

**Features**

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- 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

**Maximum Ratings**

- Mounting Torque: 5 in-lbs Maximum
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +175°C
- Maximum Thermal Resistance: 3.0°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR720	MBR720	20V	14V	20V
MBR730	MBR730	30V	21V	30V
MBR735	MBR735	35V	24.5V	35V
MBR740	MBR740	40V	28V	40V
MBR745	MBR745	45V	31.5V	45V
MBR760	MBR760	60V	42V	60V

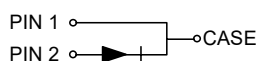
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Average Forward Current	$I_{F(AV)}$	7.5A	$T_C=125^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	150A	8.3ms, Half Sine
Maximum Forward Voltage Drop Per Element MBR720 - 745 MBR760	$V_F$	0.84V 0.75V	$I_{FM}=15$ Amper $I_{FM}=7.5$ Amper $T_J=25^\circ\text{C}$ (Note 2)
Maximum DC Reverse Current At Rated DC Blocking Voltage MBR720~MBR745 MBR760 MBR720~MBR745 MBR760	$I_R$	0.1mA 0.05mA 20mA 10mA	$T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	400pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

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

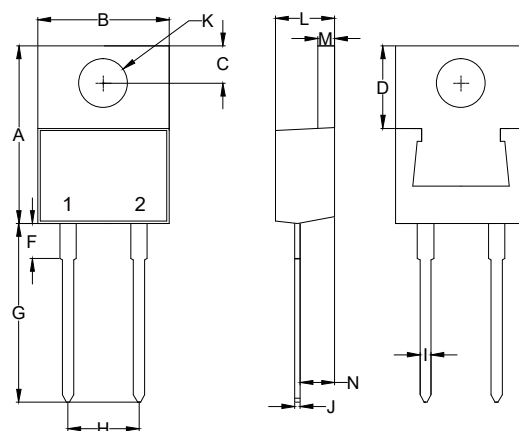
2. Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

**Internal Structure**



**7.5 Amp  
Schottky  
Barrier Rectifier  
20 to 60 Volts**

**TO-220AC**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.560	0.625	14.22	15.88	
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	----	0.250	----	6.35	
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	$\Phi$
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

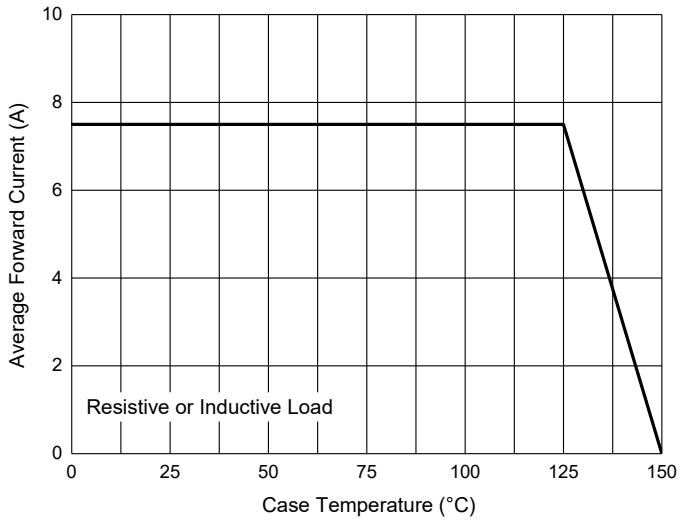


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

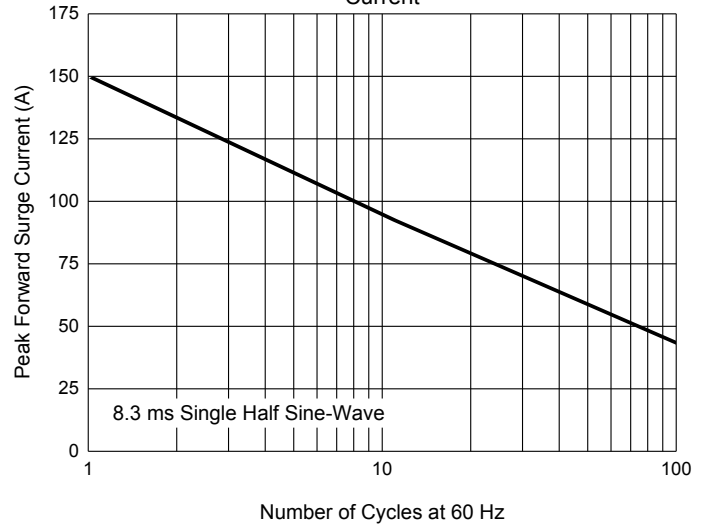


Fig. 3 - Typical Instantaneous Forward Characteristics

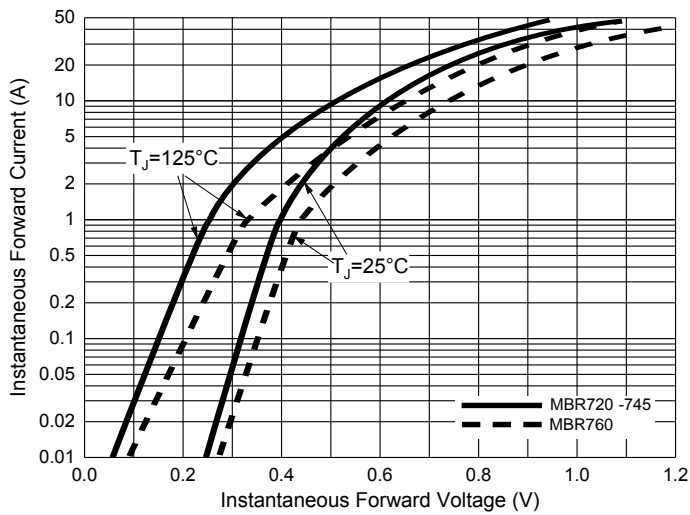
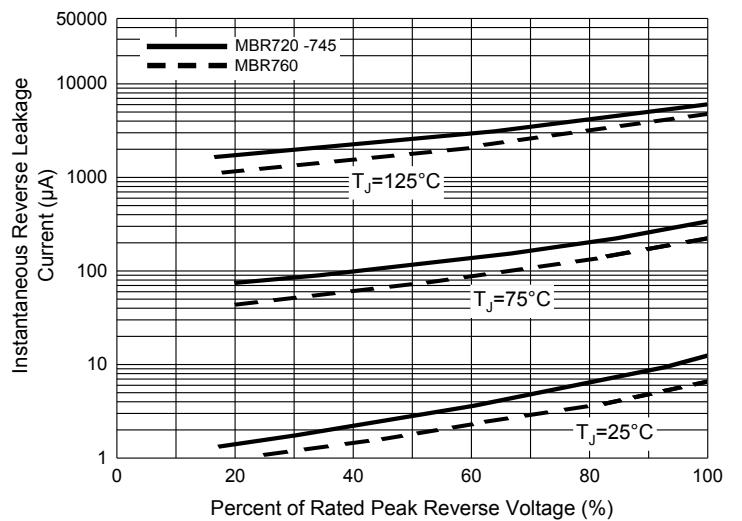


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-BP	Bulk:1Kpcs/Box

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

### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.