SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

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

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Human Exposure Report

Application No.:	SZEM1807006899CR
Applicant:	Gartner Studios, Inc
Address of Applicant:	220 East Myrtle Street, Stillwater, Minnesota 55082, United States.
Manufacturer/ Factory:	Dongguan DBK Energy Technology Co.,Ltd
Address of Manufacturer/ Factory:	No.51 Zhangshen Middle Road, Xuzhen Community, Zhangmutou Town, Dongguan City, Guangdong Province, P.R. China
Equipment Under Test (EUT):	
EUT Name:	Wireless Power Bank
Model No.:	38544
FCC ID:	2AQT63854
Trade Mark:	MOTILE
Standards:	47 CFR Part 1, Subpart I, Section 1.1310
Date of Receipt:	2018-08-10
Date of Test:	2018-08-16 to 2018-09-03
Date of Issue:	2018-09-06
Test Result :	Pass*

* In the configuration tested, the EUT complied with the standards specified above.

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.

1 Contents

2 General Information

2.1 Details of E.U.T.

Power supply:	DC 5V from USB port Input: DC 5V/2A Output: WPC: 5W(DC 5V/1A), 7.5W(DC 5V1.5A), 10W(DC 9V/1.1A) USB Port: USB-A*2 5V/2.1A Capacity: 10000mAh/37Wh
Test Voltage:	AC 120V/60Hz (Voltage of the AC/DC adapter)
Antenna Type:	Loop Antenna
Operation Frequency:	100.45-170.74kHz
Modulation Type:	Load modulation

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
AC/DC Adapter	SGS	DC 5V	REF. No.SEA0500
AC/DC Adapter	Samsung	EP-TA200	REF. No.SEA0500
iPhone 8	Apple	A1863	F4GVQ656JC6D
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB

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 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

• **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

• **Industry Canada (IC)**

The 10m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-3.

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.

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

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/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).				

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 built-in battery at level 5%, 50% and 90%.

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)
147.2kHz	15	Side 1	0.41	307
		Side 2	0.43	307
		Side 3	0.39	307
		Side 4	0.41	307
		Top	0.39	307
		Bottom	0.39	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
147.2kHz	15	Side 1	0.053	0.815
		Side 2	0.086	0.815
		Side 3	0.062	0.815
		Side 4	0.067	0.815
		Top	0.079	0.815
		Bottom	0.063	0.815

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

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(V/m)			50%Limit (V/m)
			5%	50%	90%	
147.2kHz	15	Side 1	0.44	0.42	0.40	307
		Side 2	0.46	0.44	0.42	307
		Side 3	0.42	0.40	0.38	307
		Side 4	0.44	0.42	0.40	307
		Top	0.42	0.40	0.38	307
		Bottom	0.42	0.40	0.38	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(A/m)			50%Limit (A/m)
			5%	50%	90%	
147.2kHz	15	Side 1	0.058	0.050	0.054	0.815
		Side 2	0.094	0.082	0.087	0.815
		Side 3	0.068	0.059	0.063	0.815
		Side 4	0.073	0.064	0.068	0.815
		Top	0.086	0.075	0.080	0.815
		Bottom	0.069	0.060	0.064	0.815

5 Photographs- Test photos

Refer to RF exposure test setup photos.

- End of the Report -