

# RF EXPOSURE Test Report

**Product:** Wireless Charger

**Trade Mark:** N/A

**Model Number:** T15

**FCC ID:** 2ANOA-T15

**Prepared for**

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# 1 General Description

## 1.1 Description of EUT

|                            |  |
|----------------------------|--|
| Product name:              | Wireless Charger   |
| Model name:                | T15  |
| Series Model:              | T15A, T15B, T15C, T16, T18, T19, T20, T21, T22, T23, T25, T26, T27, T28, T29   |
| Different of series model: | Except for the model and appearance color, all models have the same circuit and module.                                      |
| Operation frequency:       | Watch: 322kHz<br>Phone : 115kHz–205kHz<br>Earbuds: 115kHz–205kHz   |
| Operational mode:          | Wireless charging  |
| Modulation type:           | ASK  |
| Antenna type:              | Coil Antenna   |
| Hardware version:          | T15-9028-15W+5W-V1.4   |
| Software version:          | V1.0   |
| Power supply:              | Input: DC 9V/2A<br>Wireless Output(Phone): 7.5W(MAX)<br>Wireless Output(Earbuds): 5W(MAX)<br>Wireless Output(Watch): 3W(MAX) |
| Adapter information:       | N/A  |

## 1.2 Test Mode

| Pretest Test Mode | Description of Mode                              |
|-------------------|--|
| 1                 | Wireless Output (Phone:5W+Earbuds:5W+Watch:3W)   |
| 2                 | Wireless Output (Phone:7.5W+Earbuds:5W+Watch:3W) |

Note:The test data only show worst test mode: Mode 2

## 1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

#### 1.4 Ancillary Equipment

| Equipment | Model     | S/N                 | Manufacturer               |
|-----------|-----------|---------------------|----------------------------|
| Adapter   | MDY-10-EH | AA61905921<br>427IG | Selkang (Guigang) Co., Ltd |
| Earbuds   | /         | /                   | Apple Inc.                 |
| Phone     | iPhone 13 | /                   | Apple Inc.                 |
| Watch     | /         | /                   | Apple Inc.                 |

## 2 Test Facilities and Accreditations

### 2.1 Test Laboratory

|                       |   |
|-----------------------|---|
| Test Site             | Shenzhen HongBiao Certification& Testing Co., Ltd   |
| Test Site Location    | Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China |
| Telephone:            | (86-755) 2998 9321  |
| Fax:                  | (86-755) 2998 5110  |
| FCC Registration No.: | CN1341  |
| A2LA Certificate No.: | 6765.01   |

### 2.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

|                    |              |
|--------------------|--------------|
| Temperature:       | 15°C~35°C    |
| Relative Humidity: | 20%~75%      |
| Air Pressure:      | 98kPa~101kPa |

### 2.3 Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

| Measurement Frequency Range      | U, (dB)            | Note |
|----------------------------------|--------------------|------|
| RF frequency                     | $2 \times 10^{-5}$ |      |
| RF power, conducted              | $\pm 0.57$ dB      |      |
| Conducted emission(150kHz~30MHz) | $\pm 2.5$ dB       |      |
| Radiated emission(30MHz~1GHz)    | $\pm 4.2$ dB       |      |
| Radiated emission (above 1GHz)   | $\pm 4.7$ dB       |      |
| Temperature                      | $\pm 1$ degree     |      |
| Humidity                         | $\pm 5$ %          |      |

### 2.4 Test Software

| Software name | Manufacturer | Model    | Version  |
|---------------|--------------|----------|----------|
| EHP200-TS     | Narda        | EHP-200A | Rel 1.95 |

### 3 List of Test Equipment

| Item | Equipment No. | Equipment name                       | Manufacturer | Model    | Serial No. | Calibration date | Due date   |
|------|---------------|--------------------------------------|--------------|----------|------------|------------------|------------|
| 1    | HB-E073       | Electric and Magnetic Field Analyzer | Narda        | EHP-200A | 180ZX11013 | 2023-06-09       | 2024-06-08 |

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).



## 4 RF Exposure

### 4.1 Maximum Permissible Exposure

#### 4.1.1. Limit

| Frequency range(MHz)   | Electric field strength(V/m) | Magnetic field strength(A/m) | Power density(mW/cm <sup>2</sup> ) | Averaging time(minutes) |
|--|------------------------------|------------------------------|------------------------------------|-------------------------|
| (A) 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                              | 6                       |
| 300-1500   |                              |                              | f/300                              | 6                       |
| 1500-100000  |                              |                              | 5                                  | 6                       |
| (B) 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                      |
| 300-1500   |                              |                              | f/1500                             | 30                      |
| 1500-100000  |                              |                              | 1                                  | 30                      |
| f = frequency in MHz * = Plane-wave equivalent power density |                              |                              |                                    |                         |

#### 4.1.2. Test Procedures

E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

These measurements should be repeated for three different client battery levels, 1%, 50%, and 99%.

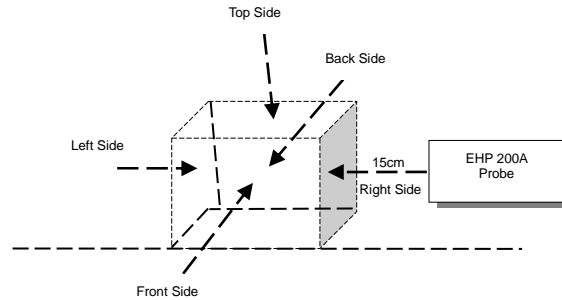
Record the test results.

KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01:

- (1) Power transfer frequency is less than 1 MHz
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (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.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (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.

Note: The device is in compliance with KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01 6 conditions.

**4.1.3. Test Setup**



**4.1.4. Test Result**

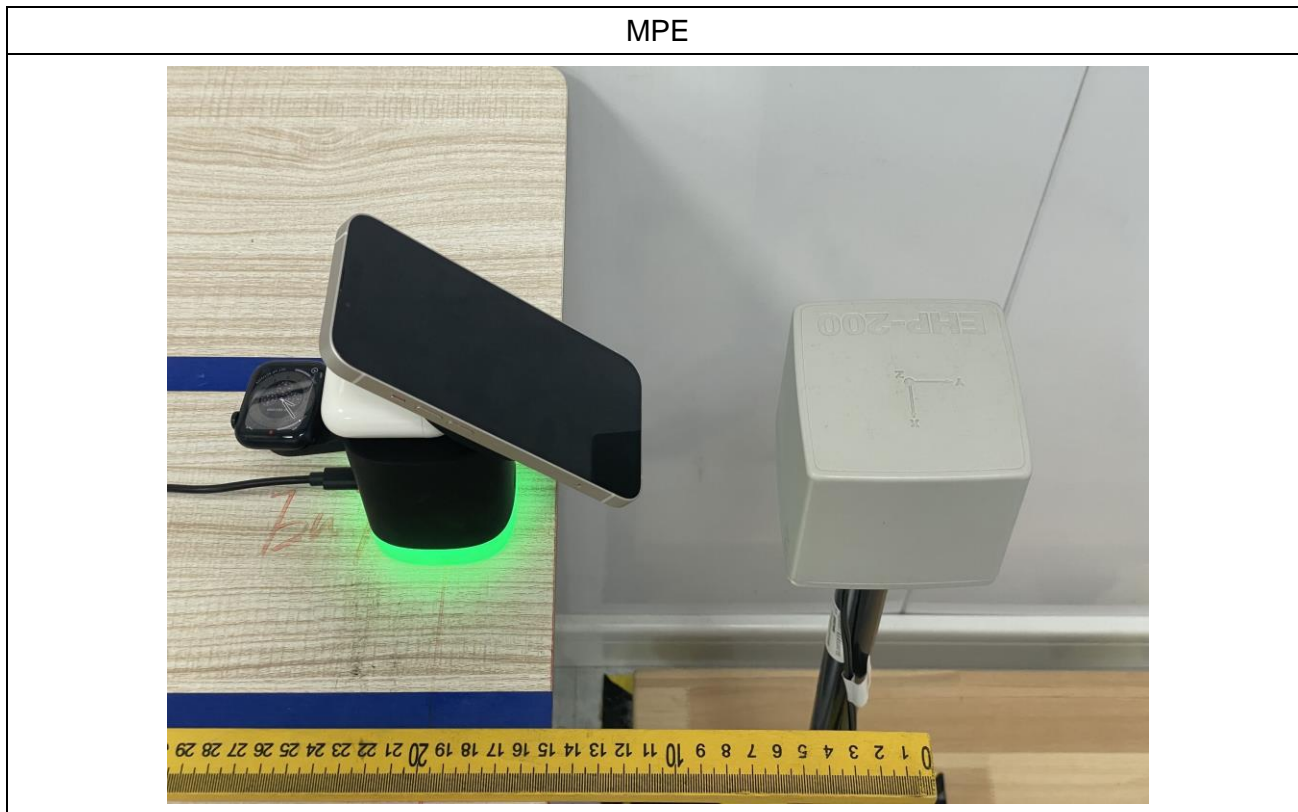
| Maximum permissible Exposure |            |                   |               |              |
|------------------------------|------------|-------------------|---------------|--------------|
| Battery levels               | Test sides | Test distance(cm) | E -field(V/m) | H-field(A/m) |
| <1%                          | Top        | 20                | 1.2576        | 0.0489       |
| <1%                          | Left       | 15                | 3.1673        | 0.0474       |
| <1%                          | Right      | 15                | 2.4691        | 0.0506       |
| <1%                          | Front      | 15                | 3.9877        | 0.0489       |
| <1%                          | Back       | 15                | 4.8745        | 0.0575       |
| Limit                        |            |                   | 614           | 1.63         |
| Margin Limit (%)             |            |                   | 0.79%         | 3.53%        |

| Maximum permissible Exposure |            |                   |               |              |
|------------------------------|------------|-------------------|---------------|--------------|
| Battery levels               | Test sides | Test distance(cm) | E -field(V/m) | H-field(A/m) |
| <50%                         | Top        | 20                | 1.2555        | 0.0484       |
| <50%                         | Left       | 15                | 3.1665        | 0.0472       |
| <50%                         | Right      | 15                | 2.4684        | 0.0498       |
| <50%                         | Front      | 15                | 3.9854        | 0.0484       |
| <50%                         | Back       | 15                | 4.8733        | 0.0565       |
| Limit                        |            |                   | 614           | 1.63         |
| Margin Limit (%)             |            |                   | 0.79%         | 3.47%        |

| Maximum permissible Exposure |            |                   |              |              |
|------------------------------|------------|-------------------|--------------|--------------|
| Battery levels               | Test sides | Test distance(cm) | E-field(V/m) | H-field(A/m) |
| <99%                         | Top        | 20                | 1.2541       | 0.0482       |
| <99%                         | Left       | 15                | 3.1654       | 0.0470       |
| <99%                         | Right      | 15                | 2.4675       | 0.0498       |
| <99%                         | Front      | 15                | 3.9849       | 0.0481       |
| <99%                         | Back       | 15                | 4.8727       | 0.0552       |
| Limit                        |            |                   | 614          | 1.63         |
| Margin Limit (%)             |            |                   | 0.79%        | 3.39%        |

## 5 Photographs of the Test Setup

MPE



\*\*\*\*\* END OF REPORT \*\*\*\*\*