



Human Exposure Report

Application No.: SZEM1911020515CR
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
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: CAR WIRELESS CHARGER
Model No.: WD-222A, 47649, 3S-1802 ♣
♣ Please refer to section 3.1 of this report which indicates which model was actually tested and which were electrically identical.
Trade mark: DNS, omars, MBEST, novoo, 3SIXT
FCC ID: ZBCWD222A
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1091
Date of Receipt: 2019-11-22
Date of Test: 2019-11-27 to 2019-12-04
Date of Issue: 2019-12-05

Test Result :	Pass*
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* In the configuration tested, the EUT complied with the standards specified above

Kenx. Xu

Kenx Xu
EMC Laboratory Manager



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Shenzhen Branch EMC Laboratory

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-12-05		Original

Authorized for issue by:			
			
		Leo Li /Project Engineer	
			
		Eric Fu /Reviewer	



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3 General Information

3.1 Details of E.U.T.

Power supply:	Input: 5V 2A, 9V 2A, 12V 1.67A Output: DC9V, 1.67A; DC9V, 1.12A; DC9V, 0.83A; DC5V, 1A 5W, 7.5W, 10W, 15W
Cable:	Type-C cable (Unshielded, 150cm)
Operation Frequency:	110.57-202.40kHz
Modulation Type:	Load Modulation
Antenna Type:	Loop Antenna
Remark:	Tests were conducted in all load modes and the worst case 15W (DC 9V/1.67A) is reported only.

Remark:

Model No.: WD-222A, 47649, 3S-1802

Only the model WD-222A was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, only different on model number, brandname.

Details see below:

Product name	Brandname	model
CAR WIRELESS CHARGER	DNS, omars, mbest, NOVOO	WD-222A
CAR WIRELESS CHARGER	3SIXT	47649, 3S-1802

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
HUAWEI Mate 20 Pro	HUAWEI	LYA-AL00	S2D7N19124014116



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:

• **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.



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4 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	2020-02-05



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5 Test Results

5.1 RF Exposure test

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

Measurement Distance: 0/4/6/8/10/15cm

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 with mobile phone at zero charge, intermediate charge, and full charge.



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5.1.2 Measurement Data

Output Voltage=DC 9V; The max output power =15W;Calculation of resistor value=5.4Ω

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	0	Side 1	0.4029	0.815
		Side 2	0.3272	0.815
		Side 3	0.4166	0.815
		Side 4	0.3427	0.815
		Top	0.2841	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	2	Side 1	0.3654	0.815
		Side 2	0.2949	0.815
		Side 3	0.3770	0.815
		Side 4	0.3065	0.815
		Top	0.2526	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	4	Side 1	0.3333	0.815
		Side 2	0.2639	0.815
		Side 3	0.3445	0.815
		Side 4	0.2728	0.815
		Top	0.2196	0.815





Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	6	Side 1	0.2982	0.815
		Side 2	0.2275	0.815
		Side 3	0.3102	0.815
		Side 4	0.2380	0.815
		Top	0.1827	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	8	Side 1	0.2646	0.815
		Side 2	0.1913	0.815
		Side 3	0.2759	0.815
		Side 4	0.2039	0.815
		Top	0.1489	0.815

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	10	Side 1	0.2274	0.815
		Side 2	0.1586	0.815
		Side 3	0.2378	0.815
		Side 4	0.1723	0.815
		Top	0.1160	0.815



Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
135 kHz	15	Side 1	0.1555	0.815
		Side 2	0.0898	0.815
		Side 3	0.1644	0.815
		Side 4	0.1024	0.815
		Top	0.0631	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	0	Side 1	0.4139	0.4038	0.3996	0.815
		Side 2	0.3373	0.3252	0.3202	0.815
		Side 3	0.4278	0.4125	0.4075	0.815
		Side 4	0.3526	0.3395	0.3348	0.815
		Top	0.2931	0.2780	0.2731	0.815

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	2	Side 1	0.3753	0.3595	0.3556	0.815
		Side 2	0.3050	0.2912	0.2873	0.815
		Side 3	0.3879	0.3740	0.3697	0.815
		Side 4	0.3180	0.3025	0.2975	0.815
		Top	0.2627	0.2487	0.2440	0.815



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	4	Side 1	0.3457	0.3297	0.3263	0.815
		Side 2	0.2731	0.2584	0.2541	0.815
		Side 3	0.3543	0.3435	0.3397	0.815
		Side 4	0.2832	0.2675	0.2624	0.815
		Top	0.2314	0.2160	0.2108	0.815

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	6	Side 1	0.3079	0.2940	0.2892	0.815
		Side 2	0.2400	0.2240	0.2195	0.815
		Side 3	0.3216	0.3068	0.3024	0.815
		Side 4	0.2492	0.2360	0.2320	0.815
		Top	0.1918	0.1761	0.1721	0.815

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	8	Side 1	0.2752	0.2602	0.2561	0.815
		Side 2	0.2040	0.1938	0.1901	0.815
		Side 3	0.2858	0.2723	0.2677	0.815
		Side 4	0.2153	0.1998	0.1958	0.815
		Top	0.1587	0.1433	0.1389	0.815



Magnetic Field Emissions

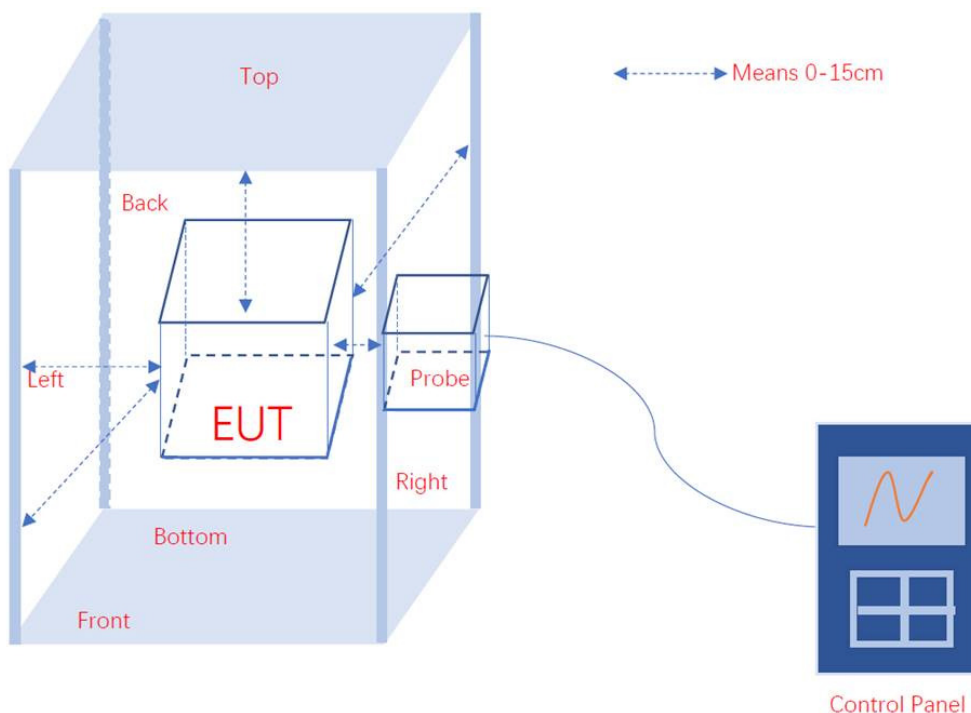
Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			zero charge	intermediate charge	full charge	
135 kHz	10	Side 1	0.2381	0.2252	0.2211	0.815
		Side 2	0.1689	0.1559	0.1509	0.815
		Side 3	0.2494	0.2337	0.2297	0.815
		Side 4	0.1855	0.1726	0.1686	0.815
		Top	0.1271	0.1168	0.1119	0.815

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	0.1669	0.1566	0.1523	0.815
		Side 2	0.0987	0.0836	0.0789	0.815
		Side 3	0.1769	0.1659	0.1619	0.815
		Side 4	0.1142	0.1005	0.0966	0.815
		Top	0.0750	0.0597	0.0554	0.815



6 Photographs- RF exposure setup



- End of the Report -

