

Human Exposure Report

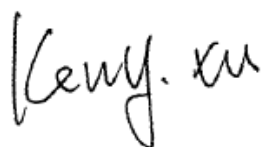
Application No.: SZEM1907016651CR
Applicant: TESSCO Technologies
Address of Applicant: 375 W. Padonia Rd. 21093 Lutherville Timonium Maryland 21093 United States
Manufacturer: TESSCO Technologies
Address of Manufacturer: 375 W. Padonia Rd. P.O. Box 21093, Lutherville Timonium MD 21093
Factory: Shenzhen Powerqi Technology Co., Ltd / SEOSIN ELECTRONICS VINA CO., LTD
Address of Factory: 2nd&3rd Floor, A4 Building, A Area, Fangxing Science and Technology Park, No.13 Baonan Road, Longgang Street, Longgang District, Shenzhen / Chau Son industrial park, Le Chan street, Le Hong Phong ward, Phu Ly city, Ha Nam province, Viet Nam

Equipment Under Test (EUT):
EUT Name: wireless chargerwrap mini
Model No.: R50, 213145, 283328 ♣
 ♣ Please refer to section 3.2 of this report which indicates which model was actually tested and which were electrically identical.

Trade mark: ventev
FCC ID: 2ASH9-WCWMINI
Standards: 47 CFR PART 1, Subpart I, Section 1.1310
Date of Receipt: 2019-07-23
Date of Test: 2019-07-24 to 2019-08-02
Date of Issue: 2019-08-06

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



Keny Xu
 EMC Laboratory Manager



<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2019-08-06		Original

Authorized for issue by:			
			
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		Harry Wu /Project Engineer	
			
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		Eric Fu /Reviewer	



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3 General Information

3.1 Details of E.U.T.

Power supply: Input: DC 5V, 2A
 Output: 5W
 Cable: USB Cable: 120cm, Unshielded
 Operation Frequency: 110.096-139.423KHz
 Modulation Type: Load Modulation
 Antenna Type: Loop Antenna
 Antenna Gain: 0dBi.

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	SAMSUNG	EP-TA200	R37J8YA7W71DK3
SAMSUNG Galaxy S8	SAMSUNG	SM-G9500	R28J9140LPB

Declaration of EUT Family Grouping:

Model No.: R50, 213145, 283328

Only the model R50 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on model number.



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:

• **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.

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.



4 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2020-06-10
2	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2020-05-06



5 Test Results

5.1 RF Exposure test

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

Measurement Distance: 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.



5.1.2 Measurement Data

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

Electric Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result(V/m)			50%Limit (V/m)
			zero charge	intermediate charge	full charge	
121 kHz	15	Side 1	2.63	2.42	2.17	307
		Side 2	1.79	1.57	1.36	307
		Side 3	2.42	2.17	1.93	307
		Side 4	1.67	1.54	1.31	307
		Top	1.26	1.01	0.85	307

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	
121 kHz	15	Side 1	0.0723	0.0613	0.0488	0.815
		Side 2	0.0494	0.0348	0.0255	0.815
		Side 3	0.0636	0.0516	0.0365	0.815
		Side 4	0.0456	0.0335	0.0298	0.815
		Top	0.0349	0.0287	0.0226	0.815

- End of the Report -

