

Features

- Guard Ring For Transient Protection
- 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 RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 2.0°C/W Junction to Case
- Maximum Thermal Resistance: 50°C/W Junction to Ambient

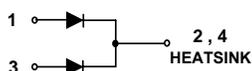
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MBRB2020CT | MBRB2020CT | 20V | 14V | 20V |
| MBRB2030CT | MBRB2030CT | 30V | 21V | 30V |
| MBRB2035CT | MBRB2035CT | 35V | 24.5V | 35V |
| MBRB2040CT | MBRB2040CT | 40V | 28V | 40V |
| MBRB2045CT | MBRB2045CT | 45V | 31.5V | 45V |
| MBRB2060CT | MBRB2060CT | 60V | 42V | 60V |
| MBRB2080CT | MBRB2080CT | 80V | 56V | 80V |
| MBRB20100CT | MBRB20100CT | 100V | 70V | 100V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|-------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 20A | $T_A=125^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 150A | 8.3ms, Half Sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.70V 0.80V 0.85V | $I_{FM}=10A$ $T_J=25^\circ\text{C}$ |
| MBRB2020CT-2045CT MBRB2060CT MBRB2080CT-20100CT | | | |
| MBRB2020CT-2045CT MBRB2060CT MBRB2080CT-20100CT | V_F | 0.84V 0.95V 0.95V | $I_{FM}=20A$ $T_J=25^\circ\text{C}$ |
| MBRB2020CT-2045CT MBRB2060CT MBRB2080CT-20100CT | V_F | 0.80V 0.85V 0.85V | $I_{FM}=20A$ $T_J=125^\circ\text{C}$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 0.1mA | $T_J=25^\circ\text{C}$ |

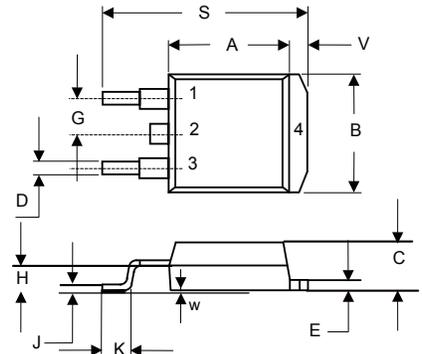
Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.

Internal Structure



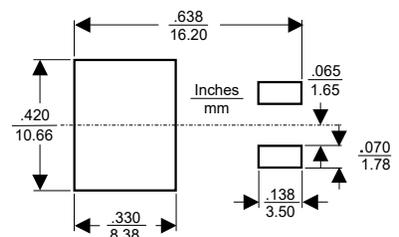
**20 Amp Schottky Barrier Rectifier
20 to 100 Volts**

D²-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

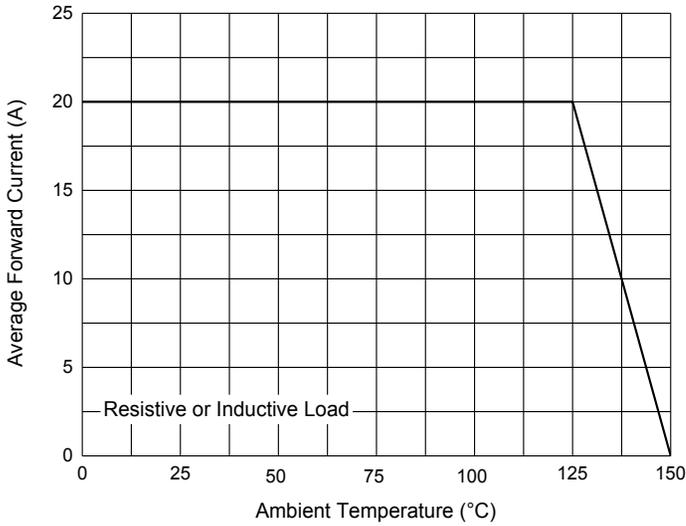


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

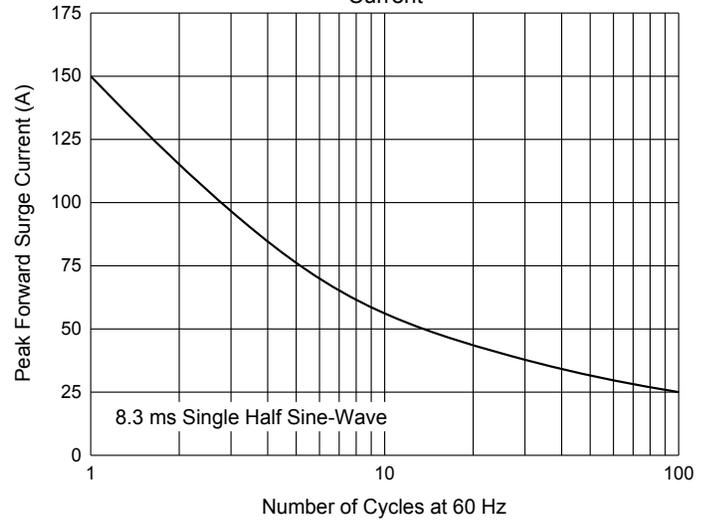


Fig. 3 - Typical Instantaneous Forward Characteristics

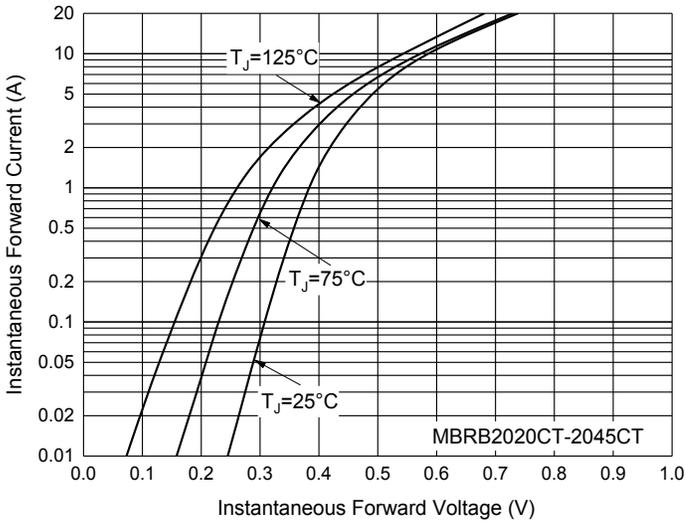


Fig. 4 - Typical Instantaneous Forward Characteristics

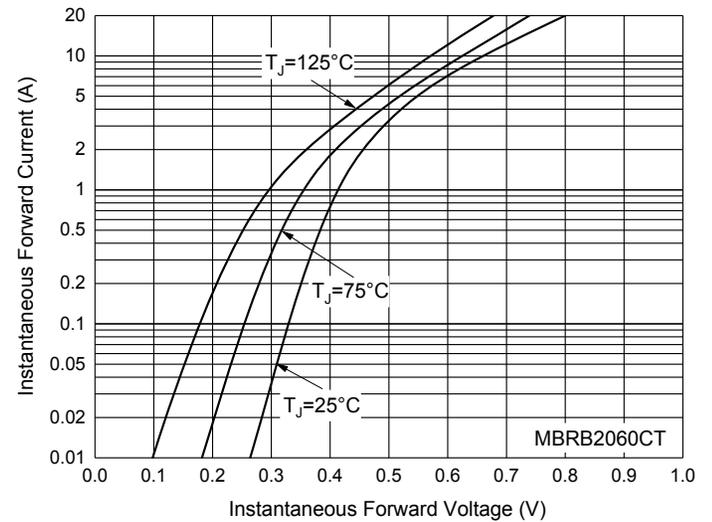


Fig. 5 - Typical Instantaneous Forward Characteristics

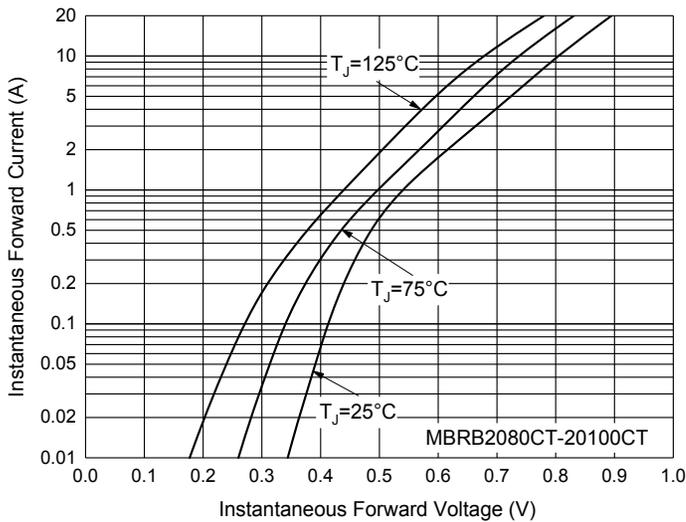
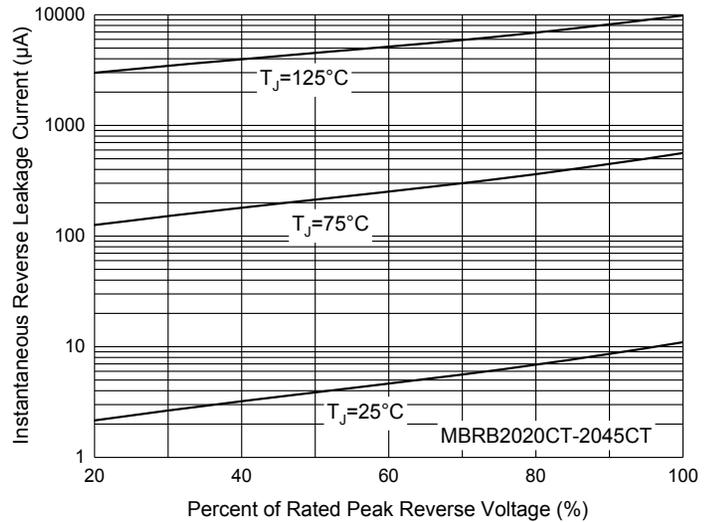


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

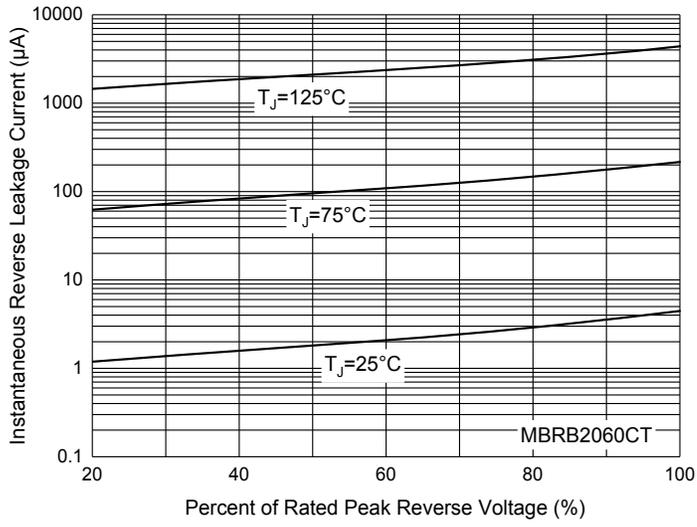
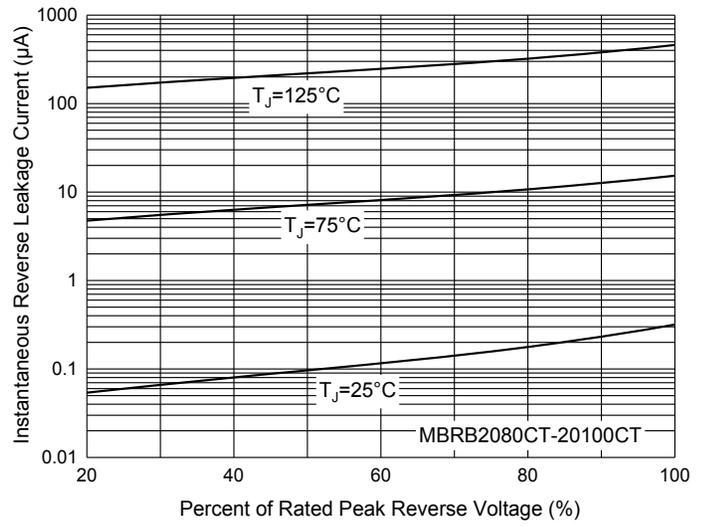


Fig. 8 - Typical Reverse Leakage Characteristics



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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