

**Features**

- High Frequency Operation
- High Current Capability, High Efficiency
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Low Forward Voltage Drop
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance : 2°C/W Junction to Case
- Typical Thermal Resistance : 15°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR20100CTH	MBR20100CTH	100V	70V	100V
MBR20150CTH	MBR20150CTH	150V	105V	150V
MBR20200CTH	MBR20200CTH	200V	140V	200V

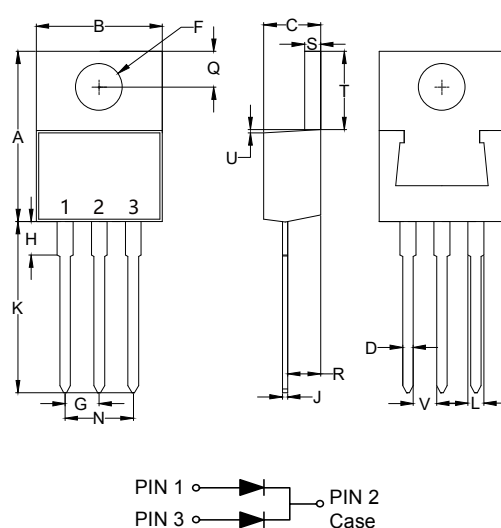
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	20A	$T_C=140^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	0.82V 0.85V 0.9V	$I_{FM}=10A$ $T_A=25^\circ\text{C}$
Maximum DC Reverse Current at Rated DC Blocking Voltage(Note 2)	$I_R$	0.01mA 0.15mA 1.5mA	$T_A=25^\circ\text{C};$ $T_A=90^\circ\text{C}$ $T_A=125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	250pF 200pF 150pF	Measured at 1.0MHz, $V_R=4.0V$
Voltage Rate of Change (Rated VR)	dV/dt	10,000V/uS	
Peak Non-repetitive Reverse Surge Energy	$E_{RSM}$	20mJ	Per Diode, 8/20 $\mu\text{s}$ Waveform
Non-repetitive Avalanche Energy	$E_{AS}$	20mJ	Per Diode at 25°C, $I_{AS}=2.0A$ , $L=10mH$

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.  
2.Pulse Test: 300us Pulse Width, 1% Duty Cycle

**20 Amp Schottky Barrier Rectifier  
100 to 200 Volts**

**TO-220AB**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
B	0.380	0.429	9.65	10.90	
C	0.140	0.201	3.56	5.10	
D	0.020	0.045	0.51	1.14	
F	0.131	0.170	3.34	4.31	$\Phi$
G	0.079	0.121	2.01	3.07	
H	-----	0.250	-----	6.35	
J	0.011	0.025	0.28	0.64	
K	0.500	0.580	12.70	14.73	
L	0.045	0.060	1.14	1.52	
N	0.158	0.242	4.02	6.14	
Q	0.087	0.135	2.22	3.43	
R	0.080	0.126	2.04	3.19	
S	0.045	0.055	1.14	1.39	
T	0.230	0.270	5.84	6.86	
U	-----	0.050	-----	1.27	
V	0.045	-----	1.15	-----	

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

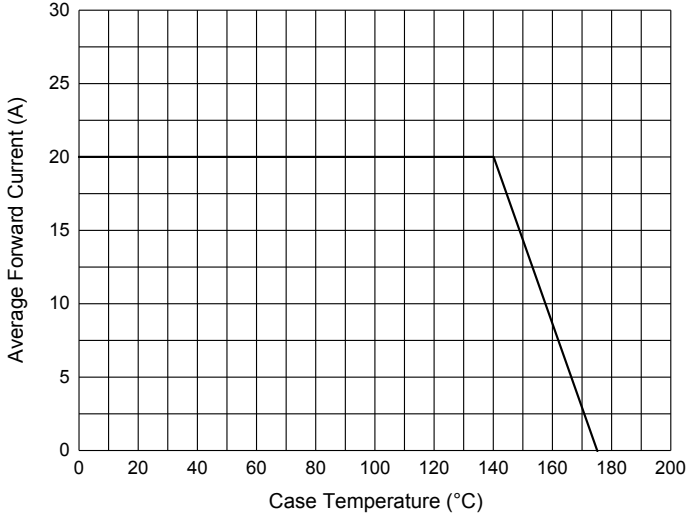


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

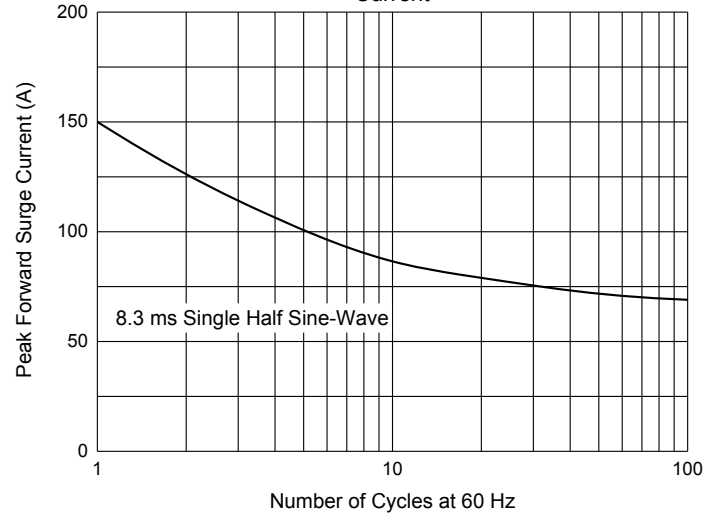


Fig. 3 - MBR20100CTH  
Typical Instantaneous Forward Characteristics

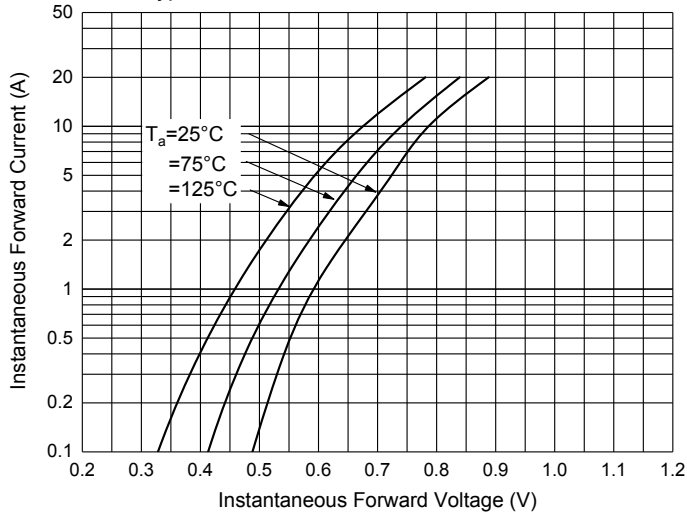


Fig. 4 - MBR20150CTH  
Typical Instantaneous Forward Characteristics

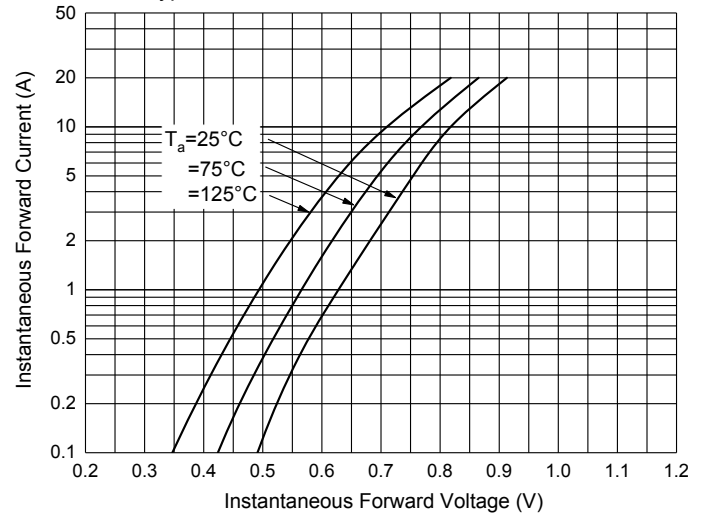


Fig. 5 - MBR20200CTH  
Typical Instantaneous Forward Characteristics

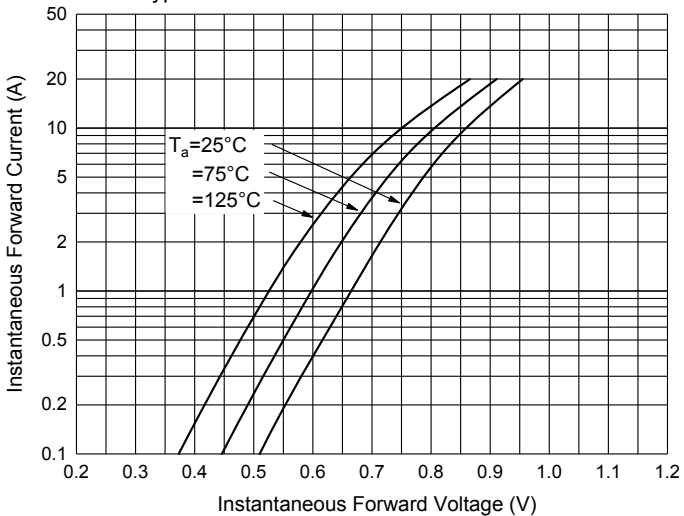
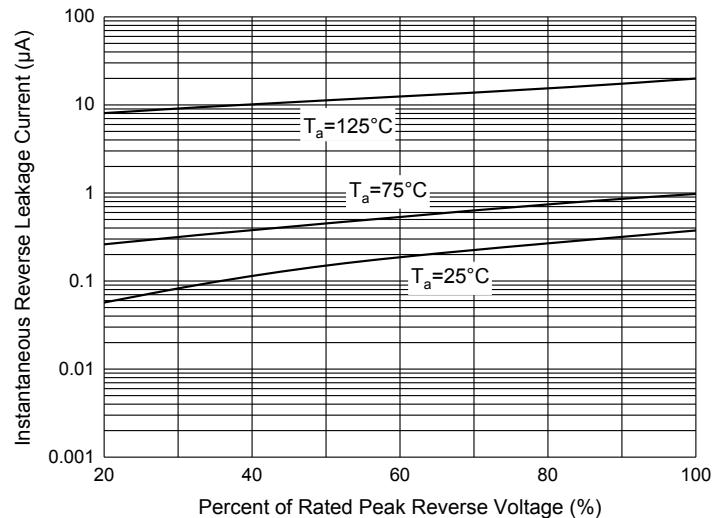


Fig. 6 - Typical Reverse Leakage Characteristics



### Ordering Information

Device	Packing
Part Number-BP	Bulk:50pcs/Tube, 1Kpcs/Box,5Kpcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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