

IXYS UK Westcode introduces three new high current rectifier diodes



IXYS UK Westcode Ltd. Adds three new voltage classes to its range of 83mm die, pressure contact rectifier diodes; the new introductions are at 1.5kV, 4.0kV and 4.8kV. These devices use bonded die technology and improved package design, to give a significant improvement in power density over older designs within the same package footprint, as well as better electromechanical & thermal performance.

With the silicon die directly bonded to a metallic disc, the new 83mm die devices are constructed using a new improved process when compared to IXYS' earlier high current rectifier diode designs. This structure offers both improved transient thermal conditions and overall greater robustness, when compared to designs with free floating silicon. The thermal capacity of the metal disc and its direct fusion to the silicon enhances performance and presents excellent transient thermal and surge current ratings. The new package design, while retaining an industry standard footprint, allows for the maximum silicon to package ratio and represents up to a 25% increase in current density over older designs in a similar package outline.

The 1.5kV device has an average current rating of 9830 amperes (case temperature 55°C) and a surge rating of 80,000 amperes, the 4kV device has an average current rating of 5984 amperes (case temperature 55°C) and a surge rating of 68,000 amperes and the 4.8kV part has an average current rating of 5139 amperes (case temperature 55°C) and a surge rating of 60,500 amperes.

The new devices are available in industry standard 26mm & 35mm thick packages with an electrode diameter of 75mm and overall diameter of 112mm. Designations are: W9830TJ150, W5984TJ400 & W5139TJ480 for the 26mm thick package; W9830TE150, W5984TE400 & W5139TE480 for the 35mm thick package. Typical applications include traction rectifiers & substations, front end rectification for very large drives, Chemical power supplies and all rectifier applications requiring devices in this power rating.

For more information, please contact IXYS

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