

# TEST REPORT

**Reference No.**..... : WTD23X12259780W003  
**FCC ID** ..... : 2ALCVCKSW5010  
**Applicant** ..... : Emerson Radio Corp.  
**Address** ..... : 959 Route 46 East, Suite 210, 2nd Floor, Parsippany NJ 07054, USA  
**Manufacturer** ..... : Shenzhen Maniway Electronics Limited  
**Address** ..... : Bldg 8, Hualian Hebei Industrial Estate, Longhua Street, Longhua District,  
SHENZHEN Guangdong  
**Product Name** ..... : Alarm Clock FM Radio with Bluetooth Speaker and Wireless Chargers  
**Model No.**..... : CKSW5010  
**Standards** ..... : KDB 680106 D01 V04  
**Date of Receipt sample** .... : 2023-12-06  
**Date of Test**..... : 2023-12-06 to 2024-01-12  
**Date of Issue** ..... : 2024-01-13  
**Test Report Form No.** ..... : WTX\_KDB 680106\_D01\_V04W  
**Test Result**..... : **Pass**

Remarks:

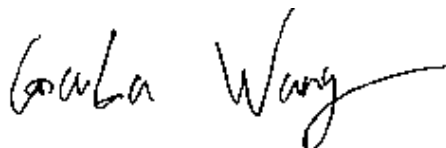
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Report version

| Version No. | Date of issue | Description |
|-------------|---------------|-------------|
| Rev.00      | 2024-01-13    | Original    |
| /           | /             | /           |

## 1. GENERAL INFORMATION

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

| General Description of EUT   |   |
|--|---|
| Product Name:  | Alarm Clock FM Radio with Bluetooth Speaker and Wireless Chargers                     |
| Trade Name   | Emerson   |
| Model No.:   | CKSW5010  |
| Adding Model(s):   | CKSWXXXX (where “XXXX” is alphanumeric denotes different display color or cosmetics ) |
| Rated Voltage:   | AC120V60Hz  |
| Battery Capacity:  | /   |
| Adapter Model:   | GJ30WD-1200300U<br>INPUT:AC120V AC~60Hz<br>OUTPUT:DC12V 3A<br>POWER CONSUMPTION:54W   |
| <i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model CKSW5010, but the circuit and the electronic construction do not change, declared by the manufacturer.</i> |   |

| Technical Characteristics of EUT   |  |
|--|--|
| Frequency Range:   | 110KHz-145kHz(15W)<br>110KHZ-205kHz (5W) |
| Modulation Type:   | ASK                                      |
| Antenna Type:  | Coil Antenna                             |
| Input:   | Adapter DC12V                            |
| Wireless output:   | Output: 5W,7.5W,15W                      |
| Rated Power:   | Total: 15W (Wireless output)             |
| Antenna Gain   | 0dBi                                     |
| <i>Note The Antenna Gain is provided by the customer and can affect the validity of results.</i> |  |

1.2 Auxiliary Equipment List and Details

Auxiliary Equipment List and Details

| Description | Manufacturer | Model | Serial Number |
|-------------|--------------|-------|---------------|
| /           | /            | /     | /             |

EUT Cable List and Details

| Cable Description | Length (m) | Shielded/Unshielded | With / Without Ferrite |
|-------------------|------------|---------------------|------------------------|
| DC cable          | 1.5        | Unshielded          | Without Ferrite        |

1.3 Test Equipment List and Details

| Description                             | Manufacturer | Model     | Serial No. | Cal Date   | Due Date   |
|---|--------------|-----------|------------|------------|------------|
| ELECTRIC AND MAGNETIC<br>FIELD ANALYZER | Narda        | EHP-200AC | 180ZX10226 | 2021-05-20 | 2024-05-19 |
| Note: The deviation response is 0.8dB.  |              |           |            |            |            |

## 2. RF Exposure Test Report

### 2.1 Standard Applicable

According to §1.1310 system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

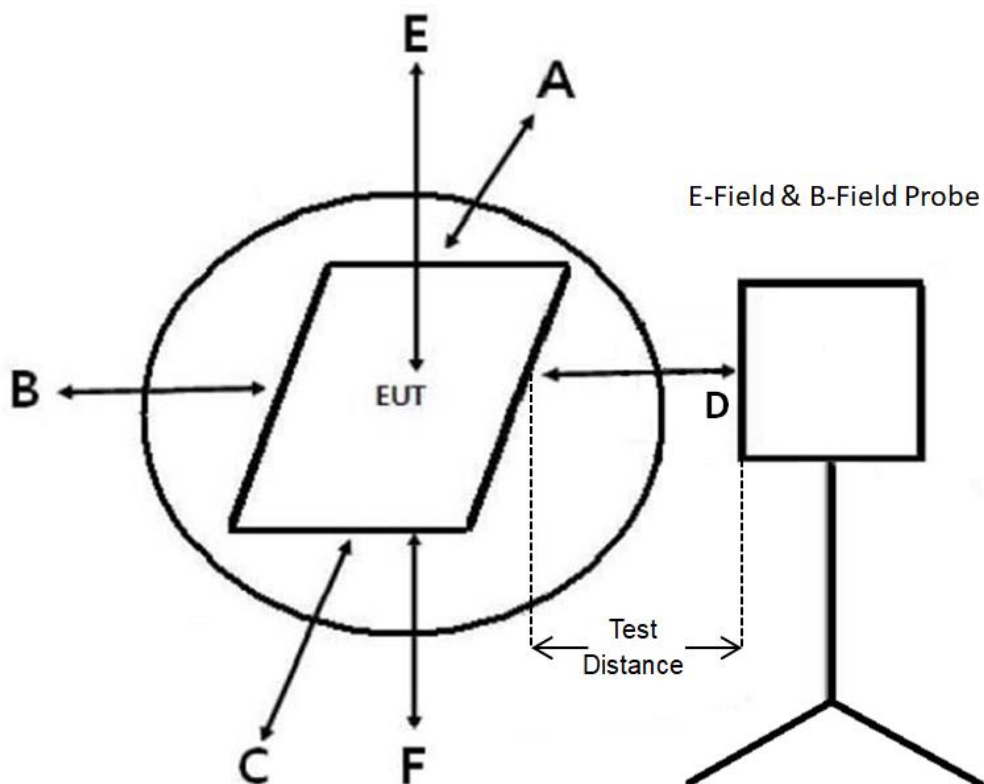
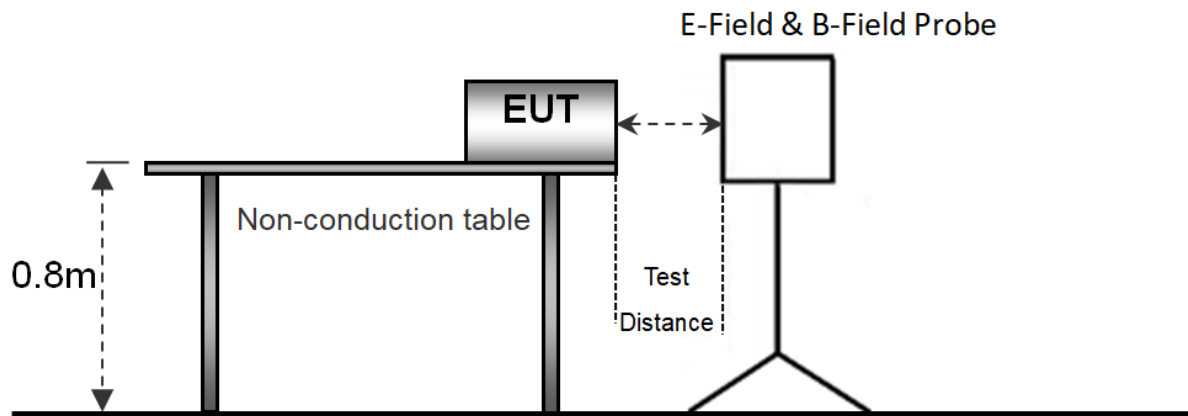
| Frequency range (MHz)  | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits 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

### 2.2 Test Conditions

| Test Mode   | Description       | Remark                 | Power Supply Mode                                   |
|---|-------------------|------------------------|---|
| TM1   | Wireless Charging | Connect to the Adapter | AC120V 60Hz for adapter, Wireless Charging (5W)     |
| TM2   | Wireless Charging | Connect to the Adapter | AC120V 60Hz for adapter, Wireless Charging (15W)    |
| TM3   | Wireless Charging | Connect to the Adapter | AC120V 60Hz for adapter, Wireless Charging (5W+15W) |
| Note: The EUT was tested with empty load, half load, and full load, and recorded the worst mode (full load) data in the report. |                   |                        |   |
| Measurement Distance:   | 15 cm and 20 cm   |                        |   |

## 2.3 Test Procedure



- Probe Model: EHP-200AC; The probe sensor is 8 mm below the surface.
- The measurement probe was placed at test distance (15 cm for A, B, C, D, F and 20 cm for E), which is between the edge of the charger and the edge of probe.
- The highest emission level was recorded at the measurement points (A, B, C, D, E, F).
- The EUT was measured according to the distance of KDB 680106 D01 v04



## 2.4 Test Result

The EUT complies with item 5.2 of KDB 680106 D01 v04

1. The power transfer frequency is below 1 MHz.  
Yes, the device operates in the frequency range from 110kHz 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 the primary coil is less than 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, the surfaces of the transmitter and client device enclosures has be in physical contact.
4. Only § 2.1091-Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).  
Yes, It is mobile exposure conditions only.
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. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.  
Yes, The EUT field strength levels are less than 50% of the MPE limit, refer to test TM1 list.
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. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well.  
Yes, The EUT field strength levels are less than 50% of the MPE limit, refer to test TM1 list.

*Test Mode: TM1*

| Electric Field Emissions |                     |            |                 |
|--------------------------|---------------------|------------|-----------------|
| Test Position            | Measure Value (V/m) | Limit(V/m) | 50% Limit (V/m) |
| Top                      | 4.12                | 614        | 307             |
| Bottom                   | 1.21                | 614        | 307             |
| Side 1                   | 3.12                | 614        | 307             |
| Side 2                   | 4.23                | 614        | 307             |
| Side 3                   | 3.21                | 614        | 307             |
| Side 4                   | 3.11                | 614        | 307             |
| Magnetic Field Emissions |                     |            |                 |
| Test Position            | Measure Value (A/m) | Limit(A/m) | 50% Limit (A/m) |
| Top                      | 0.25                | 1.63       | 0.815           |
| Bottom                   | 0.53                | 1.63       | 0.815           |
| Side 1                   | 0.41                | 1.63       | 0.815           |
| Side 2                   | 0.37                | 1.63       | 0.815           |
| Side 3                   | 0.26                | 1.63       | 0.815           |
| Side 4                   | 0.21                | 1.63       | 0.815           |

*Test Mode: TM2*

| Electric Field Emissions |                     |            |                 |
|--------------------------|---------------------|------------|-----------------|
| Test Position            | Measure Value (V/m) | Limit(V/m) | 50% Limit (V/m) |
| Top                      | 5.11                | 614        | 307             |
| Bottom                   | 2.44                | 614        | 307             |
| Side 1                   | 4.111               | 614        | 307             |
| Side 2                   | 5.08                | 614        | 307             |
| Side 3                   | 3.21                | 614        | 307             |
| Side 4                   | 3.15                | 614        | 307             |
| Magnetic Field Emissions |                     |            |                 |
| Test Position            | Measure Value (A/m) | Limit(A/m) | 50% Limit (A/m) |
| Top                      | 0.21                | 1.63       | 0.815           |
| Bottom                   | 0.45                | 1.63       | 0.815           |
| Side 1                   | 0.42                | 1.63       | 0.815           |
| Side 2                   | 0.36                | 1.63       | 0.815           |
| Side 3                   | 0.26                | 1.63       | 0.815           |
| Side 4                   | 0.21                | 1.63       | 0.815           |

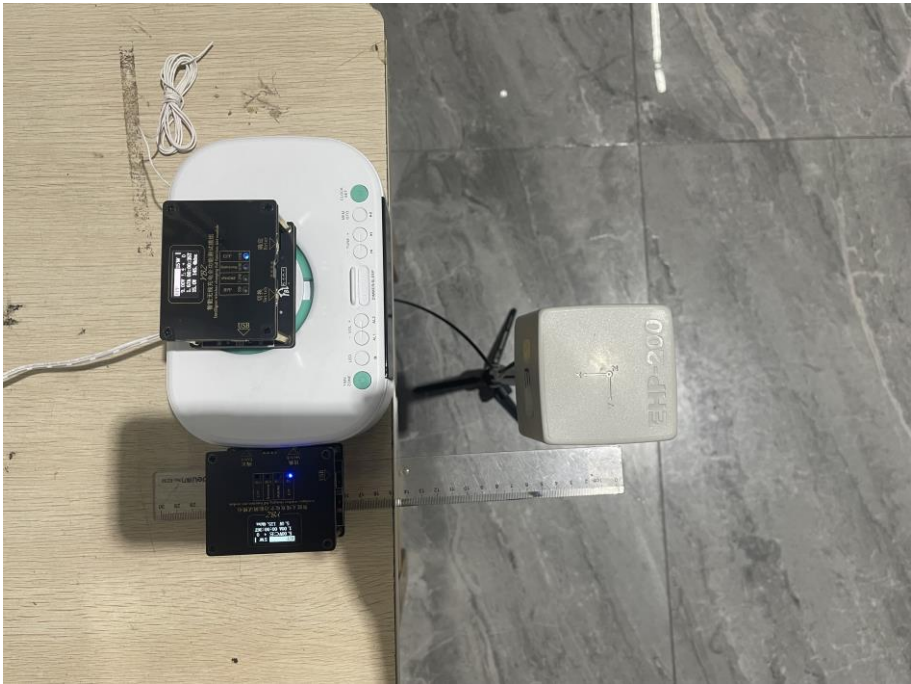
*Test Mode: TM3*

| Electric Field Emissions |                     |            |                 |
|--------------------------|---------------------|------------|-----------------|
| Test Position            | Measure Value (V/m) | Limit(V/m) | 50% Limit (V/m) |
| Point E                  | 6.14                | 614        | 307             |
| Point F                  | 2.25                | 614        | 307             |
| Point A                  | 4.15                | 614        | 307             |
| Point B                  | 5.84                | 614        | 307             |
| Point C                  | 3.23                | 614        | 307             |
| Point D                  | 3.26                | 614        | 307             |
| Magnetic Field Emissions |                     |            |                 |
| Test Position            | Measure Value (A/m) | Limit(A/m) | 50% Limit (A/m) |
| Point E                  | 0.28                | 1.63       | 0.815           |
| Point F                  | 0.54                | 1.63       | 0.815           |
| Point A                  | 0.43                | 1.63       | 0.815           |
| Point B                  | 0.38                | 1.63       | 0.815           |
| Point C                  | 0.29                | 1.63       | 0.815           |
| Point D                  | 0.24                | 1.63       | 0.815           |

2.5 Measurement Uncertainty

| Measurement uncertainty  |            |             |
|--------------------------|------------|-------------|
| Parameter                | Conditions | Uncertainty |
| Electric Field Emissions | Radiated   | ±1.56 (V/m) |
| Magnetic Field Emissions | Radiated   | ±0.08(A/m)  |

2.6 Test Photos



## APPENDIX PHOTOGRAPHS

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Please refer to “ANNEX”

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