

Press Pack IGBT For Transmission And Distribution Applications

[Infineon Technologies Bipolar](#) expands the high-power Prime Switch family with its latest Press Pack IGBT (PPI) with internal freewheeling diodes (FWDs) in ceramic disc housings. This PPI is specifically designed for transmission and distribution applications and is well suited for high-current modular multilevel converters (MMCs), medium-voltage drives, dc breakers, wind turbine converters and traction systems.

The Prime Switch IGBT features a blocking voltage of 4.5 kV at 3000 A without FWD and 2000 A with FWD. Fitting to the 3000-A PPI, Infineon offers external freewheeling diodes in different silicon diameters—the 120-mm diameter, 26-mm high D1600U45X122 and D2700U45X122 and the 172-mm diameter D3900U45X172 and D4600U45X172.

The leading high-voltage IGBT chip trench technology combined with highly reliable press-pack technology, proven in the field for more than 40 years, provides customers with an excellent, high-performance solution for ultra-high power applications, says the vendor. In addition, the devices open up new opportunities to optimize high-power applications in terms of losses, reliability and cost.

The PPI-housing is hermetically sealed and specifically designed to withstand system-induced failures. In this way, the PPI provides an extremely robust break resistance of the housing in addition to a “short-on-fail” feature. In order to cover numerous applications and power ranges, the innovative design of internal chip-stack and housing enables Infineon to create a perfect fitting portfolio with different current values and topologies, according to the company.

The Prime Switch IGBT can be ordered now. The next portfolio expansion of the new Prime Switch family is expected in mid/late 2022. More information is available at www.infineon.com/primeswitch.



Figure. Infineon's Press Pack IGBT features a blocking voltage of 4.5 kV at 3000 A without FWD and 2000 A with FWD. Fitting to the 3000-A device, Infineon offers external freewheeling diodes in different silicon diameters. According to the vendor, leading high-voltage IGBT chip trench technology combined with highly reliable press-pack technology, proven in the field for more than 40 years, provides customers with an excellent, high-performance solution for ultra-high power applications. In addition, the devices open up new opportunities to optimize high-power applications in terms of losses, reliability and cost.