Features

- Guard Ring for Transient Protection
- Low Power Loss High Efficiency
- High Surge Capacity, High Current Capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"

10 Amp Schottky Barrier Rectifier 20 to 100 Volts

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C(MBR1020~1045)
- Operating Junction Temperature Range: -55°C to +150°C(MBR1060~10100)
- Storage Temperature Range: -55ºC to +150ºC
- Typical Thermal Resistance: 2.5°C/W Junction to Case
- Mounting Torgue: 5 in-lbs Maximum

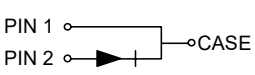
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR1020	MBR1020	20V	14V	20V
MBR1030	MBR1030	30V	21V	30V
MBR1035	MBR1035	35V	24.5V	35V
MBR1040	MBR1040	40V	28V	40V
MBR1045	MBR1045	45V	31.5V	45V
MBR1060	MBR1060	60V	42V	60V
MBR1080	MBR1080	80V	56V	80V
MBR10100	MBR10100	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

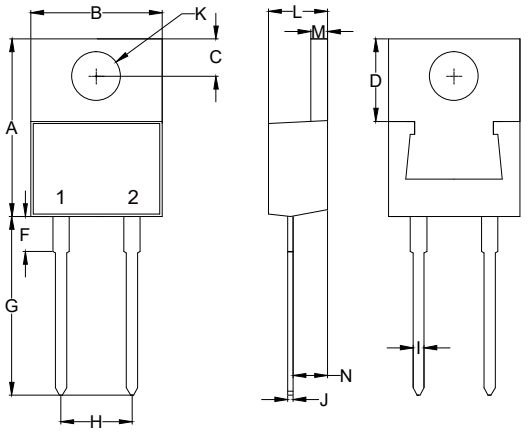
Average Forward Current	$I_{F(AV)}$	10A	See Fig.1
Peak Forward Surge Current	I_{FSM}	150A	8.3ms,Half Sine
Maximum Forward Voltage Drop Per Element			
MBR1020~MBR1045	V_F	0.65V	I_{FM}=10A
MBR1060		0.75V	I_{FM}=10A
MBR1080~MBR10100		0.84V	I_{FM}=10A
MBR1060		0.65V	I_{FM}=10A, T_J=125ºC
MBR1020~MBR1045		0.84V	I_{FM}=20A
MBR1060		0.95V	I_{FM}=20A
		0.80V	I_{FM}=20A, T_J=125ºC
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	0.1mA	T_J=25ºC

Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Internal Structure



TO-220AC



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.578	0.603	14.68	15.32	
B	0.380	0.420	9.65	10.67	
C	0.100	0.135	2.54	3.43	
D	0.230	0.270	5.84	6.86	
F	0.147	0.167	3.74	4.24	
G	0.500	0.580	12.70	14.73	
H	0.190	0.210	4.83	5.33	
I	0.020	0.045	0.51	1.14	
J	0.012	0.025	0.30	0.64	
K	0.139	0.161	3.53	4.09	Φ
L	0.140	0.190	3.56	4.83	
M	0.045	0.055	1.14	1.40	
N	0.080	0.115	2.03	2.92	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

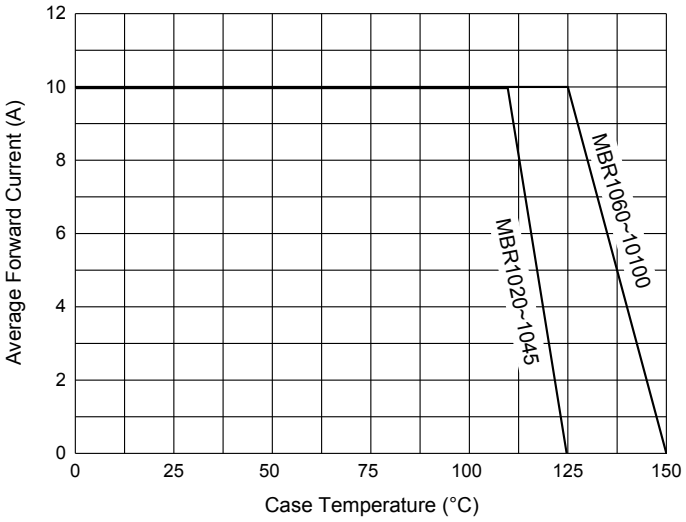


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

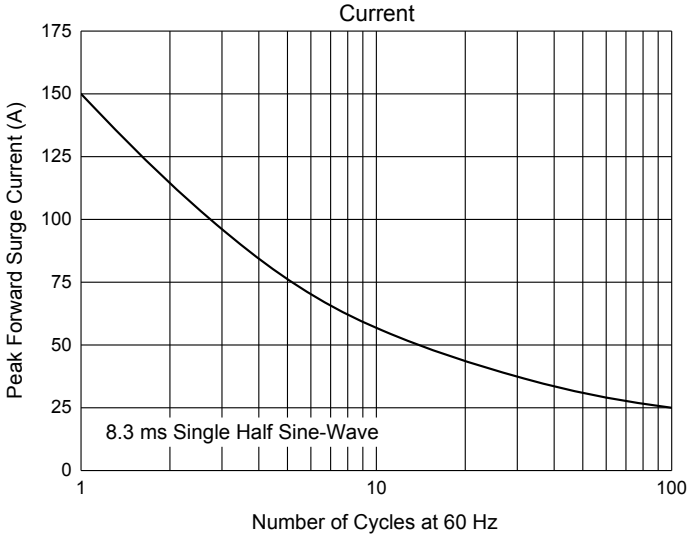


Fig. 3 - Typical Instantaneous Forward Characteristics

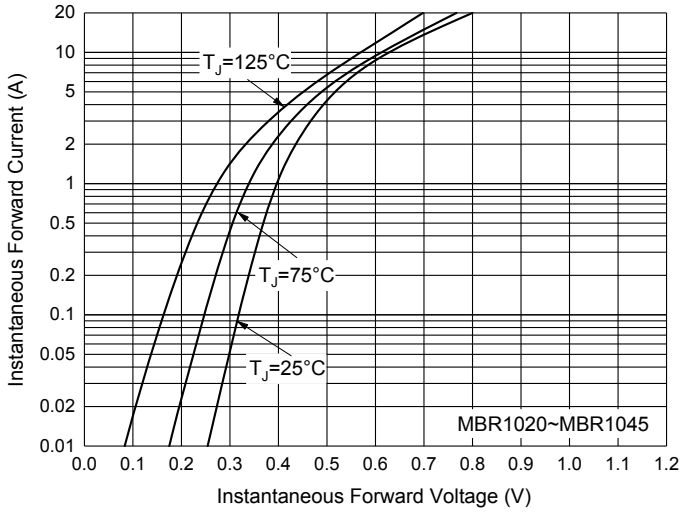


Fig. 4 - Typical Instantaneous Forward Characteristics

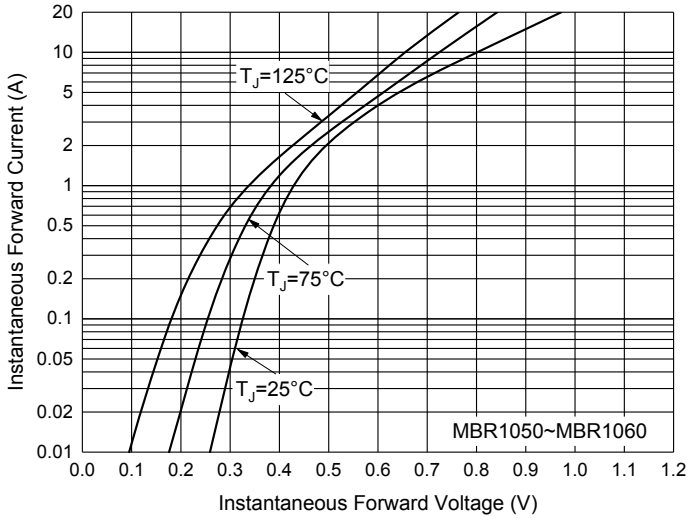


Fig. 5 - Typical Instantaneous Forward Characteristics

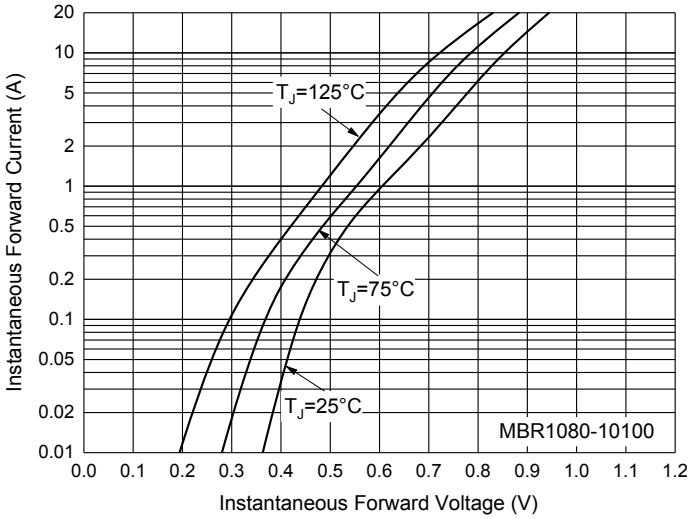


Fig. 6 - Typical Reverse Leakage Characteristics