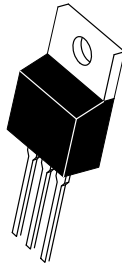


### FEATURES

- \* 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

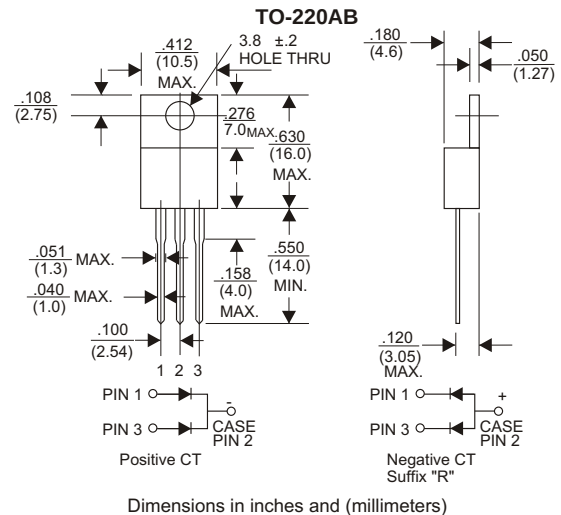


### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

30.0 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%.

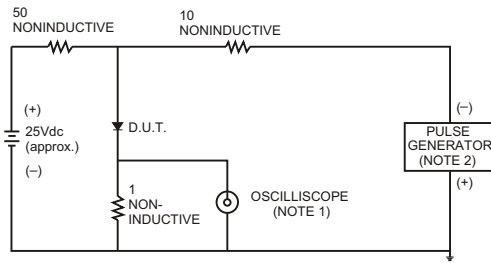
| TYPE NUMBER                                                                                           | MUR3005CT  | MUR3010CT | MUR3020CT | MUR3030CT | MUR3040CT | MUR3060CT | MUR3080CT | MUR30100CT | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100       | 200       | 300       | 400       | 600       | 800       | 1000       | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70        | 140       | 210       | 280       | 420       | 560       | 700        | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100       | 200       | 300       | 400       | 600       | 800       | 1000       | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=50°C                      | 30.0       |           |           |           |           |           |           |            | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 250        |           |           |           |           |           |           |            | A     |
| Maximum Instantaneous Forward Voltage at 30.0A                                                        | 1.0        |           |           | 1.3       |           | 1.75      |           |            | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 10         |           |           |           |           |           |           |            | μA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 400        |           |           |           |           |           |           |            | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 50         |           |           |           |           |           |           |            | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 130        |           |           |           |           |           |           |            | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +150 |           |           |           |           |           |           |            | °C    |

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (MUR3005CT THRU MUR30100CT)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

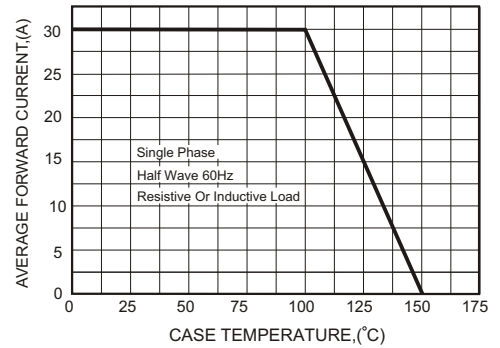


FIG.3-TYPICAL FORWARD CHARACTERISTICS

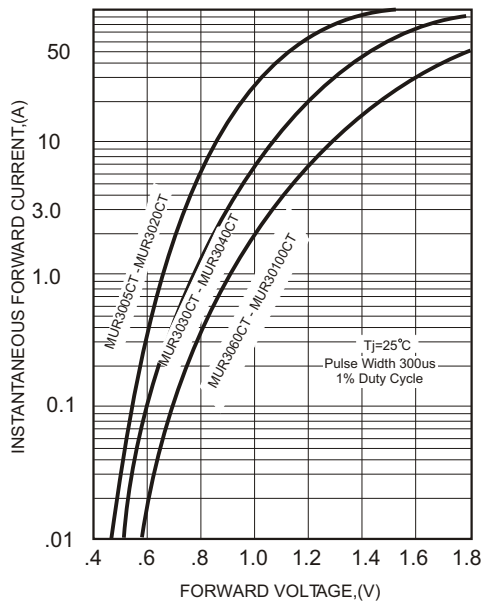


FIG.4-TYPICAL REVERSE CHARACTERISTICS

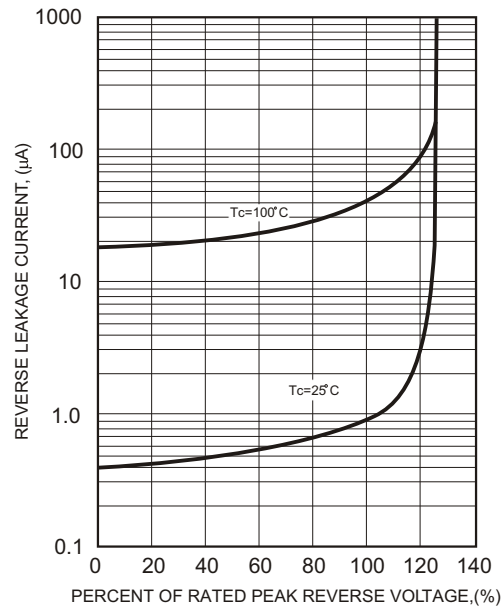


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

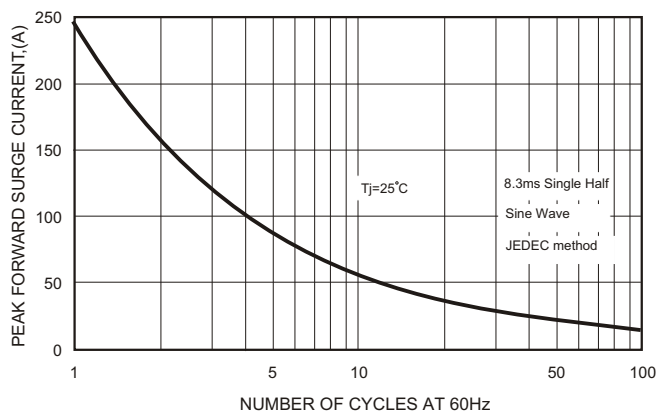


FIG.6-TYPICAL JUNCTION CAPACITANCE

