# EMC REPORT

| | |
|---|---|
| Prepared For : | **Shenzhen Lost Vape Technology Ltd**<br>Add:A3101, 301, 401, Building 15th, Junfeng Industrial Area, Chongqing Road, Fuhai Street, Baoan District, Shenzhen, China. |
| Product Name: | Electronic Cigarette |
| Model : | Ursa Mini Pod Kit |
| Trade Mark: | Lost Vape |
| Prepared By : | Shenzhen SIT Testing Technology Co., Ltd.<br>Add: Room 401, Building A2, The 2nd Industrial Zone of Zhu'ao, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China |
| Test Date: | June 16, 2021 to June 23, 2021 |
| Date of Report : | June 23, 2021 |
| Report No.: | SIT210615270101ER |

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# 1 TEST CERTIFICATION

| | |
|---|---|
| **Product:** | Electronic Cigarette |
| **Model:** | Ursa Mini Pod Kit |
| **Applicant:** | **Shenzhen Lost Vape Technology Ltd**<br>Add: A3101, 301, 401, Building 15th, Junfeng Industrial Area, Chongqing Road, Fuhai Street, Baoan District, Shenzhen, China. |
| **Factory:** | **Shenzhen Lost Vape Technology Ltd**<br>Add: A3101, 301, 401, Building 15th, Junfeng Industrial Area, Chongqing Road, Fuhai Street, Baoan District, Shenzhen, China. |
| **Trade Mark:** | Lost Vape |
| **Tested:** | June 16, 2021 to June 23, 2021 |
| **Test Voltage:** | DC 3.7V |
| **Applicable Standards:** | EN 61000-6-1:2019<br>EN 61000-6-3:2007+A1:2011 |

The above equipment has been tested by Shenzhen SIT Testing Technology Co., Ltd., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Prepared by : Debe Yu

Assistant

Reviewer : Jessica

Supervisor

Approved & Authorized Signer : Kevin Sun

Manager

# 2 TEST RESULT SUMMARY

| Standard | Item | Result |
|---|---|---|
| EN61000-6-3 | Conducted Emission | N/A |
| | Radiated Emission | Compliant |
| | EN61000-3-2 Harmonic Current Emission | N/A |
| | EN61000-3-3 Voltage Fluctuation And Flicker | N/A |
| EN61000-6-1 | Electrostatic Discharge Immunity in accordance with IEC 61000-4-2 | Compliant |
| | Radiated RF-Electromagnetic Field Immunity in accordance with IEC 61000-4-3 | Compliant |
| | Electrical Fast Transient/Burst Immunity in accordance with IEC 61000-4-4 | N/A |
| | Surge Immunity in accordance with IEC 61000-4-5 | N/A |
| | Conducted disturbances Immunity in accordance with IEC 61000-4-6 | N/A |
| | Power-frequency magnetic field Immunity in accordance with IEC 61000-4-8 | N/A |
| | Voltage Dips/Interruptions Immunity in accordance with IEC 61000-4-11 | N/A |

**Note:** N/A: not applicable

# 3 EUT DESCRIPTION

| | |
|---|---|
| **Product** | Electronic Cigarette |
| **Model** | Ursa Mini Pod Kit |
| **Trade Mark** | Lost Vape |
| **Applicant** | Shenzhen Lost Vape Technology Ltd |
| **Housing material** | Plastic&Metal&Leather |
| **EUT Type** | ☒ Engineering Sample. ☐ Product Sample,<br>☐ Mass Product Sample. |
| **Serial Number** | N/A |

# 4 TEST METHODOLOGY

## 4.1 Test Standards

The following report is prepared on behalf of the **Shenzhen Lost Vape Technology Ltd** in accordance with EN 61000-6-3, Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential,
commercial and light-industrial environments and EN 61000-6-1, Electromagnetic compatibility (EMC) -- Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments.
The objective of the manufacturer is to demonstrate compliance with the standards EN61000-6-3 and EN61000-6-1 for residential, commercial and light-industrial environments.
**Maintenance of compliance** is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

## 4.2 Test Methodology

All measurements contained in this report were conducted with the standards EN61000-6-3, EN61000-3-2, EN61000-3-3, and EN61000-6-1 for residential, commercial and light-industrial environments, and all related testing and measurement techniques intentional standards.

## 4.3 EUT Setup and Operation Mode

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

Test Mode List:

| Test Mode | Charging | Remark |
|---|---|---|
| TM1 | Normal working | / |

EUT Cable List and Details

| Cable Description | Length (M) | Shielded/Unshielded | With Core /Without Core |
|---|---|---|---|
| / | / | / | / |

Special Cable List and Details

| Cable Description | Length (M) | Shielded/Unshielded | With Core /Without Core |
|---|---|---|---|
| / | / | / | / |

## 4.4 Performance Criteria for EMS

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

A. The apparatus shall continue to operate as intended during and after the test. The manufacturer specifies some minimum performance level. The performance level may be specified by the manufacturer as a permissible loss of performance.

B. The apparatus shall continue to operate as intended after the test. This indicates that the EUT does not need to function at normal performance levels during the test, but must recover. Again some minimal performance is defined by the manufacture. No change in operating state or loss or data is permitted.

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

# 5 FACILITIES AND ACCREDITATIONS

## 5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at SIT LAB.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

## 5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Copies of granted accreditation certificates are available for downloading from our web site, www.sit-cert.com

## 5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement | Frequency | | Uncertainty |
|---|---|---|---|
| Conducted emissions | 9kHz~30MHz | | +/- 3.59dB |
| Radiated emissions | Horizontal | 30MHz ~ 200MHz | +/- 4.77dB |
| | | 200MHz ~1000MHz | +/- 4.93dB |
| | Vertical | 30MHz ~ 200MHz | +/- 5.04dB |
| | | 200MHz ~1000MHz | +/- 4.93dB |

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

# 6 RADIATED EMISSION MEASUREMENT

## 6.1. TEST INSTRUMENTS

| Radiated Emission Test Site (966) | | | | |
|---|---|---|---|---|
| **Name of Equipment** | **Manufacturer** | **Model** | **Serial Number** | **Calibration Due** |
| EMI Test Receiver | R&S | ESCI | 100005 | 12/25/2021 |
| Spectrum Analyzer | R&S | FSU | 100114 | 12/25/2021 |
| Pre Amplifier | H.P. | HP8447E | 2945A02715 | 12/25/2021 |
| Bilog Antenna | SUNOL Sciences | JB3 | A021907 | 12/25/2021 |
| Cable | TIME MICROWAVE | LMR-400 | N-TYPE04 | 12/22/2021 |
| System-Controller | CCS | N/A | N/A | N.C.R |
| Turn Table | CCS | N/A | N/A | N.C.R |
| Antenna Tower | CCS | N/A | N/A | N.C.R |

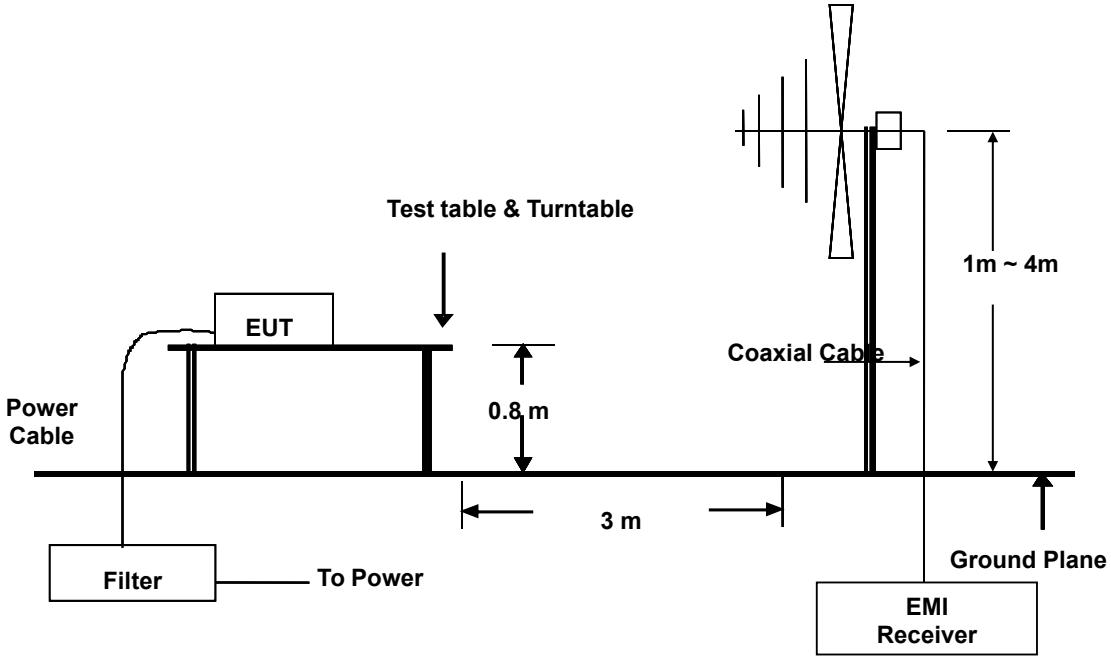
**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

2. N.C.R = No Calibration Request.

## 6.2. TEST PROCEDURE

### Procedure of Preliminary Test

Test is conducting under the description of EN61000-6-3 or CISPR22, Radio disturbance characteristics - Limits and methods of measurement.




## 6.3 Corrected Amplitude & Margin Calculation

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

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

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

Margin = Corr. Ampl. - EN61000-6-3 Limit

## 6.4 Environmental Conditions

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

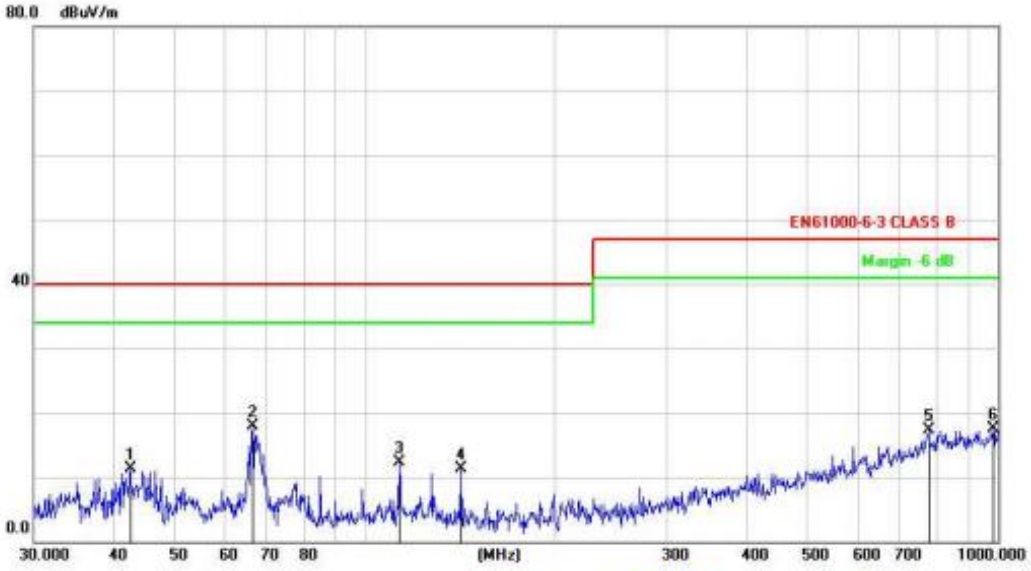
## 6.5 Summary of Test Results/Plots

According to the data in section 6.5, the EUT complied with the EN 61000-6-3 standards, and had the worst margin is:

-3.88 dBμV at 175.5000 MHz in the, Vertical polarization 30 MHz to 1 GHz, 3Meters

Plot of Radiated Emissions Test Data
EUT: Electronic Cigarette
Tested Model: Ursa Mini Pod Kit
Operating Condition: Normal Working

**Radiated Emission Measurement**




Polarization: *Horizontal* Temperature:

Limit: EN61000-6-3 CLASS B Power: Humidity: %

EUT: Electronic Cigarette Distance:

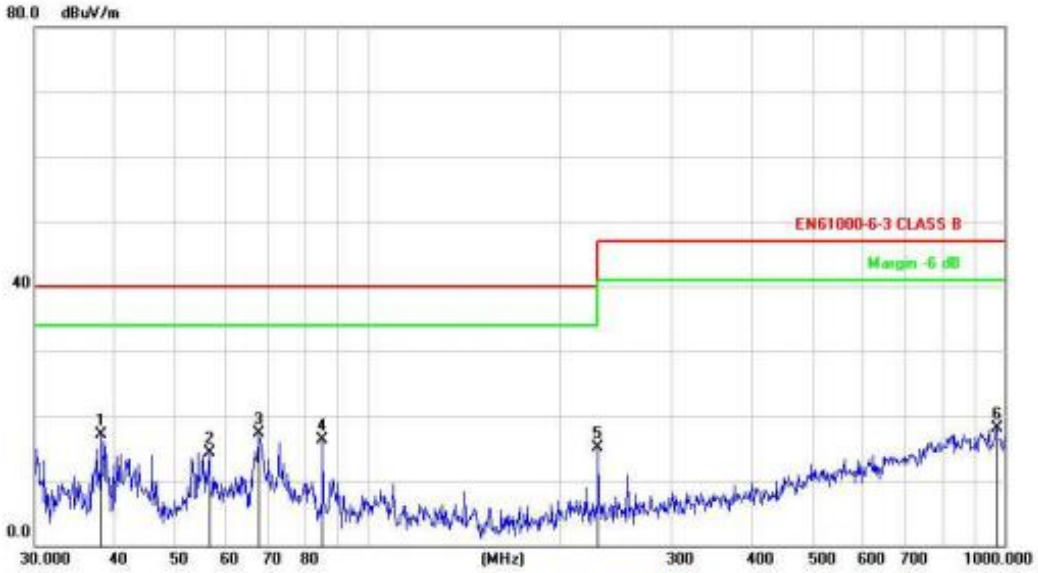
M/N: Ursa Mini Pod Kit

Mode:

Note:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dB/m | dB | Detector | cm | degree | Comment |
| 1 | | 42.6000 | 29.19 | -17.93 | 11.26 | 40.00 | -28.74 | peak | | | |
| 2 | * | 66.4989 | 37.33 | -19.52 | 17.81 | 40.00 | -22.19 | peak | | | |
| 3 | | 113.3163 | 32.37 | -20.11 | 12.26 | 40.00 | -27.74 | peak | | | |
| 4 | | 141.8262 | 29.65 | -18.34 | 11.31 | 40.00 | -28.69 | peak | | | |
| 5 | | 776.8778 | 27.79 | -10.42 | 17.37 | 47.00 | -29.63 | peak | | | |
| 6 | | 982.6200 | 26.16 | -8.70 | 17.46 | 47.00 | -29.54 | peak | | | |

**Radiated Emission Measurement**




Polarization: *Vertical* Temperature:

Limit: EN61000-6-3 CLASS B Power: Humidity: %

EUT: Electronic Cigarette Distance:

M/N: Ursa Mini Pod Kit

Mode:

Note:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | Antenna Height | Table Degree | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dB/m | dB | Detector | cm | degree | Comment |
| 1 | | 38.2120 | 35.11 | -18.09 | 17.02 | 40.00 | -22.98 | peak | | | |
| 2 | | 56.3948 | 33.05 | -18.65 | 14.40 | 40.00 | -25.60 | peak | | | |
| 3 | * | 67.4382 | 36.93 | -19.63 | 17.30 | 40.00 | -22.70 | peak | | | |
| 4 | | 84.9995 | 37.37 | -21.06 | 16.31 | 40.00 | -23.69 | peak | | | |
| 5 | | 230.0985 | 34.69 | -19.49 | 15.20 | 47.00 | -31.80 | peak | | | |
| 6 | | 972.3374 | 26.97 | -8.86 | 18.11 | 47.00 | -28.89 | peak | | | |

# 7 ELECTROSTATIC DISCHARGE (ESD)

## 7.1. TEST SPECIFICATION

| | |
|---|---|
| **Basic Standard:** | EN 61000-4-2 |
| **Discharge Impedance:** | 330 ohm |
| **Charging Capacity:** | 150pF |
| **Discharge Voltage:** | Air Discharge: 8 kV (Direct)<br>Contact Discharge: 4 kV (Direct/Indirect) |
| **Polarity:** | Positive & Negative |
| **Number of Discharge:** | Minimum 25 times at each test point |
| **Discharge Mode:** | 1 time/s |
| **Performance Criterion:** | B |

## 7.2. TEST INSTRUMENT

| IMMUNITY SHIELDED ROOM | | | | |
|---|---|---|---|---|
| **Name of Equipment** | **Manufacturer** | **Model** | **Serial Number** | **Calibration Due** |
| ESD 2000 | EMC PARTNER | ESD2000 | 182 | 12/25/2021 |

**NOTE:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

## 7.3. TEST PROCEDURE

The discharges shall be applied in two ways:

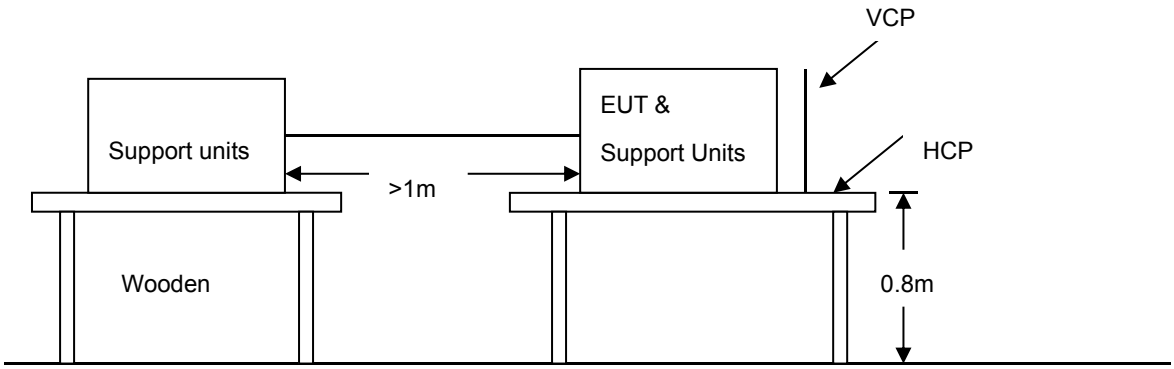
a) Contact discharges to the conductive surfaces and coupling planes:
   The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points. One of the test points shall be subjected to at least 50 indirect discharges to the center of the front edge of the **H**orizontal **C**oupling **P**lane (**HCP**). The remaining three test points shall each receive at least 50 direct contact discharges. If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode. Test shall be performed at a maximum repetition rate of one discharge per second.

b) Air discharges at slots and apertures and insulating surfaces:
   On those parts of the EUT where it is not possible to perform contact discharge testing, the equipment should be investigated to identify user accessible points where breakdown may occur. Such points are tested using the air discharge method. This investigation should be restricted to those area normally handled by the user. A minimum of 10 single air discharges shall be applied to the selected test point for each such area.

The basic test procedure was in accordance with IEC 61000-4-2:

a) The EUT was located 0.1 m minimum from all side of the **HCP** (dimensions 1.6m x 0.8m).
b) The support units were located another table 30 cm away from the EUT, but direct support unit was/were located at same location as EUT on the HCP and keep at a distance of 10 cm with EUT.
c) The time interval between two successive single discharges was at least 1 second.
d) Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.
e) Air discharges were applied with the round discharge tip of the discharge electrode approaching the EUT as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator was removed from the EUT and re-triggered for a new single discharge. The test was repeated until all discharges were complete.
f) At least ten single discharges (in the most sensitive polarity) were applied at the front edge of each **HCP** opposite the center point of each unit of the EUT and 0.1 meters from the front of the EUT. The long axis of the discharge electrode was in the plane of the **HCP** and perpendicular to its front edge during the discharge.
g) At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the **V**ertical **C**oupling **P**lane (**VCP**) in sufficiently different positions that the four faces of the EUT were completely illuminated. The **VCP** (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the EUT.

## 7.4. TEST SETUP




Ground Reference

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

**NOTE:**

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the **G**round **R**eference **P**lane. The **GRP** consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A **H**orizontal **C**oupling **P**lane (1.6m x 0.8m) was placed on the table and attached to the **GRP** by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of EN 61000-4-2, and its cables were placed on the **HCP** and isolated by an insulating support of 0.5mm thickness. A distance of 1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

## 7.5. TEST RESULTS

| | | | |
|---|---|---|---|
| **Temperature:** | 25°C | **Humidity** | 55% RH |
| **Pressure** | 996mbar | **Test result** | Pass |
| **Test mode** | Normal Working | **Test By** | Debe Yu |

| Air Discharge | | | | | | |
|---|---|---|---|---|---|---|
| **Test locations** | | **Test Levels** | **Results** | | | |
| | | **± 8 kV** | **Pass** | **Fail** | **Performance Criterion** | **Observation** |
| Button and Top | 2Points | ☒ | ☒ | ☐ | **B** | **Note ☐ 1 ☒ 2** |

| Contact Discharge | | | | | | |
|---|---|---|---|---|---|---|
| **Test Points** | | **Test Levels** | **Results** | | | |
| | | **± 4 kV** | **Pass** | **Fail** | **Performance Criterion** | **Observation** |
| HCP | 2Points | ☒ | ☒ | ☐ | **B** | **Note ☐ 1 ☒ 2** |
| VCP | 2Points | ☒ | ☒ | ☐ | **B** | **Note ☐ 1 ☒ 2** |

***NOTE***: 1. There was no change compared with initial operation during the test.
2. The loss of function of the EUT during the test and it was recovered by itself operation after the test.

# 8 CONTINUOUS RADIATED DISTURBANCES (R/S)

## 8.1. TEST SPECIFICATION

| | |
|---|---|
| **Basic Standard:** | EN 61000-4-3 |
| **Frequency Range:** | 80 MHz ~1000 MHz, |
| **Field Strength:** | 3 V/m |
| **Modulation:** | 1kHz Sine Wave, 80%, AM Modulation |
| **Frequency Step:** | 1 % of preceding frequency value |
| **Polarity of Antenna:** | Horizontal and Vertical |
| **Test Distance:** | 3 m |
| **Antenna Height:** | 1.5m |
| **Performance Criterion:** | A |

## 8.2. TEST INSTRUMENT

| 743 RS Chamber | | | | |
|---|---|---|---|---|
| **Name of Equipment** | **Manufacturer** | **Model** | **Serial Number** | **Calibration Due** |
| Signal Generator | Maconi | 2022D | 119246/003 | 12/22/2021 |
| Power Amplifier | M2S | A00181-1000 | 9801-112 | 12/22/2021 |
| Power Amplifier | M2S | AC8113/ 800-250A | 9801-179 | 12/22/2021 |
| Power Antenna | SCHAFFNER | CBL6140A | 1204 | 12/22/2021 |

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).
2. N.C.R.= No Calibration required

## 8.3. TEST PROCEDURE

The test procedure was in accordance with EN 61000-4-3

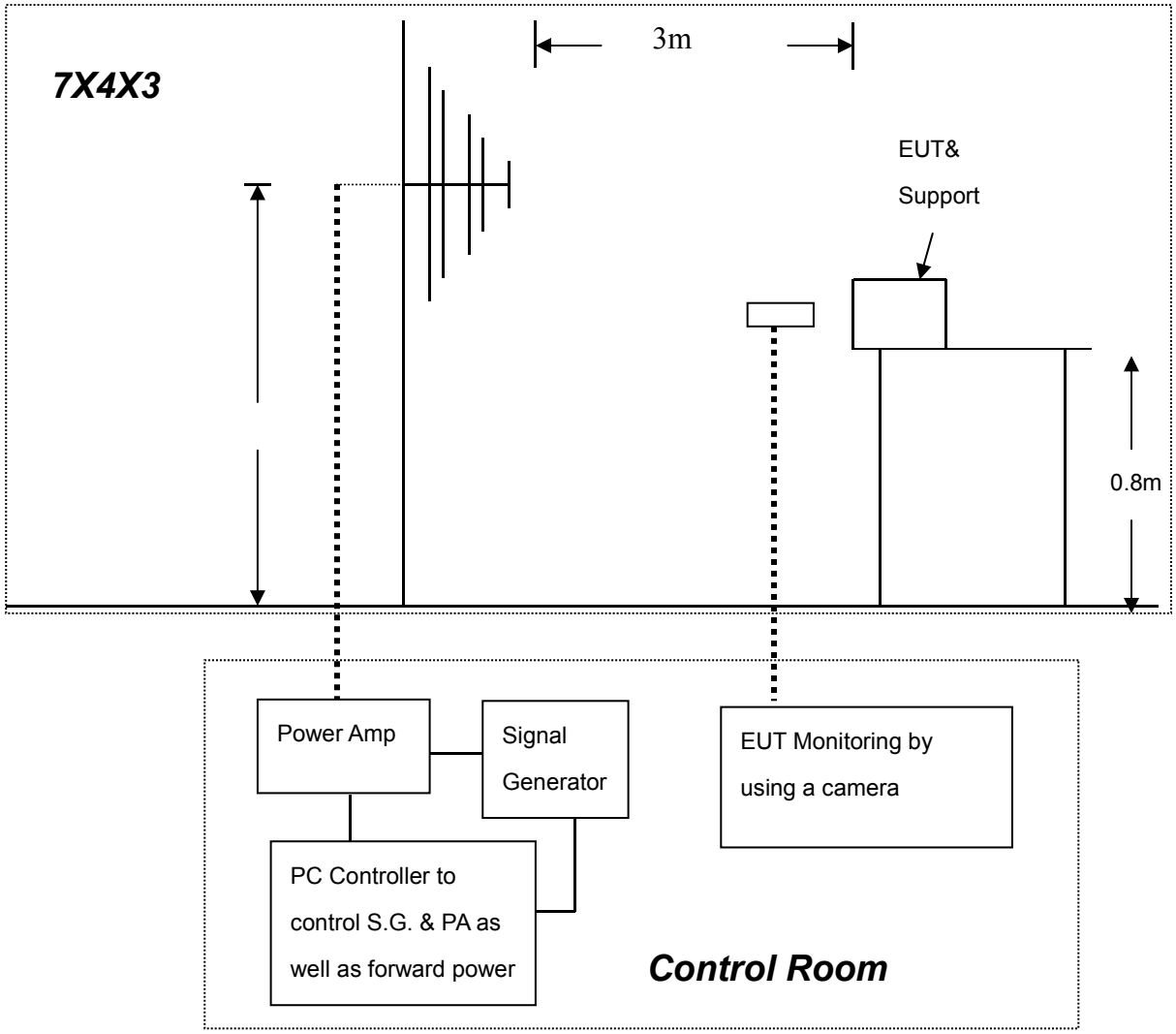
a) The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.

b) The frequency range is swept from 80 MHz to 1000 MHz, with the signal 80% amplitude modulated with a 1 kHz sine-wave. The rate of sweep did not exceed $1.5 \times 10^{-3}$ decade/s, where the frequency range is swept incrementally, the step size was 1% of preceding frequency value.

c) The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.

d) The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

## 8.4. TEST SETUP




For the actual test configuration, please refer to the related item.

**NOTE:**

TABLETOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

## 8.5. TEST RESULTS

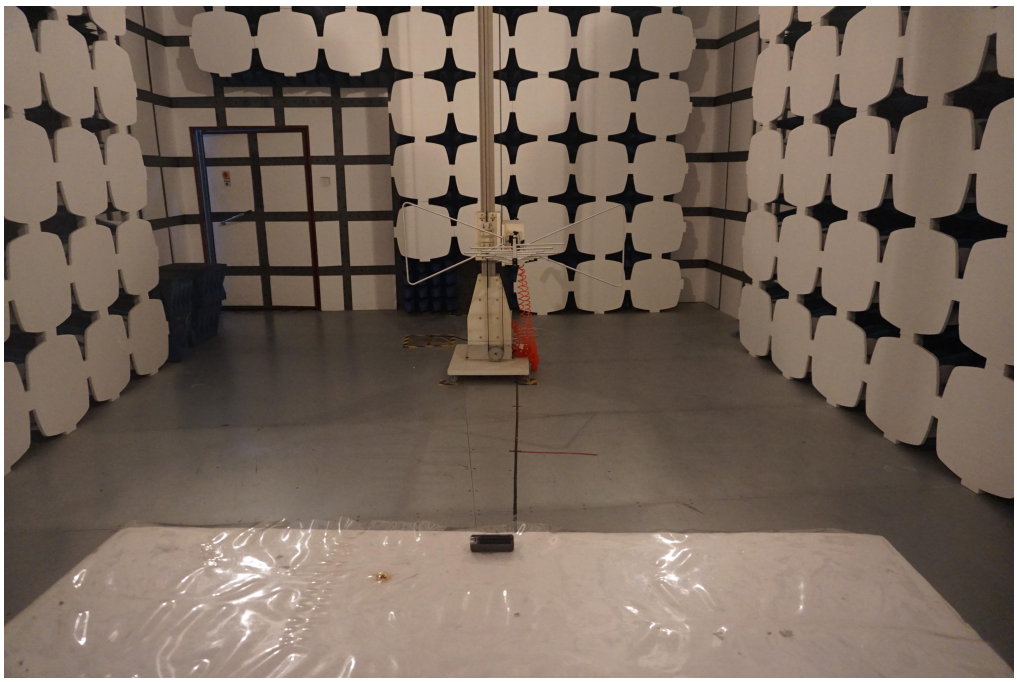
| | | | |
|---|---|---|---|
| **Temperature:** | 25°C | **Humidity** | 55% RH |
| **Pressure** | 996mbar | **Test result** | Pass |
| **Test mode** | Normal Working | **Test By** | DebeYu |

| Frequency Range(MHz) | Field (V/m) | Front | | Rear | | Left | | Right | |
|---|---|---|---|---|---|---|---|---|---|
| | | VERT | HORI | VERT | HORI | VERT | HORI | VERT | HORI |
| 80-1000 | 3 | A | A | A | A | A | A | A | A |
| 1400-2000 | 3 | A | A | A | A | A | A | A | A |
| 2000-2700 | 1 | A | A | A | A | A | A | A | A |

**NOTE:** 1.There was no change compared with the initial operation during the test.
2. This item is tested by Shenzhen Aacademy of Metrology & Quality Inspection

# 9 PHOTOGRAPH OF THE TEST CONFIGURATION

**RADIATED EMISSION TEST**



# 10 PHOTOGRAPHS OF EUT

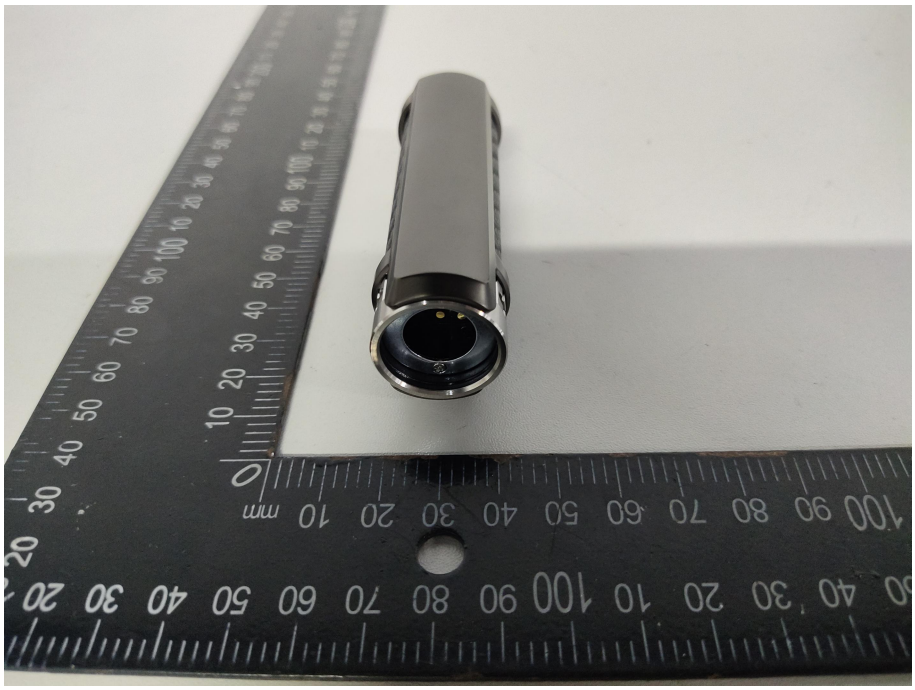
Appearance photograph of EUT




Appearance photograph of EUT



Appearance photograph of EUT



Appearance photograph of EUT



********THE END********