

TEST REPORT

Applicant:

Address of Applicant:

Manufacturer:

Address of

Manufacturer:

Equipment Under Test (EUT)

Product Name: camping lantern

Model No.: CL312-SM/USB (#5818981)

Applicable standards: EN IEC 55015:2019+A11:2020
EN IEC 61547:2023
EN IEC 61000-3-2:2019+A1:2021
EN 61000-3-3:2013+A2:2021

Date of sample receipt: March 28, 2024

Date of Test: March 28- April 01, 2024

Date of report issued: April 01, 2024

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Luo

Laboratory Manager

This 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 compiler and approver.



2 Version

| Version No. | Date | Description |
|-------------|----------------|-------------|
| 00 | April 01, 2024 | Original |
| | | |
| | | |
| | | |
| | | |
| | | |

Prepared By:

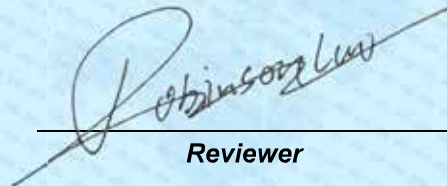


Project Engineer

Date:

April 01, 2024

Reviewed By:



Reviewer

Date:

April 01, 2024

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4 Test Summary

| Test item | Test Requirement | Test Method | Class / Severity | Result |
|--|------------------|------------------|--|--------|
| Radiated electromagnetic disturbances (9kHz-30MHz) | EN IEC 55015 | EN IEC 55015 | Table 8 | Pass |
| Radiated electromagnetic disturbances | EN IEC 55015 | EN IEC 55015 | Table 10 | Pass |
| Disturbance voltages | EN IEC 55015 | EN IEC 55015 | Table 1 | Pass |
| Disturbance voltage wired network interfaces other than power supply | EN IEC 55015 | EN IEC 55015 | Table 2 | N/A |
| Disturbance voltage local wired ports | EN IEC 55015 | EN IEC 55015 | Table 5 | N/A |
| Harmonic Emission | EN IEC 61000-3-2 | EN IEC 61000-3-2 | Class C | Pass |
| Flicker Emission | EN 61000-3-3 | EN 61000-3-3* | Clause 5 of EN61000-3-3 | N/A |
| Electrostatic discharges | EN IEC 61547 | EN 61000-4-2 | Contact:±4kV Air: ±2, ±4, ±8kV | Pass |
| Radio-frequency electromagnetic fields | EN IEC 61547 | EN 61000-4-3 | 3V/m 80%, 1kHz, AM | Pass |
| Fast Transients | EN IEC 61547 | EN 61000-4-4 | AC ± 1.0kV | Pass |
| Surges | EN IEC 61547 | EN 61000-4-5 | Table 10 | Pass |
| Injected currents | EN IEC 61547 | EN 61000-4-6 | 3Vrms (emf), 80%, 1kHz Amp. Mod. | Pass |
| Voltage dips and short interruptions | EN IEC 61547 | EN 61000-4-11 | 0 % UT* for 0.5per 70 % UT* for 10per | Pass |

Remark:

*: Limits are not specified when LED luminaires with rating less than or equal to 600W (EN 61000-3-3:2013+A2:2021, AnnexA (A.2)).

UT* is the nominal supply voltage.

N/A: Not applicable.

5 General Information

5.1 General Description of EUT

| | |
|---------------|---|
| Product Name: | camping lantern |
| Model No.: | CL312-SM/USB (#5818981) |
| Power Supply: | USB input: DC 5V Battery: DC 3.7V, 4000mAh USB output: DC 4.2V,1A |

Remark: The relevant information of the sample is provided by the entrusting company, and the laboratory is not responsible for its authenticity.

5.2 Test mode and voltage

| | |
|------------------------------------|---|
| Test mode: | |
| Operation + Charge mode | Keep the EUT in the operation and charging status. |
| Operation + Discharge mode | Keep the EUT in the operation and discharging status. |
| Test voltage: | |
| USB input: DC 5V& Battery: DC 3.7V | |

5.3 Description of Support Units

| Manufacturer | Description | Model | Serial Number |
|---------------|----------------|--------------|---------------|
| Apple adapter | USB Charger | A1443 | N/A |
| BX | Slide rheostat | 7-23 3A 110Ω | 20100030430 |

5.4 Monitoring of EUT for All Immunity Test

| | |
|---------|--|
| Visual: | Monitored the luminous intensity of the EUT. |
| Audio: | N/A |

5.5 Deviation from Standards

| |
|-------|
| None. |
|-------|

5.6 Abnormalities from Standard Conditions

| |
|-------|
| None. |
|-------|

5.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.: 381383**

Designation Number: CN5029

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

- **ISED —Registration No.: 9079A**

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing.

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

5.8 Test Location

All test items were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480; Fax: 0755-27798960

6 Test Instruments List

| Radiated Emission: | | | | | | |
|--------------------|-------------------------------------|--------------------------------|-----------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | 3m Semi- Anechoic Chamber | ZhongYu Electron | 9.2(L)*6.2(W)* 6.4(H) | GTS250 | June 23, 2021 | June 22, 2024 |
| 2 | Control Room | ZhongYu Electron | 6.2(L)*2.5(W)* 2.4(H) | GTS251 | N/A | N/A |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESU26 | GTS203 | April 14, 2023 | April 13, 2024 |
| 4 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9168 | GTS640 | March 19, 2023 | March 18, 2025 |
| 5 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | BBHA 9120 D | GTS208 | April 17, 2023 | April 16, 2025 |
| 6 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 7 | Wideband Radio Communication Tester | Rohde & Schwarz | CMW500 | GTS575 | April 14, 2023 | April 13, 2024 |
| 8 | Loop Antenna | ZHINAN | ZN30900A | GTS534 | Nov. 13, 2023 | Nov.12, 2024 |
| 9 | Broadband Preamplifier | SCHWARZBECK | BBV9718 | GTS535 | April 14, 2023 | April 13, 2024 |
| 10 | Amplifier(1GHz-26.5GHz) | HP | 8449B | GTS601 | April 14, 2023 | April 13, 2024 |
| 11 | Horn Antenna (18-26.5GHz) | / | UG-598A/U | GTS664 | Oct. 29, 2023 | Oct. 28, 2024 |
| 12 | Horn Antenna (26.5-40GHz) | A.H Systems | SAS-573 | GTS665 | Oct. 29, 2023 | Oct. 28, 2024 |
| 13 | FSV Signal Analyzer (10Hz-40GHz) | Keysight | FSV-40-N | GTS666 | March 12, 2024 | March 11, 2025 |
| 14 | Amplifier | / | LNA-1000-30S | GTS650 | April 14, 2023 | April 13, 2024 |
| 15 | CDNE M2+M3-16A | HCT | 30MHz-300MHz | GTS692 | Nov. 08, 2023 | Nov.07, 2024 |
| 16 | Wideband Amplifier | / | WDA-01004000-15P35 | GTS602 | April 14, 2023 | April 13, 2024 |
| 17 | Thermo meter | JINCHUANG | GSP-8A | GTS643 | April 19, 2023 | April 18, 2024 |
| 18 | RE cable 1 | GTS | N/A | GTS675 | July 31. 2023 | July 30. 2024 |
| 19 | RE cable 2 | GTS | N/A | GTS676 | July 31. 2023 | July 30. 2024 |
| 20 | RE cable 3 | GTS | N/A | GTS677 | July 31. 2023 | July 30. 2024 |
| 21 | RE cable 4 | GTS | N/A | GTS678 | July 31. 2023 | July 30. 2024 |
| 22 | RE cable 5 | GTS | N/A | GTS679 | July 31. 2023 | July 30. 2024 |
| 23 | RE cable 6 | GTS | N/A | GTS680 | July 31. 2023 | July 30. 2024 |
| 24 | RE cable 7 | GTS | N/A | GTS681 | July 31. 2023 | July 30. 2024 |
| 25 | RE cable 8 | GTS | N/A | GTS682 | July 31. 2023 | July 30. 2024 |

| Loop | | | | | | |
|------|---------------------|------------------|----------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Shielding Room | ZhongYu Electron | 7.3(L)x3.1(W)x2.9(H) | GTS252 | July 12, 2022 | July 11, 2027 |
| 2 | EMI Test Receiver | ROHDE & SCHWARZ | ESCI 7 | GTS552 | April 14, 2023 | April 13, 2024 |
| 3 | TPIPLE-LOOP ANTENNA | EVERFINE | LLA-2 | GTS539 | April 14, 2023 | April 13, 2024 |
| 4 | Thermo meter | JINCHUANG | GSP-8A | GTS642 | April 19, 2023 | April 18, 2024 |

| Conducted Emission | | | | | | |
|--------------------|----------------------|-------------------------|----------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Shielding Room | ZhongYu Electron | 7.3(L)x3.1(W)x2.9(H) | GTS252 | July 12, 2022 | July 11, 2027 |
| 2 | EMI Test Receiver | R&S | ESCI 7 | GTS552 | April 14, 2023 | April 13, 2024 |
| 3 | LISN | ROHDE & SCHWARZ | ENV216 | GTS226 | April 14, 2023 | April 13, 2024 |
| 4 | Coaxial Cable | GTS | N/A | GTS227 | N/A | N/A |
| 5 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 6 | Thermo meter | JINCHUANG | GSP-8A | GTS642 | April 19, 2023 | April 18, 2024 |
| 7 | Absorbing clamp | Elektronik-Feinmechanik | MDS21 | GTS229 | April 14, 2023 | April 13, 2024 |
| 8 | ISN | SCHWARZBECK | NTFM 8158 | GTS565 | April 14, 2023 | April 13, 2024 |
| 9 | High voltage probe | SCHWARZBECK | TK9420 | GTS537 | April 14, 2023 | April 13, 2024 |
| 10 | Antenna end assembly | Weinschel | 1870A | GTS560 | April 14, 2023 | April 13, 2024 |

| ESD | | | | | | |
|------|----------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | ESD Simulator | LINCEL | ESD-203B | GTS645 | April 17, 2023 | April 16, 2024 |
| 2 | Thermo meter | KTJ | TA328 | GTS243 | April 18, 2023 | April 17, 2024 |

| Conducted Immunity | | | | | | |
|--------------------|------------------|-----------------|----------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Signal Generator | ROHDE & SCHWARZ | SMB 100A | GTS553 | April 14, 2023 | April 13, 2024 |
| 2 | CDN | LionCEL | CDN-M3-16 | GTS554 | April 14, 2023 | April 13, 2024 |
| 3 | CDN | CYBERTEK | EM 5070 | GTS559 | April 14, 2023 | April 13, 2024 |
| 4 | Power amplifier | rflight | NTWPA-00010475 | GTS555 | April 14, 2023 | April 13, 2024 |
| 5 | ATT | SUNWAVE | SJ-50-06DB | GTS556 | April 14, 2023 | April 13, 2024 |
| 6 | Clamp | SCHAFFNER | KEMZ 801 | GTS558 | April 14, 2023 | April 13, 2024 |
| 7 | Thermo meter | JINCHUANG | GSP-8A | GTS642 | April 19, 2023 | April 18, 2024 |

| Harmonic/ Flicker | | | | | | |
|-------------------|--------------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Power Analyzer H/F | EMTEST | LFZ-1-16 | GTS646 | April 14, 2023 | April 13, 2024 |
| 2 | AC POWER SUPPLY | EMTEST | ACS500 | GTS236 | April 14, 2023 | April 13, 2024 |
| 3 | Thermo meter | JINCHUANG | GSP-8A | GTS639 | April 18, 2023 | April 17, 2024 |

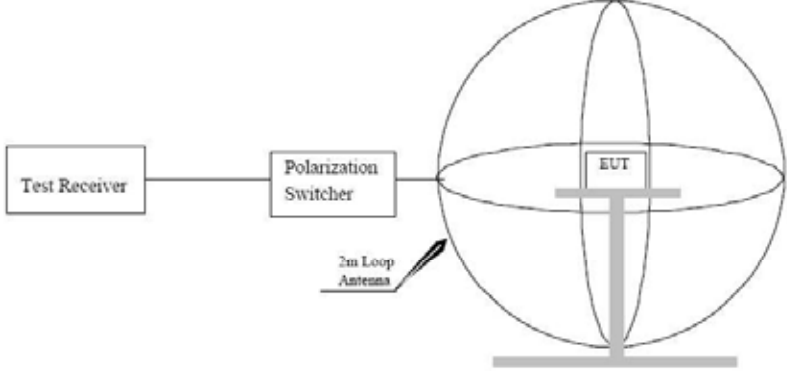
| EFT, Surge, Voltage dips and Interruption | | | | | | |
|---|----------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | EMTEST system | EMTEST | UCS500N | GTS239 | April 14, 2023 | April 13, 2024 |
| 2 | Clamp | EMTEST | HFK | GTS557 | April 14, 2023 | April 13, 2024 |
| 3 | Thermo meter | JINCHUANG | GSP-8A | GTS639 | April 18, 2023 | April 17, 2024 |

| Radiated Immunity | | | | | | |
|-------------------|-------------------------------------|--------------|-------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Probe | STT | SEM-600 | GTS648 | April 17, 2023 | April 16, 2024 |
| 2 | Stacked Log.-Per.-Broadband Antenna | SCHWARZBECK | STLP 9129 | GTS658 | Aug.04, 2023 | Aug.03, 2024 |
| 3 | MXG vector Signal Generator | Agilent | N5181A | GTS659 | Nov. 08, 2023 | Nov.07, 2024 |
| 4 | Power amplifier | Micotop | MPA-20-1000-250 | GTS660 | Aug.04, 2023 | Aug.03, 2024 |
| 5 | Power amplifier | Micotop | MPA-1000-6000-100 | GTS661 | Aug.04, 2023 | Aug.03, 2024 |
| 6 | EPM S SERIES POWER METER | Agilent | E4419B | GTS662 | Nov. 08, 2023 | Nov.07, 2024 |
| 7 | E-SERIES AVG POWER SENSOR | HP | E9301A | GTS670 | Nov. 08, 2023 | Nov.07, 2024 |
| 8 | Thermo meter | JINCHUANG | GSP-8A | GTS643 | April 19, 2023 | April 18, 2024 |

| General used equipment: | | | | | | |
|-------------------------|----------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Barometer | KUMAO | SF132 | GTS647 | April 19, 2023 | April 18, 2024 |

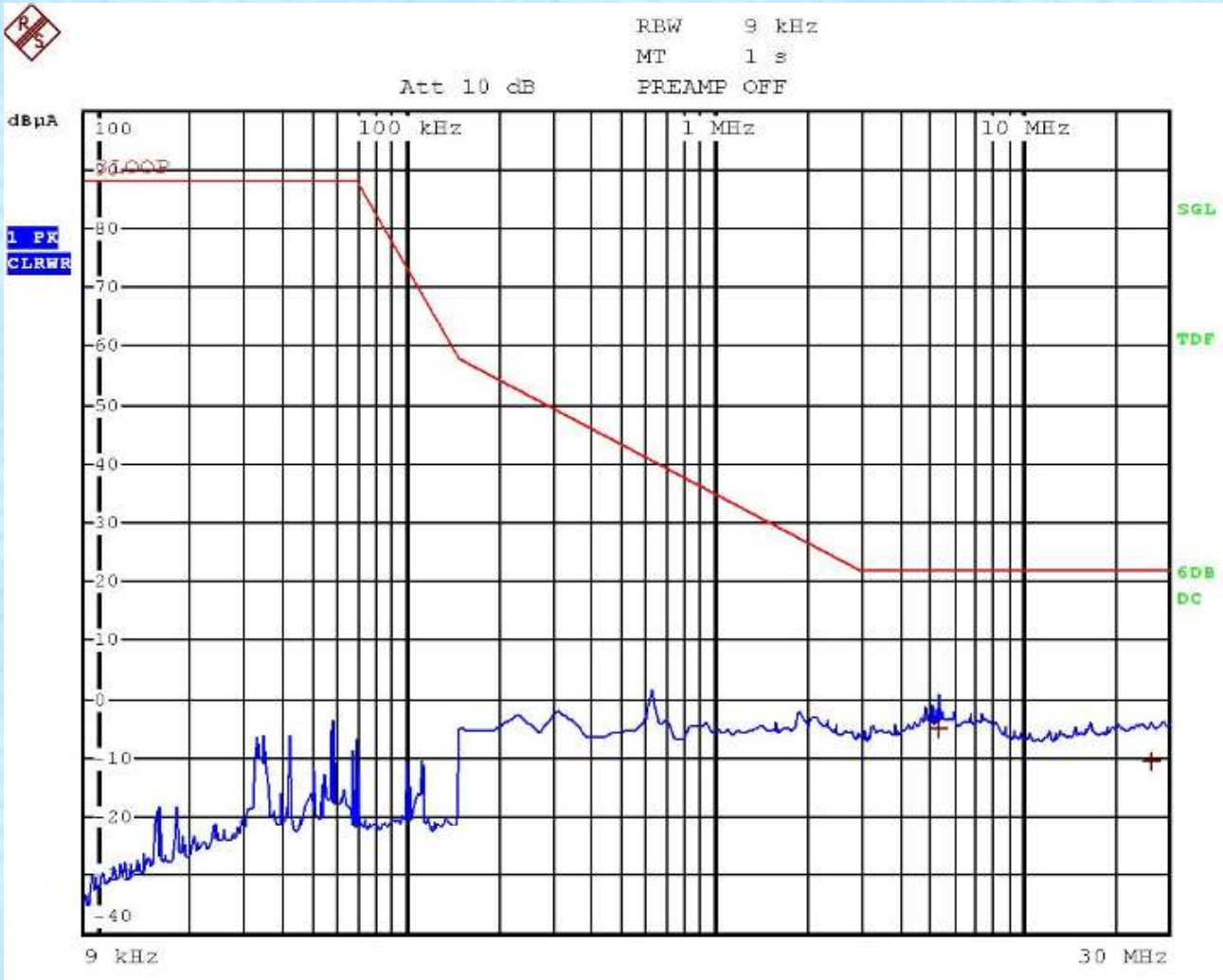
7 Emission Test Results

7.1 Radiated Electromagnetic Disturbance(9kHz-30MHz)

| | | | | | | |
|---|--|------------|--------------------------------------|-------|------------|-----------|
| Test Requirement: | EN IEC 55015 | | | | | |
| Test Method: | EN IEC 55015 | | | | | |
| Test Frequency Range: | 9kHz to 30MHz | | | | | |
| Receiver set: | Frequency | Detector | RBW | VBW | Value | |
| | 9KHz~150KHz | Quasi-peak | 200Hz | 600Hz | Quasi-peak | |
| | 150KHz~30MHz | Quasi-peak | 9KHz | 30KHz | Quasi-peak | |
| Limit: | Frequency range (MHz) | | Limits for loop diameter dBuA @2m | | | |
| | 0.009-0.070 | | 88 | | | |
| | 0.070-0.150 | | 88 to 58* | | | |
| | 0.15-3.0 | | 58 to 22* | | | |
| | 3.0-30 | | 22 | | | |
| *Decreasing linearly with the logarithm of the frequency. For electrodeless lamps and luminaires, the limit in the frequency range of 2,2 MHz to 3,0 MHz is 58 dB(μA) for 2 m, 51dB(μA) for 3 m and 45 dB(μA) for 4 m loop diameter. | | | | | | |
| Test Setup: |  | | | | | |
| Test procedure | <ol style="list-style-type: none"> 1. An initial pre-scan was performed in the 2m loop antenna using the spectrum analyser in peak detection mode. 2. The EUT was measured for X(A), Y(B), Z(C) polarities. 3. No further quasi-peak measurements were performed since no peak emissions from the EUT were detected within 6dB of the limit for 2m diameter loop antenna. | | | | | |
| Test Instruments: | Temp.: | 25 °C | Humid.: | 50% | Press.: | 1 012mbar |
| Measurement Record: | Uncertainty: 3.26dB | | | | | |
| Test Instruments: | Refer to section 6 for details | | | | | |
| Test mode: | Refer to section 5.2 for details only show the worst case. | | | | | |
| Test results: | Pass | | | | | |

Measurement Data

X:



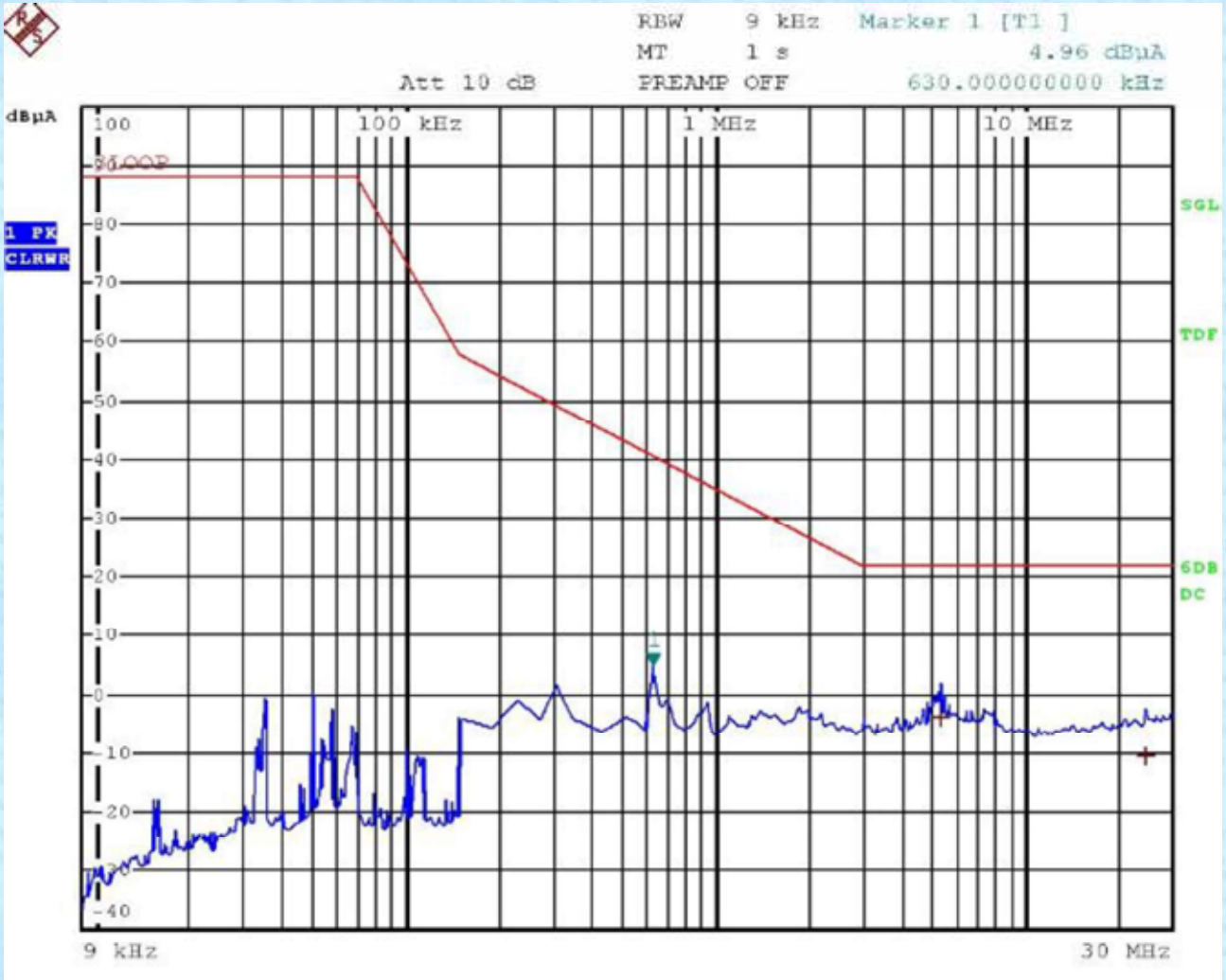
```

Trace1:      3LOOP
Trace2:      ---
Trace3:      ---

```

| TRACE | FREQUENCY | LEVEL dBµA | DELTA LIMIT dB |
|--------------|-----------|------------|----------------|
| 1 Quasi Peak | 5.31 MHz | -4.98 | -26.98 |
| 1 Quasi Peak | 26.11 MHz | -10.31 | -32.31 |

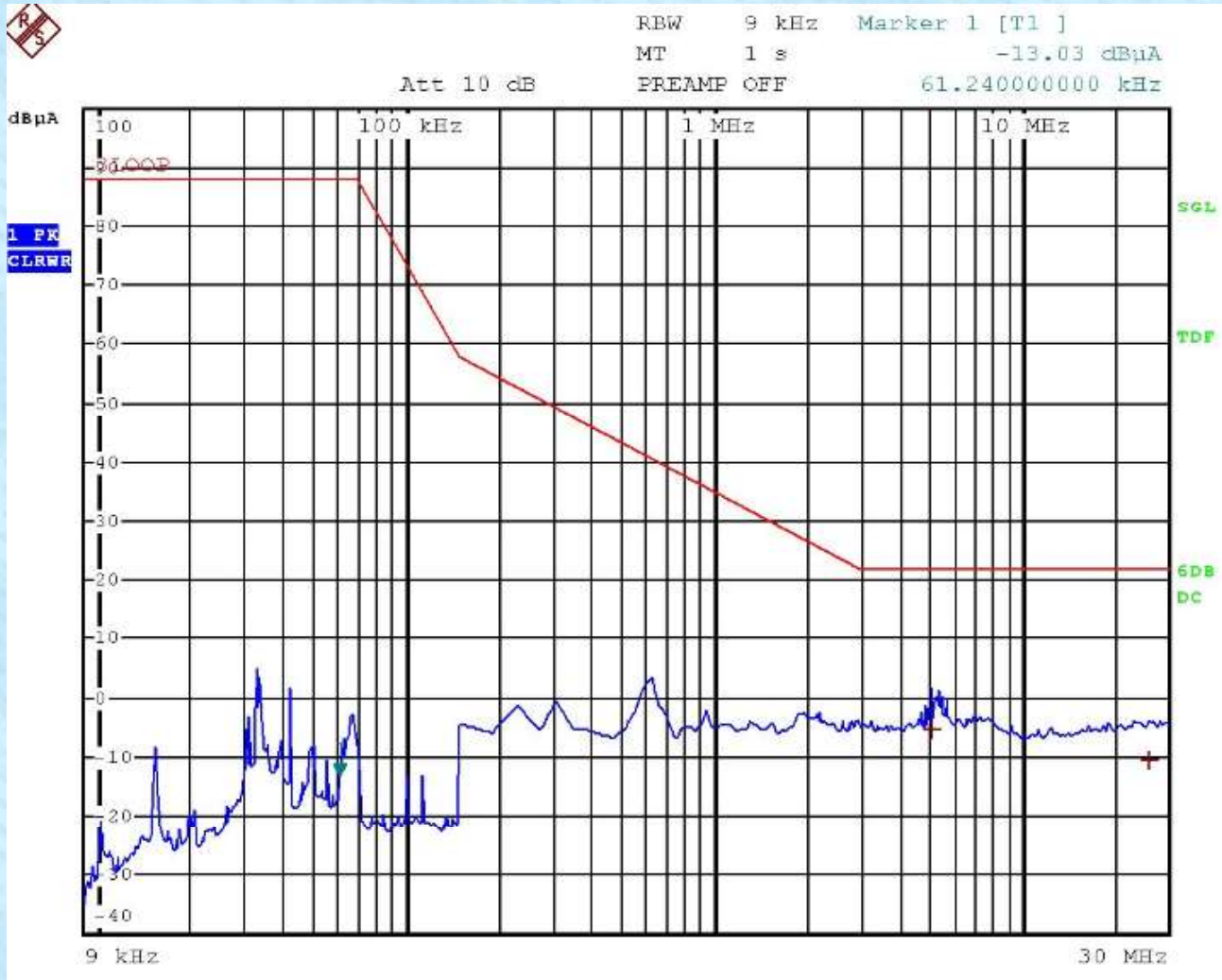
Y:



```
Trace1: 3LOOP
Trace2: ---
Trace3: ---
```

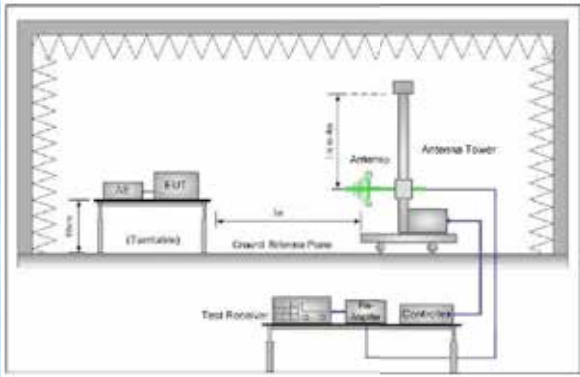
| TRACE | FREQUENCY | LEVEL dBµA | DELTA LIMIT dB |
|--------------|-----------|------------|----------------|
| 1 Quasi Peak | 5.31 MHz | -3.85 | -25.85 |
| 1 Quasi Peak | 24.67 MHz | -10.52 | -32.52 |

Z:



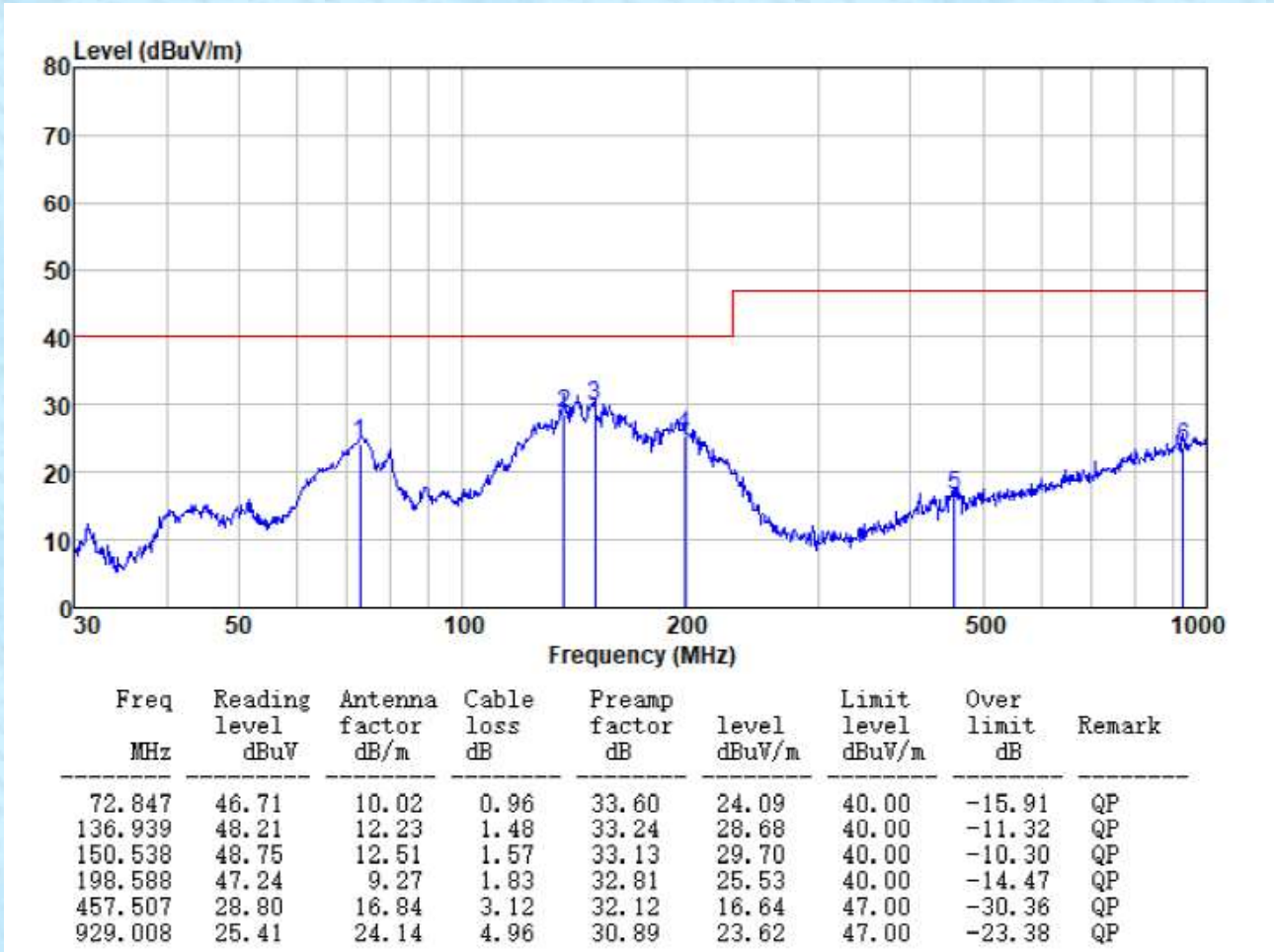
| Trace1: | 31LOOP | | |
|--------------|-----------|------------|----------------|
| Trace2: | --- | | |
| Trace3: | --- | | |
| TRACE | FREQUENCY | LEVEL dBμA | DELTA LIMIT dB |
| 1 Quasi Peak | 5.11 MHz | -5.41 | -27.41 |
| 1 Quasi Peak | 25.79 MHz | -10.39 | -32.39 |

7.2 Radiated electromagnetic disturbances(30MHz-1000MHz)

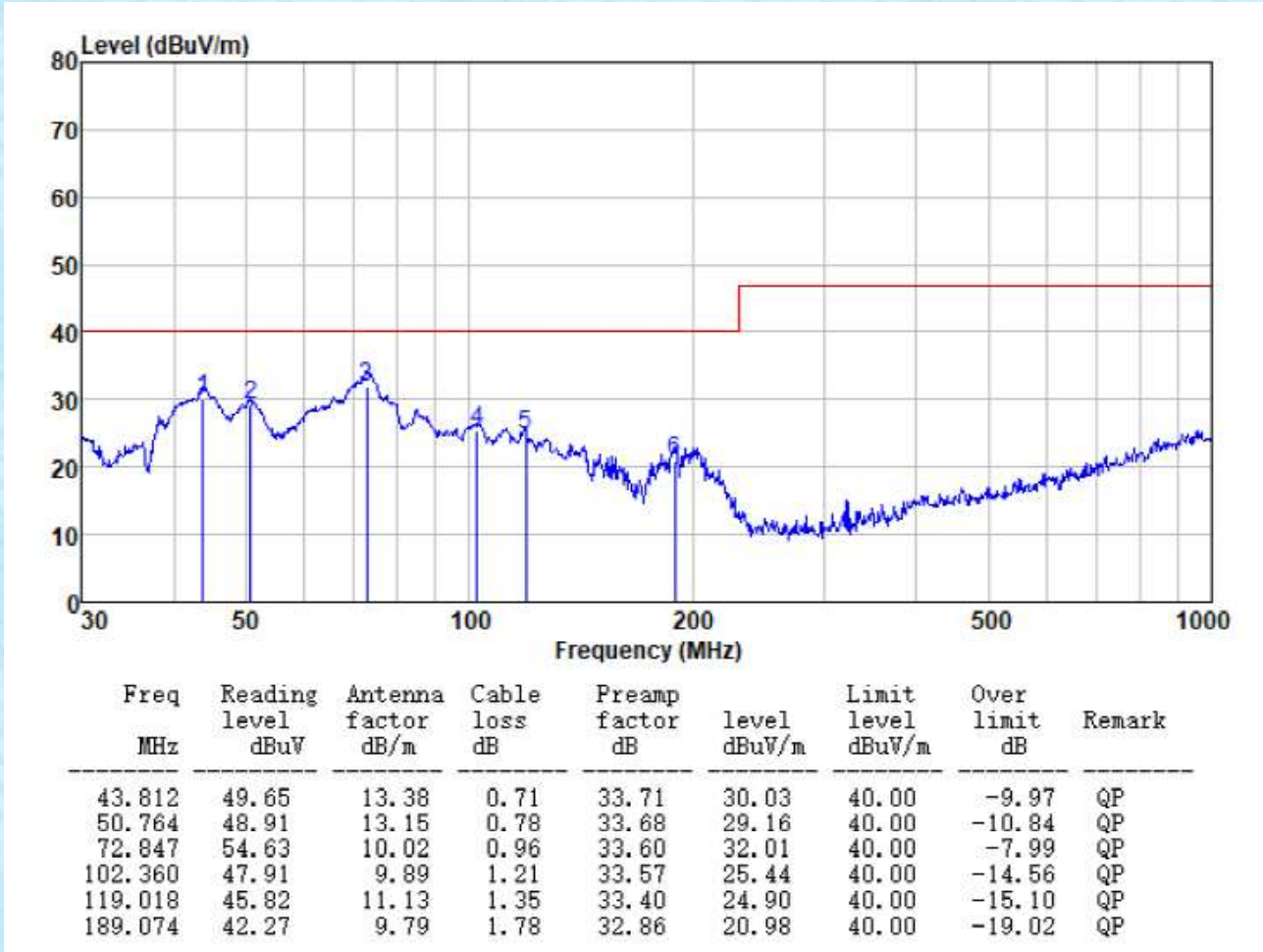
| | | | | | | |
|-----------------------|--|-------|---------|------------------|---------|-----------|
| Test Requirement: | EN IEC 55015 | | | | | |
| Test Method: | EN IEC 55015 | | | | | |
| Test Frequency Range: | 30MHz to 1000MHz | | | | | |
| Test site: | Measurement Distance: 3m | | | | | |
| Limit: | Frequency range(MHz) | | | Limit @3m (dBuV) | | |
| | 30 to 230 | | | 40.00 | | |
| | 230 to 1000 | | | 47.00 | | |
| | * At the transition frequency, the lower limit applies. | | | | | |
| Test setup: |  | | | | | |
| Test procedure | <ol style="list-style-type: none"> 1. The radiated emissions test was conducted in a semi-anechoic chamber. 2. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation. 3. Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT. 4. The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization. | | | | | |
| Test Instruments: | Temp.: | 25 °C | Humid.: | 50% | Press.: | 1 012mbar |
| Measurement Record: | Uncertainty: 3.8039dB (30MHz-200MHz) 3.9679dB (200MHz-1GHz) | | | | | |
| Test Instruments: | Refer to section 6 for details | | | | | |
| Test mode: | Refer to section 5.2 for details only show the worst case. | | | | | |
| Test results: | Pass | | | | | |

Measurement Data

| | | | |
|------------|----------------------------|-------------------|------------|
| Test mode: | Operation + Discharge mode | Antenna Polarity: | Horizontal |
|------------|----------------------------|-------------------|------------|



| | | | |
|------------|----------------------------|-------------------|----------|
| Test mode: | Operation + Discharge mode | Antenna Polarity: | Vertical |
|------------|----------------------------|-------------------|----------|



Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Pre-amplifier. The basic equation with a sample calculation is as follows:

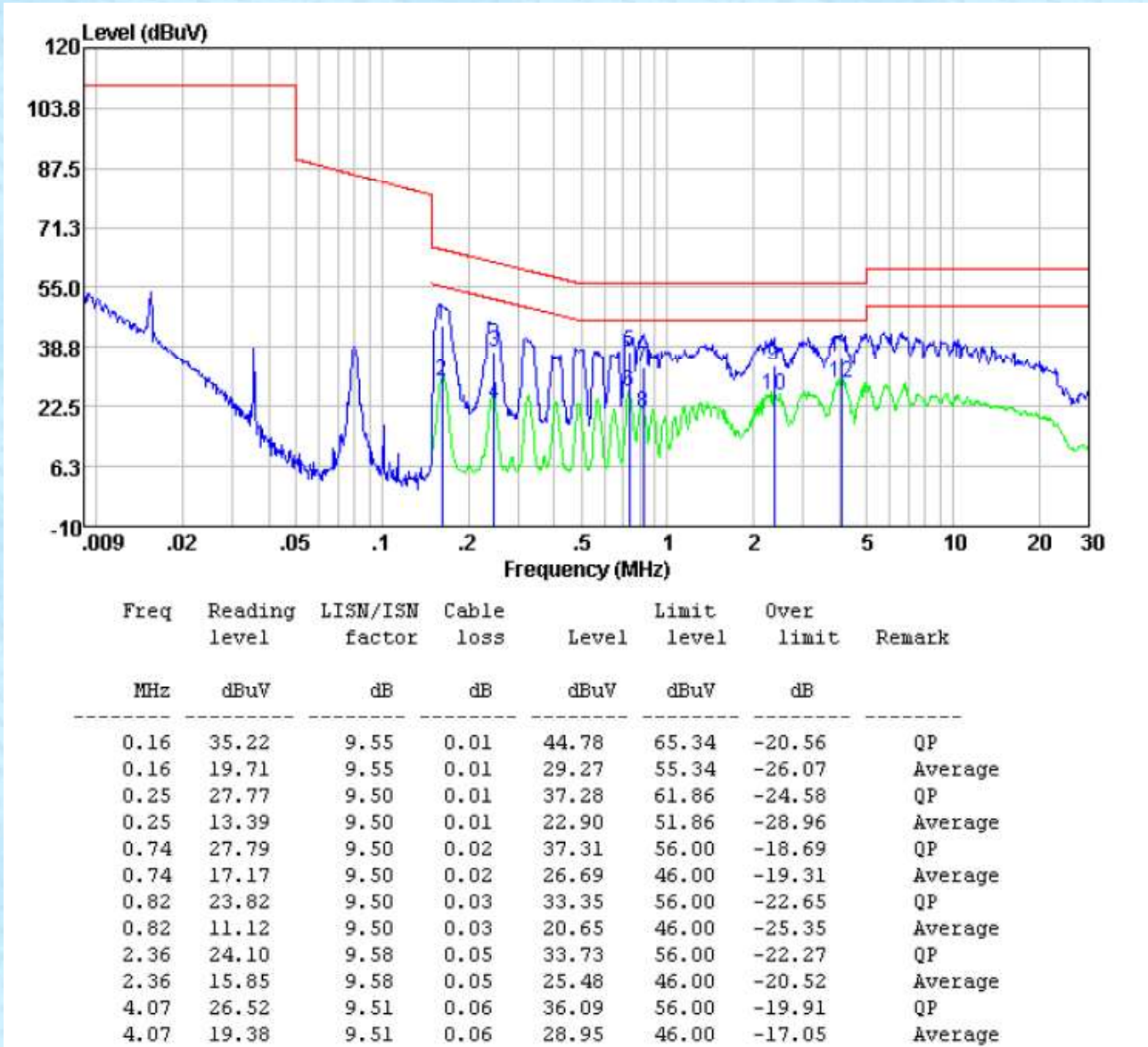
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor

7.3 Disturbance voltages

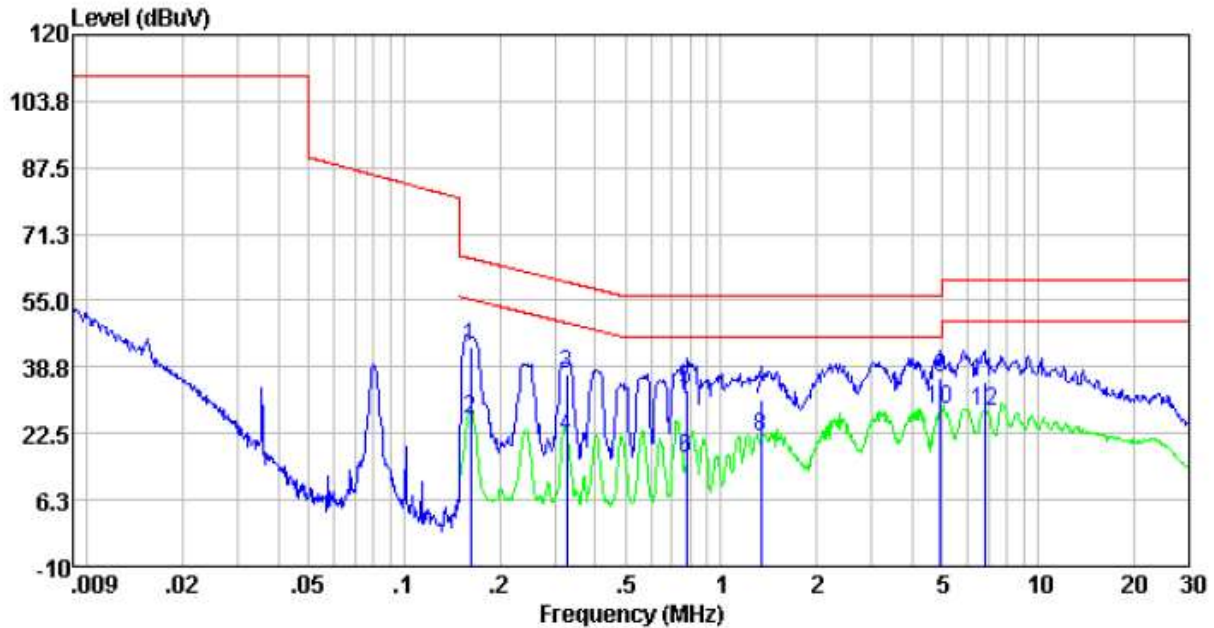
| | | | | | | |
|--|--|--------------|---------|-----------|---------|-----------|
| Test Requirement: | EN IEC 55015 | | | | | |
| Test Method: | EN IEC 55015 | | | | | |
| Test Frequency Range: | 9kHz to 30MHz | | | | | |
| Receiver setup: | Frequency range | RBW | | VBW | | |
| | 9KHz~150KHz | 200Hz | | 600Hz | | |
| | 150KHz~30MHz | 9KHz | | 30KHz | | |
| Limit: | Frequency range (MHz) | Limit (dBuV) | | | | |
| | | Quasi-peak | | Average | | |
| | 0.009-0.05 | 110 | | - | | |
| | 0.05-0.15 | 90-80* | | - | | |
| | 0.15-0.5 | 66 to 56* | | 56 to 46* | | |
| | 0.5-5 | 56 | | 46 | | |
| | 5-30 | 60 | | 50 | | |
| * Decreases with the logarithm of the frequency. | | | | | | |
| Test setup: | <p>Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p> | | | | | |
| Test procedure | <ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to EN IEC 55015 Class B on conducted measurement. | | | | | |
| Test Instruments: | Temp.: | 25 °C | Humid.: | 50% | Press.: | 1 012mbar |
| Measurement Record: | Uncertainty: 3.44dB | | | | | |
| Test Instruments: | Refer to section 6 for details | | | | | |
| Test mode: | Refer to section 5.2 for details only show the worst case. | | | | | |
| Test results: | Pass | | | | | |

Measurement Data

| | | | |
|------------|-------------------------|-------------------|------|
| Test mode: | Operation + Charge mode | Antenna Polarity: | Line |
|------------|-------------------------|-------------------|------|



| | | | |
|------------|-------------------------|-------------------|---------|
| Test mode: | Operation + Charge mode | Antenna Polarity: | Neutral |
|------------|-------------------------|-------------------|---------|



| Freq | Reading level | LISN/ISN factor | Cable loss | Level | Limit level | Over limit | Remark |
|------|---------------|-----------------|------------|-------|-------------|------------|---------|
| MHz | dBuV | dB | dB | dBuV | dBuV | dB | |
| 0.16 | 33.97 | 9.55 | 0.01 | 43.53 | 65.38 | -21.85 | QP |
| 0.16 | 16.61 | 9.55 | 0.01 | 26.17 | 55.38 | -29.21 | Average |
| 0.33 | 27.30 | 9.56 | 0.01 | 36.87 | 59.57 | -22.70 | QP |
| 0.33 | 12.25 | 9.56 | 0.01 | 21.82 | 49.57 | -27.75 | Average |
| 0.78 | 23.59 | 9.56 | 0.02 | 33.17 | 56.00 | -22.83 | QP |
| 0.78 | 6.57 | 9.56 | 0.02 | 16.15 | 46.00 | -29.85 | Average |
| 1.34 | 21.21 | 9.55 | 0.04 | 30.80 | 56.00 | -25.20 | QP |
| 1.34 | 11.83 | 9.55 | 0.04 | 21.42 | 46.00 | -24.58 | Average |
| 4.93 | 26.46 | 9.56 | 0.06 | 36.08 | 56.00 | -19.92 | QP |
| 4.93 | 18.52 | 9.56 | 0.06 | 28.14 | 46.00 | -17.86 | Average |
| 6.81 | 25.62 | 9.53 | 0.08 | 35.23 | 60.00 | -24.77 | QP |
| 6.81 | 18.14 | 9.53 | 0.08 | 27.75 | 50.00 | -22.25 | Average |

Notes:

1. An initial pre-scan was performed on the live and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss

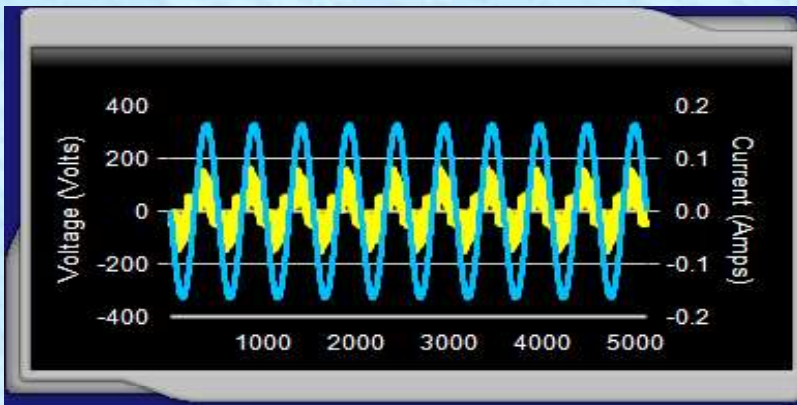
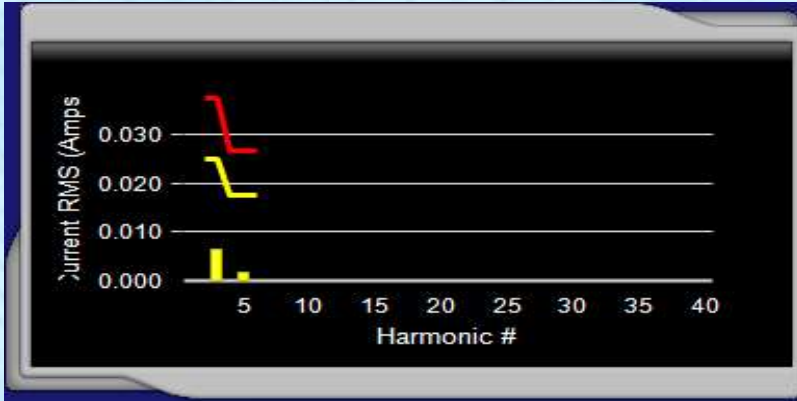
7.4 Harmonics Test Results

| | | | | | | |
|-------------------|----------------------------------|-------|---------|-----|---------|-----------|
| Test Requirement: | EN IEC 61000-3-2 | | | | | |
| Test Method: | EN IEC 61000-3-2 | | | | | |
| Frequency range: | 100Hz to 2kHz | | | | | |
| Measurement Time: | 2.5 min | | | | | |
| Class/Severity: | Class C | | | | | |
| Detector: | As per EN IEC 61000-3-2 | | | | | |
| Test environment: | Temp.: | 25 °C | Humid.: | 50% | Press.: | 1 012mbar |
| Test Instruments: | Refer to section 6 for details | | | | | |
| Test mode: | Refer to section 5.2 for details | | | | | |
| Test results: | Pass | | | | | |

Measurement Data

General Test Data: (Phase A)

| | | | |
|----------------------------|------------------------|-----------------------------|-----------|
| Vrms (Volts)/V-pk/V-CF: | 231.28 / 326.1 / 1.410 | Frequency (Hz): | 50.0001 |
| I_rms (Amps): | 0.033 | Power (VA)/VAR: | 7.7 / 5.2 |
| I_fund/I_ref (Amps): | 0.029 / 0.029 | Power (W): | 5.7 |
| I_peak (Amps)/I-CF: | 0.095 / 2.451 | Power Factor: | 0.736 |
| V-THD (%): | 0.08 | I-THD (%): | 28.44 |
| I-THC (A): | 0.008 | Meas. Pwr (Min / Max) | 5.6W/5.7W |
| Phase angle of H5 (deg): | 152.0 | Max Curr Limit (deg): | 65.00 |
| Peak Curr @ (deg) : | 57.77 | Min Current @ 90 (deg) (A): | 0.046 |
| Min Current @ 60 deg (A) : | 0.057 | 3rd Harm Limit (%): | 86.00 |
| 3rd Harm (%) : | 22.34 | 5th Harm Limit (%): | 61.00 |
| 5th Harm (%) : | 5.80 | | |



| Harm No. | Harm. Ave. | Harm. Limit (100%) | % Of Limits | Result (Ave.) | Result (Max.) | Harm. Win. | Harm. Win. (150%) | % Of Max |
|----------|------------|--------------------|-------------|---------------|---------------|------------|-------------------|----------|
| 3 | 0.0065 | 0.0250 | 26.0 | PASS | PASS | 0.0065 | 0.0374 | 17.4 |
| 5 | 0.0017 | 0.0177 | 9.5 | PASS | PASS | 0.0017 | 0.0266 | 6.4 |

| Harm No. | Harm. Ave. | Harm. Limit (100%) | % Of Limits | Result (Ave.) | Result (Max.) | Harm. Win. | Harm. Win. (150%) | % Of Max |
|----------|------------|--------------------|-------------|---------------|---------------|------------|-------------------|----------|
| 2 | 0.0002 | 0.0014 | 11.8 | PASS | PASS | 0.0002 | 0.0022 | 8.4 |
| 3 | 0.0054 | 0.0194 | 27.8 | PASS | PASS | 0.0054 | 0.0292 | 18.6 |
| 4 | 0.0001 | 0.0072 | 1.3 | PASS | PASS | 0.0001 | 0.0108 | 1.0 |
| 5 | 0.0035 | 0.0072 | 48.3 | PASS | PASS | 0.0035 | 0.0108 | 32.4 |
| 6 | 0.0001 | 0.0050 | 1.4 | PASS | PASS | 0.0001 | 0.0076 | 1.0 |
| 7 | 0.0022 | 0.0050 | 42.7 | PASS | PASS | 0.0022 | 0.0076 | 28.7 |
| 8 | 0.0000 | 0.0036 | 1.1 | PASS | PASS | 0.0001 | 0.0054 | 1.0 |
| 9 | 0.0013 | 0.0036 | 37.4 | PASS | PASS | 0.0014 | 0.0054 | 25.3 |
| 10 | 0.0000 | 0.0022 | 1.9 | PASS | PASS | 0.0001 | 0.0032 | 1.6 |
| 11 | 0.0010 | 0.0022 | 47.1 | PASS | PASS | 0.0010 | 0.0032 | 32.2 |
| 12 | 0.0000 | 0.0022 | 2.1 | PASS | PASS | 0.0001 | 0.0032 | 1.7 |
| 13 | 0.0008 | 0.0022 | 37.2 | PASS | PASS | 0.0008 | 0.0032 | 25.3 |
| 14 | 0.0000 | 0.0022 | 1.8 | PASS | PASS | 0.0000 | 0.0032 | 1.5 |
| 15 | 0.0011 | 0.0022 | 48.9 | PASS | PASS | 0.0011 | 0.0032 | 33.0 |
| 16 | 0.0001 | 0.0022 | 4.2 | PASS | PASS | 0.0001 | 0.0032 | 3.2 |
| 17 | 0.0006 | 0.0022 | 26.0 | PASS | PASS | 0.0006 | 0.0032 | 18.0 |
| 18 | 0.0000 | 0.0022 | 1.5 | PASS | PASS | 0.0000 | 0.0032 | 1.4 |
| 19 | 0.0006 | 0.0022 | 28.4 | PASS | PASS | 0.0006 | 0.0032 | 20.1 |
| 20 | 0.0000 | 0.0022 | 1.4 | PASS | PASS | 0.0000 | 0.0032 | 1.2 |
| 21 | 0.0006 | 0.0022 | 27.7 | PASS | PASS | 0.0006 | 0.0032 | 20.0 |
| 22 | 0.0000 | 0.0022 | 1.3 | PASS | PASS | 0.0000 | 0.0032 | 1.2 |
| 23 | 0.0006 | 0.0022 | 25.6 | PASS | PASS | 0.0006 | 0.0032 | 17.8 |
| 24 | 0.0000 | 0.0022 | 1.2 | PASS | PASS | 0.0000 | 0.0032 | 1.1 |
| 25 | 0.0004 | 0.0022 | 19.7 | PASS | PASS | 0.0004 | 0.0032 | 13.6 |
| 26 | 0.0000 | 0.0022 | 1.2 | PASS | PASS | 0.0000 | 0.0032 | 1.2 |
| 27 | 0.0004 | 0.0022 | 16.2 | PASS | PASS | 0.0004 | 0.0032 | 11.4 |
| 28 | 0.0000 | 0.0022 | 1.0 | PASS | PASS | 0.0000 | 0.0032 | 1.2 |
| 29 | 0.0002 | 0.0022 | 11.3 | PASS | PASS | 0.0003 | 0.0032 | 8.6 |
| 30 | 0.0000 | 0.0022 | 0.9 | PASS | PASS | 0.0000 | 0.0032 | 1.0 |
| 31 | 0.0003 | 0.0022 | 12.6 | PASS | PASS | 0.0003 | 0.0032 | 9.5 |
| 32 | 0.0001 | 0.0022 | 5.2 | PASS | PASS | 0.0001 | 0.0032 | 4.0 |
| 33 | 0.0003 | 0.0022 | 13.7 | PASS | PASS | 0.0003 | 0.0032 | 9.7 |
| 34 | 0.0000 | 0.0022 | 1.2 | PASS | PASS | 0.0001 | 0.0032 | 2.6 |
| 35 | 0.0003 | 0.0022 | 15.7 | PASS | PASS | 0.0004 | 0.0032 | 11.3 |
| 36 | 0.0000 | 0.0022 | 1.1 | PASS | PASS | 0.0001 | 0.0032 | 2.4 |
| 37 | 0.0004 | 0.0022 | 16.7 | PASS | PASS | 0.0004 | 0.0032 | 11.7 |
| 38 | 0.0000 | 0.0022 | 1.5 | PASS | PASS | 0.0001 | 0.0032 | 3.5 |
| 39 | 0.0004 | 0.0022 | 16.6 | PASS | PASS | 0.0004 | 0.0032 | 12.2 |
| 40 | 0.0000 | 0.0022 | 1.0 | PASS | PASS | 0.0001 | 0.0032 | 2.2 |

| Harm No. | Harm. Value | Harm. Limit | % Of Limits | % Of Vfund | Result |
|----------|-------------|-------------|-------------|------------|--------|
| 2 | 0.035 | 0.460 | 7.622 | 0.015 | OK |
| 3 | 0.060 | 2.070 | 2.880 | 0.026 | OK |
| 4 | 0.012 | 0.460 | 2.704 | 0.005 | OK |
| 5 | 0.068 | 0.920 | 7.367 | 0.029 | OK |
| 6 | 0.015 | 0.460 | 3.153 | 0.006 | OK |
| 7 | 0.038 | 0.690 | 5.476 | 0.016 | OK |
| 8 | 0.013 | 0.460 | 2.725 | 0.005 | OK |
| 9 | 0.034 | 0.460 | 7.302 | 0.015 | OK |
| 10 | 0.023 | 0.460 | 5.073 | 0.010 | OK |
| 11 | 0.057 | 0.230 | 24.937 | 0.025 | OK |
| 12 | 0.020 | 0.230 | 8.505 | 0.008 | OK |
| 13 | 0.073 | 0.230 | 31.579 | 0.031 | OK |
| 14 | 0.015 | 0.230 | 6.653 | 0.007 | OK |
| 15 | 0.042 | 0.230 | 18.240 | 0.018 | OK |
| 16 | 0.009 | 0.230 | 4.002 | 0.004 | OK |
| 17 | 0.026 | 0.230 | 11.456 | 0.011 | OK |
| 18 | 0.011 | 0.230 | 4.642 | 0.005 | OK |
| 19 | 0.066 | 0.230 | 28.688 | 0.029 | OK |
| 20 | 0.011 | 0.230 | 4.803 | 0.005 | OK |
| 21 | 0.067 | 0.230 | 28.951 | 0.029 | OK |
| 22 | 0.013 | 0.230 | 5.648 | 0.006 | OK |
| 23 | 0.038 | 0.230 | 16.689 | 0.017 | OK |
| 24 | 0.012 | 0.230 | 5.125 | 0.005 | OK |
| 25 | 0.020 | 0.230 | 8.501 | 0.008 | OK |
| 26 | 0.013 | 0.230 | 5.446 | 0.005 | OK |
| 27 | 0.051 | 0.230 | 22.236 | 0.022 | OK |
| 28 | 0.010 | 0.230 | 4.213 | 0.004 | OK |
| 29 | 0.061 | 0.230 | 26.377 | 0.026 | OK |
| 30 | 0.012 | 0.230 | 5.385 | 0.005 | OK |
| 31 | 0.039 | 0.230 | 16.918 | 0.017 | OK |
| 32 | 0.010 | 0.230 | 4.554 | 0.005 | OK |
| 33 | 0.013 | 0.230 | 5.580 | 0.006 | OK |
| 34 | 0.011 | 0.230 | 4.672 | 0.005 | OK |
| 35 | 0.041 | 0.230 | 17.675 | 0.018 | OK |
| 36 | 0.009 | 0.230 | 3.920 | 0.004 | OK |
| 37 | 0.042 | 0.230 | 18.375 | 0.018 | OK |
| 38 | 0.009 | 0.230 | 4.029 | 0.004 | OK |
| 39 | 0.029 | 0.230 | 12.684 | 0.013 | OK |
| 40 | 0.011 | 0.230 | 4.661 | 0.005 | OK |

7.5 Flicker Test Result

| | |
|-------------------|---|
| Test Requirement: | EN 61000-3-3 |
| Test Method: | N/A: See Remark Below |
| Remark | <p>There is no need for Flicker test to be performed on this product (rated power is less than 600W) in accordance with EN 61000-3-3.</p> <p>Limits are not specified when LED luminaires with rating less than or equal to 600W (EN 61000-3-3:2013+A2:2021, AnnexA (A.2)).</p> |

8 Immunity Test Results

8.1 Performance Criteria Description in Clause 4.2 of EN IEC 61547

| | |
|--------------|---|
| Criterion A: | During the test no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended. |
| Criterion B: | During the test the luminous intensity may change to any value. After the test the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given. |
| Criterion C: | During and after the test any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal if necessary by temporary interruption of the mains supply and/or operating the regulating control. Additional requirement for lighting equipment incorporating a starting device: After the test, the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended. |

| | |
|-------------------|--|
| | 0.5m, was placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges were applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated. |
| Test environment: | Temp.: 24 °C Humid.: 51% Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details |
| Test mode: | Refer to section 5.2 for details only show the worst case. |
| Test results: | Pass |

Measurement Record:

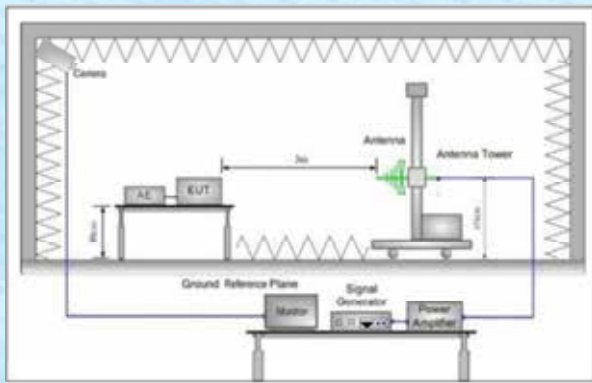
| Test points: | I: Metal interface | | | |
|------------------------|---------------------------------------|-------------------|--------------------------------------|--------|
| | II: Plastic parts | | | |
| Direct discharge | | | | |
| Discharge Voltage (KV) | Type of discharge | Test points | Observations (Performance Criterion) | Result |
| ± 4 | Contact | I | B | Pass |
| ± 2, ± 4, ± 8 | Air | II | B | Pass |
| Indirect discharge | | | | |
| Discharge Voltage (KV) | Type of discharge | Test points | Observation Performance | Result |
| ± 4 | HCP-Bottom/Top/ Front/Back/Left/Right | Edge of the HCP | A | Pass |
| ± 4 | VCP-Front/Back /Left/Right | Center of the VCP | A | Pass |

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

N/A: Not applicable

8.3 Radio-frequency electromagnetic fields

| | |
|------------------------|--|
| Test Requirement: | EN IEC 61547 |
| Test Method: | EN 61000-4-3 |
| Frequency range: | 80MHz to 1GHz |
| Test Level: | 3V/m |
| Modulation: | 80%, 1kHz Amplitude Modulation |
| Performance Criterion: | Criteria A |
| Test setup: |  |
| Test Procedure: | <ol style="list-style-type: none"> 1. For table-top equipment, the EUT was placed in the chamber on a non-conductive table 0.8m high. For arrangement of floor-standing equipment, the EUT was mounted on a non-conductive support 0.1m above the supporting plane. For human body-mounted equipment, the EUT may be tested in the same manner as table top items. 2. If possible, a minimum of 1 m of cable is exposed to the electromagnetic field. Excess length of cables interconnecting units of the EUT shall be bundled low-inductively in the approximate center of the cable to form a bundle 30 cm to 40 cm in length. 3. The EUT was initially placed with one face coincident with the calibration plane. The EUT face being illuminated was contained within the UFA (Uniform Field Area). 4. The frequency ranges to be considered were swept with the signal modulated and pausing to adjust the RF signal level or to switch oscillators and antennas as necessary. Where the frequency range was swept incrementally, the step size was not exceed 1 % of the preceding frequency value. 5. The dwell time of the amplitude modulated carrier at each frequency was not be less than the time necessary for the EUT to be exercised and to respond, and was not less than 0,5 s. 6. The test normally was performed with the generating antenna facing each side of the EUT. 7. The polarization of the field generated by each antenna necessitates testing each selected side twice, once with the antenna positioned vertically and again with the antenna positioned horizontally. 8. The EUT was performed in a configuration to actual installation conditions, a video camera and/or a audio monitor were used to |

| | |
|-------------------|--|
| | monitor the performance of the EUT. |
| Test environment: | Temp.: 25 °C Humid.: 52% Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details |
| Test mode: | Refer to section 5.2 for details only show the worst case. |
| Test results: | Pass |

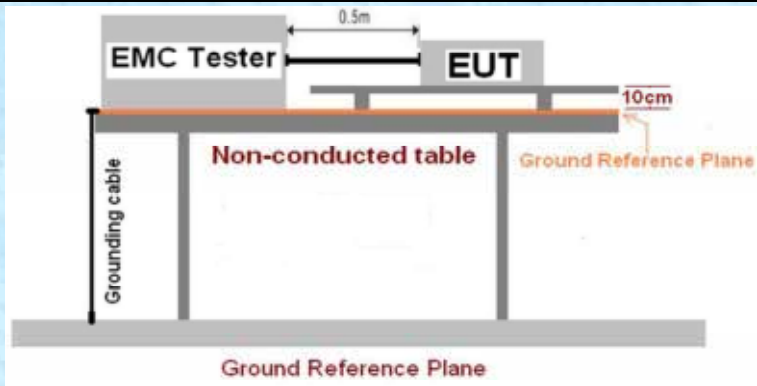
Measurement Record:

| Frequency | Level | Modulation | Antenna Polarization | EUT Face | Observations (Performance Criterion) |
|--------------|-------|---|----------------------|----------|--------------------------------------|
| 80 MHz-1 GHz | 3 V/m | 1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=3seconds | V | Front | A |
| | | | H | | A |
| | | | V | Rear | A |
| | | | H | | A |
| | | | V | Left | A |
| | | | H | | A |
| | | | V | Right | A |
| | | | H | | A |
| | | | V | Top | A |
| | | | H | | A |
| | | | V | Bottom | A |
| | | | H | | A |

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.4 Fast Transients

| | |
|------------------------|---|
| Test Requirement: | EN IEC 61547 |
| Test Method: | EN 61000-4-4 |
| Test Level: | 1.0kV on AC port |
| Polarity: | Positive & Negative |
| Repetition Frequency: | 5kHz |
| Burst Duration: | 15ms |
| Burst Period: | 300ms |
| Test Duration: | 2 minute per level & polarity |
| Performance Criterion: | B |
| Test setup: |  |
| Test Procedure: | <ol style="list-style-type: none"> 1. The EUT and its simulators were placed on the ground reference plane and were insulated from it by a wood support 0.1m + 0.01m thick. 2. The ground reference plane was 1m*1m metallic sheet with 0.65mm minimum thickness. 3. This reference ground plane was project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane was more than 0.5m. All cables to the EUT was placed on the wood support, cables not subject to EFT/B was routed as far as possible from the cable under test to minimize the coupling between the cables. 4. The EUT is connected to the power mains through a coupling device that directly couples the EFT/B interference signal. 5. Each of the Line and Neutral conductors is impressed with burst noise for 2 minutes. 6. The length of the signal and power lines between the coupling device and the EUT is 0.5m |

| | | | |
|-------------------|----------------------------------|-------------|-------------------|
| Test environment: | Temp.: 26 °C | Humid.: 54% | Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details | | |
| Test mode: | Refer to section 5.2 for details | | |
| Test results: | Pass | | |

Measurement Record:

| Lead under Test | Level (±kV) | Coupling Direct/Clamp | Observations (Performance Criterion) | Result |
|-----------------|-------------|--------------------------|---|--------|
| L | ± 1.0 | Direct | A | Pass |
| N | ± 1.0 | Direct | A | Pass |
| L-N | ± 1.0 | Direct | A | Pass |

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.5 Surges

| | | | |
|-----------------------------|--|----------------------|---|
| Test Requirement: | EN IEC 61547 | | |
| Test Method: | EN 61000-4-5 | | |
| Test Level: | Characteristics | Test Levels | |
| | | Self-ballasted lamps | Lighting equipment (except selfballasted lamps ≤ 25 W) |
| | Line to line | ≤ 25 W | > 25 W |
| | Line to ground | ± 0.5 kV | ± 1.0 kV |
| | | | ± 2.0 kV |
| | NOTE In addition to the specified test level, all lower test levels as detailed in IEC 61000-4-5 should also be satisfied. | | |
| Polarity: | Positive & Negative | | |
| Generator source impedance: | 2 Ω (line-line coupling) 12 Ω (line-earth coupling) | | |
| No. of surges: | 5 positive at 90°, 5 negative at 270° | | |
| Performance Criterion: | Criterion C | | |
| Test setup: | | | |
| Test procedure | <ol style="list-style-type: none"> For line-to-line coupling mode, provide a 1.2/50μs voltage surge (at open-circuit condition) and 8/20μs current surge to EUT selected points, and for active line / neutral lines to ground. At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are applied during test. Different phase angles are done individually. Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test. | | |
| Test environment: | Temp.: | 26 °C | Humid.: 53% Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details | | |
| Test mode: | Refer to section 5.2 for details | | |
| Test results: | Pass | | |

Measurement Record:

| Location | Level(kV) | Pulse No | Surge Interval | Phase(deg) | Observations (Performance Criterion) | Result |
|----------|-----------|----------|----------------|------------|--------------------------------------|--------|
| L-N | ±0.5, | 5 | 60s | 90° | A | Pass |
| | ±1.0 | | | 270° | | |

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.6 Injected Currents

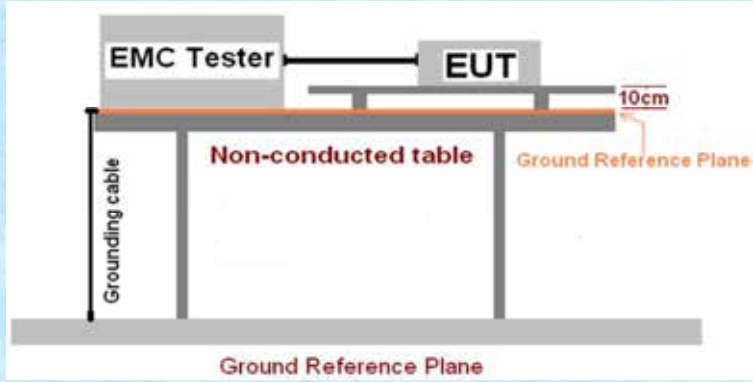
| | |
|------------------------|--|
| Test Requirement: | EN IEC 61547 |
| Test Method: | EN 61000-4-6 |
| Frequency range: | 0.15MHz to 80MHz |
| Test Level: | 3V rms on AC Ports (unmodulated emf into 150 Ω) |
| Modulation: | 80%, 1kHz Amplitude Modulation |
| Performance Criterion: | Criteria A |
| Test setup: | |
| Test Procedure: | <ol style="list-style-type: none"> The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible). The disturbance signal described below is injected to EUT through CDN. The EUT operates within its operational mode(s) under intended climatic conditions after power on. Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion. |
| Test environment: | Temp.: 24 °C Humid.: 51% Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

Measurement Record:

| Frequency | Injected Position | Level | Modulation | Observations (Performance Criterion) | Result |
|-----------------|-------------------|-------|---|--------------------------------------|--------|
| 150kHz to 80MHz | AC Mains | 3Vrms | 1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=2seconds | A | Pass |

Remark: Performance Criteria: A, B, C: Refer to section 8.1 for details

8.7 Voltage Dips and Voltage Interruptions

| | |
|------------------------------|--|
| Test Requirement: | EN IEC 61547 |
| Test Method: | EN 61000-4-11 |
| Test Level: | 0% of U_T (Supply Voltage) for 0.5 Periods 70 % of U_T (Supply Voltage) for 10 Periods |
| No. of Dips / Interruptions: | 3 per Level |
| Performance Criterion: | 100% VD ----Performance criterion: B 30% VD ----Performance criterion: C |
| Test setup: |  |
| Test Procedure: | <ol style="list-style-type: none"> The EUT and test generator were setup as shown on above setup photo. The interruptions are introduced at selected phase angles with specified duration. Record any degradation of performance. |
| Test environment: | Temp.: 26 °C Humid.: 53% Press.: 1 012mbar |
| Test Instruments: | Refer to section 6 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

Measurement Record:

| Test Level % U_T | Duration (Periods) | Phase angle | No. of drop out | Time between dropout | Observations (Performance Criterion) | Result |
|--------------------|--------------------|-------------|-----------------|----------------------|--------------------------------------|--------|
| 0 | 0.5 | 0°, 180° | 3 | 10s | A | Pass |
| 70 | 10 | 0°, 180° | 3 | 10s | B | Pass |

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

9 Test Setup Photo

Radiated Emission



Radiated Electromagnetic Disturbance



Disturbance voltages



Electrostatic discharge



Harmonic



EFT/Surge/V-Dips



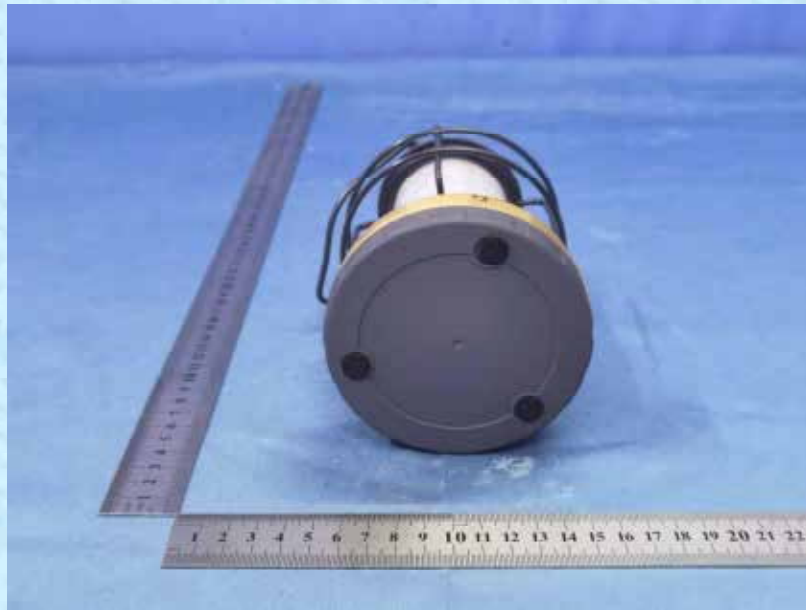
CS

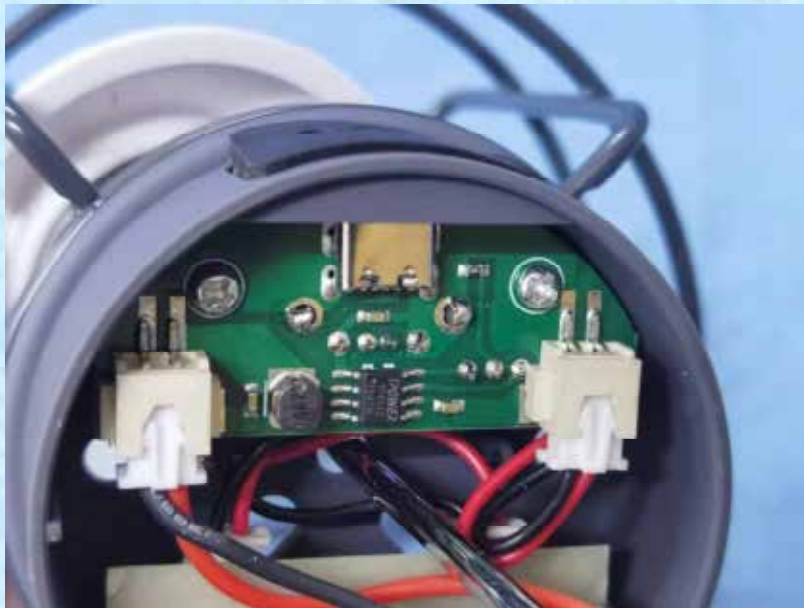


10 EUT Constructional Details









-----End-----