

# TEST REPORT

Report No.: BCTC2306055010-2E

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Applicant: Ningbo Puyuan Electronic Technology Co., Ltd

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Product Name: Wireless Charger

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Model/Type Ref.: GM7984

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Tested Date: 2024-03-12 to 2024-03-20

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Issued Date: 2024-10-29

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



# FCC ID: 2BLWE-GM7984

Product Name: Wireless Charger  
Trademark: ZHITIE  
Model/Type Ref.: GM7984  
GM7985, GM7986, GM7987, GM7988, GM7989, GM7990, GM7991, GM7992, GM7993, GM7994, GM7995, GM7996, GM7997, GM7998, GM7999  
Prepared For: Ningbo Puyuan Electronic TECnology Co., Ltd  
Address: No. 481 Pingaokou, Qiuja Industrial Park, Meilin Street, Ninghai, Ningbo City, Zhejiang Province, China  
Manufacturer: Ningbo Puyuan Electronic TECnology Co., Ltd  
Address: No. 481 Pingaokou, Qiuja Industrial Park, Meilin Street, Ninghai, Ningbo City, Zhejiang Province, 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: 2024-03-11  
Sample tested Date: 2024-03-12 to 2024-03-20  
Issue Date: 2024-10-29  
Report No.: BCTC2306055010-2E  
Test Standards: FCC CFR 47 part1, 1.1307(b), 1.1310  
KDB 680106 D01 Wireless Power Transfer v04  
Test Results: PASS

Tested by:



Eric Yang/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.

**Table Of Content**

<b>Test Report Declaration</b>	<b>Page</b>
1. Version .....	4
2. Product Information .....	5
2.1 Product Information.....	5
2.2 Support Equipment .....	5
2.3 Test Mode .....	5
3. Test Facility And Test Instrument Used.....	6
3.1 Test Facility .....	6
3.2 Test Instrument Used.....	6
4. Method Of Measurement.....	7
4.1 Applicable Standard .....	7
4.2 Block Diagram Of Test Setup.....	7
4.3 Limit .....	8
4.4 Test Procedure .....	8
4.5 Equipment Approval Considerations.....	9
4.6 E And H Field Strength .....	10
5. Photographs Of Test Set-Up .....	11

(Note: N/A Means Not Applicable)

## 1. Version

Report No.	Issue Date	Description	Approved
BCTC2306055010-2E	2024-10-29	Original	Valid

## 2. Product Information

### 2.1 Product Information

Model/Type Ref.:	GM7984 GM7985, GM7986, GM7987, GM7988, GM7989, GM7990, GM7991, GM7992, GM7993, GM7994, GM7995, GM7996, GM7997, GM7998, GM7999
Model differences:	All the model are the same circuit and RF module, except model names.
Product Description:	Wireless Charger
Modulation:	MSK
Operation Frequency:	115kHz-205kHz
Antenna installation:	loop coil antenna
Ratings:	Type-C Input: 5V/2A, 9V/2A 12V/2A Wireless charger Output: 5W, 7.5W, 10W, 15W

### 2.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-2	Adapter	N/A	HW-110600C02	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	0.8M	USB cable unshielded

**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 Charging+ Full load
Test Mode 2	Wireless Charging+ Half-load
Test Mode 3	Wireless Charging+ Null load

### 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

EMF Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Electromagnet -ic radiation tester	Wavecontrol	SMP160	19SN0980	Sept. 26, 2023	Sept. 25, 2024
Electromagnet -ic field probe	Wavecontrol	WP400-3	20WP120082	Sept. 26, 2023	Sept. 25, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

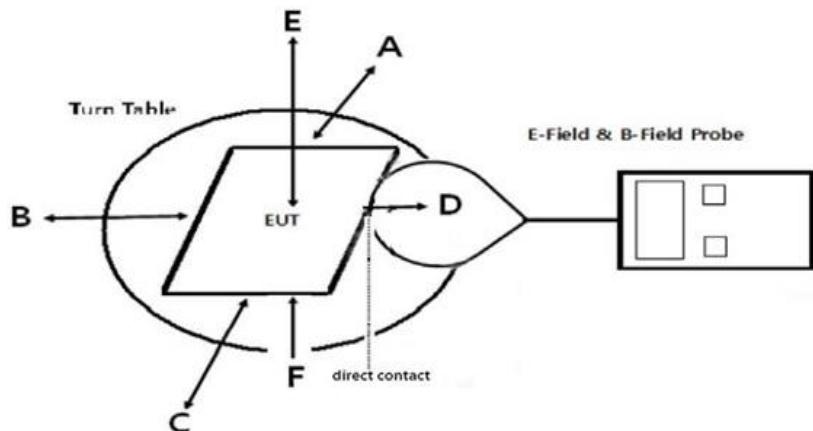
#### 4. Method Of Measurement

##### 4.1 Applicable Standard

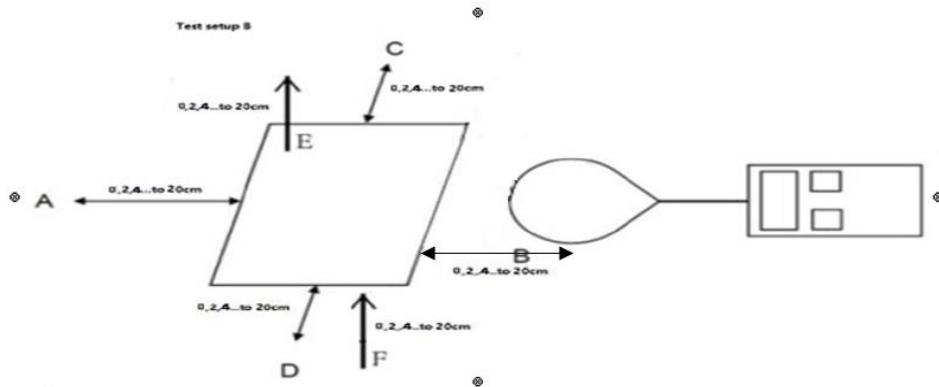
According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1093 RF exposure is calculated. According KDB680106 D01v04: RF Exposure Wireless Charging Apps v04.

##### 4.2 Block Diagram Of Test Setup

A



B



#### 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

- a) The RF exposure test was performed in anechoic chamber.
- b) The measurement probe was placed at 0 cm surrounding the device for test setup A; and the measurement Probe was placed from 0 cm to 20 cm, in 2 cm maximum increment measured from the edge of the device For the test setup B.
- c) The highest emission level was recorded and compared with limit as soon as measurement of each
- d) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- e) The EUT was measured according to the dictates of KDB680106 D01v04
- f) Remark: The EUT's test position A, B, C, D, E and F is valid for the E and H field measurements.

#### 4.5 Equipment Approval Considerations

1. The power transfer frequency is below 1 MHz.

Yes. The operating frequencies: 115-205 kHz

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

Yes. The maximum output power is: 15W

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)

Yes. Client device is placed directly in contact with the transmitter.

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

Yes. Conform to

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.

Yes. Conform to

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.

Yes. Conform.

## 4.6 E And H Field Strength

We measured the H-Field Strength of 20cm, 22cm and 24cm, and recorded the test data of the worst 20cm  
 Mobile: Test Mode 1 (the worst mode)

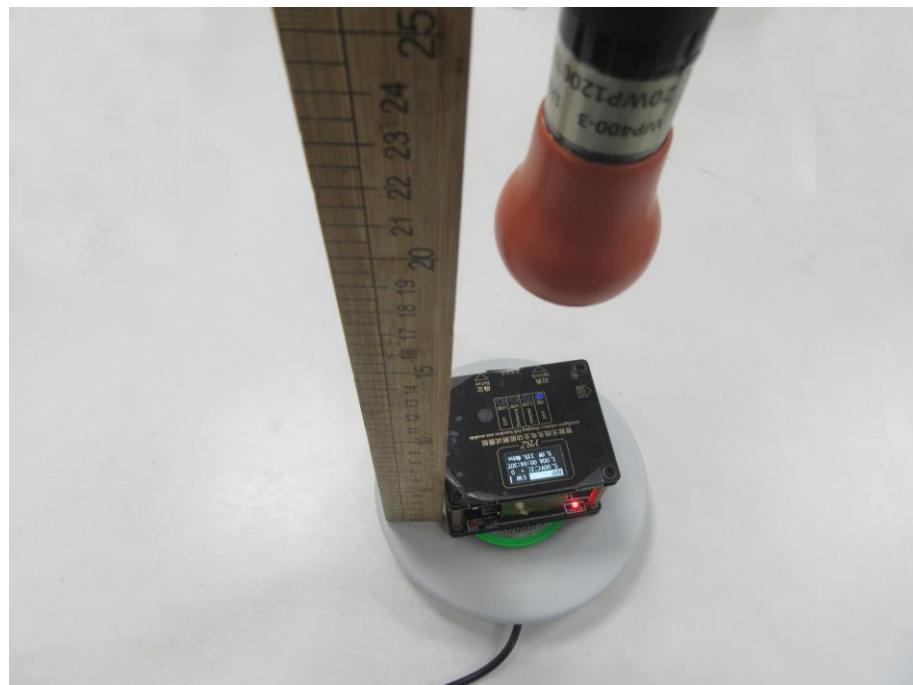
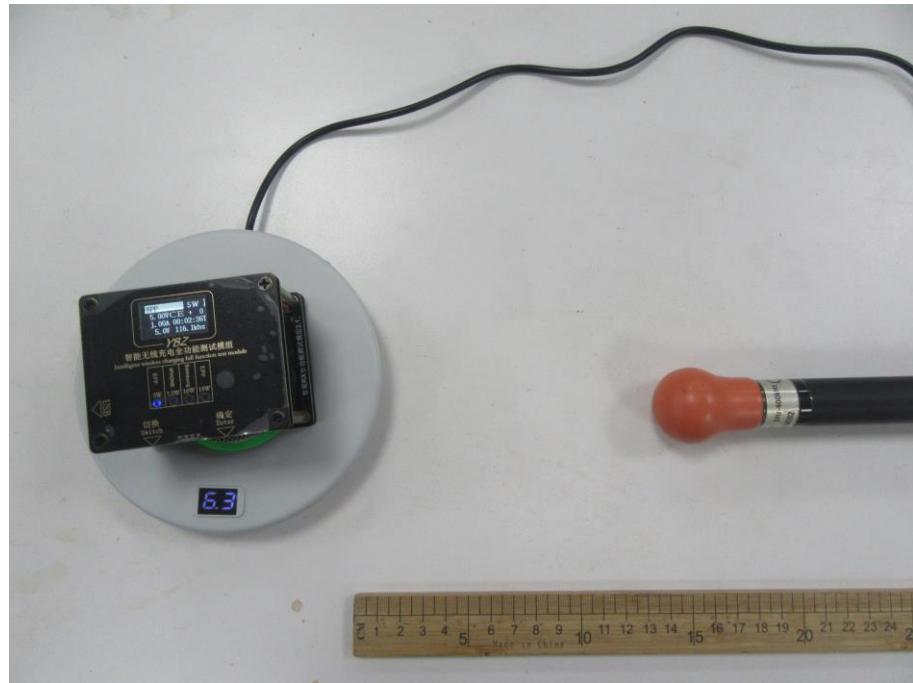
H-Field Strength at 20 cm surrounding the EUT and 20cm above the top surface of the EUT

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)
0.115-0.205	0.095	0.098	0.117	0.135	0.051	0.104

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)	50% Limits Test (A/m)	Limits Test (A/m)
0.115-0.205	0.076	0.079	0.093	0.108	0.041	0.083	0.85	1.63

Note:  $A/m = uT \div 1.25$

## 5. Photographs Of Test Set-Up



**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:

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