

TEST REPORT

of

FCC CFR 47 part1, 1.1307(b), 1.1310

FCC ID: 2A68LHIN-WLC

Equipment Under Test : DUOLIF

Model Name : HIN-WLC

Variant Model Name(s) : -

Applicant : MEDICOSON Co., Ltd.

Manufacturer : MEDICOSON Co., Ltd.

Date of Receipt : 2022.04.26

Date of Test(s) : 2022.04.26 ~ 2022.05.30

Date of Issue : 2022.06.08

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

- 1) The results of this test report are effective only to the items tested.
- 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
- 3) This test report cannot be reproduced, except in full, without prior written permission of the Company.
- 4) The data marked * in this report was provided by the customer and may affect the validity of the test results.

We are responsible for all the information of this test report except for the data(*) provided by the customer.

Tested by:



Teo Kim

Technical Manager:



Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

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1.2. Details of Applicant

Applicant : MEDICOSON Co., Ltd.
Address : 704, 711, WMIT, 200, Gieopdosi-ro, Jijeong-myeon, Gangwon-do, Wonju-si, South Korea, 26354
Contact Person : Sang-beom, Kim
Phone No. : +82 33 747 6231

1.3. Details of Manufacturer

Company : Same as applicant
Address : Same as applicant

1.4. Description of EUT

Kind of Product	DUOLIF
Model Name	HIN-WLC
Serial Number	DU220500001
Power Supply	DC 5 V
Operation Mode	10 W
Frequency Range	112 ~ 122 kHz
Antenna Type	Loop Coil Antenna
H/W Version	1.0
S/W Version	1.0

1.5. Declaration of Manufacturer

- The EUT can only operate on Skin Care Device (HIN-7MB).

1.6. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Electric and Magnetic field Probe analyzer	NARDA	EHP 200AC	170WX91017	Dec. 02, 2021	Annual	Dec. 02, 2022
Anechoic Chamber	SY Corporation	L x W x H (9.6 m x 6.4 m x 6.6 m)	N/A	N.C.R.	N/A	N.C.R.

► Support Equipment*

Description	Manufacturer	Model
Skin Care Device	MEDICOSON	HIN-7MB
AC/DC ADAPTER	Shenzhen Merryking Electronics Co., Ltd.	MKC-0502000DEXU
USB Cable	Power cast	DC Cable

1.7. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 1 Subpart I		
Section	Test Item(s)	Result
1.1307(b)	Electronic Field, Magnetic Field	Complied
1.1310(e)(1)		

1.8. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Electric Field	19.78 %
Magnetic Field	13.66 %

All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicate a 95 % level of confidence.

1.9. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL003209	2022.06.08	Initial

1.10. Worst Case of Test Configurations

In order to check all kinds of possible configurations, EUT was evaluated with appropriate client and under each charging condition as below table.

Charging mode with client device	Mode	Description
Skin Care Device Model: HIN-7MB	10 W	1 % of battery 50 % of battery 99 % of battery
	Ant. 1: 112 ~ 122 kHz	

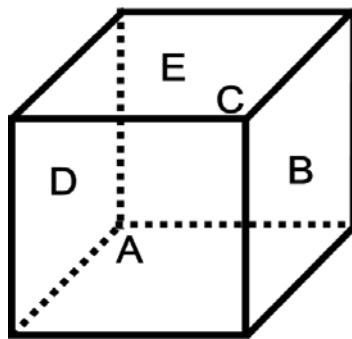
Note:

- EUT was investigated with client device under normal charging condition as above then worst value was only reported.

2. Test Result

2.1.1. Isotropic Probe Test Setup

The measurement probe (EHP-200AC) is a regular hexahedron and supports 3-axis isotropic probe.



A: Front of measurement probe

B: Right of measurement probe

C: Rear of measurement probe

D: Left of measurement probe

E: Top of measurement probe

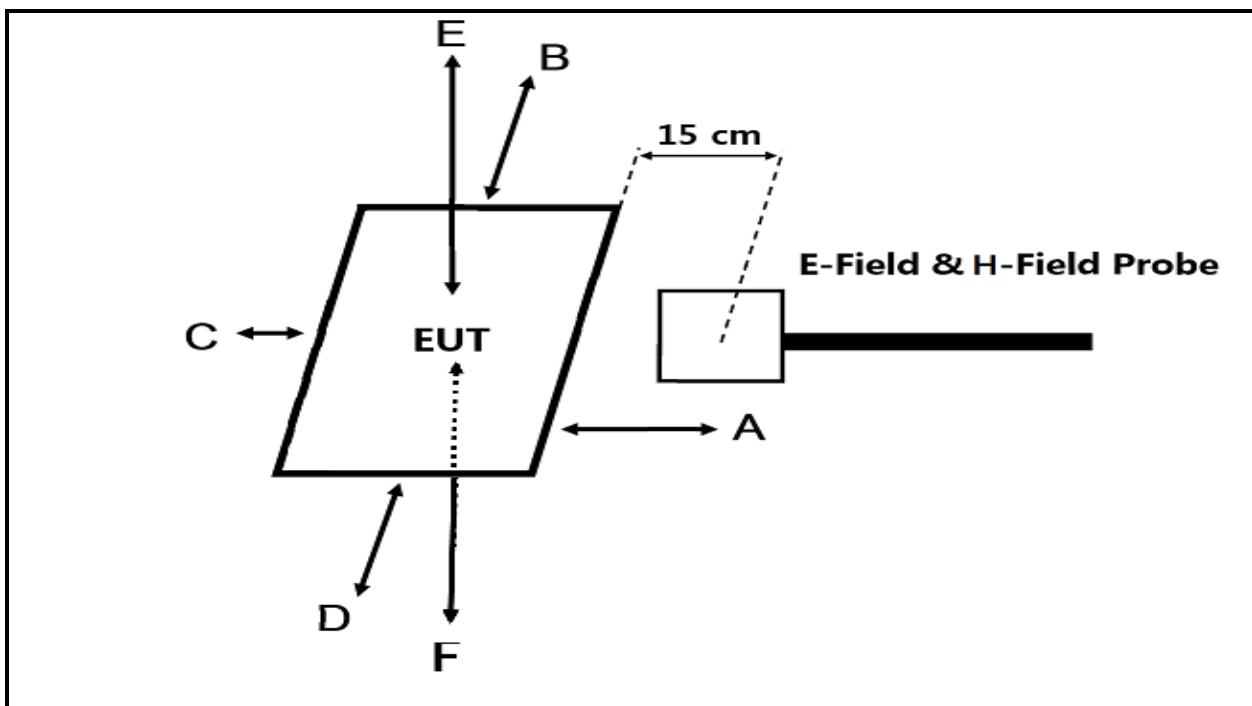
*Bottom of measurement probe is not used to measure RF exposure condition owing to connection with a stick.

- At 0 cm distance, measurement isotropic probe was investigated by rotating the probe through various angles for one of the EUT's sides as below.

Measurement Point	A	B	C	D	E
Direction	Front	Right	Rear	Left	Top
Measurement Point	A to B	B to C	C to D	D to A	N/A
Direction	Front to Right	Right to Rear	Rear to Left	Left to Front	-
Measurement Point	A to E	B to E	C to E	D to E	N/A
Direction	Front to Top	Right to Top	Rear to Top	Left to Top	-

- When the worst angle among all angles was found, RF exposure measurement should be adjusted from worst angle.

2.1.2. EUT Test Setup



2.1.3. Measurement procedure

- The RF exposure test was performed in anechoic chamber.
- The measurement probe was placed at test distance (15 cm) which is between the edge of the charger and the geometric center of probe.
- Measurement was performed on each side of the EUT as described above picture (A, B, C, D, E, F).
- The EUT was measured according to the dictates of KDB 680106 D01 RF Exposure Wireless Charging Apps v03.

2.3. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310.

§1.1310: The criteria listed in the following table 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)	Average Time (minutes)
(i) Limits for Occupational /Control Exposures				
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	1.0	<6
300-1 500	-	-	f/300	<6
1 500-100 000	-	-	5	<6
(ii) Limits for General Population/Uncontrolled Exposures				
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/1 500	<30
1 500-100 000	-	-	1.0	<30

f = frequency in MHz. * = Plane wave equivalent power density.

2.4. E and H field strength

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 % R.H.

2.4.1. E-Field Strength at from the edges surrounding the EUT

Test Condition: 10 W Operating mode with client device (1 % battery status of client device)

Frequency Range (kHz)	Probe Position A (V/m)	Probe Position B (V/m)	Probe Position C (V/m)	Probe Position D (V/m)	Probe Position E (V/m)	Probe Position F (V/m)	Limits (V/m)
112 ~ 122	3.178	3.256	<u>3.705</u>	2.731	0.934	2.261	614

Remark;

- Worst Case: one of the several angles was found as D-side of isotropic probe.

2.4.2. H-Field Strength at from the edges surrounding the EUT

Test Condition: 10 W Operating mode with client device (1 % battery status of client device)

Frequency Range (kHz)	Probe Position A (A/m)	Probe Position B (A/m)	Probe Position C (A/m)	Probe Position D (A/m)	Probe Position E (A/m)	Probe Position F (A/m)	Limits (A/m)
112 ~ 122	0.355	0.308	0.319	0.345	0.166	<u>0.490</u>	1.63

Remark;

- Worst Case: one of the several angles was found as C-side of isotropic probe.

- End of the Test Report -