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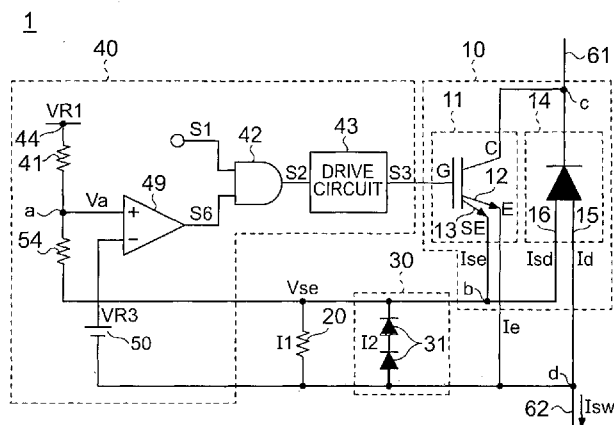
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- (54) Title: SEMICONDUCTOR DEVICE

FIG. 1



- (S7) Abstract:** A semiconductor device includes a transistor (12), a diode (15), a sense transistor (13), a sense diode (16), a resistor (20), and a clamp circuit (30). The diode is connected in inverse parallel to the transistor. The resistor is connected at one end of the resistor to an emitter of the sense transistor and an anode of the sense diode, and is connected at the other end of the resistor to an emitter of the transistor and an anode of the diode. The clamp circuit is configured to clamp a voltage that is generated in the resistor when a sense diode current flows. A ratio of a sense diode current to a current flowing to the diode is larger than a ratio of a sense current to a current flowing to the transistor.