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(54) **DIFFERENTIAL TECHNIQUES FOR MEASURING VOLTAGE OVER A POWER SWITCH**

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(57) **ABSTRACT**

A driver circuit is configured to deliver drive signals from an output pin to a power switch to control ON/OFF switching of the power switch. A first detection pin of the driver circuit is configured to receive a first signal associated with the power switch, wherein the first signal indicates a voltage drop over the power switch and a voltage drop over one or more other circuit elements. A second detection pin is configured to receive a second signal, wherein the second signal indicates a voltage drop over one or more matched circuit elements, wherein the one or more matched circuit elements associated with the second signal are substantially identical to the one or more other circuit elements associated with the first signal. The driver circuit is configured to determine the voltage drop over the power switch based on a difference between the first signal and the second signal.