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Shenzhen Branch**

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Report No.: SZEM180600541101  
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## **TEST REPORT**

**Application No.:** SZEM1806005411CR  
**Applicant:** DongGuan city JIESHUI electronic co., Ltd.  
**Address of Applicant:** No.152, LiYaTang Industrial Area, LinChun Village, TangXia Town, DongGuan City, 523711 CHINA  
**Manufacturer:** DongGuan city JIESHUI electronic co., Ltd.  
**Address of Manufacturer:** No.152, LiYaTang Industrial Area, LinChun Village, TangXia Town, DongGuan City, 523711 CHINA  
**Factory:** DongGuan city JIESHUI electronic co., Ltd.  
**Address of Factory:** No.152, LiYaTang Industrial Area, LinChun Village, TangXia Town, DongGuan City, 523711 CHINA  
**Equipment Under Test (EUT):**  
**EUT Name:** Race 10W wireless car charger  
**Model No.:** JS-WQC-003, CY2578WLCCH ♣  
♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.  
**Trade mark:** JSE, CYGNETT  
**FCC ID:** 2AQAE-JSWQC003  
**Standard(s) :** 47 CFR Part 18  
**Date of Receipt:** 2018-06-21  
**Date of Test:** 2018-06-23  
**Date of Issue:** 2018-06-28

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>Pass*</b> |
|---------------------|--------------|

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



Keny Xu  
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2018-06-28 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |   |  |  |
|--------------------------|--|---|--|--|
| Authorized for issue by: |  |   |  |  |
|                          |  |    |  |  |
|                          |  | <hr/>   |  |  |
|                          |  | Peter Geng /Project Engineer  |  |  |
|                          |  |  |  |  |
|                          |  | <hr/>   |  |  |
|                          |  | Eric Fu /Reviewer   |  |  |



## 2 Test Summary

| Radio Spectrum Matter Part |                |          |             |        |
|----------------------------|----------------|----------|-------------|--------|
| Item                       | Standard       | Method   | Requirement | Result |
| Radiated emission          | 47 CFR Part 18 | FCC MP-5 | Part 18.305 | Pass   |

Remark:

Model No.: JS-WQC-003, CY2578WLCCH

Only the model JS-WQC-003 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for all the above models, with only difference on item number and customer.



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## 4 General Information

### 4.1 Details of E.U.T.

|                      |   |
|----------------------|---|
| Power supply:        | Input: DC 5V/2.1A, DC 12V/1.5A<br>Output: DC 5V/1A, DC 9V/1.1A (5W, 7.5W, 10W)              |
| Cable:               | DC line with Car charger: 120cm, unshielded   |
| Operation frequency: | 114.1-128.4kHz  |
| Modulation type:     | Load modulation   |
| Antenna type:        | Inductive Loop Coil Antenna   |
| Remark:              | Tests were conducted in all three load modes and the worst case(DC 5V/1A) is reported only. |

### 4.2 Description of Support Units

| Description  | Manufacturer              | Model No. | Serial No.   |
|--------------|---------------------------|-----------|--------------|
| E-loading    | provided by client        | N/A       | DC 5V/1A     |
| Mobile Phone | SAMSUNG (provided by SGS) | SM-G9500  | R28J9140LPB  |
| Mobile phone | Apple (provided by SGS)   | A1863     | F4GVQ656JC6D |

### 4.3 Measurement Uncertainty

| No. | Item              | Measurement Uncertainty         |
|-----|-------------------|---------------------------------|
| 1   | Radiated Emission | $\pm 4.5\text{dB}$ (30MHz-1GHz) |
| 2   | Temperature test  | $\pm 1\text{ }^{\circ}\text{C}$ |
| 3   | Humidity test     | $\pm 3\%$                       |



#### **4.4 Test Location**

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.  
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

#### **4.5 Test Facility**

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

#### **4.6 Deviation from Standards**

None

#### **4.7 Abnormalities from Standard Conditions**

None



## 5 Equipment List

| Radiated emission                    |                      |                 |              |            |              |
|--------------------------------------|----------------------|-----------------|--------------|------------|--------------|
| Equipment                            | Manufacturer         | Model No        | Inventory No | Cal Date   | Cal Due Date |
| 10m Semi-Anechoic Chamber            | SAEMC                | FSAC1018        | SEM001-03    | 2018-03-31 | 2021-03-30   |
| Measurement Software                 | AUDIX                | e3 V8.2014-6-27 | N/A          | N/A        | N/A          |
| Coaxial Cable                        | SGS                  | N/A             | SEM029-01    | 2017-07-13 | 2018-07-12   |
| EMI Test Receiver (9kHz-3GHz)        | Rohde & Schwarz      | ESCI            | SEM004-01    | 2018-04-02 | 2019-04-01   |
| Trilog-Broadband Antenna(30MHz-1GHz) | Schwarzbeck          | VULB9168        | SEM003-18    | 2016-01-26 | 2019-01-25   |
| Pre-amplifier                        | Sonoma Instrument Co | 310N            | SEM005-04    | 2018-04-13 | 2019-04-12   |
| Active Loop Antenna                  | ETS-Lindgren         | 6502            | SEM003-08    | 2017-08-22 | 2020-08-21   |

| General used equipment          |   |          |              |            |              |
|---------------------------------|---|----------|--------------|------------|--------------|
| Equipment                       | Manufacturer                              | Model No | Inventory No | Cal Date   | Cal Due Date |
| Humidity/ Temperature Indicator | Shanghai Meteorological Industry Factory  | ZJ1-2B   | SEM002-03    | 2017-09-29 | 2018-09-28   |
| Humidity/ Temperature Indicator | Shanghai Meteorological Industry Factory  | ZJ1-2B   | SEM002-04    | 2017-09-29 | 2018-09-28   |
| Humidity/ Temperature Indicator | Mingle                                    | N/A      | SEM002-08    | 2017-09-29 | 2018-09-28   |
| Barometer                       | Changchun Meteorological Industry Factory | DYM3     | SEM002-01    | 2018-04-08 | 2019-04-07   |

## 6 Radio Spectrum Matter Test Results

### 6.1 Radiated emission

Test Requirement Part 18.305

Test Method: FCC MP-5

Measurement Distance: 10m

Limit:

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

| Equipment   | Operating frequency                        | RF Power generated by equipment (watts) | Field strength limit (uV/m)   | Distance (meters)                  |
|---|--|---|---|------------------------------------|
| Any type unless otherwise specified (miscellaneous) | Any ISM frequency                          | Below 500<br>500 or more                | 25<br>$25 \times \text{SQRT}(\text{power}/500)$                                   | 300<br><sup>1</sup> 300            |
|   | Any non-ISM frequency                      | Below 500<br>500 or more                | 15<br>$15 \times \text{SQRT}(\text{power}/500)$                                   | 300<br><sup>1</sup> 300            |
| Industrial heaters and RF stabilized arc welders    | On or below 5,725 MHz<br>Above 5,725 MHz   | Any<br>Any                              | 10<br>( <sup>2</sup> )  | 1,600<br>( <sup>2</sup> )          |
| Medical diathermy                                   | Any ISM frequency<br>Any non-ISM frequency | Any<br>Any                              | 25<br>15  | 300<br>300                         |
| Ultrasonic  | Below 490 kHz                              | Below 500<br>500 or more                | 2,400/F(kHz)<br>$2,400/\text{F}(\text{kHz}) \times \text{SQRT}(\text{power}/500)$ | 300<br><sup>3</sup> 300            |
|   | 490 to 1,600 kHz<br>Above 1,600 kHz        | Any<br>Any                              | 24,000/F(kHz)<br>15   | 30<br>30                           |
| Induction cooking ranges                            | Below 90 kHz<br>On or above 90 kHz         | Any<br>Any                              | 1,500<br>300  | <sup>4</sup> 30<br><sup>4</sup> 30 |

<sup>1</sup>Field strength may not exceed 10 µV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

<sup>2</sup>Reduced to the greatest extent possible.

<sup>3</sup>Field strength may not exceed 10 µV/m at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

<sup>4</sup>Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.



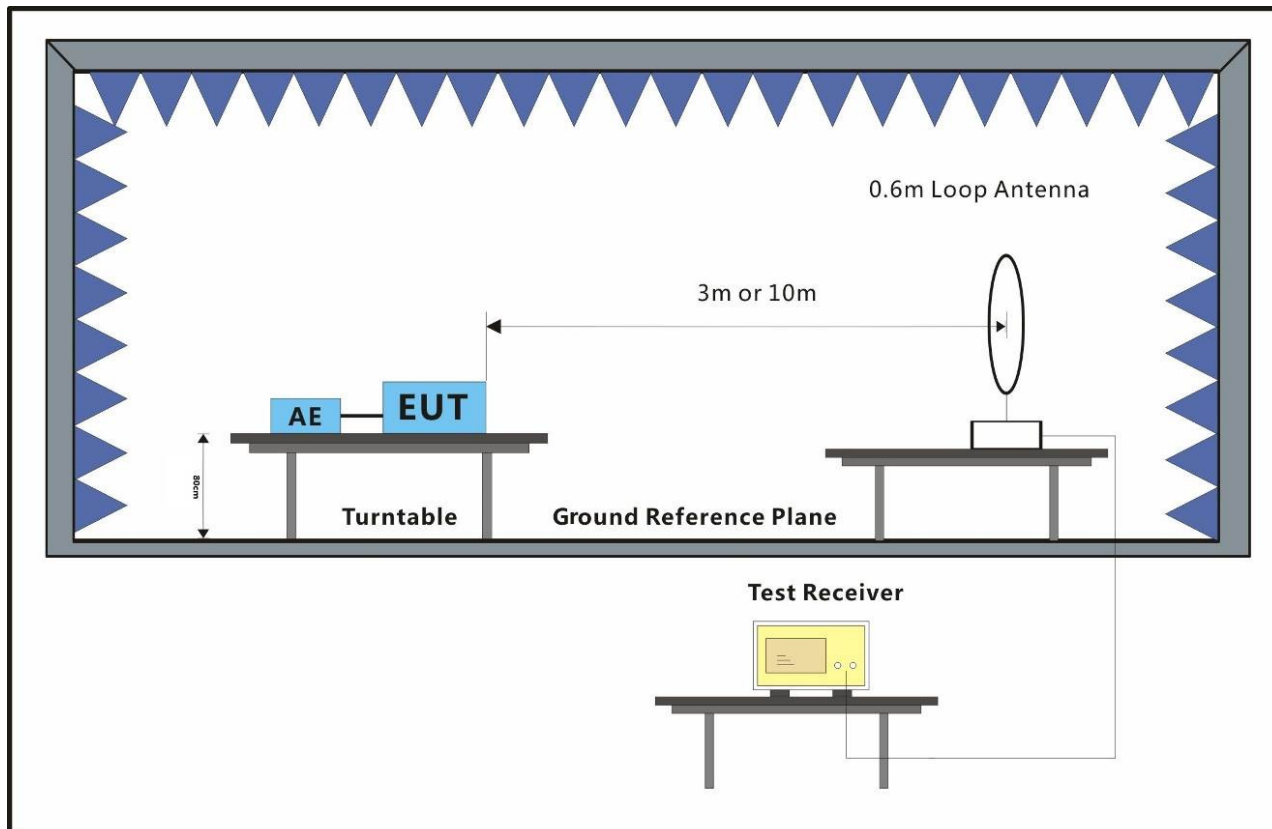
### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 51 % RH Atmospheric Pressure: 1010 mbar

Test mode a: Charge mode\_Keep the EUT charging

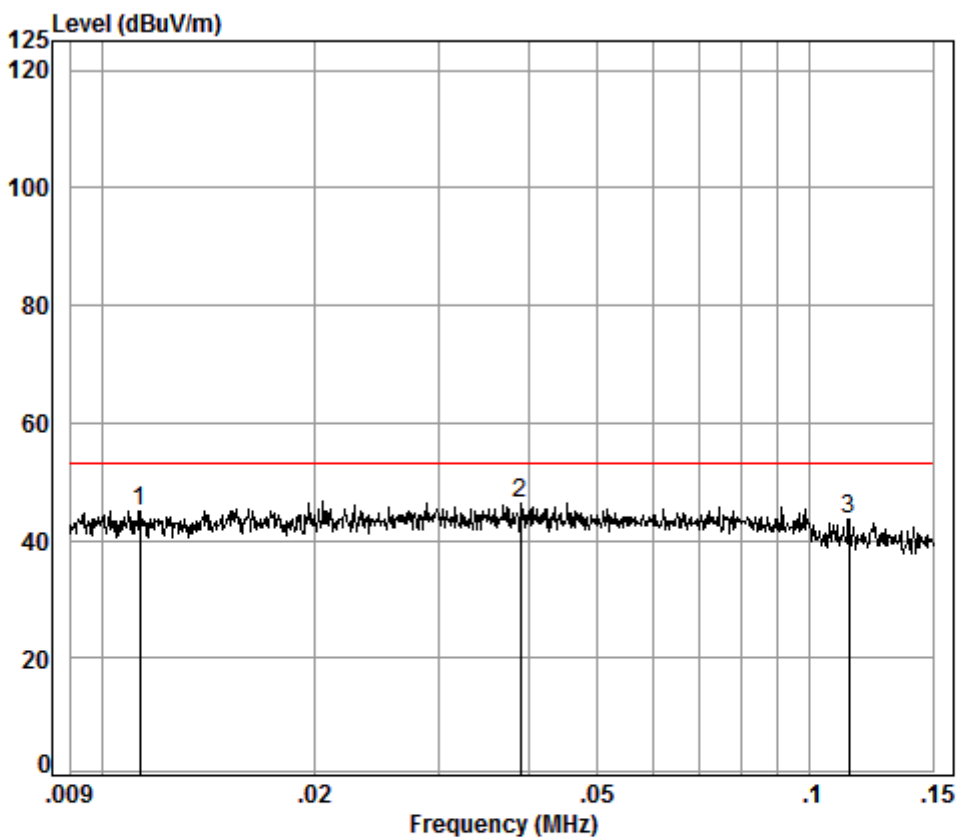
### 6.1.2 Test Setup Diagram



### 6.1.3 Measurement Procedure and Data



Model:a; 9kHz~150kHz



Condition: 10m

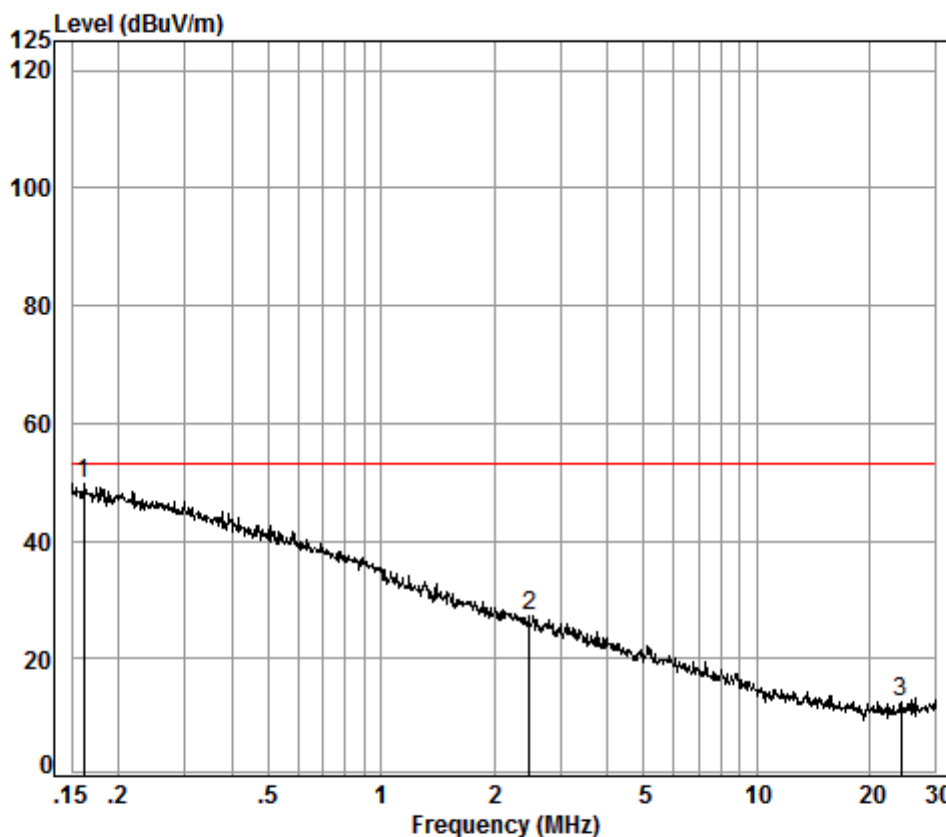
Job No. : 05411CR

Test Mode: a

|      | Freq | Cable Loss | Ant Factor | Preamplifier Factor | Read Level | Level  | Limit Line | Over Limit |
|------|------|------------|------------|---------------------|------------|--------|------------|------------|
|      | MHz  | dB         | dB/m       | dB                  | dBuV       | dBuV/m | dBuV/m     | dB         |
| 1    | 0.01 | 0.28       | 18.54      | 0.00                | 26.31      | 45.13  | 53.06      | -7.93      |
| 2 pp | 0.04 | 0.15       | 13.11      | 0.00                | 33.01      | 46.27  | 53.06      | -6.79      |
| 3    | 0.11 | 0.05       | 11.91      | 0.00                | 31.75      | 43.71  | 53.06      | -9.35      |



Model:a; 150kHz~30MHz



Condition: 10m

Job No. : 05411CR

Test Mode: a

|      | Freq  | Cable Loss | Ant Factor | Preamp Factor | Read Level | Level  | Limit Line | Over Limit |
|------|-------|------------|------------|---------------|------------|--------|------------|------------|
|      | MHz   | dB         | dB/m       | dB            | dBuV       | dBuV/m | dBuV/m     | dB         |
| 1 pp | 0.16  | 0.07       | 11.74      | 0.00          | 37.89      | 49.70  | 53.06      | -3.36      |
| 2    | 2.47  | 0.36       | 12.15      | 0.00          | 14.74      | 27.25  | 53.06      | -25.81     |
| 3    | 24.14 | 0.72       | 8.91       | 0.00          | 3.00       | 12.63  | 53.06      | -40.43     |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
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The test was performed at a 10m test site. According to below formulate and the test data at 10m test distance,

$$L_{300} / L_{10} = D_{10} / D_{300}$$

Note:

L<sub>300</sub>: Level @ 300m distance. Unit: uV/m;

L<sub>10</sub>: Level @ 10m distance. Unit: uV/m;

D<sub>300</sub>: 300m distance. Unit: m

D<sub>10</sub>: 10m distance. Unit: m

The level at 300m test distance is below:

| Frequency (MHz) | Level @ 10m (dBuV/m) | Level @ 10m (uV/m) | Level @ 300m (uV/m) | Level @ 300m (dBuV/m) | Limit @ 300m (dBuV/m) | Margin (dB) |
|-----------------|----------------------|--------------------|---------------------|-----------------------|-----------------------|-------------|
| 0.01            | 45.13                | 180.51             | 6.02                | 15.59                 | 23.52                 | -7.93       |
| 0.04            | 46.27                | 205.83             | 6.86                | 16.73                 | 23.52                 | -6.79       |
| 0.11            | 43.71                | 153.29             | 5.11                | 14.17                 | 23.52                 | -9.35       |
| 0.16            | 49.7                 | 305.49             | 10.18               | 20.16                 | 23.52                 | -3.36       |
| 2.47            | 27.25                | 23.04              | 0.77                | -2.29                 | 23.52                 | -25.81      |
| 24.14           | 12.63                | 4.28               | 0.14                | -16.91                | 23.52                 | -40.43      |

## 7 Photographs

### 7.1 Radiated emission Test Setup



### 7.2 EUT Constructional Details (EUT Photos)

Please refer to external and internal photos for details.

- End of the Report -