

## 4500V Power MOSFETs

Ideal for very high voltage power conversion applications



Milpitas, California and Biel, Switzerland, July 2013 – IXYS Corporation (NASDAQ: IXYS), a manufacturer of power semiconductors and integrated circuits for energy efficiency, power management, and motor control applications, today announced the release of the highest voltage Power MOSFET product line in the industry – 4500V N-Channel Power MOSFETs in international standard size packages. The current ratings range from 200mA to 2A. They are specifically designed to address demanding, fast-switching power conversion applications requiring very high blocking voltages up to 4.5kV.

Thanks to the positive temperature coefficient of their on-state resistance, these very high voltage MOSFETs are ideally suited for parallel device operation, which provides cost-effective solutions compared to series-connected, lower-voltage MOSFET ones. This also results in reduction in the associated gate drive circuitry, further simplifying the design, saving PCB board space, and improving the reliability of the overall system.

"We all know from Physics 101, that it is more efficient to provide electrical energy efficiently with higher voltage than with higher current. Thus, we developed this technology, to enable power conversion or energy tapping from the electrical grid closer to the grid voltage," commented Dr. Nathan Zommer, Founder and CEO of IXYS Corporation. "Numerous other industrial, transportation and medical applications require also high voltage control capabilities that these MOSFETs enable."

Moreover, a ceramic isolation of up to 4.5kV is achieved with the Direct Copper Bond (DCB) substrate technology – an electrically isolated tab is provided for heat sinking. The DCB provides low thermal impedance and best-in-class power and temperature cycling capabilities. And the molding epoxies meet the UL 94 V-0 flammability classification.

These new Power MOSFETs can provide an optimal solution for applications such as tapping power from the high voltage grid, capacitor discharge circuits, high-voltage automated test equipment, laser and x-ray generation systems, high-voltage power supplies, and pulse circuits.

The 4500V Power MOSFETs are available in IXYS' proprietary high-voltage versions of the international standard packages: TO-263HV, TO-268HV, ISOPLUS i4-Pak<sup>™</sup>, ISOPLUS i5-Pak<sup>™</sup>. The part numbers include IXTT02N450HV, IXTA02N450HV, IXTF02N450, IXTF1N450, IXTT1N450HV, IXTL2N450, with collector current ratings of 200mA, 200mA, 200mA, 900mA, 1A, and 2A, respectively.

Additional product information can be obtained by visiting the IXYS website at http://www.ixys.com or by contacting the company directly.

## 4500V Power MOSFETs Summary Table

Part Number	v <sub>oss</sub> (M)	Г <sub>офин</sub> ) TC = 25°С (A)	R <sub>Btine)</sub> max. Tj=25°C (Ω)	С_ МР- (рf)	Q, typ. (nC)	t <sub>n</sub> typ. (µs)	R <sub>talc</sub> max. (*C/W)	P,	Package Type
IXTF02N450	4500	0.2	750	256	10.4	1.6	1.6	78	ISOPLUS i4-Pak**
IXTT02N450HV	4500	0.2	750	256	10.4	1.6	1.1	113	TO-268HV
IXTF1N450	4500	0.9	85	1730	40	1.75	0.77	165	ISOPLUS i4-Pak**
IXTT1N450HV	4500	1	85	1730	40	1.75	0.24	520	TO-268HV
IXTL2N450	4500	2	23	6900	156	1.75	0.56	220	ISOPLUS i5-Pak**

## (Hyperlinks)

Product Brief (Downloadable PDF)

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Parametric Data and Datasheets

## Safe Harbor Statement

Any statements contained in this press release that are not statements of historical fact, including the performance, price, ratings, benefits, 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 Annual Report on Form 10-Q for the fiscal quarter ended March 31, 2013. The Company undertakes no obligation to publicly release the results of any revisions to these forward-looking statements.