

### FEATURES

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

### MECHANICAL DATA

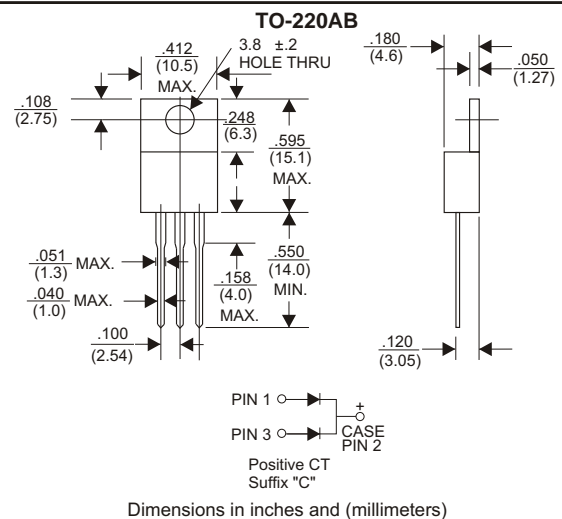
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any

### VOLTAGE RANGE

45 to 200 Volts

### CURRENT

20.0 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   | MBR20L45CT | MBR20L60CT | MBR20L100CT | MBR20L150CT | MBR20L200CT | 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  | 20         |            |             |             |             | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 200        |            |             |             |             | A     |
| Maximum Instantaneous Forward Voltage at 20A  | 0.46       | 0.55       | 0.7         | 0.85        |             | V     |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage  | 0.2        |            |             |             |             | mA    |
| Typical Junction Capacitance (Note1)  | 500        |            |             |             |             | 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 (MBR20L45CT THRU MBR20L200CT)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

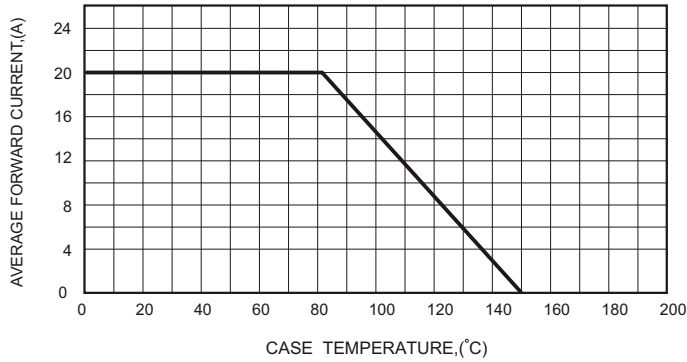


FIG.2-TYPICAL FORWARD CHARACTERISTICS

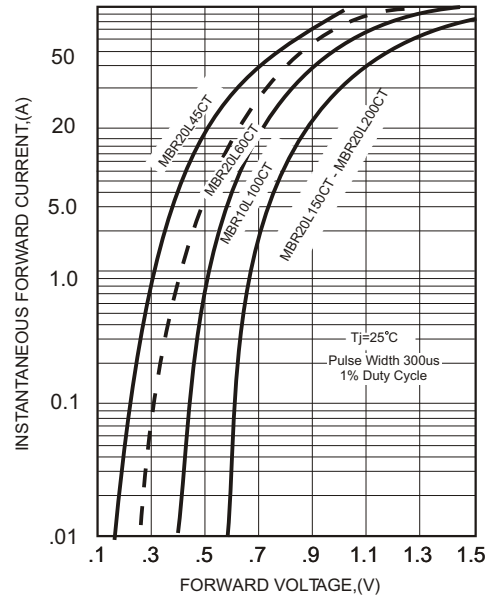


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

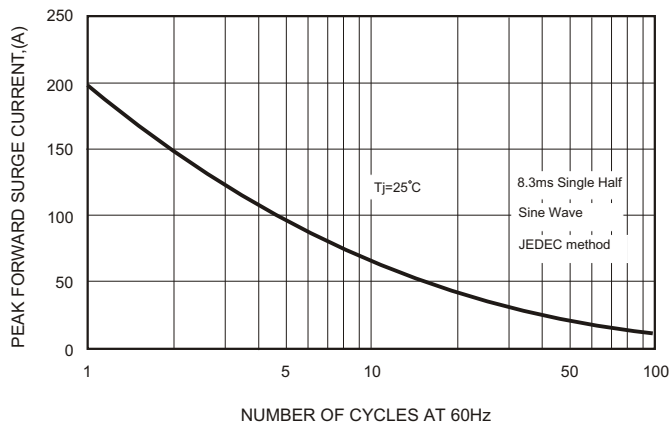


FIG.4-TYPICAL JUNCTION CAPACITANCE

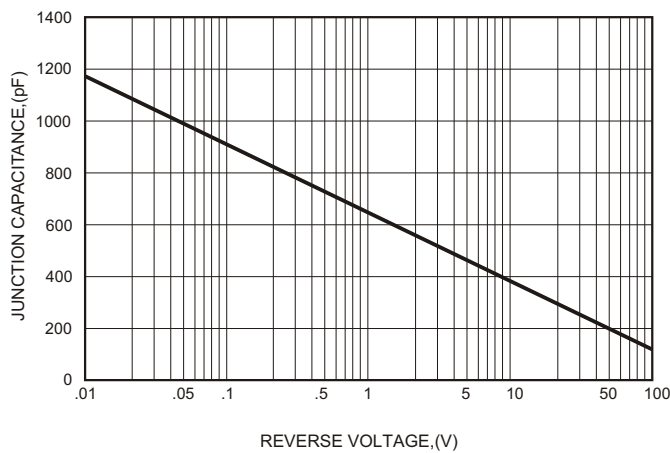


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

