

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057

Telephone: +86 (0) 755 2601 2053 Report No.: SZEM181000901802

+86 (0) 755 2671 0594 Fax: Page: 1 of 9 Email: ee.shenzhen@sgs.com

Human Exposure Report

SZEM1810009018CR Application No.:

SHENZHEN DBK ELECTRONICS CO., LTD. Applicant:

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

Longhua District, Shenzhen City, Guangdong Province, China

Manufacturer/ Factory: SHENZHEN DBK ELECTRONICS CO., LTD.

Address of Manufacturer/

Factory:

Room No.208-1, 308, 404-408 in Building Five, 2-4 Floor in Building Three, No.8 Qinghua Road, Zhu Village, Fucheng New Community, Guanlan Street, Longhua District, Shenzhen City, Guangdong Province, P.R.China

Equipment Under Test (EUT):

EUT Name: Wireless Charger

CP681 Model No.: Trade mark: DBK

FCC ID: 2ARVRCP681

Standards: 47 CFR PART 1, SUBPART I, SECTION 1.1310

Date of Receipt: 2018-10-17

Date of Test: 2018-10-23 TO 2018-11-06

Date of Issue: 2018-11-15

Pass* Test Result:



Keny Xu **EMC Laboratory Manager**

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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^{*} 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:	DC 5V from USB port
	Input: DC 5V/2A, DC 9V/1.67A
	Output:
	WPC: 5W(DC 5V/1A), 7.5W(DC 5V/1.5A), 10W(DC 9V/1.1A)
Cable:	USB cable: 100cm shielded
Operation frequency:	109.29-175.00kHz
Modulation type:	Load modulation
Antenna type:	Inductive Loop Coil Antenna

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	LeTV	EQ-248CN	16041847014
iPhone 8	Apple	A1863	F4GVQ656JC6D
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 (yyyy-mm-dd)
1	Electric and Magnetic Field Analyzer	narda	NBM-550/EHP-50F	EMC092	2019-02-06



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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

Test voltage: AC 120V/60Hz (Voltage of the AC/DC adapter)

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: 23.8 °C Humidity: 52 % RH Atmospheric Pressure: 1014 mbar

EUT Operation:

This device has been tested the worst status of full load and the device has been tested with mobile phone at 5%, 50% and 90% charge.

^{*=}Plane-wave equivalent power density



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4.1.2 Measurement Data

All three load modes were conducted and the worst case(10W) is reported only. Output Voltage=DC 9V; The max output power =10W; Calculation of resistor value= 8.1Ω

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (V/m)	50% Limit (V/m)
		Side 1	0.44	307
128.4kHz	15	Side 2	0.49	307
		Side 3	0.35	307
		Side 4	0.44	307
		Тор	0.51	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
		Side 1	0.049	0.815
	15	Side 2	0.085	0.815
128.4kHz		Side 3	0.066	0.815
		Side 4	0.061	0.815
		Тор	0.074	0.815



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Mobile phone built-in battery level has been charged at 5%, 50% and 90%.

Electric Field Emissions

Operation	Test Distance	Test	Probe Measure Result(V/m)			50%Limit	
frequency	frequency	(cm)	Position	5%	50%	90%	(V/m)
		Side 1	0.45	0.48	0.43	307	
128.4kHz	kHz 15	Side 2	0.46	0.44	0.42	307	
		Side 3	0.41	0.40	0.38	307	
		Side 4	0.45	0.43	0.47	307	
		Тор	0.44	0.45	0.39	307	

Magnetic Field Emissions

Operation	Test Distance	Test	Probe Measure Result(A/m)			50%Limit	
frequency	(cm)	Position	5%	50%	90%	(A/m)	
		Side 1	0.052	0.053	0.053	0.815	
128.4kHz	3.4kHz 15	Side 2	0.089	0.081	0.084	0.815	
		Side 3	0.066	0.054	0.065	0.815	
		Side 4	0.071	0.065	0.065	0.815	
		Тор	0.082	0.072	0.082	0.815	



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5 Photographs- Test photos

Refer to RF Exposure Setup Photos.

- End of the Report -