

TEST REPORT

of

FCC CFR 47 part1, 1.1307(b), 1.1310

FCC ID: 2AWJX-GA-P701

1. Equipment Under Test : O-Yring
2. Model Name : GA-P701
3. Variant Model Name(s) : -
4. Applicant : WLT Co., Ltd.
5. Manufacturer : WLT Co., Ltd.
6. Date of Receipt : 2020.06.01
7. Date of Test(s) : 2020.06.01 ~ 2020.11.05
8. Date of Issue : 2020.11.18

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.

Tested by:



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Report Number: F690501-RF-RTL000850-1

Page: 2 of 8

INDEX

Table of Contents

1. General Information -----	3
2. Test Result -----	5

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

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1.2. Details of Applicant

Applicant : WLT Co., Ltd.

Address : #307, 175, LS-ro, Gunpo-si, Gyeonggi-do, South Korea, 15808

Contact Person : Son, Bon-ju

Phone No. : +82 10 7164 7700

1.3. Details of Manufacturer

Company : Same as applicant

Address : Same as applicant

1.4. Description of EUT

Kind of Product	O-Yring
Model Name	GA-P701
Power Supply	DC 9.0 V
Operation Mode	5 W
Frequency Range	120 kHz ~ 132 kHz
Antenna Type	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	Jul. 03, 2020	Annual	Jul. 03, 2021
Magnetic Field Sensor	HIOKI	3471	0850-B1	Aug 05, 2020	Annual	Aug. 05, 2021
Magnetic Field Hitester	HIOKI	FT3470-50	140430999	Aug 05, 2020	Annual	Aug. 05, 2021
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	FCC ID
Samsung Mobile Phone	Samsung Electronics Co., Ltd.	SM- N920S	A3LSMN920S

1.6. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL000850	2020.06.29	Initial
1	F690501-RF-RTL000850-1	2020.11.18	Retested the E and H field strength

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.

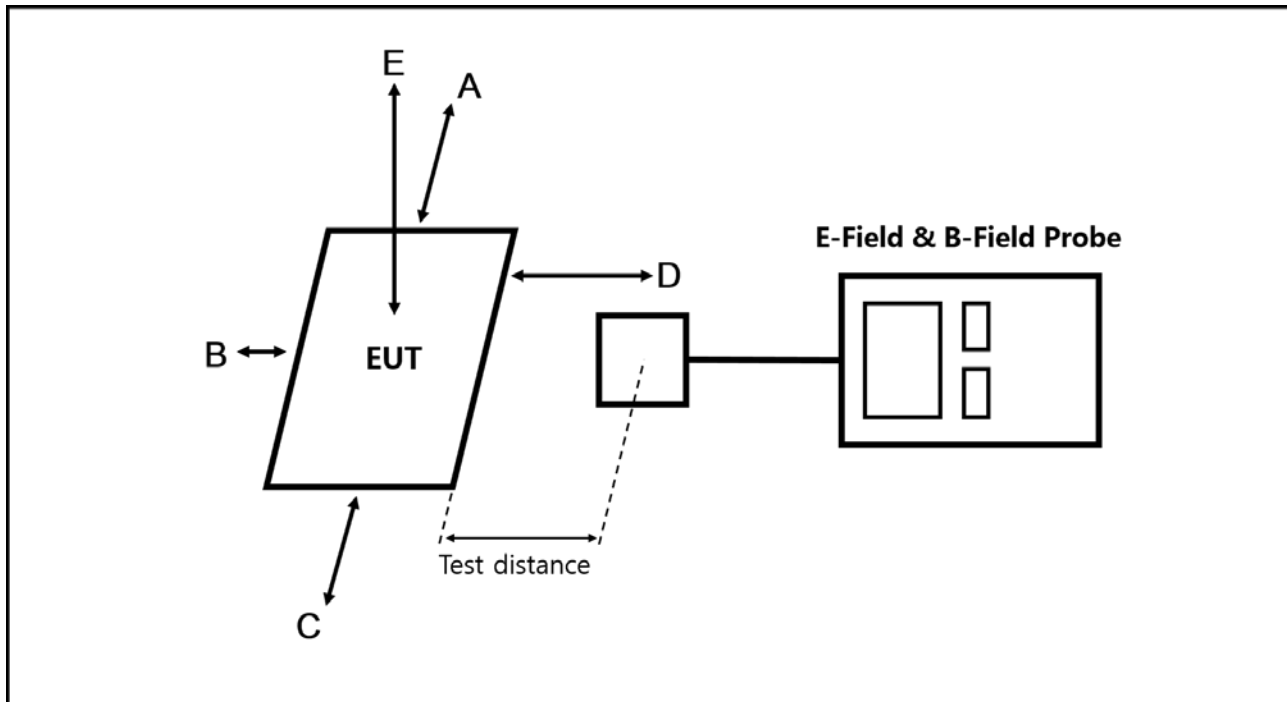
Charging mode with client device	Mode	Description
Model: SM-N920S FCC ID: A3LSMN920S	120 kHz ~ 132 kHz	1 % of battery 50 % of battery 99 % of battery

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

- The RF exposure test was performed in anechoic chamber.
- The minimum separation distance to user is 6 cm. Thus, the measurement probe was placed at test distance (6, 8, 10, 13, 15 cm) which is between the edge of the charger and the geometric center of probe.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT was measured according to the dictates of KDB 680106 D01 RF Exposure Wireless Charging Apps v03.

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

- (1) Power transfer frequency is less than 1 MHz.
 - The device operates at a frequency 120 kHz and 132 kHz.
- (2) Output power from each primary coil is less than or equal to 15 watts.
 - Output power from primary coil: 5 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 single coil.
- (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 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.
 - Refer to following test results.
The EUT H-Field Strength levels at 15 cm < 50 % of the MPE H-Field Strength limit 1.63 A/m
0.133 A/m (Max. at 15 cm) < 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 (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	0.163	1.0	6
300-1 500			f/300	6
1 500-100 000			5	6
(B) Limits for General Population / Uncontrol Exposures				
<u>0.3-1.34</u>	<u>614</u>	<u>1.63</u>	*(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

2.5. E and H field strength

Ambient temperature : $(23 \pm 1) ^\circ\text{C}$
Relative humidity : 47 % R.H.

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

Test Condition: 1 % battery status of client device

Frequency (kHz)	Distance (cm)	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)	Limits (V/m)
120 ~ 132	15	3.410	4.970	5.020	4.580	5.780	614
	13	4.780	5.590	5.680	5.530	7.790	
	10	7.190	8.360	7.760	8.890	11.300	
	8	9.470	11.400	10.600	11.100	13.800	
	6	14.900	15.900	15.300	15.200	18.100	
	4	20.200	21.200	19.300	20.700	20.300	
	3	33.400	31.200	39.100	32.000	31.400	

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

Test Condition: 1 % battery status of client device

Frequency (kHz)	Distance (cm)	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)	Limits (A/m)
120 ~ 132	15	0.081	0.113	0.090	0.128	0.133	1.63
	13	0.083	0.124	0.110	0.150	0.158	
	10	0.114	0.271	0.140	0.251	0.247	
	8	0.161	0.581	0.164	0.404	0.360	
	6	0.206	0.797	0.304	0.758	0.585	

Remark;

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

- End of the Test Report -