

Press Release

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IXYS Introduces Surface Mount Power Device (SMPD) Technology That Delivers Record Maximum Power in Surface Mount Devices (SMD)

Biel, Switzerland, February 15, 2012 – IXYS Corporation (NASDAQ:IXYS) announces the expansion of its discrete ISOPLUS™ technology to introduce power modules as Surface Mount Devices (SMD). The IXYS ISOPLUS™ devices provided isolated package solutions for the power electronic industry for over 10 years with better thermal conductivity, lower weight and better power cycling when compared to copper based leadframe devices.

The newly developed Surface Mount Power Device (SMPD) uses the ISOPLUS™ principle to create a power module replacement with a DCB leadframe and plastic molded structure. The SMPD is UL recognized with 2.5KV terminal to base isolation and is suitable for SMD automated assembly processes. By utilizing the DCB leadframe concept, IXYS is able to provide the equivalent of any ‘screw-type’ power module in an SMPD version that can be easily mounted, in a low-cost reflow soldering process, onto any PCB-like standard discrete or IC devices.

“We see the SMPD as a revolutionary package which simplifies the way power system designers address their power semiconductor system integration and assembly. Now these customers can integrate high power modules in the same PCB reflow process as they use for low power surface mount ICs in one step, thus reducing cost, increasing yields, and creating lighter and thinner high power products,” commented Bradley Green, President of IXYS Europe. “The SMPD, as we designed it, can accommodate our large area power semiconductors in multi chip configurations with solderable leads that have significantly lower cost than the use of screw terminal or clip mounted products.”

The SMPD technology delivers to the designer a transfer molded package with integrated Direct Copper Bonded (DCB) isolation. The DCB provides low thermal impedance and best in class reliability under power and temperature cycling. Added to this, the new module includes IXYS’ proven ISOPLUS™ advantage – the energy efficient and cost controlling inclusion of multiple die on a single substrate that facilitates topologies such as phase leg, buck or boost chopper, Power Factor Correction (PFC) or even three phase rectifiers in a single package allowing a single SMD package replacement of various discrete packages. Traditional power semiconductor modules are the heaviest semiconductor component in present power systems. The weight reduction, which implies also reduced material cost and waste, is one of the key “Green” initiatives of IXYS Corporation in developing new products for the “Cleantech” industry. Lower weight products reduce the CO2 footprint of shipping and handling these products.

The SMPD package is mounted onto the customers' printed circuit boards just like any standard SMD package via a pick and place machine; thereby successfully removing manual or specialized power module mounting procedures which often dominate assembly costs using traditional technology. Both power and control terminal positions are separated to provide natural isolation and prevent complicated PCB designs.

“With the flexibility and its ease of mounting, IXYS' SMPD can provide the customer with the off-the-shelf building blocks to make any power electronic system. For instance, one SMPD takes care of the input rectifier whether it is a single or three phase design. One SMPD can provide a PFC or brake chopper stage, and up to three SMPD for the complete converter/inverter stage, thereby allowing the customer to distribute his power dissipation rather than be limited by the increased material or co-located heat dissipation of a traditional module,” continued Mr. Green.

IXYS offers flexible SMPD in various topologies including the IXA68PF650LB which is an example of a dual IGBT of 68A, 1200V including anti-parallel diodes, DMA90U1800LB, an example of a three phase diode rectifier providing 99A of DC current at a case temperature of 90 Deg C with 1800V blocking voltage. Alternatively, the MMIX1F520N075T2 contains a single die 75V trench MOSFET with a rated 500A at 25 Deg C case temperature. Although the range is extensive, IXYS can readily produce any customer-specific configuration for custom products.

For more information of this extremely versatile surface mount package please refer to www.IXYS.com or contact your nearest IXYS sales office.

About IXYS Corporation

Since its founding, IXYS Corporation has been developing power semiconductors and mixed signal ICs to improve power conversion efficiency, generate solar and wind power and provide efficient motor control for industrial applications. IXYS, and its subsidiary companies, offer a diversified product base that addresses worldwide needs for power control in the growing cleantech industries, renewable energy markets, telecommunications, medical devices, transportation applications, flexible displays and RF power.

Safe Harbor Statement

Any statements contained in this press release that are not statements of historical fact, including the performance, features 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 Form 10-Q for the fiscal quarter ended December 31, 2011. The Company undertakes no obligation to publicly release the results of any revisions to these forward-looking statements.