



Micro Commercial Components  
21201 Itasca Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

## Features

- Metal of silicon rectifier, majority carrier conduction
- 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 |
|--------------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MBR1030CT                | MBR1030CT      | 30V                                    | 21V                 | 30V                         |
| MBR1035CT                | MBR1035CT      | 35V                                    | 24.5V               | 35V                         |
| MBR1040CT                | MBR1040CT      | 40V                                    | 28V                 | 40V                         |
| MBR1045CT                | MBR1045CT      | 45V                                    | 31.5V               | 45V                         |
| MBR1050CT                | MBR1050CT      | 50V                                    | 35V                 | 50V                         |
| MBR1060CT                | MBR1060CT      | 60V                                    | 42V                 | 60V                         |

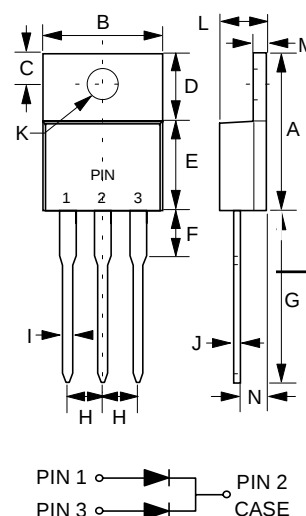
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                                                                                  |             |                              |                                                                                         |
|------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|-----------------------------------------------------------------------------------------|
| Average Forward Current                                                                                          | $I_{F(AV)}$ | 10A                          | $T_C = 105^\circ\text{C}$                                                               |
| Peak Forward Surge Current                                                                                       | $I_{FSM}$   | 125A                         | 8.3ms, half sine                                                                        |
| Maximum Forward Voltage Drop Per Element<br>MBR1030CT-45CT<br>MBR1050CT-60CT<br>MBR1030CT-45CT<br>MBR1050CT-60CT | $V_F$       | .70V<br>.80V<br>.57V<br>.65V | $I_{FM} = 5A$<br>$T_J = 25^\circ\text{C}$<br>$I_{FM} = 5A$<br>$T_J = 125^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                                                          | $I_R$       | 0.1mA<br>15mA                | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$                                   |
| Typical Junction Capacitance<br>MBR1030CT-45CT<br>MBR1050CT-60CT                                                 | $C_J$       | 170pF<br>220pF               | Measured at 1.0MHz, $V_R = 4.0V$                                                        |

## MBR1030CT THRU MBR1060CT

## 10 Amp Schottky Barrier Rectifier 30-60 Volts

### TO-220AB



| DIM | INCHES |      | MM    |       | NOTE |
|-----|--------|------|-------|-------|------|
|     | MIN    | MAX  | MIN   | MAX   |      |
| 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  | Ø    |
| L   | .140   | .190 | 3.56  | 4.83  |      |
| M   | .045   | .055 | 1.14  | 1.40  |      |
| N   | .080   | .115 | 2.03  | 2.92  |      |

\*Pulse test: Pulse width 300 µsec, Duty cycle 2%

**RATING AND CHARACTERISTIC CURVES**  
**MBR1030CT thru MBR1060CT**

FIG.1 - FORWARD CURRENT DERATING CURVE

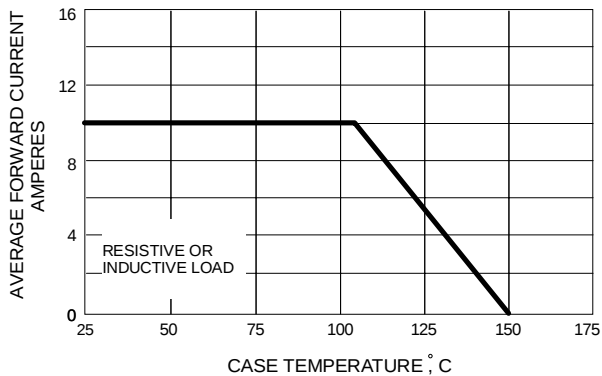


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

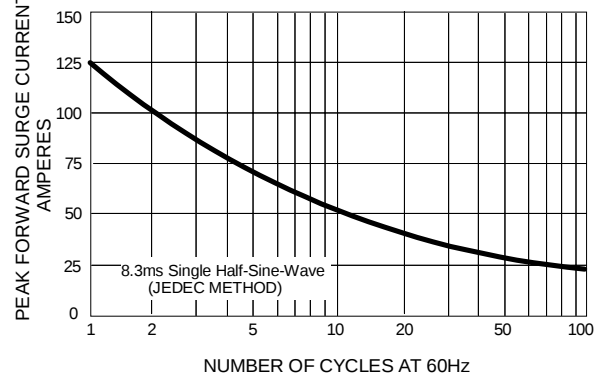


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

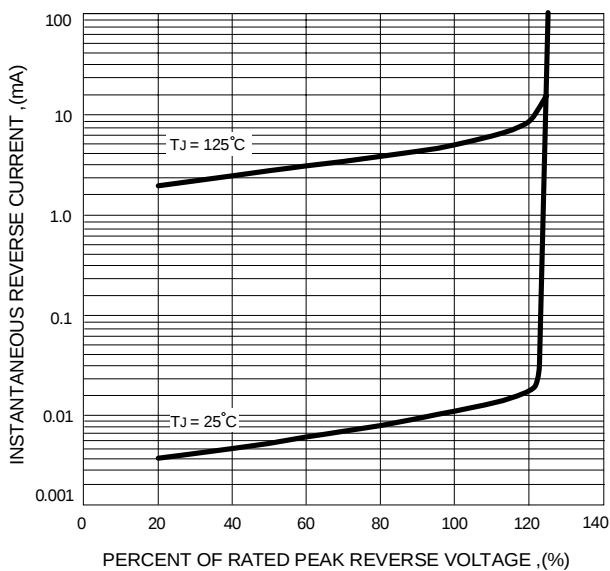


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

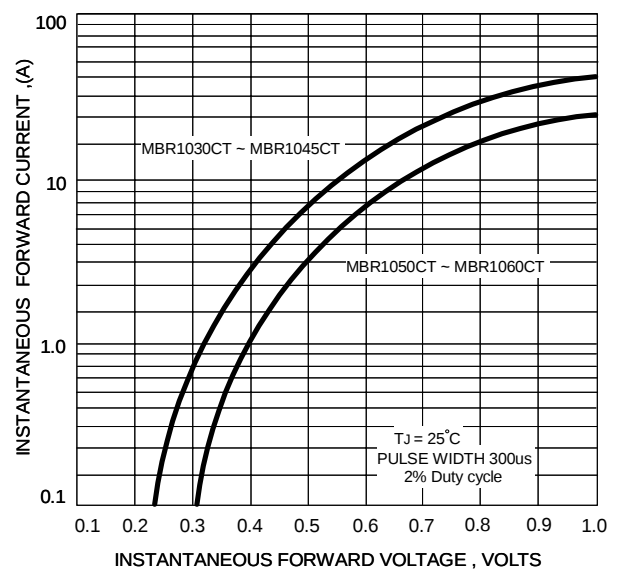


FIG.5 - TYPICAL JUNCTION CAPACITANCE

