

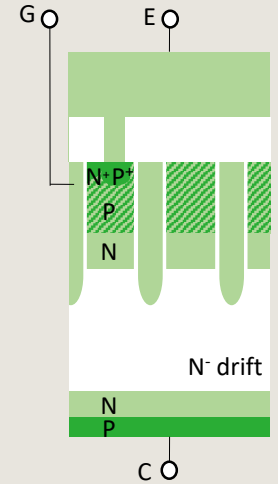
Chip Technology

LV100 and HV100 HVIGBT modules use the newly developed X-Series 7th-generation IGBTs with carrier-store layer and Relaxed Field of Cathode (RFC) diodes. These technologies enhance efficiency and robustness.

The optimized N buffer achieves operation at higher temperatures of 150 °C. Moreover, the optimized edge termination structure LNFLR (Linearly-Narrowed Field Limiting Ring) allows an increased active chip area of up to 28 % compared to previous products. Surface Charge Control (SCC) makes the device more robust against high humidity.



Compared to previous product*, active chip area is increased 28 % by optimizing edge termination. (* CM750HG-130R)



Chip structure improving maximal temperature range

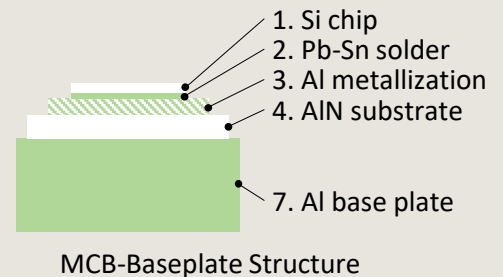
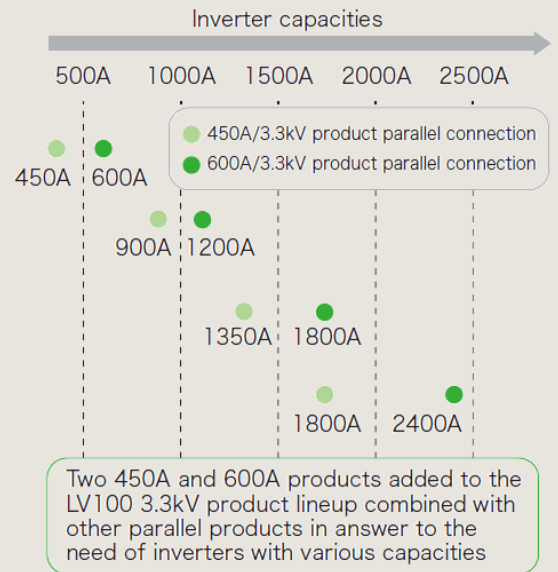
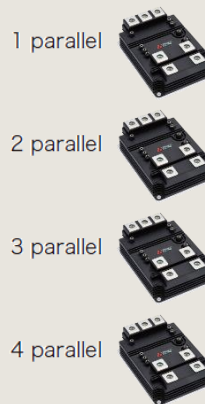
Package Technology

LV100 and HV100 modules have a standardized package design with a footprint of 100 mm x 140 mm. For converter manufacturers, this allows simplified design, improved scalability and multiple sources for power modules.

Terminal layout and chip arrangement enable easier parallel connection while optimizing current sharing between the modules. The user-friendly placing of auxiliary gate terminal provides large space for custom gate-driver designs.

The LV100 and HV100 packages are compatible with baseplates using MCB (Metal Casting Direct Bonding) technology. Compared to classical materials, these aluminum-based baseplates offer higher thermal conductivity and less weight. They allow converter designs with increased output power and higher power density.

Of course, LV100 and HV100 are future-proof and SiC-ready. Several Full-SiC and Hybrid-SiC modules are available or under development.



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