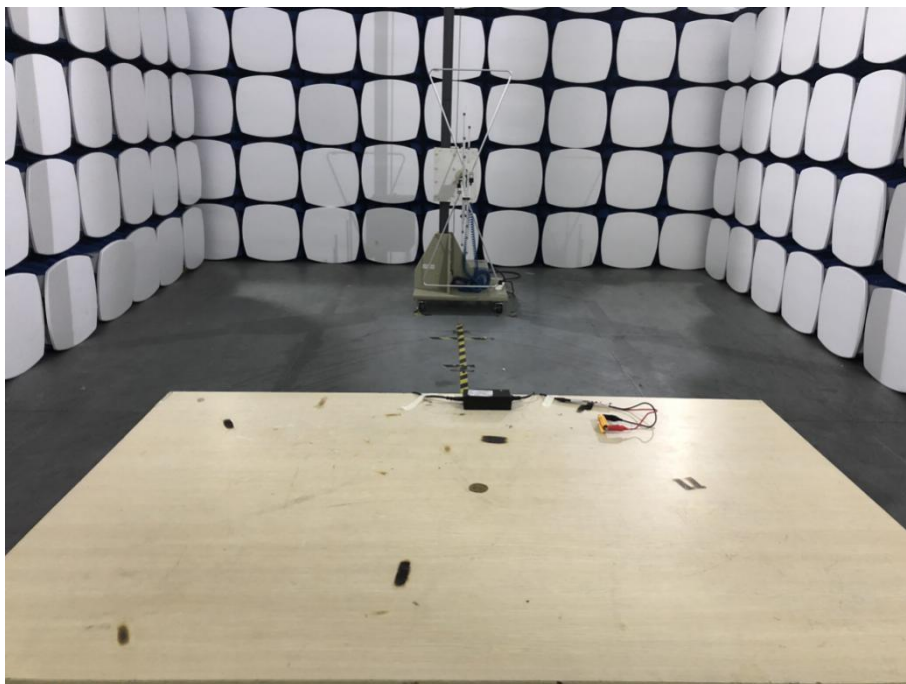
EN 61000-4-3 Test View



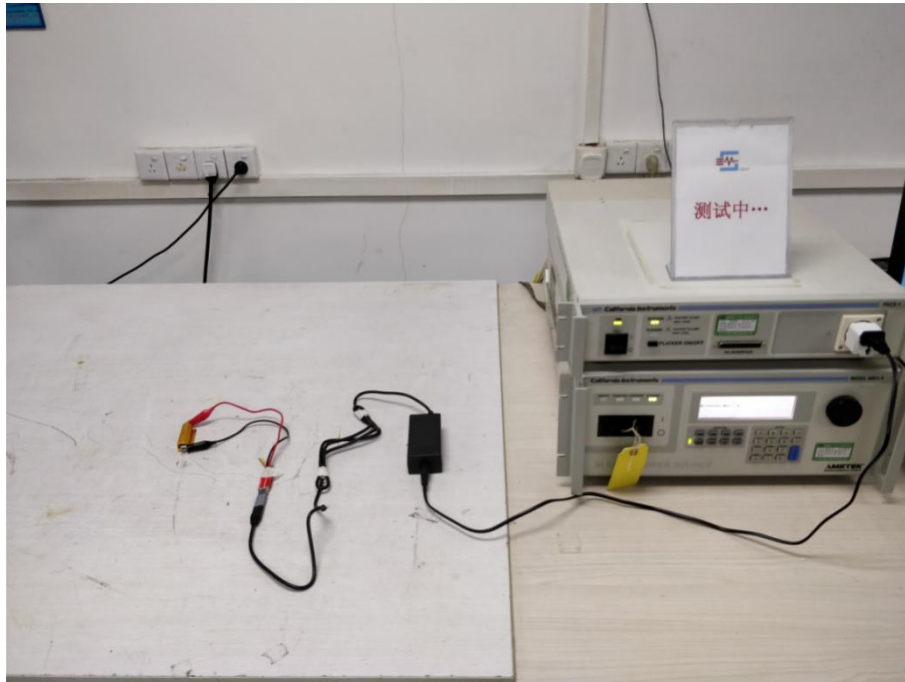
EN 61000-4-4/5/11 Test View



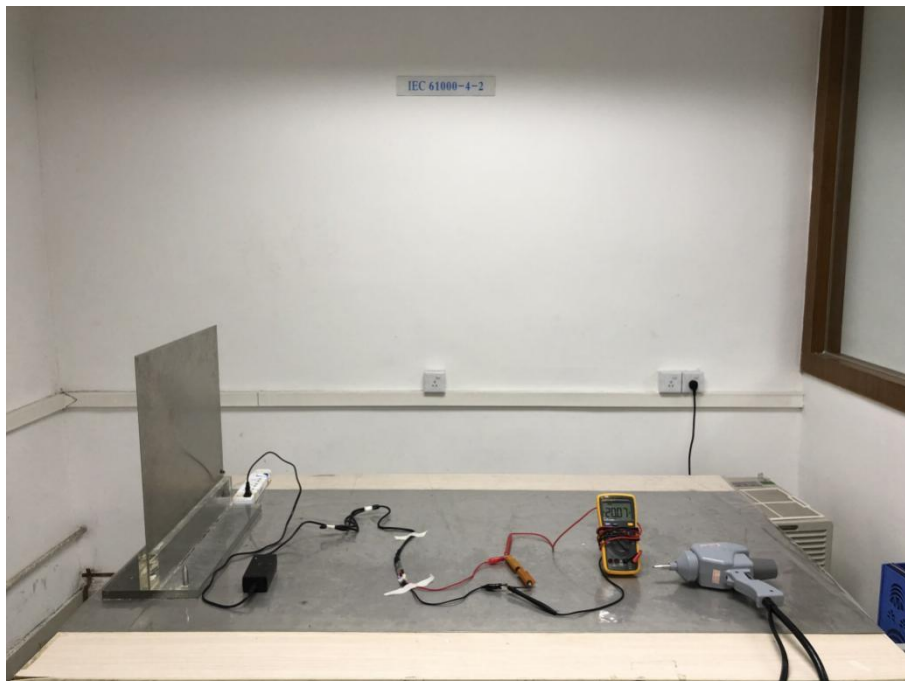
EN 61000-4-6 Test View**EN 61000-4-8 Test View**

GT96605-G2A3-T2**Conduction Emission Test View****Radiation Emission Test View**

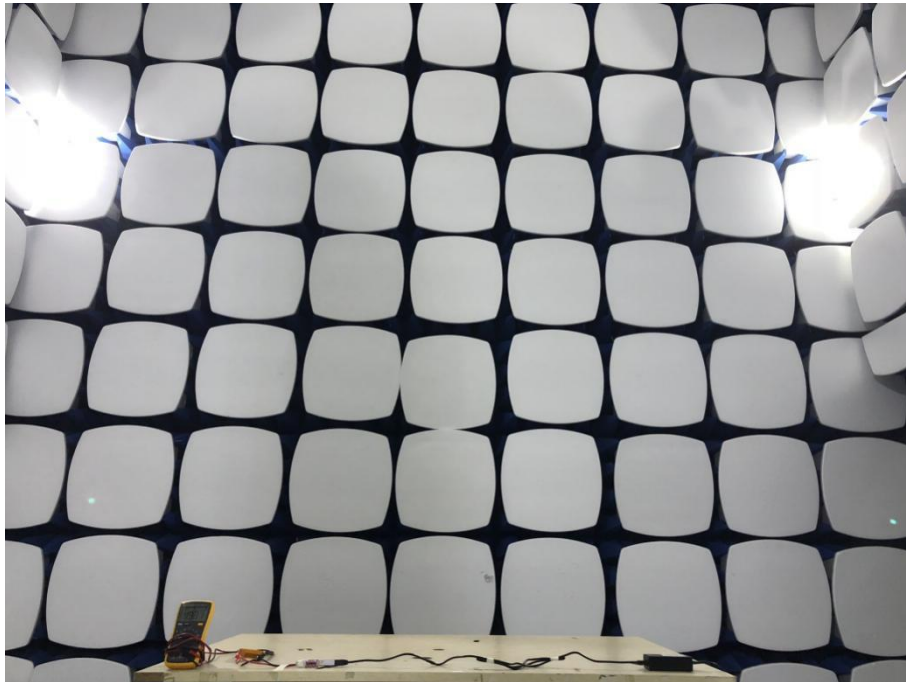
Harmonic/Flicker Test View



EN 61000-4-2 Test View

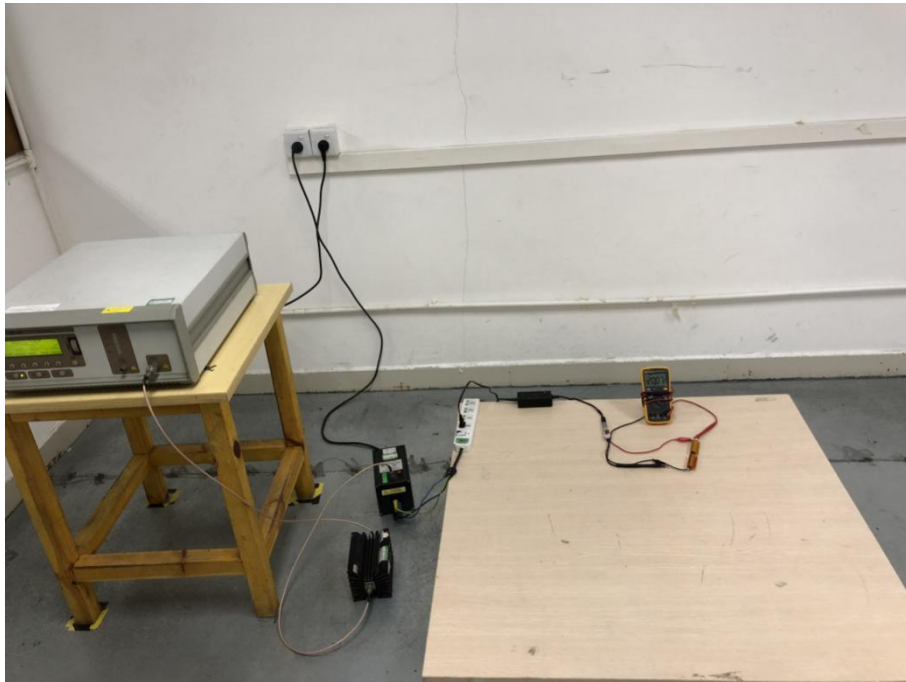
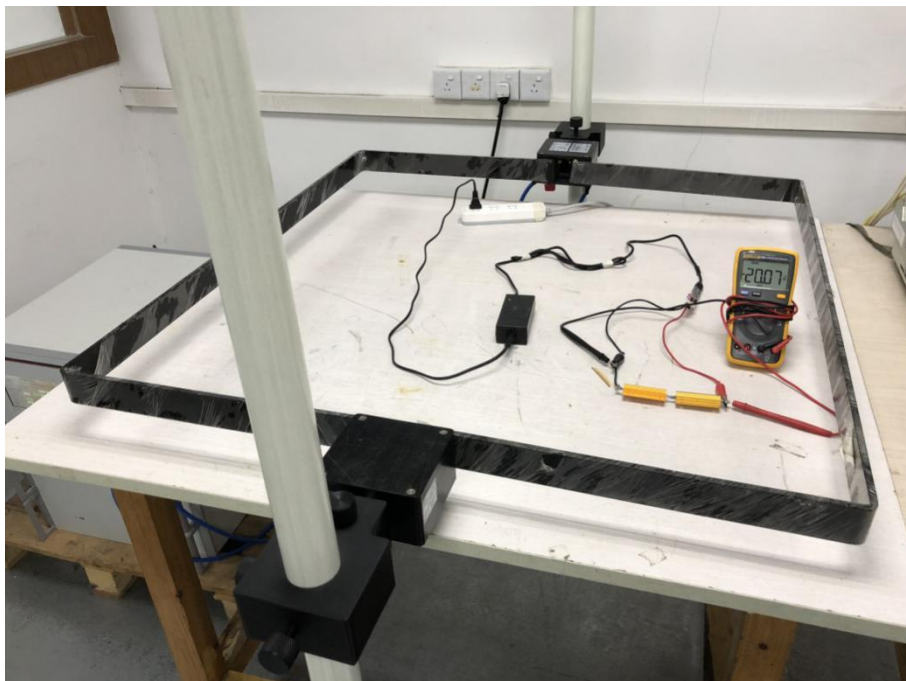


EN 61000-4-3 Test View



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



EN 61000-4-6 Test View**EN 61000-4-8 Test View**

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