

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 |

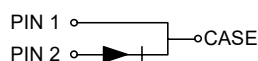
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---------------------------------|--|
| 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, $V_R=4.0V$ |

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

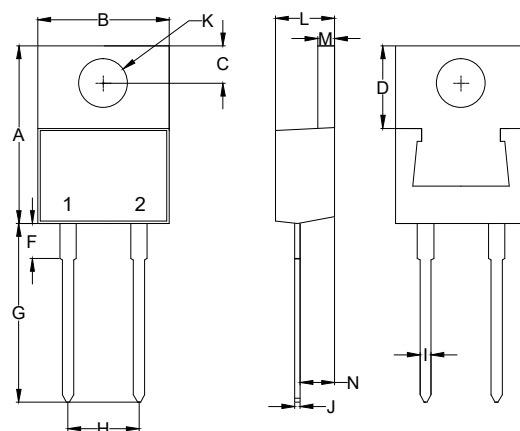
2. Pulse test: Pulse width 300 μsec , Duty cycle 2%

Internal Structure



7.5 Amp Schottky Barrier Rectifier 20 to 60 Volts

TO-220AC



| DIMENSIONS | | | | | |
|------------|--------|-------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | 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 | 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

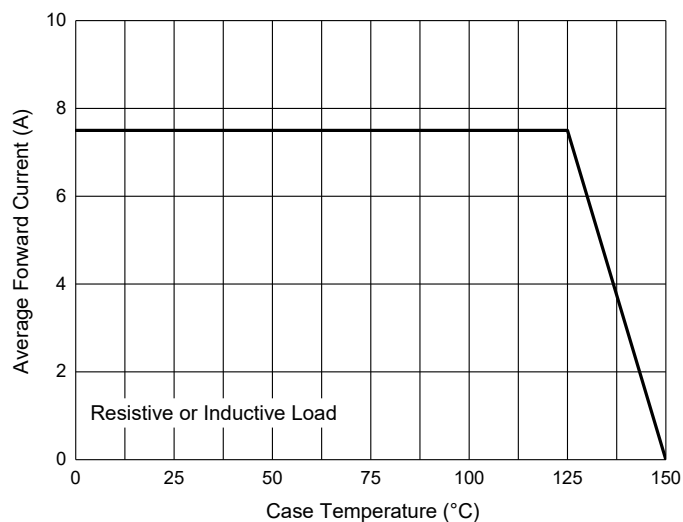


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

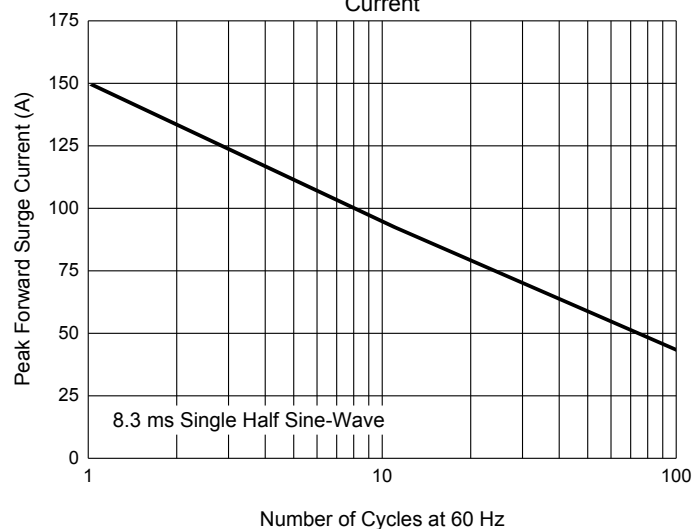


Fig. 3 - Typical Instantaneous Forward Characteristics

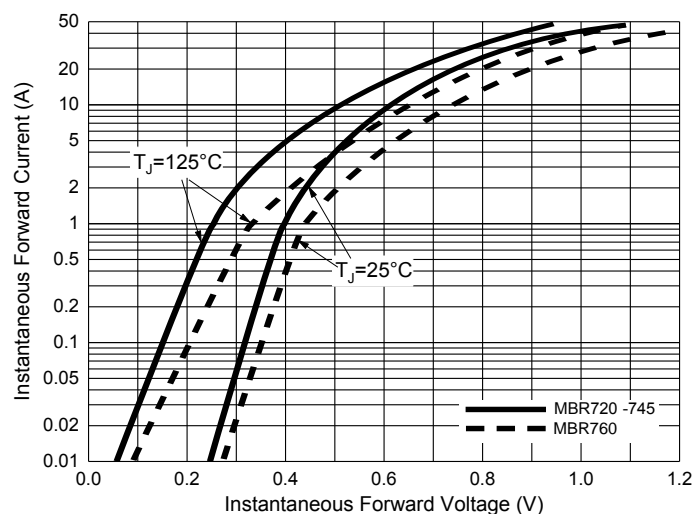
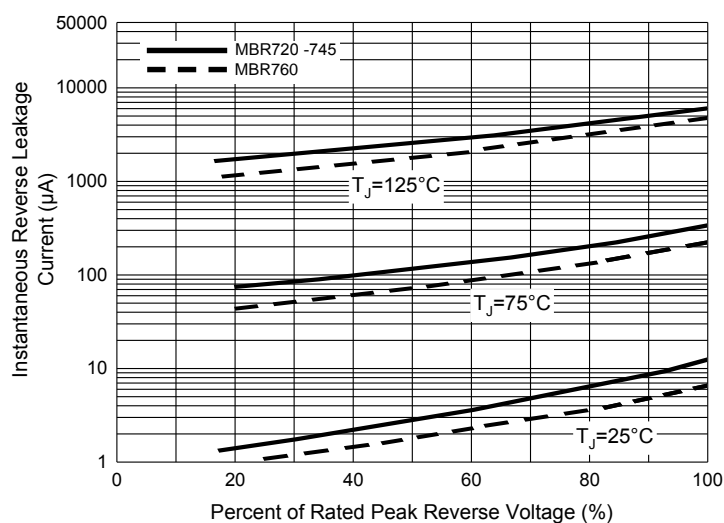


Fig. 4 - Typical Reverse Leakage Characteristics



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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