RF EXPOSURE REPORT

Test Report

Equipment Under Test	**Wireless Charger Tx Pad**
Model Name	**SWP-TT100**
Applicant	**Samsung Electro Mechanics**
FCC ID	**E2XSWP-TT100**
Manufacturer	**Samsung Electro Mechanics**
Date of Test(s)	**2015. 06. 15**
Date of Issue	**2015. 07. 02**

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

Issue to	Issue by
Samsung Electro Mechanics 314 Maetan-3 Dong Pal Dal-Ku Suwon Kyungki-Do, Korea Tel.: +82-31-300-4239 Fax: +82-31-300-7900	**MOVON CORPORATION** 498-2, Geumeo-ro, Pogok-eup, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 449-812 Tel.: +82-31-338-8837 Fax: +82-31-338-8847

Revision history

Revision	Date of issue	Description	Revised by
--	July 2, 2015	Initial	--

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1. Attestation of test results

1.1. Details of applicant

Applicant	:	Samsung Electro Mechanics
Address	:	314 Maetan-3 Dong Pal Dal-Ku Suwon Kyungki-Do, Korea
Contact Person	:	Jinhwan Lim
Telephone	:	+82-31-300-4239
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1.2. Summary of test results

The EUT has been tested according to the following specifications;

FCC part Section in	Description	Result
1.1307(b), 1.1310	Radio frequency radiation exposure limits	C

The sample was tested according to the following specification:
FCC Public Notice KDB 680106
TEST SITE REGISTRATION NUMBER:
FCC(67068)

※ Abbreviation

C Complied
N/A Not applicable
F Fail

Approval Signatories

Test and Report Completed by :	Report Approval by :
	
Kin Son Test Engineer MOVON CORPORATION	Issac Jin Technical Manager MOVON CORPORATION

2. EUT Description

Kind of product	Wireless Charger Tx Pad
Model Name	SWP-TT100
Serial Number	N/A
Power supply	DC 5 V
Frequency range	110 ㎑ ~205 ㎑
TEST SITE REGISTRATION NUMBER	FCC(67068)

2.1. Declarations by the manufacturer

None

2.2. Details of modification

Test mode

This device has been tested in the worst-case mode of charging mode as below conditions:

Test Mode	Support Equipment	Charging Current Condition
TM1	Client Device	100 ㎃
TM2	Client Device	400 ㎃
TM3	Client Device	800 ㎃
TM4	Mobile Phone	< 1% battery status
TM5	Mobile Phone	50% battery status

3. Measurement equipment

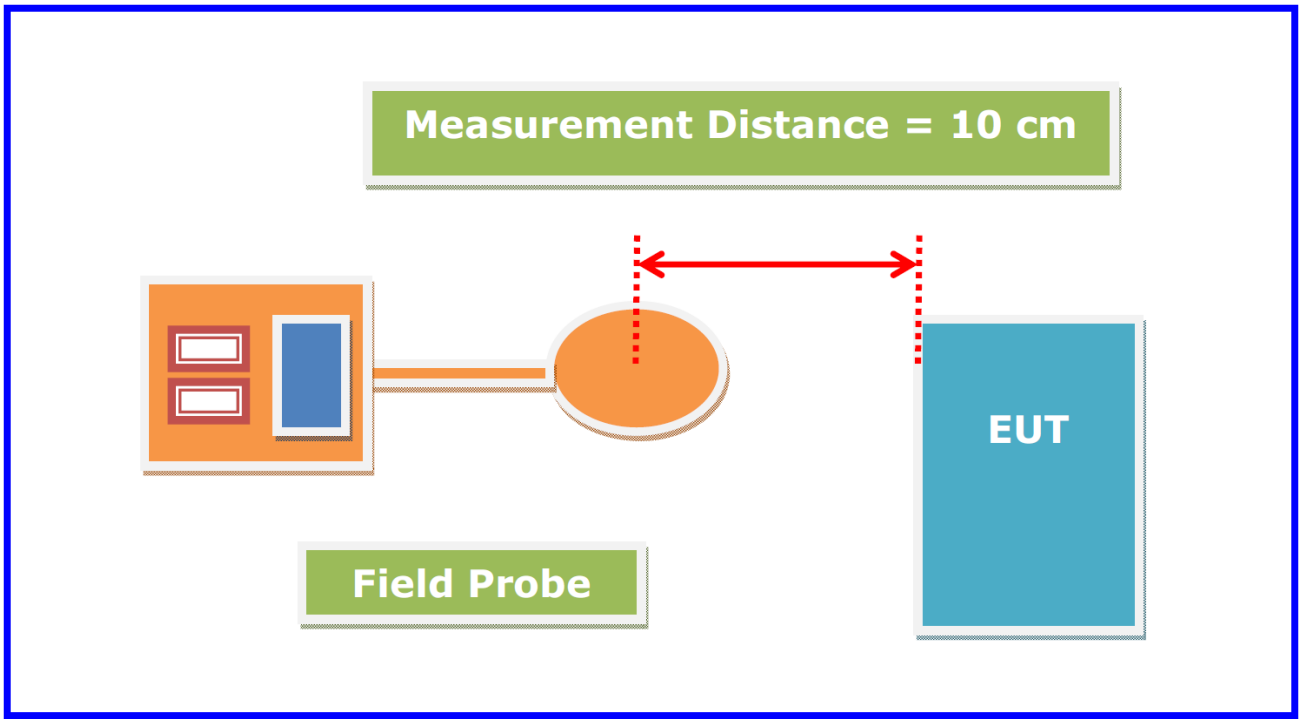
Equipment	Manufacturer	Model	Serial number	Calibration Interval	Calibration due.
E-Field Probe	Shaffner	EMC-20	R-0029	2 year	2015-10-24
H-Field Probe	Beehibe Electronics	100C	100C	2 year	2015-07-03
Signal Analyzer	R&S	FSV-40	100832	1 year	2016-03-06

※ Remark;
Support equipment

Description	Manufacturer	Model	Serial number
Smartphone	Samsung	**SHV-E300S**	-

4. Radio frequency radiation exposure limits

4.1. Test setup



4.2. Limit

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(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.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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/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/1500	30
1,500-100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

(1) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure. The phrase fully aware in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. Such training is not required for transient persons, but they must receive written and/or verbal information and notification (for example, using signs) concerning their exposure potential and appropriate means available to mitigate their exposure. The phrase exercise control means that an exposed person is allowed to and knows how to reduce or avoid exposure by administrative or engineering controls and work practices, such as use of personal protective equipment or time averaging of exposure.

(2) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

4.4. Test result

Ambient temperature: 23℃
Relative humidity: 50 % R.H.

4.4.1. Test data

Operation mode : TM1

E-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	3.31	3.91	2.82	3.30	5.26
Limit (V/m)	614	614	614	614	614

H-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (A/m)	0.00000434	0.0000025	0.00000442	0.00000358	0.00000448
Limit (A/m)	1.63	1.63	1.63	1.63	1.63

Operation mode : TM2

E-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.93	2.56	2.74	2.49	5.64
Limit (V/m)	614	614	614	614	614

H-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (A/m)	0.00000424	0.00000383	0.00000287	0.00000345	0.00000550
Limit (A/m)	1.63	1.63	1.63	1.63	1.63

Operation mode : TM3

E-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	4.10	3.70	2.55	4.32	8.23
Limit (V/m)	614	614	614	614	614

H-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (A/m)	0.00000509	0.00000406	0.00000404	0.00000395	0.00000355
Limit (A/m)	1.63	1.63	1.63	1.63	1.63

Operation mode : TM4

E-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.35	1.99	1.76	2.01	2.15
Limit (V/m)	614	614	614	614	614

H-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (A/m)	0.00000223	0.00000205	0.00000140	0.00000147	0.00000589
Limit (A/m)	1.63	1.63	1.63	1.63	1.63

Operation mode : TM5

E-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	2.63	2.23	2.22	2.17	4.16
Limit (V/m)	614	614	614	614	614

H-Field Measurement (10Cm)					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (A/m)	0.00000198	0.00000239	0.00000161	0.00000150	0.00000370
Limit (A/m)	1.63	1.63	1.63	1.63	1.63