

# ZERO-VOLTAGE AND ZERO-CURRENT SOFT-SWITCHED FULL-BRIDGE PWM (ZVZCS-FB-PWM) DC/DC CONVERTER

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**Abstract:** *A new topology of an improved Zero-Voltage and Zero-Current Soft-Switched Full-Bridge Phase-Shifted PWM (ZVZCS-FB-PWM) DC/DC Converter for a battery charger application is analyzed and designed. To improve the conventional phase-shifted ZVS PWM converter, an auxiliary transformer and a small discrete inductor (commutation inductor) are added in the primary circuit of the power transformer. Experimental results from a 600 V/2.6 kW -70 kHz prototypes validate the design.*

**Key words:** *zero voltage switching, zero current switching, dc/dc converter.*

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