

lac-MRA

Report No.: SZEM190601569402

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Human Exposure Report

Application No.: SZEM1906015694CR

Applicant: SHENZHEN DNS INDUSTRIES CO., LTD.

Address of Applicant: 23/F Building A, Shenzhen International Innovation Center, No.1006

Shennan Road, Futian, Shenzhen, 518026 China

Manufacturer: SHENZHEN DNS INDUSTRIES CO., LTD.

Address of 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.: Please refer to section 3.2

Please refer to section 3.2 of this report which indicates which model was

actually tested and which were electrically identical.

Trade mark: DNS, Tech. inc, goji, Maxell

FCC ID: ZBCWD210

Standards: 47 CFR PART 1, Subpart I, Section 1.1310

Date of Receipt: 2019-06-27

Date of Test: 2019-06-29 to 2019-07-22

Date of Issue: 2019-07-24

Test Result : Pass*

Keny Xu EMC Laboratory Manager

Ceny. Ku



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



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Revision Record						
Version	Chapter	Modifier	Remark			
01		2019-07-24		Original		

Authorized for issue by:		
	fane Boro	
	Powell Bao /Project Engineer	-
	EvicFu	
	Eric Fu /Reviewer	_



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2 General Information

2.1 Details of E.U.T.

Power supply: Input:DC5V/2A

Output: DC5V/1A(5W)

Antenna Type: Loop Antenna Modulation Type: Load Modulation

Operation Frequency: 112.50kHz to 141.67kHz

Software version: V1.0

Hardware version: HH11A1 TX1.1

Remark:

Model No.: WD-210AA, WD-210A, WD-210C, WD-210E, WD-210F, ITM1907-000218, ITM1907-000399, G5WC20, WRS-CHR, 851300, WP-PD21BK, WP-PD21WH, WP-PD21PK, WP-PD21NY, WP-PD21XX (X=A-Z for different colour)

Only the model WD-210AA was tested fully, and the model WD-210E, was performed the Radiated Emissions (9kHz-30MHz) and Radiated Emissions (30MHz-1GHz) for discrepancy, since the electrical circuit design, PCB layout, components used and internal wiring were identical for the above models, with only difference on trade mark, model No, overvoltage protection circuit, NTC design, details as below see:

Trade Mark	Model No.	NTC design	Enclosure shape code
	WD-210AA	SMD	Α
	WD-210A	SMD	A
DNS,	WD-210C	SMD	В
mbest	WD-210E	Bonding wire	A
	WD-210F	Bonding wire	В
Tech. inc	ITM1907-000218	SMD	A
recn. inc	ITM1907-000399	SMD	A
goji	G5WC20	Bonding wire	A
	WRS-CHR	SMD	В
	851300	SMD	В
	WP-PD21BK	SMD	В
maxell	WP-PD21WH	SMD	В
	WP-PD21PK	SMD	В
	WP-PD21NY	SMD	В
	WP-PD21XX (X=A-Z for different colour)	SMD	В



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2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.	
USB cable:100cm unshielded	Supplied by SGS	N/A	REF. No.:SEA0700	
E-loading	Supplied by client	N/A	5W	
Adapter	Apple	A1357 W010A051	REF. No.:SEA0500	
iPhone 8	Apple	A1863	F4GVQ656JC6D	



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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.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

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 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.

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.



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3 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date
1	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2020-02-06



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4 Test Results

4.1 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/f²)	6			
30-300	61.4	0.163	1.0	6			
300-1500	/	/	f/300	6			
1500-100,000	/	/	5	6			
	(B) Limits for Genera	l Population/Uncontrolle	d Exposure				
0.3-1.34	614	1.63	*(100)	30			
1.34-30	824/f	2.19/f	*(180/f²)	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

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: 24.5 °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.



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^{*=}Plane-wave equivalent power density



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4.1.2 Measurement Data

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

Magnetic Field Emissions

Operation	Test	Test	Probe Measure Result(A/m)			50%Limit
frequency	Distance	Position	zero	intermediate	full	(A/m)
	(cm)		charge	charge	charge	(7/11)
131 kHz	15	Side 1	0.1075	0.0919	0.0771	0.815
		Side 2	0.0596	0.0453	0.0326	0.815
		Side 3	0.0961	0.0827	0.0678	0.815
		Side 4	0.0481	0.0345	0.0296	0.815
		Тор	0.0334	0.0199	0.0052	0.815



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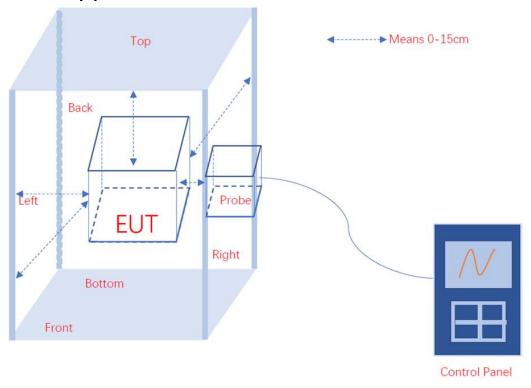


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5 Photographs

5.1 Test setup photos



- End of the Report -



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