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Report No.: SZEM180300184801

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## Human Exposure Report

**Application No.:** SZEM1803001848CR  
**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  
**Model No.:** AC51800LZ, AC52800LZ, WD51L4C, WD52L4C, S75WC18, WC15BKC, OMWLAC52BK, WC15BK, 22900, 8075339 ♣  
 ♣ Please refer to section 3 of this report which indicates which model was actually tested and which were electrically identical.  
**Trade Mark:** DNS, Sandstrom, omars, Trust, Nexxtech  
**FCC ID:** ZBCWD51L4C0  
**Standards:** 47 CFR PART 1, Subpart I, Section 1.1310  
**Date of Receipt:** 2018-03-19  
**Date of Test:** 2018-03-22 to 2018-03-26  
**Date of Issue:** 2018-03-28

<b>Test Result :</b>	<b>Pass*</b>
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\* 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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## 2 General Information

### 2.1 Details of E.U.T.

Power supply:	Input: DC 5V/2A, OR 12V/2A Output: DC 5V/1A, OR 9V/1.67A, OR 12V/1.25A. Max. 15W
Cable:	USB charging line: 180cm, unshielded
Operation frequency:	114.4-184.6 kHz
Antenna type:	Inductive Loop Coil Antenna
Modulation type:	Load modulation
Remark:	Tests were conducted in all three load modes for all tests and the worst case (DC 9V, 1.67A) is reported only.

### 2.2 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Serial No.
AC/DC adapter	provided by client	S75WC18	Output: DC 5V/3A, 9V/2A, 12V/1.5A
E-loading	provided by client	N/A	DC 5V/1A, 9V/1.67A, 12V/1.25A. Max. 15W



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Remark:

Model No.: AC51800LZ, AC52800LZ, WD51L4C, WD52L4C, S75WC18, WC15BKC, OMWLAC52BK, WC15BK, 22900, 8075339

Only the model AC52800LZ was tested fully, and the model WD51L4C was performed the Radiated Disturbance for discrepancy, since the electrical circuit design, PCB layout, components used and internal wiring were identical for the above models, with only difference on model name, appearance and Capacitance type.

Trade mark	Model number	Description	capacitance	
			C22, C23(NPO capacitance)	C22 (CBB capacitance)
DNS	AC52800LZ	rectangles appearance	YES	NO
DNS	AC51800LZ	Square appearance	YES	NO
DNS	WD51L4C	Square appearance	NO	YES
DNS	WD52L4C	rectangles appearance	NO	YES
Sandstrom	S75WC18	rectangles appearance	YES	NO
omars	WC15BKC	rectangles appearance	NO	YES
omars	OMWLAC52BK	rectangles appearance	NO	YES
omars	WC15BK	Square appearance	NO	YES
Trust	22900	rectangles appearance	NO	YES
Nexxtech	8075339	rectangles appearance	NO	YES



## 2.3 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.

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No tests were sub-contracted.

## 2.4 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.

## 2.5 Deviation from Standards

None.

## 2.6 Abnormalities from Standard Conditions

None.



### 3 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	2019-03-22



## 4 Test Results

### 4.1 RF Exposure test

Test Requirement: 47 CFR PART 1, Subpart I, Section 1.1310

Measurement Distance: 10cm

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 *=Plane-wave equivalent power density 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).				

#### 4.1.1 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.



#### 4.1.2 Measurement Data

1: Output Voltage=DC 9V; The max output power =15W;Calculation of resistor value=8.2Ω

##### Electric Field Emissions

Operation frequency	Test Position	Test Distance (cm)	Probe Measure Result (V/m)	Limit (V/m)	30% Limit (V/m)
172.3 kHz	Side 1	10	5.32	614	184.2
	Side 2	10	5.41	614	184.2
	Side 3	10	5.30	614	184.2
	Side 4	10	5.09	614	184.2
	Top	10	6.24	614	184.2

##### Magnetic Field Emissions

Operation frequency	Test Position	Test Distance (cm)	Probe Measure Result (A/m)	Limit (A/m)	30% Limit (A/m)
172.3 kHz	Side 1	10	0.0832	1.63	0.489
	Side 2	10	0.0915	1.63	0.489
	Side 3	10	0.0905	1.63	0.489
	Side 4	10	0.0953	1.63	0.489
	Top	10	0.1649	1.63	0.489





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

**Electric Field Emissions**

Operation frequency	Test Position	Test Distance (cm)	Probe Measure Result(V/m)			30%Limit (V/m)
			zero charge	intermediate charge	full charge	
172.3 kHz	Side 1	10	5.39	5.35	5.35	184.2
	Side 2	10	5.46	5.37	5.48	184.2
	Side 3	10	5.33	5.36	5.39	184.2
	Side 4	10	5.12	5.16	5.21	184.2
	Top	10	6.26	6.21	6.31	184.2

**Magnetic Field Emissions**

Operation frequency	Test Position	Test Distance (cm)	Probe Measure Result(A/m)			30%Limit (A/m)
			zero charge	intermediate charge	full charge	
172.3 kHz	Side 1	10	0.0836	0.0839	0.0821	0.489
	Side 2	10	0.0911	0.0916	0.0910	0.489
	Side 3	10	0.0909	0.0912	0.0906	0.489
	Side 4	10	0.0956	0.0953	0.0959	0.489
	Top	10	0.1652	0.1657	0.1645	0.489

## 5 Photographs

### 5.1 Test photos

#### Test with mobile phone

Side 1



Side 2



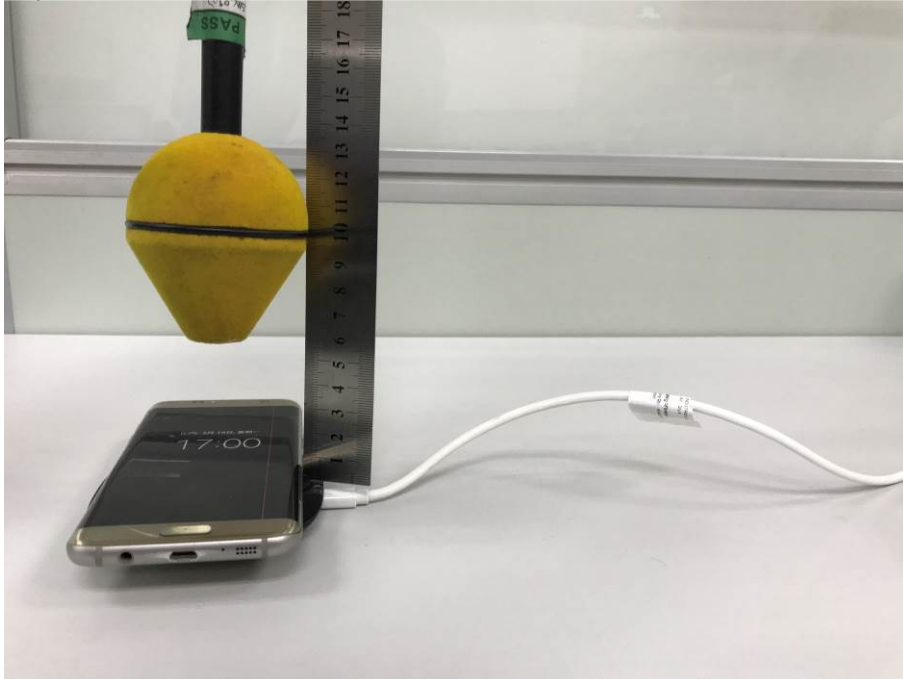
Side 3



Side 4



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