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High power portable DC-DC power supply design

Overview

What is a high voltage DC power supply?

The design scheme of high-voltage DC power supply is experimentally verified, and the results show that the single-module output voltage is 50 kV, and the output power is about 800W, which can meet the high-power input requirements by stacking multiple modules.

What are the design considerations associated with portable power design?

Some design considerations associated with portable power design have been discussed, such as light load efficiency, voltage regulation accuracy, the battery impedance impact on the end of discharge voltage, battery discharge efficiency and system stability. A portable device needs a battery as its power source when an AC adapter is not available.

How to design a high-voltage power supply?

Design Your Transformer. One of the main things required in a good high-voltage power supply design is designing the transformer correctly for your applications. The transformer is generally the energy-conversion element in a high-voltage design, which also provides isolation between the primary and secondary.

How do you choose a high power density design?

Marketing has come up with a new product idea, but it requires more power and less space than the previous designs. There are so many choices for a solution. Which one do you select?

In order to meet the high power density design requirement, you must first understand the efficiency losses in your system and make some design decisions.

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A Compact High Voltage DC Power Supply Design by ...

Taizhuang Hu, Huibo Zhang, Zicheng Zhang, and Jingming Gao Abstract The demand for mobile and portable applications is driving the devel-opment of compact and ...

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Power-Supply Design

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Achieving High Power Density Designs in DC-DC Converters Agenda Marketing / Product Requirement Design Decision Making Translating Requirements to Specifications Passive ...

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DC-DC Power Conversions and System Design Considerations for Battery Operated System Lingyin Zhao and Jinrong Qian, Texas Instruments ABSTRACT The ...

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