Human Exposure Report

Application No.:	SZEM2102002041CR
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:	Hyper Juice Wireless Battery Pack
Model No.:	HJ-WL61TC
Trade mark:	HYPER
FCC ID:	2ARVR-WL61TC
Standards:	47 CFR PART 1, Subpart I, Section 1.1310 47 CFR PART 2, Subpart J, Section 2.1091
Date of Receipt:	2021-02-24
Date of Test:	2021-02-25 to 2021-03-09
Date of Issue:	2021-03-16
Test Result :	**Pass***

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

Keny Xu
EMC Laboratory Manager

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2021-03-16		Original

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

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3 General Information

3.1 Details of E.U.T.

Power supply:	USB-C Input: DC 5V/2.4A USB-C Output: DC 5V/2.4A Wireless Output: 5W/7.5W/10W Battery Typical Capacity: 3.6V/5000 mAh(18Wh)
Operation frequency:	116.14kHz to 151.45kHz
Modulation type:	Load modulation
Antenna type:	Loop Antenna
Antenna gain:	0dBi
Remark:	Tests were conducted in all five load modes and the worst case 10W is reported only.

3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
E-loading	SGS	N/A	REF. No.SEA06A12
Smartphone	Nokia	Lumia 920	Client supply
iPhone 8	Apple	A1863	REF. No.SEA16J00
Mobile Phone	SAMSUNG	SM-G9500	REF. No.SEA16J00

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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	Shielding Room	SAEMC	MSR733	SEM001-09	2021-11-08
2	Electric and Magnetic Field Analyzer	Narda	EHP-50F	EMC092	2021-11-26

Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	02	Charge mode_Keep the EUT charging(5W)
Pre-scan	03	Charge mode_Keep the EUT charging(7.5W)
Final test	04	Charge mode_Keep the EUT charging(10W)
Pre-scan	05	Charging_Keep the EUT working in charge mode (5W), while keep the battery of the EUT in charging mode via USB-C port.
Pre-scan	06	Charging_Keep the EUT working in charge mode (5W), while keep the EUT in discharging mode via USB-C port.

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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: 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: 22.3 °C Humidity: 52.9 % RH Atmospheric Pressure: 1015 mbar

This device has been tested the worst status of full load and the 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 =10W;Calculation of resistor value=8.1Ω

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
133.27 kHz	15	Side 1	0.0610	0.815
		Side 2	0.0677	0.815
		Side 3	0.0619	0.815
		Side 4	0.0634	0.815
		Top	0.0589	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)
			10% charge	50% charge	90% charge	
133.27 kHz	15	Side 1	0.0629	0.0445	0.0368	0.815
		Side 2	0.0794	0.0568	0.0434	0.815
		Side 3	0.0585	0.0438	0.0374	0.815
		Side 4	0.0623	0.0552	0.0429	0.815
		Top	0.0483	0.0372	0.0299	0.815

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