Bauer Hockey, LLC

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
1062222

REPORT NUMBER:
230700938HZH-002

ISSUE DATE:
January 23, 2024

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 230700938HZH-002

Applicant:	**Bauer Hockey, LLC** **100 Domain Drive, Exeter, New Hampshire 03833, USA**
Manufacturer:	**Bauer Hockey, LLC** **100 Domain Drive, Exeter, New Hampshire 03833, USA**
Factory:	**Shandong Xinlongsheng Rail Transit Co., Ltd.** **No. 197 Shuangyuan Road, Jihongtan Street, Chengyang District, Qingdao City, Shandong Province, China**
FCC ID:	**2BD6O-1062222**

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:**
Project Engineer Offa Zhou	Reviewer Dylan Tang

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Revision History

Report No.	Version	Description	Issued Date
230700938HZH-002	Rev. 01	Initial issue of report	January 23, 2024

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Skate Sharpening Machine
Type/Model:	1062222
Description of EUT:	The EUT covered in the report is skate sharpening machine. RFID card reader is incorporated in model for process control.
Rating:	Unit: 24VDC, Max. 96W Adaptor: Input: 100-240V~, 50/60Hz, 2.5A Output: 24VDC, 4A, 96W
EUT type:	☒ Tabletop ☐ Floor standing
Software Version:	/
Hardware Version:	/
Serial numbers:	A230915-13-001
Sample received date:	September 19, 2023
Date of test:	September 19, 2023 ~ December 20, 2023

1.2 Technical Specification

Frequency Range:	13.56 MHz ~ 13.56 MHz
Modulation:	ASK
Antenna gain:	PCB antenna

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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 Registration No.: R-4243, G-845, C-4723, T-2252
	A2LA Accreditation Lab Certificate Number: 3309.02

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2 MPE Assessment

Test result: **PASS**

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

According to§1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Note: Limit for 13.56MHz is 60.77 V/m

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:
$S = PG / (4\pi R^2)$
Where S = power density in mW/cm^2
P = Radiated transmit power in mW
G = numeric gain of transmit antenna
R = distance (cm)

As we can see from the test report 230700938HZH-001:
69.10dBuV/m at 3m, @20cm = @3m + 20log(3/0.2) = 92.63dBuV/m = 0.042V/m < 60.77 V/m

The power for 2.4GHz Wi-Fi and BT module refers to certificate of FCC ID: 2AC7Z-ESPS3WROOM1.

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.

Frequency Range	EIRP	Antenna Gain	R	S	Limits
(MHz)	(mW)	(dBi)	(cm)	(mW/cm^2)	(mW/cm^2)
WIFI 2.412-2.462 GHz	359.7	3.26	20	0.233	1
BLE 2.402-2.480 GHz	10.9	3.26	20	0.007	1

Note: 1 mW/cm^2 from 1.310 Table 1.

RFID, WIFI and BLE can transmit simultaneously, so the maximum rate of MPE is,
0.042/60.77 + 0.233/1 + 0.007/1 = 0.241 < 1.0

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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**********