

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- High Current Capability and High Efficiency
- Low Forward Voltage Drop
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- 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 +150°C
- Thermal Resistance: 2.0°C/W Junction to Case

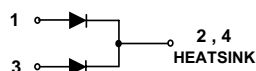
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBRL30100CT     | MBRL30100CT    | 100V                                   | 70V                 | 100V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |             |                                     |
|---|-------------|-------------|-------------------------------------|
| Average Forward Current                         | $I_{F(AV)}$ | 30A         | $T_C=120^\circ\text{C}$             |
| Peak Forward Surge Current                      | $I_{FSM}$   | 200A        | 8.3ms, Half Sine                    |
| Instantaneous Forward Voltage                   | $V_F$       | 0.68V(Typ.) | $I_{FM}=15A; T_J=25^\circ\text{C}$  |
|   |             | 0.72V(Max.) | $I_{FM}=15A; T_J=25^\circ\text{C}$  |
| DC Reverse Current at Rated DC Blocking Voltage | $I_R$       | 0.67V(Typ.) | $I_{FM}=15A; T_J=125^\circ\text{C}$ |
|   |             | 0.70V(Max.) | $I_{FM}=15A; T_J=125^\circ\text{C}$ |
| DC Reverse Current at Rated DC Blocking Voltage | $I_R$       | 6.5uA(Typ.) | $T_J=25^\circ\text{C}$              |
|   |             | 0.1mA(Max.) | $T_J=25^\circ\text{C}$              |
|   |             | 8mA(Typ.)   | $T_J=125^\circ\text{C}$             |
|   |             | 50mA(Max.)  | $T_J=125^\circ\text{C}$             |

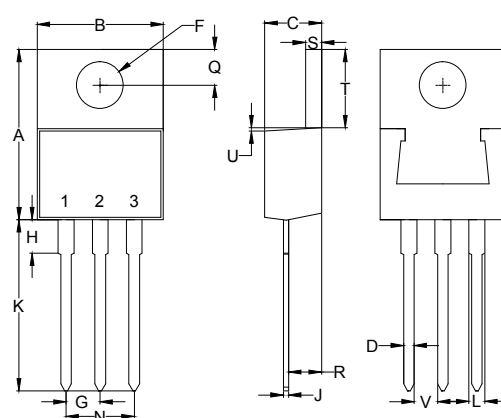
Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## Internal Structure



# 30 Amp Low VF Schottky Barrier Rectifier 100 Volts

## TO-220AB



## DIMENSIONS

| 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

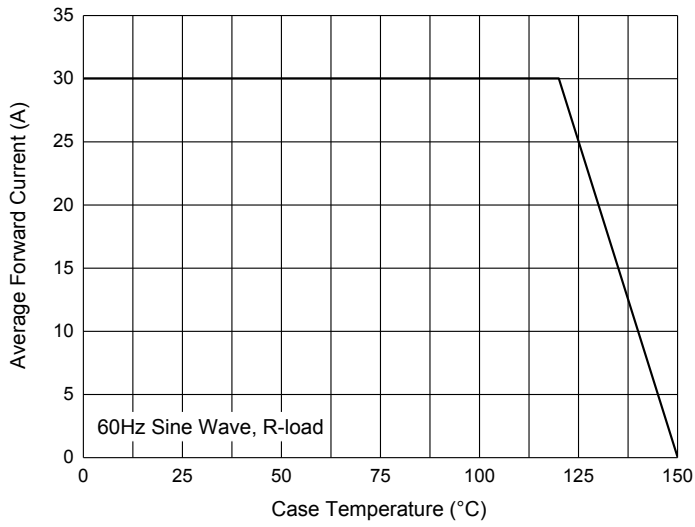


Fig. 2 - Surge Forward Current Capability

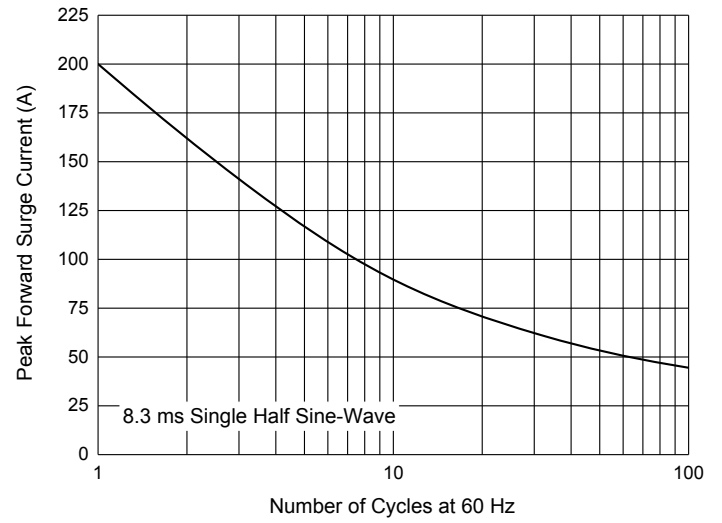


Fig. 3 - Typical Instantaneous Forward Characteristics

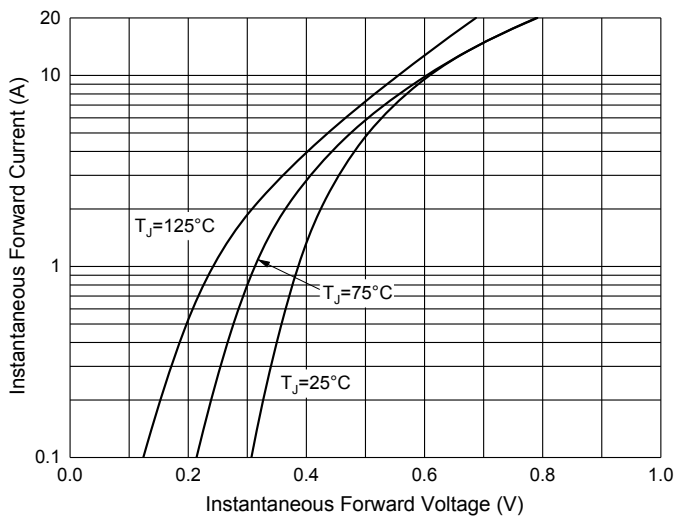
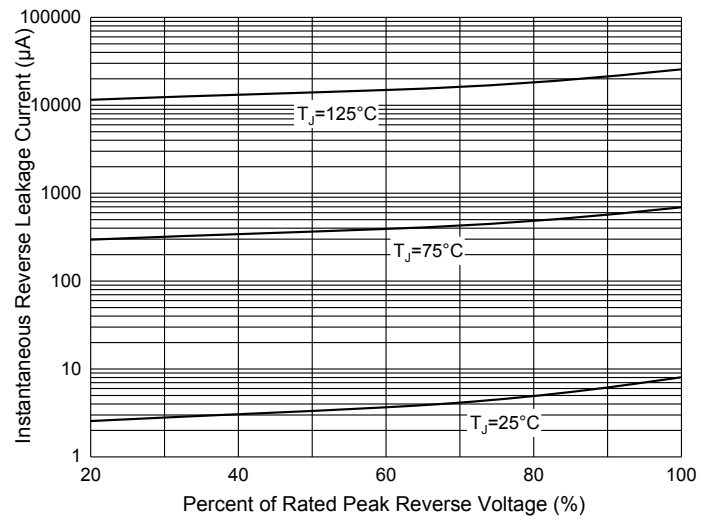


Fig. 4 - Typical Reverse Leakage Characteristics



## 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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