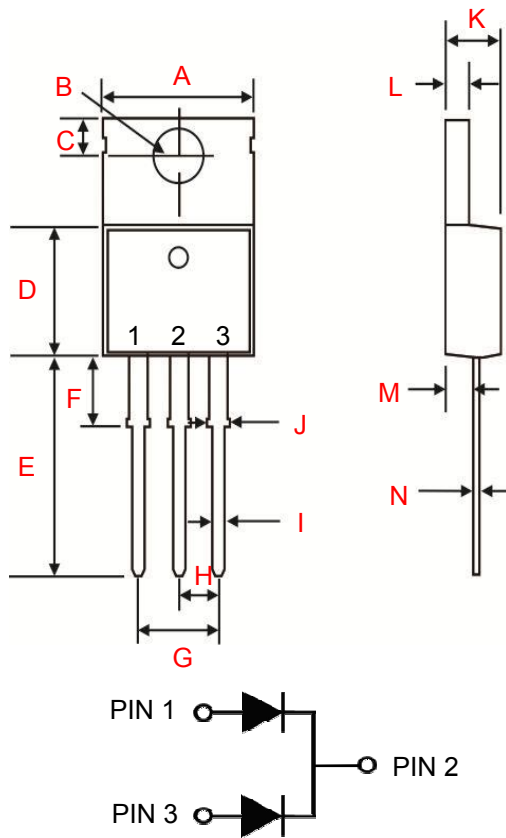


High Power Schottky Barrier Rectifier

Package Outline Dimensions (millimeters)



| TO-220AB | | |
|------------------------------|----------|-------|
| Dim. | Min. | Max. |
| A | 10.01 | 10.31 |
| B | 3.79 | 3.89 |
| C | 2.64 | 2.95 |
| D | 8.76 | 9.02 |
| E | 13.70 | 14.10 |
| F | 4.04 | 4.19 |
| G | 4.98 | 5.18 |
| H | 2.54 BSC | |
| I | 0.71 | 0.91 |
| J | 1.17 | 1.50 |
| K | 4.47 | 4.67 |
| L | 1.17 | 1.37 |
| M | 2.52 | 2.82 |
| N | 0.28 | 0.48 |
| All Dimensions in millimeter | | |

Features

- High Current Capability
- Low Switching Noise
- High Surge Capability
- Low Power Loss & High Efficiency
- Guard Ring Protection
- Pd-free lead plating & Halogen-free part

Mechanical

- Molded Plastic Low profile TO-220AB
- Plastic materials used carries underwriters laboratory flammability classification 94V-0
- Lead Temperature for Soldering Purposes : 265°C Max. for 10 Seconds
- Device Weight : Approximated 2.25 grams

Maximum Ratings & Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | MBR 40100CT | MBR 40150CT | MBR 40200CT | Units |
|---|-----------|-------------|-------------|-------------|-------|
| DC Blocking Voltage | V_{RM} | 100 | 150 | 200 | |
| Working Peak Reverse Voltage | V_{RWM} | 70 | 105 | 140 | Volts |
| Peak Repetitive Reverse Voltage | V_{RRM} | 100 | 150 | 200 | |
| Average Rectified Output Current (Total Device) | I_O | 40 | | | Amps |
| Non-Repetitive Peak Forward Surge Current (Per Leg) (Surge applied at rated load conditions half wave, single phase, 60Hz) | I_{FSM} | 350 | | | Amps |
| Instantaneous Forward Voltage (Per Leg) $I_F = 20A, T_A = 25^\circ\text{C}$ | V_F | 0.85 | 0.87 | 0.9 | Volts |
| Instantaneous Reverse Current (Per Leg) $V_R = V_{RRM}, T_A = 25^\circ\text{C}$ $V_R = V_{RRM}, T_A = 125^\circ\text{C}$ | I_R | 0.1 10 | | | mA |

NOTE : 1. Thermal resistance from junction to case per leg, with heatsink(1.35" x 0.95" x 0.18") Al-plate.

Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified) (Per Leg)

| Parameter | Symbol | Value | Units |
|--|----------------|--------------|-----------------------------|
| Maximum Thermal Resistance Junction to Case | $R\theta_{JC}$ | 3.0 | $^\circ\text{C} / \text{W}$ |
| Operating & Storage Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| | T_{STG} | - 65 to +150 | |

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)

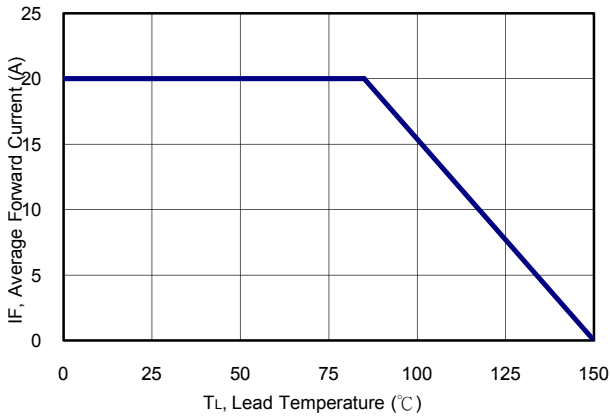


Figure 1: Current Derating Curves (Per Leg)

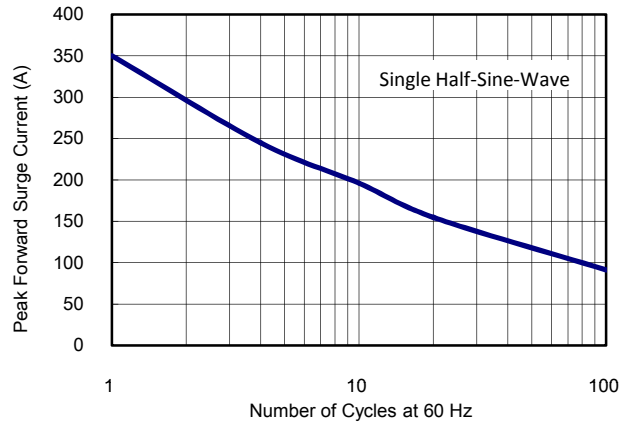


Figure 2: Peak Forward Surge Current (Per Leg)

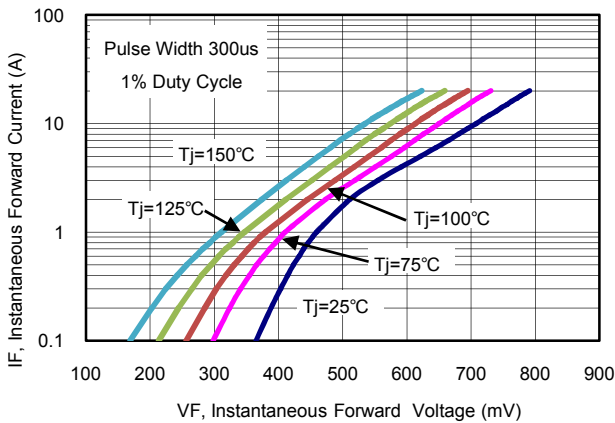


Figure 3: Typical Forward Characteristics (MBR40100CT) (Per Leg)

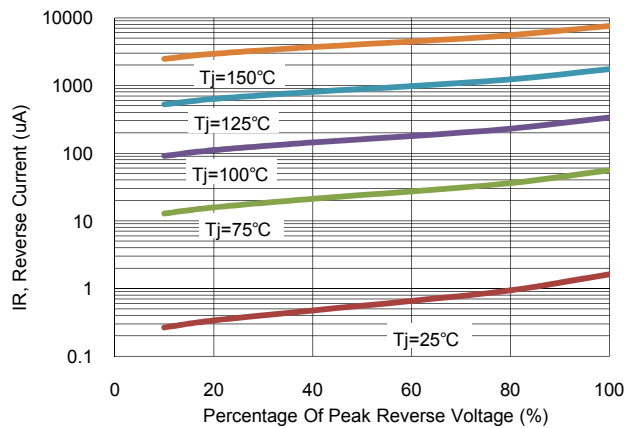


Figure 4: Typical Reverse Characteristics (MBR40100CT) (Per Leg)

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)

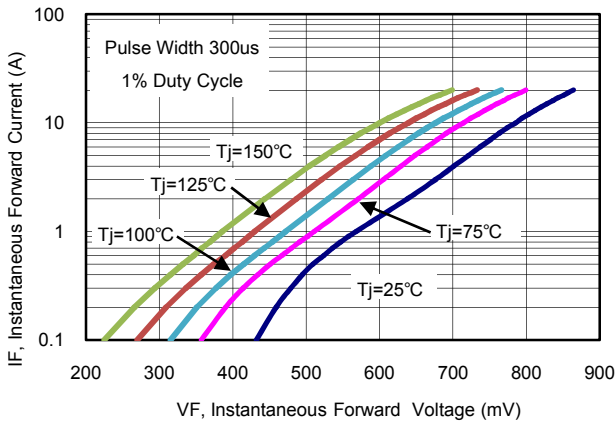


Figure 5: Typical Forward Characteristics (MBR40150CT) (Per Leg)

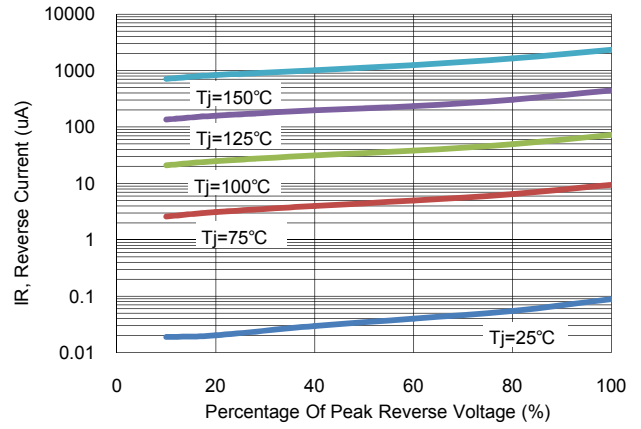


Figure 6: Typical Reverse Characteristics (MBR40150CT) (Per Leg)

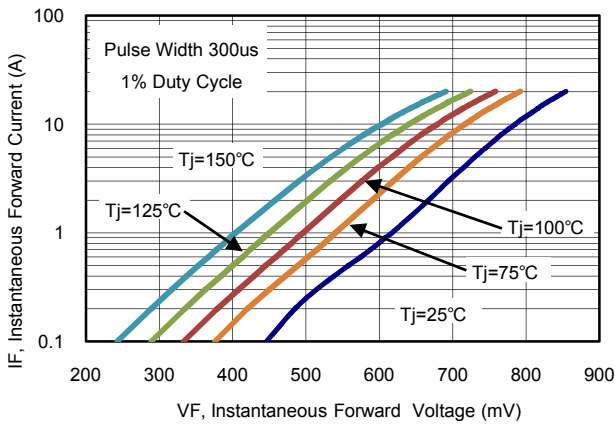


Figure 7: Typical Forward Characteristics (MBR40200CT) (Per Leg)

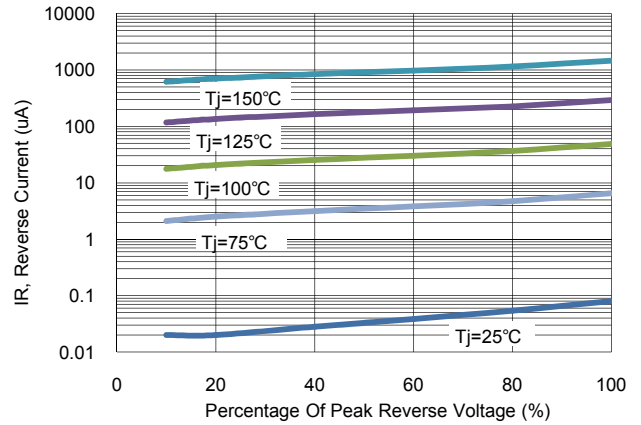
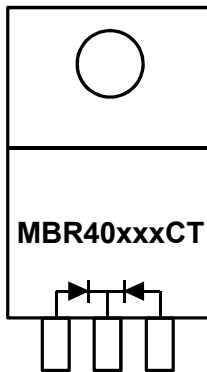


Figure 8: Typical Reverse Characteristics (MBR40200CT) (Per Leg)

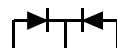
Ordering information

| Part Number | Package | Delivery mode |
|----------------------------|----------|------------------|
| MBR40100CT THRU MBR40200CT | TO-220AB | 50 pieces / Tube |

Marking Code Information



MBR40xxxCT = Product Type Marking Code

 = polarity

Disclaimer

All product specifications and data are subject to change without notice.

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