

# EMC Test Report

**Application No.** : TB181220628  
**Applicant** : JYC Battery Manufacturer Co., Ltd  
**Equipment Under Test (EUT)**  
**EUT Name** : Valve Regulated Lead Acid Battery  
**Model No.** : 12V7AH  
**Serial Model No.** : 2V50AH~2V3000AH, 6V1AH~6V250AH, 12V1AH~12V250AH  
**Brand Name** : JYC  
**Receipt Date** : 2018-12-14  
**Test Date** : 2018-12-15 to 2018-12-17  
**Issue Date** : 2018-12-18  
**Standards** : EN 61000-6-3:2007+A1:2011  
EN 61000-6-1:2017  
**Conclusions** : **PASS**

In the configuration tested, the EUT complied with the standards specified above  
The EUT technically complies with the 2014/30/EU directive requirements

**Test/Witness Engineer** :

*Rebecca*

Rebecca

**Engineer Supervisor** :

*Ivan Su*

Ivan Su

**Engineer Manager** :

*Ray Lai*

Ray Lai



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-075-1.0

---

---

## TABLE OF CONTENTS

|           |  |           |
|-----------|--|-----------|
| <b>1.</b> | <b>GENERAL INFORMATION.....</b>                                      | <b>4</b>  |
| 1.1.      | Client Information .....   | 4         |
| 1.2.      | General Description of EUT (Equipment Under Test).....               | 4         |
| 1.3.      | Block Diagram Showing The Configuration of System Tested .....       | 5         |
| 1.4.      | Description of Support Units.....                                    | 5         |
| 1.5.      | Description of Operating Mode .....                                  | 5         |
| 1.6.      | Performance Criterion .....  | 6         |
| 1.7.      | Measurement Uncertainty .....  | 6         |
| 1.8.      | Test Facility .....  | 7         |
| <b>2.</b> | <b>TEST RESULTS SUMMARY .....</b>                                    | <b>8</b>  |
| <b>3.</b> | <b>TEST EQUIPMENT USED .....</b>                                     | <b>9</b>  |
| <b>4.</b> | <b>RADIATED EMISSION TEST .....</b>                                  | <b>10</b> |
| 4.1.      | Test Standard and Limit .....  | 10        |
| 4.2.      | Test Setup .....   | 10        |
| 4.3.      | Test Procedure .....   | 11        |
| 4.4.      | Test Data .....  | 11        |
| <b>5.</b> | <b>ELECTROSTATIC DISCHARGE IMMUNITY TEST .....</b>                   | <b>12</b> |
| 5.1.      | Test Requirements.....   | 12        |
| 5.2.      | Test Setup .....   | 12        |
| 5.3.      | Test Procedure .....   | 13        |
| 5.4.      | Test Data .....  | 13        |
| <b>6.</b> | <b>RADIATED ELECTROMAGNETIC FIELD IMMUNITY TEST.....</b>             | <b>14</b> |
| 6.1.      | Test Requirements.....   | 14        |
| 6.2.      | Test Setup .....   | 14        |
| 6.3.      | Test Procedure .....   | 14        |
| 6.4.      | Test Data .....  | 15        |
| <b>7.</b> | <b>PHOTOGRAPHS - CONSTRUCTIONAL DETAILS .....</b>                    | <b>16</b> |
| <b>8.</b> | <b>PHOTOGRAPHS - TEST SETUP .....</b>                                | <b>17</b> |
|           | <b>ATTACHMENT A--RADIATED EMISSION TEST DATA (BELOW 1G).....</b>     | <b>18</b> |
|           | <b>ATTACHMENT B--ELECTROSTATIC DISCHARGE TEST DATA.....</b>          | <b>20</b> |
|           | <b>ATTACHMENT C--RF FIELD STRENGTH SUSCEPTIBILITY TEST DATA.....</b> | <b>22</b> |

### Revision History

| Report No.   | Version | Description             | Issued Date |
|--------------|---------|-------------------------|-------------|
| TB-EMC163411 | Rev.01  | Initial issue of report | 2018-12-17  |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |
|              |         |                         |             |

# 1. General Information

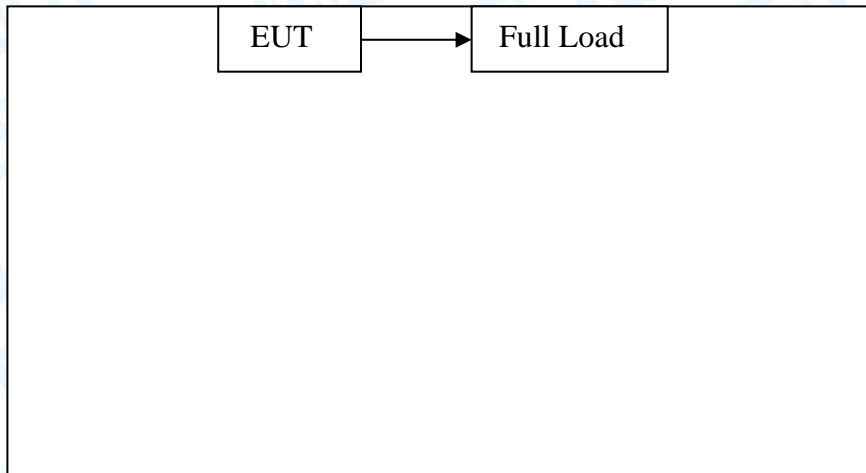
## 1.1. Client Information

|              |   |  |
|--------------|---|--|
| Applicant    | : | JYC Battery Manufacturer Co., Ltd  |
| Address      | : | Wengcheng Industrial Park, Guandu development Zone, Wengyuan, Shaoguan, Guangdong, China |
| Manufacturer | : | JYC Battery Manufacturer Co., Ltd  |
| Address      | : | Wengcheng Industrial Park, Guandu development Zone, Wengyuan, Shaoguan, Guangdong, China |

## 1.2. General Description of EUT (Equipment Under Test)

|   |   |  |
|---|---|--|
| EUT Name  | : | Valve Regulated Lead Acid Battery  |
| Model(s)  | : | 12V7AH, 2V50AH~2V3000AH, 6V1AH~6V250AH, 12V1AH~12V250AH                    |
| Brand Name  | : | JYC  |
| Battery Rating  | : | Standby use: 13.5-13.8V<br>Cycle use: 14.4-15.0V<br>Initial current: <2.1A |
| <b>Remark:</b> All above models are identical in schematic, structure and critical components except for only different voltage; therefore, EMC testing was performed with 12V7AH only. |   |  |

### 1.3. Block Diagram Showing The Configuration of System Tested



### 1.4. Description of Support Units

The EUT has been tested as an independent unit.

### 1.5. Description of Operating Mode

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description      |
|--------------|------------------|
| Mode 1       | Discharging Mode |

The EUT system operated these modes were found to be the worst case during the pre-scanning test as Following:

| For EMI Test    |                  |
|-----------------|------------------|
| Final Test Mode | Description      |
| Mode 1          | Discharging Mode |
| For EMS Test    |                  |
| Final Test Mode | Description      |
| Mode 1          | Discharging Mode |

## 1.6. Performance Criterion

**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.

**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.

**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.

## 1.7. Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

| Test                           | Parameters  | Expanded Uncertainty ( $U_{Lab}$ ) | Expanded Uncertainty ( $U_{Cispr}$ ) |
|--------------------------------|---|------------------------------------|--------------------------------------|
| Conducted Emission             | Level Accuracy:<br>9kHz~150kHz<br>150kHz to 30MHz | $\pm 3.42$ dB<br>$\pm 3.42$ dB     | $\pm 4.0$ dB<br>$\pm 3.6$ dB         |
| Radiated Emission              | Level Accuracy:<br>9kHz to 30 MHz                 | $\pm 4.60$ dB                      | N/A                                  |
| Radiated Emission              | Level Accuracy:<br>30MHz to 1000 MHz              | $\pm 4.40$ dB                      | $\pm 5.2$ dB                         |
| Radiated Emission              | Level Accuracy:<br>Above 1000MHz                  | $\pm 4.20$ dB                      | N/A                                  |
| Mains Harmonic                 | Voltage   | $\pm 3.11\%$                       | N/A                                  |
| Voltage Fluctuations & Flicker | Voltage   | $\pm 3.25\%$                       | N/A                                  |

## 1.8. Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

### **CNAS (L5813)**

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

### **A2LA Certificate No.: 4750.01**

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.

### **IC Registration No.: (11950A-1)**

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.

## 2. TEST Results Summary

| <b>EMISSION</b>   |                                      |                |
|---|--------------------------------------|----------------|
| <b>Description of test items</b>                        | <b>Standards</b>                     | <b>Results</b> |
| Conducted disturbance at mains terminals                | EN 61000-6-3:2007+A1:2011            | N/A            |
| Radiated Disturbance                                    | EN 61000-6-3:2007+A1:2011            | Pass           |
| Harmonic current emissions                              | EN 61000-3-2: 2014                   | N/A            |
| Voltage fluctuation and flicker                         | EN 61000-3-3: 2013                   | N/A            |
| <b>IMMUNITY</b>   |                                      |                |
| <b>Description of test items</b>                        | <b>Standards</b>                     | <b>Results</b> |
| Electrostatic Discharge (ESD)                           | EN 61000-4-2: 2009                   | Pass           |
| Radio-frequency, Continuous radiated disturbance        | EN 61000-4-3: 2006+A1: 2008 +A2:2010 | Pass           |
| EFT/B Immunity  | EN 61000-4-4: 2012                   | N/A            |
| Surge Immunity  | EN 61000-4-5: 2014                   | N/A            |
| Conducted RF Immunity                                   | EN 61000-4-6: 2014                   | N/A            |
| Power frequency magnetic field                          | EN 61000-4-8: 2010                   | N/A            |
| Voltage dips, >95% reduction                            | EN 61000-4-11: 2004                  | N/A            |
| Voltage dips, 30% reduction                             |                                      |                |
| Voltage interruptions                                   |                                      |                |
| <b>Note:</b> N/A is an abbreviation for Not Applicable. |                                      |                |



### 3. Test Equipment Used

| Radiation Emission Test |                 |           |            |               |               |
|-------------------------|-----------------|-----------|------------|---------------|---------------|
| Equipment               | Manufacturer    | Model No. | Serial No. | Last Cal.     | Cal.Due Date  |
| Spectrum Analyzer       | Agilent         | E4407B    | MY45106456 | Jul. 18, 2018 | Jul. 17, 2019 |
| EMI Test Receiver       | Rohde & Schwarz | ESCI      | 100010/007 | Jul. 18, 2018 | Jul. 17, 2019 |
| Bilog Antenna           | ETS-LINDGREN    | 3142E     | 00117537   | Mar. 16, 2018 | Mar. 15, 2019 |
| Bilog Antenna           | ETS-LINDGREN    | 3142E     | 00117542   | Mar. 16, 2018 | Mar. 15, 2019 |
| Horn Antenna            | ETS-LINDGREN    | 3117      | 00143207   | Mar. 16, 2018 | Mar. 15, 2019 |
| Horn Antenna            | ETS-LINDGREN    | 3117      | 00143209   | Mar. 16, 2018 | Mar. 15, 2019 |
| Pre-amplifier           | HP              | 11909A    | 185903     | Mar. 17, 2018 | Mar. 16, 2019 |
| Pre-amplifier           | HP              | 8449B     | 3008A00849 | Mar. 17, 2018 | Mar. 16, 2019 |
| Cable                   | HUBER+SUHNER    | 100       | SUCOFLEX   | Mar. 17, 2018 | Mar. 16, 2019 |
| Signal Generator        | Rohde & Schwarz | SML03     | IKW682-054 | Mar. 17, 2018 | Mar. 16, 2019 |
| Positioning Controller  | ETS-LINDGREN    | 2090      | N/A        | N/A           | N/A           |
| Discharge Immunity Test |                 |           |            |               |               |
| Equipment               | Manufacturer    | Model No. | Serial No. | Last Cal.     | Cal.Due Date  |
| ESD Tester              | TESEQ           | NSG437    | 304        | Jul. 18, 2018 | Jul. 17, 2019 |
| Radiated Immunity Test  |                 |           |            |               |               |
| Equipment               | Manufacturer    | Model No. | Serial No. | Last Cal.     | Cal.Due Date  |
| Signal Generator        | Rohde & Schwarz | SMT03     | 200754     | Mar. 22, 2018 | Mar. 21, 2019 |
| Power Meter             | Rohde & Schwarz | NRVD      | 110562     | Feb. 12, 2018 | Feb. 11, 2019 |
| Voltage Probe           | Rohde & Schwarz | URV5-Z2   | 12056      | Feb. 12, 2018 | Feb. 11, 2019 |
| Voltage Probe           | Rohde & Schwarz | URV5-Z2   | 12074      | Feb. 12, 2018 | Feb. 11, 2019 |
| RF Amplifier            | AR              | 50S1G4A   | 326720     | Feb. 12, 2018 | Feb. 11, 2019 |
| Bilog Antenna           | ETS             | 3142C     | 00047662   | Feb. 12, 2018 | Feb. 11, 2019 |
| Horn Antenna            | ARA             | DRG-118A  | 16554      | Feb. 12, 2018 | Feb. 11, 2019 |
| Audio Analyzer          | Rohde & Schwarz | UPL 16    | SB2208     | Feb. 12, 2018 | Feb. 11, 2019 |
| Sound Level Calibrator  | B&K             | 4231      | 264516     | Feb. 12, 2018 | Feb. 11, 2019 |

## 4. Radiated Emission Test

### 4.1. Test Standard and Limit

#### 4.1.1. Test Standard

EN 61000-6-3:2007+A1:2011

#### 4.1.2. Test Limit

#### Radiated Disturbance Test Limit

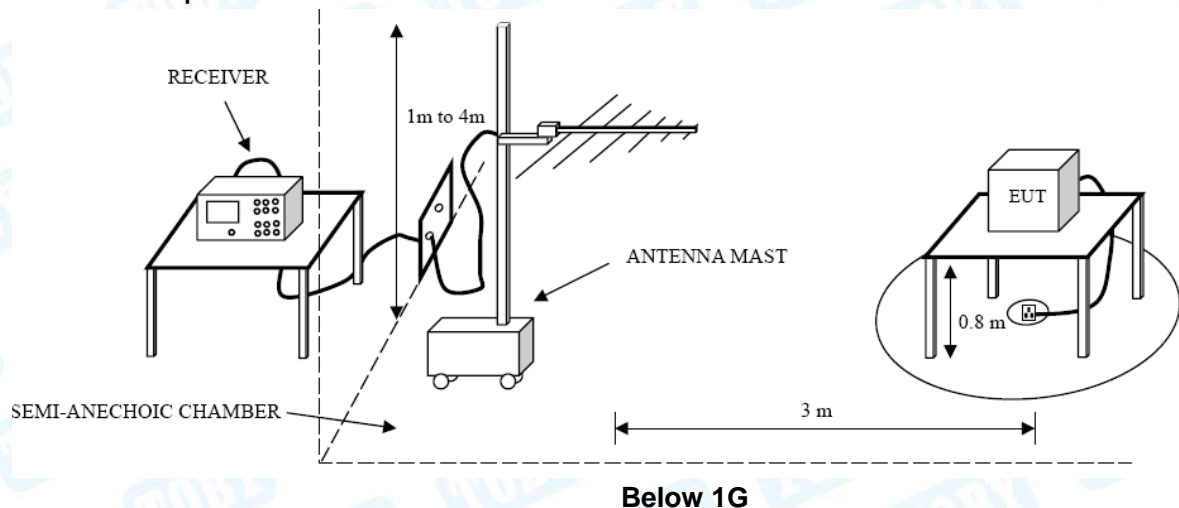
| Radiated Disturbance Test Limit-Below 1G |                      |  |
|--|----------------------|--|
| Frequency (MHz)                          | Limit (dB $\mu$ V/m) |  |
|  | Quasi-peak Level     |  |
| 30~230                                   | 40                   |  |
| 230~1000                                 | 47                   |  |

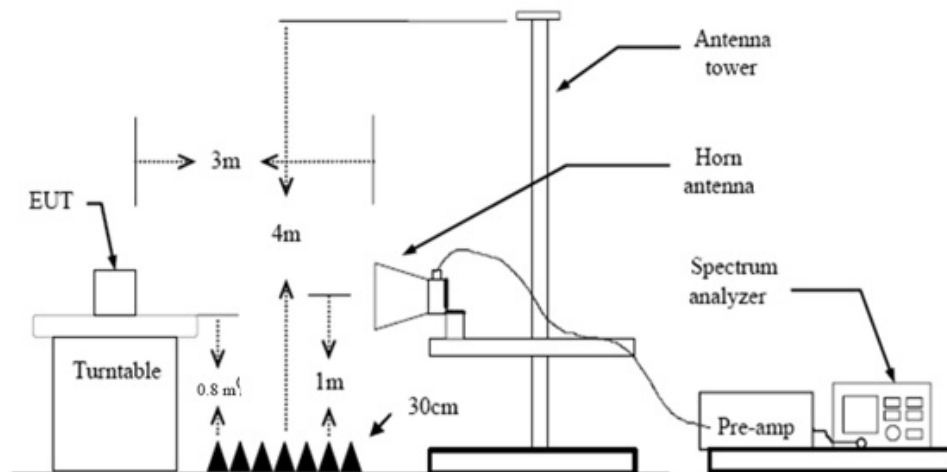
**Remark:** 1. The lower limit shall apply at the transition frequency.  
2. The test distance is 3m.

| Radiated Disturbance Test Limit-Above 1G |                      |               |
|--|----------------------|---------------|
| Frequency (GHz)                          | Limit (dB $\mu$ V/m) |               |
|  | Peak Level           | Average Level |
| 1~3                                      | 70                   | 50            |
| 3~16                                     | 74                   | 54            |

if the highest internal frequency of the EUT is less than 108 MHz, the measurement shall only be made up to 1GHz.  
if the highest internal frequency of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2GHz.  
if the highest internal frequency of the EUT is between 500MHz and 1GHz, the measurement shall only be made up to 5GHz.  
if the highest internal frequency of the EUT is above 1GHz, the measurement shall be made up to 6GHz.

### 4.2. Test Setup





Above 1G

#### 4.3. Test Procedure

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m. The table was rotated 360 degrees to determine the position of the highest radiation.

The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range.

If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

#### 4.4. Test Data

Please refer to the Attachment A.

## 5. Electrostatic Discharge Immunity Test

### 5.1. Test Requirements

#### 5.1.1. Test Standard

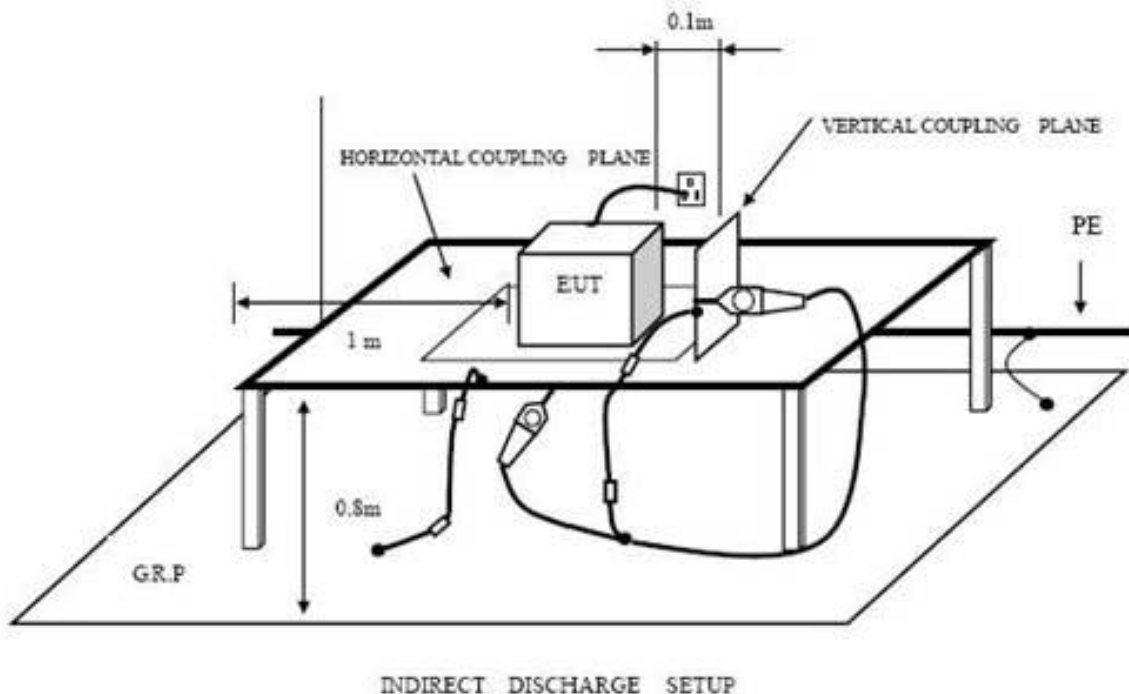
EN 61000-6-1: 2017 (EN 61000-4-2:2009)

#### 5.1.2. Test Level

|                             |   |
|-----------------------------|---|
| <b>Discharge Impedance:</b> | 330 ohm/ 150pF  |
| <b>Discharge Voltage:</b>   | Air Discharge: 2kV/4kV/8kV(Direct)<br>Contact Discharge: 2kV/4kV (Direct /Indirect)         |
| <b>Polarity:</b>            | Positive& Negative  |
| <b>Number of Discharge:</b> | Air Discharge: min.20 times at each test point<br>Contact Discharge: min.200 times in total |
| <b>Discharge Mode:</b>      | Single Discharge  |
| <b>Discharge Period:</b>    | 1 second minimum  |

#### 5.1.3. Performance criterion: B

### 5.2. Test Setup



---

### 5.3. Test Procedure

#### 5.3.1. Air Discharge:

This test is done on a non-conductive surface. 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.

#### 5.3.2. Contact Discharge:

All the procedure shall be same as air discharge. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

#### 5.3.3. Indirect discharge for horizontal coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

#### 5.3.4. Indirect discharge for vertical coupling plane

At least 10 single discharges (in the most sensitive polarity) 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.

### 5.4. Test Data

Please refer to the Attachment B.

## 6. Radiated Electromagnetic Field Immunity Test

### 6.1. Test Requirements

#### 6.1.1. Test Standard

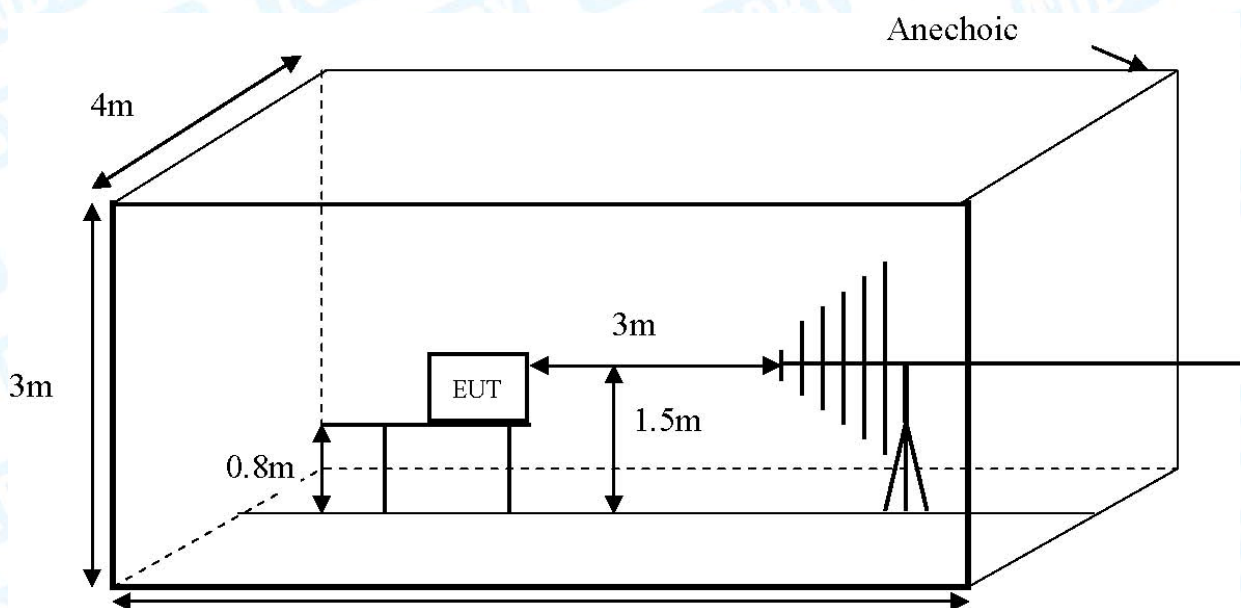
EN 61000-6-1: 2017 (EN 61000-4-3:2006+A1:2008+A2:2010)

#### 6.1.2. Test Level

| Test Specification                    |   |   |
|---------------------------------------|---|---|
| 80-1000MHz<br>3 V/m<br>80 % AM (1kHz) | 1400-2000MHz<br>3 V/m<br>80 % AM (1kHz) | 2000-2700MHz<br>1 V/m<br>80 % AM (1kHz) |

#### 6.1.3. Performance criterion: A

### 6.2. Test Setup



### 6.3. Test Procedure

The EUT are placed on a table, which is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna, which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually.

In order to judge the EUT performance, a camera is used to monitor its screen.

All the scanning conditions are as following:

| Condition of Test  | Remark           |              |              |
|--------------------|------------------|--------------|--------------|
|                    | Fielded strength | 3V/m         | 3V/m         |
| Radiated signal    | Modulated        | Modulated    | Modulated    |
| Scanning frequency | 80-1000MHz       | 1400-2000MHz | 2000-2700MHz |
| Dwell time         | 3 Sec.           | 3 Sec.       | 3 Sec.       |

#### 6.4. Test Data

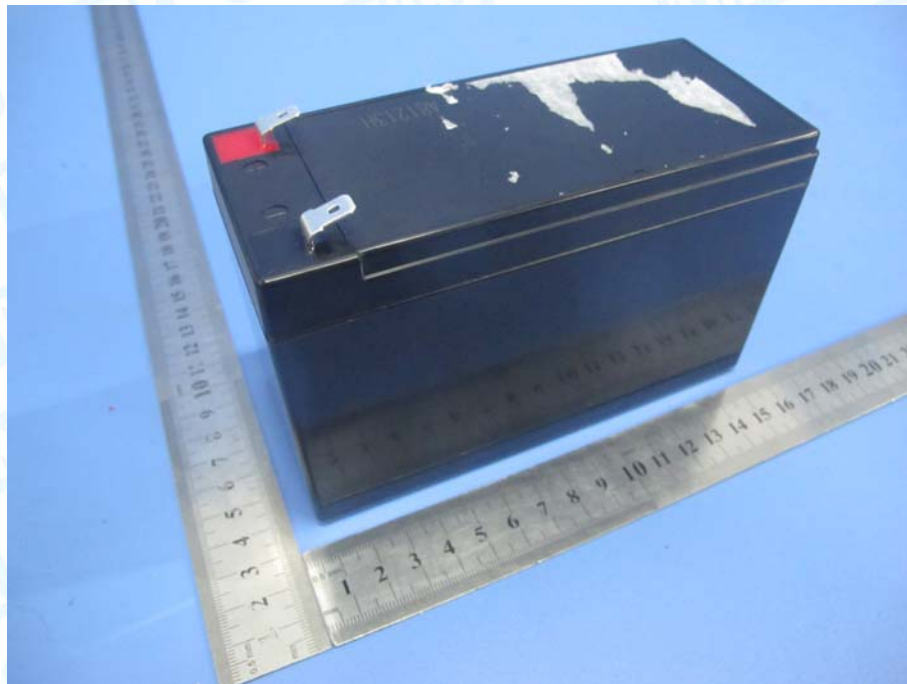
Please refer to the Attachment C.

## 7. Photographs - Constructional Details

Photo 1 Appearance of EUT



Photo 2 Appearance of EUT



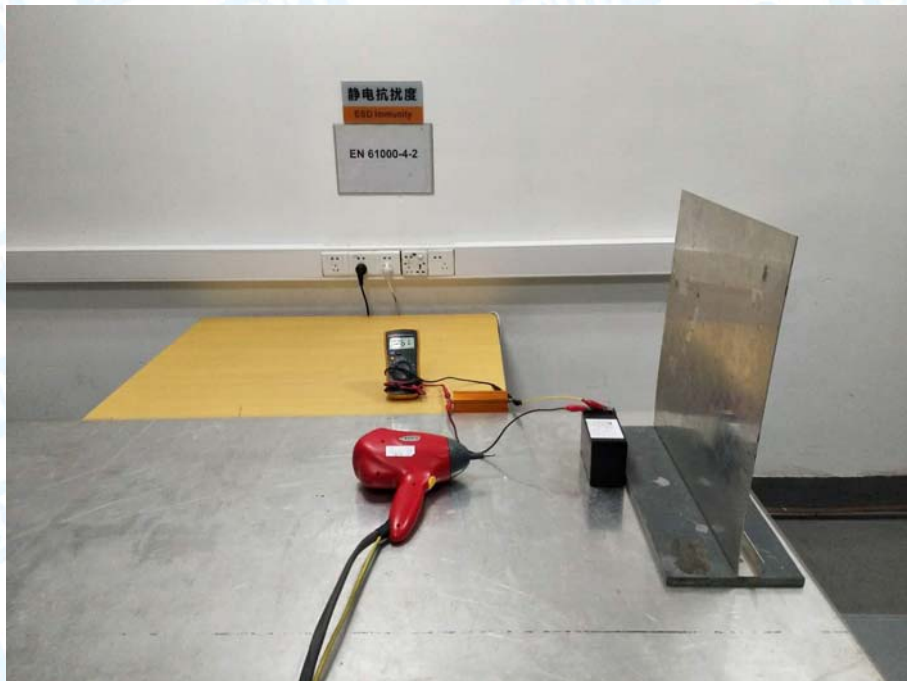


## 8. Photographs - Test Setup

### Radiated Emission Test Setup—Below 1G

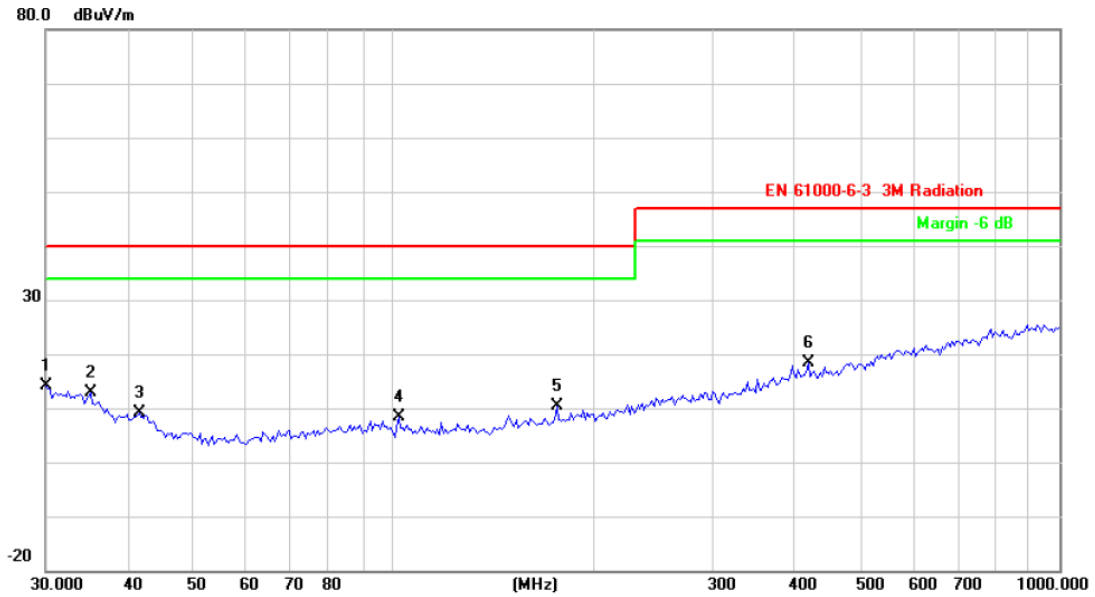


### Electrostatic Discharge Test Setup



## Attachment A--Radiated Emission Test Data (Below 1G)

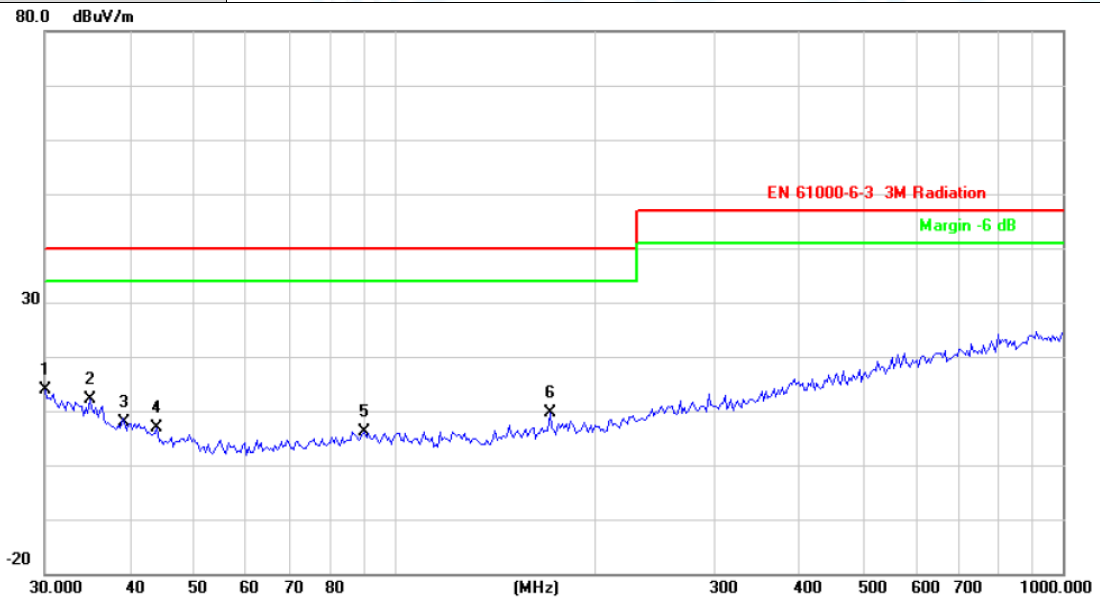
|               |            |                    |     |
|---------------|------------|--------------------|-----|
| Temperature:  | 25 °C      | Relative Humidity: | 55% |
| Pressure:     | 1010 hPa   |                    |     |
| Test Voltage: | DC 12V     |                    |     |
| Ant. Pol.     | Horizontal |                    |     |
| Test Mode:    | Mode 1     |                    |     |
| Remark:       |            |                    |     |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB/m | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|---------------------------|----------------------------|-----------------|------------|----------|
| 1   | *   | 30.0000      | 27.02                    | -13.00                    | 14.02                      | 40.00           | -25.98     | peak     |
| 2   |     | 35.0048      | 29.64                    | -16.75                    | 12.89                      | 40.00           | -27.11     | peak     |
| 3   |     | 41.4215      | 29.00                    | -19.81                    | 9.19                       | 40.00           | -30.81     | peak     |
| 4   |     | 101.6443     | 30.60                    | -22.16                    | 8.44                       | 40.00           | -31.56     | peak     |
| 5   |     | 175.6516     | 30.81                    | -20.32                    | 10.49                      | 40.00           | -29.51     | peak     |
| 6   |     | 419.1081     | 30.59                    | -12.16                    | 18.43                      | 47.00           | -28.57     | peak     |

Emission Level= Read Level+ Correct Factor

|                      |          |                           |     |
|----------------------|----------|---------------------------|-----|
| <b>Temperature:</b>  | 25 °C    | <b>Relative Humidity:</b> | 55% |
| <b>Pressure:</b>     | 1010 hPa |                           |     |
| <b>Test Voltage:</b> | DC 12V   |                           |     |
| <b>Ant. Pol.</b>     | Vertical |                           |     |
| <b>Test Mode:</b>    | Mode 1   |                           |     |
| <b>Remark:</b>       |          |                           |     |

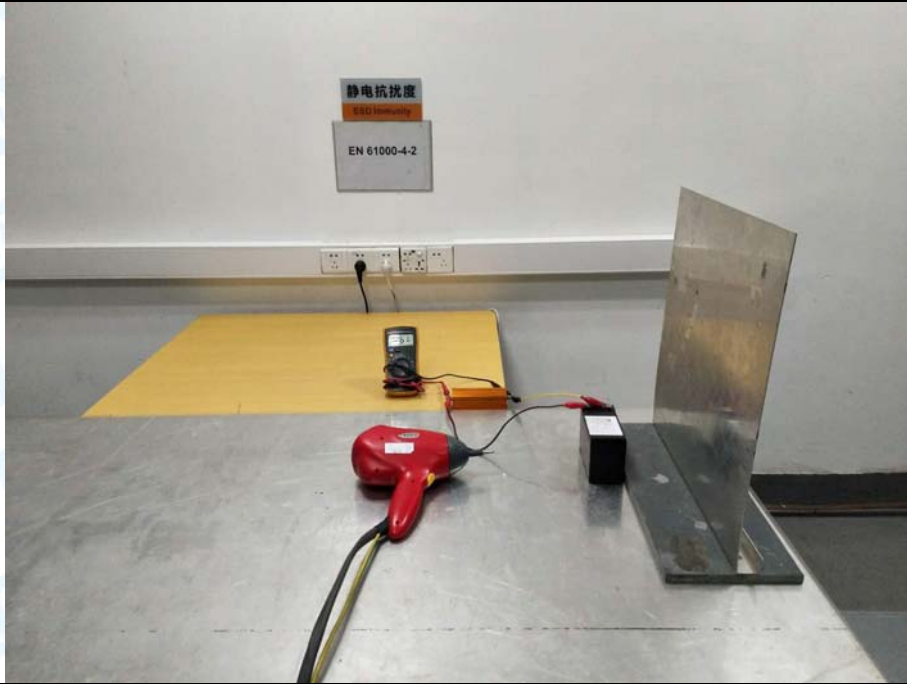


| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB/m | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|---------------------------|----------------------------|-----------------|------------|----------|
| 1   | *   | 30.0000      | 26.80                    | -13.00                    | 13.80                      | 40.00           | -26.20     | peak     |
| 2   |     | 35.0048      | 28.86                    | -16.75                    | 12.11                      | 40.00           | -27.89     | peak     |
| 3   |     | 39.4371      | 26.68                    | -18.84                    | 7.84                       | 40.00           | -32.16     | peak     |
| 4   |     | 44.1202      | 27.98                    | -21.14                    | 6.84                       | 40.00           | -33.16     | peak     |
| 5   |     | 90.2205      | 28.16                    | -21.98                    | 6.18                       | 40.00           | -33.82     | peak     |
| 6   |     | 170.7926     | 30.11                    | -20.49                    | 9.62                       | 40.00           | -30.38     | peak     |

**Emission Level= Read Level+ Correct Factor**

## Attachment B--Electrostatic Discharge Test Data

| Temperature : 24.3°C  | Humidity : 53%     |                  |          |        |
|---|--------------------|------------------|----------|--------|
| Power supply : DC 12V   | Test Mode : Mode 1 |                  |          |        |
| <b>Required Performance Criteria: B</b>                                   |                    |                  |          |        |
| Air Discharge: $\pm 2/\pm 4/\pm 8$ kV Contact Discharge: $\pm 2/\pm 4$ kV |                    |                  |          |        |
| Location  | Test Level (kV)    | No. of Discharge | Judgment | Result |
| HCP   | $\pm 4$ kV         | 40               | A        | PASS   |
| VCP   | $\pm 4$ kV         | 40               | A        |        |

**Test Location Photos****Note:**

- 1) Criteria A: There was no change operated with initial operating during the test.
- 2) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 3) Criteria C: The system shut down during the test.

## Attachment C--RF Field Strength Susceptibility Test Data

Temperature : 23.5°C Humidity : 52%

Power supply : DC 12V Test Mode : Mode 1

### Required Performance Criteria: A

| Position | Frequency Range 1 |          | Frequency Range 2 |          | Frequency Range 3 |          | Result      |
|----------|-------------------|----------|-------------------|----------|-------------------|----------|-------------|
|          | 80~1000MHz        |          | 1400~2000MHz      |          | 2000~2700MHz      |          |             |
|          | Horizontal        | Vertical | Horizontal        | Vertical | Horizontal        | Vertical |             |
| Front    | A                 | A        | A                 | A        | A                 | A        | <b>PASS</b> |
| Right    | A                 | A        | A                 | A        | A                 | A        |             |
| Rear     | A                 | A        | A                 | A        | A                 | A        |             |
| Left     | A                 | A        | A                 | A        | A                 | A        |             |

### Remark:

- 1) Criteria A: There was no change operated with initial operating during the test.
- 2) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 3) Criteria C: The system shut down during the test.

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