



# RF Exposure Report

On Behalf of

**Guangdong BiQiO Electronics Co., Ltd.**

105,1101,1102,1103,1104, No.10-2,7th Street, Sanlian,Gulao Town, Heshan, Guangdong, China

**FCC ID: 2BD7E-T02**

**Model: T02, T01**

December 20, 2023

<b>This Report Concerns:</b> <input checked="" type="checkbox"/> Original Report	<b>Equipment Type:</b> wireless charger
<b>Test Engineer:</b> Charlie He / <u>Charlie He</u>	
<b>Report Number:</b> <u>QCT23LR-2246E-02</u>	
<b>Test Date:</b> <u>December 15, 2023</u>	
<b>Reviewed By:</b> <u>Gordon Tan/ Gordon.Tan</u>	
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# Revision History of This Test Report



## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

EUT Description	wireless charger
Model No.	T02, T01
Tested Model	T02
Sample(s) Status	Engineer sample
Operation Frequency:	110.5kHz~205kHz
Modulation type:	ASK
Antenna Type:	Inductive loop coil Antenna
Antenna gain* <sup>1</sup> :	0dBi (Max)
Power supply:	5V/2A,9V/1.66A,12V/1.25A (Powered by USB Port)
WPT Output Power:	5W,7.5W,10W,15W
Trade Mark:	N/A
Applicant	Guangdong BiQiO Electronics Co., Ltd.
Address	105,1101,1102,1103,1104, No.10-2,7th Street, Sanlian,Gulao Town, Heshan, Guangdong, China
Manufacturer	Guangdong BiQiO Electronics Co., Ltd.
Address	105,1101,1102,1103,1104, No.10-2,7th Street, Sanlian,Gulao Town, Heshan, Guangdong, China
Sample No.	Y23L2245E01LY

Note: \*<sup>1</sup>This information provided by Manufacturer, SZ QC Lab is not responsible for the accuracy of this information.

### 1.2 System Test Configuration

#### 1.2.1 Support Equipment

Manufacturer	Description	Model	Serial Number
EESON	Wireless charger load	2S	/
MDY	Adapter	Input: 100-240V~ 50/60Hz, 1.7A Output: 5V --- 3A, 9V --- 3A, 11V --- 6A, 20V --- 3.25A	/



### 1.3 Test Facility

Test Firm : Shenzhen QC Testing Laboratory Co., Ltd.

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19. The testing quality system of our laboratory meets with ISO/IEC-17025 requirements. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS – Registration No.: L8464

The EMC Laboratory has been accredited by CNAS, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

A2LA Certificate Number: 6759.01

The EMC Laboratory has been accredited by A2LA, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

FCC Registration Number: 561109

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission.

IC Registration Number: 29628

CAB identifier: CN0141

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada.

### 1.4 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
E-field	110.5kHz~205kHz	0.5V/m	(1)
H-field	110.5kHz~205kHz	0.1A/m	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.



## 2. Requirements

### 2.1 Test Methodology

The tests documented in this report were performed in accordance with FCC CFR Title 47 Part 1 §1.1307, FCC CFR Title 47 Part 1 §1.1310, FCC CFR Title 47 Part 2 §2.1091 and KDB 680106 D01 Wireless Power Transfer v04

### 2.2 Limit

Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

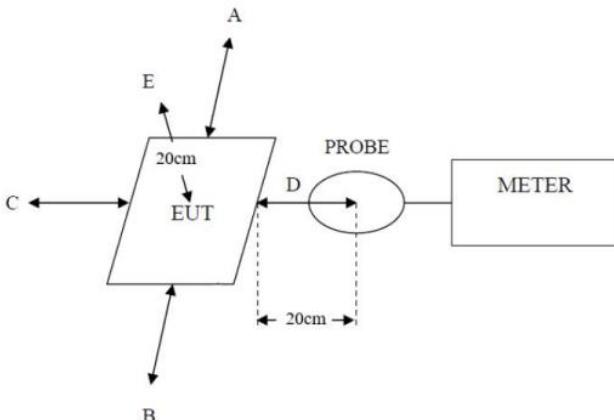
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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 <sup>2</sup> )	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. \* = Plane-wave equivalent power density.

### 2.3 Method Of Measurement:

- The RF exposure test was performed in shielded chamber.
- The geometric centre of probe was placed at 20 cm test distance surrounding the device and the top surface.
- The measurement probe used 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 680106 D01 Wireless Power Transfer v04.

## 2.4 Test Setup



Note: As bottom point is not required to test for desktop devices

## 2.5 Equipment Approval Considerations

The EUT comply with KDB 680106 D01 Wireless Power Transfer v04.

1. The power transfer frequency is below 1 MHz.  
Yes, the device operated in the frequency range from 110.5kHz to 205kHz.
2. The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.  
Yes, The maximum output power of each primary coil is 15 watts.
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, the client device includes only single primary coil.
4. Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).  
Yes. The EUT has Only § 2.1091-Mobile exposure conditions apply
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, The EUT's field strength levels are less than 50% of the MPE limit.
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.  
Yes, the EUT has only one coil, all test modes met the conditions specified in (5).

## 2.6 Measuring Instrument Used:

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Exposure Level Tester	Narda	ELT-400	N-0231	June 24, 2023	June 23, 2024
Magnetic field probe 100cm <sup>2</sup>	Narda	ELT probe 100cm <sup>2</sup>	M0675	June 24, 2023	June 23, 2024
Broadband field Meter	Narda	NBM-550	E-1273	June 24, 2023	June 23, 2024
Broadband field Probe	Narda	EF0391	D-0891	June 24, 2023	June 23, 2024



## 2.7 E Field And H Field Strength Test Result

Test Mode	Description
Mode 1	Charging with 15 W wireless charging load (99% Load)
Mode 2	Charging with 15 W wireless charging load (50% Load)
Mode 3	Charging with 15 W wireless charging load (1% Load)
Mode 4	Charging with 10 W wireless charging load (99% Load)
Mode 5	Charging with 10 W wireless charging load (50% Load)
Mode 6	Charging with 10 W wireless charging load (1% Load)
Mode 7	Charging with 7.5 W wireless charging load (99% Load)
Mode 8	Charging with 7.5 W wireless charging load (50% Load)
Mode 9	Charging with 7.5 W wireless charging load (1% Load)
Mode 10	Charging with 5 W wireless charging load (99% Load)
Mode 11	Charging with 5 W wireless charging load (50% Load)
Mode 12	Charging with 5 W wireless charging load (1% Load)

Note: All the modes had been tested, but only the worst data was recorded in the report (Mode 1&2&3).

### Mode 1

H-Filed Strength at 20 cm from the edges surrounding and the top surface of the EUT (A/m)

20cm					Limits(A/m)	50% Limits(A/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
0.19	0.20	0.27	0.16	0.30	1.63	0.815

E-Filed Strength at 20 cm from the edges surrounding and the top surface of the EUT (V/m)

20cm					Limits(V/m)	50% Limits(V/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1.58	1.34	1.23	1.19	1.61	614	307

### Mode 2

H-Filed Strength at 20 cm from the edges surrounding and the top surface of the EUT (A/m)

20cm					Limits(A/m)	50% Limits(A/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
0.15	0.17	0.20	0.13	0.28	1.63	0.815

E-Filed Strength at 20 cm from the edges surrounding and the top surface of the EUT (V/m)

20cm					Limits(V/m)	50% Limits(V/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1.53	1.30	1.19	1.08	1.55	614	307



Mode 3

H-Filed Strength at 20 cm from the edges surrounding and the top surface of the EUT (A/m)

20cm					Limits(A/m)	50% Limits(A/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
0.16	0.19	0.18	0.14	0.25	1.63	0.815

E-Filed Strength at 20 cm from the edges surrounding and the top surface of the EUT (V/m)

20cm					Limits(V/m)	50% Limits(V/m)
Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1.46	1.24	1.17	1.13	1.45	614	307

### 3. Test Setup Photo

Right (Position A)



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