RF EXPOSURE REPORT



Report No.: 17070938-FCC-H

Supersede Report No.: N/A Applicant HONWA(HK) CORPORATION LIMITED **Product Name BLUETOOTH EARPHONE** Model No. **MBH542** Serial No. N/A FCC 2.1093:2016 **Test Standard Test Date** September 23 to October 12, 2017 **Issue Date** October 13, 2017 Pass Test Result Fail Equipment complied with the specification 7 Equipment did not comply with the specification oren Luo David Huang Loren Luo **David Huang Test Engineer Checked By** This test report may be reproduced in full only 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.

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		

Accreditations for Conformity Assessment



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1. Report Revision History

Report No.	Report Version	Description	Issue Date		
17070938-FCC-H	NONE	Original	October 13, 2017		

2. Customer information

Applicant Name	HONWA(HK) CORPORATION LIMITED
Applicant Add	MAOGUANG INDUSTRIAL GURAO TOWN CHAOYANG DISTRICT SHANTOU
Manufacturer	HONWA(HK) CORPORATION LIMITED
Manufacturer Add	MAOGUANG INDUSTRIAL GURAO TOWN CHAOYANG DISTRICT SHANTOU

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:	BLUETOOTH EARPHONE
Main Model:	MBH542
Serial Model:	N/A
Date EUT received:	September 22, 2017
Test Date(s):	September 23 to October 12, 2017
Antenna Gain:	-9dBi
Antenna Type:	PCB Antenna
Type of Modulation:	GFSK, π /4DQPSK
RF Operating Frequency (ies):	2402-2480 MHz
Number of Channels:	79CH
Port:	USB Port, AUX IN Port
Input Power:	Battery: Spec: 3.7V, 450mAh USB: DC 5.0V
Trade Name :	MAGNAVOX
FCC ID:	2AIXC-HW-MBH542



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5. <u>FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable</u> devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), 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* \leq 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·

- $[\sqrt{f_{(GHz)}}] \le 3.0$ 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 \leq 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is \leq 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 turn-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:

		Freque	Conducted	Tune Up	Max Tune	Max Tune		
Modulation	СН	ncy	Power	Power	Up Power	Up Power	Result	Limit
		(MHz)	(dBm)	(dBm)	(dBm)	(mW)		
	Low	2402	-5.878	-5.5±1	-4.5	0.355	0.11	3
GFSK	Mid	2441	-5.892	-5.5±1	-4.5	0.355	0.11	3
	High	2480	-5.983	-5.5±1	-4.5	0.355	0.11	3
	Low	2402	-4.849	-5.5±1	-4.5	0.355	0.11	3
π /4 DQPSK	Mid	2441	-4.830	-5.5±1	-4.5	0.355	0.11	3
	High	2480	-4.828	-5.5±1	-4.5	0.355	0.11	3

Result: Compliance

No SAR measurement is required.