

Features

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

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance : 2°C/W Junction to Case
- Typical Thermal Resistance : 15°C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBR20100CTH | MBR20100CTH | 100V | 70V | 100V |
| MBR20150CTH | MBR20150CTH | 150V | 105V | 150V |
| MBR20200CTH | MBR20200CTH | 200V | 140V | 200V |

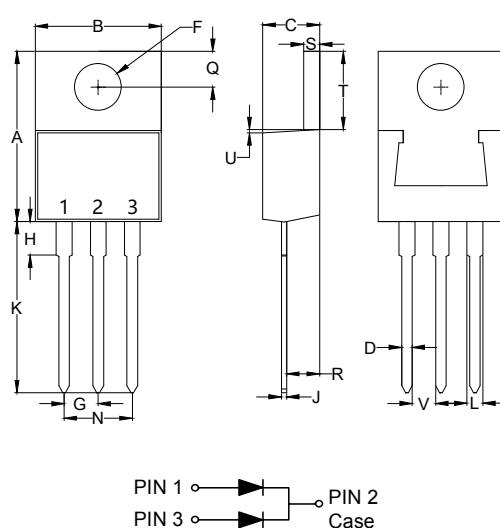
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 20A | $T_C=140^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 150A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.82V 0.85V 0.9V | $I_{FM}=10A$ $T_A=25^\circ\text{C}$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage(Note 2) | I_R | 0.01mA 0.15mA 1.5mA | $T_A=25^\circ\text{C};$ $T_A=90^\circ\text{C}$ $T_A=125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 250pF 200pF 150pF | Measured at 1.0MHz, $V_R=4.0V$ |
| Voltage Rate of Change (Rated VR) | dV/dt | 10,000V/uS | |
| Peak Non-repetitive Reverse Surge Energy | E_{RSM} | 20mJ | Per Diode, 8/20 μs Waveform |
| Non-repetitive Avalanche Energy | E_{AS} | 20mJ | Per Diode at 25°C, $I_{AS}=2.0A$, $L=10mH$ |

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.
2.Pulse Test: 300us Pulse Width, 1% Duty Cycle

**20 Amp Schottky Barrier Rectifier
100 to 200 Volts**

TO-220AB



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

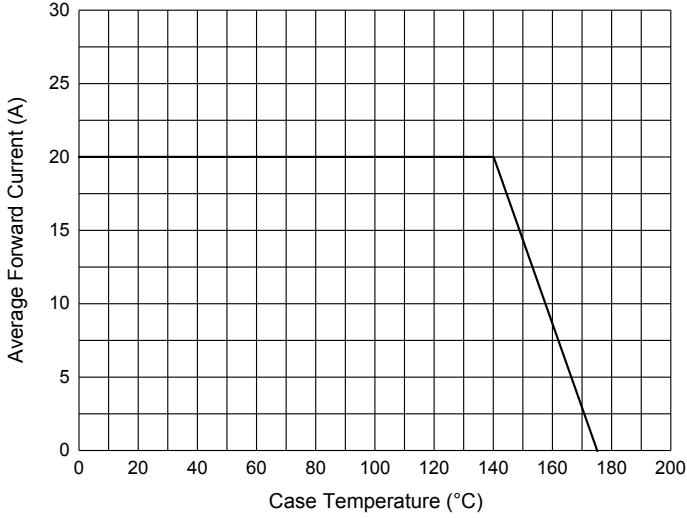


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

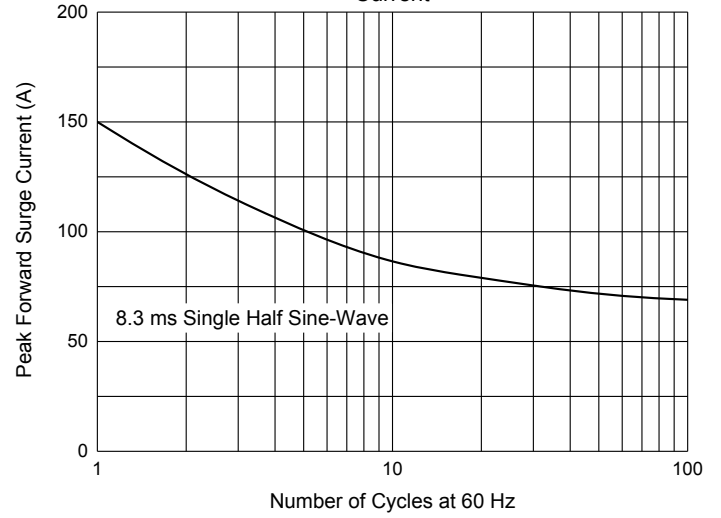


Fig. 3 - MBR20100CTH
Typical Instantaneous Forward Characteristics

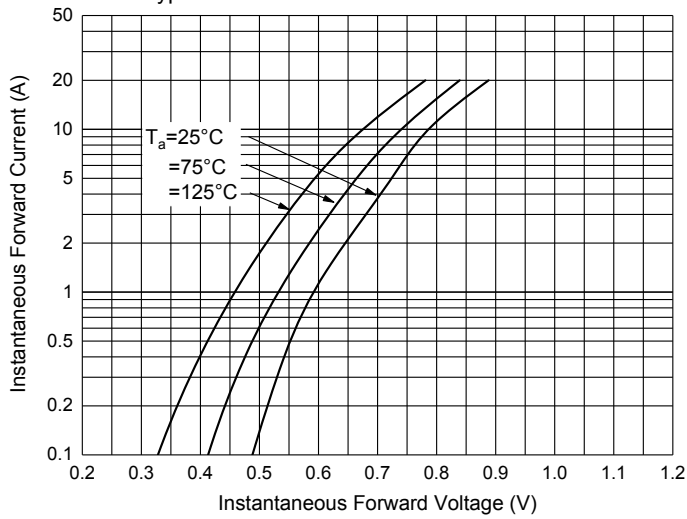


Fig. 4 - MBR20150CTH
Typical Instantaneous Forward Characteristics

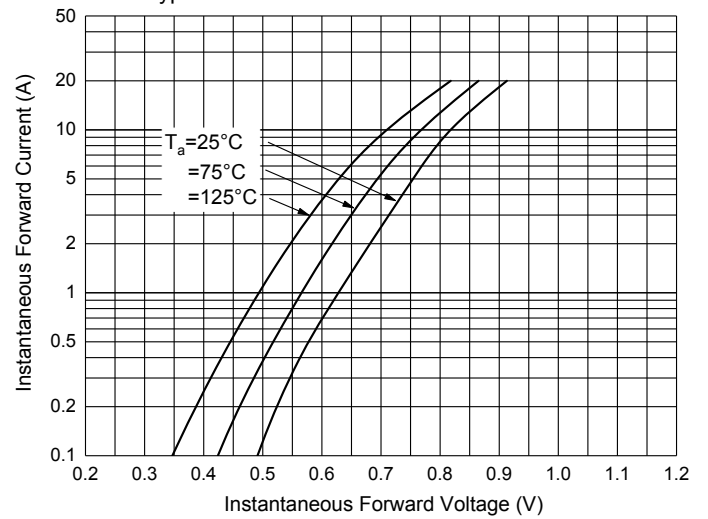


Fig. 5 - MBR20200CTH
Typical Instantaneous Forward Characteristics

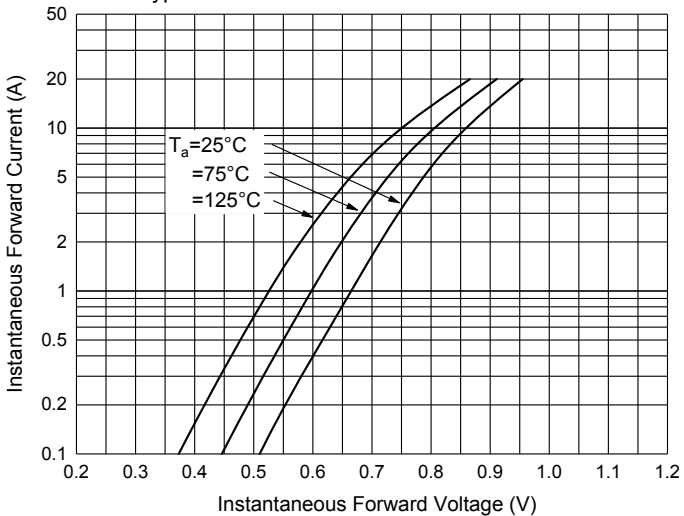
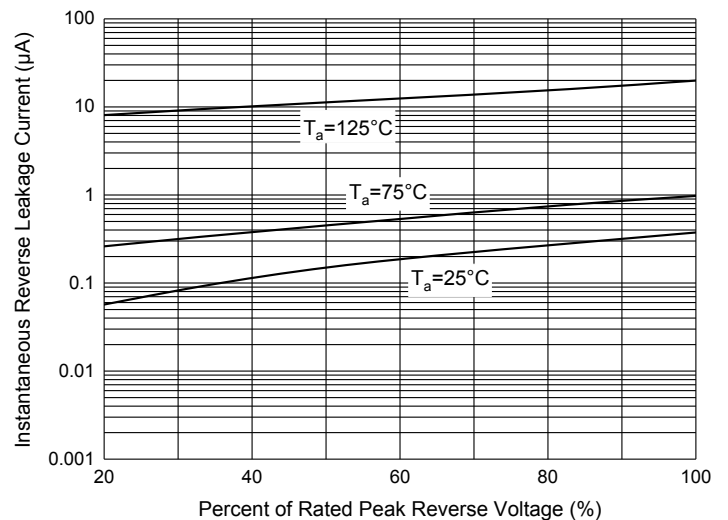


Fig. 6 - Typical Reverse Leakage Characteristics



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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