RF EXPOSURE REPORT



Report No.: Q181127S005-FCC-H

Supersede Report No.: N/A

Applicant	Shenzhen Haixinwang Electronic Co., Ltd.			
Product Name	Festival Stick Wireless Speaker			
Model No.	HXWW502	HXWW502ZD		
Carial No.	HXWW502	JD, AR-ELCFSS, AR-ELCFS	SBK-BMI, AR-ELCFSS-BMI	
Serial No.	, BB2288, I	HXWW502S, HW502		
Test Standard	FCC 2.109	3&KDB 447498 D01		
Test Date	December 05 to 12, 2018			
Issue Date	December 13, 2018			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
Jamen Lioney		David Huang		
Aaron Liang		David Huang	A	
Test Engineer		Checked By		

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety



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1. Report Revision History

Report No.	Report Version	Description	Issue Date
Q181127S005-FCC-H	NONE	Original	December 13, 2018

2. Customer information

Applicant Name	Shenzhen Haixinwang Electronic Co., Ltd.	
Applicant Add	2nd floor, Building 56, Baotian industrial park, Xixiang, Bao'an District, Shenzhen,	
	China	
Manufacturer	Shenzhen Haixinwang Electronic Co., Ltd.	
Manufacturer Add	2nd floor, Building 56, Baotian industrial park, Xixiang, Bao'an District, Shenzhen,	
	China	

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China	
	518108	
FCC Test Site No.	535293	
IC Test Site No.	4842E-1	
Test Software	Radiated Emission Program-To Shenzhen v2.0	



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4. Equipment under Test (EUT) Information

Description of EUT:	Festival Stick Wireless Speaker
Main Model:	HXWW502ZD
Serial Model:	HXWW502JD, AR-ELCFSS, AR-ELCFSSBK-BMI, AR-ELCFSS-BMI, BB2288, HXWW502S, HW502
Date EUT received:	December 03, 2018
Test Date(s):	December 05 to 12, 2018
Antenna Gain:	0dBi
Antenna Type:	PCB antenna
Type of Modulation:	Bluetooth: GFSK, π /4DQPSK, 8DPSK
RF Operating Frequency (ies):	Bluetooth: 2402-2480 MHz
Number of Channels:	Bluetooth: 79CH
Port:	Please refer to the user's manual
Input Power:	USB: 5V
Trade Name :	HXWW
FCC ID:	2ARTV-AR-ELCFSS



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5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i), §1.1307(b)(1) and KDB 447988 D01, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot [\sqrt{f_{(GHz)}}] \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, 16 where

- f_(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

result = $P\sqrt{F}/D$

P= Maximum tune-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm



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5.2 Test Result

Bluetooth Mode:

Modulation	СН	Freque ncy	Conducted Power	Tune Up Power	Max Tune Up Power	Max Tune Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
GFSK	Low	2402	1.718	1.5±1	2.5	1.778	0.55	3
	Mid	2441	1.898	1.5±1	2.5	1.778	0.56	3
	High	2480	1.393	1.5±1	2.5	1.778	0.56	3
π /4 DQPSK	Low	2402	3.644	3.5±1	4.5	2.818	0.87	3
	Mid	2441	3.761	3.5±1	4.5	2.818	0.88	3
	High	2480	3.154	3.5±1	4.5	2.818	0.89	3
8-DPSK	Low	2402	3.712	3.5±1	4.5	2.818	0.87	3
	Mid	2441	3.930	3.5±1	4.5	2.818	0.88	3
	High	2480	3.204	3.5±1	4.5	2.818	0.89	3

Result: Compliance

No SAR measurement is required.