1200-V SiC Power Modules Provide Independent Outputs And Small Size

Solitron Devices' SD11911 and SD11912 1200-V SiC power modules feature two independent, high-current MOSFETs. The SD11911 includes two 1200-V, 8.6-mΩ SiC MOSFETs while the SD11912 has two 13-mΩ SiC MOSFETs. The pinout configuration separates the power bus from the gate and source controls to ease and simplify board layout. The independent outputs allow maximum flexibility to customize configurations such as half bridge, full bridge, H-bridge and many other topologies.

Both devices feature continuous drain current of 120 A and include an integrated NTC temperature sensor. According to the vendor, Solitron power modules maximize the benefits of SiC, with a unique robust and cost-effective packaging format. The 37-mm x 25-mm x 9-mm outline is a fraction of the size and weight of competitive modules, says the company. The integrated format maximizes power density while minimizing loop inductance with a pin configuration to allow simple power bussing (see the figure).

The SD11911 and SD11912 are designed for demanding applications such as avionics-based electromechanical actuators, industrial high efficiency power converters/inverters and motor drives. Designed to operate over a range of -55°C to 175°C, the modules' construction includes copper baseplates and alumina nitride insulators ensuring TCE matching and high thermal transfer. Isolated integrated temperature sensing enables high-level temperature protection.

For more information, see the SD11911 and SD11912 datasheets.

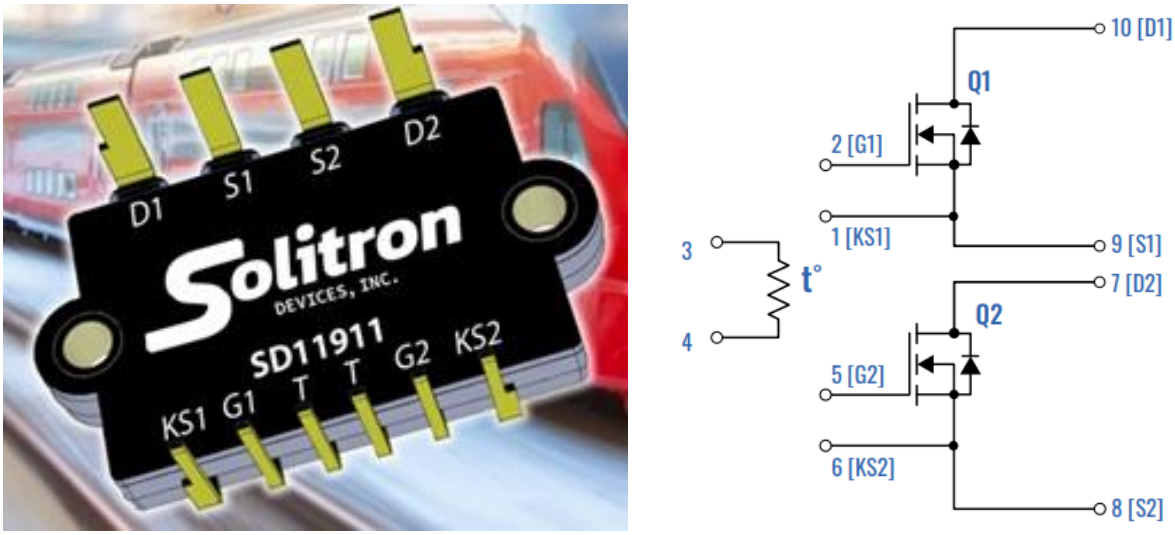

Figure. The SD11911 and SD11912 1200-V SiC power modules house two independent, high-current MOSFETs in a robust 37-mm x 25-mm x 9-mm package that is said to be a fraction of the size and weight of competing modules.