

### Features

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

### 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

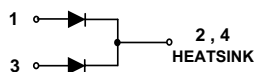
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBRBL20100CT    | MBRBL20100CT   | 100V                                   | 70V                 | 100V                        |

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

|  |             |                    |   |
|--|-------------|--------------------|---|
| Average Forward Current                              | $I_{F(AV)}$ | 20A                | $T_C=120^\circ\text{C}$                                       |
| Peak Forward Surge Current                           | $I_{FSM}$   | 150A               | 8.3ms, Half Sine Wave   |
| Maximum Instantaneous Forward Voltage                | $V_F$       | 0.72V              | $I_{FM}=10A; T_A=25^\circ\text{C}$                            |
| Maximum Reverse Current At Rated DC Blocking Voltage | $I_R$       | 0.1mA<br>10mA      | $T_A=25^\circ\text{C}$<br>$T_A=100^\circ\text{C}$             |
| Current Squared Time                                 | $I^2t$      | 94A <sup>2</sup> s | 1ms ≤ t ≤ 8.3ms $T_A=25^\circ\text{C}$<br>Rating of Per Diode |

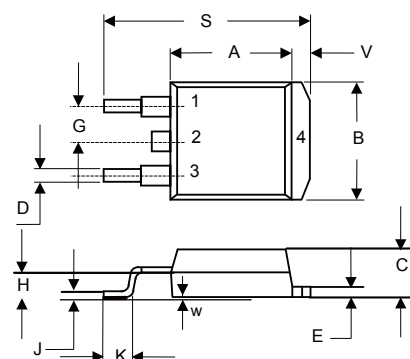
Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 7a.

### Internal Structure



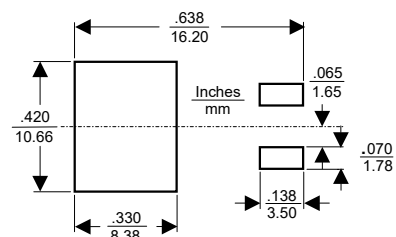
# 20 Amp Low VF Schottky Barrier Rectifier 100 Volts

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



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

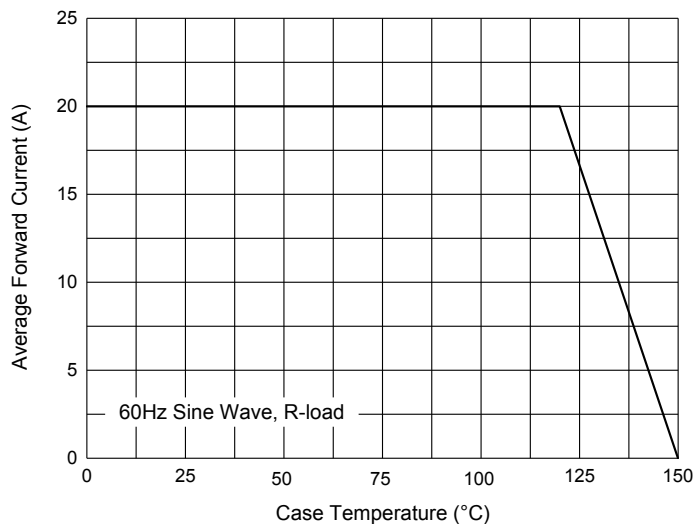


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

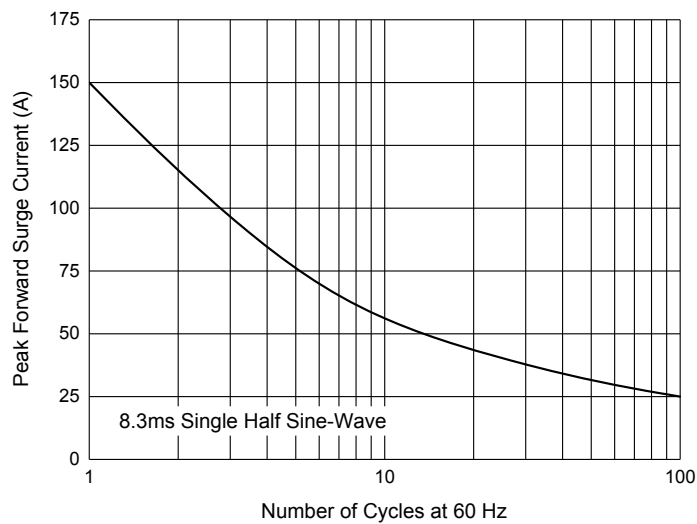


Fig. 3 - Typical Instantaneous Forward Characteristics

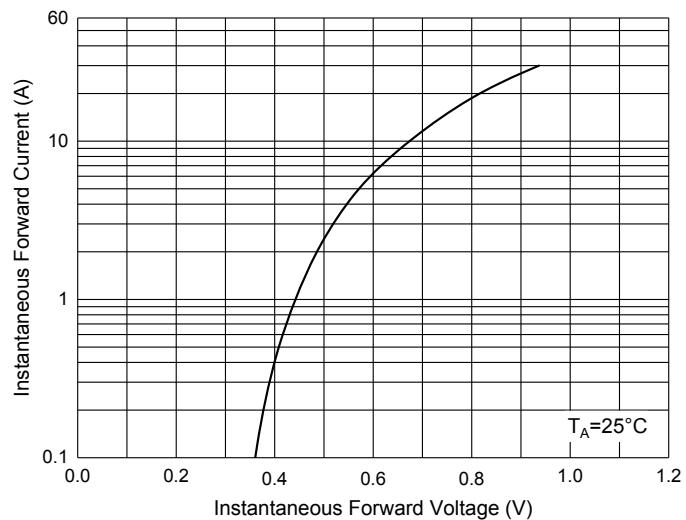
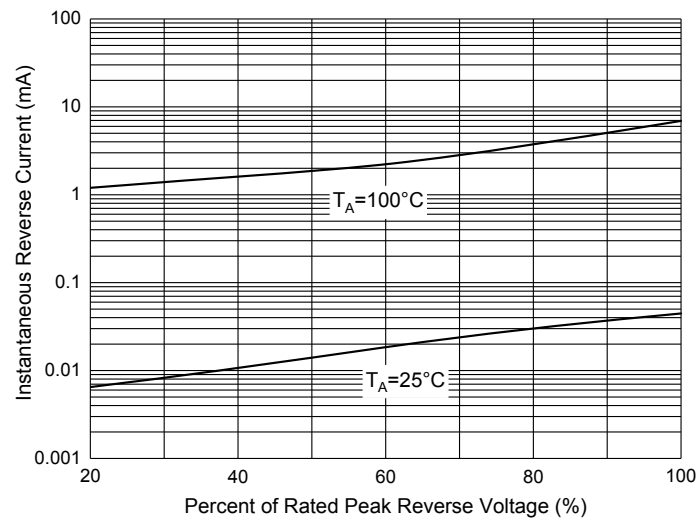


Fig. 4 - Typical Reverse Characteristics



## Ordering Information

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

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

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