
Motor drive systems using pulse width modulation (PWM) control techniques experience high-frequency switching losses in the inverter, while high-frequency motor losses ...

The paper presents efficiency and power loss analysis in a high-frequency, seven-level diode-clamped inverter (7LDCB). The inverter is composed of four-level (4L) diode ...

In this paper, a high frequency single phase dual-buck full-bridge grid-connect inverter for small power renewable energy is proposed. The SiC components, as the power devices, are ...

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The study presents analytical expressions describing static and dynamic power losses in power semiconductor diodes and transistors.

Abstract: Due to its low loss and high switching frequency, the silicon carbide metal oxide field effect transistors (SiC mosfets) are more suitable as switching devices in power inverter for ...

This means that all high-frequency components of the fundamental wave are lost as useless energy (in the form of heat, sound, and vibration). As a result, engineers developing high ...

The aim of this paper is to analyse the capability of the variable switching frequency hybrid pulse width modulation (VSF-HPWM) strategy for reducing the inverter power losses.

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The given static and dynamic power loss modeling methods have been used to look into the efficiency of frequency converters and other types of semiconductor converters, as well as ...

For a total inverter power loss of approximately 20 W under high-load conditions, the coreless system could generate 2.3× to 2.6× ...

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