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Shenzhen Branch

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Human Exposure Report

Application No.:	SZEM1803002109CR
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, China 518026
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
Model No.:	Please refer to section 2 ♣
♣	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:	ZBCWD51Y3
Standards:	47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt:	2018-03-21
Date of Test:	2018-03-26
Date of Issue:	2018-03-30
Test Result :	**Pass***

* 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.

Revision Record				
Version	***Chapter***	***Date***	***Modifier***	***Remark***
01		*2018-03-30*		*Original*

Authorized for issue by:				
				
		Peter Geng /Project Engineer		
				
		Eric Fu /Reviewer		

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3 General Information

3.1 Details of E.U.T.

Power supply:	Input: DC 5V/2A, 9V/2A Output: DC 5V/1A, 9V/1.1A
Cable:	USB line: 100cm, unshielded
Operation frequency:	116.4-162.8 kHz
Modulation type:	Load modulation
Antenna type:	Inductive Loop Coil Antenna
Remark:	Tests were conducted in both loads and the worst case (DC 9V/1.1A) is reported only.

3.2 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Serial No.
AC/DC Wall Charger	LINOCELL(provided by client)	97431	Output: DC 5V/3A, 9V/2A, 12V/1.5A
E-charging	provided by client	N/A	DC 5V/1A
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB

Declaration of EUT Family Grouping:

Model No.: WD51Y3, WD52Y3, AC52YH, AC51YH, 22894, P308.96, WCHAQ10W2BK, CH-021BL, 00178976, 00183375, CWC-7500-BK, CWC-7500-WH, SL-690401-BK, OWL-QI10W-SI, OWL-QI10W-BK, OWL-QI10W02-BK, 276-882107

Only the model WD51Y3 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on appearance and model number.

Trade mark	Model number	Description
DNS,omars	WD52Y3	rectangles appearance
DNS,omars	AC52YH	rectangles appearance
DNS,omars	WD51Y3	Square appearance
DNS,omars	AC51YH	Square appearance
Trust	22894	rectangles appearance
Swiss Peak	P308.96	Square appearance
Nedis	WCHAQ10W2BK	Square appearance
Sweex	CH-021BL	Square appearance
Hama	00178976	rectangles appearance
Hama	00183375	rectangles appearance
Connect IT	CWC-7500-BK	rectangles appearance
Connect IT	CWC-7500-WH	rectangles appearance
Winspeed	SL-690401-BK	rectangles appearance
OWLTECH、LIFE EGG	OWL-QI10W-SI	Square appearance
OWLTECH、LIFE EGG	OWL-QI10W-BK	Square appearance
OWLTECH、LIFE EGG	OWL-QI10W02-BK	rectangles appearance
HAMEE	276-882107	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 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.

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	2019-03-21

5 Test Results

5.1 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^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 9V; The max output power =10W;Calculation of resistor value=8.2Ω

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (V/m)	30% Limit (V/m)
156.3 kHz	10	Side 1	3.52	184.2
		Side 2	3.25	184.2
		Side 3	3.58	184.2
		Side 4	3.61	184.2
		Top	3.41	184.2

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	30% Limit (A/m)
156.3 kHz	10	Side 1	0.0451	0.489
		Side 2	0.0463	0.489
		Side 3	0.0447	0.489
		Side 4	0.0457	0.489
		Top	0.0785	0.489

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

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(V/m)			30%Limit (V/m)
			zero charge	intermediate charge	full charge	
156.3 kHz	10	Side 1	3.52	3.56	3.50	184.2
		Side 2	3.22	3.25	3.29	184.2
		Side 3	3.54	3.57	3.51	184.2
		Side 4	3.65	3.68	3.60	184.2
		Top	3.44	3.48	3.41	184.2

Magnetic Field Emissions

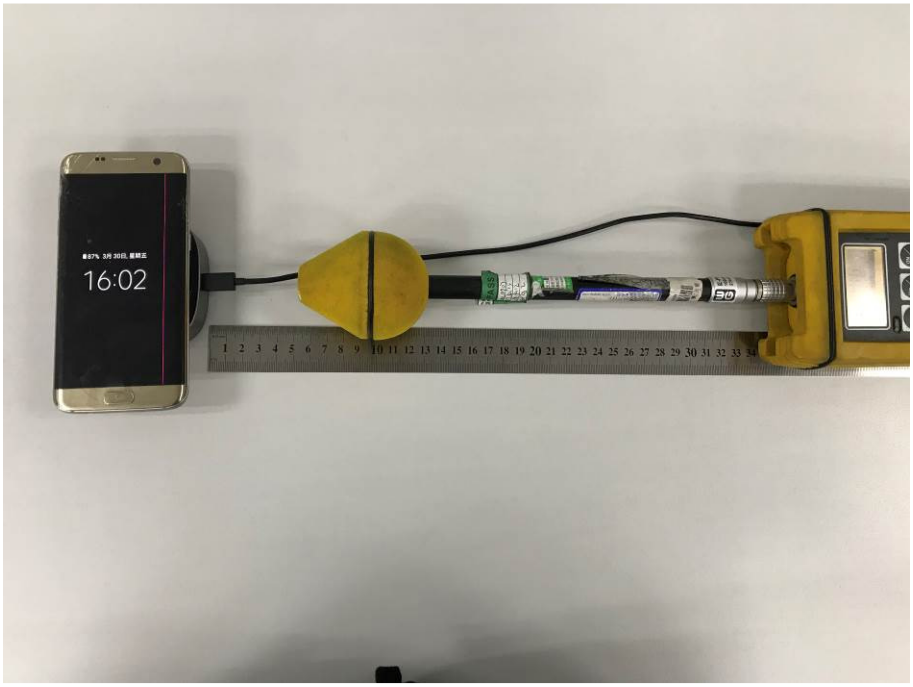
Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			30%Limit (A/m)
			zero charge	intermediate charge	full charge	
156.3 kHz	10	Side 1	0.0457	0.0452	0.0451	0.489
		Side 2	0.0463	0.0466	0.0469	0.489
		Side 3	0.0447	0.0443	0.0447	0.489
		Side 4	0.0461	0.0456	0.0468	0.489
		Top	0.0789	0.0784	0.0796	0.489

6 Photographs

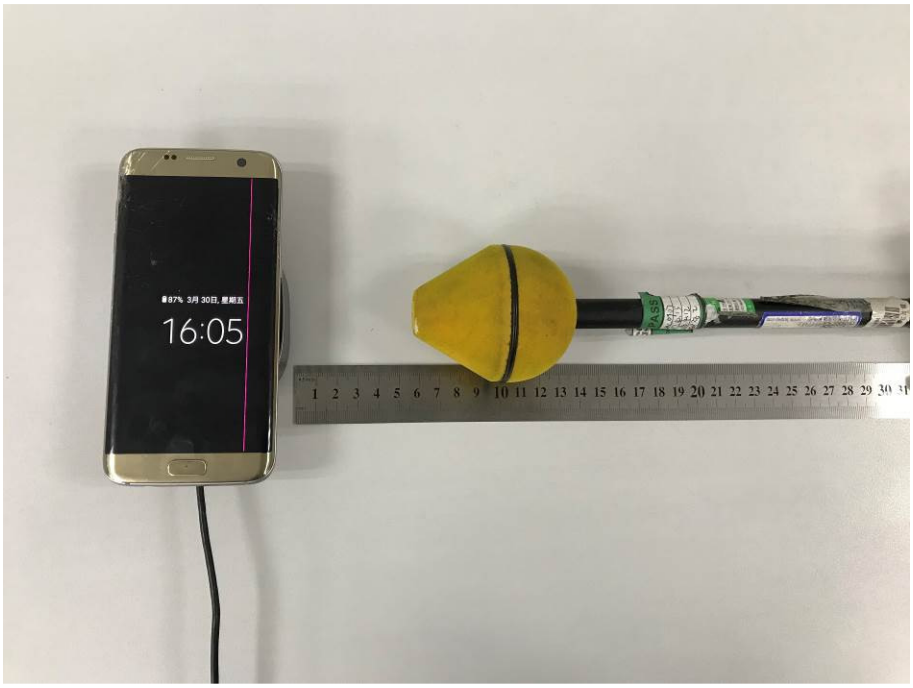
6.1 Test photos

Test with mobile phone with 10cm measurement distance

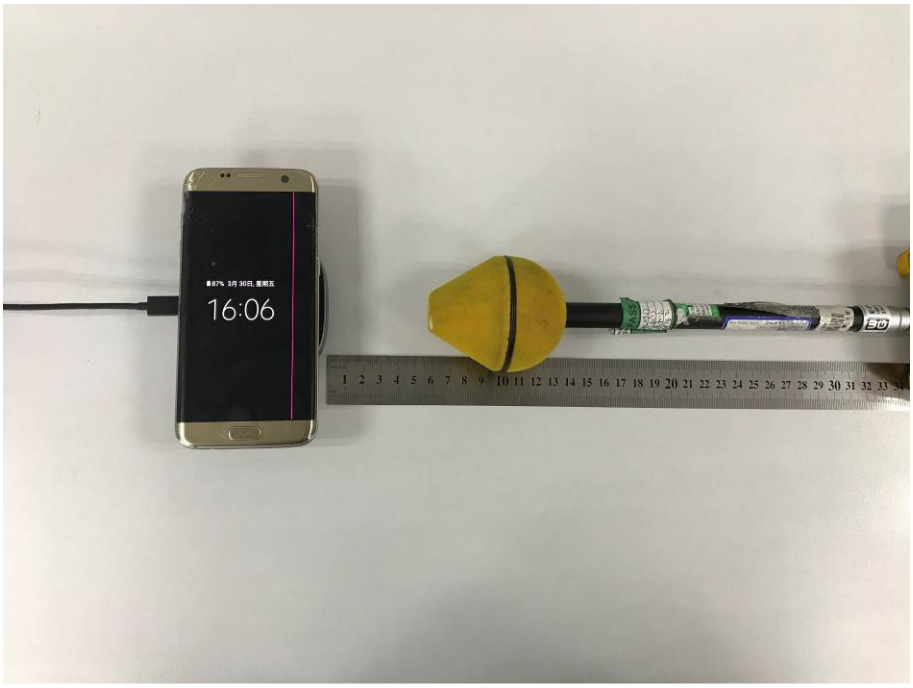
Side 1



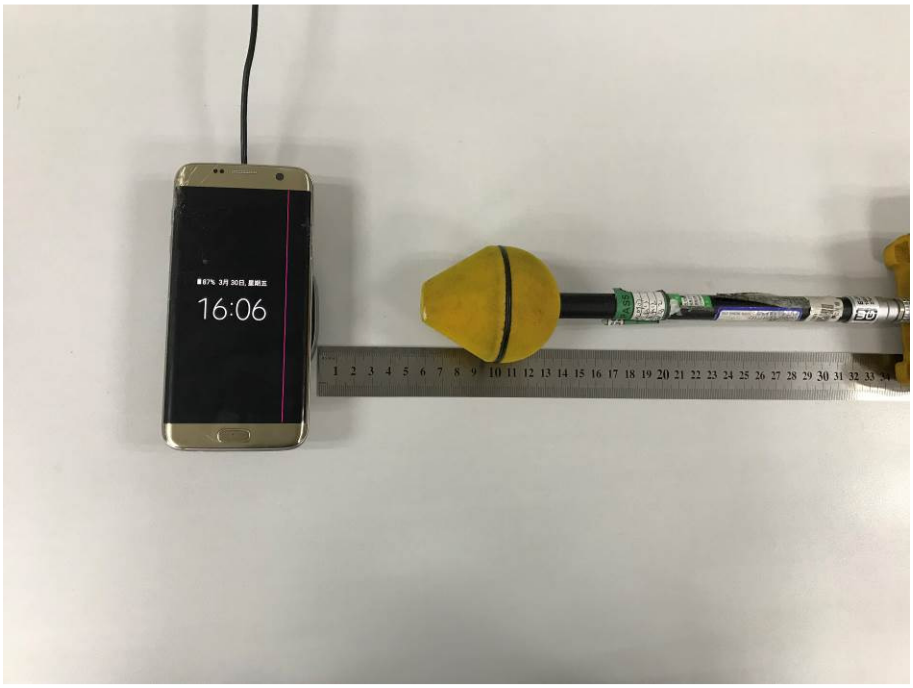
Side 2



Side 3



Side 4



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