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(54) **PROTECTING SEMICONDUCTOR SWITCHES IN SWITCHED MODE POWER CONVERTERS**

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(57) **ABSTRACT**

Driver circuitry for driving a power semiconductor switch having a control input and main terminals is described. The driver circuitry includes control terminal driver circuitry coupled to the control input and configured to provide a drive signal, a sense terminal coupled to the main terminal, a current mirror coupled to the sense terminal to mirror a current input into the sense terminal during turn-off, a first current comparator configured to compare a current signal received from the current mirror to a first current threshold and output a first signal representative of the comparison, and a second comparator configured to compare a signal received from the sense terminal to a turn-on threshold and output a second signal representative of the comparison. The turn-on threshold represents a highest voltage of the main terminal during turn-on. The first current threshold represents a highest voltage of the main terminal during turn-off.