

# TEST REPORT

**Reference No.**..... : WTD21D01008815W002  
**FCC ID** ..... : 2ALCVCKS1521  
**Applicant**..... : Emerson Radio Corp.  
**Address**..... : 35 Waterview Blvd, Parsippany, New Jersey 07054, United States  
**Manufacturer** ..... : HE XUN ELECTRONICS CO., LTD  
**Address**..... : The 3rd Floor, Workshop, Shiwu (Huizhou Fuersheng Wire and Cable Co., LTD.), Queen Village, Zhenlong Town, Huiyang District, Huizhou city, Guangdong Province, China.  
**Product**..... : SmartSet Alarm Clock Radio  
**Brand Name**..... : Emerson  
**Model(s)** ..... : CKS1521, CKS1522, CKS1523  
**Standards**..... : FCC Part 1.1307  
**Date of Receipt sample** .... : 2021-01-27  
**Date of Test** ..... : 2021-01-27 to 2021-03-11  
**Date of Issue**..... : 2021-03-11  
**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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### 3. Revision History

| Test report No.        | Date of Receipt sample | Date of Test                   | Date of Issue | Purpose  | Comment | Approved |
|------------------------|------------------------|--------------------------------|---------------|----------|---------|----------|
| WTD21D01008815<br>W002 | 2021-01-27             | 2021-01-27<br>to<br>2021-03-11 | 2021-03-11    | Original | -       | Valid    |

## 4. General Information

### 4.1. General Description of E.U.T.

|                       |                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Product:              | SmartSet Alarm Clock Radio                                                                                                                    |
| Model(s):             | CKS1521, CKS1522, CKS1523                                                                                                                     |
| Model difference:     | All models are same in all respects, only the model names are different for different market requirement. The test sample's model is CKS1521. |
| Operation Frequency:  | 2402-2480MHz, 79 Channels in total                                                                                                            |
| Antenna installation: | PCB Printed Antenna                                                                                                                           |
| Antenna Gain:         | -0.58dBi                                                                                                                                      |
| Type of Modulation:   | GFSK, $\pi/4$ DQPSK                                                                                                                           |
| Hardware Version:     | REV 1.0                                                                                                                                       |
| Software Version:     | V3.3                                                                                                                                          |

### 4.2. Details of E.U.T.

|                       |                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------|
| Max. RF output power: | -3.82dBm                                                                                        |
| Ratings:              | Input: 120V AC ~ 60Hz<br>DC 3V by CR2032 Lithium Battery (clock backup)<br>USB output: 5V==1.5A |
| Adapter:              | Refer to following table                                                                        |

| Adapter           | Manufacturer                         | M/N             | Rating                                               |
|-------------------|--------------------------------------|-----------------|------------------------------------------------------|
| Main Adapter      | DONGGUAN GURONG ELECTRONIC CO., LTD  | GQ07-050150-DU  | INPUT: 120V AC ~ 60Hz<br><br>POWER CONSUMMPTION: 15W |
| Alternate Adapter | GUANGDONG KEERDA ELECTRONIC CO., LTD | DZ007AHL050150U |                                                      |

## 5. Test Summary

| Test Items                                                        | Test Requirement | Result |
|-------------------------------------------------------------------|------------------|--------|
| Maximum Permissible Exposure<br>(Exposure of Humans to RF Fields) | 1.1307           | PASS   |

## 6. RF Exposure

Test Requirement: FCC Part 1.1307

Evaluation Method: FCC Part 2.1091 & KDB 447498 D01 General RF Exposure Guidance v06

### 6.1. Requirements

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 levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

### 6.2. The procedures / limit

#### (A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|------------------------------------------|------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                   | 6                                                                |
| 3.0-30                | 1842 / f                          | 4.89 / f                          | (900 / f)*                               | 6                                                                |
| 30-300                | 61.4                              | 0.163                             | 1.0                                      | 6                                                                |
| 300-1500              |                                   |                                   | F/300                                    | 6                                                                |
| 1500-100,000          |                                   |                                   | 5                                        | 6                                                                |

#### (B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|------------------------------------------|------------------------------------------------------------------|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                   | 30                                                               |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                 | 30                                                               |
| 30-300                | 27.5                              | 0.073                             | 0.2                                      | 30                                                               |
| 300-1500              |                                   |                                   | F/1500                                   | 30                                                               |
| 1500-100,000          |                                   |                                   | 1.0                                      | 30                                                               |

Note: f = frequency in MHz; \*Plane-wave equivalent power density

### 6.3. MPE Calculation Method

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = output power to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

| Antenna Gain (dBi) | Antenna Gain (numeric) | Max. conducted Output Power (dBm) | Max. conducted Output Power (mW) | Power Density (mW/cm <sup>2</sup> ) | Limit of Power Density (mW/cm <sup>2</sup> ) | Result     |
|--------------------|------------------------|-----------------------------------|----------------------------------|-------------------------------------|----------------------------------------------|------------|
| -0.58              | 0.875                  | -3.82                             | 0.41                             | 0.000072                            | 1                                            | Compliance |

### 6.4. Result: Compliance

No SAR measurement is required.

=====End of Report=====