

# RF EXPOSURE REPORT

## FOR

|                             |   |                                                                                         |
|-----------------------------|---|-----------------------------------------------------------------------------------------|
| <b>Applicant</b>            | : | Loctek Ergonomic Technology Corp.                                                       |
| <b>Address</b>              | : | 588 Qihang South Road, Binhai Industrial<br>ZoneYinzhou District, Ningbo Zhejiang China |
| <b>Equipment under Test</b> | : | Wireless Charger                                                                        |
| <b>Model No.</b>            | : | QI02S, QI03S, QI04S, QI05S, QI06S, QI07S, QI08S,<br>QI09S                               |
| <b>Trade Mark</b>           | : | /                                                                                       |
| <b>FCC ID</b>               | : | 2ARK8-QI02S                                                                             |
| <b>Manufacturer</b>         | : | Loctek Ergonomic Technology Corp.                                                       |
| <b>Address</b>              | : | 588 Qihang South Road, Binhai Industrial<br>ZoneYinzhou District, Ningbo Zhejiang China |

**Issued By: Dongguan Dongdian Testing Service Co., Ltd.**

**Add.:** No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,  
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# REPORT

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## Test Report Declare

|                     |   |                                                                                         |
|---------------------|---|-----------------------------------------------------------------------------------------|
| <b>Applicant</b>    | : | Loctek Ergonomic Technology Corp.                                                       |
| <b>Address</b>      | : | 588 Qihang South Road, Binhai Industrial ZoneYinzhou District,<br>Ningbo Zhejiang China |
| <b>Equipment</b>    | : | Wireless Charger                                                                        |
| <b>Model No.</b>    | : | QI02S, QI03S, QI04S, QI05S, QI06S, QI07S, QI08S, QI09S                                  |
| <b>Trade Mark</b>   | : | /                                                                                       |
| <b>Manufacturer</b> | : | Loctek Ergonomic Technology Corp.                                                       |
| <b>Address</b>      | : | 588 Qihang South Road, Binhai Industrial ZoneYinzhou District,<br>Ningbo Zhejiang China |

**Assess Standard Used:** FCC CFR 47 part1, 1.1307(b), 1.1310; KDB 680106 D01 RF Exposure Wireless Charging App v03r01.

### We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

**After evaluation, our opinion is that the equipment In Accordance with above standard.**

|                         |                    |                      |                               |
|-------------------------|--------------------|----------------------|-------------------------------|
| <b>Report No.:</b>      | DDT-R21111009-1E01 |                      |                               |
| <b>Date of Receipt:</b> | Nov. 12, 2021      | <b>Date of Test:</b> | Nov. 12, 2021 ~ Nov. 19, 2021 |

**Prepared By:**

*Sam Li*

**Sam Li/Engineer**

**Approved By:**



**Damon Hu/EMC Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

## Revision History

| Rev. | Revisions     | Issue Date    | Revised By |
|------|---------------|---------------|------------|
| ---  | Initial issue | Nov. 19, 2021 |            |
|      |               |               |            |

## 1. General Information

### 1.1. Description of equipment

|                                       |                                                                                                                   |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| EUT* Name                             | : Wireless Charger                                                                                                |
| Model Number                          | : QI02S, QI03S, QI04S, QI05S, QI06S, QI07S, QI08S, QI09S                                                          |
| Model Differences                     | : All models are identical except the appearance and model name, therefore the test performed on the model QI02S. |
| EUT function description              | : Please reference user manual of this device                                                                     |
| Power Supply                          | : Input: 20-36VDC 1.0A Max<br>Wireless Output: 5W/7.5W/10W Max                                                    |
| Wireless charging Operation frequency | : 115-178 kHz                                                                                                     |
| Antenna Type                          | : Inductive loop coil antenna                                                                                     |
| Sample Type                           | : N/A                                                                                                             |
| Serial Number                         | : N/A                                                                                                             |

Note: EUT is the abbreviation of equipment under test.

### 1.2. Accessories of EUT

| Description of Accessories | Manufacturer | Model number | Description | Remark |
|----------------------------|--------------|--------------|-------------|--------|
| N/A                        | N/A          | N/A          | N/A         | N/A    |

### 1.3. Assistant equipment used for test

| Assistant equipment | Manufacturer | Model number or Type | Description | Other |
|---------------------|--------------|----------------------|-------------|-------|
| Dummy load          | N/A          | N/A                  | N/A         | N/A   |

### 1.4. Assess laboratory

Ⓡ Dongguan Dongdian Testing Service Co., Ltd

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Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: [ddt@dgddt.com](mailto:ddt@dgddt.com)

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

## 2. Equipment Used During Test

| Equipment                            | Manufacturer | Model No. | Serial No. | Last Cal.     | Cal. Interval |
|--------------------------------------|--------------|-----------|------------|---------------|---------------|
| Electric and Magnetic Field Analyzer | narda        | EHP-200A  | 170WX91016 | Jan. 06, 2021 | 1 Year        |

## 3. Method of Measurement

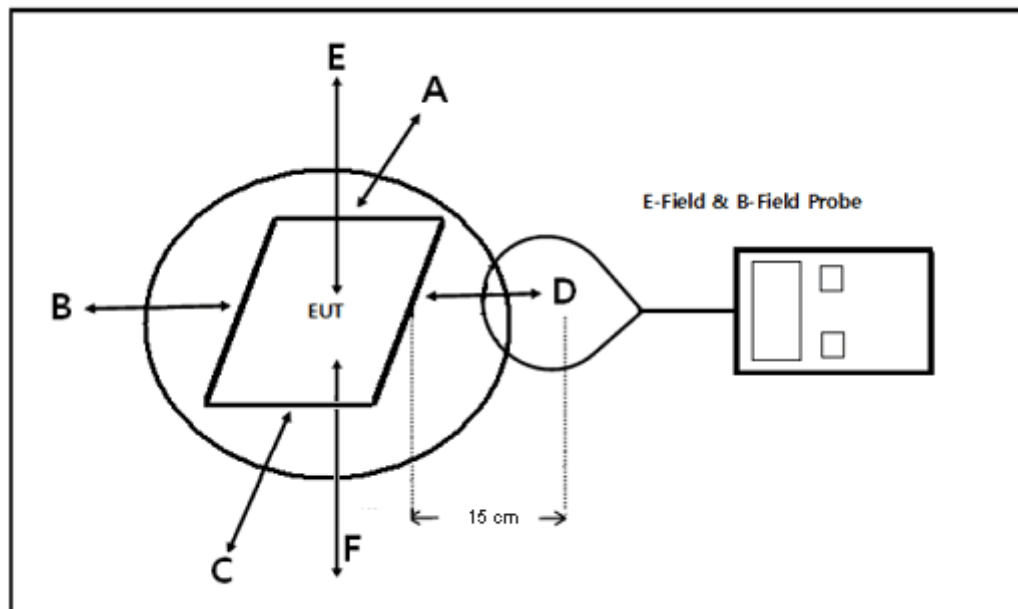
### 3.1. Applicable standard

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 §2.1091 RF exposure is calculated.

According KDB 680106 D01 RF Exposure Wireless Charging App v03r01.

### 3.2. Block diagram of test setup



Note: Due to installation limitations no tests from the underside of the charging device (Test Position F) are required.

### 3.3. Test procedure

- The RF exposure test was performed in shielded chamber.
- The measurement probe was placed at test distance (15 cm) which is between the edge of the charger and the geometric centre of probe.
- 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 KDB680106 DR03-44118.

### 3.4. Equipment approval considerations:

The EUT does comply with section 5 b) of KDB 680106 D01 RF Exposure Wireless Charging App v03r01.

(1) Power transfer frequency is less than 1 MHz.

Yes; the device operates in the frequency range from 115-178 kHz

(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 10 W.

(3) The system may consist of more than one source primary coils, charging one or more clients.

If more than one primary coil is present, the coil pairs may be powered on at the same time.

Yes.

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

Yes.

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

Yes.

(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

Yes; the EUT H-field strengths levels are less than 50% of MPE limit.

TABLE 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) |
|----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposure</b>         |                               |                               |                                     |                          |
| 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                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 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

### 3.5. E and H Field Strength

Test mode for wireless charger:

Dummy load: 10W Load, 5W Load and 7.5W Load mode

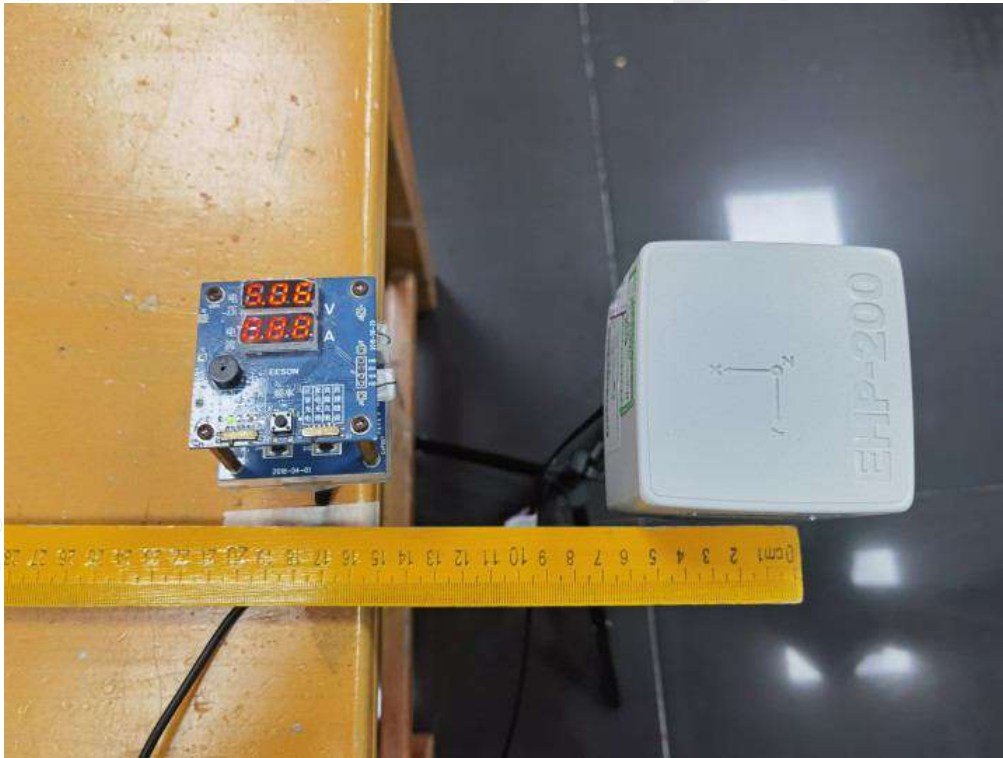
E-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT (V/m)

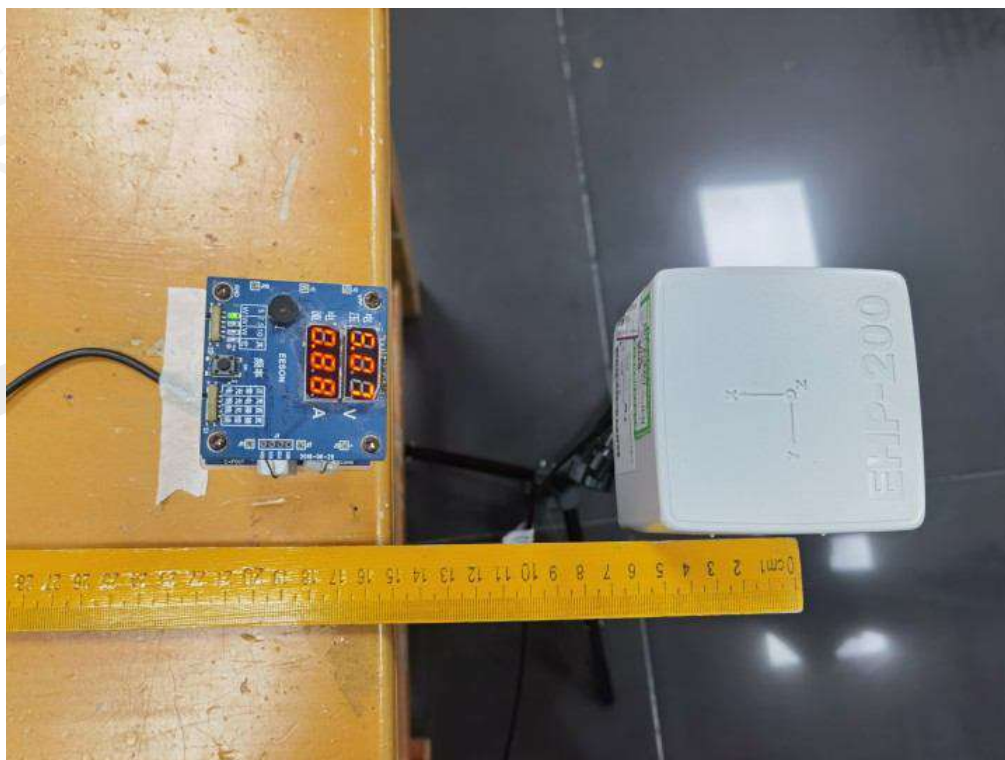
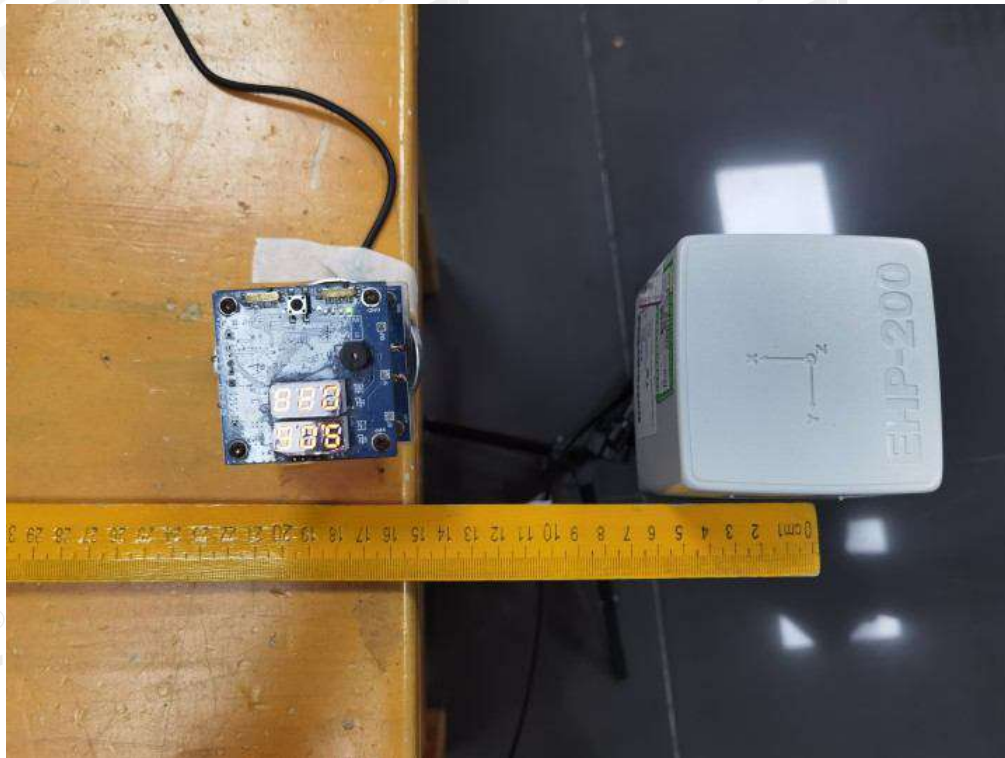
| Test Position | Probe Measure Result(V/m) |        |        | Limits<br>Test (V/m) |
|---------------|---------------------------|--------|--------|----------------------|
|               | 10W                       | 5W     | 7.5W   |                      |
| A             | 0.8021                    | 0.7639 | 1.0673 | 614                  |
| B             | 0.8902                    | 0.7960 | 0.8642 | 614                  |
| C             | 0.9954                    | 0.5306 | 1.1419 | 614                  |
| D             | 0.8562                    | 0.6015 | 0.9624 | 614                  |
| E             | 0.6029                    | 0.5306 | 0.8560 | 614                  |

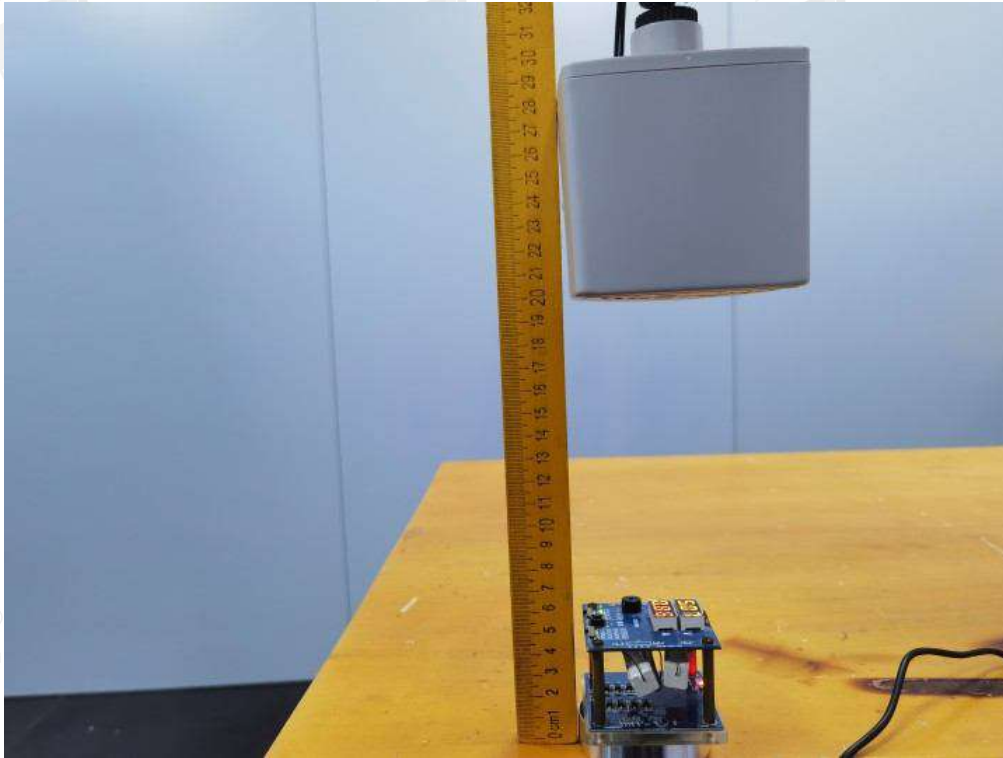
H-Filed Strength at 15 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT (A/m)

| Test Position | Probe Measure Result(A/m) |        |        | Limits<br>Test (A/m) |
|---------------|---------------------------|--------|--------|----------------------|
|               | 10W                       | 5W     | 7.5W   |                      |
| A             | 0.0650                    | 0.0758 | 0.0726 | 1.63                 |
| B             | 0.0882                    | 0.0869 | 0.0570 | 1.63                 |
| C             | 0.0593                    | 0.0528 | 0.0677 | 1.63                 |
| D             | 0.0836                    | 0.0965 | 0.0654 | 1.63                 |
| E             | 0.0577                    | 0.0562 | 0.0697 | 1.63                 |

#### 4. Test Setup Photo







**END OF REPORT**