



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

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Report No.: SZEM171001074502  
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## Human Exposure Report

**Application No.:** SZEM1710010745CR  
**Applicant/ Manufacturer:** SHENZHEN DNS INDUSTRIES CO., LTD.  
**Address of Applicant/ Manufacturer:** 23/F Building A, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian, Shenzhen, 518026 China  
**Factory:** HUIZHOU D&S CABLE CO., LTD.  
**Address of Factory:** LONGJIN DONGJIANG INDUSTRY ZONE, SHUIKOU, HUICHENG, HUIZHOU, GUANGDONG, CHINA

**Equipment Under Test (EUT):**  
**EUT Name:** WIRELESS CHARGER, Wireless charging pad with quick charger  
**Model No.:** WC15BK, AC51800, AC52800, S75WC18, OMWLAC52BK, 3S-1047♣  
♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.  
**Trade Mark:** Please refer to section 2  
**FCC ID:** ZBCAC51WC15BK  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
**Date of Receipt:** 2017-11-01  
**Date of Test:** 2017-11-15  
**Date of Issue:** 2017-11-16

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

\* This report is just a test result base on the test method and limit requirement shown in the form on the second page. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government..

Authorized Signature:

Peter Geng  
Project Engineer



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### 3 General Information

#### 3.1 Details of E.U.T.

|                      |                                    |
|----------------------|------------------------------------|
| Rated input:         | DC 5V, 3A/DC 9V, 2A/DC 12V, 2A     |
| Rated output:        | DC 5V, 2A/DC 9V,1.1A/DC 12V, 1.25A |
| Operation frequency: | 119-167kHz                         |
| Test voltage:        | AC 120V/60Hz                       |

#### 3.2 Description of Support Units

The EUT has been tested with associated equipment below.



| Description     | Manufacturer       | Model No.            | Serial No.      |
|-----------------|--------------------|----------------------|-----------------|
| mobile phone    | Samsung            | Galaxy S6 Edge+      | N/A             |
| E-Charging      | provided by client | DC 9V/1.1A, DC 5V/2A | N/A             |
| Micro USB Cable | PHILIPS            | SWR2101              | REF. No.SEA0700 |
| AC charger      | provided by client | AC25N20E             |                 |

**Remark:**

Model No.: WC15BK, AC51800, AC52800, S75WC18, OMWLAC52BK, 3S-1047

Only the model WC15BK 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 model number, appearance.

Details see below:

| Trade mark   | Model number | Description   |
|--|--------------|---|
| DNS, LBT, iHope, Owltech, nexxtech,<br><b>ATIVA®</b><br>iHope<br>Leplus, VIBE, AmazonBasics<br>Tzumi, Xindao | DNS          | WC15BK  |
|  | AC51800      | <br>Square appearance     |
|  | AC52800      | <br>rectangles appearance |
| DNS  | S75WC18      | rectangles appearance   |
| omars  | OMWLAC52BK   | rectangles appearance   |
| 3SIXT  | 3S-1047      | Square appearance   |



### 3.3 Test Location

All tests were performed at:

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

### 3.4 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 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

- **Industry Canada (IC)**

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

### 3.5 Deviation from Standards

None.

### 3.6 Abnormalities from Standard Conditions

None.



## 4 Equipments Used during Test

| Item | Test Equipment           | Manufacturer | Model No. | Inventory No. | Cal. Due date (yyyy-mm-dd) |
|------|--------------------------|--------------|-----------|---------------|----------------------------|
| 1    | 3m Semi-Anechoic Chamber | ETS-LINDGREN | N/A       | SEL0017       | 2018-06-10                 |
| 2    | Electric Field Meter     | Schaffner    | EMC20     | EMC068        | 2018-03-27                 |



## 5 Test Results

### 5.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310  
Measurement Distance: 10cm  
Test voltage: AC 120V 60Hz  
Limit:

| Frequency range (MHz)   | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|---|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>   |                               |                               |                                     |                          |
| 0.3-3.0   | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30  | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300  | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500  | /                             | /                             | f/300                               | 6                        |
| 1500-100,000  | /                             | /                             | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b>  |                               |                               |                                     |                          |
| 0.3-1.34  | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34-30   | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30-300  | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300-1500  | /                             | /                             | f/1500                              | 30                       |
| 1500-100,000  | /                             | /                             | 1.0                                 | 30                       |
| F=frequency in MHz<br>*=Plane-wave equivalent power density<br>RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m). |                               |                               |                                     |                          |

#### 5.1.1 E.U.T. Operation

##### Operating Environment:

Temperature: 24.0 °C      Humidity: 52% RH      Atmospheric Pressure: 1015 mbar

##### EUT Operation:

This device has been tested the worst status of full load and the device has been tested with mobile phone at zero charge, intermediate charge, and full charge.



### 5.1.2 Measurement Data

1: Output Voltage=DC 5V; The max output current =2A;Calculation of resistor value=2.5Ω

#### Electric Field Emissions

| Test Position | Test Distance (cm) | Probe Measure Result (V/m) | Limit (V/m) | 30% Limit (V/m) |
|---------------|--------------------|----------------------------|-------------|-----------------|
| Side 1        | 10                 | 5.43                       | 614         | 184.2           |
| Side 2        | 10                 | 5.54                       | 614         | 184.2           |
| Side 3        | 10                 | 5.72                       | 614         | 184.2           |
| Side 4        | 10                 | 5.69                       | 614         | 184.2           |
| Top           | 10                 | 7.37                       | 614         | 184.2           |
| Bottom        | 10                 | 4.12                       | 614         | 184.2           |

#### Magnetic Field Emissions

| Test Position | Test Distance (cm) | Probe Measure Result (A/m) | Limit (A/m) | 30% Limit (A/m) |
|---------------|--------------------|----------------------------|-------------|-----------------|
| Side 1        | 10                 | 0.0983                     | 1.63        | 0.489           |
| Side 2        | 10                 | 0.0961                     | 1.63        | 0.489           |
| Side 3        | 10                 | 0.0928                     | 1.63        | 0.489           |
| Side 4        | 10                 | 0.0995                     | 1.63        | 0.489           |
| Top           | 10                 | 0.1326                     | 1.63        | 0.489           |
| Bottom        | 10                 | 0.0749                     | 1.63        | 0.489           |



**2: Output Voltage=DC 9V; The max output power =10W;Calculation of resistor value=8.1Ω**

**Electric Field Emissions**

| Test Position | Test Distance (cm) | Probe Measure Result (V/m) | Limit (V/m) | 30% Limit (V/m) |
|---------------|--------------------|----------------------------|-------------|-----------------|
| Side 1        | 10                 | 4.97                       | 614         | 184.2           |
| Side 2        | 10                 | 4.84                       | 614         | 184.2           |
| Side 3        | 10                 | 5.48                       | 614         | 184.2           |
| Side 4        | 10                 | 4.88                       | 614         | 184.2           |
| Top           | 10                 | 6.37                       | 614         | 184.2           |
| Bottom        | 10                 | 3.69                       | 614         | 184.2           |

**Magnetic Field Emissions**

| Test Position | Test Distance (cm) | Probe Measure Result (A/m) | Limit (A/m) | 30% Limit (A/m) |
|---------------|--------------------|----------------------------|-------------|-----------------|
| Side 1        | 10                 | 0.0786                     | 1.63        | 0.489           |
| Side 2        | 10                 | 0.0836                     | 1.63        | 0.489           |
| Side 3        | 10                 | 0.0864                     | 1.63        | 0.489           |
| Side 4        | 10                 | 0.0894                     | 1.63        | 0.489           |
| Top           | 10                 | 0.1454                     | 1.63        | 0.489           |
| Bottom        | 10                 | 0.0759                     | 1.63        | 0.489           |





**3: Output Voltage=DC 12V; The max output power =15W;Calculation of resistor value=9.6Ω**

**Electric Field Emissions**

| Test Position | Test Distance (cm) | Probe Measure Result (V/m) | Limit (V/m) | 30% Limit (V/m) |
|---------------|--------------------|----------------------------|-------------|-----------------|
| Side 1        | 10                 | 6.13                       | 614         | 184.2           |
| Side 2        | 10                 | 6.09                       | 614         | 184.2           |
| Side 3        | 10                 | 6.32                       | 614         | 184.2           |
| Side 4        | 10                 | 6.16                       | 614         | 184.2           |
| Top           | 10                 | 7.32                       | 614         | 184.2           |
| Bottom        | 10                 | 5.19                       | 614         | 184.2           |

**Magnetic Field Emissions**

| Test Position | Test Distance (cm) | Probe Measure Result (A/m) | Limit (A/m) | 30% Limit (A/m) |
|---------------|--------------------|----------------------------|-------------|-----------------|
| Side 1        | 10                 | 0.0896                     | 1.63        | 0.489           |
| Side 2        | 10                 | 0.0937                     | 1.63        | 0.489           |
| Side 3        | 10                 | 0.0914                     | 1.63        | 0.489           |
| Side 4        | 10                 | 0.0948                     | 1.63        | 0.489           |
| Top           | 10                 | 0.1693                     | 1.63        | 0.489           |
| Bottom        | 10                 | 0.0738                     | 1.63        | 0.489           |



**4: Mobile phone has been charge at zero charge, intermediate charge, and full charge.**

**Electric Field Emissions**

| Test Position | Test Distance (cm) | Probe Measure Result(V/m) |                     |             | Limit(V/m)/<br>30%Limit(V/m) |
|---------------|--------------------|---------------------------|---------------------|-------------|------------------------------|
|               |                    | zero charge               | intermediate charge | full charge |                              |
| Side 1        | 10                 | 4.56                      | 4.98                | 3.87        | 614/184.2                    |
| Side 2        | 10                 | 4.63                      | 4.88                | 3.37        | 614/184.2                    |
| Side 3        | 10                 | 4.38                      | 5.46                | 4.57        | 614/184.2                    |
| Side 4        | 10                 | 3.98                      | 4.25                | 3.74        | 614/184.2                    |
| Top           | 10                 | 5.75                      | 5.57                | 5.27        | 614/184.2                    |
| Bottom        | 10                 | 3.41                      | 2.95                | 2.78        | 614/184.2                    |

**Magnetic Field Emissions**

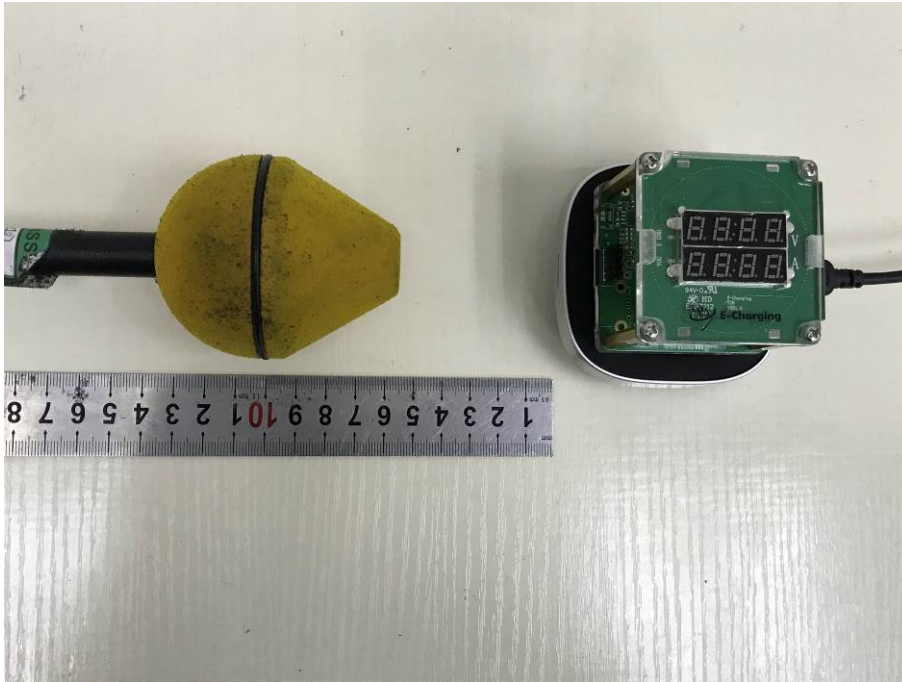
| Test Position | Test Distance (cm) | Probe Measure Result(A/m) |                     |             | Limit(A/m)/<br>30%Limit(A/m) |
|---------------|--------------------|---------------------------|---------------------|-------------|------------------------------|
|               |                    | zero charge               | intermediate charge | full charge |                              |
| Side 1        | 10                 | 0.0213                    | 0.0186              | 0.0195      | 1.63/0.489                   |
| Side 2        | 10                 | 0.0217                    | 0.0169              | 0.0186      | 1.63/0.489                   |
| Side 3        | 10                 | 0.0209                    | 0.0153              | 0.0197      | 1.63/0.489                   |
| Side 4        | 10                 | 0.0173                    | 0.0147              | 0.0174      | 1.63/0.489                   |
| Top           | 10                 | 0.0316                    | 0.0274              | 0.0307      | 1.63/0.489                   |
| Bottom        | 10                 | 0.0184                    | 0.0148              | 0.0163      | 1.63/0.489                   |

## 6 Photographs

### 6.1 Test photos

Test with full load

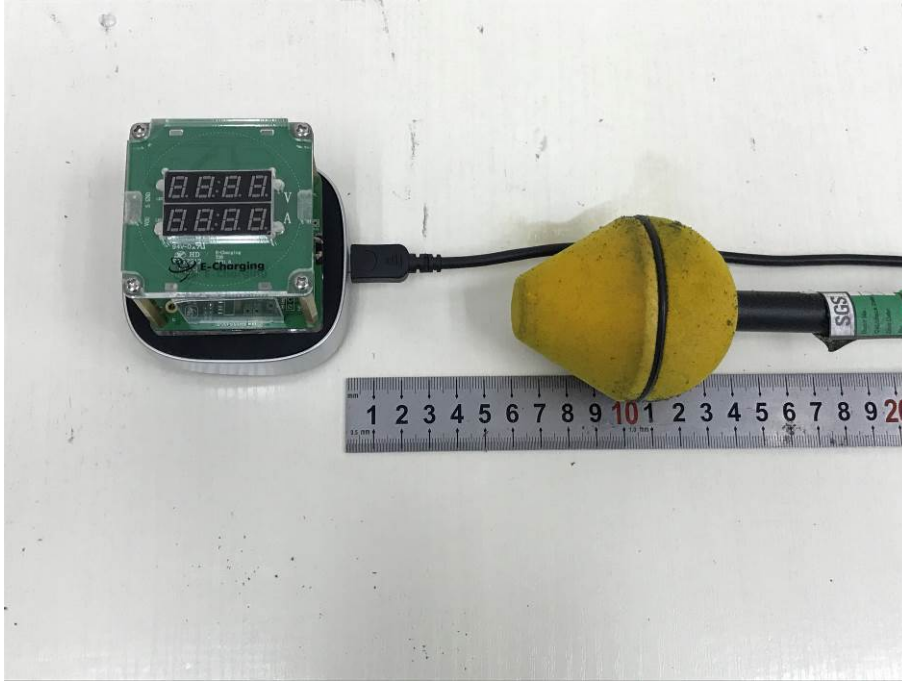
Side 1



Side 2



Side 3



Side 4



Top



Bottom

