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Using IGBT to produce sine wave inverter

Overview

This paper describes a method to design a single phase sine wave inverter using IGBT as switching devices to obtain a sine wave AC output of desired magnitude and frequency, and analyze the effect of various passive components on the output waveform and try to improve the quality. This paper describes a method to design a single phase sine wave inverter using IGBT as switching devices to obtain a sine wave AC output of desired magnitude and frequency, and analyze the effect of various passive components on the output waveform and try to improve the quality. A sine wave inverter is a device which converts battery power into a 220 V AC or a 120 V AC sine wave output. There are 3 basic types of inverters: square wave inverter, modified sine wave inverter and a pure sine wave inverter. The inverter uses transistor or IGBT power stages driven by PWM-modulated signals to produce a sinewave output. I've made some tests based around the EGS002 driver board and other smaller modules. But this driver could read feedback and control some IGBTs in order to create a steady. This Paper presents the design and implementation of a single phase inverter using IGBT as switch and the study of the output responses.

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