

**Features**

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- High Current Capability and High Efficiency.
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 2 °C/W Junction to Case

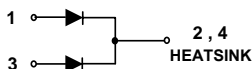
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBRB40200CT     | MBRB40200CT    | 200V                                   | 140V                | 200V                        |

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

|   |             |  |   |
|---|-------------|--|---|
| Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% Duty Cycle | $I_{F(AV)}$ | 40A                                    | $T_C=120^\circ\text{C}$   |
| Peak Forward Surge Current  | $I_{FSM}$   | 450A                                   | 8.3ms, Half Sine Wave   |
| Maximum Instantaneous Forward Voltage   | $V_F$       | 0.84V(Typ)<br>0.90V(Max)<br>0.80V(Max) | $I_F=20A;$<br>$T_J=25^\circ\text{C}$<br>$I_F=20A;$<br>$T_J=125^\circ\text{C}$ |
| Maximum Reverse Current at Rated DC Blocking Voltage                            | $I_R$       | 0.01mA<br>5mA                          | $T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$                             |

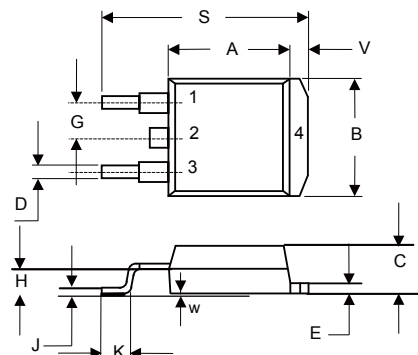
- Note:
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  2. High temperature solder exemption applied, see EU directive annex 7a.

**Internal Structure**



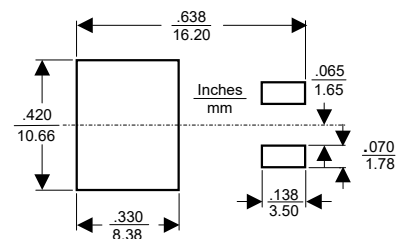
**40 Amp  
Schottky  
Barrier Rectifier  
200 Volts**

**D<sup>2</sup>-PAK**



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | 0.331  | 0.370 | 8.40  | 9.40  |      |
| B   | 0.378  | 0.417 | 9.60  | 10.60 |      |
| C   | 0.165  | 0.189 | 4.20  | 4.80  |      |
| D   | 0.027  | 0.037 | 0.68  | 0.94  |      |
| E   | 0.045  | 0.055 | 1.14  | 1.40  |      |
| G   | 0.010  |       | 2.54  |       | TYP. |
| H   | 0.096  | 0.134 | 2.43  | 3.40  |      |
| J   | 0.011  | 0.025 | 0.28  | 0.64  |      |
| K   | 0.071  | 0.131 | 1.80  | 3.32  |      |
| S   | 0.575  | 0.625 | 14.60 | 15.87 |      |
| V   | 0.042  | 0.058 | 1.07  | 1.47  |      |
| W   | 0.000  | 0.010 | 0.00  | 0.25  |      |

**Suggested Solder Pad Layout**



**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

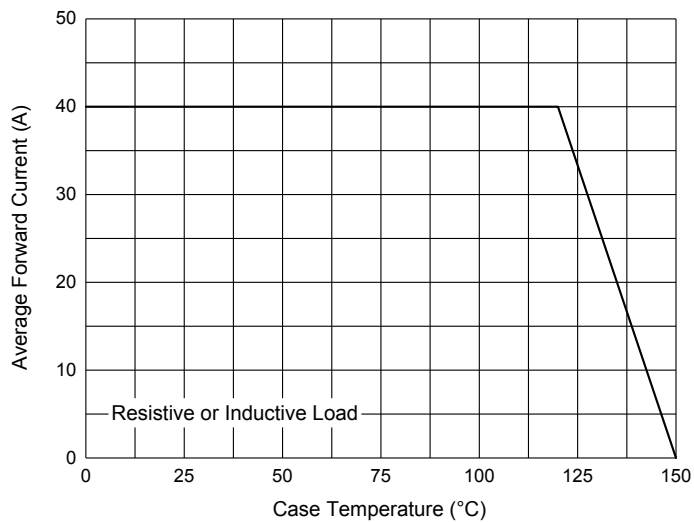


Fig. 2 - Typical Instantaneous Forward Characteristics

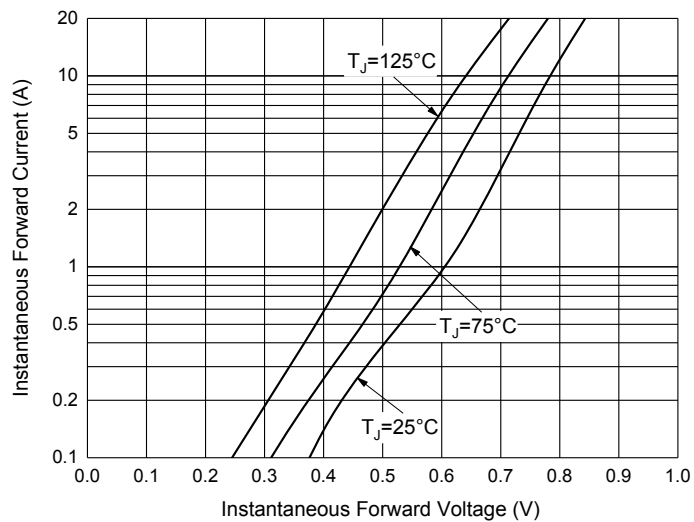
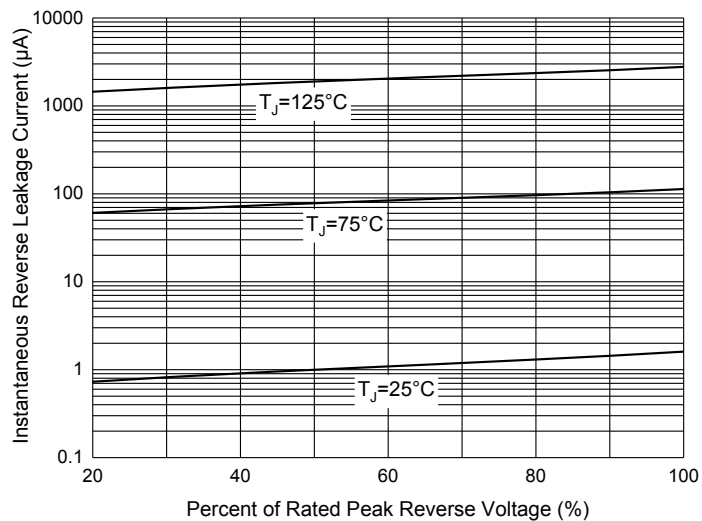


Fig. 3 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                |
|----------------|------------------------|
| Part Number-TP | Tape&Reel: 800pcs/Reel |
| Part Number-BP | Tube: 5Kpcs/Ctn        |

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