



RF Exposure Report

On Behalf of

ShenZhen litian technology Co.,Ltd

Rm209, #2 Zonghe Bldg, Bao yun da center, Xixiang St, Bao anDistrict, Shenzhen, China

FCC ID: 2AYZG-DS2203
Model: DS2203, DS2203A, DS2203B, DS223C

June 24, 2024

| | |
|--|---|
| This Report Concerns: <input checked="" type="checkbox"/> Original Report | Equipment Type: Wireless Charging Alarm Clock |
| Test Engineer: LBi Li / <i>Li</i> | |
| Report Number: QCT24FR-1692E-02 | |
| Test Date: June 6, 2024 ~ June 24, 2024 | |
| Reviewed By: Gordon Tan / <i>Gordon Tan</i> | |
| Approved By: Kendy Wang / <i>Kendy Wang</i> | |
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1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

| | |
|----------------------|---|
| EUT Description | Wireless Charging Alarm Clock |
| Model No. | DS2203, DS2203A, DS2203B, DS223C |
| Model Difference: | All models in each series have similar construction with the same diagram circuit and PCB layout, but different from model names. All tests were conducted on the models (DS2203) and the test result was passed. |
| Tested Model | DS2203 |
| Sample(s) Status | Engineer sample |
| Operation Frequency: | 110.5kHz~205kHz |
| Modulation type: | ASK |
| Antenna Type: | Inductive loop coil Antenna |
| Antenna gain*1: | 0dBi (Max) |
| Input voltage: | DC 5V (Powered by adapter), DC 3V (2*1.5V AAA battery) |
| Adaptor Information: | Model: YMK-18W050210A Input: 100-120V~,50/60Hz, 0.4A Max Output: 5VDC 2100mA |
| WPT Output Power: | 10W |
| Trade Mark: | N/A |
| Applicant | ShenZhen litian technology Co.,Ltd |
| Address | Rm209, #2 Zonghe Bldg, Bao yun da center, Xixiang St, Bao anDistrict, Shenzhen, China |
| Manufacturer | ShenZhen litian technology Co.,Ltd |
| Address | Rm209, #2 Zonghe Bldg, Bao yun da center, Xixiang St, Bao anDistrict, Shenzhen, China |
| Sample No. | Y24F1692E01YN (Model:DS2203) |

Note: *1This 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 | / |



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)

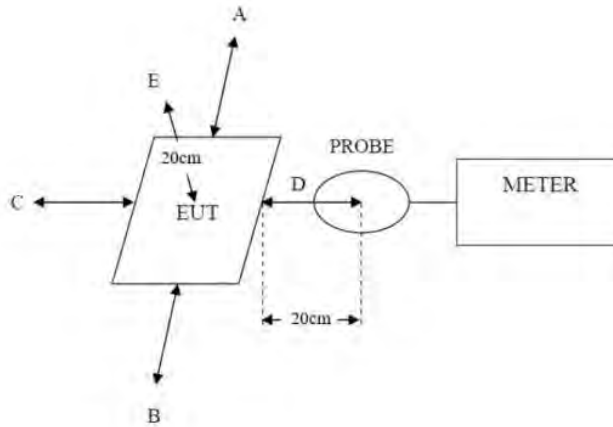
| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|---|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (i) Limits for Occupational/Controlled Exposure | | | | |
| 0.3-3.0 | 614 | 1.63 | *(100) | ≤6 |
| 3.0-30 | 1842/f | 4.89/f | *(900/f ²) | <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 ²) | <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 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 | March 14, 2024 | March 13, 2025 |
| Magnetic field probe 100cm ² | Narda | ELT probe 100cm ² | M0675 | March 14, 2024 | March 13, 2025 |
| Broadband field Meter | Narda | NBM-550 | E-1273 | March 14, 2024 | March 13, 2025 |
| Broadband field Probe | Narda | EF0391 | D-0891 | March 14, 2024 | March 13, 2025 |

2.6 E Field And H Field Strength Test Result

| Test Mode | Description |
|-----------|--|
| Mode 1 | Charging with 10 W wireless charging load (99% Load) |
| Mode 2 | Charging with 10 W wireless charging load (50% Load) |
| Mode 3 | Charging with 10 W wireless charging load (1% Load) |

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 | | |
| 0.27 | 0.21 | 0.28 | 0.22 | 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 | | |
| 1.63 | 1.42 | 1.30 | 1.28 | 1.58 | 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% |
|------|--|--|--|--|-------------|-----|
| | | | | | | |



| Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | | Limits(A/m) |
|-----------------|-----------------|-----------------|-----------------|-----------------|------|-------------|
| 0.26 | 0.20 | 0.23 | 0.20 | 0.31 | 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 | | |
| 1.59 | 1.35 | 1.22 | 1.22 | 1.59 | 614 | 307 |

Mode 3

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

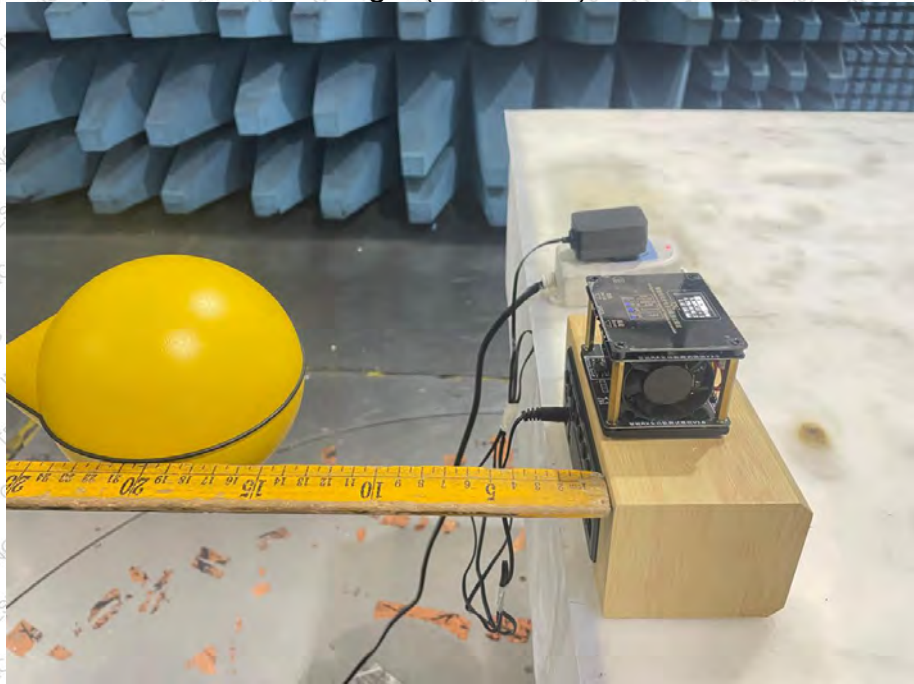
| 20cm | | | | | Limits(A/m) | 50% Limits(A/m) |
|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|-----------------|
| Test Position A | Test Position B | Test Position C | Test Position D | Test Position E | | |
| 0.28 | 0.19 | 0.18 | 0.21 | 0.29 | 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 | 1.32 | 1.26 | 1.24 | 1.60 | 614 | 307 |

3. Test Setup Photo

Right (Position A)



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