

## *IXYS UK Westcode introduces a range of new very high current fast recovery diodes (HP Sonic FRDs) for high megawatt applications.*



IXYS UK Westcode Ltd. announces a range of new 4.5kV very high current fast recovery diodes (HP-sonic FRDs) with nominal operating currents from 1.8kA to 3kA, to be used in conjunction with IXYS UKs range of very high current press-pack IGBTs.

The new diodes incorporate IXYS UKs most advanced die bonding technology, where the silicon die is bonded to a metallic disc using a low temperature sinter technology, replacing older designs based on floating silicon. The new bonded die design offers a diode with improved thermal stability and very robust mechanical properties. The silicon is optimised with advanced processing to give unrivalled di/dt capability to more than 5kA/ $\mu$ s, while retaining a soft recovery characteristic and low switching losses.

The diodes are packaged in fully hermetic 26mm thick ceramic packages with copper electrodes and are compatible for series clamping in the same stack as IXYS UKs range of very high current press-pack IGBTs. The 3000A device has a 96mm die and the 2400A has a 91mm die, both are packaged in an 85mm electrode package with overall diameter of 125mm, the 1800A device has an 83mm die and is packaged in a 75mm electrode package with an overall diameter of 112mm.

Parts number designations are as follows: 3000A device, E3000EC45E, 2400A device E2400EC45E and 1800A device E1800TC45E. The two lower current devices will replace the older C series floating silicon products and the 3000 ampere device extends the range to cover the new 3000 ampere press-pack IGBT .

The new HP sonic FRDs are optimised for use with IXYS UKs range of 4.5kV press pack IGBTs; as both anti-parallel and neutral point clamp diodes (for multi level converters). Typical applications for this device include: Utilities and HVDC applications like, flexible AC transition systems, HVDC transition, Statcoms, VSC SVC etc.; medium voltage AC drives for harsh environments and ultra-high power, such as mining, marine and off shore, gas and oil installations; Renewable energy for wind turbines, hydro generation, wave-generation and solar. As well as applications incorporating IXYS UKs press-pack IGBTs the devices are also suitable for use with other very high power switching devices which require the same combination for very high di/dt and soft recovery, such as IGCTs (integrated gate-commutated thyristor).

**For more information, please contact**

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