

Test report No:  
NIE: 78472RAN.002A1

## Test report

IEEE Std C95.3-2021  
FCC 47 CFR Part 2.1091

(*) Identification of item tested	Charger for Wellness ring
(*) Trademark	OURA
(*) Model and /or type reference tested	OA12
(*) Other identification of the product	FCC ID : 2AD7V-OURA2402 IC : 20635-OURA2402 HW version : 01 SW version : 2.0.7
(*) Features	Inductive charging
(*) Manufacturer	Oura Health Oy Elektroniikkatie 10, 90590 Oulu, Finland
Test method requested, standard	IEEE Std C95.3-2021. FCC 47 CFR Part 2.1091.
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Manuel García Antennas Lab Technical Responsible
Date of issue	2024-07-24
Report template No	FAN39_02 (* "Data provided by the client")



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## Competences and guarantees

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DEKRA Testing and Certification is a FCC-recognized accredited testing laboratory with appropriate scope of accreditation that include testing performed in this test report.

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## General conditions

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1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification S.A.U.
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## Uncertainty

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Uncertainty (factor  $k=2$ ) was calculated according to the DEKRA Testing and Certification S.A.U. internal documents PODT000 and FAN040.

## Data provided by the client

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The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested", "Other identification of the product", "Features" and "Test sample description").
2. Normal device use conditions and minimum use distance information.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results. The laboratory is not responsible for such information and it is not covered by accreditation.

## Usage of samples

Samples undergoing test have been selected by: Oura Health Oy.

Samples are composed of the following elements:

Sample	Control N°	Description	Model	Serial N°	Date of reception
S/01	78472/010	USB-C Cable	--	--	2024-03-05
S/01	78472/071	Commercial OA12 Charger size 10	OA12	--	2024-03-11
S/01	78472/059	Commercial OA11 size 10 Black	Oura 10	--	2024-03-11
S/01	78472/091	Powe adapter USB-C	--	--	2024-03-11

1. Sample M/01 has undergone the test(s) specified in subclause “Test method requested”.

## Test sample description

Description of product .....	OURA is a revolutionary wellness ring and app, designed to help user gets more restful sleep and performs better. It enables user to learn how the lifestyle choices affect user’s sleep, and how the quality of the sleep affects user’s ability to perform. The OURA ring can automatically tell when user is sleeping. When user goes to sleep, the OURA ring analyzes the quality of the rest and recovery by measuring the heart rate (optically), respiration rate, body temperature, and movement. While user is awake, it monitors the duration and intensity of the activities, and the time user spends sitting. The OURA app integrates and visualizes this data to identify patterns between the sleep quality and daily activities. By understanding how well user slept and recharged, it can determine the readiness to perform and help user adjust the intensity and duration of the day’s activities. It can also uncover actionable insights for changes to the daily activities that can help user sleep better.		
Software version.....	2.0.7		
Hardware version .....	01		
Mounting position .....	<input checked="" type="checkbox"/>	Table top equipment	
	<input type="checkbox"/>	Wall/Ceiling mounted equipment	
	<input type="checkbox"/>	Equipment used next to the ear	
	<input type="checkbox"/>	Hand-held equipment	
	<input type="checkbox"/>	Other: Body-worn device	
Accessories (not part of the test item).....	Description	Type	Manufacturer
	Charging adapter	---	
	USB cable	---	

## Identification of the client

Oura Health Oy  
 Elektroniikkatie 10, 90590 Oulu, Finland

## Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2024-04-19
Date (finish)	2024-05-10

## Document history

Report number	Date	Description
78472RAN.002	2024-05-17	First release
78472RAN.002A1	2024-07-24	Second release. WPT measurement setup picture has been moved to Appendix C. This modification test report cancels and replaces the test report 78472RAN.002.

## Environmental conditions

Date	Max. Temp. °C	Min. Temp. °C	Max. Hum. %	Min. Hum. %	Limit
From 2024-04-19 to 2024-04-22	24.97	21.13	46.00	36.30	18-40 °C, 20-80%
2024-05-10	24.87	23.77	41.82	36.64	18-40 °C, 20-80%

## Remarks and comments

- The tests have been performed by the technical personnel: Ismael Gamarro.
- The instrumentation utilized to perform the tests covered in this test report is listed in the following table:

DEKRA Control Number	Equipment	S/N
05780	TEMPERATURE AND HUMIDITY PROBE	60038023023
09949	MAGPy	3095

## Testing verdicts

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Not applicable :	N/A
Pass :	P
Fail :	F
Not measured :	N/M

## Summary

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FCC 47CFR Part 2.1091 & IEEE Std C95.3-2021	VERDICT			
	N/A	P	F	NM
Wireless Charger 6.78 MHz		P		

## Appendix A: Test results

## WPT Evaluation

According to KDB 680106 D01, RF exposure evaluation for mobile devices should be conducted assuming a user separation distance of 20 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements of external E and H field strengths using a commercial sample wireless charger and client provided by the manufacturer have been performed in the worst case side taking consideration E and H field measurements. To know this worst-case side, previous measurements in all sides of the device have been performed with a separation distance of 20 cm, according to minimum declared use distance, measured from the probe center to the edge of the device. Additionally, measurements at the worst-case position were performed in two further testing distance (25 and 30 cm) or until a 1/d field decay was observed in the principal axis of the device according to KDB 680106 D01 requisites.

See the “WPT Measurement setup” picture in Appendix C for more details.

Previous measurements for worst-case searching:

Technology	WPT client	Battery level	Test Side	Distance to DUT (cm)	Freq. (MHz)	E-Field (V/m)	Limit (V/m)	% E-Limit	Verdict
WPT	S/01	99%	Front edge	20	6.57	0.05	125.42	0.04%	P
		99%	Back edge	20	6.35	0.02	129.76	0.02%	P
		99%	Left edge	20	6.72	0.03	122.62	0.02%	P
		99%	Right edge	20	6.65	0.04	123.91	0.03%	P
		99%	Top face	20	6.82	0.04	120.82	0.03%	P
		99%	Bottom face	20	7.24	0.03	113.81	0.03%	P

**Table 1:** E-field worst-case side search



Technology	WPT client	Battery level	Test Side	Distance to DUT (cm)	Freq. (MHz)	H-Field (A/m)	Limit (A/m)	% A-Limit	Verdict
WPT	S/01	99%	Front edge	20	6.57	0.001	0.33	0.23%	P
		99%	Back edge	20	6.35	0.001	0.34	0.36%	P
		99%	Left edge	20	6.72	0.002	0.33	0.51%	P
		99%	Right edge	20	6.65	0.002	0.33	0.53%	P
		99%	Top edge	20	6.82	0.001	0.32	0.25%	P
		99%	Bottom face	20	7.24	0.001	0.30	0.47%	P

**Table 2:** H-field worst-case side search

The maximum measured values for each transmitting technology are listed in the following tables:

Technology	WPT client	Battery level	Test Side	Distance to DUT (cm)	Freq. (MHz)	E-Field (V/m)	Limit (V/m)	% E-Limit	Verdict
WPT	S/01	99%	Right edge	20	7.01	0.770	117.55	0.66%	P
		50%	Right edge	20	6.36	1.160	129.56	0.90%	P
		10%	Right edge	20	6.59	1.140	125.04	0.91%	P
		99%	Right edge	25	7.04	0.730	117.05	0.62%	P
		50%	Right edge	25	7.03	0.800	117.21	0.68%	P
		10%	Right edge	25	7.27	0.520	113.34	0.46%	P
		99%	Right edge	30	7.12	0.320	115.73	0.28%	P
		50%	Right edge	30	6.70	0.120	122.99	0.10%	P
		10%	Right edge	30	6.53	0.140	126.19	0.11%	P

**Table 3:** E-field measurements values

Technology	WPT client	Battery level	Test Side	Distance to DUT (cm)	Freq. (MHz)	H-Field (A/m)	Limit (A/m)	% H-Limit	Verdict
WPT	S/01	99%	Right edge	20	6.65	0.004	0.33	1.33%	P
		50%	Right edge	20	7.11	0.005	0.31	1.49%	P
		10%	Right edge	20	6.73	0.005	0.33	1.42%	P
		99%	Right edge	25	6.32	0.006	0.35	1.62%	P
		50%	Right edge	25	7.23	0.005	0.30	1.55%	P
		10%	Right edge	25	6.77	0.006	0.32	1.93%	P
		99%	Right edge	30	7.21	0.004	0.30	1.32%	P
		50%	Right edge	30	7.08	0.004	0.31	1.32%	P
		10%	Right edge	30	6.86	0.005	0.32	1.59%	P

**Table 4:** H-field measurement values

All E-Field and H-Field values are complying to values shown into §1.1310, paragraph (e), "Table 1: limits for Maximum Permissible Exposure (MPE).

## Appendix B: FCC RF Exposure information

## FCC RF Exposure evaluation for mobile devices

A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the RF source's radiating structure(s) and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location while transmitting. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal desktop computer, are considered to be mobile devices if they meet the 20-centimeter separation requirement.

Evaluation of compliance with the exposure limits in § 1.1310, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or if the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is not exempt by the formulas and tables stated into § 1.1310, paragraphs (3), (i), (B) and (C).

According to §1.1310 Radiofrequency radiation exposure limits, paragraph (e), the limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields are:

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

According to TCB Workshop “Part 18 and WPT Updates”, April 27, 2022:

- Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.
- For all RF devices operating below 100 kHz, the provision in KDB 680106 apply, i.e. field strengths not to exceed 83 V/m and 90 A/m, for E and H fields, respectively.