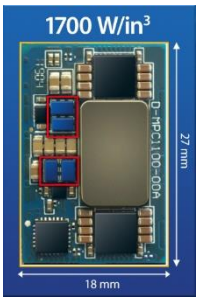
MPS & EPC Redefine DC/DC Power Conversion with 48V to 6V LLC Module Family for High-Density Computing and Datacenters

The combination of MPS (Monolithic Power Systems) controllers with ultra-efficient eGaN® FETs from EPC (Efficient Power Conversion) enable best-in-class power density of 1700W/in³ in high-efficiency, low-cost LLC DC/DC conversion.

MPC1100-54

- 48V to 6V
- LLC 10:1
- 300W
- 27mm x 18mm
- 1700W/in³



KIRKLAND, WASHINGTON, January 14, 2021 − Monolithic Power Systems, Inc. (MPS) (Nasdaq: MPWR), a leading company in high-performance power solutions, announced today the launch of a new family of 48V to 6V digital DC/DC power modules for 48V Datacenter Solutions, utilizing eGaN® transistors from Efficient Power Conversion (EPC) Corporation. These power modules target applications for high-density computing and datacenters, artificial intelligence, machine learning, and multi-user gaming.

MPS's MPC1100-54-0000 is the first controller in a product family that will include 48V to 6V LLC modules that utilize eGaN FETs to achieve an overall efficiency above 97% in a small 27mmx18mmx6mm footprint. A key advantage of 48V to 6V front-end conversion includes the enabling of a high-frequency secondary stage that is small enough to be placed much closer to the xPU/ASIC/GPU; this reduces 4X the power distribution loss, compared to the commonly used STC topology for 48V to 12V conversion.

For high-density server applications, record power density and efficiency can be achieved with simple, low-cost topologies, such as an LLC DC/DC converter. eGaN FETs are well-suited for LLC converters due to their combined low gate charge with 5V gate operation that yields very low gate power consumption, ultra-low on resistance, and low output capacitance charge.

With power levels ranging from 300W to 1000W, these modules are scalable to accommodate a range of high-current and high-power applications. Customers can add up to three modules to address higher power requirements, or scale down to one or two modules for lower power requirements.

"The 48V to 6V module family offers an extremely powerful and versatile solution set for high-performance computing, high-density datacenters, and artificial intelligence systems migrating to the 48V power distribution architecture," said Maurice Sciammas, Sr. VP Marketing & Sales, MPS. "With the EPC devices inside our modules, we can increase power density significantly to meet the demanding requirements of these advanced applications."

"Advanced computing applications are putting higher demands on power converters, and silicon-based power conversion is not keeping pace," said Alex Lidow, CEO of EPC. "We are delighted to work with MPS, a leader in this space, to implement GaN into their modules, allowing customers to increase the efficiency, shrink the size, and reduce system cost for 48V power conversion."

About Monolithic Power Systems

Monolithic Power Systems, Inc. (MPS) provides small, highly energy efficient, easy-to-use power solutions for systems found in industrial applications, telecom infrastructures, cloud computing, automotive, and consumer applications. MPS' mission is to reduce total energy consumption in its customers' systems with green, practical, compact solutions. The company was founded by Michael Hsing in 1997 and is based in the United States. MPS can be contacted through its website at www.monolithicpower.com or its support offices around the world.

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About EPC

EPC is the leader in enhancement-mode gallium nitride-based power management devices. EPC was the first to introduce enhancement-mode gallium-nitride-on-silicon (eGaN) FETs as power MOSFET replacements in applications such as DC-DC converters, wireless power transfer, envelope tracking, RF transmission, power inverters, remote sensing technology (Lidar), and class-D audio amplifiers with device performance many times greater than the best silicon power MOSFETs. EPC also has a growing portfolio of eGaN-based integrated circuits that provide even greater space, energy, and cost efficiency.

Visit our web site: www.epc-co.com

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