

Wenzhou Zhirong Health & Science Technology Co., LTD

MPE ASSESSMENT REPORT

Report Type:

FCC MPE assessment report

Model:

Sharper Image Axis 4D, Axis 4D, Axis 3D,
Axis, 1Z1001116, 1Z1004416, Z100S-3

REPORT NUMBER:

230200965SHA-002

ISSUE DATE:

April 3, 2023

DOCUMENT CONTROL NUMBER:

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Applicant: Wenzhou Zhirong Health & Science Technology Co., Ltd
No. 129, North Liandong Road, Clothing Garden, Kunyang, Plangyang,
Wenzhou, Zhejiang, 325400 China

Manufacturer: Wenzhou Zhirong Health & Science Technology Co., Ltd
No. 129, North Liandong Road, Clothing Garden, Kunyang, Plangyang,
Wenzhou, Zhejiang, 325400 China

Manufacturing Site: Wenzhou Zhirong Health & Science Technology Co., Ltd
No. 129, North Liandong Road, Clothing Garden, Kunyang, Plangyang,
Wenzhou, Zhejiang, 325400 China

Model: Sharper Image Axis 4D, Axis 4D, Axis 3D, Axis, 1Z1001116, 1Z1004416,
Z100S-3

FCC ID: 2AXSR-COZYMATE002

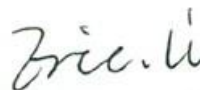
SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:**REVIEWED BY:**

Scout Gong
Project Engineer


Eric Li
Reviewer

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Revision History

Report No.	Version	Description	Issued Date
230200965SHA-002	Rev. 01	Initial issue of report	April 3, 2023

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Massage Chair
Type/Model:	Sharper Image
Description of EUT:	The EUT is a massage chair which supports Bluetooth function. All models have same electrical and mechanical construction except model name.
Rating:	120V 60Hz, 240W
Category of EUT:	Class B
EUT type:	☐ Tabletop ☒ Floor standing
Software Version:	/
Hardware Version:	/
Sample identification No.:	0230206-02-001
Sample received date:	February 14, 2023
Date of test:	January 03, 2023, to April 3, 2023

1.2 Technical Specification

Frequency Range:	2400MHz ~ 2483.5MHz
Support Standards:	Bluetooth 5.0 (BR+EDR)
Modulation Technique:	Frequency Hopping Spread Spectrum (FHSS)
Type of Modulation:	GFSK, $\pi/4$ DQPSK
Channel Number:	79 (0 - 78)
Data Rate:	1Mbps, 2Mbps
Channel Separation:	1 MHz
Antenna:	Internal PCB antenna, -1.39dBi Peak gain

TEST REPORT

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road (North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier: CN0014
	VCCI Registration Lab Member No: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02

TEST REPORT

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = P / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 230200965SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Working mode	Frequency band	power		Antenna gain	R	S	Limits
	MHz	dBm	mW	dBi	cm	mW/cm ²	mW/cm ²
BT	2402-2480	5.04	3.19	-1.39	20	0.0005	1

Note: 1mW/cm² from 1.310 Table 1

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

***** END *****