



HIGH-PERFORMANCE GEN 5.0 SCHOTTKY DIODES

New 100-V Family Targets High-Temperature Applications



5th Generation of High-Performance 100-V Schottky Diodes Offers T_j Max of +175 °C For High-Temperature Applications

FEATURES

- Submicron trench technology
- Very low typical forward voltage drop from 0.55 V at 8 A to 0.61 V at 30 A
- Extremely low typical reverse leakage from 1 mA to 5.5 mA at 125 °C
- Increased ruggedness for reverse avalanche capability, with 100 % screening for all devices

BENEFITS

- Very tight parameter distribution
- Negligible switching losses
- Small RoHS-compliant packages for improved cost-to-power ratios
- Reverse biased safe operating area (RBSOA) available for tight and cost-effective designs
- 30 % increased height and stability of breakdown voltage (> 115 V typical) accommodates voltage spikes and optimizes power density

Datasheets available on our web site at www.vishay.com
http://www.vishay.com/ref/HPS_Gen5



High Performance Schottky Generation 5.0 series

High Power Products

APPLICATIONS

- AC/DC and secondary rectification; flyback, buck, and boost converters; half-bridge, reverse battery protection, freewheeling, class-D amplifiers, and dc-to-dc module applications
- Typical end products include high power density SMPS; adaptors for desktop PCs; servers; automotive drives and controls; telecom networks; consumer electronics like PDPs, LCDs, and high-efficiency audio systems; and mobile electronics such as notebook computers, cell phones, and portable media players

| Device | I _{F(AV)} | @ TC (°C) | V _{FM} @ 125 °C (Typ) (V) | Reverse Leakage | | EAS (mJ) | T _J Max (°C) | Package |
|-------------|--------------------|-----------|------------------------------------|-----------------|-------------------|----------|-------------------------|----------|
| | | | | @ 25 °C (μA) | Typ @ 125 °C (mA) | | | |
| 8TT100 | 8 A | 163 | 0.55 at 8 A | 65 | 1 | 67 | 175 | TO-220AC |
| 15TT100 | 15 A | 144 | 0.63 at 15 A | 120 | 2.3 | 36 | 175 | TO-220AC |
| MBR10T100 | 10 A | 159 | 0.62 at 10 A | 100 | 1.2 | 54 | 175 | TO-220AC |
| 16CTT100 | 2 x 8 A | 163 | 0.55 at 8 A | 65 | 1 | 67 | 175 | TO-220AB |
| MBR20T100CT | 2 x 10 A | 159 | 0.62 at 10 A | 100 | 1.2 | 54 | 175 | TO-220AB |
| 20TT100 | 20 A | 160 | 0.63 at 20 A | 150 | 2 | 67.5 | 175 | TO-220AC |
| 30CTT100 | 2 x 15 A | 144 | 0.63 at 15 A | 120 | 2.3 | 36 | 175 | TO-220AB |
| 43CTT100 | 2 x 20 A | 160 | 0.63 at 20 A | 150 | 2.5 | 67.5 | 175 | TO-220AB |
| 30PT100 | 30 A | 156 | 0.61 at 30 A | 200 | 5.5 | 135 | 175 | TO-247AC |
| 30CPT100 | 2 X 15 A | 158 | 0.63 at 15 A | 120 | 2.3 | 36 | 175 | TO-247AB |
| 63CPT100 | 2 x 30 A | 156 | 0.61 at 30 A | 200 | 5.5 | 135 | 175 | TO-247AB |

Packages



TO-220AC



TO-247ACMOD

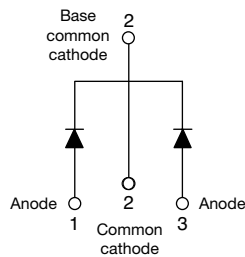
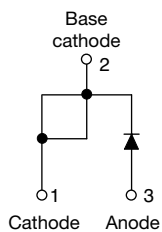


TO-247AB



TO-220AB

Circuit Configurations



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