

Bestway Inflatables & Material Corp.

MPE ASSESSMENT REPORT

Report Type:

FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model:

58614E, 90445E

REPORT NUMBER:

190502702SHA-002

ISSUE DATE:

October 25, 2019

DOCUMENT CONTROL NUMBER:

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Report no.: 190502702SHA-002

Applicant: Bestway Inflatables & Material Corp.

No. 3065 Cao An Road, Shanghai, China

Manufacturer: Bestway Inflatables & Material Corp.

No. 3065 Cao An Road, Shanghai, China

Manufacturing site: Bestway (Nantong) Recreation Corp.

No.8 West Huimin Road, Rugao Economic Development Zone,

Jiangsu, China

Product Name: Smart Touch WIFI Filter Pump

Type/Model: 58614E, 90445E **FCC ID:** 2ACGN-BW58641

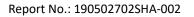
SUMMARY:

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:	KEVIEWED BY:	
Wade zhang	Donnel	
Project Engineer	Reviewer	
Wade 7hang	Daniel Zhao	

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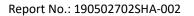




TEST REPORT

Revision History

Report No.	Version	Description	Issued Date	
190502702SHA-002	Rev. 01	Initial issue of report	October 25, 2019	





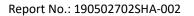
1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Smart Touch WIFI Filter Pump
Type/Model:	58614E, 90445E
Description of EUT:	The EUT is smart touch WIFI filter pump which was install a WIFI module.
Rating:	110~120VAC 60Hz, 1.45A
Software Version:	/
Hardware Version:	/
Sample received date:	September 10, 2019
Date of test:	September 10, 2019 ~ October 18, 2019

1.2 Technical Specification

Frequency Range:	2412MHz ~ 2462MHz			
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40			
	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)			
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)			
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)			
Channel Number:	7 Channels for 802.11n(HT40)			
	IEEE 802.11b: Up to 11 Mbps			
	IEEE 802.11g: Up to 54 Mbps			
	IEEE 802.11n-HT20: Up to MCS7			
Data Rate:	IEEE 802.11n-HT40: Up to MCS7			
Channel Separation:	5 MHz			
Antenna:	Internal antenna, 2.0dBi Peak gain			

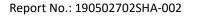




1.3 Description of Test Facility

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,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1175
Organizations.	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02





2 MPE Assessment

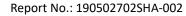
Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength B-field		Equivalent plane wave
1 7 0	(V/m)	(A/m)	(uT)	power density
		, , ,	, ,	S _{eq} (W/m ²)
0-1 Hz	-	3,2 × 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 \leq 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 190402507SHA-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.

Frequency band	Power		Ante	nna Gain	R	S	Limits
(MHz)	dBm	mW	dBi	(Numeric)	(cm)	(mW/cm ²)	(mW/cm ²)
2412 - 2462	18.16	65.46	2	1.58	20	0.021	1

Note: 1 mW/cm2 from 1.310 Table 1





Appendix I

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.