

TEST REPORT

Reference No...... : WTD22D01004910W002
FCC ID : 2ALCVER100501
Applicant..... : Emerson Radio Corp.
Address..... : 35 Waterview Blvd, Parsippany, New Jersey 07054, United States
Manufacturer : Huizhou Shangmeijia Electronic Technology Co., Ltd.
Address..... : Jiutan North Development Area, Yuanzhou Town, Boluo Country, Huizhou City, Guangdong, China.
Brand Name..... : Emerson
Product..... : Alarm Clock Radio with Bluetooth and Wireless Chargers
Model(s) : ER100501, ER100502, ER100503, CKSW1516
Standards..... : FCC 47CFR Part 2 Subpart J Section 2.1091
Date of Receipt sample : 2022-01-26
Date of Test : 2022-01-26 to 2022-02-16
Date of Issue..... : 2022-04-08
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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2 Contents

	Page
1 COVER PAGE.....	1
2 CONTENTS	2
3 REVISION HISTORY	3
4 GENERAL INFORMATION.....	4
4.1 GENERAL DESCRIPTION OF E.U.T.....	4
4.2 DETAILS OF E.U.T.....	4
4.3 TEST FACILITY	5
4.4 SUBCONTRACTED	5
4.5 ABNORMALITIES FROM STANDARD CONDITIONS	5
4.6 TEST MODE	5
5 TEST SUMMARY	6
6 EQUIPMENT USED DURING TEST	7
6.1 EQUIPMENTS LIST	7
6.2 DESCRIPTION OF AUXILIARY EQUIPMENT	7
6.3 TEST EQUIPMENT CALIBRATION	7
7 RF EXPOSURE.....	8
7.1 THE PROCEDURES / LIMIT	8
7.2 EUT OPERATION.....	8
7.3 TEST SETUP	9
7.4 EQUIPMENT APPROVAL CONSIDERATIONS (CLAUSE 5 B) OF KDB 680106 D01 v03.....	9
7.5 TEST RESULT	10
8 PHOTOGRAPHS OF TEST SETUP	11

3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD22D01004 910W002	2022-01-26	2022-01-26 to 2022-02-16	2022-04-08	original	-	Valid

4 General Information

4.1 General Description of E.U.T

Product..... : Alarm Clock Radio with Bluetooth and Wireless Chargers
Model(s)..... : ER100501, ER100502, ER100503, CKSW1516
Model Difference..... : The model names, cosmetics and display colors are different.
The test sample's model is ER100501
Hardware Version..... : MAIN BOARD: REV. 2.1
DISPLAY BOARD: REV. 1.0
WIRELESS CHARGER: REV. 1.0
Software Version..... : V32

4.2 Details of E.U.T

Frequency Range..... : WPT 110-205kHz
Max. RF output power... : WPT 76.57dBμV/m@3m distance
Type of Modulation..... : Load Modulation
Antenna installation..... : Inductive loop coil Antenna
Ratings..... : DC 12V from adapter
DC 3V by CR2032 Lithium Battery (clock backup)
Top wireless output..... : 10W Max.
Side wireless output..... : 3W Max.
USB port output..... : USB-A: 5VDC 0.5A, USB-C: 5VDC 1.0A
Adapter..... : Input: 120V ~ 60Hz
Power consumption 36W

Note: please refer to user manual and EUT photos for more details.

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 Services (Shenzhen) 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 Services (Shenzhen) 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.

4.6 Test Mode

Test Mode	Descriptions
Idle mode (standby)	EUT alone powered by AC/DC adapter
Charging mode 1	Side ant. full-load
Charging mode 2	Top ant. full-load
Charging mode 3	Side ant. full-load + Top ant. full-load

Note:

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst-data were recorded and reported.

5 Test Summary

Test Items	Test Requirement	Result
Electric Field Strength (E) (V/m)	FCC CFR 47 part1subpart I §1.1310 KDB 680106 D01 v03	PASS
Magnetic Field Strength (H) (A/m)		PASS

Note: -

6 Equipment Used during Test

6.1 Equipments List

RF EXPOSURE						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Valid
1	Electric and magnetic field Analyzer	NARDA	EHP-200AC	180ZX10226	2021-05-20	1Year

6.2 Description of Auxiliary Equipment

Equipment	Manufacturer	Model No.	Series No.
Wireless charging dummy load (15W Max.)	Waltek	/	/
Wireless charging dummy load (15W Max.)	Waltek	/	/
-	-	-	-

6.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R. China.

7 RF Exposure

7.1 The procedures / limit

FCC 47CFR part 1 Subpart I §1.1310: The criteria listed in the following table 1 shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of this chapter.

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.

Note:

RF exposure compliance will need to be determined with respect to 1.1307(C) and (d) of the FCC rule s. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m, 1.63A/m).

7.2 EUT Operation

Operating Environment:

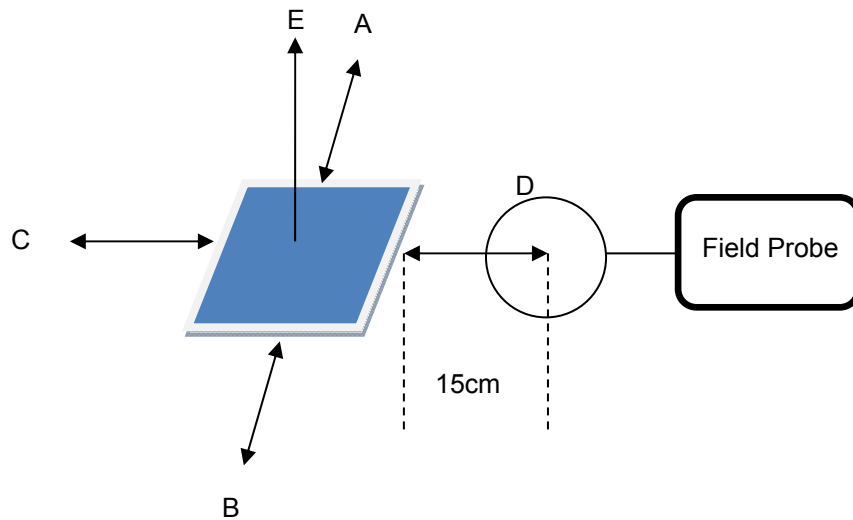
Temperature: 21.8 °C
Humidity: 47.9 % RH

Atmospheric Pressure: 101.1kPa

EUT Operation: Charging mode 3

Only the worst-case transmitting mode were record in the report.

7.3 Test Setup



The RF exposure test was performed in anechoic chamber or shielding room.

The probe was placed at test distance (15cm) which is between the edge of the charger and the geometric centre of probe.

The EUT was put in different directions (Left, Right, Front, Rear, Top) to obtain the maximum reading.

The EUT was measured according to the dictates of KDB 680106 D01 RF Exposure Wireless Charging App v03.

7.4 Equipment approval considerations (clause 5 b) of KDB 680106 D01 v03

- (1) Power transfer frequency is less than 1 MHz.

This device's frequency range is 110-205kHz.

- (2) Output power from each primary coil is less than or equal to 15 watts.

The device has two coil antennas, one of which has a maximum output of 3W and the other has a maximum output of 15W.

- (3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

The device has two coils corresponding to different clients.

- (4) Client device is placed directly in contact with the transmitter.

Client device is placed directly in contact with the transmitter.

- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes

- (6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Please refer to clause 7.5 test result.

7.5 Test Result

Maximum RF exposure reading and percentage

Electric Field Limit			Magnetic Field Limit		
FCC	Maximum RMS (V/m)	Percentage (%)	FCC	Maximum RMS (A/m)	Percentage (%)
614	17.89	2.91	1.63	0.44	27.15

E-Filed Strength (V/m) of Charging mode 3

Frequency MHz	Test Position					Maximum (V/m)
	A	B	C	D	E	
0.148	17.89	14.72	11.75	12.88	10.60	17.89

H-Filed Strength (A/m) of Charging mode 3

Frequency MHz	Test Position					Maximum (A/m)
	A	B	C	D	E	
0.148	0.441	0.096	0.099	0.341	0.102	0.441

8 Photographs of test setup

Note: Please refer to appendix: Appendix-ER100501-Photos.

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