

**SHENZHEN YARUI TESTING CO., LTD.**

No. 620 HuaYuan Commercial Center, No. 347 XiXiang Road, XiXiang Town, Bao'An District, ShenZhen City  
Tel : +86-755-27912080      Fax: +86-755-27916936

# EMC TEST REPORT

|                                   |  |
|-----------------------------------|--|
| <b>Product name</b> .....         | POE power adapter  |
| <b>Trademark</b> .....            |  |
| <b>Model no.</b> .....            | ZCD0241000EU   |
| <b>Adding Model</b> .....         | ZCC0241000EU,ZCC02400500EU,ZCC0181000EU,<br>ZCC04800300EU,ZCC04800500EU,ZCC0480300US,<br>ZCC0480500US,WT-GPOE-1A-48V15W,WT-GPOE-1B-48V1<br>5W,ZCC0240500EU,ZCC0240750EU,ZCC0240800EU,ZCC0<br>360500EU,ZCD0242000EU,ZCD0481000EU,ZCD0241250E<br>U,ZCD02401600EU,ZCD0240800EU,ZCD0480500EU,WT-G<br>POE-1B-24V24W,WT-GPOE-1A-24V15W,WT-GPOE-1B-24V<br>15W,WT-GPOE-1B-29V15W |
| <b>Test Standards</b> .....       | <b>EN 55032: 2015</b><br><b>EN 55024: 2010</b>   |
| <b>Applicant</b> .....            | ShenZhen ZhangQing Electronic LTD  |
| <b>Address of applicant</b> ..... | No 622, 6th Floor, HuaYuan Commerical Center, No 347th<br>XiXiang Road, XiXiang Town,Bao'An district, ShenZhen City  |
| <b>Date of Receipt</b> .....      | June 01, 2017  |
| <b>Date of Test Date</b> .....    | June 01, 2017 - June 06, 2017  |
| <b>Date of issue</b> .....        | June 06, 2017  |
| <b>Report No.</b> .....           | YRT201706206E  |

|                    |               |
|--------------------|---------------|
| <b>Test result</b> | <b>Pass *</b> |
|--------------------|---------------|

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



The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2014/30/EU are considered.

## GENERAL DESCRIPTION OF EUT

|                      |   |                      |     |                      |     |
|----------------------|---|----------------------|-----|----------------------|-----|
| Equipment            | POE power adapter   |                      |     |                      |     |
| Model Name           | ZCD0241000EU  |                      |     |                      |     |
| Adding Models:       | ZCC0241000EU,ZCC02400500EU,ZCC0181000EU,<br>ZCC04800300EU,ZCC04800500EU,ZCC0480300US,ZCC0480500US,<br>WT-GPOE-1A-48V15W,WT-GPOE-1B-48V15W,ZCC0240500EU,<br>ZCC0240750EU,ZCC0240800EU,ZCC0360500EU,ZCD0242000EU,<br>ZCD0481000EU,ZCD0241250EU,ZCD02401600EU,ZCD0240800EU,<br>ZCD0480500EU,WT-GPOE-1B-24V24W,WT-GPOE-1A-24V15W,<br>WT-GPOE-1B-24V15W,WT-GPOE-1B-29V15W                          |                      |     |                      |     |
| Manufacturer         | ShenZhen ZhangQing Electronic LTD.  |                      |     |                      |     |
| Manufacturer Address | No 622, 6th Floor, HuaYuan Commerical Center, No 347th<br>XiXiang Road, XiXiang Town, Bao'An district, ShenZhen City  |                      |     |                      |     |
| Product Description  | <p>The EUT is a POE power adapter</p> <table border="1"><tr><td>Operating frequency:</td><td>N/A</td></tr><tr><td>Connecting I/O port:</td><td>N/A</td></tr></table> <p>Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification please refer to the User's Manual.</p> | Operating frequency: | N/A | Connecting I/O port: | N/A |
| Operating frequency: | N/A   |                      |     |                      |     |
| Connecting I/O port: | N/A   |                      |     |                      |     |
| Power Source         | DC Voltage  |                      |     |                      |     |
| Power Rating         | DC24V,24W,1A  |                      |     |                      |     |

Compiled Engineer

(Tim Huang)

Reviewed By:

(Tony Wang)

Approved Signatory

(Walter Chen)

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## Table of Contents

Page

|   |    |
|---|----|
| 1. TEST SUMMARY .....   | 5  |
| 1.1.DESCRIPTION OF STANDARDS AND RESULTS.....                                 | 5  |
| 1.2.DESCRIPTION OF PERFORMANCE CRITERIA .....                                 | 5  |
| 1.2.1. <i>Performance criterion A.</i> .....                                  | 6  |
| 1.2.2. <i>Performance criterion B.</i> .....                                  | 6  |
| 1.2.3. <i>Performance criterion C.</i> .....                                  | 6  |
| 2.MEASUREMENT UNCERTAINTY .....   | 7  |
| 3 .MEASUREMENT INSTRUMENTS EQUIPMENTS LIST .....                              | 8  |
| 3.1 RADIATED EMISSION ( 3M ) .....  | 8  |
| 3.2 ELECTROSTATIC DISCHARGE .....   | 8  |
| 3.3 RF FIELD STRENGTH SUSCEPTIBILITY.....                                     | 8  |
| 3.4 POWER FREQUENCY MAGNETIC FIELD SUSCEPTIBILITY .....                       | 8  |
| 4. RADIATED EMISSION MEASUREMENT .....  | 8  |
| 4.1.BLOCK DIAGRAM OF TEST SETUP.....  | 8  |
| 4.2.MEASURING STANDARD .....  | 9  |
| 4.3.RADIATED EMISSION LIMITS .....  | 9  |
| 4.4.EUT CONFIGURATION ON TEST .....   | 9  |
| 4.5.OPERATING CONDITION OF EUT .....  | 9  |
| 4.5.1. <i>Turn on the power.</i> .....  | 9  |
| 4.5.2. <i>After that, let the EUT work in test Mode and measure it.</i> ..... | 9  |
| 4.6.TEST PROCEDURE.....   | 9  |
| 4.7.TEST RESULTS.....   | 9  |
| 5. ELECTROSTATIC DISCHARGE IMMUNITY TEST.....                                 | 12 |
| 5.1BLOCK DIAGRAM OF TEST SETUP.....   | 12 |
| 5.2 TEST STANDARD .....   | 12 |
| 5.3 SEVERITY LEVELS AND PERFORMANCE CRITERION .....                           | 12 |
| 5.3.1 <i>Severity level</i> .....   | 12 |
| 5.3.2 <i>Performance Criterion: B</i> .....                                   | 12 |
| 5.3.3 <i>EUT Configuration on Test</i> .....                                  | 12 |
| 5.3.4 <i>Operating Condition of EUT</i> .....                                 | 12 |
| 5.6 TEST PROCEDURE.....   | 13 |
| 5.6.1 <i>Air Discharge</i> .....  | 13 |
| 5.6.2 <i>Contact Discharge</i> .....  | 13 |
| 5.6.3 <i>Indirect Discharge For Horizontal Coupling Plane</i> .....           | 13 |
| 5.6.4 <i>Indirect Discharge For Vertical Coupling Plane</i> .....             | 13 |
| 5.7 TEST RESULTS .....  | 13 |
| 6. RF FIELD STRENGTH SUSCEPTIBILITY TEST.....                                 | 15 |
| 6.1 BLOCK DIAGRAM OF TEST .....   | 15 |
| 6.2 TEST STANDARD .....   | 15 |
| 6.3 SEVERITY LEVELS AND PERFORMANCE CRITERION .....                           | 15 |
| 6.3.1 <i>Severity Levels</i> .....  | 15 |
| 6.3.2 <i>Performance Criterion: A</i> .....                                   | 15 |
| 6.4 EUT CONFIGURATION ON TEST .....   | 16 |
| 6.5 OPERATING CONDITION OF EUT.....   | 16 |
| 6.6 TEST PROCEDURE.....   | 16 |
| 6.7 TEST RESULTS .....  | 16 |

## SHENZHEN YARUI TESTING CO., LTD.

## Table of Contents

## Page

|   |    |
|---|----|
| 7. MAGNETIC FIELD SUSCEPTIBILITY TEST .....         | 18 |
| 7.1 BLOCK DIAGRAM OF TEST SETUP .....               | 18 |
| 7.2 TEST STANDARD .....                             | 18 |
| 7.3 SEVERITY LEVELS AND PERFORMANCE CRITERION ..... | 18 |
| 7.3.1 Severity Levels .....                         | 18 |
| 7.3.2 Performance Criterion: A .....                | 18 |
| 7.4 EUT CONFIGURATION ON TEST .....                 | 18 |
| 7.5 TEST PROCEDURE .....                            | 18 |
| 7.6 TEST RESULTS .....                              | 18 |
| 8. EUT TEST PHOTO .....                             | 21 |

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## 1. TEST SUMMARY

### 1.1. Description of Standards and Results

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

| <b>EMISSION (EN 55032: 2015)</b>                  |                             |                             |                |
|---|-----------------------------|-----------------------------|----------------|
| <b>Description of Test Item</b>                   | <b>Standard</b>             | <b>Limits</b>               | <b>Results</b> |
| Conducted disturbance at mains terminals          | EN 55032: 2015              | Class B                     | N/A            |
| Conducted disturbance at telecommunication port   | EN 55032: 2015              | Class B                     | N/A            |
| Radiated disturbance                              | EN 55032: 2015              | Class B                     | PASS           |
| Harmonic current emissions                        | EN 61000-3-2: 2014          | Class A                     | N/A            |
| Voltage fluctuations & flicker                    | EN 61000-3-3: 2013          | ---                         | N/A            |
| <b>IMMUNITY (EN 55024: 2010)</b>                  |                             |                             |                |
| <b>Description of Test Item</b>                   | <b>Basic Standard</b>       | <b>Performance Criteria</b> | <b>Results</b> |
| Electrostatic discharge (ESD)                     | EN 61000-4-2: 2009          | B                           | PASS           |
| Radio-frequency, Continuous radiated disturbance  | EN 61000-4-3: 2006+A1: 2010 | 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          | B                           | N/A            |
| Surge (Telecommunication ports)                   |                             | B                           | N/A            |
| Radio-frequency, Continuous conducted disturbance | EN 61000-4-6: 2014          | A                           | N/A            |
| Power frequency magnetic field                    | EN 61000-4-8: 2010          | A                           | PASS           |
| Voltage dips, >95% reduction                      | EN 61000-4-11: 2004         | B                           | N/A            |
| Voltage dips, 30% reduction                       |                             | C                           | N/A            |
| Voltage interruptions                             |                             | C                           | N/A            |
| N/A is an abbreviation for Not Applicable.        |                             |                             |                |

| <b>Test mode:</b> |           |          |
|-------------------|-----------|----------|
| Mode 1            | No load   | Pre-scan |
| Mode 2            | Half Load | Pre-scan |
| Mode 3            | Full Load | Record   |

### 1.2. Description of Performance Criteria

General Performance Criteria

Examples of functions defined by the manufacturer to be evaluated during testing

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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.

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## 2.Measurement Uncertainty

| Test              | Parameters                        | Expanded uncertainty (U <sub>lab</sub> ) | Expanded uncertainty (U <sub>cispr</sub> ) |
|-------------------|-----------------------------------|--|--|
| Radiated Emission | Level accuracy (9kHz to 30MHz)    | ± 3.68 dB                                | N/A  |
| Radiated Emission | Level accuracy (30MHz to 1000MHz) | ± 3.48 dB                                | ± 5.2 dB                                   |
| Radiated Emission | Level accuracy (above 1000MHz)    | ± 3.90 dB                                | N/A  |

(1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

(2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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### 3 .MEASUREMENT INSTRUMENTS EQUIPMENTS LIST

#### 3.1 RADIATED EMISSION (3M)

| Item | Test Equipment           | Manufacturer    | Model No. | Serial No. | Calibrated until |
|------|--------------------------|-----------------|-----------|------------|------------------|
| 1    | 3m Semi Anechoic Chamber | SIDT FRANKONIA  | SAC-3M    | 03CH03-HY  | Dec. 26, 2017    |
| 2    | EMI Test Receiver        | ROHDE & SCHWARZ | ESR 7     | 101181     | Dec. 26, 2017    |
| 3    | Log per Antenna          | SCHWARZBECK     | VULB9163  | 9163-470   | Dec. 26, 2017    |
| 4    | EMI Test Software        | AUDIX           | E3        | N/A        | Dec. 26, 2017    |
| 5    | Positioning Controller   | MF              | MF-7082   | /          | Dec. 26, 2017    |

#### 3.2 Electrostatic Discharge

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Calibrated until |
|------|----------------|--------------|-----------|------------|------------------|
| 1    | ESD Simulator  | EM TEST      | DITO      | N/A        | Dec. 26, 2017    |

#### 3.3 RF Field Strength Susceptibility

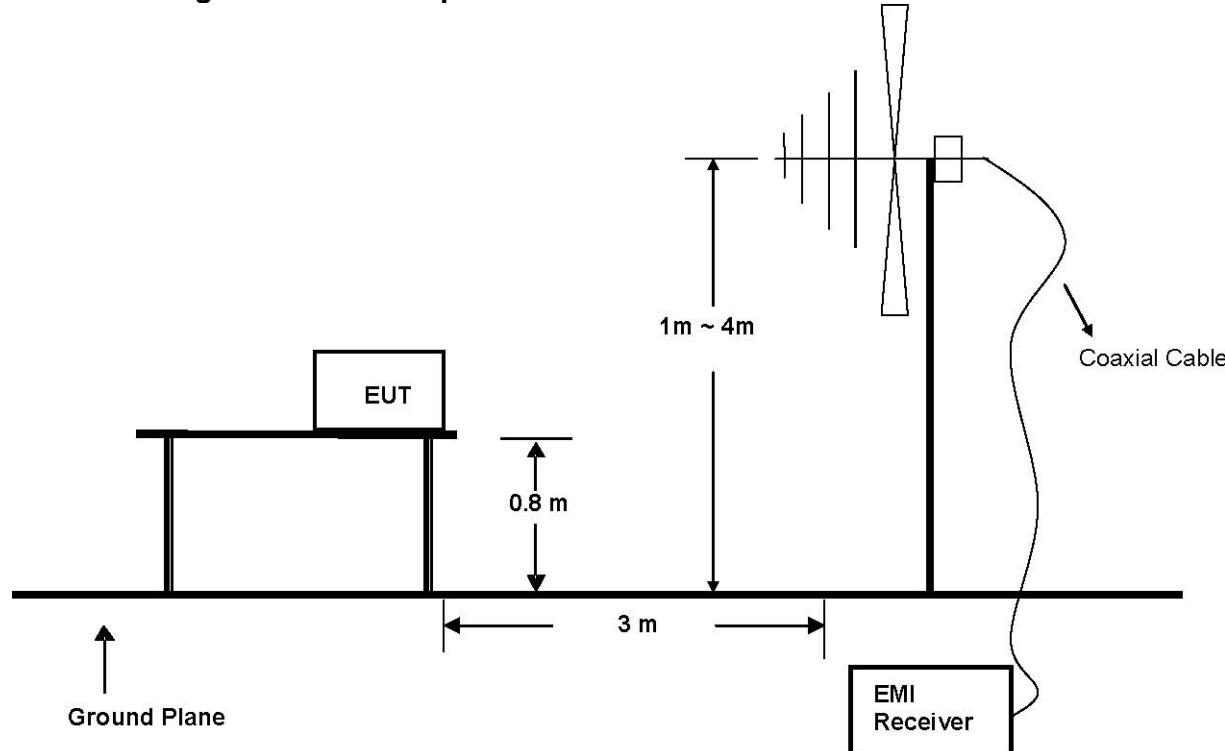
| Item | Test Equipment       | Manufacturer    | Model No.                    | Serial No. | Calibrated until |
|------|----------------------|-----------------|------------------------------|------------|------------------|
| 1    | SIGNAL GENERATOR     | R&S             | SMB100A                      | 105942     | Dec. 28, 2017    |
| 2    | RF Power Amplifier   | BONN Elektronik | BLWA0830-1<br>60<br>/100/40D | 128740     | Dec. 28, 2017    |
| 3    | Log-periodic Antenna | SCHWARZBECK     | STLP9128D                    | 043        | Dec. 28, 2017    |

#### 3.4 Power Frequency Magnetic Field Susceptibility

| Item | Test Equipment                             | Manufacturer | Model No.    | Serial No. | Calibrated until |
|------|--|--------------|--------------|------------|------------------|
| 1    | Power frequency mag-field generator System | EVERFINE     | EMS61000-8 K | 906003     | Dec. 27, 2017    |

### 4. RADIATED EMISSION MEASUREMENT

#### 4.1.Block Diagram of Test Setup



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#### 4.2.Measuring Standard

EN 55032: 2015

#### 4.3.Radiated Emission Limits

EN 55032 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:

**Limits for radiated disturbance Blow 1GHz**

| FREQUENCY (MHz)  | DISTANCE (Meters) | FIELD STRENGTHS LIMIT (dB $\mu$ V/m) |
|--|-------------------|--------------------------------------|
| 30 ~ 230   | 3                 | 40                                   |
| 230 ~ 1000   | 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. |                   |                                      |

#### 4.4.EUT Configuration on Test

The EN 55032 regulations test method must be used to find the maximum emission during radiated emission measurement.

#### 4.5.Operating Condition of EUT

4.5.1.Turn on the power.

4.5.2.After that, let the EUT work in test Mode3 and measure it.

#### 4.6.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 3 meters away from the receiving antenna, which is mounted on a 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 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.

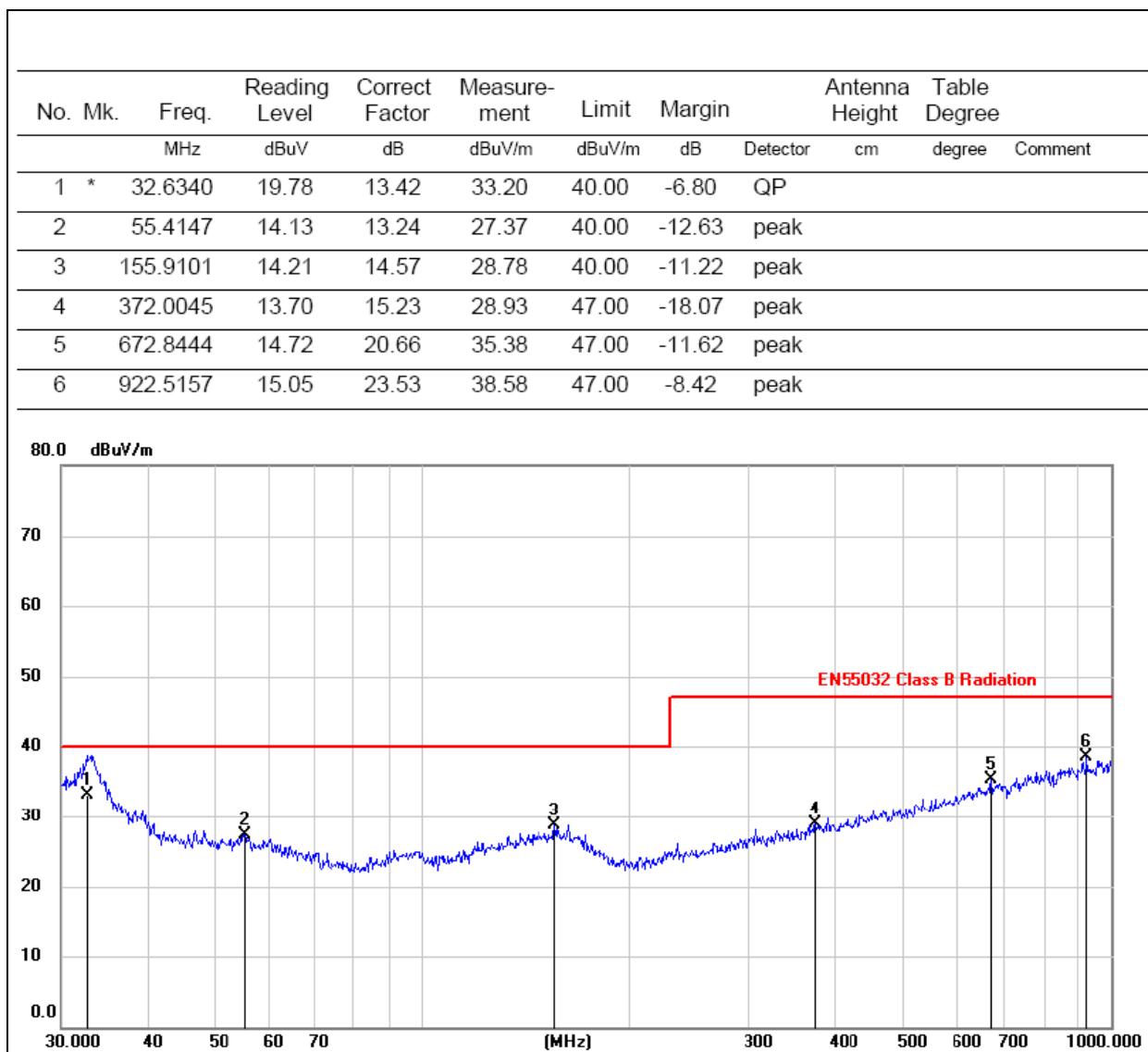
The frequency range from 30MHz to 1000MHz is investigated.

#### 4.7.Test Results

**PASS.**

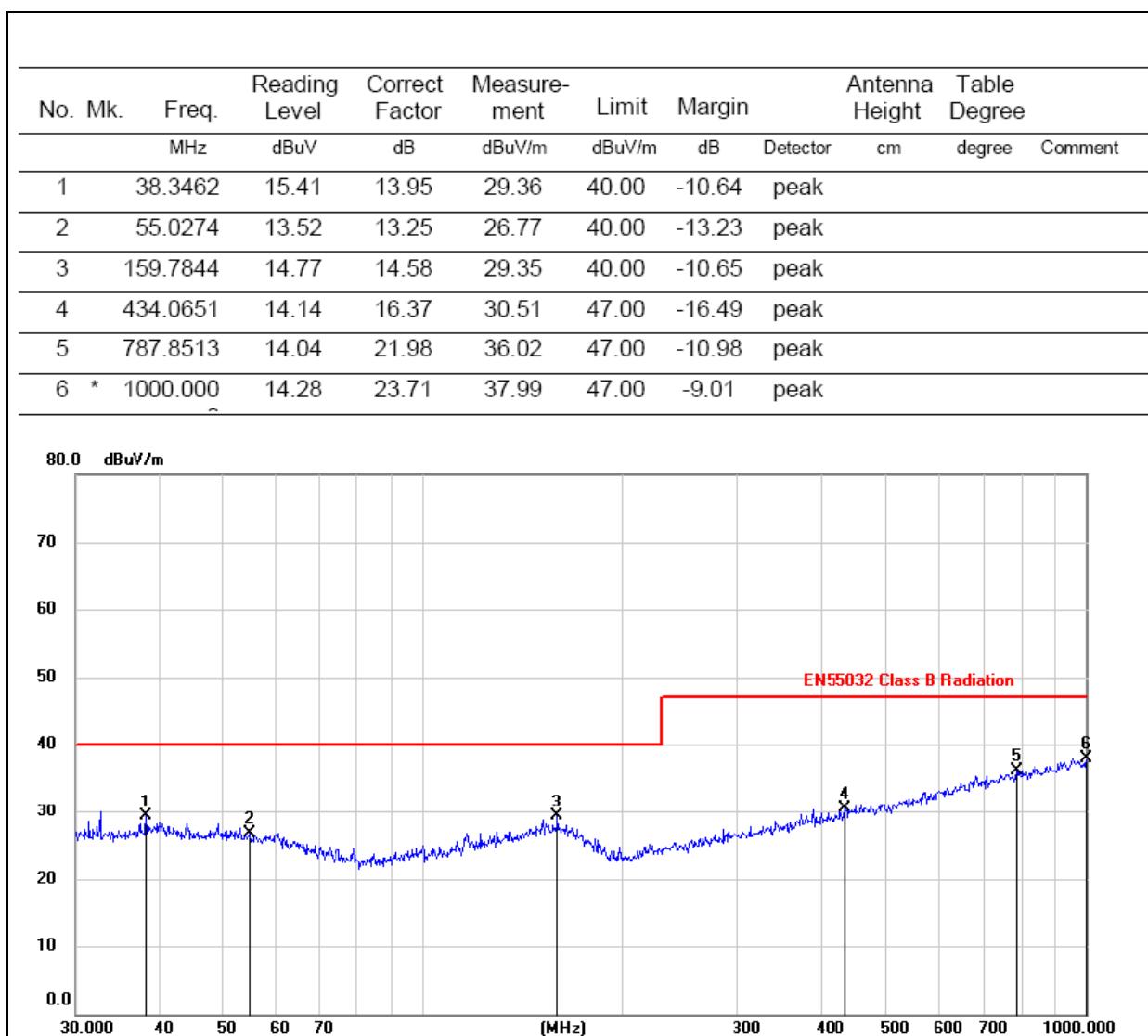
The test result please refer to the next page.

|               |                   |                     |              |
|---------------|-------------------|---------------------|--------------|
| EUT :         | POE power adapter | Model Name. :       | ZCD0241000EU |
| Temperature : | 26 °C             | Relative Humidity : | 54%          |
| Pressure :    | 101 Kpa           | Test Date :         | 2017-06-05   |
| Test Mode :   | Mode 3            | Polarization :      | Vertical     |
| Test Engineer | Davey Liu         |                     |              |


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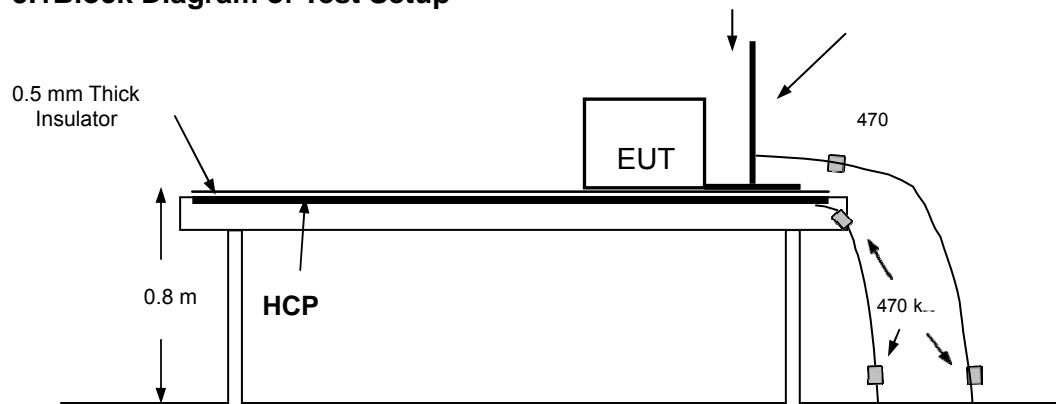
|               |                   |                     |              |
|---------------|-------------------|---------------------|--------------|
| EUT :         | POE power adapter | Model Name. :       | ZCD0241000EU |
| Temperature : | 26 °C             | Relative Humidity : | 54%          |
| Pressure :    | 101 Kpa           | Test Date :         | 2017-06-05   |
| Test Mode :   | Mode 3            | Polarization :      | Horizontal   |
| Test Engineer | Davey Liu         |                     |              |


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## 5. ELECTROSTATIC DISCHARGE IMMUNITY TEST

### 5.1 Block Diagram of Test Setup



### 5.2 Test Standard

EN 55024: 2010

Severity Level: 3 / Air Discharge:  $\pm 8\text{KV}$ , Level: 2 / Contact Discharge:  $\pm 4\text{KV}$

### 5.3 Severity Levels and Performance Criterion

#### 5.3.1 Severity level

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

#### 5.3.2 Performance Criterion: B

#### 5.3.3 EUT Configuration on Test

The configuration of EUT is listed in Section 2.1.

#### 5.3.4 Operating Condition of EUT

Same as conducted emission measurement, which is listed in Section 4.5.

Except the test set up replaced by Section 5.1.

## 5.6 Test Procedure

### 5.6.1 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

### 5.6.2 Contact Discharge

All the procedure shall be same as Section 5.6.1. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

### 5.6.3 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.

### 5.6.4 Indirect Discharge For Vertical Coupling Plane

At least 10 single discharge (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.

## 5.7 Test Results

PASS.

Please refer to the following pages

| Electrostatic Discharge Test Results |  |  |  |  |           |  |
|--------------------------------------|--|--|--|--|-----------|--|
| Standard                             | <input type="checkbox"/> IEC 61000-4-2 |  | <input checked="" type="checkbox"/> EN 61000-4-2 |  |           |  |
| Applicant                            | SHENZHEN ZHANGQING ELECTRONIC LTD.     |  |  |  |           |  |
| EUT                                  | POE power adapter                      |  | Temperature                                      |  | 23.6 °C   |  |
| M/N                                  | ZCD0241000EU                           |  | Humidity   |  | 54.7      |  |
| Criterion                            | B                                      |  | Pressure   |  | 1021mbar  |  |
| Test Mode                            | Mode 3                                 |  | Test Engineer                                    |  | Davey Liu |  |

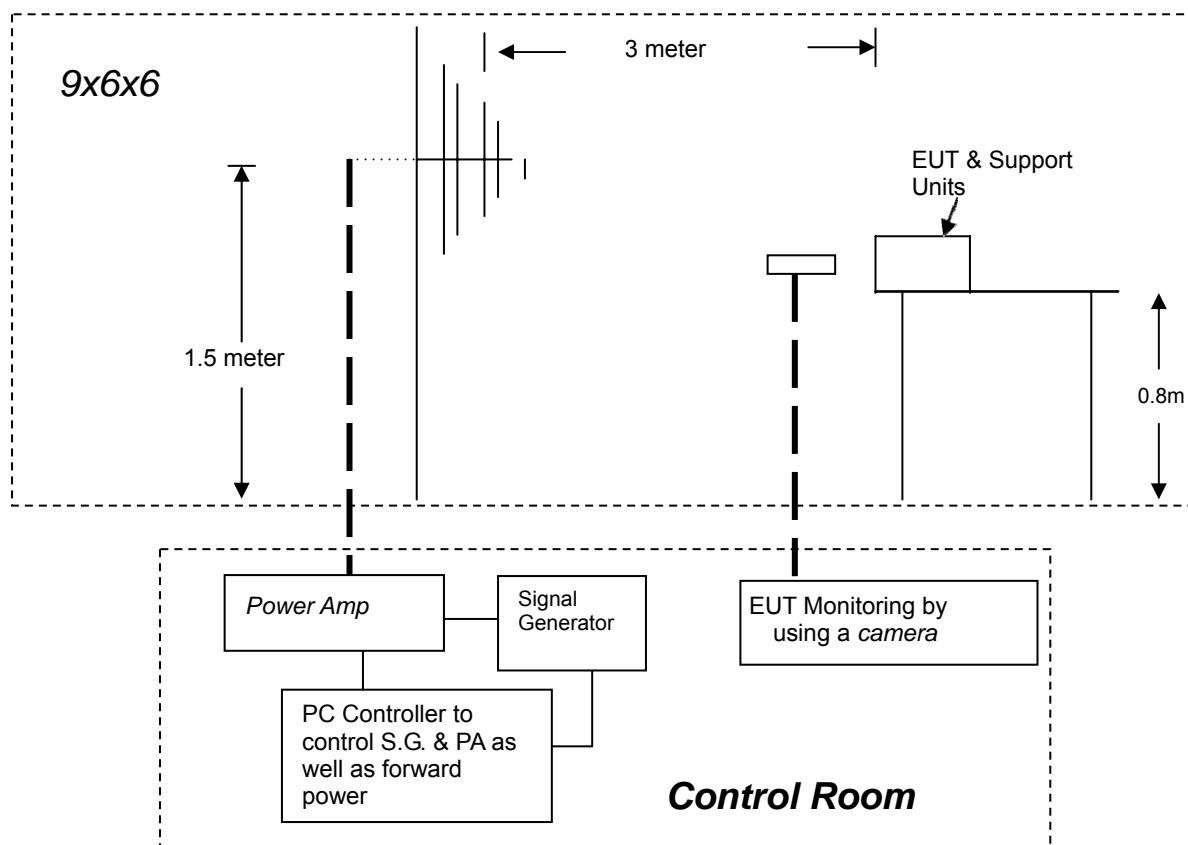
| Air Discharge                          |                                     |                                     |                                     |                                     |                            |                                       |                                       |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------------------|---------------------------------------|---------------------------------------|
| Test Points                            | Test Levels                         |                                     |                                     | Results                             |                            |                                       |                                       |
|  | ±2kV                                | ±4kV                                | ±8kV                                | Passed                              | 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                             |                                     |                            |                                       | Performance Criterion                 |
|  | ±2 kV                               | ±4 kV                               | Passed                              |                                     | Fail                       |                                       |                                       |
| 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                             |                                     |                            |                                       | Performance Criterion                 |
|  | ±2 kV                               | ±4 kV                               | Passed                              |                                     | Fail                       |                                       |                                       |
| 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                             |                                     |                            |                                       | Performance Criterion                 |
|  | ±2kV                                | ±4 kV                               | Passed                              |                                     | Fail                       |                                       |                                       |
| 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 |                                       |

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## 6. RF FIELD STRENGTH SUSCEPTIBILITY TEST

### 6.1 Block Diagram of Test



### 6.2 Test Standard

EN 55024: 2010,  
 (EN 61000-4-3: 2006+A2: 2010, Severity Level: 2, 3V / m)

### 6.3 Severity Levels and Performance Criterion

#### 6.3.1 Severity Levels

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

#### 6.3.2 Performance Criterion: A

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#### 6.4 EUT Configuration on Test

The configuration of the EUT is same as Section 2.1.

#### 6.5 Operating Condition of EUT

Same as radiated emission measurement, which is listed in Section 4.5, except the test setup replaced as Section 6.1.

#### 6.6 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 CCD Recording is used to monitor its screen. All the scanning conditions are as following:

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

#### 6.7 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                                     | SHENZHEN ZHANGQING ELECTRONIC LTD.   |                |           |
| EUT   | POE power adapter  | Temperature    | 23.6 °C   |
| M/N   | ZCD0241000EU   | Humidity       | 54.2      |
| Criterion                                     | A  | Field Strength | DC24V     |
| Test Mode                                     | Mode 3   | Test Engineer  | Davey Liu |
| 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)
- Power Antenna: 3108 (EMCO) & AT1080 (A&R)  
Field Monitor: FM2000 (A&R)

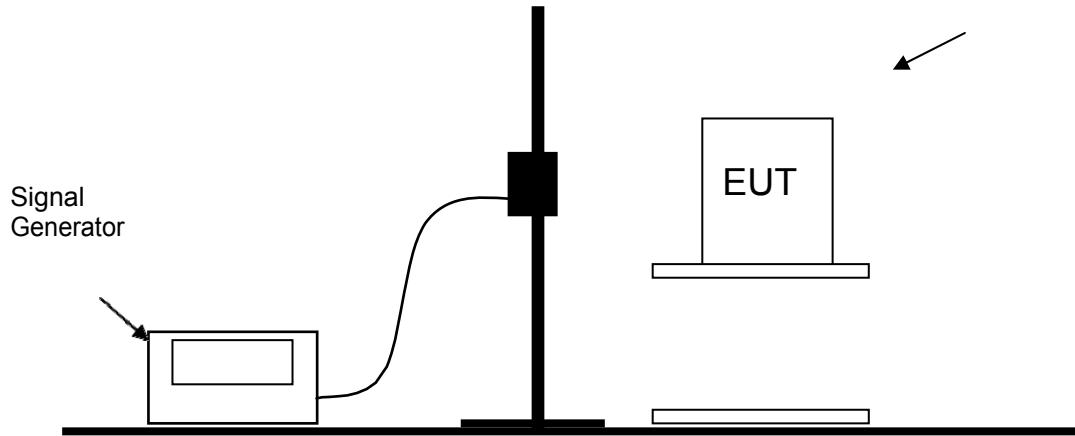
Note:

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## 7. MAGNETIC FIELD SUSCEPTIBILITY TEST

### 7.1 Block Diagram of Test Setup



### 7.2 Test Standard

EN 55024: 2010

(EN 61000-4-8: 2010, Severity Level: Level 1, 1A / m)

### 7.3 Severity Levels and Performance Criterion

#### 7.3.1 Severity Levels

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

#### 7.3.2 Performance Criterion: A

### 7.4 EUT Configuration on Test

The configuration of the EUT is same as Section 2.1.

### 7.5 Test Procedure

The EUT is placed in the middle of a induction coil (1\*1m), under which is a 1\*1\*0.1m (high) table, this small table is also placed on a larger table, 0.8 m above the ground. Both horizontal and vertical polarization of the induction coil is set on test, so that each side of the EUT is affected by the magnetic field. Also can reach the same aim by change the position of the EUT.

### 7.6 Test Results

PASS.

Please refer to the following page.

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| <b>Magnetic Field Immunity Test Result</b> |   |             |        |
|--|---|-------------|--------|
| Standard                                   | <input type="checkbox"/> IEC 61000-4-8 <input checked="" type="checkbox"/> EN 61000-4-8 |             |        |
| Applicant                                  | SHENZHEN ZHANGQING ELECTRONIC LTD.  |             |        |
| EUT  | POE power adapter   | Temperature | 23.6°C |
| M/N  | ZCD0241000EU  | Humidity    | 55.2   |
| Criterion                                  | A   | Test Mode   | Mode 3 |
| Test Engineer                              | Davey Liu   |             |        |

| Test Level<br>(A/M) | Testing Duration | Coil Orientation | Criterion | Result |
|---------------------|------------------|------------------|-----------|--------|
| 1                   | 5 mins           | X                | A         | PASS   |
| 1                   | 5 mins           | Y                | A         | PASS   |
| 1                   | 5 mins           | Z                | A         | PASS   |

Note:

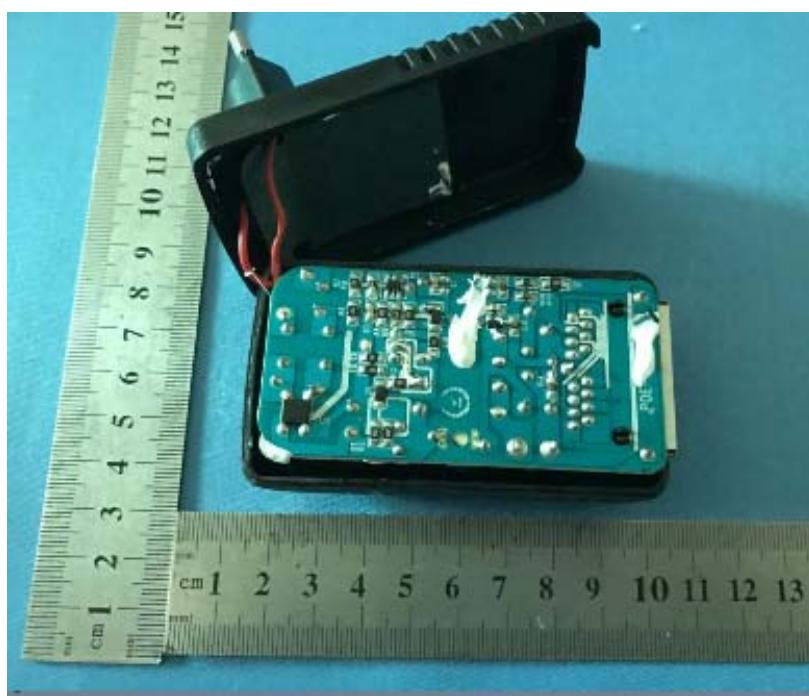
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## 8. EUT TEST PHOTO



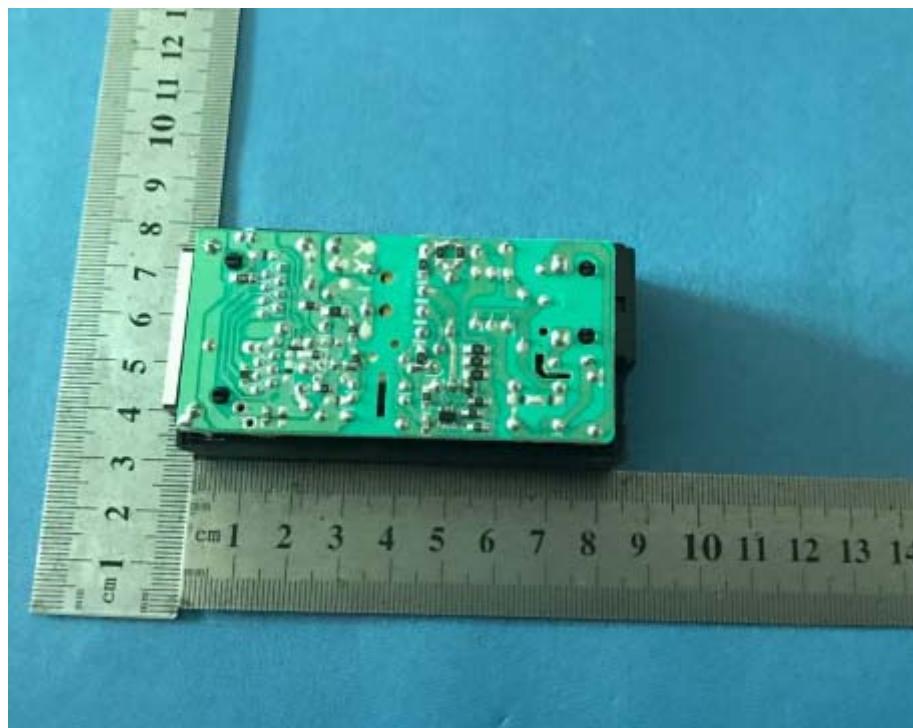
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