



Human Exposure Report

Application No.: SZEM1812010349CR
Applicant: Shenzhen Horn Audio Co., Ltd
Address of Applicant: No.6, 4th Guihua Road, Pingshan District, Shenzhen, 518118 China
Manufacturer/ Factory: Shenzhen Horn Audio Co., Ltd
Address of Manufacturer/ Factory: No.6, 4th Guihua Road, Pingshan District, Shenzhen, Guangdong, P.R.China
Equipment Under Test (EUT):
EUT Name: Wireless Charger
Model No.: WIC-001
Trade mark: Horn
FCC ID: ZXC-WIC-001
Standards: 47 CFR PART 1, SUBPART I, SECTION 1.1310
Date of Receipt: 2018-12-03
Date of Test: 2018-12-06 to 2018-12-13
Date of Issue: 2018-12-20

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

Keny Xu
 EMC Laboratory Manager





Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2018-12-20		Original

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





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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 5V1.5A), 10W(DC 9V/1.1A)

Cable: USB cable: 100cm shielded

Antenna Type: Loop Antenna

Modulation Type: Load Modulation

Operation Frequency: 108.65kHz to 148.24kHz

2.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Mobile Phone	SAMSUNG	SM-G9500	R28J9140LPB
Adapter	SAMSUNG	EP-TA200	R37J8YA7W71DK3
iPhone 8	Apple	A1863	F4GVQ656JC6D



2.3 Test Location

All tests were performed at:

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

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.





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: 25.0 °C Humidity: 51 % RH Atmospheric Pressure: 1015 mbar

EUT Operation:

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.





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)
126.1 kHz	15	Side 1	1.66	307
		Side 2	1.52	307
		Side 3	1.76	307
		Side 4	2.04	307
		Top	2.58	307

Magnetic Field Emissions

Operation frequency	Test Distance (cm)	Test Position	Probe Measure Result (A/m)	50% Limit (A/m)
126.1 kHz	15	Side 1	0.0072	0.815
		Side 2	0.0067	0.815
		Side 3	0.0065	0.815
		Side 4	0.0086	0.815
		Top	0.0099	0.815



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	
126.1 kHz	15	Side 1	1.64	1.74	1.58	307
		Side 2	1.53	1.56	1.45	307
		Side 3	1.72	1.78	1.74	307
		Side 4	2.02	2.00	1.89	307
		Top	2.54	2.47	2.31	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	
126.1 kHz	15	Side 1	0.0075	0.0082	0.0073	0.815
		Side 2	0.0069	0.0076	0.0058	0.815
		Side 3	0.0064	0.0072	0.0057	0.815
		Side 4	0.0088	0.0086	0.0077	0.815
		Top	0.0096	0.0104	0.0087	0.815





5 Photographs

Please refer RF Setup Photos.

- End of the Report -

