

RF EXPOSURE EVALUATION DOCUMENT

For SPEN WPT Charging

Applicant : SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA

Model : SM-X710

FCC ID : A3LSMX710

EUT Description : Tablet with BT, DTS/UNII a/b/g/n/ac/ax and WPT

Date Of Issue:

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Prepared by:

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Suwon Test Site: UL Korea, LTD. Suwon Laboratory

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1. TEST PROCEDURE

Per FCC Guidance, WPT function was evaluated for portable exposure condition.

2. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro
<input checked="" type="checkbox"/> Shield Room

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

3. INFORMATION OF EQUIPMENT UNDER TEST

Information	
Operating frequency [MHz]	0.531
Maximum output power [mW]	50
Charging type	Inductive wireless power transfer
Operating duty factor	0.5 (15min / 30min)

4. TEST EQUIPMENT

Test equipment (Measurement probe)				
Description	Manufacturer	Model	S/N	Cal due.
E-H Field Analyzer	Narda	EHP-200AC	170WX91008	8-23-2023

5. MEASUREMENT RESULT

5.1. H-field measurement results of EUT's 6 sides

Spent WPT Coil Location	Distance	H-field measurement [A/m]					
		Rear	Front	Top	Left	Right	Bottom
Location.1	0cm	0.5282	0.0835	0.0721	0.0152	0.1612	0.0152
Location.2	0cm	0.4511	0.0712	0.0152	0.0152	0.1542	0.0152

(0mm distance means that the probe's surface are touched at DUT's surface.)

5.2. H-field measurement results for 0cm to 10cm at Rear side.

Distance [cm]	Location.1		Location.2		FCC Limit [A/m]
	H-field meas. [A/m]	H-field x (duty factor) [A/m]	H-field meas. [A/m]	H-field x (duty factor) [A/m]	
0	0.5282	0.2641	0.4511	0.2256	1.63
1	0.2588	0.1294	0.2144	0.1072	
2	0.1295	0.0648	0.1088	0.0544	
3	0.0810	0.0405	0.0542	0.0271	
4	0.0562	0.0281	0.0282	0.0141	
5	0.0282	0.0141	0.0232	0.0116	
6	0.0232	0.0116	0.0172	0.0086	
7	0.0172	0.0086	0.0152	0.0076	
8	0.0153	0.0077	0.0152	0.0076	
9	0.0152	0.0076	0.0152	0.0076	
10	0.0152	0.0076	0.0152	0.0076	

(Distance means that the probe's surface are touched at DUT's surface.)

5.3. Corrected H-field measurement

Operating duty factor is based on Averaging time of §1.1310 table 1.

- Location.1 : $5282 \text{ A/m} * 0.5 = 0.2641 \text{ A/m}$
- Location.2 : $4511 \text{ A/m} * 0.5 = 0.2256 \text{ A/m}$