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Report No.: SZEM190501450402

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## **Human Exposure Report**

Application No.: SZEM1905014504CR

Applicant: SHENZHEN DBK ELECTRONICS CO., LTD

Address of Applicant: No.8 Qinghua Road, Zhu Village, Fucheng New Community, Guanlan Street,

Longhua District, Shenzhen City, Guangdong Province, China.

Manufacturer: SHENZHEN DBK ELECTRONICS CO., LTD

Address of Manufacturer: No.8 Qinghua Road, Zhu Village, Fucheng New Community, Guanlan Street,

Longhua District, Shenzhen City, Guangdong Province, China.

Factory: SHENZHEN DBK ELECTRONICS CO., LTD

Address of Factory: No.8 Qinghua Road, Zhu Village, Fucheng New Community, Guanlan Street,

Longhua District, Shenzhen City, Guangdong Province, China.

**Equipment Under Test (EUT):** 

EUT Name: Wireless charger Model No.: CD-WST011-X

Trade mark: DBK

FCC ID: 2ARVRWST011-X

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

**Date of Receipt:** 2019-05-28

**Date of Test**: 2019-05-31 to 2019-06-10

**Date of Issue:** 2019-06-12

Test Result : Pass\*

Keny Xu EMC Laboratory Manager

Ceny. Ku



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<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above



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### 2 General Information

#### 2.1 Details of E.U.T.

Power supply: Input: DC 5V/2A

Output: Wireless DC 5V/1A 5W MAX

Cable: USB line: 100cm, shielded

Operation Frequency: 114.90kHz to 156.41kHz

Modulation Type: Load Modulation
Antenna Type: Loop Antenna

Antenna Gain: 0dBi

### 2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.	
Adapter(client supply)	UGREEN	CD122	40407	
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB	



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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	2020-02-05



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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
Test voltage: DC 5V

Limit:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	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 General Population/Uncontrolled 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: 22.4 °C Humidity: 55 % RH Atmospheric Pressure: 1015 mbar

**EUT Operation:** 

The device has been tested with load at zero charge, intermediate charge, and full charge.



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<sup>\*=</sup>Plane-wave equivalent power density



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#### 4.1.2 Measurement Data

### Output Voltage=DC 5V; The max output power =5W; Calculation of resistor value=5Ω **Electric Field Emissions**

Operation frequency	-		Probe Measure Result (V/m)	50% Limit (V/m)
		Side 1	1.71	307
		Side 2	4.03	307
134.3 kHz	15	Side 3	2.28	307
		Side 4	3.64	307
		Тор	3.99	307

#### **Magnetic Field Emissions**

Operation frequency	-		Probe Measure Result (A/m)	50% Limit (A/m)
		Side 1	0.1035	0.815
		Side 2	0.1982	0.815
134.3 kHz	15	Side 3	0.1306	0.815
		Side 4	0.2117	0.815
		Тор	0.1784	0.815



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

#### **Electric Field Emissions**

Operation	lesi			Probe Measure Result(V/m)		
frequency	Distance (cm)	Position	zero charge	intermediate charge	full charge	50%Limit (V/m)
	Side kHz 15 Side	Side 1	2.06	1.71	1.52	307
		Side 2	4.29	3.99	3.75	307
134.3 kHz		Side 3	2.58	2.32	2.06	307
		Side 4	3.89	3.66	3.42	307
		Тор	4.29	4.07	3.89	307

#### **Magnetic Field Emissions**

Operation	Test Test		Probe Measure Result(A/m)			50%Limit
frequency	Distance (cm)	Position	zero charge	intermediate charge	full charge	(A/m)
	(0111)					
	z 15	Side 1	0.1163	0.1049	0.0922	0.815
134.3 kHz		Side 2	0.2101	0.1985	0.1849	0.815
		Side 3	0.1435	0.1297	0.1146	0.815
		Side 4	0.2237	0.2079	0.1939	0.815
		Тор	0.1885	0.1763	0.1617	0.815

## 5 Photographs- RF exposure Setup photos

Refer to RF setup photos.

- End of the Report -



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