



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>



Instructions

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TEST RESULT CERTIFICATION

Applicant's name: 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 Hotone Audio Co., LTD

Address: Room 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, y: any number, z: any capital letter or number, could be
omitted

Standards: N/A

Test procedure: KDB 447498 D01 v06

Date of Test

Date (s) of performance of tests: 08 Mar. 2021 ~ 29 Mar. 2021

Test Result: Pass

This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Testing Engineer

:

Danny Xu

(Danny Xu)

Technical Manager

:

Leo Su

(Leo Su)

Authorized Signatory

:

Tom Xue

(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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			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/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

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

P_d 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 power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	4.382	5±1	6	3.981	1	1.26	0.0010	1
2440		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: $0.0010 \leq 1.0$ for 1g SAR, No SAR is required.

----END OF REPORT----