
48V inverter design solution

What is a 48V 12Kw inverter of BSG?

A 48V 12kW inverter of BSG was designed with paralleled TO-Leadless MOSFETs. The phase current was up to 500Arms while the VDS voltage spike was under 70V. The maximum temperature rise of MOSFET was 30°C, and the current of MOSFET was balanced well. This design fulfilled the power requirement with 105°C liquid cooling system.

What is a 48 volt power supply?

Infineon stands for the introduction of the 48 V power supply and already offers an extensive application and product portfolio for 48 V solutions in electric and mild hybrid cars. Traditionally, battery electric vehicles (BEVs) have been equipped with a high-voltage (HV) power supply and a 12 V power supply.

What is inverter specification?

The inverter specification describes the working condition of the power stage as shown in Table 2. This specification is not directly limited by the power stage. The power stage is designed for such inverter and motor system. The target motor is Permanent Magnet Synchronous Motor (PMSM).

What is a BSG/ISG inverter?

The BSG/ISG unit is a permanent magnet or inductive motor capable of accepting 48V. Traditionally, driving the phase windings is a dedicated 3-Phase inverter network, 6 power switches arranged as 3 half-bridges, with 80V or 100V Power Trench MOSFETs.

Introduction This eBook provides guidance on designing 48V power delivery networks to enhance the performance, efficiency, and reliability of industrial products. You will ...

This reference design demonstrates a 48V DC input, 85A RMS output, three-phase motor drive inverter. The 100V intelligent half-bridge gate driver DRV8162L enables a small size, robust, ...

Scope and purpose The power stage was developed to support customers during their first steps in designing 48V inverter for Belt-driven Starter Generator (BSG) application. ...

EV 48V new E/E structure introduction and MPS power solutions Adley Cheng 2024.05.10 rev 20180504

Discover how Infineon is leveraging the benefits of 48 V solutions in electric and mild hybrid cars - higher efficiency, reduced wires and heatsinks.

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Solution Overview Power Inverter -3 Phase or 6 Phase Motor Design T10 MOSFET Technology: 40V-80V Low & Medium Voltage MOSFETs Automotive Power Modules APM17 for 48V ...

System Purpose The hybrid power solution for MHEVs is achieved by a Starter Generator powered by a 48V lithium-ion battery. Whether in the form of a Belt Starter Generator (BSG) or ...

By applying the Hybrid Polymer technology to Axial-lead Aluminium Electrolytic Capacitors, a compact DC-link solution with reduced amount of capacitor and minimized ...

Arrow Electronics, in collaboration with Vishay eMobility, today announced the launch of a low-voltage

traction inverter reference design tailored for light electric vehicles ...

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