TEST REPORT

of

FCC CFR 47 part 1, 1.1307(b), 1.1310

FCC ID: 2AJKSKGC108SH

Equipment Under Test	:	WIRELESS CHARGER
Model Name	:	KGC-108SH
Applicant	:	Kum Oh Electronics Co., Ltd.
Manufacturer	:	Kum Oh Electronics Co., Ltd.
Date of Receipt	:	2018.08.09
Date of Test(s)	:	2018.08.10 ~ 2018.08.14
Date of Issue	:	2018.08.14

In the configuration tested, the EUT complied with the standards specified above.

Tested By: **Date:** **2018.08.14**

Jinhyoung Cho

Technical Manager: **Date:** **2018.08.14**

Harim Lee

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1. General information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)
- Wireless Div. 2FL, 10-2, 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.

Phone No. : +82 31 688 0901
Fax No. : +82 31 688 0921

1.2. Details of Applicant

Applicant : Kum Oh Electronics Co., Ltd.
Address : 35, Gilju-ro 444beon-gil, Bucheon-si, Gyeonggi-do, South Korea, 14556
Contact Person : Park, Chan-hong
Phone No. : +82 32 712 0322

1.3. Details of Manufacturer

Company : Same as applicant
Address : Same as applicant

1.4. Description of EUT

Kind of Product	WIRELESS CHARGER
Model Name	KGC-108SH
Power Supply	DC 5.0 V
Frequency Range	120 ㎑ ~ 190 ㎑
Antenna Type	Inductive loop coil antenna

1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
E-Field Probe	D.A.R.E!! Instruments	RadiSense 4	13I00444SNO04	Jun. 21, 2018	Annual	Jun. 21, 2019
Magnetic Field Sensor	HIOKI	0850-C1	3472	Jul. 24, 2018	Annual	Jul. 24, 2019
Magnetic Field Hitester	HIOKI	FT3470-50	140430999	Jul. 24, 2018	Annual	Jul. 24, 2019
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A	N.C.R.

▶ Support Equipment

Description	Manufacturer	Model	FCC ID
Smart Wearable Device	Samsung Electronics Co., Ltd.	SM-R815U	A3LSMR815U

1.6. Test Report Revision

Revision	Report number	Date of Issue	Description
0	F690501/RF-RTL012967	2018.08.14	Initial

1.7. 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.

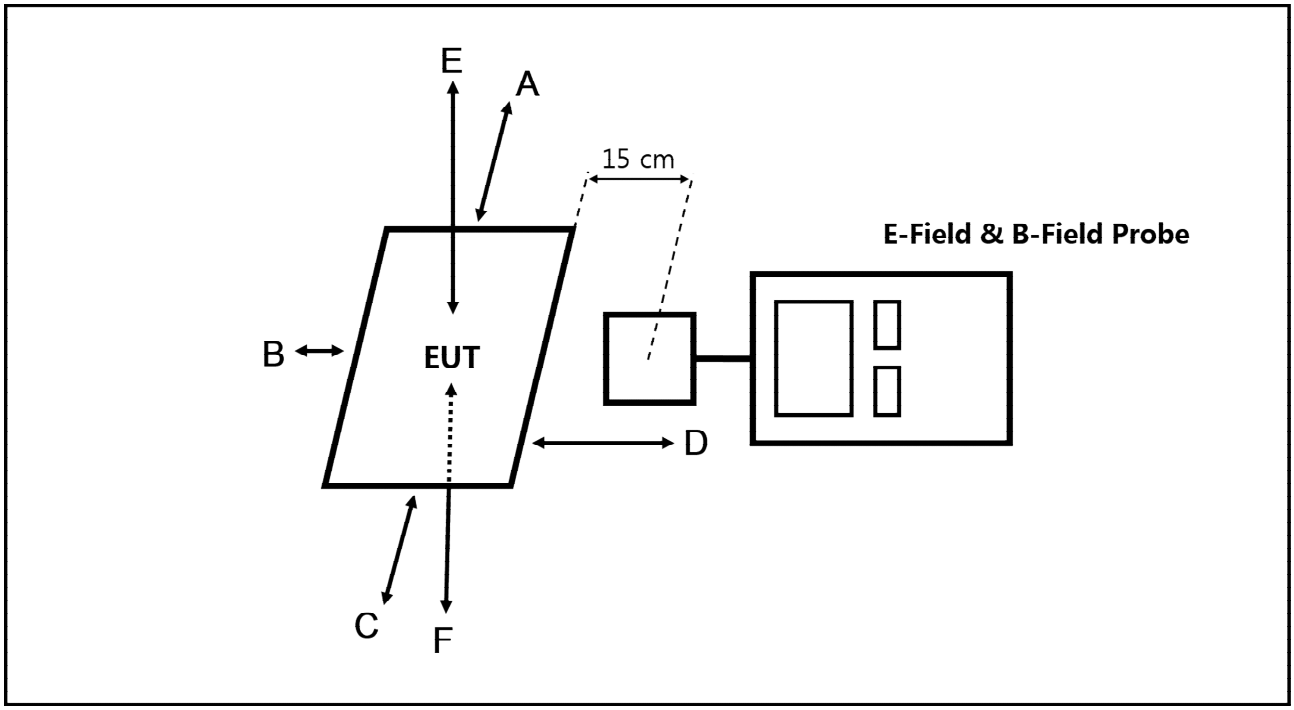
EUT configuration	Description
Charging Mode with client device (Model: SM-R815U, FCC ID: A3LSMR815U)	1 % of battery
	50 % of battery
	99 % of battery

Note;

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

2. Test Result

2.1. Test Setup



2.2. Measurement procedure

a) The RF exposure test was performed in anechoic chamber.
b) The measurement probe was placed at test distance (15 ㎝) which is between the edge of the charger and the geometric center of probe.
c) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.
d) The EUT was measured according to the dictates of KDB 680106 D01 v03.

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

(1) Power transfer frequency is less that 1 ㎒.
- The device operates at a frequency 120 ㎑ to 190 ㎑.

(2) Output power from each primary coil is less than or equal to 15 watts.
- Output power from primary coil: 1.25 watts.

(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 transfer system including a charging system with one primary coils is to detect and allow only between individual pairs of coils.

(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).
- Mobile exposure conditions only.

(6) 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
0.100 A/m (Max. at 15 ㎝) < 0.815 A/m

2.4. 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 - LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (㎒)	Electric Field Strength(V/m)	Magnetic Field Strength (A/m)	Power Density (㎽/㎠)	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	0.163	1.0	6
300-1 500			f/300	6
1 500-100 000			5	6
(B) Limits for General Population / Uncontrol 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 ㎒
* = Plane wave equivalent power density

2.5. E and H field strength

Ambient temperature : (23 ± 1) ℃
Relative humidity : 47 % R.H.

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

Test Condition: Charging mode with client device (1 % battery status of client device)

Frequency Range (㎑)	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)
120 ~ 190	7.61	8.81	8.09	7.27	5.92	6.85	614

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

Test Condition: Charging mode with client device (1 % battery status of client device)

Frequency Range (㎑)	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)
120 ~ 190	0.089	0.100	0.090	0.088	0.087	0.088	1.63

Remark;

- H-field strength (A/m) = B-field (μT) / 1.25

- End of the Test Report -