



US 20240235542A1

(19) **United States**(12) **Patent Application Publication**
IMAMURA et al.(10) **Pub. No.: US 2024/0235542 A1**(43) **Pub. Date: Jul. 11, 2024**(54) **DRIVING METHOD AND DRIVING DEVICE
FOR SEMICONDUCTOR DEVICE, AND
POWER CONVERSION APPARATUS****Publication Classification**(51) **Int. Cl.****H03K 17/082** (2006.01)**H02M 1/08** (2006.01)**H02M 7/5387** (2006.01)**H03K 17/16** (2006.01)(52) **U.S. Cl.**CPC **H03K 17/0822** (2013.01); **H02M 1/08**
(2013.01); **H02M 7/53871** (2013.01); **H03K**
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§ 371 (c)(1),

(2) Date: **Nov. 17, 2023**

(57)

ABSTRACT

A semiconductor device is subjected to ON/OFF control by controlling a gate voltage according to a drive control signal (Ssw). In a turn-on operation for charging a gate in response to transition of drive control signal (Ssw) from a first level (0) to a second level (1), a drive signal (Sdr) is set to first level (0) to discharge the gate at a first time (t1) after end of a Miller period (200) of a gate voltage (Vg), thereby providing a voltage drop period (210) in which gate voltage (Vg) temporarily drops. At a second time (t2), drive signal (Sdr) is again set to second level (1) to start charging the gate.

