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High-power mobile three-level power box

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Design and Analysis of a High-Voltage and High-Power ANPC Three-Level

Mar 23, 2023 · In electric railway traction application, the two-level topology and NPC (neutral-point-clamped) three-level topology are usually used in the DC 3600 V voltage traction ...

Power Modules for Combining Innovation, Flexibility and ...

Mar 13, 2025 · Three level topologies have demonstrated higher efficiencies, filter optimization potential and the capability of handling high DC-link voltages. To maximize the advantages ...

Power Layout Design of a GaN HEMTs-Based High-Power High ...

Jan 19, 2024 · Multiple commutation paths exist for switching devices in a three-level active neutral point clamped (3L-ANPC) inverter operation based on the selected switching state and ...

Comprehensive DC Power Balance Management in High-Power Three-Level ...

Feb 2, 2015 · With the increasing popularity of electric vehicles, there is an urgent demand to shorten the charging time, so the development of high-power charging stations with fast ...

onsemi to supply Volkswagen with SiC-based power box ...

Jul 22, 2024 · The solution features silicon carbide-based technologies in an integrated module that can scale across all power levels - from high-power to low-power traction inverters to be ...

An SiC MOSFET and Si Diode Hybrid Three-Phase High-Power Three-Level

Sep 27, 2018 · The utilization of wide bandgap devices such as silicon carbide (SiC) diode and mosfet can significantly increase the power density and the efficiency of rectifier circuits. ...

POWER ELECTRONICS High Voltage Box for Electrified ...

May 18, 2022 · High Voltage Box for

Electrified Vehicles Through a higher mechatronic integration of energy conversion and distribution in the vehicle one can reduce weight and cost, while at ...

A high power NPC three-level inverter equipped with IGCTs

Aug 16, 2004 · In this paper, a high power NPC three-level inverter equipped with integrated gate-commutated thyristor (IGCT) is introduced and a hybrid space voltage pulse width modulation ...

Design and Analysis of a High-Voltage and High-Power ANPC Three-Level

Mar 23, 2023 · Based on the above application background, this paper proposes a design method and experimental results of a high-voltage and high-power three-level power module. At ...

A cascaded three-level buck-LLC DC/DC converter with high

power ...

Aug 18, 2023 · A cascaded three-level buck-LLC DC/DC converter with high power density for high-frequency applications Department of Electrical Engineering, Nanjing University of ...

Research on the Application of the High-Power SiC& Si Hybrid Three-Level

Dec 3, 2024 · This paper primarily discusses the hybrid application technology of high-voltage SiC MOSFETs and IGBTs in high-power three-level, three-phase inverters. It thoroughly utilizes ...

Maximize power density with three-level buck-switching ...

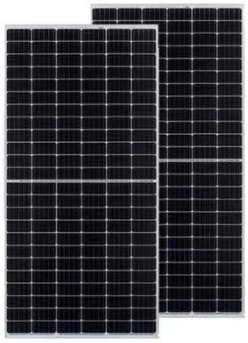
Jan 7, 2021 · Traditional synchronous buck-based battery chargers cannot take full advantage of high input power because of their maximum efficiency limitations. The challenge for portable ...

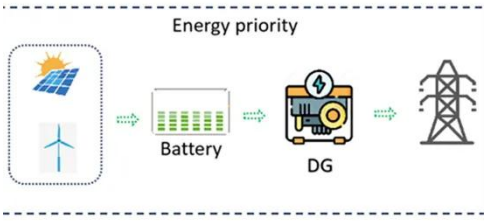
Design of a High-Efficiency, High Specific-Power Three-Level ...

Nov 8, 2019 · The electric propulsion drives for the more-electric aircraft need lightweight and high-efficiency power converters. Moreover, a modular approach to the construction of the ...

Modular design of a three-level SiC MOSFET power ...

Aug 31, 2022 · Abstract In this article, a three-level neutral point clamped inverter design for more-electric aircraft applications is presented. The power losses were calculated by building an ...





A cascaded three-level buck-LLC DC/DC converter with high power ...

Aug 18, 2023 · On the other hand, compared with the three-level converter, the proposed cascaded three-level converter has simpler structure, and simpler driving circuit. Finally, a 980 ...

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