

Features

- Low Power Loss and High Efficiency
- High Surge Capacity and 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
- Halogen Free Available Upon Request By Adding Suffix "-HF"

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Typical Thermal Resistance: 5°C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR3020FCT | MBR3020FCT | 20V | 14V | 20V |
| MBR3030FCT | MBR3030FCT | 30V | 21V | 30V |
| MBR3040FCT | MBR3040FCT | 40V | 28V | 40V |
| MBR3045FCT | MBR3045FCT | 45V | 31.5V | 45V |
| MBR3060FCT | MBR3060FCT | 60V | 42V | 60V |
| MBR3080FCT | MBR3080FCT | 80V | 56V | 80V |
| MBR30100FCT | MBR30100FCT | 100V | 70V | 100V |

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} | 250A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage 3020FCT~3045FCT 3060FCT~30100FCT | V_F | 0.60V 0.85V | $I_{FM}=15A; T_J=25^\circ\text{C}$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage 3020FCT~30100FCT 3020FCT~3045FCT 3060FCT~30100FCT | I_R | 0.1mA 20mA 10mA | $T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ |

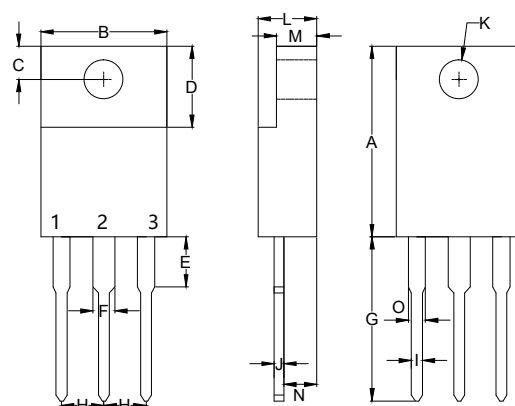
Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

Internal Structure



30 Amp Schottky Barrier Rectifier 20 to 100 Volts

ITO-220AB



| DIMENSIONS | | | | | |
|------------|--------|-------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.567 | 0.642 | 14.40 | 16.30 | |
| B | ----- | 0.421 | ----- | 10.70 | |
| C | 0.085 | 0.128 | 2.15 | 3.25 | |
| D | 0.248 | 0.272 | 6.30 | 6.90 | |
| E | ----- | 0.177 | ----- | 4.50 | |
| F | ----- | 0.071 | ----- | 1.80 | |
| G | 0.500 | 0.539 | 12.70 | 14.20 | |
| H | 0.100 | | 2.55 | | |
| I | ----- | 0.035 | ----- | 0.90 | |
| J | ----- | 0.032 | ----- | 0.80 | |
| K | 0.102 | 0.150 | 2.60 | 3.80 | Φ |
| L | ----- | 0.201 | ----- | 5.10 | |
| M | ----- | 0.140 | ----- | 3.56 | |
| N | 0.083 | 0.126 | 2.10 | 3.20 | |
| O | ----- | 0.071 | ----- | 1.80 | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

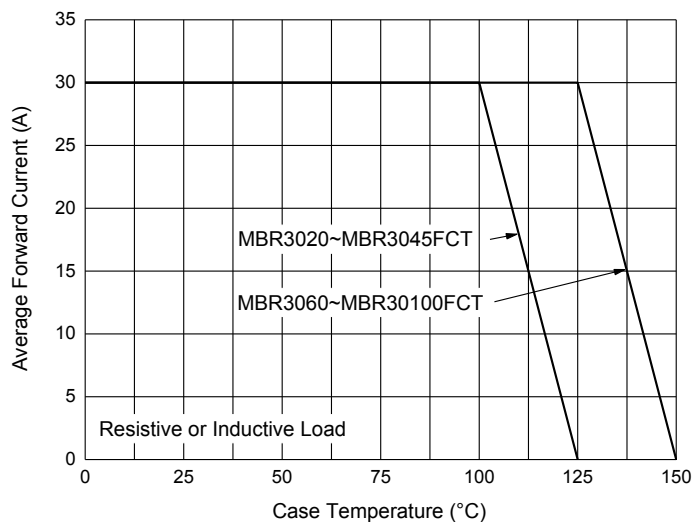


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

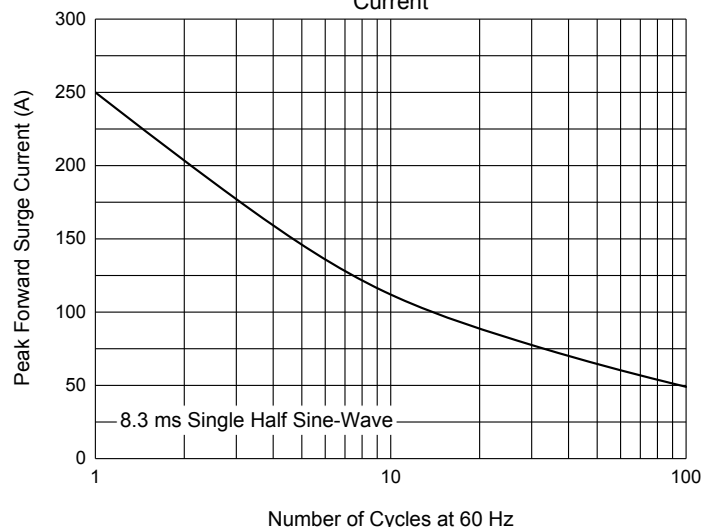


Fig. 3 - Typical Instantaneous Forward Characteristics

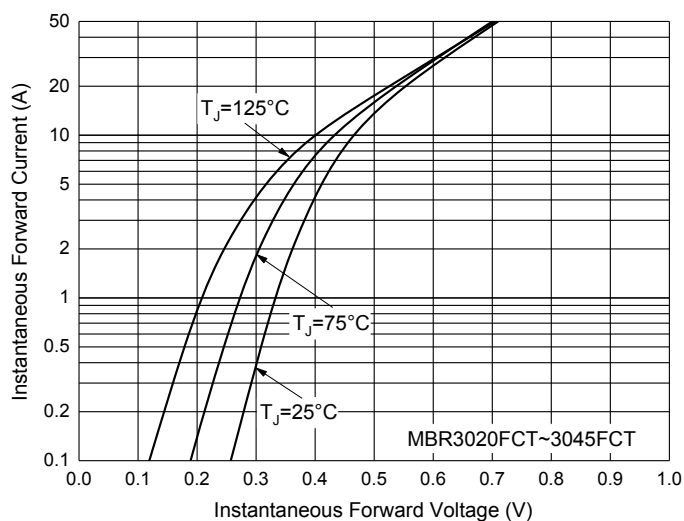


Fig. 4 - Typical Instantaneous Forward Characteristics

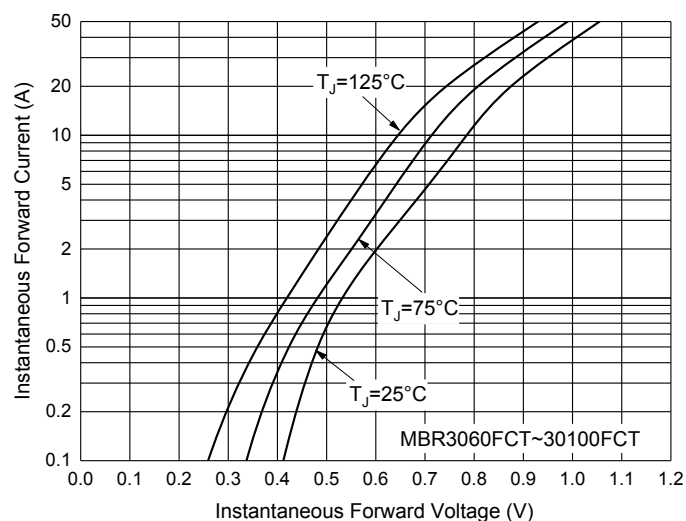


Fig. 5 - Typical Reverse Leakage Characteristics

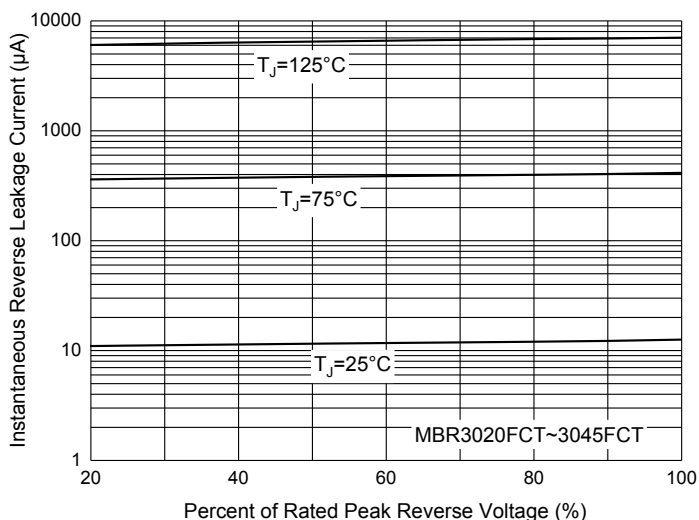
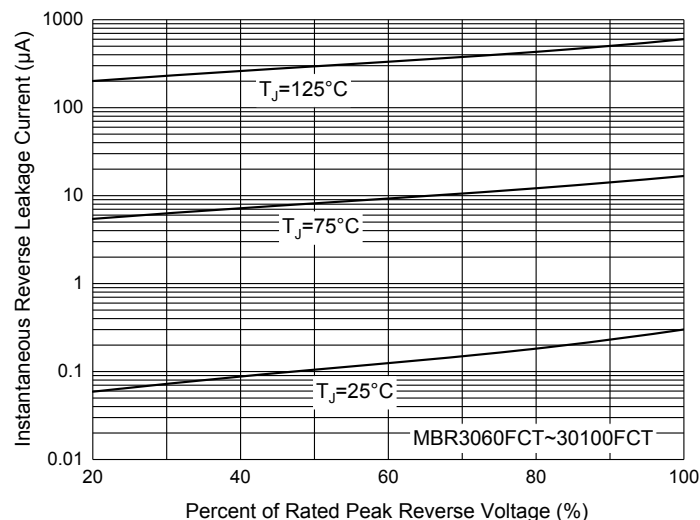


Fig. 6 - Typical Reverse Leakage Characteristics



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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