



## FEATURES

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

## MECHANICAL DATA

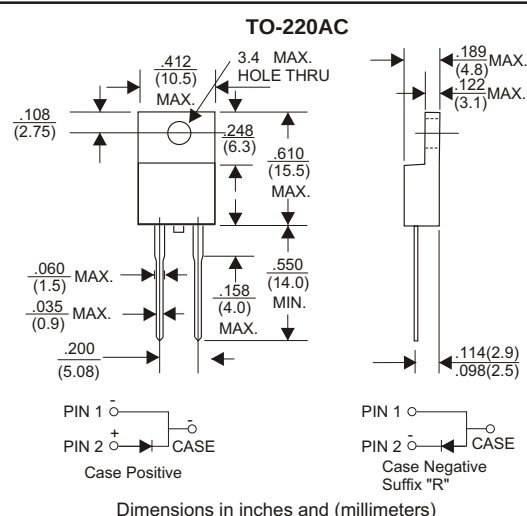
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Lead solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: As Marked
- \* Mounting position: Any

## VOLTAGE RANGE

20 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%.

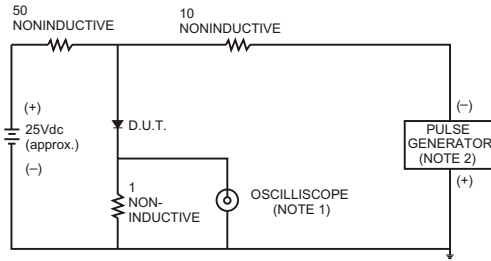
| TYPE NUMBER                                                                                           | MUR1005    | MUR1010 | MUR1020 | MUR1030 | MUR1040 | MUR1060 | MUR1080 | MUR10100 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|---------|---------|---------|---------|---------|---------|----------|-------|
| 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                      | 10.0       |         |         |         |         |         |         |          | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 175        |         |         |         |         |         |         |          | A     |
| Maximum Instantaneous Forward Voltage at 10.0A                                                        | 1.0        |         |         | 1.3     |         | 1.75    |         |          | V     |
| Maximum DC Reverse Current Ta=25°C                                                                    | 10         |         |         |         |         |         |         |          | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                                 | 400        |         |         |         |         |         |         |          | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 50         |         |         |         |         |         |         |          | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 55         |         |         |         |         |         |         |          | 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 (MUR1005 THRU MUR10100)

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

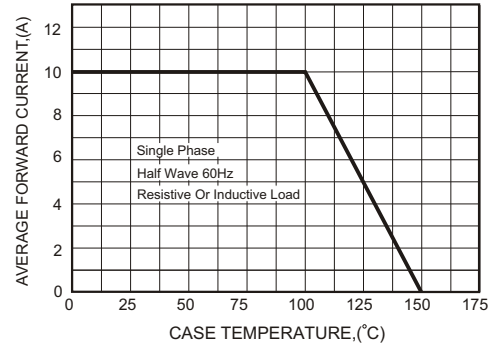


FIG.3-TYPICAL FORWARD CHARACTERISTICS

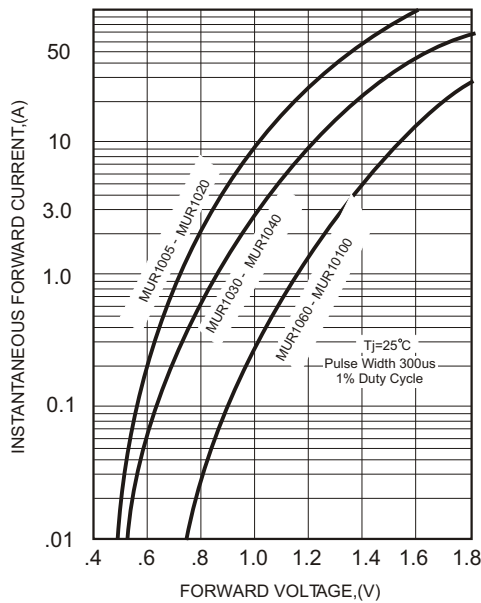


FIG.4-TYPICAL REVERSE CHARACTERISTICS

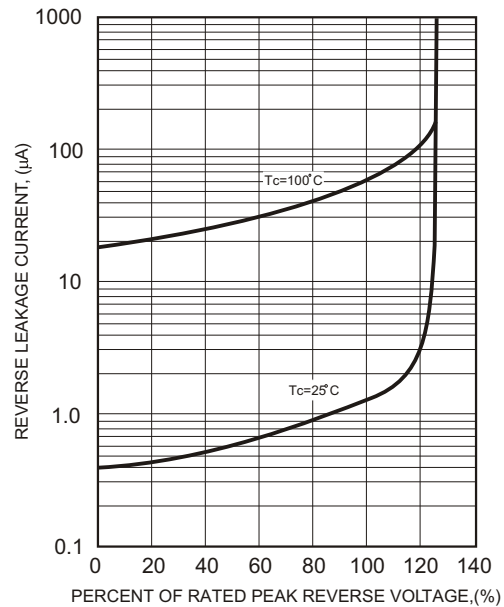


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

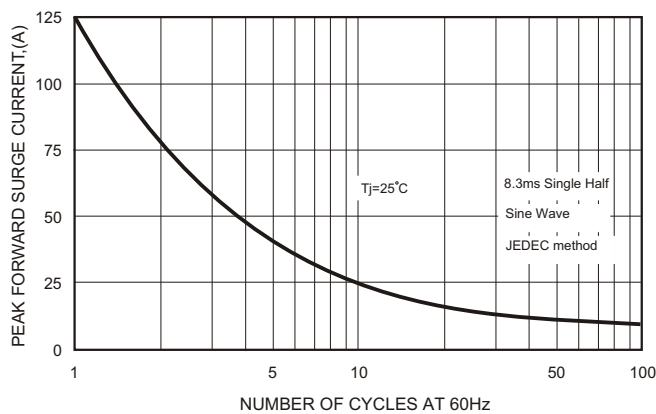


FIG.6-TYPICAL JUNCTION CAPACITANCE

