

EMC TEST REPORT
For

SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD

ILLUMINATED SIGNS

Model No.: 900*900

Additional Model No.: 670*900, 445*900, 220*900, 5520*940,
5520*1860, 500*500*900, 520*520*1860, 900*1820,
670*1820, 445*1820, 220*1820

Prepared for : SHANGHAI SUMMIT INTERNATIONAL TRADING
Address : CO.,LTD
 : Room 418, Block 1, No. 1000 zhenchen Road, Baoshan
 : District, Shanghai, China

Prepared by : Shenzhen AOCE Electronic Technology Service Co., Ltd.
Address : Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu
 : Industrial Park, Fuhai Street, Baoan District, Shenzhen,
 : Guangdong, China
Tel : (+86)755-85277785
Fax : (+86)755-23705230
Web : www.aoc-cert.com
Mail : postmaster@aoc-cert.com

Date of receipt of test sample : July 2, 2025
Number of tested samples : 1
Serial number : Prototype
Date of Test : July 2, 2025 - July 16, 2025
Date of Report : July 16, 2025



**EMC TEST REPORT
EN IEC 55015: 2019+A11: 2020**

Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN IEC 61547: 2023
Equipment for general lighting purposes - EMC immunity requirements

Report Reference No. : **AOC250716103E**

Date Of Issue..... : July 16, 2025

Testing Laboratory Name..... : **Shenzhen AOCE Electronic Technology Service Co., Ltd.**

Address..... : Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

Testing Location/ Procedure..... : Full application of Harmonised standards
Partial application of Harmonised standards
Other standard testing method

Applicant's Name..... : **SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD**

Address..... : Room 418, Block 1, No. 1000 zhenchen Road, Baoshan District, Shanghai, China

Test Specification:

Standard..... : EN IEC 55015:2019+A11:2020
EN IEC 61000-3-2:2019+A1:2021+A2:2024
EN 61000-3-3:2013+A1:2019+A2:2021+AC:2022
EN IEC 61547: 2023

Test Report Form No..... : AOCEMC-1.0

TRF Originator..... : Shenzhen AOCE Electronic Technology Service Co., Ltd.

Master TRF..... : Dated 2011-03

Shenzhen AOCE Electronic Technology Service Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen AOCE Electronic Technology Service Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen AOCE Electronic Technology Service Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test Item Description..... : **ILLUMINATED SIGNS**

Trade Mark..... : OMODA JAECOO

Model/ Type Reference..... : 900*900

Ratings..... : DC 24V, 8.3A, 95W

Result : **Positive**

Compiled by:

David Liu

Supervised by:

Kevin Huang

Approved by:

Jackson Fang

David Liu/ File administrators

Kevin Huang/ Technique principal

Jackson Fang/ Manager

EMC -- TEST REPORT

| | |
|----------------------------------------|---------------------------------------|
| Test Report No. : AOC250716103E | <u>July 16, 2025</u> Date of issue |
|----------------------------------------|---------------------------------------|

Type / Model..... : ILLUMINATED SIGNS

EUT..... : 900*900

Applicant..... : SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD

Address..... : Room 418, Block 1, No. 1000 zhenchen Road, Baoshan District, Shanghai, China

Telephone..... : /

Fax..... : /

Manufacturer..... : SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD

Address..... : Room 418, Block 1, No. 1000 zhenchen Road, Baoshan District, Shanghai, China

Telephone..... : /

Fax..... : /

Factory..... : SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD

Address..... : Room 418, Block 1, No. 1000 zhenchen Road, Baoshan District, Shanghai, China

Telephone..... : /

Fax..... : /

| | |
|----------------------------------------------------------|-------------|
| Test Result according to the standards on page 6: | Pass |
|----------------------------------------------------------|-------------|

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

TABLE OF CONTENTS

| Test Report Description | Page |
|-------------------------------------------------------------------|-----------|
| 1. SUMMARY OF STANDARDS AND RESULTS | 6 |
| 1.1.Description of Standards and Results | 6 |
| 1.2.Description of Performance Criteria | 7 |
| 2. GENERAL INFORMATION | 8 |
| 2.1.Description of Device (EUT) | 8 |
| 2.2.Description of Test Facility | 8 |
| 2.3.Statement of the measurement uncertainty | 8 |
| 2.4.Measurement Uncertainty | 8 |
| 3. MEASURING DEVICES AND TEST EQUIPMENT | 9 |
| 3.1.Conducted Disturbance | 9 |
| 3.2.Disturbance Power | 9 |
| 3.3.Radiated Electromagnetic Disturbance | 9 |
| 3.4.Radiated Disturbance (Electric Field) | 9 |
| 3.5.Harmonic Current | 9 |
| 3.6.Voltage fluctuation and Flicker | 9 |
| 3.7.Electrostatic Discharge | 9 |
| 3.8.RF Field Strength Susceptibility | 10 |
| 3.9.Electrical Fast Transient/Burst | 10 |
| 3.10.Surge | 10 |
| 3.11.Conducted Susceptibility | 10 |
| 3.12.Power Frequency Magnetic Field Susceptibility | 10 |
| 3.13.Voltage Dips | 10 |
| 3.14.Voltage Short Interruptions | 10 |
| 4. MAGNETIC FIELD EMISSION MEASUREMENT | 11 |
| 4.1.Block Diagram of Test Setup | 11 |
| 4.2.Magnetic Field Emission Measurement Standard and Limits | 11 |
| 4.3.EUT Configuration on Test | 11 |
| 4.4.Operating Condition of EUT | 11 |
| 4.5.Test Procedure | 12 |
| 4.6.Test Results | 12 |
| 5. RADIATED EMISSION MEASUREMENT | 13 |
| 5.1.Block Diagram of Test Setup | 13 |
| 5.2.Test Standard | 13 |
| 5.3.Radiated Emission Limits | 13 |
| 5.4.EUT Configuration on Test | 14 |
| 5.5.Operating Condition of EUT | 14 |
| 5.6.Test Procedure | 14 |
| 5.7.Test Results | 14 |

| | |
|----------------------------------------------------------|------------|
| 6. ELECTROSTATIC DISCHARGE TEST | 16 |
| 6.1.Block Diagram of Test Setup | 16 |
| 6.2.Test Standard | 16 |
| 6.3.Severity Levels and Performance Criterion | 16 |
| 6.4.EUT Configuration on Test | 16 |
| 6.5.Operating Condition of EUT | 17 |
| 6.6.Test Procedure | 17 |
| 6.7.Test Results | 17 |
| 7. RF FIELD STRENGTH SUSCEPTIBILITY TEST | 19 |
| 7.1.Block Diagram of Test Setup | 19 |
| 7.2.Test Standard | 19 |
| 7.3.Severity Levels and Performance Criterion | 19 |
| 7.4.EUT Configuration on Test | 20 |
| 7.5.Operating Condition of EUT | 20 |
| 7.6.Test Procedure | 20 |
| 7.7.Test Results | 20 |
| 8. MAGNETIC FIELD IMMUNITY TEST | 22 |
| 8.1.Block Diagram of Test Setup | 22 |
| 8.2.Test Standard | 22 |
| 8.3.Severity Levels and Performance Criterion | 22 |
| 8.4.EUT Configuration on Test | 22 |
| 8.5.Operating Condition of EUT | 23 |
| 8.6.Test Procedure | 23 |
| 8.7.Test Results | 23 |
| 9. PHOTOGRAPH | 25 |
| 9.1.Photo of Radiated Measurement | 25 |
| 10. EXTERNAL AND INTERNAL PHOTOS OF THE EUT | 266 |

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

| EMISSION (EN IEC 55015: 2019+A11: 2020) | | | |
|---------------------------------------------------|-------------------------------------------|----------------------|---------|
| Description of Test Item | Standard | Limits | Results |
| Conducted disturbance at mains terminals | EN IEC 55015: 2019+A11: 2020 | ----- | N/A |
| Magnetic field emission | EN IEC 55015: 2019+A11: 2020 | ----- | PASS |
| Radiated disturbance | EN IEC 55015: 2019+A11: 2020 | ----- | PASS |
| Harmonic current emissions | EN IEC 61000-3-2: 2019+A1:2021+A2:2024 | Class C | N/A |
| Voltage fluctuations & flicker | EN 61000-3-3:2013+A1:2019+A2:2021+AC:2022 | ----- | N/A |
| IMMUNITY (EN IEC 61547: 2023) | | | |
| Description of Test Item | Basic Standard | Performance Criteria | Results |
| Electrostatic discharge (ESD) | EN 61000-4-2: 2009 | B | PASS |
| Radio-frequency, Continuous radiated disturbance | EN 61000-4-3: 2020 | A | PASS |
| Electrical fast transient (EFT) | EN 61000-4-4: 2012 | B | N/A |
| Surge (Input a.c. power ports) | EN 61000-4-5: 2014+A1: 2017 | B | N/A |
| Radio-frequency, Continuous conducted disturbance | EN 61000-4-6: 2014+AC: 2015 | A | N/A |
| Power frequency magnetic field | EN 61000-4-8: 2010 | A | PASS |
| Voltage dips, 30% reduction | EN 61000-4-11: 2020 | C | N/A |
| Voltage interruptions | | B | N/A |

N/A is an abbreviation for Not Applicable.

1.2.Description of Performance Criteria

General Performance Criteria

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access (hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution;
- quality of data display and transmission;
- quality of speech transmission.

1.2.1.Performance criterion A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

1.2.2.Performance criterion B

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operation state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

1.2.3.Performance criterion C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : ILLUMINATED SIGNS
Model Number : 900*900
Power Supply : DC 24V, 8.3A, 95W

2.2. Description of Test Facility

EMC Lab.

2.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the AOC quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.4. Measurement Uncertainty

| Test Item | Frequency Range | Uncertainty | Note |
|--------------------------|-----------------|-------------|------|
| Radiation Uncertainty : | 30MHz~200MHz | ±2.96dB | (1) |
| | 200MHz~1000MHz | ±3.10dB | (1) |
| Conduction Uncertainty : | 150kHz~30MHz | ±1.63dB | (1) |
| Power disturbance : | 30MHz~300MHz | ±1.60dB | (1) |

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. MEASURING DEVICES AND TEST EQUIPMENT

3.1. Conducted Disturbance

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------|-----------------|-----------|------------|------------|
| 1 | EMI Test Receiver | ROHDE & SCHWARZ | ESCI | 101142 | 2024/04/13 |
| 2 | 10dB Attenuator | SCHWARZBECK | OSPAM236 | 9729 | 2024/04/13 |
| 3 | Artificial Mains | ROHDE & SCHWARZ | ENV216 | 101288 | 2024/04/13 |
| 4 | EMI Test Software | AUDIX | E3 | N/A | 2024/04/13 |

3.2. Disturbance Power

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------|-----------------|-----------|------------|------------|
| 1 | EMI Test Receiver | ROHDE & SCHWARZ | ESCI | 101142 | 2024/04/13 |
| 2 | Absorbing clamp | ROHDE & SCHWARZ | MDS 21 | 4033 | 2024/04/13 |
| 3 | EMI Test Software | AUDIX | E3 | N/A | 2024/04/13 |

3.3. Radiated Electromagnetic Disturbance

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|---------------------|-----------------|-----------|------------|------------|
| 1 | EMI Test Receiver | ROHDE & SCHWARZ | ESCI | 1011423 | 2024/04/13 |
| 2 | Triple-loop Antenna | EVERFINE | LLA-2 | 11050003 | 2024/04/13 |
| 3 | EMI Test Receiver | ROHDE & SCHWARZ | ESPI | 101840 | 2024/04/13 |
| 4 | EMI Test Software | AUDIX | E3 | N/A | 2024/04/13 |

3.4. Radiated Disturbance (Electric Field)

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|--------------------------|-----------------|-----------|------------|------------|
| 1 | 3m Semi Anechoic Chamber | SIDT FRANKONIA | SAC-3M | 03CH03-HY | 2024/04/13 |
| 2 | EMI Test Receiver | ROHDE & SCHWARZ | ESPI | 101840 | 2024/04/13 |
| 3 | Log per Antenna | SCHWARZBECK | VULB9163 | 9163-470 | 2024/04/13 |
| 4 | EMI Test Software | AUDIX | E3 | N/A | 2024/04/13 |
| 5 | Positioning Controller | MF | MF-7082 | / | 2024/04/13 |

3.5. Harmonic Current

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|----------------------------|--------------|-----------|-------------|------------|
| 1 | Power Analyzer Test System | Voltech | PM6000 | 20000670053 | 2024/04/13 |

3.6. Voltage fluctuation and Flicker

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|----------------------------|--------------|-----------|-------------|------------|
| 1 | Power Analyzer Test System | Voltech | PM6000 | 20000670053 | 2024/04/13 |

3.7. Electrostatic Discharge

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|----------------|--------------|-----------|------------|------------|
| 1 | ESD Simulator | KIKUSUI | KC001311 | KES4021 | 2024/04/13 |

3.8.RF Field Strength Susceptibility

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------------|-----------------|-------------|------------|------------|
| 1 | SIGNAL GENERATOR | HP | 8648A | 625U00573 | 2024/04/13 |
| 2 | Amplifier | AR | 500A100 | 17034 | 2024/04/13 |
| 3 | Amplifier | AR | 100W/1000M1 | 17028 | 2024/04/13 |
| 4 | Isotropic Field Monitor | AR | FM2000 | 16829 | 2024/04/13 |
| 5 | Isotropic Field Probe | AR | FP2000 | 16755 | 2024/04/13 |
| 6 | Bi-conic Antenna | EMCO | 3108 | 9507-2534 | 2024/04/13 |
| 7 | By-log-periodic Antenna | AR | AT1080 | 16812 | 2024/04/13 |
| 8 | EMS Test Software | ROHDE & SCHWARZ | ESK1 | N/A | 2024/04/13 |

3.9.Electrical Fast Transient/Burst

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-----------------------------------------|--------------|-----------|------------|------------|
| 1 | Electrical fast transient(EFT)generator | 3CTEST | EFT-4021 | EC0461044 | 2024/04/13 |
| 2 | Coupling Clamp | 3CTEST | EFTC | EC0441098 | 2024/04/13 |

3.10.Surge

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-----------------------------|--------------|-----------|------------|------------|
| 1 | Surge test system | 3CTEST | SG5006G | EC5581070 | 2024/04/13 |
| 2 | Coupling/decoupling network | 3CTEST | SGN-5010G | CS5591033 | 2024/04/13 |

3.11.Conducted Susceptibility

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|----------------|--------------|-----------|--------------|------------|
| 1 | Simulator | EMTEST | CIT-10 | A126A1195 | 2024/04/13 |
| 2 | CDN | EMTEST | CDN-M2 | A2210177 | 2024/04/13 |
| 3 | CDN | EMTEST | CDN-M3 | A2210177 | 2024/04/13 |
| 4 | Attenuator | EMTEST | ATT6 | 50FP-006-H3B | 2024/04/13 |

3.12.Power Frequency Magnetic Field Susceptibility

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|--------------------------------------------|--------------|-------------|------------|------------|
| 1 | Power frequency mag-field generator System | EVERFINE | EMS61000-8K | 906003 | 2024/04/13 |

3.13.Voltage Dips

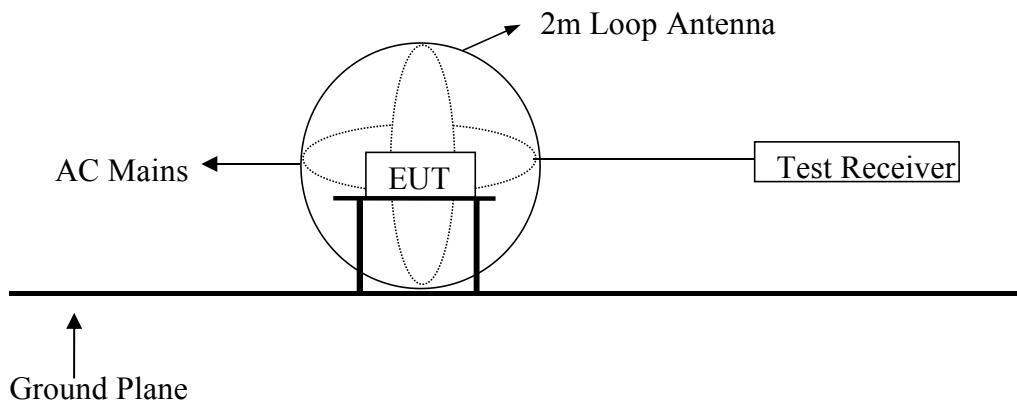
| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------------------|--------------|-----------|------------|------------|
| 1 | Voltage dips and up generator | 3CTEST | VDG-1105G | EC0171014 | 2024/04/13 |

3.14.Voltage Short Interruptions

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------------------|--------------|-----------|------------|------------|
| 1 | Voltage dips and up generator | 3CTEST | VDG-1105G | EC0171014 | 2024/04/13 |

4. MAGNETIC FIELD EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



4.2. Magnetic Field Emission Measurement Standard and Limits

4.2.1. Test Standard

EN IEC 55015: 2019+A11: 2020

4.2.2. Test Limits

| Frequency | Limits for loop diameter (dB μ A) |
|-----------------|---------------------------------------|
| | 2m |
| 9kHz ~ 70kHz | 88 |
| 70kHz ~ 150kHz | 88 ~ 58* |
| 150kHz ~ 3.0MHz | 58 ~ 22* |
| 3.0MHz ~ 30MHz | 22 |

1. At the transition frequency the lower limit applies.
2. * decreasing linearly with logarithm of the frequency.

4.3. EUT Configuration on Test

The configuration of the EUT is same as Section 3.3.

4.4. Operating Condition of EUT

- 4.4.1. Setup the EUT as shown in Section 4.1.
- 4.4.2. Turn on the power of all equipments.
- 4.4.3. Let the EUT work in test mode (On) and measure it.

4.5. Test Procedure

The EUT is placed on a wood table in the center of a loop antenna. The induced current in the loop antenna is measured by means of a current probe and the test receiver. Three field components are checked by means of a coaxial switch.

The frequency range from 9kHz to 30MHz is investigated. The receiver is measured with the quasi-peak detector. For frequency band 9kHz to 150kHz, the bandwidth of the field strength meter is set at 200Hz. For frequency band 150kHz to 30MHz, the bandwidth is set at 9kHz.

All the test results are listed in Section 4.6.

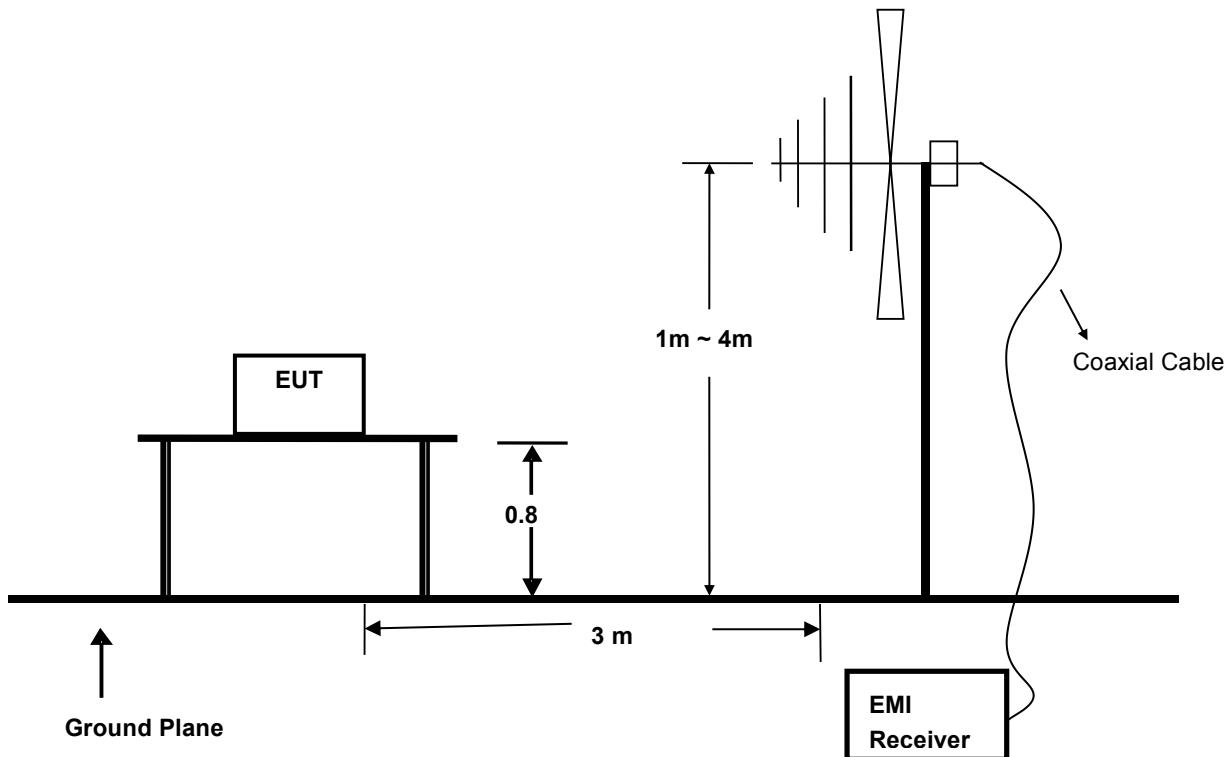
4.6. Test Results

PASS.

The frequency range from 9kHz to 30MHz is investigated.

5. RADIATED EMISSION MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. Test Standard

EN IEC 55015: 2019+A11: 2020

5.3. Radiated Emission Limits

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

| FREQUENCY (MHz) | DISTANCE (Meters) | FIELD STRENGTHS LIMIT (dB μ V/m) |
|--------------------|----------------------|-----------------------------------------|
| 30 ~ 230 | 3 | 40 |
| 230 ~ 300 | 3 | 47 |

- Note: (1) The smaller limit shall apply at the combination point between two frequency bands.
 (2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

5.4.EUT Configuration on Test

The EN IEC 55015 regulations test method must be used to find the maximum emission during radiated emission measurement.

5.5.Operating Condition of EUT

5.5.1 Turn on the power.

5.5.2 After that, let the EUT work in test mode (ON) and measure it.

5.6.Test Procedure

The EUT is placed on a turntable, which is 0.8 meter high above the ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 10 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. By-log antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver is set at 120kHz.

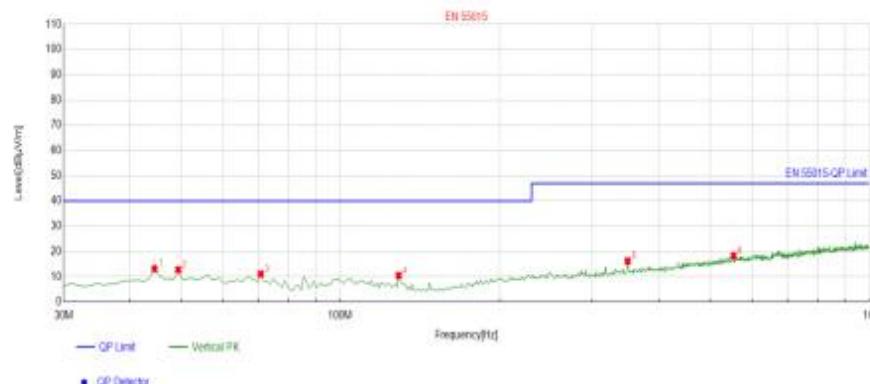
The frequency range from 30MHz to 300MHz is investigated.

5.7.Test Results

PASS.

The test result please refer to the next page.

| | | | |
|---------------------------------|---------------|--------------------------|------------|
| Model No. | 900*900 | Test Mode | ON |
| Environmental Conditions | 24°C / 56% RH | Detector Function | Quasi-peak |
| Pol | Vertical | Distance | 3m |
| Test Engineer | Gao | | |

Test Graph**Suspected List**

| Suspected List | | | | | | | | | |
|-----------------------|-------------|-------------|------------------------|----------------------|----------------------|-------------|-------------|-----------|----------|
| NO. | Freq. [MHz] | Factor [dB] | Reading [dB μ V/m] | Level [dB μ V/m] | Limit [dB μ V/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1 | 44.5646 | -13.73 | 26.89 | 13.16 | 40.00 | 26.84 | 100 | 212 | Vertical |
| 2 | 49.4194 | -13.65 | 26.41 | 12.76 | 40.00 | 27.24 | 100 | 344 | Vertical |
| 3 | 70.7808 | -17.81 | 28.88 | 11.07 | 40.00 | 28.93 | 100 | 22 | Vertical |
| 4 | 129.0390 | -18.43 | 28.95 | 10.52 | 40.00 | 29.48 | 100 | 54 | Vertical |
| 5 | 349.4494 | -11.69 | 27.93 | 16.24 | 47.00 | 30.76 | 100 | 34 | Vertical |
| 6 | 554.3243 | -6.84 | 25.09 | 18.25 | 47.00 | 28.75 | 100 | 10 | Vertical |

Model No.

900*900

Test Mode

ON

Environmental Conditions

24°C / 56% RH

Detector Function

Quasi-peak

Pol

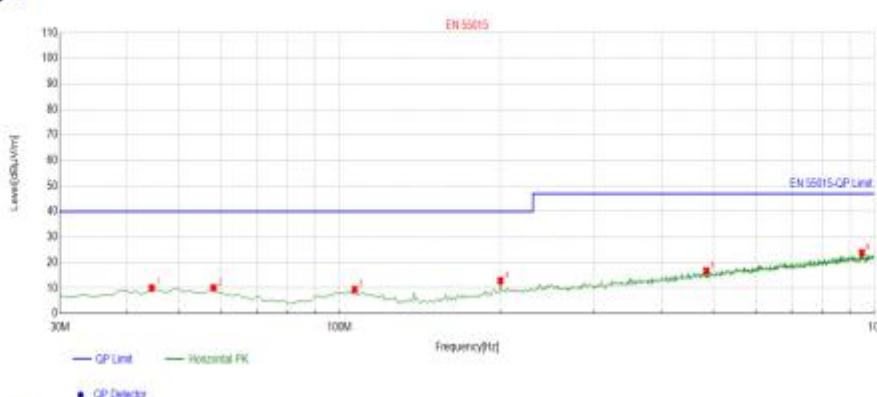
Horizontal

Distance

3m

Test Engineer

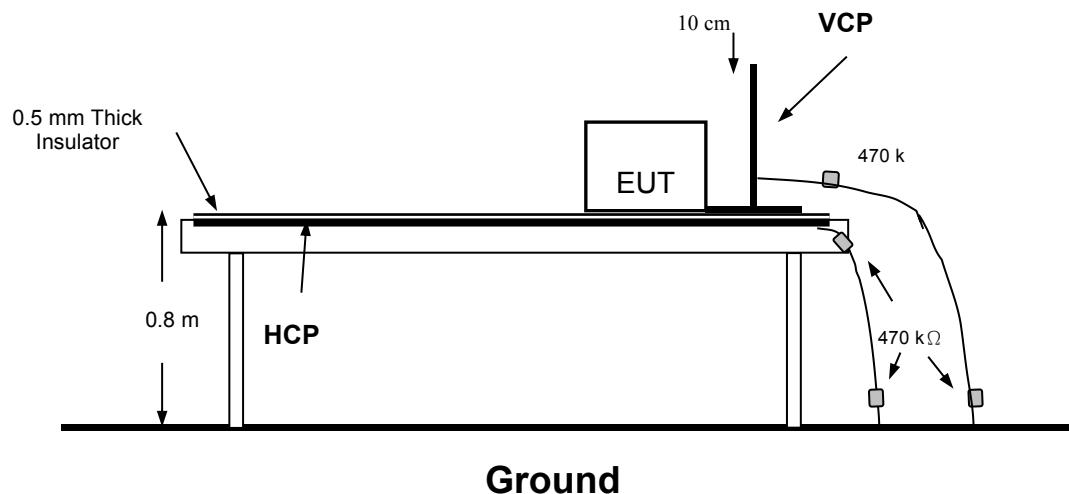
Gao

Test Graph**Suspected List**

| Suspected List | | | | | | | | | |
|-----------------------|-------------|-------------|------------------------|----------------------|----------------------|-------------|-------------|-----------|------------|
| NO. | Freq. [MHz] | Factor [dB] | Reading [dB μ V/m] | Level [dB μ V/m] | Limit [dB μ V/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1 | 44.5646 | -13.73 | 23.76 | 10.03 | 40.00 | 29.97 | 100 | 9 | Horizontal |
| 2 | 58.1582 | -14.88 | 24.96 | 10.08 | 40.00 | 29.92 | 100 | 96 | Horizontal |
| 3 | 106.7067 | -15.42 | 24.80 | 9.38 | 40.00 | 30.62 | 100 | 171 | Horizontal |
| 4 | 199.9199 | -15.07 | 27.98 | 12.91 | 40.00 | 27.09 | 100 | 155 | Horizontal |
| 5 | 485.3854 | -8.50 | 25.31 | 16.81 | 47.00 | 30.19 | 100 | 29 | Horizontal |
| 6 | 947.5676 | -1.30 | 25.15 | 23.85 | 47.00 | 23.15 | 100 | 124 | Horizontal |

6. ELECTROSTATIC DISCHARGE TEST

6.1. Block Diagram of Test Setup



6.2. Test Standard

EN IEC 61547: 2023 (EN 61000-4-2: 2009, Severity Level: Air Discharge: Level 3, $\pm 8\text{KV}$
Contact Discharge: Level 2, $\pm 4\text{KV}$)

6.3. Severity Levels and Performance Criterion

6.3.1. Severity level

| Level | Test Voltage Contact Discharge (KV) | Test Voltage Air Discharge (KV) |
|-------|----------------------------------------|------------------------------------|
| 1. | ± 2 | ± 2 |
| 2. | ± 4 | ± 4 |
| 3. | ± 6 | ± 8 |
| 4. | ± 8 | ± 15 |
| X | Special | Special |

6.3.2. Performance criterion: B

6.4. EUT Configuration on Test

The configuration of EUT is listed in Section 3.7.

6.5.Operating Condition of EUT

- 6.5.1.Setup the EUT as shown in Section 6.1.
- 6.5.2.Turn on the power of all equipments.
- 6.5.3.Let the EUT work in test mode (ON) and measure it.

6.6.Test Procedure

6.6.1.Air Discharge

This test is done on a non-conductive surfaces. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

Because the case of the EUT is metal surface, so it does not need to be tested.

6.6.2.Contact Discharge

All the procedure shall be same as Section 6.6.1. except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

6.6.3.Indirect Discharge For Horizontal Coupling Plane

At least 20 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1m from the EUT and with the discharge electrode touching the coupling plane.

6.6.4.Indirect Discharge For Vertical Coupling Plane

At least 20 single discharge shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

6.7.Test Results

PASS.

Please refer to the following page.

Electrostatic Discharger Test Results

| | | | |
|------------------|-----------------------------------------------------------------------------------------|----------------------|----------|
| Standard | <input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2 | | |
| Applicant | SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD | | |
| EUT | ILLUMINATED SIGNS | Temperature | 26°C |
| M/N | 900*900 | Humidity | 51% |
| Criterion | B | Pressure | 1021mbar |
| Test Mode | ON | Test Engineer | Gao |

Air Discharge

| Test Points | Test Levels | | | Results | | |
|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
| | $\pm 2\text{KV}$ | $\pm 4\text{KV}$ | $\pm 8\text{KV}$ | Pass | Fail | Performance Criterion |
| Front | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Top | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Bottom | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

Contact Discharge

| Test Points | Test Levels | | Results | | |
|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
| | $\pm 2\text{ KV}$ | $\pm 4\text{ KV}$ | Pass | Fail | Performance Criterion |
| Front | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Top | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Bottom | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

Discharge To Horizontal Coupling Plane

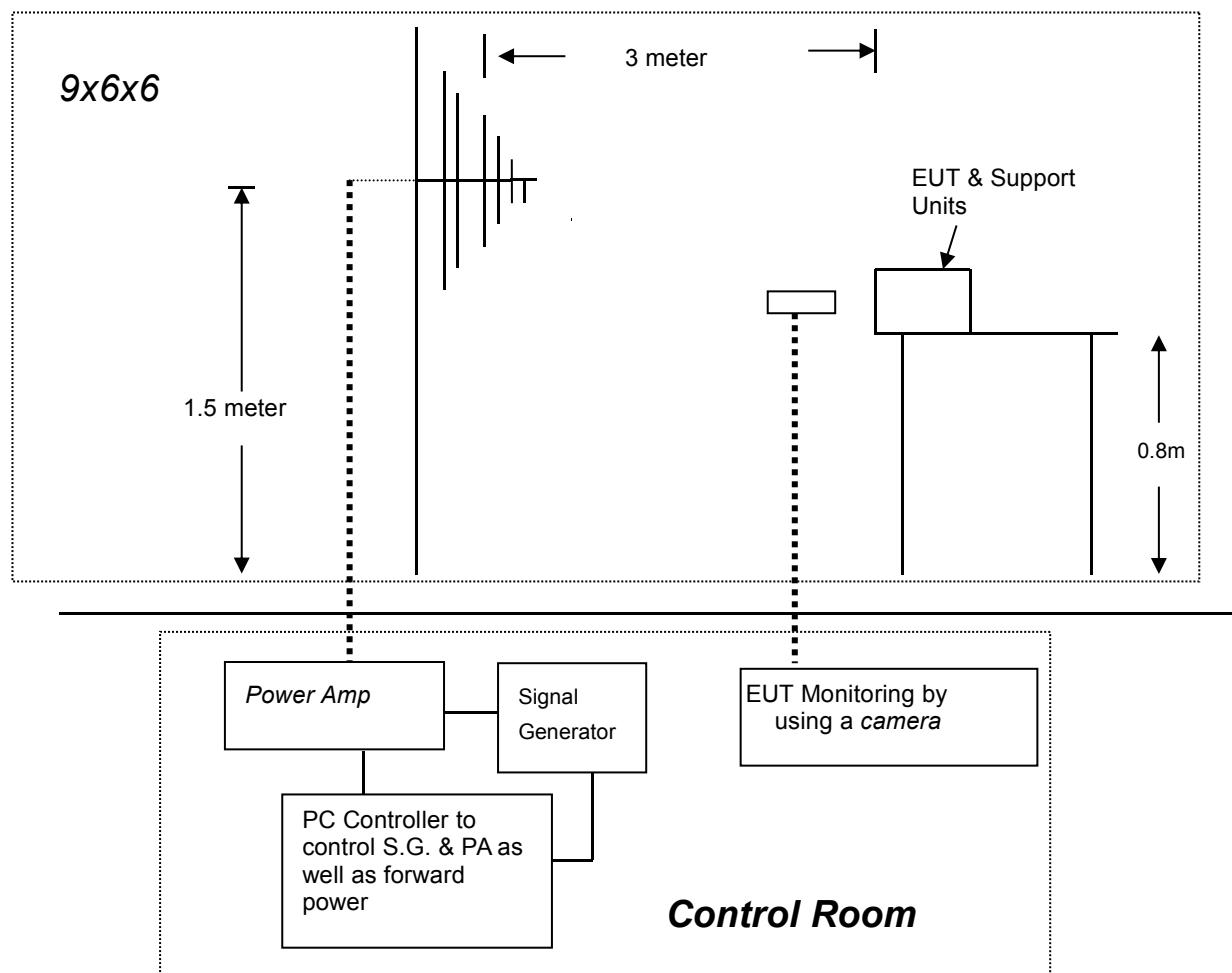
| Side of EUT | Test Levels | | Results | | |
|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
| | $\pm 2\text{ KV}$ | $\pm 4\text{ KV}$ | Pass | Fail | Performance Criterion |
| Front | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

Discharge To Vertical Coupling Plane

| Side of EUT | Test Levels | | Results | | |
|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
| | $\pm 2\text{ KV}$ | $\pm 4\text{ KV}$ | Pass | Fail | Performance Criterion |
| Front | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

7. RF FIELD STRENGTH SUSCEPTIBILITY TEST

7.1. Block Diagram of Test Setup



7.2. Test Standard

EN IEC 61547: 2023 (EN 61000-4-3: 2020, Severity Level: 2, 3V / m)

7.3. Severity Levels and Performance Criterion

7.3.1. Severity level

| Level | Field Strength (V/m) |
|-------|----------------------|
| 1 | 1 |
| 2 | 3 |
| 3 | 10 |
| X | Special |

7.3.2. Performance criterion: A

7.4.EUT Configuration on Test

The configuration of EUT are listed in Section 2.1.

7.5.Operating Condition of EUT

7.5.1.Setup the EUT as shown in Section 7.1.

7.5.2.Turn on the power of all equipments.

7.5.3.Let the EUT work in test mode (On) and measure it.

7.6.Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. EUT is set 3 meter away from the transmitting antenna which is mounted on an antenna tower.

Both horizontal and vertical polarization of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually. In order to judge the EUT performance, a CCD camera is used to monitor EUT screen. All the scanning conditions are as follows:

| Condition of Test | Remarks |
|---------------------------|--------------------------|
| 1. Fielded Strength | 3 V/m (Severity Level 2) |
| 2. Radiated Signal | Unmodulated |
| 3. Scanning Frequency | 80 - 1000 MHz |
| 4. Dwell time of radiated | 0.0015 decade/s |
| 5. Waiting Time | 3 Sec. |

7.7.Test Results

PASS.

Please refer to the following page.

RF Field Strength Susceptibility Test Results

| | | | |
|------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------|------|
| Standard | <input type="checkbox"/> IEC 61000-4-3 <input checked="" type="checkbox"/> EN 61000-4-3 | | |
| Applicant | SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD | | |
| EUT | ILLUMINATED SIGNS | Temperature | 26°C |
| M/N | 900*900 | Humidity | 51% |
| Field Strength | 3 V/m | Criterion | A |
| Test Mode | ON | Test Engineer | Gao |
| Frequency Range | 80 MHz to 1000 MHz | | |
| Modulation | <input type="checkbox"/> None <input type="checkbox"/> Pulse | <input checked="" type="checkbox"/> AM 1KHz 80% | |
| Steps | 1% | | |

| | Horizontal | Vertical |
|--------------|-------------------|-----------------|
| Front | PASS | PASS |
| Right | PASS | PASS |
| Rear | PASS | PASS |
| Left | PASS | PASS |

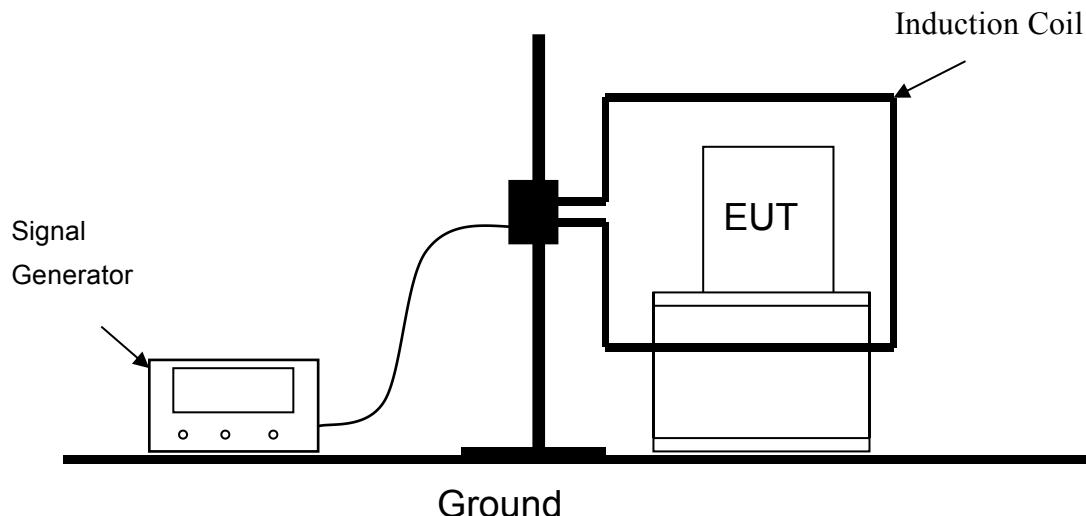
Test Equipment:

1. Signal Generator: 2031 (MARCONI)
2. Power Amplifier: 500A100 & 100W/1000M1 (A&R)
3. Power Antenna: 3108 (EMCO) & AT1080 (A&R)
4. Field Monitor: FM2000 (A&R)

Note:

8. MAGNETIC FIELD IMMUNITY TEST

8.1. Block Diagram of Test Setup



8.2. Test Standard

EN IEC 61547: 2023 (EN 61000-4-8: 2010, Severity Level 2: 3A/m)

8.3. Severity Levels and Performance Criterion

8.3.1. Severity level

| Level | Magnetic Field Strength (A/m) |
|-------|-------------------------------|
| 1. | 1 |
| 2. | 3 |
| 3. | 10 |
| 4. | 30 |
| 5. | 100 |
| X | Special |

8.3.2. Performance criterion: A

8.4. EUT Configuration on Test

The configuration of EUT are listed in Section 3.12.

8.5.Operating Condition of EUT

- 8.5.1.Setup the EUT as shown in Section 8.1.
- 8.5.2.Turn on the power of all equipments.
- 8.5.3.Let the EUT work in test mode (On) and measure it.

8.6.Test Procedure

- 8.6.1.Set up the EUT system as shown on Section 8.1.
- 8.6.2.The Induction coil is set up in horizontal or vertical.
- 8.6.3.Let the EUT work in test mode and measure it.

8.7.Test Results

PASS.

Please refer to the following page.

Magnetic Field Immunity Test Result

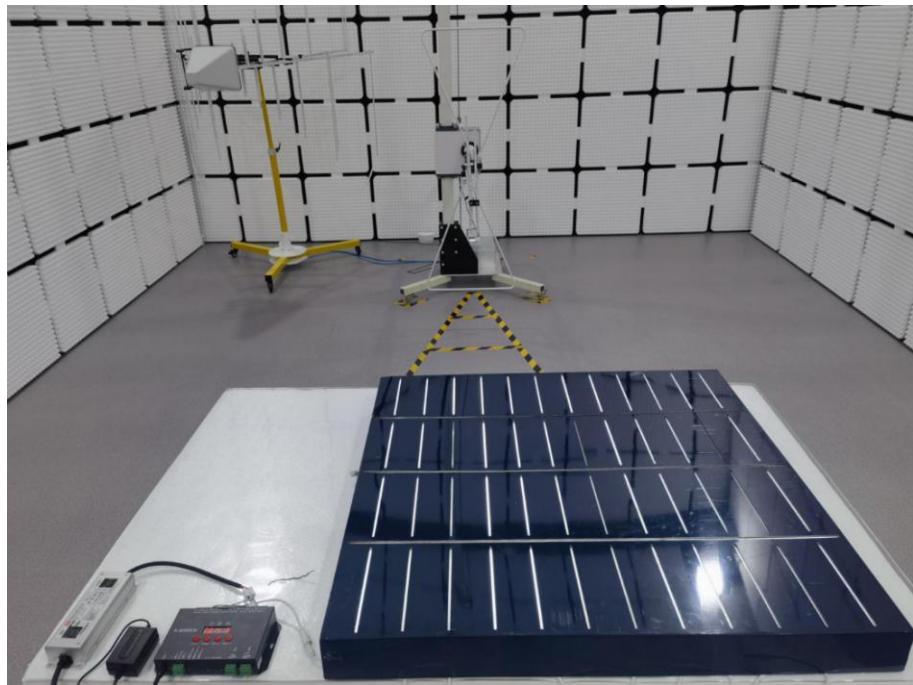
| | | | |
|----------------------|-----------------------------------------------------------------------------------------|--------------------|------|
| Standard | <input type="checkbox"/> IEC 61000-4-8 <input checked="" type="checkbox"/> EN 61000-4-8 | | |
| Applicant | SHANGHAI SUMMIT INTERNATIONAL TRADING CO.,LTD | | |
| EUT | ILLUMINATED SIGNS | Temperature | 26°C |
| M/N | 900*900 | Humidity | 51% |
| Test Mode | ON | Criterion | A |
| Test Engineer | Gao | | |

| Test Level (A/M) | Testing Duration | Coil Orientation | Criterion | Result |
|-----------------------------|-----------------------------|-------------------------|------------------|---------------|
| 3 | 5 mins | X | A | PASS |
| 3 | 5 mins | Y | A | PASS |
| 3 | 5 mins | Z | A | PASS |

Note:

9. PHOTOGRAPH

9.1.Photo of Radiated Measurement



9. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

900*900 PHOTOS



Fig. 1

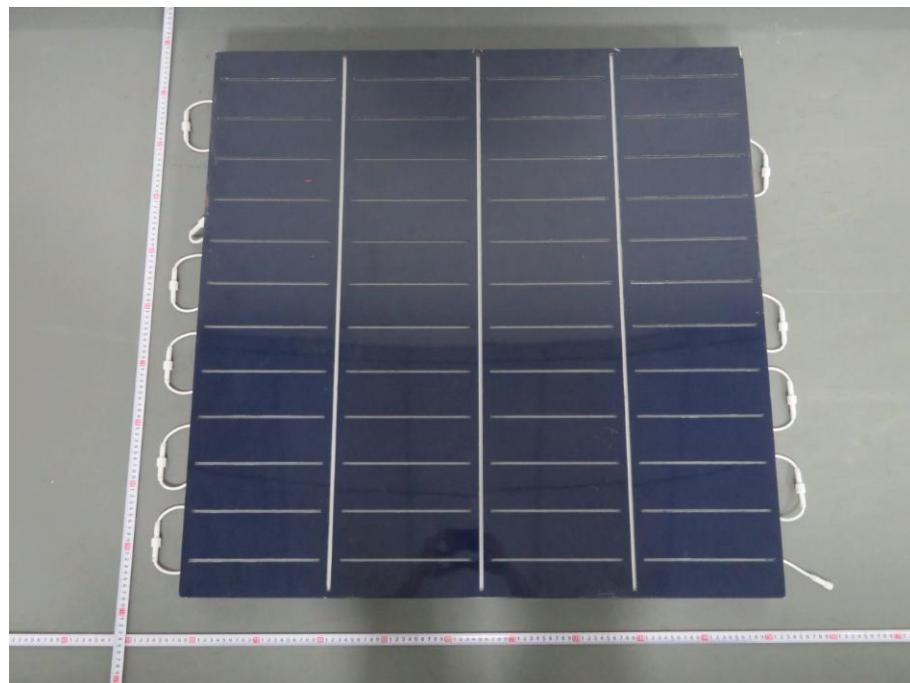


Fig.2

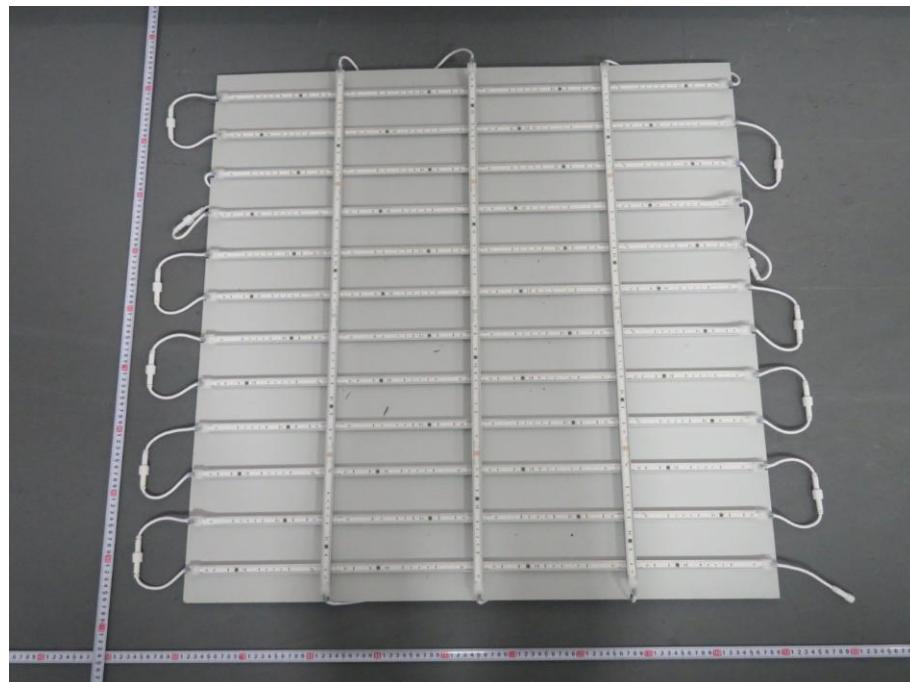


Fig.3

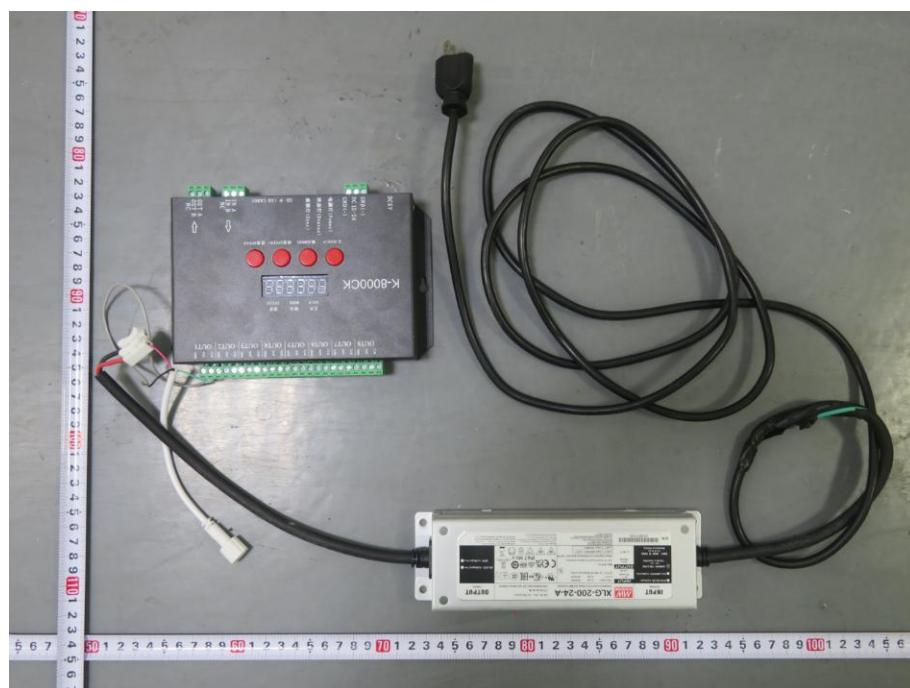


Fig.4

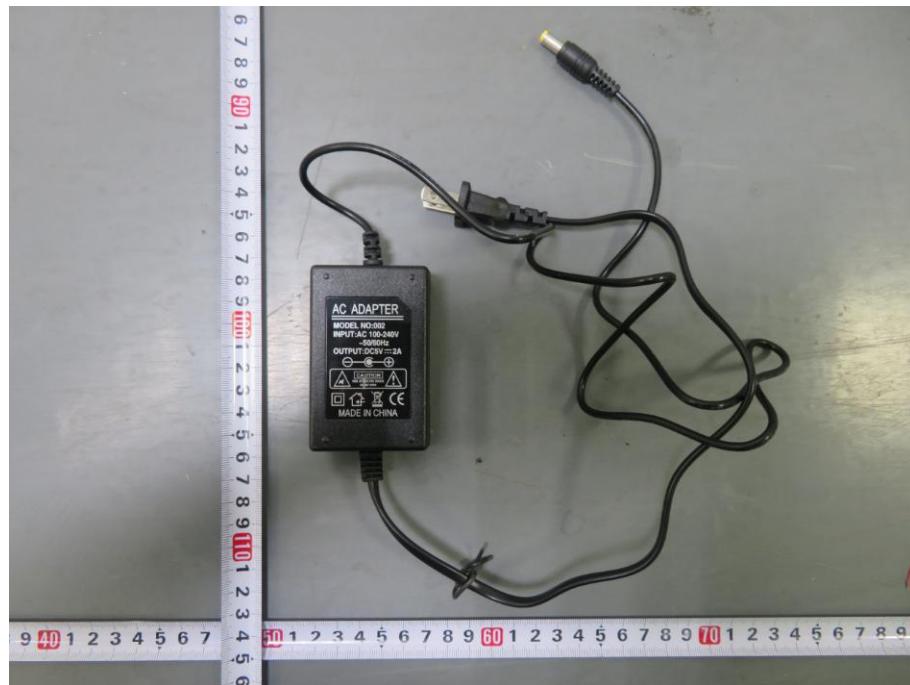


Fig.5

-----THE END OF REPORT-----