



US 20240213889A1

(19) **United States**(12) **Patent Application Publication**
LIM et al.(10) **Pub. No.: US 2024/0213889 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **PWM CONTROL APPARATUS AND
METHOD FOR 2-STAGE INVERTER***H02M 1/088* (2006.01)*H02M 7/49* (2006.01)(71) Applicant: **Hyundai AutoEver Corp.**, Seoul (KR)(52) **U.S. Cl.**CPC *H02M 7/5395* (2013.01); *H02M 1/0077*
(2021.05); *H02M 1/088* (2013.01); *H02M*
7/49 (2013.01)(72) Inventors: **Dong Hwi LIM**, Seoul (KR); **Eun Su**
JUN, Seoul (KR)(21) Appl. No.: **18/396,424**(22) Filed: **Dec. 26, 2023**(30) **Foreign Application Priority Data**

Dec. 27, 2022 (KR) 10-2022-0185234

Publication Classification(51) **Int. Cl.***H02M 7/5395* (2006.01)*H02M 1/00* (2006.01)

(57)

ABSTRACT

A PWM control apparatus of a 2-stage inverter includes: a first inverter; a second inverter; and a PWM controller which PWM-controls the first inverter and the second inverter, respectively, wherein the PWM controller controls the first inverter by remote-state PWM (RSPWM), the PWM controller determines whether it is necessary to generate five edges in next PWM period in the RSPWM control of the first inverter, and if it is necessary to generate five edges, generates an edge in the beginning of the next PWM period and generates an edge according to a previously calculated setting value in the next PWM period.

