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Human Exposure Report

Application No.:	SZEM1908017770CR
Applicant:	SHENZHEN DNS INDUSTRIES CO., LTD.
Address of Applicant:	23/F Building A, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian, Shenzhen, China
Manufacturer:	SHENZHEN DNS INDUSTRIES CO., LTD.
Address of Manufacturer:	23/F Building A, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian, Shenzhen, China
Equipment Under Test (EUT):	
EUT Name:	Wireless Charger
Model No.:	WD-213AA, WD-213AB, DNSAC47, 96232, B0835LGZ9B ♣
♣	Please refer to section 3.1 of this report which indicates which model was actually tested and which were electrically identical.
Trade mark:	DNS, , KEYMOX
FCC ID:	ZBCWD213A
Standards:	47 CFR PART 1, Subpart I, Section 1.1310 47 CRF PART 2, Subpart J, Section 2.1091
Date of Receipt:	2019-08-22
Date of Test:	2019-08-23 to 2019-08-28
Date of Issue:	2019-09-02
Test Result :	**Pass***

* In the configuration tested, the EUT complied with the standards specified above

Keny Xu
EMC Laboratory Manager

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2019-09-02		Original

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

2 Contents

3 General Information

3.1 Details of E.U.T.

Power supply: Input: DC 5V/1.6A or 2A
Output: DC 5V/1A(5W Max)

Operation frequency: 114.42-152.88kHz

Modulation type: Load modulation

Antenna type: Coil antenna

Declaration of EUT Family Grouping:

Model No.: WD-213AA, WD-213AB, DNSAC47, 96232, B0835LGZ9B

Only the model WD-213AA was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on trade mark, model No, overvoltage protection circuit, NTC design, details see below:

Trade Mark	Model No.	Overvoltage protection circuit used or not	NTC design
DNS	WD-213AA	No	SMD
	WD-213AB	Yes	Bonding wire
	DNSAC47	No	SMD
	96232	No	SMD
KEYMOX	B0835LGZ9B	No	SMD

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	Apple	A1357 W010A051	REF. No.SEA0500
iPhone 8	Apple	A1863	F4GVQ656JC6D
Micro USB Cable	PHILIPS	SWR2101	REF. No.SEA0700

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.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.
IC#: 4620C.

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

4 Equipments Used during Test

Item	Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
1	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2019-05-06	2020-05-06
2	Shielding Room	SAEMC	MSR733	SEM001-09	2019-05-09	2020-05-09

5 Test Results

5.1 RF Exposure test

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

Measurement Distance: 15cm

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 5V; The max output power =5W;Calculation of resistor value=5Ω

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	15	Side 1	0.112	0.815
		Side 2	0.073	0.815
		Side 3	0.127	0.815
		Side 4	0.093	0.815
		Top	0.058	0.815

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

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
135 kHz	15	Side 1	0.121	0.107	0.094	0.815
		Side 2	0.082	0.068	0.055	0.815
		Side 3	0.137	0.126	0.112	0.815
		Side 4	0.102	0.088	0.075	0.815
		Top	0.069	0.054	0.039	0.815

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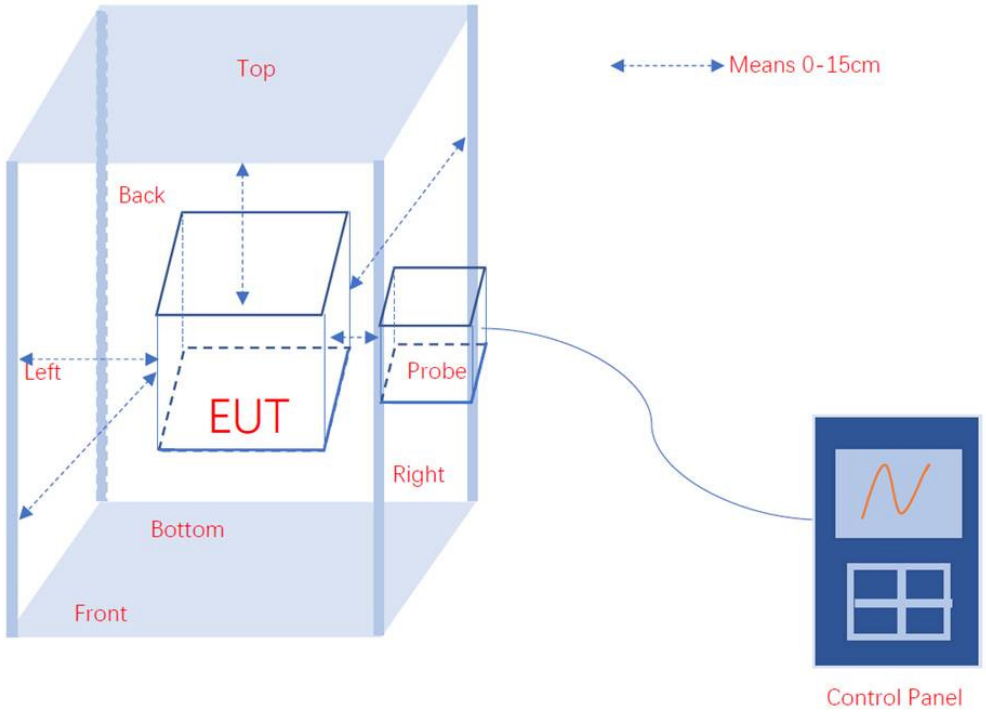
6 Photographs- RF exposure setup



- End of the Report -