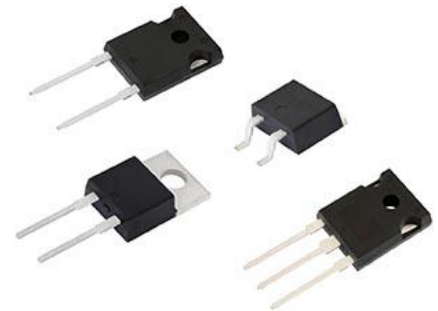




Increasing Efficiency and Reliability for Switching Power Designs, New 5 A to 40 A Gen 3 1200 V SiC Schottky Diodes Feature an MPS Design, Offer Lower Forward Voltage Drop, Capacitive Charge, and Reverse Leakage Current

Product Benefits:

- Available with forward current from 5 A to 40 A
- Offered in TO-220AC 2L, TO-247AD 2L, and TO-247AD 3L through-hole and D²PAK 2L (TO-263AB 2L) surface-mount packages
- Increase efficiency:
 - Low forward voltage drop down to 1.35 V
 - Low capacitance charge down to 28 nC
 - Low typical reverse leakage current down to 0.3 μ A at 25 °C
- Increased robustness:
 - Operating temperatures to +175 °C
 - Forward surge ratings to 260 A
 - Molding compound with a high CTI \geq 600 ensures excellent electrical insulation at elevated voltages (D²PAK 2L package)
- Increased reliability:
 - Pass higher temperature reverse bias (HTRB) testing of 2000 hours and temperature cycling testing of 2000 thermal cycles



Market Applications:

- AC/DC PFC and DC/DC ultra high frequency output rectification in FBPS and LLC converters for solar power inverters; energy storage systems; industrial drives and tools; and datacenters

The News:

Vishay Intertechnology introduces 16 new Gen 3 1200 V silicon carbide (SiC) Schottky diodes. Featuring a merged PIN Schottky (MPS) design, the Vishay Semiconductors devices combine high surge current robustness with low forward voltage drop, capacitive charge, and reverse leakage current to increase efficiency and reliability in switching power designs.

- The devices' MPS structure — which features a backside thinned via laser annealing technology — reduces their forward voltage drop
- The diodes' low typical reverse leakage current reduces conduction losses, ensuring high system efficiency during light loads and idling
- Unlike ultrafast diodes, the Gen 3 devices have virtually no recovery tail, which further improves efficiency



The Key Specifications:

Part #	$I_{F(AV)}$ (A)	I_{FSM} (A)	V_F at I_F (V)	Q_C (nC)	Configuration	Package
VS-3C05ET12T-M3	5	42	1.35	28	Single	TO-220AC 2L
VS-3C10ET12T-M3	10	84	1.35	55	Single	TO-220AC 2L
VS-3C15ET12T-M3	15	110	1.35	81	Single	TO-220AC 2L
VS-3C20ET12T-M3	20	180	1.35	107	Single	TO-220AC 2L
VS-3C05ET12S2L-M3	5	42	1.35	28	Single	D ² PAK 2L
VS-3C10ET12S2L-M3	10	84	1.35	55	Single	D ² PAK 2L
VS-3C15ET12S2L-M3	15	110	1.35	81	Single	D ² PAK 2L
VS-3C20ET12S2L-M3	20	180	1.35	107	Single	D ² PAK 2L
VS-3C10EP12L-M3	10	84	1.35	55	Single	TO-247AD 2L
VS-3C15EP12L-M3	15	110	1.35	81	Single	TO-247AD 2L
VS-3C20EP12L-M3	20	180	1.35	107	Single	TO-247AD 2L
VS-3C30EP12L-M3	30	260	1.35	182	Single	TO-247AD 2L
VS-3C10CP12L-M3	2 x 5	42	1.35	28	Common cathode	TO-247AD 3L
VS-3C20CP12L-M3	2 x 10	84	1.35	55	Common cathode	TO-247AD 3L
VS-3C30CP12L-M3	2 x 15	110	1.35	81	Common cathode	TO-247AD 3L
VS-3C40CP12L-M3	2 x 20	180	1.35	107	Common cathode	TO-247AD 3L

Availability:

Samples and production quantities of the new SiC diodes are available now, with lead times of 13 weeks.

[Link to product datasheets](#)

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