

A Compact and High Performance SC DC/DC Buck Converter

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Abstract

A novel paralleling interleaved discharging (PID) approach is presented to reduce the output ripple and continuous input current waveform in step-down switched capacitor (SC). Theoretical analysis and the computer simulation show that PID method can reduce output ripple by a factor of three and improve output power level by 8.7%. The PID method can provide a large range of constant desired values of the output voltage for a given input voltage by paralleling.