

# TEST REPORT

Report No.: BCTC2305526769-2E

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Applicant: ShenZhen Zhongyi Technology CO., Ltd.

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Product Name: 3in1 Foldable magnetic wireless charger

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Model/Type  
reference: MSL-M1088Q

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Tested Date: 2023-06-01 to 2023-06-29

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Issued Date: 2023-06-29

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**Shenzhen BCTC Testing Co., Ltd.**



# FCC ID: 2A9Q9-M1088Q

Product Name: 3in1 Foldable magnetic wireless charger

Trademark: N/A

Model/Type reference: MSL-M1088Q  
WC38

Prepared For: ShenZhen Zhongyi Technology CO., Ltd.

Address: Room 401, No.4 Road One, Shangxue Science and Technology City, Xinxue Community, Bantian Street, Longgang District, Shenzhen, China

Manufacturer: ShenZhen Zhongyi Technology CO., Ltd.

Address: Room 401, No.4 Road One, Shangxue Science and Technology City, Xinxue Community, Bantian Street, Longgang District, Shenzhen, China

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Sample Received Date: 2023-06-01

Sample tested Date: 2023-06-01 to 2023-06-29

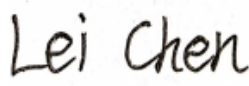
Issue Date: 2023-06-29

Report No.: BCTC2305526769-2E

Test Standards: FCC CFR 47 part1, 1.1307(b), 1.1310

Test Results: PASS

Tested by:



Lei Chen/Project Handler

Approved by:



Zero Zhou/Reviewer

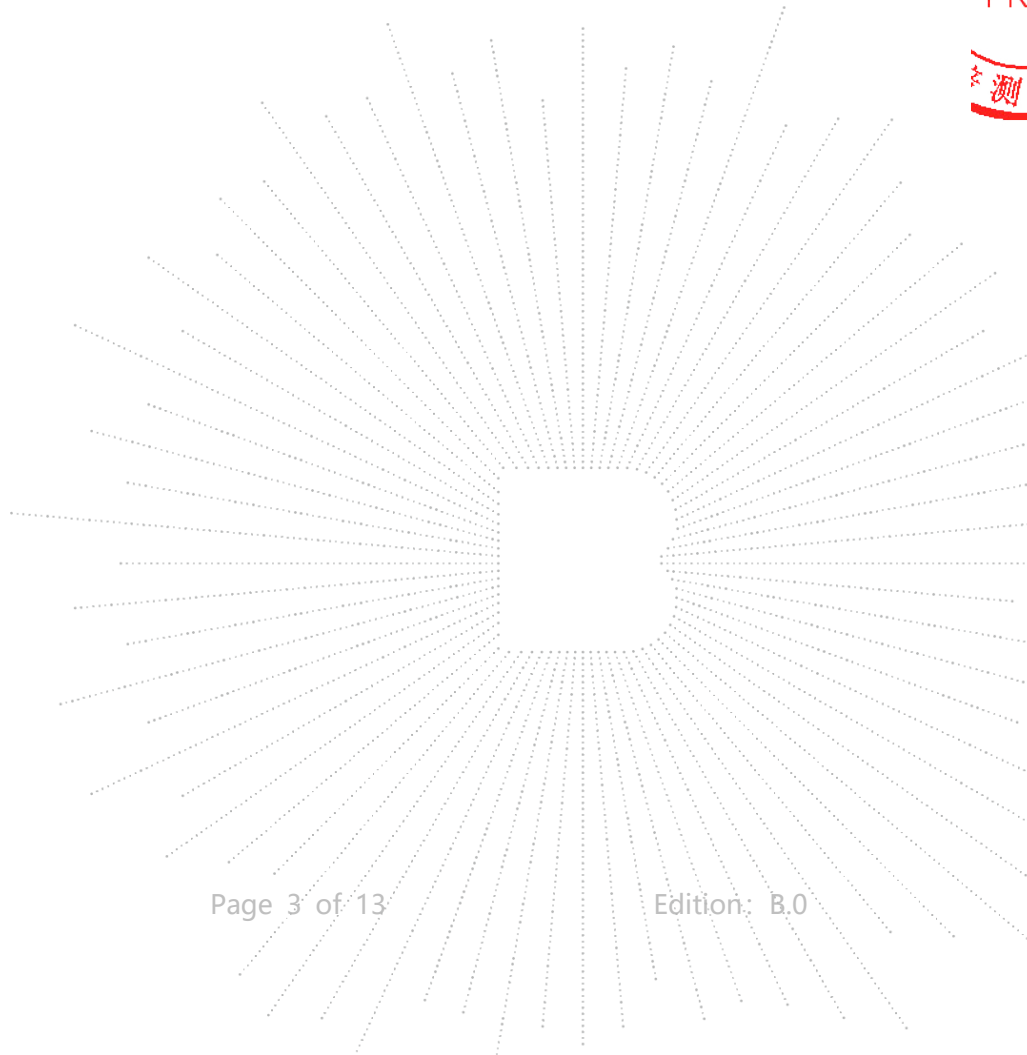
The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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(Note: N/A Means Not Applicable)

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**1. Version**

| Report No.        | Issue Date | Description | Approved |
|-------------------|------------|-------------|----------|
| BCTC2305526769-2E | 2023-06-29 | Original    | Valid    |
|                   |            |             |          |

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## 2. Product Information

### 2.1 Product Information

|                       |                                                                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model/Type Ref.:      | MSL-M1088Q<br>WC38                                                                                                                                                            |
| Model differences:    | All the model are the same circuit and RF module, except model names.                                                                                                         |
| Product Description:  | 3in1 Foldable magnetic wireless charger                                                                                                                                       |
| Operation Frequency:  | Wireless charging Output (Phone/ Earphone): 115kHz-205kHz,<br>Wireless charging Output (Watch): 300-350kHz                                                                    |
| Modulation type:      | ASK                                                                                                                                                                           |
| Antenna installation: | loop coil antenna                                                                                                                                                             |
| Ratings:              | Type C Input: DC 5V/3A, 9V/3A, 12V/2A<br>Wireless charging Output (Phone): 5W/7.5W/10W/15W<br>Wireless charging Output (Earphone): 5W<br>Wireless charging Output (Watch): 2W |
| Hardware Version:     | N/A                                                                                                                                                                           |
| Software Version:     | N/A                                                                                                                                                                           |

Cable of Product

| No. | Cable Type | Quantity | Provider  | Length (m) | Shielded | Note                                  |
|-----|------------|----------|-----------|------------|----------|---------------------------------------|
| 1   | --         | --       | Applicant | ---        | Yes/No   | With a ferrite ring in mid Detachable |
| 2   | --         | --       | BCTC      | --         | Yes/No   | --                                    |

## 2.2 Support Equipment

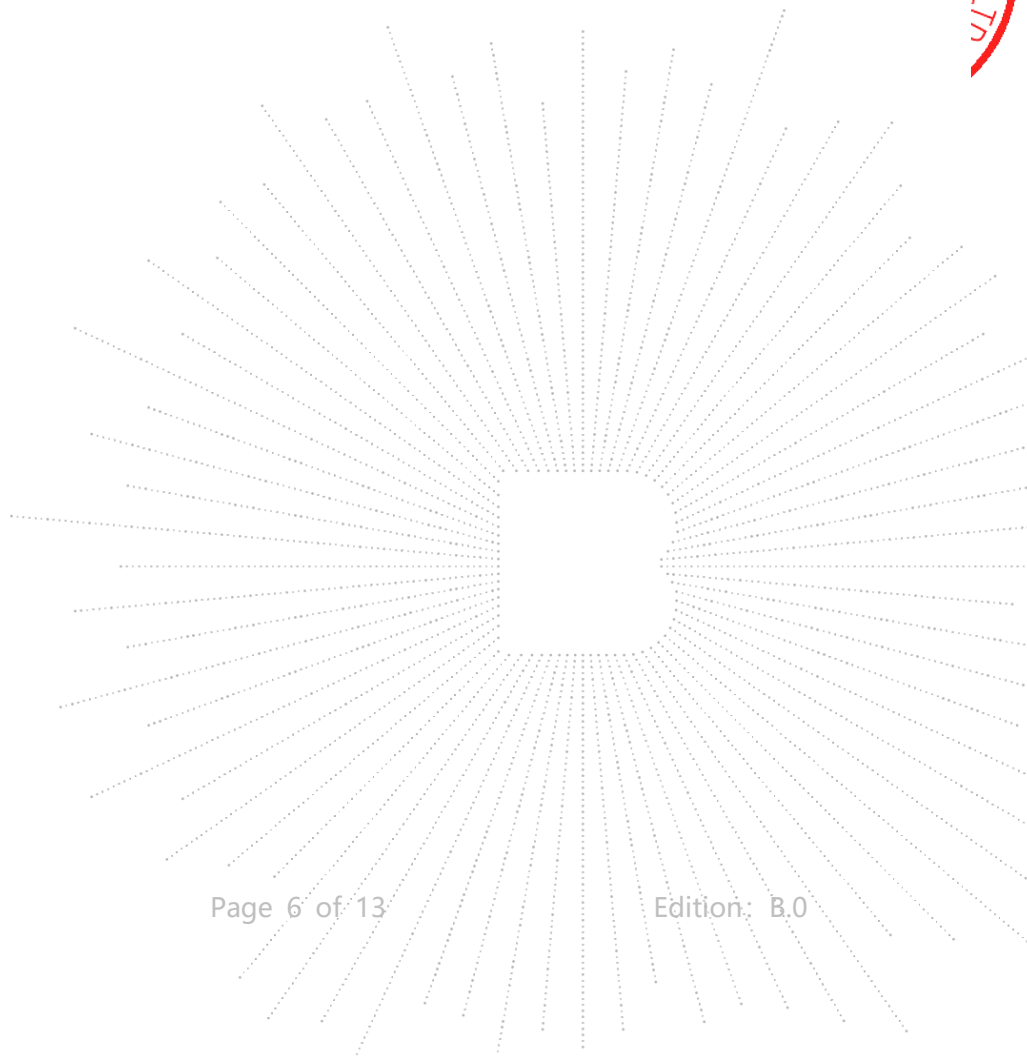
| No. | Device Type | Brand | Model | Series No. | Note |
|-----|-------------|-------|-------|------------|------|
| 1.  | ---         | ---   | ---   | ---        | ---  |

### Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

## 2.3 Test Mode

|             |                                                                                              |
|-------------|----------------------------------------------------------------------------------------------|
| Test Mode 1 | Wireless charger 5W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2W (Watch)   |
| Test Mode 2 | Wireless charger 7.5W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2W (Watch) |
| Test Mode 3 | Wireless charger 10W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2W (Watch)  |
| Test Mode 4 | Wireless charger 15W (Phone) + Wireless charger 5W (Earphone) + Wireless charger 2W (Watch)  |



### 3. Test Facility And Test Instrument Used

#### 3.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

#### 3.2 Test Instrument Used

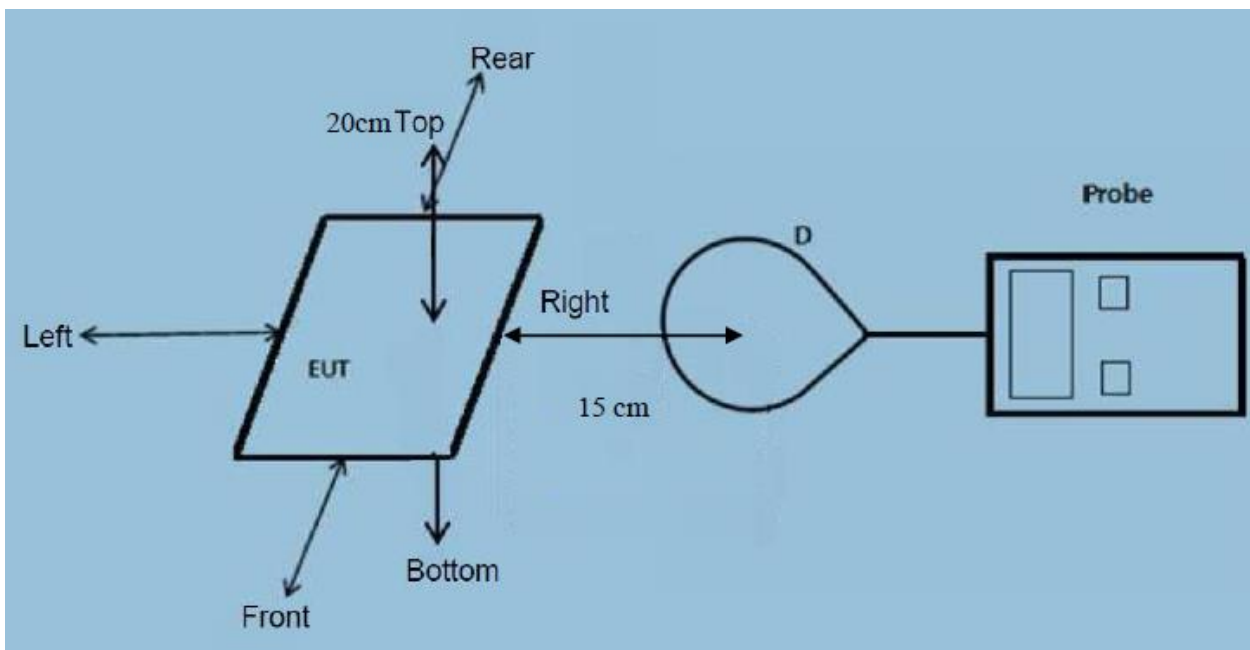
| Equipment                         | Manufacturer | Model No. | Serial No.  | Last Cal.      | Next Cal.      |
|-----------------------------------|--------------|-----------|-------------|----------------|----------------|
| Electromagnet-ic radiation tester | Wavecontrol  | SMP160    | 19SN0980    | May 15, 2023   | May 14, 2024   |
| Electromagne-tic field probe      | Wavecontrol  | WP400-3   | 20WP120082  | Sept. 08, 2022 | Sept. 07, 2023 |
| 843 Chamber                       | ETS          | 843       | 84301       | Aug. 27, 2020  | Aug. 26, 2023  |
| Software                          | Frad         | EZ-EMC    | EMC-CON 3A1 | \              | \              |

## 4. Method Of Measurement

### 4.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According KDB680106 D01v03: RF Exposure Wireless Charging Apps v02.

### 4.2 Block Diagram Of Test Setup



Note: Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device

### 4.3 Limit

| Limits for Occupational / Controlled Exposure |                                   |                                   |                                          |                                                                  |
|-----------------------------------------------|-----------------------------------|-----------------------------------|------------------------------------------|------------------------------------------------------------------|
| Frequency Range (MHz)                         | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes) |
| 0.3-3.0                                       | 614                               | 1.63                              | (100)*                                   | 6                                                                |
| 3.0-30                                        | 1842 / f                          | 4.89 / f                          | (900 / f)*                               | 6                                                                |
| 30-300                                        | 61.4                              | 0.163                             | 1.0                                      | 6                                                                |
| 300-1500                                      |                                   |                                   | F/300                                    | 6                                                                |
| 1500-100,000                                  |                                   |                                   | 5                                        | 6                                                                |

| Limits for General Population / Uncontrolled Exposure |                                   |                                   |                                          |                                                                  |
|-------------------------------------------------------|-----------------------------------|-----------------------------------|------------------------------------------|------------------------------------------------------------------|
| Frequency Range (MHz)                                 | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes) |
| 0.3-1.34                                              | 614                               | 1.63                              | (100)*                                   | 30                                                               |
| 1.34-30                                               | 824/f                             | 2.19/f                            | (180 / f)*                               | 30                                                               |
| 30-300                                                | 27.5                              | 0.073                             | 0.2                                      | 30                                                               |
| 300-1500                                              |                                   |                                   | F/1500                                   | 30                                                               |
| 1500-100,000                                          |                                   |                                   | 1                                        | 30                                                               |

### 4.4 Test procedure

- The RF exposure test was performed on 360 degree turn table in anechoic chamber.
- The measurement probe was placed at test distance (15cm) which is between the edge of the charger and the geometric centre of probe.
- The turn table was rotated 360d degree to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106D01v03.

#### 4.5 Equipment Approval Considerations

The EUT does comply with item 5(b) of KDB 680106 D01v03

1) Power transfer frequency is less than 1MHz

Yes, the device operate in the frequency range from 115-350KHz

2) Output power from each primary coil is less than or equal to 15 watts.

Yes, the maximum output power of the primary coil is 15W.

3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that able to detect and allow coupling onlybetween individual pair of coils.

Yes, the transfer system includes only single primary and secondary coils.

4) Client device is inserted in or placed directly in contact with the transmitter.

Yes, client device is placed directly in contact with the transmitter.

5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes, the EUT is a mophie device charging mat.

6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Yes, the EUT field strength levels are 10% x MPE limit.

#### 4.6 E and H field Strength

Worst Case Operating Mode: Mode 4

E-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

| Battery level | Frequency Range (MHz) | Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | Test Position Top | 10% Limits Test (V/m) | Limits Test (V/m) |
|---------------|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------------|-------------------|
| 1%            | 0.115-0.35            | 0.064           | 0.076           | 0.074           | 0.098           | 0.035           | 0.081             | 61.4                  | 614               |
| 50%           | 0.115-0.35            | 0.068           | 0.060           | 0.095           | 0.097           | 0.041           | 0.074             | 61.4                  | 614               |
| 99%           | 0.115-0.35            | 0.071           | 0.064           | 0.071           | 0.099           | 0.047           | 0.084             | 61.4                  | 614               |

H-Field Strength at 15 cm surrounding the EUT and 20cm above the top surface of the EUT

| Battery level | Frequency Range (MHz) | Test Position A(uT) | Test Position B(uT) | Test Position C(uT) | Test Position D(uT) | Test Position E(uT) | Test Position Top(uT) | 10% Limits Test (uT) | Limits Test (uT) |
|---------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|----------------------|------------------|
| 1%            | 0.115-0.35            | 0.079               | 0.101               | 0.118               | 0.126               | 0.039               | 0.106                 | 0.204                | 2.038            |
| 50%           | 0.115-0.35            | 0.096               | 0.091               | 0.077               | 0.126               | 0.055               | 0.107                 | 0.204                | 2.038            |
| 99%           | 0.115-0.35            | 0.099               | 0.077               | 0.100               | 0.117               | 0.057               | 0.079                 | 0.204                | 2.038            |

| Battery level | Frequency Range (MHz) | Test Position A(A/m) | Test Position B(A/m) | Test Position C(A/m) | Test Position D(A/m) | Test Position E(A/m) | Test Position Top(A/m) | 10% Limits Test (A/m) | Limits Test (A/m) |
|---------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------------------------|-----------------------|-------------------|
| 1%            | 0.115-0.35            | 0.063                | 0.081                | 0.095                | 0.101                | 0.031                | 0.085                  | 0.163                 | 1.63              |
| 50%           | 0.115-0.35            | 0.077                | 0.073                | 0.062                | 0.101                | 0.044                | 0.085                  | 0.163                 | 1.63              |
| 99%           | 0.115-0.35            | 0.079                | 0.062                | 0.080                | 0.094                | 0.046                | 0.063                  | 0.163                 | 1.63              |

Note: A/m=uT÷1.25

## 5. Photographs Of Test Set-Up

15CM



**STATEMENT**

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

**Address:**

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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Website: <http://www.chnbctc.com>

E-Mail: [bctc@bctc-lab.com.cn](mailto:bctc@bctc-lab.com.cn)

**\*\*\*\*\* END \*\*\*\*\***