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Title: Three-phase inverter synchronous rectification

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Here, we present how to implement hybrid active neutral point clamped (ANPC) inverter topology with synchronous rectification to optimally balance efficiency and cost for common applications.

In this work, the three-phase SiC inverter using synchronous rectification is investigated. The analytical model for inverter power loss with and without freewheeling diode is built.

This article will discuss the specific requirements for DC-DC converters required to power today's GHz class CPUs, the benefits of the multiphase topology, and an example of implementation ...

To meet these demands, switching power supply designers in the late 1990s began adopting Synchronous Rectification (SR)--the use of MOSFETs to achieve the rectification function ...

In this paper, a high performance CMV reduction PWM method, named, generalized TSPWM (GTSPWM) method is proposed to maximize the performance of high-frequency SiC based ...

In this paper, a synchronous rectifier discontinuous pulse width modulation (SRDPWM) strategy suitable for SiC MOSFETs is proposed for SiC MOSFET three-phase two- level inverters from ...

The tested switching cell is based on 3.3 kV / 120 mO TO-263-7 discrete MOSFETs using synchronous rectification mode. This configuration implies some challenges and introduces ...

Synchronous rectification (SR) has a pivotal role in improving the efficiency of LLC converters. SR technology is to use MOSFETs instead of rectifier diodes. The MOSFET is ...

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technology is to use MOSFETs ...

The reactive power in power converter with inductive load (motor drive e.g.) requires a current commutation path for the freewheeling current. Due to the high v.

A 7-kW prototype of SiC three-phase inverter is built, which achieves a peak efficiency of 98.8% (98.8%; 0.15%) and 98.5% (98.5%; 0.15%) at 40 kHz using SR and FWD, respectively.

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