

Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free. "Green" Device (Note2)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- High Junction Temperature Capability

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 5°C/W Junction to Case

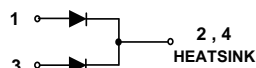
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBRD20100CTH	MBRD20100CTH	100V	70V	100V
MBRD20150CTH	MBRD20150CTH	150V	105V	150V
MBRD20200CTH	MBRD20200CTH	200V	140V	200V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle	$I_{F(AV)}$	20A	$T_C=125^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	130A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage MBRD20100CTH MBRD20150CTH MBRD20200CTH	V_F	0.85V 0.85V 0.90V	$I_F=10A; T_A=25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	0.01mA 1mA	$T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$
Typical Junction Capacitance MBRD20100CTH MBRD20150CTH MBRD20200CTH	C_J	250pF 200pF 150pF	Measured at 1.0MHz, $V_R=4.0V$

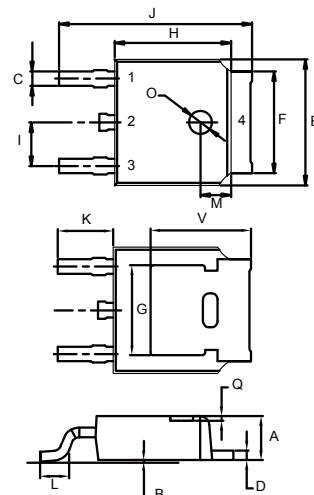
Note: 1. High Temperature Solder Exemption Applied. See EU Directive Annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure:



20 Amp Schottky Barrier Rectifier 100~200 Volts

(TO-252) DPAK



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

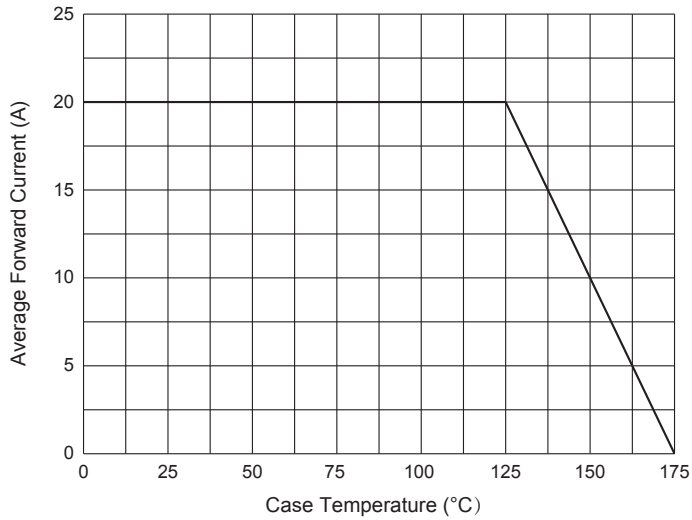


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

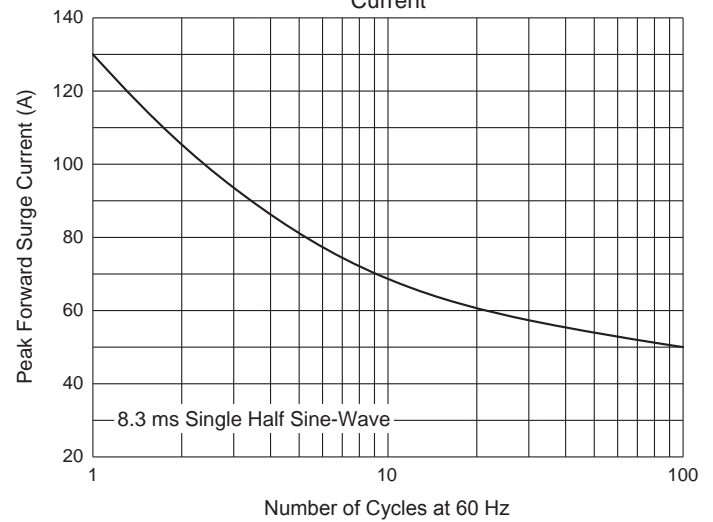


Fig. 3 - Typical Instantaneous Forward Characteristics

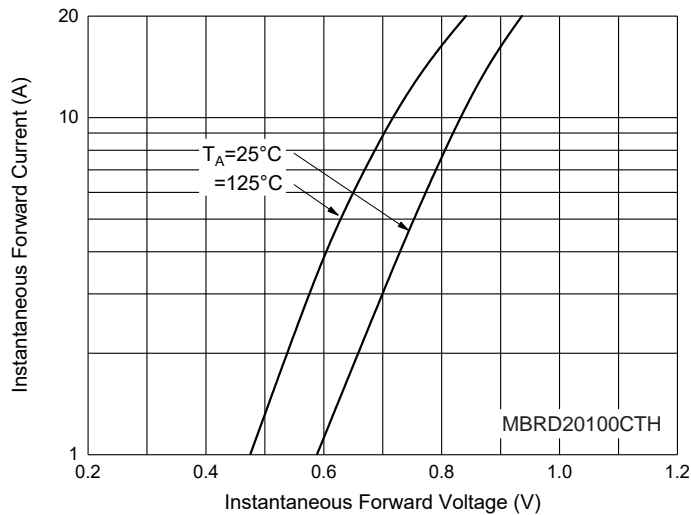


Fig. 4 - Typical Instantaneous Forward Characteristics

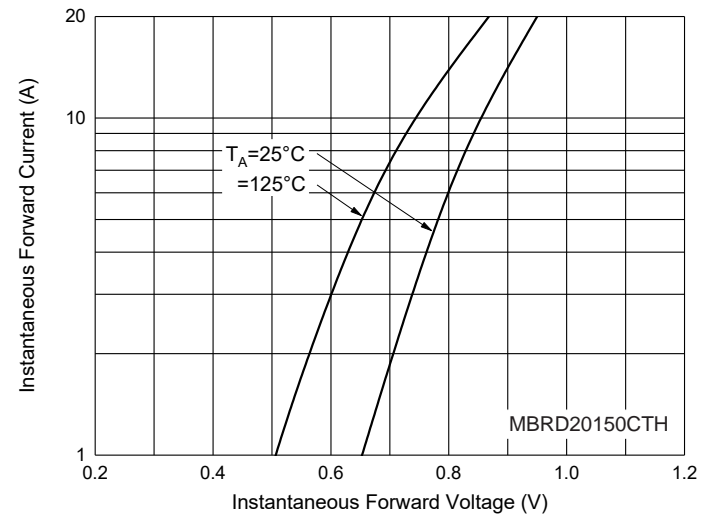


Fig. 5 - Typical Instantaneous Forward Characteristics

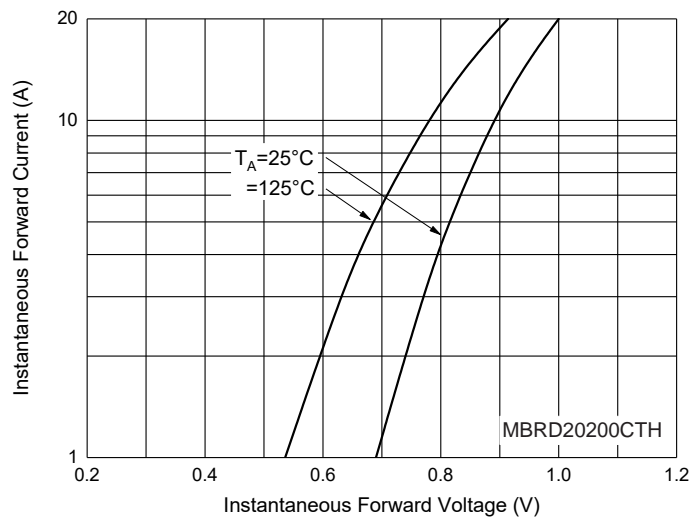
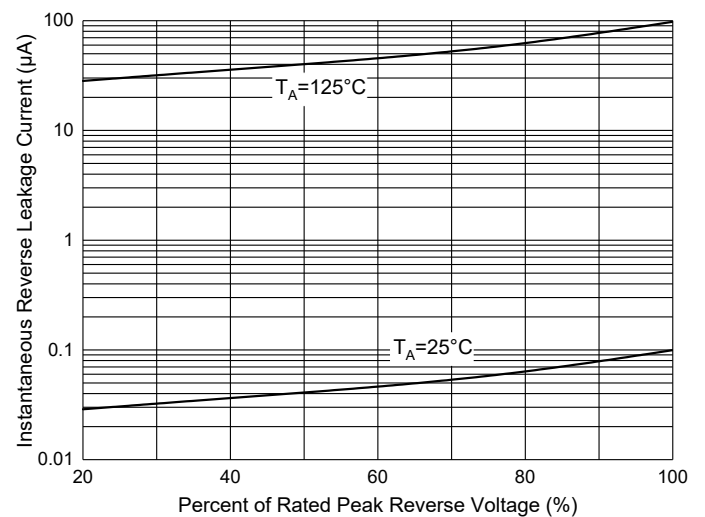


Fig. 6 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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