

CoolSiC™ Schottky diode G5 1200 V in D2PAK real 2-pin package

Trends in system compact designs call for high efficiency while using a small device package. The CoolSiC™ Schottky diode generation 5 1200 V is now available in D2PAK real2pin package with current ratings from 2 A to 20 A. Combined with a Si IGBT or super-junction MOSFET, for example in a Vienna rectifier stage or PFC boost stage used in 3-phase conversion systems, a CoolSiC™ diode raises efficiency up to 1% compared to next best Si diode alternative. The output power of PFC and DC-DC stages can thus be substantially increased, by 40% or more. Other than negligible switching losses – the signature feature of SiC Schottkys – CoolSiC™ generation 5 products come with best-in-class forward voltage (VF), the slightest increase of VF with temperature and highest surge current capability. The result is a series of products delivering market-leading efficiency and more system reliability at an attractive price.



Features

- > Zero Qrr leading to no reverse recovery losses
- > High surge current capability
- > Real two-pin package with 4.7 mm creepage and 4.4 mm clearance distances
- > Tight forward voltage distribution
- > Temperature-independent switching behavior
- > Low forward voltage even at high operating temperature

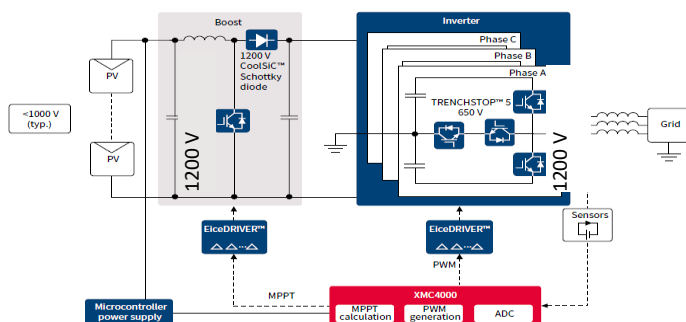
Benefits

- > Enabling higher frequency / increased power density in compact designs
- > System size/cost saving due to reduced heatsink requirements and smaller magnetics
- > Reduce a risk of partial discharge on the surface (real 2-pin)
- > System efficiency improvement over Si diodes
- > System reliability improvement
- > Reduced EMI
- > RoHS II standard compliant (Pb-free die attach)

Target applications

- > Solutions for solar energy systems
- > Motor control and drives
- > Uninterruptible power supply (UPS)
- > Industrial SMPS
- > Fast EV-Charging
- > Industrial heating and welding
- > Commercial, construction and agricultural vehicles (CAV)

Application diagram



Product overview incl. data sheet link

OPN	SP Number	Package
IDK02G120C5XTMA1	SP002739618	PG-TO263-2
IDK05G120C5XTMA1	SP002739622	PG-TO263-2
IDK08G120C5XTMA1	SP002739626	PG-TO263-2
IDK10G120C5XTMA1	SP002739630	PG-TO263-2
IDK16G120C5XTMA1	SP002739638	PG-TO263-2
IDK20G120C5XTMA1	SP002739646	PG-TO263-2

Product collaterals / Online support

[Family Page](#)

[Application Notes](#)