

Bestway (Hong Kong) International Ltd.

MPE ASSESSMENT REPORT

Report Type:

FCC MPE assessment report

Model:

S300206

Report Number:

2405B1901SHA-003

Issue Date:

June 6, 2024

DOCUMENT CONTROL NUMBER:

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TEST REPORT

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Report no.: 2405B1901SHA-003

Applicant: Bestway (Hong Kong) International Ltd.
SUITE 713, 7/FLOOR, EAST WING, TSIM SHA TSUI CENTRE, 66 MODY
ROAD, KOWLOON, HONG KONG

Manufacturer: Bestway Inflatables & Material Corp.
No. 208 Jin Yuan Wu Road, Shanghai, 201812, China

Manufacturing site: Bestway (Nantong) Recreation Corp.
No. 8, West Huimin Road, Rugao Economic and Technology
Development Zone, Jiangsu, 226503, China

FCC ID: 2AS3R-300206R

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:

Scout Gong
Project Engineer

REVIEWED BY:


Eric Li
Reviewer

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TEST REPORT**Revision History**

Report No.	Version	Description	Issued Date
2405B1901SHA-003	Rev. 01	Initial issue of report	June 6, 2024

TEST REPORT**1 General Information****1.1 Description of Equipment Under Test (EUT)**

Product name:	Electric Spas
Type/Model:	S300206
Description of EUT:	EUT is a wireless Electric Spas with BLE and Wi-Fi module.
Rating:	110-120 VAC, 60Hz, 12A
EUT type:	<input type="checkbox"/> Tabletop <input checked="" type="checkbox"/> Floor standing
Brand name:	/
Software Version:	/
Hardware Version:	/
Sample received date:	March 30, 2024
Date of test:	March 30, 2024, to June 5, 2024

1.2 Technical Specification

Wi-Fi:

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20)
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n(HT20): OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Operating Frequency:	2412MHz to 2462MHz for IEEE 802.11b/g/n(HT20)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20)
Channel Separation:	5 MHz

Bluetooth LE:

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	Bluetooth Low Energy
Type of Modulation:	GFSK
Channel Number:	40
Data Rate:	1Mbps
Channel Separation:	2MHz

1.3 Antenna Information

No.	Antenna Type	Gain	Note
1	PCB antenna	2 dBi	Internal type

TEST REPORT**1.4 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 .**

TEST REPORT**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/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report **2405B1901SHA-001** and **2405B1901SHA-002**:

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

Mode	Frequency band	Peak conducted output power	Antenna Gain	R	S	Limits
	(MHz)	(dBm)	(dBi)	(cm)	(mW/cm ²)	(mW/cm ²)
Wi-Fi	2400-2483.5	14.86	2	20	0.0097	1
BLE	2400-2483.5	9.77	2	20	0.0030	1

Note: 1 mW/cm² from 1.310 Table 1

Therefore, the MPE requirement is deemed to be satisfied.

TEST REPORT**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*****