



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

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Report No.: SZEM180300185102
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Human Exposure Report

Application No.: SZEM1803001851CR
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: DNS, omars, OSMA, IHOPE, ihome, mizco, Hama, Winspeed, JUICE
FCC ID: ZBCAC51F1
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt: 2018-03-13
Date of Test: 2018-03-15 to 2018-03-20
Date of Issue: 2018-03-21

Test Result :	Pass*
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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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<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2018-03-23		Original

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



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3 General Information

3.1 Details of E.U.T.

Power supply:	Input: DC 5V/2A Output: DC 5V/1A
Cable:	USB charging line: 100cm, unshielded
Operation frequency:	118.9-183.3 kHz
Modulation type:	Load modulation
Antenna type:	Inductive Loop Coil Antenna

3.2 Description of Support Units

Description	Manufacturer	Model No.	parameter
adapter	provided by client	N/A	output: DC 5V/2A
E-loading	provided by client	N/A	DC 5V/2A
USB line	provided by client	N/A	100cm, unshielded

Declaration of EUT Family Grouping:

Model No.: AC51F1, AC52F1, AC51F1O, AC52F1O, WLC-0501WS, WLC-0501BG, OKWWLC-0502WH, OKWWLC-0502BK, IH-QI1010W-D, IH-QI1010B-D, IH-QI1004B-D, IH-QI1004W-D, IH-BL-QI100W, IH-BL-QI100B, IH-QI1004B, IH-QI1004W, WPC-501R, 00178975, 0018337, SL-690400-BK, JUI-WCHAR-PDIUM

Only the model AC52F1 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on model number, overvoltage protection circuit and appearance.



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Trade mark	Model number	Description	overvoltage protection circuit
DNS, omars	AC52F1	rectangles appearance	NO
	AC52F1O	rectangles appearance	Yes
	AC51F1	Square appearance	NO
	AC51F1O	Square appearance	Yes
OSMA, IHOPE	WLC-0501WS	Square appearance	NO
	WLC-0501BG	Square appearance	NO
	OKWWLC-0502WH	rectangles appearance	NO
	OKWWLC-0502BK	rectangles appearance	NO
ihome	IH-QI1010W-D	Square appearance	Yes
ihome	IH-QI1010B-D	Square appearance	Yes
ihome	IH-QI1004B-D	rectangles appearance	Yes
ihome	IH-QI1004W-D	rectangles appearance	Yes
ihome	IH-BL-QI100W	rectangles appearance	Yes
ihome	IH-BL-QI100B	rectangles appearance	Yes
ihome	IH-QI1004B	rectangles appearance	Yes
ihome	IH-QI1004W	rectangles appearance	Yes
mizco	WPC-501R	Square appearance	NO
Hama	00178975	rectangles appearance	NO
Hama	0018337	rectangles appearance	NO
Winspeed	SL-690400-BK	rectangles appearance	NO
JUICE	JUI-WCHAR-PDIUM	Square appearance	NO



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	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

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

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)
154.6 kHz	10	Side 1	4.00	184.2
		Side 2	4.21	184.2
		Side 3	4.37	184.2
		Side 4	4.09	184.2
		Top	5.43	184.2

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	30% Limit (A/m)
154.6 kHz	10	Side 1	0.0732	0.489
		Side 2	0.0846	0.489
		Side 3	0.0821	0.489
		Side 4	0.0857	0.489
		Top	0.1423	0.489



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	
154.6 kHz	10	Side 1	4.03	4.06	4.15	184.2
		Side 2	4.24	4.28	4.22	184.2
		Side 3	4.42	4.47	4.54	184.2
		Side 4	4.12	4.16	4.32	184.2
		Top	5.53	5.59	5.75	184.2

Magnetic Field Emissions

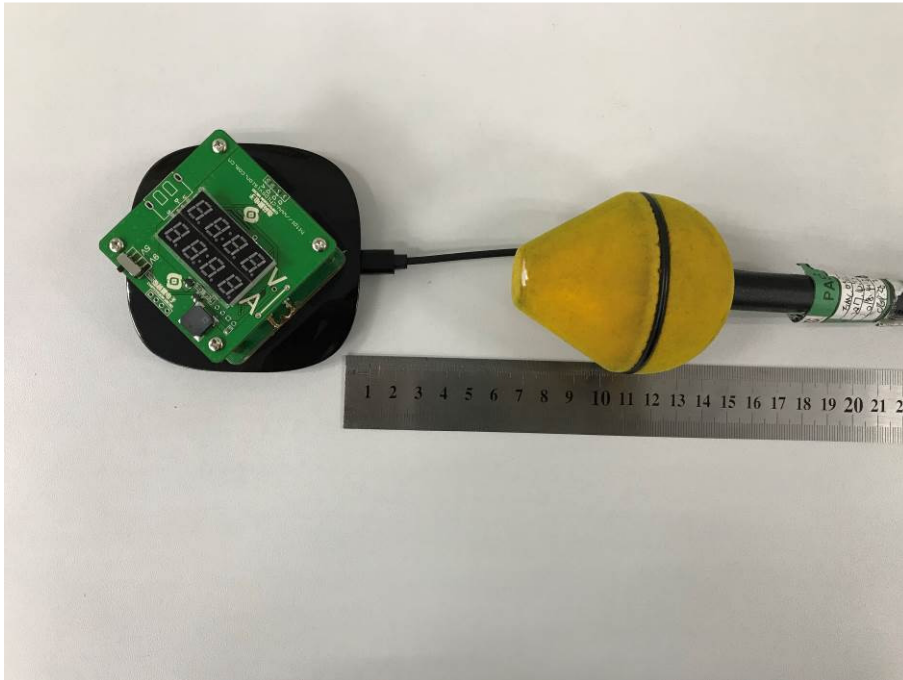
Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			30%Limit (A/m)
			zero charge	intermediate charge	full charge	
154.6 kHz	10	Side 1	0.0724	0.0741	0.0738	0.489
		Side 2	0.0849	0.0854	0.0851	0.489
		Side 3	0.0824	0.0826	0.0820	0.489
		Side 4	0.0861	0.0867	0.0883	0.489
		Top	0.1425	0.1425	0.1429	0.489

6 Photographs

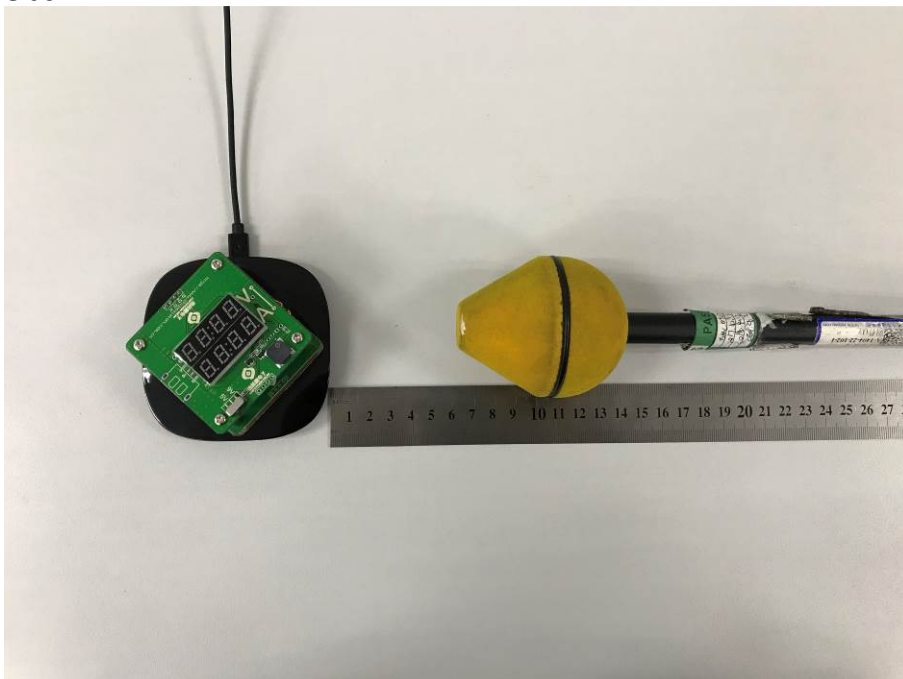
6.1 Test photos

Test with mobile phone with 10cm measurement distance

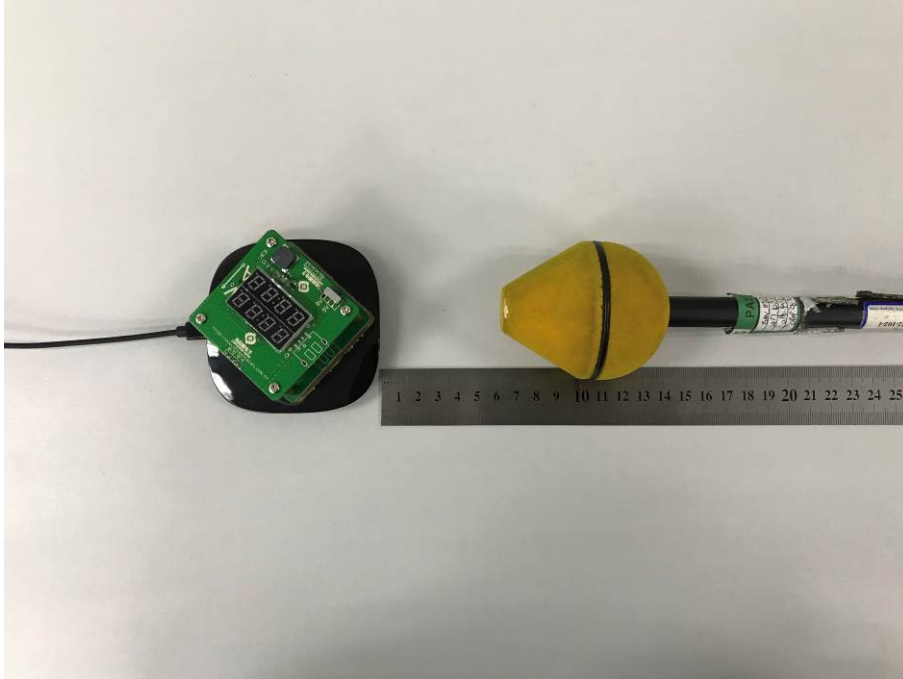
Side 1



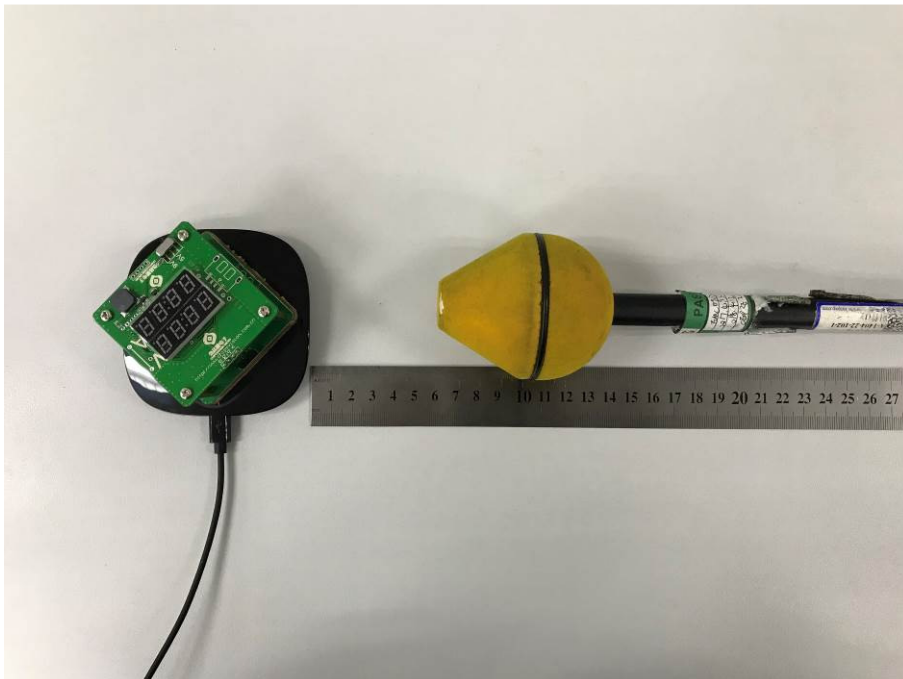
Side 2



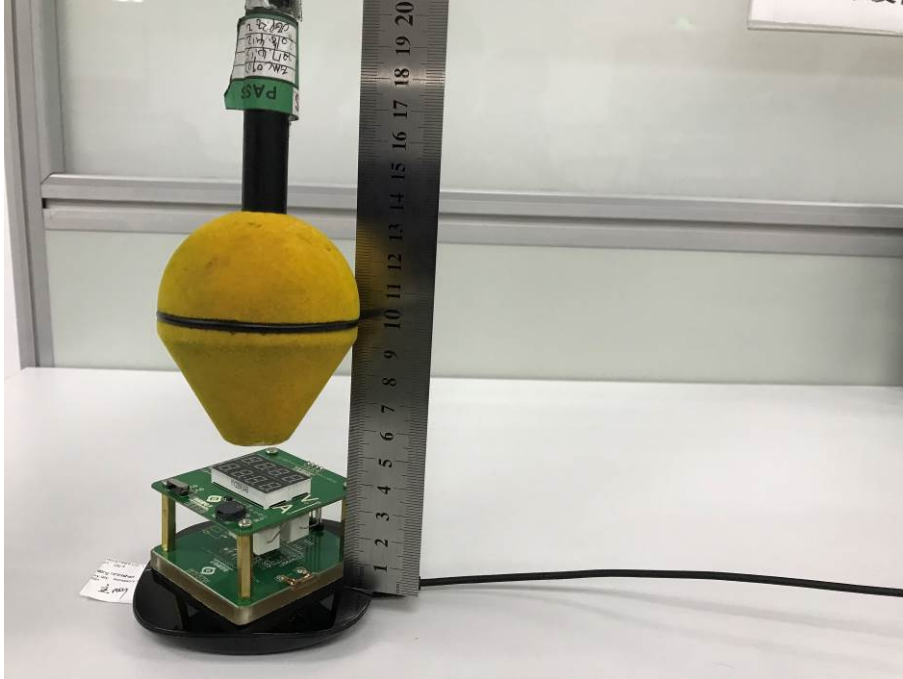
Side 3



Side 4



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