RF EXPOSURE REPORT

Equipment under test	Wireless Charger for SMART INSOLE
Model name	ST-WPAD001
FCC ID	2AL6N-ST-WPAD001
Applicant	Salted Co., Ltd.
Manufacturer	Salted Co., Ltd.
Date of test(s)	2022.10.04 ~ 2022.10.06
Date of issue	2022.10.07

Issued to

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Issued by

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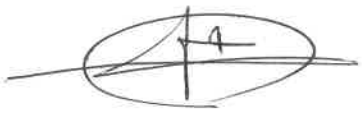
Test and report completed by :	**Report approval by :**
	
Bong-Seok, Kim Test engineer	Young-Jun, Cho Technical manager

This test report is not related to KS Q ISO/IEC 17025 and KOLAS.

Revision history

Revision	Date of issue	Test report No.	Description
-	2022.10.12	KES-RF1-22T0139	Initial

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1. General information

Applicant	Salted Co., Ltd.
Applicant address	6F, 603, Eonju-ro, Gangnam-gu, Seoul, South Korea
Test site	KES Co., Ltd.
Test site address	☐ 3701, 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Korea ☒ 473-29, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea
Test Facility	FCC Accreditation Designation No.: KR0100, Registration No.: 444148
FCC rule part(s):	Part 15C
FCC ID:	2AL6N-ST-WPAD001
Test device serial No.	☒ Production ☐ Pre-production ☐ Engineering

1.1. EUT description

Equipment under test	Wireless Charger for SMART INSOLE
Frequency	0.200 ㎒ (WPT), 2 402 ㎒ ~ 2 480 ㎒ (BLE)
Inductive charging technique	Magnetic Induction
Model:	ST-WPAD001
Antenna specification	Internal type (Coil antenna)
Power source	AC 120 V (Adapter Output DC 5 V)
S/W Version	Revision 1.1
H/W version	1.01

1.2. Test configuration

The **Salted Co., Ltd. //Wireless Charger fod SMART INSOLE // ST-WPAD001 //**
FCC ID: 2AL6N-ST-WPAD001 was tested according to the specification of EUT, the EUT must comply with following standards.

FCC Part 15C
ANSI C63.10-2013
KDB 680106 D01 V03

1.3. Test frequency

		Frequency Range
Power source	AC 120 V (Adapter Output DC 5 V)	0.200 ㎒

1.4. Test mode

Mode	Charging current	Description
Charging mode With load	90%	Using Max load
	50%	Using Mid load
	10%	Using Min load

1.5. Information about derivative model

N/A

1.6. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source
SMART INSOLE 1	Salted Co., Ltd.	ST-BTIN003L	-	DC 3.7 V (Battery)
SMART INSOLE 2	Salted Co., Ltd.	ST-BTIN003R	-	DC 3.7 V (Battery)

1.7. Measurement Uncertainty

Test Item		Uncertainty
Uncertainty for Conduction emission test		2.38 ㏈ (SHIELD ROOM #6)
Uncertainty for Radiation emission test (include Fundamental emission)	Below 1 ㎓	4.50 ㏈ (SAC #6)
	Above 1 ㎓	4.90 ㏈ (SAC #5)
Note. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

2. Environmental evaluation and exposure limit

Limits for Maximum Permissible Exposure (MPE)

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental 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 §2.1093 of this chapter.

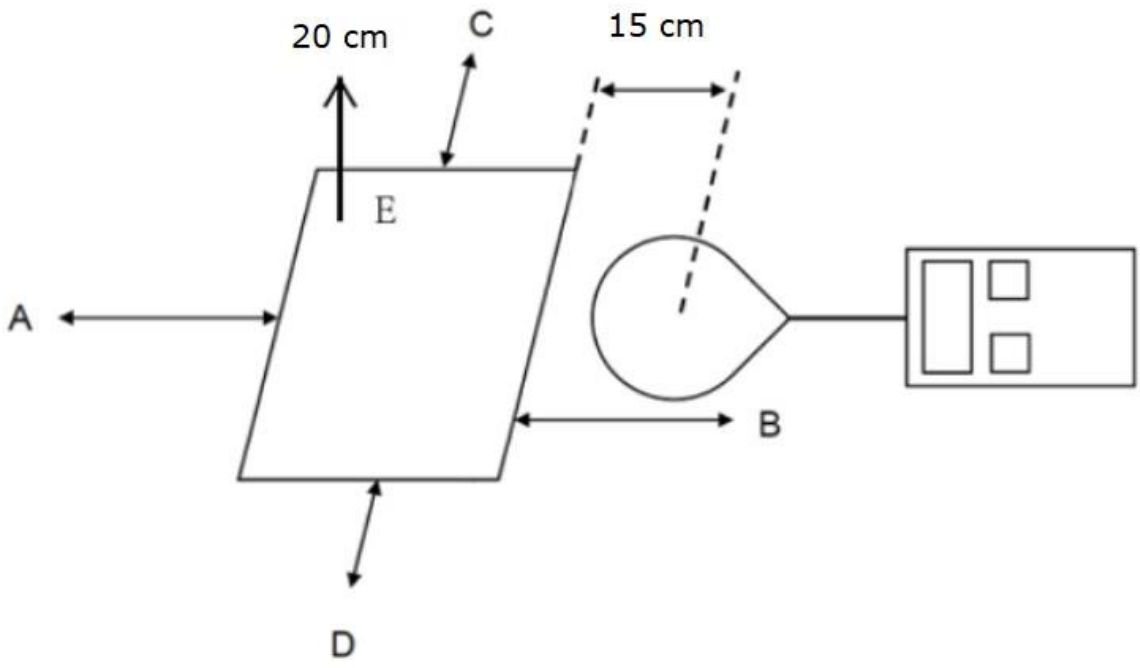
TABLE 1 - Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
(A) 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	0.613	1.0	6
300 – 1 500			f/300	6
1 500 - 100 000			5	6
(B) 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/1 500	30
1 500 – 100 000			1.0	30

Note.

1. f= frequency in MHz
2. "*" means Plane-wave equivalent power density

2.1. Test Setup



1. The test was performed on 360° turn table in anechoic chamber.
2. The probe was placed at distance 15 cm or 20 cm which is between the edge of the charger and the geometric center of the probe.
3. The highest emission level was recorded and compared with limit as soon as measurement of each point ; A, B, C, D, E were completed.
4. Point F is highest measured field from moving the probe around the device at distance 15 cm.
5. The EUT was measured according to the KDB 680106 D01v03.

Note.

Equipment Approval Considerations item 5.b) of KDB 680106 D01 v03.

a) Power transfer frequency is less that 1 ㎒.

- The device operates at a frequency of 200 ㎑.

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

- Output power from each primary coil : 5 watts.

c) 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 transfer system including a charging system with single coil. .

d) Client device is placed directly in contact with the transmitter.

- Client device is placed directly.

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

- Not a portable device.

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

- Refer to following test results.

  The EUT H-Field Strength levels at 15 ㎝ < 50 % of the MPE H-Field Strength limit 1.63 A/m

  0.340 A/m (Max) < 0.815 A/m

2.2. Test results

Test mode : 5 W

E-Field Strength from each edges the EUT

Test Mode		Point A (V/m)	Point B (V/m)	Point C (V/m)	Point D (V/m)	Point E (V/m)
5W Charging mode	10 % load	1.425	1.407	1.992	1.369	1.098
	50 % load	1.435	1.412	1.989	1.365	1.105
	90 % load	1.429	1.410	1.996	1.381	1.103

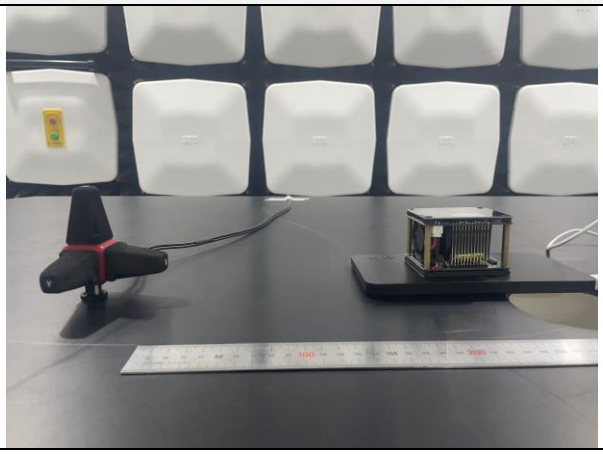
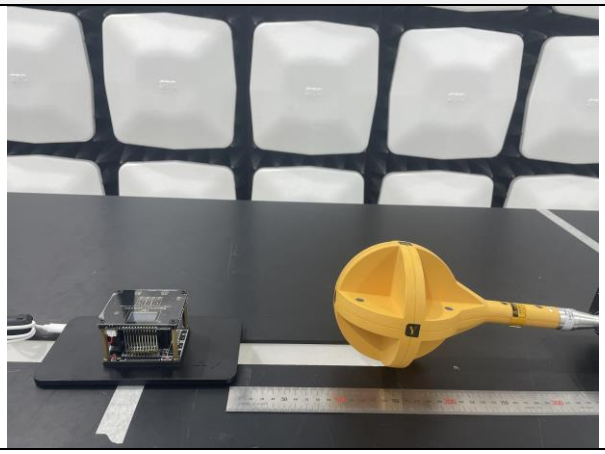
H-Field Strength from each edges the EUT

Test Mode		Point A (A/m)	Point B (A/m)	Point C (A/m)	Point D (A/m)	Point E (A/m)
5W Charging mode	10 % load	0.315	0.331	0.298	0.318	0.275
	50 % load	0.320	0.328	0.304	0.322	0.279
	90 % load	0.312	0.340	0.310	0.314	0.276

Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial No.	Calibration interval	Calibration due.
Electric Field Probe	ETS LINDGREN	HI-6105	00151770	1 year	2023.06.17
Magnetic Field Hitester	HIOKI	FT3470-50	120429926	1 year	2022.10.12

Appendix B. Test setup photo

E-Field / H-Field	
E-Field	**H-Field**
	

The end of test report.