

# MBRF10L45CT THRU MBRF10L200CT 10.0 AMP SCHOTTKY BARRIER RECTIFIERS



## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Good for switching mode application

## MECHANICAL DATA

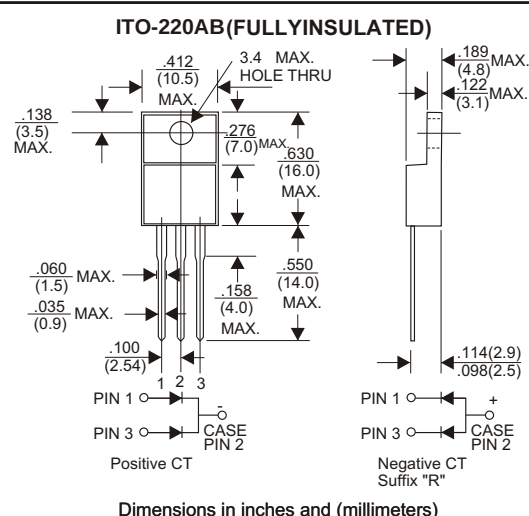
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any

## VOLTAGE RANGE

45 to 200 Volts

## CURRENT

10.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                           | MBRF10L45CT | MBRF10L60CT | MBRF10L100CT | MBRF10L150CT | MBRF10L200CT | UNITS |
|-------------------------------------------------------------------------------------------------------|-------------|-------------|--------------|--------------|--------------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 45          | 60          | 100          | 150          | 200          | V     |
| Maximum RMS Voltage                                                                                   | 45          | 60          | 100          | 150          | 200          | V     |
| Maximum DC Blocking Voltage                                                                           | 32          | 42          | 70           | 105          | 140          | V     |
| Maximum Average Forward Rectified Current<br>at Tc=125°C                                              | 10          |             |              |              |              | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 150         |             |              |              |              | A     |
| Maximum Instantaneous Forward Voltage at 10A                                                          | 0.46        | 0.55        | 0.7          | 0.85         |              | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 0.2         |             |              |              |              | mA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 50          |             |              |              |              | mA    |
| Typical Junction Capacitance (Note1)                                                                  | 420         |             |              |              |              | pF    |
| Typical Thermal Resistance RθJC (Note 2)                                                              | 2.5         |             |              |              |              | °C/W  |
| Operating Temperature Range Tj                                                                        | -65 — +150  |             |              |              |              | °C    |
| Storage Temperature Range Tstg                                                                        | -65 — +150  |             |              |              |              | °C    |

### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case.

## RATING AND CHARACTERISTIC CURVES (MBRF10L45CT THRU MBRF10L200CT)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

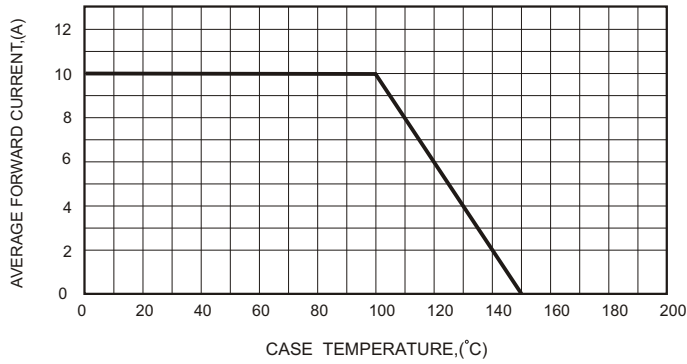


FIG.2-TYPICAL FORWARD CHARACTERISTICS

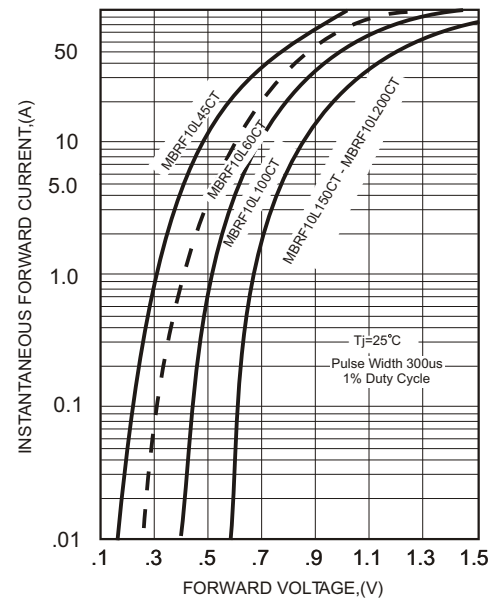


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

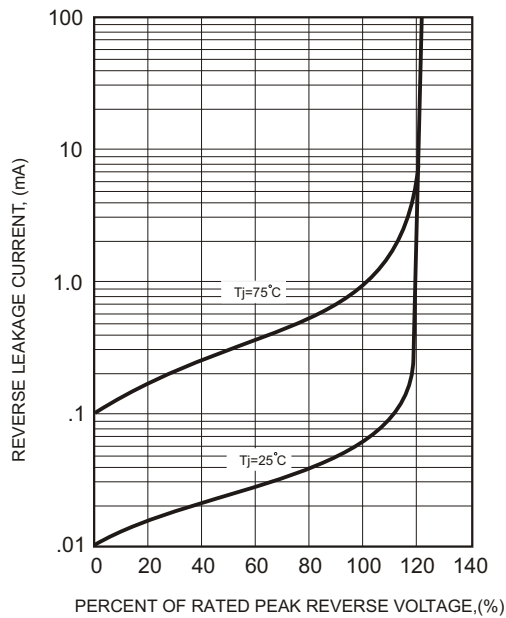


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

