

## Micr©test 微测检测

# RF EXPOSURE Test Report

Report No.:	MTi210222035-04E2			
Date of issue:	Apr. 26, 2021			
Applicant:	Changsha Hotone Audio Co., LTD			
Product name:	Bluetooth MIDI Controller			
	EC-4, EC-yzzzz, y: any number,			
Model(s):	z: any capital letter or number,			
	could be omitted			
FCC ID:	2AHJSEC-4			

Shenzhen Microtest Co., Ltd. http://www.mtitest.com

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

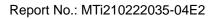


# Instructions

- 1. The report shall not be partially reproduced without the written consent of the laboratory;
- 2. The test results of this report are only responsible for the samples submitted;
- 3. This report is invalid without the seal and signature of the laboratory;
- 4. This report is invalid if transferred, altered or tampered with in any form without authorization;
- 5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

	TEST RES	SULT CERTIFICATION							
Applicant's name	: Changsha	.: Changsha Hotone Audio Co., LTD							
Address	Room 201, East Block, Hunan University Science Park, No.186, Guyuan Rd. Yue Lu District, Changsha, Hunan Province, China								
Manufacturer's Name	: Changsha								
Address	IdressBoom 201, East Block, Hunan University Science Park, No.186, Guyuan Rd. Yue Lu District, Changsha, Hunan Province, China								
Product description									
Product name	: Bluetooth	MIDI Controller							
Trademark	HOTONE								
Model Name	: EC-4								
Serial Model	EC-yzzzz, omitted	EC-yzzz, y: any number, z: any capital letter or number, could be omitted							
Standards	: N/A								
Test procedure	: KDB 4474	98 D01 v06							
Date of Test									
Date (s) of performance of tes	sts:	08 Mar. 2021 ~ 29 Mar. 2021							
Test Result	:	Pass							
	ler test (EUT)	sted by Shenzhen Microtest Co., Ltd. and the test results is in compliance with the FCC requirements. And it is ified in the report.							
Testing Engineer : Technical Manager : Authorized Signatory :		Dawy An (Danny Xu) Leo Su (Leo Su) Tom Kue							
									(Tom Xue)





#### **RF EXPOSURE EVALUATION**

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)						
(A) Limits for Occupational/Controlled Exposure										
0.3-3.0	614	1.63	*100	6						
3.0-30	1842/1	4.89/f	*900/f <sup>2</sup>	6						
30-300	61.4	0.163	1.0	6						
300-1,500			f/300	6						
1,500-100,000			5	6						
	(B) Limits for General Population/Uncontrolled Exposure									
0.3-1.34	614	1.63	*100	30						
1.34-30	824/1	2.19/f	*180/f <sup>2</sup>	30						
30-300	27.5	0.073	0.2	30						
300-1,500			f/1500	30						
1,500-100,000			1.0	30						

 $\mathsf{f} = \mathsf{frequency} \text{ in } \mathsf{MHz} \ ^\star = \mathsf{Plane}\mathsf{-wave}$  equivalent power density

MPE Calculation Method

Friis transmission formula:  $Pd=(Pout^{G}) (4^{pi^{R}})$ 

Where

Pd= Power density in mW/cm2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm (20cm)

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.



### **Measurement Result**

R=20cm

BLE

	Channel Freq. (MHz) modulation	conducted power	Tune-up	Max		Antenna		Evaluation result	Power density Limits	
		modulation		power (dBm)	tune-up power			Gain	(	(
			(dBm)		(dBm)	(mW)	(dBi)	Numeric	(mW/cm2 )	(mW/cm2)
	2402		4.382	5±1	6	3.981	1	1.26	0.0010	1
	2440	GFSK	5.461	5±1	6	3.981	1	1.26	0.0010	1
	2480		5.989	5±1	6	3.981	1	1.26	0.0010	1

#### **Conclusion:**

For the max result: 0.0010≤ 1.0 for 1g SAR, No SAR is required.

----END OF REPORT----

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.