

Features

- High Frequency Operation
- High Current Capability, High Efficiency
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- High Junction Temperature 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

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 5°C/W Junction to Case
- Typical Thermal Resistance: 22°C/W Junction to Ambient^(Note 2)

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBRD10100CTH | MBRD10100CTH | 100V | 70V | 100V |
| MBRD10150CTH | MBRD10150CTH | 150V | 105V | 150V |
| MBRD10200CTH | MBRD10200CTH | 200V | 140V | 200V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|--------|------------------------------------|
| Average Forward Current | $I_{F(AV)}$ | 10A | $T_C=130^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 120A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.8V | $I_{FM}=5A; T_J=25^\circ\text{C}$ |
| MBRD10150CTH | | 0.85V | $I_{FM}=5A; T_J=25^\circ\text{C}$ |
| MBRD10200CTH | | 0.9V | $I_{FM}=5A; T_J=25^\circ\text{C}$ |
| MBRD10200CTH | | 0.84V | $I_{FM}=5A; T_J=125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 0.01mA | $T_J=25^\circ\text{C};$ |
| | | 5mA | $T_J=125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 100pF | Measured at 1.0MHz, $V_R=4.0V$ |

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

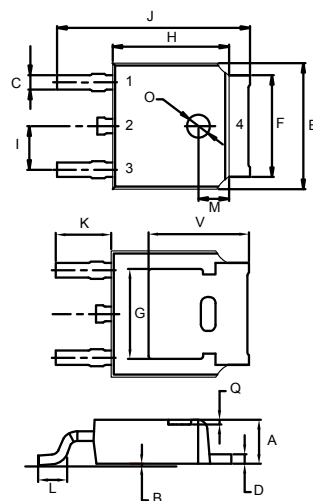
2.Test with 2in. Al board.

Internal Structure:



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

(TO-252) DPAK



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|------|-------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.087 | 0.094 | 2.20 | 2.40 | |
| B | 0.000 | 0.005 | 0.00 | 0.13 | |
| C | 0.026 | 0.034 | 0.66 | 0.86 | |
| D | 0.018 | 0.023 | 0.46 | 0.58 | |
| E | 0.256 | 0.264 | 6.50 | 6.70 | |
| F | 0.201 | 0.215 | 5.10 | 5.46 | |
| G | 0.190 | | 4.83 | | |
| H | 0.236 | 0.244 | 6.00 | 6.20 | |
| I | 0.086 | 0.094 | 2.18 | 2.39 | |
| J | 0.386 | 0.409 | 9.80 | 10.40 | |
| K | 0.114 | | 2.90 | | |
| L | 0.055 | 0.067 | 1.40 | 1.70 | |
| M | 0.063 | | 1.60 | | |
| O | 0.043 | 0.051 | 1.10 | 1.30 | |
| Q | 0.000 | 0.012 | 0.00 | 0.30 | |
| V | 0.211 | | 5.35 | | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

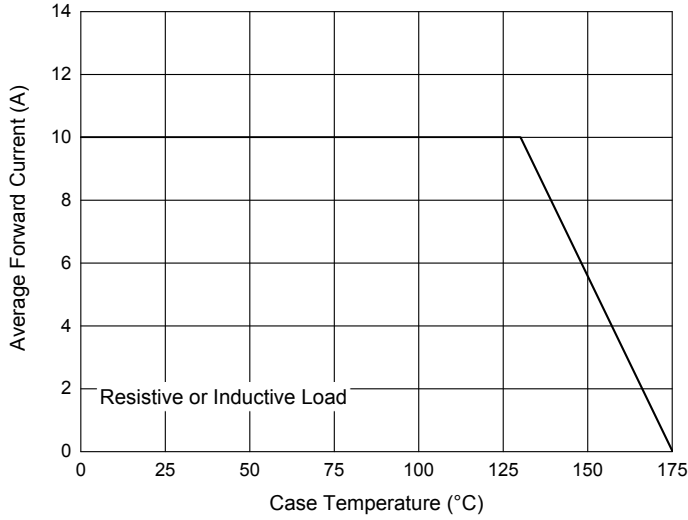


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

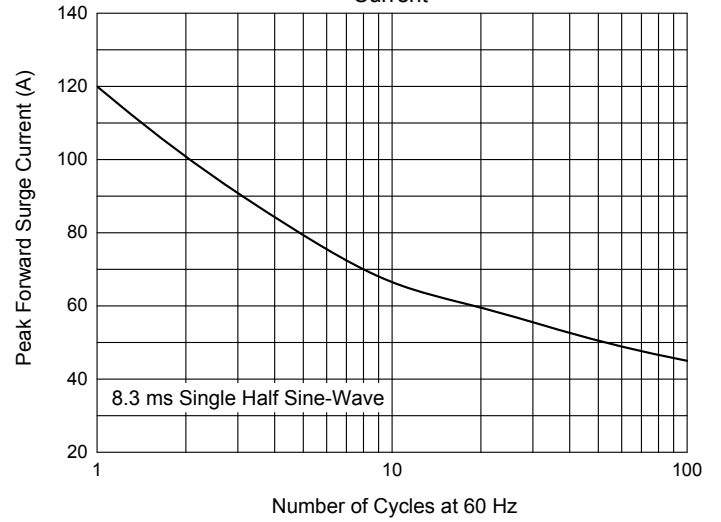


Fig. 3 - MBRD10100CTH Typical Instantaneous Forward Characteristics

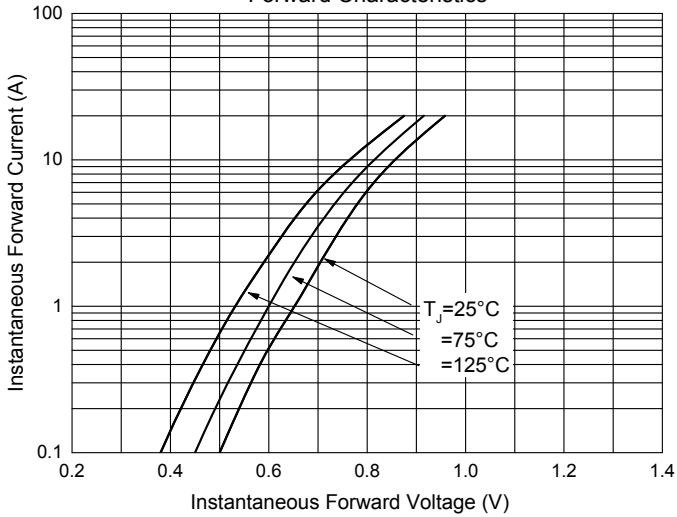


Fig. 4 - MBRD10150CTH Typical Instantaneous Forward Characteristics

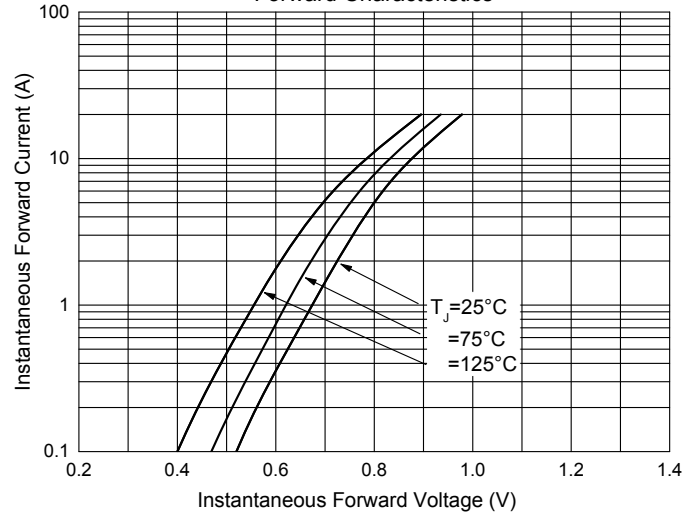


Fig. 5 - MBRD10200CTH Typical Instantaneous Forward Characteristics

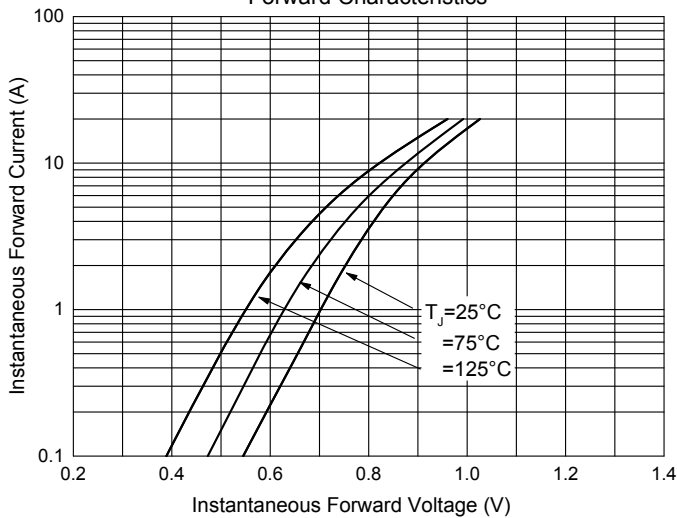
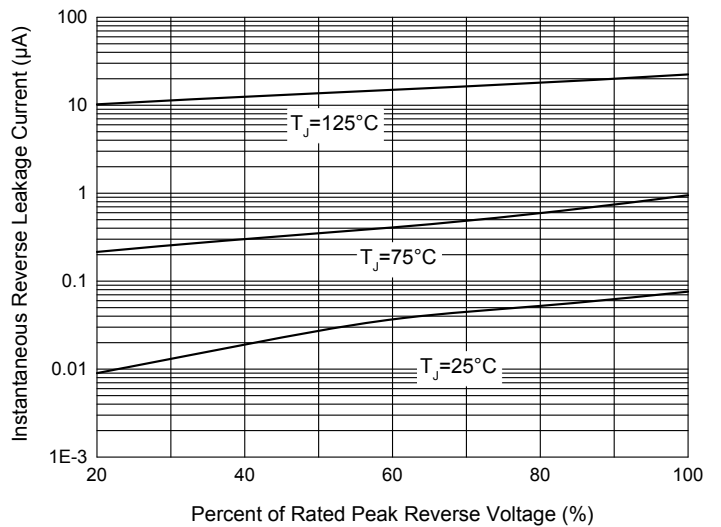


Fig. 6 - Typical Reverse Leakage Characteristics



Ordering Information

| Device | Packing |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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