RF EXPOSURE REPORT

Report No.: 17070725-FCC-H2-V1

Supersede Report No.: N/A

Applicant	Micro M's CO,.LTD
Product Name	ZEROMIC
Model No.	Bluetooth type
Serial No.	N/A
Test Standard	FCC 2.1093:2016
Test Date	August 11 to September 03, 2017
Issue Date	September 09, 2017
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Loren Luo	David Huang	
Loren Luo Test Engineer	David Huang 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
17070725-FCC-H2	NONE	Original	September 04, 2017
17070725-FCC-H2-V1	V1	Updated the FCC ID	September 09, 2017

2. Customer information

Applicant Name	Micro M's CO,.LTD
Applicant Add	Toranomon KT Building 2F ,5 11 15 Toranomon, Minato-Ku , Tokyo , JAPAN
Manufacturer	Micro Ms , Inc
Manufacturer Add	105-0001 Toranomon KT Building 2F ,5 - 11 - 15 Toranomon, Minato-Ku,Tokyo . JAPAN

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park 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

4. Equipment under Test (EUT) Information

Description of EUT:	ZEROMIC
Main Model:	Bluetooth type
Serial Model:	N/A
Date EUT received:	August 10, 2017
Test Date(s):	August 11 to September 03, 2017
Antenna Gain:	Bluetooth/BLE: -0.5dBi
Antenna Type:	Patch antenna
Type of Modulation:	Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK
RF Operating Frequency (ies):	Bluetooth& BLE: 2402-2480 MHz
Number of Channels:	Bluetooth: 79CH BLE: 40CH
Port:	USB Port, Earphone Port
Input Power:	Battery: Spec: 3.7V, 250mAh
Trade Name :	N/A
FCC ID:	2ANDG-ZEROMIC

5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable 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* ≤ 50 mm are determined by:

[(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] · [$\sqrt{f_{(GHz)}}$] ≤ 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 calculation[17]
- 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 turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

5.2 Test Result

Bluetooth Mode:

Modulation	CH	Frequency (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	2.581	3±1	4	4	0.78	3
	Mid	2441	3.448	3±1	4	4	0.78	3
	High	2480	3.578	3±1	4	4	0.79	3
π /4 DQPSK	Low	2402	0.423	1.4±1	2.4	2.4	0.54	3
	Mid	2441	1.709	1.4±1	2.4	2.4	0.54	3
	High	2480	2.336	1.4±1	2.4	2.4	0.55	3
8-DPSK	Low	2402	0.826	1.8±1	2.8	2.8	0.59	3
	Mid	2441	2.209	1.8±1	2.8	2.8	0.60	3
	High	2480	2.732	1.8±1	2.8	2.8	0.60	3

BLE Mode:

Modulation	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)	Max Tune Up Power (dBm)	Max Tune Up Power (mW)	Result	Limit
GFSK	Low	2402	-0.886	-1±1	0	1.000	0.31	3
	Mid	2440	-1.971	-1±1	0	1.000	0.31	3
	High	2480	-1.093	-1±1	0	1.000	0.31	3

Result: Compliance

No SAR measurement is required.