



# **RF EXPOSURE EVALUATION DOCUMENT**

**For WPT(wireless Power Transfer)**

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

**Model** : SM-X900

**FCC ID** : A3LSMX900

**EUT Description** : DTS/UNII a/b/g/n/ac/ax Tablet + BT/BLE and WPT

**Test Standard(s)** : FCC 47 CFR PART 2 SUBPART J

**Date Of Issue:**

2021-11-29

**Prepared by:**

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## 1. TEST METHODOLOGY

Per FCC Guidance, WPT function was evaluated for portable exposure condition. The tests documented in this report were performed in accordance with following methods.

1. FCC CFR 47 Part 2.
2. 680106 D01 RF Exposure Wireless Charging Apps v03r01.
3. 2021 October TCB workshop note "Wireless power Transfer".

## 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]	0.530 – 0.562
Maximum output power [mW]	50
Charging type	Inductive wireless power transfer
Operating duty factor	0.50

## 4. TEST EQUIPMENT

Test Equipment List				
Description	Manufacturer	Model	S/N	Cal Due
E-H Field Analyzer	Narda	EHP-200AC	170WX91008	2022-08-06



## 5. MEASUREMENT RESULT

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

Distance	H-field measurement [A/m]					
	Rear	Front	Edge 1	Edge 2	Edge 3	Edge 4
0cm	<b>0.2431</b>	0.0378	0.0327	0.0152	0.0152	0.0196

Note: 0cm distance was measured from the center of the probe head to the edge of the DUT.

### H-field test distance up to 20cm from DUT

Distance	H-field measurement [A/m]						
	0cm	2cm	4cm	6cm	8cm	10cm	10 cm– 20 cm
Rear	0.2431	0.0637	0.0218	0.0152	0.0152	0.0152	0.0152

Note : Ambient noise level is 0.0152 A/m in Test chamber.

### 5.2. TER analysis.

Position	SAR level (W/kg)	SAR's ER	MPE level (A/m)	MPE's ER	TER (SAR'ER+MPE'ER)	TER limit
Rear	1.340	0.838	0.2431	0.149	<b>0.987</b>	1.000
Front	N/A	N/A	0.0378	0.023	0.023	
Edge 1	1.285	0.803	0.0327	0.020	0.823	
Edge 2	N/A	N/A	0.0152	0.009	0.009	
Edge 3	1.459	0.912	0.0152	0.009	0.921	
Edge 4	0.569	0.356	0.0196	0.020	0.376	
(SAR limit = 1.6 W/kg, MPE limit = 1.63 A/m)						
ER(Exposure Ration) = measured SAR(MPE) / SAR limit(MPE limit)						

Note: SAR level is refer to Section 12.1 in SAR report.

**END OF EVALUATION DOCUMENT**