

TITLE:
MOTOR DRIVING DEVICE

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ABSTRACT

A motor driving device includes a battery module and a conversion circuit. The conversion circuit drives a motor in a driving mode and charges the battery module in a charging mode. The conversion circuit includes a determination circuit, a controller, and
10 a first phase upper arm switch circuit. The first phase upper arm switch circuit includes a power switch and a transistor. First terminals, second terminal, and control terminals of both the power switch and the transistor are respectively coupled to a positive power supply terminal of the battery module, a first phase node, and the controller. In the charging
15 mode, when a first phase voltage value located at the first phase node is greater than a battery voltage value located at the positive power supply terminal, the determination circuit notifies the controller to turn on the transistor.

FIG. 2