

### Features

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

### Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +175°C
- Mounting Torque: 5 in-lbs Maximum
- Typical Thermal Resistance Per Leg : 1.7°C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR3030CT       | MBR3030CT      | 30V                                    | 21V                 | 30V                         |
| MBR3035CT       | MBR3035CT      | 35V                                    | 24.5V               | 35V                         |
| MBR3040CT       | MBR3040CT      | 40V                                    | 28V                 | 40V                         |
| MBR3045CT       | MBR3045CT      | 45V                                    | 31.5V               | 45V                         |
| MBR3050CT       | MBR3050CT      | 50V                                    | 35V                 | 50V                         |
| MBR3060CT       | MBR3060CT      | 60V                                    | 42V                 | 60V                         |

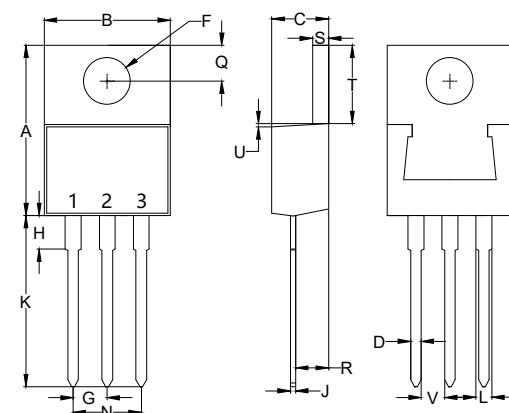
### Electrical Characteristics @ 25°C Unless Otherwise Specified

|  |             |                         |   |
|--|-------------|-------------------------|---|
| Average Forward Current  | $I_{F(AV)}$ | 30A                     | $T_C=100^\circ\text{C}$   |
| Peak Forward Surge Current   | $I_{FSM}$   | 200A                    | 8.3ms, Half Sine  |
| Maximum Instantaneous Forward Voltage<br>MBR3030CT~3045CT            | $V_F$       | 0.70V<br>0.84V<br>0.72V | $I_{FM}=15A; T_J=25^\circ\text{C}$<br>$I_{FM}=30A; T_J=25^\circ\text{C}$<br>$I_{FM}=30A; T_J=125^\circ\text{C}$ |
| MBR3050CT~3060CT   |             | 0.80V<br>0.95V<br>0.85V | $I_{FM}=15A; T_J=25^\circ\text{C}$<br>$I_{FM}=30A; T_J=25^\circ\text{C}$<br>$I_{FM}=30A; T_J=125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage              | $I_R$       | 0.1mA                   | $T_J=25^\circ\text{C}$  |
| Typical Junction Capacitance<br>MBR3030CT-3045CT<br>MBR3050CT-3060CT | $C_J$       | 450pF<br>400pF          | Measured at 1.0MHz, $V_R=4.0V$  |

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

# 30 Amp Schottky Barrier Rectifier 30 to 60 Volts

## TO-220AB



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | 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  | Φ    |
| 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

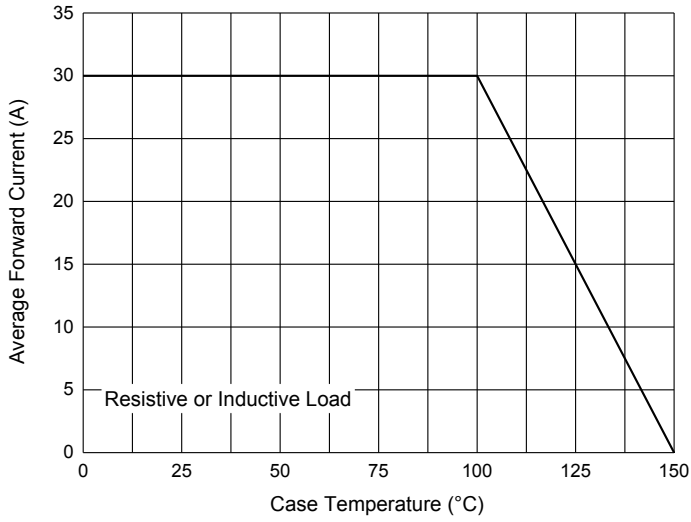


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

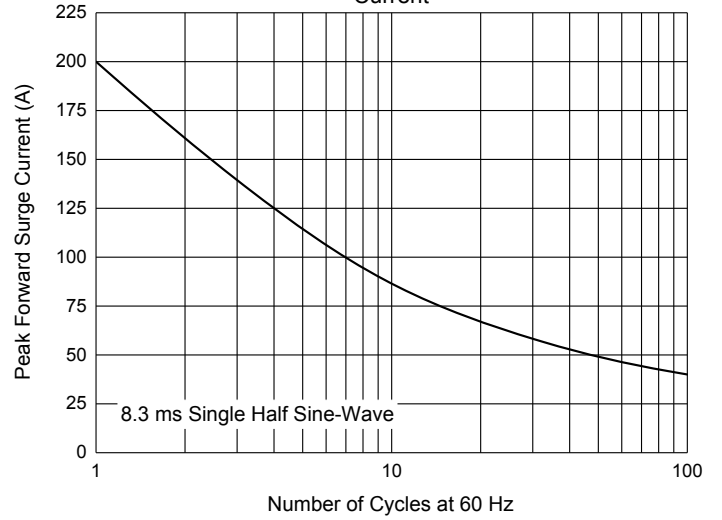


Fig. 3 - Typical Instantaneous Forward Characteristics

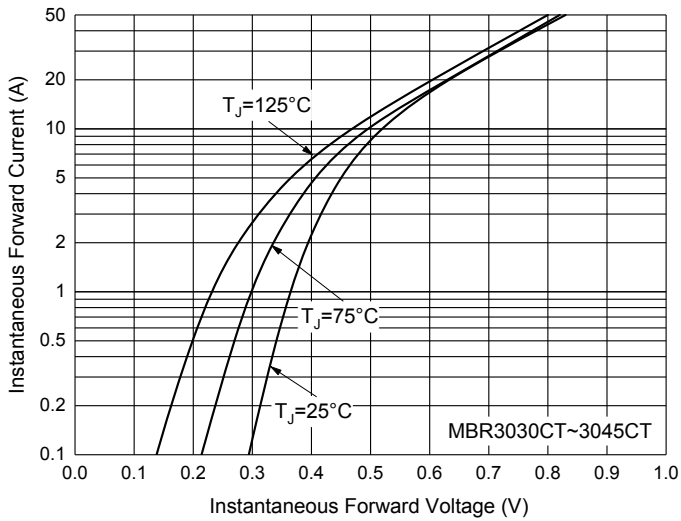


Fig. 4 - Typical Instantaneous Forward Characteristics

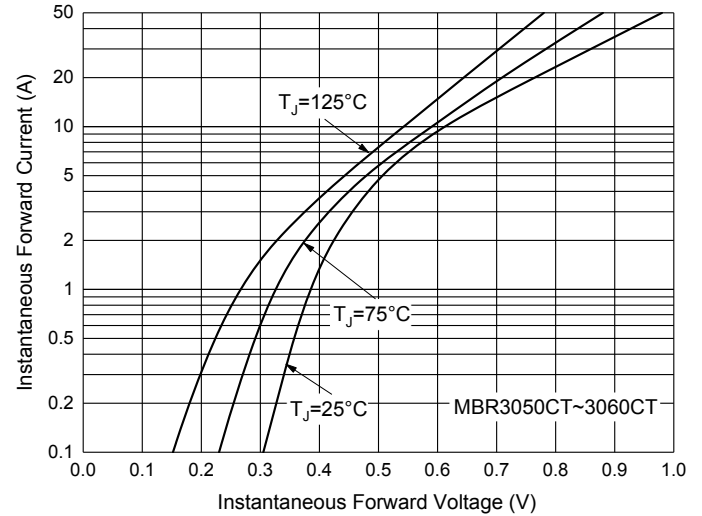


Fig. 5 - Typical Reverse Leakage Characteristics

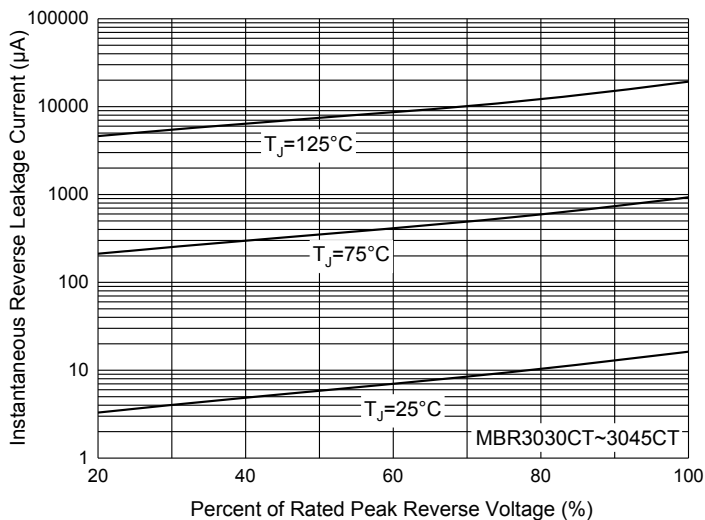
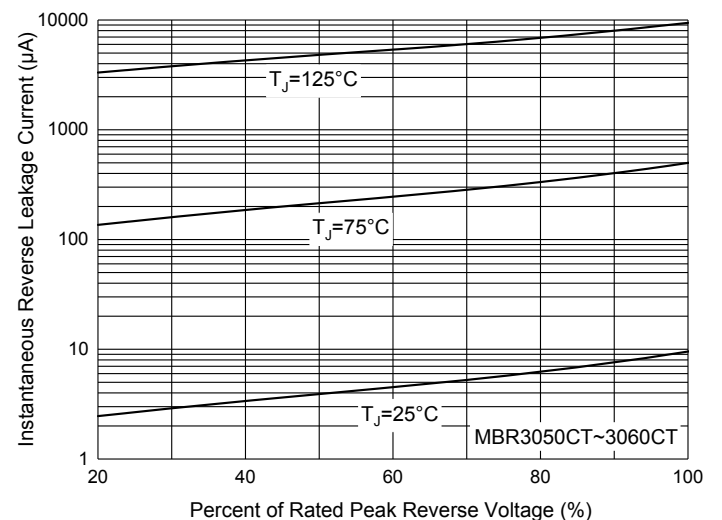


Fig. 6 - Typical Reverse Leakage Characteristics



## 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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