
RF Exposure Evaluation

FCC ID:2BN7BW-041

Product Name:	Watch Wireless Charge
Trade Mark:	N/A
Model No.:	W-041
Model Difference:	W-041A, W-041B, W-041C, W-041D, W-041E, W-041F
Transmitting mode	Keep the EUT in continuously wireless charging mode
Power supply:	Input: 5V/3A Max output:15 W; Wireless charge output: 2.5W(Max); USB-A Output: 5W; USB-C Output: 10W; Lightning Output: 12W
Date of Receipt:	May 12, 2025
Test Date:	May 12, 2025- May 20, 2025
Date of Report:	May 20, 2025

Mode1. Wireless Output Mode(Max 2.5W)

Mode 2 Wireless Output + Line Output (Max 12.5W)

Mode 3 Line Output (Max 15W)

Note: 1. We have evaluated 1%, 50% and 99% battery charging mode, and the worst mode (99%) is showed in this report.

2. All modes have been tested, and the report only shows the results of the worst mode 1.

1 Measuring Standard

According to Part 2.1091 RF exposure is calculated. According KDB 680106 D01 v04 WirelessPower Transfer v04.

2 Requirements

①According to the item 5 of KDB 680106 D01 v04:

②Inductive wireless power transfer applications that meet all of the following requirements are excluded from submitting an RF exposure evaluation.

3 Limits

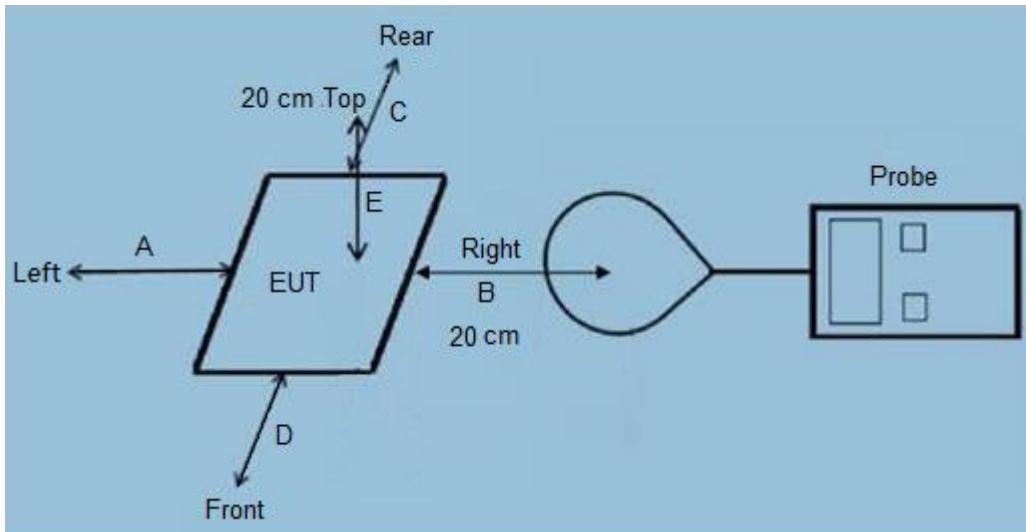
The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

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 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
300-1500	/	/	f/300	6
1500-100,000	/	/	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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

4 Test Setup



5 Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The measurement probe was placed at test distance (20 cm from all sides and 20 cm from the top) which is between the edge of the charger and the geometric center of probe.
- 3) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- 4) The EUT was measured according to the dictates of KDB 680106 v04.

Remark: The EUT's test position A, B, C, D and E is valid for the E and H field measurements.

6 Description of Support Units

Watch(Provide by test lab):	Adapter (Provide by test lab):
Manufacturer: JiaTong	Manufacturer: SHENZHEN TIANLIN ELECTRONICS CO., LTD
Model: CS02	Model: TPA-46B050100UU
	I/P: AC 100-240V 50/60Hz 0.2A
	O/P: DC 5V/1A

7 Test Instruments list

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Exposure Level Tester	Narda	EHP-200A	180ZX00634	2024.06.10	2025.06.09

8 Test Uncertainty

E-Filed Strength(1Hz-400kHz)	:	±0.08V/m
H-Filed Strength(1Hz-400kHz)	:	±0.02A/m
uT	:	±0.01

Note: The field intensity value A/m in the report is converted from uT, and the formula is as follows:

$$\text{uT to A/m} \quad A/m = \frac{\mu T}{1.25}$$

9 Test Result

Battery	Test Position	Test distance(cm)	E -field(V/m)	uT	H-field(A/m)
≤1%	Top	20	1.4022	0.1196	0.0957
≤1%	Left	20	1.8829	0.1699	0.1359
≤1%	Right	20	1.8186	0.1760	0.1408
≤1%	Rear	20	1.7685	0.1553	0.1242
≤1%	Front	20	1.7927	0.1608	0.1286
Limit (50%)			317	/	0.815
Limit			614	/	1.63
Margin Limit (%)			0.20%	/	3.33%

Battery	Test Position	Test distance(cm)	E -field(V/m)	uT	H-field(A/m)
=50%	Top	20	1.3695	0.1065	0.0852
=50%	Left	20	1.8562	0.1568	0.1254
=50%	Right	20	1.8241	0.1636	0.1309
=50%	Rear	20	1.7712	0.1495	0.1196
=50%	Front	20	1.7643	0.1521	0.1217
Limit (50%)			317	/	0.815
Limit			614	/	1.63
Margin Limit (%)			0.19%	/	3.87%

Battery	Test Position	Test distance(cm)	E -field(V/m)	uT	H-field(A/m)
≥99%	Top	20	1.3008	0.1005	0.0804
≥99%	Left	20	1.6684	0.1518	0.1214
≥99%	Right	20	1.6329	0.1606	0.1285
≥99%	Rear	20	1.5598	0.1435	0.1148
≥99%	Front	20	1.5274	0.1346	0.1077
Limit (50%)			317	/	0.815
Limit			614	/	1.63
Margin Limit (%)			0.07%	/	2.47%

10 Test Set-up Photo

