

ComPack Family... Compact Package with highest power density

700 A / 1600 V PHASE-LEGS

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Overview:

IXYS Corporation (NASDAQ: IXYS), a leader in power semiconductors and integrated circuits technologies for energy efficient products used in power conversion and motor control applications, announced today the introduction of a new bi-polar module for high power applications. The new ComPack family represents a compact package with the highest power density.

The ComPack design is resulting from the implementation of the newest assembly methods in combination with the well-proven, clip-soldered die technologies of IXYS. Different inner and outer features lead to an user-friendly product that fulfils the highest needs in reliability and functionality.

First products are phase-legs with varying topologies like dual thyristors, dual diode and thyristor/diode. The modules have a rated current of 700 Amperes per leg, improved surge rating and a maximum junction temperature of 140°C.

Internally the IXYS' Direct Copper Bonded (DCB) ceramic technology provides a high isolation voltage of 4800 V and represents the base to cover UL standards.

With the adapted copper base plate the ComPack concept achieves a very low thermal impedance that supports long-term reliability under highest power output usage.

Further the optimised DCB-Layout gives a perfect symmetrical internal design of the dies with the copper construction. This leads directly into an optimum for the terminal design providing M10 screw connections and a big surface to minimize the ohmic resistance.

Creepage and clearance distances are in line with the industrial standards and have been set to reduce additional efforts of the user to a minimum.

The ComPack family have a size and volume that is at least 1.5 times smaller compared with current products in this power class. With this reduction also the weight of the ComPack module has been improved to a value that is 3 times lower.

With this development IXYS is allowing the designer to switch more power than historically available, facilitating higher power densities, greater material efficiency and lower system cost and weight.

"These new IXYS rectifier modules are first in the line of modules that set a new benchmark for bi-polar power rectification, raising the standards and offering our customers innovation in extremely rugged, efficient product design," commented Dr. Nathan Zommer CEO and Chairman of IXYS.



Features

- Optimized creepage & clearance distances
- Clip-soldered die technology
- Less weight
- Optimized heatsink & DCB construction
- 93 mm x 65 mm x 50 mm (L x W x H)
- M10 screw connections

Applications

- Motor control, softstarter
- AC-Control
- UPS
- Input rectification
- Supplies for DC power equipment
- Field supply for DC motors

| TYPE | I_{TAVM} | V_{RRM} |
|--------------------|------------|-----------|
| MCMA 700 P 1600CA | 700 | 1600 |
| MCMA 700 PD 1600CB | 700 | 1600 |
| MDMA 700 P 1600CC | 700 | 1600 |