



US 20240215201A1

(19) **United States**

(12) **Patent Application Publication**
HYON et al.

(10) **Pub. No.: US 2024/0215201 A1**

(43) **Pub. Date: Jun. 27, 2024**

(54) **POWER CONVERSION SYSTEM**

Publication Classification

(71) Applicant: **KOREA ELECTRONICS
TECHNOLOGY INSTITUTE,**
Seongnam-si (KR)

(51) **Int. Cl.**

H05K 7/20 (2006.01)

H05K 7/14 (2006.01)

(52) **U.S. Cl.**

CPC H05K 7/20409 (2013.01); **H05K 7/14329**
(2022.08); **H05K 7/20145** (2013.01)

(72) Inventors: **Byong Jo HYON**, Anyang-si (KR);
YONGSU NOH, Seoul (KR); **Sang
Min PARK**, Bucheon-si (KR);
DONGMYOUNG JOO, Bucheon-si
(KR); **Daecheon HWANG**, Incheon
(KR); **poou reum JANG**, Incheon (KR);
Hyoung-Kyu YANG, Seoul (KR); **JUN
HYUK CHOI**, Bucheon-si (KR); **Jin
Hong KIM**, Suwon-si (KR); **Joon
Sung PARK**, Seoul (KR)

(57)

ABSTRACT

Provided is a power conversion system including a heat sink, a first heat emitter provided on an upper surface of the heat sink, a second heat emitter electrically connected to the first heat emitter and provided on a lower surface of the heat sink, a third heat emitter provided on one side of the heat sink and spaced apart by a predetermined distance from the heat sink, and a heat dissipation fan provided in a direction facing the third heat emitter based on the heat sink and spaced apart by a predetermined interval from the third heat emitter, wherein, during a normal operation, more heat is emitted by the first heat emitter than by the second heat emitter.

(21) Appl. No.: **18/541,919**

(22) Filed: **Dec. 15, 2023**

(30) **Foreign Application Priority Data**

Nov. 30, 2022 (KR) 10-2022-0164110

Jul. 17, 2023 (KR) 10-2023-0092244

