

FCC TEST REPORT

FCC ID:2BGJS-SW0001

Report Number.....: **ZHT-240514028E-1**

Date of Test..... May 14, 2024 to May 29, 2024

Date of issue..... May 29, 2024

Test Result PASS

Testing Laboratory.....: **Guangdong Zhonghan Testing Technology Co., Ltd.**

Address Room 104, Building 1, Yibaolai Industrial Park, Qiaotou Community,
Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Applicant's name: **MK PONCH LLC**

Address 18585 Coastal Highway, Unit 10PMB 2011 Rehoboth Beach, DE 19971

Manufacturer's name Guangdong Vebest Supply Chain Management Co., Ltd

Address RoomE405,EZone,4F,ManSumInformationTechnology&SciencePark,
No.8,EasternJinsanRd.,SanjiaoTown,ZhongshanCity,Guangdong
Province,ChinaRoom; 101,BuildingASanXinRoad126,SanJiaoTown,
ZhongshanCity GuangdongProvince

Test specification:

Standard.....: FCC CFR Title 47 Part 15 Subpart C

Test procedure.....: /

Non-standard test method: N/A

This device described above has been tested by ZHT, and the test resul/ show that the equipment under test (EUT) is in compliance with the FCC requiremen/. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of ZHT, this document may be altered or revised by ZHT, personal only, and shall be noted in the revision of the document.

Product name.....: **SHELLWELL Power Bank**

Trademark: /

Model/Type reference.....: SW0001

Model Difference.....: /

Ratings.....: Input: 5V---3A / 9V---2A, or DC 3.7V by battery

Wireless output: 5W/7.5W/10W/15W

Testing procedure and testing location:

Testing Laboratory.....: Guangdong Zhonghan Testing Technology Co., Ltd.

Address.....: Room 104, Building 1, Yibaolai Industrial Park, Qiaotou
Community, Fuhai Street, Bao'an District, Shenzhen,
Guangdong, China

Tested by (name + signature).....: Leon Li

Leon Li

Reviewer (name + signature).....: Baret Wu

Baret Wu

Approved (name + signature).....: Levi Lee

Levi Lee

RF Exposure Evaluation

Product Name:	SHELLWELL Power Bank
Product Model No.:	SW0001
Model Difference:	/
Test Auxiliary:	iPhone
Transmitting mode:	Keep the EUT in continuously wireless charging mode
Ratings:	Input: 5V---3A / 9V---2A, or DC 3.7V by battery Wireless output: 5W/7.5W/10W/15W

Test Modes:

Mode 1	Wireless charging(5W)
Mode 2	Wireless charging(7.5W)
Mode 3	Wireless charging(10W)
Mode 4	Wireless charging(15W)
Note: All modes were tested, only the worst-case was recorded in the report. Mode 4 is the worst mode.	

Auxiliary equipment					
Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless charging load	/	EESON	N/A	AE

1 Measuring Standard

KDB 680106 D01 Wireless Power Transfer v04

2 Requirements

According to the item 5 of KDB 680106 D01 v04:

Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

(1) The power transfer frequency is below 1 MHz.

The EUT frequency range is: 110.1kHz- 205kHz.

(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.

The output power is equal to 5W, Only one coil.

(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)

EUT can be directly charged.

(4) Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).

EUT is a mobile device

(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be

taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.

Fulfil requirements

(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.

EUT has only one coil

Limits

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)

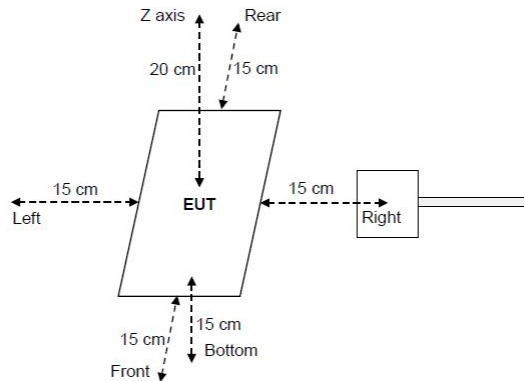
Limits for Maximum Permissible Exposure (MPE)

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 Exposures				
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
300-1500	/	/	f/300	6
1500-100,000	/	/	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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

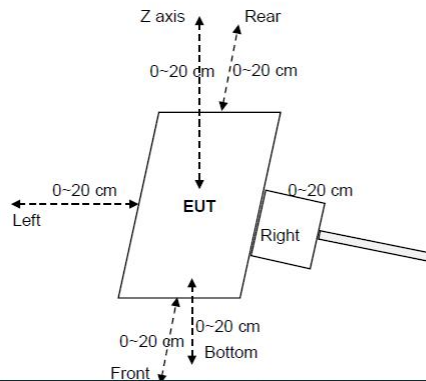
F=frequency in MHz
 *=Plane-wave equivalent power density
 RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

3 Test Setup

For mobile exposure conditions:



For portable exposure conditions:



4 Test Procedure

- 1) For mobile exposure conditions:
 - a. The RF exposure test was performed in anechoic chamber.
 - b. E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the EUT and 20 cm above the top surface of the primary/client pair.
 - c. The highest emission level was recorded and compared with limit.
 - d. The EUT was measured according to the dictates of KDB 680106 v03r01.
- 2) For portable exposure conditions:
 - a. The RF exposure test was performed in anechoic chamber.
 - b. E and H-field measurements should be made with the probe at 0 cm for all side of the EUT.
 - c. The highest emission level was recorded and compared with limit.
- 3) For portable exposure conditions: Perform H-field measurements for each edge/top surface of the host/client pair at every 2 cm, starting from as close as possible out to 10 cm

5 Test Instruments list

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Magnetic Amplitude and Gradient Probe System	SPEAG	MAGPy-8H3D+E3D V2& MAGPy-DAS V2	SZ186-06& 3061	Feb. 26, 2024	Feb. 25, 2025

6 Test Result

We have evaluated 5W, 7.5W, 10W and 15W Wireless charging mode, and the worst mode (15W) is showed in this report.

E-Filed Strength from the edges surrounding the EUT (V/m)								
The measurement probe was placed at test distance which is between the edge of the charger and the geometric of probe(cm)	Frequency Range (MHz)	Test Position A (Left)	Test Position B (Right)	Test Position C (Rear)	Test Position D (Front)	Test Position E (Top)	Test Position F (Bottom)	Limits (V/m)
0	0.1101-0.205	0.87	0.95	1.05	1.08	1.18	1.08	614
2	0.1101-0.205	1.05	1.00	1.13	1.16	1.06	1.02	614
4	0.1101-0.205	1.20	1.21	0.95	1.00	1.05	1.03	614
6	0.1101-0.205	1.07	1.04	0.89	1.02	1.15	1.02	614
8	0.1101-0.205	0.91	0.99	1.09	1.05	1.10	1.14	614
10	0.1101-0.205	0.98	1.01	1.08	1.03	1.15	0.92	614
12	0.1101-0.205	1.02	0.94	1.12	1.00	1.06	0.95	614
14	0.1101-0.205	1.21	1.05	0.92	1.19	1.15	1.10	614
16	0.1101-0.205	1.01	1.03	1.14	0.93	1.08	0.94	614
18	0.1101-0.205	0.99	0.93	1.06	1.11	1.11	1.13	614
20	0.1101-0.205	1.11	1.07	0.92	0.91	1.07	1.02	614

H-Filed Strength from the edges surrounding the EUT (A/m)

The measurement probe was placed at test distance which is between the edge of the charger and the geometric of probe(cm)	Frequency Range (MHz)	Test Position A (Left) uT	Test Position A (Left) A/m	Test Position B (Right) uT	Test Position B (Right) A/m	Test Position C (Rear) uT	Test Position C (Rear) A/m	Test Position D (Front) uT	Test Position D (Front) A/m	Test Position E (Top) uT	Test Position E (Top) A/m	Test Position F (Bottom) uT	Test Position F (Bottom) A/m	Limits (A/m)
0	0.1101-0.205	0.50	0.40	0.29	0.23	0.40	0.32	0.36	0.29	0.60	0.48	0.36	0.29	1.63
2	0.1101-0.205	0.45	0.36	0.39	0.31	0.46	0.37	0.50	0.40	0.37	0.30	0.47	0.38	1.63
4	0.1101-0.205	0.27	0.22	0.50	0.40	0.48	0.38	0.20	0.16	0.41	0.33	0.45	0.36	1.63
6	0.1101-0.205	0.56	0.45	0.48	0.38	0.55	0.44	0.52	0.42	0.28	0.22	0.23	0.18	1.63
8	0.1101-0.205	0.48	0.38	0.14	0.11	0.30	0.24	0.51	0.41	0.32	0.26	0.18	0.14	1.63
10	0.1101-0.205	0.31	0.25	0.32	0.26	0.34	0.27	0.35	0.28	0.27	0.22	0.27	0.22	1.63
12	0.1101-0.205	0.38	0.30	0.55	0.44	0.31	0.25	0.41	0.33	0.48	0.38	0.47	0.38	1.63
14	0.1101-0.205	0.21	0.17	0.57	0.46	0.34	0.27	0.33	0.26	0.43	0.34	0.49	0.39	1.63
16	0.1101-0.205	0.28	0.22	0.49	0.39	0.47	0.38	0.46	0.37	0.44	0.35	0.51	0.41	1.63
18	0.1101-0.205	0.23	0.18	0.44	0.35	0.34	0.27	0.40	0.32	0.19	0.15	0.41	0.33	1.63
20	0.1101-0.205	0.58	0.46	0.37	0.30	0.48	0.38	0.46	0.37	0.22	0.18	0.53	0.42	1.63

Note: Calculation: A/m=uT/1.25

E-field (V/m):

According to the following table, when we backward derivation 0cm, it should be 0.97(V/m), with a deviation from the actual test value of 17.8%.

E-field (V/m)			
0cm	2cm	4cm	6cm
1.18	1.06	1.05	1.15

Note:

1. Estimated value (0cm) / Measured value(4cm) = Measured value(2cm) / Measured value(6cm)
2. Deviation = [Measured value(0cm) - Estimated value (0cm)]/ Measured value(0cm)
3. Estimated value (0cm) = $1.06 \times 1.05 / 1.15 = 0.97(\text{V/m})$
4. Deviation = $(1.18 - 0.97) / 1.18 = 17.8\%$

H-field (A/m):

According to the following table, when we backward derivation 0cm, it should be 0.45(A/m), with a deviation from the actual test value of 6.25%.

E-field (V/m)			
0cm	2cm	4cm	6cm
0.48	0.30	0.33	0.22

1. Estimated value (0cm) / Measured value(4cm) = Measured value(2cm) / Measured value(6cm)
2. Deviation = [Measured value(0cm) - Estimated value (0cm)]/ Measured value(0cm)
3. Estimated value (0cm) = $0.30 \times 0.33 / 0.22 = 0.45(\text{V/m})$
4. Deviation = $(0.48 - 0.45) / 0.48 = 6.25\%$

Test Set-up Photo

