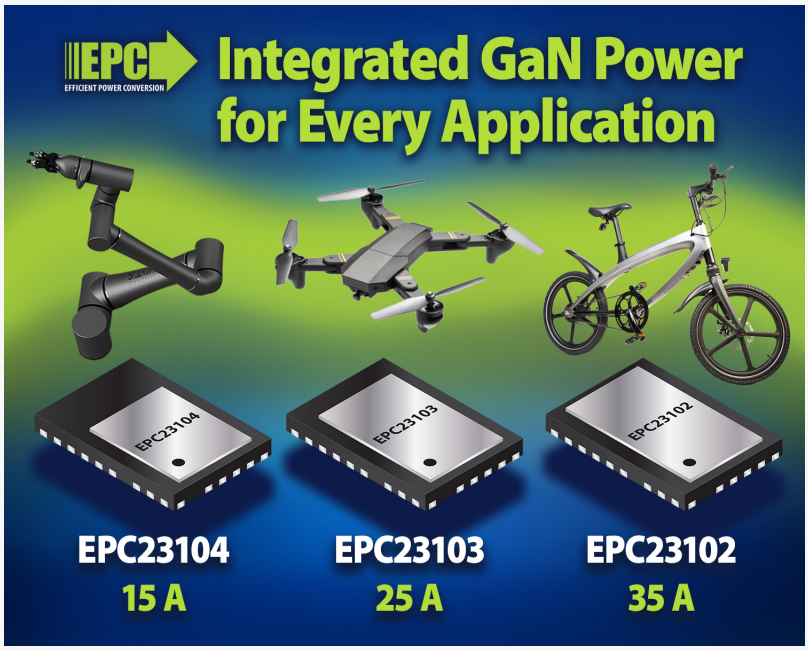
ePower™ Stage ICs Boost Power Density and Simplify Design Across Power Budgets

Efficient Power Conversion (EPC) expands its family of footprint compatible ePower™ Stage ICs to boost power density and simplify design.



"ePower™ Stage ICs Boost Power Density and Simplify Design Across Power Budgets"

EL SEGUNDO, CA, USA, March 21, 2023 /EINPresswire.com/ -- EPC announces the introduction of two new 100 V power stage ICs rated at 15 A (EPC23104) and 25 A (EPC23103). The two devices join the 100 V 35 A power stage IC EPC23102 offered by EPC.

The three ICs are capable of a maximum withstand voltage of 100 V and integrate a complete GaN half-bridge power stage that includes symmetrical FETs in half bridge configuration, half bridge driver, level shifter, bootstrap charging, and input logic interface.

The three devices feature a thermally enhanced QFN package measuring only 3.5 mm x 5 mm with exposed top for dual side cooling and wettable flanks. Footprint compatibility enables customers to upgrade their design for better performance or lower cost without modification to the board, and therefore can easily adapt to changing load requirements.

In DC-DC applications, the devices can operate with high efficiency at high switching frequency (3 MHz maximum) and offer higher performance and smaller solution size for 28 V – 60 V DC-DC in computing, industrial and USB PD 3.1 applications.

In 32 V – 48 V BLDC motor drives for e-mobility, robotics, power tools, and drones, the device can operate with small deadtimes (21 ns) and at 100 kHz to increase the system efficiency due to less motor core losses and vibrations, and to reduce or eliminate the electrolytic capacitors.

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>
> *Alex Lidow, CEO and co-founder of EPC*

founder of EPC. "Integrated devices are easier to design, easier to layout, easier to assemble, save space on the PCB, and increase efficiency. Designers can use these devices to make lighter weight and more precise BLDC motor drives, higher efficiency 48 V input DC-DC converters, higher fidelity class-d audio systems, and other industrial and consumer applications."

Development Board

The development board, EPC90151 and EPC90152, are half bridge demo boards featuring the EPC23103 and the EPC23104 ePower Stage IC respectively. The purpose of the boards is to simplify the evaluation process of the EPC23103 and the EPC23104. These 2" x 2" (50.8 mm x 50.8 mm) boards are designed for optimal switching performance and contain all critical components for easy evaluation.

Price and Availability

The EPC23103 priced at $3.75 each in 1 Ku volumes. The EPC23104 priced at $3.00 each in 1 Ku volumes.

The development board, EPC90151 and EPC90152, are priced at $200.00 each.

All devices and boards are available for immediate delivery from Digi-Key at https://www.digikey.com/en/supplier-centers/epc

Designers interested in replacing their silicon MOSFETs with a GaN solution can use the EPC GaN Power Bench's cross-reference tool to find a suggested replacement based on their unique operating conditions. The cross-reference tool can be found at: https://epc-co.com/epc/DesignSupport/GaNPowerBench/CrossReferenceSearch.aspx

About EPC

EPC is the leader in enhancement mode gallium nitride (eGaN®) based power management. eGaN FETs and integrated circuits provide performance many times greater than the best silicon power MOSFETs in applications such as DC-DC converters, remote sensing technology (lidar), motor drives for eMobility, robotics, and drones, and low-cost satellites.

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