

SHENZHEN DNS INDUSTRIES CO., LTD.

TEST REPORT

SCOPE OF WORK

SAR Assessment– WD-286C, TLL151391

REPORT NUMBER

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PAGES

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DOCUMENT CONTROL NUMBER

RF Exposure

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Test Report

Applicant : SHENZHEN DNS INDUSTRIES CO., LTD.
23/F Building A, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian, Shenzhen, China

Sample Description

Product : 3-in-1 Wireless Charger
Model No. : WD-286C, TLL151391
Brand Name : DNS, omars, mbest, NOVOO, KEYMOX, Tellur
Electrical Rating : Input: 9V==3A, 12V==2.5A, 15V==2A 30W Max
Wireless charging Output1: 15W Max for Magsafe
Wireless charging Output2: 5W for AirPods
Wireless charging Output3: 2.5W for iWatch ;
Total output: 22.5W Max

Date Received : 14 February 2023
Date Test Conducted : 14 February 2023 to 28 February 2023

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 KDB 680106 D01 RF Exposure Wireless Charging App v03r01

Test Result : Pass
Conclusion : When determining of test conclusion, measurement uncertainty of tests have been considered.

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Prepared and Checked By:

Approved By:

Holland



Holland Yang
Engineer

Ryan Chen
Project Engineer
Date: 29 March 2023

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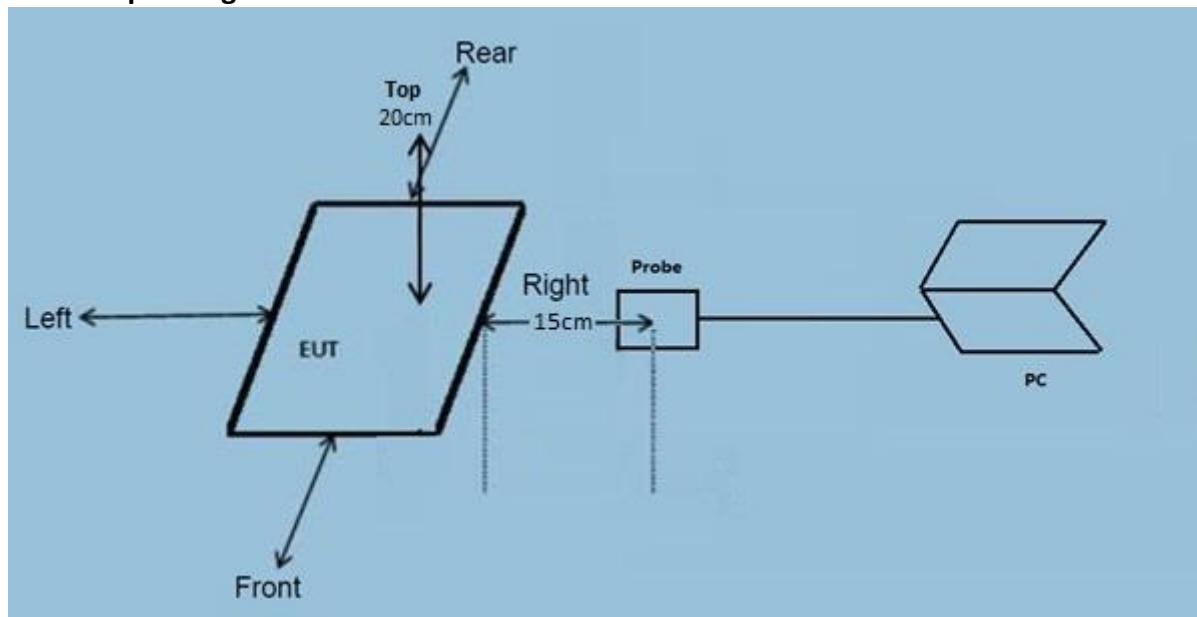
101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen.

Tel: (86 755) 8601 6288

Fax: (86 755) 8601 6751

Test Report

Test Setup Configuration



Note

- The RF exposure test is performed in the shield room.
- The test distance is at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils.

Test Equipment List

Name of instrument	Model	Manufacturer	Cal. Date	Due Date
Electric and Magnetic Field Analyzer	EHP-50F	Narda	2022-08-01	2023-08-01

This product was tested in the following configuration:

Description	Manufacturer	Detail
Mobile Phone (Provided by Intertek)	Apple	iphone 13 (A2634)
Earphone	Apple	Air Pods (A2083)
iWatch (Provided by Applicant)	Apple	SERIES 3
USB cable (Provided by Applicant)	NIL	Unshielded, Length 185cm
USB Power Adapter (Provided by Applicant)	N/A	Model No: W0920U-1U05F Input: 100-240VAC 50/60Hz 0.45A Max Output: 9V=3A, 12V=2.5A, 15V=2A

Justification

The EUT was powered by AC 120V/60Hz for adapter during the test. All power input voltages(DC 9V=3A, 12V=2.5A,15V=2A) and all rated output powers have been tested. And have considered all the following EUT modes of operation to pre-scan the test system. The worst-case testing data were recorded in this report.

The Model: TLL151391 is the same as the Model: WD-286C in hardware aspect. The difference in model number and trade name serves as marketing strategy.

For mode 11 to mode 13, three coils were charging during test, measurements were taken with the client being charged by the one coil and measured 15 cm from four edges and 20 cm from top of the coil firstly. And then repeat these measurements for the other coils one by one.

Pertest mode	Description
Mode 1	Standby mode
Mode 2	Mobile phone is charging at 1% battery power (Only Magsafe charger in charging)
Mode 3	Mobile phone is charging at 50% battery power (Only Magsafe charger in charging)
Mode 4	Mobile phone is charging at 99% battery power (Only Magsafe charger in charging)
Mode 5	Apple Watch is charging at 1% battery power (Only Watch charger in charging)
Mode 6	Apple Watch is charging at 50% battery power (Only Watch charger in charging)
Mode 7	Apple Watch is charging at 99% battery power (Only Watch charger in charging)
Mode 8	AirPods is charging at 1% battery power (Only AirPods charger in charging)
Mode 9	AirPods is charging at 50% battery power (Only AirPods charger in charging)
Mode 10	AirPods is charging at 99% battery power (Only AirPods charger in charging)
Mode 11	All Sides are charging at 1% battery power (Three chargers are charging)
Mode 12	All Sides are charging at 50% battery power (Three chargers are charging)
Mode 13	All Sides are charging at 99% battery power (Three chargers are charging)

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/cm ²)	Average Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3 – 1.34	614	1.63	(100) *	30

Note: * = Plane wave equivalent power density

Test Result:

During test, All devices has been tested the worst status of full load and tested with mobile phone/iWatch/Airports at zero charge, intermediate charge, and full charge.

Worst Case Operating Mode: Mode 11~13(Three chargers are charging and the probe is measuring to the AirPods charging coil/Qi protocol coil)

H-Field Strength at 15 cm surrounding the EUT and 20cm away from the surface from the coil of the EUT

Frequency 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)	Limits (A/m)
0.110-0.205	1% Battery Level	0.0949	0.0289	0.0284	0.0472	0.2954	1.63
0.110-0.205	50% Battery Level	0.0904	0.0289	0.0288	0.0472	0.2954	1.63
0.110-0.205	99% Battery Level	0.0837	0.0256	0.0280	0.0431	0.2807	1.63
0.110-0.205	Stand-by	0.0535	0.0241	0.0254	0.0415	0.2513	1.63

E-Field Strength at 15 cm surrounding the EUT and 20cm away from the surface from the coil of 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)	Limits (V/m)
0.110-0.205	1% Battery Level	0.2601	0.2232	0.2806	0.2777	0.3506	614
0.110-0.205	50% Battery Level	0.2940	0.2518	0.2815	0.2788	0.3579	614
0.110-0.205	99% Battery Level	0.2733	0.2515	0.2753	0.2748	0.3472	614
0.110-0.205	Stand-by	0.2093	0.0290	0.2655	0.2166	0.3284	614

Configuration photo of the test:

Please refer to RF Exposure setup photos. pdf.

***** End of Report*****