

# (19) United States

### (12) Patent Application Publication (10) Pub. No.: US 2023/0231424 A1 LEE et al.

# Jul. 20, 2023

# (43) **Pub. Date:**

### (54) ELECTRONIC DEVICE FOR TRANSMITTING WIRELESS POWER AND OPERATING METHOD THEREFOR

### (71) Applicant: SAMSUNG ELECTRONICS CO., LTD., Suwon-si (KR)

(72) Inventors: Sangwook LEE, Suwon-si (KR); Sungbum PARK, Suwon-si (KR); Hyunseok SHIN, Suwon-si (KR);

> Youngho RYU, Suwon-si (KR); Kyungmin LEE, Suwon-si (KR); Cheonyong LIM, Suwon-si (KR); Jinsu CHOI, Suwon-si (KR)

(73) Assignee: SAMSUNG ELECTRONICS CO., LTD., Suwon-si (KR)

Appl. No.: 18/124,963

(22) Filed: Mar. 22, 2023

#### Related U.S. Application Data

Continuation of application No. PCT/KR2021/ 012748, filed on Sep. 17, 2021.

#### (30)Foreign Application Priority Data Oct. 12, 2020 (KR) ...... 10-2020-0131434

#### **Publication Classification**

(51)	Int. Cl.	
` ′	H02J 50/90	(2006.01)
	H02J 50/10	(2006.01)
	H02J 50/60	(2006.01)

(52) U.S. Cl. CPC ...... H02J 50/90 (2016.02); H02J 50/10 (2016.02); H02J 50/60 (2016.02)

#### (57)**ABSTRACT**

Disclosed is an electronic device including a plurality of sensing coils for sensing an external device; a power transmitting coil for transmitting power to the external device; and a processor configured to: sequentially apply, to the power transmitting coil, powers having magnitudes respectively set to correspond to the plurality of sensing coils, and during a period in which power corresponding to each sensing coil of the plurality of sensing coils among the powers is applied, identify induction voltages respectively induced in the plurality of sensing coils, and sense the external device located on a wireless power transmitting device, on the basis of the identified induction voltages.

