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Single-phase high-frequency inverter design

An uninterruptible power supply (UPS) application requires a DC/AC converter to connect AC loads to the battery DC power source. Most inverters used for such ap.

The first step is the conversion of the low voltage DC power to a high voltage DC source, and the second step is the conversion of the high DC source to an AC waveform using pulse width modulation.

The main aim of this paper is the analysis and development of single-phase and three-phase inverter to design with MOSFET and IGBT as power elements by sinusoidal pulse width mod- ulation (SPWM) ...

In this chapter single-phase inverters and their operating principles are analyzed in detail. The concept of Pulse Width Modulation (PWM) for inverters is described with analyses extended to different kinds ...

Great efforts have been made to solve this problem from three aspects: topology, modulation, and control strategy. In this paper, modulation strategies and topologies of different ...

This application note explores the use of GreenPAK ICs in power electronics applications and will demonstrate the implementation of a single-phase inverter using various control methodologies.

This application report documents the concept reference design for the DC-DC Stage and the DC-AC Converter section that can be used in the High-Frequency Inverter using TMS320F28069, which ...

This paper presents the design and experimental implementation of a single-phase H-bridge inverter, controlled using the IR2103 integrated circuit, a dedicated high- and low-side driver ...

This article presents a simple high-frequency transformer (HFT) isolated buck-boost inverter designed for single-phase applications. The proposed HFT isolated inverter, with its full-bridge buck-boost ...

Abstract Aims: To simulate and construct a single phase, pure sine wave inverter using a high frequency transformer.

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