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(54) SWITCHING POWER CONVERTER AND CONVERSION CONTROL CIRCUIT THEREOF

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(57)**ABSTRACT**

A conversion control circuit, configured to control a switching power converter, includes a trigger signal generation circuit, an on-time control circuit, and a logic driver circuit. The trigger signal generation circuit is configured to generate a turn-on trigger signal. The on-time control circuit is configured to generate a turn-off trigger signal to determine the on-time and/or the off-time of a pulse width modulation (PWM) signal, and adjusts the on-time and/or the off-time according to the input voltage and the output voltage, such that the switching frequency of the switching power converter is adaptively adjusted according to a ratio between the output voltage and the input voltage. The logic driver circuit is configured to generate the PWM signal according to the turn-on trigger signal and the turn-off trigger signal, wherein the turn-on trigger signal enables the PWM signal, and the turn-off trigger signal disables the PWM signal.

