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Efficient 1200-V, 300-A IGBT Module Comes In Robust Standard Package

CISSOID's CMT-PLA1BL12300MA 1200-V, 300-A half-bridge IGBT power module combines advanced switching technology with a widely adopted industry-standard package, providing a highly reliable and cost-effective solution for a broad range of industrial power conversion systems. The CPAK-EDC package delivers enhanced mechanical robustness and drop-in compatibility. According to the vendor, this approach not only makes upgrades seamless but also adds greater design freedom, allowing system architects to balance performance and efficiency versus cost and mechanical integration more effectively (see the figure).

The CMT-PLA1BL12300MA is engineered to optimize efficiency and reliability in high-frequency-switching and high-performance industrial applications, such as UPSs, motor and motion control solutions, and power supplies. Utilizing advanced trench gate field stop (TG-FS) IGBT technology, the module is said to deliver a superior balance between switching speed and conduction losses, with excellent short-circuit behavior for robust operation under fault conditions.

Its freewheeling diode provides very high surge capability, supporting demanding transient and overload events, while the module's thermal conductance helps move heat out fast, boosting power density and extending lifetime margins.

Key technical features include:

- A 450-A continuous dc current rating at Tj = 90°C.
- A low saturation voltage of Vce_sat of 1.56 V at Ic = 300 A and Tj = 25°C, and 1.78 V at Ic = 300 A and Tj = 150°C
- Low switching losses of 34 mJ (Eon) and 34.5 mJ (Eoff) at Tj = 150°C
- Low thermal resistance of Rth_jc = 0.065°C/W (IGBT) and 0.1°C/W (diode)

The CMT-PLA1BL12300MA is available for order now. For more information and a full datasheet, see the IGBT Power Modules page.

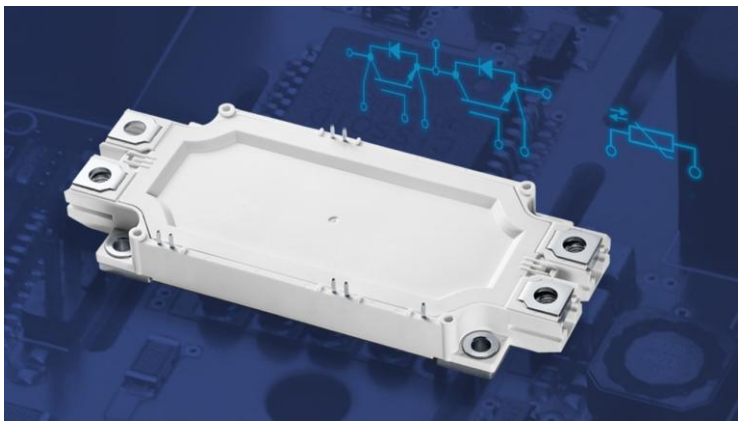

Figure. The CMT-PLA1BL12300MA is an IGBT power module based on trench gate field stop technology. Designed and qualified for demanding industrial applications, it features low saturation voltage and delivers a continuous dc collector current up to 450 A. It also features fast switching and short tail currents, as well as a freewheeling diode optimized for fast and soft reverse recovery. The module is guaranteed for reliable operation across the full junction temperature range from -40°C to +175°C.