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## (54) TRANSISTOR SHORT CIRCUIT PROTECTION

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#### (57)ABSTRACT

A short circuit detection circuit includes a current terminal, a sense resistor, an amplifier, and a resistor-capacitor ladder. The sense resistor is coupled to the current terminal, and is configured to develop a sense voltage proportional to a current through the current terminal. The amplifier is coupled to the sense resistor, and is configured to generate a scaled current proportional to the sense voltage. The resistor-capacitor ladder is coupled to the amplifier, and is configured to generate a measurement voltage that represents a surface temperature rise due to the current through the current terminal.

