

## **Plug-And-Play Gate Drivers Suit 4500-V Press-Pack IGBT Modules**

[Power Integrations'](#) 1SP0351 SCALE-2 single-channel, +15-V/-10-V, plug-and-play gate-drivers were developed specifically for new 4500-V press-pack IGBT (PPI) modules from manufacturers such as Toshiba, Westcode and ABB. Based on Power Integrations' widely used SCALE-2 chipset, the new gate-drivers are well suited for high-reliability applications such as HVDC voltage-source converters, STATCOM/FACTS and medium-voltage drives (Fig.1).

The 1SP0351 drivers are equipped with Dynamic Advanced Active Clamping (DAAC), short-circuit protection, a built in dc-dc converter, regulated turn-on gate-drive voltage, dc-dc overload monitoring and supply-voltage monitoring (Fig. 2). Active Miller clamping is also included. According to the company, the SCALE-2 ASIC chipset uses sophisticated digital control techniques to reduce component count by as much as 85% compared with conventional solutions, significantly increasing reliability.

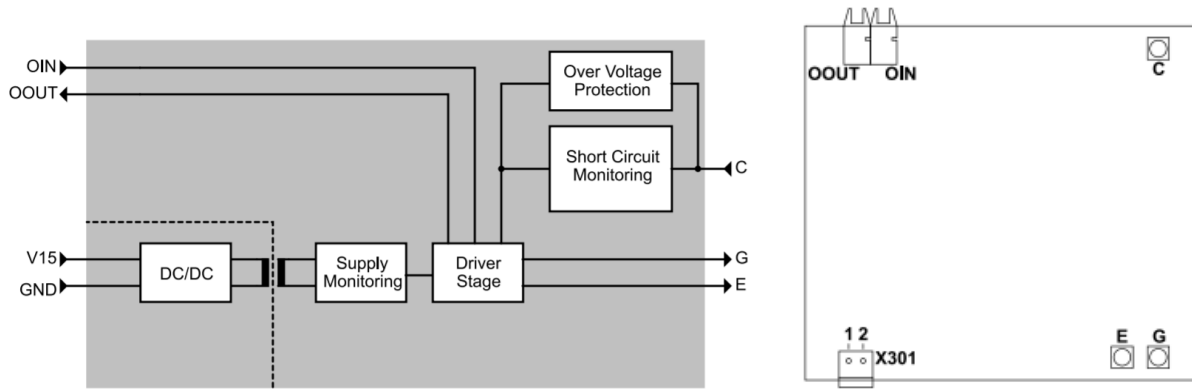
Designed for ease of use, 1SP0351 drivers feature plug-and-play capability, which facilitates commissioning and allows immediate operation after installation. The inclusion of a simple two-pin power plug also simplifies operation, and conformal coating increases product ruggedness and reliability.

Comments Thorsten Schmidt, technical product manager at Power Integrations, "These drivers are the optimum drive solution for the industry's leading press-pack IGBT modules. Devices are rugged, reliable and simple to use."

The 1SP0351 SCALE-2 gate drivers meet creepage and clearance specifications according to IEC standards (IEC 61800-5-1). They are available now priced at \$214.20 in 1,000-piece quantities. For more information, see the product [page](#).



*Fig. 1. The 1SP0351 single-channel plug-and-play gate drivers are optimized for operation of 4500-V Press-Pack IGBT power modules from manufacturers such as Toshiba, Westcode and ABB. The drivers are well suited for high-reliability applications such as HVDC voltage-source converters, STATCOM/FACTS and medium-voltage drives.*



*Fig. 2. The gate driver is based on Power Integrations' SCALE-2 chipset, which uses sophisticated digital control techniques to reduce component count versus conventional solutions, increasing reliability. As shown in the functional diagram on the left, the gate driver features a built-in dc-dc power supply with basic isolation and an enhanced level of protection via short-circuit monitoring. It also includes optical interfaces, labeled OOUT and OIN in the drawing on the right and visible in the Fig. 1 photo.*