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OVERCURRENT PROTECTION DEVICE****Publication Classification**(71) Applicant: **FUJI ELECTRIC CO., LTD.**,
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ABSTRACT

A semiconductor device includes an output element configured to switch on and off according to a drive signal to drive a load, a current monitoring element configured to monitor a current flowing through the output element, and a capacitor having one end connected to a gate of the output element and another end connected to a gate of the current monitoring element. The semiconductor device further includes a current detection resistor configured to output a sense current detection signal obtained by converting a sense current output from the current monitoring element into a voltage, and an overcurrent detection circuit configured to detect an overcurrent state of the output element, by comparing the sense current detection signal with a reference voltage.

