



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

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Report No.: SZEM171001074502
Page: 1 of 16

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

Test Result :	Pass*
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* 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



2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 GENERAL INFORMATION	3
3.1 DETAILS OF E.U.T.	3
3.2 DESCRIPTION OF SUPPORT UNITS	3
3.3 TEST LOCATION.....	4
3.4 TEST FACILITY.....	4
3.5 DEVIATION FROM STANDARDS	4
3.6 ABNORMALITIES FROM STANDARD CONDITIONS	4
4 EQUIPMENTS USED DURING TEST	5
5 TEST RESULTS	6
5.1 RF EXPOSURE TEST	6
5.1.1 <i>E.U.T. Operation</i>	6
<i>Operating Environment</i>	6
<i>EUT Operation</i>	6
5.1.2 <i>Measurement Data</i>	7
6 PHOTOGRAPHS	11
6.1 TEST PHOTOS	11

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, ATIVA® iHope Leplus, VIBE, AmazonBasics Tzumi, Xindao	WC15BK	 Square appearance
	AC51800	
	AC52800	 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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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).				

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)/ 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

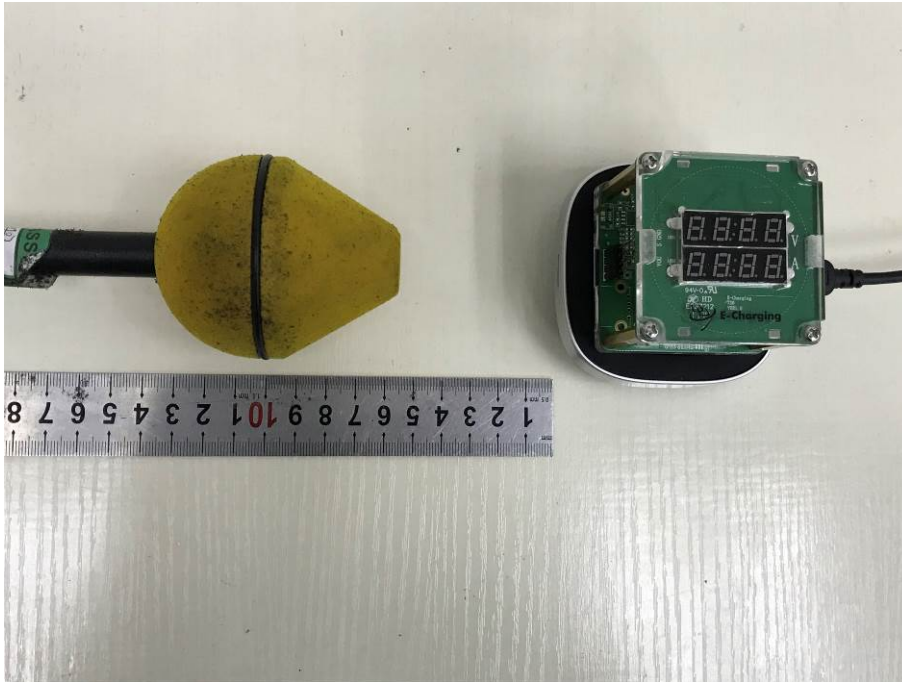
Test Position	Test Distance (cm)	Probe Measure Result(A/m)			Limit(A/m)/ 30%Limit(A/m)
		zero charge	intermediate charge	full charge	
Side 1	10	0.0213	0.0186	0.0195	1.63/0.489
Side 2	10	0.0217	0.0169	0.0186	1.63/0.489
Side 3	10	0.0209	0.0153	0.0197	1.63/0.489
Side 4	10	0.0173	0.0147	0.0174	1.63/0.489
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

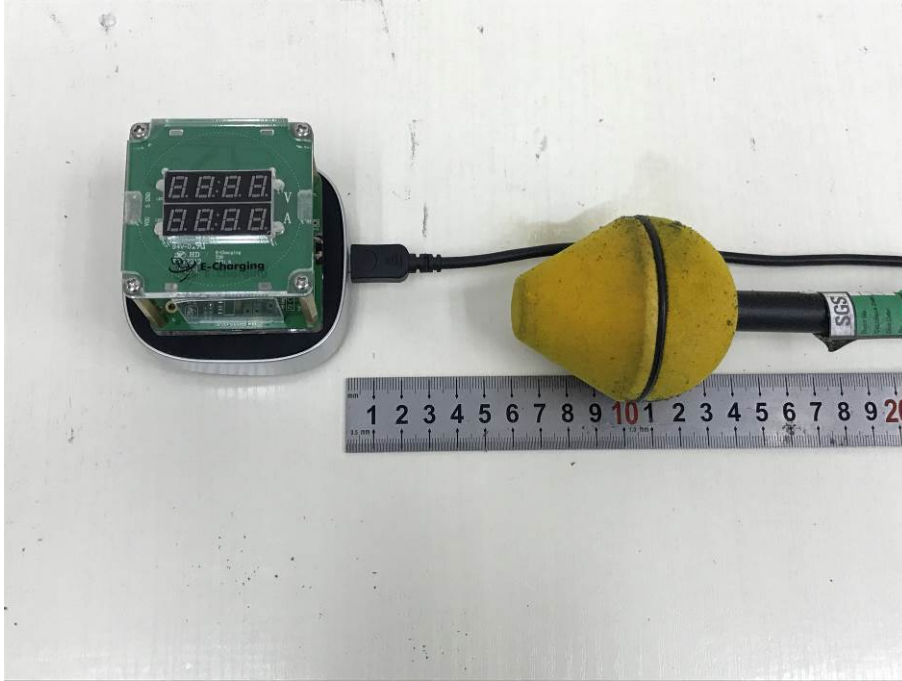
Side 1



Side 2



Side 3



Side 4



Top



Bottom

