

TEST REPORT

Reference No. : WTD22D03045392W002
FCC ID : 2ALCVCKS1521N
Applicant..... : Emerson Radio Corp.
Address..... : 35 Waterview Blvd, Parsippany NJ 07054, USA
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

Brand Name..... : Emerson
Product..... : SmartSet Alarm Clock Radio
Model(s). : CKS1521,CKS1522, CKS1523
Standards..... : FCC 47CFR Part 2 Subpart J Section 2.1091
Date of Receipt sample : 2022-03-21
Date of Test : 2022-03-21 to 2022-03-29
Date of Issue..... : 2022-05-27
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
WTD22D03045392 W002	2022-03-21	2022-03-21 to 2022-03-29	2022-05-27	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:	The model names, cosmetics and display colors are different. Model CKS1521 was tested in this report.
BT Version:	5.1
Operation Frequency:	2402-2480MHz, 79 Channels in total
Max. RF output power:	3.06dBm
Antenna installation:	PCB Printed Antenna
Antenna Gain:	-0.58dBi
Type of Modulation:	FHSS
Modulation Technology:	GFSK, $\pi/4$ DQPSK, 8DPSK
Hardware Version:	REV 1.3
Software Version:	V4.9

4.2. Details of E.U.T.

Ratings:	DC 5V from adapter DC 3V by CR2032 Lithium Battery (clock backup)
USB port output:	USB output: 5.0V $\approx$ 1.5A
Adapter:	refer to next table

Adapter	Manufacturer	M/N	Rating
Main Adapter	HUIZHOU GUOAOTONG TECHNOLOGY CO., LTD.	GA-0502000	INPUT: 120V AC ~ 60Hz POWER CONSUMPTION: 15W
Alternate Adapter	GUANGDONG KEERDA ELECTRONIC CO., LTD	DZ007AHL050150U	

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	FCC Part 2.1091	PASS

6. RF Exposure

Test Requirement: FCC 47CFR Part 2 Subpart J Section 2.1091

Evaluation Method: FCC 47CFR Part 1 Subpart I Section 1.1310,
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

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	<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	<30

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/cm²)

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 ²)	Limit of Power Density (mW/cm ²)	Result
-0.58	0.875	3.06	2.02	0.000352	1	Compliance

6.4. Result: Compliance

No SAR measurement is required.

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