



## SCHOTTKY BARRIER RECTIFIER

### MBR1080 THRU MBR10100

VOLTAGE RANGE  
CURRENT

80 to 100Volts  
10 Ampere

### Features

- Metal of siliconrectifier, majonty carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

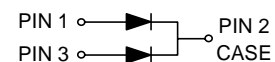
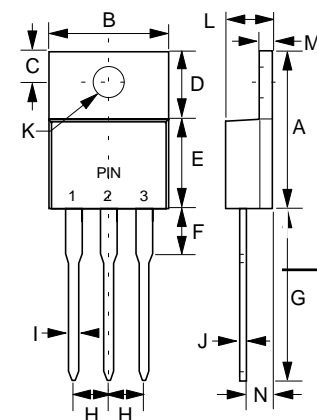
| Microsemi Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------------|----------------|--|---------------------|-----------------------------|
| MBR1080CT                | MBR1080CT      | 80V                                    | 56V                 | 80V                         |
| MBR10100CT               | MBR10100CT     | 100V                                   | 70V                 | 100V                        |

Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |               |  |
|---|-------------|---------------|--|
| Average Forward Current                                 | $I_{F(AV)}$ | 10A           | $T_C = 100^\circ\text{C}$  |
| Peak Forward Surge Current                              | $I_{FSM}$   | 120A          | 8.3ms, half sine   |
| Maximum Forward Voltage Drop Per Element                | $V_F$       | .85V<br>.75V  | $I_{FM} = 5A$<br>$T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 0.2mA<br>15mA | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$                  |
| Typical Junction Capacitance                            | $C_J$       | 300pF         | Measured at 1.0MHz, $V_R=4.0V$   |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

### TO-220AB



| DIM | DIMENSIONS |      |       |       | NOTE          |
|-----|------------|------|-------|-------|---------------|
|     | INCHES     |      | MM    |       |               |
| A   | .560       | .625 | 14.22 | 15.88 |               |
| B   | .380       | .420 | 9.65  | 10.67 |               |
| C   | .100       | .135 | 2.54  | 3.43  |               |
| D   | .230       | .270 | 5.84  | 6.86  |               |
| E   | .380       | .420 | 9.65  | 10.67 |               |
| F   | -----      | .250 | ----- | 6.35  |               |
| G   | .500       | .580 | 12.70 | 14.73 |               |
| H   | .090       | .110 | 2.29  | 2.79  |               |
| I   | .020       | .045 | 0.51  | 1.14  |               |
| J   | .012       | .025 | 0.30  | 0.64  |               |
| K   | .139       | .161 | 3.53  | 4.09  | $\varnothing$ |
| L   | .140       | .190 | 3.56  | 4.83  |               |
| M   | .045       | .055 | 1.14  | 1.40  |               |
| N   | .080       | .115 | 2.03  | 2.92  |               |



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CURRENT 10 Ampere

FIG.1 - FORWARD CURRENT DERATING CURVE

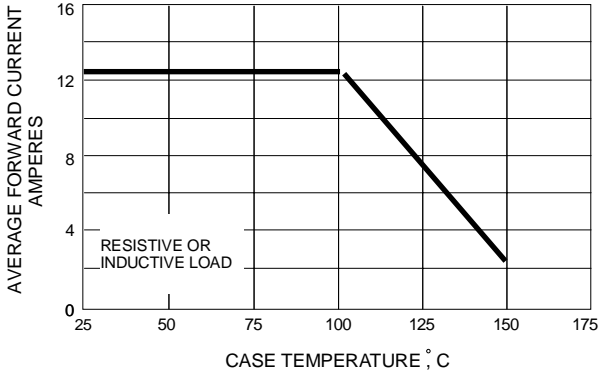


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

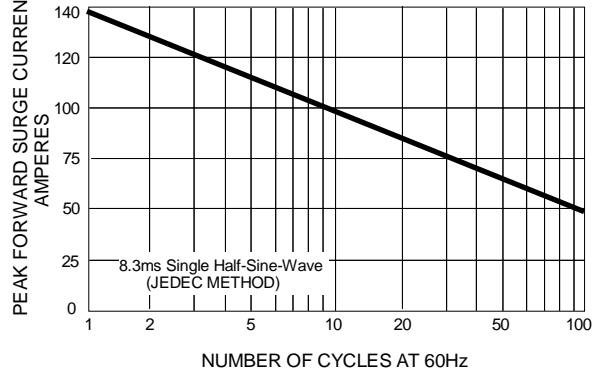


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

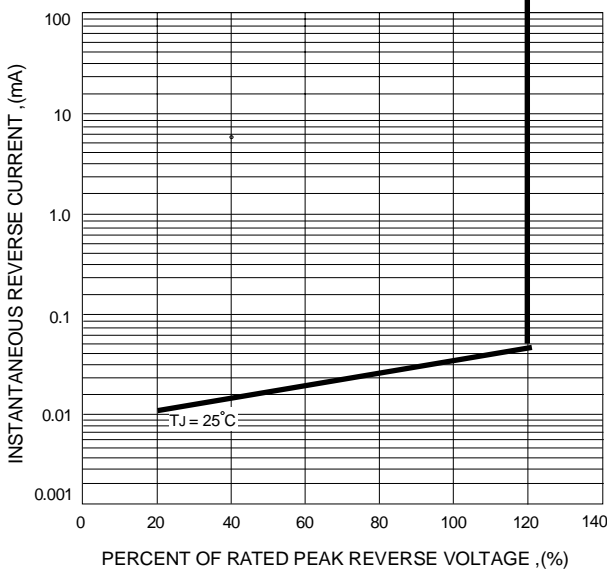


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

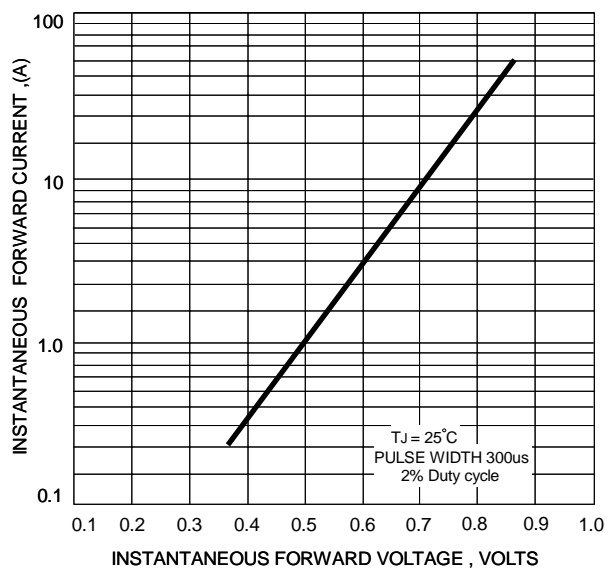


FIG.5 - TYPICAL JUNCTION CAPACITANCE

