



HIGH-PERFORMANCE GEN 5.0 SCHOTTKY DIODES

100 V and 45 V Devices Target High-Temperature Applications



Gen 5.0 100 V and 45 V High-Performance Schottky Diodes Offer T_J Max of + 175 °C

FEATURES

- Submicron trench technology
- Very low typical forward voltage drop from 0.50 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 for 100 V and > 55 V typical for 45 V) 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

Vishay Semiconductors

APPLICATIONS

- Automotive, 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

Part Number	V _{RRM} (V)	I _{F(AV)} (A)	@ TC (°C)	V _{FM} @ 125 °C (Typ) (V)	Reverse Leakage		EAS (mJ)	T _J Max (°C)	Package
					@ 25 °C (µA)	Typ @ 125 °C (mA)			
30CTT045	45 V	2x15 A	163 °C	0.5 at 15 A	3	2	55	175 °C	TO-220AB
30CTT050-F	50 V	2x15 A	163 °C	0.5 at 15 A	3	2	55	175 °C	TO-220AB
18TT045-F	45 V	1x18 A	165 °C	0.5 at 15 A	3	2	55	175 °C	TO-220AC
8TT100	100 V	8 A	163 °C	0.55 at 8 A	65	1	67	175 °C	TO-220AC
15TT100	100 V	15 A	144 °C	0.63 at 15 A	120	2.3	36	175 °C	TO-220AC
MBR10T100	100 V	10 A	159 °C	0.62 at 10 A	100	1.2	54	175 °C	TO-220AC
16CTT100	100 V	2x8 A	163 °C	0.55 at 8 A	65	1	67	175 °C	TO-220AB
MBR20T100CT	100 V	2x10 A	159 °C	0.62 at 10 A	100	1.2	54	175 °C	TO-220AB
20TT100	100 V	20 A	160 °C	0.63 at 20 A	150	2	67.5	175 °C	TO-220AC
30CTT100	100 V	2X15 A	144 °C	0.63 at 15 A	120	2.3	36	175 °C	TO-220AB
43CTT100	100 V	2x20 A	160 °C	0.63 at 20 A	150	2.5	67.5	175 °C	TO-220AB
60CPT045	45 V	2x30 A	159 °C	0.5 at 30 A	8	5	140	175 °C	TO-247AB
30PT100	100 V	30 A	156 °C	0.61 at 30 A	200	5.5	135	175 °C	TO-247AC
30CPT100	100 V	2X15 A	158 °C	0.63 at 15 A	120	2.3	36	175 °C	TO-247AB
40CPT100-F	100 V	2x20 A	156 °C	0.585 at 20 A	2.1	3.2	101	175 °C	TO-247AB
MBR40H100WT-F	100 V	2x20 A	144 °C	0.63 at 20 A	1.2	2.5	67.5	175 °C	TO-247AB
63CPT100	100 V	2x30 A	156 °C	0.61 at 30 A	200	5.5	135	175 °C	TO-247AB
6CUT04	40 V	2x3 A	166 °C	0.485 at 3 A	1	0.5	28	175 °C	I-Pak
6CWT04FN	40 V	2x3 A	166 °C	0.485 at 3 A	1	0.5	28	175 °C	D-Pak
10UT10	100 V	1x10 A	159 °C	0.53 at 5 A	1.5	1	54	175 °C	I-Pak
10WT10FN	100 V	1x10 A	159 °C	0.53 at 5 A	1.5	1	54	175 °C	D-Pak
20CUT10	100 V	2x10 A	159 °C	0.615at 10 A	1.5	1	108	175 °C	I-Pak
20CWT10FN	100 V	2x10 A	159 °C	0.615at 10 A	1.5	1	108	175 °C	D-Pak
20UT04	40 V	1x20 A	153 °C	0.415 at 10 A	6	3	108	175 °C	I-Pak
20WT04FN	40 V	1x20 A	153 °C	0.415 at 10 A	6	3	108	175 °C	D-Pak

Packages



TO-220AC



TO-247ACMOD



TO-247AB



TO-220AB

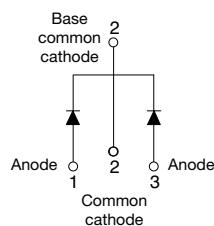
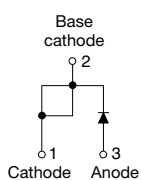


D-PAK



I-PAK

Circuit Configurations



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