
Discover the crucial role of inverter power stage modules in converting high-voltage DC into three-phase AC. This blog post explores their functionality, key components, and ...

In this paper, we propose a simple frequency controller that uses the inverter output current as feedback to adapt its frequency, and also propose controllers for the regulation of the DC and ...

Explore high voltage inverters, their benefits, applications, and how to protect them for optimal performance.

The front stage, often called the DC-DC converter stage, typically operates at 12V to 48V in most residential and commercial systems. However, industrial applications may push this range to ...

A deep dive into THT/through-hole soldering for renewable energy inverter PCB--covering high-voltage insulation, power-stage layout, thermal management, and grid ...

This reference design provides an overview on how to implement a bidirectional three-level, three-phase, SiC-based active front end (AFE) inverter and power factor correction (PFC) stage.

This technical note introduces the working principle of an Active Front End (AFE) and presents an implementation example built with the TPI 8032 programmable inverter.

When the front stage output voltage spikes beyond safe limits, it can damage equipment and reduce energy efficiency. This article reveals 7 practical solutions to tame voltage surges while ...

Safe, robust, efficient switching of the power transistors within the power inverter is an important function of the gate drivers within a VSD. The next blog will consider some of the ...

Safe, robust, efficient switching of the power transistors within the power inverter is an important function of the gate drivers within a ...

The higher voltage supplies large loads such as traction motor, air-conditioning, and starters. Lower-power components such as infotainment and safety systems will remain on 12V supplies.

This technical note introduces the working principle of an Active Front End (AFE) and presents an implementation example built ...

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