# TEST REPORT

| | |
|---|---|
| **Application No.:** | GZEM2308004072LM |
| **Applicant:** | Blueview Elec-optic Tech Co., Ltd |
| **Address of Applicant:** | No.1000, Section 2, 2nd Konggang Road, Southwest Aviation Industrial Development Zone, Chengdu, Sichuan, China |
| **Manufacturer:** | Blueview Elec-optic Tech Co., Ltd |
| **Address of Manufacturer:** | No.1000, Section 2, 2nd Konggang Road, Southwest Aviation Industrial Development Zone, Chengdu, Sichuan, China |
| **Factory:** | Blueview Elec-optic Tech Co., Ltd |
| **Address of Factory:** | No.1000, Section 2, 2nd Konggang Road, Southwest Aviation Industrial Development Zone, Chengdu, Sichuan, China |
| **Equipment Under Test (EUT):** | |
| **EUT Name:** | LED Strip |
| **Model No.:** | ANX-X-230V-50M, AN2-4, AWHE1608-D ♣ |
| ♣ | Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical. |
| **Standard(s) :** | EN IEC 55015: 2019+A11:2020 |
| | EN 61547: 2009 |
| | EN IEC 61000-3-2: 2019+A1:2021 |
| | EN 61000-3-3: 2013+ A1:2019+A2:2021 |
| **Date of Receipt:** | 2023-08-02 |
| **Date of Test:** | 2023-08-04 to 2023-11-14 |
| **Date of Issue:** | 2023-11-27 |
| **Test Result:** | **Pass*** |

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

Jerry Chan
Manager

| Revision Record | | | |
|---|---|---|---|
| **Version** | **Report No.** | **Date** | **Remark** |
| 01 | GZEM230800407201 | 2023-11-27 | Original |
| | | | |
| | | | |

| **Authorized for issue by:** | | | | |
|---|---|---|---|---|
| | | Michael Huang<br>**Michael Huang/Project Engineer** | | |
| | | Terry Lai<br>**Terry Lai/Reviewer** | | |


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# 2 Test Summary

| Emission Part | | | | |
|---|---|---|---|---|
| **Item** | **Standard** | **Method** | **Requirement** | **Result** |
| Conducted Emissions at Mains Terminals (9kHz-30MHz) | EN IEC 55015: 2019+A11:2020 | EN IEC 55015:2019+A11:2020 | Table 1 | Pass |
| Radiated Emissions (30MHz-1GHz) | | EN IEC 55015:2019+A11:2020 | Table 10 | Pass |
| Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop | | EN IEC 55015:2019+A11:2020 | Table 8 | Pass |
| Harmonic Current Emission | EN IEC 61000-3-2: 2019+A1:2021 | EN IEC 61000-3-2: 2019+A1:2021 | Class C | Pass |
| Voltage Fluctuations and Flicker | EN 61000-3-3: 2013+ A1:2019+A2:2021 | EN 61000-3-3: 2013+ A1:2019+A2:2021 | Clause 5 | Pass |

**: The EUT passed Harmonic Current Emission test after modifications.

| Immunity Part | | | | |
|---|---|---|---|---|
| **Item** | **Standard** | **Method** | **Requirement** | **Result** |
| Electrostatic Discharge | EN 61547: 2009 | EN 61000-4-2:2009 | 4kV Contact Discharge, 8kV Air Discharge | Pass |
| Radiated Immunity (80MHz-1GHz) | | EN IEC 61000-4-3:2020 | 3V/m, 80%, 1kHz Amp. Mod,1% increment | Pass |
| Electrical Fast Transients Burst at AC Mains Power Port | | EN 61000-4-4:2012 | 1kV, 5/50ns Tr/Td, 5kHz Repetition Frequency | Pass |
| Surge at Power Port | | EN 61000-4-5:2014+A1:2017 | 1.2/50μs Tr/Td, 1.0kV Line to Line | Pass |
| Conducted Immunity at AC Mains Power Port (150kHz-80MHz) | | EN 61000-4-6:2014 | 3Vrms (emf),80%,1kHz Amp. Mod. | Pass |
| Voltage Dips and Interruptions | | EN IEC 61000-4-11:2020 | 0 % UT for 0.5cycle, 70 % UT for 10cycles, UT is Supply Voltage | Pass |

**Note:**

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

**♣ Declaration of EUT Family Grouping:**

Model No.: ANX-X-230V-50M, AN2-4, AWHE1608-D

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on appearance and color temperature.

Therefore, only one model ANX-X-230V-50M was tested in this report.


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# 3 Contents

# 4 General Information

## 4.1 Details of E.U.T.

Power supply: AC 230V 50Hz
Rated Power: 494W
Test voltage: AC 230V

Cable(s): 2 wires x about 1.2m unscreened AC mains cable.
(The AC cable, supply by the SGS).

## 4.2 Description of Support Units

The EUT has been tested as an independent unit.

## 4.3 Measurement Uncertainty

| Test Item | Measurement Uncertainty |
|---|---|
| Conducted Emissions at Mains Terminals (9kHz-30MHz) | 3.18dB (9kHz to 150kHz)<br>2.76dB (150kHz to 30MHz) |
| Radiated Emissions (30MHz-1GHz) | 5.00dB (30MHz-1GHz):3m<br>4.38dB (30MHz-1GHz):10m |
| Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop | 3.08dB (9kHz to 150kHz)<br>3.12dB (150kHz to 30MHz)(LLAS) |
| Remark:<br>The $U_{lab}$ (lab Uncertainty) is less than $U_{cispr}$ (CISPR Uncertainty), so the test results<br>– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;<br>– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit. | |

## 4.4 Test Location

All tests were performed at:
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663
Tel: +86 20 82155555 Fax: +86 20 82075059
No tests were sub-contracted.

## 4.5 Test Facility

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

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

## 4.6 Deviation from Standards

None

## 4.7 Abnormalities from Standard Conditions

The EUT passed Harmonic Current Emission test after modifications.

## 4.8 EMS Monitor

Visual: LED lighting of the EUT.
Audio: N/A
Other: N/A

# 5 Equipment List

| Conducted Emissions at Mains Terminals (9kHz-30MHz) | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Coaxial Cable | HangTianXing | 2m | EMC0107 | 2023-08-04 | 2024-08-03 |
| Shielding Room | ChangZhou ZhongYu | 8m x 3m x 3.8m | EMC0306 | 2022-10-16 | 2025-10-15 |
| Two-Line V-Network-GZ | Rohde & Schwarz | ENV216 | EMC2135 | 2023-09-08 | 2024-09-07 |
| EMI Test Receiver (9kHz-3.6GHz) | Rohde & Schwarz | ESR3 | EMC2221 | 2023-05-19 | 2024-05-18 |
| Test Software E3r | Audix | Ver.6.11812 | GZE100-77 | N/A | N/A |
| Conical Metal Housing | SGS-EMC | N/A | EMC0167 | 2022-04-19 | 2024-04-18 |

| Radiated Emissions (30MHz-1GHz) | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| 966 Anechoic Chamber | Shenzhen C.R.T | CRTSGSSAC966 | EMC2230 | 2022-04-12 | 2025-04-11 |
| EMI Test Receiver(1Hz-8GHz) | Rohde & Schwarz | ESW8 | EMC2229 | 2023-02-20 | 2024-02-19 |
| Amplifier(9k-1000MHz) | SONOMA | 310 | EMC2237 | 2023-04-13 | 2024-04-12 |
| TRILOG Broadband Antenna（25M-2GHz) | SCHWRZBECK | VULB 9168 | EMC2238 | 2022-04-20 | 2025-04-19 |
| Coaxial Cable | Times Microwave | BL03-NMNM-6 | EMC2239 | 2023-06-14 | 2025-06-13 |
| Test Software E3 | Audix | Ver.6.191211 | GZE100-81 | N/A | N/A |

| Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| EMI Test Receiver (10Hz-26.5GHz) | Rohde & Schwarz | ESIB26 | EMC0522 | 2022-12-16 | 2023-12-15 |
| Test Software E3 | Audix | Ver.6.120110a | GZE100-61 | N/A | N/A |
| Coaxial Cable (RE 2m Loop) | INFINITE | CC223N-10 | EMC0703 | 2023-06-25 | 2025-06-24 |
| 2m Large Loop Antenna System (ZN3040) | ZHINAN | ZN3040 | EMC2187 | 2022-03-26 | 2024-03-25 |

| Harmonic Current Emission | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Digital power analyzer for harmonics & flicker testing | EMTEST | DPA 500N | EMC2235 | 2023-04-21 | 2024-04-20 |
| Programmable multifunctional ac/dc power source | EMTEST | NETWAVE 7-400 | EMC2234 | 2023-04-21 | 2024-04-20 |
| NET.Control | EMTEST | Ver 3.2.3 | GZE100-80 | N/A | N/A |

| Voltage Fluctuations and Flicker | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Digital power analyzer for harmonics & flicker testing | EMTEST | DPA 500N | EMC2235 | 2023-04-21 | 2024-04-20 |
| Programmable multifunctional ac/dc power source | EMTEST | NETWAVE 7-400 | EMC2234 | 2023-04-21 | 2024-04-20 |
| NET.Control | EMTEST | Ver 3.2.3 | GZE100-80 | N/A | N/A |

| Electrostatic Discharge | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Temperature & Humidity | Shanghai Meteorological Instrument Factory Co., Ltd. | ZJ1-2B | EMC0078 | 2023-06-12 | 2024-06-11 |
| ESD Ground Plane | SGS-EMC | 3m x 3m | EMC0804 | N/A | N/A |
| Aneroid Barometer | Shanghai Meteorological Instrument Factory Co., Ltd. | YM3 | EMC2181 | 2022-11-18 | 2023-11-17 |
| ESD Simulator-E | EMTEST | NX30 | EMC2186 | 2023-02-20 | 2024-02-19 |


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| Radiated Immunity (80MHz-1GHz) | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| 743 Compact 3m Semi-Anechoic Chamber | ChangZhou ZhongYu | N/A | EMC0525 | 2022-10-16 | 2025-10-15 |
| Monitor System | Mitsubish Corp. | M-0552AB | EMC0909 | N/A | N/A |
| Oscilloscope | Tektronix | TDS3052C | EMC2055 | 2023-11-10 | 2024-11-09 |
| Laser Probe Interface | RF Microwave Instrumentation | FI7000 | EMC2089 | N/A | N/A |
| Open Switch And Control Unit | Rohde & Schwarz | OSP130 | EMC2090 | N/A | N/A |
| Broadband Amplifier (80MHz~1GHz/250W) | Rohde & Schwarz | BBA150 | EMC2091 | 2022-12-16 | 2023-12-15 |
| Signal Generator (9kHz-6GHz) | Rohde & Schwarz | SMB100A | EMC2093 | 2022-12-16 | 2023-12-15 |
| Laser Probe | RF Microwave Instrumentation | FL7006 | EMC2094 | 2023-04-26 | 2024-04-27 |
| NRP-Z91 Power Sensor (9kHz-6GHz) | Rohde & Schwarz | NPR-Z91 | EMC2095 | 2022-12-16 | 2023-12-15 |
| NRP-Z91 Power Sensor (9kHz-6GHz) | Rohde & Schwarz | NPR-Z91 | EMC2096 | 2022-12-16 | 2023-12-15 |
| High-Gain Log-preiodic Antenna | Rohde & Schwarz | HL046E | EMC2097 | 2022-02-14 | 2025-02-13 |
| RI Cable | Rohde & Schwarz | 7m | EMC2098 | 2023-05-19 | 2024-05-18 |
| Test Software EMC32 | Rohde & Schwarz | Ver. 10.60.10 | GZE100-63 | N/A | N/A |

| Electrical Fast Transients Burst at AC Mains Power Port | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Oscilloscope | Tektronix | TDS3052C | EMC2055 | 2023-11-10 | 2024-11-09 |
| EMC Immunity Test System | TESEQ AG | NSG 3060&CDN3061&INA 6502 CIB | EMC2072 | 2022-12-16 | 2023-12-15 |
| Test Software WIN 3000 | TESEQ AG | Ver 1.3.2 | GZE100-68 | N/A | N/A |

| Surge at Power Port | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Oscilloscope | Tektronix | TDS3052C | EMC2055 | 2023-11-10 | 2024-11-09 |
| EMC Immunity Test System | TESEQ AG | NSG 3060&CDN3061&INA 6502 CIB | EMC2072 | 2022-12-16 | 2023-12-15 |
| Test Software WIN 3000 | TESEQ AG | Ver 1.3.2 | GZE100-68 | N/A | N/A |


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| Conducted Immunity at AC Mains Power Port (150kHz-80MHz) | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Dual Directional coupler | Werlatone Inc. | C1795 | EMC1105 | 2023-05-15 | 2024-05-14 |
| CDN M2 | Schaffner Chase | CDN-M2-16 | EMC1107 | 2023-10-20 | 2025-10-19 |
| CDN M2/M3 | Elektronik-Feinmechanik | L-801:M2/M3 | EMC2048 | 2023-07-18 | 2024-07-17 |
| Test System for Conducted and Radiated Immunity | TESEQ AG | NSG 4070B-80 | EMC2115 | 2023-11-10 | 2024-11-09 |
| Test Software NSG4070_Ctrl1 | TESEQ AG | Ver.1.3.0.1 | GZE100-72 | N/A | N/A |
| Oscilloscope | Tektronix | TDS3052C | EMC2055 | 2023-11-10 | 2024-11-09 |

| Voltage Dips and Interruptions | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No.** | **Inventory No.** | **Cal Date** | **Cal Due Date** |
| Oscilloscope | Tektronix | TDS3052C | EMC2055 | 2023-11-10 | 2024-11-09 |
| EMC Immunity Test System | TESEQ AG | NSG 3060&CDN3061&INA 6502 CIB | EMC2072 | 2022-12-16 | 2023-12-15 |
| Test Software WIN 3000 | TESEQ AG | Ver 1.3.2 | GZE100-68 | N/A | N/A |

| General used equipment | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model No** | **Inventory No** | **Cal Date** | **Cal Due Date** |
| DMM | Fluke | 73 | EMC0006 | 2023-06-11 | 2024-06-10 |
| DMM | Fluke | 73 | EMC0007 | 2023-06-11 | 2024-06-10 |

# 6 Emission Test Results

## 6.1 Conducted Emissions at Mains Terminals (9kHz-30MHz)

| | |
|---|---|
| Test Requirement: | EN IEC 55015: 2019+A11:2020 |
| Test Method: | EN IEC 55015:2019+A11:2020 |
| Limit: | |
| 0.009MHz – 0.05MHz | 110dB(μV) quasi-peak |
| 0.05MHz – 0.15MHz | 90dB(μV)-80dB(μV) quasi-peak |
| 0.15MHz – 0.5MHz | 66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average |
| 0.5MHz – 5MHz | 56dB(μV) quasi-peak, 46dB(μV) average |
| 5MHz – 30MHz | 60dB(μV) quasi-peak, 50dB(μV) average |
| Detector: | Peak for pre-scan (200Hz resolution bandwidth) 0.009M to 0.15MHz |
| | Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz |

### 6.1.1 E.U.T. Operation

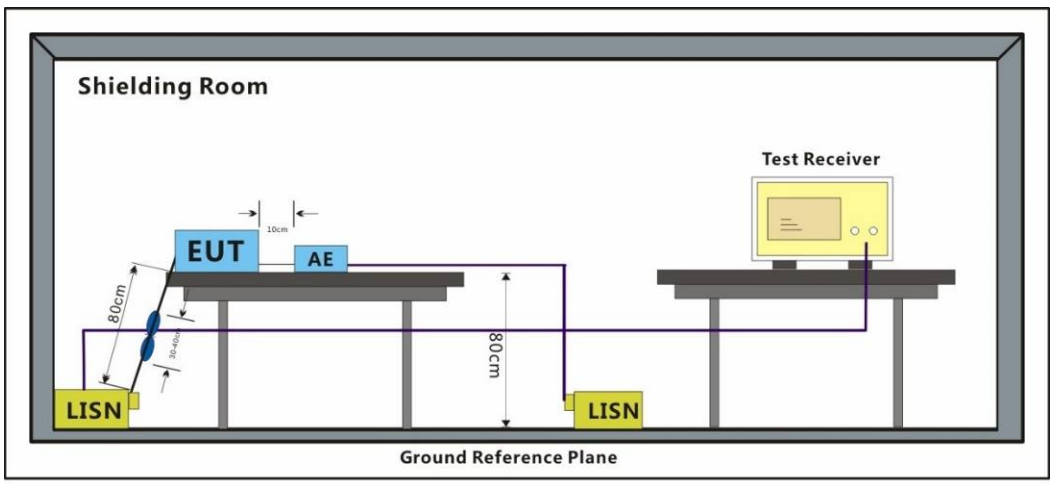
Operating Environment:

Temperature: 24.9 °C Humidity: 52.5 % RH Atmospheric Pressure: 1002 mbar

### 6.1.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 6.1.3 Test Setup Diagram



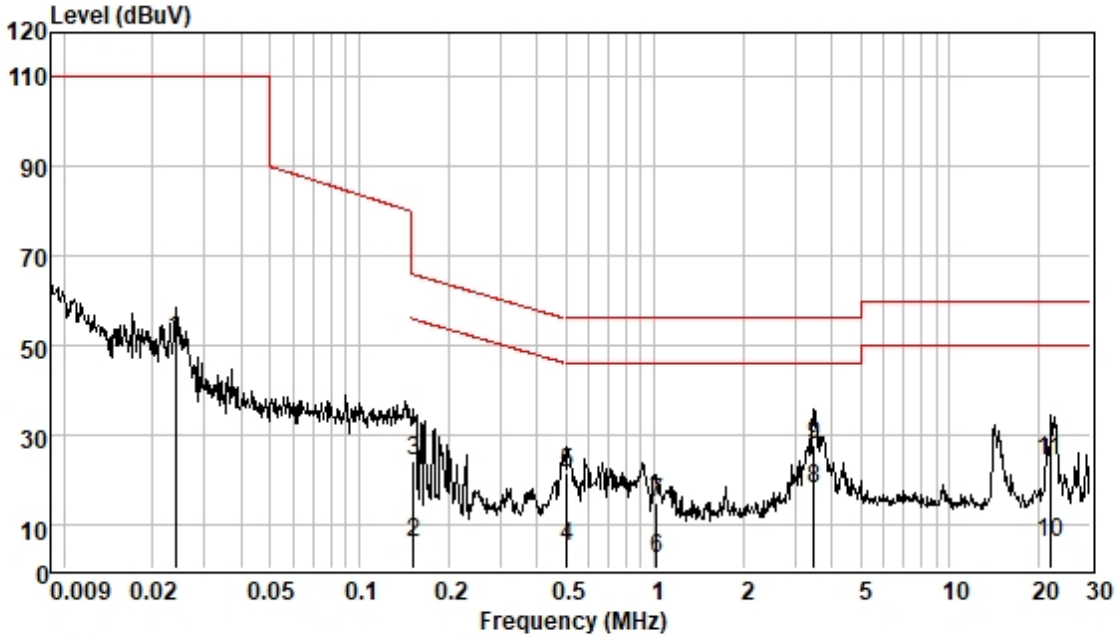
### 6.1.4 Measurement Procedure and Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

The red line show in graphic is the limit in standard used in this section.

Remark: Level= Read Level+ Cable Loss+ LISN Factor

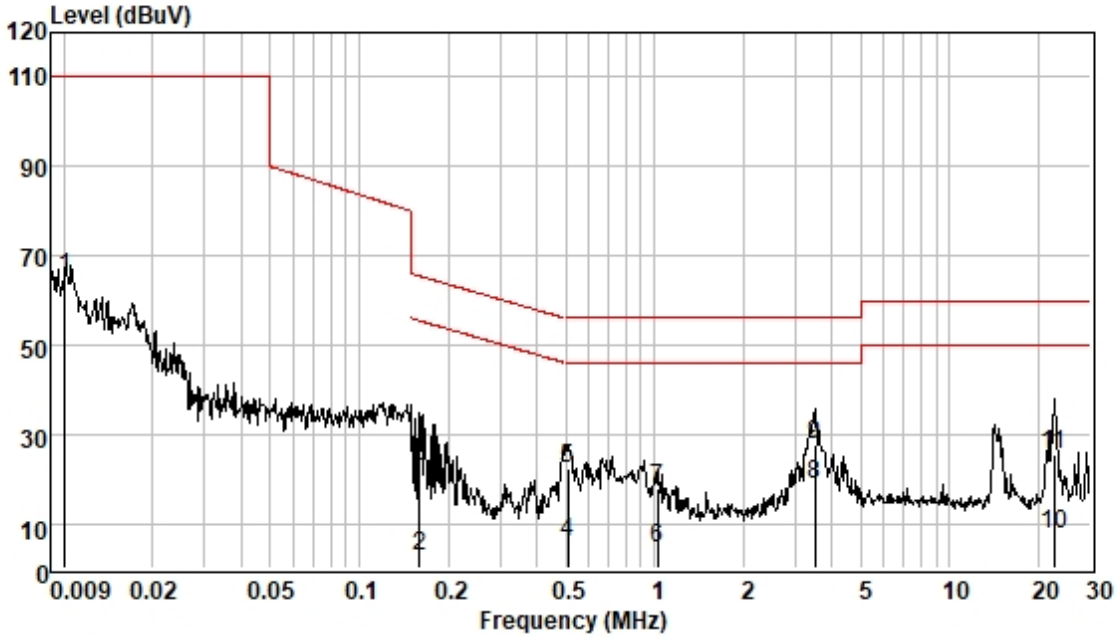
Test Mode: 00; Line: Live line




Pol :LINE
Mode :
Model :
Power :

| | Frequenc MHz | Read Level dBuV | Cable Loss dB | LISN Factor dB | Measured Level dBuV | Limit Line dBuV | Over Limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.024 | 41.63 | 0.05 | 9.80 | 51.48 | 110.00 | -58.52 | QP |
| 2 | 0.152 | -3.71 | 0.06 | 9.61 | 5.96 | 55.87 | -49.91 | Average |
| 3 | 0.152 | 14.28 | 0.06 | 9.61 | 23.95 | 65.87 | -41.92 | QP |
| 4 | 0.505 | -4.75 | 0.07 | 9.59 | 4.91 | 46.00 | -41.09 | Average |
| 5 | 0.505 | 11.65 | 0.07 | 9.59 | 21.31 | 56.00 | -34.69 | QP |
| 6 | 1.016 | -7.29 | 0.07 | 9.59 | 2.37 | 46.00 | -43.63 | Average |
| 7 | 1.016 | 5.06 | 0.07 | 9.59 | 14.72 | 56.00 | -41.28 | QP |
| 8 | 3.472 | 8.19 | 0.15 | 9.63 | 17.97 | 46.00 | -28.03 | Average |
| 9 | 3.472 | 17.77 | 0.15 | 9.63 | 27.55 | 56.00 | -28.45 | QP |
| 10 | 21.946 | -4.31 | 0.37 | 9.67 | 5.73 | 50.00 | -44.27 | Average |
| 11 | 21.946 | 14.09 | 0.37 | 9.67 | 24.13 | 60.00 | -35.87 | QP |

Test Mode: 00; Line: Neutral Line




Pol :NEUTRAL
Mode :
Model :
Power :

| | Frequenc MHz | Read Level dBuV | Cable Loss dB | LISN Factor dB | Measured Level dBuV | Limit Line dBuV | Over Limit dB | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.010 | 54.71 | 0.04 | 10.32 | 65.07 | 110.00 | -44.93 | QP |
| 2 | 0.161 | -6.79 | 0.06 | 9.61 | 2.88 | 55.43 | -52.55 | Average |
| 3 | 0.161 | 13.14 | 0.06 | 9.61 | 22.81 | 65.43 | -42.62 | QP |
| 4 | 0.510 | -4.03 | 0.07 | 9.60 | 5.64 | 46.00 | -40.36 | Average |
| 5 | 0.510 | 12.74 | 0.07 | 9.60 | 22.41 | 56.00 | -33.59 | QP |
| 6 | 1.027 | -5.25 | 0.07 | 9.61 | 4.43 | 46.00 | -41.57 | Average |
| 7 | 1.027 | 8.02 | 0.07 | 9.61 | 17.70 | 56.00 | -38.30 | QP |
| 8 | 3.491 | 8.81 | 0.15 | 9.64 | 18.60 | 46.00 | -27.40 | Average |
| 9 | 3.491 | 17.73 | 0.15 | 9.64 | 27.52 | 56.00 | -28.48 | QP |
| 10 | 22.655 | -2.73 | 0.37 | 9.87 | 7.51 | 50.00 | -42.49 | Average |
| 11 | 22.655 | 15.30 | 0.37 | 9.87 | 25.54 | 60.00 | -34.46 | QP |

## 6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN IEC 55015: 2019+A11:2020

Test Method: EN IEC 55015:2019+A11:2020

Limit:

Test Distance: 3m

30MHz-230MHz 40 dB(μV/m) quasi-peak

230MHz-1GHz 47 dB(μV/m) quasi-peak

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

### 6.2.1 E.U.T. Operation

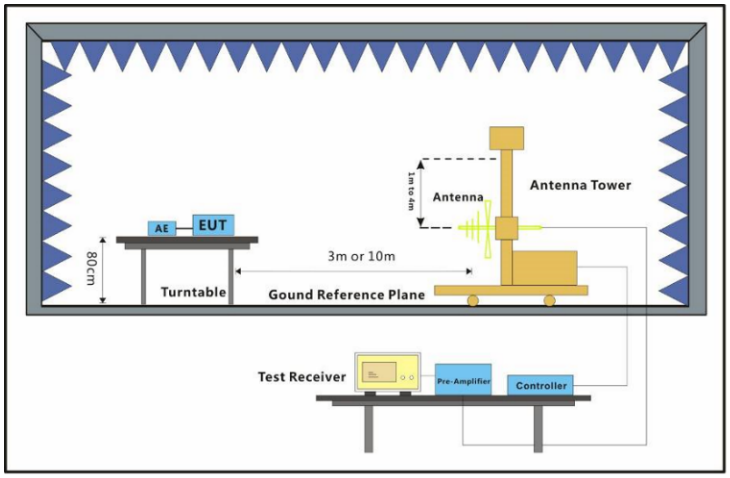
Operating Environment:

Temperature: 23.1 °C Humidity: 53.1 % RH Atmospheric Pressure: 1002 mbar

### 6.2.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 6.2.3 Test Setup Diagram



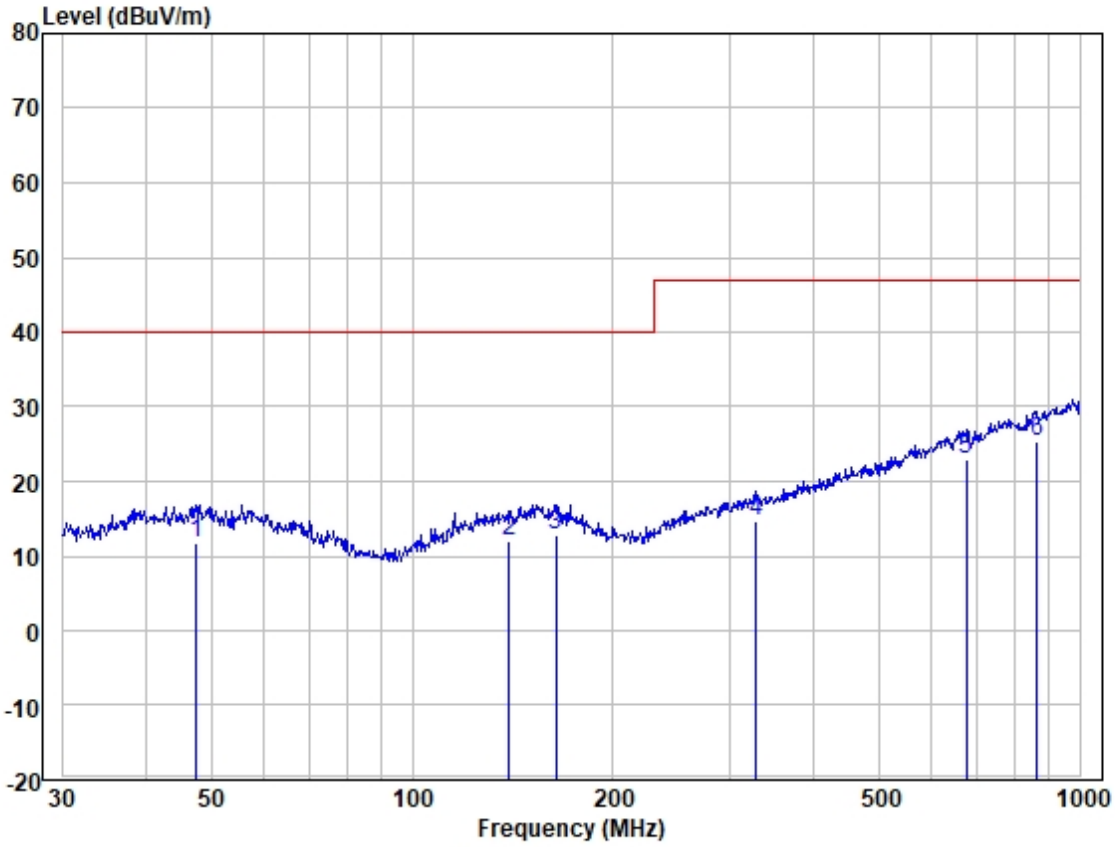

### 6.2.4 Measurement Procedure and Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Test Mode: 00; Polarity: Horizontal




Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

| | Freq | Read Level | Anterna Factor | Cable Loss | Preamp Factor | Measured Level | Limit Line | Over Limit | Pol/ Phase | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | | |
| 1 | 47.492 | 24.72 | 19.50 | 0.38 | 32.81 | 11.79 | 40.00 | -28.21 | HORIZONTAL | QP |
| 2 | 139.851 | 25.65 | 18.64 | 0.64 | 32.80 | 12.13 | 40.00 | -27.87 | HORIZONTAL | QP |
| 3 | 164.330 | 25.91 | 19.08 | 0.71 | 32.80 | 12.90 | 40.00 | -27.10 | HORIZONTAL | QP |
| 4 | 327.887 | 26.26 | 20.11 | 1.01 | 32.80 | 14.58 | 47.00 | -32.42 | HORIZONTAL | QP |
| 5 | 675.208 | 27.68 | 26.56 | 1.52 | 32.73 | 23.03 | 47.00 | -23.97 | HORIZONTAL | QP |
| 6 | 863.056 | 26.40 | 28.99 | 1.73 | 31.79 | 25.33 | 47.00 | -21.67 | HORIZONTAL | QP |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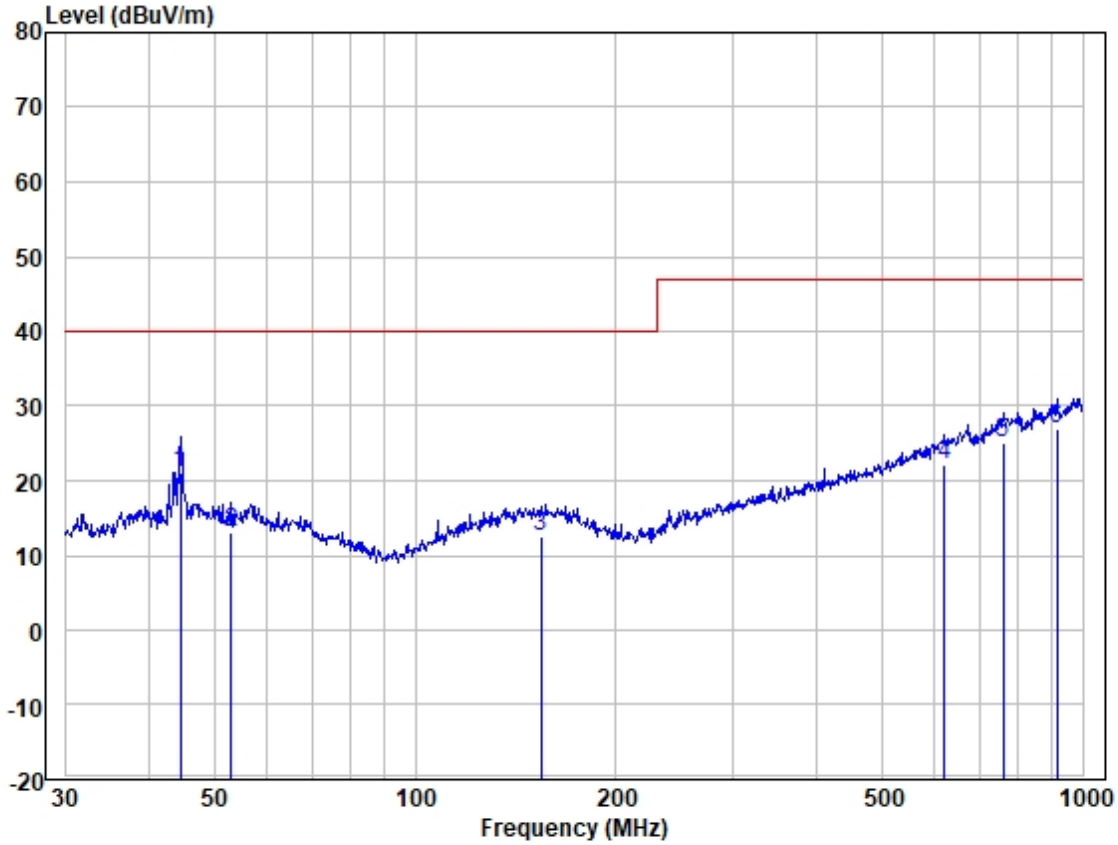
Test Mode: 00; Polarity: Vertical




Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

| | Freq | Read Level | Anterna Factor | Cable Loss | Preamp Factor | Measured Level | Limit Line | Over Limit | Pol/ Phase | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | | |
| 1 | 44.587 | 33.94 | 19.45 | 0.37 | 32.81 | 20.95 | 40.00 | -19.05 | VERTICAL | QP |
| 2 | 53.131 | 25.95 | 19.39 | 0.40 | 32.80 | 12.94 | 40.00 | -27.06 | VERTICAL | QP |
| 3 | 154.279 | 25.43 | 19.14 | 0.68 | 32.80 | 12.45 | 40.00 | -27.55 | VERTICAL | QP |
| 4 | 620.710 | 27.58 | 26.10 | 1.44 | 32.88 | 22.24 | 47.00 | -24.76 | VERTICAL | QP |
| 5 | 760.704 | 27.90 | 28.05 | 1.62 | 32.42 | 25.15 | 47.00 | -21.85 | VERTICAL | QP |
| 6 | 912.862 | 27.30 | 29.51 | 1.77 | 31.54 | 27.04 | 47.00 | -19.96 | VERTICAL | QP |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## 6.3 Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz) 2m loop

Test Requirement: EN IEC 55015: 2019+A11:2020

Test Method: EN IEC 55015:2019+A11:2020

Limit:

| | |
|---|---|
| 0.009MHz-0.07MHz | 88dB(μA) quasi-peak |
| 0.07MHz-0.15MHz | 88dB(μA)-58dB(μA) quasi-peak |
| 0.15MHz-3MHz | 58dB(μA)-22dB(μA) quasi-peak |
| 3MHz-30MHz | 22dB(μA) quasi-peak |

Detector: Peak for pre-scan (200Hz resolution bandwidth) 0.009M to 0.15MHz
Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

### 6.3.1 E.U.T. Operation

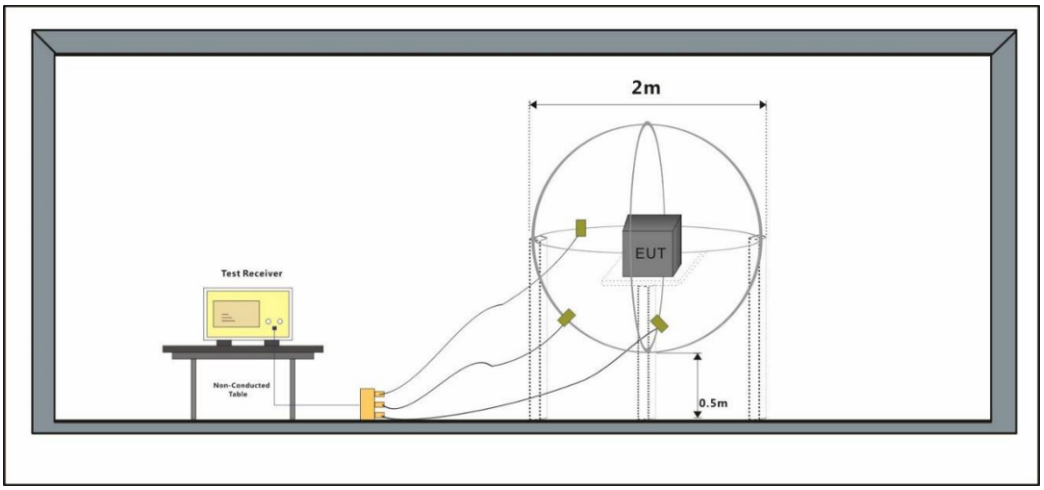
Operating Environment:

Temperature: 24.2 °C Humidity: 55.5 % RH Atmospheric Pressure: 1002 mbar

### 6.3.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 6.3.3 Test Setup Diagram



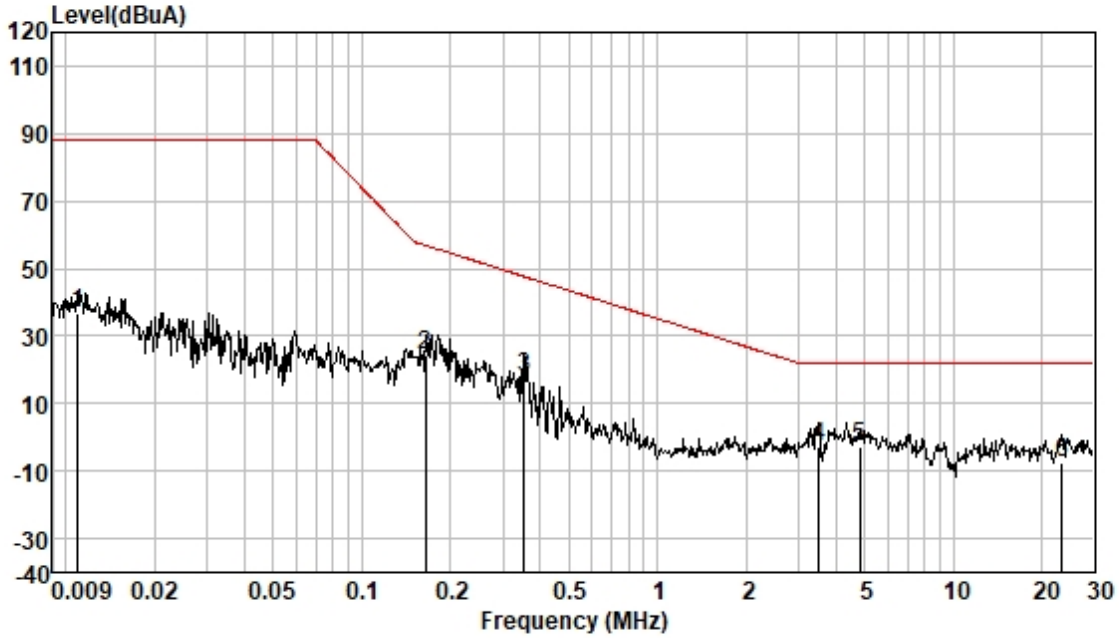
### 6.3.4 Measurement Procedure and Data

Frequency range: 9kHz-30MHz

An initial pre-scan was performed in the 2m loop antenna using the spectrum analyser in peak detection mode. The EUT was measured for X(A), Y(B), Z(C) polarities.

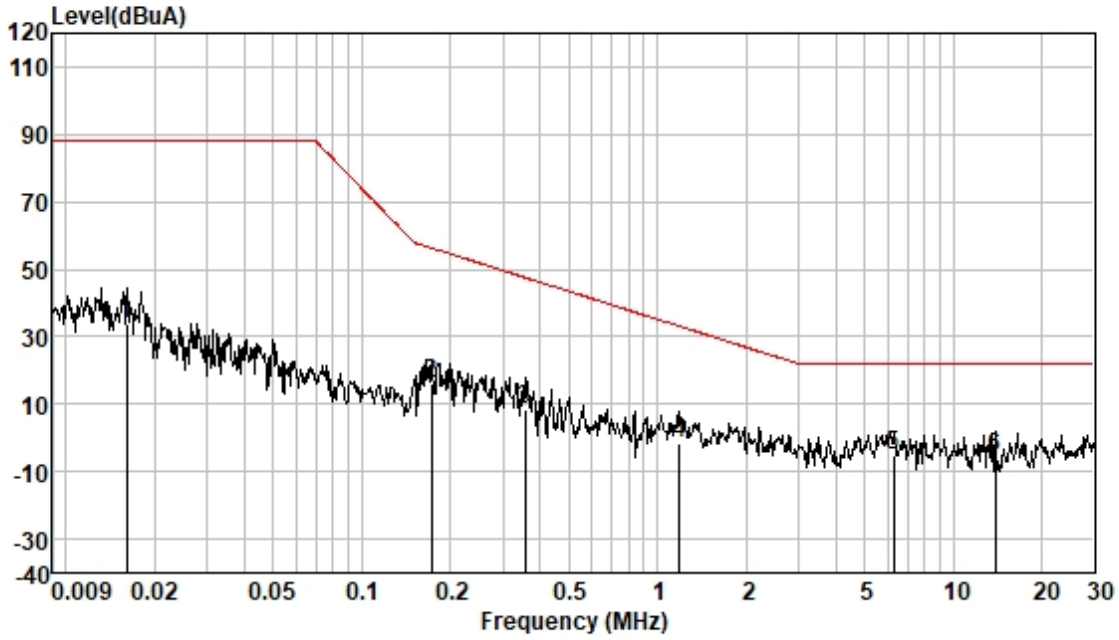
The red line show in graphic is the limit in standard used in this section.

Measured Level= Read Level + Cable Loss + Antenna Factor(if applicable)



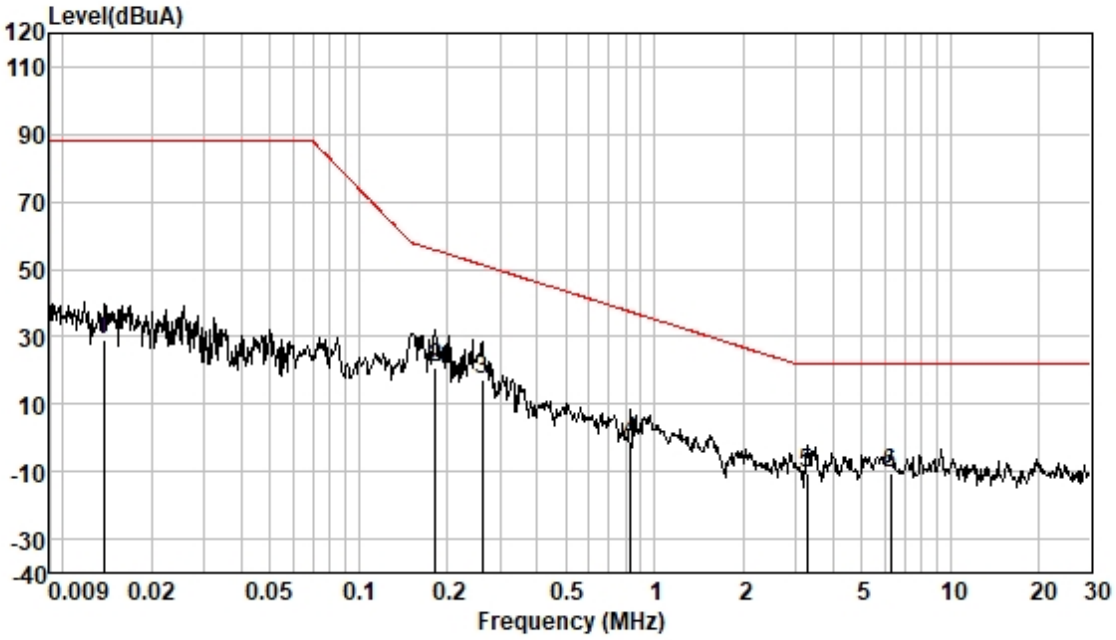

loop : Y
Test Mode:
Model :

| Frequency MHz | Read level dBuV | Cable Loss dB | Antenna Factor dB | Measured level dBuA | Limit Line dBuA | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|
| 0.01 | 35.84 | 0.00 | 1.09 | 36.93 | 88.00 | -51.07 | QP |
| 0.16 | 24.40 | 0.10 | 0.02 | 24.52 | 56.91 | -32.39 | QP |
| 0.35 | 17.67 | 0.10 | 0.09 | 17.86 | 47.65 | -29.79 | QP |
| 3.52 | -3.47 | 0.36 | 0.49 | -2.62 | 22.00 | -24.62 | QP |
| 4.84 | -3.98 | 0.40 | 0.63 | -2.95 | 22.00 | -24.95 | QP |
| 23.33 | -8.03 | 0.90 | -0.22 | -7.35 | 22.00 | -29.35 | QP |




loop : X
Test Mode:
Model :

| Frequency MHz | Read level dBuV | Cable Loss dB | Antenna Factor dB | Measured level dBuA | Limit Line dBuA | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|
| 0.02 | 34.38 | 0.00 | -0.30 | 34.08 | 88.00 | -53.92 | QP |
| 0.17 | 16.20 | 0.10 | -0.29 | 16.01 | 56.33 | -40.32 | QP |
| 0.36 | 8.49 | 0.10 | -0.39 | 8.20 | 47.55 | -39.35 | QP |
| 1.19 | -1.25 | 0.12 | -0.39 | -1.52 | 33.13 | -34.65 | QP |
| 6.27 | -6.65 | 0.50 | 0.70 | -5.45 | 22.00 | -27.45 | QP |
| 13.88 | -7.61 | 0.70 | 1.28 | -5.63 | 22.00 | -27.63 | QP |




loop : Z
Test Mode:
Model :

| Frequency MHz | Read level dBuV | Cable Loss dB | Antenna Factor dB | Measured level dBuA | Limit Line dBuA | Over limit dB | Remark |
|---|---|---|---|---|---|---|---|
| 0.01 | 28.51 | 0.00 | 0.71 | 29.22 | 88.00 | -58.78 | QP |
| 0.18 | 21.13 | 0.10 | -0.20 | 21.03 | 55.74 | -34.71 | QP |
| 0.26 | 17.26 | 0.10 | -0.20 | 17.16 | 51.36 | -34.20 | QP |
| 0.83 | -0.72 | 0.10 | -0.29 | -0.91 | 37.42 | -38.33 | QP |
| 3.28 | -11.18 | 0.32 | 0.10 | -10.76 | 22.00 | -32.76 | QP |
| 6.27 | -11.09 | 0.50 | 0.29 | -10.30 | 22.00 | -32.30 | QP |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## 6.4 Harmonic Current Emission

Test Requirement: EN IEC 61000-3-2: 2019+A1:2021

Test Method: EN IEC 61000-3-2: 2019+A1:2021

### 6.4.1 E.U.T. Operation

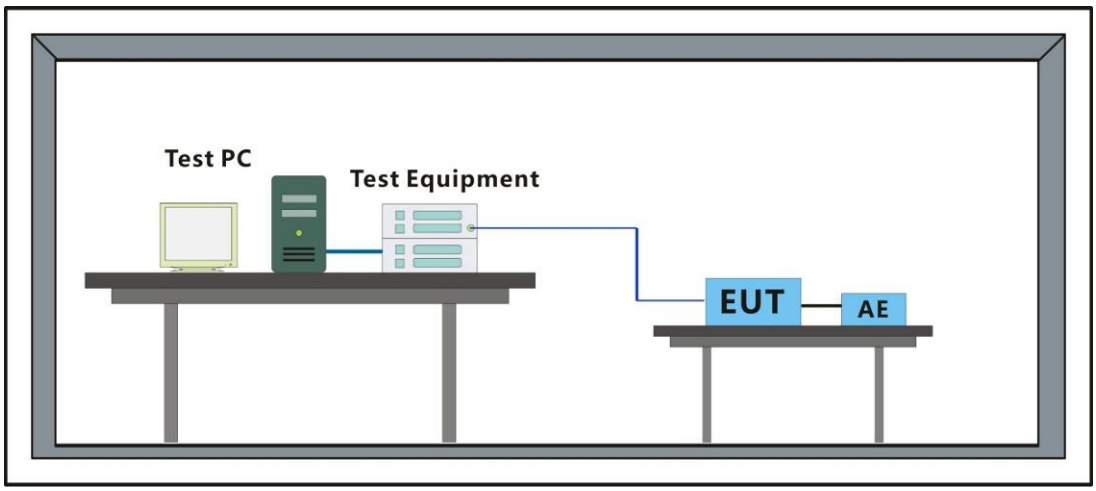
Operating Environment:

Temperature: 23.3 °C Humidity: 52.8 % RH Atmospheric Pressure: 1016 mbar

### 6.4.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 6.4.3 Test Setup Diagram



### 6.4.4 Measurement Procedure and Data

Frequency Range: 100Hz to 2kHz

Test Mode: 00

| Standard Specific Results for IEC 61000-3-2 (Edition 5.1) | |
|---|---|
| Standard Group: | Industry |
| Standard Name: | IEC 61000-3-2 (Edition 5.1) |
| | Limits for harmonic current emissions (equipment input current < 16 A per phase) |
| Device Under Test: | PASS |
| Power Source: | PASS |
| Connection Type: | L - N |
| Main Line: | 230 V, 50 Hz |
| Classification: | Class C (Rated power > 25 W, Table 2) |
| Appli. of Limits: | less than or equal to 150 % (Without POHC Enhancement) |
| Test Duration: | 2 min 30 s |

| Check Harmonics 2..40 | | | |
|---|---|---|---|
| *First detected harmonic order > 150 %* | | | |
| Line 1: | None | | |
| *Harmonics orders > 150 %* | | | |
| Line 1: | None | | |
| *Harmonics orders with average > 100 %* | | | |
| Line 1: | None | | |

| Measured values | | | |
|---|---|---|---|
| *Fundamental Current* | | | |
| Line 1: | 2.159 A | | |
| *Active input Power* | | | |
| Line 1: | 494.775 W * | | |
| *Circuit power factor* | | | |
| Line 1: | 0.987 * | | |

** Absolute value.*

**Current Test Result**

| Average and Maximum harmonic current results | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hn | Average | | | | Maximum | | | | Harmonic Result |
| | Ieff [%] | of Limit [%] | Limit [%] | Result | Ieff [%] | of Limit [%] | Limit [%] | Result | |
| 1 | 99.965 | | | | 100.000 | | | | |
| 2 | 0.054 | 2.717 | 2.000 | n/a | 0.059 | 1.964 | 3.000 | n/a | PASS |
| 3 | 13.991 | 51.818 | 27.000 | PASS | 14.026 | 34.633 | 40.500 | PASS | PASS |
| 4 | 0.073 | | | | 0.077 | | | | |
| 5 | 0.289 | 2.891 | 10.000 | n/a | 0.295 | 1.968 | 15.000 | n/a | PASS |
| 6 | 0.046 | | | | 0.050 | | | | |
| 7 | 1.636 | 23.374 | 7.000 | PASS | 1.662 | 15.825 | 10.500 | PASS | PASS |
| 8 | 0.065 | | | | 0.069 | | | | |
| 9 | 3.797 | 75.942 | 5.000 | PASS | 3.808 | 50.772 | 7.500 | PASS | PASS |
| 10 | 0.065 | | | | 0.069 | | | | |
| 11 | 1.918 | 63.918 | 3.000 | PASS | 1.935 | 43.008 | 4.500 | PASS | PASS |
| 12 | 0.084 | | | | 0.088 | | | | |
| 13 | 0.848 | 28.264 | 3.000 | PASS | 0.870 | 19.338 | 4.500 | PASS | PASS |
| 14 | 0.068 | | | | 0.072 | | | | |
| 15 | 1.446 | 48.197 | 3.000 | PASS | 1.456 | 32.346 | 4.500 | PASS | PASS |
| 16 | 0.045 | | | | 0.049 | | | | |
| 17 | 1.010 | 33.653 | 3.000 | PASS | 1.016 | 22.572 | 4.500 | PASS | PASS |
| 18 | 0.049 | | | | 0.054 | | | | |
| 19 | 1.546 | 51.542 | 3.000 | PASS | 1.565 | 34.781 | 4.500 | PASS | PASS |
| 20 | 0.056 | | | | 0.060 | | | | |
| 21 | 2.639 | 87.968 | 3.000 | PASS | 2.657 | 59.051 | 4.500 | PASS | PASS |
| 22 | 0.051 | | | | 0.055 | | | | |
| 23 | 2.758 | 91.919 | 3.000 | PASS | 2.764 | 61.419 | 4.500 | PASS | PASS |
| 24 | 0.041 | | | | 0.046 | | | | |
| 25 | 1.965 | 65.491 | 3.000 | PASS | 1.975 | 43.893 | 4.500 | PASS | PASS |
| 26 | 0.035 | | | | 0.039 | | | | |
| 27 | 1.471 | 49.025 | 3.000 | PASS | 1.477 | 32.829 | 4.500 | PASS | PASS |
| 28 | 0.031 | | | | 0.035 | | | | |
| 29 | 1.547 | 51.550 | 3.000 | PASS | 1.559 | 34.646 | 4.500 | PASS | PASS |
| 30 | 0.041 | | | | 0.045 | | | | |
| 31 | 1.316 | 43.857 | 3.000 | PASS | 1.324 | 29.427 | 4.500 | PASS | PASS |
| 32 | 0.064 | | | | 0.076 | | | | |
| 33 | 0.422 | 14.068 | 3.000 | n/a | 0.443 | 9.855 | 4.500 | n/a | PASS |
| 34 | 0.092 | | | | 0.113 | | | | |
| 35 | 0.509 | 16.969 | 3.000 | n/a | 0.528 | 11.728 | 4.500 | n/a | PASS |
| 36 | 0.061 | | | | 0.101 | | | | |
| 37 | 0.620 | 20.663 | 3.000 | PASS | 0.628 | 13.949 | 4.500 | PASS | PASS |
| 38 | 0.031 | | | | 0.040 | | | | |
| 39 | 0.146 | 4.869 | 3.000 | n/a | 0.157 | 3.491 | 4.500 | n/a | PASS |
| 40 | 0.033 | | | | 0.036 | | | | |

*Note: Harmonic currents less than 0.6 % of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.*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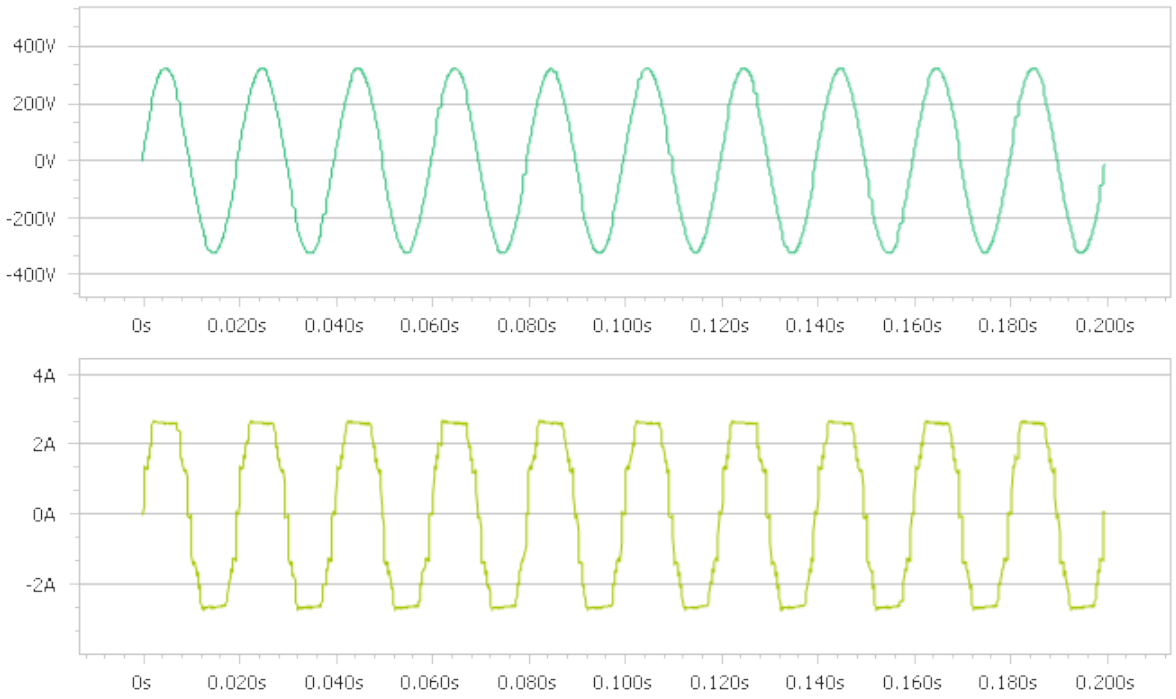
## Time Window 1

### Time Domain of Time Window 1

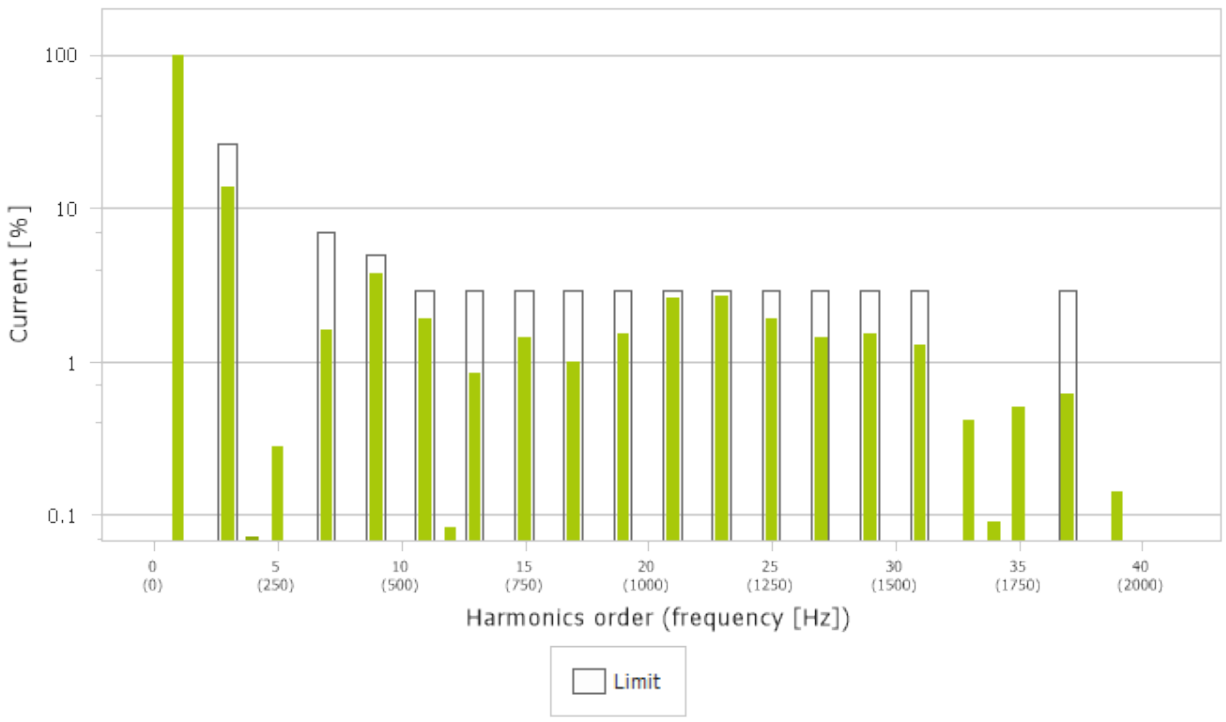


## Maximum / Average Values

| | Line 1 |
|---|---|
| *Maximum Values* | |
| Frequency | 50 Hz |
| Voltage RMS | 229.2 V |
| Current RMS | 2.187 A |
| Peak Current | 2.723 A |
| Fundamental Current | 2.159 A |
| Current Crest Factor | 1.246 |
| Active Power P | 494.9 W |
| Power Factor | 0.9875 |
| Total Harmonic Current (THC) | 0.3409 A |
| Instantaneous Partial Odd Harmonic Current (Inst. POHC) | 0.1095 A |
| Total Harmonic Distortion Current (THDC) | 0.1579 |
| *Average Values* | |
| Total Harmonic Current (THC) | 0.3402 A |
| Instantaneous Partial Odd Harmonic Current (Inst. POHC) | 0.1091 A |
| Total Harmonic Distortion Current (THDC) | 0.1576 |

## Average Harmonics

Average Harmonics (Line 1)



## 6.5 Voltage Fluctuations and Flicker

Test Requirement: EN 61000-3-3: 2013+ A1:2019+A2:2021

Test Method: EN 61000-3-3: 2013+ A1:2019+A2:2021

### 6.5.1 E.U.T. Operation

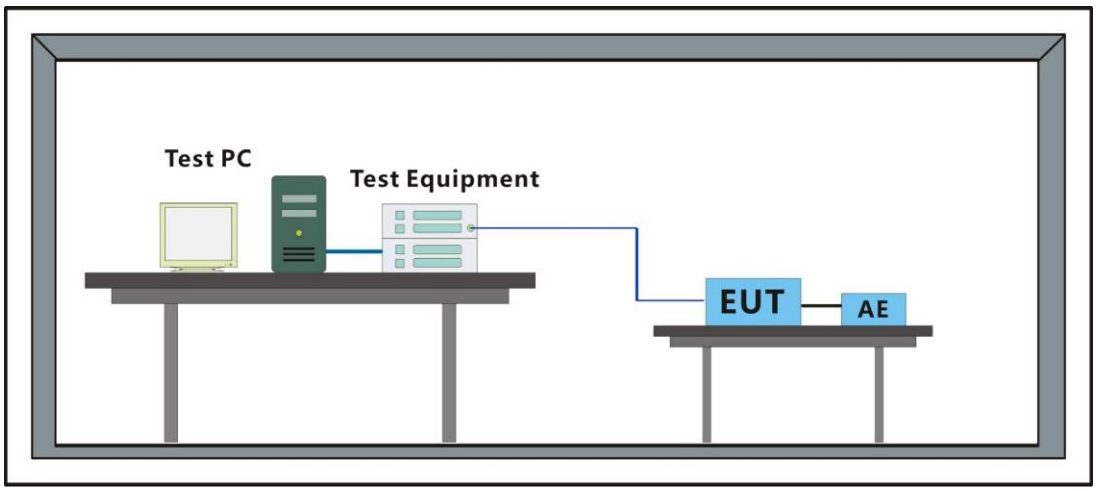
Operating Environment:

Temperature: 22.6 °C Humidity: 55.5 % RH Atmospheric Pressure: 1002 mbar

### 6.5.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 6.5.3 Test Setup Diagram




### 6.5.4 Measurement Procedure and Data

Test Mode: 00

## Flicker Results

### Standard Specific Results for IEC 61000-3-3 (Edition 3)

Standard Group: Industry

Standard Name: IEC 61000-3-3 (Edition 3)
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

Test Condition: General Test Conditions

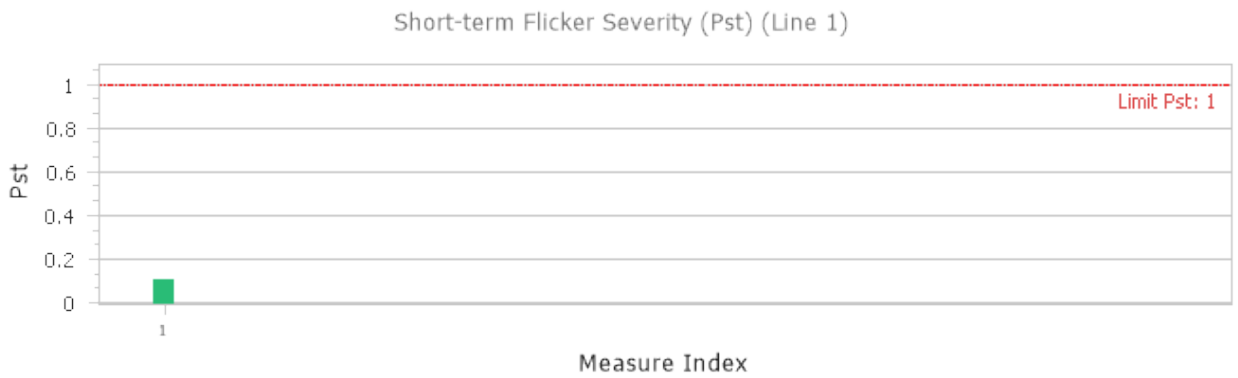
Analysis Status: PASS

| Flicker Measurements Settings | |
|---|---|
| Main Line: | 230V, 50Hz |
| Flicker Meter: | 230V / 50Hz |
| Flicker Impedance: | Zref |
| Observation Time: | 1 × 10 min |
| Measurements: | 1 |

| Flicker Measurements | | | | | |
|---|---|---|---|---|---|
| | $P_{lt}$ | Max $P_{st}$ | Max $d_c$ | Max $d_{max}$ | Max $T_{max}$ |
| Line 1: | 0.047 | 0.108 | 0 | < 0.2 | 0 |
| Limits: | 0.65 | 1 | 3.3 | 4 | 0.5 |
| Results: | PASS | PASS | PASS | PASS | PASS |

| Flicker Individual Measurements | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measurement | $P_{st}$ [ ] | | | $d_c$ [%] | | | $d_{max}$ [%] | | | $T_{max}$ [s] | | |
| | Value | Limit | Result | Value | Limit | Result | Value | Limit | Result | Value | Limit | Result |
| #1 | 0.11 | 1.00 | PASS | 0.00 | 3.30 | PASS | < 0.2 | 4.00 | PASS | 0.00 | 0.50 | PASS |

## Pst Data



# 7 Immunity Test Results

**Performance Criteria Description in EN 61547: 2009**

**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.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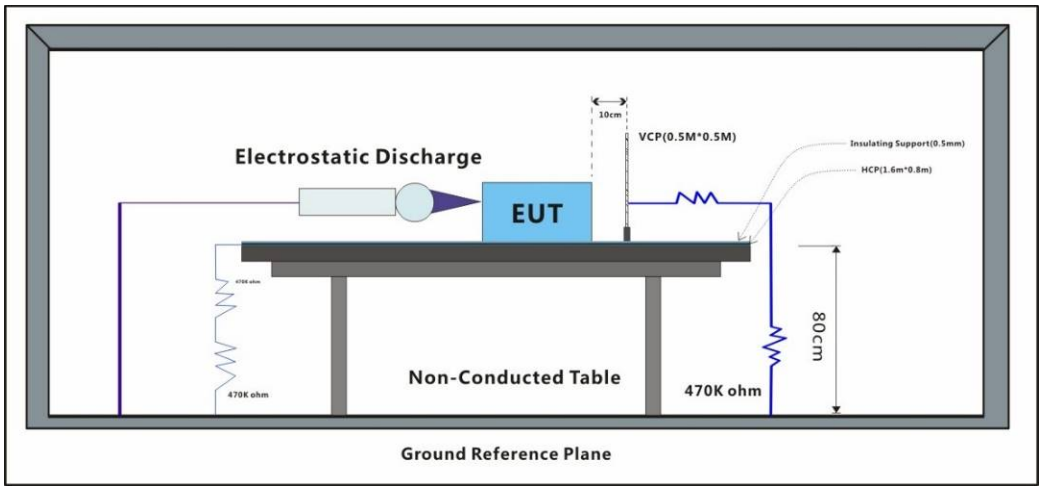
## 7.1 Electrostatic Discharge

Test Requirement: EN 61547: 2009

Test Method: EN 61000-4-2:2009

### 7.1.1 Test Setup Diagram




### 7.1.2 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C Humidity: 55.4 % RH Atmospheric Pressure: 1002 mbar

### 7.1.3 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 7.1.4 Test Condition and Results:

Performance Criterion: B
Discharge Impedance: 330 Ω / 150 pF
Discharge Voltage: Air Discharge: 2,4,8 kV; Contact Discharge:4 kV; VCP/HCP: 4 kV.
Polarity: Positive & Negative
Number of Discharge: Minimum 10 times at each test point
Discharge Mode: Single Discharge
Discharge Period: 1 second minimum
Test Point 1: All insulated enclosure & seams.
Test Point 2: All accessible metal parts of the enclosure.
Test Point 3: All sides.

| Discharge type | Level (kV) | Polarity | Test Point | Result / Observations |
|---|---|---|---|---|
| Air Discharge | 2,4,8 | + | 1 | A |
| Air Discharge | 2,4,8 | - | 1 | A |
| Contact Discharge | 4 | + | 2 | A |
| Contact Discharge | 4 | - | 2 | A |
| Horizontal Coupling | 4 | + | 3 | A |
| Horizontal Coupling | 4 | - | 3 | A |
| Vertical Coupling | 4 | + | 3 | A |
| Vertical Coupling | 4 | - | 3 | A |
| A: No degradation in the performance of the EUT was observed. | | | | |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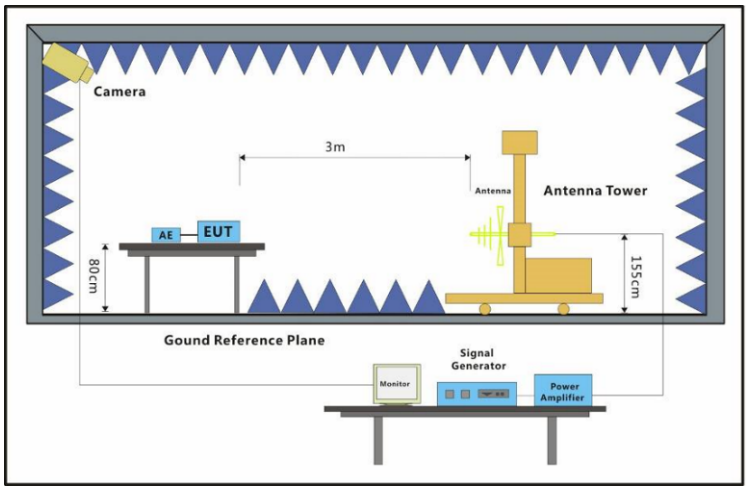
## 7.2 Radiated Immunity (80MHz-1GHz)

Test Requirement: EN 61547: 2009

Test Method: EN IEC 61000-4-3:2020

### 7.2.1 Test Setup Diagram




### 7.2.2 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C Humidity: 53.3 % RH Atmospheric Pressure: 1002 mbar

### 7.2.3 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 7.2.4 Test Condition and Results:

Performance Criterion: A

Frequency Range: 80MHz to 1GHz

Test Distance: 3m

Antenna Polarisation: Vertical and Horizontal

Modulation1kHz,80% Amp. Mod,1% increment

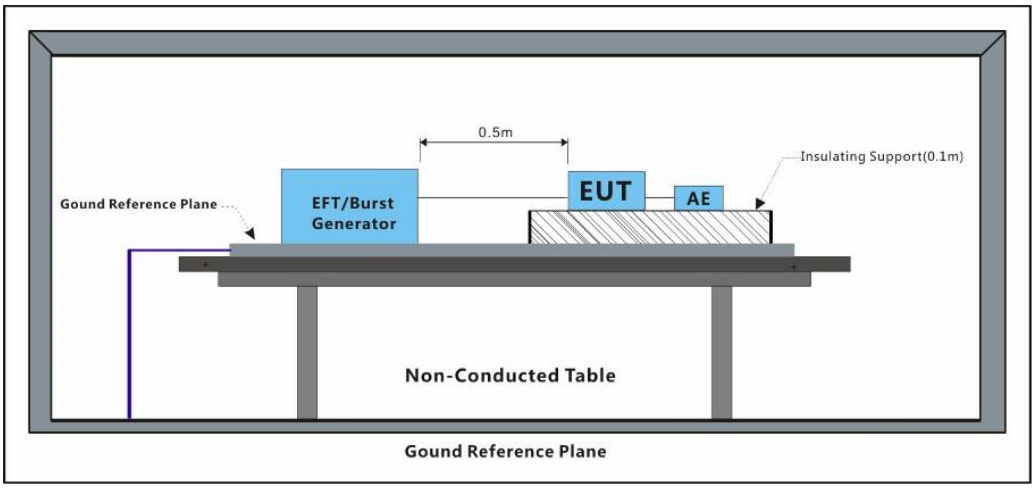
| Frequency | Level (V/m) | EUT Face | Dwell time | Result / Observations |
|---|---|---|---|---|
| 80MHz-1GHz | 3 | Front | 3s | A |
| 80MHz-1GHz | 3 | Back | 3s | A |
| 80MHz-1GHz | 3 | Left | 3s | A |
| 80MHz-1GHz | 3 | Right | 3s | A |
| 80MHz-1GHz | 3 | Top | 3s | A |
| 80MHz-1GHz | 3 | Bottom | 3s | A |
| A: No degradation in the performance of the EUT was observed. | | | | |

## 7.3 Electrical Fast Transients Burst at AC Mains Power Port

Test Requirement: EN 61547: 2009

Test Method: EN 61000-4-4:2012

### 7.3.1 Test Setup Diagram




### 7.3.2 E.U.T. Operation

Operating Environment:

Temperature: 23.1 °C Humidity: 52.6 % RH Atmospheric Pressure: 1002 mbar

### 7.3.3 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 7.3.4 Test Condition and Results:

Performance Criterion: B

Repetition Frequency: 5kHz

Burst Period: 300ms

Test Duration: 2 minute per level & polarity

Test Level: 1.0kV

Polarity: Positive & Negative

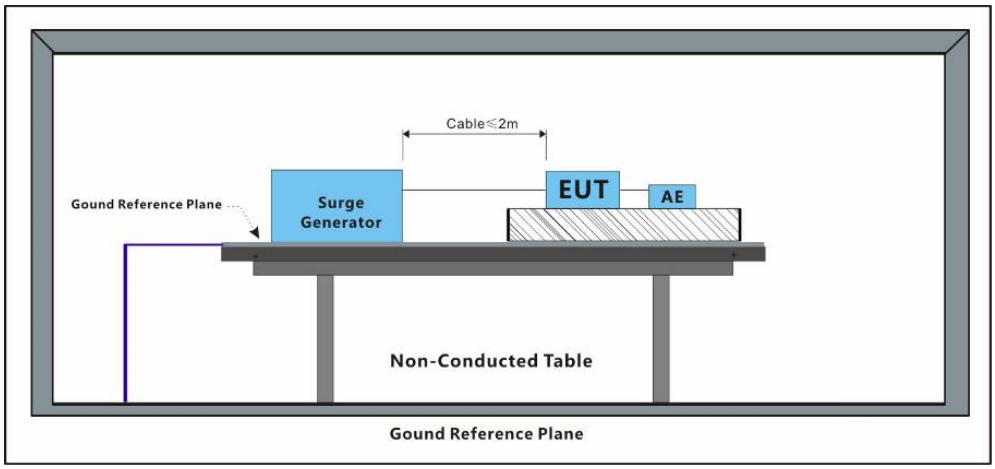
| Test Line | Level (kV) | Polarity | CDN/Clamp | Result / Observations |
|---|---|---|---|---|
| AC power port | 1 | + | CDN | A |
| AC power port | 1 | - | CDN | A |
| A: No degradation in the performance of the EUT was observed. | | | | |

## 7.4 Surge at Power Port

Test Requirement: EN 61547: 2009

Test Method: EN 61000-4-5:2014+A1:2017

### 7.4.1 Test Setup Diagram




### 7.4.2 E.U.T. Operation

Operating Environment:

Temperature: 23.1 °C Humidity: 52.3 % RH Atmospheric Pressure: 1002 mbar

### 7.4.3 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 7.4.4 Test Condition and Results:

Performance Criterion: B (Luminaire for emergency lighting),

Performance Criterion: C (for others lighting equipment).

Interval: 60s between each surge

Test Level: ±0.5kV, ±1kV Live to Neutral; ±1kV, ±2kV Live, Neutral to Earth

Polarity: Positive & Negative

Generator source impedance: 2Ω

CDN coupling impedance(Line-to-ground): 10Ω

Trigger Mode: Internal

No. of surges: 5 positive at 90°, 5 negative at 270°.

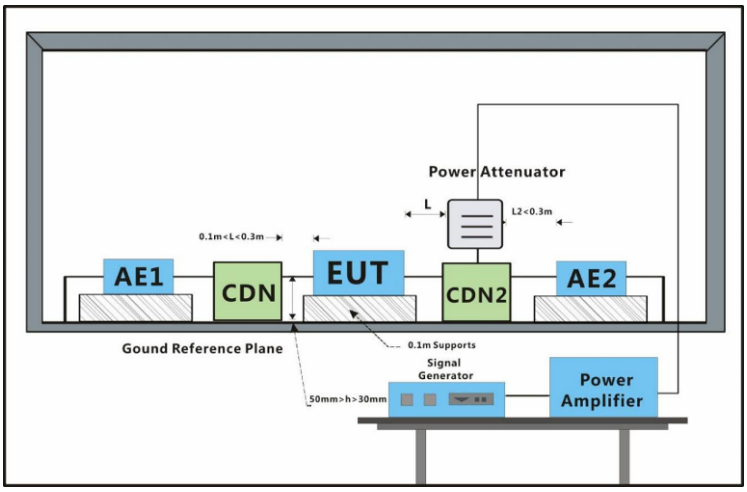
| Test Line | Level (kV) | Polarity | Phase (deg) | Result / Observations |
|---|---|---|---|---|
| L-N | 1.0 | + | 90° | A |
| L-N | 1.0 | - | 270° | A |
| A: No degradation in the performance of the EUT was observed. | | | | |

## 7.5 Conducted Immunity at AC Mains Power Port (150kHz-80MHz)

Test Requirement: EN 61547: 2009

Test Method: EN 61000-4-6:2014

### 7.5.1 Test Setup Diagram




### 7.5.2 E.U.T. Operation

Operating Environment:

Temperature: 23.1 °C Humidity: 52.1 % RH Atmospheric Pressure: 1002 mbar

### 7.5.3 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 7.5.4 Test Condition and Results:

Performance Criterion: A

Step Size 1%

Frequency Range:0.15MHz to 80MHz

Modulation:80%, 1kHz Amplitude Modulation

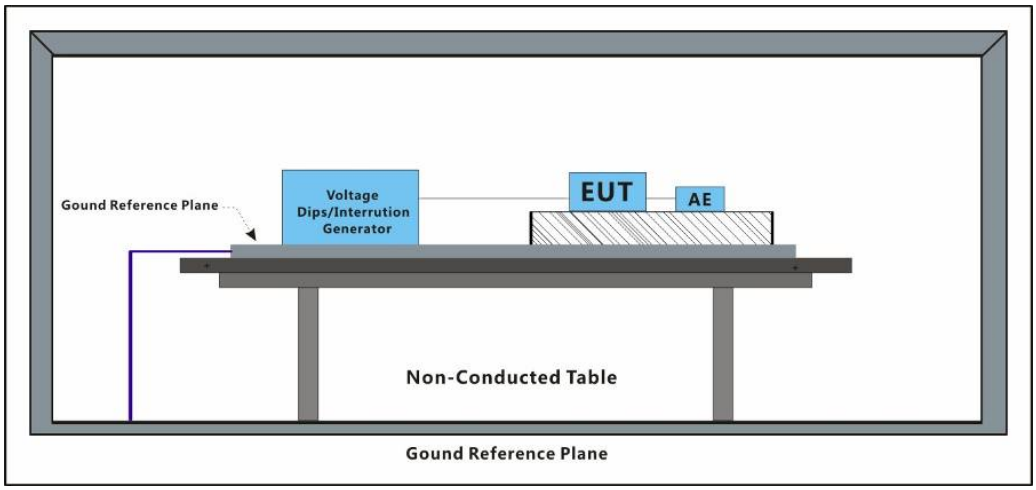
| Cable port | Level (Vrms) | CDN/Clamp | Dwell time | Result / Observations |
|---|---|---|---|---|
| AC power port | 3 | CDN | 2s | A |
| A: No degradation in the performance of the EUT was observed. | | | | |

## 7.6 Voltage Dips and Interruptions

Test Requirement: EN 61547: 2009

Test Method: EN IEC 61000-4-11:2020

### 7.6.1 Test Setup Diagram




### 7.6.2 E.U.T. Operation

Operating Environment:

Temperature: 23.1 °C Humidity: 52.6 % RH Atmospheric Pressure: 1002 mbar

### 7.6.3 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|---|---|---|
| Final test | 00 | Test the EUT in LED lighting mode. |

### 7.6.4 Test Condition and Results:

Performance Criterion: 0% of UT (Rated Voltage) for 0.5 Cycle: B; 70% of UT for 10 Cycles: C.

No. of Dips / Interruptions: 3 per Level

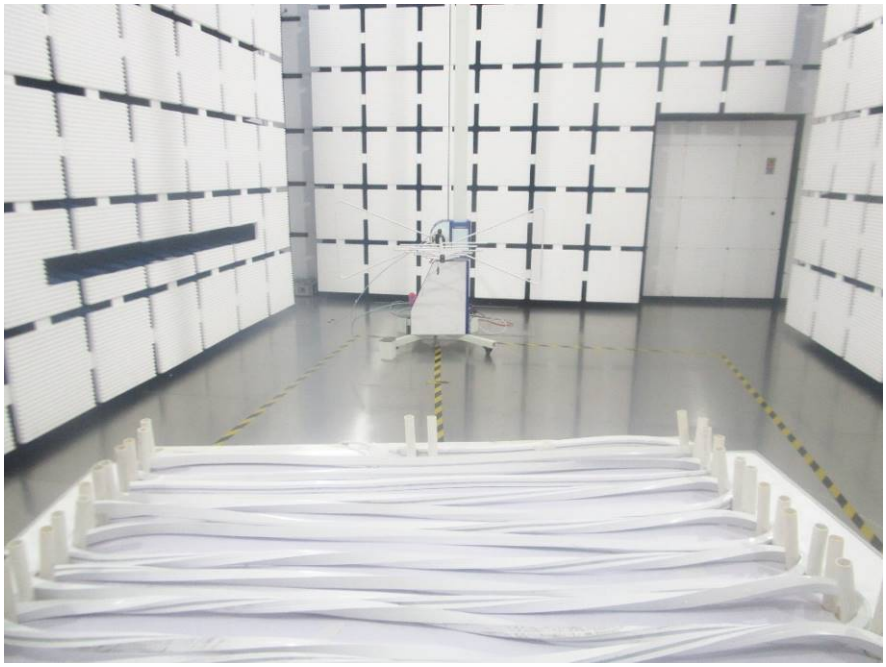
Time between dropout 10s

| Level % UT | Phase (deg) | Duration | No. of Dips / Interruptions | Result / Observations |
|---|---|---|---|---|
| 0 | 0° | 0.5 Cycle | 3 | A |
| 0 | 180° | 0.5 Cycle | 3 | A |
| 70 | 0° | 10 Cycles | 3 | A |
| 70 | 180° | 10 Cycles | 3 | A |
| A: No degradation in the performance of the EUT was observed. | | | | |

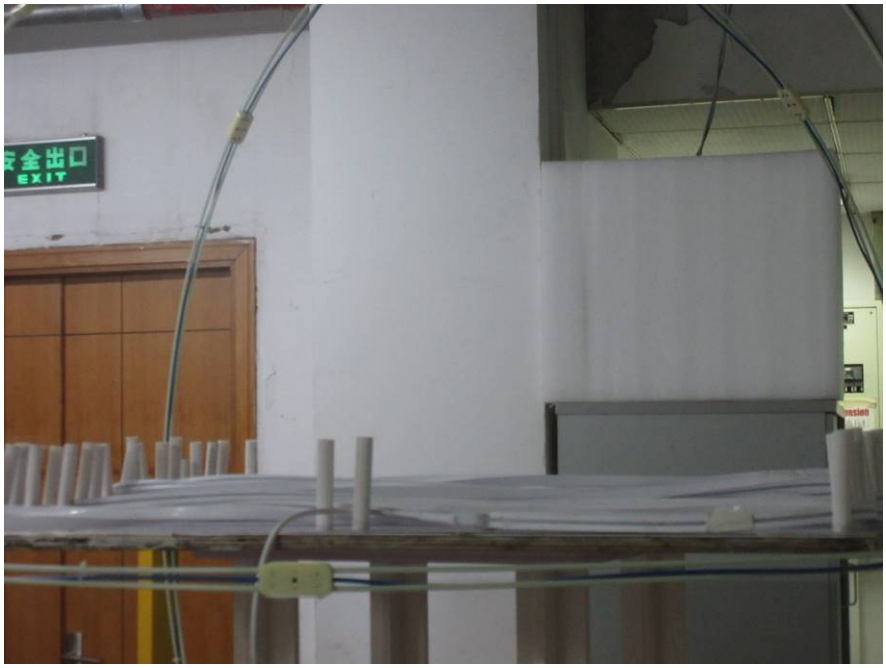
# 8 Test Setup Photo

**Conducted Emissions at Mains Terminals (9kHz-30MHz)**

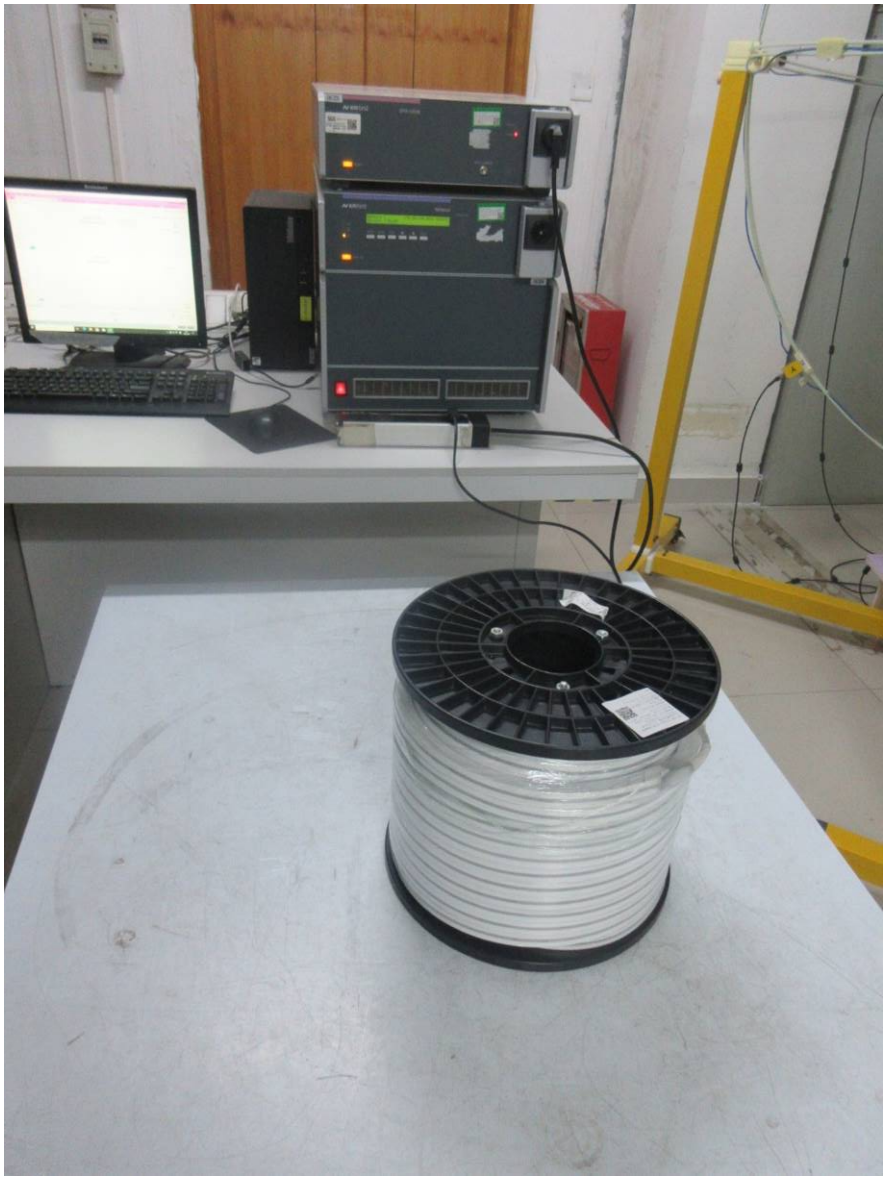
**Radiated Emissions (30MHz-1GHz)**



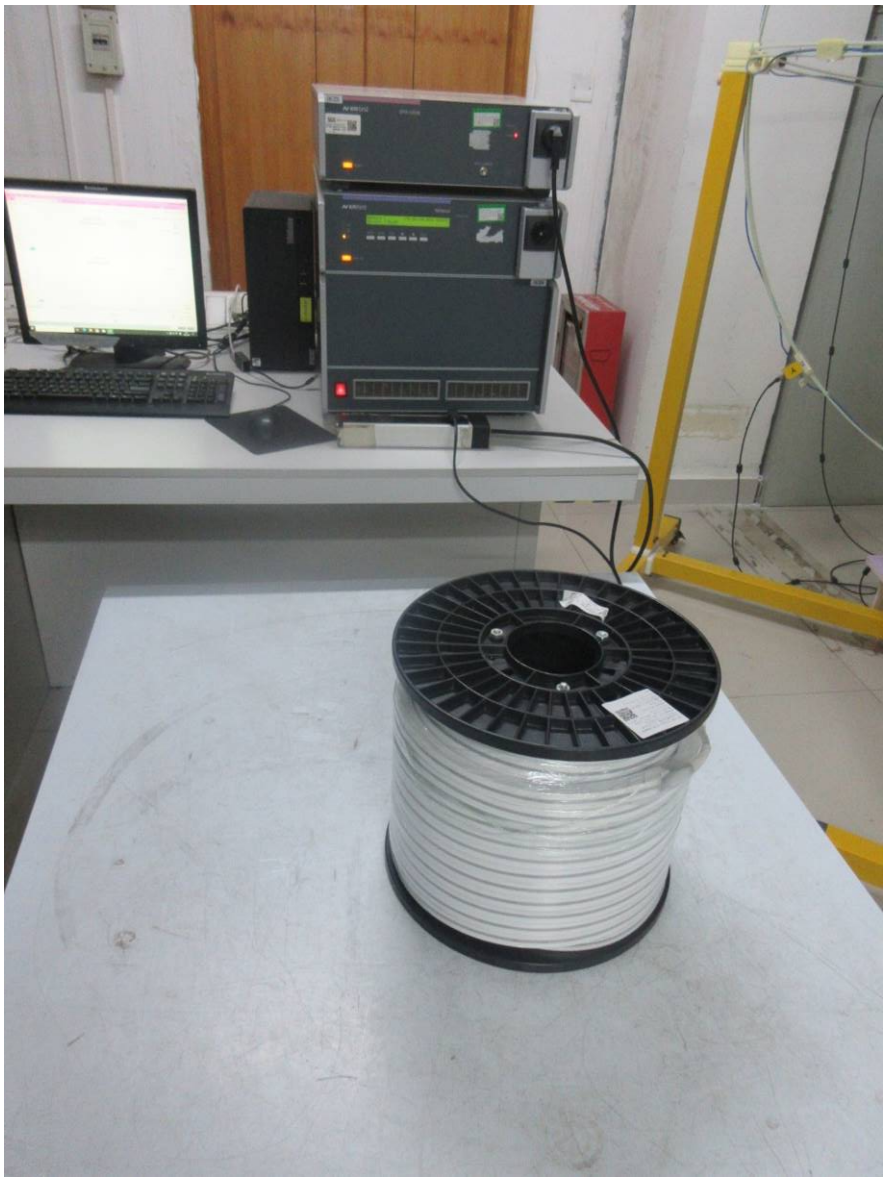
**Radiated Emissions (Magnetic Field Induced Current)(9kHz-30MHz)**
**2m loop**



**Harmonic Current Emission**

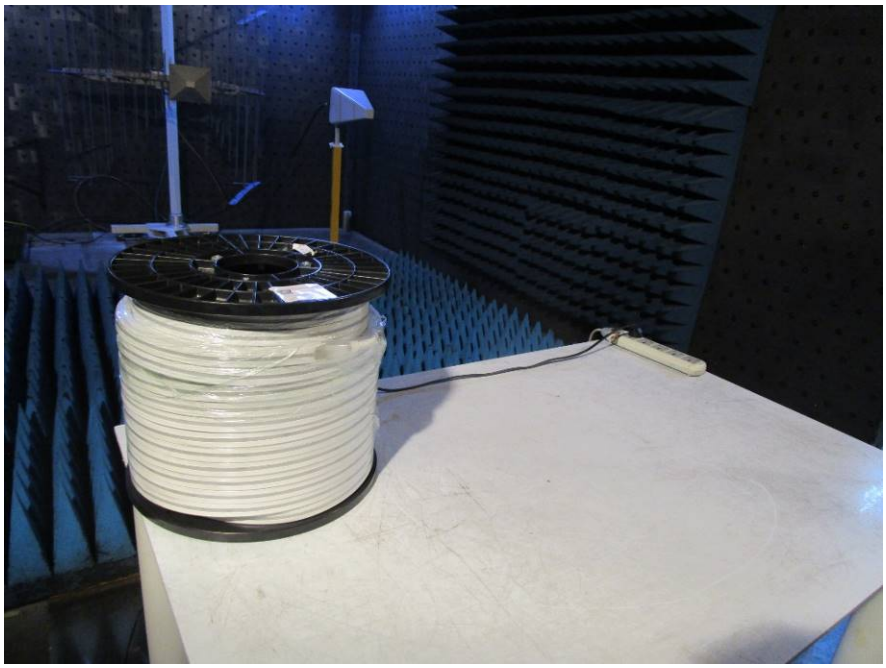


**Voltage Fluctuations and Flicker**

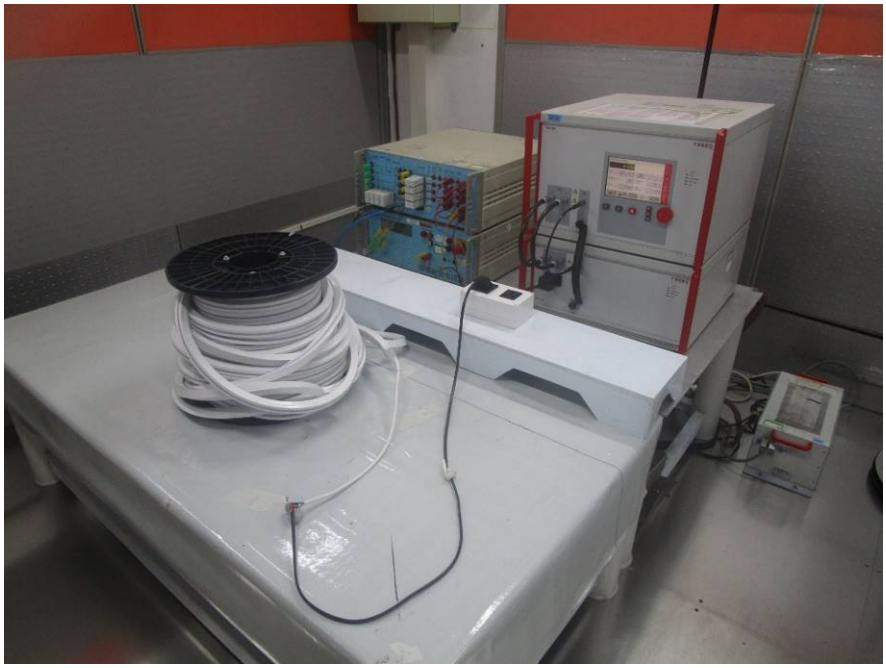


**Electrostatic Discharge**

**Radiated Immunity (80MHz-1GHz)**



**Electrical Fast Transients Burst at AC Mains Power Port**

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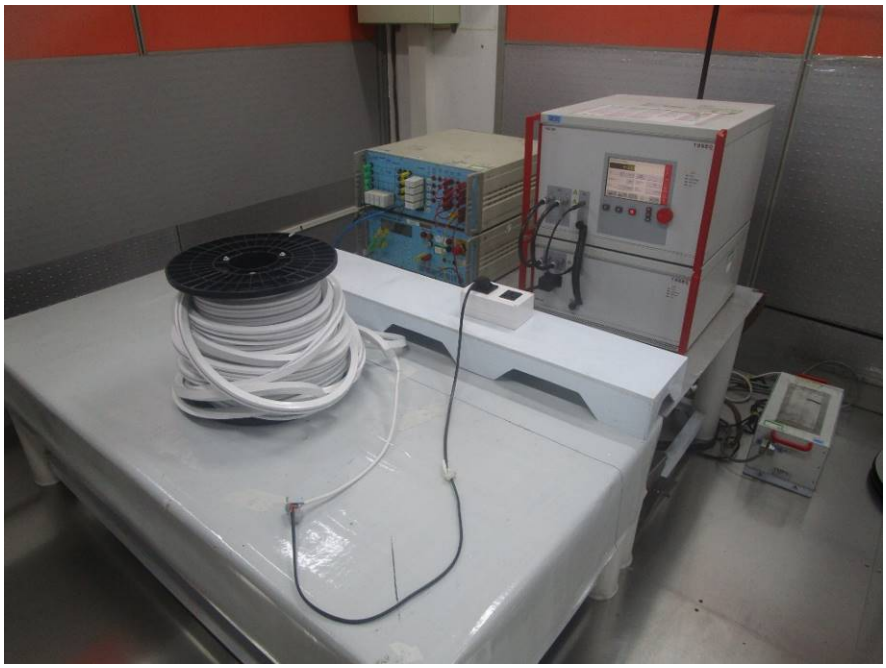
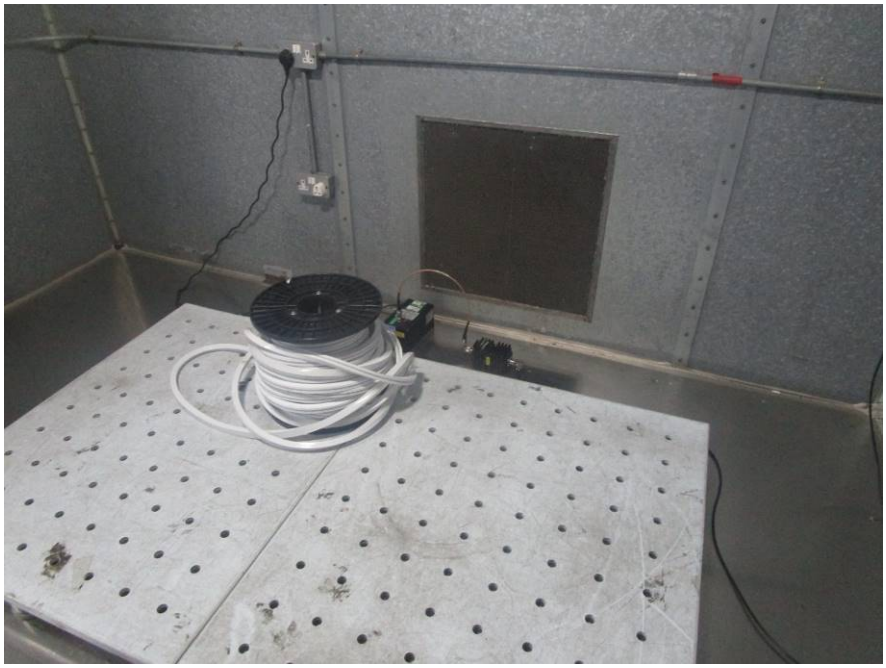
**Surge at Power Port**



**Conducted Immunity at AC Mains Power Port (150kHz-80MHz)**

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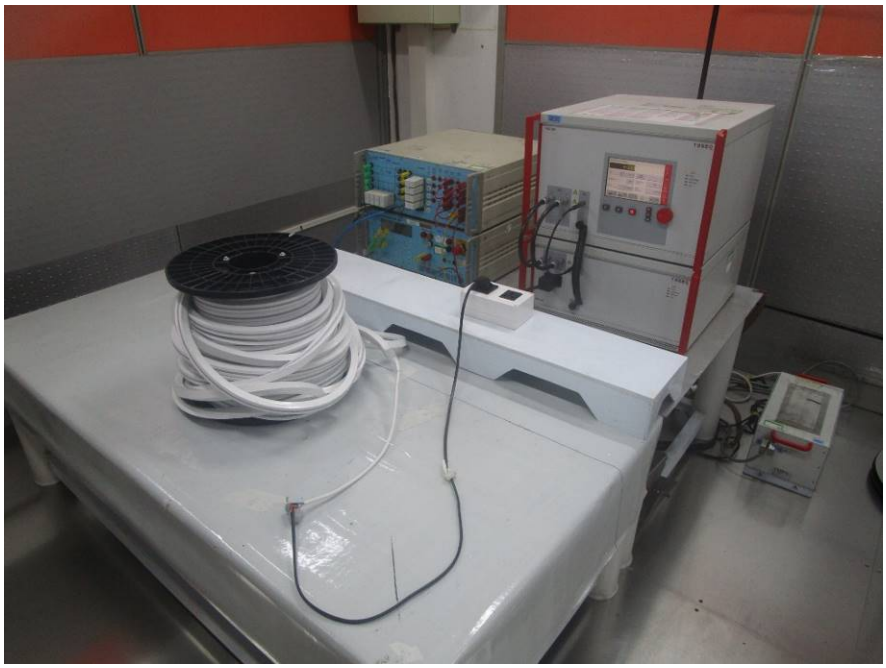
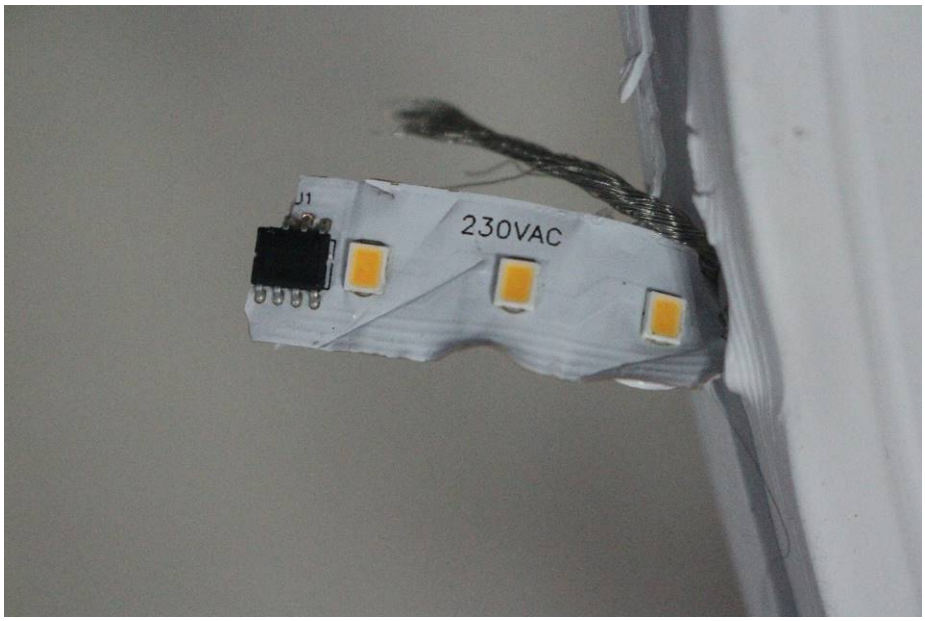
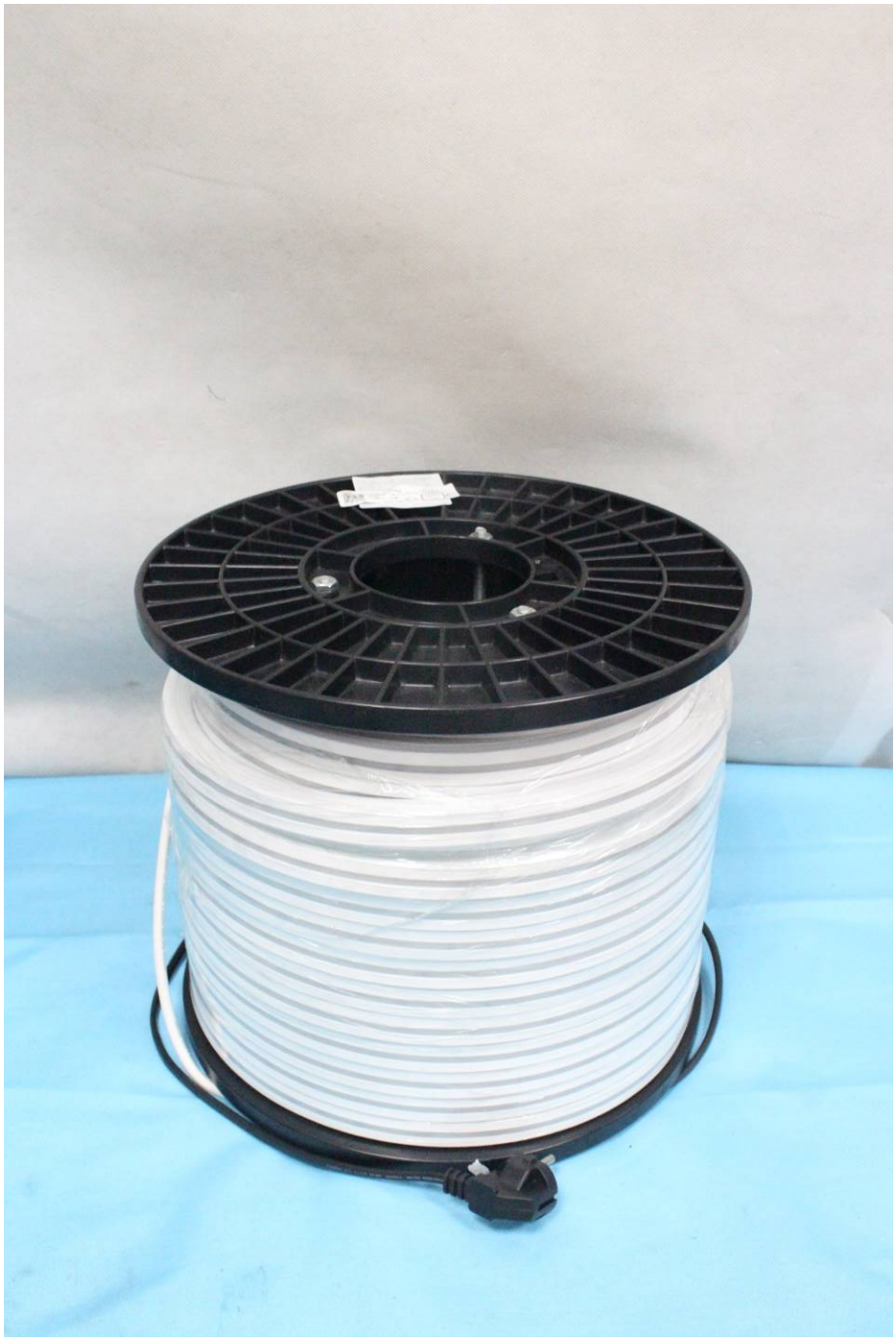
**Voltage Dips and Interruptions**



# 9 EUT Constructional Details (EUT Photos)

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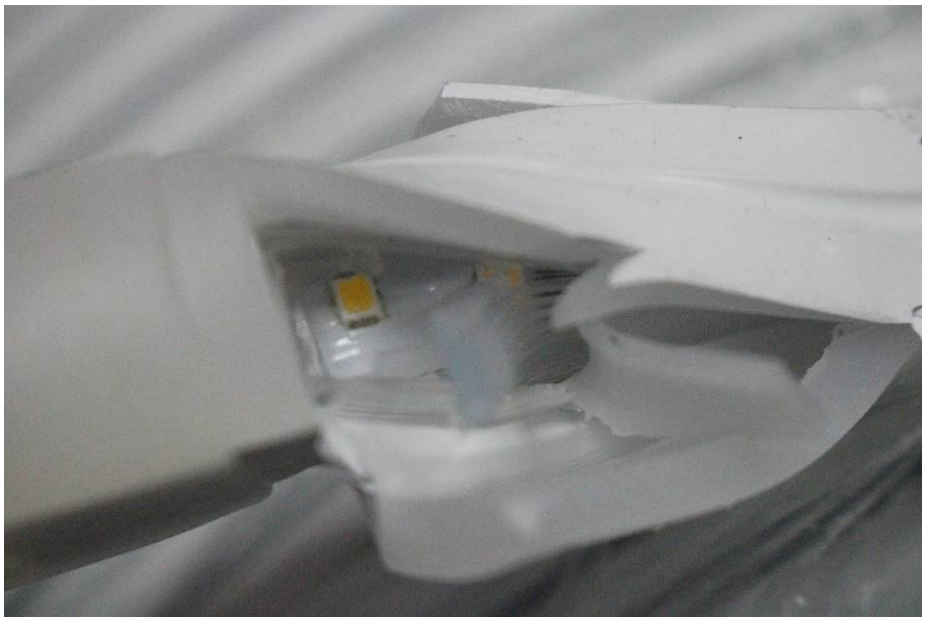

- End of the Report -


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