



**THE DATASHEET OF  
MBR10100-BP**



**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 RatingHalogen Free Available Upon Request By Adding Suffix "-HF"

**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: -55°C to +150°C
- Typical Thermal Resistance: 2.5°C/W Junction to Case
- Mounting Torque: 5 in-lbs Maximum

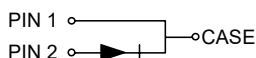
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR1020	MBR1020	20V	14V	20V
MBR1030	MBR1030	30V	21V	30V
MBR1035	MBR1035	35V	24.5V	35V
MBR1040	MBR1040	40V	28V	40V
MBR1045	MBR1045	45V	31.5V	45V
MBR1060	MBR1060	60V	42V	60V
MBR1080	MBR1080	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	$V_F$	0.65V 0.75V 0.84V 0.65V	$I_{FM}=10A$ $I_{FM}=10A$ $I_{FM}=10A$ $I_{FM}=10A, T_J=125^{\circ}C$
		0.84V 0.95V 0.80V	$I_{FM}=20A$ $I_{FM}=20A$ $I_{FM}=20A, T_J=125^{\circ}C$
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.1mA	$T_J=25^{\circ}C$

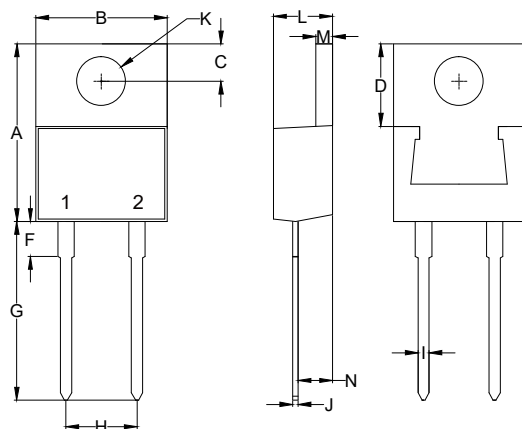
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

**Internal Structure**



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

**TO-220AC**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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

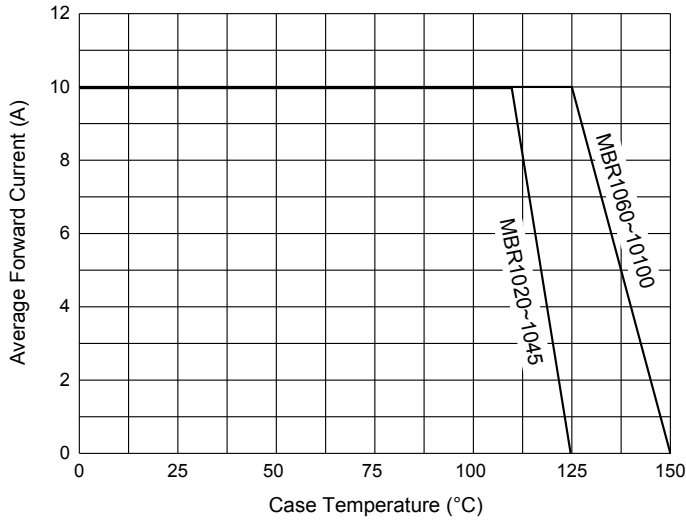


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

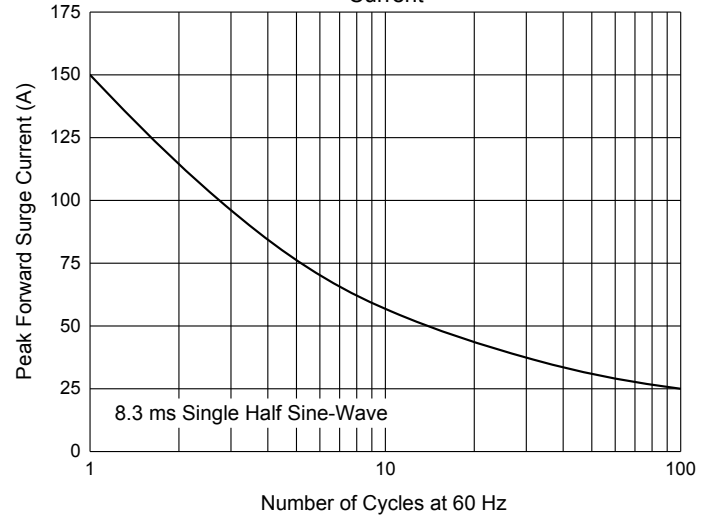


Fig. 3 - Typical Instantaneous Forward Characteristics

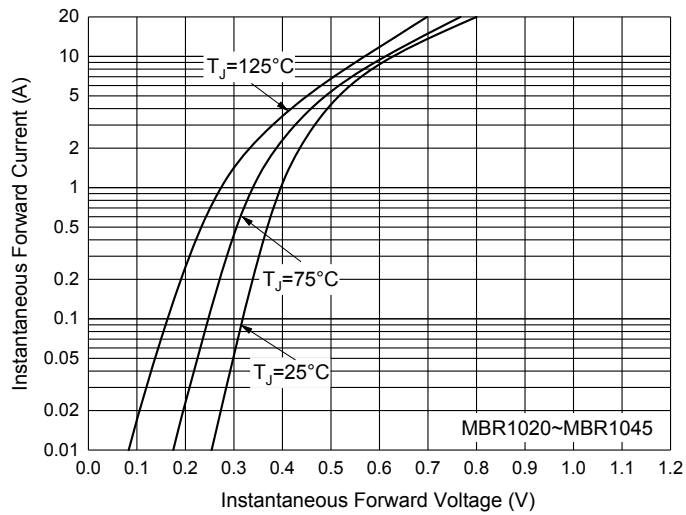


Fig. 4 - Typical Instantaneous Forward Characteristics

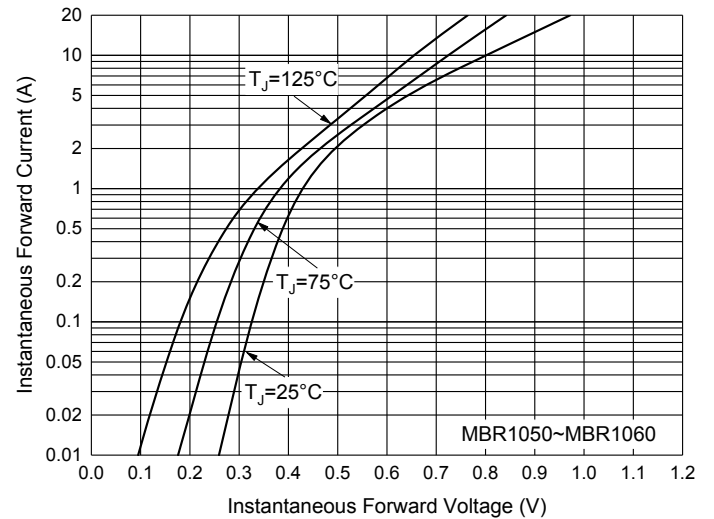


Fig. 5 - Typical Instantaneous Forward Characteristics

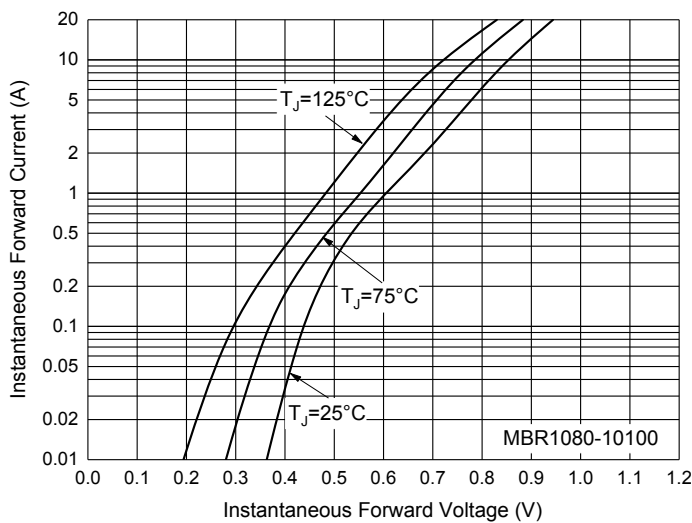
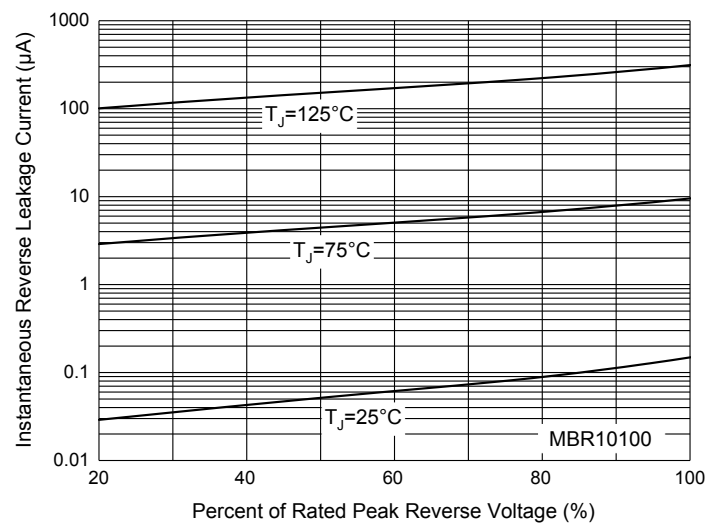


Fig. 6 - Typical Reverse Leakage Characteristics



## 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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