Gallium Nitride Integrated Power Intelligent Controller



Overview

GaNEXUSTM Integrated Power includes GaNEXUS Drive, GaNEXUS Smart, and GaNEXUS Control, where each combines a GaN switch together with potential combination of additional features: gate driver, current sensing, protection, and control, in a single device to simplify design . GaNEXUSTM Integrated Power includes GaNEXUS Drive, GaNEXUS Smart, and GaNEXUS Control, where each combines a GaN switch together with potential combination of additional features: gate driver, current sensing, protection, and control, in a single device to simplify design . Our integrated GaN technology delivers greater than 99% inverter efficiency, significantly enhancing thermal performance and minimizing power loss. Advanced integration and increased power density enable a smaller solution footprint and reduce system-level costs. Ultra-low dead time and. GaNEXUS™ is onsemi's gallium nitride (GaN) power portfolio, designed to deliver higher efficiency, greater power density, and fast switching performance across modern power architectures. In the joint research project “PowerCare”, three Fraunhofer institutes combine their.



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Article Content

Gallium nitride (GaN) motor drivers

Our integrated GaN technology delivers greater than 99% inverter efficiency, significantly enhancing thermal performance and minimizing power loss. Advanced integration and increased power density

Gallium Nitride (GaN) Integrated Power

GaNEXUSTM Integrated Power includes GaNEXUS Drive, GaNEXUS Smart, and GaNEXUS Control, where each combines a GaN switch together with potential combination of additional features: gate

Gallium nitride (GaN) intelligent power modules (IPMs) | TI

Our integrated GaN IPMs achieve greater than 99% inverter efficiency, removing the need for an external heat sink and improving thermal performance with reduced power loss. Advanced

Gallium Nitride (GaN)

GaNEXUS™ is onsemi''s new gallium nitride (GaN) power portfolio, designed to deliver higher efficiency, greater power density, and fast switching performance across modern power architectures.

Gallium Nitride (GaN) Power | Renesas

Renesas Electronics'' gallium nitride (GaN) power solutions are designed to improve energy efficiency and performance in automotive, industrial, and power systems. Featuring GaN transistors,

Gallium nitride (GaN) power ICs

Integrated Smart GaNs Gallium nitride (GaN) is revolutionizing the power engineering world by enabling high speed, increased efficiency and higher power density never before possible with silicon MOSFETs.

Concept for a GaN-Based Intelligent Motor Controller with Integrated ...

In the internal, strategic research project “PowerCare”, Fraunhofer will combine new, highly efficient GaN devices and a multi-channel pulse width modulator (PWM) controller with embedded AI to develop

GaN transistors (GaN HEMTs) | Infineon Technologies

Infineon CoolGaN™ delivers discrete and integrated GaN power solutions with proven reliability, assured long-term supply, and expert support to enable

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STMicroelectronics'' new GaN ICs platform for motion

ST''s latest GaN ICs now make this technology applicable to motor drives for products like washing machines, hairdryers, power tools, and factory

scann986

This will allow system on a chip integration, such as complete AC/DC LV conversion and high power monolithic inverters for motor drives and power distribution. More than the replacement of Silicon

GaN with integrated driver

GaN with integrated driver Infineon CoolGaN™ Drive - integrates gallium nitride transistors with intelligent gate drivers and current sense

Start of the Fraunhofer-funded project PowerCare Annual savings in ...

Annual savings in megatons of greenhouse gas emissions in industry and mobility through intelligent power electronics with novel gallium nitride semiconductors in motor controllers Independence from

Gallium Nitride Power Devices: A State of the Art Review

Wide Bandgap (WBG) semiconductor materials present promising electrical and thermal characteristics for Power Electronics applications. These WBG devices make it possible the development of more

Overview of Gallium Nitride (GaN) Solutions from Leading

GaN power devices have gained prominence in medium- and high-power applications due to their ability to operate at high frequencies while maintaining excellent efficiency.

Concept for a GaN-Based Intelligent Motor Controller with Integrated ...

Power electronics based on gallium nitride (GaN) or silicon carbide enable more efficient and compact drives for industry and mobility - with particularly demanding requirements for dynamics and

Press Release: PowerCare

In the PowerCare project, novel vertical gallium nitride power semiconductors as well as real-time failure models are developed and used in a motor drive. Here, PowerCare takes a new

Gallium Nitride Power Devices | Springer Nature Link

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In this chapter, we will thoroughly examine the key attributes of power devices based on Gallium Nitride (GaN). Our focus will encompass an in-depth exploration of their electrical

GaN transistors (GaN HEMTs) | Infineon Technologies

Infineon''s gallium nitride (GaN) transistors are available in voltage ranges from 60 V up to 700 V. The fast turn-on and turn-off speeds with minimal switching losses

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Website: https://bagyou.es
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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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