

# SHENZHEN DNS INDUSTRIES CO., LTD

# **TEST REPORT**

#### **SCOPE OF WORK**

SAR ASSESSMENT-PW47Y2A, 24998

### **REPORT NUMBER**

180719025SZN-002

**ISSUE DATE** 

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#### **PAGES**

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### **DOCUMENT CONTROL NUMBER**

RF Exposure
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1F/2F, Building B, QiaoAn Scientific Technology Park, Shangkeng Community, Guanhu Subdistrict, Longhua District, Shenzhen, P.R. China

11 August 2018

Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751 www.intertek.com

# **Test Report**

Applicant: SHENZHEN DNS INDUSTRIES CO., LTD Number: 180719025SZN-002

23/F Building A, Shenzhen International Innovation Date:

Center, No.1006 Shennan Road, Futian,

Shenzhen, China.

Sample Description

Product : Wireless Charger Power Bank

Model No. : PW47Y2A, 24998

Brand Name : DNS, omars, mworks!

Electrical Rating : Input: DC5V, 2A; Output 1: DC5V, 1A; Output 2: DC5V, 2A; USB total output:

DC5V, 2A; Wireless Output: DC5V, 1A(5W)

Date Received : 19 July 2018

Date Test Conducted : 19 July 2018 to 10 August 2018

Test Requested : Test for compliance with CFR 47 part 1

Test Method : Environmental evaluation and exposure limit according to FCC

CFR 47 part 1, 1.1307(c) and (d), 1.1310

Test Result : Pass

Conclusion : When determining of test conclusion, measurement uncertainty of tests have

been considered.

Prepared and Checked By: Approved By:

Leo Li Kidd Yang

Engineer Technical Supervisor
Date: 11 August 2018

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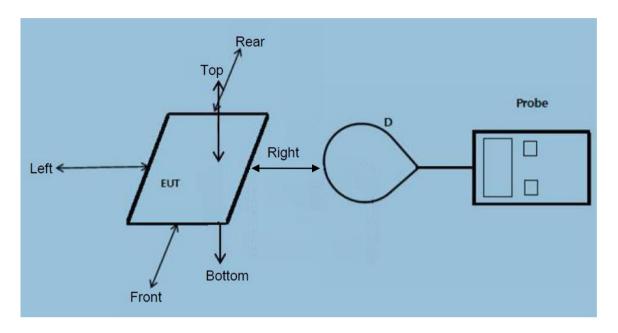
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# **Test Report**

# **Test Setup Configuration**



### Note

- The RF exposure test is performed in the shield room.
- The test distance is between the edge of the charger and the geometric centre of probe.
- The Model: 24998 is the same as the Model: PW47Y2A in hardware aspect. The difference in model number and brand name serves as marketing strategy.

### **Test Equipment List**

Name of instrument	Model	Manufacturer	Cal. Date	Due Date
Exposure Level Tester	ELT-4002304/03	Narda	21-Mar-18	21-Mar-19
Field Probe	HI-6105	ETS	21-Mar-18	21-Mar-19
Laser Data Interface	HI-6113	ETS	21-Mar-18	21-Mar-19



### **Reference Limit:**

# Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(c) and (d), 1.1310

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation.

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric field strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Average Time (minutes)						
(A) Limits for Occupational/Controlled Exposure										
0.3 – 3.0	614	1.63	(100)*	6						
(B)	(B) Limits for General Population/Uncontrolled Exposure									
0.3 – 1.34	614	1.63 (100)*		30						

Note: \* = Plane wave equivalent power density

Test Mode: Power transfer

**Test Result:** 

H-Field Strength at 0 cm surrounding the EUT

Frequenc y Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Positio n Bottom (A/m))	Limits (A/m)
0.110- 0.205	1% battery level	0.183	0.213	0.197	0.147	0.171	0.127	1.63
0.110- 0.205	50% battery level	0.189	0.223	0.203	0.152	0.175	0.135	1.63
0.110- 0.205	99% battery level	0.187	0.207	0.195	0.143	0.169	0.119	1.63

H-Field Strength at 5 cm surrounding the EUT

Frequenc y Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Positio n Bottom (A/m))	Limits (A/m)
0.110- 0.205	1% battery level	0.169	0.193	0.176	0.121	0.143	0.107	1.63
0.110- 0.205	50% battery level	0.172	0.182	0.173	0.126	0.145	0.095	1.63
0.110- 0.205	99% battery level	0.178	0.189	0.181	0.135	0.136	0.091	1.63



H-Field Strength at 10 cm surrounding the EUT

Frequenc y Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Positio n Bottom (A/m))	Limits (A/m)
0.110- 0.205	1% battery level	0.137	0.179	0.148	0.107	0.124	0.089	1.63
0.110- 0.205	50% battery level	0.131	0.151	0.139	0.102	0.121	0.091	1.63
0.110- 0.205	99% battery level	0.135	0.158	0.137	0.108	0.132	0.083	1.63

# H-Field Strength at 15 cm surrounding the EUT

Frequenc y Range (MHz)	EUT Operation mode	Probe Position Front (A/m)	Probe Position Rear (A/m)	Probe Position Left (A/m)	Probe Position Right (A/m)	Probe Position Top (A/m)	Probe Positio n Bottom (A/m))	Limits (A/m)
0.110- 0.205	1% battery level	0.119	0.168	0.129	0.098	0.104	0.063	1.63
0.110- 0.205	50% battery level	0.101	0.134	0.120	0.089	0.118	0.068	1.63
0.110- 0.205	99% battery level	0.108	0.133	0.104	0.081	0.097	0.057	1.63

E-Field Strength at 0 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Positio n Bottom (V/m)	Limits (V/m)
0.110-0.205	1% battery level	1.059	1.093	1.137	1.032	1.107	0.897	614
0.110-0.205	50% battery level	1.087	1.116	1.129	1.043	1.091	0.882	614
0.110-0.205	99% battery level	1.066	1.102	1.116	1.061	1.085	0.877	614



E-Field Strength at 5 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Positio n Bottom (V/m)	Limits (V/m)
0.110-0.205	1% battery level	0.991	1.049	1.058	0.997	1.037	0.769	614
0.110-0.205	50% battery level	1.034	1.057	1.072	0.983	1.051	0.783	614
0.110-0.205	99% battery level	1.021	1.041	1.053	0.987	1.022	0.761	614

E-Field Strength at 10 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Positio n Bottom (V/m)	Limits (V/m)
0.110-0.205	1% battery level	0.872	0.905	0.931	0.825	0.927	0.621	614
0.110-0.205	50% battery level	0.859	0.889	0.922	0.832	0.901	0.632	614
0.110-0.205	99% battery level	0.903	0.895	0.907	0.838	0.917	0.609	614

E-Field Strength at 15 cm surrounding the EUT

Frequency Range (MHz)	EUT Operation mode	Probe Position Front (V/m)	Probe Position Rear (V/m)	Probe Position Left (V/m)	Probe Position Right (V/m)	Probe Position Top (V/m)	Probe Positio n Bottom (V/m)	Limits (V/m)
0.110-0.205	1% battery level	0.774	0.897	0.815	0.765	0.850	0.453	614
0.110-0.205	50% battery level	0.710	0.865	0.802	0.732	0.834	0.441	614
0.110-0.205	99% battery level	0.714	0.859	0.782	0.715	0.830	0.429	614

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### Configuration photo of the test:

H-Field Strength at 0 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



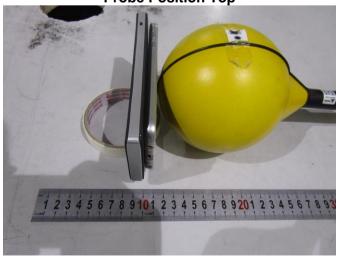
**Probe Position Left** 



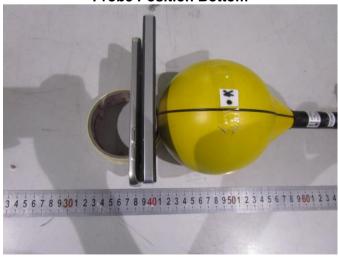
**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# H-Field Strength at 5 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



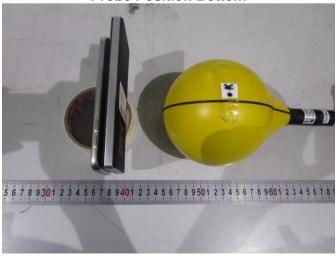
**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# H-Field Strength at 10 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# H-Field Strength at 15 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# E-Field Strength at 0 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# E-Field Strength at 5 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# E-Field Strength at 10 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 





# E-Field Strength at 15 cm surrounding the EUT

**Probe Position Front** 



**Probe Position Rear** 



**Probe Position Left** 



**Probe Position Right** 



**Probe Position Top** 



**Probe Position Bottom** 

