

Press Release

Contact:

Nyan Tin
IXYS Corporation
1590 Buckeye Drive
Milpitas, CA 95035
Tel: (408) 457-9039
Email: sales@ixys.net

IXYS Announces 3kW Two-Phase Digital Power Factor Corrector Reference Design Based on Zilog's Z8F6481 MCU and IXYS Power Semiconductors

Milpitas, CA and Leiden, Netherlands. July 12, 2017 – IXYS Corporation (NASDAQ: IXYS), a global manufacturer of power semiconductors and integrated circuits for energy efficiency, power management, and motor control applications, today announced the availability of a new design: 3kW Two-Phase Digital Power Factor Corrector (PFC). It is based on Zilog's 8-bit Z8F6481 microcontroller, a member of the Z8 Encore! XP F6482 series of microcontrollers, and IXYS power transistors and rectifiers.

This PFC incorporates the digital inrush current concepts and design principles demonstrated in the recently released IXYS reference designs – the IXRD1002 High Power Digital Inrush Current Controller and the IXRD1004 High Power Two-Phase Digital Power Factor Correction. It consists of a 3kW AC-DC converter with an active PFC and employs a two-phase interleaved conversion architecture.

The input voltage of the PFC is at 240VAC while the output voltage is 650V. The maximum output power is 3kW, and the switching frequency ranges from 80kHz to 100kHz. The output voltage ripple is less than 5 percent at the full load. Other features include overload, overvoltage, and brownout protection, soft start, and power good status. The switches and the boost diodes use the IXYS 850V Ultra-junction Power MOSFETs IXFH50N85X and IXFH30N85X, respectively. The total power dissipated in these MOSFETs is less than 54W at 3000W output power, making the PFC highly efficient.

“This reference design demonstrates the World of IXYS in action for digitizing power management circuits using standard MCU's to achieve state of the art control and energy efficiency.” commented Steve Darrough, VP of marketing. “The Zilog Z8 Encore! family is a proven robust MCU especially for power control applications and is incorporated in an innovative circuit using the efficient IXYS 850V power MOSFET to achieve cost effective efficiency in a wide power range.”

The design consists of a microcontroller module, main power board, and auxiliary board. Implemented as an add-on device, the MCU module contains a connector for programming, which should be done before the entire system is switched on. The four layer, surface mount

main power board provides easy access to test points and can be powered from a 50Hz/60Hz 220/240V AC source.

Suitable for high power (3kW and above) AC-DC converters with active PFCs, this design can serve as a platform for developing a variety of power management solutions such as electric vehicle chargers, air conditioning systems, high-power LED lighting, and welding equipment.

The 3kW Two-Phase Digital PFC is available for purchase directly from IXYS' online store, <http://www.ixolarstore.com>. Additional product information can be obtained by visiting the IXYS website at <http://www.ixys.com> or by contacting the company directly.

About IXYS Corporation

IXYS Corporation makes and markets technology-driven products to improve power conversion efficiency, generate solar and wind power, and provide efficient motor control for industrial applications. IXYS offers a diversified product base that addresses worldwide needs for power control, electrical efficiency, renewable energy, telecommunications, medical devices, electronic displays, and RF power.

Safe Harbor Statement

Any statements contained in this press release that are not statements of historical fact, including the performance, rating, benefits, efficiency, reliability, availability and suitability of products for various applications, may be deemed to be forward-looking statements. There are a number of important factors that could cause the results of IXYS to differ materially from those indicated by these forward-looking statements, including, among others, risks detailed from time to time in the Company's SEC reports, including its Report on Form 10-K for the fiscal year ended March 31, 2017. The Company undertakes no obligation to publicly release the results of any revisions to these forward-looking statements.